PENTAX

Digital Camera

X70

Operating Manual

CERTIFIED FOR Windows Vista®

acdsee

SDHC

HI-SPEED USB

To ensure the best performance from your camera, please read the Operating Manual before using the camera.

Thank you for purchasing this PENTAX Digital Camera.
Please read this manual before using the camera in order to get the most out of all the features and functions. Keep this manual safe, as it can be a valuable tool in helping you to understand all the camera capabilities.

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Regarding Product Registration

In order to better serve you, we request that you complete the product registration, which can be found on the CD-ROM supplied with the camera or the PENTAX website. Thank you for your cooperation.
Refer to "Connecting to a Computer" (p.217) for more information.

To users of this camera

- Do not use or store this device in the vicinity of equipment that generates strong electromagnetic radiation or magnetic fields.
  Strong static charges or the magnetic fields produced by equipment such as radio transmitters could interfere with the monitor, damage the stored data, or affect the product's internal circuitry and cause camera misoperation.
- The liquid crystal panel used in the display is manufactured using extremely high precision technology. Although the level of functioning pixels is 99.99% or better, you should be aware that 0.01% or fewer of the pixels may not illuminate or may illuminate when they should not. However, this has no effect on the recorded image.
- There is a possibility that the illustrations and the display screen in this manual are different from the actual product.
- In this manual, both an SD Memory Card and an SDHC Memory Card are referred to as SD Memory Cards hereafter.
- In this manual, the generic term "computer(s)" refers to either a Windows PC or a Macintosh hereafter.

USING YOUR CAMERA SAFELY

We have paid close attention to the safety of this product. When using this product, we request your special attention regarding items marked with the following symbols.

⚠ **Warning**   This symbol indicates that violating this item could cause serious personal injuries.

⚠ **Caution**   This symbol indicates that violating this item could cause minor or medium personal injuries, or material losses.

About the Camera

⚠ Warning

- Do not attempt to take the camera apart or remodel the camera. High voltages are present within the camera, and there is therefore a danger of electric shocks if the camera is taken apart.
- If the inside of the camera should become exposed as a result of, for example, the camera being dropped, please do not under any circumstances touch such exposed portions, as there is a danger of receiving an electric shock.
- To avoid the risk of it being swallowed by mistake, keep the SD Memory Card out of the reach of small children. Seek medical attention immediately if a card is accidentally swallowed.
- Wrapping the strap of the camera around your neck is also dangerous. Please take care that small children do not hang the strap around their necks.
- Use an AC adapter that is of the power and voltage specified for exclusive use with this product. The use of an AC adapter other than that specified exclusively for use with this product may cause fire or electric shocks.
- If the camera emits smoke or a strange smell, or in the event of any other irregularity, stop using the camera immediately, remove the battery and contact your nearest PENTAX Service Center. Continued use of the camera may result in fire or electric shock.

⚠ **Caution**

- Do not place your finger on the flash when it is discharging as there is a risk of burns.
- Do not discharge the flash while it is touching your clothing as there is a risk of discoloring.
- If any leakage from the battery should come in contact with your eyes, it may cause a loss of sight. Flush your eyes with clean water and get medical attention immediately. Do not rub them.
- If any leakage from the battery should come in contact with skin or clothes, it may cause irritation to the skin. Wash the affected areas thoroughly with water.
- Precautions for D-LI92 Battery Usage:
  BATTERY MAY EXPLODE OR FIRE IF MISTREATED.
  - DO NOT DISASSEMBLE OR DISPOSE OF IN FIRE.
  - DO NOT CHARGE EXCEPT SPECIFIED CHARGING CONDITION.
  - DO NOT HEAT ABOVE 140°F / 60°C, OR SHORT CIRCUIT.
  - DO NOT CRUSH OR MODIFY.
- Remove the battery from the camera immediately if it becomes hot or begins to smoke. Be careful not to burn yourself during removal.
- Some portions of the camera heat up during use, so please take care, as there is a risk of low temperature burns if such portions are held for long periods of time.
- Should the LCD be damaged, be careful of glass fragments. Also, be careful not to allow the liquid crystal to get on your skin or in your eyes or in your mouth.
- Depending on your inherent factors or physical condition, the use of the camera may cause itching, rashes or blisters. In case of any abnormality, stop using the camera and get medical attention immediately.

