



LEICA D-LUX 6

Instructions

About  
downloading  
**Adobe® Photoshop®**  
**Lightroom®**  
see page 189.

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**Playback**

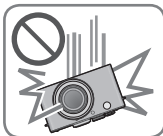
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## Before use

### ■ Camera handling



**Protect the camera from excessive vibration, force, or pressure.**

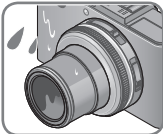
- Avoid using the camera under the following conditions, which may damage the lens, the monitor, or the camera body. This may also cause the camera to malfunction or prevent recording.
  - Dropping or hitting the camera against a hard surface
  - Sitting down with the camera in your pants pocket or forcing it into a full bag
  - Attaching accessories to the camera strap
  - Exerting excessive force on the lens or the monitor

**The camera is not dust resistant, splash resistant, or waterproof.**

**Avoid using the camera in places with excessive dust or sand, or where water can come into contact with the camera.**

- Avoid using the camera under the following conditions, which present a risk that sand, water, or foreign material may enter the camera through the lens or gaps around buttons. Be especially careful because these conditions may damage the camera, and such damage may not be repairable.
  - In extremely dusty or sandy places
  - In the rain or by the shore, where the camera may be exposed to water

### ■ Condensation (When the lens or the monitor is fogged up)



- Condensation may occur when the camera is exposed to sudden changes of temperature or humidity. Avoid these conditions, which may soil the lens or the monitor, cause mold, or damage the camera.
- If condensation does occur, turn off the camera and wait about two hours before using it. Once the camera adjusts to the surrounding temperature, the fogging will clear naturally.

### ■ Always take a test shot first

Before important events when you will use the camera (at weddings, for example), always take a test shot to make sure that pictures and sound are recorded correctly.

### ■ No compensation for missed shots

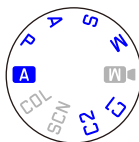
We cannot compensate for missed shots if technical problems with the camera or card prevent recording.

### ■ Carefully observe copyright laws

Unauthorized use of recordings that contain works with copyright for purposes other than personal use is prohibited under copyright law. Recording of certain material may be restricted even for the purpose of personal use.

### ■ Also refer to “Usage cautions and notes” (→216)

- Please note that the actual controls and components, menu items, and other information for your camera may differ from those in the illustrations provided in these instructions.
- Recording mode icons  
You can select and execute the indicated menus and functions for the recording modes displayed in blue on mode dial illustrations next to section titles.



In the example shown on the left, the following recording modes are available: **A**, **P**, **A**, **S** and **M**.

\* **C1** and **C2** will differ depending on the recording modes registered under custom settings.

## Scope of Delivery

	Order No.
Rechargeable battery	
BP-DC10-E	18 719
BP-DC10-U	18 720
Charger	
BC-DC10-E	423-092.001-010
BC-DC10-U	423-092.002-010
Mains cable	
EU	423-111.001-006
UK	423-111.001-007
AUS	423-068.801-023
TW	423-111.001-009
CN	423-111.001-010
KR	423-111.001-008 (delivery differs depending on markets)
Shoulder strap	423-108.001-020
Lens cap	423-108.001-018
String for lens cap	423-108.001-019
Hot shoe cover	423-108.001-015
CD with instr. PDFs	423-108.001-016
USB cable	423-106.001-010
AV cable	423-105.001-010
Button template for Canada / Taiwan	423-108.001-021/-022 (only with camera models: 18 461/18 462)
Short instructions	93 479 -482 (delivery differs depending on markets)
Warranty Card	439-399.100-026

## Accessories

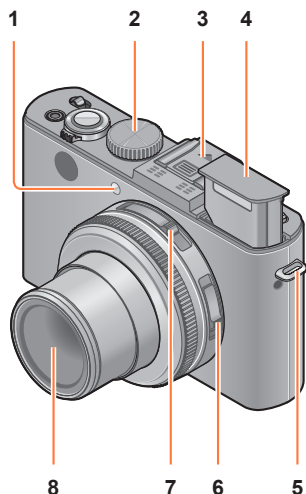
	Order No.
Leather case D-LUX 6	18 727
Protector	18 730
Small system case	18 746
Shoulder strap	18 747
Hand grip D-LUX 6	18 733
LEICA Electronic Viewfinder EVF 3	18 734
HDMI mini cable	14 491
LEICA CF 22 Flash unit	18 694
Tabletop tripod	14 100
Ball and Socket head	14 110

## Notes:

- Memory cards are optional. You can record or play back pictures on the internal memory when you are not using a card.
- Check that all items belonging to the scope of delivery are included before using the camera.
- The items and their shape may differ depending on the country or area where the camera was purchased.
- Keep small parts in a safe place out of the reach of children.
- Please dispose of all packaging appropriately.



## Names of the components



**1 Self-timer indicator / AF Assist Lamp**  
Illuminates when the self-timer is set or when Autofocus is operated in dark locations. (→116, 143)

**2 Mode dial**  
Switches the recording mode. (→48)

**3 Hot shoe (Hot shoe cover)**  
The hot shoe cover is on the hot shoe at the time of purchase.

**4 Built-in flash**  
Use the flash open switch to open the flash. (→106)

**5 Shoulder strap eyelet**  
Attach the supplied shoulder strap and lens cap string to this eyelet. (→13)

**6 Focus selector switch**  
Switches the focus setting. (→96, 102, 104)

**7 Aspect ratio selector switch**  
Switches the aspect ratio of a still picture. (→121)

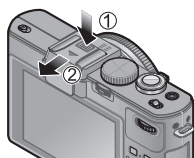
**8 Lens**  
The lens barrel extends forward when you take a picture.

### ■ About the hot shoe cover

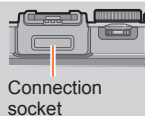
To attach (optionally available) accessories in the hot shoe, the cover must be removed first.

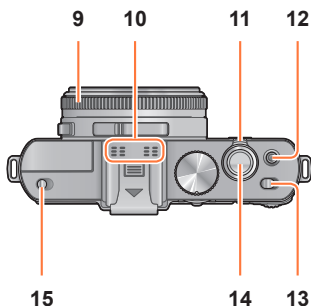
#### Removing the hot shoe cover

While pressing down on the hot shoe cover release button ①, pull the cover in the direction of the arrow ② to remove it.

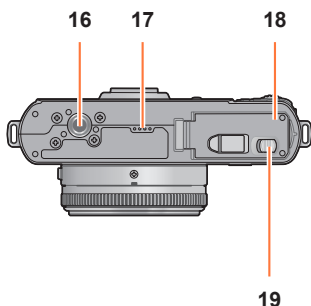


- Be sure to attach the hot shoe cover when the hot shoe is not in use.
- When not in use, keep the hot shoe cover in a safe place so that you do not lose it.
- When the hot shoe cover is removed, make sure that connection socket is not damaged by liquids or sand.
- Keep the hot shoe cover out of reach of children to prevent swallowing.

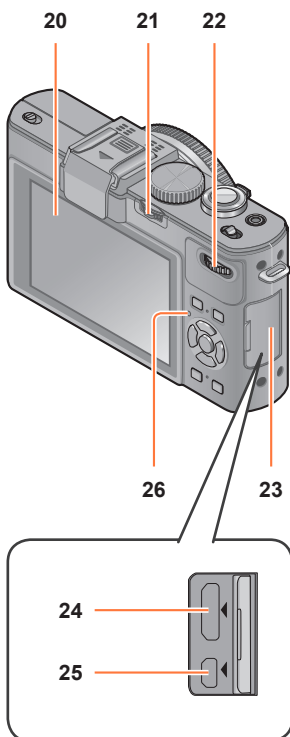




- 9 Aperture ring**  
Adjusts the aperture value. (→60, 62)
- 10 Microphone**  
Records sound when you record motion pictures. (→82)
- 11 Zoom lever**  
Adjusts the recording range. (→92)
- 12 Motion picture button**  
Press this button to start and stop motion picture recording. (→46)
- 13 Camera ON/OFF switch**  
Turns the camera on or off.
- 14 Shutter button**  
Press this button to record a still picture. (→46)



- 15 Flash open switch**  
Operate this switch to open the flash. (→106)
- 16 Tripod thread**  
For attaching the camera to a tripod or other accessories.  
Do not attach to a tripod using longer than 5.5mm screws. Doing so may damage the camera.
- 17 Speaker**  
Do not cover the speaker with your fingers.
- 18 Card/Battery door**  
Open this door to insert and remove a card or battery. (→18)
- 19 Release slider**  
Push this slider to open the card/battery door. (→18)



**20 LCD monitor** (→200)

**21 [ND/FOCUS] lever**

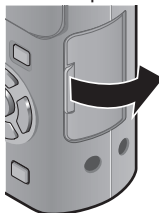
To operate the lever, move it left or right or press it forwards. Use this lever for Manual Focus adjustment or for turning the built-in ND filter on/off, etc. (→104, 123)

**22 Dial**

To operate the dial, rotate it left or right or press it forwards. Use this dial for operations such as adjusting the shutter speed or selecting an operation item. (→61, 62, 124)

**23 Terminal cover**

How to open the terminal cover



**24 [HDMI] socket**

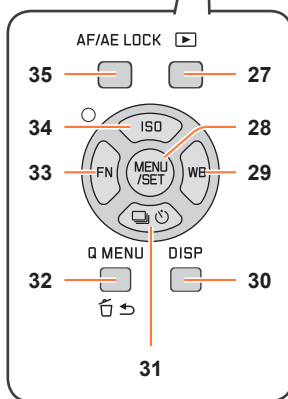
For connecting the HDMI mini cable (available as accessory (→8)) to this socket. (→182)

**25 [AV OUT/DIGITAL] socket**

For connecting the USB cable or the AV cable (→8). (→182, 191, 193)

**26 Status indicator**

This indicator lights up in accordance with the operating conditions of the camera.



### 27 Playback button

Switches between picture taking and playback mode. (→152)

### 28 [MENU/SET]

Mainly used to display menu screens or to set menu items. (→25)

### 29 [WB] button / Right cursor button (▶)

Displays the White Balance setting screen. This button is also used to move the cursor on the menu screens and for other functions. (→25, 111)

### 30 [DISP] button

Switches the displayed screens. (→127, 162)

### 31 [☰] button / Down cursor button (▼)

Displays the setting screens for serial exposures, self-timer and other functions. This button is also used to move the cursor on the menu screens and for other functions. (→25, 116, 118, 125)

### 32 [Q MENU] button / [☰ ↵] button

Displays the Quick menu in picture taking mode. Deletes pictures in playback mode. This button is also used to return to the previous screen during menu operations. (→129, 163)

### 33 [FN] button / Left cursor button (◀)

Displays the screen of the function registered to the corresponding [FN] button. This button is also used to move the cursor on the menu screens and for other functions. (→25, 30)

### 34 [ISO] button / Up cursor button (▲)

Displays the setting screen for ISO Sensitivity. This button is also used to move the cursor on the menu screens and for other functions. (→25, 109)

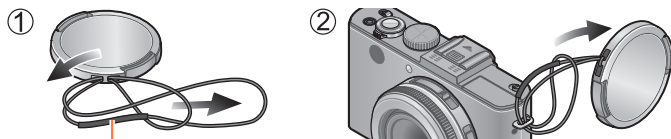
### 35 [AF/AE LOCK] button

Locks the exposure and focus settings. (→103, 138)

## Attaching lens cap and shoulder strap

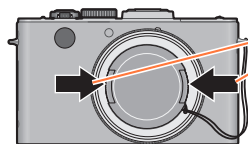
Protect the lens with the lens cap when you are not taking pictures. We recommend attaching the lens cap to the camera using the lens cap string to prevent loss of the lens cap. We also recommend attaching the shoulder strap to prevent the camera from being dropped.

### 1 Use the supplied string to attach the lens cap to the camera



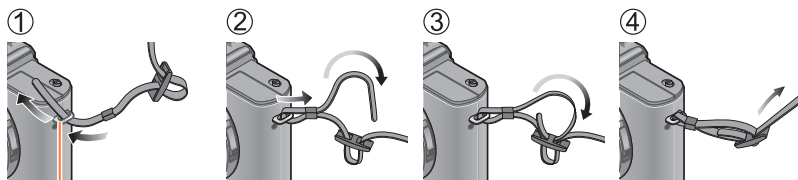
Make sure that the thicker section of the string is not caught in the lens cap or the shoulder strap eyelets.

### 2 Attach the lens cap



To attach and remove the lens cap, press the areas shown by arrows in the illustration.

### 3 Attach the shoulder strap



Shoulder strap eyelet

- Attach the other end of the shoulder strap the same way.
- Make sure that the shoulder strap does not come loose.
- Attach the shoulder strap with the LEICA logo on the strap facing outwards.
- Use the shoulder strap on your shoulder.
  - Do not use the strap around your neck. It may result in injury or accident.
- Do not leave the shoulder strap where a child can reach it.
  - This may result in the child accidentally strangling itself.

## Charging the battery

Always charge before first use! (the battery is shipped uncharged)

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

It has been found that counterfeit batteries which look very similar to the genuine product are available in some markets. Some of these batteries are not adequately protected with internal circuitry to meet the requirements of appropriate safety standards. There is a possibility that these batteries may lead to fire or explosion. Please be advised that Leica Camera AG is not liable for any accident or failure occurring as a result of use of a counterfeit battery. To ensure that safe products are used we urgently recommend to use only the Leica battery BP-DC10 (→8).

- Use only the specified charger and battery.

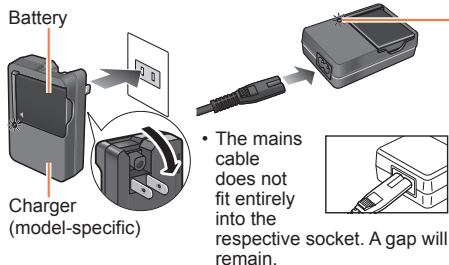
### 1 Insert the battery into the charger

- The terminals should face the charger's contacts.



### 2 Connect the charger to the electrical outlet

- Plug-in type
- Cable type



- It is recommended to charge the battery indoors (10°C to 30°C (50°F to 86°F)).

#### Charging light ([CHARGE])

**On:** Charging in progress  
**Off:** Charging complete

#### If light is flashing:

- Charging may take longer than normal if battery temperature is too high or too low (charging may not be completed).
- Battery/charger contacts are dirty. Clean with a dry cloth.

### 3 Detach the battery after charging is completed

- The charger is in the standby condition as long as it is connected to the mains. The primary circuit is always "live" as long as it is connected to the mains.

## ■ Notes on the charging time

Charging time	Approx. 155 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 a battery in hot/cold environments or for a battery that has not been used for a long time may be longer than normal.
- Use only the Leica battery BP-DC10 (→8).
- We cannot guarantee the quality of any other batteries.
- **Remove the battery from camera when you are not going to use the camera for a long time.**
  - Store the battery in a plastic case, making sure that it is kept away from metal objects (such as clips).
- To remove the battery, turn the camera off and wait until the Leica indicator on the monitor goes off. (Failure to wait may cause the camera to malfunction and may damage the card or recorded data.)

## Remaining battery capacity

When using the camera, the remaining battery capacity is displayed.



### Remaining battery capacity

(flashes red\*)  
 If the battery mark flashes red, recharge or replace battery.

\* When the monitor is turned off, the status indicator will flash.

### Guidelines for the number of recordable pictures and operating time

The number of recordable pictures or available operating time may vary according to the surrounding environment and usage conditions. Figures may be reduced if flash, zoom, or other functions are used frequently, or in colder conditions.

#### ■ Recording still pictures

Number of recordable pictures	Approx. 330	By CIPA standard
Recording time	Approx. 165 min	

#### ● Recording conditions by CIPA standard

CIPA is an abbreviation of [Camera & Imaging Products Association].

- [Program AE] Mode
- Temperature: 23°C (73.4°F)/Humidity: 50% RH when the monitor is on.
- Using a 32MB memory card.
- 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 with full flash every second recording.
- Zooming from the maximum wide-angle to the maximum telephoto setting 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 is reduced if intervals are longer (e.g. to approx. one quarter for 2-minute intervals under the above conditions).



## ■ Recording motion pictures

[Rec Mode]	[AVCHD]		[MP4]
[Rec Quality]	[PSH]	[FSH]	[FHD]
Available recording time	Approx. 90 min	Approx. 100 min	Approx. 110 min
Actual available recording time	Approx. 50 min	Approx. 55 min	Approx. 60 min

### ● Recording conditions

- Temperature 23°C (73.4°F), humidity 50% RH
- The time you can actually record when repeatedly turning the power on and off, starting and stopping recording and using the zoom.

### ● Remaining time for continuous recording displayed on the monitor

#### • With camera model 18 460

You can continuously record a motion picture in [MP4] for up to 29 minutes or approx. 4 GB. (Since recording in [MP4] with [FHD] creates larger files, the recording time for such motion pictures will be shorter than 29 minutes.)

You can continuously record [AVCHD] motion pictures for up to 29 minutes.

#### • With camera models 18 461 / 18 462

You can continuously record a motion picture in [MP4] for up to 29 minutes or approx. 4 GB. (Since recording in [MP4] with [FHD] creates larger files, the recording time for such motion pictures will be shorter than 29 minutes.)

If [Rec Quality] of [AVCHD] motion pictures is set to [PSH] or [FSH], you can continuously record a motion picture for up to 29 minutes.

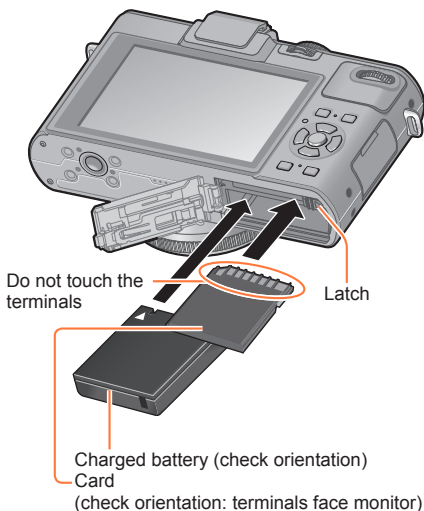
## ■ Viewing pictures

Playback time	Approx. 240 min
---------------	-----------------

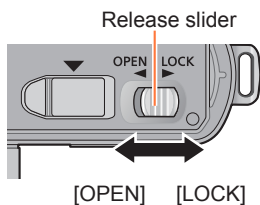
- The number of recordable pictures or available operating time may vary according to the surrounding environment and usage conditions.
- If the available battery capacity is significantly reduced, it is reaching the end of its lifespan. Please purchase a new battery.

## Inserting and removing the card/the battery

- Set the camera ON/OFF switch to [OFF].



- 1** Push the release slider to the [OPEN] position and open the card/battery door



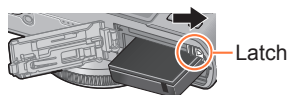
- 2** Insert battery and card, making sure that they are correctly aligned

- **Battery:** Push it in until it is locked by the latch.
- **Card:** Push it down until it clicks into place.

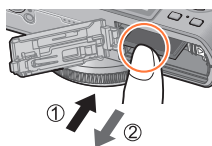
- 3** Close the door and push the release slider to the [LOCK] position

### ■ To remove

- **To remove the battery:**  
Pull the latch in the direction of the arrow.



- **To remove the card:**  
Press it further down until it clicks, then pull it out upright.



- Remove battery from the camera when you are not going to use the camera for a long time.
- Keep memory cards out of reach of children to prevent swallowing.
- To remove the card or the battery, turn the camera off and wait until the Leica logo display on the monitor and the status indicator go out. (Failure to wait may cause the camera to malfunction and may damage the card or recorded data.)

## Saving your pictures (to an inserted memory card or the built-in memory)

Pictures will be saved to a card if one is inserted, or to the built-in memory  if not.

### ■ Built-in memory (approx. 70 MB)

- Pictures can be copied between cards and the built-in memory. (→181)
- The access time for the built-in memory may be longer than the access time for a card.

### ■ Compatible memory cards



The following SD standard-based cards

Type of Card	Capacity	Notes
SD Memory Cards	8 MB – 2 GB	<ul style="list-style-type: none"> <li>• Can be used with devices compatible with the respective formats.</li> <li>• Before using SDXC Memory Cards, check that your computer and other devices support this type of card.</li> <li>• <b>Using a card of SD speed "Class 4"* or above is recommended for recording motion pictures.</b></li> <li>• Only the cards listed on the left with the given capacities are supported.</li> </ul>
SDHC Memory Cards	4 GB – 32 GB	
SDXC Memory Cards	48 GB, 64 GB	

\* SD speed class refers to a specification for sustained write speeds. Confirm the SD speed by checking the card label or other card related materials.

(Example)



- While the camera is accessing the card or the built-in memory (for an operation such as picture writing, reading, deletion, or formatting), do not turn off the camera or remove the battery or the card. Do not subject the camera to vibrations, impact, or static electricity.  
The card or the data on the card may be damaged, and the camera may no longer operate normally. If operation fails due to vibration, impact or static electricity, perform the operation again.
  - Icons displayed while recording
    -  : When using a card
    -  : When using the built-in memory
- Please reformat the card with this camera if it has already been formatted with a computer or another device. (→42)
- If the write-protect switch is set to "LOCK", the card cannot be used to record or delete pictures, and it cannot be formatted.
- It is recommended that you copy important pictures to your computer (as electromagnetic fields, static electricity, or faults may cause data to be damaged).



Switch

Saving your pictures (to an inserted memory card or the built-in memory)

## Recording capacity guidelines (pictures/recording time)

The number of pictures you can take and the recording time vary in proportion to card capacity (and depending on recording conditions and type of card).



Displayed when no card is inserted  
(pictures will be saved to built-in memory)

Estimated remaining number of pictures or recording time  
(The display switches depending on the settings.)

## ■ Recording picture capacity (still pictures)

[Picture Size]	Built-in memory	2 GB	32 GB	64 GB
4:3  10M	16	440	7290	14530
4:3  5M	24	650	10620	21490
4:3  0.3M	380	10050	162960	247150

- When the number of recordable pictures exceeds 99,999, “+99999” is displayed.

Saving your pictures (to an inserted memory card or the built-in memory)

### ■ Recording time capacity (motion pictures)

([h], [m] and [s] indicate “hour”, “minute” and “second”).

#### When the [AVCHD] recording mode is used

[Rec Quality]	Built-in memory	2 GB	32 GB	64 GB
[PSH]	–	8m00s	2h31m00s	5h07m00s
[FSH]/[SH]	–	14m00s	4h10m00s	8h26m00s

#### When the [MP4] recording mode is used

[Rec Quality]	Built-in memory	2 GB	32 GB	64 GB
[FHD]	–	12m02s	3h22m58s	6h50m54s
[HD]	–	22m59s	6h27m29s	13h04m28s
[VGA]	1m42s	50m36s	14h12m48s	28h46m30s

- The time displayed in the table is the total time.

### ● Remaining time for continuous recording is displayed on the screen

#### • With camera model 18 460

You can continuously record a motion picture in [MP4] for up to 29 minutes or approx. 4 GB. (Since recording in [MP4] with [FHD] creates larger files, the recording time for such motion pictures will be shorter than 29 minutes.)

You can continuously record [AVCHD] motion pictures for up to 29 minutes.

#### • With camera models 18 461 / 18 462

You can continuously record a motion picture in [MP4] for up to 29 minutes or approx. 4 GB. (Since recording in [MP4] with [FHD] creates larger files, the recording time for such motion pictures will be shorter than 29 minutes.)

If [Rec Quality] of [AVCHD] motion pictures is set to [PSH] or [FSH], you can continuously record a motion picture for up to 29 minutes.

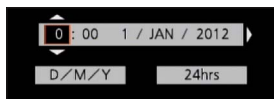
## Setting time and date

The clock is not set when the camera is shipped.

**Preparation:** Before using the camera, remove the lens cap.



[ ] button



### 1 Turn on the power



### 2 Press [MENU/SET] while the message is displayed

### 3 Press ▲ ▼ to select the language and then [MENU/SET]

### 4 The [Please set the clock] message appears. Press [MENU/SET]

### 5 Press ◀ ▶ to select the items (year, month, day, hour, minute, display order or time display format), and then ▲ ▼ to set

### 6 Press [MENU/SET]

### 7 Press [MENU/SET] to set

- To return to the previous screen, press the [ ] button.

- 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] or [Text Stamp].
- If the clock is set, the correct date can be printed even if the date is not displayed on the monitor.

## Changing settings

Select [Clock Set] from the [Setup] or [Rec] menu to change the current time settings.

- Clock settings will be saved for approx. 3 months even after the battery is removed, provided a fully-charged battery was installed in the camera for 24 hours beforehand.

### **1** Select [Clock Set] from the [Setup] or [Rec] menu

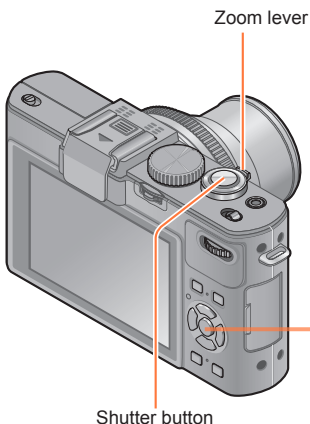
- For details about how to set the menu (→25)

### **2** Set the date and time (Perform steps **5** - **6**. (→23))



## Setting the menu

You can use the menu to set camera and picture taking functions, operate playback functions, and perform other operations.



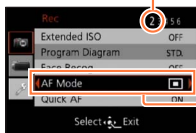
### 1 Press [MENU/SET] to bring up the menu



Each item's background color changes when it is selected

### 2 Select the menu type (→26)

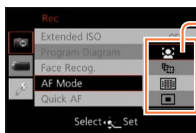
### 3 Press ▲▼ to select the menu item and then ►



Page number (Zoom lever can be used to switch to next page.)

Item

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



Selected setting

Available settings

### 5 Press [MENU/SET] to close the menu



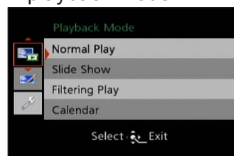
- You can also close the menu by pressing the shutter button halfway. (The camera switches to picture taking mode.)

## ■ Menu type

### ● In recording mode



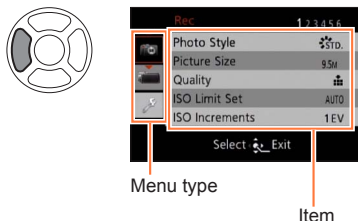
### ● In playback mode



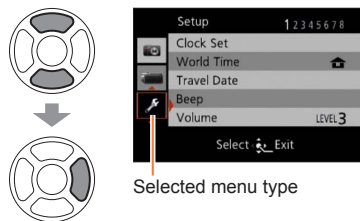
<b>[Rec] menu</b>	For settings such as resolution and flash mode.
<b>[Motion Picture] menu</b>	For settings such as recording method and resolution.
<b>[Playback Mode] menu</b>	For settings for playback methods such as [Slide Show] and [Filtering Play].
<b>[Playback] menu</b>	For settings for recorded pictures, such as picture protection and cropping and print settings.
<b>[Setup] menu</b>	For basic camera settings, such as setting the clock and changing the beep sounds.

## ■ Switching menu type

- ① Press ◀ to move the cursor from the menu item to the menu type (shown in left-hand frame).



- ② Press ▲▼ to select the menu type to be displayed and then ▶ to return to the menu item



- The monitor screen examples in these instructions may differ from the actual displays or some parts of the display may be omitted.
- The menu types and items that are displayed vary according to the mode.
- The setting methods vary depending on the menu item.

## Using the [Setup] menu

[Clock Set], [Economy] and [Auto Review] are important for clock setting and battery life. Please check these before use.

- For the setting procedures of the menu. (→25)

- In [Snapshot Mode], only [Clock Set], [World Time], [Beep], [Language] and [O.I.S. Demo.] are set.

### [Clock Set]

For setting time, date, and display format.

For details (→24).

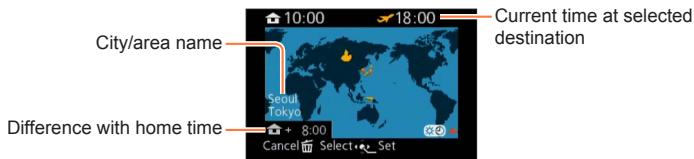
### [World Time]

For setting the local recording date and time at your destination.

- A message will be displayed when setting for the first time. In this case, press [MENU/SET] and skip to step 2.

**1** Use cursor buttons to select [Destination] and then press [MENU/SET]

**2** Use cursor buttons to select the area and then press [MENU/SET]



When [Destination] has been selected


### ■ To set summer time

Press ▲ in step **2**. (Press again to release the setting)

- When summer time is set, the current time is advanced by 1 hour. If the setting is canceled, the time automatically returns to the current time.

### ■ When you come back from your travel destination

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

- If you cannot find your destination in the area displayed on the screen, set based on difference with home time.
-  is displayed on the screen for pictures recorded at the destination when they are played back.

- For the setting procedures of the menu. ([→25](#))

## [Travel Date]

If you set your travel schedule and record pictures, the day of your trip on which the picture was taken will be recorded.

**1** Use cursor buttons to select [Travel Setup] and then press ►

**2** Use cursor buttons to select [SET] and then press [MENU/SET]

**3** Use cursor buttons to select the departure date and then press [MENU/SET]

**4** Use cursor buttons to select the return date and then press [MENU/SET]

### ■ To record [Location]

Once [Travel Setup] is set, you can set the location.

- ① Use cursor buttons in step **1** above to select [Location] and then press ►
- ② Use cursor buttons to select [SET] and then press [MENU/SET]
- ③ Enter your location (Entering text ([→44](#)))

- The travel date is calculated from the set departure date and the date set in the camera's clock. When the destination is set in [World Time], the elapsed days are calculated based on the local destination time.
- When [Travel Setup] is set to [OFF], the number of elapsed days is not recorded. It is not displayed even if [Travel Setup] is set to [SET] after recording.
- If settings are made before the departure date, the number of days to departure are not recorded.
- To print [Location] or the number of days that have passed, use [Text Stamp].
- [Travel Date] cannot be recorded for AVCHD motion pictures.
- [Destination] cannot be recorded for MP4 motion pictures.

- For the setting procedures of the menu. (→25)

## [Beep]

With this function, you can change or mute the beep/shutter sounds.

### ■ Settings

#### [Beep Level]

/ / : High / Low / Mute

#### [Beep Tone]

/ / : Changes the beep tone.

#### [Shutter Vol.]

/ / : High / Low / Mute

#### [Shutter Tone]

/ / : Changes the shutter tone.

- For the setting procedures of the menu. (→25)

### [Volume]

For adjusting the volume of sound from the loudspeaker (7 levels).

#### ■ Settings: [0] / [1] / [2] / [3] / [4] / [5] / [6]

- This function cannot be used to adjust TV speaker volume when the camera is connected to a TV.

### [Cust.Set Mem.]

For registering the current camera settings.  
For details (→90).

### [Fn Button Set]

For registering frequently used functions from the [Rec], [Setup] or other menus to the [FN] button for faster operation.

#### ■ Settings

[Photo Style] (→134)	[Level Gauge] (→128)
[Quality] (→136)	[Guide Line] (→32)
[Metering Mode] (→139)	[Video Rec Area] (→34)
[AF Mode] (→97)	[Remaining Disp.] (→34)
[Focus Area Set] (→100)	[Flash] (→107)
[1 Shot AF] (→105)	[Flash Adjust.] (→145)
[i.Dynamic] (→139)	[Aspect Bracket] (→122)

- For the setting procedures of the menu. (→25)

### [LCD Display] / [Viewfinder]

For adjusting the brightness and the color rendition of the monitor. When the display is switched to an attached external electronic viewfinder (available as accessory (→8)), the brightness and color rendition of the viewfinder are adjusted.

**1** Press ▲ ▼ to select the setting item, and then ◀ ▶ to make adjustments

**2** Press [MENU/SET]

- Some subjects may look different from their actual appearance, but the recorded picture will not be affected.

### [LCD Mode]

For enhancing the visibility of the monitor image.

#### ■ Settings

**[A\*]**: The display brightness is adjusted automatically depending on the ambient brightness.

**[\*]**: Increases the monitor image brightness (for outdoor use).

**[OFF]**

- This function [**A\***] is not available in playback mode.
- [**[\*]**] returns to ordinary brightness if there is no operation for 30 seconds when recording. (Press any button to increase the monitor image brightness again.)
- Because the picture shown on the monitor is brighter than normal, some subjects may look different than their actual appearance, but this will not affect the recorded picture.
- Setting [LCD Mode] reduces the operating time.

