



LEICA V-LUX 2

Instructions

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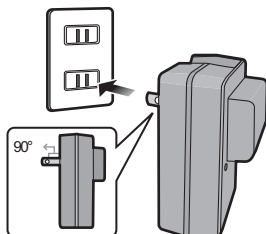
Quick Guide

This is an overview of how to record and play back pictures with the camera. For each step, be sure to refer to the pages indicated in brackets.

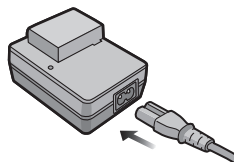
1 Charge the battery. (P16)

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

plug-in type

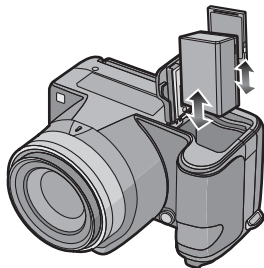


Cable type



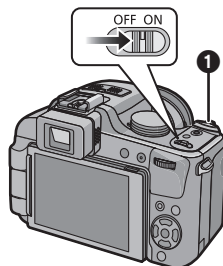
2 Insert the battery and the card. (P21)

- When you do not wish to use the card, you can record or play back pictures on/from the internal memory. (P23) Refer to P24 when you use a card.



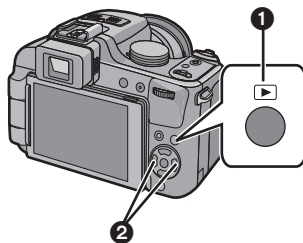
3 Turn the camera on to take pictures.

- 1 Press the shutter button to take pictures. (P47)



4 Play back the pictures.

- 1 Press [▶].
- 2 Select the picture you want to view.
(P60)



Scope of Delivery

	Order No.
Rechargeable battery BP-DC9-E BP-DC9-U	18 717 18 718
Battery charger BC-DC9-E BC-DC9-U	423-094.001-010 423-094.002-010
Mains cable EU UK AUS TW CN KR	423-068.801-019 423-068.801-020 423-068.801-023 424-025.002-000 423-082.805-004 423-082.805-005 (delivery differs depending on markets)
Shoulder strap	423-094.001-014
Lens hood	423-094.001-015
Lens cap	423-094.001-018
Lens cap string	423-094.001-019
CD with instr. PDFs	423-094.001-016
USB cable	423-082.001-020
AV cable	423-082.001-022
Button template for Canada / Taiwan	423-094.001-025
Short instructions	93 353 -56 (delivery differs depending on markets)
Instructions for registration and SW download	93 368
Warranty Card	439-399.100-026

Accessories

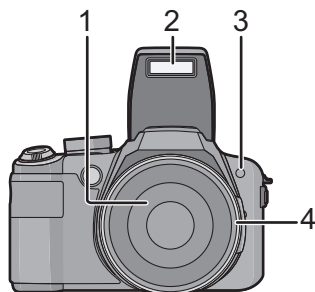
	Order No.
Outdoor case	18 721
HDMI mini cable	14 491
LEICA CF 22 Flash unit	18 694
Mini tripod	14 320
Tabletop tripod	14 110
Ball and Socket head	14 100

Notes:

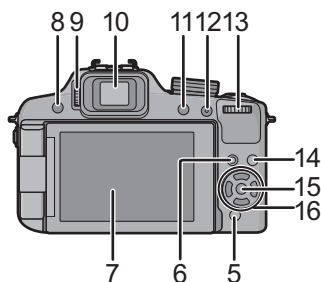
- Cards are optional. You can record or play back pictures on the internal memory when you are not using a card.
- SD, SDHC, and SDXC memory cards are indicated as card in these instructions.
- Check that all items belonging to the scope of delivery are included before using the camera.
- The items and their shape may differ depending on the country or area where the camera was purchased.
- Please dispose of all packaging appropriately.

Names of the Components

- 1 Lens (P205)
- 2 Flash (P69)
- 3 Self-Timer indicator (P77)
AF assist lamp (P147)
- 4 Bayonet for lens hood (P15)



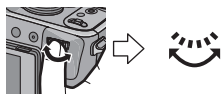
- 5 [Q.MENU] button (P30)/Delete button (P64)
- 6 [DISPLAY] button (P66)
- 7 LCD monitor (P66, 201)
- 8 Flash open button (P69)
- 9 Diopter adjustment dial (P44)
- 10 Viewfinder (P44, 201)
- 11 [EVF/LCD] button (P44)
- 12 [AF/AE LOCK] button (P50, 140, 143)



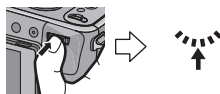
- 13 Rear dial (P56, 61, 62, 75, 78, 85, 86, 114)

Rear dial operation is indicated as follows in these instructions:

e.g.: Rotate to the left or to the right



e.g.: Press



- Refer to P12 for operation of the rear dial.

- 14 Playback button (P60)
- 15 [MENU/SET] button (P25)

16 Cursor buttons

◀/ Self-Timer button (P77)

▼/ Function button (P32)

Assign [REC] Mode menu to ▼ button. It is convenient to register [REC] Mode menu that is used often.

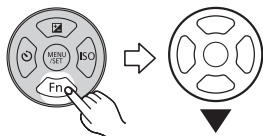
[FILM MODE]/[ASPECT RATIO]/[QUALITY]/[METERING MODE]/[WHITE BALANCE]/[i.EXPOSURE]/[GUIDE LINE]/[👤 REC AREA]/[REMAINING DISP.]

▶/ ISO (P80)

▲/ Exposure compensation (P78)/

Auto Bracket (P79)/Flash output adjustment (P72)

Cursor button operation, e.g. when one of them should be pressed, is indicated as follows in these instructions:



or

Press ▼

17 Stereo microphone (P108)

18 Zoom lever (P57)

19 Shutter button (P47, 48)

20 Motion picture button (P47, 107)

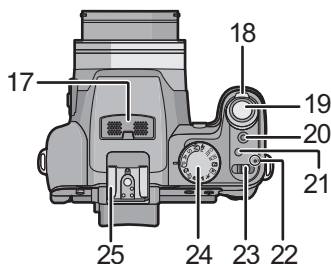
21 Continuous Mode Button (P82)

22 Power lamp (P45)

23 Camera ON/OFF switch (P25)

24 Mode dial (P45)

25 Hot Shoe



26 [MIC/REMOTE] terminal door

27 Shoulder strap eyelet (P14)

28 [MIC/REMOTE] socket*

* For audio recording, you should exclusively use the Panasonic microphone model DMW-MS1.
For remote control, you should exclusively use the Panasonic model DMW-RSL1.

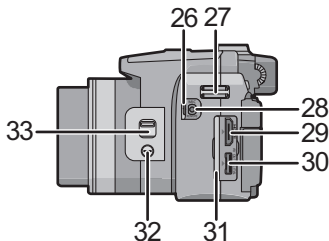
29 [HDMI] socket (P185, 187)

30 [AV OUT/DIGITAL] socket (P183, 189, 192, 195)

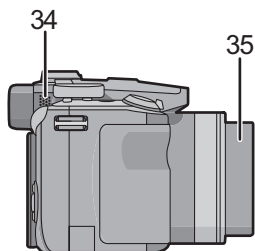
31 Terminal door

32 [FOCUS] button (P50, 76, 141)

33 Focus Mode selector switch (P74, 75)



- 34 Speaker (P157)
- 35 Lens barrel

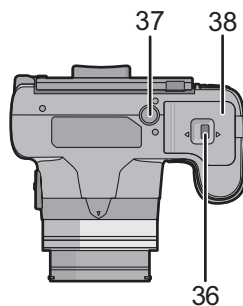


- 36 Release lever (P21)
- 37 Tripod thread (P208)

- When you use a tripod, make sure the tripod is stable when the camera is attached to it.

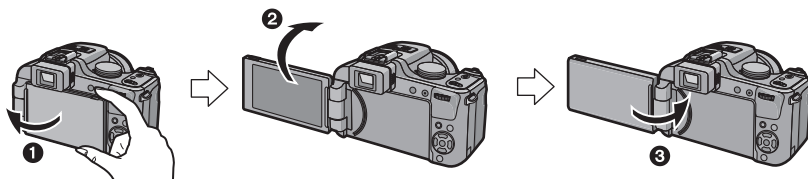
- 38 Card/Battery door (P21)

- We recommend using a battery with sufficient power when recording motion pictures.



Rotating the LCD monitor

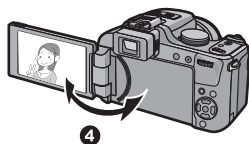
At the time when this camera is purchased, the LCD monitor is stowed in the camera body. Bring out the LCD monitor as shown below.



- 1 Open the LCD monitor. (Maximum 180°)
- 2 It can be rotated 180° forwards.
- 3 Return the monitor to its original position.

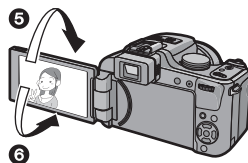
Rotation range of the LCD monitor

■ Horizontal opening direction



- 4 Maximum 180°

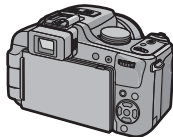
■ Vertical rotating direction



- 5 180°
 - It can be rotated 180° forwards.
- 6 90°
 - It can only be rotated 90° towards you.

● Note

- Only rotate the LCD monitor after opening it wide enough, and be careful not to use excessive force as it may be damaged.
- Be careful as the camera may get scratched if you rotate the LCD monitor without opening the LCD monitor fully.
- Check that the terminal door is closed when rotating the LCD monitor. The terminal door may get damaged or LCD monitor may get scratched if you rotate the LCD monitor with the terminal door opened.
- When holding the edge of the LCD monitor, there may be some distortion, however this is not a malfunction. Moreover, this has no effect on the taken pictures or playback.
- When not using the LCD monitor it is recommended that you close it with the screen facing inwards to prevent dirt and scratches.
- Be careful as the rotation sound will be recorded when the LCD monitor is rotated during motion picture recording.



Operating the Rear Dial

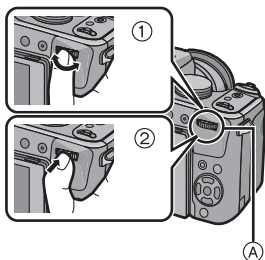
There are 2 ways to operate the rear dial, rotating left or right, and by pressing.

Rotating:

Selection of items or setting of values is performed during the various settings.

Pressing:

Operations that are the same as [MENU/SET] button, such as selection of settings and exiting the menu, are performed during the various settings.



Example of operation during recording/playback screen

	① “Rotating”	② “Pressing”
*1	Adjusting of Program Shift (P56), Manual Focus (P75), Aperture (P85), Shutter Speed (P85), selection of items when continuous mode is set, etc.	Switching to Compensating the Exposure (P78) etc.
*2	Forwarding/rewinding of pictures during 1 Screen Playback (P60), Multi-playback/Calendar Search (P61), Playback Zoom (P62)	Picture selection during Multi-Playback and Calendar Search

Ⓐ Rear dial

*1 Recording

*2 Playback

Note

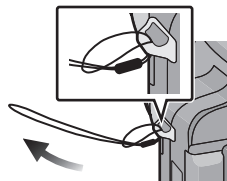
- The sound of the rear dial operation may be recorded when operated during motion picture recording.

Attaching the Lens Cap/Shoulder Strap

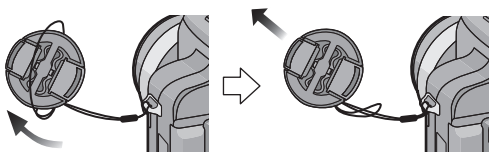
■ Lens Cap

- When you turn the camera off or carry the camera, attach the lens cap to protect the surface of the lens.

- 1 Pass the string through the hole on the camera.**

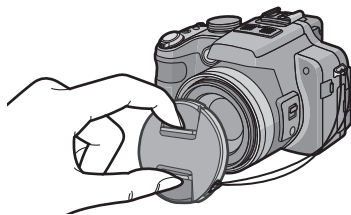


- 2 Pass the same string through the hole on the lens cap.**



- 3 Attach the lens cap.**

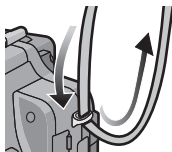
- Detach the lens cap before turning on the camera in the Recording Mode.
- Do not hang or swing around the camera holding it only by the the lens cap string.
- Make sure to detach the lens cap when turning the power [ON] or zooming.
- **Be careful not to lose the lens cap.**
- Since the lens cap string is long, be careful not to let it get tangled with the shoulder strap or let it hit the tripod during motion picture recording.



■ Shoulder Strap

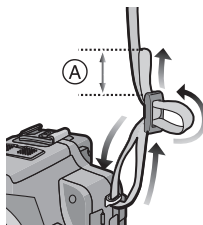
- We recommend attaching the shoulder strap when using the camera to prevent it from dropping.

1 Pass the shoulder strap through the hole at the shoulder strap eyelet.



2 Pass the shoulder strap through the stopper and fasten the shoulder strap.

- Ⓐ Pull the shoulder strap 2 cm (1/2") or more.
- Attach the shoulder strap to the other side of the camera being careful not to twist it.
- Check that the shoulder strap is firmly attached to the camera.

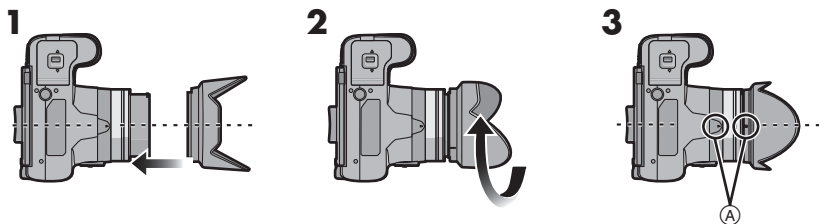


Attaching the Lens Hood

In bright sunlight or backlight, the lens hood will minimize lens flare and ghosting. The lens hood cuts off excess lighting and improves the picture quality.

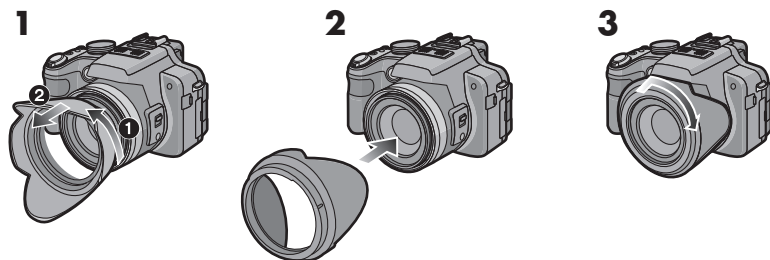
- Check that the camera is turned off.
- Close the flash.

- 1 Insert the lens hood into the lens with the short sides at the top and bottom.**
- 2 Rotate the lens hood in the direction of the arrow until it stops with a "click".**
- 3 Check that the marks (A) on the lens hood and the lens barrel are aligned.**
 - Check that the lens hood is firmly attached and that it does not appear in the picture.



■ Temporarily storing the lens hood

- 1 Turn the lens hood in the direction of the arrow to detach it.**
- 2 Reverse the lens hood and then insert the lens hood into the lens with the short sides at the top and bottom.**
 - Screw the lens hood into the lens barrel in the direction indicated by the arrow, ensuring that the two parts mesh together properly.
- 3 Turn the lens hood in the direction of the arrow until it stops.**
 - Attach the lens cap.
 - When temporarily storing the lens hood, check that it is firmly attached.



● Note

- When taking pictures with flash with the lens hood attached, the lower portion of the photo may turn dark (vignetting effect) and the control of the flash may be disabled because the photo flash may be obscured by the lens hood. We recommend detaching the lens hood.
- When using the AF assist lamp in the dark, detach the lens hood.

Charging the Battery

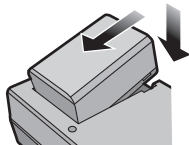
■ About batteries you can use with this camera.

It has been found that counterfeit battery packs which look very similar to the genuine product are made available to purchase in some markets. Some of these battery packs are not adequately protected with internal protection to meet the requirements of appropriate safety standards. There is a possibility that these battery packs may lead to fire or explosion. Please be advised that we are not liable for any accident or failure occurring as a result of use of a counterfeit battery. To ensure safe operation we urgently recommend to use only the Leica battery BP-DC9 E/U (P7).

- Use only the specified charger and battery.
 - The camera has a function for distinguishing batteries which can be used safely. The dedicated battery supports this function. The only battery suitable for use with this camera is the Leica battery BP-DC9 E/U (P7). (Batteries which do not support this function cannot be used). Leica cannot in any way guarantee the quality, performance or safety of any other batteries.
- ### ■ Charging
- The battery is not charged when the camera is shipped. Charge the battery before use.
 - Charge the battery with the charger indoors.
 - It is recommended to charge the battery in a temperature between 10 °C to 30 °C. (The battery temperature should also be the same.)

1 Insert the battery into the charger.

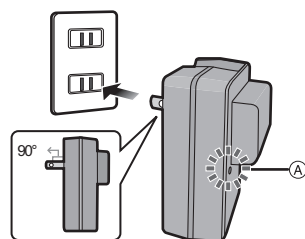
- The terminals should face the charger's contacts and the Leica logo upwards.



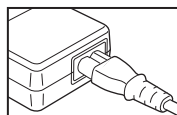
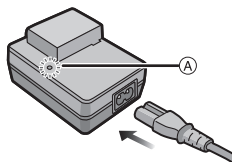
2 Connect the charger to the electrical outlet.

- Disconnect the charger from the electrical socket and detach the battery after charging is completed.
- The AC cable does not fit entirely into the AC input terminal. A gap will remain as shown on the right.


plug-in type




Cable type



■ About the [CHARGE] indicator

The [CHARGE] indicator  turns on: Charging has started.

The [CHARGE] indicator  turns off: Charging has been completed without any problem.

• When the [CHARGE] indicator flashes

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

■ Charging

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 the battery in hot/cold environments or a battery that has not been used for long time may be longer than normal.

■ Battery indication

The battery indication is displayed on the LCD monitor/Viewfinder.



- The indication turns red and flashes if the remaining battery power is exhausted. (The power lamp also flashes) Recharge the battery or replace it with a fully charged battery.

📌 Note

- The battery may be warm after use, during charging, immediately after charging etc. The camera also becomes warm during use. This is not a malfunction.
- The battery can be recharged even when it still has some charge left, but it is not recommended that the battery charge be frequently topped up while the battery is fully charged. (Since characteristic swelling may occur.)
- **Do not leave any metal items (such as clips) near the power plug terminals. Otherwise, a fire and/or electric shocks may be caused by short-circuiting or the resulting heat generated.**

Approximate recording time and number of recordable pictures

■ Recording still pictures (When using the LCD monitor/Viewfinder)



Number of recordable pictures	Approx. 410 pictures	(By CIPA standard in Program AE Mode)
Recording time	Approx. 205 min	


Recording conditions by CIPA standard

- CIPA is an abbreviation of [Camera & Imaging Products Association].
- Temperature: 23 °C/Humidity: 50%RH when LCD monitor is on.
- Using a 32 MB SD 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 [AUTO].)
- **Recording once every 30 seconds** with full flash every second recording.
- Rotating the zoom lever from Tele to Wide or vice versa in every recording.
- Turning the camera off every 10 recordings and leaving it until the temperature of the battery decreases.

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

■ Recording motion pictures (When using the LCD monitor/Viewfinder)

	[AVCHD] (Recording with picture quality set to [FSH]())	[MOTION JPEG] (Recording with picture quality set to [HD]())
Continuous recordable time (motion pictures)	Approx. 110 min	Approx. 160 min
Actual recordable time (motion pictures)	Approx. 60 min	Approx. 90 min

- These times are for an ambient temperature of 23 °C and a humidity of 50%RH. Please be aware that these times are approximate.
- Actual recordable time is the time available for recording when repeating actions such as switching the power supply [ON]/[OFF], starting/stopping recording, zoom operation etc.
- **With camera models 18 393 / 18 394:**
Motion pictures can be recorded continuously in [MOTION JPEG] or [HIGH SPEED MOVIE] in Scene Mode up to a capacity of 2 GB. Only the maximum recordable time for 2 GB is displayed on the screen.
The maximum time available for recording motion pictures continuously with [AVCHD] is 13 hours 3 minutes 20 seconds. Only respective times will be displayed on the screen. However, the recording may stop before that depending on the remaining battery level.
- **With camera model 18 392:**
Motion pictures can be recorded continuously for up to 29 minutes. Also, motion picture recorded continuously in [MOTION JPEG] is possible for up to 2 GB. (Example: [7m 50s] with ())
The remaining time for continuous recording is displayed on the screen.

■ Playback (When using the LCD monitor/Viewfinder)

Playback time	Approx. 330 min
----------------------	-----------------

Note

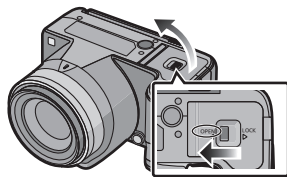
- **The operating times and number of recordable pictures will differ according to the environment and the operating conditions.**
For example, in the following cases, the operating times shorten and the number of recordable pictures is reduced.
 - In low-temperature environments, such as on ski slopes.
 - When using [AUTO POWER LCD] or [POWER LCD] (P32).
 - When operations such as flash and zoom are used repeatedly.
- When the operating time of the camera becomes extremely short even after properly charging the battery, the life of the battery may have expired. Buy a new battery.

Inserting and Removing Card and Battery

- Turn the power switch to [OFF] and confirm that the lens barrel is retracted.
- Close the flash.

- 1** Set the camera ON/OFF switch to OFF, slide the release lever in the direction of the arrow, and open the card/battery door.

- Use only the Leica battery BP-DC9 E/U (P7).
- We cannot guarantee the quality of any other batteries.



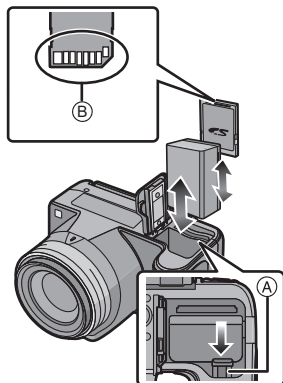
- 2** Insert battery and card.

Be sure to insert in the correct orientation.

Battery: Push it in until it is locked by the lever (A). To remove, pull this lever in the direction of the arrow.

Card: Push it down until it clicks into place. To remove, push it further down until it clicks, then pull it out upright.

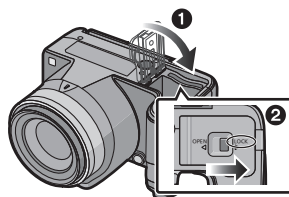
- (B): Do not touch the connection terminals of the card.
- The card may be damaged if it is not fully inserted.



- 3** ①: Close the card/battery door.

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

- If the card/battery door cannot be completely closed, remove the card, check its direction and then insert it again.






 **Note**

- Remove the battery after use.
- Do not remove the battery while the power is on as the settings on the camera may not be stored properly.
- The supplied battery is designed only for the camera. Do not use it with any other equipment.
- The battery will be exhausted if left for a long period of time after being charged.
- Remove the card or battery after turning off the power, with the power lamp completely turned off and the lens barrel retracted completely. (The camera may not function properly, or the card or recorded contents may be damaged.)

About the Internal Memory/the Card

The camera can store image data as follows.

- **When no card is inserted:** Pictures are recorded and played back in/ from the internal memory.
- **When a card is inserted:** Pictures are recorded and played back on/ from the card.
- **When using the internal memory**
 →  (access indication*)
- **When using the card**
 (access indication*)

* The access indication lights up in red when pictures are being recorded on the internal memory (or the card).



Internal Memory

- You can copy the recorded pictures to a card. (P182)
- **Memory size: Approx. 40 MB**
- **Recordable motion pictures: QVGA (320×240 pixels) only**
- The internal memory can be used as a temporary storage device when the card being used becomes full.
- The access time for the internal memory may be longer than the access time for a card.

Card

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

Type of card which can be used with the camera	Remarks
SD Memory Card (8 MB to 2 GB)	<ul style="list-style-type: none"> • SDHC Memory Card can be used with SDHC Memory Card or SDXC Memory Card compatible equipment. • SDXC Memory Card can only be used with SDXC Memory Card compatible equipment. • Check that the PC and other equipment are compatible when using the SDXC Memory Cards.
SDHC Memory Card (4 GB to 32 GB)	
SDXC Memory Card (48 GB, 64 GB)	

- Only cards bearing the SDHC logo (indicating that the card conforms to SD video standards) may be used as 4 GB to 32 GB cards.
- Only cards bearing the SDXC logo (indicating that the card conforms to SD video standards) may be used as 48 GB, 64 GB cards.
- Use a card with SD Speed Class⁺ with "Class 4" or higher when recording motion pictures in [AVCHD]. Also, use a card with SD Speed Class with "Class 6" or higher when recording motion pictures in [MOTION JPEG].
 - * SD Speed Class is the speed standard regarding continuous writing.

Note

- **Do not turn the camera off or remove its battery or card when the access indication is lit [when pictures are being written, read or deleted, or the internal memory or the card is being formatted (P39)]. Furthermore, do not subject the camera to vibration, 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.

- Write-Protect switch (A) provided (When this switch is set to the [LOCK] position, no further data writing, deletion or formatting is possible. The ability to write, delete and format data is restored when the switch is returned to its original position.)
- The data on the internal memory or the card may be damaged or lost due to electromagnetic waves, static electricity or breakdown of the camera or the card. We recommend storing important data on a PC etc.
- Do not format the card on your PC or other equipment. Format it on the camera only to ensure proper operation. (P39)
- Keep the Memory Card out of reach of children to prevent swallowing.



Setting Date/Time (Clock Set)

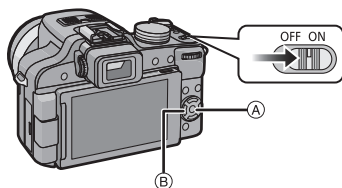
- The clock is not set when the camera is shipped.

1 Turn the camera on.

(A) [MENU/SET] button

(B) Cursor buttons

- The lens barrel extends.
- If the language select screen is not displayed, proceed to step 4.

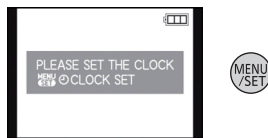


2 Press [MENU/SET].

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

- The [PLEASE SET THE CLOCK] message appears.

4 Press [MENU/SET].

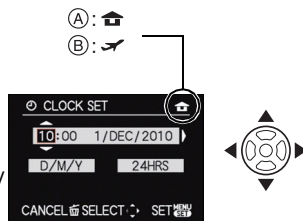


- 5** Press ◀/▶ to select the items (year, month, day, hour, minute, display sequence or time display format), and press ▲/▼ to set.

(A): Time at the home area

(B): Time at the travel destination (P130)

- Select either [24HRS] or [AM/PM] for the time display format.
- When [AM/PM] is selected as the time display format, midnight is displayed as AM 12:00 and noon is displayed as PM 12:00. This display format is common in the US and elsewhere.
- You can cancel without setting the clock by pressing [⏮].



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

- 7** Press [MENU/SET].

- Press [⏮] to return to the settings screen.
- After completing the clock settings, turn the camera off. Then turn the camera back on, and check that the display reflects the settings that were performed.
- When [MENU/SET] has been pressed to complete the settings without the clock having been set, set the clock correctly by following the “Changing the clock setting” procedure below.

Changing the clock setting

Select [CLOCK SET] in the [REC] or [SETUP] menu, and press ▶. (P28)

• It can be changed in steps 5 and 6 to set the clock.

• **The clock setting is maintained for 3 months using the built-in clock battery even without the battery. (Leave the charged battery in the camera for 24 hours to charge the built-in battery.)**


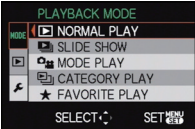
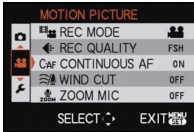


Note

- The clock is displayed when [DISPLAY] is pressed several times during recording.
- You can set the year from 2000 to 2099.
- If the clock is not set, the correct date cannot be printed when you stamp the date on the pictures with [TEXT STAMP] (P168) or order a photo studio to print the pictures.
- If the clock is set, the correct date can be printed even if the date is not displayed on the screen of the camera.

Setting the Menu

The camera comes with menus that allow you to choose the settings for taking pictures and playing them back as you like and menus that enable you to have more fun with the camera and use it more easily.

In particular, the [SETUP] menu contains some important settings relating to the camera's clock and power. Check the settings of this menu before proceeding to use the camera.

<p>[REC] Mode menu (P132 to 149)</p> <ul style="list-style-type: none"> This menu lets you set the coloring, sensitivity, aspect ratio, number of pixels and other aspects of the pictures you are recording. 	<p>[MODE] Playback Mode menu (P63, 160 to 164)</p> <ul style="list-style-type: none"> This menu lets you select the setting of the playback methods such as playback or slide show of only the pictures set as [FAVORITE]. 
<p>[MOTION PICTURE] Mode menu (P150 to 151)</p> <ul style="list-style-type: none"> This menu lets you set the [REC MODE], [REC QUALITY], and other aspects for motion picture recording. 	<p>[PLAYBACK] Mode menu (P165 to 182)</p> <ul style="list-style-type: none"> This menu lets you set the Protection, Cropping or Print Settings, etc. of recorded pictures. 
<p>[SETUP] menu (P31 to 40)</p>	
<ul style="list-style-type: none"> This menu lets you perform the clock settings, select the operating beep tone settings and set other settings which make it easier for you to operate the camera. [SETUP] menu can be set from either Recording Mode or Playback Mode. 	

Note

Due to the camera's specifications, it may not be possible to set some of the functions or some functions may not work in some of the conditions under which the camera is used. [FAVORITE PLAY] is not displayed when [FAVORITE] in [SETUP] menu has not been set to [ON]. (P39)

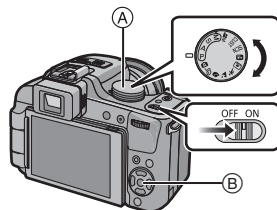
Setting menu items

This section describes how to select the Program AE Mode (P53), and the same setting can be used for the [MOTION PICTURE] mode menu, [PLAYBACK] menu and [SETUP] menu as well.

Example: To change the [AF MODE] from [□] (1-area-focusing) to [👤] (Face Detection) in Program AE Mode with the focus mode selector switch set to [AF].

1 Turn the camera on.

- (A) Mode dial
- (B) [MENU/SET] button
- The lens barrel extends.



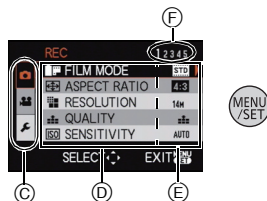
2 Set the mode dial to [P].

- To set the playback menu, proceed to step 3 by pressing the [▶].

3 Press [MENU/SET] to display the menu.

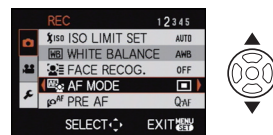
- (C) Menu toggle icon
- (D) Menu item
- (E) Settings
- (F) Menu screen page

- You can easily switch menu screen pages by rotating the zoom lever.



4 Press ▲/▼ to select [AF MODE].

- Select the item at the very bottom, and press ▼ to move to the second screen.



5 Press ▶.

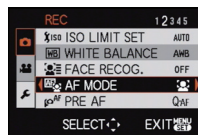
- Depending on the item, its setting may not appear or it may be displayed in a different way.



6 Press ▲/▼ to select [👤].



7 Press [MENU/SET] to set.





8 Press [MENU/SET] to close the menu.



Switching to other menus

e.g.: Switching to the [SETUP] menu

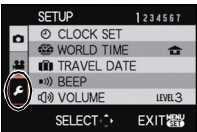

- 1** Press [MENU/SET] to display the menu.



- 2** Press ◀.

- 3** Press ▼ to select the [SETUP] menu icon [⌂].

- 4** Press ▶.
 - Select a menu item next and set it.

Using the quick menu

By using the quick menu, some of the menu settings can be easily found.

- Some of the menu items cannot be set by the modes.

1 Press [Q.MENU] when recording.

2 Press ▲/▼/◀/▶ to select the menu item and the setting and then press [MENU/SET] to close the menu.



Ⓐ The items to be set and the settings are displayed.

- You can set the following items in detail by pressing [DISPLAY].
[WHITE BALANCE] (P136)/[AF MODE] (P139)


Perform these settings if you need to.

About the Setup Menu




[CLOCK SET], [ECONOMY] and [AUTO REVIEW] are important items. Check their settings before using them.

- In the Snapshot Mode, only [CLOCK SET], [WORLD TIME], [BEEP], [LANGUAGE] and [O.I.S. DEMO.] (P40) can be set.


For details on how to select the [SETUP] menu settings, refer to P28.

 [CLOCK SET]	Setting Date/Time.
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













- Refer to P25 for details.


 [WORLD TIME]	Set the time in your home area and travel destination.	
	 [DESTINATION]: Travel destination area	 [HOME]: Your home area

- Refer to P130 for details.

 [TRAVEL DATE]	Set the departure date and the return date of the vacation.	
	[TRAVEL SETUP] [OFF]/[SET]	[LOCATION] [OFF]/[SET]

- Refer to P127 for details.

 [BEEP]	This allows you to set the beep and shutter sound.	
	■)) [BEEP LEVEL]:  (Muted)  (Low)  (High)	 [SHUTTER VOL.]:  (Muted)  (Low)  (High)
	 [BEEP TONE]:  [1]/  [2]/  [3]	 [SHUTTER TONE]:  [1]/  [2]/  [3]

 [VOLUME]	Adjust the volume of the speaker to any of 7 levels.
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- When you connect the camera to a TV, the volume of the TV speakers does not change.

C [CUST. SET MEM.]	Up to 3 current camera settings can be registered as custom settings. (Recording Mode only)
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- Refer to [P116](#) for details.




Fn [Fn BUTTON SET]	Assign [REC] Mode menu to ▼ button. It is convenient to register [REC] Mode menu that is used often. (Recording Mode only) [FILM MODE]/[ASPECT RATIO]/[QUALITY]/ [METERING MODE]/[WHITE BALANCE]/[I.EXPOSURE]/ [GUIDE LINE]/[REC AREA]/[REMAINING DISP.]
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- Refer to [P132](#) for details about the [REC] Mode menu.


LCD [LCD MODE]	These menu settings make it easier to see the LCD monitor when you are in bright places. [OFF] [A* [AUTO POWER LCD]: The brightness is adjusted automatically depending on how bright it is around the camera. [* [POWER LCD]: The LCD monitor becomes brighter and easier to see even when taking pictures outdoors.
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- The brightness of the pictures displayed on the LCD monitor is increased so some subjects may appear differently from actuality on the LCD monitor. However, this does not affect the recorded pictures.
- The LCD monitor automatically returns to normal brightness after 30 seconds when recording in Power LCD Mode. Press any button to make the LCD monitor bright again.
- If the screen is difficult to see because of light from the sun etc. shining on it, use your hand or another object to block the light.
- The number of recordable pictures decreases in Auto Power LCD Mode and Power LCD Mode.
- [AUTO POWER LCD] cannot be selected in Playback Mode.

A/A [DISPLAY SIZE]	Change the display size of some icons and menu screens. [STANDARD]/[LARGE]
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 [GUIDE LINE]	Set the pattern of the guide lines displayed when taking pictures. You can also set whether or not to have the recording information displayed when the guide lines are displayed. (P66)	
	[REC. INFO.]: [OFF]/[ON]	[PATTERN]: []/[


- The [PATTERN] setting is fixed to [] in the Snapshot Mode.

 [HISTOGRAM]	This allows you to set either to display or not display the histogram. (P68)	
	[OFF]/[ON]	

 [REC AREA]	Angle of view for motion picture recording can be checked.	
	[OFF]/[ON]	

- Motion picture recording frame display is only an approximation.
- Recording frame display may disappear when zooming to Tele depending on the resolution setting.
- This cannot be used during Snapshot Mode.

 [REMAINING DISP.]	This will switch display between the number of recordable pictures and available recording time.	
	 [REMAINING SHOTS]: This will display the number of recordable pictures for still pictures.	 [REMAINING TIME]: This will display the available recording time for motion pictures.

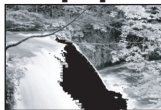
 [HIGHLIGHT]	When the Auto Review function is activated or when playing back, white saturated areas appear flashing in black and white.
	[OFF]/[ON]


- If there are any white saturated areas, we recommend compensating the exposure towards negative (P78) referring to the histogram (P68) and then taking the picture again. It may result in a better quality picture.

- There may be white saturated areas if the distance between the camera and the subject is too close when taking pictures with the flash.

If [HIGHLIGHT] is set to [ON] in this case, the area directly illuminated by the photo flash will become white saturated and appear flashing in black and white.

- Highlighting does not work during Multi-Playback (P61), Calendar Search (P165), Playback Zoom (P62), or Motion Picture Playback (P157).

[ON]**[OFF]**

 [LENS RESUME]	It is possible to memorize the zoom position and the MF (manual focus) position when the power is switched [OFF].
	[ZOOM RESUME]: It will automatically return to the zoom position when the power was switched [OFF], next time you turn the power [ON]. [OFF]/[ON]
	[MF RESUME]: It will memorize the MF position set with the manual focus. It will resume the memorized manual focus position when you return to manual focus recording. [OFF]/[ON]

- MF position will be memorized in the following cases:

- Turning the camera off
- When the focus mode selector switch is switched to anything but [MF]
- When switched to playback mode



- Zoom position will be set all the way to wide when the [ZOOM RESUME] is set to [OFF].

- When [MF RESUME] is set to [OFF], MF position will be the distance focused at the time of recording in Manual Focus.


- Depending on the recording conditions, the memorized MF positions and resumed MF positions might be different.

MF _Q [MF ASSIST]	In Manual Focus, the assistance screen appears on the center of the screen to facilitate focusing on the subject.
	[OFF] [ON]: The center of the screen is enlarged over the whole screen.


- Refer to [P76](#) for details.

ECO [ECONOMY]	You can conserve the battery life by setting these menus. Also, it will turn off the LCD monitor automatically when not in use to prevent discharge of the battery.
	 [SLEEP MODE]: The camera is automatically turned off if the camera has not been used for the time selected on the setting. [OFF]/[2MIN.]/[5MIN.]/[10MIN.]
	 [AUTO LCD OFF]: The LCD monitor is automatically turned off if the camera has not been used for the time selected on the setting. [OFF]/[15SEC.]/[30SEC.]


