Panasonic

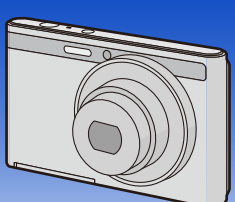
Owner's Manual for advanced features

Digital Camera

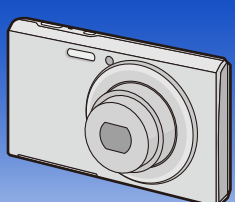
Model No. DMC-XS1

DMC-FH10

LUMIX



DMC-XS1



DMC-FH10

Please read these instructions carefully before using this product, and save this manual for future use.

microSD™ HC

Register online at
www.panasonic.com/register
(U.S. customers only)

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• The camera illustrations and on-screen display illustrations provided in this manual may differ from the actual product appearance or on-screen displays. In this manual, DMC-XS1 is used for examples of the camera illustrations and on-screen display illustrations when operation or other information is more or less the same between models.
Therefore, the camera illustrations and on-screen display illustrations in this manual may differ from your model.
• The operations, procedures, or functions that differ among models are indicated separately, together with the relevant model number.

e.g.: DMC-XS1
DMC-FH10

Care of the camera

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

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

This camera is not dust/splash/water proof.
Avoid using the camera in places with a lot of dust, water, sand, etc.

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

■ About Condensation (When the lens is fogged up)

- Condensation occurs when the ambient temperature or humidity changes. Be careful of condensation since it causes lens stains, fungus and camera malfunction.
- If condensation occurs, turn the camera off and leave it for about 2 hours. The fog will disappear naturally when the temperature of the camera becomes close to the ambient temperature.

Standard Accessories

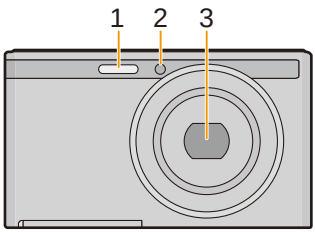
Check that all the accessories are supplied before using the camera.

- The accessories and their shape will differ depending on the country or area where the camera was purchased.
  For details on the accessories, refer to “Basic Owner’s Manual”.
- Battery Pack is indicated as **battery pack** or **battery** in the text.
- microSD Memory Card, microSDHC Memory Card are indicated as **card** in the text.
- **The card is optional.**
  You can record or play back pictures on the built-in memory when you are not using a card.
- If any accessories are lost, customers in the USA and Puerto Rico should contact Panasonic’s parts department at 1-800-833-9626 and customers in Canada should contact 1-800-99-LUMIX (1-800-995-8649) for further information about obtaining replacement parts.

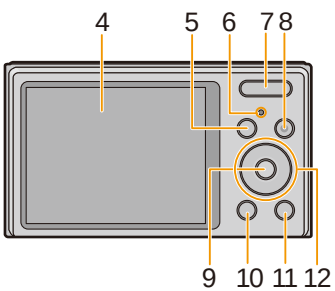
Names and Functions of Main Parts

DMC-XS1

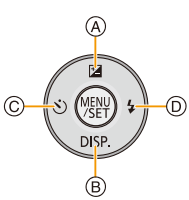
1 Flash (P50)
2 Self-timer indicator (P54)
3 Lens (P5, 110)



4 LCD monitor (P45, 107, 110)
5 [MODE] button (P25, 82)
6 Charging lamp (P13)
7 Zoom button (P47)
8 Motion picture button (P32)
9 [MENU/SET] button (P38)
10 [▶] (Playback) button (P34)
11 [🗑/↩] (Delete/Cancel) button (P37)



12 Cursor buttons
Ⓐ: ▲/Exposure compensation (P55)
Ⓑ: ▼/[DISP.] (P45)
Ⓒ: ◀/Self-timer (P54)
Ⓓ: ▶/Flash setting (P50)



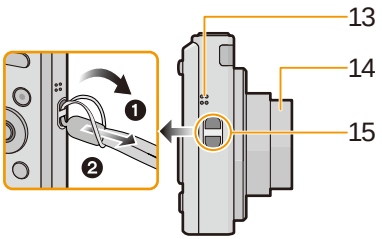
In this Owner's Manual, the cursor buttons are described as shown in the figure below or described with ▲/▼/◀/▶.
e.g.: When you press the ▼ (down) button

or **Press ▼**

13 Speaker (P41)
- Be careful not to cover the speaker with your finger. Doing so may make sound difficult to hear.

14 Lens barrel

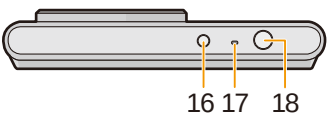
15 Strap eyelet (P24)
- Be sure to attach the strap when using the camera to ensure that you will not drop it.



16 Camera [ON/OFF] button (P22)

17 Microphone
- Be careful not to cover the microphone with your finger.

18 Shutter button (P26, 29)

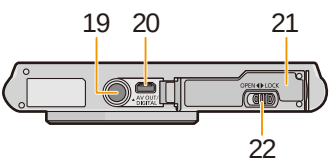


19 Tripod mount
- A tripod with a screw length of 5.5 mm (0.22 inch) or more may damage this unit if attached.

20 [AV OUT/DIGITAL] socket (P13, 96, 100, 102)
- This socket is also used when charging the battery.
- Take care not to subject the socket with water or other liquids.

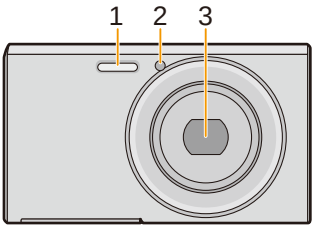
21 Card/Battery door (P12, 18)

22 Release lever (P12, 18)



DMC-FH10

1 Flash (P50)
2 Self-timer indicator (P54)
3 Lens (P5, 110)



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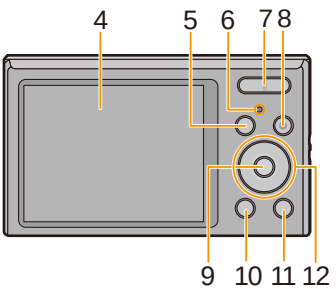
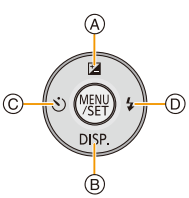


12 Cursor buttons
Ⓐ: ▲/Exposure compensation (P55)
Ⓑ: ▼/[DISP.] (P45)
Ⓒ: ◀/Self-timer (P54)
Ⓓ: ▶/Flash setting (P50)



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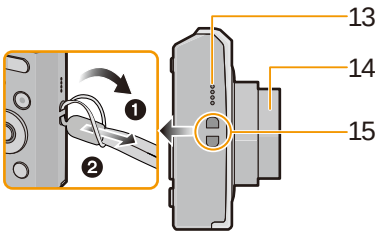

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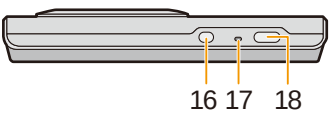

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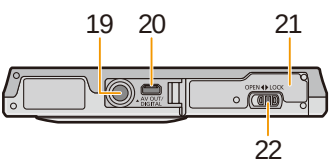
21 Card/Battery door (P12, 18)
22 Release lever (P12, 18)



Charging the Battery

Use the dedicated AC adaptor (supplied), USB connection cable (supplied) and battery.
- **The battery is not charged when the camera is shipped. Charge the battery before use.**
- **Charge the battery only when it is inserted in the camera.**

Camera conditions	Charge
Turned off	◯
Turned on	—

■ About batteries that you can use with this unit

It has been found that counterfeit battery packs which look very similar to the genuine product are made available for 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.

■ About the power supply

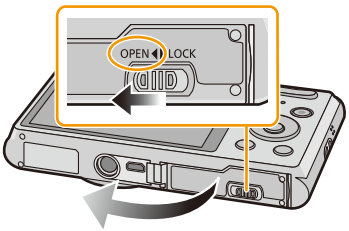
If you use the AC adaptor (supplied) when the battery is in this unit, you can supply power from a power outlet via the USB connection cable (supplied).
- **The battery may be running out during recording. The camera will turn off if the battery power is gone.**
- When the battery is not inserted, power is not supplied.
- Before connecting or disconnecting the AC adaptor (supplied), turn the camera off.

Inserting the Battery

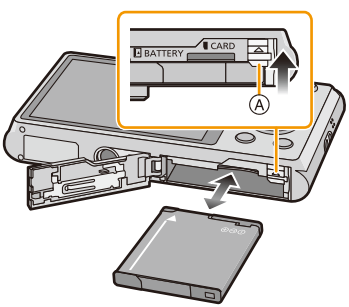
Insert the battery into the camera to charge it.

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

- **Always use genuine Panasonic batteries.**
- **If you use other batteries, we cannot guarantee the quality of this product.**

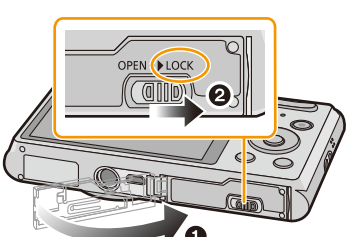


2 **Being careful about the battery orientation, securely insert it all the way in, and then check that it is locked by the lever Ⓐ.**
To remove the battery, pull the lever Ⓐ in the direction of the arrow.



3 **❶: Close the card/battery door.**

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

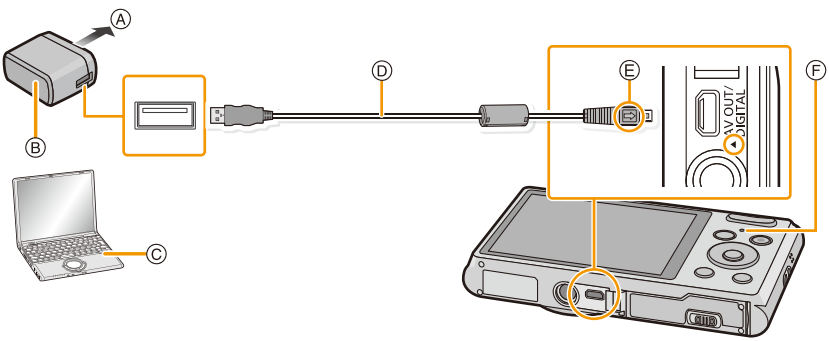


- Turn the camera off and wait for the “LUMIX” display on the LCD monitor to clear before removing the battery. (Otherwise, this unit may no longer operate normally and the card itself may be damaged or the recorded pictures may be lost.)

Charging

• Charge the battery in areas with an ambient temperature, between 10 °C and 30 °C (50 °F and 86 °F) (same as the battery temperature), is recommended.

Check that this unit is turned off.



Ⓐ To power outlet
Ⓑ AC adaptor (supplied)
Ⓒ PC (Turned on)
Ⓓ USB connection cable (supplied)
• Check the directions of the connectors, and plug them straight in or unplug them straight out. (Otherwise the connectors may bend out of shape, which may cause malfunction.)
Ⓔ Align the marks, and insert.
Ⓕ Charging lamp

(Charging from the power outlet)

Connect the AC adaptor (supplied) and this camera with the USB connection cable (supplied), and insert the AC adaptor (supplied) into the power outlet.

(Charging from a computer)

Connect the computer and this camera with the USB connection cable (supplied).

- Charging may not be possible depending on computer specifications.
- If the computer enters a suspended state while charging the battery, charging will stop.
- Connecting this camera to a notebook computer that is not connected to a power outlet will cause the notebook computer battery to drain faster. Do not leave the camera connected for extended periods of time.
- Be sure to always connect the camera to a computer USB terminal. Do not connect the camera to a monitor, keyboard or printer USB terminal, or a USB hub.

■ About the charging lamp

On:	Charging.
Off:	Charging has completed. (When charging is complete, disconnect the camera from the power outlet or computer.)

■ Charging time

When using the AC adaptor (supplied)

Charging time	Approx. 150 min

- **The indicated charging time is for when the battery has been discharged completely. The charging time may vary depending on how the battery has been used. The charging time for the battery in hot/cold environments or a battery that has not been used for a long time may be longer than normal.**
- **The charging time when connected to the computer depends on the computer's performance.**

■ Battery indication

The battery indication is displayed on the LCD monitor.

- The indication turns red and blinks if the remaining battery power is low. Recharge the battery or replace it with a fully charged battery.

- **Do not leave any metal items (such as clips) near the contact areas of the power plug. Otherwise, a fire and/or electric shocks may be caused by short-circuiting or the resulting heat generated.**
- Do not use any other USB connection cables except the supplied one or a genuine Panasonic USB connection cable (DMW-USBC1: optional).
- Do not use any other AC adaptors except the supplied one.
- Do not use a USB extension cable.
- The AC adaptor (supplied) and USB connection cable (supplied) are for this camera only. Do not use them with other devices.
- Remove the battery after use. (The battery will be exhausted if left for a long period of time after being charged.)
- The battery becomes warm after using and during and after charging. The camera also becomes warm during use. This is not a malfunction.
- The battery can be recharged even when it still has some power left, but it is not recommended that the battery charge be frequently topped up while the battery is fully charged. (Since characteristic swelling may occur.)
- If a problem occurs in the power outlet, such as a power outage, charging may not be completed normally. If this happens, disconnect the USB connection cable (supplied) and connect it again.
- If the charging lamp does not turn on or blinks when you connect the AC adaptor (supplied) or PC, this indicates that the charging has been stopped because the unit is not in a temperature range suitable for charging, and does not indicate a fault.
  Reconnect the USB connection cable (supplied) in a location where the ambient temperature (and the temperature of battery) is in a 10 °C to 30 °C (50 °F to 86 °F) range, and try charging again.

Approximate operating time and number of recordable pictures

■ Recording still pictures

Number of recordable pictures	**Approx. 260 pictures**	By CIPA standard in Normal Picture Mode
Recording time	**Approx. 130 min**	

Recording conditions by CIPA standard

- CIPA is an abbreviation of [Camera & Imaging Products Association].
- Temperature: 23 °C (73.4 °F)/Humidity: 50%RH when LCD monitor is on.
- Using a Panasonic microSDHC Memory Card (16 GB).
- Using the supplied battery.
- Starting recording 30 seconds after the camera is turned on. (When the Optical Image Stabilizer function is set to [ON].)
- **Recording once every 30 seconds** using full flash every second recording.
- Changing the zoom magnification from Tele to Wide or vice versa in every recording.
- Turning the camera off every 10 recordings and leaving it until the temperature of the battery decreases.

The number of recordable pictures varies depending on the recording interval time. As the recording interval time becomes longer, the number of recordable pictures decreases. [For example, if you were to take one picture every two minutes, then the number of pictures would be reduced to approximately one-quarter of the number of pictures given above (based upon one picture taken every 30 seconds).]

■ Recording motion pictures

When recording with picture quality set to [HD]

Recordable time	**Approx. 90 min**
Actual recordable time	**Approx. 45 min**

- These times are for an ambient temperature of 23 °C (73.4 °F) and a humidity of 50%RH. Please be aware that these times are approximate.
- Actual recordable time is the time available for recording when repeating actions such as turning this unit on and off, starting/stopping recording, zoom operation, etc.
- Motion pictures can be recorded continuously up to 2 GB.
  The maximum available recording time for up to 2 GB only is displayed on the screen.

Playback

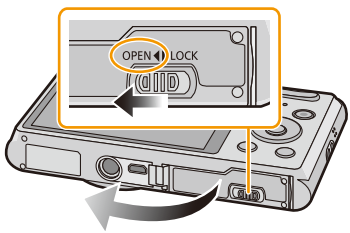
Playback time	Approx. 240 min

- **The operating times and number of recordable pictures will differ according to the environment and the operating conditions.**
  For example, in the following cases, the operating times will shorten and the number of recordable pictures is reduced:
  – In low-temperature environments, such as on ski slopes.
  – When operations such as flash and zoom are used repeatedly.
- When the operating time of the camera becomes extremely short even after properly charging the battery, the life of the battery may have expired. Buy a new battery.

Inserting and Removing the Card (optional)

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

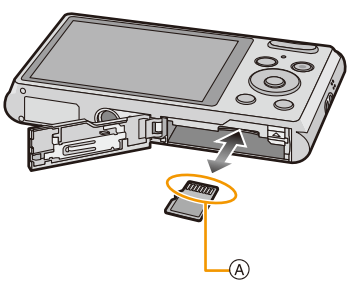
1 **Slide the release lever in the direction of the arrow and open the card/battery door.**



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

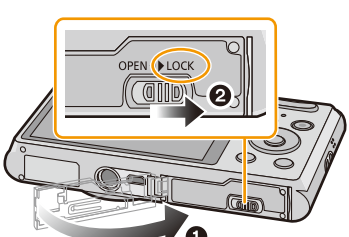
To remove the card, push the card until it clicks, then pull the card out upright.

Ⓐ: Do not touch the connection terminals of the card.



3 **❶: Close the card/battery door.**

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



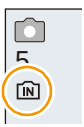
- Turn the camera off and wait for the “LUMIX” display on the LCD monitor to clear before removing the card. (Otherwise, this unit may no longer operate normally and the card itself may be damaged or the recorded pictures may be lost.)

About the Built-in Memory/the Card

The following operations can be performed using this unit:

When a card has not been inserted	Pictures can be recorded on the built-in memory and played back.
When a card has been inserted	Pictures can be recorded on the card and played back.

- **When using the built-in memory:**
  IN→IN **(access indication*)**
- **When using the card:**
  (access indication*)



* The access indication is displayed in red when pictures are being recorded on the built-in memory (or the card).

Built-in Memory

- You can copy the recorded pictures to a card. (P95)
- **Memory size: Approx. 90 MB**
- The access time for the built-in memory may be longer than the access time for a card.

Card

The following cards, which conform to the SD video standard, can be used with this unit.
(These cards are indicated as **card** in the text.)