- For the setting procedures of the menu. (→25)


### [EVF Disp.Style] / [LCD Disp.Style]

[EVF Disp.Style]: Set the display mode for an attached external electronic viewfinder (available as accessory (→8)).

[LCD Disp.Style]: Set the display mode for the monitor.

#### ■ Settings

: External electronic viewfinder display layout

: Monitor display layout

- Display screen example (when using the monitor)



 (External electronic viewfinder display layout)






 (Monitor display layout)

- [EVF Disp.Style] can be selected only when an electronic viewfinder (available as accessory (→8)) is attached.

### [Guide Line]

For displaying guide lines that can be used as a reference for picture composition.

■ Settings:  /  /  / [OFF]

#### ■ Setting the position of the guidelines

Select  to set the position of the guidelines.

① Select  under [Guide Line] in the [Setup] menu

② Use cursor buttons to move the position of the guidelines (point of intersection) and then press [MENU/SET]

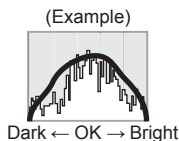
- When you press the [DISP] button, the point of intersection will return to the center.



- For the setting procedures of the menu. (→25)

### [Histogram]

A histogram illustrates the distribution of brightness in the picture – e.g. if the graph peaks at the right, this means there are more bright areas in the picture. A peak in the center represents a correct exposure. This can be used as a reference for exposure compensation, etc.



### ■ Settings: [ON] / [OFF]

- When the histogram is not the same as that of the recorded picture under the following conditions, it will be displayed in orange.
  - When manual exposure assist indicates settings other than 0 EV in [Manual Exposure] mode or during Exposure Compensation.
  - When the flash fires.
  - When the proper exposure is not achieved while the flash is closed or the brightness of a picture on the monitor cannot be displayed correctly in dark locations.
- The histogram displayed during recording is only a reference.
- The histogram displayed during recording and that displayed during playback may be different.
- The histogram is different from those displayed using the image editing software of a computer.
- The histogram will not be displayed in the following cases.
  - [Snapshot Mode]
  - During motion picture recording
  - Playback Zoom
  - Multi Playback
  - When the HDMI mini cable is connected

- For the setting procedures of the menu. (→25)

## [Video Rec Area]

This mode allows the identification of the recordable area for a motion picture before recording.

### ■ Settings: [ON] / [OFF]

- The recordable area displayed for motion pictures should be interpreted as an approximation.
- When using Extended optical zoom, the recordable area may not always be displayed for certain zoom ratios.

## [Remaining Disp.]

This mode switches the display between the remaining number of still pictures you can take or the remaining recording time of a motion picture that you can record on the available card or to the built-in memory.

### ■ Settings

- 📷 (Displays the number of pictures that can be recorded)
- 🕒 (Displays the remaining recording time)

## [Highlight]

With this mode activated, bright areas without any detail, i.e. that are rendered totally white are indicated by flashing on the screen when the [Auto Review] function is activated or during playback.

### ■ Settings: [ON] / [OFF]

- To reduce or prevent overexposure, use a negative exposure compensation with the help of e.g. the histogram display as a reference. (A peak on the right side of the histogram indicates overexposure.)
- This feature is disabled during Multi Playback, Calendar Playback, Playback Zoom or motion picture playback.
- If the subject is too close to the camera using flash, overexposure may occur.

- For the setting procedures of the menu. (→25)

## [Expo.Meter]

For selecting whether or not to display the setting display when e.g. shutter speed and aperture value settings or Exposure Compensation are performed.

### ■ Settings: [ON] / [OFF]

- If the setting display is not displayed, press the [DISP] button to switch the display of the monitor.
- The setting display will turn off if no operation is performed for approximately 4 seconds.

## [Lens Resume]

For saving the zoom position and the Manual Focus position in the memory when the camera is turned off.

### ■ Settings

#### [Zoom Resume]

[ON]: Returns to the zoom position that was saved in the memory when the camera is turned on the next time.

[OFF]

#### [MF Resume]

[ON]: Saves the Manual Focus position in the memory when the camera is turned [OFF] or when the focus selector switch is set to modes other than [MF]. This setting will return to the focus position saved in the memory when the camera is turned on or the focus selector switch is set to [MF] next time.

[OFF]

- The Manual Focus position saved in the memory and the position to which the camera returns when it is turned on may differ depending on the recording conditions.

## [MF Assist]

This mode facilitates simple and precise manual focusing by enlarging a section of the monitor image.

- About MF assist (→105)

### ■ Settings: [ON] / [OFF]

- For the setting procedures of the menu. (→25)

## [Economy]

For switching off the camera and/or the monitor when they are not being used to minimize battery consumption.

### [Sleep Mode]

#### ■ Settings: [10MIN.] / [5MIN.] / [2MIN.] / [1 MIN.] / [OFF]

Automatically switches the camera off when no operation is performed for a preset period of time.

- To restore → Press the shutter button halfway, or turn on the camera again.
- This mode cannot be used in the following cases:  
When the camera is connected to a computer or printer, when recording or playing back motion pictures or playing back pictures using Slide Show, or during interval recording
- The settings are fixed to [5MIN.] in [Snapshot Mode].

### [Auto LCD Off]

#### ■ Settings: [30 MIN.] / [5MIN.] / [2MIN.] / [1 MIN.]

Automatically switches the monitor off when no operation is performed for a preset period of time.

- The status indicator lights up when the monitor is turned off. To turn on the monitor again, press any button.

### [Live View Mode]

#### ■ Settings: [NORMAL] / [ECO] (Reduces power consumption)

- Although the monitor image quality may deteriorate when [ECO] is set (compared to [NORMAL]), the recorded pictures will not be affected.
- When [Live View Mode] is set to [NORMAL], the operating time will be reduced.

- For the setting procedures of the menu. (→25)

**[Play on LCD]**

This mode automatically switches on the monitor during playback even if an external electronic viewfinder (available as accessory (→8)) is attached.

- **Settings:** [ON] / [OFF]

**[Auto Review]**

This mode automatically displays still pictures immediately after taking them.

- **Settings**

**[HOLD]:** The playback mode remains until a button (other than the [DISP] button) is pressed

**[2SEC.] / [1SEC.]:** The playback mode is replaced by the previous picture taking mode after the preset time

**[OFF]**


- The setting is fixed to [2SEC.] in [Snapshot Mode].
- This mode automatically displays still pictures immediately after they are taken during [Auto Bracket], [Aspect Bracket], [WB Bracket] and series exposures, regardless of the [Auto Review] setting.
- The Auto Review function is disabled during motion picture recording or interval recording.


- For the setting procedures of the menu. (→25)


## [Start Mode]

For determining whether picture taking or playback mode is active when the camera is switched on.

### ■ Settings

: When the camera is turned on, recording mode is activated.

: When the camera is turned on, playback mode is activated.

- Even when [] is set, if the camera is turned on while pressing the playback button, the camera is activated in playback mode.

## [No.Reset]

For resetting the file number for the next picture to be taken to 0001.

- The folder number is updated and the file number for the next picture to be taken is set to 0001.
- A folder number between 100 and 999 can be assigned.  
Numbers cannot be reset once the folder number reaches 999. In this case, save all necessary pictures to your computer, and format the built-in memory/card (→42).
- To reset folder number to 100:  
First, format the built-in memory and card in the camera, and select [Yes] in [No.Reset]. Then select [Yes] on the folder number reset screen.

- For the setting procedures of the menu. (→25)

## [Reset]

For returning the [Rec] menu and [Setup] menu settings to the default settings.


### ■ Settings: [Reset Rec. settings?] / [Reset setup parameters?]


- The information registered in [Face Recog.] is reset if recording settings are reset.
- Resetting the setup parameters will also reset the following:  
Age in years/months and names in [Baby] and [Pet] Scene Modes
- Folder numbers and clock settings will not be reset.
- Camera functions may be audible as the lens function is reset. This is not a fault.

## [USB Mode]

For selecting the communication method for when connecting the camera to a computer or printer with the USB cable.

### ■ Settings

 **[Select on connection]**: Selects the communication method each time you connect to a computer or PictBridge-compatible printer.

 **[PictBridge(PTP)]**: Select this mode when connecting to a PictBridge-compatible printer.

 **[PC]**: Select this mode when connecting to a computer.

## [Output]

For changing the settings to be used when the camera is connected to a TV or other device.

### ■ Settings

**[Video Out]** (With camera model 18 460)

**[NTSC] / [PAL]**

If the default setting is changed, AVCHD motion pictures may not be played correctly.

**[TV Aspect]** (This setting performs when the supplied AV cable is connected.)

**16:9 / 4:3**

- For the setting procedures of the menu. (→25)

### [HDTV Link]

This mode allows automatic linking with other HDTV Link-compatible devices, and operability with a HDTV compatible remote control when connecting via the HDMI mini cable (available as accessory (→8) (→184)).

#### ■ Settings

- [ON]:** Operations may be performed via the remote control of the HDTV Link-compatible device. (Not all operations will be available.)  
Operability of the camera's own buttons will be limited.
- [OFF]:** Operations must be performed via the camera's own buttons.

### [3D Playback]

For setting how 3D still picture is output.



#### ■ Settings: [3D] / [2D]

- If you want to play back a picture in 2D (conventional picture) on a 3D television, set to [2D].
- This item of the menu functions when the HDMI mini cable (available as accessory (→8)) is connected.
- For the procedure for playing back a 3D still picture (→186).

### [Rotate Disp.]

For automatic rotation of portrait still pictures.

#### ■ Settings

- : Rotates and displays pictures displayed on a TV screen as well as those displayed on the monitor of the camera in portrait orientation.
- : Rotates and displays only pictures displayed on a TV screen in portrait orientation.

#### [OFF]

- [Rotate Disp.] cannot be used with motion pictures.
- Still pictures taken with the lens facing up or down, or still pictures taken on other cameras may not be rotated.
- Pictures cannot be rotated during Multi Playback.
- With a computer, pictures will only be rotated if in Exif-compatible (→152) environment (OS, software).



- For the setting procedures of the menu. (→25)

## [Scene Menu]

For setting whether or not to display the selection screen for Scene Mode when the camera is switched to Scene Mode.

### ■ Settings

**[AUTO]:** Displays the selection screen.

**[OFF]:** Displays the currently selected Scene Mode recording screen.

## [Menu Resume]

For saving the last operated menu position.

### ■ Settings: [ON] / [OFF]

## [User's Name Rec]

For recording a user name on a picture while recording.

- Entering text (→44)

### ■ Settings: [ON] / [OFF] / [SET] (Register or change user name)

- You cannot record a user name on the following pictures.
  - AVCHD motion pictures
  - Already recorded pictures

- For the setting procedures of the menu. (→25)

## [Version Disp.]

For checking the camera firmware version or display software information.

- When you press [MENU/SET] while the version is displayed, software information such as the license is displayed.

## [Format]

Use this function when [Built-In Memory Error] or [Memory Card Error] appears, or when formatting the built-in memory or card.

**When a card/the built-in memory is formatted, the data cannot be restored. Check the content of the card/built-in memory carefully before formatting.**

- When formatting the built-in memory, remove the card.  
(If a card is inserted, it will be formatted, if not, the internal memory.)
- Always format cards with this camera.
- **All protected pictures and other picture data will be deleted.**
- This requires a sufficiently charged battery. Do not turn off power or perform other operations during formatting.
- Formatting the built-in memory may take several minutes.
- Consult the dealer or your nearest Leica Customer Care center if formatting cannot be successfully completed.

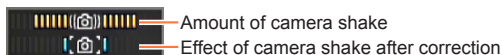
- For the setting procedures of the menu. (→25)

## [Language]

For changing the display language.  
Set the language displayed on the screen.

## [O.I.S. Demo.]

The amount of camera shake is shown on a graph (Guide)



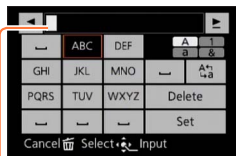
- During demo screen display, the Optical Image Stabilizer switches ON and OFF every time [MENU/SET] is pressed.
- This cannot be displayed during playback mode.

## Entering Text

Use the cursor button to enter names with the Face Recognition function and in Scene Modes [Baby] and [Pet], or to register locations in [Travel Date] etc.

### 1 Use cursor button to select characters

### 2 Press [MENU/SET] until the desired character is displayed



Text is inserted at the cursor position.

- To change the character type  
→ Select **Aa**, and then press [MENU/SET].

Cursor position

#### ■ Editing text

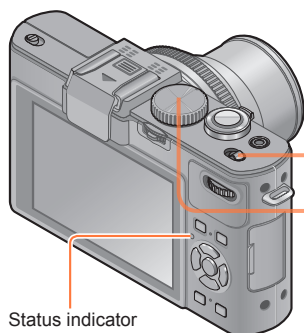
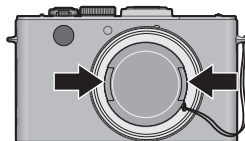
- ① Use cursor buttons to select ◀ ▶ and then press [MENU/SET]. Then, move the cursor to the text to edit
  - You can also use the zoom lever to reposition the cursor.
- ② Use cursor buttons to select [Delete] and then press [MENU/SET]
- ③ Use cursor buttons to select the correct text and then press [MENU/SET]

### 3 When you are finished entering text, use cursor buttons to select [Set] and then press [MENU/SET]

- A maximum of 30 characters can be entered (max. of 9 characters for [Face Recog.] names).

## Sequence of operations

Before using the camera, remove the lens cap.



Status indicator

### 1 Turn on the power

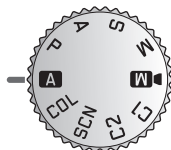


Status indicator illuminated for approx. 1 second.

### 2 Rotate the mode dial to select the recording mode

Align the desired mode with index.

- Make sure the dial is set exactly to the click-stop position of the desired mode.



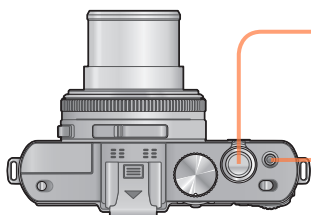
### 3 Use the zoom lever to set the desired focal length, i.e. the captured section of the subject

To widen the angle of view, use shorter focal lengths (hence wideangle, also makes subjects appear further away)



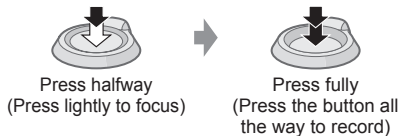
To make subjects appear closer, use longer focal lengths (telephoto, also narrows the angle of view)

(Continued on the next page)



## 4 Take pictures

### ■ Taking still pictures (Shutter button)



Camera shake alert display

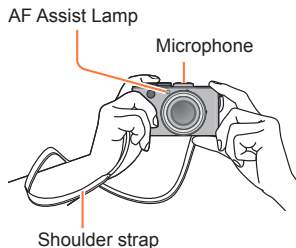


### ■ Recording motion pictures (Motion picture button)



- If a warning is displayed about camera shake, use [Stabilizer], a tripod, or [Self Timer].  
In some cases, camera shake can be reduced by using a higher setting for [Sensitivity].


## ■ Holding the camera



- To avoid camera shake, hold the camera with both hands keeping your arms close to your body while standing with your feet slightly apart.
- Do not touch the lens.
- Do not cover the microphone when recording motion pictures.
- Do not cover the flash or the lamp. Do not look at them from close range.
- Make sure not to move the camera when you press the shutter button.

- We recommend using the supplied shoulder strap to avoid dropping the camera.

## ■ About the direction detect function

Still pictures recorded with the camera held vertically can be automatically displayed in portrait orientation during playback. (Only when [Rotate Disp.] is set to )

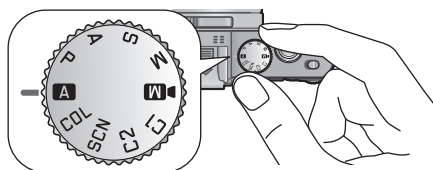
- The direction detect function may not operate correctly if pictures are taken with the camera pointing up or down.
- Motion pictures cannot be displayed in portrait orientation.

## About recording modes

Rotate the mode dial to switch recording modes.

### Set to the desired recording mode

Make sure the dial is set exactly to the click-stop position of the desired mode. →



<b>A</b>	<b>[Snapshot Mode]</b>	For taking pictures with extended automatic settings. (→49)
<b>P</b>	<b>[Program AE] Mode</b>	For taking pictures with automatic exposure control. (→58)
<b>A</b>	<b>[Aperture-Priority] Mode</b>	The exposure is determined by the automatically controlled shutter speed, based on the manually set aperture value. (→60)
<b>S</b>	<b>[Shutter-Priority] Mode</b>	The exposure is determined by the automatically controlled aperture value, based on the manually set shutter speed. (→61)
<b>M</b>	<b>[Manual Exposure] Mode</b>	The exposure is determined by the manually set aperture value and shutter speed. (→62)
<b>M</b>	<b>[Creative Video Mode]</b>	For recording motion pictures with manual settings. (→87)
<b>C1</b> <b>C2</b>	<b>[Custom] Mode</b>	For taking pictures with previously registered settings. (→90)
<b>SCN</b>	<b>[Scene Mode]</b>	For taking pictures that match the scene being recorded. (→75)
<b>COL</b>	<b>[Creative Control] Mode</b>	For taking pictures using different picture effects such as [Dynamic Monochrome] or [Miniature Effect]. (→64)



## Snapshot mode

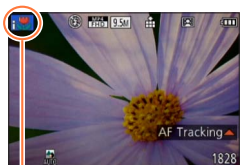


Optimum settings are made automatically based on information such as “face”, “movement”, “brightness”, and “distance” just by pointing the camera at the subject, meaning that sharp and correctly exposed pictures can be taken without the need to make settings manually.

- About recording modes (→48)

### Automatic Scene Detection

The camera recognizes the type of subject it is pointed at, and makes optimum settings automatically.



The icon of scene detected

	Recognizes people
	Recognizes children*1
	Recognizes landscapes
	Recognizes night scenes and people in them*2
	Recognizes night scenes*2
	Recognizes night scenes to be taken without a tripod*3
	Recognizes close-ups
	Recognizes sunsets
	Reads subject movement to avoid blurring when the scene does not correspond to any of the above.

\*1 When children (under 3 years) that are registered with the Face Recognition function are recognized.

\*2 Only when using flash. We recommend using a tripod and the self-timer.

\*3 When [iHandheld Nite Shot] is [ON].

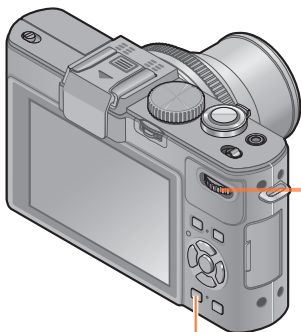
- Depending on recording conditions, different scene types may be determined for the same subject.
- If the desired scene type is not selected, we recommend manually selecting the appropriate Scene Mode.
- When , or is detected, Face Detection is activated, and focus and exposure are set for the recognized faces.

### ■ About Backlight Compensation ()

Backlight is a situation in which a subject is comparatively small and located in front of a bright background. In such situations a normal exposure would render such subjects too dark. A backlight compensation increases the exposure, resulting in such subjects being rendered brighter. In [Snapshot Mode], backlight compensation is activated automatically. When the camera detects backlight, is displayed on the monitor (depending on the conditions, backlighting may not be detected correctly).

## Determining the extent of the area rendered sharply

You can also use [Snapshot Mode] to easily adjust the depth of field, i.e. which parts are rendered sharply and which are not, as with [Aperture-Priority] mode.



[Fn] button

### 1 Press the dial

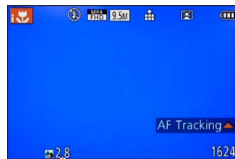


### 2 Rotate the dial to adjust the aperture value (which determines the depth of field)

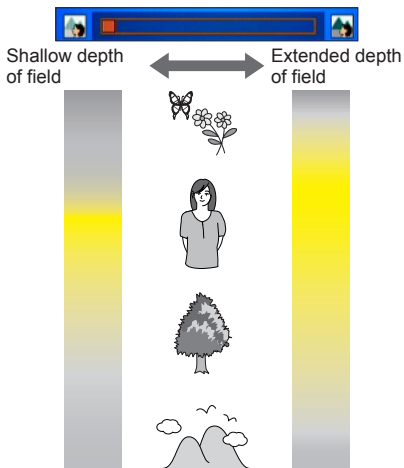


- You can also press ◀▶ to make adjustments.
- To return to automatic adjustment  
→ Press [Fn] button

### 3 Press the dial to finalize the setting



The aperture value is displayed. ([AUTO] is displayed in the icon during automatic adjustment)



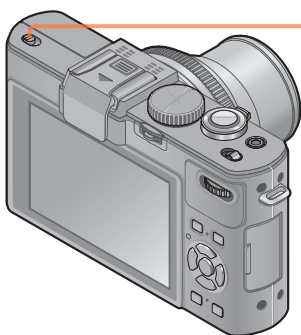
The yellow range shown in the left figure is the depth of field, i.e. the range in which subject parts are rendered sharply.

- This range changes based on the distance to the focused subject, the set focal length, etc.

- When you record motion pictures, the camera performs aperture control within the appropriate exposure range, and the depth of field may not change due to the subject brightness.
- You can use [Snapshot Plus Mode] to adjust brightness and coloring. (→56)

## Using the built-in flash

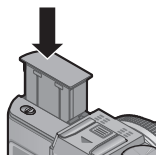
Let the built-in flash pop up to use it. (→106)



### 1 Open the built-in flash



### ■ Closing the built-in flash



When you do not want to use the flash or after using it, press it back down until it clicks into place.

- Set to [i↖^], [i↖△], [i↖⊙] or [i↖^S] depending on the subject and brightness.
- When [i↖△] or [i↖⊙] is selected, the red-eye reduction function is activated.
- When [i↖⊙] or [i↖^S] is selected, longer shutter speeds are possible.

**[Color Mode]**

By changing the [Color Mode] setting in the [Rec] menu, you can determine the color rendition of still and motion pictures.


- For the setting procedures of the menu. (→25)

Setting	Description
[STANDARD]	Records pictures with colors close to the actual ones.
[Happy]	Records pictures with sharp and vivid colors.
[B&W]	Records pictures in black and white.
[SEPIA]	Records pictures with sepia tones to produce a nostalgic effect.

**[Motion Deblur]**

With this mode, the camera automatically sets the optimum shutter speed in accordance with the movements of the subject to minimize the blur of the subject.

- For the setting procedures of the menu. (→25)

- When [Motion Deblur] is set to [ON], and the shutter button is pressed halfway,  appears on the screen.
- The subject may be recorded with a lower resolution than the one that has been set.

**[iHandheld Nite Shot]**

If a night scene is detected automatically while the camera is handheld, the camera can record a still picture with less camera shake and less noise by combining a series of pictures.


- For the setting procedures of the menu. (→25)

- When the camera is fixed in place on a tripod or by other means, [iHandheld Nite Shot] will not be identified.

## [iHDR]

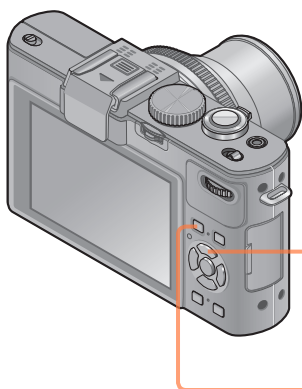
When [iHDR] is set to [ON] and there is, for example, strong contrast between different parts of the subject, multiple still pictures are recorded with differing exposures and combined to create a single still picture rich in gradation.

• For the setting procedures of the menu. (→25)

- This function is automatically activated only when  (→49) is displayed on the monitor.
- In the case that a single picture is going to be composed from a series of exposures, a message indicating that multiple pictures are to be recorded appears on the screen and the exposure series is carried out. Note that an exposure series will not take place if the camera determines that it can compensate for the difference in contrast in a single exposure.
- In the case of composition from an exposure series, the resulting image may appear if the subject was moving.
- The camera does not combine pictures in the following cases:
  - When the zoom ratio exceeds 3.8x
  - With [Burst Shooting] mode

## AF Tracking

In [Snapshot Mode], you can select [AF Tracking] in [AF Mode] in a single operation. When [AF Tracking] mode is used, the camera can continuously focus on a subject and adjust its exposure even when it is moving.



**1** Press ▲ to set [AF Tracking]



• To cancel AF Tracking → Press ▲ again.

**2** Aim the AF Tracking frame at the subject

**3** Press the [AF/AE LOCK] button to lock

AF/AE LOCK



• To cancel AF Lock → Press ▲.



AF Tracking frame  
AF Lock successful:  
Yellow  
AF Lock failed:  
Red

- The optimal scene mode for the AF locked subject is automatically identified.
- Face Recognition will be inactive while using AF Tracking.
- Under certain conditions, such as when the subject is small or when it is dark, [AF Tracking] may not operate correctly.

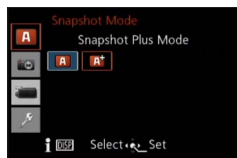
**[Snapshot Plus Mode]**

When [Snapshot Plus Mode] is selected, you can easily adjust the brightness and coloring, in addition to the depth of field, without compromising the user-friendly operation of the [Snapshot Mode].

**■ Switching to [Snapshot Plus Mode]**

Use the [Snapshot Mode] menu to switch the mode.

- For the setting procedures of the menu. (→25)



**A**: [Snapshot Mode]

**A+**: [Snapshot Plus Mode]

**■ Adjusting brightness, coloring, and depth of field****1 Press the dial****2 Press ▲ ▼ to select an item to adjust**

Adjusts brightness.

Adjusts depth of field.

Adjusts coloring.

- [AUTO] is displayed in the icon during automatic adjustment.

**3 Press ◀ ▶ to make adjustments**

Brightness	Underexposure (dark) ◀ ▶ Overexposure (bright)
Depth of field	Shallower ◀ ▶ Extended
Coloring	Warmer colors ◀ ▶ Cooler colors

- You can also rotate the dial to make adjustments.
- To return to automatic adjustment → Press [⏏] button.





**4 Press [MENU/SET]**



- When you record motion pictures, the camera performs aperture control within the appropriate exposure range, and the depth of field may not change for some subject brightness levels.

## About setting items

Only the menu items which are displayed in the [Snapshot Mode] can be set. The settings selected in the [Program AE] or other modes will reflect on the menu items in the [Setup] menu that are not displayed.

- Settings that can be made for the following items are different from the settings that can be made in other recording modes.
  - [Self Timer]
  - [Burst Shooting]
  - [Picture Size] in the [Rec] menu
  - [Beep] in the [Setup] menu
- The settings for the following functions are fixed:
  - [Quality]: 
  - [White Balance]: [AWB]
  - [AF Assist Lamp]: [ON]
  - [Flash Synchro]: [1ST]
  - [Stabilizer]: [ON]
  - [Continuous AF]: [ON]
  - [Wind Cut]: [AUTO]
  - [Sensitivity]:  ISO
  - [AF Mode]: 
  - [Quick AF]: [ON]
  - [Metering Mode]: 
  - [i.Resolution]: [LOW]\*
  - [i.Zoom]: [ON]
  - [Min. Shtr Speed]: [AUTO]

\* The function will turn [OFF] in the following cases.

-   

## Program mode

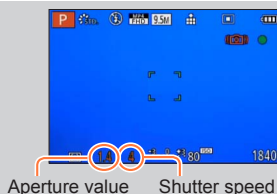


The camera automatically sets both shutter speed and aperture value according to the brightness of the subject.

You can change various settings in the [Rec] menu.

- About recording modes (→48)

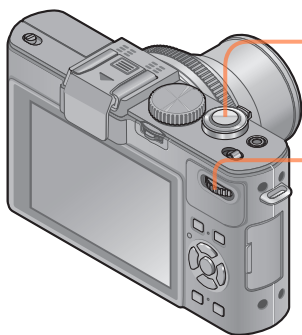
- Aperture and shutter speed are shown in red, if an appropriate exposure is not possible. You should either use the flash, change [Sensitivity] settings or set [Min. Shtr Speed] to a slower speed.



## Program Shift

In Program Mode, you can change the preset aperture value and shutter speed without changing the exposure. This is called Program Shift.

You can make the back- and foreground more blurred by decreasing the aperture value or record a moving subject more dynamically by slowing the shutter speed.



- 1 Press the shutter button halfway



- 2 Select the desired shutter speed/aperture value combination

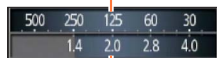


Program Shift indicator (P↔)

Setting display

### Setting display

Shutter speed  
(Automatic adjustment)

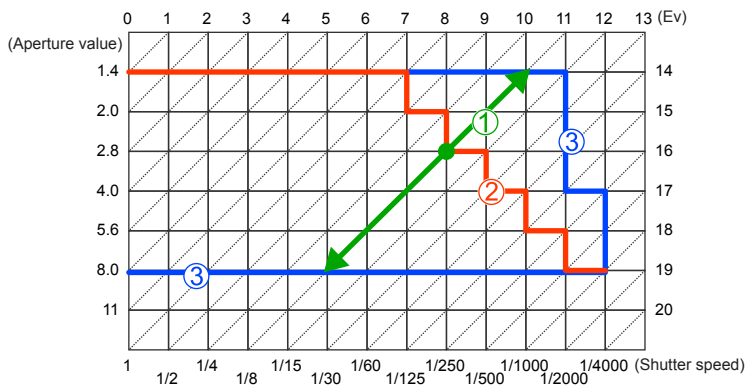


Aperture value  
(Automatic adjustment)

- To cancel Program Shift  
→ Rotate the dial until the Program Shift indicator goes off.

- When the camera is turned off, Program Shift is canceled.
- Program Shift may not function for some subject brightness levels.

## ■ Example of Program Shift



- ① Program Shift range
- ② Automatic camera setting
- ③ Program Shift limit

### [Program Diagram]

You can change the automatically controlled shutter speed/aperture combinations in Program Mode.

You can preset the maximum aperture or an aperture value that achieves the best lens resolution as a combination of shutter speed and aperture value.

## 1 Select [Program Diagram] from the [Rec] menu

- For the setting procedures of the menu. (→25)

## 2 Use cursor buttons to select the setting and then press [MENU/SET]

- Setting: STD. ([Standard]) / MAX ([Max. Aperture]) / MTF ([Optimum Accuracy])

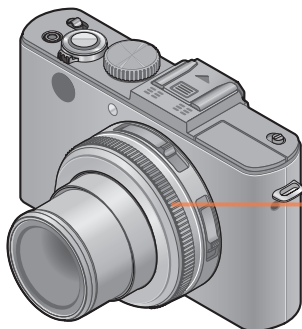
- When the [MAX] or [MTF] mode is set, the built-in ND filter functions automatically. You cannot perform manual settings.
- Even if you change the [Program Diagram] setting, the shutter speed and aperture value combination can be changed using Program Shift. (→58)

# Aperture priority mode

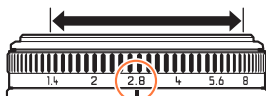


Set the aperture value to a higher number when you want a larger in-focus area (in front of and behind the main subject), to a lower number for a smaller in-focus area.

- About recording modes (→48)



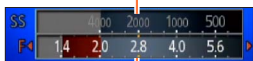
## 1 Rotate the aperture ring to select the aperture value



You can set the aperture values between [1.4] and [8] in 1/3-stop increments. (Set the aperture ring only to the click-stop positions.)

### Setting display

Shutter speed  
(Automatic adjustment)



Set aperture value

- Proper exposure is not possible in the range indicated in red.



Setting display

- When the aperture value is increased, the depth of field expands, i.e. more of the foreground and background is rendered sharply.
- When the aperture value is reduced, the depth of field gets smaller, i.e. less of the foreground and background is rendered sharply.

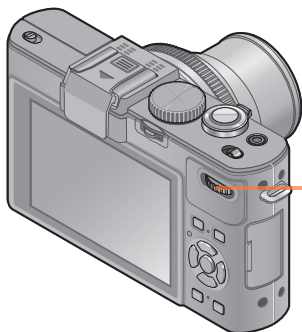
- The aperture ring rotates only within the range of the printed values.
- Since the maximum aperture value changes in accordance with the zoom setting, the printed indication on the aperture value ring and the actual aperture value may be different. Refer to the setting display for the aperture value when you take a picture.
- When the resulting picture would be too bright or too dark, i.e. incorrectly exposed, the numbers for the aperture value and shutter speed are shown in red.
- The monitor brightness may vary from the actual still picture recorded.