- Press the shutter button halfway or turn the camera off and on to cancel [SLEEP MODE].
- [SLEEP MODE] is set to [5MIN.] in the Snapshot Mode.
- [SLEEP MODE] is fixed to [2MIN.] when [AUTO LCD OFF] is set to [15SEC.] or [30SEC.].
- Press any button to turn on the LCD monitor again.
- [AUTO LCD OFF] does not work while operating menu or Playback Zoom.
- [SLEEP MODE] does not work in the following cases.
 - When connecting to a PC or a printer
 - When recording or playing back motion pictures
 - During a slide show
- [AUTO LCD OFF] does not work in the following cases.
 - When connecting to a PC or a printer
 - While the Self-Timer is set
 - When recording or playing back motion pictures
 - During a slide show
 - While the menu screen is displayed

 [PLAY ON LCD]	<p>If you selected to use the viewfinder in a Recording Mode, the display will automatically switch to the LCD monitor when playing back the pictures.</p> <p>[OFF]/[ON]</p>
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- Refer to [P67](#) for details.

 [AUTO REVIEW]	<p>Set the length of time that the picture is displayed after taking it.</p> <p>[OFF] [1SEC.] [2SEC.]</p> <p>[HOLD]: The pictures are displayed until one any of the buttons is pressed.</p>
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- The Auto Review function is activated regardless of its setting when using Auto Bracket ([P79](#)), [FLASH BURST] ([P101](#)) and [PHOTO FRAME] ([P105](#)) in Scene Mode and Continuous Mode ([P82](#)).
- In Snapshot Mode, the Auto Review function is fixed to [2SEC.].
- If [HIGHLIGHT] ([P34](#)) is set to [ON], white saturated areas appear flashing in black and white when the Auto Review function is activated.
- [AUTO REVIEW] does not work when recording motion pictures.

 [NO.RESET]	<p>Reset the file number of the next recording to 0001.</p>
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- The folder number is updated and the file number starts from 0001. ([P194](#))
- A folder number between 100 and 999 can be assigned. When the folder number reaches 999, the number cannot be reset. We recommend formatting the card ([P39](#)) after saving the data on a PC or elsewhere.
- To reset the folder number to 100, format the internal memory or the card first and then use this function to reset the file number. A reset screen for the folder number will then appear. Select [YES] to reset the folder number.

 [RESET]	<p>The [REC] or [SETUP] menu settings are reset to the initial settings.</p>
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- When the [RESET] setting is selected during recording, the operation that resets the lens is also performed at the same time. You will hear the sound of the lens operating but this is normal and not indicative of malfunctioning.
- When the [REC] Mode settings are reset, data registered with [FACE RECOG.] will be also reset, too.
- When [SETUP] menu settings are reset, the following settings are also reset. In addition, [ROTATE DISP.] ([P175](#)) is set to [ON].
 - The birthday and name settings for [BABY1]/[BABY2] ([P99](#)) and [PET] ([P100](#)) in Scene Mode.
 - The [TRAVEL DATE] ([P127](#)) setting. (Departure date, return date, destination)
 - The [WORLD TIME] ([P130](#)) setting.
 - The [CUST. SET MEM.] ([P116](#)) setting.
 - Position memorized in [LENS RESUME]/[MENU RESUME].
- The folder number and the clock setting are not changed.

 [USB MODE]	Select the USB communication system after or before connecting the camera to your PC or your printer with the USB connection cable (supplied).
	 [SELECT ON CONNECTION]: Select either [PC] or [PictBridge(PTP)] if you connected the camera to a PC or a printer supporting PictBridge.  [PictBridge(PTP)]: Set after or before connecting to a printer supporting PictBridge.  [PC]: Set after or before connecting to a PC.

- When [PC] is selected, the camera is connected via the “USB Mass Storage” communication system.
- When [PictBridge(PTP)] is selected, the camera is connected via the “PTP (Picture Transfer Protocol)” communication system.

 [VIDEO OUT]	Set to match the color television system in each country. (Playback Mode only)
	[NTSC]: Video output is set to NTSC system. [PAL]: Video output is set to PAL system.

- This will operate when the AV cable or HDMI mini cable (optional) is connected.

 [TV ASPECT]	Set to match the type of TV. (Playback Mode only)
	[16:9]: When connecting to a 16:9 screen TV. [4:3]: When connecting to a 4:3 screen TV.

- This will work when the AV cable is connected.

HDMI [HDMI MODE]	Set the format for HDMI output when playing back on a HDMI compatible TV connected with the camera using the optional HDMI mini cable.
	<p>[AUTO]: The output resolution is automatically set based on the information from the connected TV.</p> <p>[1080i]: The interlace method with 1080 available scan lines is used for output.</p> <p>[720p]: The progressive method with 720 available scan lines is used for output.</p> <p>[576p]^{*1}/[480p]^{*2}: The progressive method with 576^{*1}/480^{*2} available scan lines is used for output.</p>

*1 When [VIDEO OUT] is set to [PAL]







*2 When [VIDEO OUT] is set to [NTSC]

• **Interlace method/progressive method**

- i= interlace scanning is scanning the screen with half of the effective scanning lines every $1/50^{*1}(1/60^{*2})$ seconds, where p= progressive scanning is a high density image signal that is scanning the screen with all the effective scanning lines every $1/50^{*1}(1/60^{*2})$ seconds. The [HDMI] terminal on the camera is compatible with high definition output [1080i]. It is necessary to have a compatible TV to enjoy progressive and high definition images.
- If the images are not output on the TV when the setting is [AUTO], match with the image format your TV can display, and select number of effective scanning lines. (Please read the operating instructions for the TV.)
 - This will work when the HDMI mini cable (optional) is connected.
 - Refer to [P185](#) for details.

HDTV Link [HDTV Link]	Setup enabling the camera to be controlled by the remote control units of HDTV-Link compatible equipment using the optional HDMI mini cable.
	<p>[OFF]: Operation is performed with the buttons on the camera.</p> <p>[ON]: Remote control operation of the HDTV Link compatible equipment is enabled. (Not all operations are possible) Button operation of the main unit will be limited.</p>

- This will work when the HDMI mini cable (optional) is connected.
- Refer to [P187](#) for details.

SCN [SCENE MENU]	Set the screen that is displayed when the mode dial is set to  ,  ,  ,  ,  and  .
	<p>[OFF]: The recording screen in the currently selected Advanced Scene Mode (P91) or Scene Mode (P96) appears.</p> <p>[AUTO]: The Advanced Scene Mode or Scene Mode menu screen appears.</p>


M [MENU RESUME]	The last operated menu position is saved even if the camera is turned off.
	[OFF]/[ON]

★ [FAVORITE]	Marks can be added to pictures, and set up as favorites.
	[OFF]/[ON]


- When it is set to [ON], you can set/cancel favorites by pressing ▼ during playback. You can also set favorites from the playback menu. For details, refer to P176.









Ver. [VERSION DISP.]	It is possible to check which version of firmware is on the camera.
----------------------	---------------------------------------------------------------------

 [FORMAT]	The internal memory or card is formatted.
	Formatting permanently deletes all data on your memory card. Please be sure all pictures and motion pictures are saved elsewhere before using this feature.

- Use a battery with sufficient battery power when formatting.
- If a card has been inserted, only the card is formatted. To format the internal memory, remove the card.
- If the card has been formatted on a PC or other equipment, format it on the camera again.
- It may take longer to format the internal memory than the card.
- If formatting cannot be performed, contact your Leica dealer or the nearest Leica Customer Service Center.

 [LANGUAGE]	Set the language displayed on the screen.
-------------------------------------------------------------------------------------------------	-------------------------------------------

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

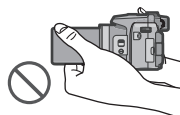
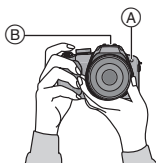
DEMO [O.I.S. DEMO.]	<p>Displays the amount of camera shake the camera has detected.</p> <p>  Amount of camera shake  Amount of camera shake after correction </p> <div style="text-align: right;">  </div> <p style="text-align: center;">   </p>
----------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- The Stabilizer Function is switched between [ON] and [OFF] every time [MENU/SET] is pressed during the [O.I.S. DEMO.].
- In Playback Mode, [O.I.S. DEMO.] cannot be displayed.
- Press [DISPLAY] to close [O.I.S. DEMO.].
- [O.I.S. DEMO.] is an approximation.

Holding and using your camera

Tips for taking good pictures

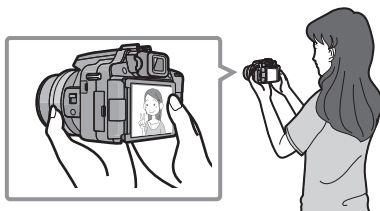
- **Do not cover the flash, the AF assist lamp (A) or the microphone (B) with your fingers or other objects.**
- Hold the camera firmly with both hands, keep your arms still at your side and stand with your feet slightly apart.
- Be careful not to move the camera when you press the shutter button.
- The lens barrel will retract approximately 15 seconds after switching from Recording Mode to Playback Mode.
- Do not touch the lens or the lens barrel. You may get your fingers pinched when it is retracting, or the lens may get dirty. (P205)
- When taking pictures, make sure your footing is stable and there is no danger of colliding with another person, an object etc.



LCD Monitor

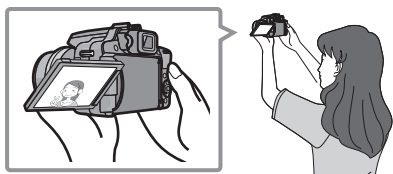
This is convenient as it allows you to take pictures from various angles by adjusting the LCD monitor. (P11)

■ Taking pictures at a normal angle



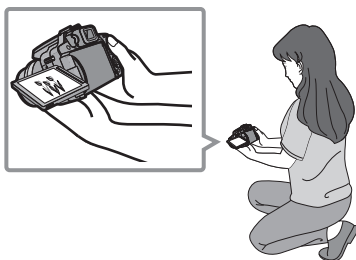
■ Taking pictures at a high angle

Open the LCD monitor 180° toward you, and adjust the angle.



■ Taking pictures at a low angle

Open the LCD monitor 180° toward you, and adjust the angle.



- This is convenient when there is someone in front of you and you cannot get close to the subject.

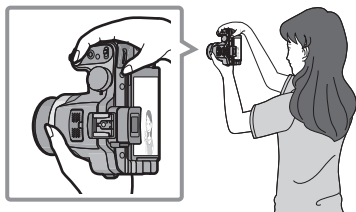
- This is convenient when taking pictures of flowers etc. that are in a low position.

■ Taking pictures with the camera held vertically

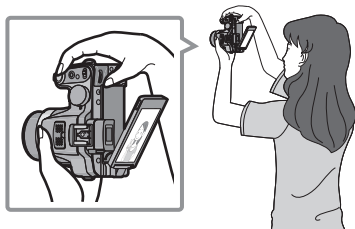
Open the LCD monitor and rotate it to an angle that makes it easy to see.

- Do not cover the AF assist lamp, the microphone with your fingers or other objects.

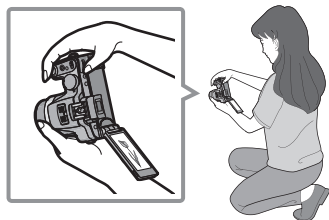
Taking pictures at a normal angle



Taking pictures at a high angle



Taking pictures at a low angle



 **Note**

- Close the LCD monitor, turn the power switch to [OFF], and retract the lens completely when carrying the camera.

Direction Detection Function

Pictures recorded with the camera held vertically are played back vertically (rotated). (Only when [ROTATE DISP.] (P175) is set to [ON])

- The Direction Detection Function may not operate correctly if recording is performed with the camera aimed up or down.
- Motion pictures taken with the camera held vertically are not displayed vertically.

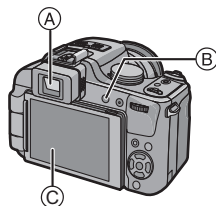
Viewfinder

■ Switching the LCD monitor/Viewfinder

Press [EVF/LCD] to switch the monitor screen.

- (A) Viewfinder
- (B) [EVF/LCD] button
- (C) LCD monitor

- When the LCD monitor turns on, the Viewfinder turns off (and vice versa).

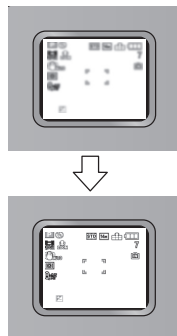
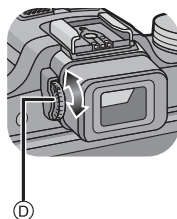


■ Diopter adjustment

Adjust the diopter to suit your vision so that you can see the viewfinder image clearly.

Look at the display on the Viewfinder and rotate the diopter adjustment dial to where the screen is clearest.

- (D) Diopter adjustment dial

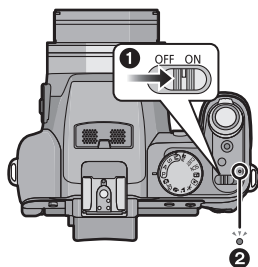


Mode switching

Selecting the [REC] Mode to record still or motion pictures

1 Turn the camera on.

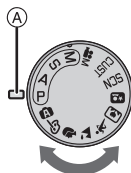
- The power lamp ② lights when you turn the camera on ①.



2 Change modes by rotating the mode dial.

Align the desired mode with index **A**.

- Make sure the dial is set exactly to the click-stop position of the desired mode. (The mode dial rotates 360°)



Basic

A Snapshot Mode (P48)

For taking pictures with extended automatic settings.

P Program AE Mode (P53)

For taking pictures with automatic exposure control.

■ Advanced

Aperture-Priority Mode (P85)

The exposure is determined by the automatically controlled shutter speed, based on the manually set aperture value.

Shutter-Priority Mode (P85)

The exposure is determined by the automatically controlled aperture value, based on the manually set shutter speed.

Manual Exposure Mode (P86)

The exposure is determined by the manually set aperture value and shutter speed.

Creative Motion Picture Mode (P114)

Record motion picture with manual settings.

Custom Mode (P117)

Use this mode to take pictures with previously registered settings.

Scene Mode (P96)

This allows you to take pictures that match the scene being recorded.

My Color Mode (P88)

Use this mode to check coloring effects, select a color mode from among twelve color modes, and then take pictures.

■ Advanced Scene Mode

Portrait Mode (P92)

Use this mode to take pictures of people.

Scenery Mode (P93)

Use this mode to take pictures of scenery.

Sports Mode (P93)

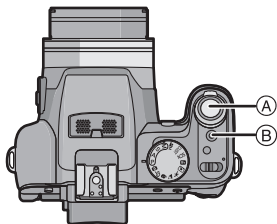
Use this mode to take pictures of sporting events, etc.

Close-up Mode (P94)

Use this mode to take pictures of a close-by subject.

Night Portrait Mode (P95)

Use this mode to take pictures of night scenes and people against night time scenery.



- (A) Shutter button
- (B) Motion picture button

Taking still pictures

1 Press the shutter button halfway to focus.



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



■ For more details, refer to the explanation of each recording mode.

Recording motion pictures

1 Press the motion picture button to start the recording.



2 Press the motion picture button again to stop the recording.



- Sound will be turned off when pressing the motion picture button indicating start/stop of motion picture recording.
Sound volume can be set in [BEEP LEVEL] (P31).

■ Recording of motion pictures appropriate for each mode is possible. For more details, refer to “Recording Motion Pictures” (P107).

[REC] Mode: [A]

Using Snapshot Mode

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

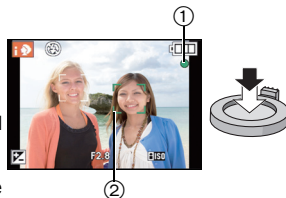
• The following functions are activated automatically.

- Scene Detection/[STABILIZER]/Intelligent ISO sensitivity control/Face Detection/Quick AF/[I.EXPOSURE]/Digital Red-Eye Correction/Backlight Compensation/[I.RESOLUTION]/Intelligent Zoom

1 Set the mode dial to [A].

2 Press the shutter button halfway to focus.

- The focus indication ① (green) lights up when the subject is focused.
- The AF frame ② is placed over the subject's face by the Face Detection function. In other cases, it is placed at the point on the subject which is in focus.
- The focus range is 1 cm (Wide)/1 m (Tele) to ∞.
- The maximum close-up distance (the shortest distance at which the subject can be taken) differs depending on the zoom magnification.



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

- The access indication (P23) lights up in red when pictures are being recorded on the internal memory (or the card).



■ When taking pictures using the flash (P69)

• Open the flash when the flash is to be used. (P69)

- [iA], [iA], [iS] or [iS] is set depending on the type of subject and brightness.
- When [iA] or [iS] is displayed, the Digital Red-Eye Correction is turned on.
- Shutter speed will be slow when using [iS] or [iS].








■ When taking pictures using the zoom (P57)

■ When recording motion pictures (P107)

■ To take pictures using the Face Recognition function (which stores faces of frequent subjects with information such as their names and birthdays) (P121)

Scene Detection

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

A →		[i- PORTRAIT]	
		[i- SCENERY]	
		[i- MACRO]	
		[i- NIGHT PORTRAIT]	• Only when [i- A] is selected
		[i- NIGHT SCENERY]	
		[i- SUNSET]	
		[i- BABY]*	

- [A] is set if none of the scenes are applicable, and the standard settings are set.
- When [i- P], [i- S] or [i- M] is selected, the camera automatically detects a person's face, and it will adjust the focus and exposure. **(Face Detection) (P140)**
- If a tripod is used, for instance, and the camera has judged that camera shake is minimal when the Scene Mode has been identified as [i- NS], the shutter speed will be set to a maximum of 8 seconds. Take care not to move the camera while taking pictures.
- When [FACE RECOG.] is set to [ON], and the face similar to the registered face is detected, [R] is displayed in the top right of [i- P], [i- S] and [i- M].
- * When [FACE RECOG.] is set to [ON], [i- B] will be displayed for birthdays of registered faces already set only when the face of a person 3 years old or younger is detected.

Note

- Due to conditions such as the ones below, a different scene may be identified for the same subject.
 - Subject conditions: When the face is bright or dark, the size of the subject, the color of the subject, the distance to the subject, the contrast of the subject, when the subject is moving
 - Recording conditions: Sunset, Sunrise, Under low brightness conditions, When the camera is shaken, When zoom is used
- To take pictures in an intended scene, it is recommended that you take pictures in the appropriate Recording Mode.
- **The Backlight Compensation**
 Backlight refers to situations when the important part of the subject is both considerably smaller than the total frame and also illuminated much less than the rest.
 Normally, such subjects would be rendered too dark. This function compensates the exposure by brightening the whole picture automatically.

AF Tracking Function

It is possible to set the focus to the specified subject.

1 Press [FOCUS].

- [AF-ON] is displayed in the upper left of the screen.
- AF Tracking frame is displayed in the center of the screen.
- Press [FOCUS] again to cancel.



FOCUS

2 Aim the AF Tracking frame at your subject and press [AF/AE LOCK] to lock the subject.

- The AF tracking frame will turn yellow.
- An optimum scene mode for the framed subject will be chosen.
- Press [FOCUS] to cancel.

AF/AE LOCK

Note

- [FACE RECOG.] does not work during AF tracking.
- Please read the Note regarding the AF tracking on [P140](#).

Settings in Snapshot Mode

■ [REC] Mode menu

[RESOLUTION]*¹ (P133)/[COLOR EFFECT]/[FACE RECOG.] (P121)/
[MOTION DEBLUR]

- [COLOR EFFECT] can set the color effects of [STANDARD], [Happy] or [B/W]. When [Happy] is selected, it is possible to automatically take a picture with a higher level of brilliance for the color brightness and vividness.
- When [MOTION DEBLUR] is set to [ON], the camera will automatically attempt to reduce blur by selecting an optimal shutter speed according to the motion of the subject. Note that the resolution may be reduced when using this setting. [] is displayed on the recording screen when [MOTION DEBLUR] is set.



■ [MOTION PICTURE] Mode menu



[REC MODE] (P111)/[REC QUALITY]*¹ (P111)

■ [SETUP] menu

[CLOCK SET]/[WORLD TIME]/[BEEP]/[LANGUAGE]/[O.I.S. DEMO.]

- The settings of the following items are fixed.

Item	Settings
[GUIDE LINE] (P33)	[] ([REC. INFO.]: [OFF])
[ECONOMY] ([SLEEP MODE]) (P35)	[5MIN.]
[AUTO REVIEW] (P36)	[2SEC.]
[SENSITIVITY] (P80)	[] ISO (Intelligent ISO) (The maximum ISO sensitivity: [ISO1600])* ²
[QUALITY] (P134)	[]
[ISO LIMIT SET] (P135)	1600* ²
[WHITE BALANCE] (P136)	[AWB]
[AF MODE] (P139)	[]* ³
[PRE AF] (P142)	[Q] AF
[METERING MODE] (P144)	[]
[I.EXPOSURE] (P144)	[STANDARD]
[I.RESOLUTION] (P145)	[i.ZOOM]* ⁴
[STABILIZER] (P146)	AUTO* ⁵
[AF ASSIST LAMP] (P147)	[ON]
[FLASH SYNCHRO] (P148)	[1ST]
[RED-EYE REMOVAL] (P148)	[ON]
[CONTINUOUS AF] (P151)	[ON]
[WIND CUT] (P151)	[OFF]
[ZOOM MIC] (P151)	[ON]

- *1 The settings which can be selected are different from when other [REC] Modes are used.
 - *2 When [MOTION DEBLUR] is set to [ON], and maximum ISO sensitivity level becomes [ISO6400].
 - *3 When a face is not recognized, it will be fixed to  when recording still pictures, and to  when recording motion pictures.
 - *4 The Intelligent Zoom does not work when [MOTION DEBLUR] is set to [ON].
 - *5 Fix to [MODE 1] during motion picture recording or when continuous mode is set.
- The following functions cannot be used.
 - [FILM MODE]/[AUTO LCD OFF]/Auto Bracket/Flash output adjustment/White Balance fine adjustment/White Balance Bracket/Multi Film Bracket/[AF/AE LOCK]/[MIN. SHTR SPEED]/[DIGITAL ZOOM]/[HISTOGRAM]/Out of frame display.

[REC] Mode: **P**

Program AE Mode

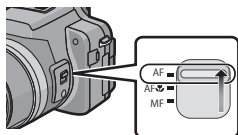
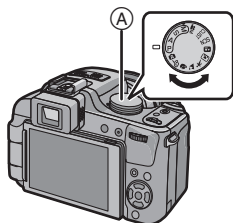
The camera automatically sets both shutter speed and aperture value according to the brightness of the subject.

You can take pictures with greater freedom by changing various settings in [REC] menu.

1 Set the mode dial to **[P]**.

A Mode dial

- Set the focus mode selector switch to [AF].
- To change the setting while taking pictures, refer to "Using the [REC] Mode menu" (P132).



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

3 Press the shutter button halfway to focus.

- The focus range is 30 cm (1') (Wide)/2 m (6' 6" 3/4) (Tele) to ∞.
- If pictures are to be taken at an even closer range, refer to "Close-up Pictures" (P74).



4 Press the shutter button fully to take a picture.

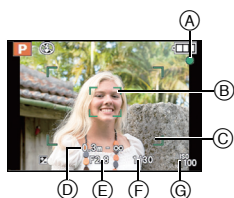
- The access indication lights (P23) up in red when pictures are being recorded on the internal memory (or the card).



- To adjust the exposure and take pictures at times when the image appears too dark (P78)
- To adjust the colors and take pictures at times when the image appears too red (P136)
- When recording motion pictures (P107)

Focusing

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



Focus	When the subject is focused	When the subject is not focused
Focus indication	On	Flashes
AF area	White→Green	White→Red
Sound ^{*1}	Beeps 2 times	Beeps 4 times

- Ⓐ Focus indication
- Ⓑ AF area (normal)
- Ⓒ AF area (when using the Digital Zoom or when it is dark)
- Ⓓ Recording distance range display (when zooming)
- Ⓔ Aperture value^{*2}
- Ⓕ Shutter speed^{*2}
- Ⓖ ISO sensitivity

*1 Sound volume can be set in [SHUTTER VOL.] (P31).

*2 If correct exposure cannot be achieved, it will be displayed in red.
(However, it will not be displayed in red when the flash is used.)

Focusing off-center subjects

- 1** Aim the AF area at the subject, and then **press the shutter button halfway** to fix the focus and exposure.
- 2** **Press and hold the shutter button halfway** while moving the camera as you compose the picture.

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


We recommend that you use the Face Detection function when taking pictures of people. (P139)



■ Subjects and recording conditions which are difficult to focus

- Fast-moving subjects, extremely bright subjects or subjects without contrast
- When the recording distance range display has appeared in red
- When recording subjects through windows or near shiny objects
- When it is dark or when camera shake occurs
- When the camera is too close to the subject or when taking a picture of both distant and near subjects

Preventing camera shake

When the camera shake alert [

- Shutter speed will be slower particularly in the following cases. Keep the camera still from the moment the shutter button is pressed until the picture appears on the screen. We recommend using a tripod.
 - Slow sync./Red-Eye Reduction
 - [NIGHT PORTRAIT] and [NIGHT SCENERY] in the Advanced Scene Mode (P91)
 - In [PANORAMA ASSIST], [PARTY], [CANDLE LIGHT], [STARRY SKY], or [FIREWORKS] in Scene Mode (P96)
 - [HIGH DYNAMIC], [DYNAMIC ART], [DYNAMIC]([**B&W**]) in My Color Mode
 - When the shutter speed is slowed in [MIN. SHTR SPEED]

Program shift

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

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



(A)

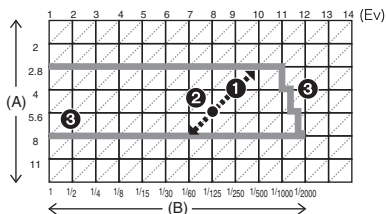
- Press the shutter button halfway and then use the rear dial to activate program shift while the aperture value and the shutter speed are displayed on the screen (about 10 seconds).
- The program shift indication (A) appears on the screen when program shift is activated.
- Program shift is canceled if the camera is turned off or the rear dial is rotated back until the program shift indication disappears, i.e. is set back to 0.

■ Example of program shift

(A): Aperture value

(B): Shutter speed

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



● Note

- If the exposure is not adequate when the shutter button is pressed halfway, the aperture value and shutter speed turns red.
- Program shift is canceled and the camera returns to normal Program AE Mode if more than 10 seconds pass after program shift is activated. However, the program shift setting is memorized.
- Depending on the brightness of the subject, program shift may not be available.

[REC] Mode: **A P A S M** CUST **M** SCN      

Using the Zoom

Using the Optical Zoom/Using the Extended Optical Zoom (EZ)/Using the Intelligent Zoom/Using the Digital Zoom

You can zoom-in to make people and objects appear closer or zoom-out to record landscapes in wide angle. To make subjects appear even closer (maximum of 50.6 \times), do not set the resolution to the highest setting for each aspect ratio (**4:3** / **3:2** / **16:9** / **1:1**). The zoom magnification can be increased by approximately 1.3 \times without noticeable deterioration in the picture by the Intelligent Resolution Technology when the Intelligent Zoom is used.

Even higher levels of magnification are possible when [DIGITAL ZOOM] is set to [ON] in [REC] menu.

To make subjects appear closer use (Tele)

Rotate the zoom lever towards Tele.



To make subjects appear further away use (Wide)

Rotate the zoom lever towards Wide.



■ Changing the zoom speed

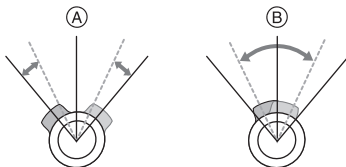
You can operate the zoom at 2 speeds depending on the rotation angle of the zoom lever.

The zoom speed becomes slower when the rotation angle is small and the zoom speed becomes faster when the rotation angle is large.

(A) Fast

(B) Slow



- Zoom speed cannot be changed in recording motion pictures (P107).





■ Storing the zoom position (Zoom resume)

- Refer to P34 for details.

■ Types of zooms

Feature	Optical Zoom	Extended Optical Zoom (EZ)
Maximum magnification	24×	50.6×*
Picture quality	No deterioration	No deterioration
Conditions	None	[RESOLUTION] with [EZ] (P133) is selected.
Screen display		 A [EZ] is displayed.

Feature	Intelligent Zoom	Digital Zoom
Maximum magnification	32× (including Optical Zoom 24×) 67.4× (including Extended Optical Zoom 50.6×)	96× (including Optical Zoom 24×) 202× (including Extended Optical Zoom 50.6×) 127× (including Optical Zoom and [i.ZOOM] 32×) 269× (including Extended Optical Zoom and [i.ZOOM] 67.4×)
Picture quality	No noticeable deterioration	The higher the magnification level, the greater the deterioration.
Conditions	[I.RESOLUTION] (P145) on the [REC] menu is set to [i.ZOOM].	[DIGITAL ZOOM] (P146) on the [REC] menu is set to [ON].
Screen display	 B [I.ZOOM] is displayed.	 C The Digital Zoom range is displayed.

• When using the zoom function, an estimate of the focus range will appear in conjunction with the zoom display bar. (Example: 0.3 m –∞)

* The magnification level differs depending on [RESOLUTION] and [ASPECT RATIO] setting.

■ Extended Optical Zoom mechanism

As an example, if you set to [**3M**] (3 million pixels), pictures will be registered with a central section of the sensor, utilizing only 3 million of its total of 14.1 million pixels. This allows you to take more magnified pictures.




Note

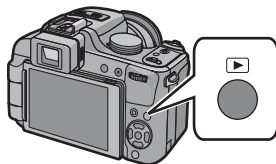
- **The Digital Zoom cannot be set when [A] has been selected.**
- The indicated zoom magnification is an approximation.
- "EZ" is an abbreviation of "Extended Optical Zoom".
- The Optical Zoom is set to Wide (1×) when the camera is turned on. Zoom position is as when the power was turned off if the [ZOOM RESUME] (P34) is set to [ON].
- If you use the zoom function after focusing on the subject, focus on the subject again.
- The lens barrel extends or retracts according to the zoom position. Take care not to interrupt the motion of the lens barrel while the zoom lever is rotated.
- When you rotate the zoom lever, you may hear some sound from the camera or the camera may shake. This is not a malfunction.
- When using the Digital Zoom, [STABILIZER] may not be effective.
- When using the Digital Zoom, we recommend using a tripod and the Self-Timer (P77) for taking pictures.
- [i.RESOLUTION] is fixed to [i.ZOOM] in Snapshot Mode (when [MOTION DEBLUR] is set to [OFF]) or Scene Mode*.
 - * [i.ZOOM] cannot be used when in [HIGH SENS.] or [FLASH BURST] in Scene Mode.
- The Extended Optical Zoom cannot be used in the following cases.
 - [MOTION DEBLUR] in Snapshot Mode
 - In [HIGH SENS.], [FLASH BURST], [PHOTO FRAME] and [HIGH SPEED MOVIE] in Scene Mode
 - [PIN HOLE] in My Color Mode
 - When recording motion pictures
 - When [QUALITY] is set to [RAW], [RAW] or [RAW]
- [DIGITAL ZOOM] cannot be used in the following cases.
 - In [HIGH SENS.], [FLASH BURST], [PHOTO FRAME] and [HIGH SPEED MOVIE] in Scene Mode
 - [PIN HOLE] or [FILM GRAIN] in My Color Mode
 - When [QUALITY] is set to [RAW], [RAW] or [RAW]

[PLAYBACK] Mode: 

Playing back Pictures ([NORMAL PLAY])

1 Press .


- During recomposition of the Continuous Picture group information, the currently retrieving information icon [] will appear. For details, refer to P154 “About retrieval of Picture Series group information”.





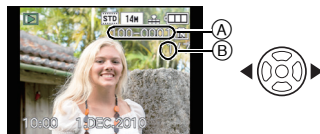
2 Press / to select the picture.

- (A) File number
- (B) Picture number


: Play back the previous picture

: Play back the next picture

- Speed of picture forwarding/rewinding changes depending on the playback status.
- If you press and hold / , you can play back the pictures in succession.
- It is also possible to forward/rewind pictures by rotating the rear dial.



■ To finish playback

Press  again, press the motion picture button or press the shutter button halfway.

Note

- This camera complies with the DCF standard “Design rule for Camera File system” established by JEITA “Japan Electronics and Information Technology Industries Association” and with Exif “Exchangeable Image File Format”. Files which do not comply with the DCF standard cannot be played back.
- The lens barrel retracts about 15 seconds after switching from [REC] Mode to [PLAYBACK] Mode.

Displaying Multiple Pictures (Multi Playback)

Rotate the zoom lever towards [W].

1 screen→12 screens→30 screens→Calendar screen display (P 165)

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

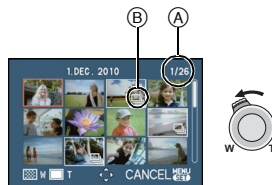
(B) Continuous icon []

• Rotate the zoom lever towards [T] to return to the previous screen.

• If you select a picture with the Continuous icon [], and press [MENU/SET], the pictures from within that Continuous Picture group will be played back using Multi Playback.

• Pictures are not rotated for display.

• Pictures displayed using [] cannot be played back.



■ To return to normal playback

1 Press ▲/▼/◀/▶ to select a picture.

- An icon will be displayed depending on the recorded picture and the settings.
- It is also possible to select pictures by rotating the rear dial.

2 Press [MENU/SET].

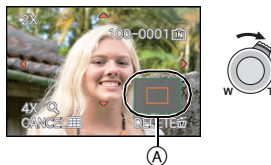
- The picture that was selected will appear.
- It is also possible to display pictures by pressing the rear dial.

Using the Playback Zoom

Rotate the zoom lever towards [T].

1× → 2× → 4× → 8× → 16×

- When you rotate the zoom lever towards [W] after enlarging the picture, the magnification becomes lower.
- When you change the magnification, the zoom position indication (A) appears for about 1 second, and the position of the enlarged section can be moved by pressing ▲/▼/◀/▶.
- The more a picture is enlarged, the more its quality deteriorates.
- When you move the position to be displayed, the zoom position indication appears for about 1 second.
- Focus point will be enlarged when [FOCUS] is pressed.
(P63)

**Switching the displayed image while maintaining the Playback Zoom****Rotating the rear dial to select the picture during Playback Zoom.**

- You can switch the displayed image while maintaining the same zoom magnification and zoom position for the Playback Zoom.

Note

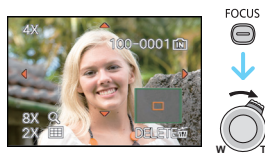
- You can also delete the recording information etc. on the LCD monitor/Viewfinder during Playback Zoom by pressing [DISPLAY].
- If you want to save the enlarged picture, use the Cropping function. (P172)
- The Playback Zoom may not operate if pictures have been recorded with other equipment.
- The zoom magnification and the zoom position are canceled when the camera is turned off (including Sleep Mode).
- The zoom position returns to the center in the following images.
 - Images with different aspect ratios
 - Images with different numbers of recorded pixels
 - Images with a different rotation direction (when [ROTATE DISP.] is set to [ON])
- Playback Zoom is not available during Motion Picture Playback.

Enlarge the focus point (display focus point)

The camera can memorize the focus point during the recording, and the resulting picture can be enlarged with that point in the center.

Press [FOCUS] during image playback.

- Focus point may not be the center of enlargement when it is at the edge of the image.
- Refer to "Using the Playback Zoom" (P62) for operation during zooming.
- It will return to the original enlargement if [FOCUS] is pressed again.
- Following pictures cannot be enlarged because there is no focus point:
 - Picture that was taken without focusing
 - Picture that was taken with Manual Focus
 - Picture that was taken with a different camera



Switching the [PLAYBACK] Mode

- 1 Press [MENU/SET] during playback.
- 2 Press \blacktriangleright .
- 3 Press $\blacktriangle/\blacktriangledown$ to select the item and then press [MENU/SET].

[NORMAL PLAY] (P60)

All the pictures are played back.

[SLIDE SHOW] (P160)

The pictures are played back in sequence.

[MODE PLAY] (P162)

Playback in [PICTURE], [AVCHD]*1, or [MOTION JPEG] can be selected.

*1 This is the specification to record and playback high definition images.

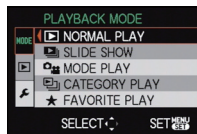
[CATEGORY PLAY] (P163)

The pictures grouped together in categorize are played back.

[FAVORITE PLAY] (P164)*2

Your favorite pictures are played back.

*2 [FAVORITE PLAY] is not displayed when [FAVORITE] in [SETUP] menu has not been set to [ON]. (P39)



[PLAYBACK] Mode: 

Deleting Pictures

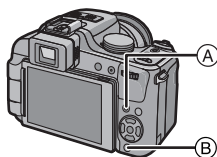
Once deleted, pictures cannot be recovered.


- The picture being played back is deleted, regardless of whether it is recorded on the internal memory or the card.
- You can also delete pictures from the [PLAYBACK] mode Menu. (P180)

To delete a single picture

- 1** Select the picture to be deleted, and then press .

- (A) [DISPLAY] button
(B)  button



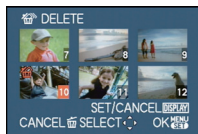
- 2** Press  to select [YES] and then press [MENU/SET].



To delete multiple pictures (up to 100) or all the pictures

- 1 Press [MENU].
- 2 Press ▲/▼ to select [DELETE MULTI] or [DELETE ALL] and then press [MENU/SET].
 - [DELETE ALL] → step 5.

- 3 Press ▲/▼/◀/▶ to select the picture, and then press [DISPLAY] to set. (Repeat this step.)
 - [MENU] appears on the selected pictures. If [DISPLAY] is pressed again, the setting is canceled.



- 4 Press [MENU/SET].
- 5 Press ▲ to select [YES] and then press [MENU/SET] to set.

■ When [DELETE ALL] has been selected with the [FAVORITE] (P176) setting

The selection screen is displayed again. Select [DELETE ALL] or [ALL DELETE EXCEPT ★], press ▲ to select [YES] and delete the pictures. ([ALL DELETE EXCEPT ★] cannot be selected if no pictures have been set as [FAVORITE].)

Note

- Do not turn the camera off while deleting (while [MENU] is displayed). Use a battery with sufficient battery power.
- If you press [MENU/SET] while deleting pictures using [DELETE MULTI], [DELETE ALL] or [ALL DELETE EXCEPT ★], the deleting will stop halfway.
- Depending on the number of pictures to be deleted, it may take some time to delete them.
- If pictures do not conform to the DCF standard or are protected (P179), they will not be deleted even if [DELETE ALL] or [ALL DELETE EXCEPT ★] is selected.

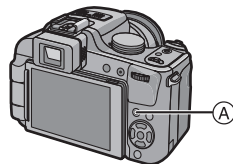
About the LCD Monitor/Viewfinder

■ Selecting the screen to be used

Press [DISPLAY] to change.