	Remarks
microSD Memory Card (64 MB to 2 GB) **microSDHC Memory Card (4 GB to 32 GB)**	• **Use a card with SD Speed Class* with "Class 6" or higher when recording motion pictures.** • microSDHC Memory Cards can only be used with compatible models, however cannot be used with models that are only compatible with microSD Memory Cards. • Only the cards with capacity listed left can be used.

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

e.g.: CLASS 6 6

- Please confirm the latest information on the following website.
  http://panasonic.jp/support/global/cs/dsc/
  (This site is English only.)

- **During access (image writing, reading and deleting, formatting etc.), do not turn this unit off, remove the battery, card or disconnect the AC adaptor (supplied). Furthermore, do not subject the camera to vibration, impact or static electricity.**
  The card or the data on the card may be damaged, and this unit may no longer operate normally.
  If operation fails due to vibration, impact or static electricity, perform the operation again.
- The data on the built-in memory or the card may be damaged or lost due to electromagnetic waves, static electricity or breakdown of the camera or the card. We recommend storing important data on a PC etc.
- Do not format the card on your PC or other equipment. Format it on the camera only to ensure proper operation. (P44)
- Keep the Memory Card out of reach of children to prevent swallowing.

Approximate number of recordable pictures and available recording time

About the display of the number of recordable pictures and available recording time

• Switch the display (number of recordable pictures, available recording time, etc.) by pressing ▼. (P45)

Ⓐ Number of recordable pictures
Ⓑ Available recording time

• The number of recordable pictures and the available recording time are an approximation. (These vary depending on the recording conditions and the type of card.)
• The number of recordable pictures and the available recording time varies depending on the subjects.

Number of recordable pictures

• [+99999] is displayed if there are more than 100,000 pictures remaining.

Picture size	Built-in Memory (Approx. 90 MB)	2 GB	4 GB	32 GB
16M (4:3)	10	230	451	3720
5M (4:3)	23	500	979	8070
0.3M (4:3)	386	7540	14582	120110

Available recording time (when recording motion pictures)

• “h” is an abbreviation for hour, “m” for minute and “s” for second.

Recording quality setting	Built-in Memory (Approx. 90 MB)	2 GB	4 GB	32 GB
HD	–	7m53s	15m00s	2h00m00s
VGA	–	20m00s	40m00s	5h20m00s
QVGA	2m47s	1h00m00s	2h00m00s	16h00m00s

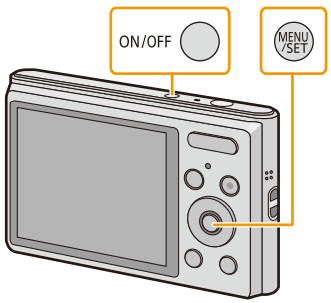
• The recordable time is the total time of all the motion pictures which have been recorded.
• Motion pictures can be recorded continuously up to 2 GB.
The maximum available recording time for up to 2 GB only is displayed on the screen.
• The maximum available continuous recording time is displayed on the screen.

Setting Date/Time (Clock Set)

• **The clock is not set when the camera is shipped.**

1 **Press camera [ON/OFF] button.**

• If the language select screen is not displayed, proceed to step **4**.



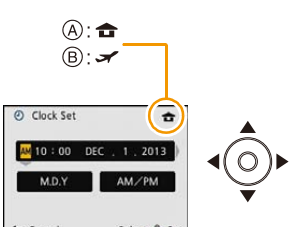
2 **Press [MENU/SET].**

3 **Press ▲/▼ to select the language, and press [MENU/SET].**

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

5 **Press ◄/► to select the items (year, month, day, hour, minute, display sequence or time display format), and press ▲/▼ to set.**

Ⓐ: Time at the home area
Ⓑ: Time at the travel destination
• You can cancel without setting the clock by pressing [🗑/↩].



6 **Press [MENU/SET] to set.**

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

Changing the Clock Setting

Select [Clock Set] in the [Rec] or [Setup] menu, and press [MENU/SET]. **(P38)**

- The clock can be reset as shown in steps **5** and **6**.
- **The clock setting is maintained for about 20 hours using the built-in clock battery even without the battery. (Leave the charged battery in the unit for about 10 minutes to charge the built-in battery.)**

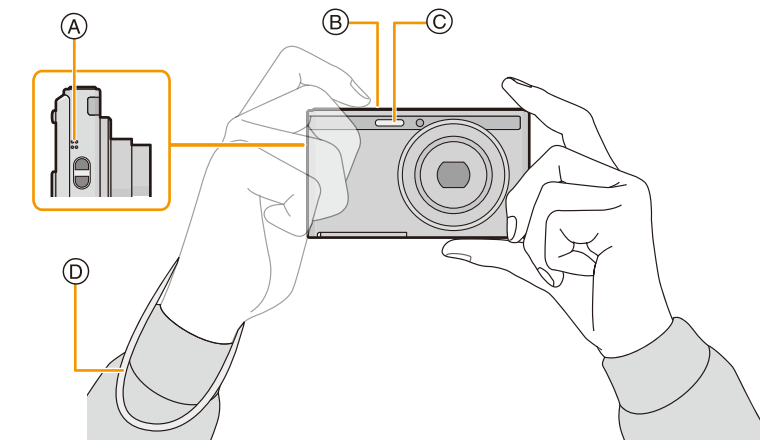
- If the clock is not set, the correct date cannot be printed when you order a photo studio to print the picture, or when you stamp the date on the pictures with [Date Stamp].
- If the clock is set, the correct date can be printed even if the date is not displayed on the screen of the camera.

Tips for taking good pictures

Fit the strap and hold the camera carefully

Hold the camera gently with both hands, keep your arms still at your side and stand with your feet slightly apart.

- **To prevent dropping, be sure to attach the supplied strap and fit it to your wrist. (P8)**
- Do not swing around or pull forcefully on the unit with the strap attached. The strap may break.
- Be careful not to move the camera when you press the shutter button.
- Be careful not to put your fingers on the flash, microphone, speaker or lens etc.



Ⓐ Speaker
Ⓑ Microphone
Ⓒ Flash
Ⓓ Strap

■ Direction Detection Function ([Rotate Disp.])

Pictures recorded with the camera held vertically are played back vertically (rotated). (Only when [Rotate Disp.] (P43) is set)

- When the camera is held vertically and tilted up and down to record pictures, the Direction Detection function may not work correctly.
- Motion pictures taken with the camera held vertically are not displayed vertically.

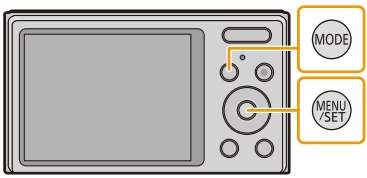
Preventing jitter (camera shake)

When the Jitter alert [((📷))] appears, use [Stabilizer] (P79), a tripod or the Self-timer (P54).

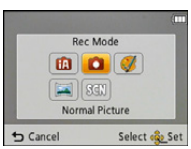
- Shutter speed will be slower particularly in the following cases. Keep the camera still from the moment the shutter button is pressed until the picture appears on the screen. We recommend using a tripod.
  – Slow sync./Red-Eye Reduction
  – [Night Portrait]/[Night Scenery]/[Starry Sky] (Scene Mode)

Selecting the Recording Mode

1 **Press [MODE].**



2 **Press ▲/▼/◀/▶ to select the Recording Mode.**



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

■ List of Recording Modes

Intelligent Auto Mode (P26)	
The subjects are recorded using settings automatically selected by the camera.	
Normal Picture Mode (P29)	
The subjects are recorded using your own settings.	
Creative Control Mode (P56) DMC-XS1	
Record while checking the image effect.	
Panorama Shot Mode (P61)	
This mode allows you to take panorama pictures.	
Scene Mode (P64)	
This allows you to take pictures that match the scene being recorded.	

- When the mode has been switched from Playback Mode to Recording Mode, the previously set Recording Mode will be set.

Taking pictures using the automatic function
(Intelligent Auto Mode)

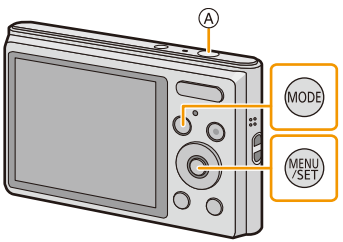
Recording Mode: iA

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

• The following functions are activated automatically.
– Scene Detection/Backlight Compensation/Intelligent ISO sensitivity control/Auto White Balance/ Face Detection/[i.Exposure]/[i.Zoom]/[Red-Eye Removal]/[Stabilizer]/[Continuous AF]

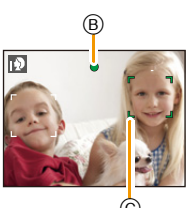
1 Press [MODE].

Ⓐ Shutter button



2 Press ▲/▼/◄/► to select [Intelligent Auto], and then press [MENU/SET].

3 Press the shutter button halfway to focus.



- The focus indication Ⓑ (green) lights when the subject is focused.
- The AF area Ⓒ 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.
- The minimal distance (how close you can be to the subject) will change depending on the zoom factor. Please check with the recordable range display on the screen. (P30)

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

Scene Detection

When the camera identifies the optimum scene, the icon of the scene concerned is displayed in blue for 2 seconds, after which its color changes to the usual red.

When taking pictures

iA →	[i-Portrait]	[i-Scenery]
	[i-Macro]	[i-Night Portrait]*
	[i-Night Scenery]	[i-Sunset]

* Only when [iA] is selected.

- [iA] is set if none of the scenes are applicable, and the standard settings are set.
- When [ ] or [ ] is selected, the camera automatically detects a person's face, and it will adjust the focus and exposure. **(Face Detection)**
- If a tripod is used, for instance, and the camera has judged that camera shake is minimal when the Scene Mode has been identified as [ ], the shutter speed will be set to a maximum of 8 seconds. Take care not to move the camera while taking pictures.
- Due to conditions such as the ones below, a different scene may be identified for the same subject.
  – Subject conditions: When the face is bright or dark, the size of the subject, the color of the subject, the distance to the subject, the contrast of the subject, when the subject is moving
  – Recording conditions: Sunset, sunrise, under low brightness conditions, when the camera is shaken, when zoom is used
- For the best results, it is recommended that you take pictures in the appropriate Recording Mode.
- [iA] is used for recording when recording motion pictures. Scene Detection does not work.

The Backlight Compensation

When there is a backlight, the subject appears darker and the camera will automatically attempt to correct it by increasing the brightness of the picture.
In Intelligent Auto Mode, backlight compensation works automatically. The [ ] is displayed on the screen when backlighting is detected. (Depending on the backlighting conditions, backlighting may not be detected correctly.)

Changing the settings

Following menus can be set.

Menu	Item
[Rec]	[Picture Size]*/[Burst]*/[Color Mode]*
[Motion Picture]	[Rec Quality]
[Setup]	[Clock Set]/[World Time]/[Beep]/[Language]/[Stabilizer Demo.] • Menu items other than those listed above are not displayed, but you can set them in other Recording Modes.

• For the setting method of the menu, refer to P38.

* Available settings may be different from other Recording Modes.

[Color Mode]

• Color setting of [Happy] is available in [Color Mode]. It is possible to automatically take a picture with a higher level of brilliance for the color brightness and vividness.

About the flash (P50)

• When [iA] is selected, [iA], [iA◎], [iS◎] or [iS] is set depending on the type of subject and brightness.
• When [iA◎], [iS◎] is set, [Red-Eye Removal] is enabled.
• Shutter speed will be slower during [iS◎] or [iS].

Taking pictures with your favorite settings

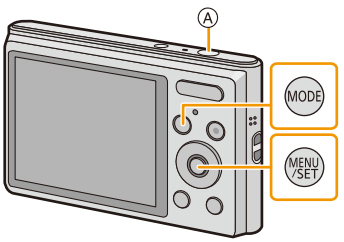
(Normal Picture Mode)

Recording Mode:

The camera automatically sets the shutter speed and the aperture value according to the brightness of the subject.
You can take pictures with greater freedom by changing various settings in the [Rec] menu.

1 **Press [MODE].**

Ⓐ Shutter button



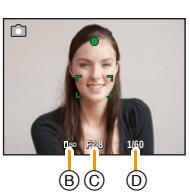
2 **Press ▲/▼/◀/► to select [Normal Picture], and then press [MENU/SET].**

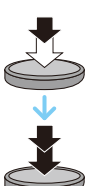
3 **Aim the AF area at the point you want to focus on.**

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

Ⓑ ISO sensitivity
Ⓒ Aperture value
Ⓓ Shutter speed

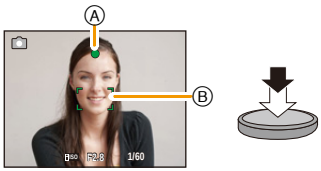
- Aperture value and shutter speed is displayed in red when correct exposure is not achieved. (Exclude when using a flash)





Focusing

Aim the AF area at the subject, and then press the shutter button halfway.



Focus	When the subject is focused	When the subject is not focused
Focus indication Ⓐ	On	Blinks
AF area Ⓑ	White→Green	White→Red
Sound	Beeps 2 times	Beeps 4 times

• The AF area may be displayed larger for certain zoom magnifications and in dark places.

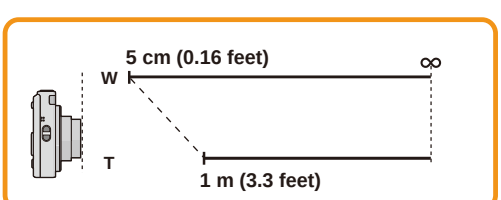
About focus range

The focus range is displayed when operating the zoom.

• The focus range is displayed in red when it is not focused after pressing the shutter button halfway.

The focus range may change gradually depending on the zoom position.

e.g.: Range of focus during the Intelligent Auto Mode



■ When the subject is not in focus (such as when it is not in the center of the composition of the picture you want to take)

1 **Aim the AF area at the subject, and press the shutter button half way to fix the focus and exposure.**

2 **Press and hold the shutter button half way while moving the camera as you compose the picture.**

• You can repeatedly retry the actions in step **1** before pressing the shutter button fully.

■ Subject and recording conditions which are difficult to focus in

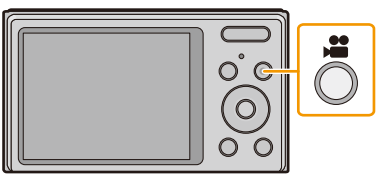
• Fast-moving subjects, extremely bright subjects or subjects without contrast
• When recording subjects through windows or near shiny objects
• When it is dark or when jitter occurs
• When the camera is too close to the subject or when taking a picture of both distant and near subjects

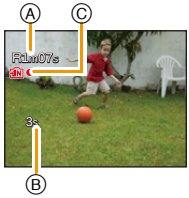
Recording Motion Pictures

Applicable modes: DMC-XS1 iA SCN
DMC-FH10 iA SCN

This unit can record motion pictures in QuickTime Motion JPEG format.

1 Start recording by pressing the motion picture button.





Ⓐ Available recording time
Ⓑ Elapsed recording time

- You can record motion pictures fitting each Recording Mode.
- Release the motion picture button right after you press it.
- The recording state indicator (red) Ⓒ will flash while recording motion pictures.
- For the setting of [Rec Quality], refer to P81.

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

- When recording to the built-in memory, [Rec Quality] is fixed to [QVGA].
- The available recording time displayed on the screen may not decrease regularly.
- Depending on the type of the card, the card access indication may appear for a while after recording motion pictures. This is not a malfunction.
- When motion pictures recorded with the camera are played back on other equipment, the quality of the picture and sound may deteriorate and it may not be possible to play them back. Also the recording information may not be displayed correctly.
- The screen may be blacked out momentarily, or the unit may record noise due to static electricity or electromagnetic waves etc. depending on the environment of the motion picture recording.
- Do not insert or remove the card during motion picture recording. (Otherwise, this unit may no longer operate normally and the card itself may be damaged or the recorded pictures may be lost.)
- Even if the aspect ratio setting is the same in still pictures and motion pictures, the angle of view may change at the start of the motion picture recording.
  When [Video Rec Area] (P41) is set to [ON], angle of view during motion picture recording is displayed.
- If the Extended Optical Zoom are used before pressing the motion picture button, those settings will be cleared, so the shooting range will change dramatically.
- The optical zoom magnification cannot be changed after starting to record motion pictures. However, Intelligent Zoom can be used by setting [i.Zoom] (P75) in the [Rec] menu to [ON]. Also, the Digital Zoom can be used by setting the [Digital Zoom] (P75) in the [Rec] menu to [ON]. For details about the zoom range, refer to P47. If motion picture recording was started within the optical zoom area, the zoom setting returns to the original magnification when motion picture recording is finished.
- It will be recorded in following categories for certain Scene Modes. A motion picture recording matching each scene will be performed for the ones not listed below.

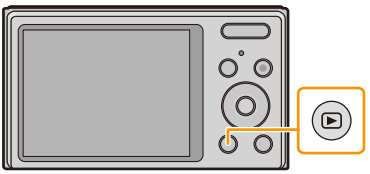
Selected Scene Mode	Scene Mode while recording motion picture
[Baby1]/[Baby2]	Portrait Mode
[Night Portrait], [Night Scenery], [Starry Sky]	Low Light Mode
[Sports], [Pet], [Photo Frame]	Normal motion picture

DMC-XS1

- If you end motion picture recording after a short time when using [Miniature Effect] of the Creative Control Mode, the camera may go on recording for a certain period. Please continue to hold the camera until the recording finishes.
- Motion pictures cannot be recorded while in [Soft Focus] of Creative Control Mode.