# Shutter speed priority mode



When you want to take a sharp picture of a fast moving subject, set with a faster shutter speed. When you want to create a trailing effect, set to a slower shutter speed.

- About recording modes (→48)



## 1 Rotate the dial to select the shutter speed

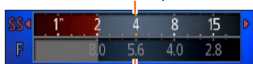


Setting display

- At faster shutter speeds, moving subjects are rendered sharper.
- At slower shutter speeds, moving subjects are rendered less sharp.

### Setting display

Set shutter speed



Aperture value  
(Automatic adjustment)

- Proper exposure is not possible in the range indicated in red.

- When the resulting picture would be too bright or too dark, i.e. incorrectly exposed, the numbers for the aperture value and shutter speed are shown in red.
- The monitor brightness may vary from the actual still picture recorded.

# Manual exposure mode

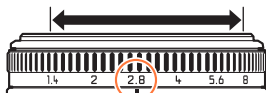


Determine the exposure by manually setting the aperture value and the shutter speed.

- About recording modes (→48)

## 1 Select shutter speed and aperture value

### ■ Setting the aperture value



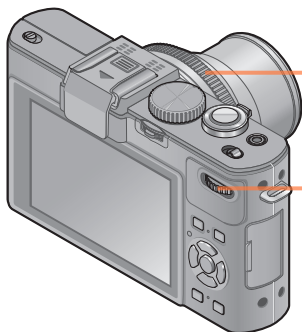
You can set the aperture values between [1.4] and [8] in 1/3-stop increments. (Set the aperture ring only to the click-stop positions.)

### ■ Setting the shutter speed



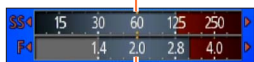
Setting display

Manual exposure assist



### Setting display




Set shutter speed



Set aperture value

- Proper exposure is not possible in the range indicated in red.

## ■ Light balance (approximation)

	Indicates pictures with standard brightness.
	Indicates overexposure. For a correct exposure, use a faster shutter speed and/or a higher aperture value.
	Indicates underexposure. For a correct exposure, use a slower shutter speed and/or a lower aperture value.

- The aperture ring rotates only within the range of the printed values.
- When the resulting picture would be too bright or too dark, i.e. incorrectly exposed, the numbers for the aperture value and shutter speed are shown in red.
- The monitor brightness may vary from the actual still picture recorded.
- The shutter speed setting range changes depending on the [Sensitivity] setting.

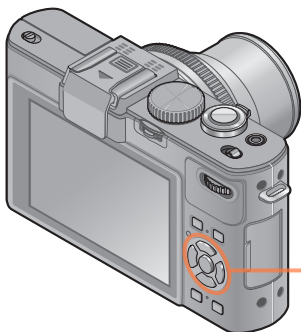
[Sensitivity]	Shutter speed
80 - 1600	250 - 1/4000th
2000 - 3200	30 - 1/4000th
4000 - 12800	8 - 1/4000th

## Using [Creative Control] Mode

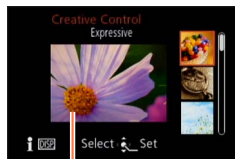


You can select your own settings from various effects and take pictures while confirming these effects on the monitor.

- About recording modes (→48)



### 1 Press ▲▼ to select the effect and then [MENU/SET]



Preview screen

- When you press the [DISP] button, a description of the selected effect is displayed.
- When you select [COL] by rotating the mode dial, the menu appears automatically.
- You can display the [Creative Control] menu by pressing [MENU/SET]. For the setting procedures of the menu. (→25)

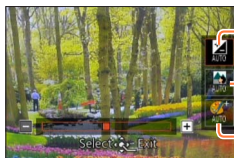
- The display of a picture with a selected effect in the preview or recording screen may differ from the actual recorded pictures.
- A setting that was selected in [Creative Control] Mode is retained even after the camera is turned off.
- The following recording menu and settings are automatically adjusted, and cannot be set manually.  
[Sensitivity] [White Balance] [i.Dynamic] [Min. Shtr Speed] [Photo Style]



## ■ Adjusting the brightness, depth of field, setting conditions of a selected effect, etc.

### 1 Press the dial

### 2 Press ▲▼ to select an item to adjust



Adjusts the brightness.

Adjusts the depth of field.

Adjusts the setting conditions of the selected effect, etc. (The settings to be adjusted vary depending on the selected effect.)

- [AUTO] is displayed in the icon during automatic adjustment.
- The items that can be adjusted differ depending on the selected effect.

### 3 Press ◀▶ to make adjustments

- You can also rotate the dial to make adjustments.
- To return to automatic adjustment → Press [⏪ ⏩] button.

### 4 Press [MENU/SET]

- When you record motion pictures, the camera performs aperture control within the appropriate exposure range, and the depth of field may not change for some subject brightness levels.

For the [Creative Control] menu setting procedures. (→64)

## [Expressive]

This effect creates a pop art style picture that enhances the color.

### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Vividness	Subdued	↔	Gaudy

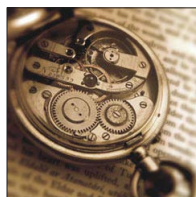


## [Retro]

This effect creates the soft appearance of a tarnished picture.

### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Coloring	Yellowish	↔	Reddish



For the [Creative Control] menu setting procedures. (→64)

### [High Key]

This effect creates a brighter and lighter toned appearance for the entire picture.

#### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Coloring	Pinkish	↔	Light-bluish

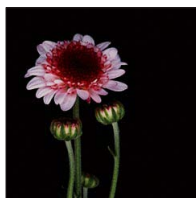


### [Low Key]

This effect creates a darker somber appearance for the entire picture to emphasize the bright portions.

#### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Coloring	Reddish	↔	Bluish



For the [Creative Control] menu setting procedures. (→64)

## [Sepia]

This effect creates a picture with sepia tone.

### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Contrast	Low	↔	High



## [Dynamic Monochrome]

This effect creates a monochromatic picture with a higher contrast and more dramatic atmosphere.

### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Contrast	Low	↔	High



For the [Creative Control] menu setting procedures. (→64)

### [Impressive Art]

This effect creates a picture with a higher contrast and surreal appearance.

#### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Coloring	Black & white	↔	Gaudy



### [High Dynamic]

This effect creates a picture with well-balanced brightness for the entire picture (from dark areas to bright areas).

#### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Coloring	Black & white	↔	Gaudy



For the [Creative Control] menu setting procedures. (→64)

## [Cross Process]

This effect allows you to play with color effects.

### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Coloring	Greenish / Bluish / Yellowish / Reddish		



## [Toy Effect]

This effect creates a picture that resembles pictures taken by a toy camera with vignetted (darker) corners.

### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Coloring	Orangish	↔	Bluish



For the [Creative Control] menu setting procedures. (→64)

## [Miniature Effect]

This effect creates a diorama-like picture by intentionally defocusing all but one section of the picture.

### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Vividness	Subdued coloring	↔	Gaudy coloring



### ■ Defocusing a picture

- ① Press ◀
- ② Press ▲ ▼ or ◀▶ to move the focusing area (frame)
- ③ Rotate the dial to select the size of the focusing area (frame)
- ④ Press [MENU/SET]
  - When you press [DISP] button, the initial setting condition is restored.

- The monitor image is displayed with a slight delay compared to normal recording.
- No audio is recorded for motion pictures.

#### ● With camera model 18 460

When a motion picture is recorded, the finished recording will be approximately 1/8th of the actual recorded time period. (If you record a motion picture for 8 minutes, the resulting motion picture recording time will be approximately 1 minute.) The recordable time displayed on the camera is approx. 8x longer than actual recording. When the recording mode is changed, be sure to check the recordable time.

#### ● With camera models 18 461 / 18 462

When a motion picture is recorded, the finished recording will be approximately 1/10th of the actual recorded time period. (If you record a motion picture for 10 minutes, the resulting motion picture recording time will be approximately 1 minute.) The recordable time displayed on the camera is approx. 10x longer than actual recording. When the recording mode is changed, be sure to check the recordable time.

- If you stop recording motion pictures too soon, the camera may continue recording for a certain time. Hold the camera in the same position until it stops recording.
- When you take a picture using a high resolution setting, the screen will become dark for a certain period of time after the picture is taken. However, this occurs due to signal processing and is not a defect.

For the [Creative Control] menu setting procedures. (→64)

## [Soft Focus]

This effect creates a soft appearance by intentionally blurring the entire picture.

### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Degree of defocusing	Slight defocusing	↔	Strong defocusing



- The monitor image is displayed with a slight delay compared to normal recording.
- When you take a picture using a high resolution setting, the screen will become dark for a certain period of time after the picture is taken. However, this occurs due to signal processing and is not a defect.
- Motion pictures cannot be recorded.

## [Star Filter]

This effect creates a picture with all light points displaying a 4x light cross.

### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Length of the rays of light	Cross rays are shorter	↔	Cross rays are longer



- Motion pictures cannot be recorded.



For the [Creative Control] menu setting procedures. (→64)

### [One Point Color]

This effect creates a monochromatic picture by retaining only the amount of color you determine.

#### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Depth of field	Shallower	↔	Extended
Amount of color retained	Leaves a small amount	↔	Leaves a large amount



#### ■ Selecting the color to be retained

① Press ◀

② Select the color to be retained using the frame in the center of the screen and then press [MENU/SET]

- The selected color may not be retained for some subjects.

### [Smooth Defocus]

This effect creates a smooth defocused area that emphasizes the subject by operating the aperture when the shutter is open during the exposure.

#### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Vividness	Subdued coloring	↔	Gaudy coloring



- The result of this effect may be hard to see for some subjects.
- Motion pictures cannot be recorded.
- Use a tripod or other device since this effect slows the shutter speed.

For the [Creative Control] menu setting procedures. (→64)

### [Radial Defocus]

This effect defocuses the entire picture by retaining a sharper focus on the main subjects than with [Soft Focus] by operating focus when the shutter is open during the exposure. This effect is recommended when recording night scenes, for example.

#### ■ Items that can be set

Brightness	Underexposure (darker)	↔	Overexposure (brighter)
Degree of defocusing	Slight defocusing	↔	Strong defocusing



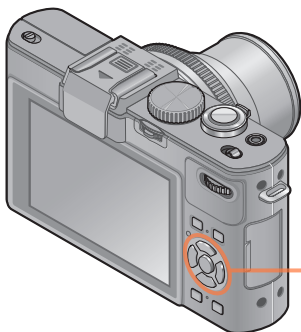
- Motion pictures cannot be recorded.
- Use a tripod or other device since this effect slows the shutter speed.

## Using [Scene Mode]

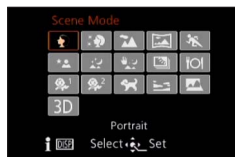


Using [Scene Mode] enables you to take pictures with optimum settings (exposure, coloring, etc.) for given scenes.

- About recording modes (→48)








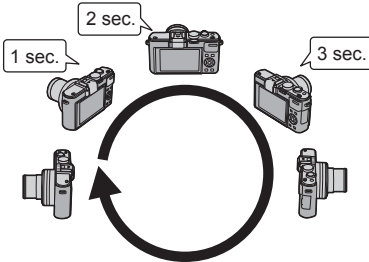
### 1 Use cursor buttons to select the scene mode and then press [MENU/SET]



- When you select [SCN] by rotating the mode dial, the menu appears automatically. (When [Scene Menu] in the [Setup] menu is [AUTO])
- You can display the [Scene Mode] menu by pressing [MENU/SET]. For the setting procedures of the menu. (→25)

- Selecting a Scene Mode inappropriate for the actual scene may affect the coloring of your picture.
- The following recording menu and settings are automatically adjusted, and cannot be set manually.  
[Sensitivity] [Metering Mode] [i.Dynamic] [Min. Shtr Speed] [i.Resolution] [Photo Style]

- How to select a scene (→75)

 <b>[Portrait]</b>	<p><b>Improves the skin tone of subjects for a healthier appearance in bright daylight conditions.</b></p> <p><b>Tip</b></p> <ul style="list-style-type: none"> <li>• The longer the set focal length and the closer the camera is to the subject, the greater the effect will be.</li> </ul>
 <b>[Soft Skin]</b>	<p><b>Smooths skin colors in bright, outdoor daylight conditions (portraits from chest upwards).</b></p> <p><b>Tip</b></p> <ul style="list-style-type: none"> <li>• The longer the set focal length and the closer the camera is to the subject, the greater the effect will be.</li> </ul>
 <b>[Scenery]</b>	<p><b>Takes sharp pictures of distant subjects.</b></p>
 <b>[Panorama Shot]</b>	<p><b>Creates a single panorama picture by stitching multiple still pictures taken in rapid succession.</b></p> <ol style="list-style-type: none"> <li>① Use cursor buttons to select the recording direction, and then press [MENU/SET] to set.</li> <li>② Check the recording direction and then press [MENU/SET]       <ul style="list-style-type: none"> <li>• Special panorama guidelines will be displayed during recording.</li> </ul> </li> <li>③ Press the shutter button halfway to focus</li> <li>④ Press the shutter button fully and pan the camera in a small circular motion in the selected direction to start recording       <ul style="list-style-type: none"> <li>• Taking pictures from left to right</li> </ul> </li> </ol> <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 20px;">  </div> </div> <p>Recording direction and progress status (approximate)</p> <ul style="list-style-type: none"> <li>• Pan the camera so that you make a complete circuit in approx. 8 seconds       <ul style="list-style-type: none"> <li>- Pan the camera at a constant speed.</li> <li>- You may not be able to take pictures successfully if you move the camera too quickly or too slowly.</li> </ul> </li> <li>⑤ Press the shutter button fully again to end recording       <ul style="list-style-type: none"> <li>• You can also end recording if you stop panning the camera while taking pictures.</li> </ul> </li> </ul>

- How to select a scene (→75)



### [Panorama Shot]

(Continued)

#### Tip

- Pan the camera in the recording direction as steadily as possible.







If the camera shakes too much, it may not be able to take pictures or may end up creating a narrow (small) panorama picture.

Pan the camera to a point slightly ahead of the point that you want to take. (However, the last frame is not recorded to the end.)






#### Notes

- The shortest focal length is fixed.
- Motion pictures cannot be recorded.
- Focus, White Balance, and Exposure Compensation are all fixed to optimal values for the first picture. If the focusing or brightness of pictures recorded as part of a panorama picture after the first picture are significantly different from those of the first picture, the panorama picture as a whole (when all pictures are stitched together) may not have consistent focus and brightness.
- The following functions are fixed to the settings indicated below.  
[Stabilizer]: [OFF] [Date Stamp]: [OFF]
- Since several pictures are stitched together to create a panorama picture, some subjects may be distorted or the joining sections of successively taken pictures that are stitched may be noticeable.
- The resolution of a panorama picture varies depending on the recording direction and number of stitched pictures.  
The maximum resolution is as follows:
  - Taking pictures in landscape orientation: Approx. 8000 x 1080 pixels
  - Taking pictures in portrait orientation: Approx. 1440 x 8000 pixels
- Panorama pictures may not be created or pictures may not be recorded properly when taking pictures of the following subjects or when taking pictures in the following recording conditions:
  - Subjects that have a continuous or monotone pattern (sky, beach, etc.)
  - Moving subjects (person, pet, vehicle, waves, or flowers swaying in the wind, etc.)
  - Subjects whose colors or patterns change quickly (such as an image appearing on a display)
  - Dark locations
  - Locations with a flickering light source (fluorescent lamp, candle light, etc.)



- How to select a scene (→75)

 <p><b>[Sports]</b></p>	<p><b>Takes pictures of scenes with fast movement, e.g. sports.</b></p> <p><b>Tip</b></p> <ul style="list-style-type: none"> <li>• Stand at least 5m (16 feet) away.</li> </ul> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• Sports mode requires adequate lighting, to enable the higher shutter speed to be used. This mode may not produce acceptable results when shooting indoors, under limited lighting.</li> <li>• The shutter speed may slow down to 1 second.</li> </ul>
 <p><b>[Night Portrait]</b></p>	<p><b>Takes pictures of people and nightscapes with close to actual brightness.</b></p> <p><b>Tips</b></p> <ul style="list-style-type: none"> <li>• Use flash.</li> <li>• The subject should not move.</li> <li>• Tripod, self-timer recommended.</li> </ul> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• The shutter speed may slow down to 8 seconds.</li> <li>• After recording, the shutter may stay closed (up to 8 seconds) to process the signal. This is not a malfunction.</li> </ul>
 <p><b>[Night Scenery]</b></p>	<p><b>Takes sharp pictures of night scenes.</b></p> <p><b>Tip</b></p> <ul style="list-style-type: none"> <li>• Tripod, self-timer recommended.</li> </ul> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• The shutter speed may slow down to 8 seconds.</li> <li>• After recording, the shutter may stay closed (up to 8 seconds) to process the signal. This is not a malfunction.</li> </ul>
 <p><b>[Handheld Night Shot]</b></p>	<p><b>Takes sharp still pictures of night scenes with less camera shake and less noise by combining a series of still pictures.</b></p> <p><b>Tip</b></p> <ul style="list-style-type: none"> <li>• After the shutter button has been pressed, do not move the camera during the exposure series.</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• Since a series of still pictures are combined after they have been recorded, it will be a few moments before you will be able to record another picture.</li> </ul>

- How to select a scene (→75)

 <b>[HDR]</b>	<p><b>The camera can combine several still pictures taken with different exposures into a single properly exposed picture with rich gradation.</b></p> <p><b>Tip</b></p> <ul style="list-style-type: none"> <li>• After the shutter button has been pressed, do not move the camera during the exposure series.</li> </ul> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• Since a series of still pictures are combined after they have been recorded, it will be a few moments before you will be able to record another picture.</li> <li>• A subject that was in motion when it was recorded may be rendered like a double exposure.</li> <li>• The camera may take a single still picture instead of several pictures under certain recording conditions.</li> </ul>
 <b>[Food]</b>	<p><b>Takes natural-looking pictures of food.</b></p>
  <b>[Baby]</b>	<p><b>Takes pictures of a child with a healthy complexion. When you use the flash, the light from it is weaker than usual.</b></p> <p><b>■ To record age and name</b>  [Baby1] and [Baby2] can be set separately.</p> <ol style="list-style-type: none"> <li>① Use cursor buttons to select [Age] or [Name] and then press ►</li> <li>② Select [SET] with cursor buttons, and then press [MENU/SET]</li> <li>③ Set the birthday and name  Age: Set birthday with cursor buttons, and then press [MENU/SET]  Name: (Entering text (→44))</li> <li>④ Press [MENU/SET]</li> </ol> <p><b>Tip</b></p> <ul style="list-style-type: none"> <li>• Make sure [Age] and [Name] are [ON] before taking a picture.</li> </ul> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• Age display format depends on the [Language] setting.</li> <li>• The shutter speed may slow down to 1 second.</li> <li>• Text may be stamped onto the still picture using [Text Stamp].</li> </ul>
 <b>[Pet]</b>	<p><b>Records a pet's age and name when taking pictures.</b></p> <ul style="list-style-type: none"> <li>• Refer to [Baby] for other tips and notes.</li> </ul>

- How to select a scene (→75)

 [Sunset]	Takes clear pictures of scenes such as sunsets.
 [Glass Through]	<b>Most suitable for taking pictures such as a landscapes through a window.</b> <b>Notes</b> <ul style="list-style-type: none"><li>• If there are stains such as dust or a reflection on the glass, the camera may focus on the glass instead of the subject.</li><li>• The color of pictures may appear unnatural due to the color of the glass. (You may be able to reproduce the appropriate color by adjusting the White Balance.)</li></ul>



- How to select a scene (→75)

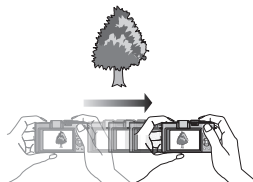
Pictures are recorded continuously while moving the camera horizontally, two of which are automatically selected and combined to make a single 3D picture.

To view 3D pictures, a television that supports 3D is required (The camera will play back in 2D).

#### ■ Recording procedure

Press the shutter button fully to start recording, and then move the camera horizontally from left to right in a straight line.

- A guide is displayed while recording.
- Move the camera approximately 10 cm (4") within approximately 4 seconds using the guide.



#### Tips for recording pictures

- Record a stationary subject.
- Record a picture outdoors or in other bright locations.
- Press the shutter button halfway to fix the focus and the exposure, press the shutter button fully, and then pan the camera.
- Hold the camera so that the subject is slightly to the right of the center on the display at the start of the recording. This makes it easier to position the subject in the center of the recorded picture.

## 3D

### [3D Photo Mode]

#### Notes

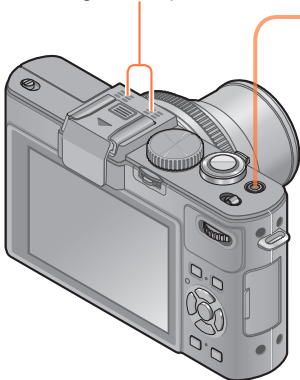
- **3D still pictures cannot be recorded by holding this camera vertically.**
- 3D still pictures are recorded in MPO format (3D).
- The longest focal length is fixed.
- The resolution is fixed to 2M [16:9].
- ISO Sensitivity is automatically adjusted. However, ISO Sensitivity is increased to allow faster shutter speeds.
- Motion pictures cannot be recorded.
- It may be impossible to record pictures under any of the conditions below. Even if pictures are recorded, they may not have a 3D effect or may appear distorted.
  - When the subject is too dark or too bright
  - When the subject's brightness changes
  - When the subject is moving
  - When the subject lacks contrast

## Taking motion pictures



You can record motion pictures with audio (stereo).

Do not cover the microphone when recording motion pictures.



### 1 Press the motion picture button to start recording

[Rec Mode] (→150)/[Rec Quality] (→150)



Elapsed recording time

Remaining recording time (approx.)

- Immediately release the motion picture button after pressing it.

### 2 Press the motion picture button again to end recording

#### ■ About zoom operation

You can also use zoom while recording motion pictures.

- The zoom speed will be slower than normal.
- When using zoom while recording motion pictures, it may take some time to focus.
- The operating sounds of the zoom lens may be recorded in some cases.

- You can record motion pictures to the built-in memory only in [VGA] mode. (→150)
- Use a sufficiently charged battery.
- The available recording time displayed on the monitor may not decrease regularly.
- [Sensitivity] is set automatically while a motion picture is being recorded. Also [ISO Limit Set] is disabled.
- The following functions are not available:  
Extended optical zoom, flash, [Face Recog.], [Rotate Disp.] for pictures taken vertically.
- For certain memory cards, recording may end while in progress.
- The recording range may become narrower in motion pictures compared to still pictures. Also, if the aspect ratio is different for still pictures and motion pictures, the angle of view will change when starting to record a motion picture. The recordable area is displayed by setting [Video Rec Area] (→34) to [ON].
- If Extended optical zoom is used before pressing the motion picture button, these settings will be cleared, and the recordable area will be changed significantly.

**■ About the recording format for recording motion pictures**

This camera can record motion pictures in either AVCHD or MP4 formats.

**AVCHD:**

You can record high definition quality images with this format. It is suitable for viewing motion pictures on a high-resolution TV or for saving them to a disc.

**AVCHD Progressive:****With camera model 18 460**

The [PSH] in [AVCHD] is a mode that allows motion pictures to be recorded at 1920 x 1080/50p, the highest quality\* that complies with the AVCHD standard.

**With camera models 18 461 / 18 462**

The [PSH] in [AVCHD] is a mode that allows motion pictures to be recorded at 1920 x 1080/60p, the highest quality\* that complies with the AVCHD standard.

Recorded motion pictures can be saved and played back using this camera or the available software.

\* This means the highest quality for this camera.

**MP4:**

This is a simpler video format best used when extensive editing is needed, or when uploading videos to the Internet.

**■ About the compatibility of the recorded motion pictures**

Motion pictures recorded in [AVCHD] or [MP4] may be played back with poor picture or sound quality or playback may not be possible even when played back with equipment compatible with these formats. Also, the recording information may not be displayed properly. In this case, use this camera.

- Motion pictures recorded with [PSH] in [AVCHD] can be played back on equipment that is compatible with AVCHD Progressive.

## ■ About recording modes

<p><b>A</b></p>	<p>The camera automatically detects the scene to record motion pictures with optimal settings.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>A</b></p> <p>When the scene does not correspond to any on the right.</p> <table border="1" style="float: right; margin-left: 20px;"> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table> </div> <ul style="list-style-type: none"> <li>• In  mode, focus and exposure will be set according to the face detected.</li> <li>•  will be selected for nightscapes and other dark scenes.</li> <li>• If the camera does not select your desired Scene Mode, choosing an appropriate mode manually is recommended.</li> </ul>								
<p><b>P A S M</b></p>	<p>Records a motion picture at your preferred settings.</p> <ul style="list-style-type: none"> <li>• Aperture and shutter speed are automatically or manually set, depending on the mode.</li> </ul>								
<p><b>M</b></p>	<p>Records a motion picture with manual operations. For details (<a href="#">→87</a>).</p>								
<p><b>C1 C2</b></p>	<p>See the description about the registered recording mode.</p>								
<p><b>SCN</b></p>	<p>Records a motion picture at the optimum settings for the selected scene.</p> <ul style="list-style-type: none"> <li>• Some scenes are switched to the following scenes:</li> </ul> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Selected scene</th> <th style="text-align: center;">Scenes for motion picture</th> </tr> </thead> <tbody> <tr> <td>[Baby]</td> <td>Portrait motion picture</td> </tr> <tr> <td>[Night Portrait], [Night Scenery], [Handheld Night Shot]</td> <td>Low light motion picture</td> </tr> <tr> <td>[Sports], [HDR], [Pet]</td> <td>Normal motion picture</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• A motion picture cannot be recorded in [Panorama Shot] or [3D Photo Mode] Scene Mode.</li> </ul>	Selected scene	Scenes for motion picture	[Baby]	Portrait motion picture	[Night Portrait], [Night Scenery], [Handheld Night Shot]	Low light motion picture	[Sports], [HDR], [Pet]	Normal motion picture
Selected scene	Scenes for motion picture								
[Baby]	Portrait motion picture								
[Night Portrait], [Night Scenery], [Handheld Night Shot]	Low light motion picture								
[Sports], [HDR], [Pet]	Normal motion picture								
<p><b>COL</b></p>	<p>Records a motion picture at the optimum settings for the selected effects.</p> <ul style="list-style-type: none"> <li>• A motion picture cannot be recorded using [Star Filter], [Soft Focus], [Smooth Defocus] and [Radial Defocus] in [Creative Control] Mode.</li> </ul>								

- The aperture value cannot be changed even when the aperture ring is rotated. (Except [Creative Video Mode])
- The built-in ND filter cannot be manually set even when the [ND/FOCUS] lever is pressed.

### Taking still pictures while a motion picture is being recorded

Still pictures can be recorded even while a motion picture is being recorded.

#### 1 Press the shutter button fully during the motion picture recording

Still pictures are recorded with an aspect ratio setting of [16:9] and [Picture Size] setting of 3.5 M. (Max. 20 pictures)

Motion picture recording continues unchanged.

- The clicking sound made when the shutter button is operated may be recorded.
- When still pictures are recorded during zooming, the zooming may stop.
- Using [Miniature Effect] in [Creative Control] Mode, a still picture may be taken with a slight delay from the time when the shutter button is pressed fully.

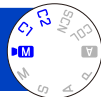
#### ■ Exposure series function

When the exposure series function has been set in advance, a series of still pictures can be recorded during motion picture recording.

- When the series setting is set to [11], [40], [60] or [92], still pictures are automatically recorded using the [10] setting.
- Even at the [Af] or [Af] setting, the focus is fixed at the first picture.

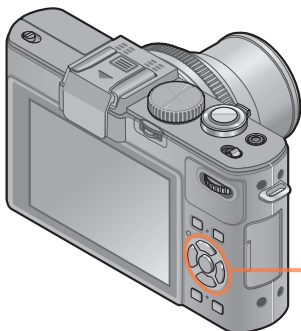
- The camera will refocus if the shutter button is pressed halfway during motion picture recording. This refocus movement is recorded even during motion picture recording. When priority is to be given to the motion picture videos, press the shutter button fully, and record the still pictures. Still pictures can also be created after motion picture recording. (→160)
- When the shutter button is pressed halfway, the resolution and the number of recordable pictures are displayed.
- Still pictures cannot be recorded when [Rec Quality] is set to [VGA].
- The flash is set to [☒] (Forced flash off).
- Since the electronic shutter is used for recording, the pictures recorded may be distorted.
- You cannot record pictures in RAW file format. (Only pictures in JPEG file format with the [Quality] setting [📷] can be recorded.)

## Taking motion pictures with manual operation [Creative Video Mode]



You can set the desired shutter speed and aperture value.

- About recording modes (→48)



- 1 Press ▲▼ to select the setting and then [MENU/SET]



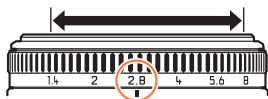
- When you select [M] by rotating the mode dial, the menu appears automatically.
- You can display the [Creative Video] menu by pressing [MENU/SET]. For the setting procedures of the menu. (→25)

Setting	Description
P [Program AE]	Automatically sets the shutter speed and aperture value.
A [Aperture-Priority]	Records motion pictures at a set aperture value. (The shutter speed is automatically adjusted.)
S [Shutter-Priority]	Records motion pictures at a set shutter speed. (The aperture value is automatically adjusted.)
M [Manual Exposure]	Records motion pictures at a set shutter speed and a set aperture value.
HS [High Speed Video]	For details (→89).

### ● About aperture value

To record motion pictures with a larger depth of field, set the aperture value to a higher number. To record motion pictures with a smaller depth of field, set a lower number.

#### Setting the aperture value



You can set the aperture values between [1.4] and [8] in 1/3-stop increments.  
(Set the aperture ring only to the click-stop positions.)

### ● About the shutter speed

To record a sharp motion picture of a fast-moving subject, set a faster shutter speed.

To record a motion picture with a trailing effect for a subject's movements, set a slower shutter speed.

#### Setting the shutter speed

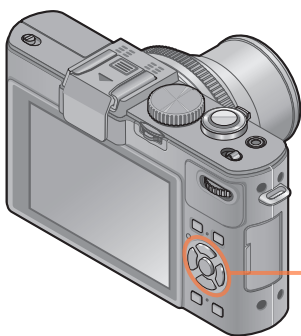
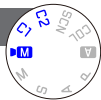


- Press the shutter button to start and stop recording motion pictures.
- Still pictures cannot be recorded while motion pictures are being recorded.
- The shutter speed that can be set using [Creative Video Mode] is different from the values that can be set using [Program AE], [Aperture-Priority], [Shutter-Priority], and [Manual Exposure] Modes.
- Although you can change camera settings such as shutter speed and aperture value even when a motion picture recording is in progress, the beeps and camera operation sounds may be recorded in some cases.
- When you set a faster shutter speed, the monitor image noise may increase due to the higher sensitivity.
- When you take a picture under a fluorescent lamp, LED, mercury arc lamp or sodium lamp, for example, the coloring and the brightness of the screen may change.



## [High Speed Video]

With this mode, you can capture subjects during sporting events or other active scenes at a high frame rate, i.e. with a rapid succession of exposures, which allows details to be revealed that cannot be seen with the naked eye.



**1** Press ▲ ▼ to select [HS] and then [MENU/SET]



- When you select [M] by rotating the mode dial, the menu appears automatically.
- You can display the [Creative Video] menu by pressing [MENU/SET]. For the setting procedures of the menu. (→25)


## ■ Resolution of high-speed motion pictures

1280×720 pixels (Aspect ratio of 16:9)

100 pictures/s (With camera model 18 460)

120 pictures/s (With camera models 18 461 / 18 462)

Recording format: MP4 (without audio)

- You can record a motion picture of up to 4 GB per recording session.
- When converted into playback time, motion pictures can be recorded for up to 29 minutes.
- The shutter speed and aperture value are automatically adjusted.
- Press the shutter button to start and stop recording motion pictures.
- Still pictures cannot be recorded while motion pictures are being recorded.
- The settings for focus, zoom, exposure and White Balance are fixed to the settings specified when recording was started.
- The Optical Image Stabilizer does not work.
- The [AF Mode] is set to  (1-area-focusing).
- Flickering or horizontal stripes may appear while recording under fluorescent lighting.