(A) [DISPLAY] button

- When the menu screen appears, the [DISPLAY] button is not activated. During Playback Zoom (P62), while playing back motion pictures (P157) and during a slide show (P160), you can only select "Normal display (F)" or "No display (H)".



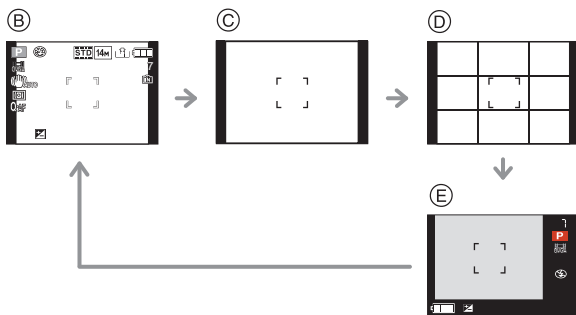
In Recording Mode

(B) Normal display*1, 2

(C) No display

(D) No display (Recording guide line)*1, 3

(E) Out-of-frame display*4

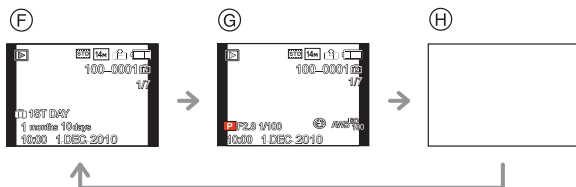


In Playback Mode

(F) Normal display

(G) Display with recording information*1

(H) No display



*1 If the [HISTOGRAM] in [SETUP] menu is set to [ON], histogram will be displayed.

*2 You can switch between available recording time and number of recordable pictures by setting [REMAINING DISP.] in [SETUP] menu.

*3 Set the pattern of the guide lines displayed by setting [GUIDE LINE] in [SETUP] menu. You can also set whether or not to have the recording information displayed when the guide lines are displayed.

*4 When the number of pictures remaining is more than 1000 or the time remaining in recording motion pictures is more than 1000 seconds, [+999] is displayed.

Note

- [NIGHT PORTRAIT] (P95), [STARRY SKY] and [FIREWORKS] in Scene Mode (P96), the guide line is gray.
- In [PHOTO FRAME] in Scene Mode, the guideline is not displayed. (P105)

■ Out-of-frame display

Recording information is displayed on the bottom and right edges of the screen. You can therefore concentrate on the subject when taking pictures without being obstructed by information displayed on the screen.

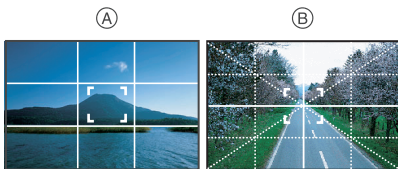
■ Monitor priority



When [PLAY ON LCD] is set to [ON] on the [SETUP] menu (P36), the LCD monitor is turned on when switching from Recording Mode to Playback Mode.

You can save the time it would take to switch the display to the LCD monitor even when using the Viewfinder to record.

■ Recording guide line

When you align the subject on the horizontal and vertical guide lines or the cross point of these lines, you can take pictures with well-designed composition by viewing the size, the slope and the balance of the subject.



- Ⓐ : This is used when dividing the entire screen into 3×3 for taking pictures with a well-balanced composition.
- Ⓑ : This is used when you want to position the subject at the exact center of the screen.

■ About the Histogram

A histogram is a graph that displays brightness along the horizontal axis (black to white) and the number of pixels at each brightness level on the vertical axis.

It allows you to easily check a picture's exposure.

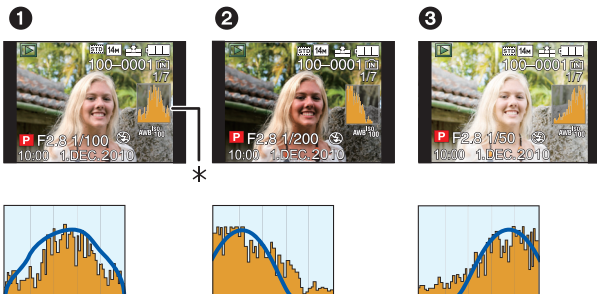
Examples of histogram

① Properly Exposed

② Under Exposed

③ Overexposed

* Histogram



Note

• When the recorded picture and the histogram do not match each other under the following conditions, the histogram is displayed in orange.


- When the Manual Exposure Assistance is other than $[\pm 0EV]$ during exposure compensation or in the Manual Exposure Mode
- When the flash is activated
- In [STARRY SKY] or [FIREWORKS] in Scene Mode (P96)
- When the flash is closed
 - When the brightness of the screen is not correctly displayed in dark places
 - When the exposure is not adequately adjusted
- The histogram is an approximation in Recording Mode.
- The histogram of a picture may not match in Recording Mode and Playback Mode.
- The histogram displayed in this camera does not match histograms displayed by picture editing software used in PCs etc.
- Histograms are not displayed in the following cases.
 - Snapshot Mode
 - Multi Playback
 - In [PHOTO FRAME] in Scene Mode
 - Playback Zoom
 - Calendar Search
 - When HDMI cable is connected

[REC] Mode: **A P A S M** CUST SCN     

Using the Built-in Flash

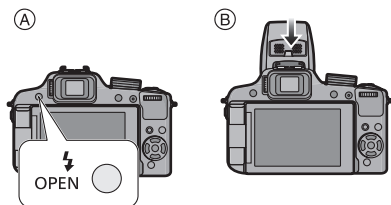
A To open the flash
Press the flash open button.

B To close the flash
Press the flash unit down until it clicks into place.

- Be sure to close the flash when not in use.
- The flash setting is fixed to  while the flash is closed.

Note

- Be careful not to catch a finger when closing a flash bulb.



Switching to the appropriate flash setting

Set the flash to match the recording.

- Open the flash.

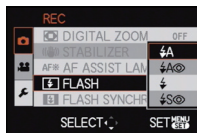
1 Select [FLASH] in the [REC] mode menu. (P28)

2 Press / to select a mode and press [MENU/SET].

- For information about flash settings that can be selected, refer to “Available flash settings by Recording Mode”. (P71)

3 Press [MENU/SET] to close the menu.

- You can also press the shutter button halfway to finish.



Item	Description of settings
A: AUTO	The flash is automatically fired when the recording conditions make it necessary.
A : AUTO/Red-Eye Reduction*	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 when you take pictures of people in low lighting conditions.
Forced flash ON : Forced ON/Red-Eye Reduction*	The flash is fired every time regardless of the recording conditions. • Use this when your subject is back-lit or under fluorescent light. • The flash setting is set to [] only when you set [PARTY] or [CANDLE LIGHT] in Scene Mode. (P96)
S : Slow sync./Red-Eye Reduction*	When taking pictures against a dark background landscape, this feature will slow the shutter speed when the flash is fired. Dark background landscape will appear brighter. Simultaneously it reduces the red-eye phenomenon. • Use this when you take pictures of people in front of a dark background. • Using a slower speed can cause motion blur. Using a tripod can enhance your photos.
: Forced flash OFF	The flash is not fired in any recording conditions. • Use this when you take pictures in places where the use of the flash is not permitted.

- * The flash is fired twice. The subject should not move until the second flash is fired. Flash interval depends on the brightness of the subject.
[RED-EYE REMOVAL] (P148) on the [REC] Mode menu is set to [ON], [] appears on the flash icon.

■ About Digital Red-Eye Correction

When [RED-EYE REMOVAL] (P148) has been set to [ON] and Red-Eye Reduction ([A], [S], [S]) is selected, Digital Red-Eye Correction is performed whenever the flash is used. The camera automatically detects red-eye and corrects the picture. (Only available when [AF MODE] is set to [] and Face Detection is active)

- Under certain circumstances, red-eye cannot be corrected.
- In the following cases, Digital Red-Eye Correction does not work.
 - When the flash setting is set to [A], [S], or []
 - When [RED-EYE REMOVAL] is set to [OFF]
 - When [AF MODE] is set to anything except []

■ The available flash range to take pictures

- The available flash range is an approximation.

ISO sensitivity	Available flash range	
	Wide	Tele
AUTO	30 cm to 9.5 m*	1.0 m to 5.1 m*
ISO100	30 cm to 3.3 m	1.0 m to 1.8 m
ISO200	40 cm to 4.7 m	1.0 m to 2.5 m
ISO400	60 cm to 6.7 m	1.0 m to 3.6 m
ISO800	80 cm to 9.5 m	1.0 m to 5.1 m
ISO1600	1.15 m to 13.5 m	1.0 m to 7.3 m

- In [HIGH SENS.] (P100) in Scene Mode, the ISO sensitivity automatically switches to between [ISO1600] and [ISO6400] and the available flash range also differs.
Wide: Approx. 1.15 m to approx. 27.1 m
Tele: Approx. 1.0 m to approx. 14.6 m
- In [FLASH BURST] (P101) in Scene Mode, the ISO sensitivity automatically switches to between [ISO100] and [ISO3200] and the available flash range also differs.
Wide: Approx. 30 cm to approx. 4.0 m
Tele: Approx. 1.0 m to approx. 2.1 m
- * When the [ISO LIMIT SET] (P135) is set to [AUTO]

■ Flash output compensation

Adjust the flash output when the subject is small, or the reflectivity is very high or low.

1 Press **▲** () several times to display [FLASH], and then press **◀/▶** to set the flash output.

- You can adjust from [-2 EV] to [+2 EV] in steps of [1/3 EV].
- Select [0 EV] to return to the original flash output.

2 Press **[MENU/SET]** to close the menu.




- You can also close the menu by pressing the shutter button halfway.





Note

- When the flash output is adjusted, the flash output value appears on the upper left of the screen.
- The flash output setting is memorized even if the camera is turned off.
- You cannot set [FLASH] in the following cases.
 - In Snapshot Mode
 - In [SCENERY]
 - In [NIGHT SCENERY], [ILLUMINATIONS] and [CREATIVE NIGHT SCENERY] in [NIGHT PORTRAIT]
 - In [PANORAMA ASSIST], [SUNSET], [FLASH BURST], [STARRY SKY], [FIREWORKS], [AERIAL PHOTO] and [HIGH SPEED MOVIE] in Scene Mode
 - In Creative Motion Picture Mode

■ Shutter speed for each flash setting

Flash setting	Shutter speed (Sec.)
	1/60*1 to 1/2000s
	
	

Flash setting	Shutter speed (Sec.)
	1*1 to 1/2000s
	

*1 It may vary depending on the [MIN. SHTR SPEED] setting (P145).

- Refer to P87 for details about the Aperture-Priority, Shutter-Priority, and Manual Exposure modes.
- In Snapshot Mode, shutter speed changes depending on the identified scene.
- In Advanced Scene Mode (P91) and Scene Mode (P96), the shutter speeds will differ from those described above.

Note

- Do not bring the flash too close to objects or close the flash while it is fired. The objects may be discolored by its heat or lighting.**
- Do not close the flash soon after the flash is fired prior to taking pictures due to AUTO/Red-Eye Reduction etc. It causes a malfunction.
- When you take a picture beyond the available flash range, it may not be adequately exposed, i.e. it may be too bright or too dark.
- When the flash is being charged, the flash icon flashes red, and you cannot take a picture even when you press the shutter button fully.
- The White Balance may not be properly adjusted if the flash level is insufficient for the subject.
- The flash effect may not be sufficient when using [FLASH BURST] (P101) in Scene Mode or when shutter speed is fast.
- When taking a picture with the flash, we recommend removing the lens hood. In some cases it may not allow the scene to be illuminated properly.**
- Charging the flash may take longer after taking pictures in quick succession.
- The Red-Eye Reduction effect differs between people. Also, if the subject was far away from the camera or was not looking at the first flash, the effect may not be evident.

[REC] Mode: **PASM** CUST

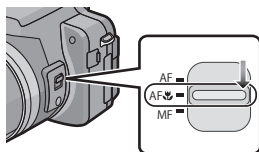
Close-up Pictures

This mode allows you to take close-up pictures of a subject, e.g. when taking pictures of flowers. You can take pictures of a subject as close as 1 cm from the lens by rotating the zoom lever upmost to Wide (1×).

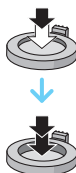
As you rotate the zoom lever towards Tele, the distance at which you can take close-up pictures changes in steps. The maximum distance for close-up pictures is 1 m.

1 Slide the focus mode selector switch to [AF🌸].

- In AF macro mode, [AF🌸] is displayed.

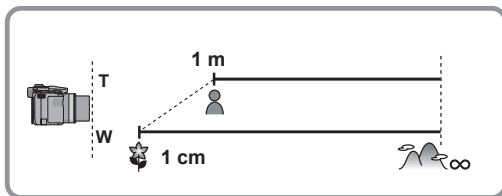


2 Take the pictures.



■ Focus range

- * The focus range changes in steps.



Note

- We recommend using a tripod and the Self-Timer.
- We recommend setting the flash to [🌸] when you take pictures at close range.
- If the distance between the camera and the subject is beyond the focus range of the camera, the picture may not be properly focused even if the focus indication lights up.
- When a subject is close to the camera, the effective focus range is significantly narrowed. Therefore, if the distance between the camera and the subject is changed after focusing on the subject, it may become difficult to focus on it again.
- AF Macro Mode gives priority to a subject close to the camera. Therefore, if the distance between the camera and the subject is far, it takes longer to focus on it.
- When you take pictures at close range, the resolution of the periphery of the picture may decrease slightly. This is not a malfunction.
- If the lens becomes dirty with fingerprints or dust, the lens may not be able to focus on the subject correctly.

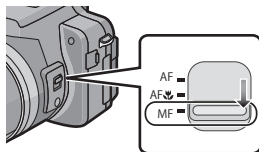
[REC] Mode: **P A S M** CUST         

Manual Focusing

Use this function when you want to fix the focus or when the distance between the lens and the subject is determined and you do not want to activate Auto Focus.

1 Set the focus mode selector switch to [MF].

- [MF] is displayed in the upper left of the screen while in Manual Focus Mode.



2 Press the rear dial a few times to enable the Manual Focus operation.

- Enabled operation will switch every time the rear dial is pressed.
- Manual Focus operation is enabled when [MF] at the bottom right of the screen changes to orange.



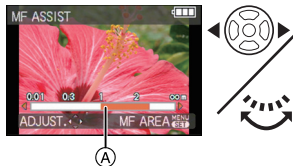
3 Rotate the rear dial.

- Focus range is displayed.

4 Press ◀/▶ or rotate the rear dial to focus on the subject.

(A) Focus range

- It may be difficult to make fine adjustments when using the rear dial. If you have any difficulty, we recommend adjusting using the cursor button.
- Pressing and holding down the cursor button causes the focus position to move continuously.
- MF assistance disappears about 2 seconds after you stop operating the rear dial.
- Focus range disappears about 5 seconds after you stop operating the rear dial.
- Manual focus cannot be used when a motion picture other than Creative Motion Picture is selected.



5 Take the picture.

MF assistance

If [MF ASSIST] (P35) in the setup menu is set to [ON], when you rotate the rear dial, MF assistance is activated and the screen is enlarged allowing you to focus on the subject more easily.

- 1 Rotate the rear dial to display MF assistance on the screen.
- 2 Display MF area (enlarged area) by pressing [MENU/SET].
- 3 Move the MF area (enlarged area) by pressing ▲/▼/◀/▶ on the cursor button.
- 4 Return to MF assistance by pressing [MENU/SET].



- The magnification of the enlarged area can be changed by pressing the rear dial when MF assistance is activated or the MF area is moving.
- The following will return the MF assistance to the original position.
 - Changing the resolution or aspect.
 - Turning the camera off.
 - When pressing [DISPLAY]

Technique for Manual Focus

- 1 Focus by rotating the rear dial.
- 2 Press the cursor button a few times furthermore in the same direction.
- 3 Finely focus on the subject by pressing the cursor button in reverse.



Prefocus

This is a technique for focusing in advance on the point the pictures will be taken when it is difficult to focus on the subject with Auto Focus due to its quick motion. (e.g. [PANNING] (P102) in Scene Mode)

This function is suitable when the distance between the camera and the subject is certain.

One shot AF

You can focus on the subject with Auto Focus by pressing [FOCUS] button when [MF] is displayed.

This is convenient for prefocus.

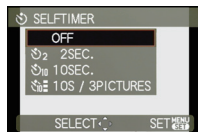
Note

- If you focus on the subject in Wide and then rotate the zoom lever to Tele, the focus may not be adequate. In this case, focus on the subject again.
- The MF assistance does not appear when using the Digital Zoom.
- The distance to the subject displayed on the screen in Manual Focus is an approximation of the focus position. Use the MF assistance screen for a final check of the focus.
- After canceling Sleep Mode, focus on the subject again.
- Using MF Assistance in combination with AE Lock makes it easy to check the focus.

[REC] Mode: **A PASM** CUST SCN      

Using the Self-Timer

1 Press ◀ [Ⓢ].



2 Press ▲/▼ to select a mode.

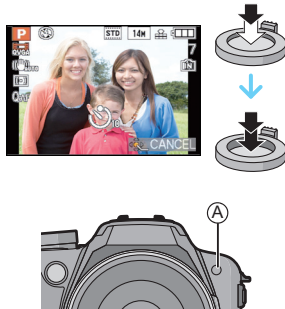
- You can also press ◀ [Ⓢ] to select.
- If you set [10S/3PICTURES], after 10 seconds the camera takes 3 pictures at about 2 second intervals.

3 Press [MENU/SET].

- You can also press the shutter button halfway to finish.
- The menu screen disappears after about 5 seconds. At this time, the selected item is automatically set.

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

- The Self-Timer indicator **A** flashes and the shutter is activated after 10 seconds (or 2 seconds).
- If you press [MENU/SET] while the Self-Timer is set, the Self-Timer setting is canceled.
- When [10S/3PICTURES] is selected, the Self-Timer indicator flashes again after the first and the second pictures are taken and the shutter is activated 2 seconds after it flashes.



Note

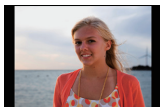
- When using a tripod etc., setting the Self-Timer to 2 seconds is a convenient way to avoid the camera shake caused by pressing the shutter button.
- When you press the shutter button once fully, the subject is automatically focused just before recording. In dark places, the Self-Timer indicator will flash and then may turn on brightly operating as an AF assist lamp (P147) to allow the camera to focus on the subject.
- We recommend using a tripod when recording with the Self-Timer.
- The number of pictures which can be taken in Continuous Mode is fixed to 3.
- The number of pictures which can be taken in [FLASH BURST] (P101) is fixed to 5.
- Depending on the recording conditions, the recording interval may become more than 2 seconds when [10S/3PICTURES] is selected.
- The flash output may not be constant when [10S/3PICTURES] is selected.
- [10S/3PICTURES] cannot be set when any of Snapshot Mode, Auto Bracket or [PANORAMA ASSIST], [FLASH BURST] or [PHOTO FRAME] in Scene Mode is set.
- You cannot use Continuous Mode when [10S/3PICTURES] is selected.
- Setting of the Self-Timer cannot be performed when recording motion pictures.

[REC] Mode: **P A S** CUST         

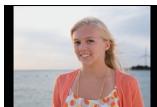
Exposure Compensation

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

Under exposed



Properly exposed



Overexposed



Compensate the exposure towards positive.

Compensate the exposure towards negative.

- 1 Press  until [EXPOSURE] appears, compensate the exposure with / .

- Select [0 EV] to return to the original exposure.



- 2 Press [MENU/SET] to finish.

- You can also press the shutter button halfway to finish.

■ Operate with the rear dial

- 1 Press the rear dial to select , and then rotate the rear dial to compensate the exposure.

- (A) Exposure compensation value

- 2 Press the shutter button halfway to finish.



Note

- EV is an abbreviation of [Exposure Value].
- The exposure compensation value appears on the lower left of the screen.
- The set exposure value is memorized even if the camera is turned off.
- The compensation range of the exposure will be limited depending on the brightness of the subject.
- Exposure compensation cannot be used when in [STARRY SKY] in Scene Mode.

[REC] Mode: **P A S M** CUST SCN      

Using Auto Bracket

In this mode, 3 pictures are automatically recorded with the selected exposure steps each time the shutter button is pressed. You can select the picture with the desired exposure from the 3 pictures with different exposures.

With Auto Bracket ± 1 EV

1st picture

 ± 0 EV

2nd picture



-1 EV

3rd picture



+1 EV

- 1 Press   several times until [AUTO BRACKET] appears, set the compensation range of the exposure with  .



- When you do not use Auto Bracket, select [OFF] (0).



- 2 Press [MENU/SET] to finish.

- You can also press the shutter button halfway to finish.

Note

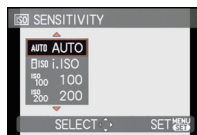
- When Auto Bracket is set,  is displayed on the screen.
- When taking pictures using Auto Bracket after setting the exposure compensation range, the pictures taken are based on the selected exposure compensation range. When the exposure is compensated, the exposure compensation value appears on the lower left of the screen.
- The exposure may not be compensated with Auto Bracket depending on the brightness of the subject.
- The Auto Bracket setting is canceled if you turn the camera off or [SLEEP MODE] is activated.
- The Auto Review function is activated regardless of the Auto Review setting. You cannot set the Auto Review function in the [SETUP] menu.
- In Shutter-Priority Mode and Manual Exposure Mode, if the shutter speed is set to more than 1 second, Auto Bracket is canceled.
-  is set for the flash when Auto Bracket is set.
- Continuous Mode, Multi Film Bracket or White Balance Bracket is canceled when Auto Bracket is set.
- You cannot use the Auto Bracket in following conditions.
 - In [PANORAMA ASSIST], [FLASH BURST], [STARRY SKY], [PHOTO FRAME] and [HIGH SPEED MOVIE] in Scene Mode
 - When recording motion pictures

[REC] mode: **P A S M** CUST  

Setting the Sensitivity

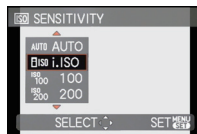
This allows the sensitivity to light (ISO sensitivity) to be set. Setting to a higher figure enables pictures to be taken even in dark places without the resulting pictures coming out dark.

1 Press **▶** (**ISO**).




2 Press **▲/▼** to select the ISO sensitivity and then press **[MENU/SET]** to set.

- You can also press **▶** [**ISO**] to select.
- You can also press the shutter button halfway to set.
- The menu screen disappears after about 5 seconds. At this time, the selected item is automatically set.



ISO sensitivity	100	1600
Recording location (recommended)	When it is light (outdoors)	When it is dark
Shutter speed	Slow	Fast
Noise	Less	Increased

ISO sensitivity	Settings
AUTO*	The ISO sensitivity is automatically adjusted according to the brightness.
 ISO* (Intelligent)	The ISO sensitivity is adjusted according to the movement of the subject and the brightness.
100/200/400/800/1600	The ISO sensitivity is fixed to various settings.

- * When the **[ISO LIMIT SET]** of **[REC] mode menu (P135)** is set to anything except **[AUTO]**, it is set automatically within the value set in **[ISO LIMIT SET]**. It is set as following when the **[ISO LIMIT SET]** is set to **[AUTO]**.
- When **[AUTO]** is selected, ISO sensitivity is adjusted automatically depending on brightness within a maximum setting of **[ISO400]**.
 - When setting to **[ISO]**, ISO sensitivity will adjust automatically depending on brightness within the maximum setting of **[ISO1600]**. (**[ISO800]** when the flash is used)
- ISO sensitivity will operate as **[AUTO]** in Motion Picture Recording other than Creative Motion Picture. Also, **[ISO LIMIT SET]** will not function.

■ About [ISO] (Intelligent ISO sensitivity control)

The camera automatically sets the optimum ISO sensitivity and shutter speed to suit the movement of the subject, i.e. to ensure its sharpest possible rendition, and also the brightness of the scene.

- The shutter speed is not fixed when the shutter button is pressed halfway. It is continuously changing to match the movement of the subject until the shutter button is pressed fully. Confirm the actual shutter speed on the information display for the picture being played back.

Note

- The higher the value set for the ISO sensitivity, the sharper moving subjects can be rendered, but the greater the amount of picture noise.
- Refer to P72 for the flash range.
- Depending on the brightness and how fast the subject is moving, unsharp rendition may not be avoided even if [ISO] is selected.
- Movements may not be detected when a moving subject is small, when a moving subject is at the edge of the screen or when a subject has moved at the very moment when the shutter button was pressed fully.
- The setting is fixed to [ISO] in the following cases.
 - In [INDOOR PORTRAIT] in [PORTRAIT]
 - In [SPORTS]
 - [BABY1]/[BABY2], [PET] and [FLASH BURST] in Scene Mode
- Program Shift cannot be activated when the ISO sensitivity is set to [ISO].
- You cannot select [ISO] in Shutter-Priority Mode and Manual Exposure Mode.
- To avoid picture noise, we recommend reducing the ISO sensitivity, setting [NOISE REDUCTION] in [FILM MODE] towards [+] or setting the items except [NOISE REDUCTION] towards [-] to take pictures. (P119)


[REC] Mode: **A** P A S M CUST SCN      

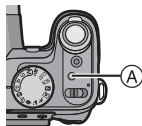
Continuous Mode



With this mode, pictures are taken as long as the shutter button is pressed. This allows you to select the best ones from the series.

The frame rate/frequency can be selected to match the recording conditions or subjects. Pictures recorded in continuous mode will be recorded as one group. (P153)

1 Press  (Continuous Mode) button to display the Continuous mode setting menu.

(A)  (Continuous Mode) button



2 Press  /  to select the Continuous speed and then press [MENU/SET].

- You can also use the rear dial to select.
- Description of recording conditions suitable for each frame rate is displayed by pressing [DISPLAY].
- Select [OFF] if continuous mode is not set.



Frame rate	Features															
<p>[2]): 2 pictures/second</p> <p>[5]): 5 pictures/second</p>	<p>Suitable for moderate action shots. Maximum recordable pictures: 100</p>															
<p>[11]): 11 pictures/second</p>	<p>It is suitable for recording fast movements, such as a bird beating its wings. Maximum recordable pictures: 15</p>															
<p>[40]): 40 pictures/second</p> <p>[60]): 60 pictures/second</p>	<p>It is suitable for recording split second actions that are hard to see with the naked eye, such as water splashing. Maximum recordable pictures: 50 (when [40]) is selected) 60 (when [60]) is selected)</p> <p>• When [40]) or [60]) is selected, the resolution setting will become as shown below.</p> <table border="1"> <thead> <tr> <th>Aspect ratio</th> <th>[40])</th> <th>[60])</th> </tr> </thead> <tbody> <tr> <td>[4:3]</td> <td>[5M], [3M], [0.3M]</td> <td>[2.5M], [0.3M]</td> </tr> <tr> <td>[3:2]</td> <td>[4.5M], [2.5M], [0.3M]</td> <td>[3M], [0.3M]</td> </tr> <tr> <td>[16:9]</td> <td>[3.5M], [2M], [0.2M]</td> <td>[3.5M], [0.2M]</td> </tr> <tr> <td>[1:1]</td> <td>[3.5M], [2.5M], [0.2M]</td> <td>[2M], [0.2M]</td> </tr> </tbody> </table> <p>• The range that can be recorded will become smaller when it is set to [60]).</p>	Aspect ratio	[40])	[60])	[4:3]	[5M], [3M], [0.3M]	[2.5M], [0.3M]	[3:2]	[4.5M], [2.5M], [0.3M]	[3M], [0.3M]	[16:9]	[3.5M], [2M], [0.2M]	[3.5M], [0.2M]	[1:1]	[3.5M], [2.5M], [0.2M]	[2M], [0.2M]
Aspect ratio	[40])	[60])														
[4:3]	[5M], [3M], [0.3M]	[2.5M], [0.3M]														
[3:2]	[4.5M], [2.5M], [0.3M]	[3M], [0.3M]														
[16:9]	[3.5M], [2M], [0.2M]	[3.5M], [0.2M]														
[1:1]	[3.5M], [2.5M], [0.2M]	[2M], [0.2M]														

How to focus

Focus will be fixed to the position set in the first picture for the [AF] (Auto Focus).

Focus will be set to the position adjusted manually for the [MF] (manual focus).

How the focus is set with the auto focus can be selected only when [**2**]) or [**5**]) is selected.

[AF-SINGLE]: The focus is fixed with the first picture of the series.

[AF-CONTINUOUS]: The focus is adjusted for each recording in the series.

Live View display is used instead of Auto Review display during the series.

It is initially set to [AF-CONTINUOUS] on the camera.



3 Focus on the subject and take a picture.

- Keep the shutter button pressed down fully to activate Continuous Mode.

 **Note**

- When [AF-CONTINUOUS] is set, focus prediction will be performed in a possible range to prioritize the frame rate. Therefore, if you try to take a picture of a subject that is moving fast, it may have trouble with focusing or it may take time to focus.
- You can select only [2], [2AF], [5], [5AF], and [11] when in Snapshot Mode.
- When [40] or [60] is selected, [QUALITY] can only be set to [S] or [L]. If you select [40] or [60] when [QUALITY] is [RAW], [RAW] or [RAW], [QUALITY] will automatically change to [S].
- The frame rate may become slower while taking pictures in [2] or [5] setting.
- When [2] or [5] is selected, the exposure and white balance are adjusted for each recording in the series.
- When [11], [40], or [60] is selected, exposure and white balance will be fixed to the settings for the first picture. Depending on changes in the brightness of the subject, the recording may be brighter or darker from the second picture.
- Recording is performed by the electronic shutter when [40] or [60] is selected, so the recorded picture may appear warped.
- When the Self-Timer is used, the number of recordable pictures in Continuous Mode is fixed to 3.
- If you are following a moving subject while taking pictures in a place (landscape) indoors, outdoors etc. where there is a large difference between the light and shade, it may take time until the exposure is stable. If Continuous mode is used at this time, the exposure may not become optimal.
- The frame rate (pictures/second) may become slower depending on the recording environment such as in dark places, if the ISO sensitivity is high etc.
- Continuous Mode is not canceled when the camera is switched off.
- Due to the limited amount of the internal memory, the use of Continuous Mode may be limited. We recommend having an SD card installed for reliable Continuous Mode operation.
- If you take pictures in Continuous Mode with the internal memory, it will take time to write the picture data.
- **[S] is set for the flash when Continuous mode is set.**
- **Auto Bracket, White Balance Bracket or Multi Film Bracket is canceled when Continuous mode is set.**
- The Continuous Mode cannot be used in the following cases.
 - In [PIN HOLE] in My Color Mode.
 - In [PANORAMA ASSIST], [FLASH BURST], [STARRY SKY], [FIREWORKS], [PHOTO FRAME] and [HIGH SPEED MOVIE] in Scene Mode.
- You cannot set [STABILIZER] to [AUTO] or [MODE2] when Continuous Mode is set.
- [AF-CONTINUOUS] cannot be selected when recording motion pictures.
- [AF-CONTINUOUS] does not work when using AF lock.
- Face Recognition information is attached only to the first picture of the series during recording with face recognition. (However, the whole group is treated as Face Recognition pictures during [CATEGORY PLAY].)

[REC] Mode: **AS**

Aperture- and Shutter-Priority Modes

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.

- 1 Set the mode dial to **[A]**.
- 2 Rotate the rear dial to set the aperture value.
 - It will switch between aperture setting operation and Exposure Compensation operation every time the rear dial is pressed.
- 3 Take a picture.



Shutter-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.

- 1 Set the mode dial to **[S]**.
- 2 Rotate the rear dial to set the shutter speed.
 - Every time the rear dial is pressed, it switches between shutter speed and exposure compensation setting operation.
- 3 Take a picture.



Note

- Refer to [P87](#) for the available aperture values and the shutter speed.
- The brightness of the LCD monitor/Viewfinder and the recorded pictures may differ. Check the pictures using the Playback Mode.
- Set the aperture value to a higher number when the subject is too bright. Set the aperture value to a lower number when the subject is too dim.
- The aperture value and the shutter speed displayed on the screen turn red when the exposure is not adequate.
- We recommend using a tripod when the shutter speed is slow.
- **[4.5]** cannot be set for Shutter-Priority Mode.

[REC] Mode: [M]

Manual Exposure Mode

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

1 Set the mode dial to [M].

- The Manual Exposure Assistance (A) appears for about 10 seconds.

2 Rotate the rear dial to set the aperture and shutter speed.

- (B) Aperture Value
- (C) Shutter Speed
- Every time the rear dial is pressed, it switches between aperture setting and shutter speed setting operation.
- Focus can be set manually when [MF] is displaying. (P75)



3 Press the shutter button halfway.

- The Manual Exposure Assistance (A) appears for about 10 seconds.
- Set the aperture value and the shutter speed again when the exposure is not adequate.



4 Take the picture.

Manual Exposure Assistance

	The exposure is appropriate.
	Set to faster shutter speed or larger aperture value.
	Set to slower shutter speed or smaller aperture value.

- The Manual Exposure Assistance is an approximation.

Note

- Refer to P87 for the available aperture values and the shutter speed.
- The brightness of the LCD monitor/Viewfinder may differ from the brightness of the actual pictures. Check the pictures using the Playback Mode.
- If the exposure is not adequate, the aperture value and the shutter speed turn red when the shutter button is pressed halfway.
- [] for flash cannot be set.

Aperture Value and Shutter Speed

Aperture-Priority Mode

Available Aperture Value (Per 1/3 EV)	Shutter Speed (Sec)
F2.8 to F8.0	8 to 1/2000

Shutter-Priority Mode


Available Shutter Speed (Sec) (Per 1/3 EV)					Aperture Value
8	6	5	4	3.2	F2.8 to F8.0
2.5	2	1.6	1.3	1	
1/1.3	1/1.6	1/2	1/2.5	1/3.2	
1/4	1/5	1/6	1/8	1/10	
1/13	1/15	1/20	1/25	1/30	
1/40	1/50	1/60	1/80	1/100	
1/125	1/160	1/200	1/250	1/320	
1/400	1/500	1/640	1/800	1/1000	
1/1300					
1/1600					
1/2000					

Manual Exposure Mode

Available Aperture Value (Per 1/3 EV)	Available Shutter Speed (Sec) (Per 1/3 EV)
F2.8 to F8.0	60 to 1/2000


 **Note**

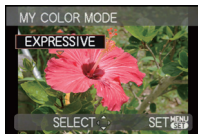
- The aperture values given in the table above are values when the zoom lever is rotated to Wide.
- Depending on the zoom magnification, some of the aperture values cannot be selected.


[REC] mode: 

Using My Color Mode

You can take pictures with a desired effect by previewing the subject on the LCD monitor or viewfinder and setting the desired effect.

- 1 Set the mode dial to .
- 2 Press $\blacktriangle/\blacktriangledown$ to select an item.



Item	Effect
[EXPRESSIVE]	This is a pop art style image effect that emphasises the color.
[RETRO]	This is a soft image effect that gives the appearance of a tarnished photograph.
[PURE]	This is an image effect that uses a cool, bright light to give a feeling of freshness. (The image will come out bright and slightly bluish.)
[ELEGANT]	This is an image effect that creates a tranquil atmosphere and projects a feeling of stateliness. (The image will come out slightly dark and amberish.)
[MONOCHROME]	This is an image effect that captures the subject using tones characteristic of black and white photography, and with a whisper of color.
[HIGH DYNAMIC]	This is an image effect that pictures dark and bright areas with appropriate brightness and with natural color.
[DYNAMIC ART]	This is an impressive image effect that pictures dark areas to bright areas with appropriate brightness, together with enhancements on colors.
[DYNAMIC]()	This is a black and white image effect that pictures dark and bright areas with appropriate brightness.
[SILHOUETTE]	This is an image effect that enhances the subject in the shade as a black silhouette by utilising the background colors of the sky or sunset etc.
[PIN HOLE]	Picture is taken darker and with soft focus around the subjects.
[FILM GRAIN]	Picture is taken with a grainy texture as though blasted with sand.
[CUSTOM]*	The color effects can be set according to your preferences.

*For [CUSTOM] settings, refer to page 90.

3 Press [MENU/SET] to set.

- When you press the shutter button halfway before pressing [MENU/SET], the setting will be canceled.
- Recording screen is displayed.

■ Readjust the My Color settings

Return to step 2 on page 88 by pressing [MENU/SET].

Note

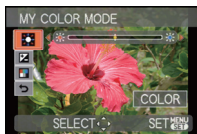
- **During Motion Picture Recording, settings for My Color Mode are used.**
- My Color settings are memorized even if the camera is turned off.
- Auto Bracket cannot be used in My Color Mode excepting [HIGH DYNAMIC], [DYNAMIC ART] or [DYNAMIC](**B&W**).
- [I.EXPOSURE] can be set only when the My Color Mode is set to [CUSTOM].
- The following items cannot be set in My Color Mode because the camera automatically adjusts them to the optimal setting.
 - [FILM MODE]/[ISO LIMIT SET]





Adjusting the custom settings to achieve desired effects

By selecting [CUSTOM], you can take pictures with color, brightness and saturation adjusted to desired levels.

1 In step 2 on page 88, select [CUSTOM] and press ►.

2 Press ▲/▼ to select an item and ◀/▶ to adjust.



Item	Adjustment contents
 [COLOR]	This will adjust the color of the image from red light to blue light. (11 steps in ± 5)
 [BRIGHTNESS]	This will adjust the brightness of the image. (19 steps in ± 9)
 [SATURATION]	This will adjust the color intensity of the image from black and white to vivid color. (11 steps in ± 5)
 [RESET]	Return all settings to default

3 Press [MENU/SET] to set.

- You can also press the shutter button halfway to set.
- Recording screen is displayed.

Return [CUSTOM] settings to default

1 Select [RESET] in above step 2.

2 Press ◀ to select [YES] and press [MENU/SET].

- Adjusted value for each item returns to standard (center point).

Note

- Adjustments made with [CUSTOM] are not in effect in other recording modes.
- Icons for the adjusted items are displayed in the LCD monitor/viewfinder when the [CUSTOM] are adjusted. Displayed icon is the one for direction of adjustment.
- AF tracking may not function if you adjust [SATURATION] to make the color lighter.

[REC] Mode:     

Using Advanced Scene Mode

You can take high-quality pictures of such subjects as people, scenery, sporting events and activities, people in night scenes and flowers in accordance with the surrounding conditions.

1 Set the mode dial.

2 Press $\blacktriangle/\blacktriangledown$ to select the Advanced Scene Mode.

- If you press [DISPLAY] when selecting an Advanced Scene Mode, explanations about each Advanced Scene Mode are displayed.



3 Press [MENU/SET] to set.

- The menu screen is switched to the recording screen in the selected Advanced Scene Mode.