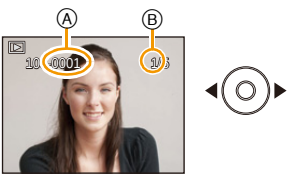
Playing Back

1 Press [▶].



2 Press ◄/► to select pictures.

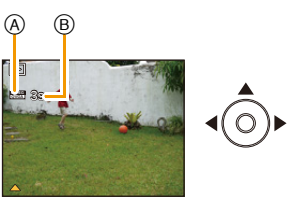
Ⓐ File number
Ⓑ Picture number
- If you press and hold ◄/►, you can play back the pictures in succession.
- Speed of picture Forwarding/Rewinding changes depending on the playback status.



■ Playing Back Motion Pictures

Press ◄/► to select a picture with a Motion Picture icon (such as [MJPEG VGA]), and then press ▲ to play back.

Ⓐ Motion picture icon
Ⓑ Motion picture recording time
- If you have filtered images for playback by using [Slide Show] (P83) or [Filtering Play] (P85), the selection screen appears. Press ▲/▼ to select [Play Video], and then press [MENU/SET].
- After playback starts, the elapsed playback time is displayed on the screen.
  For example, 8 minutes and 30 seconds is displayed as [8m30s].



• Operations performed during Motion Picture Playback

[MENU/SET]	▲	Play/Pause
	[MENU/SET]	Stop
	◄	Fast rewind*/ Frame-by-frame rewind (while pausing)
	►	Fast forward*/ Frame-by-frame forward (while pausing)

* The fast forward/rewind speed increases if you press ►/◄ again.
– You can adjust the volume with the zoom button.

- This camera complies with the DCF standard “Design rule for Camera File system” established by JEITA “Japan Electronics and Information Technology Industries Association” and with Exif “Exchangeable Image File Format”. Files that do not comply with the DCF standard cannot be played back.
- Images recorded with other camera may not be able to play back on this unit.
- The lens barrel retracts about 15 seconds after switching from Recording Mode to Playback Mode.
- The file format that can be played back with this camera is QuickTime Motion JPEG.
- When using a high capacity card, it is possible that fast rewinding may be slower than usual.
- To play back the motion pictures recorded by this unit on a PC, use the “PHOTOfunSTUDIO” software on the CD-ROM (supplied).
- Be careful not to block the speaker of the camera during playback.

Displaying Multiple Screens (Multi Playback)

Press [W] of the zoom button.

1 screen→12 screens→30 screens→Calendar screen display

Ⓐ Number of the selected picture and the total number of recorded pictures

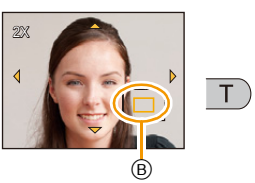
- Press [T] of the zoom button to return to the previous screen.
- Pictures displayed using [[!]] cannot be played back.

■ To return to normal playback

Press ▲/▼/◄/► to select a picture and then press [MENU/SET].

Using the Playback Zoom

Press [T] of the zoom button.



1×→2×→4×→8×→16×

- When you press [W] of the zoom button after enlarging the picture, the magnification becomes lower.
- When you change the magnification, the zoom position indication Ⓑ appears for about 2 seconds, and the position of the enlarged section can be moved by pressing ▲/▼/◄/►.
- The more a picture is enlarged, the more its quality deteriorates.

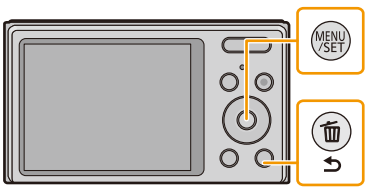
Deleting Pictures

Once deleted, pictures cannot be recovered.
- Pictures on the built-in memory or the card that are being played back will be deleted.
- Pictures that are not in the DCF standard or those that are protected cannot be deleted.

To delete a single picture

Select the picture to be deleted, and then press [🗑/↩].

- Confirmation screen is displayed.
  Picture is deleted by selecting [Yes].



To delete multiple pictures (up to 50) or all the pictures

1 **Press [🗑/↩].**

2 **Press ▲/▼ to select [Delete Multi] or [Delete All] and then press [MENU/SET].**

- [Delete All] → Confirmation screen is displayed.
  Pictures are deleted by selecting [Yes].
- It is possible to delete all pictures except the ones set as favorite when [All Delete Except Favorite] is selected with the [Delete All] set.

3 **(When [Delete Multi] is selected) Press ▲/▼/◄/► to select the picture, and then press [MENU/SET].** (Repeat this step.)

- [🗑] appears on the selected pictures. If [MENU/SET] is pressed again, the setting is canceled.

4 **(When [Delete Multi] is selected) Press ◄ to select [OK], and then press [MENU/SET].**

- Confirmation screen is displayed.
  Pictures are deleted by selecting [Yes].

- Do not turn the camera off while deleting.
- Depending on the number of pictures to be deleted, it may take some time to delete them.

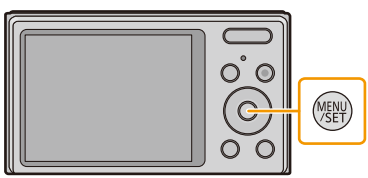
Setting the Menu

The camera comes with menus that allow you to choose the settings for taking pictures and playing them back just as you like and menus that enable you to have more fun with the camera and use it more easily.
In particular, the [Setup] menu contains some important settings relating to the camera's clock and power. Check the settings of this menu before proceeding to use the camera.

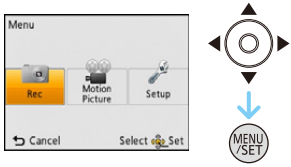
Setting menu items

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

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



2 **Press ▲/▼/◀/▶ to select menu and then press [MENU/SET].**

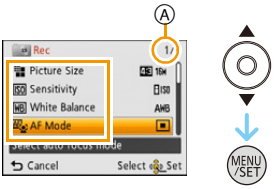


Menu	Description of settings
[Rec] (P69 to 80) **(Recording Mode only)**	The menu lets you set the Coloring, Sensitivity or Number of pixels, etc. of pictures you are recording.
[Motion Picture] (P81) **(Recording Mode only)**	This menu lets you set the setting for motion pictures such as recording quality.
[Playback] (P91 to 95) **(Playback Mode only)**	This menu lets you set the Protection, etc. of recorded pictures.
[Setup] (P40 to 44)	This menu lets you perform the clock settings, beep tone settings and other settings which make it easier for you to operate the camera.

3 Press ▲/▼ to select the menu item and then press [MENU/SET].

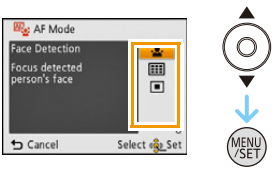
Ⓐ Menu screen page

- It will switch to the next page when you reach the bottom. (It will also switch by pressing the zoom button)



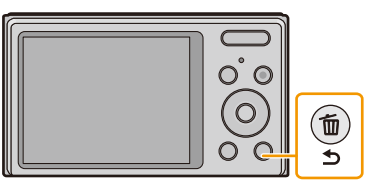
4 Press ▲/▼ to select the setting and then press [MENU/SET].

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



■ Close the menu

Press [🗑/↩] until the screen returns to the recording/playback screen or press the shutter button half-way.



- There are functions that cannot be set or used depending on the modes or menu settings being used on the camera due to the specifications.

About the Setup Menu

For details on how to select the [Setup] menu settings, refer to P38.

- [Clock Set], [Auto Power Off] and [Auto Review] are important items. Check their settings before using them.
- In Intelligent Auto Mode, only [Clock Set], [World Time], [Beep], [Language], [Stabilizer Demo.] can be set.

[Clock Set]	Setting Date/Time.

- Refer to P22 for details.

[World Time]	Set the time in your home area and travel destination. You can display the local times at the travel destinations and record them on the pictures you take.
	After selecting [Destination] or [Home], press ◄/► to select an area, and press [MENU/SET] to set. • Set [Home] first thing after purchasing. [Destination] can be set after setting up [Home]. **[Destination]:** Travel destination area Ⓐ Current time of the destination area Ⓑ Time difference from home area **[Home]:** Your home area Ⓒ Current time Ⓓ Time difference from GMT (Greenwich Mean Time)

- Press ▲ if you are using Summer Time [☀]. (The time will move forward by 1 hour.) Press ▲ once more to return to the normal time.
- If you cannot find the travel destination in the areas displayed on the screen, set by the time difference from the home area.

[Beep]	Adjusts the volume of the operating sound.
	[🔉] ([Low]) **[🔊]** ([High]) **[🔇]** ([OFF])

• Changing the settings for the operating sound will change the shutter sound.

[Speaker Volume]	Adjust the volume of the speaker to any of the 7 levels.

• When you connect the camera to a TV, the volume of the TV speakers does not change. Also, when connected, no sound is output from the camera speakers.

[Monitor Display]	Brightness, color, or red or blue tint of the LCD monitor is adjusted.
	[Brightness]: Adjust the brightness. **[Contrast · Saturation]:** Adjust the contrast or clarity of colors. **[Red Tint]:** Adjust the red tint. **[Blue Tint]:** Adjust the blue tint.
	1 **Select the settings by pressing ▲/▼, and adjust with ◄/►.** ***2*** **Press [MENU/SET] to set.**

• Some subjects may appear differently from actuality on the LCD monitor. However, this does not affect the recorded pictures.

[Focus Icon]	Change the focus icon.
	[●]/[ ]/[ ]/[ ]/[ ]/[ ]

[Video Rec Area]	Angle of view for motion picture recording can be checked.
	[ON]/[OFF]

• Motion picture recording area display is only an approximation.
• Recording area display may disappear when zooming to Tele depending on the picture size setting.
• It will be fixed to [OFF] during the Intelligent Auto Mode.

[Auto Power Off]	The camera is automatically turned off if the camera has not been used for the time selected on the setting.
	[2MIN.] **[5MIN.]** **[10MIN.]** **[OFF]**

- [Auto Power Off] is set to [5MIN.] in the Intelligent Auto Mode.
- [Auto Power Off] does not work in the following cases.
  - When using the AC adaptor (supplied)
  - When connecting to a PC or a printer
  - When recording or playing back motion pictures
  - During a Slide Show

[Auto Review]	Displays pictures you took right after taking them.
	[ON]/[OFF]

- When [ON] is set, a picture taken is displayed for approximately 2 seconds.
- [Auto Review] is activated regardless of its setting in the following case.
  - When using [Burst].
- The Auto Review function is fixed to [ON] in the following cases.
  - Intelligent Auto Mode
- [Auto Review] does not work when recording motion pictures.

[Reset]	The [Rec] or [Setup] menu settings are reset to the initial settings.

- When the [Reset] setting is selected during recording, the operation that resets the lens is also performed at the same time. You will hear the sound of the lens operating but this is normal and not indicative of malfunctioning.
- When [Setup] menu settings are reset, the following settings are also reset.
  - The birthday settings for [Baby1]/[Baby2] and [Pet] in Scene Mode.
  - The [World Time] setting.
- The folder number and the clock setting are not changed.

[Output]	Set to match the color television system in each country or the type of TV.
	[] ([Video Out])*: **[NTSC]:** Video output is set to NTSC system. **[PAL]:** Video output is set to PAL system. **[] ([TV Aspect]):** **[16:9]:** When connecting to a 16:9 screen TV. **[4:3]:** When connecting to a 4:3 screen TV.

- This will work when the AV cable (optional) is connected.

* PAL video out is not available on the version DMC-XS1P/DMC-FH10P sold in the U.S. and the version DMC-XS1PC/DMC-FH10PC sold in Canada.

[Rotate Disp.]	This mode allows you to display pictures vertically if they were recorded holding the camera vertically.
	[] ([On]): Rotate pictures on a TV and the LCD monitor so that they are displayed vertically. **[] ([External Only]):** Pictures are displayed vertically by rotating when played back on TV. **[OFF]**

- Refer to P34 for information about how to play back pictures.
- When you play back pictures on a PC, they cannot be displayed in the rotated direction unless the OS or software is compatible with Exif. Exif is a file format for still pictures which allows recording information etc. to be added. It was established by “JEITA (Japan Electronics and Information Technology Industries Association)”.
- It may not be possible to rotate pictures that have been recorded with other equipment.
- Pictures are not rotated during Multi Playback.

[Version Disp.]	It is possible to check which version of firmware is on the camera.

[Format]	The built-in memory or card is formatted. **Formatting irretrievably deletes all the data so check the data carefully before formatting.**

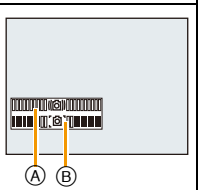
- Do not turn the camera off during formatting.
- If a card has been inserted, only the card is formatted. To format the built-in memory, remove the card.
- If the card has been formatted on a PC or other equipment, format it on the camera again.
- It may take longer to format the built-in memory than the card.
- If you cannot format, contact the dealer or Panasonic.

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

For Canadian assistance, please call:
1-800-99-LUMIX (1-800-995-8649) or
send e-mail to: lumixconcierge@ca.panasonic.com

[Language]	Set the language displayed on the screen.

- If you set a different language by mistake, select [] from the menu icons to set the desired language.

[Stabilizer Demo.]	Displays the amount of jitter the camera has detected. Ⓐ Amount of jitter Ⓑ Amount of jitter after correction 

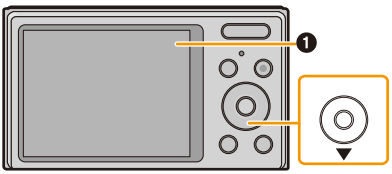
- The Stabilizer function is switched between [On] and [Off] every time [MENU/SET] is pressed.
- [Stabilizer Demo.] is an approximation.

About the LCD Monitor

Press ▼ to change.

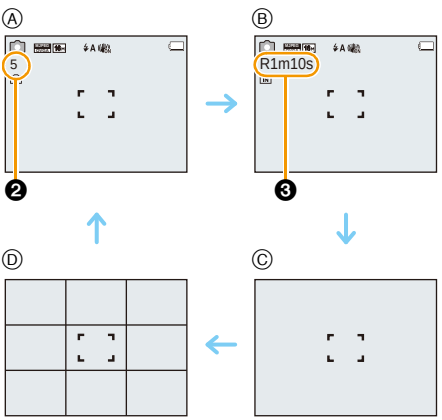
❶ LCD monitor

• During motion picture playback, panorama playback or a slideshow, you can only select “Normal Display Ⓔ” or “No Display Ⓖ”.



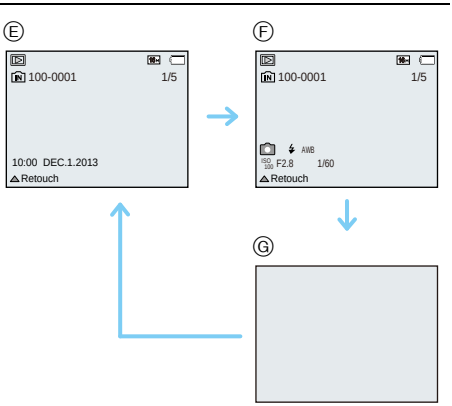
In Recording Mode

Ⓐ Normal display
Ⓑ Normal display
Ⓒ No display
Ⓓ No display (Recording guideline)
❷ Number of recordable pictures
❸ Available recording time



In Playback Mode

Ⓔ Normal display
Ⓕ Display with recording information
Ⓖ No display



Recording guideline

This is used as a reference of composition, such as balance, while taking a picture.

• In the following cases, the guidelines are not displayed:

– Panorama Shot Mode

– [Photo Frame] (Scene Mode)

Using the Zoom

Applicable modes: DMC-XS1 iA SCN
DMC-FH10 iA SCN

You can zoom in to make people and objects appear closer or zoom out to record landscapes in wide angle.

To make subjects appear further away use (Wide)

Press [W] of the zoom button.

W

To make subjects appear closer use (Tele)

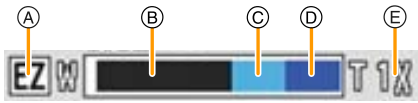
Press [T] of the zoom button.

T

Screen display

Example of display when Extended Optical Zoom (EZ), Intelligent Zoom and Digital Zoom are used together.

Ⓐ Extended Optical Zoom indication
Ⓑ Optical Zoom range
Ⓒ Intelligent Zoom range
Ⓓ Digital Zoom range
Ⓔ Zoom magnification (approximation)



- **When using the Zoom function, an estimate of the focus range will appear in conjunction with the zoom display bar. [Example: 0.05 m (0.16 ft.) –∞]**

- The lens barrel will extend or retract depending on the zoom position. Take care not to obstruct the movement of the lens barrel when using the Zoom function.

Optical Zoom

Zooms in without deteriorating the image quality.

Maximum magnification: 5×

- Optical zoom cannot be used while recording motion pictures.

Extended Optical Zoom (EZ)

This function works when any of the picture sizes (P69) indicated with EZ is selected. You can zoom in further than you can with the Optical Zoom without deteriorating the image quality.

Maximum magnification: 11.3×
(This includes the optical zoom magnification. The magnification level differs depending on [Picture Size] setting.)

- "EZ" is an abbreviation of "Extended Optical Zoom".
- This function is not available in the following cases:
  - [High Sens.]/[Photo Frame] (Scene Mode)
  - When [Burst] in the [Rec] menu is set to [□H] or [□]
  - When recording motion pictures

DMC-XS1

  - [Toy Effect] (Creative Control Mode)

Intelligent Zoom

Enabled when [i.Zoom] (P75) in the [Rec] menu is set to [ON].
You can zoom in up to 1.6× the original zoom magnification while minimizing the deterioration of the image quality.

- This will work automatically in Intelligent Auto Mode.
- This function is not available in the following cases:
  - [High Sens.] (Scene Mode)
  - When [Burst] in the [Rec] menu is set to [□H] or [□]

DMC-XS1

  - [Toy Effect] (Creative Control Mode)

Digital Zoom

This function works when [Digital Zoom] (P75) in the [Rec] menu is set to [ON]. Although the image quality deteriorates every time you zoom in further, you can zoom in up to four times the original zoom magnification.