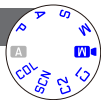
## Registering your own settings and recording

[Custom] Mode

Registering your preferred recording mode, [Rec] menu settings, etc. to [Cust.Set Mem.] and setting the mode dial to **C1** / **C2** allows you to switch quickly to those settings.

[Cust.Set Mem.]

Up to 4 current camera settings can be registered.



- 1** Select the recording mode you wish to register and set the [Rec], [Motion Picture], [Setup] menu, etc.
- 2** Select [Cust.Set Mem.] from the [Setup] menu
  - For the setting procedures of the menu. (→25)
- 3** Use cursor buttons to select custom set for registration and then press [MENU/SET]

- A confirmation screen is displayed. Select [Yes] with cursor buttons, and then press [MENU/SET].
- The custom settings registered in [C1] can be used with the **C1** position of the mode dial. It will be convenient if the settings used often are registered, since they can be used by just setting the mode dial.
- The custom settings registered in [Custom Set 2-1], [Custom Set 2-2] or [Custom Set 2-3] can be selected with the **C2** position of the mode dial. Up to 3 custom settings can be registered, so select the one matching your needs.

● Since certain menu items would be reflected in other recording modes, they are not saved.

**[Custom]**

Settings registered in [Cust.Set Mem.] can be quickly called up by setting the mode dial to **C1**/**C2**.

**1 Set mode dial to C1 / C2** ([Custom] mode)

- When set to **C1**  
→ The camera switches to the recording mode and settings registered in **C1**.
- When set to **C2**  
→ Use cursor buttons to select custom set and then press [MENU/SET] to switch to the recording mode and settings registered in **C2**.

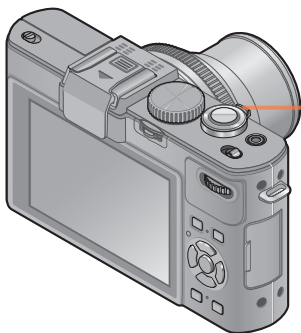
**■ When changing the menu settings**

Even if the menu settings are changed temporarily when [C1], [Custom Set 2-1], [Custom Set 2-2] or [Custom Set 2-3] is selected, the currently registered settings will remain unchanged.

To change the currently registered settings, overwrite the registered data using [Cust. Set Mem.] (→90) on the [Setup] menu.

## Using the zoom lens

You can determine how much of a subject is to be captured / how large a subject is to be rendered by selecting the appropriate focal length, i.e. by zooming.

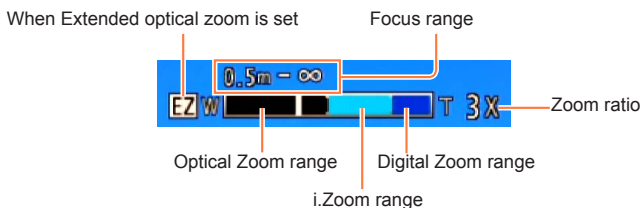


### 1 Zoom In/Out

To widen the angle of view, use shorter focal lengths (hence wideangle, also makes subjects appear further away)




To make subjects appear closer use longer focal lengths (telephoto, also narrows the angle of view)




- Adjust the focus after setting the focal length.
- Do not touch the lens barrel during zooming.
- The zoom ratio and the zoom bar displayed on the monitor are approximations.
- The camera may make a rattling noise and vibrate when the zoom lever is operated - this is not a malfunction.






### Optical Zoom

With this mode, a zoom ratio up to 3.8x is possible if pictures without  have been selected by [Picture Size] in the [Rec] menu. (→135)

- Optical Zoom cannot be used in the following cases:
  - Scene Modes ([Panorama Shot] [3D Photo Mode])

### Extended optical zoom

With this mode, a zoom ratio up to 6.7x is possible when pictures with  have been selected by [Picture Size] in the [Rec] menu (→135). EZ is short for “Extended optical zoom”.

- Extended optical zoom cannot be used in the following cases:
  - With [Snapshot Mode] (when [Motion Deblur] is [ON])
  - With motion picture recording
  - When the [Burst Shooting] setting is set to ,  or 
  - When the [Sensitivity] setting is set to [H.8000], [H.10000] or [H.12800]
  - With the Scene Modes ([Panorama Shot] [HDR] [3D Photo Mode])
  - With [Creative Control] Mode ([Toy Effect])
  - When the [Quality] setting is set to ,  or [RAW]
  - When [Multi Expo.] is set in the [Rec] menu

**[i.Zoom]**

You can use the camera's Intelligent Resolution technology to increase the zoom ratio up to 2x higher than the original zoom ratio with limited deterioration of the resolution.

Set the [i.Zoom] in the [Rec] menu to [ON]. (→141)

- The camera's Intelligent Resolution technology is applied to a picture in the zoom range of [i.Zoom].
- [i.Zoom] does not function in the following cases.
  - With [Snapshot Mode] (when [Motion Deblur] is [ON])
  - When the [Burst Shooting] setting is set to [40], [60] or [30]
  - When the [Sensitivity] setting is set to [H.8000], [H.10000] or [H.12800]
  - With the Scene Modes ([Panorama Shot] [Handheld Night Shot] [HDR] [3D Photo Mode])
  - With [Creative Control] Mode ([Toy Effect] [Smooth Defocus] [Radial Defocus])
  - When [Multi Expo.] is set in the [Rec] menu

**[Digital Zoom]**

With this mode, a zoom ratio 4x higher than Optical/Extended optical zoom is possible.

Note that, with Digital Zoom, enlarging will decrease the resolution. Set the [Digital Zoom] in the [Rec] menu to [ON]. (→141)

- [Digital Zoom] cannot be used in the following cases:
  - With [Snapshot Mode]
  - When the [Burst Shooting] setting is set to [40], [60] or [30]
  - When the [Sensitivity] setting is set to [H.8000], [H.10000] or [H.12800]
  - With the Scene Modes ([Panorama Shot] [Handheld Night Shot] [HDR] [3D Photo Mode])
  - With [Creative Control] Mode ([Miniature Effect] [Toy Effect])
  - When the [Quality] setting is set to [RAW], [RAW] or [RAW]
  - With [High Speed Video] in [Creative Video Mode]
  - When [Multi Expo.] is set in the [Rec] menu
- When [Digital Zoom] is used simultaneously with [i.Zoom], you can only increase the zoom ratio up to 2x.

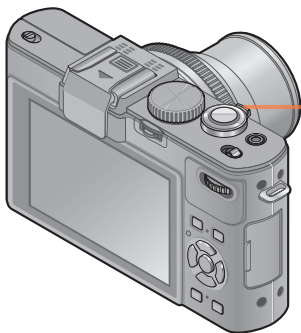
**[Step Zoom]**

You can set the zoom operation to allow easy visualization of the angle of view (picture angle) for the focal length of a regular fixed focal length lens (as with a 35mm film camera). When using the Step Zoom, you can operate the zoom ratio as easily as changing the camera lens.

**Preparation:**

Set [Step Zoom] for the [Rec] menu to [ON].

- For the setting procedures of the menu. (→25)

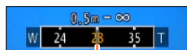
**1 Select the focal length**

Every time you operate the zoom lever, zooming will stop at the indicated focal lengths.

To widen the angle of view, use shorter focal lengths (hence wideangle, also makes subjects appear further away)



To make subjects appear closer use longer focal lengths (telephoto, also narrows the angle of view)



Current zoom position  
(The indicated focal lengths are not the actual ones, but rather the equivalent ones for the 35mm format)

**■ [Step Zoom] stop positions**

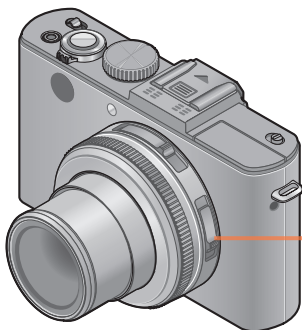
24mm, 28mm, 35mm, 50mm, 70mm, and 90mm

- In addition to the above focal lengths, the zoom will stop at the following positions when a setting other than Optical Zoom is set.  
135mm, 200mm, 300mm, 400mm, 500mm, 600mm, the focal length at max. Tele, and so on.

- The focal length values are only approximations.
- The focal length will change in the following cases:
  - When the aspect ratio is 1:1
  - When [Burst Shooting] is set to [OFF]
  - When [Handheld Night Shot] is set in Scene mode
- [Step Zoom] cannot be used in the following cases:
  - With [Snapshot Mode]
  - When recording motion pictures
- The focal length is displayed during playback for pictures recorded using the [Step Zoom].

## Using Autofocus

When Autofocus is enabled, press the shutter button halfway to focus. The focusing methods differ depending on [Rec] mode and [AF Mode] setting.



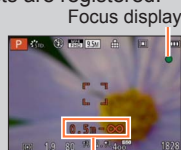
### 1 Switch the focus selector switch to [AF] or [AF]



Autofocus is activated.

Align with the index

- Subjects/environments which may make auto focusing difficult:
  - Fast-moving or extremely bright objects, or objects with no color contrast.
  - Taking pictures through glass or near objects emitting light. In the dark, or with significant camera shake.
  - When an object is too close or when both distant and close objects are registered.
- The focus display flashes and beep sounds when focusing is not possible. Use the focus range displayed in red as a reference. Even if the focus display is lit, the camera may be unable to bring the subject into focus if it is out of range.









## ■ Switching [AF Mode]

### 1 Select [AF Mode] from the [Rec] menu

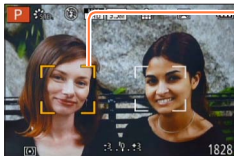
• For the setting procedures of the menu. (→25)

### 2 Press ▲▼ to select Autofocus mode items and then [MENU/SET]

 (Face Detection)	For taking front-on pictures of people
 (AF Tracking)	For automatically locking the focus on a moving subject (→98)
 (23-area-focusing)	For off-center subjects (→98)
 (1-area-focusing)	For precise focusing on small subjects (→99)

## Face Detection



Recognizes faces (up to 15 people) and adjusts exposure and focus accordingly.



AF area

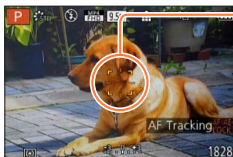
Yellow: When the shutter button is pressed halfway, the frame turns green when the camera is focused.

White: Displayed when more than one face is detected. Other faces that are the same distance away as faces within the yellow AF area are also focused.

-  (Face Detection) is not available in the following cases:
  - With the Scene Modes ([Panorama Shot] [Night Scenery] [Handheld Night Shot] [Food])
  - [Creative Control] Mode ([Soft Focus] [Miniature Effect])
- If the camera misinterprets a non-human subject as a face, switch to another setting.
- If conditions prevent the face from being recognized, such as when the movement of the subject is too rapid, the [AF Mode] setting switches to  (23-area-focusing).

## AF Tracking

# 1 Align the subject with the AF Tracking frame and then press the [AF/AE LOCK] button






AF Tracking frame

When the subject is recognized, the AF Tracking frame changes from white to yellow, and the subject is automatically kept in focus.

If AF Lock fails, a red frame flashes.

- To release AF Tracking → Press the [AF/AE LOCK] button.
- Focus range (same as macro recording)

- Under certain conditions, such as when the subject is small or dark,  (AF Tracking) may not operate correctly. When it does not work, the [AF Mode] will be switched to  (1-area-focusing).
-  (AF Tracking) is not available in the following cases.
  - With [Panorama Shot] Scene Mode
  - With [Creative Control] Mode ([Sepia] [Dynamic Monochrome] [High Dynamic] [Toy Effect] [Soft Focus] [Miniature Effect] [Radial Defocus])
  - With the [Monochrome] setting in [Photo Style]
  - [Creative Video Mode]

## Focusing on off-center subjects

With this mode, focusing is based on the closest registered object in the 23 metered areas.




## Spot focusing

Focusing is based on the subject registered in the center of the picture. (Recommended when focusing is difficult, or when it is supposed to be based on a specific off-center detail)



• You can adjust the position of the AF area. (→100)

- Focus is fixed to  (1-area-focusing) in the following cases:
  - With [Miniature Effect] in [Creative Control] Mode
  - [High Speed Video] in [Creative Video Mode]
- The AF area display may be larger depending on recording conditions such as dark locations or the set focal length.

## ■ Locking the focus

When a subject you want to base focusing on is not in the center of the monitor image, use the following procedure.

### 1 Aim the AF area at the subject



Hold down halfway



#### Focus display

When focus is set: illuminated  
When focus is not possible: flashing

#### AF area

When focus is set: green  
When focus is not possible: red

### 2 Return to desired composition




Press fully



AF area

## ■ Changing the position and size of the AF area

When [AF Mode] is set to  (1-area-focusing), you can move the position or change the size of the AF area.

### 1 Select [AF Mode] from the [Rec] menu

- For the setting procedures of the menu. (→25)

### 2 Use cursor buttons to select [] from the [AF Mode] items and then press ►

### 3 To move/change the AF area


To move the AF area: Press ▲▼◀▶

To change the size of the AF area: Rotate the dial

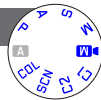
- To restore the AF area to its initial state (position and size) → Press the [DISP] button



### 4 Press [MENU/SET]

- While a motion picture is being recorded, you cannot move the AF area or change its size.
- When the AF area is small, focusing may be difficult.
- When [Metering Mode] is set to , the new position of the AF area will be measured.
- The AF area display may be larger depending on recording conditions such as dark locations or the set focal length.

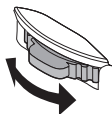
## Using Manual Focus together with Autofocus



After setting the focus using Autofocus, you can make fine adjustments for the focus position using the Manual Focus.

**1** Press the [AF/AE LOCK] button to lock the focus

AF/AE LOCK

**2** Use the [ND/FOCUS] lever to adjust the focus

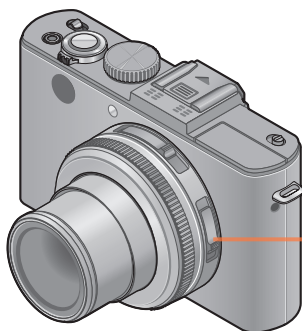
Setting procedures for Manual Focus ([→104](#))

- Even if the focus is locked by pressing the shutter button halfway, you can still use the [ND/FOCUS] lever to adjust the focus.

## Close-up pictures



When you want to enlarge the subject, setting to [🌸] enables you to take pictures at an even closer distance than the normal focus range (up to 1 cm ( $\frac{25}{64}$ " ) for max. Wide).



**1** Switch the focus selector switch to [🌸]



Enables close-up focusing on a subject. (Autofocus functions.)

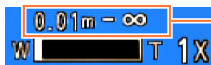
Align with the index

### ■ Shortest focusing distance

The shortest focusing distance is the distance from the lens front to the subject. This distance changes gradually depending on the set focal length/zoom position.

Focus selector switch	Zoom lens setting	
	Max. wideangle setting (4.7mm)	Max. telephoto setting (17.7mm)
AF	50cm (1' 7 $\frac{11}{16}$ " )	50cm (1' 7 $\frac{11}{16}$ " )
🌸	1cm ( $\frac{25}{64}$ " )	30cm (1')
MF	1cm ( $\frac{25}{64}$ " )	30cm (1')

- The focus range is displayed when changing the focal length, i.e. zooming, etc.



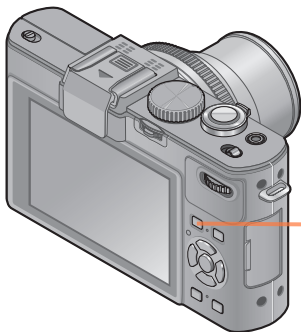
Focus range

- In [Snapshot Mode], the shortest focusing distance will be the same as that for [🌸], regardless of the focus selector switch setting.
- With the [🌸] mode, it can take longer to focus on subjects at normal distances.
- Using a tripod and [Self Timer] is recommended. Also, we recommend that you close the flash to set to [🔇] (Forced flash off).
- Moving the camera after focusing is likely to result in unsharp pictures if the subject is close to the camera, due to the fact that at short distance settings, the range of sharp rendition is extremely limited.
- It is not possible to set AF Macro Mode in the following cases.
  - In all Scene Modes except [3D Photo Mode]

## Locking the exposure and/or focus



It is convenient to use the [AF/AE LOCK] button when you want to change the composition after having set focus and exposure for the decisive and off-center part of the subject.



**1** Point the camera at the subject

**2** Press the [AF/AE LOCK] button

AF/AE LOCK



Focus is locked (AF Lock)



Exposure is locked (AE lock)

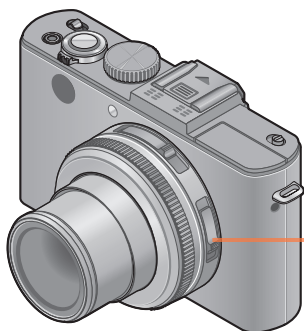
**3** Adjust the composition and then take the picture

- To cancel the focus or exposure  
→ Press [AF/AE LOCK] button again

- You can use [AF/AE Lock] in the [Rec] menu to switch between the AE Lock (lock exposure only) setting and the AF Lock (lock focus only) setting. (→138)
- The subject can be focused again by pressing the shutter button halfway, even when the exposure setting is locked.
- Program Shift can be set even when the exposure setting is locked.
- When you record motion pictures after locking the exposure and/or focus, you can continue to record still pictures in the locked state in [Creative Video Mode]. Lock will canceled in modes other than [Creative Video Mode].
- Lock is canceled when changing the focal length/zooming after locking the exposure and/or focus. Perform the locking operation again.
- AE Lock will be disabled in [Manual Exposure] Mode and [Scene Mode].

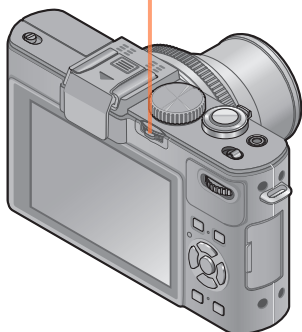
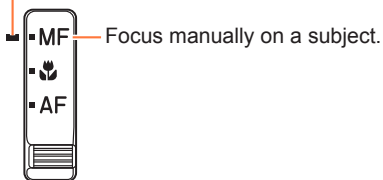
## Manual focusing

Use this function when you want to determine the focus setting yourself or when using Autofocus proves difficult.

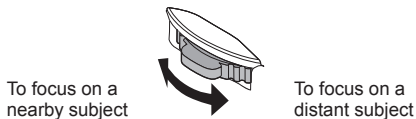


### 1 Switch the focus selector switch to [MF]

Align with the index



### 2 Focus with the [ND/FOCUS] lever



Focus setting and depth of field indication



The yellow bar indicates the depth of field range



- You can focus using the [ND/FOCUS] lever even during motion picture recording. Note, however, that indications such as MF assist and depth of field range are not displayed.
- After changing the focal length, i.e. zooming, refocus.
- The depth of field range displayed by Manual Focus is an approximation. Confirm the focus setting on the monitor image ([MF Assist] screen).
- After canceling [Sleep Mode], be sure to refocus.
- When Manual Focus is used together with AE Lock, it is easier to confirm the focus.

### ■ Enlarged display (MF assist)

When [MF Assist] in the [Setup] menu is [ON] and you focus manually, an enlarged display appears.

- By pushing the [ND/FOCUS] lever during an enlarged display, you can set the magnification to approx. 5x, 10x or 4x (only at the center of the screen).
- Approximately 2 seconds after manually focusing, the display switches to normal.
- To change the position of an enlarged display
  - ① Press [MENU/SET] during the manual focusing operation (while the enlarged display is displayed)
  - ② Use cursor buttons to move the enlarged display
    - To return the enlarged display to the center → Press the [DISP] button
  - ③ Press [MENU/SET]

- MF assist is not displayed in the Digital Zoom area.

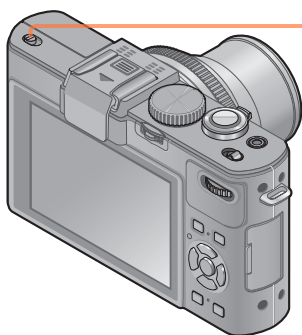
### ■ 1 Shot AF

When [1 Shot AF] is registered in [Fn Button Set], you can press ◀ once to activate Autofocus temporarily and focus on the subject.

## Using the built-in flash



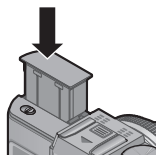
You can use the built-in flash to take pictures in dark locations or light up a subject to reduce its contrast to a bright background.



### 1 Open the built-in flash



### Close the built-in flash



When you do not want to use the flash or after using it, press it down until it clicks into position.





- Be careful not to catch a finger or any other part of your body or any object when you close the flash.
- Do not cover the light-emitting area of the flash with your hands or look at it from close range. Do not use the flash at close distances to other subjects (heat/light may damage the subject).
- Do not close the flash immediately after the initial flash is fired prior to taking pictures for Auto/Red-Eye Reduction and other flash settings. If you close the flash immediately, it will cause a malfunction.
- When the flash is being charged, the flash icon flashes red, and you cannot take a picture even when you fully press the shutter button.
- The flash effect may not be sufficient in the following cases:
  - With slow shutter speeds
  - When [Burst Shooting] is set to [ ]
- Flash charging may take longer if the battery is low or after using the flash repeatedly.
- When an external flash unit is attached, it will have priority over the built-in flash. (→198)




## Changing the flash mode



**1** Select [Flash] in the [Rec] menu

- For the setting procedures of the menu. (→25)

**2** Press ▲ ▼ to select a mode and then [MENU/SET]

Type, operations		Uses
	<b>[Auto]</b> • The flash is automatically fired when the recording conditions make it necessary	Standard setting for normal use.
	<b>[Auto/Red-Eye]*</b> • The flash is automatically fired when the recording conditions make it necessary. It is fired once before the actual recording to reduce the red-eye phenomenon (eyes of the subject appearing red in the picture) and then fired again for the actual recording	Use this mode when you take pictures of people in low lighting conditions.
	<b>[Forced Flash On]</b> • The flash is fired every time regardless of the recording conditions	Use this mode when your subject is back-lit or under fluorescent light.
	<b>[Slow Sync./Red-Eye]*</b> • If you take a picture with a dark background, this feature will slow the shutter speed when the flash is fired 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. Since a slower speed can cause motion blur, it is recommended to use a tripod.

\* Two flashes will be emitted. Do not move the camera until after the second flash. The interval between flashes varies according to the brightness of subject.  
When [Red-Eye Removal] in the [Rec] menu is set to [ON], the icon changes to /, red-eye is automatically detected and the picture data is corrected. (Only when [AF Mode] is  (Face Detection))

- When the built-in flash is closed,  (Forced flash off) is set regardless of the flash setting.
- In [Snapshot Mode],  is set and the light output is controlled according to the subject and the brightness with the built-in flash.
- You can adjust the flash output using [Flash Adjust.] in the [Rec] menu. (→145)
- You can use [Flash Synchro] in the [Rec] menu to set whether the first curtain sync or the second curtain sync will be used. (→144)
- The effect of red-eye reduction varies depending on the subject and is affected by factors such as distance to the subject, whether the subject is looking at the camera during the initial flash, and so on. In some cases, the effect of red-eye reduction may be negligible.
- Flash settings may be changed automatically when changing recording modes.
- Scene Mode flash settings are restored to default when the Scene Mode is changed.
- If the flash illumination is insufficient for a subject, neither the proper exposure nor an appropriate White Balance is achieved.

## Available flash modes in each exposure mode

(○: Available, -: Not available, □: Default setting)

	A	P	S	COL*1	[Scene Mode]						
A	○*2	○	○	-	○	○	○	-	○	○	○
AⓄ	-	○	○	-	○	○	-	-	-	○	-
S	-	○	○	-	○	○	○	○	○	○	○
SⓄ	-	○	-	○	-	-	-	○	-	-	-

\*1 [Smooth Defocus] and [Radial Defocus] only

\*2 Set to [A], [AⓄ], [S] or [SⓄ] depending on the subject and brightness.

● The flash cannot be used in the following cases.

- With motion pictures
- With the following Scene Modes:  
[Scenery] [Panorama Shot] [Night Scenery] [Handheld Night Shot] [HDR] [Sunset]  
[Glass Through] [3D Photo Mode]

## The available flash range when the [Sensitivity] setting is [AUTO]

<b>Max. wideangle setting</b>	Approx. 0.8m - 8.5m*3 (2' 7" - 28')
<b>Max. telephoto setting</b>	Approx. 0.3m - 5.2m*3 (1' - 17')

\*3 When [ISO Limit Set] is [AUTO].

## Shutter speeds for each flash mode

A AⓄ S	1/60s*4 - 1/4000s
SⓄ	1s*4*5 - 1/4000s

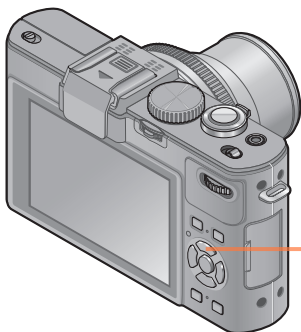
\*4 Varies according to the [Min. Shtr Speed] setting.

\*5 When [Min. Shtr Speed] is set to [AUTO], and camera shake is detected when [Stabilizer] is turned to [ON], the maximum speed is 1/4 second. Also varies in [Snapshot Mode] and the Scene Modes, etc.

## Setting the ISO Sensitivity



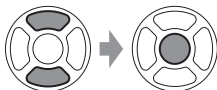
The ISO setting determines the possible shutter speed/aperture combinations for a given subject brightness. Higher ISO settings allow faster shutter speeds and/or larger aperture values and vice versa.



### 1 Press the [ISO] button



### 2 Press ▲▼ to select the ISO Sensitivity and then [MENU/SET]



## ■ Settings

[AUTO]	ISO Sensitivity is automatically set in a range up to 1600 depending on the brightness of a subject.
ISO	ISO Sensitivity is automatically set in a range up to 1600 depending on the movement and brightness of a subject.
[80] / [100] / [200] / [400] / [800] / [1600] / [3200] / [6400] / [H.12800]	<p>ISO Sensitivity is fixed at the selected setting.</p> <ul style="list-style-type: none"> <li>When [ISO Increments] is set to [1/3 EV], more ISO Sensitivity settings can be selected. (→137)</li> <li>When [Extended ISO] is set to [ON], you can set the ISO Sensitivity to a value exceeding 6400. (→110)</li> </ul>

## Setting guide

[Sensitivity]	[80]	←→	[H.12800]
Location (recommended)	Bright (outdoors)		Dark
Shutter speed	Slow		Fast
Noise	Less		More
Subject blur	More		Less

- The [Sensitivity] is automatically set in the following cases:
  - When recording motion pictures (Except [Creative Video Mode])
  - When recording [High Speed Video] in [Creative Video Mode]
  - When [Burst Shooting] is set to [3]

### ■ About extended ISO

When [Extended ISO] in the [Rec] menu is set to [ON], you can also set the following ISO Sensitivity values.

H.8000\* / H.10000\* / H.12800

\* When [ISO Increments] is [1/3EV]

- When you record a picture using [Extended ISO], the maximum resolution is reduced.

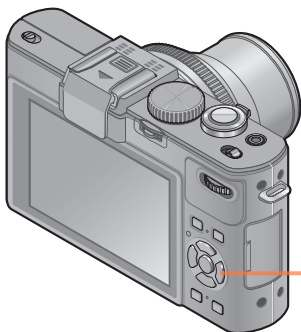
Aspect ratio	Maximum resolution (number of pixels)
1:1	2.5 M
4:3	3 M
3:2	3 M
16:9	2.5 M

- You cannot record pictures using [RAW , [RAW , and [RAW] under [Quality] when [Extended ISO] is set.

## Setting White Balance



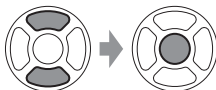
Adjust the white balance depending on the light source to ensure natural color rendition.



**1** Press the [WB] button



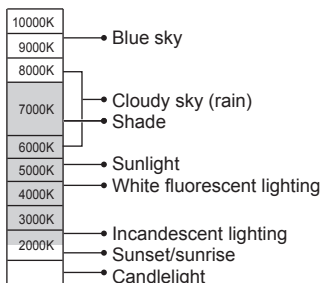
**2** Press ▲ ▼ to select the white balance and then [MENU/SET]



■ Settings: [AWB] ([Auto White Balance]) / ☀ ([Daylight]) / ☁ ([Cloudy]) /  
 🏠 ([Shade]) / ⚡ ([Flash]) / ☹ ([Incandescent]) /  
 📷 1 📷 2 ([White Set 1] [White Set 2]) / 🌈 ([Color Temperature])

- When [AWB] (Automatic White Balance) is set, the color rendition is adjusted in accordance with the light source. However, if the scene is too bright or too dark or if other extreme conditions apply, the pictures may appear reddish or bluish. The White Balance may not operate correctly if there are different types of light sources.
- We recommend setting [AWB], [📷 1] or [📷 2] under fluorescent, LED, or other types of artificial lighting.
- The [White Balance] setting is fixed to [AWB] in the following cases:  
 Scene Modes ([Scenery], [Night Portrait], [Night Scenery], [Handheld Night Shot], [Food], [Sunset])
- Even if the camera's power is OFF, the set White Balance is remembered. (If the Scene Mode is changed, the white balance setting returns automatically to [AWB].)



### ■ [AWB] operational range:



K=Color temperature in degrees Kelvin

### Setting the White Balance manually

Take a picture of a white object under the target light source to adjust the color rendition.

- 1** Press the [WB] button
- 2** Press ▲ ▼ to select either [,] or [,] and then ►
- 3** Point the camera at a white object such as a piece of paper, ensuring that it is inside the frame at the center of the screen, and then press [MENU/SET]

- Even if the camera's power is OFF, the set White Balance is remembered.
- It may not be possible to set the correct White Balance if subjects are too bright or too dark. In this case, adjust the brightness and try to set the White Balance again.



## Setting the White Balance using a color temperature

You can set the White Balance using a color temperature. Color temperature is a numeric value that expresses the color of light (unit: K\*). A picture becomes bluish when the color temperature value is higher, and reddish when it is lower.

\* Kelvin

- 1** Press the [WB] button
- 2** Press ▲ ▼ to select [K] and then ►
- 3** Press ▲ ▼ to select the color temperature value and then [MENU/SET]

● You can set the color temperature from 2,500 K to 10,000 K.




## Performing White Balance fine adjustments

White Balance settings can be individually fine-tuned if colors still do not appear as desired.

- 1** Press the [WB] button
- 2** Press ▲ ▼ to select the White Balance fine adjustment setting, and then ►
  - When you select [A], [G+] or [K], press ► again.
- 3** Use ▲ ▼ ◀ ▶ to perform fine adjustments and then press [MENU/SET]

◀: A (amber: orangish colors)  
▲: G+ (green: greenish colors)

▶: B (blue: bluish colors)  
▼: M- (magenta: reddish colors)

- When you perform fine adjustments of the White Balance toward the A (amber) or B (blue) side, the color of the White Balance icon displayed on the screen will change to the fine-tuned color.
- When you perform fine adjustments of the White Balance toward the G+ (green) or M- (magenta) side, [+ ] (green) or [- ] (magenta) will be displayed in the White Balance icon on the screen.
- When fine adjustments of the White Balance are not desired, select the center point.
- Settings remain applied when using the flash.
- You can perform fine adjustments of the White Balance independently for each White Balance setting mode.
- Settings are remembered even if the camera is turned off.
- When you reset the White Balance in  or , or reset the color temperature in , the White Balance fine adjustment level will return to the standard setting (central point).

### White Balance bracketing

Bracket settings are performed based on the fine adjustment values for White Balance, and three pictures with different coloring are automatically recorded when the shutter button is pressed once.



#### 1 Using the White Balance Fine Adjustment screen, set the White Balance, which is the reference for the bracket

- How to display the White Balance fine adjustment screen ([→113](#))

#### 2 Press the [DISP] button

#### 3 Use cursor buttons to set the bracket and then press [MENU/SET]

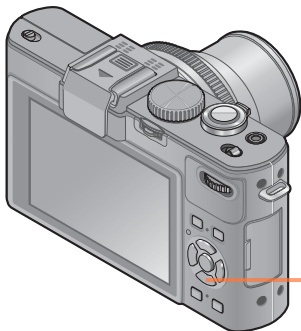
- ▲▼: G+ (green: greenish colors) to M- (magenta: reddish colors)
- ◀▶: A (amber: orangish colors) to B (blue: bluish colors)
- If the bracket width is not set, [WB Bracket] is disabled.