Note

- Return to above step 2 after pressing the [MENU/SET] to change the Advanced Scene Mode (when [MENU RESUME] (P39) is [OFF]).
- The Advanced Scene Mode flash setting is reset to the initial setting when the Advanced Scene Mode is changed.
- When you take a picture with a Advanced Scene Mode that is not adequate for the purpose, the hue of the picture may differ from the actual scene.
- The following items cannot be set in Advanced Scene Mode because the camera automatically adjusts them to the optimal setting.
 - [FILM MODE]/[SENSITIVITY]/[ISO LIMIT SET]/[METERING MODE]/[EXPOSURE]/[MIN. SHTR SPEED]/[RESOLUTION]/[FLASH SYNCHRO]

■ About the aperture value and the shutter speed when you select a creative setting

- You can change the aperture value and the shutter speed if you select a creative setting in Advanced Scene Mode.
- It will switch between aperture setting or shutter speed setting operation and Exposure Compensation operation when the rear dial is pressed.



[PORTRAIT]

The person stands out from the background and has a healthier complexion.



[NORMAL PORTRAIT]

Shades the background and renders skin color beautifully.



[SOFT SKIN]

Makes the skin surface appear especially smooth.

- If a part of the background has a color similar to the color of the person's skin, the former may also show some smoothing.
- This mode may not achieve the described effects when there is insufficient brightness.



[OUTDOOR PORTRAIT]

Prevents faces from appearing dark when photographing outside.



[INDOOR PORTRAIT]

Sets the ISO sensitivity setting to the appropriate setting to prevent blurring of photo subject for indoor photography.



[CREATIVE PORTRAIT]

You can change the amount of background blurring by changing the aperture value (P85).

■ Technique for Portrait Mode

To make this mode more effective:

- ① Rotate the zoom lever as far as possible to Tele.
- ② Move close to the subject.



Note

- When recording motion pictures in [SOFT SKIN], the setting will be applied. [NORMAL PORTRAIT], [OUTDOOR PORTRAIT], [INDOOR PORTRAIT] and [CREATIVE PORTRAIT] produce motion pictures using settings suitable for recording people.
- In [INDOOR PORTRAIT], the Intelligent ISO sensitivity control operates, and the maximum ISO sensitivity level becomes [ISO800].
- When the camera is set to [STABILIZER] and there is very little subject movement in [INDOOR PORTRAIT], or if [STABILIZER] is set to [OFF], the shutter speeds as slow as 1 second may be used.
- The initial setting for [AF MODE] is [AF-ON].

[SCENERY]

This allows you to take pictures of a wide landscape.

 [NORMAL SCENERY]

The focus adjusts onto far away subjects as a priority.

 [NATURE]

The best setting for photographing natural scenery.

 [ARCHITECTURE]

This setting takes sharp photographs of architecture. The guide lines are displayed. (P33)

 [CREATIVE SCENERY]

The shutter speed (P85) can be changed in the [NORMAL SCENERY] setting.

 **Note**

- It produces motion pictures using settings suitable for recording scenery during the motion picture recording.
- The flash setting is fixed to [☺].
- The focus range is 5 m to ∞.

[SPORTS]

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

 [NORMAL SPORTS]

Controls the ISO sensitivity while stopping movement with a high shutter speed.

 [OUTDOOR SPORTS]

Fast shutter speed for stopping movement when taking photographs outdoors in good weather.

 [INDOOR SPORTS]

Increases the ISO sensitivity and increases the shutter speed to prevent blurring for indoor photography.

Where higher ISO setting is used, the photo may show slightly more noise. This is normal, this is not a malfunction.

 [CREATIVE SPORTS]

The shutter speed (P85) can be changed in the [NORMAL SPORTS] setting.

 **Note**

- It will be a normal motion picture recording during the motion picture recording.
- This mode is suitable for taking pictures of subjects at distances of 5 m or more.
- When the camera is set to [STABILIZER] and there is very little subject movement, or if [STABILIZER] is set to [OFF], the shutter speeds as slow as 1 second may be used.

[CLOSE-UP]

This mode allows you to take close-up pictures of a subject, e.g. when taking pictures of flowers.

**[FLOWER]**

Flowers outdoors are recorded with natural colors in macro settings. The guide lines are displayed. (P67)

**[FOOD]**

You can take pictures of food with a natural hue without being affected by the ambient light in restaurants etc.

**[OBJECTS]**

You can take clear and vivid pictures of accessories or small objects in a collection.

**[CREATIVE CLOSE-UP]**

You can change the degree of blurring of the background by changing the aperture value in the macro settings. (P85)

 **Note**

- **During motion picture recording, the motion picture will reflect the settings for each mode with [FLOWER], [FOOD] and [OBJECTS]. [CREATIVE CLOSE-UP] is suitable for near distance motion picture recording.**
- We recommend using a tripod and the Self-Timer.
- We recommend setting the flash to [☺] when you take pictures at close range.
- If the distance between the camera and the subject is beyond the focus range of the camera, the picture may not be properly focused even if the focus indication lights.
- When a subject is close to the camera, the effective focus range is significantly narrowed. Therefore, if the distance between the camera and the subject is changed after focusing on the subject, it may become difficult to focus on it again.
- Close-up Mode gives priority to a subject close to the camera. Therefore, if the distance between the camera and the subject is far, it takes longer to focus on it.
- When you take pictures at close range, the resolution of the periphery of the picture may decrease slightly. This is not a malfunction.
- If the lens becomes dirty with fingerprints or dust, the lens may not be able to focus on the subject correctly.
- The focus range is 1 cm (Wide)/1 m (Tele) to ∞.

[NIGHT PORTRAIT]

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



[NIGHT PORTRAIT]

Uses when taking photographs of people with night scenery as a background.

- Open the flash.
- (You can set to [⚡👁].)
- The initial setting for [AF MODE] is [👁].



[NIGHT SCENERY]

Night scenery is vividly photographed with the maximum 8 second slow shutter.

- **The flash setting is fixed to [👁].**



[ILLUMINATIONS]

Illuminations are photographed beautifully.

- **The flash setting is fixed to [👁].**



[CREATIVE NIGHT SCENERY]

The aperture value (P85) can be changed in the [NIGHT SCENERY] setting.

- **The flash setting is fixed to [👁].**

■ Technique for Night Portrait Mode

- When selecting [NIGHT PORTRAIT], ask the subject not to move while taking a picture.

Note

- Since the shutter speed becomes slower, we recommend using a tripod and the Self-Timer for taking pictures.
- When the camera is set to [STABILIZER] and there is very little subject movement, or if [STABILIZER] is set to [OFF], the shutter speeds as slow as 8 seconds may be used.
- The shutter may remain closed (max. about 8 sec.) after taking the picture because of signal processing. This is not a malfunction.
- **During motion picture recording, low light settings [👁] are used, which will provide better pictures in dimly lit rooms or at nightfall.**
- The range in which the focus is adjusted is shown below.
 - [NIGHT PORTRAIT]: 60 cm to 10 m (Wide)
 - [NIGHT SCENERY]/[ILLUMINATIONS]/[CREATIVE NIGHT SCENERY]: 5 m to ∞
- Noise may become visible when you take pictures in dark places.

[REC] Mode: **SCN**

Using Scene Mode

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

1 Set the mode dial to **[SCN]**.

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

- If you press [DISPLAY] when selecting a scene mode, explanations about each scene mode are displayed.
- You can switch menu screens from any menu item by rotating the zoom lever.



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

- The menu screen is switched to the recording screen in the selected Scene Mode.

Note

- To change the Scene Mode, press [MENU/SET] and then press **▶**, and return to step **2** above (when [MENU RESUME] (P39) is [OFF]).
- The Scene Mode flash setting is reset to the initial setting when the Scene Mode is changed.
- When you take a picture with a Scene Mode that is not adequate for the purpose, the hue of the picture may differ from the actual scene.
- The following items cannot be set in Scene Mode because the camera automatically adjusts them to the optimal setting.
 - [FILM MODE]/[SENSITIVITY]/[ISO LIMIT SET]/[METERING MODE]/[I.EXPOSURE]/[MIN. SHTR SPEED]/[I.RESOLUTION]/[FLASH SYNCHRO]

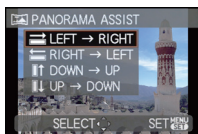
[PANORAMA ASSIST]

You can take pictures with connections suitable for creating panorama images.

■ Setting the recording direction

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

- The horizontal/vertical guideline will be displayed.



2 Take the picture.

- You can retake the picture by selecting [RETAKE].

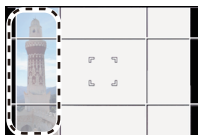


3 Press ▲ to select [NEXT] and then press [MENU/SET].

- You can also press the shutter button halfway to set the menu.
- Part of the recorded image is displayed as a transparent image.

4 Take picture after moving the camera horizontally or vertically so the transparent image overlaps.

- When taking the third and later pictures, repeat steps 3 and 4.
- You can retake the picture by selecting [RETAKE].



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



Note

- It will be a normal motion picture recording during the motion picture recording.
- The flash setting is fixed to [☺].
- The focus, zoom, exposure, White Balance, shutter speed and ISO sensitivity are fixed to the settings for the first picture.
- We recommend using a tripod. When it is dark, we recommend using the Self-Timer for taking pictures.
- When the camera is set to [STABILIZER] and there is very little subject movement, or if [STABILIZER] is set to [OFF], the shutter speeds as slow as 8 seconds may be used.
- The shutter may remain closed (max. about 8 sec.) after taking the picture because of signal processing. This is not a malfunction.

[PARTY]

Select this when you want to take pictures at a wedding reception, an indoor party etc. This allows you to take pictures of people and the background with near real-life brightness.

■ Technique for Party Mode

- **Open the flash.** (You can set to [] or [].)
- We recommend using a tripod and the Self-Timer for taking pictures.
- We recommend rotating the zoom lever to Wide (1×) and being about 1.5 m from the subject when taking pictures.

**Note**

- The initial setting for [AF MODE] is [].


[CANDLE LIGHT]

This mode allows you to take pictures with a candle-lit atmosphere.

■ Technique for Candle Light Mode

- This is more effective when taking pictures without using the flash.

**Note**

- The focus range is 1 cm (Wide)/1 m (Tele) to ∞.
- We recommend using a tripod and the Self-Timer for taking pictures.
- When the camera is set to [STABILIZER] and there is very little subject movement, or if [STABILIZER] is set to [OFF], the shutter speeds as slow as 1 second may be used.
- The initial setting for [AF MODE] is [].

[BABY1]/ [BABY2]

This takes pictures of a baby with a healthy complexion. When you use the flash, the light from it is weaker than usual.

It is possible to set different birthdays and names for [BABY1] and [BABY2]. You can select to have these appear at the time of playback, or have them stamped on the recorded image using [TEXT STAMP] (P168).

■ Birthday/Name setting

1 Press $\blacktriangle/\blacktriangledown$ to select [AGE] or [NAME] and then press \blacktriangleright .

2 Press $\blacktriangle/\blacktriangledown$ to select [SET] and then press [MENU/SET].

3 Enter the birthday or name.

Birthday: $\blacktriangle/\blacktriangleright$: Select the items (year/month/day).

$\blacktriangle/\blacktriangledown$: Setting.

[MENU/SET]: Exit.

Name: For details on how to enter characters, refer to "Entering Text" on P152.

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

4 Press [MENU/SET] to finish.

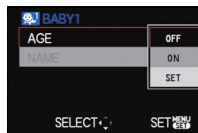
■ To cancel [AGE] and [NAME]

Select the [OFF] setting in step 2.



Note

- During motion picture recording, settings for [NORMAL PORTRAIT] are used. Also, still pictures recorded during motion picture recording (P110) will not record age or name.
- If [AGE] or [NAME] is set to [OFF] even when the birthday or name has been set, the age or name will not be displayed. Before taking pictures, set [AGE] or [NAME] to [ON].
- The focus range is 1 cm (Wide)/1 m (Tele) to ∞ .
- When the camera is set to [STABILIZER] and there is very little camera shake, or if [STABILIZER] is set to [OFF], shutter speed may slow down up to 1 second.
- Intelligent ISO sensitivity control is activated, and maximum ISO sensitivity level becomes [ISO1600].
- If the camera is turned on with [BABY1]/[BABY2] set, the age and name are displayed at the lower left of the screen for about 5 seconds, along with the current date and time.
- If the age is not properly displayed, check the clock and birthday settings.
- The birthday setting and name setting can be reset with [RESET].
- The initial setting for [AF MODE] is [AF].



[PET]

Select this when you want to take pictures of a pet such as a dog or a cat. You can set your pet's birthday and name. You can select to have these appear at the time of playback, or have them stamped on the recorded image using [TEXT STAMP] (P168). For information about [AGE] or [NAME], refer to [BABY1]/[BABY2] on P99.

 **Note**

- It will be a normal motion picture recording during the motion picture recording.
- The initial setting for the AF assist lamp is [OFF].
- The initial setting for [AF MODE] is [R₁].
- Refer to [BABY1]/[BABY2] for other information about this mode.

[SUNSET]

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

 **Note**

- The flash setting is fixed to [☺].

[HIGH SENS.]

This mode minimizes the unsharp rendition of moving subjects, and enables you to take pictures of them in dimly lit rooms. (Select this for high-sensitivity processing. The sensitivity automatically switches to between [ISO1600] and [ISO6400].)

Resolution and aspect ratio

- 1 Press ▲/▼ to select the resolution and aspect ratio and then press [MENU/SET] to set.
 - 3M (4:3), 2.5M (3:2), 2M (16:9) or 2.5M (1:1) is selected as the resolution.
- 2 Take pictures.

 **Note**

- [I.RESOLUTION] is fixed to [ON].
- [QUALITY] is automatically fixed to [•••].
- You can take pictures suitable for 4"×6"/10×15 cm printing.
- The focus range is 1 cm (Wide)/1 m (Tele) to ∞.

[FLASH BURST]

This mode is for taking serial pictures with flash in dark areas. Pictures recorded will be recorded together as a single group.

■ Resolution and aspect ratio**1 Press ▲/▼ to select the resolution and aspect ratio and then press [MENU/SET] to set.**

- 3M (4:3), 2.5M (3:2), 2M (16:9) or 2.5M (1:1) is selected as the resolution.

2 Take pictures.

- Still pictures are taken continuously while the shutter button is pressed fully.

Number of recordable pictures	max. 5 pictures
--------------------------------------	-----------------

- The frame rate changes according to the recording conditions.

Note

- It will be a normal motion picture recording during the motion picture recording.
- [I.RESOLUTION] is fixed to [OFF].
- [QUALITY] is automatically fixed to [•••].
- You can take pictures suitable for 4"×6"/10×15 cm printing.
- The focus range is 1 cm (Wide)/1 m (Tele) to ∞.
- The focus, zoom, exposure, shutter speed, ISO sensitivity, and flash level are fixed to the settings for the first picture.
- Intelligent ISO will automatically set the maximum ISO sensitivity to [ISO3200].
- See the Note on [P73](#) when using the [FLASH BURST].

[PANNING]

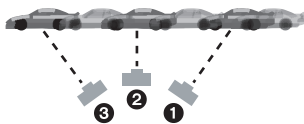
When you move the camera to follow a subject moving in one direction such as a runner or car, the background becomes a blur and the subject stays focused. This effect is called “panning”. This mode allows you to obtain this effect easier.

■ Technique for Panning Mode

To obtain good pictures in Panning Mode, move the camera in a horizontal plane as you take the pictures.

- We recommend that you do not follow the subject with the camera alone, but stand facing the subject with shoulders squared, and follow it using your entire body, while twisting at the waist.
- Once the subject is in front of you, press the shutter button. Do not stop moving the camera even after you press the shutter button.

- 1 Move the camera smoothly while following the subject in the viewfinder.
- 2 Press the shutter button while you are moving the camera.
- 3 Move the camera continuously.



- We recommend the following:

- Use the Viewfinder.
- Select a subject with quick motion.
- Use prefocus.
- Use with Continuous Mode.

(You can then select the best pictures from all the pictures taken.)

■ Setting the shutter speed

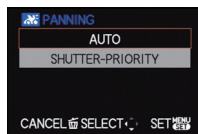
- 1 Press **▼** to select [SHUTTER-PRIORITY] and press [MENU/SET].

- If you select [AUTO], it will not be possible to select the shutter speed.

- 2 Press the rear dial to enable the shutter speed setting operation, and then rotate the rear dial to set the shutter speed.

- Every time the rear dial is pressed, it switches between shutter speed and exposure compensation setting operation.

- 3 Take pictures.



Note

- The shutter speed is reduced in Panning Mode to achieve the effect. As a result, camera shake can easily occur.
- The panning function does not work well in the following situations.
 - When the shutter speed is faster than 1/100s.
 - When you move the camera too slowly because the subject is moving slowly. (The background will not become a blur.)
 - When the camera cannot follow the subject well.
- You cannot set the Stabilizer Function Mode to [MODE2] or [AUTO]. When you set it to [MODE1], only vertical camera shakes can be compensated.

[STARRY SKY]

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

■ Setting the shutter speed

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

1 Press ▲/▼ to select the number of seconds and then press [MENU/SET].

- It is also possible to change the number of seconds using the quick menu. (P30)

2 Take pictures.

- Press the shutter button fully to display the countdown screen. Do not move the camera after this screen is displayed. When countdown finishes, [PLEASE WAIT...] is displayed for the same length of time as the set shutter speed for signal processing.
- Press [MENU/SET] to stop taking the picture while the countdown screen is displayed.



■ Technique for Starry Sky Mode

- The shutter opens for 15, 30 or 60 seconds. Be sure to use a tripod. We also recommend taking pictures with the Self-Timer.
- We recommend using prefocus (P76) to focus in advance on a subject, such as a bright star or a distant light, that is easy to focus on.

Note

- During motion picture recording, low light settings [📷] are used, which will provide better pictures in dimly lit rooms or at nightfall.
- The flash setting is fixed to [📷].
- The Optical Image Stabilizer Function is fixed to [OFF].
- ISO sensitivity is fixed to [ISO100].

[FIREWORKS]

This mode allows you to take beautiful pictures of fireworks exploding in the night sky.

■ Technique for Fireworks Mode

We recommend performing the following steps to prefocus on the point the pictures will be taken so that you do not miss taking pictures of the fireworks when they are fired.

- ① Aim the camera at an object, such as a distant light, that is about the same distance from the camera as the point where the fireworks will rise.
 - ② Press the shutter button halfway until the focus indication (P54) lights.
 - ③ Set the focus mode selector switch to [MF]. (P75)
 - ④ Aim the camera in the direction that the fireworks will be fired and wait.
 - ⑤ Press the shutter button fully to take the picture when the fireworks are fired.
- If zoom was used, the focus position will not be correct. Perform steps ② to ⑤ again.
 - We recommend using a tripod.

Note

- It will be a normal motion picture recording during the motion picture recording.
- The flash setting is fixed to [④].
- The focus range is 5 m to ∞ in AF Mode. (We recommend performing steps ① to ⑤ for prefocus.)
- This mode is most effective when the subject is 10 m or more away.
- The shutter speed becomes the following.
 - When [OFF] is set on the Optical Image Stabilizer Function: Fixed to 2 seconds.
 - When [AUTO], [MODE1] or [MODE2] is set on the Optical Image Stabilizer Function: 1/4 second or 2 seconds (The shutter speed becomes 2 seconds only when the camera has determined that there is little camera shake such as when using a tripod etc.)
 - You can change the shutter speed by compensating the exposure.
- ISO sensitivity is fixed to [ISO100].

[BEACH]

This allows you to take even more vivid pictures of the blue color of the sea, sky etc. It also prevents under exposure of people under strong sunlight.

Note

- The initial setting for [AF MODE] is [∞].
- Do not touch the camera with wet hands.
- Sand or seawater will cause the camera to malfunction. Make sure that sand or seawater does not get into the lens or the terminals.

[SNOW]

This allows you to take pictures that show the snow as white as possible at a ski resort or a snow-covered mountain.

[AERIAL PHOTO]

This mode allows you to take pictures through an airplane window.

■ Technique for Aerial Photo Mode

- We recommend using this technique if it is difficult to focus when taking pictures of clouds etc. Aim the camera at something with high contrast, press the shutter button halfway to fix the focus and then aim the camera at the subject and press the shutter button fully to take the picture.

Note

- **The flash setting is fixed to [☹].**
- The focus range is 5 m to ∞.
- **Turn the camera off when taking off or landing.**
- **When using the camera, follow all instructions from the cabin crew.**
- Be careful about the reflection from the window.

[PHOTO FRAME]

Record the image with a frame around it.

■ Setting the frame

- 1 Press ◀/▶ to select the frame to use, and then press [MENU/SET].**
 - The number of pixels is fixed to 2M (4:3).
- 2 Take pictures.**

Note

- **It will be a normal motion picture recording during the motion picture recording. Frame will not be displayed.**
- [AUTO REVIEW] is fixed to [2SEC.].
- The color of the frame displayed on the screen and the color of the frame around the actual image may differ, but this is not a malfunction.

[HIGH SPEED MOVIE]



This will record 220 frames/second, recording very fast movement that cannot be seen with the naked eye as a motion picture.

1 Start recording by pressing the motion picture button.

- Release the motion picture button right after you press it.

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

 **Note**

- You can also start/stop motion picture recording by pressing the shutter button.
- **It cannot be recorded into the internal memory.**
- Recording format will be fixed to [] of [MOTION JPEG].
- Audio is not recorded.
- Motion picture can be recorded continuously for up to 2 GB.
- Still picture cannot be recorded even when the shutter button is pressed.
- Zoom or continuous AF cannot be used while recording the motion picture.
- Exposure and white balance is fixed to the value at the beginning of the recording motion picture.
- [STABILIZER] is fixed to [OFF].
- [AF MODE] is fixed to [].
- Under fluorescent lighting, flicker or horizontal bars may be seen.

[REC] Mode: **A P A S M** CUST  SCN      

Recording Motion Pictures

You can record full high definition motion pictures compatible either with the AVCHD format or Motion JPEG.

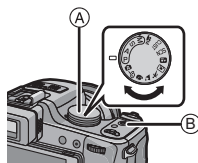
Audio will be recorded in stereo.

- Close the flash. (It is recommended that you close the flash when recording motion pictures. However, leaving the flash open will not result in a significant difference in sound quality.)









1

Select the mode

- (A) Mode dial
- (B) Motion picture button



■ Modes that can be recorded for motion picture

Item	Settings/Note
A Snapshot Mode	The camera will set the most appropriate settings to match the subject and the recording conditions, so you can leave the settings to the camera and take motion pictures easily.
P/A/S/M Mode	Record motion pictures by automatically setting aperture and shutter speed.
CUST Custom Mode	Record motion pictures with selected Custom Mode settings.
 Creative Motion Picture Mode	Record motion pictures by manually setting aperture and shutter speed. (P114)
SCN Scene Mode	Record motion pictures that match the scene being recorded. (P96 to 106)
 [PORTRAIT]	Record motion pictures with settings suitable for portraits.
 [SCENERY]	Record motion pictures with settings suitable for scenery.
 [SPORTS]	It will be a normal motion picture recording during the motion picture recording.
 [CLOSE-UP]	Record motion pictures with settings suitable for close-ups.
 [NIGHT PORTRAIT]	Record clear motion pictures with low light setting [] inside dim rooms or at dusk.
 My Color Mode	Record motion pictures in My Color Mode setting.

2 Start recording by pressing the motion picture button.

- (A) Available recording time
- (B) Elapsed recording time
- Release the motion picture button right after you press it.
- The audio is also recorded simultaneously from the built-in microphone on the camera. (Motion pictures cannot be recorded without audio.)
- The recording state indicator (red) (C) will flash while recording motion pictures.
- The screen will become dark momentarily, and recording will start after adjusting the display.
- Focus can be achieved during recording by pressing [FOCUS].
- Focus can be set manually when [MF] is displaying. (P75)



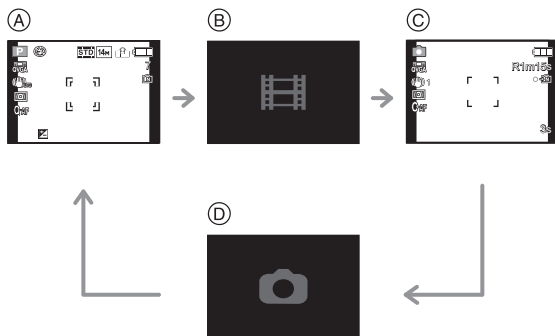
3 Stop the recording by pressing the motion picture button again.

- Sound will go off when pressing the motion picture button indicating start/stop of motion picture recording. Sound volume can be set in [BEEP LEVEL] (P31).
- If the internal memory or the card becomes full during recording, the process will be stopped automatically.

Note

- The screen will change as following when the motion picture button is pressed in steps 2 and 3.

- (A) Still picture recording screen*1
- (B) Motion Picture Mode setting*2
- (C) Motion picture recording screen
- (D) Still Picture Mode setting*3



- *1 Set [REMAINING DISP.] (P33) to [☑:☺] to display the available recording time before recording motion pictures.
- *2 The screen that is displayed during Motion Picture Mode setting is different depending on the setting of the [REC MODE].
- *3 [📷] will not be displayed in the Creative Motion Picture Mode.

- Refer to **P150** for the **[MOTION PICTURE] Mode menu**.
- The flash setting is fixed to **[☺]**.
- Refer to **P230** for information about the available recording time.
- The available recording time displayed on the screen may not decrease regularly.
- Depending on the type of the card, the card access indication may appear for a while after recording motion pictures. This is not a malfunction.
- The operational sound of the zoom or button operation may be recorded when it is operated during the recording of a motion picture.
- The screen may be blacked out momentarily, or the camera may record noise due to static electricity or electromagnetic waves etc. depending on the environment of the motion picture recording.
- When operating the zoom in recording motion pictures, it may take time to come into focus.
- If the Extended Optical Zoom was used before pressing the motion picture button, those settings will be cleared, so the focus range will change dramatically.
- Even if the aspect ratio setting is the same in still and motion pictures, the angle of view may change at the start of the motion picture recording. When **[REC AREA] (P33)** is set to **[ON]**, angle of view during motion picture recording is displayed.

(A) Example

image: When **[REC MODE]** is set to **[AVCHD(1080i)]** and the **[ASPECT RATIO]** is set to **[16:9]**.

(B) : This section is not recorded in motion pictures.

- **[STABILIZER]** is fixed to **[MODE 1]** in recording motion pictures.
- In recording motion pictures, the following functions cannot be used.
 - Direction Detection function
 - Extended Optical Zoom
 - **[FACE RECOG.]**
- It is recommended to use a fully charged battery when recording motion pictures.



Taking pictures or pictures series while recording Motion Pictures

Still pictures can be recorded even while recording a motion picture. It is also possible to record with continuous mode.

■ Taking a still picture while recording a motion picture

During motion picture recording, press the shutter button fully to record a still picture.



■ Continuous Mode during motion picture recording

- 1 Setup Continuous mode (P82) before starting motion picture recording.
- 2 Hold down the shutter button fully while recording motion pictures.

• You can set [2J], [5J] and [10J] in Continuous Mode.*

* It is automatically set to [2J] when it is set to [2AF], [5J] when it is set to [5AF], and [10J] when it is set to [11J], [40J], or [60J].

Note

- Recordable pixels and recordable number of pictures are displayed by pressing the shutter button halfway.
- Recording of a motion picture will continue after taking a still picture.
- Recording is performed by the electronic shutter, so the recorded picture may appear warped.
- Simultaneously recorded still pictures will be recorded in an aspect ratio of [16:9], and with a resolution of [3.5 M]. The picture quality may be different from [3.5 M] of standard pictures.
- Up to 40 still pictures can be recorded during recording of the motion picture.
- Only JPEG images are recorded when [QUALITY] is set to [RAW], [RAW] or [RAW]. (When set to [RAW] or [RAW], still pictures will be recorded in [QUALITY] of [SIF].)
- The flash setting is fixed to [S].
- Zooming may stop when a picture is recorded while zooming.
- Simultaneous recording is not possible in the following cases:
 - When [MOTION JPEG] is set to [SIF] or [SIF]
 - In [HIGH SPEED MOVIE] in Scene Mode
 - In Creative Motion Picture Mode

When set to Snapshot Mode

- When Snapshot Mode is selected in step 1 on page 107, motion picture recording matching to the subject or recording situation can be performed.

■ Scene Detection

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

A →		[i-PORTRAIT]
		[i-SCENERY]
		[i-LOW LIGHT]
		[i-MACRO]

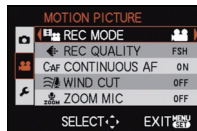
- [A] is set if none of the scenes are applicable, and the standard settings are set.
- When [i] is selected, the camera automatically detects a person's face, and it will adjust the focus and exposure. (Face Detection) (P140)

Note

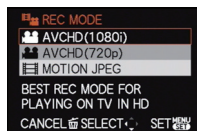
- Refer to P51 for settings in Snapshot Mode.
- Due to conditions such as the ones below, a different scene may be identified for the same subject.
 - Subject conditions: When the face is bright or dark, the size of the subject, the color of the subject, the distance to the subject, the contrast of the subject, when the subject is moving
 - Recording conditions: Sunset, Sunrise, Under low brightness conditions, When the camera is shaken, When zoom is used
- To take pictures in an intended scene, it is recommended that you take pictures in the appropriate recording mode.

Changing [REC MODE] and [REC QUALITY]

- 1** Select [REC MODE] from the [MOTION PICTURE] Mode menu, and press **▶**. (P28)



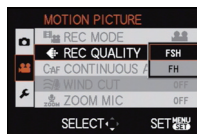
- 2** Press **▲/▼** to select the item and then press [MENU/SET].



Recording format	Features
<ul style="list-style-type: none"> • [AVCHD(1080i)] • [AVCHD(720p)] 	<ul style="list-style-type: none"> • Select this format to record HD (high definition) video for playback on your HDTV using an HDMI connection. • It can be played back as is by inserting the card into a device compatible with AVCHD. Refer to the instructions of the device used for details on compatibility. • Use a card with SD Speed Class* with "Class 4" or higher. • [AVCHD(1080i)] can record motion pictures with even higher definition and picture quality than [AVCHD(720p)].
<ul style="list-style-type: none"> • [MOTION JPEG] 	<ul style="list-style-type: none"> • Select this format to record standard definition video for playback on your PC. It can be recorded using less storage when there is not much space left on the memory card or when you want to attach the motion picture to an e-mail. • Use a card with SD Speed Class* with "Class 6" or higher.

*The SD Speed Class Rating is the speed standard for successive writes.



- 3** Press **▲/▼** to select [REC QUALITY] and then press **▶**.





4

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

When [AVCHD(1080i)] is selected in step 2

	Item	Quality (bit rate) ^{*1}		fps	Aspect ratio
High quality ↓ ↑ Longer time	 ([FSH])	1920×1080 pixels Approx. 17 Mbps ^{*2}	Full high definition	60i ^{*3} / 50j ^{*4} (Sensor output is 60 ^{*3} /50 ^{*4} fps)	16:9
	 ([FH])	1920×1080 pixels Approx. 13 Mbps ^{*2}			

When [AVCHD(720p)] is selected in step 2

	Item	Quality (bit rate) ^{*1}		fps	Aspect ratio
High quality ↓ ↑ Longer time	 ([SH])	1280×720 pixels Approx. 17 Mbps ^{*2}	High definition	60p ^{*3} / 50p ^{*4} (Sensor output is 60 ^{*3} /50 ^{*4} fps)	16:9
	 ([H])	1280×720 pixels Approx. 13 Mbps ^{*2}			

*1 What is bit rate

This is the volume of data for definite period of time, and the quality becomes higher when the number gets bigger. The camera is using the “VBR” recording method. “VBR” is an abbreviation of “Variable Bit Rate”, and the bit rate (volume of data for definite period of time) is changed automatically depending on the subject to record. Therefore, the recording time is shortened when a subject with fast movement is recorded.







*2 What is Mbps

This is an abbreviation of “Megabit Per Second”, and it represents the speed of transmission.



*3 With camera models 18 393 / 18 394

*4 With camera model 18 392

When [MOTION JPEG] is selected in step 2

	Item	Resolution	fps	Aspect ratio
High quality  Longer time 	 ([HD])	1280×720 pixels	30	16:9
	 *1 ([WVGA])	848×480 pixels		
	 ([VGA])	640×480 pixels		
	 ([QVGA])	320×240 pixels		4:3

*1 This item cannot be set in the Snapshot Mode.

- With the [AVCHD] or  for [MOTION JPEG], high quality motion picture can be enjoyed on the TV by using the HDMI mini cable (optional). For details, see “Playing back Pictures on a TV with an HDMI socket” on P185.
- It cannot be recorded to internal memory except for the .

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

- You can also press the shutter button halfway to close the menu.


Note

- The motion picture recording may stop in the middle when any of the following cards are used.
 - Cards on which recording and deleting have been repeated many times
 - Cards which have been formatted using a PC or other equipment
 Before taking pictures, format (P39) the card in this camera. Because formatting will delete all data recorded on the card, save important data beforehand on the computer.
- You may not be able to record for a short while after turning the power [ON] when using a large capacity card.
- **Motion pictures recorded in [AVCHD] or [MOTION JPEG] 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 the camera.**
- Motion picture recorded in [AVCHD] does not comply with the “DCF/Exif”, so some information will not display while playback.
- **Some motion pictures recorded in [MOTION JPEG] may not be played back with other digital cameras, including Leica models.**

[REC] Mode: 

Recording Motion Pictures with Manual Settings (Creative Motion Picture Mode)

It is possible to manually change the aperture and shutter speed and record motion pictures. Switching the [EXPOSURE MODE] allows you to use settings such as those when mode dial is switched to **[P]**, **[A]**, **[S]** and **[M]**.

- 1 Set the mode dial to .
- 2 Press **▲/▼** to select the item and then press **[MENU/SET]**.
- 3 Rotate the rear dial to change the settings.



[EXPOSURE MODE]	Items that can be set	
P (Program AE Mode)	Program shift	Exposure Compensation *
A (Aperture-Priority Mode)	Aperture*	Exposure Compensation *
S (Shutter-Priority Mode)	Shutter speed*	Exposure Compensation *
M (Manual Exposure Mode)	Shutter speed*	Aperture*

*You can change the settings even during motion picture recording. However please note that operating sounds may be recorded.

- Items that can be set will switch every time the rear dial is pressed.
- When the focus mode selector switch is at [MF], you can also set Manual Focus using the rear dial.

- 4 Start recording by pressing the motion picture button.

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

- If the card becomes full in the middle of recording, the camera stops recording automatically.
- You can also start/stop motion picture recording by pressing the shutter button.
- Sound will go off when pressing the motion picture button or shutter button indicating motion picture recording start/stop. Sound volume can be set in [BEEP LEVEL] (P31).

■ Setting the aperture value and shutter speed for each [EXPOSURE MODE]

[EXPOSURE MODE]	Aperture value	Shutter speed (Sec.)
P	—	—
A	F2.8 to F11 (Wide)/F5.2 to F11 (Tele)	
S	—	1/30 to 1/20000s ^{*1}
M	F2.8 to F11 (Wide)/F5.2 to F11 (Tele)	1/30 to 1/20000s ^{*1} (When using Manual Focus, the shutter speed can be set from 1/8 to 1/20000s. ^{*2})

*1 If you record with the shutter speed set to slower than 1/60^{*3}(1/50^{*4}) second and [REC MODE] set to [AVCHD(1080i)] or [AVCHD(720p)], the exposure time per frame will increase. Depending on the movement of the subject, this may result in blurring in the frames.

*2 During recording, if you switch the focus mode selector switch to [AF] or [AF \updownarrow] with the shutter speed set to slower than 1/30 second, the shutter speed will automatically be set to 1/30 second.

*3 With camera models 18 393 / 18 394

*4 With camera model 18 392

Note

• Aperture value

- 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.

• Shutter speed

- When you want to take a sharp picture of a fast moving subject, set a fast shutter speed. When you want to create a trailing effect, set to a slower shutter speed.
- Manually setting a higher shutter speed may increase the noise on-screen due to the higher sensitivity.
- When recording under lighting such as fluorescent lighting, mercury lighting and sodium lighting, the coloring and brightness of the screen may change.
- Refer to “Recording Motion Pictures” on P107 for other settings and operations for recording motion pictures.
- Some motion pictures recorded in [MOTION JPEG] may not be played back with other digital cameras, including Leica models.

[REC] Mode: **P A S M** CUST         

Registering Personal Menu Settings (Registering custom settings)

It is possible to register up to 3 sets of current camera settings as custom sets.

- Set to the mode dial to the desired mode and select the desired menu settings in advance.

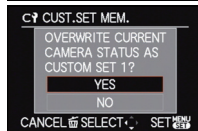
1 Select [CUST. SET MEM.] on the [SETUP] menu. (P28)

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



3 Press ▲ to select [YES] and then press [MENU/SET].

- When [YES] is selected, the settings that were previously stored are overwritten.



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

- You can also press the shutter button halfway to close the menu.

Note

- You cannot save the following menu items because they affect other Recording Modes.

[REC] menu/Recording functions	[SETUP] menu
<ul style="list-style-type: none"> • [BABY1]/[BABY2] or [PET] birthday and name settings in Scene Mode • Data registered with [FACE RECOG.] 	<ul style="list-style-type: none"> • [CLOCK SET] • [TRAVEL DATE] • [VOLUME] • [ECONOMY] • [RESET] • [VIDEO OUT] • [HDMI MODE] • [SCENE MENU] • [LANGUAGE] • [WORLD TIME] • [BEEP] • [LCD MODE] • [AUTO REVIEW] • [NO.RESET] • [USB MODE] • [TV ASPECT] • [HDTV Link] • [VERSION DISP.] • [O.I.S. DEMO.]

[REC] Mode: **CUST**

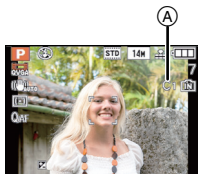
Using Custom Mode

You can select one of your own custom settings saved with [CUST. SET MEM.] to suit the picture-taking conditions.

Initial setting of the Program AE Mode is registered as the custom settings initially.

1 Set the mode dial to [CUST].

- (A) Display custom settings

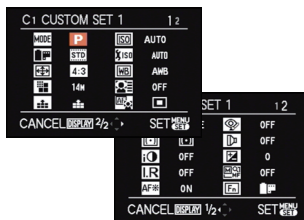


2 Press ▲/▼ to select the custom settings you want to use.

- Press [DISPLAY] to display the settings for each menu item. (Press ◀/▶ to change between screens, and press [DISPLAY] to return to the selection screen.)
- Only the main menu items are displayed.

3 Press [MENU/SET] to enter the settings.

- (A) Saving of the selected custom settings is displayed on the screen.