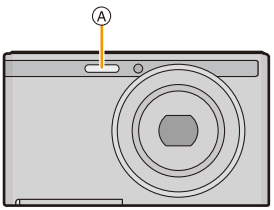
- When using the [i.Zoom], the maximum magnification of the Digital Zoom is set to 2.5×.
- We recommend using a tripod and the Self-timer (P54) for taking pictures.
- This function is not available in the following cases:
  – Intelligent Auto Mode
  – [High Sens.]/[Photo Frame] (Scene Mode)
  – When [Burst] in the [Rec] menu is set to [H] or [ ]

DMC-XS1

  – [Toy Effect]/[Miniature Effect] (Creative Control Mode)

Taking Pictures Using the Built-in Flash

Applicable modes: DMC-XS1 iA SCN
DMC-FH10 iA SCN

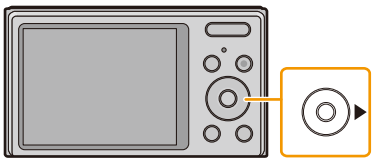


Ⓐ **Flash**
Do not cover it with your fingers or other objects.

Switching to the appropriate flash setting

Set the flash to match the recording.

1 **Press ▶ [⚡].**



2 Press ▲/▼ to select the item and then press [MENU/SET].

Item	Description of settings
[ϟA] ([Auto]) [iϟA] ([iAuto])*1	The flash is automatically activated when the recording conditions make it necessary.
[ϟA◎] ([Auto/Red-Eye])*2	The flash is automatically activated when the recording conditions make it necessary. It is activated once before the actual recording to reduce the red-eye phenomenon (eyes of the subject appearing red in the picture) and then activated again for the actual recording. • **Use this when you take pictures of people in low lighting conditions.**
[ϟ] ([Forced Flash On])	The flash is activated every time regardless of the recording conditions. • **Use this when your subject is back-lit or under fluorescent light.**
[ϟS◎] ([Slow Sync./ Red-Eye])*2	If you take a picture with a dark background landscape, this feature will slow the shutter speed when the flash is activated so that the dark background will become bright. Simultaneously, it reduces the red-eye phenomenon. • **Use this when you take pictures of people in front of a dark background.**
[⊘] ([Forced Flash Off])	The flash is not activated in any recording conditions. • **Use this when you take pictures in places where the use of flash is not permitted.**

*1 This can be set only when Intelligent Auto Mode is set. The icon changes depending on the type of subject and brightness. (P28)

*2 **The flash is activated twice. The subject should not move until the second flash is activated. Interval until the second flash depends on the brightness of the subject.**
[Red-Eye Removal] (P79) on the [Rec] menu is set to [ON], [✎] appears on the flash icon.

■ Available Flash Settings in Recording Mode

The available flash settings depend on the Recording Mode.
(○: Available, —: Not available, ●: Scene Mode initial setting)

	⚡A	⚡A◎	⚡	⚡S◎	⊛
iA	○*	—	—	—	○
📷	○	○	○	—	○
🌷 🌷 🌸1 🌸2	○	●	○	—	○
🏔 🏔 🏔 🏔 🏔	—	—	—	—	●
🏃	●	—	○	—	○
🎥	—	—	—	●	○
🍽 🍽 🍽	○	—	○	—	●
🎥	●	○	○	—	○

* [i⚡A] is displayed.

- The flash setting may change if the Recording Mode is changed. Set the flash setting again if necessary.
- The flash setting is memorized even if the camera is turned off. However, the Scene Mode flash setting is reset to the initial setting when the Scene Mode is changed.
- Flash will not be activated when recording motion picture.

The available flash range

• The available flash range is an approximation.

	Wide	Tele
In [ISO] in [Sensitivity]	40 cm (1.3 feet) to 4.4 m (14 feet)	1.0 m (3.3 feet) to 1.7 m (5.6 feet)

Shutter speed for each flash setting

Flash setting	Shutter speed (Sec.)
ϟA	1/60 to 1/1600
ϟA👁	
ϟ	

Flash setting	Shutter speed (Sec.)
ϟS👁	1 or 1/8 to 1/1600∗1 1 or 1/4 to 1/1600∗2
⊛	

∗1 The shutter speed changes depending on the [Stabilizer] setting.

∗2 When [ISO] in [Sensitivity] is set.

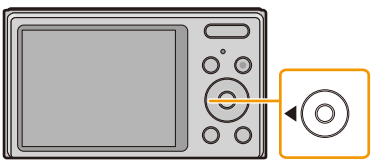
• ∗1, 2: The shutter speed becomes a maximum of 1 second in the following cases.
  – When the Optical Image Stabilizer is set to [OFF].
  – When the camera has determined that there is very little jitter when the Optical Image Stabilizer is set to [ON].
• In Intelligent Auto Mode, shutter speed changes depending on the identified scene.
• In Scene Mode, shutter speed will be different from the above table.

• If you bring the Flash too close to an object, the object may be distorted or discolored by the heat or lighting from the Flash.
• Recording a subject from too close, or without sufficient flash will not provide the appropriate level of exposure, and may result in a picture that is too white or dark.
• When the Flash is being charged, the Flash icon blinks red, and you cannot take a picture even when you press the shutter button fully.
• If recording a subject without sufficient flash, the White Balance may not be properly adjusted.
• The effects of the flash may not be adequately achieved under the following conditions.
  – When [Burst] is set to [🖼]
  – When the shutter speed is too fast
• It may take time to charge the Flash if you repeatedly take pictures. Take a picture after the access indication disappears.
• The Red-Eye Reduction effect differs between people. Also, if the subject is far away from the camera or was not looking at the first Flash, the effect may not be evident.

Taking Pictures with the Self-timer

Applicable modes: DMC-XS1 [iA] [📷] [🎨] [🎥] [SCN]
DMC-FH10 [iA] [📷] [🎥] [SCN]

1 Press ◀ [⏲].

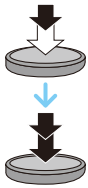


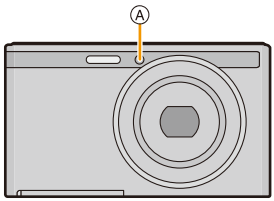
2 Press ▲/▼ to select the item and then press [MENU/SET].

Item	Description of settings
[⏲10] ([10sec.])	Picture is taken 10 seconds after shutter is pressed.
[⏲2] ([2sec.])	Picture is taken 2 seconds after shutter is pressed. • When using a tripod, etc., this setting is a convenient way to avoid the jitter caused by pressing the shutter button.
[OFF]	–

3 Press the shutter button halfway to focus and then press it fully to take the picture.

- The self-timer indicator Ⓐ blinks and the shutter is activated after 10 seconds (or 2 seconds).





- When you press the shutter button once fully, the subject is automatically focused just before recording.
- We recommend using a tripod when recording with the Self-timer.
- The self-timer cannot be set when recording motion pictures.

Compensating the Exposure

Applicable modes: DMC-XS1 DMC-FH10

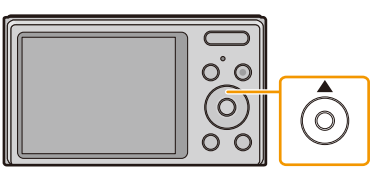
Use this function when you cannot achieve appropriate exposure due to the difference in brightness between the subject and the background.

Underexposed | **Properly exposed** | **Overexposed**

Compensate the exposure towards positive.

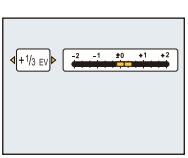
Compensate the exposure towards negative.

1 Press ▲ [+/-] to display [Exposure].



2 Press ◄/► to compensate the exposure and then press [MENU/SET].

- The exposure compensation value appears on the screen.
- Select [0 EV] to return to the original exposure.



- EV is an abbreviation of [Exposure Value], a unit indicating the amount of exposure. The EV changes with the aperture value or the shutter speed.
- The set exposure value is memorized even if the camera is turned off.
- The compensation range of the exposure will be limited depending on the brightness of the subject.
- You cannot use the Exposure Compensation in following condition.
  – [Starry Sky] (Scene Mode)

Taking Pictures with different image effects

(Creative Control Mode) DMC-XS1

Recording Mode: DMC-XS1

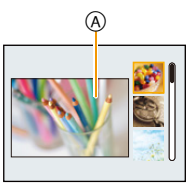
This mode records with additional image effects. You can set the effects to add by selecting example images and checking them on the screen.

1 **Press [MODE].**

2 **Press ▲/▼/◄/► to select [Creative Control], and then press [MENU/SET].**

3 **Press ▲/▼ to select image effects and then press [MENU/SET].**

- The image effect of the selected example image will be applied in a preview display Ⓐ.
- A brief description of selected image effect appears when you press ►.



- To change the Creative Control Mode, press [MENU/SET], select [Creative Control] using ▲/▼/◄/►, and then press [MENU/SET].
- The displayed image on the recording screen and the preview of the selected image effect may differ from the actual recorded image.
- The Creative Control Mode setting is stored even after turning off this unit.
- White Balance will be fixed to [AWB].
- [Sensitivity] cannot be set in Creative Control Mode because the camera adjusts its settings automatically.

∗ These pictures are examples to show the effect.

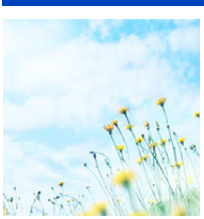
[Expressive]

This effect emphasizes the color to make a pop art picture.

[Retro]

This effect gives a faded image.

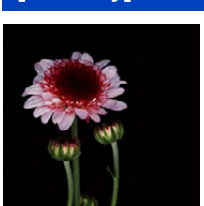
[High Key]



This effect adds a bright, airy and soft feel to the overall image.

- If you select this effect with Panorama Shot Mode, the effect may not be apparent in places with insufficient brightness.

[Low Key]



This effect adds a dark and relaxing feel to the overall image and enhances bright parts.

[Sepia]

This effect creates a sepia image.

[Dynamic Monochrome]

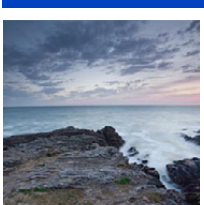
This effect gives a higher contrast to create an impressive black and white picture.

[Impressive Art]

This effect gives your photo a dramatic contrast look.

- If you select this effect with Panorama Shot Mode, seams between pictures may become noticeable.

[High Dynamic]



This effect produces the optimum brightness for both dark and bright parts.

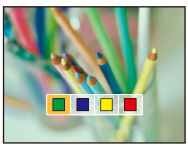
[Cross Process]

This effect gives your photo a dramatic color look.

Items that can be set

Color	Green tone/Blue tone/Yellow tone/Red tone

- Press ◄/► to select the color to enhance, and press [MENU/SET].



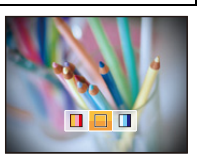
[Toy Effect]

This effect reduces peripheral brightness to give the impression of a toy camera.

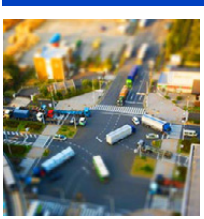
Items that can be set

Color	Orange emphasized	⇔	Blue emphasized

- Press ◄/► to select the color tone, and press [MENU/SET].



[Miniature Effect]



This effect blurs peripheral areas to give the impression of a diorama.

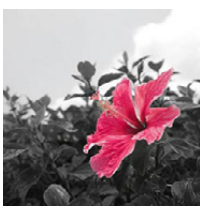
- Display of the recording screen will be delayed more than usual and the screen will look as if frames are being dropped.
- No sound is recorded in motion pictures.
- Approximately 1/10 of the time period is recorded. (If you record for 10 minutes, the resulting motion picture recording will be approximately 1 minute long.)
  The displayed available recording time is approximately 10 times. When switching to Recording Mode, please check the available recording time.
- When taking pictures of a large size, the screen may turn black after taking the picture because of signal processing. This is not a malfunction.

[Soft Focus]

This effect blurs the overall image to produce a soft feel.

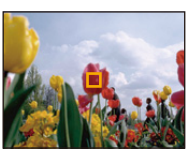
- Display of the recording screen will be delayed more than usual and the screen will look as if frames are dropping.

[One Point Color]



This effect leaves one selected color to emphasize impressiveness.

■ Set the color to leave in



1 **Fit the color you want to leave in the frame at the center of the screen, and then press [MENU/SET].**
- If you press ▼ ([DISP.]), you will return to step **1**.

2 **Check the color you have set, and then press [MENU/SET].**
- The set color is memorized even if the camera is turned off. In that case, the operation starts from step **2**.

- Depending on the subject, the set color may not be left in.

Taking panorama pictures (Panorama Shot Mode)

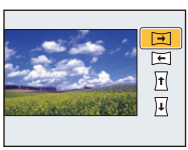
Recording Mode:

Pictures are recorded continuously while moving the camera horizontally or vertically, and are combined to make a single panorama picture.

1 **Press [MODE].**

2 **Press ▲/▼/◄/► to select [Panorama Shot], and then press [MENU/SET].**

3 **Press ▲/▼ to select the recording direction and then press [MENU/SET].**



DMC-XS1

Image effects can be selected from example images.

- You can add the same image effect as the Creative Control Mode with the same operation as the Creative Control Mode. (except for [Toy Effect] and [Miniature Effect])
- Read P57–60 for details on the respective effects.
- While recording panorama pictures, an image effect of the Creative Control Mode is not applied to the screen.
- White Balance is fixed to [AWB] while an image effect is applied.
- If you are not going to add an image effect, select [OFF].

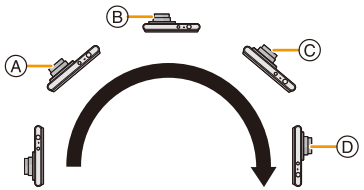
4 **After confirming the recording direction, press [MENU/SET].**

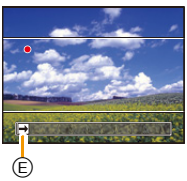
- A horizontal/vertical guide is displayed.
  If you press ►, you will return to step **3**.

5 **Press the shutter button halfway to focus.**

6 Press the shutter button fully and record a picture while moving the camera in a small circle in the direction selected in Step 3.

Recording from left to right





Trace a half-circle with the camera, taking about 4 seconds.

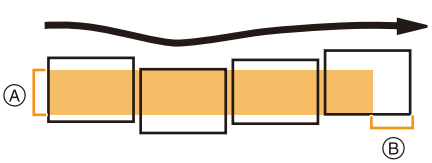
- Move the camera at a constant speed.
  Pictures may not be able to be recorded properly if the camera is moved too fast or slow.

Ⓐ 1 second
Ⓑ 2 seconds
Ⓒ 3 seconds
Ⓓ 4 seconds
Ⓔ Recording direction and panning (Guide)

7 Press the shutter button once again to end the still picture recording.

- Recording can also be ended by keeping the camera still while recording.

■ Technique for Panorama Shot Mode



Ⓐ Move the camera in the recording direction without shaking it. If the camera shakes too much, pictures may not be able to be recorded, or the recorded panorama picture may become narrower (smaller)
Ⓑ Move the camera towards the edge of the range you wish to record. (The edge of the range will not be recorded in the last frame)

- The zoom position is fixed to Wide.
- The focus, white balance, and exposure are fixed at the optimum values for the first picture. As a result, if the focus or brightness changes substantially during recording, the entire panorama picture may not be recorded at the suitable focus or brightness.
- When multiple pictures are combined to create a single panorama picture, the subject may appear distorted or the connection points may be noticeable in some cases.
- The number of recording pixels in the horizontal and vertical directions of the panorama picture varies depending on the recording direction and the number of combined pictures. The maximum number of pixels is shown below.

Recording direction	Horizontal Resolution	Vertical Resolution
Horizontal	3200 pixels	720 pixels
Vertical	960 pixels	3200 pixels

- A panorama picture may not be able to be created, or the pictures may not be combined properly when recording the following subjects or under the recording conditions below.
  – Subjects with a single, uniform color or repetitive pattern (such as the sky or a beach)
  – Moving subjects (person, pet, car, waves, flowers blowing in the breeze, etc.)
  – Subjects where the color or patterns change in a short time (such as an image appearing on a display)
  – Dark places
  – Locations with flickering light sources such as fluorescent lights or candles

■ About playback

[MENU/SET]	▲	Start panorama playback＊1/Pause＊2
	[MENU/SET]	Stop

＊1 If you have filtered images for playback by using [Slide Show] (P83) or [Filtering Play] (P85), the selection screen appears. Press ▲/▼ to select [Play Panorama], and then press [MENU/SET].
＊2 You can perform frame-by-frame forward/rewind by pressing ►/◄ during a pause.

Taking pictures that match the scene being recorded (Scene Mode)

Recording Mode: SCN

When you select a Scene Mode to match the subject and recording situation, the camera sets the optimal exposure and hue to obtain the desired picture.

1 **Press [MODE].**

2 **Press ▲/▼/◄/► to select [Scene Mode], and then press [MENU/SET].**

3 **Press ▲/▼/◄/► to select the Scene Mode and then press [MENU/SET].**

- To change the Scene Mode, press [MENU/SET], select [Scene Mode] using ▲/▼/◄/►, and then press [MENU/SET].
- The following cannot be set in Scene Mode as the camera adjusts automatically.
  – [Sensitivity]/[i.Exposure]/[i.Zoom]/[Color Mode]

[Portrait]

When taking pictures of people outdoors during the daytime, this mode allows you to improve the appearance and make their skin tones look healthier.

■ Technique for Portrait Mode

To make this mode more effective:

❶ Press and hold down the zoom button as far as possible to Tele.
❷ Move close to the subject to make this mode more effective.

[Soft Skin]

When taking pictures of people outdoors during the daytime, this mode enables the texture of their skin to appear even softer than with [Portrait]. (It is effective when taking pictures of people from the chest up.)