About the Battery Charger and the AC Adapter

⚠ Warning

- Do not use the product at a voltage other than the specified voltage. Use with a power source or voltage other than that designated can cause a fire or electrical shock. The specified voltage is 100-240V AC.
- Do not disassemble or modify the product. This can cause a fire or electrical shock.
- If the generation of smoke or strange odor from the product or other abnormality occurs, immediately discontinue using and consult a PENTAX Service Center. Continuing to use the product can cause a fire or electrical shock.
- If water should happen to get inside the product, consult a PENTAX Service Center. Continuing to use the product can cause a fire or electrical shock.
- If a thunder storm should be present during use of the battery charger or AC adapter, unplug the power cord and discontinue use. Continuing to use the product can cause damage to the equipment, fire or electrical shock.
- Wipe off the plug of the power cord if it should become covered with dust. This can cause a fire.

⚠ Caution

- Do not place heavy objects on the AC plug cord, allow heavy objects to drop onto it or allow the AC plug cord to become damaged due to excessive bending. If the AC plug cord becomes damaged, consult a PENTAX Service Center.
- Do not short or touch the output terminals of the product while it is still plugged in.
- Do not plug in the AC plug cord with wet hands. This can cause an electrical shock.
- Do not subject the product to strong impacts or allow it to drop onto a hard surface. This can cause a malfunction.
- Do not use the battery charger to charge batteries other than rechargeable lithium-ion battery D-LI92. This can cause overheating, explosion or battery charger failure.

- To reduce the risk of hazards, use only CSA/UL Certified power supply cord set, cord is Type SPT-2 or heavier, minimum NO.18 AWG copper, one end with a molded-on male attachment plug cap (with a specified NEMA configuration), and the other is provided with a molded-on female connector body (with a specified IEC nonindustrial type configuration) or the equivalent.

Care to be Taken During Handling

- When traveling, take the Worldwide Service Network listing that is included in the package. This will be useful if you experience problems abroad.
- When the camera has not been used for a long time, confirm that it is still working properly, particularly prior to taking important pictures (such as at a wedding or during traveling). Contents of the recording cannot be guaranteed if recording, playback or transferring your data to a computer, etc. is not possible due to a malfunction of your camera or recording media (SD Memory Card), etc.
- The lens on this camera is not interchangeable. The lens is not removable.
- Do not clean the product with organic solvents such as thinner, alcohol or benzene.
- Places of high temperature and humidity should be avoided. Particular care should be taken regarding vehicles, which can become very hot inside.
- This camera is not waterproof. Do not use this camera where it might come in contact with rain, water, or any other liquid.
- Storing the camera where pesticides and chemicals are handled should be avoided. Remove the camera from its case and store in a well-ventilated place to prevent the camera from becoming moldy during storage.
- Ensure that the camera is not subjected to substantial vibrations, shocks or pressure as this may cause damage or malfunction. Place the camera on a cushion for protection when the camera is subjected to the vibrations of a motorbike, car, ship, etc. If the camera is subjected to substantial vibrations, shocks or pressure, take your camera to your nearest PENTAX Service Center and have it checked.
- The temperature range in which the camera can be used is 0°C to 40°C (32°F to 104°F).
- The liquid crystal display will become black at a high temperature but will return to normal when normal temperatures are returned to.

- The response speed of the liquid crystal display becomes slow at low temperatures. This is due to the properties of the liquid crystal and is not a fault.
- Periodic checks are recommended every 1 to 2 years in order to maintain high performance.
- If the camera is subjected to rapid temperature changes, condensation may form on the inside and outside of the camera. Therefore put the camera in a bag or plastic bag, and take the camera out when the difference in temperature has subsided.
- Refer to "Precautions When Using an SD Memory Card" (p.36) regarding the SD Memory Card.
- Please note that formatting an SD Memory Card or the built-in memory will delete all data; however it may still be possible to recover that data using off-the-shelf data recovery software. Please manage your camera memory at your own risk.
- Please do not press forcefully on the display. This could cause breakage or malfunction.
- When using a tripod with the camera, be careful not to overtighten the screw in the tripod socket on the camera.
- The AC plug cord supplied with the camera is for exclusive use with the battery charger D-BC92. Do not use it with any other equipment.
- Storing the battery fully charged may decrease the battery performance. Avoid storing it especially in high temperatures.
  If the battery is left inserted and the camera is not used for a long time, the battery will over-discharge and shorten the battery's service life.
- Charging the battery a day before use or on the day of use is recommended.
- Do not hold or force the extended part of the lens. This can cause a malfunction.