■ When changing the menu settings

Even if the menu settings are changed temporarily with [C1], [C2] or [C3] selected, what has been registered will remain unchanged.

To change what has been registered, overwrite the registered data using [CUST. SET MEM.] (P116) on the setup menu.

Note

- See the note on P116 for details of the menu that is not stored in the custom set.

[REC] mode: **P A S M** CUST 

Using Film Mode to Change Color Tones

Just as each type of film for film cameras has its own color tone and contrast characteristics, Film Mode allows you to select up to 9 different “digital films”, color tones, in the same way as you would select different films for film cameras. Select different settings in Film Mode to match the photo look you wish to achieve.

1 Select [FILM MODE] from the [REC] mode menu, and press **▶**. (P28)

2 Press **◀/▶** to select an item.

- When you press [DISPLAY] on the screen shown right, explanations about each Film Mode are displayed. (When you press [DISPLAY] again, the screen returns to the previous screen.)



3 Press [MENU/SET] to set.

Item	Effect
[STANDARD] (COLOR)	This is the standard setting.
[DYNAMIC] (COLOR)	The saturation and contrast of the stored colors are increased.
[NATURE] (COLOR)	Brighter red, green and blue. Enhanced beauty of nature.
[SMOOTH] (COLOR)	The contrast is lowered for smoother and clearer color.
[VIBRANT] (COLOR)	Higher saturation and contrast than dynamic.
[NOSTALGIC] (COLOR)	Lower saturation and contrast. Reflecting passage of time.
[STANDARD] (B&W)	This is the standard setting.
[DYNAMIC] (B&W)	The contrast is increased.
[SMOOTH] (B&W)	Smooths the picture without losing the skin texture.
[MY FILM 1]/[MY FILM 2]	The saved setting is used.
[MULTI FILM]	It will take pictures changing the type of film in accordance with the setting every time the shutter button is pressed. (Up to 3 pictures)

Note

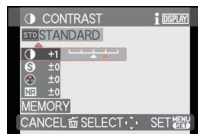
- You can also set from the Quick Menu. (P30)
- In Film Mode, the camera may do something equivalent to pull processing or push processing to create a picture with particular characteristics. The shutter speed may become very slow at this time.

Adjusting each Film Mode to the desired setting

1 Press ◀/▶ to select a film.

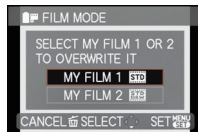
2 Press ▲/▼ to select an item and ◀/▶ to adjust.

- Registered settings are memorized even if the camera is turned off.



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

- You can register 2 settings. ([MY FILM 1] and [MY FILM 2]) (After registering, the Film Mode name that was registered previously is displayed.)
- [STANDARD] is registered in [MY FILM 1] and [STANDARD] (B&W) is registered in [MY FILM 2] at the time of purchase.



Item		Effect
[CONTRAST]	[+]	Increases the difference between the brightness and the darkness in the picture.
	[-]	Decreases the difference between the brightness and the darkness in the picture.
[SHARPNESS]	[+]	The picture is sharply defined.
	[-]	The picture is softly focused.
[SATURATION]	[+]	The colors in the picture become vivid.
	[-]	The colors in the picture become natural.
[NOISE REDUCTION]	[+]	The noise reduction effect is enhanced. Picture resolution may deteriorate slightly.
	[-]	The noise reduction effect is reduced. You can obtain pictures with higher resolution.

 **Note**

- Noise may become visible when you take pictures in dark places. To avoid picture noise, we recommend setting [NOISE REDUCTION] towards [+] or setting the items except [NOISE REDUCTION] towards [-] to take pictures.
- If you adjust a Film Mode, the Film Mode icon on the LCD monitor/viewfinder will turn orange.
- You cannot adjust [SATURATION] in the black and white settings in Film Mode.

Multi Film Bracket

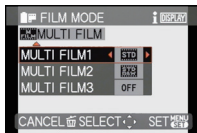
It will take pictures changing the type of film in accordance with the setting every time the shutter button is pressed. (Up to 3 pictures)

- You can also set from the Quick Menu. (P30)

1 Press ◀/▶ to select [MULTI FILM].

2 Select either [MULTI FILM 1], [MULTI FILM 2], or [MULTI FILM 3] with ▲/▼, and then select the film to be set for each with ◀/▶.

- [OFF] can be selected only for [MULTI FILM 3].



3 Press [MENU/SET] to set.

- You can also press the shutter button halfway to set.

4 Focus on the subject and take a picture.

- When using a Self-Timer, up to 3 pictures with set film will be taken if the shutter button is pressed.

 **Note**

- [MULTI FILM 1] is set to [STANDARD], [MULTI FILM 2] is set to [STANDARD](**B&W**), and [MULTI FILM 3] is set to [OFF] at the time when this camera is purchased.
- **Auto Bracket, Continuous Mode or White Balance Bracket will be canceled when Multi Film Bracket is set.**
- Motion pictures are recorded with the settings for the [MULTI FILM 1] setting.

[REC] Mode: **A P A S M** CUST SCN     

Using the Face Recognition function

Face Recognition is a function which finds a face resembling a registered face and prioritizes focus and exposure automatically. Even if the person is located towards the back or on the end of a line in a group photo, the camera can still take a clear picture.

[FACE RECOG.] is initially set to [OFF] on the camera.

[FACE RECOG.] will turn [ON] automatically when the face image is registered.

• **The following functions will also work with the Face Recognition function.**



In Recording Mode

- Display of corresponding name when camera detects a registered face* (if name has been set for the registered face)
- The camera will remember the face that the picture is taken for many times and display the registration screen automatically (if [AUTO REGISTRATION] is set to [ON])

In Playback Mode

- Display of name and age (if information has been registered)
- Selective playback of pictures chosen from pictures registered with Face Recognition ([CATEGORY PLAY] (P163))

* Names of up to 3 people are displayed. Precedence for the names displayed when taking pictures is determined according to the order of registration.

Note

- [AF MODE] is fixed to [AF].
- During Continuous Mode, [FACE RECOG.] picture information can be attached to only the first picture.
- After pressing the shutter halfway down, a different person's picture information may be added when the camera is turned to a different subject to photograph.
- [FACE RECOG.] can be used in the following Advanced Scene Modes and Scene Modes.
 - In [PORTRAIT]
 - In [SCENERY]
 - In [SPORTS]
 - In [FLOWER], [OBJECTS] and [CREATIVE CLOSE-UP] in [CLOSE-UP]
 - In [NIGHT PORTRAIT] in [NIGHT PORTRAIT]
 - In [PARTY], [CANDLE LIGHT], [BABY1]/[BABY2], [PET], [SUNSET], [HIGH SENS.], [BEACH], [SNOW] and [PHOTO FRAME] in Scene Mode
- [FACE RECOG.] will not work during Manual Focus.
- [FACE RECOG.] will find a face similar to the registered face, and does not guarantee secure recognition of a person.
- Face Recognition may take more time to select and recognize distinctive facial features than regular face detection.
- Even when Face Recognition information has been registered, pictures taken with [NAME] set to [OFF] will not be categorized by Face Recognition in [CATEGORY PLAY].
- Even when Face Recognition information is changed (P125), Face Recognition information for the pictures already taken will not be changed. For instance, if the name is changed, pictures recorded before the change will not be categorized by Face Recognition in [CATEGORY PLAY].
- To change the name information of the pictures taken, perform the [REPLACE] in [FACE REC EDIT] (P181).

Face Settings

You can register information such as names and birthdays for face images of up to 6 people.

Registration can be facilitated by taking multiple face images of each person. (up to 3 pictures/registration)

■ Point of recording when registering the face images

- Face front with eyes open and mouth closed, making sure the outline of the face, the eyes, or the eyebrows are not covered with the hair when registering.
- Make sure there is no extreme shading on the face when registering. (Flash will not flash during registration.)

[Good example for registering]



■ When it is not recognising during recording

- Register the face of same person indoors and outdoors, or with different expressions or angles. (P125)
- Additionally register at the location of recording.
- Changing the [SENSITIVITY] setting (P125).
- When a person who is registered is not recognized, correct by re-registering.

Example of faces that are hard to recognize

Face Recognition may not be possible or may not recognize faces correctly even for registered faces in the following instances, depending on the facial expression and environment.

- Hair is covering the eyes or the eyebrows (A)
- The face is dark/the light is at an angle (B)
- The face is facing in angle or sideways
- The face is facing upward/downward
- The eyes are closed
- When the face is extremely bright or dark
- Hidden by sunglasses, glasses reflecting light, hair, hat, etc.
- When the face appears small on the screen
- The entire face is not in the screen
- When distinctive facial features have changed with age
- When parents and children or siblings closely resemble one another
- Facial expression is very different
- When there is little contrast on the faces
- When there is rapid movement
- When the camera is shaking
- When Digital Zoom is used

(A)





(B)




Registering face image of new person

- 1 Select [FACE RECOG.] on the [REC] Mode menu and then press **▶**.
(P28)
- 2 Press **▲/▼** to select [MEMORY] and then press [MENU/SET].
- 3 Press **▲/▼/◀/▶** to select the Face Recognition frame that is not registered, and then press [MENU/SET].


- 4 Take the picture adjusting the face with the guide.
 - The faces of subjects other than people (pets, etc.) cannot be registered.
 - When recognition fails, a message will appear and the display will return to the recording screen. In this case, try taking the picture again.




- 5 Press **▲** to select [YES] and then press [MENU/SET].

6 Select item to edit with ▲/▼, and then press ►.

- You can register up to 3 face images.

Item	Description of settings
[NAME]	It is possible to register names. 1 Press ▼ to select [SET] and then press [MENU/SET]. 2 Enter the name. <ul style="list-style-type: none"> For details on how to enter characters, refer to “Entering Text” section on P152.
[AGE]	It is possible to register the birthday. 1 Press ▼ to select [SET] and then press [MENU/SET]. 2 Press ◀/▶ to select the items (Year/Month/Day), and then press ▲/▼ to set and then press [MENU/SET].
[FOCUS ICON]	Change the displayed focus icon when the subject is focused. Press ▲/▼ to select the focus icon, and then press [MENU/SET].
[ADD IMAGES]	To add additional face images. (Add Images) 1 Select the unregistered face recognition frame, and then press [MENU/SET]. 2 Perform steps 4 and 5 in “Registering face image of new person”. 3 Press [🗑].
	To delete one of the face images. (Delete) 1 Press ◀/▶ to select the face image to delete, and then press [MENU/SET]. 2 Press ▲ to select [YES] and then press [MENU/SET]. 3 Press [🗑]. <ul style="list-style-type: none"> If there is only one image registered, it cannot be deleted.

7 Press the shutter button halfway to close the menu.

■ About the information ⓘ

- When [DISPLAY] is pressed on the recording screen described in step 4 on [P123](#), an explanation appears for taking face images. (Press again to return to the recording screen.)

Change or delete the information for a registered person

You can modify the pictures or information of an already registered person. You can also delete the information of the registered person.

- 1 Select [FACE RECOG.] from the [REC] Mode menu, and then press ►. (P28)
- 2 Press ▼ to select [MEMORY] and press [MENU/SET].
- 3 Press ▲/▼/◀/▶ to select the face image to edit or delete and then press [MENU/SET].
- 4 Press ▲/▼ to select the item and then press [MENU/SET].



Item	Description of settings
[INFO EDIT]	Changing the information of an already registered person. Perform step 6 in “Registering face image of new person”.
[PRIORITY]	The focus and exposure are preferentially adjusted for higher-priority faces. Press ▲/▼/◀/▶ to select the priority and then press [MENU/SET].
[DELETE]	Deleting information of a registered person. Press ▲ to select [YES] and then press [MENU/SET].

- 5 Press the shutter button halfway to close the menu.

Setting Auto Registration/Sensitivity

Setting of Auto Registration and Sensitivity for Face Recognition can be done.

- 1 Select [FACE RECOG.] from the [REC] Mode menu, and then press ►. (P28)
- 2 Press ▼ to select [SET] and then press [MENU/SET].
- 3 Press ▲/▼ to select the item and then press ►.

Item	Description of settings
[AUTO REGISTRATION]	[OFF]/[ON] <ul style="list-style-type: none"> • When the [AUTO REGISTRATION] is set to [ON], [FACE RECOG.] will be set to [ON] automatically. • For details, see “Auto Registration” on P126.
[SENSITIVITY]	[HIGH]/[NORMAL]/[LOW] <ul style="list-style-type: none"> • Select [HIGH] when recognition proves to be difficult. The likelihood of recognition increases, but so does the likelihood of mistaken recognition. • Select [LOW] when mistaken recognition happens frequently. • To return to the original settings, select [NORMAL].

- 4 Press the shutter button halfway to close the menu.

Auto Registration

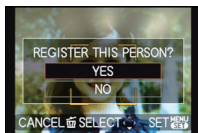
When [AUTO REGISTRATION] is set to [ON], the registration screen will display automatically after taking a picture of a face that has a high number of appearances.

- 3 is the typically required number for the registration screen to display. (Taking pictures while set to Continuous Mode, Auto Bracket, White Balance Bracket, Multi Film Bracket, or taking still pictures while recording motion pictures are not counted)
- It may be extremely hard to recognize only with [AUTO REGISTRATION], so register the face images with [FACE RECOG.] in the [REC] Mode menu beforehand.

■ Registering from the automatic registration screen

1 Press ▲ to select [YES] and then press [MENU/SET].

- If there are no registered persons, proceed to step 3.
- Selection screen is displayed again when [NO] is selected, and when [YES] is selected with ▲, [AUTO REGISTRATION] will be set to [OFF].



2 Press ▲/▼ to select [NEW PERSON] or

[ADDITIONAL IMAGE] and then press [MENU/SET].

Item	Description of settings
[NEW PERSON]	<ul style="list-style-type: none"> • A list of registered people is displayed when there are 6 people already registered. Select the person to be replaced.
[ADDITIONAL IMAGE]	<p>To additionally register a face image for a registered person. Press ▲/▼/◀/▶ to select the person to whom you wish add the picture, and then press [MENU/SET].</p> <ul style="list-style-type: none"> • If 3 images have already been registered, the picture replacement screen will appear. In this case, select the picture you wish to replace.

- After additionally registering or changing a face image, the screen returns automatically to the recording screen.

3 Perform the operation in Step 6 and following in “Registering face image of new person”.

Note

- If the registration screen will not display, it may display easier by recording in the same conditions or with the same expressions.
- If a face is not recognized even though it is registered, it will make the recognition easier by registering the person again using the [FACE RECOG.] in the [REC] Mode menu in that environment.
- If the registration screen is displayed for a person that is already registered, it will make the recognition easier by additionally registering.
- It may make recognition harder when a picture recorded with flash is registered.

[REC] Mode: **A P A S M** CUST **M** SCN      

Useful Functions at Travel Destinations

Recording which Day of the Vacation and the Location of the Vacation

For details on the [SETUP] menu settings, refer to P28.

If you set the departure date and the location of the vacation in advance, the number of days that have passed since the departure date (which day of the vacation it is) is recorded when you take the picture. You can display the number of days that have passed when playing back the pictures and stamp it on the recorded pictures with [TEXT STAMP] (P168).

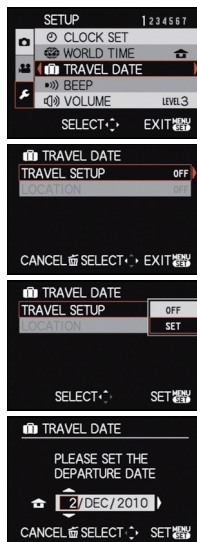
• Select [CLOCK SET] to set the current date and time in advance. (P25)

1 Select [TRAVEL DATE] from the [SETUP] menu, and then press **▶**.

2 Press **▲** to select [TRAVEL SETUP] and then press **▶**.

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

4 Press **▲/▼/◀/▶** to set the departure date (year/month/day), and then press [MENU/SET].



5 Press ▲/▼/◀/▶ to set the return date (year/month/day), and then press [MENU/SET].

- If you do not want to set the return date, press [MENU/SET] while the date bar is displayed.

6 Press ▼ to select [LOCATION] and then press ▶.

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

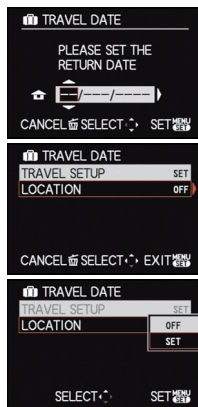
8 Enter the location.

- For details on how to enter characters, refer to “Entering Text” on P152.

9 Press [MENU/SET] twice to close the menu.

10 Take a picture.

- The number of days that have passed since the departure date is displayed for about 5 seconds if the camera is turned on etc. after setting the Travel Date or when the Travel Date is set.
- When the Travel Date is set, [📷] appears on the lower right of the screen.



■ Canceling the Travel Date

The Travel Date is automatically canceled if the current date is after the return date. If you want to cancel the Travel Date before the end of the vacation, select [OFF] on the screen shown in step **3** or **7**, and then press [MENU/SET] twice.

[LOCATION] also will be set to [OFF] automatically when the Travel Date is set to [OFF] in step **3**.

Note

- The Travel Date is calculated using the date in the clock setting and the departure date you set. If you set [WORLD TIME] (P130) to the [DESTINATION], the Travel Date is calculated using the date of the travel destination.
- The Travel Date setting is memorized even if the camera is turned off.
- If [TRAVEL DATE] is set to [OFF], the number of days that have passed since the departure date will not be recorded. Even if [TRAVEL DATE] is set to [SET] after taking the pictures, which day of the vacation you took them is not displayed.
- For the date before the departure date, [-] (minus) is displayed in orange and the day of the vacation is not recorded.
- If the Travel Date is displayed as [-] (minus) in white, there is a time difference that involves date change between the [HOME] and [DESTINATION]. (It will be recorded)
- [TRAVEL DATE] cannot be set for motion pictures recorded with [AVCHD].
- [LOCATION] cannot be recorded in the following cases.
 - When recording motion pictures
- [TRAVEL DATE] cannot be set in the Snapshot Mode. Setting of other recording mode will be reflected.

Recording Dates/Times at Overseas Travel Destinations (World Time)

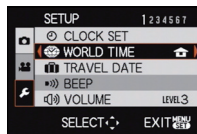
For details on the [SETUP] menu settings, refer to P28.

You can display the local times at the travel destinations and record them on the pictures you take.

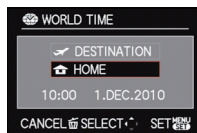
• Select [CLOCK SET] to set the current date and time in advance. (P25)

1 Select [WORLD TIME] from the [SETUP] menu, and then press **▶**.

- When first using the camera after purchasing it, the [PLEASE SET THE HOME AREA] message appears. Press [MENU/SET], and set the home area on the screen in step 3.

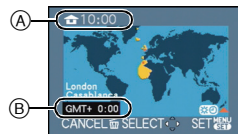


2 Press **▼** to select [HOME], and then press [MENU/SET].



3 Press **◀/▶** to select the home area, and then press [MENU/SET].

- (A) Current time
- (B) Time difference from GMT (Greenwich Mean Time)
- If daylight saving time (☀/☿) is used at the home area, press **▲**. Press **▲** again to return to the original time.
- The daylight saving time setting for the home area does not advance the current time. Advance the clock setting by one hour.



- 4** Press **▲** to select [DESTINATION] and then press [MENU/SET] to set.

- Ⓒ Depending on the setting, the time at the travel destination area or the home area is displayed.



- 5** Press **◀/▶** to select the area the travel destination is in and then press [MENU/SET] to set.

- Ⓓ Current time of the destination area
 Ⓔ Time difference
 • If daylight saving time [**☀/🌙**] is used at the travel destination, press **▲**. (The time advances by one hour.)
 Press **▲** again to return to the original time.



- 6** Press [MENU/SET] to close the menu.

Note

- Return the setting to [HOME] when the vacation is finished by performing steps **1**, **2** and **3**.
- If [HOME] is already set, change only the travel destination, and use.
- If you cannot find the travel destination in the areas displayed on the screen, set by the time difference from the home area.

Using the [REC] Mode menu

[FILM MODE]

For details on [REC] mode menu settings, refer to [P28](#).

You can select color characteristics for your pictures from among 9 sets, much as you would select a film for a film camera.

Select the Film Mode setting according to the conditions and the nature of the recording.

Applicable modes: **P A S M** **CUST** 

[STANDARD] (COLOR)/[DYNAMIC] (COLOR)/[NATURE] (COLOR)/[SMOOTH] (COLOR)/
[VIBRANT] (COLOR)/[NOSTALGIC] (COLOR)/[STANDARD] (**B&W**)/[DYNAMIC] (**B&W**)/
[SMOOTH] (**B&W**)/[MY FILM 1]/[MY FILM 2]/[MULTI FILM]

Note

- Refer to [P118](#) for details.

[ASPECT RATIO]

For details on [REC] mode menu settings, refer to [P28](#).

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

Applicable modes: **P A S M** **CUST** **SCN** 

[4:3]: [ASPECT RATIO] of a 4:3 TV

[3:2]: [ASPECT RATIO] of a 35 mm film camera

[16:9]: [ASPECT RATIO] of a high-definition TV, etc.

[1:1]: Square aspect ratio

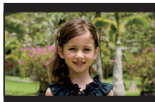
[4:3]



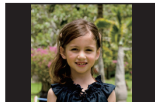
[3:2]



[16:9]



[1:1]



Note

- The ends of the recorded pictures may be cut at printing so check before printing. ([P219](#))

[RESOLUTION]

For details on [REC] Mode menu settings, refer to P28.

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

Applicable modes: **[A]** **[P]** **[AS]** **[M]** **[CUST]** **[SCN]**       

■ When the aspect ratio is **[4:3]**.

* This item cannot be set in the Snapshot Mode.

[14M] (14M)	4320×3240 pixels
[10M] (10M [7])*	3648×2736 pixels
[7M] (7M [7])*	3072×2304 pixels
[5M] (5M [7])	2560×1920 pixels
[3M] (3M [7])*	2048×1536 pixels
[0.3M] (0.3M [7])	640×480 pixels

■ When the aspect ratio is **[3:2]**.

[12.5M] (12.5M)	4320×2880 pixels
[9M] (9M [7])*	3648×2432 pixels
[6M] (6M [7])*	3072×2048 pixels
[4.5M] (4.5M [7])*	2560×1712 pixels
[2.5M] (2.5M [7])*	2048×1360 pixels
[0.3M] (0.3M [7])*	640×424 pixels

■ When the aspect ratio is **[16:9]**.

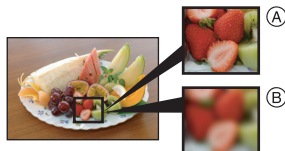
[10.5M] (10.5M)	4320×2432 pixels
[7.5M] (7.5M [7])*	3648×2056 pixels
[5.5M] (5.5M [7])*	3072×1728 pixels
[3.5M] (3.5M [7])*	2560×1440 pixels
[2M] (2M [7])*	1920×1080 pixels
[0.2M] (0.2M [7])*	640×360 pixels

■ When the aspect ratio is **[1:1]**.

[10.5M] (10.5M)	3232×3232 pixels
[7.5M] (7.5M [7])*	2736×2736 pixels
[5.5M] (5.5M [7])*	2304×2304 pixels
[3.5M] (3.5M [7])*	1920×1920 pixels
[2.5M] (2.5M [7])*	1536×1536 pixels
[0.2M] (0.2M [7])*	480×480 pixels

Note

- “EZ” is an abbreviation of “Extended Optical Zoom”.
- A digital picture is made of numerous dots called pixels. The higher the numbers of pixels, the finer the picture will be when it is printed on a large piece of paper or displayed on a PC monitor.



(A) Many pixels (Fine)

(B) Few pixels (Rough)

* These pictures are examples to show the effect.

- If you change the aspect ratio, set the resolution again.
- The Extended Optical Zoom does not work when in [HIGH SENS.], [FLASH BURST] and [PHOTO FRAME] in Scene Mode so resolution for [EZ] is not displayed.
- You cannot set [RESOLUTION] when [QUALITY] is set to [RAW].
- Pictures may appear mosaic depending on the subject and the recording conditions.
- Refer to P222 for information about the number of recordable pictures.

[QUALITY]

For details on [REC] mode menu settings, refer to P28.

Set the compression rate at which the pictures are to be stored.

Applicable modes: **P A S M** **CUST** **SCN**

: Fine (when giving priority to the picture quality)

: Standard (when using the standard picture quality and increasing the number of pictures to be recorded without changing the number of pixels)

: RAW+Fine (In addition to the [RAW] settings, a fine-equivalent JPEG image is simultaneously created.)*¹

: RAW+Standard (In addition to the [RAW] settings, a standard-equivalent JPEG image is simultaneously created.)*¹

: RAW file (When the image is to be edited with a PC in high quality)*²

*1 If you delete a RAW file from the camera, the corresponding JPEG image will also be deleted.

*2 It is fixed to maximum recordable pixels for each image aspect ratio.

Note

- Refer to P222 for information about the number of recordable pictures.
- You can enjoy more advanced picture editing if you use RAW files. You can save RAW files in a file format (JPEG, TIFF etc.) that can be displayed on your PC etc., develop them and edit them using the software available after registering your camera on the Leica Camera AG homepage (see separate leaflet).
- [RAW] images are recorded with a smaller data volume than or .
- [PRINT SET] and [FAVORITE] cannot be set to a picture taken by [RAW].

[SENSITIVITY]

For details on [REC] Mode menu settings, refer to P28.

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

Applicable modes: **PASM**   

[AUTO]/[ISO]/[100]/[200]/[400]/[800]/[1600]

ISO sensitivity	100	1600
Recording location (recommended)	When it is light (outdoors)	When it is dark
Shutter speed	Slow	Fast
Noise	Less	Increased

 **Note**

- Setting items below will be selectable in Creative Motion Picture Mode.
[AUTO]/[100]/[200]/[400]/[800]/[1600]/[3200]
- Refer to P80 for details.

[ISO LIMIT SET]

For details on [REC] Mode menu settings, refer to P28.

It will select optimal ISO sensitivity with set value as limit depending on the brightness of the subject.

Applicable modes: **PASM**  

[AUTO]/[200]/[400]/[800]/[1600]

 **Note**

- Setting items below will be selectable in Creative Motion Picture Mode.
[AUTO]/[200]/[400]/[800]/[1600]/[3200]
- The higher the value set for the ISO sensitivity, the more the effects of subject movement is reduced but the greater the amount of picture noise.
- It is possible to set when the [SENSITIVITY] is set to [AUTO] or [ISO].

[WHITE BALANCE]

For details on [REC] Mode menu settings, refer to P28.

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

Applicable modes: **P A S M**     

[AWB]: Automatic adjustment


: When taking pictures outdoors under a clear sky


: When taking pictures outdoors under a cloudy sky

: When taking pictures outdoors in the shade



: When taking pictures with the flash only

: When taking pictures under incandescent lights

: When using the preset White Balance



: When using the preset color temperature setting

Note

- The optimal White Balance will differ depending on the type of halogen lighting being recorded under so use [AWB],  or .
- The White Balance might not be adjusted for the subject where the flash does not reach when the flash is used.
- The White Balance is memorized even if the camera is turned off, but [WHITE BALANCE] for the Advanced Scene Mode or the Scene Mode is set to [AWB] when the Advanced Scene Mode or the Scene Mode is changed.
- White Balance is fixed to [AWB] in following conditions.
 - In Snapshot Mode
 - In [OUTDOOR PORTRAIT] and [INDOOR PORTRAIT] in [PORTRAIT]
 - In [SCENERY]
 - In [OUTDOOR SPORTS] and [INDOOR SPORTS] in [SPORTS]
 - In [FLOWER] and [FOOD] in [CLOSE-UP]
 - In [NIGHT PORTRAIT]
 - In [PARTY], [CANDLE LIGHT], [SUNSET], [FLASH BURST], [PANNING], [STARRY SKY], [FIREWORKS], [BEACH], [SNOW] and [AERIAL PHOTO] in Scene Mode
 - [EXPRESSIVE], [RETRO], [PURE], [ELEGANT], [MONOCHROME], [SILHOUETTE], [FILM GRAIN] and [CUSTOM] in My Color Mode

■ Setting the White Balance manually

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



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

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

**■ Finely adjusting the White Balance [WB+]**



You can finely adjust the White Balance when you cannot acquire the desired hue by setting the White Balance.

- You can set from the quick menu. (P30)

- 1 Select [WHITE BALANCE] and then press ►.
 - Press ► again if [], [] or [SET/K] is selected.
- 2 Press ▲/▼/◀/▶ to adjust the White Balance and then press [MENU/SET].

- ◀ : A (AMBER: ORANGE)
- ▶ : B (BLUE: BLUISH)
- ▲ : G+ (GREEN: GREENISH)
- ▼ : M- (MAGENTA: REDDISH)

**Note**

- If you finely adjust the White Balance to A (amber), the White Balance icon on the LCD monitor/Viewfinder will change to orange. If you finely adjust the White Balance to B (blue), the White Balance icon on the LCD monitor/Viewfinder will change to blue.
- If you finely adjust the White Balance to G+ (green) or M- (magenta), [+] (green) or [-] (magenta) appears beside the White Balance icon on the LCD monitor/Viewfinder.
- Select the center point if you are not finely adjusting the White Balance.
- The White Balance fine adjustment setting is reflected in the picture when using the flash.
- You can finely adjust the White Balance independently for each White Balance item.
- The White Balance fine adjustment setting is memorized even if the camera is turned off.
- The White Balance fine adjustment level returns to the standard setting (center point) in the following cases.
 - When you reset the White Balance in [] or []
 - When you reset the color temperature manually in [SET/K]

■ White Balance Bracket

Bracket setting is performed based on the adjustment values for the White Balance Fine Adjustment, and 3 pictures with different colors are automatically recorded when the shutter button is pressed once.

1 Press [DISPLAY] in step 2 of the “Finely adjusting the White Balance” procedure, and press ▲/▼/◀/▶ to set the bracket.

◀/▶:Horizontal (A to B)

▲/▼:Vertical (G+ to M-)

2 Press [MENU/SET].



Note

- [WB] is displayed in the LCD monitor/Viewfinder when it is set.
- The White Balance Bracket setting is released when the power has been turned off (including Sleep Mode).
- You will only hear the shutter sound once.
- White Balance Bracket cannot be set when the [QUALITY] is set to [RAW], [RAW], or [RAW].
- **Auto Bracket, Continuous Mode or Multi Film Bracket will be canceled when White Balance Bracket is set.**
- White Balance Bracket does not work when recording motion pictures.

■ Auto White Balance

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

1 Auto White Balance will work within this range.

2 Blue sky

3 Cloudy sky (Rain)

4 Shade

5 Sunlight

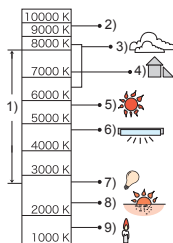
6 White fluorescent light

7 Incandescent light bulb

8 Sunrise and sunset

9 Candlelight

K=Kelvin color Temperature

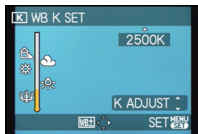


■ Setting the color temperature

You can set the color temperature manually for taking natural pictures in different lighting conditions. The color of light is measured as a number in degrees Kelvin. As the color temperature increases, the picture becomes more bluish. As the color temperature decreases, the picture becomes more reddish.

1 Select [SET K] and then press ▶.

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



Note

- You can set a color temperature from [2500K] to [10000K].

[FACE RECOG.]

For details on [REC] Mode menu settings, refer to P28.

Specify a person's face and use the Face Recognition functions.

Applicable modes: CUST SCN

[OFF]/[ON]/[MEMORY]/[SET]

**Note**

- Refer to P121 for details.

[AF MODE]

For details on [REC] Mode menu settings, refer to P28.

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

Applicable modes: CUST SCN

: Face Detection	The camera automatically detects the person's face. The focus and exposure can then be adjusted to fit that face no matter what portion of the picture it is in. (max. 15 areas)
: AF Tracking*	Focus and exposure can be adjusted to a specified subject. Focus will keep on following the subject even if it moves. (Dynamic tracking)
: 23-area-focusing	Up to 23 points for each AF area can be focused. This is effective when the subject is not in the center of the screen. (AF area frame will be same as image aspect ratio setting.)
: 1-area-focusing	The camera focuses on the subject in the AF area on the screen.

* will be used during motion picture recording.

**Note**

- The camera is focusing on all the AF areas using when multiple AF areas (max. 23 areas) light at the same time. If you want to determine the focus position to take pictures, switch the AF mode to .
- If the AF mode is set to or , the AF area is not displayed until the picture is brought into focus.
- The camera may detect the subjects other than a person as the face. In this case, switch the AF Mode to any modes other than and then take a picture.
- Only or can be set during Creative Motion Picture Mode.
- It will be fixed to when the [FACE RECOG.] is set to [ON].
- It is not possible to set in the following cases.
 - In [FOOD] in [CLOSE-UP]
 - In [NIGHT SCENERY], [ILLUMINATIONS] and [CREATIVE NIGHT SCENERY] in [NIGHT PORTRAIT]
 - In [PANORAMA ASSIST], [PANNING], [STARRY SKY], [FIREWORKS] and [AERIAL PHOTO] in Scene Mode
- The setting is fixed to with [HIGH SPEED MOVIE] in Scene Mode.

■ About [👤] (Face Detection)

The following AF area frames are displayed when the camera detects the faces.

Yellow:

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

White:

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



• Under certain picture-taking conditions including the following cases, the facial recognition function may fail to work, making it impossible to detect faces. [AF MODE] is switched to [📷].

- When the face is not facing the camera
- When the face is at an angle
- When the face is extremely bright or dark
- When there is little contrast on the faces
- When the facial features are hidden behind sunglasses, etc.
- When the face appears small on the screen
- When there is rapid movement
- When the subject is other than a human being
- When the camera is shaking
- When Digital Zoom is used

■ Setting up [👤] (AF Tracking)

1 Bring the subject to the AF tracking frame, and press [AF/AE LOCK] to lock the subject.

- Ⓐ AF tracking frame (White)
- Ⓑ AF tracking frame (Yellow)
- AF area will be displayed in yellow when a subject is recognized, and exposure and focus will automatically adjust continuously following the subject's movement (Dynamic tracking).
- AF tracking is canceled when [AF/AE LOCK] is pressed again.

Before locking

Locked



2 Take the picture.

Note

- If it fails to lock, AF area will flash in red, and disappear. Try to lock again.
- AF tracking will not operate when the subject is not specified, the subject is lost, or has failed to be tracked. The picture will be taken with [■] in [AF MODE] in that case.
- [F11] cannot be selected in [PANORAMA ASSIST], [FIREWORKS], [STARRY SKY] and [HIGH SPEED MOVIE] in Scene Mode.
- [FACE RECOG.] does not work when AF tracking is active.
- [QAF] does not work in AF tracking.
- The focus range is 1 cm (Wide)/1 m (Tele) to ∞.
- Dynamic tracking function may not work in the following cases:
 - When the subject is too small
 - When the recording location is too dark or bright
 - When the subject is moving too fast
 - When the background has the same or similar color to the subject
 - When camera shake is occurring
 - When using the zoom

■ About AF area selection

You can select the AF area by pressing [FOCUS] when [■] is selected.

It is also possible to switch to AF area selection screen by pressing ► when AF Mode is selected with ▲/▼.

- You can set from the quick menu. (P30)

When selecting [■]**1 Press ▲/▼/◀/▶ to move the AF area.**

- You can set to arbitrary position of the screen. (It cannot be set to edge of the screen)
- After moving the AF area, press [DISPLAY] to return it to the center.

2 Rotate the rear dial to change the size of AF area.

- Rotate to the right: Enlarges the area
- Rotate to the left: Reduces the area
- It can be changed to 4 different sizes.

3 Press [MENU/SET] to set.

- You can also use the rear dial to set.

**Note**

- AF area cannot be moved during motion picture recording.
- Increase the size of the AF area if focusing is difficult using "spot".
- The spot metering target can also be moved to match the AF area when using [■].
- Position of the AF area will return to initial state when the camera is set to Snapshot Mode, when the Sleep Mode is activated, or when the camera is turned off.
- AF is performed at the center position with a large frame instead of the area selected by AF area selection in the following cases:
 - During Digital Zoom
 - When it is hard to focus due to darkness

[PRE AF]

For details on [REC] Mode menu settings, refer to P28.

The camera will adjust focus automatically depending on the settings.

Applicable modes: **P A S M**       

[OFF]:	
[Q _{AF}]: Quick AF	[Q _{AF}] is displayed on the screen.
[C _{AF}]: Continuous AF*	[C _{AF}] is displayed on the screen.

* In recording motion pictures, only [C_{AF}] (Continuous AF) can be selected.

About [Q_{AF}] and [C_{AF}]

[Q_{AF}] will adjust the focus automatically when the camera shake gets small. [C_{AF}] will adjust the focus at all times (continuous AF operation).

The camera will adjust the focus automatically, and the focus adjustment when the shutter button is pressed becomes faster. It is effective when you do not want to miss the photo opportunity.

Note

- The battery will be consumed faster than usual.
- Press the shutter button halfway again when it is difficult to focus on the subject.
- [Q_{AF}] will not operate during the AF tracking.
- When [PRE AF] is set to [C_{AF}], it may take time to focus on the subject if you rotate the zoom lever from Wide to Tele or suddenly change the subject from a distant one to a nearby one.
- In the following cases, [PRE AF] is fixed to [OFF].
 - In [NIGHT PORTRAIT]
 - In [PANNING], [STARRY SKY] and [FIREWORKS] in Scene Mode
 - When Manual Focus is in use

[AF/AE LOCK]

For details on **[REC] Mode menu settings, refer to P28.**

Take a picture with the focus or exposure locked.

This is a technique for setting the focus and the exposure in advance when the subject is outside the focus area or when the contrast is too sharp and the appropriate exposure cannot be achieved.

Applicable modes: **P A S M**   **SCN**       

[AF]:	Only the focus is locked. • [AF-L] is displayed when the focus is adjusted.
[AE]:	Only the exposure is locked. • [AE-L], aperture value, and shutter speed is displayed when the exposure is adjusted.
[AF/AE]:	Both focus and exposure are locked. • [$\begin{smallmatrix} \text{AE-L} \\ \text{AF-L} \end{smallmatrix}$], aperture value, and shutter speed are displayed when the focus and exposure are adjusted.

■ Setting the AF/AE lock

- 1 Aim the AF area at the subject.**
- 2 Press [AF/AE LOCK] to fix the focus and exposure.**
 - This does not work when AF tracking is active.
- 3 Move the camera to compose the picture and then press the shutter fully.**

■ To cancel the AF/AE lock

The setting is canceled by pressing the [AF/AE LOCK] again.