■ Technique for Soft Skin Mode

To make this mode more effective:

❶ Press and hold down the zoom button as far as possible to Tele.
❷ Move close to the subject to make this mode more effective.

- If a part of the background etc. is a color close to skin color, this part is also smoothed.
- This mode may not be effective when there is insufficient brightness.

[Scenery]

This allows you to take pictures of a wide landscape.

[Sports]

Setting for when you want to take pictures of sports scenes or other fast-moving events.

- Shutter speed may slow down up to 1 second.
- This mode is suitable for taking pictures of subjects at distances of 5 m (16 feet) or more.

[Night Portrait]

This allows you to take pictures of a person and the background with near real-life brightness.

■ Technique for Night Portrait Mode

- **Use the flash. (You can set to [ ].)**
- Ask the subject not to move while taking a picture.

- We recommend using a tripod and the Self-timer for taking pictures.
- Shutter speed may slow down up to 8 seconds.
- The shutter may remain closed (max. about 8 sec.) after taking the picture because of signal processing. This is not a malfunction.
- Noise may become visible when you take pictures in dark places.

[Night Scenery]

This allows you to take vivid pictures of the nightscape.

- We recommend using a tripod and the Self-timer for taking pictures.
- Shutter speed may slow down up to 8 seconds.
- The shutter may remain closed (max. about 8 sec.) after taking the picture because of signal processing. This is not a malfunction.
- Noise may become visible when you take pictures in dark places.

[Food]

This mode allows you to take pictures of food with a natural hue without being affected by the ambient light in restaurants, etc.

[Baby1]/[Baby2]

This takes pictures of a baby with a healthy complexion. When you use the flash, the light from it is weaker than usual.
It is possible to set different birthdays for [Baby1] and [Baby2]. You can display those during playback.

■ Birthday setting

1 Press ▲/▼ to select [Age] and then press [MENU/SET].
2 Press ▲/▼ to select [SET] and then press [MENU/SET].
3 Enter the birthday.

Birthday: ◀/▶: Select the items (year/month/day)
▲/▼: Setting
[MENU/SET]: Set

- When the birthday is set, [Age] is automatically set to [ON].
- If [ON] is selected when the birthday has not been registered, the setting screen appears automatically.

4 Press ▼ to select [Exit] and then press [MENU/SET] to finish.

■ To cancel [Age]

Select the [OFF] setting in step 2.

- The age can be printed out using the "PHOTOfunSTUDIO" bundled software on the CD-ROM (supplied).
- If [Age] is set to [OFF] even when the birthday has been set, the age will not be displayed.
- Shutter speed may slow down up to 1 second.

[Pet]

Select this when you want to take pictures of a pet such as a dog or a cat.
You can set your pet's birthday.

For information about [Age], refer to [Baby1]/[Baby2] on P67.

[Sunset]

Select this when you want to take pictures of a sunset view. This allows you to take vivid pictures of the red color of the sun.

[High Sens.]

This mode minimizes the jitter of the subjects, and enables you to take pictures of these subjects in dimly lit rooms.

■ Picture Size

Select the picture size of 3M (4:3), 2.5M (3:2), 2M (16:9) or 2.5M (1:1).

[Starry Sky]

This mode allows you to take vivid pictures of a starry sky or a dark subject.

■ Setting the shutter speed

Select a shutter speed of [15 sec.], [30 sec.] or [60 sec.].

- Press the shutter button fully to display the countdown screen. Do not move the camera after this screen is displayed. When countdown finishes, [Please wait...] is displayed for the same length of time as the set shutter speed for signal processing.

■ Technique for Starry Sky Mode

- The shutter opens for 15, 30 or 60 seconds. Be sure to use a tripod. We also recommend taking pictures with the self-timer.

[Glass Through]

Objects in the distance are prioritized for focus.
This mode is ideal for taking pictures of scenery and other landscapes through clear glass, such as in vehicles or buildings.

- The camera may focus on the glass if it is dirty or has dust on it.
- The pictures taken may not look natural if the glass is colored. When this happens, change the white balance settings. (P71)

[Photo Frame]

Record the image with a frame around it.

■ Setting the frame

Select from 6 types of frames.

- The picture size is fixed to 5M (4:3).
- The color of the frame displayed on the screen and the color of the frame around the actual image may differ, but this is not a malfunction.

Using the [Rec] Menu

For details on [Rec] menu settings, refer to P38.

[Picture Size]

Applicable modes: DMC-XS1

DMC-FH10

Set the number of pixels. The higher the numbers of pixels, the finer the detail of the pictures will appear even when they are printed onto large sheets.

Settings	Picture Size
[4:3 16M]	4608×3456
[4:3 10M EZ]*	3648×2736
[4:3 5M EZ]	2560×1920
[4:3 3M EZ]*	2048×1536
[4:3 0.3M EZ]	640×480
[3:2 14M]	4608×3072
[16:9 12M]	4608×2592
[1:1 12M]	3456×3456

* This item cannot be set in the Intelligent Auto Mode.

4:3 : Aspect ratio of a 4:3 TV

3:2 : Aspect ratio of a 35 mm film camera

16:9 : Aspect ratio of a high-definition TV, etc.

1:1 : Square aspect ratio

- In specific modes, Extended Optical Zoom cannot be used, and the picture size for [EZ] is not displayed. For details regarding modes in which Extended Optical Zoom cannot be used, refer to P48.
- Pictures may appear mosaic depending on the subject and the recording conditions.

[Sensitivity]

Applicable modes: DMC-XS1 iA SCN

DMC-FH10 iA SCN

This allows the Sensitivity to light (ISO sensitivity) to be set. Setting to a higher figure enables pictures to be taken even in dark places without the resulting pictures coming out dark.

Settings	Description of settings
[iISO] ([i.ISO])	The ISO sensitivity is adjusted according to the movement of the subject and the brightness. • Maximum [1600] • The shutter speed is not fixed when the shutter button is pressed halfway. It is continuously changing to match the movement of the subject until the shutter button is pressed fully.
[100]	The ISO sensitivity is fixed to various settings.
[200]	
[400]	
[800]	
[1600]	

	[100] ⇐ **[1600]**	
Recording location (recommended)	When it is light (outdoors)	When it is dark
Shutter speed	Slow	Fast
Noise	Less	Increased
Jitter of the subject	Increased	Less

- For the focus range of flash when [iISO] is set, refer to P53.
- The ISO sensitivity is automatically set under the following conditions.
  – When recording motion pictures
  – When [Burst] is set to [H] or [ ]

[White Balance]

Applicable modes: DMC-XS1 iA, SCN

DMC-FH10 iA, SCN

In sunlight, under incandescent lights or in other such conditions where the color of white takes on a reddish or bluish tinge, this item adjusts to the color of white which is closest to what is seen by the eye in accordance with the light source.

Settings	Description of settings
[AWB] ([Auto White Balance])	Automatic adjustment
[☼] ([Daylight])	When taking pictures outdoors under a clear sky
[☁] ([Cloudy])	When taking pictures outdoors under a cloudy sky
[⌂] ([Shade])	When taking pictures outdoors in the shade
[☼] ([Incandescent])	When taking pictures under incandescent lights
[▬] ([White Set])	Value set by using [▬ SET]
[▬ SET] ([White Set Setting])	Set manually

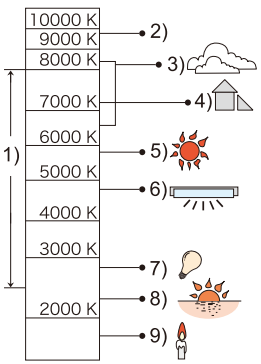
- Under fluorescent lighting, LED lighting fixture etc., the appropriate White Balance will vary depending on the lighting type, so use [AWB] or [▬ SET].
- The White Balance setting is memorized even if the camera is turned off. (However, the White Balance setting for a Scene Mode returns to [AWB] when the Scene Mode is changed.)
- White Balance is fixed to [AWB] in following cases.
  – [Scenery]/[Night Portrait]/[Night Scenery]/[Food]/[Sunset]/[Starry Sky] (Scene Mode)

■ Auto White Balance

Depending on the conditions prevailing when pictures are taken, the pictures may take on a reddish or bluish tinge. Furthermore, when a multiple number of light sources are being used or there is nothing with a color close to white, Auto White Balance may not function properly. In this case, set the White Balance to a mode other than [AWB].

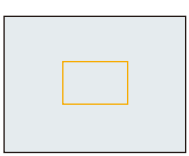
1 Auto White Balance will work within this range
2 Blue sky
3 Cloudy sky (Rain)
4 Shade
5 Sunlight
6 White fluorescent light
7 Incandescent light bulb
8 Sunrise and sunset
9 Candlelight

K=Kelvin Color Temperature



Setting the White Balance manually

Set the White Balance value. Use to match the condition when taking photographs.



1 **Select [SET] and then press [MENU/SET].**

2 **Aim the camera at a sheet of white paper etc. so that the frame in the center is filled by the white object only and then press [MENU/SET].**

- White Balance may not be set when the subject is too bright or too dark. Set the White Balance again after adjusting to appropriate brightness.
- Exit the menu after it is set.

[AF Mode]

Applicable modes: DMC-XS1 iA SCN

DMC-FH10 iA SCN

This allows the focusing method that suits the positions and number of the subjects to be selected.

Settings	Description of settings
[👤] ([Face Detection])*	The camera automatically detects the person's face. (max. 12 areas) The focus and exposure can then be adjusted to fit that face no matter what portion of the picture it is in.
[▦] ([9-Area])*	Up to 9 points for each AF area can be focused. This is effective when the subject is not in the center of the screen. (AF area frame will be same as image aspect ratio setting.)
[■] ([1-Area])	The camera focuses on the subject in the AF area on the center of the screen.

* [■] will be used during motion picture recording.

- [AF Mode] is fixed to [■] in the following cases.
  - [Starry Sky] (Scene Mode)

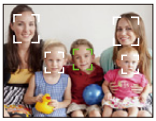
DMC-XS1

  - [Miniature Effect] (Creative Control Mode)
- It is not possible to set [👤] in the following cases.
  - Panorama Shot Mode
  - [Night Scenery]/[Food] (Scene Mode)

DMC-XS1

  - [Soft Focus] (Creative Control Mode)

About [Face Detection] ([Face Detection])



The following AF area frames are displayed when the camera detects the faces.
Yellow:
When the shutter button is pressed halfway, the frame turns green when the camera is focused.
White:
Displayed when more than one face is detected. Other faces that are the same distance away as the faces within the yellow AF areas are also brought into focus.

- Under certain picture-taking conditions including the following cases, the face detection function may fail to work, making it impossible to detect faces. [AF Mode] is switched to [].
  - – When the face is not facing the camera
  - – When the face is at an angle
  - – When the face is extremely bright or dark
  - – When there is little contrast on the faces
  - – When the facial features are hidden behind sunglasses, etc.
  - – When the face appears small on the screen
  - – When there is rapid movement
  - – When the subject is not a human being
  - – When the camera is shaking
  - – When Digital Zoom is used
- If the camera is registering something other than someone's face, change the settings to something other than [].

[i.Exposure]

Applicable modes: DMC-XS1 DMC-FH10

Contrast and exposure will be adjusted automatically when there is a big difference in brightness between the background and subject, to bring the image close to real life.

Settings: [ON]/[OFF]

- [i◑] in the screen turns yellow when [i.Exposure] is in effect.
- Even when the [Sensitivity] is set to [100], [Sensitivity] may be set higher than [100] if the picture is taken with [i.Exposure].
- Compensation effect may not be achieved depending on the conditions.

[i.Zoom]

Applicable modes: DMC-XS1 DMC-FH10

Zoom magnification can be increased while minimizing deterioration of the image quality.

Settings: [ON]/[OFF]

- Refer to P48 for details.

[Digital Zoom]

Applicable modes: DMC-XS1 DMC-FH10

This can enlarge subjects even more than the Optical Zoom, Extended Optical Zoom, or [i.Zoom].

Settings: [ON]/[OFF]

- Refer to P49 for details.

[Burst]

Applicable modes: DMC-XS1 iA SCN
DMC-FH10 iA SCN

Pictures are taken continuously while the shutter button is pressed.

Settings	Description of settings	
[ ] ([Burst On])	**Burst speed**	approx. 1.0 pictures/second
	• You can take pictures until the capacity of the built-in memory or the card is full. • **The burst speed becomes slower halfway.** The exact timing of this depends on the type of card and the Picture Size. • The focus, exposure and White Balance are fixed to the first picture. • The Burst speed (pictures/second) may become slower depending on the recording environment, such as in dark places, if the ISO sensitivity is high etc.	
[H] ([Hi-Speed Burst])	**Burst speed**	approx. 10 pictures/second
	• This can be set only during Normal Picture Mode. • The picture size is fixed to 3M (4:3), 2.5M (3:2), 2M (16:9) or 2.5M (1:1). • The Burst speed changes according to the recording conditions. • The number of Burst recording pictures are limited by the picture-taking conditions and the type and/or status of the card used. • The number of Burst recording pictures may increase when you use a card with fast writing speed or card is formatted. • The focus, zoom, exposure, White Balance, shutter speed and ISO sensitivity are fixed to the settings for the first picture. • The ISO sensitivity is automatically adjusted. However, the ISO sensitivity is increased to make the shutter speed become high-speed.	
[ ] ([Flash Burst])	**Number of recordable pictures**	max. 5 pictures
	• Still pictures are taken continuously with flash. • This can be set only during Normal Picture Mode. • The picture size is fixed to 3M (4:3), 2.5M (3:2), 2M (16:9) or 2.5M (1:1). • Settings for focus, zoom, exposure, shutter speed, ISO sensitivity, flash output are fixed to the first picture. • **The flash setting is fixed to [ ].**	
[OFF]	—	

- Depending on the operating conditions, it may take time to take the next picture if you repeat the recording of pictures.
- **It may take time to save pictures taken in Burst Mode on the card. If you take pictures continuously while saving, the maximum number of recordable pictures decreases. For continuous shooting, use of a high speed memory card is recommended.**
- Burst Mode is not canceled when the camera is switched off.
- If you take pictures in Burst Mode with the built-in memory, it will take time to write the picture data.
- The setting is fixed to [OFF] in the following cases.
  – [Starry Sky]/[Photo Frame] (Scene Mode)

DMC-XS1

  – [Toy Effect]/[Miniature Effect] (Creative Control Mode)
- When the Self-Timer is used, the number of recordable pictures in Burst Mode is fixed to 3. (5 pictures in [ ])
- **The flash setting is fixed to [ ] (except for [ ]).**

[Color Mode]

Applicable modes: DMC-XS1

DMC-FH10

Sets various color effects, including making the picture sharper, brighter, or applying a sepia tone.

Settings	Description of settings
[STANDARD]	This is the standard setting.
[Happy]∗1	Image with enhanced brightness and vividness.
[VIVID]∗2	The picture becomes sharper.
[B&W]	The picture becomes black and white.
[SEPIA]	The picture becomes sepia.

∗1 This can be set only when Intelligent Auto Mode is set.
∗2 This can be set only during Normal Picture Mode.

[Red-Eye Removal]

Applicable modes: DMC-XS1 DMC-FH10

When Red-Eye Reduction ([ ], [ ]) is selected, Red-Eye Removal is performed whenever the flash is used. The camera automatically detects red-eye and corrects the picture.

Settings: [ON]/[OFF]

- Only available when [AF Mode] is set to [ ] and Face Detection is active.
- Under certain circumstances, red-eye cannot be corrected.

[Stabilizer]

Applicable modes: DMC-XS1 DMC-FH10

Using one of these modes, jitter during picture taking is detected, and the camera automatically compensates the jitter, enabling jitter-free images to be taken.

Settings: [ON]/[OFF]

- Stabilizer will be set to [ON] while recording motion pictures.
- The setting is fixed to [OFF] in the following case.
  – [Starry Sky] (Scene Mode)
- The stabilizer function may not be effective in the following cases.
  Be careful of camera jitter when you press the shutter button.
  – When there is a lot of jitter.
  – When the zoom magnification is high.
  – In Digital Zoom range.
  – When taking pictures while following a moving subject.
  – When the shutter speed becomes slower to take pictures indoors or in dark places.

[Date Stamp]

Applicable modes: DMC-XS1 DMC-FH10

You can take a picture with date and time of recording.

Settings	Description of settings
[W/O TIME]	Stamp the year, month, and day.
[WITH TIME]	Stamp the year, month, day, hour, and minutes.
[OFF]	—

- **Date information for pictures recorded with the [Date Stamp] set cannot be deleted.**
- **When printing pictures with [Date Stamp] at a shop or with a printer, the date will be printed on top of the other if you choose to print with the date.**
- If the time has not been set, you cannot stamp with the date information.
- The setting is fixed to [OFF] in the following cases.
  – When recording motion pictures
  – When using [Burst].
- [Resize] cannot be set for pictures recorded with [Date Stamp] set.

[Clock Set]

• Refer to P22 for details.

Using the [Motion Picture] Menu

For details on [Motion Picture] menu settings, refer to P38.

[Rec Quality]

Applicable modes: DMC-XS1 iA SCN
DMC-FH10 iA SCN

This sets up the picture quality of motion pictures.

Settings	Picture size	fps	Aspect ratio
[HD]	1280×720 pixels	30	16:9
[VGA]	640×480 pixels		4:3
[QVGA]	320×240 pixels		

DMC-XS1
- The Motion Picture menu will not be displayed while in [Soft Focus] of Creative Control Mode.

[Continuous AF]

Applicable modes: DMC-XS1 iA SCN
DMC-FH10 iA SCN

It will continually keep on focusing on a subject for which the focus was once set.

Settings: [ON]/[OFF]

- Set this function to [OFF] if you wish to fix the focus on the position where you started the motion picture recording.
- The setting is fixed to [OFF] in the following case.
  – [Starry Sky] (Scene Mode)

DMC-XS1
- The Motion Picture menu will not be displayed while in [Soft Focus] of Creative Control Mode.