Contents

In this manual, the method for operating the four-way controller is shown in illustrations, such as in the one below.
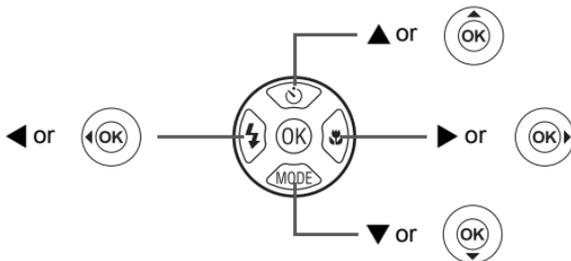
The meanings of the symbols used in this Operating Manual are explained below.

☞	indicates the reference page number for an explanation of the related operation.
memo	indicates information that is useful to know.
Caution	indicates precautions to be taken when operating the camera.
✿ mode	This is the mode for capturing still pictures and recording movies. In this manual, the mode for taking still pictures is referred to as the "Still Picture Capture Mode" and the mode for recording movies is referred to as the "🎥 mode".
▶ mode	This is the mode for viewing still pictures and playing back movies and sound files.

Composition of the Operating Manual

This Operating Manual contains the following chapters.

1 Getting Started ———————————————————————————

This chapter explains what you need to do after purchasing the camera before you start taking pictures. Be sure to read it and follow the instructions.

2 Common Operations ——————————————————————————

This chapter explains common operations such as the functions of the buttons and how to use the menus. For more details, refer to the respective chapters below.

3 Taking Pictures ———————————————————————————

This chapter explains the various ways of capturing images and how to set the relevant functions.

4 Playing Back and Deleting Images————————————————————

This chapter explains how to view still pictures and movies on the camera or on TV and how to delete images, sound files, and movies from the camera.

5 Editing and Printing Images ——————————————————————

This chapter explains the various ways of printing still pictures and how to edit images with the camera.

6 Recording and Playing Back Sound ————————————————————

This chapter explains how to add sound (a voice memo) to an image, and how to play back sound files.

7 Settings———————————————————————————————

This chapter explains how to set the camera-related functions.

8 Connecting to a Computer ———————————————————————

This chapter explains how to connect the camera to a computer, and includes installation instructions and a general overview of the provided software.

9 Appendix———————————————————————————————

This chapter deals with troubleshooting and lists the optional accessories.

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Camera Features

In addition to basic picture-taking, the X70 has a variety of shooting modes to suit different situations. This section describes how to make the most of the key features of your camera. Together with the explanations of camera operations, it will enable you to enjoy your camera to the full.

Easy-to-Navigate Capture and Playback Functions!

The user-friendly design of the X70 enables easy operation with only a few buttons. Simply by choosing the appropriate icon, you can select the shooting mode (p.68) and choose the optimal settings for the situation, or the playback mode (p.155, p.176) and enjoy the various playback and editing functions. A guide on the display lets you check the functions available in each mode and how to use them.

- **A shooting mode guide is displayed in the Capture Mode Palette and a playback mode guide in the Playback Mode Palette (p.69, p.155).**
- **Use the Green Mode to take pictures easily using standard settings (p.80).**

Perfect for Portrait Shots!

The X70 comes with a "Face Recognition" function that spots the faces in your shot and automatically adjusts the focus and exposure for the faces. It can recognize up to 32 people per shot (*), so it will help you take perfect group shots too. It will automatically release the shutter when people are smiling, or if anyone blinked, it will tell you that so you can take the shot again until it is perfect. It also has a feature that lets you enlarge each person's face in sequence during playback so you can quickly check their facial expressions.

* Up to 15 face recognition frames are displayed on the monitor.

- **Face Recognition function (p.78)**
- **Modes for taking stunning pictures of people (p.86)**
- **Close-ups of people's faces for easy checking during playback (p.162)**

Add Various Frames to Your Pictures!