Note

- The exposure is set, even if the brightness of the subject changes.
- The subject can be focused again by pressing the shutter button halfway even when AE is locked.
- Program shift can be set even when AE is locked.
- When recording motion pictures after locking, you can continue to record in a locked state in Creative Motion Picture Mode. Lock will be canceled in other modes than Creative Motion Picture Mode.
- Lock is canceled when zooming is performed after locking. Perform the locking again.
- AE lock will not work in Manual Exposure Mode (when [SENSITIVITY] is set to something other than [AUTO]), Advanced Scene Mode and Scene Mode.

[METERING MODE]

For details on [REC] Mode menu settings, refer to P28.

Type of optical measurement to measure brightness can be changed.

Applicable modes: **P A S M** **CUST** **MEM** **RECALL**


: Multiple

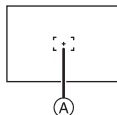
This is the method in which the camera measures the most suitable exposure by judging the allocation of brightness on the whole screen automatically. Usually, we recommend using this method.

: Center weighted



This method concentrates metering sensitivity on the subject in the center of the screen while also registering the rest of the frame.

: Spot

This is the method to measure the subject in the spot metering target .



Note

- When  is selected and [AF MODE] is set to , the camera will adjust the exposure to suit the person's face.

[I.EXPOSURE] (Intelligent exposure adjustment)



For details on [REC] Mode menu settings, refer to P28.

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

Applicable modes: **P A S M** **CUST** **MEM** **RECALL**

[OFF]/[LOW]/[STANDARD]/[HIGH]


Note

-  is displayed when it is set to either [LOW], [STANDARD], or [HIGH].
- Even when the [SENSITIVITY] is set to [ISO100], [SENSITIVITY] may be set higher than [ISO100] if the picture is taken with [I.EXPOSURE] set to valid.
- Compensation effect may not be achieved depending on the conditions.
-  in the screen turns to yellow when [I.EXPOSURE] is in effect.
- [LOW], [STANDARD], or [HIGH] represents the maximum range of effect.
- The setting is fixed to [OFF] when [QUALITY] is set to [RAW].


[MIN. SHTR SPEED]

For details on [REC] Mode menu settings, refer to P28.

You can take a picture brightly in dark places by setting [MIN. SHTR SPEED] slower. Also, you can set it faster to reduce the blur of the subject.

Applicable modes: **P** 

[AUTO], [1/250], [1/125], [1/60], [1/30], [1/15], [1/8], [1/4], [1/2], [1]

Minimum shutter speed setting	1/250		1
Brightness	Darker		Brighter
Sharpness of moving subjects	Less		More

 **Note**

- This should usually be set to [AUTO] to take pictures. (When you select a minimum shutter speed other than [AUTO], [MN] appears on the screen.)
- When [AUTO] is selected, shutter speed may be set up to 1 second when there is not much Camera shake to be adjusted with the [STABILIZER], or when [STABILIZER] is set to [OFF].
- Setting [MIN. SHTR SPEED] to slower speed might increase the chance of camera shake, so we recommend using a tripod and the Self-Timer for taking pictures.
- Setting [MIN. SHTR SPEED] to faster speed might make the picture darker, so we recommend recording the picture in well-lit area. If correct exposure cannot be achieved, [MN] will flash in red when the shutter button is pressed halfway.

[I.RESOLUTION]

For details on [REC] Mode menu settings, refer to P28.

Pictures with sharp profile and resolution can be taken by utilising the Intelligent Resolution Technology.

Applicable modes: **P A S M**   

[OFF]/[ON]

[i.ZOOM]: [I.RESOLUTION] is activated, and the zoom magnification is increased by approximately 1.3× without noticeable deterioration in the picture.

 **Note**

- Refer to P57 for information about the Intelligent Zoom.

[DIGITAL ZOOM]

For details on [REC] Mode menu settings, refer to P28.

This mode allows enlarging subjects even more than with Optical Zoom, Extended Optical Zoom, or Intelligent Zoom.

Applicable modes: **P A S M**   **SCN**     

[OFF]/[ON]

**Note**

- Refer to P57 for details.
- If camera shake is a problem during zooming, it is recommended that [STABILIZER] be set to [AUTO] or [MODE 1].

[STABILIZER]

For details on [REC] Mode menu settings, refer to P28.

Using one of these modes, camera shake is detected and automatically compensated, resulting in sharper pictures.

Applicable modes: **P A S M**   **SCN**     

[OFF]

[AUTO]*: The optimum camera shake compensation is selected depending on the condition.

[MODE1]: Camera shake is always compensated during [REC] Mode.

[MODE2]*: Camera shake is compensated for when the shutter button is pressed.

* [MODE1] will be selected during Motion Picture Recording.

**Note**

- The Stabilizer Function may not be effective in the following cases.
 - When there is a lot of camera shake.
 - When the zoom magnification is high.
 - In digital zoom range.
 - When taking pictures while following a moving subject.
 - When the shutter speed becomes slower to take pictures indoors or in dark places.
- Always try to hold the camera as steady as possible, especially when you press the shutter button.
- Only [OFF] or [MODE1] can be set in Creative Motion Picture Mode and [PANNING] in Scene Mode.
- The setting is fixed to [OFF] in [STARRY SKY] and [HIGH SPEED MOVIE] in Scene Mode.
- Only [OFF] or [MODE1] can be set in Continuous Mode.

[AF ASSIST LAMP]

For details on **[REC] Mode menu settings**, refer to **P28**.


Illuminating the subject makes it easier for the camera to focus when recording in low light conditions that make focusing difficult.

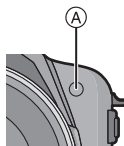
Applicable modes: **P A S M** CUST M SCN     

[OFF]: The AF assist lamp does not turn on.

[ON]: When taking pictures in dark places, the AF assist lamp lights while the shutter button is pressed halfway. (Larger AF areas are displayed depending on the recording conditions.)

 **Note**

- The effective range of the AF assist lamp is 1.5 m.
- When you do not want to use the AF assist lamp  (e.g. when taking pictures of animals in dark places), set the **[AF ASSIST LAMP]** to **[OFF]**. In this case, it will become more difficult to focus on the subject.
- Remove the lens hood.
- A vignetting effect may appear on the circumference of the AF assist lamp because the AF assist lamp may be obscured by the lens, however, this does not cause a problem with the performance of the camera.
- In the following cases, **[AF ASSIST LAMP]** is fixed to **[OFF]**.
 - In **[SCENERY]**
 - In **[NIGHT SCENERY]**, **[ILLUMINATIONS]** and **[CREATIVE NIGHT SCENERY]** in **[NIGHT PORTRAIT]**
 - In **[SUNSET]**, **[PANNING]**, **[FIREWORKS]** and **[AERIAL PHOTO]** in Scene Mode

**[FLASH]**

For details on **[REC] mode menu settings**, refer to **P28**.

You can switch the flash setting.

Applicable modes: **P A S M** CUST SCN     

[A]/[A[⊙]]/[]/[S[⊙]]/[[⊙]]

 **Note**



- Refer to **P69** for details.

[FLASH SYNCHRO]

For details on [REC] Mode menu settings, refer to P28.

[2ND] (2nd synchro) fires the flash just before the shutter closes. The result is often preferable when slow shutter speeds are used to take pictures of moving objects with their own light sources, such as cars.

Applicable modes: **P A S M CUST**




[1ST]:	The normal method when taking pictures with the flash.	
[2ND]:	The light source appears behind the subject and picture becomes dynamic.	

 **Note**

- Set it to [1ST] normally.
- [2ND] is displayed in the flash icon on the LCD monitor/Viewfinder if you set [FLASH SYNCHRO] to [2ND].
- When a fast shutter speed is set, the effect of [FLASH SYNCHRO] may deteriorate.

[RED-EYE REMOVAL]


For details on [REC] Mode menu settings, refer to P28.

When the flash is used with the Red-Eye Reduction ([], [], []) selected, it will automatically detect and correct the red-eye in the image data.

Applicable modes: **P A S M CUST SCN**     

[OFF]/[ON]

 **Note**

- It may not be able to correct the red-eye depending on the recording conditions.
- When the Digital Red-Eye Correction is set to [ON], [] appears on the flash icon.
- Refer to P70 for details.

[CLOCK SET]

For details on [REC] Mode menu settings, refer to P28.

To set the year, month, day and time.

It functions in exactly the same way as [CLOCK SET] (P31) in the [SETUP] menu.

Using the [MOTION PICTURE] Mode menu

- The [REC] Mode menus below will also be displayed in Creative Motion Picture Mode.
 - [FILM MODE]/[SENSITIVITY]/[ISO LIMIT SET]/[WHITE BALANCE]/[AF MODE]/[METERING MODE]/[I.EXPOSURE]/[DIGITAL ZOOM]/[STABILIZER]/[AF ASSIST LAMP]

[REC MODE]

For details on [MOTION PICTURE] Mode menu settings, refer to [P28](#).

This sets up the data format of motion pictures.

Applicable modes:

[AVCHD(1080i)]/ [AVCHD(720p)]/ [MOTION JPEG]]

Note

- Refer to [P111](#) for details.

[REC QUALITY]

For details on [MOTION PICTURE] Mode menu settings, refer to [P28](#).

This sets up the picture quality of motion pictures.

Applicable modes:

■ When [REC MODE] is [AVCHD(1080i)].

[FSH]/[FH]

■ When [REC MODE] is [AVCHD(720p)].

[SH]/[H]

■ When [REC MODE] is [MOTION JPEG]].

[HD]/[WVGA]/[VGA]/[QVGA]

Note

- Refer to [P111](#) for details.

[EXPOSURE MODE]

For details on [MOTION PICTURE] Mode menu settings, refer to [P28](#).

This changes the setup in Creative Motion Picture Mode.

Applicable modes:

[P]/[A]/[S]/[M]

Note

- Refer to [P114](#) for details.

[CONTINUOUS AF]

For details on **[MOTION PICTURE] Mode menu settings, refer to P28.**

It will continually keep on focusing to the subject that the focus was once set.

Applicable modes: **P A S M**   **SCN**     

[OFF]/[ON]

**Note**

- When set to [OFF], it may take time for motion picture recording to start.
- Set this function to [OFF] if you wish to fix the focus on the position where you started the motion picture recording.
- In [STARRY SKY] and [FIREWORKS] in Scene Mode, this setting is fixed to [OFF].

[WIND CUT]

For details on **[MOTION PICTURE] Mode menu settings, refer to P28.**

This reduces the wind noise in the audio recording.

Applicable modes: **P A S M**   **SCN**     

[OFF]/[ON]

**Note**

- Sound quality will be different than usual when [WIND CUT] is set.
- It will be set to [OFF] when the [ZOOM MIC] is set to [ON].

[ZOOM MIC]

For details on **[MOTION PICTURE] Mode menu settings, refer to P28.**

Coupled to the zoom operation, it will clearly record far sounds with tele, and surrounding sounds with wide.

Applicable modes: **P A S M**   **SCN**     

[OFF]/[ON]

**Note**

- When set to [ON] and performing zoom, the operation sound may be recorded enhanced in accordance with the surrounding sounds. Also, audio recording level will be lower compared to when [OFF].
- The stereo effect of the audio is reduced when the picture is enlarged.

Entering Text

It is possible to enter babies' and pets' names and the names of travel destinations when recording. (Only alphabetical characters and symbols can be entered.)

1 Display the entry screen and press ▼ to move to the character selection section.

- You can display the entry screen via the following operations.
 - [NAME] of [BABY1]/[BABY2] or [PET] (P99) in Scene Mode.
 - [NAME] in [FACE RECOG.] (P124)
 - [LOCATION] in [TRAVEL DATE] (P127)
 - [TITLE EDIT] (P166)

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

- Press [DISPLAY] to switch text between [A] (capitals), [a] (lower case) and [&/1] (special characters and numbers).
- The entry cursor position can be moved left and right with the zoom lever.
- To enter a blank, move the cursor to [SPACE], to delete an entered character, move the cursor to [DELETE], or to stop editing during text entry, move the cursor to [CANCEL], and press [MENU/SET].
- A maximum of 30 characters can be entered. (Maximum of 9 characters when setting names in [FACE RECOG.]



3 Press ▲/▼/◀/▶ to move the cursor to [SET] and then press [MENU/SET] to end text input.

- Display will return to the appropriate setting screen.


Note

- Text can be scrolled if all of the entered text does not fit on the screen.


[PLAYBACK] Mode: 

Playing Back Picture Series

■ About the picture series group


Pictures taken with Continuous or Continuous Flash modes are recorded collectively as a picture series group with the continuous mode icon .

(A) Continuous mode icon

- Continuous Playback and Multi Playback in a group unit is possible.
- Deleting and editing in a group unit is possible. (For example, if you delete a picture series group with , all the pictures in that group are deleted.)
- It is also possible to delete or edit single pictures within the group.
- Pictures recorded after the number of pictures in a series has exceeded 50000 will not be grouped.
- Picture series recorded on other cameras may not be recognized as a picture series group.



Continuously playing back picture series

1 Press /▶ to select a picture with the continuous mode icon , and then press ▲ to play back.

- Picture series are continuously played back.

2 Press ▼ to finish the continuous playback.

- It will resume normal playback once the continuous playback has finished.

■ Operations during picture series group playback

The cursor displayed during playback is the same as ▲/▼/◀/▶.

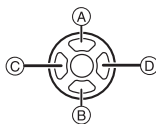
(A) Play/Pause

(B) Stop

(C) Fast rewind, Previous picture*1

(D) Fast forward, Next picture*1

*1 These operations can be performed only in the Pause Mode.




– Press ▶ during playback to fast forward (press ◀ to rewind).

– You can zoom while paused.

– Pause and rotate the zoom lever towards [W] for Multi Playback of the pictures in the Picture Series Group.

■ About retrieval of Picture Series group information

If you delete or change the file names of pictures stored in the internal memory using a PC, or pictures stored the memory card using a PC or other device, the camera will automatically retrieve the new information and recompose the picture series groups when you switch it on again. During the retrieval of information after a change to the files, the currently retrieving information icon []

(A) will appear in the playback screen. While this icon is displayed, you cannot use [DELETE] or the playback menu*²

*² With the exception of [CALENDAR] (P165) and [ROTATE DISP.] (P175).



Note

- Pictures for which information could not be retrieved will not be recognized as belonging to a picture series group, but as single pictures.
- If you switch the power switch to [OFF] while information is being retrieved, the information retrieved up to that point will be saved. When you switch on again, the information retrieval will restart from the same point.

[PLAYBACK] Mode: 

Editing Picture Series

You can edit the pictures in the picture series group as single pictures or in group units (including all pictures in group).

■ Editing single pictures within a picture series group

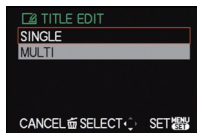
• The following editing menu can be used.

- [TITLE EDIT] (P166), [TEXT STAMP] (P168), [RESIZE] (P171), [CROPPING] (P172), [LEVELING] (P174), [FAVORITE] (P176), [PRINT SET] (P177), [PROTECT] (P179), [DELETE] (P180), [FACE REC EDIT] (P181), [COPY] (P182)


To select an image during continuous playback of picture series (Continuous Play menu)

- 1 Press **▲** to pause during continuous playback.
 - 2 Press [MENU/SET].
 - 3 Press **▲/▼** to Select item, and press **▶**.
- 4 Press **▲/▼** to select [SINGLE] or [MULTI] and then press [MENU/SET].
 - You cannot select [SINGLE] or [MULTI] when [CROPPING] or [LEVELING] is selected.
 - 5 Select the picture, and perform editing.

For details on the various ways of editing, refer to “Using the [PLAYBACK] Mode menu”. (P165)



To select an image during normal playback

- 1 Press [MENU/SET] during normal playback.
- 2 Select the item on the [PLAYBACK] mode menu and then press **▶**.
- 3 Press **▲/▼** to select [SINGLE IN BURST GROUP] or [MULTI IN BURST GROUP] and then press [MENU/SET].
 - When [CROPPING] or [LEVELING] is selected, [MULTI IN BURST GROUP] will not appear.
 - Only the picture series groups with the continuous mode icon  are displayed.
- 4 Select the picture series group and then press [MENU/SET].
 - Pictures within the group are displayed.
- 5 Select the picture, and perform editing.

For details on the various ways of editing, refer to “Using the [PLAYBACK] Mode menu”. (P165)



■ Editing in picture series group units

All pictures in the picture series group are edited at once.

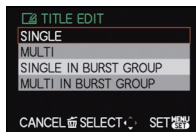
• For picture series groups, the following editing menu can be used.

- [TITLE EDIT] (P166), [TEXT STAMP] (P168), [RESIZE] (P171), [FAVORITE] (P176), [PRINT SET] (P177), [PROTECT] (P179), [DELETE] (P180), [FACE REC EDIT] (P181), [COPY] (P182)

- 1 Press [MENU/SET] in normal playback screen.
- 2 Select the item on the [PLAYBACK] mode menu and then press ►.
- 3 Press ▲/▼ to select [SINGLE] or [MULTI] and then press [MENU/SET].
- 4 Select an image with the continuous mode icon [] (A), and perform editing.


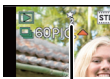

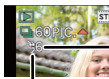
• You can select multiple pictures from the picture series group and other images by selecting [MULTI] in step 3.

For details on the various ways of editing, refer to "Using the [PLAYBACK] Mode menu". (P165)



■ About display of [FAVORITE], [PRINT SET] and [PROTECT] icons during playback of picture series groups.

If you set [FAVORITE] (P176), [PRINT SET] (P177) or [PROTECT] (P179) for any of the pictures in the picture series group, the following icons will appear on the group top screen.

Initial screen for picture series group	[FAVORITE]	[PROTECT]	[PRINT SET]
			
<p>(A) Total number of all pictures stored within the picture series group. (B) Number of pictures in given picture series group subject to a setting. (C) Total number of prints set over all picture series groups. • For example, if 3 pictures are to be printed from each of 2 picture series within the group, a "6" will appear here.</p>			

Note


- [CROPPING] and [LEVELING] is not possible at once on the picture series group units.
- Pictures for which you have performed [TEXT STAMP], [RESIZE], [CROPPING], or [LEVELING] will be saved separately from picture series.
- If you delete all pictures except one, that picture will be saved as a single picture instead of as a picture series group.
- When a setting is made for a group (all pictures in the group), the numeral indicating the number of pictures subject to the setting will not appear. The icon will appear alone.

[PLAYBACK] Mode: 

Playing Back Motion Pictures

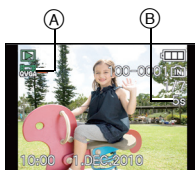
- This camera was designed to play motion pictures using the QuickTime Motion JPEG and AVCHD formats that were taken with this model (only).
- Motion pictures in AVCHD format that can be played back on the camera are [AVCHD] motion pictures that were recorded with the camera, AVCHD format (including [AVCHD Lite]) motion pictures recorded with Leica digital cameras only.

Motion pictures

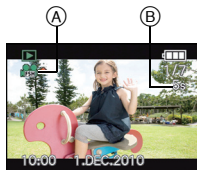
Press **◀/▶** to select a picture with a motion picture icon (such as ) and then press **▲** to play back.

- (A) Motion picture icon
 - (B) The motion picture recording time
- After playback starts, the elapsed playback time is displayed on the upper right of the screen.
For example, 8 minutes and 30 seconds is displayed as [8m30s].
- Some information (recording information, etc.) is not displayed for motion pictures recorded in [AVCHD].

[MOTION JPEG]



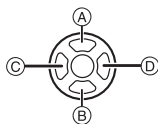
[AVCHD]



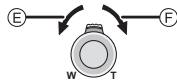
■ Operations performed during Motion Picture Playback

The cursor displayed during playback is the same as **▲/▼/◀/▶**.

- (A) Play/Pause
 - (B) Stop
 - (C) Fast rewind, Frame-by-frame rewind*
 - (D) Fast forward, Frame-by-frame forward*
- * These operations can be performed only in the Pause Mode.



- (E) Reduce volume level
- (F) Increase volume level



• About fast forward/rewind playback

- Press **▶** during playback to fast forward (press **◀** to rewind). The fast forward/rewind speed increases if you press **◀/▶** again. (The display on the screen changes from **▶▶** to **▶▶▶**.)
- Press **▲** to resume normal playback speed.
- When using a high capacity card, it is possible that fast rewinding may be slower than usual.

Note

- Sound can be heard through the speaker. Refer to [VOLUME] (P31) for information about how to adjust the volume in the [SETUP] menu.
- To playback the motion pictures recorded by the camera on a PC, use the software available after registering your camera on the Leica Camera AG homepage (see additional leaflet)
- QuickTime Motion JPEG motion pictures that were recorded with a PC or other equipment may have lower image quality or may not be able to play back with the camera.

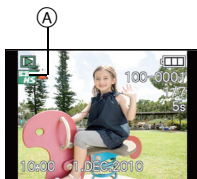
Playing Back [HIGH SPEED MOVIE]

You can play back the motion pictures recorded with scene mode set to [HIGH SPEED MOVIE] according to your preference, such as with slow motion playback or fast forward playback.

Press ◀/▶ to select a picture with a [HIGH SPEED MOVIE] icon [HS], and then press ▲ to play back.

Ⓐ Hi-speed Motion Picture icon

- After playback starts, the elapsed playback time is displayed on the upper right of the screen.
For example, 7 minutes and 47 seconds is displayed as [7m47s].



■ Operations performed during Motion Picture Playback

Same as the normal operation to playback motion pictures. See [P157](#).

- Playback speed can be changed to 3 levels.
- With high-speed motion pictures, you cannot control the volume.

Note

- Elapsed playback time at the top right of the screen is the actual recording time when the motion picture was recorded. Actual playback time is different from the displayed time.
- When using a high capacity card, it is possible that fast rewinding may be slower than usual.

[PLAYBACK] Mode: 





Creating Still Pictures from a Motion Picture



You can create a single still picture from a recorded motion picture.



- 1 Press **▲** to pause Motion Picture playback.
- 2 Press [MENU/SET].
- 3 Press **▲** to select [YES] and then press [MENU/SET].



Resolution

[MOTION JPEG]	Resolution
 ([HD]) /  ([WVGA])	2 M (16:9)
 ([VGA]) /  ([QVGA])	0.3 M (4:3)

[AVCHD(1080i)]	Resolution
 ([FSH]) /  ([FH])	2 M (16:9)

[AVCHD(720p)]	Resolution
 ([SH]) /  ([IH])	2 M (16:9)

- [QUALITY] is fixed to [●●●].
- Still pictures created from a motion picture may be coarser than with normal picture quality.

Note

- You may not be able to save still pictures from a motion picture taken on other equipment.

[PLAYBACK] Mode: 

Playing Back Pictures in Sequence (Slide Show)

You can play back the pictures you have taken in synchronisation with music, and you can do this in sequence while leaving a fixed interval between each of the pictures.

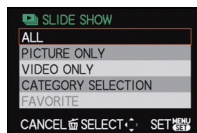
You can also put together a slide show composed of only still pictures, only motion pictures, only pictures of a particular category, or only favorites.

We recommend this feature when you view your pictures by connecting the camera to a TV.

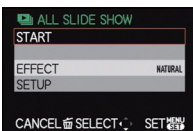
1 Select [SLIDE SHOW] on the Playback Mode menu.

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

- [FAVORITE] can be selected only when [FAVORITE] on the [SETUP] menu (P39) is at [ON] and there are pictures already set as favorites.
- During [CATEGORY SELECTION], press ▲/▼/◀/▶ to select a category, and then press [MENU/SET] to proceed to step 3. For details on categorize, refer to P163.



3 Press ▲ to select [START] and then press [MENU/SET].



4 Press ▼ to finish the slide show.

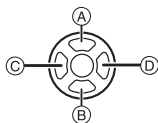
- Normal playback resumes after the slide show finishes.

■ Operations performed during slide show

The cursor displayed during playback is the same as ▲/▼/◀/▶.

• The menu screen is restored when [⏏] is pressed.

- Ⓐ Play/Pause
- Ⓑ Stop
- Ⓒ Back to previous picture*
- Ⓓ Ahead to next picture*
- * These operations can be performed only in the Pause Mode, during Motion Picture and Picture Series Group playback.



- Ⓔ Reduce volume level
- Ⓕ Increase volume level



■ Changing the slide show settings

You can change the settings for slide show playback by selecting [EFFECT] or [SETUP] on the slide show menu screen.

[EFFECT]

This allows you to select the screen effects when switching from one picture to the next.

[NATURAL], [SLOW], [SWING], [URBAN], [OFF], [AUTO]

- When [URBAN] has been selected, the picture may appear in black and white as a screen effect.
- [AUTO] can be used only when [CATEGORY SELECTION] has been selected. The pictures are played back with the recommended effects in each category.
- [EFFECT] is fixed to [OFF] during motion pictures only, and during a slide show of [⏏] in [CATEGORY SELECTION].
- Even if [EFFECT] is set, it does not work during a slide show of a picture series group.
- Some [EFFECT] will not operate when playing back pictures displayed vertically.

[SETUP]

[DURATION] or [REPEAT] can be set.




Item	Settings
[DURATION]	1SEC./2SEC./3SEC./5SEC.
[REPEAT]	OFF/ON
[SOUND]	<p>[OFF]: There will be no sound.</p> <p>[AUTO]: Music is played when the still pictures are played back, and audio is played when the motion pictures are played back.</p> <p>[MUSIC]: Music is played back.</p> <p>[AUDIO]: Audio (only for motion pictures) is played back.</p>

- [DURATION] can be set only when [OFF] has been selected as the [EFFECT] setting.
- Even if [DURATION] is set, it does not work during a slide show of motion pictures only or slide show of a picture series group.

Note

- It is not possible to add new music.
- Audio is not played back even if set to [AUDIO] or [AUTO] during Hi-Speed Motion Picture playback.

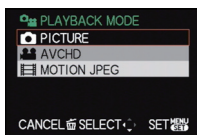
[PLAYBACK] Mode: 

Selecting Pictures and Playing them Back ([MODE PLAY]/[CATEGORY PLAY]/[FAVORITE PLAY])

[MODE PLAY]

Playback in [PICTURE], [AVCHD], or [MOTION JPEG] can be selected.

- 1** Select [MODE PLAY] on the Playback Mode menu.
- 2** Press ▲/▼ to select the item and then press [MENU/SET].



[CATEGORY PLAY]

This mode allows you to search images by Scene Mode or other categorize (such as [PORTRAIT], [SCENERY] or [NIGHT SCENERY]) and sort the pictures into each of the categorize. You can then play back the pictures in each category.

1 Select [CATEGORY PLAY] on the Playback Mode menu.

2 Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ to select the category and then press [MENU/SET] to set.

- If a picture is found in a category, the category icon turns blue.
- It may take time to search the picture files if there are a lot on the card or the internal memory.
- If you press [STOP] while searching, the searching will stop halfway.
- Pictures are sorted into the categorize shown below.



[CATEGORY]	Recording information e.g. Scene Modes
	[FACE RECOG.]*
	[PORTRAIT], [i-PORTRAIT], [NIGHT PORTRAIT], [i-NIGHT PORTRAIT], [BABY1]/[BABY2], [i-BABY]
	[SCENERY], [i-SCENERY], [SUNSET], [i-SUNSET], [AERIAL PHOTO]
	[NIGHT PORTRAIT], [i-NIGHT PORTRAIT], [i-NIGHT SCENERY], [STARRY SKY]

[CATEGORY]	Recording information e.g. Scene Modes
	[SPORTS], [PARTY], [CANDLE LIGHT], [PANNING], [FIREWORKS], [BEACH], [SNOW], [AERIAL PHOTO]
	[BABY1]/[BABY2], [i-BABY]
	[PET]
	[FOOD]
	[TRAVEL DATE]
	[HIGH SPEED MOVIE] [AVCHD], [MOTION JPEG]
	[BURST], [FLASH BURST]

* Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ to select the person to playback and then press [MENU/SET].
Face Recognition may not be possible or may not recognize faces correctly even for registered faces, depending on the facial expression and environment.
Also, if there are multiple faces that are already registered in the picture, it will be categorized only once to the person found first in the registration.

[FAVORITE PLAY]

You can play back the pictures you have set as [FAVORITE] (P176) (Only when [FAVORITE] in [SETUP] menu is set to [ON] and there are pictures which have been set to [FAVORITE]).

Select [FAVORITE PLAY] on the Playback Mode menu.

[PLAYBACK] Mode: 

Using the [PLAYBACK] Mode menu

You can use various functions in Playback Mode to rotate pictures, set protection for them etc.

- With [TEXT STAMP], [RESIZE], [CROPPING] or [LEVELING], a new edited picture is created. A new picture cannot be created if there is no free space on the internal memory or the card so we recommend checking that there is free space and then editing the picture.

[CALENDAR]

You can display pictures by recording date.

1 Select [CALENDAR] on the [PLAYBACK] Mode menu. (P28)


- You can also rotate the zoom lever several times towards [W] to display the calendar screen. (P61)

2 Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ to select the date to be played back.

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



3 Press [MENU/SET] to display the pictures that were recorded on the selected date.

- Press [\leftarrow] to return to the calendar screen.
- If you select a picture with the continuous mode icon () and press [MENU/SET], the pictures from within that picture series group will be played back using multi playback.



4 Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ to select a picture and then press [MENU/SET].

- The picture that was selected will appear.

Note

- The recording date of the picture selected in the playback screen becomes the date selected when the calendar screen is first displayed.
- If there are multiple pictures with the same recording date, the first picture recorded on that day is displayed.
- You can display the calendar between January 2000 and December 2009.
- If the date is not set in the camera, the recording date is set as the 1st January, 2010.
- If you take pictures after setting the travel destination in [WORLD TIME], the pictures are displayed by the dates at the travel destination in calendar playback.

[TITLE EDIT]

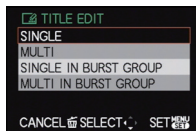
You can add text (comments) to pictures. After text has been registered, it can be included in prints using [TEXT STAMP] (P168). (Only alphabetic characters and symbols can be entered.)

Names set in [BABY1]/[BABY2] and [PET] in Scene Mode or [LOCATION] in Travel Date are also recorded as the titles.

1 Select [TITLE EDIT] on the [PLAYBACK] Mode menu. (P28)

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

- When [SINGLE IN BURST GROUP] or [MULTI IN BURST GROUP] is selected, press ▲/▼/◀/▶ to select a picture series group, and press [MENU/SET] to proceed to step 3.



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

- [✔] is displayed for pictures with titles already registered.

[MULTI] setting

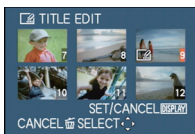
Press [DISPLAY] to set (repeat), and then press [MENU/SET] to set.

[SINGLE]



Press ◀/▶ to select the picture.

[MULTI]



Press ▲/▼/◀/▶ to select the pictures.

- The setting is canceled when [DISPLAY] is pressed again.

4 Enter the text. (P152)

5 Press [✖] to return to the menu screen.*

- *The menu screen is automatically restored when [MULTI] is selected.
- Press [MENU/SET] to close the menu.

Note

- To delete the title, erase all the text in the text input screen.
- Text can be scrolled if all of the registered text does not fit on the screen.
- You can set up to 100 pictures at one time with [MULTI].
- You cannot use [TITLE EDIT] for the following pictures.
 - Motion pictures
 - Protected pictures
 - Pictures taken with [RAW], [RAW] or [RAW]
 - Pictures recorded with other equipment

[VIDEO DIVIDE]

Recorded motion picture can be divided in two. It is recommended for when you want to divide a part you need with a part you do not need.

It cannot be restored once divided.

1 Select [VIDEO DIVIDE] on the [PLAYBACK] Mode menu. (P28)



2 Press ◀/▶ to select the motion picture to divide, and then press [MENU/SET].

- Motion picture is played back.

3 Press ▲ at the location to divide.

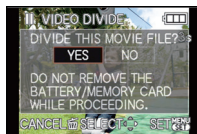
- Motion picture is paused.
Motion picture is played back from the same location when ▲ is pressed again.



4 Press ▼.

5 Press ◀ to select [YES] and then press [MENU/SET].

- Motion picture may be lost if the card or battery is removed while processing the dividing.



6 Press [EXIT] to return to the menu screen.

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

Note

- Motion pictures cannot be divided at a location close to the start or end of the motion picture.
- [VIDEO DIVIDE] may not be performed on motion pictures recorded with other equipment.
- With [MOTION JPEG] motion pictures, the order of pictures will change if divided.
It is recommended to display these motion pictures by using [CALENDAR] or [MOTION JPEG] in the [MODE PLAY].
- With [AVCHD] motion pictures, the order of pictures will not change.
- Motion pictures cannot be divided in the following cases.
 - Motion pictures set as [FAVORITE]
 - Protected motion pictures
 - Motion pictures with a short recording time

[TEXT STAMP]

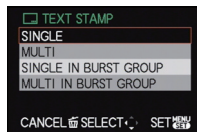
You can stamp the recording date/time, name, location, Travel Date or title onto the recorded pictures.

It is suitable for regular size printing. (Pictures with a Resolution larger than [3M] will be resized when stamping the date etc. on them.)

1 Select [TEXT STAMP] on the [PLAYBACK] Mode menu. (P28)

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

- When [SINGLE IN BURST GROUP] or [MULTI IN BURST GROUP] is selected, press ▲/▼/◀/▶ to select a picture series group, and press [MENU/SET] to proceed to step 3.



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

- [✓] appears on screen if the picture is stamped with text.

[MULTI] setting

Press [DISPLAY] to set (repeat), and then press [MENU/SET] to set.

- The setting is canceled when [DISPLAY] is pressed again.



Press ◀/▶ to select the picture.



Press ▲/▼/◀/▶ to select the pictures.

4 Press ▲/▼ to select text stamp items, and then press ►.

5 Press ▲/▼ to select the settings, and then press [MENU/SET].

Item	Setting item
[SHOOTING DATE]	[OFF] [W/OTIME]: Stamp the year, month and date. [WITHTIME]: Stamp the year, month, day, hour and minutes.
[NAME]	[OFF] []: Stamps names registered in name settings for [FACE RECOG]. [/]: Stamps names registered in name settings for [BABY1]/[BABY2] or [PET] in Scene Mode.
[LOCATION]	[OFF] [ON]: Stamps the travel destination name set under [LOCATION].
[TRAVEL DATE]	[OFF] [ON]: Stamps the Travel Date set under [TRAVEL DATE].
[TITLE]	[OFF] [ON]: Title input in the [TITLE EDIT] will be stamped.

6 Press [MENU/SET].

- If you set [TEXT STAMP] for a picture with a resolution larger than [**3M**], the resolution will become smaller as shown below.

Aspect ratio setting	Resolution
4:3	14M / 10M / 7M / 5M → 3M
3:2	125M / 9M / 6M / 45M → 25M
16:9	105M / 75M / 55M / 35M → 2M
1:1	105M / 75M / 55M / 35M → 25M

- When selecting [] or [], press **▲** to select [YES] for stamping [AGE], and then press [MENU/SET] and proceed to step 7.

7 Press **▲** to select [YES] and then press [MENU/SET].

- The message [SAVE NEW PICTURES?] appears if the picture was recorded with a resolution of [**3M**] or less.



8 Press [] to return to the menu screen.*

- *The menu screen is automatically restored when [MULTI] is selected.
- Press [MENU/SET] to close the menu.

Note

- When you print pictures stamped with text, the date will be printed over the stamped text if you specify printing of the date at the photo shop or on the printer.
- You can set up to 100 pictures at one time in [MULTI].
- The picture quality may deteriorate when text stamping is carried out.
- Depending on the printer being used, some characters may be cut at printing. Check before printing.
- When text is stamped onto the [**0.2M**]/[**0.3M**]/[**0.3M**]/[**0.2M**] pictures, it is difficult to read it.
- Text and dates cannot be stamped on the pictures in the following cases.
 - Motion pictures
 - Pictures recorded without setting the clock and title
 - Pictures that were previously stamped with [TEXT STAMP]
 - Pictures taken with [**RAW**], [**RAW**] or [RAW]
 - Pictures recorded with other equipment

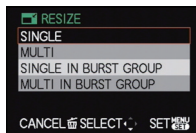
[RESIZE] Reducing the resolution

To allow easy posting to web pages, attachment to e-mail etc., resolution (number of pixels) is reduced.

1 Select **[RESIZE]** on the **[PLAYBACK]** Mode menu. (P28)

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

- When **[SINGLE IN BURST GROUP]** or **[MULTI IN BURST GROUP]** is selected, press **▲/▼/◀/▶** to select a picture series group, and press **[MENU/SET]** to proceed to step 3.



3 Select the picture and resolution.
[SINGLE] setting

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

2 Press **◀/▶** to select the resolution*1, and then press **[MENU/SET]**.

- *1 Only the resolutions to which the pictures can be resized is displayed.

[MULTI] setting

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

- When **[DISPLAY]** is pressed, an explanation of resizing is displayed.

2 Press **▲/▼/◀/▶** to select the picture, and then press **[DISPLAY]**.

- Repeat this step for each picture, and press **[MENU/SET]** to set.

4 Press **▲** to select **[YES]** and then press **[MENU/SET]**.

5 Press **[RECALL]** to return to the menu screen.*2

- *2 The menu screen is automatically restored when **[MULTI]** is selected.
- Press **[MENU/SET]** to close the menu.

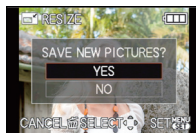
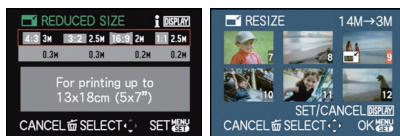
Note

- You can set up to 100 pictures at one time in **[MULTI]**.
- The picture quality of the resized picture will deteriorate.
- It may not be possible to resize pictures recorded with other equipment.
- Motion pictures, pictures stamped with **[TEXT STAMP]** and pictures taken with **[RAW]**, **[RAW]** or **[RAW]** cannot be resized.

[SINGLE]



[MULTI]



[CROPPING]

You can enlarge and then crop the important part of the recorded picture.

- 1 Select [CROPPING] on the [PLAYBACK] Mode menu. (P28)
- 2 Press ▲/▼ to select [SINGLE] or [SINGLE IN BURST GROUP], and then press [MENU/SET].
 - When [SINGLE IN BURST GROUP] is selected, press ▲/▼/◀/▶ to select a picture series group, and press [MENU/SET] to proceed to step 3.
- 3 Press ◀/▶ to select the picture and then press [MENU/SET].



- 4 Use the zoom lever and press ▲/▼/◀/▶ to select the parts to be cropped.