Various methods of playback

You can play back the recorded pictures in various methods.

1 **Press [▶].**

2 **Press [MODE].**

3 **Press ▲/▼/◀/▶ to select item, and then press [MENU/SET].**

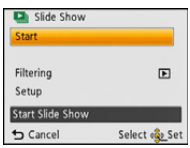
- Following items can be selected.

[▶]	([All]) (P34)
[▶]	([Slide Show]) (P83)
[▶]	([Filtering Play]) (P85)
[▶]	([Calendar]) (P87)

[Slide Show]

You can play back the pictures you have taken in synchronization with music, and you can do this in sequence while leaving a fixed interval between each of the pictures.
You can also play back images that have been sorted by category, images that have been set as favorites, etc. in a slide show.
This playback method is recommended when you have connected the camera to a TV set to view the pictures you have taken.

Press ▲/▼ to select [Start] and then press [MENU/SET].

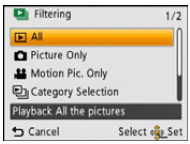


■ Operations performed during slide show

The cursors displayed during playback correspond to ▲/◄/► and [MENU/SET].

[MENU/SET]	▲	Play/Pause
	[MENU/SET]	Stop
	◄	Back to previous picture
	►	Ahead to next picture
W	**[W]**	Reduce volume level
T	**[T]**	Increase volume level

To filter images for slide show playback



You can filter images and play them back in a slide show by selecting [Filtering] on the slide show menu screen.

- If you select [All], you can play back all images in a slide show.
  You can also filter images by using the same setting as [Filtering Play]. Refer to P85–86 for the setting.
- The filter settings are stored even after terminating slide show playback. To cancel filtering, refer to P85.

Changing the slide show settings

By selecting [Setup] on the slide show menu screen, you can change the settings such as [Effect] and [Duration] for slide show playback.

Settings	Description of settings
[Effect]	[ON]/[OFF]
[Duration]	[1 SEC.]/[2 SEC.]/[3 SEC.]/[5 SEC.] • When playing back the following pictures, the [Duration] setting is disabled. – Motion pictures – Panorama pictures
[Repeat]	[ON]/[OFF]
[Music]	[ON]/[OFF]

[Filtering Play]

The images sorted into the category or images set as favorite are played back.

Settings	Description of settings
[Picture Only]	Only still pictures are played back.
[Video Only]	Only motion pictures are played back.
[Category Selection]	This mode allows you to search images by Scene Mode or other categories (such as [Portrait], [Scenery] or [Night Scenery]) and sort the pictures into each of the categories. You can then play back the pictures in each category.
[Select Date]	You can play back pictures taken on each date.
[Favorite]	You can play back the pictures you have set as [Favorite] (P93).

■ To cancel filtering

1 Press ▲ while playing back one picture at a time.

2 Press ▲/▼ to select [Filtering Off] and then press [MENU/SET].

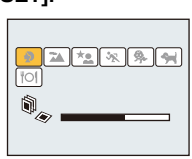
- Filtering is also canceled by turning off the camera or switching to Recording Mode.

Sorting by category to play back

1 Press ▲/▼ to select [Category Selection] and then press [MENU/SET].

2 Press ▲/▼/◄/► to select the category and then press [MENU/SET] to set.

- You can play back only the category in which an image has been found.

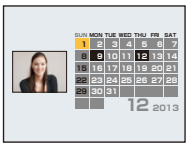


	Recording information e.g. Scene Modes
	[Portrait], [i-Portrait], [Soft Skin], [Night Portrait], [i-Night Portrait], [Baby1]/[Baby2]
	Panorama Shot Mode, [Scenery], [i-Scenery], [Sunset], [i-Sunset], [Glass Through]
	[Night Portrait], [i-Night Portrait], [Night Scenery], [i-Night Scenery],[Starry Sky]
	[Sports]
	[Baby1]/[Baby2]
	[Pet]
	[Food]

You can play back pictures taken on each date

1 **Press ▲/▼ to select [Select Date] and then press [MENU/SET].**

2 **Press ▲/▼/◄/► to select the date to be played back, and then press [MENU/SET].**
- If there were no pictures recorded during a month, that month is not displayed.



■ Changing the filtering date

1 **Press ▲ while playing back one picture at a time.**

2 **Press ▲/▼ to select [Change Date] and then press [MENU/SET].**

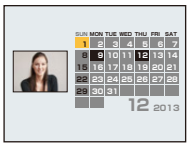
3 **Press ▲/▼/◄/► to select the date to be played back, and then press [MENU/SET].**

- The recording date of the picture selected in the playback screen becomes the date selected when the calendar screen is first displayed.
- If there are multiple pictures with the same recording date, the first picture recorded on that day is displayed.
- You can display the calendar between January 2000 and December 2099.
- If the date is not set in the camera, the recording date is set as January 1st, 2013.
- If you take pictures after setting the travel destination in [World Time], the pictures are displayed by the dates at the travel destination in Calendar Playback.

[Calendar]

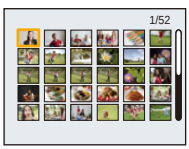
You can search for images by recorded date.

1 Press ▲/▼/◀/► to select the date you want to search.



- If there were no pictures recorded during a month, that month is not displayed.

2 Press [MENU/SET] to display a list of pictures.



- Pictures are displayed with Multi Playback (30 screens). The cursor appears on the picture at the beginning of the selected date.

3 Press ▲/▼/◀/► to select a picture and then press [MENU/SET].

- To continue the search, return to the previous screen with [W] of the zoom button. (P36)

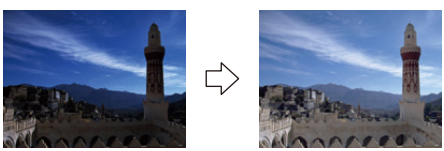
- The recording date of the picture selected in the playback screen becomes the date selected when the calendar screen is first displayed.
- If there are multiple pictures with the same recording date, the first picture recorded on that day is displayed.
- You can display the calendar between January 2000 and December 2099.
- If the date is not set in the camera, the recording date is set as January 1st, 2013.
- If you take pictures after setting the travel destination in [World Time], the pictures are displayed by the dates at the travel destination in Calendar Playback.

Having Fun with Recorded Pictures (Retouch)

You can adjust the color tone of the pictures taken, or add your preferred effects.
- The processed pictures are newly generated, so be sure that you have enough space in the built-in memory or on the card.
- Effects may be difficult to see depending on the picture.
- Pictures taken with other cameras may not be processed.

[Auto Retouch]

The brightness and color of the pictures taken can be balanced.



✳ These pictures are examples to show the effect.

DMC-XS1

1 Press ◄/► to select a picture, and then press ▲.

- If you have filtered images for playback by using [Slide Show] (P83) or [Filtering Play] (P85), the selection screen appears. You can proceed to step **2** by selecting [Retouch] with ▲/▼, and then pressing [MENU/SET],
- You can also proceed to step **2** by selecting [Retouch] from the [Playback] menu.

2 Press ▲/▼ to select [Auto Retouch], and then press [MENU/SET].

3 Press ▲/▼ to select [ON], and then press [MENU/SET].

- Confirmation screen is displayed. It is executed when [Yes] is selected.

DMC-FH10

1 Press ◄/► to select a picture, and then press ▲.

- If you have filtered images for playback by using [Slide Show] (P83) or [Filtering Play] (P85), the selection screen appears. You can proceed to step **2** by selecting [Auto Retouch] with ▲/▼, and then pressing [MENU/SET],
- You can also proceed to step **2** by selecting [Auto Retouch] from the [Playback] menu.

2 Press [MENU/SET].

- Confirmation screen is displayed. It is executed when [Yes] is selected.

- Depending on the picture, noise may be emphasized by [Auto Retouch].
- It may not be possible to perform [Auto Retouch] on pictures which have already been retouched.
- The following pictures cannot be processed:
  - Motion pictures
  - Pictures taken in Panorama Shot Mode
  - Pictures taken with [Photo Frame] in Scene Mode

[Creative Retouch] DMC-XS1

You can add your desired effects to the pictures that you have taken.

1 Press ◄/► to select a picture, and then press ▲.

- If you have filtered images for playback by using [Slide Show] (P83) or [Filtering Play] (P85), the selection screen appears. You can proceed to step **2** by selecting [Retouch] with ▲/▼, and then pressing [MENU/SET].
- You can also proceed to step **2** by selecting [Retouch] from the [Playback] menu.

2 Press ▲/▼ to select [Creative Retouch], and then press [MENU/SET].

3 Press ▲/▼ to select image effects and then press [MENU/SET].

- You can select the item from the following options that are also available in the Creative Control mode.
  [Expressive]/[Retro]/[High Key]/[Low Key]/[Sepia]/[Dynamic Monochrome]/[Impressive Art]/[High Dynamic]/[Cross Process]/[Toy Effect]/[Miniature Effect]/[Soft Focus]/[One Point Color]
- A brief description of selected image effect appears when you press ►.
- Read P57–60 for details on the respective effects.
- To set the color you want to keep by using [One Point Color], move the frame at the center of the screen to the desired color with ▲/▼/◄/►, and then press [MENU/SET].
- If you select [OFF], an image with no effect is displayed. To proceed the retouch operation, select another image effect. If you are not going to add any effect, exit the menu.
- Confirmation screen is displayed. It is executed when [Yes] is selected.

- The image effect may appear weak compared to the effect given by the Creative Control Mode.
- It may not be possible to perform [Creative Retouch] on pictures which have already been retouched.
- The following pictures cannot be processed:
  – Motion pictures
  – Pictures taken in Panorama Shot Mode

Using the [Playback] Menu

• With [Retouch] DMC-XS1, [Auto Retouch] DMC-FH10 or [Resize], a new edited picture is created. A new picture cannot be created if there is no free space on the built-in memory or the card so we recommend checking that there is free space and then editing the picture.

[Retouch] DMC-XS1

You can add the effect of [Auto Retouch] or [Creative Retouch] to recorded pictures.

• For details, refer to P88–90.

[Auto Retouch] DMC-FH10

• For details, refer to P88.

[Resize]

To allow easy posting to web pages, attachment to email etc., picture size (number of pixels) is reduced.

1 Select [Resize] on the [Playback] menu.

2 Press ▲/▼ to select [SINGLE] or [MULTI] and then press [MENU/SET].

3 Select the picture and size.

[SINGLE] setting

1 **Press ◄/► to select the picture, and then press [MENU/SET].**

2 **Press ◄/► to select the size, and then press [MENU/SET].**

• Confirmation screen is displayed. It is executed when [Yes] is selected.
Exit the menu after it is executed.

[MULTI] setting

1 **Press ▲/▼ to select the size, and then press [MENU/SET].**

2 **Press ▲/▼/◄/► to select the picture, and then press [MENU/SET]. (repeat this step)**

- If you press [MENU/SET] again, the setting is canceled.
- Select [OK] with ◄, and then press [MENU/SET] to set.
- Confirmation screen is displayed. It is executed when [Yes] is selected.
  Exit the menu after it is executed.

- You can set up to 50 pictures at one time in [MULTI].
- The picture quality of the resized picture will deteriorate.
- It may not be possible to resize pictures recorded with other equipment.
- The following images cannot be resized.
  – Motion pictures
  – Pictures taken in Panorama Shot Mode
  – Pictures with date stamped

[Favorite]

You can do the following if a mark has been added to pictures and they have been set as favorites.

- Play back only the pictures set as favorites. ([Favorite] in [Filtering Play])
- Play back the pictures set as favorites only as a Slide Show.
- Delete all the pictures not set as favorites. ([All Delete Except Favorite])

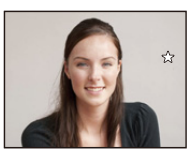
1 **Select [Favorite] on the [Playback] menu.**

2 **Press ▲/▼ to select [SINGLE] or [MULTI] and then press [MENU/SET].**

3 **Select the picture, and then press [MENU/SET].**

- The setting is canceled when [MENU/SET] is pressed again.
- Exit the menu after it is set.

[SINGLE]



Press ◄/► to select the picture.

[MULTI]

Press ▲/▼/◄/► to select the pictures.

■ Canceling all the [Favorite] settings

1 **Select [Favorite] on the [Playback] menu.**

2 **Press ▲/▼ to select [CANCEL] and then press [MENU/SET].**

- Confirmation screen is displayed. It is executed when [Yes] is selected. Exit the menu after it is executed.

- You can set up to 999 pictures as favorites.
- You may not be able to set pictures taken with other equipment as favorites.

[Protect]

You can set protection for pictures you do not want to be deleted by mistake.

1 **Select [Protect] on the [Playback] menu.**

2 **Press ▲/▼ to select [SINGLE] or [MULTI] and then press [MENU/SET].**

3 **Select the picture, and then press [MENU/SET].**

- The settings are canceled when [MENU/SET] is pressed again.
- Exit the menu after it is set.

[SINGLE]

Press ◄/► to select the picture.

[MULTI]

Press ▲/▼/◄/► to select the pictures.

■ Canceling all the [Protect] settings

1 **Select [Protect] on the [Playback] menu.**

2 **Press ▲/▼ to select [CANCEL] and then press [MENU/SET].**

- Confirmation screen is displayed. It is executed when [Yes] is selected. Exit the menu after it is executed.

- The protect setting may not be effective on other equipment.
- Even if you protect pictures in the built-in memory or a card, they will be deleted if the built-in memory or the card is formatted.

[Copy]

You can copy the data of the pictures you have taken from the built-in memory to a card or from a card to the built-in memory.

1 Select [Copy] on the [Playback] menu.

2 Press ▲/▼ to select the copy destination and then press [MENU/SET].

[IN→SD] ([IN→SD]): All the picture data in the built-in memory are copied onto the card at one time.

[SD→IN] ([SD→IN]): One picture at a time is copied from the card to the built-in memory.
Press ◄/► to select the picture and then press [MENU/SET].

- Confirmation screen is displayed. It is executed when [Yes] is selected.
  Exit the menu after it is executed.
- Do not turn the camera off at any point during the copying process.

- If a picture exists with the same name (folder number/file number) as the picture to be copied in the copy destination when [IN→SD] is selected, a new folder is created and the picture is copied. If a picture exists with the same name (folder number/file number) as the picture to be copied in the copy destination when [SD→IN] is selected, that picture is not copied.
- It may take time to copy the picture data.
- [Protect] or [Favorite] settings will not be copied. Perform the settings again after copying is finished.

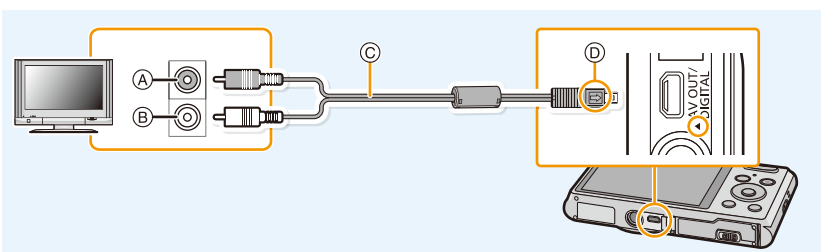
Playing Back Pictures on a TV Screen

Pictures recorded with this unit can be played back on a TV screen.

Preparations:
Set the [TV Aspect]. (P43)
Turn this unit and the TV off.

1 Connect the camera and a TV.

- Check the directions of the connectors, and plug them straight in or unplug them straight out. (Otherwise the connectors may bend out of shape, which may cause malfunction.)
- Always use a genuine Panasonic AV cable (DMW-AVC1: optional).



Ⓐ Yellow: to the video input socket
Ⓑ White: to the audio input socket
Ⓒ AV cable (optional)
Ⓓ Align the marks, and insert.

2 Turn the TV on and select external input.

3 Turn the camera on and then press [▶].

- Depending on the [Picture Size], black bands may be displayed on the top and bottom or the left and right of the pictures.
- Change the screen mode on your TV if the picture is displayed with the top or bottom cut off.
- When you play back a picture vertically, it may be blurry.
- When pictures are displayed, they may not be displayed properly depending on the type of TV.
- You can view pictures on TVs in other countries (regions) which use the NTSC or PAL system when you set [Video Out] in the [Setup] menu.
  (PAL video out is not available on the version DMC-XS1P/DMC-FH10P sold in the U.S. and the version DMC-XS1PC/DMC-FH10PC sold in Canada.)
- No sound is output from the camera speakers.
- Read the operating instructions for the TV.

■ If the TV, Blu-ray disc recorder, DVD recorder or other equipment has an SD card slot

Insert the card into the SD card slot. (Always connect the dedicated adaptor. The device will not operate properly if only the adaptor is inserted. Always insert the card into the adaptor before use.)

- Photos can be played back.
- In some cases, panorama pictures cannot be played back. Also, auto-scroll playback of panorama pictures may not work.
- Depending on the TV model, pictures may not be displayed on the full screen.
- Read the operating instructions of compatible equipment to playback motion pictures.

Saving still pictures and motion pictures on your PC

You can transfer the pictures in the camera to a PC by connecting the camera and the PC.
- Some PCs can read directly from the card removed from the camera. For details, refer to the operating instructions of your PC.

■ PC that can be used

The unit can be connected to any PC capable of recognizing a mass storage device.

- Windows support: Windows 8/Windows 7/Windows Vista/Windows XP
- Mac support: OS X v10.1 ~ v10.8

About the supplied software

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

- **PHOTOfunSTUDIO 9.0 LE (Windows 8/7/Vista/XP)**
  This software allows you to manage images. For example, you can send pictures and motion pictures to a PC and sort them by recording date or model name. You can also perform operations such as writing images to a DVD, processing and correcting images, and editing motion pictures.