- When [WB Bracket] is set, [BKT] appears with the White Balance icon.
- The position of the bracket cannot exceed the maximum ranges of the White Balance fine adjustments.
- When White Balance fine adjustments are performed after the bracket is set, the bracket is used to take pictures with the changed adjustment value as the center value.
- When the camera is turned off, the White Balance Bracket setting is canceled.
- The shutter sound will be emitted only once.
- When the White Balance Bracket is set, [Auto Bracket], [Aspect Bracket] and [Burst Shooting] will be canceled.
- The White Balance Bracket is not available in the following cases.
  - During motion picture recording
  - When the [Quality] setting is set to [RAW , [RAW , or [RAW]

## Using with self-timer



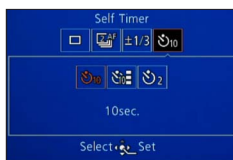
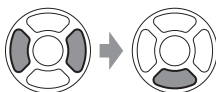
We recommend using a tripod when using the Self-Timer. This, plus setting the Self-Timer to 2 seconds is a convenient way to avoid the camera shake caused by pressing the shutter button.



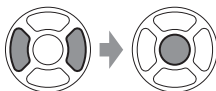
**1** Press the [ ] button



**2** Press ◀▶ to select [Self Timer] and then ▼



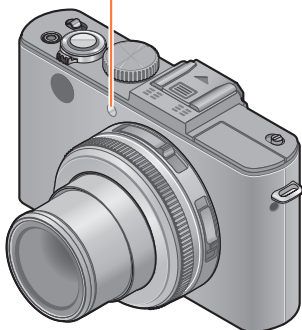
**3** Press ◀▶ to select the self-timer operation setting and then [MENU/SET]



	The shutter is released after 10 seconds.
	The shutter is released after 10 seconds and three pictures are taken at intervals of approximately 2 seconds.
	The shutter is released after 2 seconds.

(Continued on the next page)

Self-timer indicator  
(Flashes for the set delay time)



## 4 Take the picture

Press the shutter button fully to release the shutter after the preset time.



- To cancel while in operation  
→ Press [MENU/SET]

### ■ To cancel

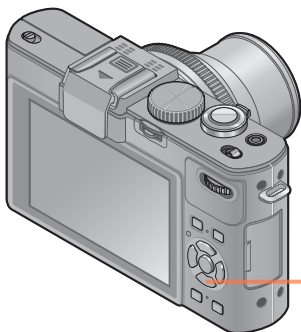
Select [□] ([Single]) in step 2.

- Focusing will be automatically performed immediately before the exposure if the shutter button is pressed fully.
- After the self-timer indicator stops flashing, it may then remain lit due to its function as AF Assist Lamp.
- You cannot use the self-timer for motion picture recording or interval recording.
- You cannot select the [⏸] setting under the following conditions.
  - [Snapshot Mode]
  - When [WB Bracket] is set
  - When [Aspect Bracket] is set
  - Scene Modes ([Panorama Shot] [3D Photo Mode])

## Setting the exposure series function



Pictures are taken continuously while the shutter button is pressed.  
Select the ones you really like from the pictures you have taken.



**1** Press the [MENU] button











**2** Press ◀▶ to select [Burst Shooting] and then ▼



**3** Press ◀▶ to select the frame rate and then [MENU/SET]



Setting	Speed	No. of pictures	Focus, exposure, White Balance
	Approx. 2 pictures/s	100*1	Only the focus is fixed to the settings of the first picture taken.*2
	Approx. 2 pictures/s	100*1	Adjusted within the possible range.
	Approx. 5 pictures/s	100*1	Only the focus is fixed to the settings of the first picture taken.*2
	Approx. 5 pictures/s	100*1	Adjusted within the possible range.
	Approx. 11 pictures/s	12	Fixed to the settings of the first picture taken.
	Approx. 40 pictures/s	40	Fixed to the settings of the first picture taken.
	Approx. 60 pictures/s	60	Fixed to the settings of the first picture taken.
	Complies with recording conditions (exposure series with flash)	5	Fixed to the settings of the first picture taken.

\*1 The number of pictures taken in series is limited by the picture-taking conditions and the type and/or status of the card used.




\*2 The exposure and White Balance are adjusted within the possible range.

\*3 When [Quality] is set to [RAW:1], [RAW:2] or [RAW], pictures are not recorded.

\*4 Carrying out exposure series using the flash: Only possible in the P, A, S modes

### ■ Note on the resolution setting

When [], [] or [] is set, the resolution will be lower.

Aspect ratio			
4:3	5 M, 3 M, 2 M, 0.3 M	2.5 M, 0.3 M	3 M
3:2	4.5 M, 2.5 M, 0.3 M	3 M, 0.3 M	2.5 M
16:9	3.5 M, 2 M, 0.2 M	3.5 M, 0.2 M	2 M
1:1	3.5 M, 2.5 M, 0.2 M	2 M, 0.2 M	2.5 M

### ■ To cancel

Select [] ([Single]) in step **2**.

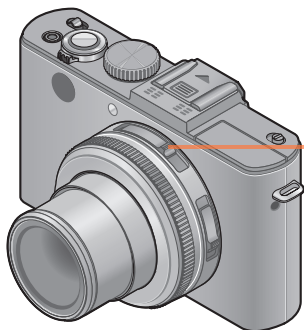
- When [60] is set, the image area is reduced.
- Pictures taken with the [40] or [60] setting are recorded together as a group (group display). (→156)
- Depending on changes in the brightness of the subject, the second and subsequent pictures may be recorded brighter or darker when using the exposure series function at the [1], [40], [60] or [3] setting.
- Even if [AF] or [AF] is set, the focus is fixed on the first picture when the exposure series function is used during motion picture recording.
- The number of pictures per second may be reduced if the shutter speed gets slower in darker locations.
- The pictures taken using the exposure series function at the [40] or [60] setting may be distorted if the subjects were moving or the camera was moved.
- The flash is set to [☒] (Forced flash off). (Excluding [3])
- Settings will be stored even if power is turned off.
- The exposure series function cannot be used in the following cases:
  - With [Creative Control] Mode ([Toy Effect] [Miniature Effect] [Soft Focus] [Star Filter] [Smooth Defocus] [Radial Defocus])
  - With the Scene Modes ([Panorama Shot] [Handheld Night Shot] [HDR] [3D Photo Mode])
  - When [Aspect Bracket] is set
  - When [WB Bracket] is set
  - During Interval Recording
- When [Snapshot Mode] is set or the Scene Mode is set to [Night Portrait] or [Night Scenery], [40], [60] and [3] cannot be selected.
- With repeated recordings, it may take a while between recordings, depending on the usage conditions.
- It may take somewhat longer to store still pictures that were taken using the exposure series function. If you continue to record while storing, the number of pictures that can be taken will be reduced. A high-speed card is recommended when recording using the exposure series function.
- You cannot use the zoom during exposure series.



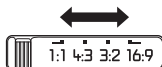
## Changing the aspect ratio for still pictures



This mode allows you to select the aspect ratio of the pictures to suit printing or the playback method.

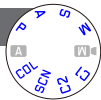


### 1 Select the aspect ratio switch



- The edges of pictures may be cut off when printing - be sure to check in advance.

### [Aspect Bracket]



Pressing the shutter button once automatically takes four pictures with aspect ratios of [4:3], [3:2], [16:9] and [1:1]. (The shutter sounds only once.)

#### 1 Select [Aspect Bracket] in the [Rec] menu

- For the setting procedures of the menu. (→25)

#### 2 Use cursor buttons to select [ON] and then press [MENU/SET]



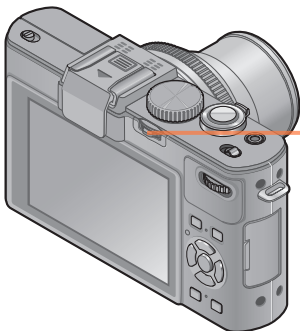
The resulting framing for each aspect ratio is displayed.

- The same shutter speed, aperture value, focus, and the same [Exposure], [White Balance] and [Sensitivity] settings are used for all four pictures.
- Aspect Bracket is disabled when the recordable number of pictures is three or less.
- When Aspect Bracket is set, [Auto Bracket], [Burst Shooting] and [WB Bracket] are canceled.
- [Aspect Bracket] cannot be used in the following cases:
  - With [Creative Control] Mode ([Toy Effect] [Miniature Effect] [Soft Focus] [Star Filter] [Smooth Defocus] [Radial Defocus])
  - With the Scene Modes ([Panorama Shot] [Handheld Night Shot] [HDR] [3D Photo Mode])
- [Aspect Bracket] is not available in the following cases:
  - During motion picture recording
  - When the [Quality] setting is set to [RAW:⬢], [RAW:⬢] or [RAW]
  - During Interval Recording

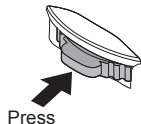
## Using the built-in ND filter



When you want to take pictures using a larger aperture than with the normal exposure settings in a bright outdoor location or with a slow shutter speed, you can use the built-in ND filter to reduce the amount of light that passes through the lens.



### 1 Press the [ND/FOCUS] lever to activate the ND filter



Displayed when using the built-in ND filter

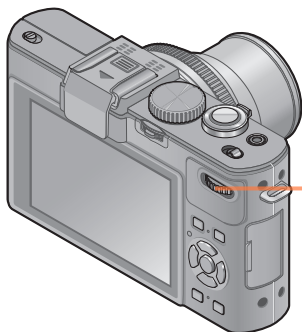
- To deactivate the built-in ND filter  
→ Press the lever again.

- The built-in ND filter reduces the exposure settings by approximately 3 EV stops.
- The built-in ND filter is automatically activated when [Program Diagram] is set to modes other than [STD.] in [Program AE] Mode.
- In [Snapshot Mode], the built-in ND filter can be set for [Snapshot Plus Mode] only.
- The built-in ND filter is automatically activated when using [Smooth Defocus] or [Radial Defocus] in [Creative Control] mode.
- You cannot switch the setting of the built-in ND filter when recording a motion picture.

# Compensating the exposure



Use this function to adjust the exposure to the important part of the subject in case of large differences in brightness within the frame.



## 1 Press the dial to select the Exposure Compensation display



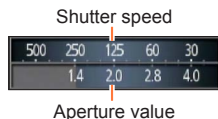
Selected (yellow)

## 2 Select the Exposure Compensation value



Exposure Compensation value (+3 - -3)  
Setting display

### Setting display



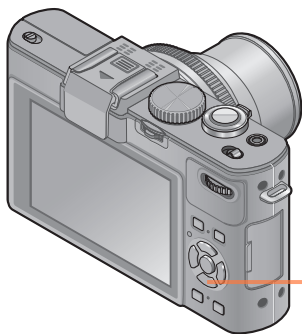
- If an important part of the subject is too dark, adjust the exposure to the “+” direction.
- If an important part of the subject is too bright, adjust the exposure to the “-” direction.

- Depending on the brightness, this may not be possible in some cases.
- The Exposure Compensation value you set is retained even after the camera is turned off.

## [Auto Bracket]



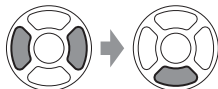
In this mode, 3 pictures are automatically recorded with the selected exposure steps each time the shutter button is pressed. When an Exposure Compensation is set, the exposures are based on the set Exposure Compensation value.



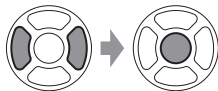
**1** Press the [ ] button



**2** Press ◀▶ to select [Auto Bracket] and then ▼



**3** Press ◀▶ to select the compensation value and then [MENU/SET]



- The camera takes the first picture without compensation, the second with minus compensation and the third with plus compensation.

### ■ To cancel

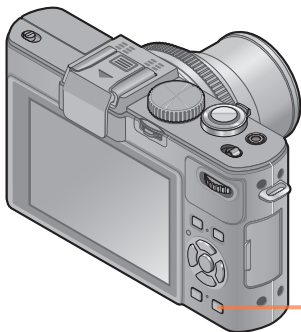
Select [ ] ([Single]) in step **2**.

- [Auto Bracket] cannot be used in the following cases:
  - With flash
  - With [Creative Control] Mode ([Miniature Effect] [Soft Focus] [Star Filter] [Smooth Defocus] [Radial Defocus])
  - With the Scene Modes ([Panorama Shot] [Handheld Night Shot] [HDR] [3D Photo Mode])
  - With motion pictures
  - When [Aspect Bracket] is set
  - When [WB Bracket] is set
  - During Interval Recording

## Switching the displays

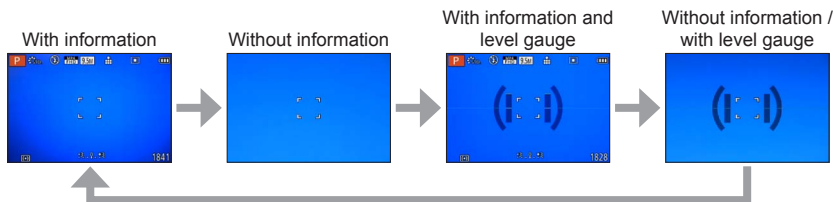


You can determine if and which information should be displayed on the monitor icons for various settings and the level gauge (→128).



### 1 Press the [DISP] button to switch the display

DISP  Every time you press the button, the display will be switched.

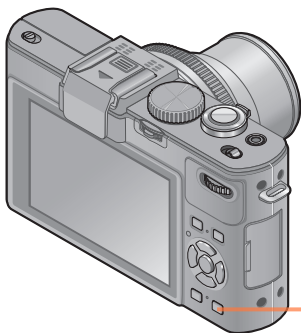


- When you set [Guide Line] in the [Setup] menu to a setting other than [OFF], the guidelines will be displayed.
- Use [LCD Disp.Style] and [EVF Disp.Style] to change the layout of the monitor or an attached external electronic viewfinder, respectively.

## Using the level gauge



If you want to make sure that the camera is not tilted, for example, when you take a picture of a landscape, use the level gauge indication as a reference.



### 1 Press the [DISP] button to switch the display

DISP  Press the button until the level gauge is displayed (3 or 4 times).

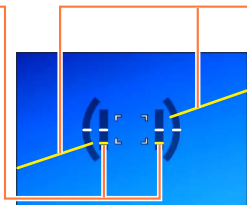
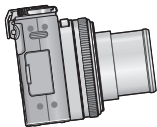
### 2 Correct the camera angle

#### ■ Using the level gauge

The yellow line indicates the current angle (horizontal line). Correct the angle of the camera so that it matches the white line.

##### Tilting up or down

- In this case, it is facing upward.



##### Tilting left or right

- In this case, it is tilted to the right side.



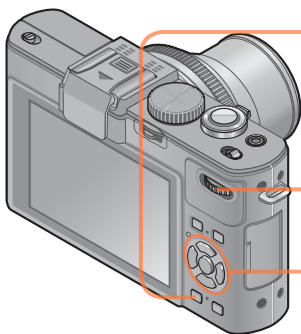
- When the camera is held nearly horizontally in both directions, the level gauge will turn green.
- When pictures are taken in portrait orientation, the level gauge is automatically switched accordingly.

- When the displays are green, there may be an error of up to  $\pm 1$  degree.
- Every time you press ◀ when [Fn Button Set] in the [Setup] menu is set to [Level Gauge], you can turn the level gauge indication on and off.
- When the camera is being moved, the level gauge may not be displayed correctly.
- The level gauge may not be displayed correctly or the direction detect function may not operate correctly if the pictures are taken with the camera strongly tilted up or down.



## Using the Quick menu

In picture taking mode, you can quickly change the main settings for a still or a motion picture.



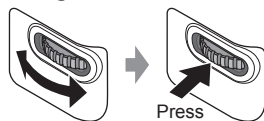
**1** Press the [Q MENU] button to display the Quick menu

Q MENU



**2** Select a menu item

■ Using the dial

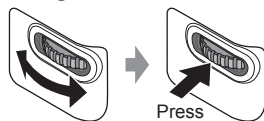


■ Using cursor buttons



**3** Change the setting

■ Using the dial

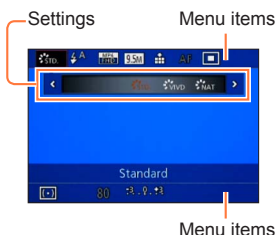


■ Using cursor buttons



**4** Press the [Q MENU] button to close the Quick menu

Q MENU



● The menu and setting items that are displayed differ depending on the recording mode.

## Using the Face Recognition function

[Face Recog.]



The default [Face Recog.] setting is [OFF].  
When a face is registered, the setting will be [ON] automatically.

### ■ How the Face Recognition function works

#### During recording

(When [AF Mode] is set to  (Face Detection))

- The camera recognizes a registered face and adjusts focus and exposure based on this face.
- When faces are recognized for which names have also been registered, the names are displayed (max. 3 persons).



#### During playback

- The name and age are displayed (if that information is registered).
- The names that have been set for the recognized faces are displayed (max. 3 persons).
- Only pictures of the selected registered people are played back ([Category Selection]).

- Only the first picture of an exposure series will contain Face Recognition information.
- If you press the shutter button halfway, then point the camera at a different subject and take the picture, the information for a different person may be put on the picture.
- Face Recognition does not work in the following cases:
  - With Motion pictures
  - With the Scene Modes ([Panorama Shot] [Night Scenery] [Handheld Night Shot] [Food] [3D Photo Mode] )
  - With [Creative Control] Mode ([Miniature Effect] [Soft Focus])
- Face Recognition searches for faces similar to those registered, but there is no guarantee it will always recognize these faces. In some cases, the camera cannot recognize or incorrectly recognizes even registered people depending on their expression or the environment.
- Even if Face Recognition information is registered, pictures recorded when the name function is set to [OFF] are not categorized for Face Recognition in [Category Selection].
- **Even if Face Recognition information is changed, Face Recognition information for previously recorded pictures is not changed.**  
For example, if a name is changed, pictures recorded before the change are not categorized for Face Recognition in [Category Selection].
- To change name information for pictures already recorded, perform a [REPLACE] (→180) in [Face Rec Edit].

### Registering faces

Up to 6 person's faces can be registered along with such information as name and birthday.

You can improve the Face Recognition function by the way you register faces: for example, register multiple faces of the same person (up to 3 pictures for one registration).

#### **1** Select [Face Recog.] in the [Rec] menu

- For the setting procedures of the menu. (→25)

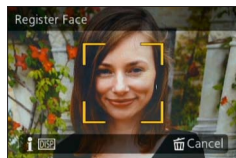
#### **2** Select [MEMORY] with cursor buttons, and then press [MENU/SET]

#### **3** Select [New] with cursor buttons, and then press [MENU/SET]

- If 6 people are already registered, first delete a registered person. (→133)

#### **4** Record a picture with the face

- ① Align the face within the frame and release the shutter
- ② Select [Yes] with cursor buttons, and then press [MENU/SET]
  - If re-recording, select [No]
  - Faces of subjects other than people (e.g. pets) cannot be registered.
  - When the [DISP] button is pressed, an explanation is displayed.



(Continued on the next page)

**5 Press ▲ ▼ to select the item for editing and then ►**

[Name]	① Select [SET] with cursor buttons, and then press [MENU/SET] ② Enter the name (Entering text (→44))
[Age]	Setting a birthday. ① Select [SET] with cursor buttons, and then press [MENU/SET] ② Press ◀▶ to select year, month and day, set with ▲▼, and then [MENU/SET]
[Focus Icon]	For changing the icon that is displayed when the subject is in focus. ① Select the focus icon with cursor buttons, and then press [MENU/SET]
[Add Images]	Up to 3 face pictures of the person can be registered. ① Select an unregistered frame, and then press [MENU/SET] • When a registered face picture is selected with cursor buttons, a screen to confirm deletion is displayed. Select [Yes] to delete the face picture. (If only one picture is registered, it cannot be deleted.) ② Take the picture (Perform step 4 (→131)) ③ Press the [ ] button

**■ Tips for registering face pictures**

- Make sure the subject's eyes are open and mouth closed; have the subject face the camera directly, and make sure the outline of the face, the eyes and eyebrows are not hidden by hair.
- Make sure there are no heavy shadows on the face. (During registration, the flash is not used.)

**■ If the camera seems to have difficulty recognizing faces when recording**

- Register additional pictures of the same person's face, indoors and outdoors or with different expressions or angles.
- Register additional pictures at the place you are recording.
- If a registered face is no longer recognized, re-register that face.

## Editing or deleting information about registered faces

Information about registered faces can be edited or deleted.

- 1** Select **[Face Recog.]** in the **[Rec]** menu
  - For the setting procedures of the menu. (→25)
- 2** Select **[MEMORY]** with cursor buttons, and then press **[MENU/SET]**
- 3** Use cursor buttons to select faces to be edited or deleted and then press **[MENU/SET]**
- 4** Use cursor buttons to select the item and then press **[MENU/SET]**

[Info Edit]	For editing name or other registered information.
[Priority]	For setting the priority order for focus and exposure. ① Select the registration order with cursor buttons, and then press [MENU/SET]
[Delete]	For deleting information and face pictures of registered persons.

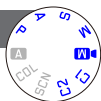
## Using the [Rec] menu

You can change settings such as resolution and flash mode.

- For the setting procedures of the menu. (→25)

### [Photo Style]

This mode allows you to adjust the colors and picture quality according to kind of picture you want to create.



### ■ Settings

☼STD. [Standard]	Standard setting.
☼VIVID [Vivid]	Setting with slightly higher contrast and saturation.
☼NAT [Natural]	Setting with slightly lower contrast.
☼MONO [Monochrome]	Setting that creates a black and white picture.
☼SCNY [Scenery]	Setting that creates a picture with vivid colors for the blue sky and green parts.
☼PORT [Portrait]	Setting that produces the look of a healthy complexion.
☼CUST [Custom]	Setting for using colors and the picture quality that were registered in advance.

### ■ Adjusting the picture quality and registering a custom setting

- ① Press ◀▶ to select the photo style to be adjusted, and then ▼
- ② Press ▲▼ to select an item and then ◀▶ to adjust.
- ③ Press [MENU/SET]

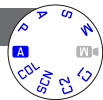
Settings	Settings and results	-	+
☾ [Contrast]	Difference between the bright and dark parts in a picture	Low	High
Ⓢ [Sharpness]	Acuity	Soft	Sharp
🌈 [Saturation]*	Color change	Paler	More vivid
NR [Noise Reduction]	Noise reduction	Priority on resolution	Priority on noise reduction
[Custom setting]	You can register the setting for the adjusted picture quality with [Custom]. ① Select [Custom setting] and then press [MENU/SET] ② Select [Yes] and then press [MENU/SET]		

\* When [Monochrome] is selected, the color tone is changed.

- The settings of the adjusted picture quality will be stored in memory even when the camera is turned off.
- When the picture quality is adjusted, [+] will be displayed in the icon.

- For the setting procedures of the menu. (→25)

### [Picture Size]



This mode allows you to set the resolution (number of pixels) for still pictures. The number of pictures which can be recorded depends on this setting and on [Quality].

#### ■ Settings

Aspect ratio	4:3	3:2	16:9	1:1
Resolution/ setting	10M 3648×2736	9.5M 3776×2520	9M 3968×2232	7.5M 2736×2736
	7M * 3072×2304	6.5M * 3168×2112	6M * 3328×1872	5.5M * 2304×2304
	5M 2560×1920	4.5M 2656×1768	4.5M 2784×1568	3.5M 1920×1920
	3M 2048×1536	3M * 2112×1408	2.5M 2208×1248	2.5M * 1536×1536
	2M * 1600×1200	2.5M 2048×1360	2M * 1920×1080	0.2M 480×480
	0.3M 640×480	0.3M 640×424	0.2M 640×360	

\* This setting is not available in ([Snapshot Mode]).

- A mosaic effect may appear depending on the subject and the recording conditions.
- You cannot set [Picture Size] when [Quality] is set to [RAW].

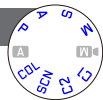
#### Setting guide

Higher resolution	← →	Lower resolution
Sharper		Less detailed
Lower recording capacity		Higher recording capacity

- For the setting procedures of the menu. (→25)

## [Quality]

This mode allows you to set the compression rate for still picture data.



### ■ Settings

[Fine]	Gives priority to picture quality and saves pictures in JPEG file format.
[Standard]	Saves pictures in JPEG file format using standard picture quality.
RAW  [RAW+Fine]	Saves pictures in JPEG and RAW file format.*1
RAW  [RAW+Standard]	
RAW  [RAW]	Saves pictures in RAW file format.*2
[3D+Fine]	Simultaneously saves 3D still picture data (MPO) and pictures in JPEG file format. (Only when [3D Photo Mode] Scene Mode is set.)
[3D+Standard]	

\*1 If you delete a RAW file from the camera, the corresponding JPEG file is also deleted.

\*2 You cannot set the resolution. (The pictures are saved using the maximum resolution for each image aspect ratio.)

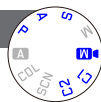
### ■ About RAW files

You can perform advanced editing of RAW pictures using the available software (→189). (The edited pictures can be saved in a file format such as JPEG that can be displayed on your computer.)



- For the setting procedures of the menu. (→25)

## [ISO Limit Set]

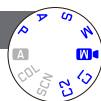


This mode allows you to set the upper limit of ISO Sensitivity when [Sensitivity] is set to [AUTO] or [ISO].

■ **Settings:** [AUTO] / [200] / [400] / [800] / [1600] / [3200]

- This function is disabled during motion picture recording. (Except [Creative Video Mode])

## [ISO Increments]

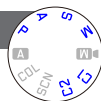


This mode allows you to select the setting increments to either 1 EV or 1/3 EV.

■ **Settings:** [1/3EV] / [1EV]

- When this setting is changed from [1/3EV] to [1EV], the setting for [Sensitivity] may be changed. (The closest ISO Sensitivity that can be set for [1EV] will be used.)

## [Extended ISO]



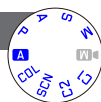
For details (→110).

## [Program Diagram]



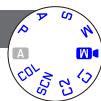
For details (→59).

## [Face Recog.]



For details (→130).

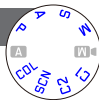
## [AF Mode]



For details (→96).

- For the setting procedures of the menu. (→25)

### [Quick AF]

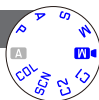


Focusing is automatically performed when camera blurring is small even when the shutter button is not pressed. (This increases battery consumption)

#### ■ Settings: [ON] / [OFF]

- Focusing may take longer if the focal length is quickly and considerably changed, e.g. from the maximum wideangle to the maximum telephoto setting, or when the distance to the subject is quickly and considerably changed.
- Press the shutter button halfway if focusing is difficult.
- The function will turn to [OFF] in the following cases.
  - With [Soft Focus] under [Creative Control] Mode
  - With [Night Portrait], [Night Scenery] and [Handheld Night Shot] Scene Modes
- [Quick AF] will not work while AF Tracking is operating.

### [AF/AE Lock]



This mode allows you to change the operation of the [AF/AE LOCK] button to either lock only the focus (AF) or the exposure (AE) settings when this button is pressed.

For details on the setting operation (→103)

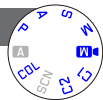
#### ■ Settings

[AF]	Only the focus setting is locked. ([AFL] is displayed on the monitor.)
[AE]	Only the exposure setting is locked. ([AEL] is displayed on the monitor.)
[AF/AE]	Both the focus and exposure settings are locked. ([AFL] and [AEL] are displayed on the monitor.)




- For the setting procedures of the menu. (→25)

### [Metering Mode]

This function allows adapting the metering mode to different subjects and situations.

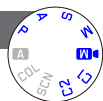


#### ■ Settings

[Metering Mode]	Metering characteristics	Conditions
 <b>[Multi Metering]</b>	The brightness is detected in different sections of the frame. The exposure is then based on the probable main subject	Normal usage (high probability of automatically correctly exposed main subjects even with greater brightness differences)
 <b>[Center Weighted]</b>	The metering sensitivity is concentrated on the center while also registering the rest of the frame	Use when subject is in the center, or to deliberately base the exposure on an off-center subject (provided, subject is of medium brightness)
 <b>[Spot]</b>	Only a small area in the center is registered	Use to base the exposure on very small subject parts (provided, these parts are of medium brightness)

### [i.Dynamic]

This function automatically adjusts contrast and exposure to produce pictures with a more balanced and detailed rendition of the brighter and the darker parts of the picture.

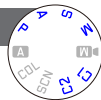


#### ■ Settings: [HIGH] / [STANDARD] / [LOW] / [OFF]

- [LOW], [STANDARD] and [HIGH] indicate the maximum available range.
- If [i.Dynamic] is activated even when [Sensitivity] is set to [80] or [100], pictures may be recorded with higher sensitivity than the ISO Sensitivity setting.

- For the setting procedures of the menu. (→25)

### [Multi Expo.]



This mode allows you to combine two or three still pictures into a single one.

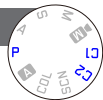
### ■ Settings

[Start]	<p>Start taking pictures.</p> <p>① Decide on your composition and take the first picture</p> <p>② Press ▲▼ to select [Next] and then [MENU/SET]</p> <ul style="list-style-type: none"> <li>• [Retake]: Delete the result of the last shot and take another picture.</li> <li>• [Exit]: Exit Multi Exposure and save the picture that was taken.</li> </ul> <p>③ Take the second and third pictures</p> <ul style="list-style-type: none"> <li>• When you press [MENU/SET] while taking pictures, the pictures that you took are saved and Multi Exposure is closed.</li> </ul> <p>④ Use cursor buttons to select [Exit] and then press [MENU/SET]</p>
[Auto Gain]	<p>[ON]: Combines several pictures into one by automatically adjusting the brightness in accordance with the number of pictures taken.</p> <p>[OFF]: Combines several pictures into one by simply overlapping them without any brightness adjustments.</p> <p>Since this setting may create a combined picture that is too bright for some situations, it may be advisable to set an Exposure Compensation.</p>

- Still pictures are not saved in memory until Multi Exposure is ended.
- Information for the picture taken last will be used as recording information of pictures taken using Multi Exposure.
- The resolution setting will be fixed at the point at which you select [Start].
- The zoom position and White Balance are fixed at the point at which you take the first picture.
- There are some restrictions on the functions, for example, you will not be able to use the following functions.
  - [Burst Shooting]
  - [i.Dynamic]
  - [Auto Bracket]
  - [Aspect Bracket]
  - [WB Bracket]

- For the setting procedures of the menu. (→25)

## [Min. Shtr Speed]

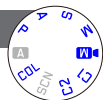


This mode allows extending the shutter speed range for automatic exposure control modes. For example, you can use slower shutter speeds to take brighter pictures in dark locations.

■ **Settings:** [AUTO] [1/250] [1/125] [1/60] [1/30] [1/15] [1/8] [1/4] [1/2] [1]

- Slower shutter speeds allow for brighter pictures but increase the risk of the effects of camera shake, so we recommend using a tripod and the self-timer.
- As still pictures may become dark when using faster shutter speeds such as [1/250], we recommend that they are taken in bright locations ([MIN] flashes red when the shutter button is pressed halfway if a picture will be dark).
- [MIN] is displayed on the monitor for settings other than [AUTO].

## [i.Resolution]



This mode allows you to use the camera's Intelligent Resolution technology to record still pictures with sharper outlines and clearer resolution.

■ **Settings:** [HIGH] / [STANDARD] / [LOW] / [OFF]

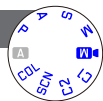
- [i.Resolution] is set to [OFF] when [Creative Control] mode is set to [Smooth Defocus] or [Radial Defocus].

## [i.Zoom]



For details (→94).

## [Digital Zoom]

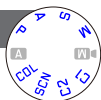


For details (→94).

- For the setting procedures of the menu. (→25)

## [Step Zoom]

For details (→95).



## [Stabilizer]

This mode automatically detects and reduces the effects of camera shake.

### ■ Settings: [ON] / [OFF]

- The setting is fixed to [ON] in [Handheld Night Shot] in [Scene Mode].
- The setting is fixed to [OFF] in [Panorama Shot] and [3D Photo Mode] Scene Mode and [High Speed Video] in [Creative Video Mode].
- Cases where Optical Image Stabilizer may be ineffective:  
Heavy camera shake, high zoom ratio (also in the Digital Zoom range), fast-moving objects, indoors or in dark locations (due to low shutter speed)



- For the setting procedures of the menu. (→25)

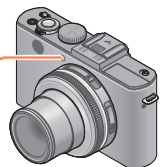
### [AF Assist Lamp]

This mode allows you to set the camera to automatically turn on the AF Assist Lamp in dark locations to make automatic focusing easier.