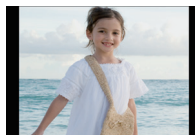


Zoom lever (T): Enlargement
 Zoom lever (W): Reduction
 ▲/▼/◀/▶: Move

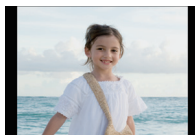
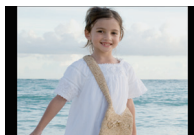
Reduction



Enlargement



Move the position



- 5 Press [MENU/SET].

6 Press **▲** to select **[YES]** and then press **[MENU/SET]**.

7 Press **[🗑️]** to return to the menu screen.

- Press **[MENU/SET]** to close the menu.



Note

- The resolution of the cropped picture will be lower than that of the original picture.
- The picture quality of the cropped picture will deteriorate.
- It may not be possible to crop pictures recorded with other equipment.
- Motion pictures, pictures stamped with **[TEXT STAMP]** and pictures taken with **[RAW]**, **[RAW]** or **[RAW]** cannot be cropped.
- Information regarding the Face Recognition in the original picture will not be copied to images having undergone **[CROPPING]**.

[LEVELING]

Minute tilting of the image can be adjusted.

- 1 Select [LEVELING] on the [PLAYBACK] Mode menu. (P28)
- 2 Press ▲/▼ to select [SINGLE], and then press [MENU/SET].
 - When [SINGLE IN BURST GROUP] is selected, press ▲/▼/◀/▶ to select a picture series group, and press [MENU/SET] to proceed to step 3.
- 3 Press ◀/▶ to select the picture, and then press [MENU/SET].
- 4 Press ◀/▶ to adjust the tilting, and press [MENU/SET].
 - ▶: clockwise
 - ◀: counter-clockwise
 - Up to 2° can be adjusted.
- 5 Press ▲ to select [YES] and then press [MENU/SET].
- 6 Press [🗑️] to return to the menu screen.
 - Press [MENU/SET] to close the menu.



Note

- Quality of image may become coarse when leveling is performed.
- Recorded pixels may decrease compared to original image when leveling is performed.
- Leveling may not be performed on images recorded with other equipment.
- Motion pictures, pictures stamped with [TEXT STAMP] and pictures taken with the [QUALITY] set to [RAW], [RAW] or [RAW] cannot be leveled.
- Information regarding the Face Recognition in the original picture will not be copied to images having undergone [LEVELING].

[ROTATE DISP.]

This mode allows you to automatically display pictures vertically if they were recorded holding the camera vertically.

1 Select **[ROTATE DISP.]** on the **[PLAYBACK] Mode menu. (P28)**

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

- The pictures are displayed without being rotated when you select **[OFF]**.

3 Press **[MENU/SET]** to close the menu.



Note

- When you play back pictures on a PC, they cannot be displayed in the rotated direction unless the OS or software is compatible with Exif. Exif is a file format for still pictures which allows recording information etc. to be added. It was established by "JEITA (Japan Electronics and Information Technology Industries Association)".
- It may not be possible to rotate pictures that have been recorded with other equipment.
- The display is not rotated during Multi Playback (P61).

[FAVORITE]

This can only be used when [FAVORITE] in setup menu is set to [ON].

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

- Play back only the pictures set as favorites. ([FAVORITE PLAY])
 - Play back the pictures set as favorites only as a slide show.
 - Delete all the pictures not set as favorites. ([ALL DELETE EXCEPT ★])
- For details about the icon display during Picture Series Group playback, refer to “About display of [FAVORITE], [PRINT SET] and [PROTECT] icons during playback of picture series groups.” on P156.

1 Select **[FAVORITE]** on the **[PLAYBACK]** Mode menu. (P28)

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

- When [SINGLE IN BURST GROUP] is selected, press **▲/▼/◀/▶** to select a picture series group, and press [MENU/SET] to proceed to step 3.
- When [CANCEL] is selected, see “Canceling all the [FAVORITE] settings”.

3 Press **◀/▶** to select the picture, and then press **[MENU/SET]** to set.

- [★] is displayed on pictures that are already registered as favorites.



Press **◀/▶** to select the picture.

4 Press **[]** to return to the menu screen.

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

■ Canceling all the [FAVORITE] settings

1 Select **[CANCEL]** on the screen shown in step 2 and then press **[MENU/SET]**.

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

3 Press **[MENU/SET]** to close the menu.

- You cannot select [CANCEL] if not even one picture has been set as a favorite.

Note

- You can set up to 999 pictures as favorites.
- When printing pictures at a photo printing store, [ALL DELETE EXCEPT ★] (P65) is useful so only the pictures you want to be printed remain on the card.
- You may not be able to set pictures taken with other equipment as favorites.
- The pictures that were taken with the [QUALITY] set to [RAW] cannot be set to [FAVORITE].

[PRINT SET]

DPOF “Digital Print Order Format” is a system that allows the user to select which pictures to print, how many copies of each picture to print and whether or not to print the recording date on the pictures when using a DPOF compatible photo printer or photo printing store. For details, ask at your photo printing store.

When you want to use a photo printing store to print pictures recorded on the internal memory, copy them to a card (P182) and then set the print setting.

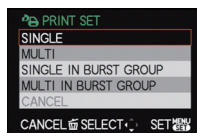
When you set [PRINT SET] for a picture series group, the print setting for the number of prints will be applied to every picture in the group.

• For details about the icon display during picture series group playback, refer to “About display of [FAVORITE], [PRINT SET] and [PROTECT] icons during playback of picture series groups.” on P156.

1 Select [PRINT SET] on the [PLAYBACK] Mode menu. (P28)

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

- When [SINGLE IN BURST GROUP] or [MULTI IN BURST GROUP] is selected, press ▲/▼/◀/▶ to select a picture series group, and press [MENU/SET] to proceed to step 3.
- When [CANCEL] is selected, see “Canceling all the [PRINT SET] settings”.



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

[SINGLE]



Press ◀/▶ to select the picture.

[MULTI]



Press ▲/▼/◀/▶ to select the pictures.

4 Press ▲/▼ to set the number of prints, and then press [MENU/SET] to set.

- When [MULTI] has been selected
 - repeat steps 3 and 4 for each picture.
 - [+999] is displayed on the screen, if the total number of prints you set for a picture series group is more than 1000 pictures.

5 Press [EXIT] to return to the menu screen.

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

■ Canceling all the [PRINT SET] settings

- 1 Select [CANCEL] on the screen shown in step 2 and then press [MENU/SET].
- 2 Press ▲ to select [YES] and then press [MENU/SET].
- 3 Press [MENU/SET] to close the menu.

• You cannot select [CANCEL] if not even one picture has been set for printing.

■ To print the date

After setting the number of prints, set/cancel printing with the recording date by pressing [DISPLAY].

- When you go to a photo printing store for digital printing, be sure to order the printing of the date additionally if required.
- Depending on the photo printing store or the printer, the date may not be printed even if you set to print the date. For further information, ask at your photo printing store or refer to the operating instructions for the printer.
- The date cannot be printed on pictures stamped with text.



Note

- The number of prints can be set from 0 to 999.
- With a printer supporting PictBridge, the date print settings of the printer may take precedence so check if this is the case.
- It may not be possible to use the print settings with other equipment. In this case, cancel all the settings, and reset the settings.
- [PRINT SET] cannot be set for motion pictures and pictures that were taken with the [QUALITY] set to [RAW].
- If the file is not based on the DCF standard, the DPOF print setting cannot be set.

[PROTECT]

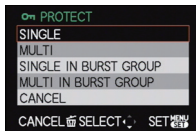
You can set protection for pictures you do not want to be deleted by mistake.

- For details about the icon display during picture series group playback, refer to "About display of [FAVORITE], [PRINT SET] and [PROTECT] icons during playback of picture series groups." on P156.

1 Select [PROTECT] on the [PLAYBACK] Mode menu. (P28)

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

- When [SINGLE IN BURST GROUP] or [MULTI IN BURST GROUP] is selected, press ▲/▼/◀/▶ to select a picture series group, and press [MENU/SET] to proceed to step 3.
- When [CANCEL] is selected, see "Canceling all the [PROTECT] settings".



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

When [MULTI] has been selected

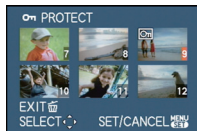
- Repeat these steps for each picture.
- The settings are canceled when [MENU/SET] is pressed again.

[SINGLE]



Press ◀/▶ to select the picture.

[MULTI]



Press ▲/▼/◀/▶ to select the pictures.

4 Press [EXIT] to return to the menu screen.

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

■ Canceling all the [PROTECT] settings

- Select [CANCEL] on the screen shown in step 2 and then press [MENU/SET].
- Press ▲ to select [YES] and then press [MENU/SET].
- Press [MENU/SET] to close the menu.

- If you press [MENU/SET] while canceling protection, the canceling will stop halfway.

Note

- The protect setting may not be effective on other equipment.
- Formatting will delete the respective pictures even if they are protected and regardless of whether they are saved to the internal memory or a card.
- Even if you do not protect pictures on a card, they cannot be deleted when the card's Write-Protect switch is set to [LOCK].

[DELETE]

Pictures can be deleted. Pictures cannot be restored once deleted.

1 Select [DELETE] on the [PLAYBACK] Mode menu. (P28)

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

- When [SINGLE IN BURST GROUP] or [MULTI IN BURST GROUP] is selected, press ▲/▼/◀/▶ to select a picture series group, and press [MENU/SET] to proceed to step 3.



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

[MULTI] setting

Press [DISPLAY] to set (repeat), and then press [MENU/SET] to set.

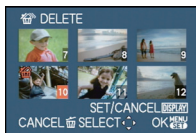
- The setting is canceled when [DISPLAY] is pressed again.

[SINGLE]



Press ◀/▶ to select the picture.

[MULTI]



Press ▲/▼/◀/▶ to select the pictures.

4 Press ▲ to select [YES] and then press [MENU/SET].

5 Press [⏪] to return to the menu screen.*

- *The menu screen is automatically restored when [MULTI] is selected.
- Press [MENU/SET] to close the menu.

Note

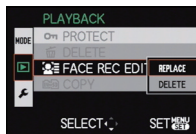
- Do not turn the camera off while deleting (while [⏪] is displayed). Use a battery with sufficient battery power.
- Deleting will stop midway when [MENU/SET] is pressed while deleting multiple pictures.
- Depending on the number of pictures to be deleted, it may take some time to delete them.
- If pictures do not conform to the DCF (excluding AVCHD) standard or are protected (P179), they will not be deleted.

[FACE REC EDIT]

You can delete or change the information relating to Face Recognition for the selected picture.

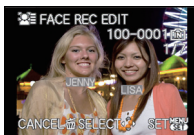
1 Select [FACE REC EDIT] on the [PLAYBACK] Mode menu. (P28)

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



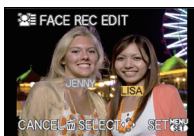
3 Press ◀/▶ to select the picture and then press [MENU/SET].

- You cannot select pictures for which Face Recognition information has not been registered.

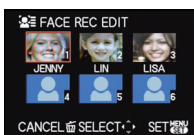


4 Press ◀/▶ to select the person and then press [MENU/SET].

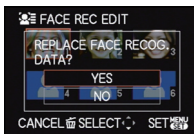
- [DELETE] → step 6.
- You cannot select a person who has not been registered.



5 Press ▲/▼/◀/▶ to select the person to replace and then press [MENU/SET].



6 Press ▲ to select [YES] and then press [MENU/SET].



7 Press [EXIT] to return to the menu screen.

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

Note


- Cleared information regarding the [FACE RECOG.] cannot be restored.
- When all Face Recognition information in a picture has been canceled, the picture will not be categorized using Face Recognition in [CATEGORY PLAY].
- You cannot edit the Face Recognition information of protected pictures.


[COPY]

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

1 Select [COPY] on the [PLAYBACK] Mode menu. (P28)

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

: All the picture data in the internal memory is copied onto the card at one time. → step 4.

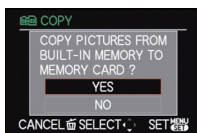
: One picture at a time is copied from the card to the internal memory. → step 3.



3 Press ◀/▶ to select the picture and then press [MENU/SET].

4 Press ▲ to select [YES], and then press [MENU/SET].




- Pressing [MENU/SET] during copying will cancel the copy partway through.
- Do not turn the camera off at any point during the copying process.



5 Press [⏪] to return to the menu screen.

- Press [MENU/SET] to close the menu.
- If you copy from the internal memory to a card, all the pictures are copied and then the screen automatically returns to the playback screen.

Note

- Image data can be copied only partway when there is not enough space in the card when  is selected. We recommend using a card which has more free space than the internal memory (about 40 MB).
- If a picture exists with the same name (folder number/file number) as the picture to be copied in the copy destination when  is selected, a new folder is created and the picture is copied. If a picture exists with the same name (folder number/file number) as the picture to be copied in the copy destination when  is selected, that picture is not copied. (P209)
- It may take time to copy the picture data.
- Only pictures recorded with a Leica digital camera [except DIGILUX, DIGILUX ZOOM, DIGILUX 4.3] will be copied. (Even if the pictures were recorded with a Leica digital camera, you may not be able to copy them if they were edited with a PC.)
- [PRINT SET], [PROTECT] or [FAVORITE] settings will not be copied. Perform the settings again after copying is finished.
- Motion picture recorded in [AVCHD] cannot be copied.

[PLAYBACK] Mode: 

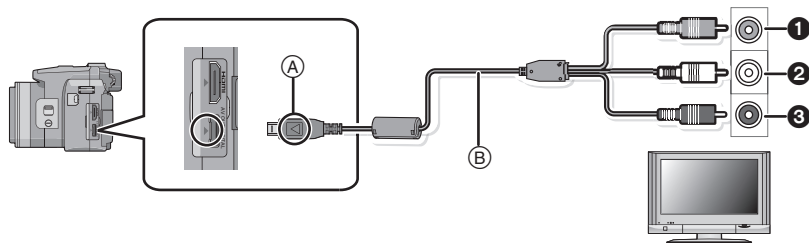
Playing Back Pictures on a TV

Playing back pictures using the AV cable (supplied)

Preparations:

Set the [TV ASPECT]. (P37)

Turn off the camera and the TV.



❶ Yellow: to the video input socket

❷ White: to the audio input socket

❸ Red: to the audio input socket

Ⓐ Align the marks, and insert.

Ⓑ AV cable (supplied)

- 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 AV cable Ⓑ (supplied) to the video input and the audio input sockets on the TV.

2 Connect the AV cable to the [AV OUT] socket on the camera.

3 Turn the TV on and select external input.

4 Turn the camera on and then press .

Note

- Depending on the [ASPECT RATIO], black bands may be displayed on the top and bottom or the left and right of the pictures.
- Do not use any other AV cables except the supplied one.
- Read the operating instructions for the TV.
- When you play back a picture vertically, it may be blurry.
- You can view pictures on TVs in other countries (regions) which use the NTSC or PAL system when you set [VIDEO OUT] in the [SETUP] menu.
- Audio will be played back as stereo (2ch).

Playing back pictures on a TV with an SD Memory Card slot

The recorded still pictures can be played back on a TV with an SD Memory Card slot.

Note

- Depending on the TV model, pictures may not be displayed on the full screen.
- Motion pictures recorded with [AVCHD] can be played back on compatible TVs, i.e. with the AVCHD logo mark. In all other cases, connect the camera to the TV using the AV cable (supplied) and playback the motion picture.
- SDHC Memory Cards cannot be played back unless it is a TV compatible with SDHC Memory Cards or SDXC Memory Cards.
- SDXC Memory Cards cannot be played back unless it is a TV compatible with SDXC Memory Cards.

Playing back Pictures on a TV with an HDMI socket

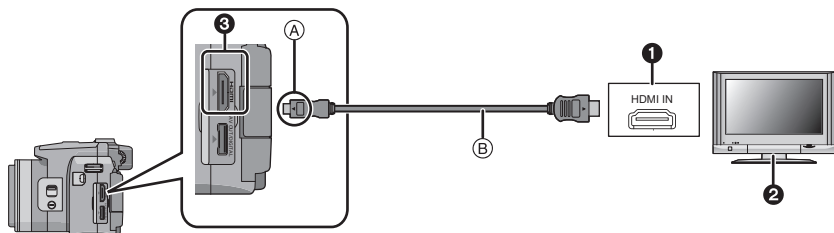
You can enjoy high quality pictures and motion pictures on the TV by connecting the camera with the HDMI compatible high definition TV using HDMI mini cable (optional).

What is HDMI?

HDMI is the interface for digital devices. When the camera is connected to a HDMI compatible device, the image and audio can be output with a digital signal. If you connect the camera to a HDMI compatible high definition TV and then play back the recorded high definition images, you can enjoy them in high resolution with high quality sound.

If you connect the camera to a TV compatible with HDTV Link, linked operations (HDTV Link) are possible. (P187)

Preparations: Check the [HDMI MODE]. (P38)
Turn the camera and the TV off.



① HDMI socket

② TV with HDMI socket

③ HDMI mini (C type)

Ⓐ Align the marks, and insert.

Ⓑ HDMI mini cable (optional)

• Make sure the plug is aligned correctly and that it is inserted straight. (Otherwise, it may cause deformation on both sides resulting in malfunction.)

1 Connect the HDMI mini cable Ⓑ (optional) to the HDMI input socket on the TV.

2 Connect the HDMI mini cable to the [HDMI] socket on the camera.

3 Turn the TV on and switch to HDMI input.

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

• When [HDTV Link] (P38) is set to [ON] and the camera is connected to a TV supporting HDTV Link, input of the TV will be switched automatically and playback screen will be displayed (P187).

 **Note**

- Depending on the [ASPECT RATIO], bands may be displayed on the top and bottom or the left and right of the pictures.
- Always use the genuine Leica HDMI mini cable (optional, P7).
- During HDMI output, no picture is displayed on the LCD monitor or Viewfinder.
- Output from the HDMI mini cable has priority when both AV cable and HDMI mini cable are connected.
- HDMI output is not possible even if you connect the HDMI mini cable while the camera is connected to the PC or the printer.
- HDMI connection is disabled and connection with the USB connection cable will take priority when you connect the USB connection cable while the HDMI mini cable is connected.
- When pictures are displayed, they may not be displayed properly depending on the type of TV.
- Read the operating instructions for the TV.
- Audio will be played back as stereo (2ch).
- Following functions cannot be set in Playback Mode.
[TITLE EDIT], [VIDEO DIVIDE], [TEXT STAMP], [RESIZE], [CROPPING], [LEVELING],
[FACE REC EDIT], [COPY], multiple selection etc.

Playback using HDTV Link (HDMI)

What is the HDTV Link?

- This function allows you to use the remote control of compatible TVs for easy operations when the camera is connected to a HDTV Link compatible device using a HDMI mini cable (optional) for automatic linked operations. (Not all operations are possible.)
- HDTV Link is a unique function built on a HDMI control function using the standard HDMI CEC (Consumer Electronics Control) specification. Linked operations with HDMI CEC compatible devices made by other companies are not guaranteed. When using devices made by other companies that are compatible with HDTV Link, refer to the operating instructions for the respective devices.
- The camera is compatible with HDTV Link Ver.5. HDTV Link Ver.5 is the newest version and is also compatible with existing HDTV Link compatible devices.

Preparations: Set the [HDTV Link] to [ON]. (P38)

- 1** Connect the camera to a TV compatible with HDTV Link with a HDMI mini cable (optional) (P185).
- 2** Turn the camera on and then press [▶].
- 3** Operate with the remote control for the TV.

TV compatible with HDTV Link



- * The shape of the remote control varies depending on the region. Operate following the TV guide displayed on screen.

 **Note**

- It is recommended to connect the camera to an HDMI terminal other than the HDMI1 if there are 2 or more HDMI input terminals on the TV.
- When the [HDTV Link] (P38) of the camera is set to [ON], operation using the button on the camera will be limited.
- HDTV Link must be activated on the connected TV. (Read the operating instructions of the TV for how to set etc.)
- If you are not using HDTV Link, set [HDTV Link] (P38) to [OFF].
- If you are unsure whether or not the TV you are using is compatible with HDTV Link, read its instructions.
- Available linked operations between the camera and compatible TVs may be different depending on the specific models even if they are compatible with HDTV Link. Refer to the instructions of the TV for the supported operations.
- Operation is not possible with a cable that is not based on the HDMI standard. Always use the genuine Leica HDMI mini cable (optional, P7).
- HDTV Link will not work even if you connect the HDMI mini cable when the camera is connected to a PC or a printer.
- [HDMI MODE] (P38) for the camera is determined automatically when HDTV Link is operating.

Saving the recorded still pictures and motion pictures

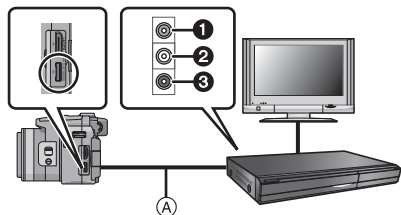
Methods to export still pictures and motion pictures to other devices will vary depending on the file format. (JPEG, RAW, AVCHD, or Motion JPEG). Here are a few suggestions.

Copying the playback image using an AV cable

File formats that can be used: [AVCHD], [Motion JPEG]

Copy images played back with the camera to DVD disc, hard disk, or video using a DVD recorder, or video.

This can be played back with equipment that is not compatible with high definition (AVCHD), so it is convenient for distributing copies. Image will be standard quality instead of high definition at this time.



- ① Yellow: to the video input socket
- ② White: to the audio input socket
- ③ Red: to the audio input socket
- Ⓐ AV cable (supplied)

- 1 Connect the camera with the recording equipment with an AV cable (supplied).**
- 2 Start the playback of the camera.**
- 3 Start the recording on the recording equipment.**

- When ending the recording (copying), stop the playback on the camera after stopping the recording in recording equipment.

Note

- When you play back motion pictures on 4:3 aspect ratio TV, you must set [TV ASPECT] (P37) on the camera to [4:3] before starting a copy. The image will be vertically long if you play back motion pictures copied with [16:9] setting on a [4:3] aspect TV.
- Do not use any other AV cables except the supplied one.
- It is recommended to turn off the display of the screen by pressing the [DISPLAY] on the camera while copying. (P66)
- See the instruction manual for the recording equipment about the details of copying and playing back.

Copying to a PC using “Adobe® Premiere® Elements®”

File formats that can be used: [JPEG], [RAW], [AVCHD], [Motion JPEG]

It is possible to acquire still pictures and motion pictures recorded in [AVCHD] or [MOTION JPEG] formats, or create conventional standard quality DVD video from the motion picture that was recorded as [AVCHD], using the software available as download after registering your camera on the Leica Camera AG homepage (see separate leaflet).

Also, you can write images to DVD, combine multiple pictures to create a single panorama picture, or create a slide show by adding audio and/or music. These pictures can then be stored onto a DVD.



1 Install the software to the PC.

- Follow the instructions of the installer of the supplied software.

2 Connect camera to PC.

- For details on connecting, refer to “Connecting to a PC” (P191).

Note

- You will not be able to playback the acquired [AVCHD] motion pictures when the files or folders related to the motion pictures are deleted, modified, or moved using Windows Explorer or similar, so make sure to acquire the [AVCHD] motion pictures using the downloaded software.

Connecting to a PC

You can acquire recorded pictures to a PC by connecting the camera and the PC.

- Some PCs can read directly from the card removed from the camera. For details, refer to the operating instructions of your PC.
- **If the computer being used does not support SDXC Memory Cards, a message prompting you to format may appear. (Doing so will cause recorded images to be erased so do not choose to format.)**
- You can easily print out or mail the pictures you have imported using the software available as download after registering your camera on the Leica Camera AG homepage (see separate leaflet).
- Read the instructions for the software for more information and about how to install it.

■ PC that can be used

	Windows			Macintosh
	98/98SE	Me/2000	XP/Vista/7	OS 9/OS X
Can the downloaded software be used?	—		○*1	—
Can the [AVCHD] motion picture be acquired to the PC?	—		○*2	—
Can the still pictures and [MOTION JPEG] motion pictures in the digital camera be acquired to the PC using a USB connection cable?	—		○	○ (OS 9.2.2/OS X [10.1~10.6])

• PC with Windows 98/98SE or older, or Mac OS 8.x or older cannot be connected via USB, but it can acquire the pictures if an SD memory card reader/writer can be used.

*1 It is necessary for Internet Explorer 6.0 or newer to be installed. PC with higher processing performance is required depending on the function to be used. It may not play back correctly or operate correctly depending on the environment of the PC used.

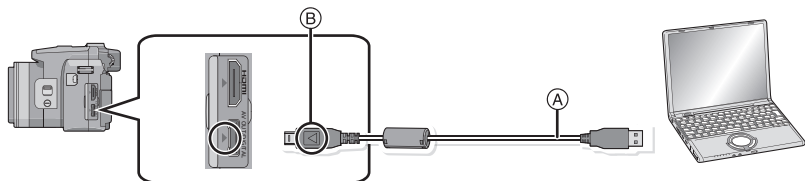
*2 **Always acquire the [AVCHD] motion pictures using the downloaded software.**

Acquiring of still pictures and [MOTION JPEG] motion pictures (other than [AVCHD] motion pictures)

Preparations:

Turn on the camera and the PC.

Remove the card before using the pictures in the internal memory.



(A) USB connection cable (supplied)

- Make sure the plug is aligned correctly and that it is inserted straight. (Otherwise, it may cause deformation on both sides resulting in malfunction.)

(B) Align the marks, and insert.

- Use a battery with sufficient battery power. If the remaining battery power becomes low while the camera and the PC are communicating, the alarm beeps. Refer to “Disconnecting the USB connection cable safely” (P193) before disconnecting the USB connection cable. Otherwise, data may be destroyed.

1 Connect the camera to a PC via the USB connection cable **(A)** (supplied).

- Do not use any other USB connection cables except the supplied one. Use of cables other than the supplied USB connection cable may cause malfunction.

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

- If [USB MODE] (P37) is set to [PC] in the [SETUP] menu in advance, the camera will be automatically connected to the PC without displaying the [USB MODE] selection screen. Since there is no need to set this each time you connect to the PC, it is convenient.
- When the camera has been connected to the PC with [USB MODE] set to [PictBridge(PTP)], a message may appear on the PC's screen. Select [Cancel] to close the screen, and disconnect the camera from the PC. Then set [USB MODE] to [PC] again.



3 Double-click on [Removable Disk] in [My Computer].

- When using a Macintosh, the drive is displayed on the desktop. (“LEICA”, “NO_NAME” or “Untitled” is displayed.)

4 Double-click [DCIM] folder.

5 Using a drag-and-drop operation, move the pictures you want to acquire or the folder storing those pictures to any different folder on the PC.

■ Disconnecting the USB connection cable safely

- Proceed with the hardware removal using “Safely Remove Hardware” on the task tray of the PC. If the icon is not displayed, check that [ACCESS] is not displayed on the LCD monitor of the digital camera before removing the hardware.

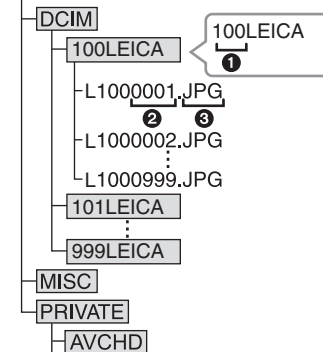
Note

- Before inserting or removing a card, turn the camera off and disconnect the USB connection cable. Otherwise, data may be destroyed.

■ Viewing the contents of the internal memory or card using the PC (folder composition)

Folders and images processed in the PC cannot be played back on the camera. It is recommended to use the software available as download after registering your camera on the Leica Camera AG homepage (see separate leaflet) when you write the image from PC to a card.

- Internal memory
- Card



- | | | |
|---|---------------|-------------------------|
| ① | Folder number | |
| ② | File number | |
| ③ | JPG: | Pictures |
| | MOV: | [MOTION JPEG] |
| | RWL: | Pictures in RAW files |
| | MISC: | DPOF print |
| | | Favorite |
| | AVCHD: | [AVCHD] Motion pictures |

A new folder is created when pictures are taken in the following situations.

- After [NO.RESET] (P36) in the [SETUP] menu has been executed
- When a card containing a folder with the same folder number has been inserted (Such as when pictures were taken using another make of camera)
- When there is a picture with file number 999 inside the folder

■ Connection in the PTP Mode (Windows® XP, Windows Vista®, Windows® 7 and Mac OS X only)

Set [USB MODE] to [PictBridge(PTP)].

Data can now be read only from the card into the PC.

- When there are 1000 or more pictures on a card, the pictures may not be imported in the PTP Mode.
- [AVCHD] motion picture cannot be played back in PTP Mode.

Printing the Pictures

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

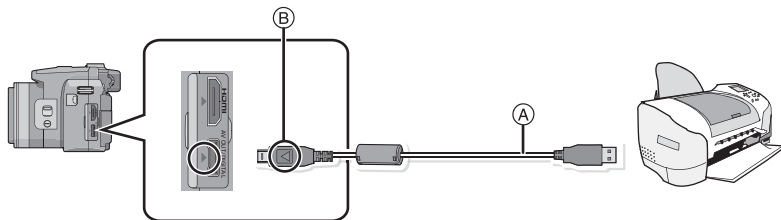
- Picture series will be displayed as a list, and not as a group.
- Some printers can print directly from the card removed from the camera. For details, refer to the operating instructions of your printer.

Preparations:

Turn on the camera and the printer.

Remove the card before printing the pictures in the internal memory.

Perform the print quality and other settings at the printer before printing the pictures.



(A) USB connection cable (supplied)

- 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.)

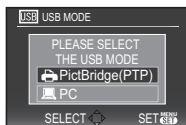
(B) Align the marks, and insert.

- Use a battery with sufficient battery power. If the remaining battery power becomes low while the camera and the printer are connected, the alarm beeps. If this happens during printing, stop printing at once. If not printing, disconnect the USB connection cable.

1 Connect the camera to a printer via the USB connection cable (A) (supplied).

- When the camera is connected to the printer, the cable disconnect prohibit icon [⊗] appears. Do not disconnect the USB cable while [⊗] is displayed.

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



 **Note**

- Do not use any other USB connection cables except the supplied one. Use of cables other than the supplied USB connection cable may cause malfunction.
- Before inserting or removing a card, turn the camera off, and disconnect the USB connection cable.
- You cannot switch between the internal memory and the card while the camera is connected to the printer. Disconnect the USB connection cable, insert (or remove) the card and then connect the USB connection cable to the printer again.
- Motion pictures recorded cannot be printed out.

Selecting a single picture and printing it

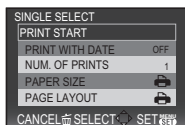
1 Press **◀/▶** to select the picture and then press **[MENU/SET]**.

- The message disappears in about 2 seconds.



2 Press **▲** to select **[PRINT START]** and then press **[MENU/SET]**.

- Refer to [P198](#) for the items which can be set before starting to print the pictures.
- Press **[MENU/SET]** to cancel printing halfway.
- Disconnect the USB connection cable after printing.

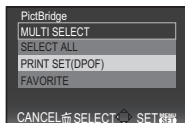


Selecting multiple pictures and printing them

1 Press **▲**.

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

- If the print check screen has appeared, select [YES], and print the pictures.

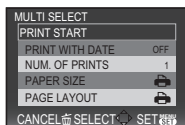


Item	Description of settings
[MULTI SELECT]	Multiple pictures are printed at one time. • Press ▲/▼/◀/▶ to select the pictures, and then When [DISPLAY] is pressed, [] appears on the pictures to be printed. (When [DISPLAY] is pressed again, the setting is canceled.) • After the pictures have been selected, press [MENU/SET].
[SELECT ALL]	Prints all the stored pictures.
[PRINT SET (DPOF)]	Prints the pictures set in [PRINT SET] only. (P177)
[FAVORITE]*	Prints the pictures set as favorites only. (P176)

* Only when [FAVORITE] is at [ON] and when there are pictures set as favorites. (P176)

3 Press **▲** to select **[PRINT START]** and then press **[MENU/SET]**.

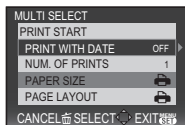
- Refer to P198 for the items which can be set before starting to print the pictures.
- Press [MENU/SET] to cancel printing.
- Disconnect the USB connection cable after printing.



Print Settings

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

- When you want to print pictures in a paper size or a layout which is not supported by the camera, set [PAPER SIZE] or [PAGE LAYOUT] to [] and then set the paper size or the layout on the printer. (For details, refer to the operating instructions of the printer.)
- When [PRINT SET (DPOF)] has been selected, the [PRINT WITH DATE] and [NUM. OF PRINTS] items are not displayed.



[PRINT WITH DATE]

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

- If the printer does not support date printing, the date cannot be printed on the picture.
- Since the printer's settings may take precedence over the print with date setting, check the printer's print with date setting as well.
- When printing images with a text stamp, please remember to set print with date to [OFF] or the date will print on top.

Note


When asking the photo shop to print the pictures

- By stamping the date using [TEXT STAMP] (P168) or setting date printing at the time of the [PRINT SET] (P177) setting before going to a photo shop, the dates can be printed at the photo shop.

[NUM. OF PRINTS]






You can set the number of prints up to 999.

[PAPER SIZE]

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


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

[PAGE LAYOUT] (Layouts for printing that can be set with the camera)


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

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


■ Layout printing**When printing a picture several times on 1 sheet of paper**

For example, if you want to print the same picture 4 times on 1 sheet of paper, set [PAGE LAYOUT] to  and then set [NUM. OF PRINTS] to 4 for the picture that you want to print.

When printing different pictures on 1 sheet of paper

For example, if you want to print 4 different pictures on 1 sheet of paper, set [PAGE LAYOUT] to  and then set [NUM. OF PRINTS] to 1 for each of the 4 pictures.

Note

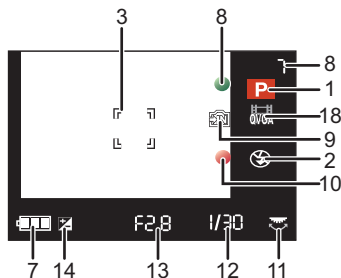
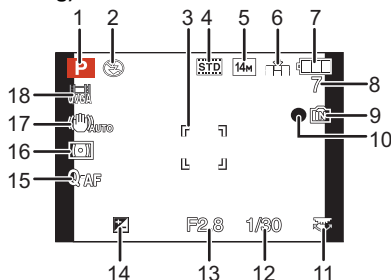
- The camera is receiving an error message from the printer when the  indication lights orange during printing. After finishing printing, make sure there are no problems with the printer.
- If the number of prints is high, the pictures may be printed several times. In this case, the remaining number of prints indicated may differ from the number set.
- When the pictures in RAW files are to be printed, the JPEG pictures recorded simultaneously by the camera will be printed. If JPEG pictures do not exit, RAW file pictures cannot be printed.

Screen Display

■ In recording

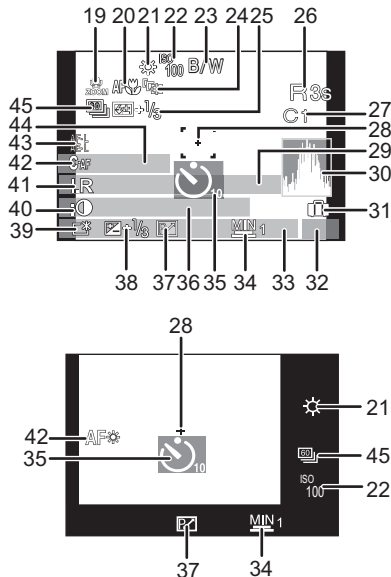
Recording in Program AE Mode [P] (Initial setting)

- 1 Recording Mode
- 2 Flash Mode (P69)
- 3 AF area (P54)
- 4 Film Mode (P118)
- 5 Resolution (P133)
- 6 Quality (P134)
- 7 Battery Indication (P18)
- 8 Number of Recordable Pictures*1 (P222)
- 9 Focus (P54)
- 10 Internal Memory (P23)
 []: Card (P23) (displayed only during recording)
- 11 Recording State
- 12 Rear dial (P56, 61, 62, 75, 78, 85, 86, 114)
- 13 Shutter Speed (P54)
- 14 Aperture Value (P54)
- 15 Exposure Compensation (P78)
- 16 Quick AF (P142)
- 17 Metering Mode (P144)
- 18 Optical Image Stabilizer (P146)
 []: Camera shake Alert (P55)
- 19 REC MODE (when recording motion pictures) (P111)/Recording Quality (P111)









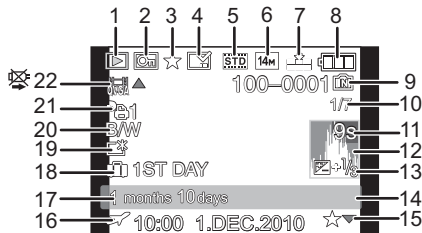
■ In recording (after settings)

- 19 Zoom Microphone (P151)
 ☹️: Wind cut (P151)
- 20 AF Macro Recording (P74)
 MF : MF (P75)
- 21 White Balance (P136)
 White Balance Fine Adjustment (P137)
- 22 ISO Sensitivity (P135)
 ISO Limit Set (P135)
- 23 Color Effect (P51)
 (👤): MOTION DEBLUR (P51)
- 24 AF Tracking (P140)
- 25 Flash Output Adjustment (P72)
- 26 Available Recording Time
 (P108): R8m30s
- 27 Custom Settings (P117)
- 28 Spot Metering Target (P144)
- 29 Name*² (P99)
 Location*³ (P127)
- 30 Histogram (P68)
- 31 Travel Date (P127)
 Elapsed Recording Time (P108)
- 32 AF Tracking Operation (P50, 140)
- 33 Current Date and Time/📍: Travel
 Destination Setting*³ (P130)
 Zoom/Extended Optical Zoom (P57)/
 Intelligent Zoom (P57)
 Digital Zoom (P57, 146) EZ i.ZOOM W T1X
- 34 Minimum Shutter Speed (P145)
- 35 Self-Timer Mode (P77)
- 36 Age*² (P99)
- 37 Program Shift (P56)
- 38 Exposure Compensation (P78)
- 39 LCD Mode (P32)
- 40 Intelligent Exposure (P144)
- 41 Intelligent Resolution (P145)
- 42 Continuous AF (P142)/AF*: AF Assist Lamp (P147)
- 43 AF/AE LOCK (P143)
- 44 Number of days that have passed since the Travel Date (P127)
- 45 Continuous mode (P82)/📷: Auto Bracket (P79)/WB: White Balance Bracket (P138)
- *1 [+99999] is displayed if there are more than 100000 pictures remaining. However, when it is an out of frame display, [+999] is displayed if there are more than 1000 pictures remaining.
- *2 This is displayed for about 5 seconds when the camera is turned on in [BABY1]/[BABY2] or [PET] in Scene Mode.
- *3 This is displayed for about 5 seconds when the camera is turned on, after setting the clock and after switching from Playback Mode to Recording Mode.