- **LoiLoScope 30 day full trial version (Windows 8/7/Vista/XP)**
  LoiLoScope is a video editing software where that draws out the full power of your PC. Creating videos is as easy as organizing cards on top of a desk. Use your music, picture and video files to create videos to share with your friends and family by burning it to a DVD, uploading it to websites, or simply share your videos with your friends via e-mail.
  – This will only install a shortcut to the trial version download site.

For more information on how to use LoiLoScope, read the LoiLoScope manual available for download at the link below.
Manual URL: http://loilo.tv/product/20

■ Installing supplied software

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

1 Check the environment of your PC.

• **Operating environment of "PHOTOfunSTUDIO 9.0 LE"**

– OS:

Windows® XP (32bit) SP3,

Windows Vista® (32bit) SP2,

Windows® 7 (32bit/64bit) or SP1

Windows® 8 (32bit/64bit)

– CPU:

Pentium® III 500 MHz or higher (Windows® XP),

Pentium® III 800 MHz or higher (Windows Vista®),

Pentium® III 1 GHz or higher (Windows® 7/Windows® 8)

– Display:

1024×768 pixels or more (1920×1080 pixels or more recommended)

– RAM:

512 MB or more (Windows® XP/Windows Vista®),

1 GB or more (Windows® 7 32bit/Windows® 8 32bit),

2 GB or more (Windows® 7 64bit/Windows® 8 64bit)

– Free hard disk space:

450 MB or more for installing software

• Refer to the operating instructions of "PHOTOfunSTUDIO" (PDF) for further operating environment.

2 Insert the CD-ROM with the supplied software.

• When you insert the supplied CD-ROM, the install menu will start.

3 Click on the [Applications] on the install menu.

4 Click on the [Recommended Installation].

• Proceed with installation according to messages appearing on the screen.

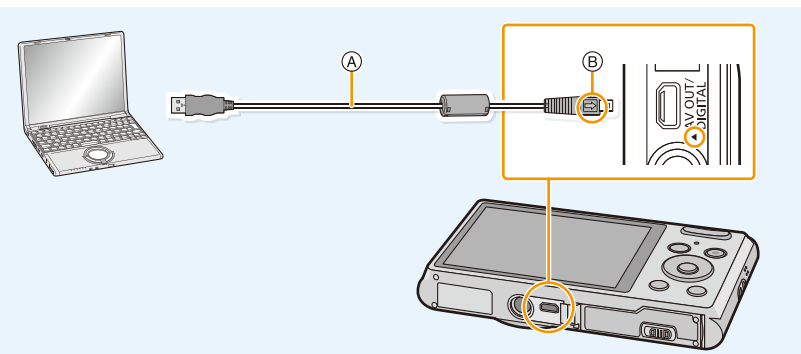
• The software compatible with your PC will be installed.
• "PHOTOfunSTUDIO" is not compatible with Mac.

■ Transferring pictures to a PC

Preparations: Install “PHOTOfunSTUDIO” to the PC.

1 Connect the computer and camera with the USB connection cable (supplied).

- Please turn this unit on and your PC before connecting.
- Check the directions of the connectors, and plug them straight in or unplug them straight out. (Otherwise the connectors may bend out of shape, which may cause malfunction.)
- Do not use any other USB connection cables except the supplied one or a genuine Panasonic USB connection cable (DMW-USBC1: optional).



Ⓐ USB connection cable (supplied)
Ⓑ Align the marks, and insert.

2 Press ▲/▼ to select [PC], and then press [MENU/SET].

3 Copy the images to a PC using “PHOTOfunSTUDIO”.

- Do not delete or move copied files or folders in Windows Explorer. When viewing in “PHOTOfunSTUDIO”, you will not be able to play back or edit.

- If the remaining battery power becomes low while the camera and the PC are communicating, the alarm beeps.
  Refer to “Disconnecting the USB connection cable safely” (P101) before disconnecting the USB connection cable. Otherwise, data may be destroyed.
- Before inserting or removing a card, turn the camera off and disconnect the USB connection cable. Otherwise, data may be destroyed.

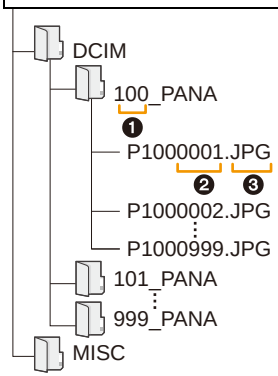
■ Copying to a PC without using “PHOTOfunSTUDIO”

If the installation of “PHOTOfunSTUDIO” fails, you can copy files and folders to your PC by dragging and dropping them from the camera after connecting to your PC.
Directory structure of built-in memory/card of this unit is shown by the figure below.

For Windows: **A drive ([Removable Disk]) is displayed in [Computer]**

For Mac: **A drive ([NO_NAME]) is displayed on the desktop**

• Built-in Memory
• Card



DCIM: Images
- ❶ Folder number
- ❷ File number
- ❸ JPG: Still pictures
- MOV: Motion pictures

MISC: Favorite

• A new folder is created when pictures are taken in the following situations.
– When a card containing a folder with the same folder number has been inserted (Such as when pictures were taken using another maker of camera)
– When there is a picture with file number 999 inside the folder

■ Disconnecting the USB connection cable safely

Select the [ ] icon in the task tray displayed on the PC, and then click [Eject DMC-XXX] (XXX varies by model).

• Depending on your PC’s settings, this icon may not be displayed.
• If the icon is not displayed, check that [Access] is not displayed on the LCD monitor of the digital camera before removing the hardware.

■ Connection in the PTP Mode

Select [PictBridge(PTP)] when connecting USB connection cable.
• Data can now be read only from the card in the PC.
• When there are 1000 or more pictures on a card, the pictures may not be imported in the PTP Mode.

Printing the Pictures

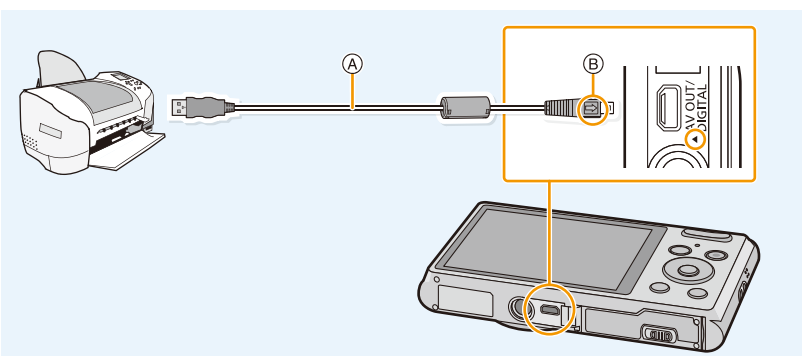
If you connect the camera to a printer supporting PictBridge, you can select the pictures to be printed out and instruct that printing be started on the camera's LCD monitor.

- Some printers can print directly from the card removed from the camera. For details, refer to the operating instructions of your printer.

Preparations:
Turn on the camera and the printer.
Remove the card before printing the pictures from the built-in memory.
Check print quality and other settings on the printer before printing the pictures.

1 Connect the printer and camera with the USB connection cable (supplied).

- Check the directions of the connectors, and plug them straight in or unplug them straight out. (Otherwise the connectors may bend out of shape, which may cause malfunction.)
- Do not use any other USB connection cables except the supplied one or a genuine Panasonic USB connection cable (DMW-USBC1: optional).



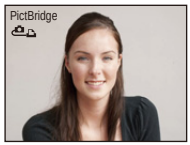
Ⓐ USB connection cable (supplied)
Ⓑ Align the marks, and insert.

2 Press ▲/▼ to select [PictBridge(PTP)], and then press [MENU/SET].

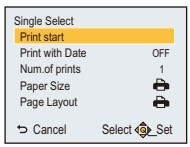
- If the remaining battery power becomes low while the camera and the printer are connected, the alarm beeps. If this happens during printing, stop printing at once. If not printing, disconnect the USB connection cable.
- Do not disconnect the USB connection cable while [🖂] (Cable disconnect prohibit icon) is displayed. (may not be displayed depending on the type of printer used)
- Before inserting or removing a card, turn the camera off, and disconnect the USB connection cable.
- Motion pictures cannot be printed out.

Selecting a single picture and printing it

1 **Press ◄/► to select the picture and then press [MENU/SET].**



2 **Press ▲ to select [Print start] and then press [MENU/SET].**



- Refer to P104 for the items which can be set before starting to print the pictures.
- Disconnect the USB connection cable after printing.

Selecting multiple pictures and printing them

1 **Press ▲.**

2 **Press ▲/▼ to select an item and then press [MENU/SET].**

Item	Description of settings
[Multi Select]	Multiple pictures are printed at one time. • Press ▲/▼/◄/► to select the pictures, and then press [MENU/SET]. (When [MENU/SET] is pressed again, the setting is canceled.) • After the pictures have been selected, press ◄ to select [OK], and then press [MENU/SET].
[Select All]	Prints all the stored pictures.
[Favorite]	Prints the pictures set as favorites only. (P93)

3 **Press ▲ to select [Print start] and then press [MENU/SET].**

- If the print check screen has appeared, select [Yes], and print the pictures.
- Refer to P104 for the items which can be set before starting to print the pictures.
- Disconnect the USB connection cable after printing.

Print Settings

Select and set the items both on the screen in step 2 of the “Selecting a single picture and printing it” and in step 3 of the “Selecting multiple pictures and printing them” procedures.

- When you want to print pictures in a paper size or a layout which is not supported by the camera, set [Paper Size] or [Page Layout] to [🖶] and then set the paper size or the layout on the printer. (For details, refer to the operating instructions of the printer.)

[Print with Date]

Item	Description of settings
[ON]	Date is printed.
[OFF]	Date is not printed.

- If the printer does not support date printing, the date cannot be printed on the picture.
- When printing images with [Date Stamp], please remember to set [Print with Date] to [OFF] or the date will print on top.

When asking the photo shop to print the pictures

- By stamping the date using [Date Stamp] (P80) setting before going to a photo shop, the dates can be printed at the photo shop.

[Num.of prints]

You can set the number of prints up to 999.

[Paper Size]

Item	Description of settings
🖶	Settings on the printer are prioritized.
[L/3.5″×5″]	89 mm×127 mm
[2L/5″×7″]	127 mm×178 mm
[POSTCARD]	100 mm×148 mm
[16:9]	101.6 mm×180.6 mm
[A4]	210 mm×297 mm
[A3]	297 mm×420 mm
[10×15cm]	100 mm×150 mm
[4″×6″]	101.6 mm×152.4 mm
[8″×10″]	203.2 mm×254 mm
[LETTER]	216 mm×279.4 mm
[CARD SIZE]	54 mm×85.6 mm

• Paper sizes not supported by the printer will not be displayed.

[Page Layout] (Layouts for printing that can be set with this unit)

Item	Description of settings
	Settings on the printer are prioritized.
	1 picture with no frame on 1 page
	1 picture with a frame on 1 page
	2 pictures on 1 page
	4 pictures on 1 page

• An item cannot be selected if the printer does not support the page layout.

■ Layout printing

When printing a picture several times on 1 sheet of paper

For example, if you want to print the same picture 4 times on 1 sheet of paper, set [Page Layout] to [ ] and then set [Num.of prints] to 4 for the picture that you want to print.

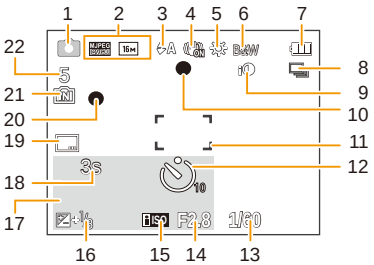
When printing different pictures on 1 sheet of paper

For example, if you want to print 4 different pictures on 1 sheet of paper, set [Page Layout] to [ ] and then set [Num.of prints] to 1 for each of the 4 pictures.

• The camera is receiving an error message from the printer when the [●] indication lights orange during printing. After finishing printing, make sure there are no problems with the printer.
• If the number of prints is high, the pictures may be printed several times. In this case, the remaining number of prints indicated may differ from the number set.

Screen Display

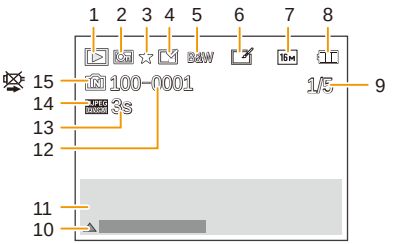
In recording



1 Recording Mode
2 Recording Quality (P81)
Picture Size (P69)
: Backlight Compensation (P27)
3 Flash Mode (P50)
4 Optical Image Stabilizer (P79)
: Jitter alert (P24)
5 White Balance (P71)
6 Color Mode (P78)
7 Battery indication (P14)
8 Burst (P76)
9 Intelligent Exposure (P75)
10 Focus (P30)
11 AF area (P30)
12 Self-timer Mode (P54)
13 Shutter speed (P29)
14 Aperture value (P29)
15 ISO sensitivity (P70)
16 Exposure compensation (P55)
17 Age (P67)
Current date and time
: World Time (P40)
Zoom (P47): EZ W T 1X
18 Elapsed recording time (P32): 8m30s*
19 Date Stamp (P80)
20 Recording state (P32)
21 Built-in memory (P19)
: Card (P19) (displayed only during recording)
22 Number of recordable pictures (P21)
Available recording time (P21, 32): R8m30s*

* “h” is an abbreviation for hour, “m” for minute and “s” for second.

In playback



1 Playback Mode (P82)
2 Protected picture (P94)
3 Favorite (P93)
4 Date stamped display (P80)
5 Color Mode (P78)
6 After Auto Retouch (P88)
After Creative Retouch (P90) DMC-XS1
7 Picture Size (P69)
8 Battery indication (P14)
9 Picture number
Total pictures
Elapsed playback time (P34): 8m30s ✳
10 Auto Retouch (P88)
Creative Retouch (P90) DMC-XS1
Motion picture playback (P34)
Play panorama (P63)
11 Recorded date and time
✈: World Time (P40)
Recording information (P45)
Age (P67)
12 Folder/File number (P101)
13 Motion picture recording time (P34): 8m30s ✳
14 Recording Quality (P81)
15 Built-in memory (P19)
Cable disconnection prohibiting icon (P102)

✳ “h” is an abbreviation for hour, “m” for minute and “s” for second.

Cautions for Use

Optimal use of the camera

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

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

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

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

Always use the supplied cords and cables. If you use optional accessories, use the cords and the cables supplied with them.
Do not extend the cords or the cables.

Do not spray the camera with insecticides or volatile chemicals.

- If the camera is sprayed with such chemicals, the body of the camera may be damaged and the surface finish may peel off.
- Do not keep rubber or plastic products in contact with the camera for a long period of time.

Cleaning

Before cleaning the camera, remove the battery or disconnect the power plug from the outlet. Then wipe the camera with a dry, soft cloth.

- When the camera is soiled badly, it can be cleaned by wiping the dirt off with a wrung wet cloth, and then with a dry cloth.
- Do not use solvents such as benzine, thinner, alcohol, kitchen detergents, etc., to clean the camera, since it may deteriorate the external case or the coating may peel off.
- When using a chemical cloth, be sure to follow the accompanying instructions.

About the LCD monitor

- Do not press the LCD monitor with excessive force. Uneven colors may appear on the LCD monitor and it may malfunction.
- If the camera is cold when you turn it on, the picture on the LCD monitor will be slightly darker than usual at first. However, the picture will return to normal brightness when the internal temperature of the camera increases.

Extremely high precision technology is employed to produce the LCD monitor screen. However, there may be some dark or bright spots (red, blue, or green) on the screen. This is not a malfunction. The LCD monitor screen has more than 99.99% effective pixels with a mere 0.01% of the pixels inactive or always lit. The spots will not be recorded on pictures on the built-in memory or a card.

About the Lens

- Do not press the lens with excessive force.
- Do not leave the camera with the lens facing the sun, as rays of light from the sun may cause it to malfunction. Also, be careful when placing the camera outside or near a window.

Battery

The battery is a rechargeable lithium ion battery. Its ability to generate power comes from the chemical reaction that takes place inside it. This reaction is susceptible to the surrounding temperature and humidity. If the temperature is too high or too low, the operating time of the battery will become shorter.

Always remove the battery after use.

• Place the removed battery in a plastic bag, and store or carry away from metallic objects (clips, etc.).

If you drop the battery accidentally, check to see if the body of the battery and the terminals are damaged.

• Inserting a damaged battery in the camera will damage the camera.

Do not remove or damage the external label on the battery.

• Using a battery with part or all of the external labal removed or using the one with a torn label may result in malfunctions.

Bring charged spare batteries when going out.

• Be aware that the operating time of the battery becomes shorter in low temperature conditions such as at a ski resort.

• When you travel, do not forget to bring the AC adaptor (supplied) and USB connection cable (supplied) so that you can charge the battery in the country that you are traveling in.

Dispose of unusable battery.

• The battery has a limited life.

• Do not throw the battery into fire because it may cause an explosion.

• The unusable battery should be discarded in accordance with battery recycling laws. Call the RBRC hotline at 1-800-822-8837 for information.

Do not allow battery terminals to come into contact with metal objects (such as necklaces, hairpins, etc.).

• This can cause short-circuiting or heat generation and you may be badly burned if you touch a battery.

AC adaptor (supplied)

• If you use the AC adaptor (supplied) near a radio, the radio reception may be disturbed.

• Keep the AC adaptor (supplied) 1 m (3.3 feet) or further away from radios.

• The AC adaptor (supplied) may generate whirring sounds when it is being used. This is not a malfunction.

• After use, be sure to disconnect the power supply device from the electrical outlet. (A very small amount of current is consumed if it is left connected.)

Card

Do not leave the card where the temperature is high, where electromagnetic waves or static electricity are easily generated or exposed to direct sunlight.
Do not bend or drop the card.

- The card may be damaged or the recorded content may be damaged or deleted.
- Put the card in the card case or the storage bag after use and when storing or carrying the card.
- Do not allow dirt, dust, or water to get into the terminals on the back of the card and do not touch the terminals with your fingers.