#### ■ Settings

**[ON]:** Lamp illuminated when the shutter button is pressed halfway (AF\* appears)

**[OFF]:** Lamp off (taking pictures of animals in the dark, etc.)

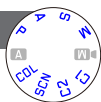


AF Assist Lamp

- The AF Assist Lamp has an effective range of 1.5m (5').
  - Do not cover the lamp with your fingers or look at it from close range.
- The function will turn [OFF] in the following cases.
  - With the Scene Modes ([Scenery] [Night Scenery] [Handheld Night Shot] [Sunset] [Glass Through])
  - With [High Speed Video] in [Creative Video Mode]

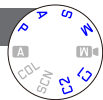
### [Flash]

For details (→107).



- For the setting procedures of the menu. (→25)

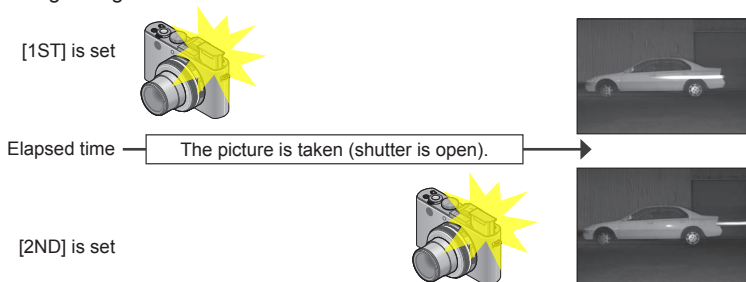
## [Flash Synchro]



This mode allows you to set the timing for firing the flash to achieve different effects.

### ■ Settings: [1ST] / [2ND]

Flash firing timing chart



**[1ST]:** The flash is fired at the beginning of the exposure, “freezing” the subject in its position at that moment even if it keeps on moving during the rest of the exposure. As opposed to that, light sources continue to be captured until the end of the exposure. This can lead to the illustrated, seemingly “unlogical” effect of the taillight streaks “overtaking” the car.

**[2ND]:** The flash is fired at the end of the exposure, “freezing” the subject in its position at that moment. As opposed to that, light sources are captured throughout the exposure. This can be utilized to create the illustrated, seemingly more “logical” image, in which the taillight streaks trail the car.

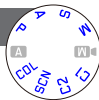
- [1ST] is the default setting.
- If you select [2ND], [2nd] will be displayed in the flash icon on the monitor.
- The faster the used shutter speed is, the less the difference will be between pictures (and vice versa) created with the two settings.
- Flash Synchro can be used even when you use an external flash.



- For the setting procedures of the menu. (→25)

### [Flash Adjust.]

This mode allows you to adjust flash output in order to e.g. take a picture of a small subject, or when the flash reflectance is extremely high or low.



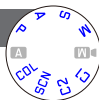
#### ■ Settings: -2 EV to +2 EV (unit: 1/3 EV)

When you do not want to adjust the flash output, select [0 EV].

- When the intensity of the flash is adjusted, [+] or [-] is displayed on the flash icon.
- The flash output setting will be stored in memory even when the camera is turned off.

### [Red-Eye Removal]

This mode automatically detects red-eye and corrects still picture data when using flash modes with red-eye reduction (⚡A👁️⚡S👁️).



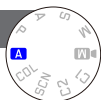
#### ■ Settings: [ON] / [OFF]

- This setting will work only when [AF Mode] is set to 👤 (Face Detection).
- Depending on the circumstances, it may not be possible to correct red-eye.
- When this function is set to [ON], the flash icon changes to ⚡A👁️⚡S👁️.

- For the setting procedures of the menu. (→25)

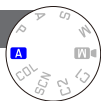
### [Color Mode]

For details (→53).



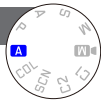
### [Motion Deblur]

For details (→53).



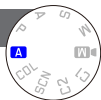
### [iHandheld Nite Shot]

For details (→53).



### [iHDR]

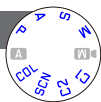
For details (→54).



### [Opt. Viewfinder]

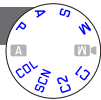
This mode allows you to set the monitor display when an external optical viewfinder is attached.

- Settings: [ON] / [OFF]



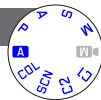
### [Aspect Bracket]

For details (→122).



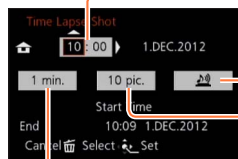
- For the setting procedures of the menu. (→25)

## [Time Lapse Shot]



This mode allows you to program the camera to produce still pictures at a predetermined time and at predetermined intervals automatically. This allows capturing gradual changes at constant intervals for landscape scenes, animals/plants, and other applications.

### ■ Settings



[Start Time]:

Set the time to start picture taking. You can select a waiting period of up to 12 hours.

[Alert]:

: The camera notifies you of the start of picture taking by emitting a warning beep sound and flashing the AF Assist Lamp.

: The camera starts recording without notifying you of the start of picture taking.

[Image Count]:

10/20/30/40/50/60 pictures

[Shooting Interval]:

Set the time between the individual shots. (Up to 30 minutes in 1-minute intervals)

- There are cases where intervals of 5 minutes or more are required for some shutter speeds.

### ■ About interval recording

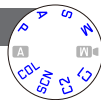
When the shutter button is pressed fully, the camera will automatically start taking pictures.

- In between the individual shots, the camera turns off automatically when no operation is performed for the preset interval. At the time determined for the shooting to start or after the determined interval between the shots, the camera turns on automatically and the lens zooms to the previously set focal length to take a picture. (Do not attach the lens cap during standby.)
- When the camera ON/OFF switch is set to [OFF], interval recording will end. To continue interval recording, leave the camera ON/OFF switch to [ON].
- When you want to perform interval recording using the flash, open the flash and perform the flash settings in advance.

- Pictures taken using this function cannot be stored in the built-in memory.
- This function is not intended for application-specific systems (monitoring cameras).
- If you leave the camera unattended during interval recording, make sure it cannot be stolen.
- Keep in mind that using this function for a long period of time in cold regions or in a low-temperature or high-temperature/high-humidity environment could cause malfunctions.
- There is a possibility of the camera moving when it automatically turns on or off, for example, when the lens is retracting into the camera body. We recommend fixing the camera on a tripod or using other methods on a stable surface. Make sure that the camera does not topple over because of wind or other causes.
- This function cannot be used for motion pictures.
- Use a fully charged battery.
- Interval recording will be interrupted and the setting will be canceled in the following cases.
  - When the remaining battery power runs out
  - When the maximum number of pictures that can be recorded has been reached
- Do not connect the HDMI mini cable (available as accessory (→8)), or the supplied USB cable during interval recording.
- Even if alert is set, the beep will not sound before recording starts if [Beep Level] for [Beep] in the [Setup] menu is set to [OFF].
- If [Shutter Vol.] for [Beep] in the [Setup] menu is set to [OFF], there will be no shutter sound.

- For the setting procedures of the menu. (→25)

### [Date Stamp]

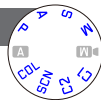


The recording date and time can be stamped on still pictures.

#### ■ Settings: [W/O TIME] / [WITH TIME] / [OFF]

- Date stamps on still pictures cannot be erased.
- The date cannot be stamped when [Auto Bracket], [Multi Expo.], [WB Bracket], [Aspect Bracket] or [Burst Shooting] is set, or when the [Panorama Shot] or [3D Photo Mode] Scene Mode is set.
- Do not request date printing additionally in a store or activate date printing on a printer for still pictures with date stamps. (Date printing may be overlapped.)
- This function is not available in [Snapshot Mode].

### [Clock Set]



For setting the clock. Same function as that in [Setup] menu. (→24)

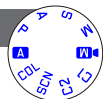
## Using the [Motion Picture] menu

Items in the [Rec] and [Motion Picture] menus with the same names have the same functions. If a setting in one menu is changed, the setting with the same name in the other menu will also be changed automatically.

- See the corresponding [Rec] menu item for details.
- For the setting procedures of the menu. (→25)

### [Rec Mode]

For setting the data format of the motion picture to be recorded.



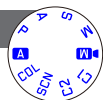
#### ■ Settings

[AVCHD]	This is a data format suitable for playback on high-definition TVs.
[MP4]	This data format is suited for playing back motion pictures on a computer and other such devices.

- For details (→84)

### [Rec Quality]

For setting the resolution/bit rate of the motion picture that is recorded.



#### ■ Settings

[AVCHD] in [Rec Mode]

Setting	Resolution/Bit rate	fps	Aspect ratio
[PSH]	1920×1080 pixels/Approx. 28 Mbps	50p*1 / 60p*2	16:9
[FSH]	1920×1080 pixels/Approx. 17 Mbps	50i*1 / 60i*2	
[SH]	1280×720 pixels/Approx. 17 Mbps	50p*1 / 60p*2	

[MP4] in [Rec Mode]

Setting	Resolution/Bit rate	fps	Aspect ratio
[FHD]	1920×1080 pixels/Approx. 20 Mbps	25*1 / 30*2	16:9
[HD]	1280×720 pixels/Approx. 10 Mbps		4:3
[VGA]	640×480 pixels/Approx. 4 Mbps		

\*1 With camera model 18 460

\*2 With camera models 18 461 / 18 462

- The bit rate is the data volume for a given period of time. The larger the volume, the higher the picture quality. This camera uses the “VBR” recording method. “VBR” is an abbreviation of “Variable Bit Rate”, meaning that the volume of data for a definite period of time is changed automatically depending on the subject being recorded. Therefore, the recording time gets shorter when a subject with fast movement is recorded.
- The aspect ratio of motion pictures is set using [Rec Quality]. The aspect ratio of motion pictures will not be changed even if you operate the aspect ratio selector switch.
- You can record motion pictures to the built-in memory only in [VGA] mode.

- For the setting procedures of the menu. (→25)

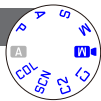
### [Continuous AF]

This mode allows the focus setting either to be constantly adjusted during motion picture recording, or to lock the focus position at the start of recording.

#### ■ Settings

[ON]

[OFF]: Locks the focus position at the start of motion picture recording.

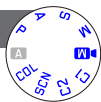


### [Wind Cut]

With this mode, wind noise captured by the microphone can be detected and suppressed when it gets too loud.

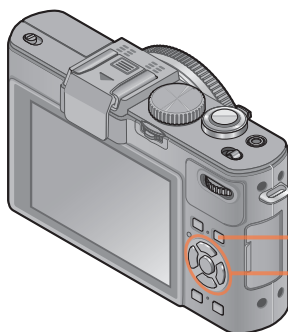
#### ■ Settings: [AUTO] / [OFF]

- When [Wind Cut] is set to [AUTO], the sound quality may differ from that of normal recordings.





## Viewing your pictures [Normal Play]

When a card is in the camera, pictures are played back from the card. Without a card, pictures are played back from the built-in memory.



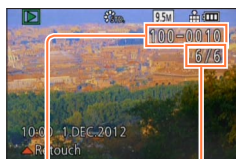
### 1 Press the playback button

-  The camera switches to the playback mode.
- 

### 2 Press ◀▶ to select a picture to be displayed



- When you press and hold the button, the pictures are displayed one after another.
- You can also rotate the dial to select a picture.



File number

Picture number/Total pictures

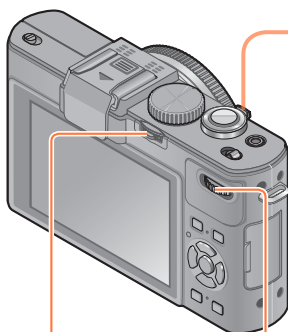
### ■ To end playback

Press the playback button again.

- If [Start Mode] in the [Setup] menu is set to [▶], the camera is activated in playback mode when the camera is turned on. You can also activate the camera in playback mode if the camera is turned on while pressing the playback button, even when the menu is set to [📷].
- It may not be possible to view pictures on this camera that were previously edited on a computer.
- When the camera is switched to playback mode, the lens barrel will be retracted into the camera body after approx. 15 seconds.
- This camera is compliant with the unified DCF (Design rule for Camera File system) standard formulated by the Japan Electronics and Information Technology Industries Association (JEITA), and with Exif (Exchangeable image file format). Files that are not DCF-compliant cannot be played back.



## Enlarged viewing “Playback zoom”



[ND/FOCUS] lever

Dial

### 1 Turn the zoom lever toward the T side to enlarge the picture



Current position of the enlarged section  
(Appears for 1 second)

Each time you turn the zoom lever toward the T side, the camera increases the magnification of the selected area to 2x, 4x, 8x, and 16x in succession. (The resolution displayed becomes successively lower.)

- To move the enlarged section  
→ Press ▲▼◀▶
- To reduce the enlargement  
→ Turn the lever towards W side

● Playback zoom cannot be used during motion picture playback.

### ■ Switching the displayed pictures without changing the enlargement and the position of the enlarged section

Rotate the dial during Playback zoom.

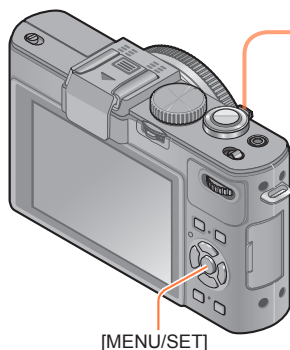
- When you display pictures with different resolutions and aspect ratios or pictures that are rotated when they are displayed, the enlarged section returns to the center.

### ■ Enlarging the section that focusing was based on

Press the [ND/FOCUS] lever.

- Pictures that were recorded without adjusting focus or with Manual Focus are not enlarged on the screen.

### Viewing several pictures simultaneously “Multi Playback”



[MENU/SET]

## 1 Turn the zoom lever toward the W side to display several pictures



Picture no./Total no.



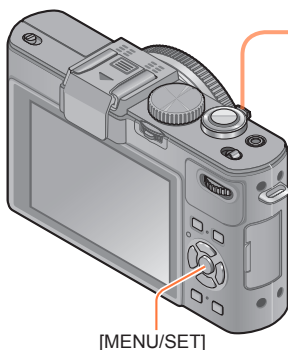
Motion pictures

Panorama pictures (→76)

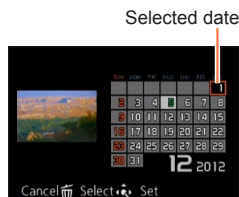
- Move the zoom lever further toward the W side and you can switch the number of displayed pictures in the following order: 12-picture screen → 30-picture screen → Calendar playback. (Turn the lever to the T side to return.)
- When you select a picture using the cursor buttons and then press [MENU/SET] on the 12-picture or 30-picture screen, the selected picture is displayed on the 1-picture screen (full-screen).

● Pictures displayed with [!] cannot be played back.

## Viewing pictures by their recording date “Calendar Playback”



- 1 Turn the zoom lever toward the W side while displaying a 30-picture screen to display the calendar screen



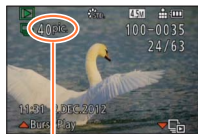
- When you select a recording date using cursor buttons and then press [MENU/SET], the display changes to the 12-picture screen.

- Only months when pictures were taken are shown on the calendar screen. If the clock was not set, pictures will be displayed as 1st January, 2012. If the date / time was set incorrectly, pictures will be displayed with the incorrect settings.
- Pictures taken with destination settings made in [World Time] are displayed in the calendar screen using the appropriate date for the destination's time zone.

## Playing back pictures recorded as exposure series and with interval recording

Still pictures taken in a sequence using the [40] or [60] exposure series settings or the time lapse function are grouped together when they are displayed. (Group display)


### ■ Representative picture display



Number of burst pictures

When these pictures are displayed together with other still pictures or motion pictures, a representative picture (the first picture of an exposure or time lapse series) is displayed.

- You can delete or edit all the still pictures in a group at once.

: Exposure series pictures

: Time lapse pictures

### ■ Displaying pictures in a group



When you press ▼ while a representative picture is being displayed, only a series of still pictures of an exposure or time lapse series will be displayed.

- Only pictures grouped together are displayed.
- To return to the representative screen display

→ Press ▼.


### ■ Playback for exposure series pictures/Continuous playback

Press ▲ to play back a series of pictures one after another.

- Regarding playback for exposure series pictures/continuous playback, refer to the operations during motion picture playback. (→159)

### ■ About retrieving group information

When the power is turned on, the  (acquiring information icon) may appear.

While  is displayed, pictures cannot be deleted and the [Playback] menu cannot be used. Only [Normal Play] or [Calendar] is available as the [Playback Mode].

- When pictures set to [Favorite] are played back using [Slide Show] or [Filtering Play], the pictures cannot be displayed in a group.
- The following modes are not available while a representative first exposure series picture is being displayed.
  - [Auto Retouch]
  - [Creative Retouch]
  - [Cropping] of [Playback] menu
  - [Leveling] of [Playback] menu
- Still pictures taken subsequently using exposure or time lapse series are not combined together to form a group after their total number exceeds 50,000. Also, if there is only one picture left in a group because the other pictures were deleted or for some other reason, no group can be formed.
- Pictures recorded using other cameras may not be recognized as a group picture.
- Pictures recorded without setting the clock are not combined together to form a group.

## Panorama playback

Still pictures recorded with the [Panorama Shot] Scene Mode are displayed with a reduced height on a normal playback screen in order to show their complete width.

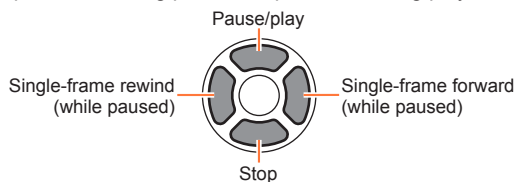
### ■ Enlarged display

You can use the Playback zoom function to enlarge a picture. (→153)

### ■ Automatic scrolling display of panorama pictures

When you press ▲, the camera automatically scrolls a panorama picture from edge to edge in enlarged display mode just like playing back a motion picture.

- Operations during panorama picture scrolling playback

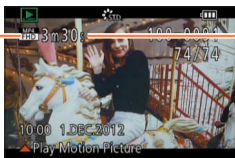


## Viewing motion pictures

This camera was designed to play motion pictures using the AVCHD, MP4 and QuickTime Motion JPEG formats.

- 1 Select a picture with the motion picture icon ([AVCHD PSH], [MP4 FHD] etc.), and then press ▲**

Playback starts.



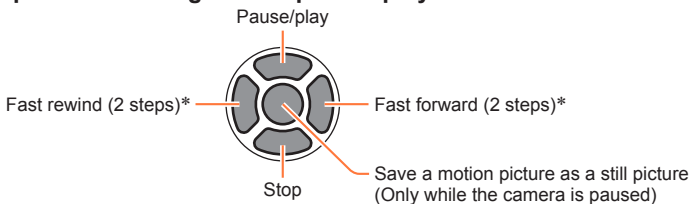
Motion picture icon

Recording time

During playback, the elapsed time is displayed at the top right of the screen.

Example: After 3 minutes and 30 seconds: [3m30s]

### ■ Operations during motion picture playback



\* Single-frame forward/single-frame rewind can be performed while paused.

- The volume can be adjusted with the zoom lever.

- It may not be possible to properly play back motion pictures recorded using other cameras.
- Some information will not be displayed for motion pictures recorded in [AVCHD].
- Motion pictures can be viewed on your computer using the available software (→189).
- **With camera model 18 460**  
Motion pictures recorded with [Miniature Effect] in [Creative Control] Mode play back at approximately 8x speed.
- **With camera models 18 461 / 18 462**  
Motion pictures recorded with [Miniature Effect] in [Creative Control] Mode play back at approximately 10x speed.

## Capturing still pictures from motion pictures

This function allows you to save a single still picture from a motion picture.

**1 Display the picture that you want to capture as a still picture by pausing a motion picture during playback**

**2 Press [MENU/SET]**



- A confirmation screen is displayed. Use the respective cursor button to select [Yes] to save a still picture.

[Rec Quality] of the original motion picture	[Picture Size]	Aspect ratio
[PSH] [FSH] [SH] [FHD] [HD]	2M	16:9
[VGA]	0.3M	4:3

- The resolution becomes slightly lower depending on the [Rec Quality] setting of the original motion picture.
- It may not be possible to capture still pictures from motion pictures that were recorded with a different camera.



## Splitting motion picture takes

A single motion picture take can be split into 2 parts. This is convenient when you want to keep just the necessary scenes, or if you wish to delete unnecessary scenes to increase free space on your card, such as when traveling.

### 1 Select [Video Divide] in the [Playback] menu

- For the setting procedures of the menu. (→25)

### 2 Select the motion picture take to split with cursor buttons and then press [MENU/SET]

### 3 Press ▲ at where you want to split a motion picture take to pause it

### 4 Press ▼



- A confirmation screen is displayed. Select [Yes] with cursor buttons, and then press [MENU/SET].
- **The original motion picture take that was split is not retained, i.e. it is replaced by the 2 separate parts.**

- During splitting, do not turn off the camera or remove the card or battery. If you do so, the motion picture may be deleted.
- Splitting a motion picture take that was recorded in [MP4] changes the order of the pictures. It is recommended to display with [Calendar] (Calendar Playback) or [Filtering Play].
- It may not be possible to split motion picture takes that were recorded with a different camera.
- Very short motion picture takes cannot be split.

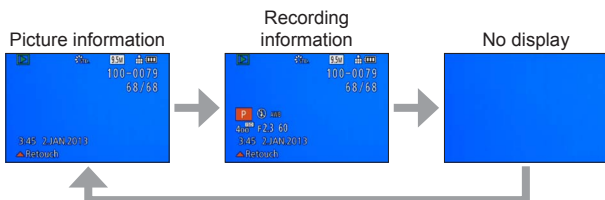
## Switching the displays

You can select if picture information (file number, etc.) and recording information (settings used for recording, etc.) are displayed when a picture is played back.



### 1 Press the [DISP] button to switch the display

DISP  Every time you press the button, the display will be switched.



## Deleting pictures

Pictures will be deleted from the card if the card is inserted, or from the built-in memory if not. (Deleted pictures cannot be recovered.)



### 1 Press the [🗑️➡️] button to delete displayed picture

Q MENU



- A confirmation screen is displayed. Select [Yes] with cursor buttons, and then press [MENU/SET].

- Do not turn off the power during deletion.
- Use a sufficiently charged battery.
- Pictures cannot be deleted in the following cases:
  - Protected pictures
  - The card switch is in the "LOCK" position.
  - The pictures are not of DCF standard (→152)

## To delete multiple (up to 100)/all pictures

When you select a representative picture of a still picture group of an exposure or time lapse series, the group is deleted as a single picture. (All the pictures in the selected group are deleted.)



## 1 Press the [ ] button to delete the displayed picture

□ MENU



## 2 Press ▼ to select [Delete Multi]/[Delete All] and then [MENU/SET]

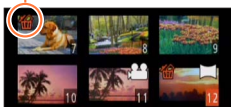


### ● [Delete Multi]

- ① Use cursor buttons to select the picture and then press the [DISP] button



Selected picture



- To cancel  
→ Press the [DISP] button again.
- ② Press [MENU/SET]
- You can select [All Delete Except Favorite] in [Delete All] if there are pictures that have been set as [Favorite] (→177).
- A confirmation screen is displayed. Select [Yes] with cursor buttons and then press [MENU/SET].
- Depending on the number of pictures to be deleted, the process may take some time.

## Different playback methods [Playback Mode]

Recorded pictures can be played back in a variety of ways.

- For the setting procedures of the menu. ([→25](#))

<b>[2D/3D Settings]</b>	Switches the output format between 2D and 3D pictures. (Only available during HDMI output.)
<b>[Normal Play]</b>	Plays back all pictures.
<b>[Slide Show]</b>	Automatically plays back recorded pictures, one after another.
<b>[Filtering Play]</b>	Plays back the pictures after narrowing down the selection according to various parameters.
<b>[Calendar]</b>	Displays the pictures according to the date on which they were taken.

### [2D/3D Settings]

The playback method for 3D pictures can be switched. This menu is only displayed during HDMI output. For the procedure of playing back a 3D still picture ([→186](#)).

- For the setting procedures of the menu. (→25)

## [Slide Show]

This mode automatically plays pictures in order and to music. It can prove to be helpful, e.g. when viewing on TV screen.

### 1 Use cursor buttons to select the playback method and then press [MENU/SET]

[All]	Plays back all pictures.
[Picture Only]	Plays back still pictures.
[Video Only]	Plays back motion pictures.
[3D Play]	Plays back 3D still pictures recorded using [3D Photo Mode] Scene Mode only.
[Category Selection]	Plays back motion or still pictures depending on the set category. (Select the category with cursor buttons and then press [MENU/SET].) (→168)
[Favorite]	Play back pictures set as [Favorite]. (→177)

### 2 Use cursor buttons to set playback effects and then press [MENU/SET]

[Effect] (For selecting music and effects according to picture atmosphere)	
[AUTO] (only available with [Category Selection] setting) / [NATURAL] / [SLOW] / [SWING] / [URBAN] / [OFF]	
[Setup]	
[Duration]*	[1 SEC.] / [2 SEC.] / [3 SEC.] / [5 SEC.]
[Repeat]	[ON] / [OFF]
[Sound]	[AUTO]: With still pictures, music will play back, and with motion pictures, audio will play back. [Music]: Music effect will play back. [Audio]: Audio is played back from motion pictures. [OFF]: Music and audio will not be played back.

\* This effect can be set only when [Effect] is set to [OFF]. Note, however, that the [Duration] setting will not be effective in the following cases.

- With motion pictures
- With panorama pictures
- With still picture groups taken sequentially with a [40] or [60] exposure series setting or a time lapse series

(Continued on the next page)

### 3 Use cursor buttons to select [Start] and then press [MENU/SET]

#### ■ Operations during a Slide Show

The operation guide appears at the bottom right of the monitor.



\* Only while the camera is paused when playing back still pictures

- When [URBAN] has been selected, the picture may appear in black and white as a screen effect.
- Part of [Effect] cannot be used when displaying pictures on a television using the HDMI mini cable (available as accessory (→8)) or when displaying pictures recorded in portrait position.
- Screen effects do not operate during a [3D Play] slide show.
- Music effects cannot be added.

- For the setting procedures of the menu. (→25)

## [Filtering Play]

This mode allows you to select and display pictures that you want to play back, for example, pictures in any category or your favorite pictures.

### 1 Press ▲ ▼ to select the playback method and then [MENU/SET]

[Picture Only]	Plays back still pictures.																						
[Video Only]	Plays back motion pictures.																						
[3D Play]	Plays back only pictures that were recorded using [3D Photo Mode] Scene Mode.																						
[Category Selection]	Use cursor buttons to select a category of pictures to be played back and then press [MENU/SET]. <table border="1" data-bbox="336 589 966 953"> <tr> <td></td> <td>Pictures taken using Face Recognition</td> </tr> <tr> <td></td> <td>[Portrait] /  / [Soft Skin] / [Night Portrait] /  / [Baby] / </td> </tr> <tr> <td></td> <td>[Scenery] /  / [Panorama Shot] / [Sunset] /  / [Glass Through]</td> </tr> <tr> <td></td> <td>[Night Portrait] /  / [Night Scenery] /  / [Handheld Night Shot] / </td> </tr> <tr> <td></td> <td>[Sports]</td> </tr> <tr> <td></td> <td>[Baby] / </td> </tr> <tr> <td></td> <td>[Pet]</td> </tr> <tr> <td></td> <td>[Food]</td> </tr> <tr> <td></td> <td>[Travel Date]</td> </tr> <tr> <td></td> <td>[Burst Shooting] ([60]) or ([60]) only</td> </tr> <tr> <td></td> <td>Time lapse series</td> </tr> </table>		Pictures taken using Face Recognition		[Portrait] /  / [Soft Skin] / [Night Portrait] /  / [Baby] /		[Scenery] /  / [Panorama Shot] / [Sunset] /  / [Glass Through]		[Night Portrait] /  / [Night Scenery] /  / [Handheld Night Shot] /		[Sports]		[Baby] /		[Pet]		[Food]		[Travel Date]		[Burst Shooting] ([60]) or ([60]) only		Time lapse series
	Pictures taken using Face Recognition																						
	[Portrait] /  / [Soft Skin] / [Night Portrait] /  / [Baby] /																						
	[Scenery] /  / [Panorama Shot] / [Sunset] /  / [Glass Through]																						
	[Night Portrait] /  / [Night Scenery] /  / [Handheld Night Shot] /																						
	[Sports]																						
	[Baby] /																						
	[Pet]																						
	[Food]																						
	[Travel Date]																						
	[Burst Shooting] ([60]) or ([60]) only																						
	Time lapse series																						
[Favorite]	Play back pictures set as [Favorite].																						

- When the camera is turned off or switched to a recording mode, normal playback is resumed.

## [Calendar]

For selecting the date from the calendar screen to view only the pictures taken on that day. (→155)

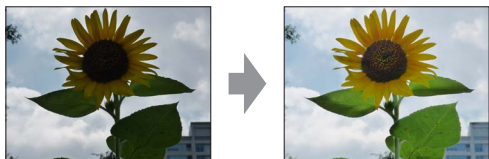


## Retouching pictures

### [Auto Retouch]

You can adjust the color and brightness of a still picture to bring them into balance.

- New pictures are created after editing pictures with [Auto Retouch]. Before starting to edit, make sure that there is enough free space in the built-in memory or on the memory card.



• Example picture

- 1 Select a still picture to retouch during playback and then press ▲**
- 2 Use cursor buttons to select [Auto Retouch] and then press [MENU/SET]**
- 3 Use cursor buttons to select [ON] and then press [MENU/SET]**
  - A confirmation screen is displayed. If you select [Yes], the new retouched still picture is saved.
  - When [OFF] is selected, you can restore a picture to its original condition (before retouching).

- The retouch effect may be less apparent in some still pictures.
- Some still pictures may have higher noise levels after retouching.
- It may not be possible to use [Auto Retouch] with still pictures that have already been retouched.
- It may not be possible to retouch still pictures recorded with other cameras.
- [Auto Retouch] is not available in the following cases:
  - With motion pictures
  - With still pictures recorded in [Panorama Shot] Scene Mode
  - With 3D still pictures
  - Still pictures recorded with the [Quality] setting [RAW:iii], [RAW:ii] or [RAW]

### [Creative Retouch]

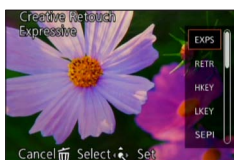
You can retouch recorded still pictures by selecting the effect that you want to apply.

- New pictures are created after editing pictures with [Creative Retouch]. Before starting to edit, make sure that there is enough free space in the built-in memory or memory card.

**1** Select a still picture to retouch during playback and then press **▲**

**2** Use cursor buttons to select [Creative Retouch] and then press [MENU/SET]

**3** Press **▲ ▼** to select a setting



- The picture retouched with the selected effect is displayed.

See the corresponding picture effects of [Creative Control] Mode. You cannot adjust effects other than brightness under [Toy Effect] and [Cross Process].

[Expressive] / [Retro] (→66)

[High Key] / [Low Key] (→67)

[Sepia] / [Dynamic Monochrome] (→68)

[Impressive Art] / [High Dynamic] (→69)

[Cross Process] / [Toy Effect] (→70)

[Miniature Effect] (→71)

[Soft Focus] / [Star Filter] (→72)

[One Point Color] (→73)

- When [OFF] is selected, you can restore a picture to its original condition (before retouching).

**4** Press [MENU/SET]

- A confirmation screen is displayed. If you select [Yes], the new retouched still picture is saved.

- The retouch effect may be less apparent in some still pictures.
- The image effect may appear weak compared to the effect given by the [Creative Control] Mode.
- It may not be possible to retouch still pictures recorded with other cameras.
- [Creative Retouch] is not available in the following cases:
  - With motion pictures
  - With still pictures recorded in [Panorama Shot] Scene Mode
  - With 3D still pictures
  - Still pictures recorded with the [Quality] setting [RAW:■■■], [RAW:■■] or [RAW]

## Using the [Playback] menu

- For the setting procedures of the menu. (→25)

### [Title Edit]

You can give titles, etc. to your favorite still pictures.

### 1 Use cursor buttons to select [Single] or [Multi] and then press [MENU/SET]

### 2 Select a still picture

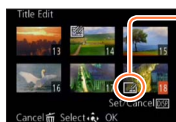
#### ● [Single]

- ① Use cursor buttons to select a still picture and then press [MENU/SET]



#### ● [Multi]

- (for up to 100 pictures with the same text)
- ① Use cursor buttons to select a still picture and then press the [DISP] button



- [Title Edit] setting
- [Title Edit] already set
  - To cancel
    - Press the [DISP] button again.