When you take a picture with the X70, you can choose from a wide range of fun frames to create attractive framed shots (p.93). You can also add frames to pictures you have taken. Adjust the position of the subject in the picture or reduce or enlarge the picture size to match the frame shape and size. Now you no longer have to worry about the subject not fitting into the frame (p.183).

- **For decorating your pictures with a frame**

Display Images and Sound Files in Calendar Format!

With the X70, you can display recorded images by date in calendar format (p.154). This lets you quickly find the image you want to play back.

Advanced Movie Recording Functions

The X70 has a Shake Reduction function to reduce camera shake during movie recording (p.146). It also supports the 1280×720 HDTV image format so you can view your recordings as stunning wide-screen movies.

- **Use the camera to shoot fun-filled movies of your children or pets as a visual diary of their development (p.143).**

A multitude of functions inside the camera for enjoying images without a Computer!

The X70 has a variety of functions to let you enjoy playing back and editing images without having to connect the camera to your computer and transfer the images first. The camera is all you need to take and edit still pictures and movies (p.176). And no more worries about accidentally deleting images, because now, with the X70, you can recover them again (p.169).
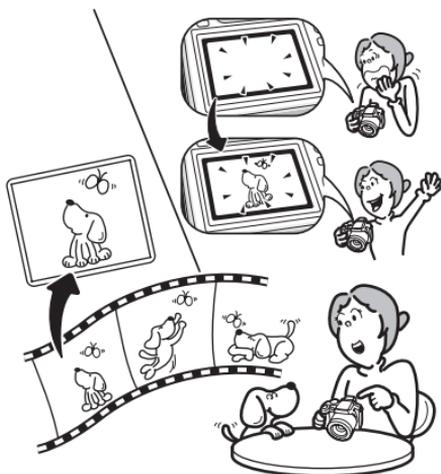
- **Resize (p.176), Cropping (p.177) and Red-eye Compensation (p.182) can be used, while the image is displayed in the playback mode.**
- **You can divide a movie into two or select a frame from a movie to save it as a still picture (p.186).**

Checking the Contents of the Package

Camera
X70

Strap
O-ST92 (*)
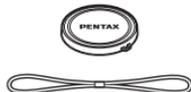
Lens cap O-LC92 (*)
(Cap installed on camera)

Software (CD-ROM)
S-SW87
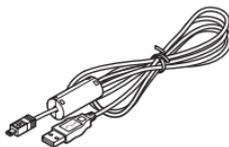
USB cable
I-USB7 (*)
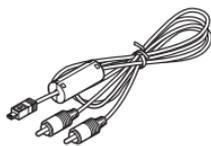
AV cable
I-AVC7 (*)

Rechargeable lithium-ion
battery D-LI92 (*)
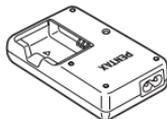
Battery charger
D-BC92 (*)

AC plug cord (*)

Quick Guide

Operating Manual
(this manual)

Items marked with an asterisk (*) are also available as optional accessories.
The battery charger and AC plug cord are only sold as a set (Battery Charger Kit
K-BC92).
For other optional accessories, refer to "Optional Accessories" (p.255).

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Names of Parts

Front

Self-timer lamp
Strap lug
✦ button
Lens

Back

Flash (stored)
Mode dial
Zoom lever
Shutter release button
Strap lug
Power switch/Power lamp
✷ button
Display
Viewfinder