■ In playback

- 1 Playback Mode (P60)
 - 2 Protected Picture (P179)
 - 3 Favorites (P176)
 - 4 Stamped with Text Indication (P168)
 - 5 Film Mode (P118)
 - 6 Resolution (P133)
 - 7 Quality (P134)
 - 8 Battery Indication (P18)
 - 9 Folder/File Number (P194)
 - Internal Memory (P23)
 - Elapsed Playback Time (P157): 8m30s
 - 10 Picture Number/Total Pictures
 - 11 Motion Picture Recording Time (P157): 8m30s
 - 12 Histogram (P68)
 - 13 Exposure Compensation (P78)
 - 14 Recording Information (P66)
 - 15 Favorites Settings (P176)
 - 16 Recorded Date and Time/Travel Destination Setting (P130)/Name* (P99)/Location* (P127)/Title* (P166)
 - 17 Age (P99)
 - 18 Number of days that have passed since the Travel Date (P127)
 - 19 Power LCD (P32)
 - 20 Color Effect (P51)
 - 21 Number of Prints (P177)
 - 22  : Recording Quality (P111)/ Picture series Playback (P153) /  : Motion Picture Playback (P157) /  : High Speed Motion Picture Playback/Cable Disconnection Warning Icon (P195)
- * It is displayed in order of [TITLE], [LOCATION], [NAME] ([BABY1]/[BABY2], [PET]), [NAME] ([FACE RECOG.]).



Cautions for Use

Optimal use of the camera

Take care not to drop or knock the camera or put a lot of pressure on it.

- Take care not to knock or drop the bag/case that you inserted the camera in as the shock may cause damage to the camera, lens or LCD monitor.
- Do not use a paper bag as it can easily rip causing the camera to fall and be damaged.
- We strongly recommend you purchase a good camera bag/case from your local dealer to protect your camera.

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

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

Always use the supplied cords and cables. If you use optional accessories, use the cords and the cables supplied with them.

Do not extend the cords or the cables.

Do not spray the camera with insecticides or volatile chemicals.

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

Cleaning

Before cleaning the camera, remove the battery. Then wipe the camera with a dry soft cloth.

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

About the LCD monitor/Viewfinder

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

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

About the Lens

- Do not press the lens with excessive force.
- Do not leave the camera with the lens facing the sun as rays of light from the sun may cause it to malfunction. Also, be careful when placing the camera outside or near a window.
- When there is dirt (water, oil, and fingerprints, etc.) on the surface of the lens, the picture may be affected. Lightly wipe the surface of the lens with a soft, dry cloth before and after taking pictures.
- Retract the lens when carrying the camera.

Battery

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

Always remove the battery after use.

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

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

Bring charged spare batteries when going out.

- Be aware that the operating time of the battery becomes shorter in low temperature conditions such as at a ski resort.
- When you travel, do not forget to bring the charger (supplied) so that you can charge the battery in the country that you are traveling in.

Dispose of unusable battery.

- The battery has a limited life.
- Do not throw the battery into fire because it may cause an explosion.

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

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

Charger

- If you use the charger near a radio, the radio reception may be disturbed.
- Keep the charger 1 m or more away from radios.
- The charger may generate whirring sounds when it is being used. This is not a malfunction.
- After use, be sure to disconnect the power supply device from the electrical outlet. (A very small amount of current is consumed if it is left connected.)
- Keep the terminals of the charger and battery clean.

Card

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

Do not bend or drop the card.

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

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

- “Format” or “delete” using the camera or a PC will only modify the file management information, and it will not erase the data in the memory card completely.

It is recommended to physically destroy the memory card or use the commercially available computer data deletion software to completely erase the data in the memory card before transferring to another party or disposing.

Management of data in the memory card is the responsibility of the user.

About the personal information

If a name or birthday is set for [BABY1]/[BABY2]/Face Recognition function, this personal information is kept in the camera and recorded in the image.

Disclaimer

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

When requesting a repair, transferring to another party or disposing

- Reset the settings to protect the personal information. (P36)
- If there are pictures stored in the internal memory, copy them into the memory card (P182) before formatting the internal memory (P39) as needed.
- Remove the memory card from the camera when requesting a repair.
- Internal memory and settings may return to factory default when camera is repaired.
- Please contact the dealer where you purchased the camera or your nearest Service Center if above operations are not possible due to malfunction.

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

When not using the camera for a long period of time

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

About the picture data

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

About tripods or unipods

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

Message Display

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

[THIS MEMORY CARD IS WRITE-PROTECTED]

- The Write-Protect switch on the card is moved to [LOCK]. Move the switch back to unlock it. (P24)

[NO VALID PICTURE TO PLAY]

- Record a picture or insert a card with a recorded picture and then play it.

[THIS PICTURE IS PROTECTED]

- Delete the picture after canceling the protect setting. (P179)

[THIS PICTURE CANNOT BE DELETED]/[SOME PICTURES CANNOT BE DELETED]

- Pictures not based on the DCF standard cannot be deleted.
 - If you want to delete some pictures, format the card after saving necessary data on a PC etc. (P39)

[NO ADDITIONAL SELECTIONS CAN BE MADE]

- The number of pictures, which can be set at one time when [MULTI] has been selected for [DELETE MULTI] (P65), [FAVORITE] (P176), [TITLE EDIT] (P166), [TEXT STAMP] (P168) or [RESIZE] (P171) has been exceeded.
 - Reduce the number of pictures set, and then repeat the operation.

[CANNOT BE SET ON THIS PICTURE]

- [TITLE EDIT], [TEXT STAMP] or [PRINT SET] cannot be set for pictures not based on the DCF standard.

[NOT ENOUGH SPACE ON BUILT-IN MEMORY]/[NOT ENOUGH MEMORY ON THE CARD]

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

[SOME PICTURES CANNOT BE COPIED]/[COPY COULD NOT BE COMPLETED]

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

[BUILT-IN MEMORY ERROR FORMAT BUILT-IN MEMORY?]

- This message will be displayed when you formatted the internal memory on a PC.
→ Format the internal memory on the camera again. (P39) The data on the internal memory will be deleted.

[MEMORY CARD ERROR FORMAT THIS CARD?]

- It is a format that cannot be used with the camera.
→ Format the card again with the camera after saving necessary data on a PC etc. (P39)

[PLEASE TURN CAMERA OFF AND THEN ON AGAIN]

- This message will be displayed when the lens does not operate properly because force was applied by hand, or if the lens hood is not attached securely.
→ Turn the camera off and on. If the message persists, contact the dealer or your nearest Service Center.

[MEMORY CARD PARAMETER ERROR]/[THIS MEMORY CARD CANNOT BE USED]

- Use a card compatible with the camera. (P24)
- SD Memory Card (8 MB to 2 GB)
- SDHC Memory Card (4 GB to 32 GB)
- SDXC Memory Card (48 GB, 64 GB)

[INSERT SD CARD AGAIN]/[TRY ANOTHER CARD]

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

[READ ERROR/WRITE ERROR PLEASE CHECK THE CARD]

- It has failed to read or write data.
→ Remove the card after turning the power [OFF]. Insert the card again, turn the power on, and try to read or write the data again.
- The card may be broken.
→ Insert a different card.

[MOTION RECORDING WAS CANCELLED DUE TO THE LIMITATION OF THE WRITING SPEED OF THE CARD]

- Use a card with SD Speed Class* with "Class 4" or higher when recording motion pictures in [AVCHD].
Also, use a card with SD Speed Class with "Class 6" or higher when recording motion pictures in [MOTION JPEG].
* SD Speed Class is the speed standard regarding continuous writing.
- In the event that it stops even after using a "Class 4" card or higher, the data writing speed has deteriorated so it is recommended to make a backup and then format (P39).
- Depending on the type of the card, motion picture recording may stop in the middle.

[THIS CARD IS NOT FORMATTED WITH THIS CAMERA, AND NOT SUITABLE FOR MOVIE RECORDING.]

- The writing speed is lower if the card has been formatted using a PC or other equipment. As a consequence, motion picture recording may stop in the middle. If this happens, make a backup of the data and format (P39) the card in the camera.

[CANNOT RECORD DUE TO INCOMPATIBLE FORMAT(NTSC/PAL) DATA ON THIS CARD.]

- If you want to delete some pictures, format the card after saving necessary data on a PC etc. (P39)
- Insert a different card.

[A FOLDER CANNOT BE CREATED]

- A folder cannot be created because there are no remaining folder numbers that can be used. (P194)
 - Format the card after saving necessary data on a PC etc. (P39) If you execute [NO.RESET] in the [SETUP] menu after formatting, the folder number is reset to 100. (P36)

[PICTURE IS DISPLAYED FOR 16:9 TV]/[PICTURE IS DISPLAYED FOR 4:3 TV]

- The AV cable is connected to the camera.
 - Press [MENU/SET] if you want to delete this message at once.
 - Select [TV ASPECT] in the [SETUP] menu if you want to change the TV aspect. (P37)
- This message also appears when the USB connection cable is connected to the camera only. In this case, connect the other end of the USB connection cable to a PC or a printer. (P191, 195)

[PRINTER BUSY]/[PLEASE CHECK THE PRINTER]

- The printer cannot print.
 - Check the printer.

[NO BATTERY POWER REMAINS]

- The remaining battery power is low.
 - Charge the battery.

[THIS BATTERY CANNOT BE USED]

- The battery cannot be recognized by the camera.
 - Use only a Leica battery BP-DC9 (P7). If this message is displayed even when a Leica battery BP-DC9 battery is used, contact your Leica dealer or the nearest Leica Customer Service Center.
- The battery cannot be recognized as its terminal is dirty.
 - Remove any dirt etc. from the terminal.

[PLEASE MAKE SURE TO TURN ON THE POWER OF EXTERNAL MICROPHONE.]

When attaching an external microphone (we suggest to use the Panasonic model DMW-MS1), check the battery status and make sure the power is on before use.

Troubleshooting

First, try out the following procedures (P212–221).

If the problem is not resolved, it may be improved by selecting [RESET] (P36) on the [SETUP] menu when taking pictures.

Battery and power source

The camera cannot be operated even when it is turned on.

- The battery is not inserted correctly. (P21)
- The battery is exhausted.
- Charge the battery.

The LCD monitor turns off while the camera is turned on.

- Is the display set to Viewfinder?
→ Press [EVF/LCD] to switch to the LCD monitor.
- Is [AUTO LCD OFF] (P35) of the [ECONOMY] Mode active?
→ Press the shutter button halfway to cancel these modes.
- The battery is exhausted.
- Charge the battery.

The camera turns off immediately after it is turned on.

- The battery is exhausted.
- Charge the battery.
- If you leave the camera on, the battery will be exhausted.
→ Turn the camera off frequently by using the [ECONOMY] Mode etc. (P35)

The camera is turned off automatically.

- If you connect to a TV compatible with HDTV Link with the optionally available HDMI mini cable and turn off the power on the TV with the remote control for the TV, the power on the camera also turns off.
→ If you are not using HDTV Link, set [HDTV Link] to [OFF]. (P38)

The [CHARGE] lamp flashes.

- Is the temperature of the battery excessively high or low? If it is, it will take longer than usual to charge the battery or charging may remain incomplete.
- Are the terminals of the charger or battery dirty?
→ Wipe off the dirt using a dry cloth.

Recording

The picture cannot be recorded.

- Is the mode dial correctly set?
- Is there any memory remaining on the internal memory or the card?
 - Delete the pictures which are not necessary to increase the available memory. (P64)

The recorded picture is whitish.

- The picture can become whitish if there is dirt e.g. fingerprints on the lens.
 - If the lens is dirty, turn the camera off, retract the lens barrel (P10) and gently wipe the lens surface with a soft dry cloth.

The area around where the pictures were taken becomes dark.

- Was this picture taken with the flash at the close range when the zoom is near [W] (1×)?
 - Zoom in a little, and then take the pictures. (P57)
 - Is this a picture taken in [PIN HOLE] in My Color Mode?

The recorded picture is too bright or dark.

- Check that the exposure is correctly compensated. (P78)
- Setting the [MIN. SHTR SPEED] to faster speed might make the picture darker.
 - Set the [MIN. SHTR SPEED] (P145) to slower speed.

2 or 3 pictures are taken at one time.

- Unset the settings of Multi Film Bracket (P120) or White Balance Bracket (P138).
- Set Auto Bracket (P79) or Continuous Mode (P82) to [OFF].
- Is the Self-Timer (P77) set to [10S/3PICTURES], or is it set to [FLASH BURST] in Scene Mode (P101)?

The subject is not focused properly.

- The focus range varies depending on the Recording Mode.
 - Set to the proper mode for the distance to the subject.
- The subject is beyond the focus range of the camera.
- There is camera shake or the subject is moving slightly. (P55)

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

- The shutter speed becomes slower when pictures are taken in dark places so hold the camera firmly with both hands to take the pictures. (P41)
- When taking pictures at a slow shutter speed, use the Self-Timer. (P77)

Taking pictures using Auto Bracket is not possible.

- Is the number of recordable pictures 2 or less?

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

- Is the ISO sensitivity high or the shutter speed slow? (ISO sensitivity is set to [AUTO] when the camera is shipped. Therefore, when taking pictures indoors etc. noise will appear.)
 - Decrease the ISO sensitivity. (P135)
 - Increase the setting for [NOISE REDUCTION] in [FILM MODE] or lower the setting for each of the items other than [NOISE REDUCTION]. (P119)
 - Take pictures in bright places.
- Has [HIGH SENS.] in the Scene Mode been set? If so, the resolution of the recorded picture decreases slightly because of high sensitivity processing, but this is not a malfunction.

Under fluorescent lighting, flicker or horizontal bars may be seen.

- This is characteristic of MOS sensors which serve as the camera's pickup sensors. This is not a malfunction.

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

- If recording under fluorescent light, the brightness or the hue may change slightly when the shutter speed becomes fast. This occurs due to the characteristics of fluorescent light. It is not a malfunction.

Reddish horizontal streaks appear on the LCD monitor during recording.

- This is characteristic of MOS sensors which serve as the camera's pickup sensors. It appears when the subject has a bright part. Some unevenness may occur in the surrounding areas, but this is not a malfunction.
It is recorded in motion pictures but is not recorded on still pictures.
- It is recommended that you take pictures while taking care not to expose the screen to sunlight or any other source of strong light.

**Motion picture recording stops in the middle.**

- Use a card with SD Speed Class* with "Class 4" or higher when recording motion pictures in [AVCHD].
Also, use a card with SD Speed Class with "Class 6" or higher when recording motion pictures in [MOTION JPEG].
* SD Speed Class is the speed standard regarding continuous writing.
- Depending on the type of the card, recording may stop in the middle.
→ If motion picture recording stops during use of a card of at least "Class 4" or if you use a card that has been formatted on a PC or other equipment, the data-writing speed is lower. In such cases, we recommend that you make a backup of the data and then format (P39) the card in the camera.

Object seems to be warped.

- Object seems to be warped slightly when the object moves across the image very fast, but this is because the camera is using MOS for the image sensor. This is not a malfunction.

**Subject cannot be locked.
(AF tracking not possible)**

- Set the AF area to the distinctive color of the subject if there is a part that is different from the surrounding color. (P140)

Lens**Recorded image may be warped, or nonexistent color is surrounding the subject.**

- It is possible that the subject may be warped slightly, or the borders get colored, depending on the zoom magnification, due to the characteristics of the lens. Also, the peripherals of the image might look warped because the perspective is enhanced when the wide angle is used. This is not a malfunction.

LCD monitor/Viewfinder

The LCD monitor/Viewfinder turns off although the camera is turned on.

- LCD monitor will turn off when [AUTO LCD OFF] (P35) of the [ECONOMY] Mode is activated.

The LCD monitor/Viewfinder becomes darker or brighter for a moment.

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

The LCD monitor flickers indoors.

- The LCD monitor may flicker for a few seconds after turning the camera on indoors under fluorescent light. This is not a malfunction.

The LCD monitor is too bright or dark.

- [POWER LCD] is activated. (P32)

The picture is not displayed on the LCD monitor.

- Does the picture appear on the Viewfinder?
→ Press [EVF/LCD] button to switch to LCD monitor display.

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


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

Noise appears on the LCD monitor.

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

Flash

The flash is not activated.

- Is the flash closed?
→ Press [ OPEN] to open the flash. (P69)
- Flash Mode is not available when Auto Bracket (P79) or Continuous mode have been set.

The flash is activated multiple times.

- The flash is activated twice when Red-Eye Reduction (P70) has been set.
- Is it set to [FLASH BURST] (P101) in Scene Mode?

Playback

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

- [ROTATE DISP.] (P175) is set to [ON].

**The picture is not played back.
There are no recorded pictures.**

- Did you press [▶]?
- Is there a picture on the internal memory or the card?
→ The pictures on the internal memory appear when a card is not inserted. The picture data on the card appears when a card is inserted.
- Is this a picture whose file name has been changed in the PC? If it is, it cannot be played back by the camera.
- Has [MODE PLAY], [CATEGORY PLAY], or [FAVORITE PLAY] been set for playback?
→ Change to [NORMAL PLAY]. (P63)

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

- Is this a non-standard picture, a picture which has been edited using a PC or a picture which was taken by another make of digital camera?
- Did you remove the battery immediately after picture-taking or did you take the picture using a battery with a low remaining charge?
→ Format the data to delete the pictures mentioned above. (P39)
(Other pictures will be deleted as well and it will not be possible to restore them. Therefore, check well before formatting.)

With a calendar search, pictures are displayed on dates differing from the actual dates on which the pictures were taken.

- Is the clock in the camera set properly? (P25)
- When pictures edited using a PC or pictures taken by other equipment are searched, they may be displayed on dates differing from the actual dates on which the pictures were taken.

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

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

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

- When Digital Red-Eye Reduction ([], [], []) is in operation, if you take a picture of subject with red color surrounded by a skin tone color, that red part may be corrected to black by the Digital Red-Eye Correction function.
 - It is recommend to take picture with Flash Mode set to [], [] or [], or [RED-EYE REMOVAL] on the [REC] Mode menu set to [OFF]. (P148)

[THUMBNAIL IS DISPLAYED] appears on the screen.

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

A clicking sound is recorded in the motion pictures.

- The camera automatically adjusts the aperture during motion picture recording. At such times, a clicking sound is heard, and this sound may be recorded on the motion pictures. This is not a malfunction.

TV, PC and printer**The picture does not appear on the television.**

- Is the camera connected to the TV correctly?
 - Set the TV input to external input mode.
- Output from the [HDMI] socket is not possible when it is connected to a PC or a printer.
 - Connect it only to the TV.

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

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

The motion pictures cannot be played back on a TV.

- Are you trying to play back the motion pictures by directly inserting the card in the card slot of the TV?
 - Connect the camera to the TV with the AV cable (supplied), or with the HDMI mini cable (optional), and then play back the motion pictures on the camera. (P183, 185)
 - Motion pictures recorded in [AVCHD] can be played back on compatible televisions (with the AVCHD logo).

The picture is not displayed fully on the TV.

→ Check [TV ASPECT] setting. (P37)

HDTV Link does not work.

- Is it connected properly with the HDMI mini cable (optional)? (P185)
 - Confirm that the HDMI mini-cable (optional) is firmly fitted.
 - Press [] on the camera.
- Is the [HDTV Link] on the camera set to [ON]? (P38)
 - Depending on HDMI terminal of the TV, the input channel may not switch automatically. In this case, use the remote control for the TV to switch input. (For details on how to switch input, please read the operating instructions for the TV.)
 - Check the HDTV Link setting on the connected device
 - Turn the power to the camera off and then back on again.
 - Set [HDTV Link] to [Off] on the TV and then turn it back to [On]. (Refer to the operating instructions of the TV for details.)
 - Check [VIDEO OUT] setting. (P37)

The picture cannot be transferred when the camera is connected to a PC.

- Is the camera connected to the PC correctly?
- Is the camera recognized by the PC correctly?
 - Set to [PC] in [USB MODE]. (P37, 192)

The card is not recognized by the PC. (The internal memory is recognized.)

→ Disconnect the USB connection cable. Connect it again while the card is inserted in the camera.

The card is not recognized by the PC. (SDXC memory card is used)

- Check if your PC is compatible with SDXC memory cards.
- A message prompting to format the card may be displayed when connecting, but do not format.
- If the [ACCESS] displayed on the LCD monitor does not disappear, disconnect the USB connection cable after turning off the power.



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

- Pictures cannot be printed using a printer which does not support PictBridge.
 - Set to [PictBridge(PTP)] in [USB MODE]. (P37, 195)

The ends of the pictures are cut at printing.

- When using a printer with a cropping or borderless printing function, cancel this function before printing. (For details, refer to the operating instructions for the printer.)
- When you order photo studios to print pictures, ask the photo studio if the pictures can be printed with both ends.

Others**An unreadable language was selected by mistake.**

- Press [MENU/SET], select the [SETUP] menu icon [] and then select the [] icon to set the desired language. (P40)

A red lamp sometimes turns on when the shutter button is pressed halfway.

- In dark places, the AF assist lamp (P147) lights red to make it easier to focus on a subject.

Part of the picture is flashing in black and white.

- This is a highlight function showing the white saturated area. (P34)
- Is the [HIGHLIGHT] set to [ON]?

The AF assist lamp does not turn on.

- Is [AF ASSIST LAMP] on the [REC] Mode menu set to [ON]? (P147)
- The AF assist lamp does not turn on in bright places.

The camera becomes warm.

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

The lens clicks.

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

The clock is reset.

- If you do not use the camera for a long time, the clock may be reset.
 - [PLEASE SET THE CLOCK] message will be displayed; please re-set the clock. When taking pictures, it will not be possible to record the correct date without setting the clock. (P25)

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

- At some magnification levels, the pictures taken are slightly distorted or the outlines and other areas in the pictures taken are colored, but this is not a malfunction.

Zooming stops instantaneously.

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

The file numbers are not recorded consecutively.

- When you perform an operation after taking a certain action, the pictures may be recorded in folders with different numbers from the ones used prior to the operation. (P194)

The file numbers are recorded in ascending order.

- If the battery was inserted or removed without first turning the camera's power off, the folder and file numbers for the pictures taken will not be stored in the memory. When the power is then turned back on and pictures are taken, they may be stored under file numbers which should have been assigned to previous pictures.

[AGE] is not displayed correctly.

- Check the clock (P25) and birthday settings (P99).

The lens barrel is retracted.









- The lens barrel retracts about 15 seconds after switching from [REC] Mode to [PLAYBACK] Mode.









Number of Recordable Pictures and Available Recording Time









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









■ Number of recordable pictures









- [+99999] is displayed if there are more than 100000 pictures remaining. However, when it is an out of frame display, [+999] is displayed if there are more than 1000 pictures remaining.









Aspect ratio		4:3							
Resolution		14M				10M (EZ)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		7	10	1	1	9	14	1	1
Card	512 MB	83	120	20	22	110	160	21	23
	1 GB	165	240	41	45	220	320	44	47
	2 GB	340	490	84	92	440	660	90	96
	4 GB	660	980	165	180	880	1290	175	190
	6 GB	1010	1490	250	270	1330	1970	270	290
	8 GB	1360	1990	340	370	1790	2640	360	380
	12 GB	2050	3010	510	560	2700	3980	540	580
	16 GB	2740	4010	680	740	3600	5310	730	780
	24 GB	3980	5830	1000	1080	5230	7710	1060	1130
	32 GB	5500	8050	1380	1500	7230	10650	1470	1570
	48 GB	7580	11030	1970	2150	9840	14000	2100	2240
64 GB	10290	14970	2680	2920	13350	19010	2850	3050	









Aspect ratio		4:3							
Resolution		7M (EZ)				5M (EZ)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		12	19	1	1	14	26	1	1
Card	512 MB	135	210	22	24	160	280	23	24
	1 GB	270	430	46	49	320	570	47	50
	2 GB	550	870	94	100	650	1130	96	100
	4 GB	1080	1720	185	195	1280	2230	190	200
	6 GB	1650	2620	280	300	1950	3390	290	300
	8 GB	2210	3500	370	400	2610	4540	380	410
	12 GB	3330	5290	570	600	3940	6860	580	620
	16 GB	4450	7050	760	810	5250	9150	780	830
	24 GB	6460	10250	1100	1180	7630	13280	1130	1210
	32 GB	8930	14160	1520	1630	10540	18350	1570	1670
48 GB	12140	18210	2190	2330	14000	22760	2240	2390	
64 GB	16470	24710	2970	3160	19010	30890	3050	3250	









Aspect ratio		4:3							
Resolution		3M (EZ)				0.3M (EZ)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		18	35	1	1	230	390	1	1
Card	512 MB	200	380	23	25	2320	3770	27	27
	1 GB	400	770	48	51	4640	7550	54	55
	2 GB	800	1530	99	105	8770	12290	110	110
	4 GB	1580	3010	195	200	17240	24130	220	220
	6 GB	2410	4580	290	310	26210	36700	330	330
	8 GB	3230	6130	390	420	35080	49120	450	450
	12 GB	4870	9260	600	640	52920	74090	680	680
	16 GB	6500	12350	800	850	70590	98830	900	910
	24 GB	9440	17930	1160	1240	102500	143500	1310	1320
	32 GB	13040	24780	1610	1710	141610	198260	1820	1820
48 GB	16550	28020	2300	2440	121420	182130	2610	2630	
64 GB	22460	38020	3120	3310	164770	247150	3550	3580	









Aspect ratio		3:2							
Resolution		125M				9M (EZ)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		7	11	1	1	10	15	1	1
Card	512 MB	90	130	22	24	115	175	24	26
	1 GB	180	270	46	50	230	350	49	53
	2 GB	360	540	94	100	470	710	100	105
	4 GB	720	1060	185	200	940	1400	195	210
	6 GB	1100	1620	280	310	1430	2130	300	320
	8 GB	1470	2170	380	410	1910	2850	400	430
	12 GB	2230	3270	570	620	2890	4300	610	650
	16 GB	2970	4370	760	830	3860	5740	810	870
	24 GB	4320	6340	1110	1210	5600	8340	1180	1270
	32 GB	5970	8770	1540	1670	7740	11520	1630	1760
48 GB	8470	12140	2230	2420	10710	15170	2360	2520	
64 GB	11490	16470	3030	3290	14530	20590	3200	3430	









Aspect ratio		3:2							
Resolution		6M (EZ)				4.5M (EZ)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		12	21	1	1	14	27	1	1
Card	512 MB	135	230	25	27	160	300	25	27
	1 GB	270	460	50	55	320	600	52	56
	2 GB	560	930	100	110	660	1180	105	115
	4 GB	1100	1820	200	220	1290	2320	210	220
	6 GB	1680	2770	310	330	1970	3520	320	340
	8 GB	2250	3720	410	450	2640	4720	430	460
	12 GB	3390	5610	630	680	3980	7120	640	690
	16 GB	4530	7480	840	900	5310	9500	860	930
	24 GB	6580	10870	1220	1320	7710	13790	1250	1350
	32 GB	9090	15010	1690	1820	10650	19060	1730	1870
48 GB	12560	19170	2440	2610	14570	24280	2510	2690	
64 GB	17040	26010	3310	3550	19770	32950	3400	3660	









Aspect ratio		3:2							
Resolution		25M (EZ)				0.3M (EZ)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		18	36	1	1	250	390	2	2
Card	512 MB	200	390	26	28	2510	3770	30	30
	1 GB	410	790	54	57	5030	7550	61	62
	2 GB	820	1530	110	115	8770	12290	125	125
	4 GB	1630	3010	210	230	17240	24130	240	240
	6 GB	2470	4580	330	350	26210	36700	370	370
	8 GB	3310	6130	440	470	35080	49120	500	500
	12 GB	5000	9260	670	710	52920	74090	760	760
	16 GB	6670	12350	890	950	70590	98830	1020	1020
	24 GB	9690	17930	1300	1380	102500	143500	1480	1480
	32 GB	13390	24780	1790	1910	141610	198260	2040	2050
48 GB	18210	30350	2600	2750	121420	182130	2960	2980	
64 GB	24710	41190	3530	3740	164770	247150	4010	4050	












Aspect ratio		16:9							
Resolution		10.5M				7.5M (EZ)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		8	13	1	2	10	17	1	2
Card	512 MB	100	150	26	29	125	195	28	30
	1 GB	200	300	54	59	250	390	57	62
	2 GB	400	600	110	120	500	780	115	125
	4 GB	800	1190	210	230	990	1540	220	250
	6 GB	1220	1810	330	360	1510	2350	340	380
	8 GB	1630	2430	440	480	2020	3140	460	500
	12 GB	2460	3660	660	730	3060	4740	700	760
	16 GB	3290	4890	890	970	4080	6330	940	1020
	24 GB	4780	7100	1290	1420	5920	9190	1360	1490
	32 GB	6600	9810	1790	1960	8190	12700	1890	2060
48 GB	9100	13000	2540	2770	11030	16550	2670	2910	
64 GB	12350	17650	3450	3770	14970	22460	3630	3950	





Aspect ratio		16:9							
Resolution		5.5M (EZ)				3.5M (EZ)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		12	22	1	2	15	29	2	2
Card	512 MB	140	250	29	31	165	310	30	32
	1 GB	280	500	58	64	330	630	60	66
	2 GB	570	1000	120	130	680	1250	120	135
	4 GB	1130	1970	230	250	1340	2460	240	260
	6 GB	1730	3000	350	390	2030	3740	370	400
	8 GB	2310	4020	480	520	2720	5010	490	540
	12 GB	3490	6070	720	790	4110	7560	750	810
	16 GB	4660	8100	970	1060	5490	10080	1000	1090
	24 GB	6760	11760	1400	1540	7970	14640	1450	1580
	32 GB	9350	16250	1940	2130	11010	20230	2010	2190
48 GB	12560	20230	2750	3000	14570	24280	2840	3080	
64 GB	17040	27460	3740	4080	19770	32950	3860	4180	

Aspect ratio		16:9							
Resolution		2M (EZ)				0.2M (EZ)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		41	80	2	2	300	460	2	2
Card	512 MB	450	860	33	35	3020	4310	36	36
	1 GB	900	1720	68	71	6040	8630	73	73
	2 GB	1800	3410	135	145	10240	15360	145	150
	4 GB	3540	6700	270	280	20110	30170	290	290
	6 GB	5390	10190	410	430	30580	45870	440	450
	8 GB	7220	13640	560	580	40930	61400	590	600
	12 GB	10890	20580	840	870	61740	92610	900	900
	16 GB	14530	27450	1130	1170	82360	123540	1200	1210
	24 GB	21100	39860	1640	1700	119590	179380	1750	1760
	32 GB	29150	55070	2260	2350	165220	247830	2420	2430
48 GB	36420	60710	3220	3340	121420	182130	3430	3460	
64 GB	49430	82380	4370	4530	164770	247150	4660	4700	





Aspect ratio		1:1							
Resolution		10.5M (E7)				7.5M (E7)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		9	14	1	1	12	19	1	2
Card	512 MB	110	160	26	29	140	210	28	30
	1 GB	220	320	54	58	280	430	57	61
	2 GB	450	660	110	115	570	860	115	125
	4 GB	880	1290	210	230	1120	1690	220	240
	6 GB	1340	1970	330	350	1710	2580	340	370
	8 GB	1800	2640	440	480	2290	3450	460	500
	12 GB	2720	3980	660	720	3460	5210	700	750
	16 GB	3630	5310	890	960	4610	6950	940	1010
	24 GB	5270	7710	1290	1400	6700	10100	1360	1460
	32 GB	7280	10650	1790	1940	9260	13960	1890	2030
48 GB	10110	14000	2560	2750	12560	18210	2690	2890	
64 GB	13730	19010	3480	3740	17040	24710	3660	3920	






Aspect ratio		1:1							
Resolution		5.5M (E7)				3.5M (E7)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		14	26	2	2	18	34	2	2
Card	512 MB	165	280	29	31	200	370	30	32
	1 GB	330	570	58	63	400	740	60	65
	2 GB	660	1130	120	125	800	1460	120	130
	4 GB	1310	2230	230	250	1580	2870	240	260
	6 GB	1990	3390	350	380	2410	4360	370	390
	8 GB	2660	4540	480	520	3230	5840	490	530
	12 GB	4020	6860	720	780	4870	8820	750	800
	16 GB	5370	9150	970	1040	6500	11760	1000	1070
	24 GB	7790	13280	1400	1520	9440	17080	1450	1560
	32 GB	10770	18350	1940	2100	13040	23600	2010	2150
48 GB	14570	22760	2770	2980	17340	28020	2860	3060	
64 GB	19770	30890	3770	4050	23530	38020	3890	4150	

Aspect ratio									
Resolution		 (EZ)				 (EZ)			
Quality				RAW 	RAW 			RAW 	RAW 
Internal Memory (Approx. 40 MB)		36	72	2	2	300	460	2	2
Card	512 MB	400	770	32	33	3020	4310	35	35
	1 GB	800	1540	65	68	6040	8630	71	71
	2 GB	1610	3070	130	135	10240	15360	140	145
	4 GB	3170	6030	260	270	20110	30170	280	280
	6 GB	4820	9170	400	410	30580	45870	430	430
	8 GB	6460	12280	530	560	40930	61400	570	580
	12 GB	9740	18520	810	840	61740	92610	870	870
	16 GB	13000	24700	1080	1130	82360	123540	1160	1170
	24 GB	18880	35870	1570	1640	119590	179380	1690	1700
	32 GB	26080	49560	2170	2260	165220	247830	2340	2350
48 GB	33110	60710	3110	3250	121420	182130	3340	3370	
64 GB	44930	82380	4220	4410	164770	247150	4530	4570	

Aspect ratio					
Quality		RAW			
Internal Memory (Approx. 40 MB)		1	2	2	2
Card	512 MB	27	30	36	35
	1 GB	55	62	74	71
	2 GB	110	125	150	145
	4 GB	220	250	290	280
	6 GB	340	380	450	430
	8 GB	450	510	600	580
	12 GB	680	770	910	880
	16 GB	910	1030	1220	1180
	24 GB	1330	1500	1770	1720
	32 GB	1840	2070	2450	2370
48 GB	2670	3030	3530	3430	
64 GB	3630	4110	4790	4660	

■ Available recording time (when recording motion pictures)

File format		[AVCHD(1080i)]		[AVCHD(720p)]	
Recording quality setting					
Internal Memory (Approx. 40 MB)		Cannot be used.			
Card	512 MB	2 min 00 s	3 min 00 s	2 min 00 s	3 min 00 s
	1 GB	6 min 00 s	8 min 00 s	6 min 00 s	8 min 00 s
	2 GB	14 min 00 s	18 min 00 s	14 min 00 s	18 min 00 s
	4 GB	29 min 00 s	38 min 00 s	29 min 00 s	38 min 00 s
	6 GB	45 min 00 s	59 min 00 s	45 min 00 s	59 min 00 s
	8 GB	1 h 1 min	1 h 20 min	1 h 1 min	1 h 20 min
	12 GB	1 h 33 min	2 h 2 min	1 h 33 min	2 h 2 min
	16 GB	2 h 5 min	2 h 44 min	2 h 5 min	2 h 44 min
	24 GB	3 h 3 min	3 h 59 min	3 h 3 min	3 h 59 min
	32 GB	4 h 13 min	5 h 31 min	4 h 13 min	5 h 31 min
	48 GB	6 h 12 min	8 h 7 min	6 h 12 min	8 h 7 min
	64 GB	8 h 26 min	11 h 1 min	8 h 26 min	11 h 1 min

File format		[MOTION JPEG]				
Recording quality setting						
Internal Memory (Approx. 40 MB)		Cannot be used.			1 min 18 s	Cannot be used.
Card	512 MB	1 min 30 s	3 min 50 s	4 min 00 s	11 min 10 s	1 min 28 s
	1 GB	3 min 30 s	9 min 00 s	9 min 20 s	26 min 00 s	3 min 25 s
	2 GB	7 min 50 s	19 min 30 s	20 min 20 s	56 min 40 s	7 min 30 s
	4 GB	15 min 50 s	39 min 50 s	41 min 20 s	1 h 54 min	15 min 20 s
	6 GB	24 min 30 s	1 h 1 min	1 h 3 min	2 h 56 min	23 min 40 s
	8 GB	33 min 00 s	1 h 22 min	1 h 25 min	3 h 57 min	32 min 00 s
	12 GB	50 min 00 s	2 h 5 min	2 h 10 min	6 h 0 min	54 min 30 s
	16 GB	1 h 6 min	2 h 47 min	2 h 54 min	8 h 2 min	1 h 5 min
	24 GB	1 h 37 min	4 h 3 min	4 h 13 min	11 h 41 min	1 h 46 min
	32 GB	2 h 14 min	5 h 37 min	5 h 50 min	16 h 10 min	2 h 10 min
	48 GB	3 h 18 min	8 h 15 min	8 h 35 min	23 h 47 min	3 h 36 min
64 GB	4 h 29 min	11 h 13 min	11 h 40 min	32 h 19 min	4 h 21 min	


• **With camera models 18 393 / 18 394:**

Motion pictures can be recorded continuously in [MOTION JPEG] or [HIGH SPEED MOVIE] in Scene Mode up to a capacity of 2 GB. Only the maximum recordable time for 2 GB is displayed on the screen.

The maximum time available for recording motion pictures continuously with [AVCHD] is 13 hours 3 minutes 20 seconds. Only respective times will be displayed on the screen.


However, the recording may stop before that depending on the remaining battery level. (P19)

• **With camera model 18 392:**

Motion pictures can be recorded continuously for up to 29 minutes. Also, motion picture recorded continuously in [MOTION JPEG] is possible for up to 2 GB. (Example: [7m 50s] with )

The remaining time for continuous recording is displayed on the screen.

 **Note**

- The number of recordable pictures and the available recording time displayed on the screen may not decrease in order.
- The Extended Optical Zoom does not work when in [HIGH SENS.], [FLASH BURST] and [PHOTO FRAME] in Scene Mode so the resolution for [] is not displayed.

Leica Service Addresses

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As well as outstanding high-performance products for taking and viewing photographs, for many years we have also been offering the special services of the Leica Akademie, with practical seminars and training courses, which are intended to share our knowledge about the world of photography, projection and magnification with both beginners and advanced photographic enthusiasts.

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More detailed information and the current Leica Akademie brochure are available from:

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Current information about products, news, events and the Leica company is available on our homepage on the Internet at:

<http://www.leica-camera.us>
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AVCHD™



HDMI



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