- ② Press [MENU/SET]

### 3 Enter the desired characters (Entering text (→44))

- To delete a title, delete all the characters in the character input screen.

#### ● The function is not available in the following cases:

- With motion pictures
- With 3D still pictures
- Still pictures recorded with the [Quality] setting [RAW], [RAW] or [RAW]
- To print the entered text, use [Text Stamp].

- For the setting procedures of the menu. (→25)

### [Text Stamp]

With this mode, the recording date and time and the text registered in the [Baby], [Pet] Scene Modes, [Travel Date] and [Title Edit] can be stamped on the still picture.

## 1 Use cursor buttons to select [Single] or [Multi] and then press [MENU/SET]

### 2 Select a still picture

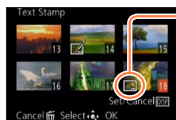
#### ● [Single]

- ① Use cursor buttons to select a still picture and then press [MENU/SET]



#### ● [Multi] (up to 100 pictures)

- ① Use cursor buttons to select a still picture and then press the [DISP] button



#### ☐ [Text Stamp] setting

- To cancel  
→ Press the [DISP] button again.

- ② Press [MENU/SET]



## 3 Use cursor buttons to select items and then press ► (→173)

## 4 Use cursor buttons to select settings and then press [MENU/SET] (→173)



## 5 Press [MENU/SET]

- A confirmation screen is displayed. If you select [Yes], the operation is executed.

## ■ Items that can be stamped

[Shooting Date]	[W/O TIME]: Stamps the recording date [WITH TIME]: Stamps recording date and time
[Name]	 Stamps the name registered in Face Recognition  Stamps the name registered in [Baby] or [Pet]
[Location]	Stamps the location registered in [Setup] menu's [Travel Date]
[Travel Date]	Stamps the Travel Date set in [Setup] menu's [Travel Date]
[Title]	Stamps the text registered in [Title Edit]

- Items set to [OFF] are not stamped.

- Texts cannot be stamped on the following pictures.
  - Motion pictures
  - 3D still pictures
  - Still pictures recorded in [Panorama Shot] Scene Mode
  - Still pictures recorded with the [Quality] setting [RAW , [RAW ] or [RAW]
  - Still pictures that had already been stamped with the date or other texts
  - Still pictures taken without setting clock
- Characters may be cut off on certain printers.
- Text is difficult to read when stamped on pictures of 0.3 M or less.
- **Do not request date printing additionally in a store or activate date printing on a printer for still pictures with date stamps. (Date printing may be overlapped.)**

- For the setting procedures of the menu. ([→25](#))

### [Video Divide]

For details ([→161](#)).

- For the setting procedures of the menu. (→25)

## [Resize]

A picture's resolution can be reduced to facilitate e-mail attachment and use in web pages, etc.

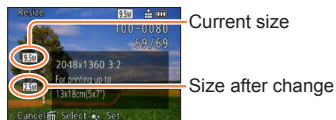
(Still pictures recorded at the lowest setting of each aspect ratio such as [0.3M] cannot be reduced further.)

## 1 Use cursor buttons to select [Single] or [Multi] and then press [MENU/SET]

## 2 Select the picture and make the setting

### ● [Single]

- ① Use cursor buttons to select the still picture and then press [MENU/SET]
- ② Use cursor buttons to select the resolution and then press [MENU/SET]



A confirmation screen is displayed. If you select [Yes], the operation is executed.

### ● [Multi]

- ① Use cursor buttons to select the resolution and then press [MENU/SET]
- ② Use cursor buttons to select the still picture and then press the [DISP] button (for up to 100 pictures)
- ③ Press [MENU/SET]



A confirmation screen is displayed. If you select [Yes], the operation is executed.

- Picture quality is reduced after resizing.
- The following type of pictures cannot be resized.
  - Motion pictures
  - 3D still pictures
  - Still pictures recorded in [Panorama Shot] Scene Mode
  - Still pictures recorded with the [Quality] setting [RAW:1], [RAW:2] or [RAW]
  - Still pictures that had already been stamped with the date or other texts

- For the setting procedures of the menu. (→25)

## [Cropping]

This mode allows you to crop your still pictures, e.g. to improve the composition or to delete undesired parts of the subject.

- 1 Use cursor buttons to select the picture and then press [MENU/SET]**
- 2 Use the zoom lever to enlarge the section of the picture to be cropped and then press [MENU/SET]**



Expand



Change position

- A confirmation screen is displayed. If you select [Yes], the operation is executed.

- The resolution is reduced after cropping.
- The following type of pictures cannot be cropped.
  - Motion pictures
  - 3D still pictures
  - Still pictures recorded in [Panorama Shot] Scene Mode
  - Still pictures recorded with the [Quality] setting [RAW:⬢], [RAW:⬢] or [RAW]
  - Still pictures that had already been stamped with the date or other texts
- Original Face Recognition information will not be copied when still pictures are cropped.

- For the setting procedures of the menu. (→25)

### [Leveling]

This mode allows you to correct slight slanting in a still picture.

**1** Use cursor buttons to select the picture and then press [MENU/SET]

**2** Press ◀▶ to adjust the angle and then [MENU/SET]



- A confirmation screen is displayed. If you select [Yes], the operation is executed.

- The resulting picture may have a lower resolution than the original one when leveling is performed.
- This function may not be available with still pictures taken on other devices.
- The angle of the following types of pictures cannot be corrected.
  - Motion pictures
  - 3D still pictures
  - Still pictures recorded in [Panorama Shot] Scene Mode
  - Still pictures recorded with the [Quality] setting [RAW], [RAW] or [RAW]
  - Still pictures that had already been stamped with the date or other texts
- The personal information related to Face Recognition recorded in an original still picture will not be copied to the pictures after their angle is corrected.



- For the setting procedures of the menu. (→25)

## [Favorite]

By labeling your favorite pictures with a star (★), you can play back your favorite pictures only, or you can delete all pictures except your favorites.

### 1 Use cursor buttons to select [Single] or [Multi] and then press [MENU/SET]

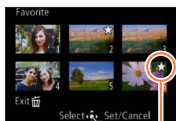
### 2 Use cursor buttons to select the picture and then press [MENU/SET]

#### ● [Single]



Favorite picture setting

#### ● [Multi]



Favorite picture setting

- To cancel → Press [MENU/SET] again.

#### ■ To clear all

Select [Cancel] in step **1** and select [Yes].

- You cannot select the [Favorite] setting for still pictures recorded with the [Quality] setting [RAW].

- For the setting procedures of the menu. (→25)

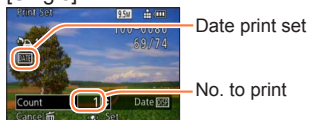
### [Print Set]

This function allows you to add picture/picture no./date printing settings for when printing with DPOF print-compatible shops or printers. (Ask at the shop to check for compatibility.)

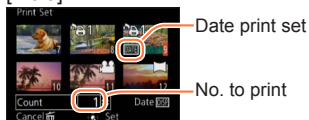
- 1** Use cursor buttons to select [Single] or [Multi] and then press [MENU/SET]
- 2** Use cursor buttons to select the picture and then press [MENU/SET]
- 3** Use cursor buttons to set the number of pictures and then press [MENU/SET]

(repeat steps **2** and **3** when using [Multi] (for up to 999 pictures))

#### ● [Single]



#### ● [Multi]



- Date print setting/release → Press [DISP] button.

### ■ To clear all settings

Select [Cancel] in step **1** and select [Yes].

- Depending on the type of printer, the printer settings may take priority over camera settings.
- These settings are not available for files that are not compliant with the DCF standard.
- Some DPOF information set by other equipment cannot be used. In such cases, delete all of the DPOF information and then set it again with this camera.
- Date print setting cannot be performed for still pictures that have been taken with [Date Stamp] and pictures with a [Text Stamp] applied.
- You cannot select the [Print Set] setting for still pictures recorded with the [Quality] setting [RAW].
- Print setting cannot be performed for motion pictures.

- For the setting procedures of the menu. (→25)

### [Protect]

This function allows you to mark important pictures so they cannot be deleted accidentally.

## 1 Use cursor buttons to select [Single] or [Multi] and then press [MENU/SET]

## 2 Use cursor buttons to select the picture and then press [MENU/SET]

### ● [Single]



Picture is protected

### ● [Multi]



Picture is protected

- To cancel → Press [MENU/SET] again.

### ■ To clear all settings

Select [Cancel] in step **1** and select [Yes].

- This function may not be effective when using other devices.
- The picture is erased when formatting, even if it is protected.
- When you set the write-protect switch on the card to the "LOCK" position, the picture is not erased.

- For the setting procedures of the menu. (→25)

**[Face Rec Edit]**

With this function, you can edit or delete the recognition information for pictures with mistaken Face Recognition.

- 1 Use cursor buttons to select [REPLACE] or [DELETE] and then press [MENU/SET]**
- 2 Use cursor buttons to select the picture and then press [MENU/SET]**
- 3 Use cursor buttons to select a person and then press [MENU/SET]**
  - If [DELETE], go to step **5**.
  - People whose Face Recognition information has not been registered cannot be selected.
- 4 Use cursor buttons to select the person to replace for another and then press [MENU/SET]**
- 5 Use cursor buttons to select [Yes] and then press [MENU/SET]**

- When Face Recognition information is deleted, it cannot be restored.
- Pictures for which all Face Recognition information has been deleted are not categorized in Face Recognition during [Category Selection].
- Recognition information cannot be edited in protected pictures.

- For the setting procedures of the menu. (→25)

### [Copy]

With this function, you can copy pictures from and to the built-in memory and the memory card.

#### ■ Copying all pictures from the built-in memory to the card

##### 1 Use cursor buttons to select [IN→SD] and then press [MENU/SET]

- A confirmation screen is displayed. If you select [Yes], the operation is executed.

#### ■ Copying 1 picture at a time from the card to the built-in memory

##### 1 Use cursor buttons to select [SD→IN] and then press [MENU/SET]

##### 2 Use cursor buttons to select picture and then press [MENU/SET]

- A confirmation screen is displayed. If you select [Yes], the operation is executed.

- Copying pictures may take several minutes. Do not turn off the camera or perform other operations during copying.
- If identical names (folder/file numbers) are present in the copy destination, a new folder for copying will be created when copying from built-in memory to card (IN→SD). Identically-named files will not be copied from card to built-in memory (SD→IN).
- The following settings are not copied. Set them again after copying.
  - [Print Set] - [Protect] - [Favorite]
- Only pictures from Leica digital cameras may be copied (exceptions: Digilux, Digilux zoom, Digilux 4.3).
- Motion pictures recorded in [AVCHD] format cannot be set.

## Viewing on a TV screen

You can view pictures on a TV screen by connecting your camera to your TV with the HDMI mini cable (available as accessory (→8)) or the supplied AV cable.

- Also consult the TV's instructions.

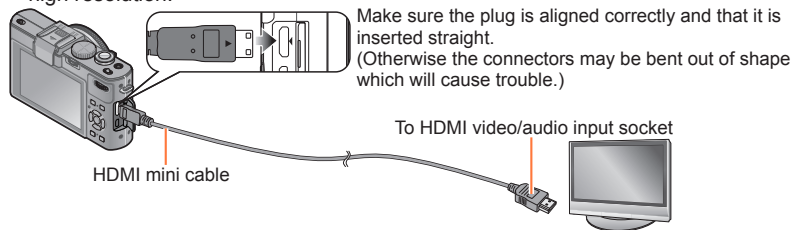
### Preparation:

- Set [TV Aspect] to connect your camera to a TV using the AV cable. (→39)
- Turn off both camera and TV.

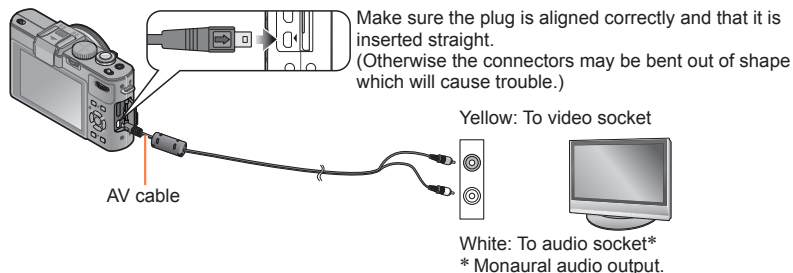
## 1 Connect the camera to the TV

### ■ To connect with the HDMI mini cable

The HDMI mini cable can be used to enable viewing of still and motion pictures in high resolution.



### ■ To connect with the AV cable



## 2 Turn on the TV

- Set to auxiliary input.

## 3 Turn on the camera and then press the playback button

**■ To connect with the HDMI mini cable**

- Always use the genuine Leica HDMI mini cable (available as accessory (→8)).
- There are restrictions on some playback functions.
- Bars may appear at the sides or at the top and bottom of the screen, depending on the aspect ratio setting.
- When the HDMI mini cable is connected, pictures are not displayed on the monitor.
- HDMI output will be canceled if the USB cable is connected simultaneously.
- When the AV cable and the HDMI mini cable are connected at the same time, no picture is output from the AV cable.
- Pictures may be momentarily distorted immediately after commencing playback or pausing on certain televisions.
- Audio output is in stereo.

**■ To connect with the AV cable**

- Always use the supplied genuine Leica AV cable.
- You can play back pictures on TVs in other countries (regions) which use the NTSC or PAL system when you set [Video Out] in the [Setup] menu. (With camera model 18 460)
- Pictures rotated to portrait may be blurred slightly.
- Change the picture mode settings on the TV if aspect ratios are not displayed correctly on widescreen or high-definition televisions.

When you insert a card into the SD card slot in a television or a DVD recorder, you can play back recorded still pictures.

- For details, read the instructions for the television or other devices.
- AVCHD motion pictures can be played back on televisions displaying the AVCHD logo.
- You may not be able to play back panorama pictures. Also you cannot perform automatic scrolling playback of panorama pictures.
- When using both SDHC and SDXC Memory Cards, make sure that the equipment is compatible with the particular format.

**HDTV Link (HDMI)****What is HDTV Link (HDMI)?**

- HDTV Link is a function that automatically links this camera to HDTV Link-compatible devices by connecting the HDMI mini cables (available as accessory (→8)) for enabling easy operation with a HDTV compatible remote control. (Some operations are not available.)
  - HDTV Link (HDMI) is a function added to the industry-standard HDMI control functions known as HDMI CEC (Consumer Electronics Control). Operation is not guaranteed when connecting with non-HDMI CEC-compatible devices. Refer to your device's instructions to verify compatibility with HDTV Link (HDMI).
- Always use the genuine Leica HDMI mini cable (available as accessory (→8)).
  - If you are unsure whether the TV you are using is compatible with HDTV Link, read the instructions for the TV.
  - Cables that do not comply with HDMI standards will not work.
  - If the [HDTV Link] setting on the camera is [ON], operations via the camera buttons will be limited.
  - Ensure that the television you are connecting to has been set up to enable HDTV Link (HDMI) (consult your television instructions for details).



**Preparation:** Set [HDTV Link] to [ON] (→40).

- 1 Connect the camera to a HDTV Link (HDMI)-compatible television set with the HDMI mini cable** (available as accessory (→8)) (→182)
- 2 Turn on the camera**
- 3 Press the playback button**
- 4 Proceed with the operation while referring to what is displayed on the TV screen**
  - When operating, refer to the HDTV Link operating panel.

#### ■ Other related operations

- Power OFF

The camera's power can also be switched off when switching the television's power off with the remote control.

- Automatic input select

- This function automatically switches the television input to the camera screen whenever the camera's power is switched on while it is connected via the HDMI mini cable. The television can also be switched on via the camera from Standby Mode (if "Power on link" on the television is set to "on", provided, it has this function).
- If HDTV Link (HDMI) does not function correctly (→213)

### Viewing 3D still pictures

If you connect this camera to a 3D-capable TV, and play back still pictures that you recorded in 3D, you can enjoy impressive 3D still pictures on the TV. If a 3D-capable TV has an SD card slot, you can play back 3D still pictures that you recorded by inserting the card into the slot.

**Preparation:** Set [3D Playback] to [3D] (→40).

**1** **Connect the camera to a 3D-capable TV with the HDMI mini cable** (available as accessory (→8)) **to display the playback screen** (→182)

**2** **Display still pictures recorded in 3D**

- When the [HDTV Link] setting on the camera is set to [ON] and the camera is connected to a HDTV Link (HDMI)-compatible television set, the television automatically switches its input and the playback screen is displayed.
- [3D] appears on the thumbnail of the 3D still pictures.

■ **To perform Slide Show playback of only the still pictures recorded in 3D**

Select [3D Play] in [Slide Show] of the [Playback Mode] menu (→166)

■ **To select and play back only the still pictures recorded in 3D**

Select [3D Play] in [Filtering Play] of the [Playback Mode] menu (→168)

■ **To switch the playback method for the still pictures recorded in 3D**

① Select the picture recorded in 3D

② Select [2D/3D Settings] in the [Playback Mode] menu and then press [MENU/SET] (→165)

- The playback method will switch to 3D if it is playing back in 2D (conventional image), or it will switch to 2D if it is playing back in 3D.
- If you get tired, uncomfortable or otherwise strange when playing back pictures recorded in 3D, set to 2D.

- When an image is not suitable for 3D viewing (due to excessive parallax, etc.)
  - During Slide Show playback: The image is displayed in 2D.
  - During [Filtering Play]: A message appears confirming whether to display the image in 3D or not.
- When a 3D image is played back on a TV that is not 3D-capable, 2 pictures may appear side-by-side on the screen.
- On the monitor of this camera, 3D still pictures will be played back in 2D (conventional pictures).
- If you switch between 3D and normal still pictures while playing them back, a black screen will be displayed for a few seconds.
- If you select a thumbnail of 3D still pictures or display a thumbnail after playing them back, it may take a few seconds to start playing back or displaying them.
- Viewing 3D still pictures too close to a TV may cause eyestrain.
- When a TV has not been converted for viewing 3D still pictures, do the necessary preparation on the TV. (For details about the necessary preparation of the TV, read the TV's instructions.)
- The functions that are not operational or available for 3D still pictures:
  - [Setup] menu
  - [Playback] menu
  - Playback Zoom
  - Delete
- You can store 3D still pictures on a computer or recorder. ([→188](#))

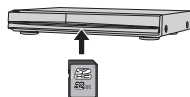
## Storing recorded still and motion pictures

The methods for copying still and motion pictures recorded with this camera to other devices vary according to the file format (JPEG, RAW, MPO, AVCHD, MP4). Follow the correct method for your device.

### Copying by inserting the SD card into a recorder

**You can copy pictures using the respective equipment (such as Blu-ray disc recorders) with support for each file format.**

- See the respective instructions for details for copying and playing back.

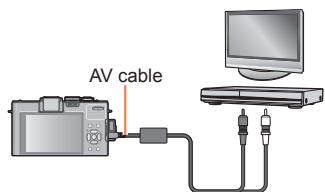


### Dubbing playback pictures via the supplied AV cable

Videos that are played on this camera can be dubbed on media such as a disc, hard disk or videotape using a device such as a video recorder. This method is useful as it allows dubbing to be performed even with devices that are not compatible with high definition images. The resolution will be reduced from high definition to standard definition. Audio will be monaural.

- 1 Connect the camera to the recorder**
- 2 Start playback on the camera**
- 3 Start recording on the recorder**

- To stop recording (dubbing), stop the recording on your recorder first before stopping the playback on the camera.



To recorder's input socket

- Always use the supplied genuine Leica AV cable.
- When using a TV with a 4:3 aspect ratio, always change the camera's [TV Aspect] setting (→39) to [4:3] before dubbing. Motion pictures copied in the 16:9 setting will appear vertically stretched when viewed on a 4:3 TV screen.
- For details on dubbing and playback methods, refer to your recorder's instructions.

**Copying the recorded image data to a computer with the available software**

Using the Adobe® Photoshop® Lightroom® software (available for download, see below), you can import the image data recorded with this camera in all file formats to a computer - for still and motion pictures.

Three preparatory steps are necessary when initially installing the software to utilize it.

**1 Install the software to your computer****2 Register your camera on the Leica Camera AG homepage**

- a. Open an account at <http://owners.leica-camera.com>. As a result, you will receive access to the "Owners area".
- b. Register your camera at "My products" by entering its serial number. Do so by following the respective instructions.
- c. Then select "...software download...". You will be requested to enter the TAN code which you will find on a sticker on the Warranty Card.

- The key with which you can activate the software will be sent to you by email.

**3 Activate the software with the key (numbers) you have received**

- Do so by following the respective instructions appearing after opening the software.

**■ Using the software****1 Connect the camera to your computer****2 Use Adobe® Photoshop® Lightroom® to copy still and motion pictures to your computer**

- For details on how to operate the software, refer to the online assistance.

- Files and folders containing copied AVCHD motion pictures cannot be played back or edited if they have been deleted, modified, or moved using Windows Explorer or similar methods.

## Using with your computer

Still/motion pictures can be copied from the camera to your computer by connecting the two.

- Some computers can read directly from the camera's memory card.  
For details, see the your computer's instructions.
- If your computer does not support SDXC Memory Cards a message will be displayed requesting you to format the card. (Do not format the card. This will erase recorded pictures.)

### ■ Computer specifications

You can connect the camera to a computer that can detect a mass storage device (device that stores a large volume of data).

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

Some motion pictures recorded in [AVCHD] may not be scanned correctly by copying a file or folder.

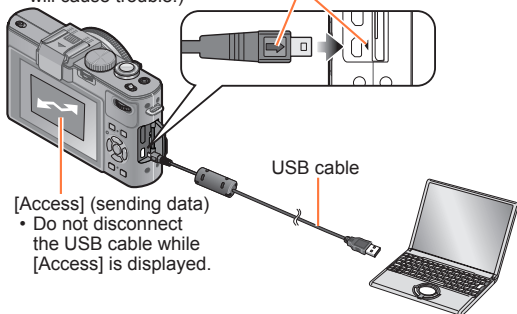
- When using Windows, be sure to use the available software to copy motion pictures recorded in [AVCHD].
- When using a Mac, you can copy motion pictures recorded in [AVCHD] using "iMovie '11". Note, however, that you cannot copy motion pictures (AVCHD Progressive) recorded when [Rec Quality] is set to [PSH]. (For details about iMovie '11, please contact Apple Inc.)

## Copying still and motion pictures recorded in [MP4] (except AVCHD motion pictures)

**Preparation:**

- Charge the battery sufficiently.
- When importing pictures from the built-in memory, remove any memory cards.
- Turn on the camera and computer.

Make sure the plug is aligned correctly and that it is inserted straight.  
(Otherwise the connectors may be bent out of shape which will cause trouble.)

**1 Connect the camera to the computer**

- Do not use cables other than the supplied genuine Leica USB cable. Using cables other than the above may cause a malfunction.

**2 Use cursor buttons on the camera to select [PC], and then press [MENU/SET]**

- A message may be displayed on the monitor if [USB Mode] (→39) is set to [PictBridge(PTP)]. Select [CANCEL] to close the screen, and set [USB Mode] to [PC].

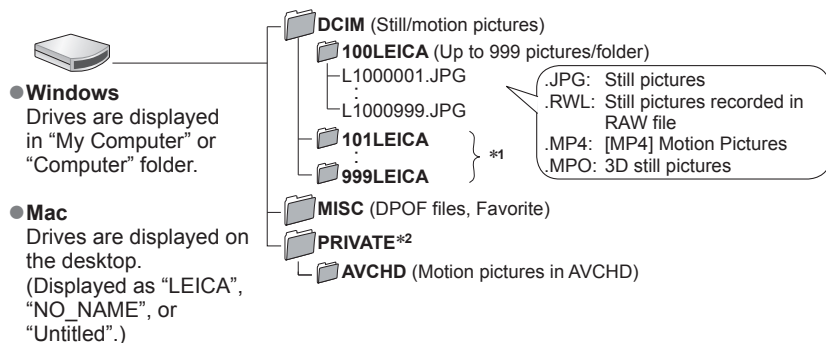
**3 Operate with your computer**

You can save pictures to use on your computer by dragging and dropping folders and files into separate folders on your computer.

**■ To cancel connection**

- Windows: Execute "Safely Remove Hardware" on the taskbar
- Mac: Open the Finder and click the eject icon that appears on the sidebar

## ■ Folder and file names on computer



\*1 New folders are created in the following cases:

- When the number of files in a folder exceeds 999.
- When using cards already containing the same folder number (for example, pictures taken with other cameras, etc.).
- When recording after performing [No.Reset].

\*2 This folder is not created in the built-in memory.

## ■ When using Windows XP, Windows Vista, Windows 7, or Mac OS X

The camera can be connected to your computer even if [USB Mode] (→39) is set to [PictBridge(PTP)].

- Only picture output can be performed.
- It may not be possible to import if there are 1000 or more pictures on the card.
- Motion pictures, 3D still pictures or RAW pictures cannot be read.

- Do not use any other USB cables except the supplied genuine Leica USB cable.
- Turn off the power before inserting or removing memory cards.
- Use a sufficiently charged battery. When the battery begins to run out during communication, the status indicator flashes and a warning beep sounds. Cancel the communication via your computer immediately.
- Setting the [USB Mode] to [PC] eliminates the need to make the setting each time the camera is connected to the computer.
- For more details, consult your computer's instructions.



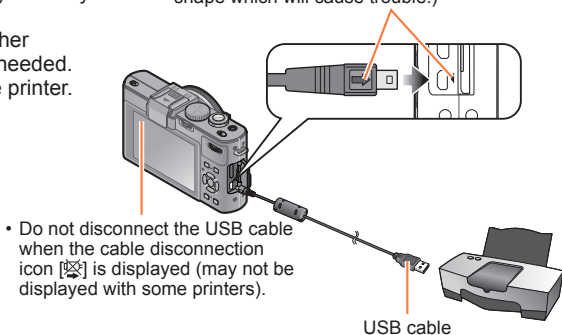
## Printing

You can connect directly to a PictBridge-compatible printer for printing.

### Preparation:

- Charge the battery sufficiently.
- When printing pictures from the built-in memory, remove any memory cards.
- Adjust the print quality or other settings on your printer, as needed.
- Turn on the camera and the printer.

Make sure the plug is aligned correctly and that it is inserted straight.  
(Otherwise the connectors may be bent out of shape which will cause trouble.)



### 1 Connect the camera to the printer

- Do not use cables other than the supplied genuine Leica USB cable. Using cables other than the above may cause a malfunction.

### 2 Use cursor buttons on the camera to select [PictBridge(PTP)] and then press [MENU/SET]

### 3 Use cursor buttons to select the picture to print and then press [MENU/SET]

### 4 Use cursor buttons to select [Print start] and then press [MENU/SET]

(Print settings (→196))

#### ■ To cancel print

Press [MENU/SET].

- Disconnect the USB cable after printing.
- Turn off the power before inserting or removing memory cards.
- Use a sufficiently charged battery. When the battery begins to run out of capacity while the camera is connected to the printer, the status indicator flashes and a warning beep sounds. Cancel printing and disconnect the USB cable.
- Still pictures recorded in a RAW file cannot be printed. (The still pictures recorded in JPEG file format at the same time as the RAW file can be printed.)
- Motion pictures cannot be printed.
- Some printers can print directly from the camera's memory card.  
For details, see your printer's instructions.

## Printing multiple pictures

**1** Press **▲** to select **[Multi Print]** in step **3** (→193)

**2** Use cursor buttons to select the item and then press **[MENU/SET]**

- **[Multi Select]:**
  - ① Scroll between pictures with cursor buttons and, select the pictures to print with the **[DISP]** button. (Press the **[DISP]** button again to erase the selection.)
  - ② Press **[MENU/SET]** when selection is complete.
- **[Select All]:** Prints all pictures.
- **[Print Set (DPOF)]:** Prints the pictures selected in **[Print Set]**. (→178)
- **[Favorite]:** Prints the pictures selected as **[Favorite]**. (→177)

**3** Use cursor buttons to select **[Print start]** and then press **[MENU/SET]**

(Print settings (→196))

- Select **[Yes]** if a print confirmation screen is displayed.

- An orange “●” displayed during printing indicates an error message.
- Printing may be divided into several pictures if printing a large amount of pictures. (Remaining sheets display may differ from the number of pictures set for printing.)

## Printing with date and text







### ■ Printing date without **[Text Stamp]**

- Printing in a store: Only the recording date can be printed. Request date printing in the store.
  - Making **[Print Set]** (→178) settings on the camera in advance allows settings for numbers of copies and date printing to be determined before giving the card to the store.
  - When printing still pictures with a 16:9 aspect ratio, check in advance that the store can accept this size.
- Using a printer: The recording date can be printed by setting **[Print Set]** on the camera, or by setting **[Print with Date]** (→196) to **[ON]** when connecting to a printer compatible with date printing.
- Time and date can be set to be printed on the picture when taking the picture by activating the **[Date Stamp]** function in the **[Rec]** menu. (→149)




### Making print settings on the camera

The setting options include the number of printed pictures and their size. Make the settings before selecting [Print start].

## 1 Use cursor buttons to select the item and then press [MENU/SET]

Item	Settings
[Print with Date]	[ON] / [OFF]
[Num.of prints]	Sets the number of pictures (up to 999 pictures)
[Paper Size]	When  is selected, the printer settings take priority.
[Page Layout]	 (the printer takes priority) /  (1 picture, no border) /  (1 picture, with border) /  (2 pictures) /  (4 pictures)

## 2 Use cursor buttons to select setting and then press [MENU/SET]

- The items may not be displayed if incompatible with the printer.
- To arrange  "2 pictures" or  "4 pictures" in the same still picture, set the number of prints for the still picture to 2 or 4.
- To print to paper sizes/layouts not supported by this camera, set to  and make settings on the printer. (Consult your printer's instructions.)
- Even with completed [Print Set] settings, dates may not be printed, depending on the shop or the printer used.
- When setting [Print with Date] to [ON], check the date printing settings on the printer (printer settings may be prioritized).
- To print a picture on which text or a date has been stamped, set [Print with Date] to [OFF]. (The still picture is printed with the date superimposed on it.)

## Using the external electronic viewfinder

The external electronic viewfinder Leica EVF3 (available as accessory (→8)) allows controlling the image even if the camera is held below eye level or if the monitor image visibility is difficult, e.g. due to bright light from behind.

### Preparation:

- Turn the camera ON/OFF switch to [OFF].
- Remove the hot shoe cover. (→9)

**1** Firmly insert the viewfinder into the hot shoe, as far as it will go

**2** Turn the camera ON/OFF switch to [ON]

**3** Press the [EVF/LCD] button of the viewfinder to switch the display

- You can switch between monitor and viewfinder display.
- The display selected by pressing the [EVF/LCD] button will be stored in memory even when the camera ON/OFF switch is set to [OFF].

### ■ To automatically display the playback screen on the monitor

When [Play on LCD] (→37) in the [Setup] menu is set to [ON], the monitor will turn on when the camera is switched from recording to playback mode. This operation eliminates the time needed to switch between monitor and viewfinder when recording pictures using the viewfinder.

- Attach and detach the viewfinder carefully and correctly.
- The viewfinder cannot be used together with an external flash.
- When the shoulder strap is attached, make sure that the strap does not get snagged on the viewfinder.
- Never hold the camera/viewfinder combination only by the viewfinder. Doing so could result in the camera accidentally detaching from the viewfinder.
- Refer to the instructions for the viewfinder for further details.

## Using an external flash unit

When you use an external flash unit such as the Leica CF22 (available as accessory (→8)), it can provide a longer effective flash range than the built-in flash.

### Preparation:

- Set the camera ON/OFF switch to [OFF] and close the built-in flash.
- Remove the hot shoe cover. (→9)

### 1 Attach the flash to the hot shoe and turn on camera and flash

### 2 Select [Flash] in the [Rec] menu

- For the setting procedures of the menu. (→25)

### 3 Use cursor buttons to select the flash mode setting and then press [MENU/SET]

- While an external flash unit is connected, the following icons are displayed.
  - ⚡ : AUTO
  - ⚡⊙ : AUTO/Red-Eye Reduction
  - ⚡ : Forced flash on
  - ⚡⊙ : Slow sync./Red-Eye Reduction
  - ⚡⊖ : Forced flash off

### ■ When using other commercially available external flashes that don't offer direct communication with this camera

- If you want to use an external flash unit, use one that allows you to set the aperture value and ISO Sensitivity to match the same settings on the camera.
- Set the camera to [Aperture-Priority] Mode or [Manual Exposure] Mode and then set the same aperture value and ISO Sensitivity on the external flash unit. [Shutter-Priority] and [Program AE] mode cannot be used because with these modes, the aperture is automatically controlled - and therefore changed - by the camera.