Notice for when transferring to another party, or disposing of the memory card

- "Format" or "delete" using the camera or a PC will only modify the file management information, it will not erase the data in the memory card completely.
  It is recommended to physically destroy the memory card or use the commercially available computer data deletion software to completely erase the data in the memory card before transferring to another party or disposing.
  Management of data in the memory card is the responsibility of the user.

About the personal information

If a birthday is set for [Baby1]/[Baby2], this personal information is kept in the camera and recorded in the image.

Disclaimer

- Information including personal information may be altered or vanish due to erroneous operation, effect of static electricity, accident, malfunction, repair, or other handlings.
  Please note in advance that Panasonic is not liable in any way for any direct or indirect damage from the alteration or vanishing of information or personal information.

When requesting a repair, transferring to another party, or disposing

- Reset the settings to protect the personal information. (P42)
- If there are pictures stored in the built-in memory, copy them onto the memory card (P95) before formatting the built-in memory (P44) as needed.
- Remove the memory card from the camera when requesting a repair.
- Built-in memory and settings may return to factory default when camera is repaired.
- Please contact the dealer where you purchased the camera or Panasonic if above operations are not possible due to malfunction.

When transferring to another party, or disposing of the memory card, please refer to "Notice for when transferring to another party, or disposing of the memory card" above.

When uploading images on WEB services

- Images may contain information that can be used for identifying individuals such as titles, recording dates, and location information. When uploading images on WEB services, check carefully, and then upload.

When not using the camera for a long period of time

- Store the battery in a cool and dry place with a relatively stable temperature: [Recommended temperature: 15 °C to 25 °C (59 °F to 77 °F), Recommended humidity: 40%RH to 60%RH]
- Always remove the battery and the card from the camera.
- If the battery is left inserted in the camera, it will discharge even if the camera is turned off. If the battery continues to be left in the camera, it will discharge excessively and may become unusable even if charged.
- When storing the battery for a long period of time, we recommend charging it once a year. Remove the battery from the camera and store it again after it has completely discharged.
- We recommend storing the camera with a desiccant (silica gel) when you keep it in a closet or a cabinet.

About the picture data

Recorded data may be damaged or lost if the camera breaks down due to inappropriate handling. Panasonic will not be liable for any damage suffered due to loss of recorded data.

About tripods or unipods

- When you use a tripod, make sure the tripod is stable when this unit is attached to it.
- You may not be able to remove the card or the battery when using a tripod or unipod.
- Make sure that the screw on the tripod or unipod is not at an angle when attaching or detaching the camera. You may damage the screw on the camera if you use excessive force when turning it. Also, the camera body and the rating label may be damaged or scratched if the camera is attached too tightly to the tripod or unipod.
- Read the operating instructions for the tripod or unipod carefully.

Message Display

Confirmation messages or error messages will be displayed on the screen in some cases. The major messages are described below as examples.

[This picture is protected]

→ Delete the picture after canceling the protect setting. (P94)

[Some pictures cannot be deleted]/[This picture cannot be deleted]

- Pictures not based on the DCF standard cannot be deleted.
  → Format the card after saving necessary data on a PC etc. (P44)

[Built-in memory full]/[Memory card full]/[Not enough space on built-in memory]/ [Not enough memory on the card]

- There is no space left on the built-in memory or the card.
- When you copy pictures from the built-in memory to the card (batch copy), the pictures are copied until the capacity of the card becomes full.

[Some pictures cannot be copied]/[Copy could not be completed]

- The following pictures cannot be copied.
  – When a picture with the same name as the picture to be copied exists in the copy destination. (Only when copying from a card to the built-in memory.)
  – Files not based on the DCF standard.
- Moreover, pictures recorded or edited by other equipment may not be copied.

[Built-In Memory Error]/[Format built-in memory?]

- This message will be displayed when you format the built-in memory on a PC.
  → Format the built-in memory on the camera again. (P44) The data on the built-in memory will be deleted.

[Memory card error.
This card cannot be used in this camera.
Format this card?]

- It is a format that cannot be used with this unit.
  → Insert a different card and try again.
  → Reformat on this unit (P44) after saving necessary data using a PC, etc. Data will be deleted.

[Please turn camera off and then on again]/[System Error]

- This is displayed when the lens has stopped operating normally due to being pressed on by a hand etc.
  → Turn the camera off and on. If the message persists, contact the dealer or Panasonic.

[Memory Card Error]/[Memory card parameter error]/[This memory card cannot be used]

→ Use a card compatible with this unit. (P19)
– microSD Memory Card (64 MB to 2 GB)
– microSDHC Memory Card (4 GB to 32 GB)

[Insert SD card again]/[Try another card]

• An error has occurred accessing the card.
→ Insert the card again.
→ Insert a different card.

**[Read Error/Write Error
Please check the card]**

• It has failed to read or write data.
→ Remove the card after turning this unit off. Insert the card again, turn this unit on, and try to read or write the data again.
• The card may be broken.
→ Insert a different card.

[Motion recording was cancelled due to the limitation of the writing speed of the card]

• Use a card with SD Speed Class with “Class 6” or higher when recording motion pictures.
• In the event that it stops even after using a “Class 6” card or higher, the data writing speed has deteriorated so it is recommended to make a backup and then format (P44).
• Depending on the type of the card, motion picture recording may stop in the middle.

[A folder cannot be created]

• A folder cannot be created because there are no remaining folder numbers that can be used.
→ Format the card after saving necessary data on a PC etc. (P44)

[Picture is displayed for 16:9 TV]/[Picture is displayed for 4:3 TV]

• Select [TV Aspect] in the [Setup] menu if you want to change the TV aspect. (P43)
• This message also appears when the USB connection cable is connected to the camera only. In this case, connect the other end of the USB connection cable to a PC or a printer. (P100, 102)

[This battery cannot be used]

• Use a genuine Panasonic battery. If this message is displayed even when a genuine Panasonic battery is used, contact the dealer or Panasonic.
• If the battery terminal is dirty, clean it and remove any objects.

Troubleshooting

First, try out the following procedures (P116–125).

If the problem is not resolved, **it may be improved by selecting [Reset] (P42) on the [Setup] menu**.

Battery and power source

The charging lamp has gone off but the unit has not been charged. Or the charging lamp blinks.

• This phenomenon occurs when charging in a location where the temperature is very high or very low.
→ Reconnect the USB connection cable (supplied) in a location where the ambient temperature (and the temperature of battery) is in a 10 °C to 30 °C (50 °F to 86 °F) range, and try charging again. [If you reconnect the USB connection cable (supplied) when the unit is fully charged, the charging lamp will turn on for approximately 15 seconds.]

The camera cannot be operated even when it is turned on. The camera turns off immediately after it is turned on.

• The battery is exhausted. Charge the battery.
• If you leave the camera on, the battery will be exhausted.
→ Turn the camera off frequently by using the [Auto Power Off]. (P42)

Card/battery door does not close.

• Insert the battery securely all the way in. (P12)

Recording

The picture cannot be recorded.

• Is there any memory remaining on the built-in memory or the card?
→ Delete the pictures which are not necessary to increase available space in the memory. (P37)
• You may not be able to record for a short while after turning this unit on when using a large capacity card.

The recorded picture is whitish.

• The picture can become whitish if there is dirt, e.g. fingerprints on the lens.
→ If the lens is dirty, turn on the camera, eject the lens barrel and gently wipe the lens surface with a soft, dry cloth.

The recorded picture is too bright or dark.

→ Check that the exposure is correctly compensated. (P55)

Multiple pictures are taken at one time.

→ Set [Burst] (P76) of the [Rec] menu to [OFF].

The subject is not focused properly.

• The focus range varies depending on the Recording Mode.
→ Set to the proper mode for the distance to the subject.
• The subject is beyond the focus range of the camera. (P30)
• There is camera shake (jitter) or the subject is moving slightly. (P24)

The recorded picture is blurred. The Optical Image Stabilizer is not effective.

→ The shutter speed becomes slower when pictures are taken in dark places so hold the camera firmly with both hands to take the pictures. (P24)
→ When taking pictures at a slow shutter speed, use the Self-timer. (P54)

The recorded picture looks rough. Noise appears on the picture.

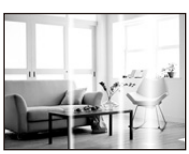
- Is the ISO sensitivity high or the shutter speed slow?
  (ISO sensitivity is set to [ISO] when the camera is shipped. Therefore, when taking pictures indoors etc. noise will appear.)
  → Decrease the ISO sensitivity. (P70)
  → Take pictures in bright places.
- Have you set [High Sens.] in Scene Mode, or [Burst] in [Rec] menu to [H] or [H]? If so, the resolution of the recorded picture decreases slightly because of high sensitivity processing, but this is not a malfunction.

The brightness or the hue of the recorded picture is different from the actual scene.

- When recording under fluorescent or LED lighting fixture etc., increasing the shutter speed may introduce slight changes to brightness and color. These are a result of the characteristics of the light source and do not indicate a malfunction.

When recording pictures or half-pressing the shutter button, reddish stripes may appear on the LCD monitor. Alternatively, part or all of the LCD monitor may turn a reddish color.

- This is a characteristic of CCDs, and it appears when the subject has a bright part. Some unevenness may occur in the surrounding areas, but this is not a malfunction.
  It is recorded in motion pictures but is not recorded on still pictures.
- It is recommended that when you take pictures you take care not to expose the screen to sunlight or any other source of strong light.



Motion picture recording stops in the middle.

- Use a card with SD Speed Class with “Class 6” or higher when recording motion pictures.
- Depending on the type of the card, recording may stop in the middle.
  → If motion picture recording stops during use of a card of at least “Class 6” or if you use a card that has been formatted on a PC or other equipment, the data-writing speed is lower. In such cases, we recommend that you make a backup of the data and then format (P44) the card in this unit.

Recording by Panorama Shot Mode is ended before finishing.

- If the camera is moved too slowly, the camera assumes that camera motion was stopped and ends the still picture recording.
- If there is a lot of camera shake in the recording direction while moving the camera, recording ends.
  → When recording in Panorama Shot Mode, try to trace a small half-circle parallel to the recording direction, taking about 4 seconds to complete the half-circle (approximate).

LCD monitor

The LCD monitor becomes darker or brighter for a moment.

- This phenomenon appears when you press the shutter button halfway to set the aperture value and does not affect the recorded pictures.
- This phenomenon also appears when the brightness changes when the camera is zoomed or when the camera is moved. This is because of operation of the automatic aperture of the camera, and it is not a malfunction.

The LCD monitor flickers indoors.

- The LCD monitor may flicker for a few seconds after turning this unit on. This is an operation to correct flicker caused by lighting such as fluorescent lights, LED lights etc. and is not a malfunction.

The LCD monitor is too bright or dark.

- Perform [Monitor Display]. (P41)

Black, red, blue and green dots appear on the LCD monitor.

- This is not a malfunction. These pixels do not affect the recorded pictures.

Noise appears on the LCD monitor.

- In dark places, noise may appear to maintain the brightness of the LCD monitor. This does not affect the pictures you are recording.

Flash

The flash is not activated.

- Is the flash setting set to [⊗]?
  → Change the flash setting. (P50)
- The flash cannot be used in the following cases:
  – Creative Control Mode (P56) DMC-XS1
  – Panorama Shot Mode (P61)
  – [Scenery]/[Night Scenery]/[Sunset]/[Starry Sky]/[Glass Through] (Scene Mode) (P64)
  – When recording in [Burst] (except for [🎞]) (P76)

Flash is activated several times.

- The flash is activated twice when Red-Eye Reduction (P50) has been set.
- Has [Burst] (P76) in the [Rec] menu been set to [🎞]?

Playback

The picture being played back is rotated and displayed in an unexpected direction.

- [Rotate Disp.] (P43) is set to [🖵📷] or [🖵].

The picture is not played back.
The recorded pictures are not displayed.

- Is there a picture on the built-in memory or the card?
  → The pictures on the built-in memory appear when a card is not inserted. The picture data on the card appears when a card is inserted.
- Is this a folder or picture which was processed in the PC? If it is, it cannot be played back by this unit.
  → It is recommended to use the “PHOTOfunSTUDIO” software in the CD-ROM (supplied) to write pictures from PC to card.
- Are you playing back filtered images by using [Slide Show] or [Filtering Play]?
  → Cancel the filter. (P85)

The folder number and the file number are displayed as [—] and the screen turns black.

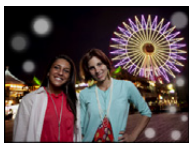
- Is this a non-standard picture, a picture which has been edited using a PC or a picture which was taken by another maker of digital cameras?
- Did you remove the battery immediately after picture-taking or did you take the picture using a battery with a low remaining charge?
  → Format the data to delete the pictures mentioned above. (P44)
  (Other pictures will be deleted as well and it will not be possible to restore them. Therefore, check well before formatting.)

With a Calendar Search, pictures display dates differing from the actual dates on which the pictures were taken.

- Is the clock in the camera set properly? (P22)
- When pictures edited using a PC or pictures taken by other equipment are searched, they may display dates differing from the actual dates on which the pictures were taken.

White round spots like soap bubbles appear on the recorded picture.

- If you take a picture with the flash in a dark place or indoors, white round spots may appear on the picture caused by the flash reflecting off of particles of dust in the air. This is not a malfunction.
  A characteristic of this is that the number of round spots and their position differ in every picture.



Red part of the recorded image has changed color to black.

- When Red-Eye Removal ([ ], [ ]) is in operation, if you take a picture of a subject with red color surrounded by a skin tone color, that red part may be corrected to black by the Red-Eye Removal function.
  → It is recommended to take a picture with the Flash Mode set to [ ], [ ] or [ ], or [Red-Eye Removal] on the [Rec] menu set to [OFF]. (P79)

[Thumbnail is displayed] appears on the screen.

- Is it a picture that has been recorded with other equipment? In such cases, these pictures may be displayed with a deteriorated picture quality.

The sound of the recorded motion pictures sometimes breaks up.

- This unit automatically adjusts the aperture during motion picture recording. At such times, the sound may break up. This is not a malfunction.

Motion pictures recorded with this model cannot be played back on other equipment.

- Playback of motion pictures recorded with this unit may not be possible with other companies' digital cameras. Also, Panasonic's digital cameras (LUMIX)* may also not be able to play them back.
  * Introduced prior to December 2008, and FS and LS series introduced in 2009.

TV, PC and printer

The picture does not appear on the television.

• Is the camera connected to the TV correctly?
→ Set the TV input to External Input Mode.

The display areas on the TV screen and the camera's LCD monitor are different.

• Depending on the TV model, the pictures may be elongated horizontally or vertically or they may be displayed with their edges cut off.

The motion pictures cannot be played back on a TV.

• Are you trying to play back the motion pictures by directly inserting the card in the card slot of the TV?
→ Connect the camera to the TV with the AV cable (optional) and then play back the pictures on the camera. (P96)

The picture is not displayed fully on the TV.

→ Check [TV Aspect] setting. (P43)

Cannot communicate with the PC.

• Is the camera connected to the PC correctly?
• Is the camera recognized by the PC correctly?
→ Select [PC] when connecting. (P100)
→ Turn this unit off and on.

The card is not recognized by the PC. (The built-in memory is recognized.)

→ Disconnect the USB connection cable. Connect it again while the card is inserted in the camera.
→ If there are two or more USB terminal on a single PC, try connecting the USB connection cable to another USB terminal.

The picture cannot be printed when the camera is connected to a printer.

• Pictures cannot be printed using a printer that does not support PictBridge.
→ Select [PictBridge(PTP)] when connecting. (P102)

The ends of the pictures are cut at printing.

→ When using a printer with a borderless printing function, cancel this function before printing. (For details, refer to the operating instructions for the printer.)
→ When you order photo studios to print pictures, ask the photo studio if the 16:9 pictures can be printed.

The panorama picture is not printing correctly.

• Since aspect ratio of a panorama picture differs from normal pictures, it may not always be possible to print it correctly.
→ Please use a printer that supports panorama pictures. (For details, refer to the operating instructions for the printer.)
→ We recommend using the “PHOTOfunSTUDIO” software on the CD-ROM (supplied) to adjust the size of the still picture to the print paper size.

Others

An unreadable language was selected by mistake.

→ Press [MENU/SET], select the [Setup] menu icon [🔧]. Then press [MENU/SET], and then select the [🌐] icon to set the desired language. (P44)

The camera becomes warm.

• The surface of the camera may become warm during use. This does not affect the performance or quality of the camera.

The lens clicks.

• When the brightness changes due to zoom or camera movement, etc., the lens may click and the picture on the screen may drastically change. However, the picture is not affected. The sound is caused by the automatic adjustment of the aperture. This is not a malfunction.

The clock is reset.

• If you do not use the camera for a long time, the clock may be reset.
→ [Please set the clock] message will be displayed; please reset the clock. (P22)

When pictures are taken using the zoom, they are slightly distorted and the areas around the subject contain colors which are not actually present.

• It is possible that the subject may be warped slightly, or the borders get colored, depending on the zoom magnification, due to the characteristics of the lens, but this is not a malfunction.

Zooming stops instantaneously.

• When using the Extended Optical Zoom, the zooming action will stop temporarily. This is not a malfunction.

The file numbers are not recorded consecutively.

- When you perform an operation after taking a certain action, the pictures may be recorded in folders with different numbers from the ones used prior to the operation.

The file numbers are recorded with previously used numbers.

- If you insert or remove the battery before turning off this unit, the folder and file numbers for the pictures taken will not be stored in the memory. When this unit is turned on again and pictures are taken, they may be stored under file numbers which should have been assigned to previous pictures.

The card cannot be formatted.

- Formatting is not available in Intelligent Auto Mode. Switch the recording mode to another one. (P25)

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