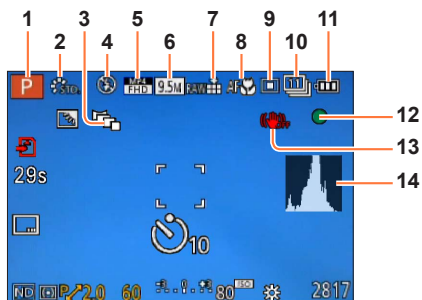
- An external flash cannot be attached simultaneously with an external viewfinder.
- You can set the aperture value, shutter speed and ISO Sensitivity on the camera even when an external flash unit is attached.
- Some commercially available external flash units have synchro terminals with high-voltage or reversed polarity. If such units are used, they could cause a malfunction or hinder normal operation of the camera.
- Do not use external flash units with communication systems for other camera makes. If you do, they may fail to operate properly and may also cause the camera to malfunction.
- Some external flash units put the camera into external flash mode as soon as they are mounted on the camera, even if the external unit is turned off. If you are not using an external unit, detach it from the camera.
- When an external flash unit is attached, do not open the built-in flash.
- Detach an external flash unit when you carry the camera.
- Never hold the camera/flash unit combination only by the flash unit. Doing so could result in the camera accidentally detaching from the flash unit.
- If the White Balance is set to [☐<sup>WB</sup>] when an external flash unit is used, perform fine adjustment of the White Balance if the recording resulting pictures are not satisfactory. (→113)
- If you take pictures close to the subject with short/wideangle focal lengths, the light of the flash can be partly blocked by the lens and the bottom of the image may be dark.
- Refer to the instructions of the respective external flash units for further details.



## List of monitor displays

The screens shown here are only examples. The actual display may vary.

- Press the [DISP] button to change the display.

### ■ During picture taking mode



- |  |  |
|--|--|
| 1 Recording Mode (→48)<br>Custom Set (→91)                 | 9 Autofocus mode (→97)   |
| 2 Color Mode (→53)<br>Photo style (→134)                   | 10 Self-timer (→116)<br>Exposure series (→118)<br>Exposure Bracketing (→125)  |
| 3 Aspect Bracketing (→122)                                 | 11 Battery capacity (→15)  |
| 4 Flash (→106)   | 12 Focus display (→96)   |
| 5 Recording Mode (→150)                                    | 13 Optical Image Stabilizer OFF (→142)<br>Camera shake alert (→46)           |
| 6 Resolution (→135)  | 14 Histogram (→33)   |
| 7 Quality (→136)   |  |
| 8 AF macro (→102)<br>Manual Focus (→104)<br>AF Lock (→103) |  |



The screens shown here are only examples. The actual display may vary.

- Press the [DISP] button to change the display.

### ■ During picture taking mode



- |  |  |
|--|--|
| 15 Self-timer (→116)   | 24 Built-in ND filter (→123)   |
| 16 Estimated number of remaining pictures or recording time capacity*1 (→34) | 25 Current date/time<br>World time (→27)<br>Name*2 (→79)<br>Age in years/months*2 (→79)<br>Destination settings*2 (→28)<br>Elapsed travel days*2 (→28) |
| 17 White Balance (→111)  | 26 Date Stamp (→149)   |
| 18 ISO Sensitivity (→109)  | 27 AF area (→97)   |
| 19 Manual exposure assist (→62)<br>Exposure Compensation (→124)              | 28 Elapsed recording time*1 (→82)  |
| 20 Shutter speed (→58)   | 29 Recording operation (→20)   |
| 21 Aperture value (→58)  | 30 Backlight Compensation (→49)  |
| 22 Program Shift (→58)   |  |
| 23 Metering Mode (→139)<br>AE Lock (→103)                                    |  |

\*1 [m] and [s] indicate "minute" and "second". (With camera model 18 460)

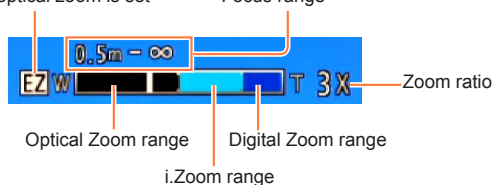
[h], [m] and [s] indicate "hour", "minute" and "second". (With camera models 18 461 / 18 462)

\*2 The displaying is performed in the following priority order: travel destination, name ([Baby]/[Pet]), and name ([Face Recog.])

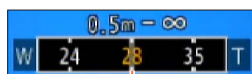
## ■ During picture taking mode (During zooming, for example)

When Extended optical zoom is set

Focus range



- When Step Zoom has been set (→95)



Current zoom position  
(Focal lengths are the 35mm camera equivalents)

- Focus range indication (During manual focusing) (→104)

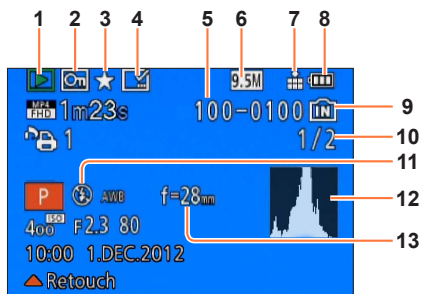


Reference of the depth of field

The screens shown here are only examples. The actual display may vary.

- Press the [DISP] button to change the display.

### ■ During playback mode

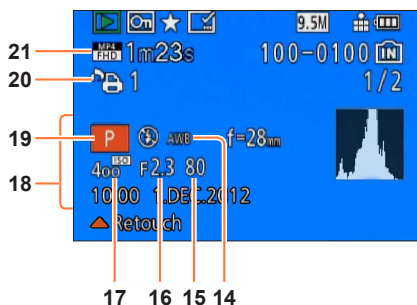


- |   |   |
|---|---|
| 1 Playback Mode (→165)                  | 8 Battery capacity (→15)                |
| 2 Protected picture (→179)              | 9 Built-in memory (→20)                 |
| 3 Favorites (→177)                      | 10 Picture No./Total number of pictures |
| 4 Date/text stamped display (→149, 172) | 11 Flash mode (→106)                    |
| 5 Folder/File No.                       | 12 Histogram (→33)                      |
| 6 Resolution (→135)                     | 13 Zoom position during Step Zoom (→95) |
| 7 Quality (→136)                        |   |

The screens shown here are only examples. The actual display may vary.

- Press the [DISP] button to change the display.

## ■ During playback mode



- |   |   |
|---|---|
| <b>14</b> White Balance (→111)  | <b>19</b> Recording Mode (→48)  |
| <b>15</b> Shutter speed (→58)   | <b>20</b> Print settings (→178)   |
| <b>16</b> Aperture value (→58)  | <b>21</b> Recording Mode (→150)<br>Motion picture recording time*2 (→159) |
| <b>17</b> ISO Sensitivity (→109)  |   |
| <b>18</b> Recording date/time<br>World time (→27)<br>Name*1 (→79)<br>Age in years/months*1 (→79)<br>Destination settings*1 (→28)<br>Elapsed travel days*1 (→28)<br>Title*1 (→171) |   |

\*1 The displaying is performed in the following priority order: title, travel destination, name ([Baby]/[Pet]), and name ([Face Recog.]).

\*2 [m] and [s] indicate "minute" and "second". (With camera model 18 460)  
[h], [m] and [s] indicate "hour", "minute" and "second". (With camera models 18 461 / 18 462)

## Message displays

Meanings of and required responses to major messages displayed on the monitor.

### [This memory card cannot be used]

- A MultiMediaCard was inserted.  
→ Not compatible with the camera. Use a compatible card.

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

- Non-DCF pictures (→152) cannot be deleted.  
→ Save the needed data on a computer or an other device, and then use [Format] on the camera. (→42)

### [No additional selections can be made]

- The number of pictures that can be deleted at once has been exceeded.
- More than 999 pictures have been set as [Favorite].
- The number of pictures allowing [Title Edit], [Text Stamp] or [Resize] (multiple settings) at once has been exceeded.

### [Cannot be set on this picture]

- [Print Set], [Title Edit], or [Text Stamp] cannot be made for non-DCF pictures (→152).

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

- The lens is not working correctly.  
→ Turn on power again.  
(Consult your dealer or your nearest Leica Customer Care center if the display still remains)

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

- Pictures cannot be copied in the following cases.  
→ A picture of the same name already exists in built-in memory when copying from the card.  
→ File is not of DCF standard (→152).  
→ Picture was taken or edited on a different device.

### [Not enough space on built-in memory] [Not enough memory on the card]

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

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

- Displayed when formatting the built-in memory via computer, etc.  
→ Reformat directly using the camera. The data will be deleted.

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

- The card format cannot be used with this camera.  
→ Save needed data on a computer or another device, and then use [Format] on the camera. (→42)

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

- Access to the card has failed.  
→ Insert card again.
- Try with a different card.

**[Memory card parameter error]**

- The card is not of SD standard.
- Use a card compatible with the camera.
  - SD memory cards (8 MB to 2 GB)
  - SDHC memory cards (4 GB to 32 GB)
  - SDXC memory cards (48 GB, 64 GB)

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

- Data reading has failed.
  - Check whether the card has been inserted correctly (→18).
- Data writing has failed.
  - Turn off the camera and remove the card. Reinsert the card and turn the camera on again.
- The card may possibly be damaged.
- Try with a different card.

**[Cannot record due to incompatible format(NTSC/PAL) data on this card.]**

- Format the card after saving necessary data on a PC etc. (→42)
- Insert a different card.

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

- If recording stops even when using a card of the recommended speed class (→20), the data writing speed drops. If this happens, we recommend backing up the data on the memory card and formatting it (→42).
- Motion picture recording may be automatically terminated with certain cards.

**[A folder cannot be created]**

- The folder numbers in use have reached 999.
  - Save the needed data on a computer or an other device, and then use [Format] on the camera (→42).
  - The folder number is reset to 100 when performing [No.Reset] (→38).

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

- The supplied AV cable is connected to camera.
  - To remove the message immediately → Press [MENU/SET].
  - To change the aspect ratio → Change [TV Aspect] (→39).
- The USB cable is only connected to camera.
  - A message disappears when cable is also connected to another device.

**[This battery cannot be used]**

- Use a genuine Leica battery (→8).
- The battery is not identifiable by the camera due to dirty terminals.
  - Wipe any dirt away from the terminals.

**[Recording failed.]**

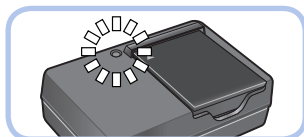
- Recording may be impossible if the recording location for a 3D image is too dark/too bright, or if the subject lacks contrast.

## Q&A Troubleshooting

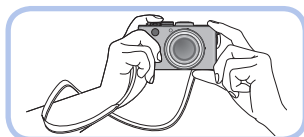
Before asking for repairs, check and try the following procedures.



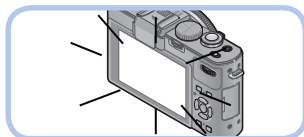
**A message is displayed on the camera** (→205)



**Battery- and power supply-related problems** (→208)



**Recording-related problems** (→208)



**Monitor-related problems** (→211)



**Playback-related problems** (→212)



**Other problems** (→213)

If the problem persists, performing [Reset] in the [Setup] menu may resolve the issue (→39). Note that except for some items such as [Clock Set], all settings are returned to their values at the time of purchase.

## Battery, power

### The camera does not work even if the power is turned on.

- The battery is not inserted correctly ([→18](#)), or needs recharging.

### The monitor switches itself off even if the power is turned on.

#### The camera switches itself off as soon as the power is turned on.

- [Opt. Viewfinder] is set to [ON].  
→ Press the [DISP] button to switch to the monitor display.
- An external viewfinder display is selected.  
→ Press the [EVF/LCD] button of the external electronic viewfinder to switch to the monitor display.
- [Economy] ([Sleep Mode] or [Auto LCD Off]) is activated. ([→36](#))  
→ Press the shutter button halfway to release.
- The battery needs recharging.

### The camera switches itself off automatically.

- If you connect to a TV compatible with HDTV Link (HDMI) with the HDMI mini cable (available as accessory ([→8](#))) and turn off the power on the TV with its remote control, the power on the camera also turns off.  
→ If you are not using HDTV Link (HDMI), set [HDTV Link] to [OFF]. ([→40](#))

## Recording

### I cannot record pictures.

- The built-in memory/the card is full.  
→ Free space by deleting unwanted pictures ([→163](#)).

### The recorded pictures look white.

- The lens is dirty (fingerprints, etc.).  
→ Turn on power to extend the lens barrel, and clean the lens surface with a soft, dry cloth.
- The lens is foggy ([→6](#)).

### The recorded pictures are too bright/too dark.

- **Adjust the exposure** ([→124](#)).
- **[Min. Shtr Speed] is set to fast speed. Check the setting** ([→141](#)).

### Several pictures are taken when I press the shutter button just once.

- The following functions are set.  
[Burst Shooting] ([→118](#)) [WB Bracket] ([→114](#)) [Aspect Bracket] ([→122](#)) [Auto Bracket] ([→125](#))

### The focusing is not correct.

- The camera is not set to mode appropriate for the distance to the subject. (The focusing range varies according to recording mode.)
- The subject is outside of the focusing range. ([→96](#), [102](#))
- This may be caused by camera shake or subject movement. ([→142](#))

### The recorded pictures are blurred. The Optical Image Stabilizer ineffective.

- The shutter speed is slower in dark locations and the Optical Image Stabilizer is less effective.  
→ Hold the camera firmly with both hands, keeping the arms close to the body.
- Use a tripod and the self-timer ([→116](#)) when using slower shutter speeds with [Min. Shtr Speed].



**Recording (continued)****I cannot use [WB Bracket].**

- The built-in memory/the card is full.  
→ Free space by deleting unwanted pictures (→163).

**The recorded pictures appear coarse, or there is noise.**

- The ISO Sensitivity is high, or the shutter speed is slow.  
(The default [Sensitivity] setting is [AUTO] – interference may appear with indoor pictures.)  
→ Lower [Sensitivity] (→109).  
→ Take pictures in brighter locations.

**Striping or flicker may appear under e.g. fluorescent and LED lighting.**

- This is characteristic for MOS sensors like the one in this camera. This is not a malfunction.

**Brightness or coloring of the recorded picture are different than in reality.**

- When recording under fluorescent or LED lighting 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 subjects in extremely bright locations or recording under fluorescent lighting or LED lighting, mercury lamps, sodium lighting etc., the colors and screen brightness may change or horizontal striping may appear on the screen.

**The zoom does not function normally.**

- The zoom operates in steps.  
→ Set [Step Zoom] to [OFF] (→95).

**Reddish horizontal streaks appear on the monitor during recording.**

- This is characteristic for MOS sensors, like the one in this camera. The streaks appear 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 you take pictures while taking care not to expose the monitor to sunlight or any other source of strong light.

**Motion picture recording stops midway.**

- With some cards, the access display may appear briefly after recording, and recording may end midway.
- If recording stops even when using a card of the recommended speed class (→20), the data writing speed has been reduced. If this happens, we recommend backing up the data on the memory card and formatting it (→42).
- You can continuously record a motion picture in [MP4] for up to 29 minutes or approx. 4 GB. (Since recording in [MP4] with [FHD] creates larger files, the recording time for such motion pictures will be shorter than 29 minutes.)
- You can continuously record [AVCHD] motion pictures for up to 29 minutes. (With camera model 18 460)
- If [Rec Quality] of [AVCHD] motion pictures is set to [PSH] or [FSH], you can continuously record a motion picture for up to 29 minutes. (With camera models 18 461 / 18 462)

## Recording (continued)

### The subject appears distorted.

- An MOS sensor is used as the imaging device in this camera, so if the subject passes quickly in front of the lens, it will appear slightly distorted. Note, however, that this does not indicate a malfunction.

### An unusual noise, such as clicking or buzzing, is recorded in a motion picture.

#### The audio level is extremely low.

- When recording a motion picture in a quiet environment, noise due to the motion of the aperture and focusing mechanism may be recorded. Note that this is not a fault. You can set the focus operation during motion picture recording to [OFF] using [Continuous AF] (→151).
- Note that if you perform operations such as zooming, using buttons or dials, while recording a motion picture, operational noise may be recorded.
- If you cover the microphone opening while recording a motion picture, the audio level may be low, or no sound at all may be recorded. Note that in this case, noise due to the motion of the lens is more likely to be recorded.

### Panorama picture recording stops before it is finished.

- If the panning motion of the camera is too slow, the camera assumes that the operation has been aborted and stops recording.
- If the panning motion of the camera is too shaky when it is moved in the recording direction, the camera stops recording.  
→ To record panorama pictures, pan the camera in a small circular motion parallel to the recording direction at a speed of approx. 8 seconds per revolution (guideline).

### The subject cannot be locked. (AF track fails)

- If the color of the subject is similar to that of its background, AF Tracking may not function. Set the AF lock to the colors specific to the subject.

## Flash

### No flash is fired.

- The flash is retracted into the camera housing.  
→ Operate the flash open switch to let the flash pop up.
- The flash becomes unavailable in the following cases:
  - With [Burst Shooting] (Excluding [L1])
  - With [Auto Bracket]
  - With the Scene Modes ([Scenery] [Panorama Shot] [Night Scenery] [Handheld Night Shot] [HDR] [Sunset] [Glass Through] [3D Photo Mode])
  - With the [Creative Control] mode (excluding [Smooth Defocus] and [Radial Defocus])

### Multiple flashes are fired.

- Red-eye reduction is active (→107). (Flashes twice to prevent eyes appearing red.)
- [Burst Shooting] is set to [L1].

## Monitor

### No picture is displayed on the monitor.

- [Opt. Viewfinder] is set to [ON].  
→ Press the [DISP] button to switch to monitor display.
- The display of an attached external viewfinder is selected.  
→ Press the [EVF/LCD] button of the viewfinder to switch to monitor display.

### The brightness varies.

- The aperture is set while shutter button is pressed halfway. (This does not affect the recorded picture.)  
This symptom may also occur when the brightness changes due to zooming or because the camera is moved. This is the automatic aperture operation of the camera and is not a malfunction.

### The monitor image flickers indoors.

- The monitor image may flicker for a few seconds after turning on. This is an operation to correct flicker caused fluorescent or LED lights etc. and is not a malfunction.

### The monitor image is too bright/too dark.

- [LCD Mode] is activated. (→31)
- Use [LCD Display] to adjust the brightness of the monitor. (→31)

### Black/blue/red/green dots or interference appears. The monitor image looks distorted when touched.

- This is not a fault, and will not be recorded on the actual pictures.

### Even when I press the [EVF/LCD] button of an attached external electronic viewfinder (available as accessory (→8)), the display does not switch between the monitor and viewfinder.

- When it is connected to a computer or a printer, the camera can only display pictures on the monitor.

## Playback

### Pictures are rotated.

- [Rotate Disp.] is activated (→40)

### I cannot view pictures. There are no recorded pictures.

- There are no pictures in the built-in memory or on the card (pictures are played from the card if inserted, from the built-in memory if not).
- Has the file name of the picture been changed on a computer? If so, it cannot be played back on the camera.
- The [Playback Mode] has been changed.  
→ Set [Playback Mode] to [Normal Play] (→152).

### The folder/file number is displayed as [-]. The picture is black.

- The picture was edited on a computer or taken with a different device.
- The battery was removed immediately after the picture was taken, or it was taken with a low battery.  
→ Use [Format] to delete (→42).

### Incorrect date is displayed in Calendar Playback.

- The picture was edited on a computer or taken with a different device.
- [Clock Set] is incorrect (→27).  
(Incorrect date may be displayed in Calendar Playback on pictures copied to a computer and then back to the camera, if the computer and camera dates differ.)

### 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 particles of dust in the air reflecting the light from the flash. This is not a fault. A characteristic of this is that the number of round spots and their position differ in every picture.



### Part of a picture flashes in black and white.

- [Highlight] is set to [ON].

### [Thumbnail is displayed] is shown on the screen.

- The pictures may have been recorded on another device. If so, they may be displayed with poor resolution.

### Red areas in pictures appear blackened.

- When digital red-eye correction (A, S) is operating, if a subject is recorded that has skin-colored areas with red areas within them, the digital red-eye correction function may blacken the red areas.  
→ We recommend setting the flash mode to [A], [S] or [S], or [Red-Eye Removal] to [OFF] before recording. (When the built-in flash is closed, (S) (Forced flash off) is set regardless of the flash mode setting.)

### Sounds of camera operations such as zooming are recorded in motion pictures.

- Camera operation sounds may be recorded as the camera automatically adjusts the lens aperture during motion picture recording; this is not a fault.

### Motion pictures taken with this camera cannot be played in other cameras.

- When motion pictures recorded in AVCHD or MP4 with this camera are played back, they may be displayed with poor picture and sound quality or may not be played back at all even if an AVCHD or MP4 compatible device is used. Also, the recording information may not be displayed correctly.

**TV, computer, printer****No image appears on the TV. The image is blurred or not colored.**

- The connection is incorrect (→182).
- The television has not been switched to auxiliary input.
- Check the [Video Out] setting (NTSC/PAL) on the camera. (→39) (With camera model 18 460)

**The TV screen display differs from that of the monitor.**

- The aspect ratio may be incorrect or the edges may be cut off with certain televisions.

**Motion pictures cannot be played on a TV.**

- A memory card is inserted into the TV.
  - Connect with the supplied AV cable or HDMI mini cable (available as accessory (→8)) and play on camera (→182).

**Picture is not displayed on full TV screen.**

- Check [TV Aspect] settings (→39).

**No sound is output from the camera speaker.**

- When the supplied AV cable or HDMI mini cable (available as accessory (→8)) is connected to the camera, no sound is output from the camera.

**HDTV Link (HDMI) is not working.**

- Is the HDMI mini cable (available as accessory (→8)) connected correctly? (→182)
  - Check that the HDMI mini cable is fully inserted.
- Is the camera's [HDTV Link] setting set to [ON]? (→40)
  - The input setting may not be able to be changed automatically with certain television's HDMI sockets. In this case, please change the input setting with your television's remote control (consult your television's instructions for details).
  - Check the HDTV Link (HDMI) settings on the device you are connecting to.
  - Turn the camera's power off and on again.
  - Provided it has this function, turn the "HDTV Link control (HDMI device control)" setting on your television set to off and then to on again. (Consult the device's instructions for details.)

**TV, computer, printer (continued)****The camera does not communicate with the computer.**

- The connection is incorrect (→190).
- Check whether computer has recognized the camera.
  - Set [USB Mode] to [PC] (→39).
  - Turn the camera off and then on again.

**The computer does not recognize the card (only reads the built-in memory).**

- Disconnect the USB cable and reconnect with a card inserted.

**The computer does not recognize the card. (When using an SDXC memory card)**

- Check whether your computer is compatible with SDXC memory cards.
- A message prompting you to format the card may appear when you connect it. Do not format the card.
- If the [Access] indicator on the monitor does not go off, turn off the camera's power before disconnecting the USB cable.

**Printing does not work in spite of the connection to a printer.**

- The printer is not compatible with PictBridge.
- Set [USB Mode] to [PictBridge(PTP)] (→39).

**The edges of pictures are cut off when printing.**

- Erase any trimming or edgeless printing settings on the printer before printing.  
(Consult the printer's instructions.)
- The aspect ratio of the pictures is different from that of the paper used for printing.
  - If printing in a shop, check if 16:9 sizes can be printed.

**Panorama pictures are not printed properly.**

- The aspect ratio of panorama pictures is different from that of regular still pictures, and therefore some panorama pictures may not be printed correctly.
  - Use a printer with support for panorama pictures. (Refer to the printer's instructions.)

**Miscellaneous****The menu is not displayed in desired language.**

- Change the [Language] setting ([→43](#)).

**The camera rattles if shaken.**

- This sound is made by the lens movement and is not a fault.

**The red lamp turns on when pressing shutter button halfway in dark locations.**

- [AF Assist Lamp] is set to [ON] ([→143](#)).

**The red lamp does not turn on.**

- [AF Assist Lamp] is set to [OFF].
- In bright locations, this is unnecessary and therefore correct.

**The camera gets warm.**

- The camera may become a little warm during use, but this does not affect its performance or image quality.

**The lens makes a clicking noise.**

- When the subject brightness changes, this may happen and the monitor brightness may also change, but this is due to aperture settings being made.  
(This does not affect recording.)

**The time/date display is incorrect.**

- The camera has been left for a long period.  
→ Reset the clock ([→24](#)).
- A long time was taken for the settings (the display will be behind by the same lapse of time).

**The zooming movement stops momentarily.**

- This can occur during Extended optical zoom operation, but it is not a malfunction.

**The file numbers are not recorded in sequence.**

- File numbers are reset when new folders are created ([→38](#)).

**The file numbers have jumped backwards.**

- The battery was removed/inserted with the camera switched on.  
(The numbers may jump backwards if folder/file numbers are not correctly recorded.)

## Usage cautions and notes

### When in use

- The camera may become warm if used for long periods of time, but this is not a fault.
- **Keep the camera as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games etc.).**
  - If you use the camera on top of or near a TV, its pictures and/or sound may be disrupted by electromagnetic fields.
  - Do not use the camera near cell phones because doing so may result in noise adversely affecting the pictures and/or the sound.
  - Recorded data may be damaged, or pictures may be distorted, by strong magnetic fields created by speakers or large motors.
  - Electromagnetic fields generated by microprocessors may adversely affect the camera, disturbing the pictures and/or the sound.
  - If the camera is adversely affected by electromagnetic equipment and stops functioning properly, turn it off and remove the battery. Then reinsert the battery and turn the camera on.
- **Do not use the camera near radio transmitters or high-voltage lines.**
  - If you record near radio transmitters or high-voltage lines, the recorded pictures and/or the sound may be adversely affected.
- Do not keep objects that may be influenced magnetically close to the speaker.
  - Magnetized objects such as bank cards, commuter passes, watches, may be adversely affected by the magnetic influence of the speaker.
- Do not extend the supplied cables.
- Do not allow camera to come into contact with pesticides or volatile substances (this can cause surface damage or the coating to peel).
- Never leave the camera and the battery in a car or on a car hood in the summer. Doing so may cause leakage of the battery electrolyte overheating, fire or a battery explosion due to the high temperature.

### Caring for your camera

- To clean your camera, remove the battery, and wipe with a soft, dry cloth.
- Use a damp cloth to remove stubborn stains, before wiping with a dry cloth.
  - Do not use benzine, thinners, alcohol, or kitchen detergent, as these may damage the outer casing and finish of the camera.
  - If using a chemically-treated cloth, read the supplied instructions carefully.



### When not using the camera for a while

- Turn off the camera before removing the battery and the card (ensure that battery is removed to prevent damage due to over-discharge).
- Do not leave the camera in contact with rubber or plastic bags.
- Store the camera together with a drying agent (silica gel) if leaving it in a drawer, etc. Store batteries in cool (15°C to 25°C (59°F to 77°F)) places with low humidity (40% RH to 60% RH) and no major temperature changes.
- Charge the battery once per year and drain it completely before storing it again.

### Memory cards

- To prevent damage to cards and data
  - Avoid high temperatures, direct sunlight, electromagnetic fields, and static electricity.
  - Do not bend, drop, or expose to strong impacts.
  - Do not touch the terminals or allow them to become dirty or wet.
- When disposing of/transferring memory cards
  - If using the “format” or “delete” functions on your camera or computer, this only changes the file management information, and does not completely delete the data from the memory card. When disposing of or transferring your memory cards, we recommend physically destroying them, or using commercially available computer data erasing software to completely delete the data from the card. Data on memory cards should be managed responsibly.

### Monitor

- Do not exert excessive pressure on the monitor. This may cause uneven display and damage it.
- In cold weather or other situations when the camera gets cold, the monitor may appear slightly darker than normal immediately after the camera is turned on. Normal brightness will return once the internal components have warmed up.

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

### Charging the battery

- The time required for charging varies depending on the conditions of battery usage. Charging takes longer at high or low temperatures and when the battery has not been used for some time.
- The battery will get warm during charging and for some time thereafter.
- The battery will be drained completely if not used for long periods of time, even after being charged.
- Do not leave any metal items (such as clips) near the battery's terminals or a connected charger's plug. Otherwise, a fire and/or electric shocks may be caused by short-circuiting or the resulting heat generated.
- Frequently charging the battery is not recommended. (This would reduce its maximum usage time and can cause it to expand.)
- If the achievable battery capacity is significantly reduced, it is reaching the end of its lifespan. Please purchase a new battery.
- When charging:
  - Wipe dirt from the battery terminals with a dry cloth.
  - Keep at least 1m (3' 3") away from an AM radio (this may cause radio interference).
- Do not use a damaged or dented battery (especially with respect to its terminals), e.g. by dropping (can cause faults).

### Charger

- Depending on the environment while charging, the charging LED may flicker due to static electricity or electromagnetic fields, etc. This has no effect on charging.
- Keep at least 1m (3' 3") away from an AM radio (this may cause radio interference).
- The charger may generate whirring sounds when it is being used. This is not a malfunction.
- After use, be sure to disconnect the charger from the electrical outlet. (A very small amount of current is consumed if it is left connected.)

### Lens

- Images may appear slightly white if the lens surface is dirty (fingerprints, etc.). Turn the power on, hold the extended lens barrel with your fingers, and gently wipe the lens surface with a soft, dry cloth.
- Do not leave the lens exposed to direct sunlight.

### When using a tripod or unipod

- Do not apply excessive force or use damaged screws. (This may damage the camera, its tripod thread, or its label.)
- Ensure that the tripod is stable. (Refer to the tripod instructions.)
- You may not be able to remove the card or the battery when using a tripod or unipod.

### 3D viewing

- Anyone who is hypersensitive to light, suffers from heart disease or is otherwise unwell should avoid viewing 3D pictures.
  - Viewing 3D pictures may have an adverse effect to the individual.
- If you feel tired, uncomfortable or otherwise strange when viewing 3D pictures, stop viewing at once.
  - Continuing to view may cause illness.
  - After stopping viewing, please rest appropriately.
- When viewing 3D pictures, we recommend taking a break every 30 to 60 minutes.
  - Viewing for extended periods may cause eye-fatigue.
- Short or long-sighted persons, those with differences in the sight of their right and left eyes, and those with astigmatism are advised to wear their glasses etc.  
Stop viewing if you can clearly see a double image while watching 3D pictures.
  - There are differences in the way that different people experience 3D pictures. Please correct your sight appropriately before viewing 3D pictures.
  - You can change the 3D setting of your television or 3D output setting of the camera to 2D.

### Personal Information

If names or birthdays are set in [Baby] Mode or in the [Face Recog.] function, keep in mind that the camera and the recorded pictures will contain personal information.

- Disclaimer
  - Data containing personal information can be altered or lost due to malfunction, static electricity, accidents, breakdowns, repairs, or other operations.  
Leica Camera AG will not be liable for any damage that occurs, direct or indirect, as a result of the alteration or loss of data containing personal information.
- When ordering repairs or transferring/disposing of the camera
  - To protect your personal information, please reset the settings. (→39)
  - If any pictures are contained in the built-in memory, copy (→181) them to a memory card if necessary, and then format (→42) the built-in memory.
  - Remove the memory card from the camera.
  - When ordering repairs, the built-in memory and other settings may be returned to the initial purchase state.
  - If the above operations cannot be performed because of a camera malfunction, consult your dealer or nearest Leica Customer Care center.

**When transferring or disposing of your memory card, see “When disposing of/transferring memory cards” in the previous section (→217).**

## Leica Service Addresses

### LEICA INFORMATION SERVICE

The Leica Information Service can provide you with an answer to any technical questions relating to Leica products, including software supplied, either in writing, on the telephone or by e-mail.

They are also the contact point for purchasing advice and to order instruction manuals. Alternatively, you can send us your questions using the contact form on the Leica Camera AG homepage.

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Customer Service / Software support  
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D-35599 Solms  
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Fax: +49 (0) 6442-208-490  
info@leica-camera.com / software-support@leica-camera.com

### LEICA CUSTOMER SERVICE

For servicing your Leica equipment or in the event of damage, the Leica Camera AG Customer Care department or the repair service provided by authorized Leica agents in your country are available (see the Warranty Card for a list of addresses).

Leica Camera AG  
Customer Care  
Solms Gewerbepark 8  
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customer.care@leica-camera.com

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See <http://www.mpegla.com>.



my point of view