Bottom

Tripod socket

Battery/Card cover
lock lever

Battery/Card cover
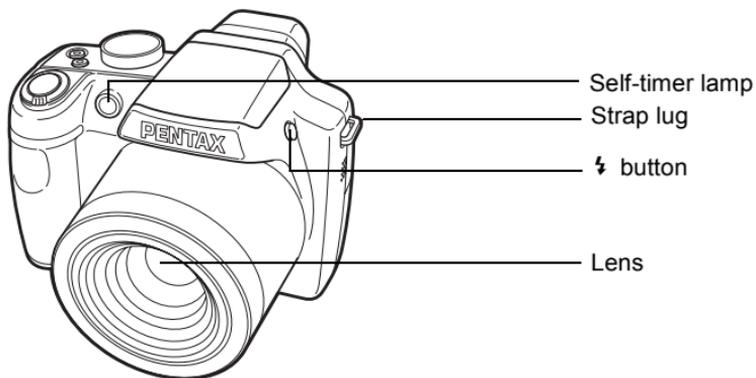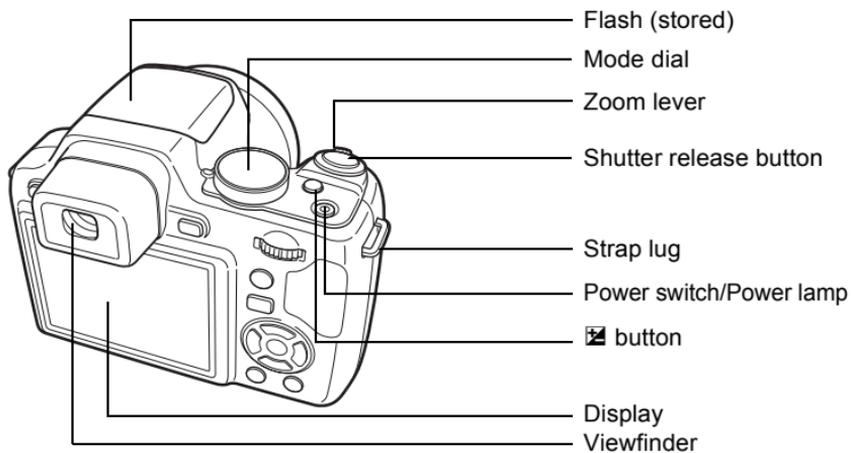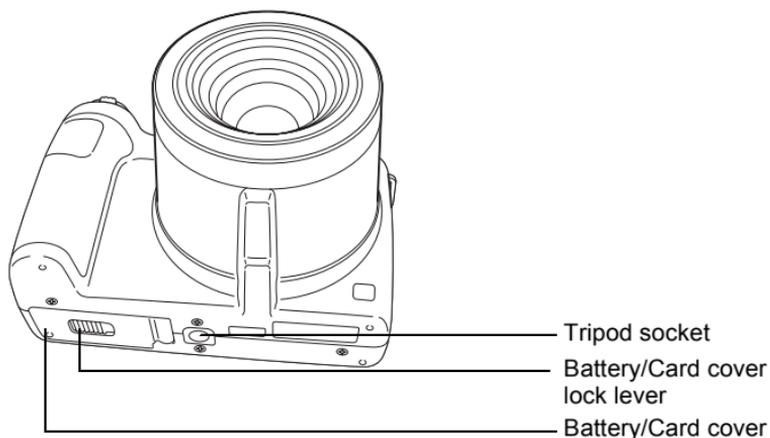
Names of Operating Parts

EVF/LCD button

DISPLAY button

e-dial

ⓠ button

▶ button

Four-way controller

OK button

Green/面 button

MENU button
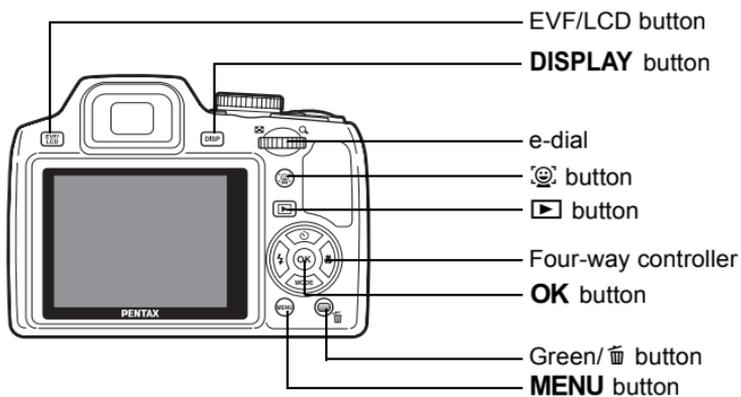
memo   Refer to "Understanding the Button Functions" (p.48 - p.51) for an explanation of the function of each button.

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Monitor Indications

Display in ✿ Mode

The display shows information such as the shooting conditions in the capture mode. The display changes in the following sequence each time you press the **DISPLAY** button: "Normal Display", "Histogram + Info", "Grid Display" and "No Info".

Normal Display

Histogram + Info

[DISP]

[DISP]

[DISP]

No Info

[DISP]

Grid Display
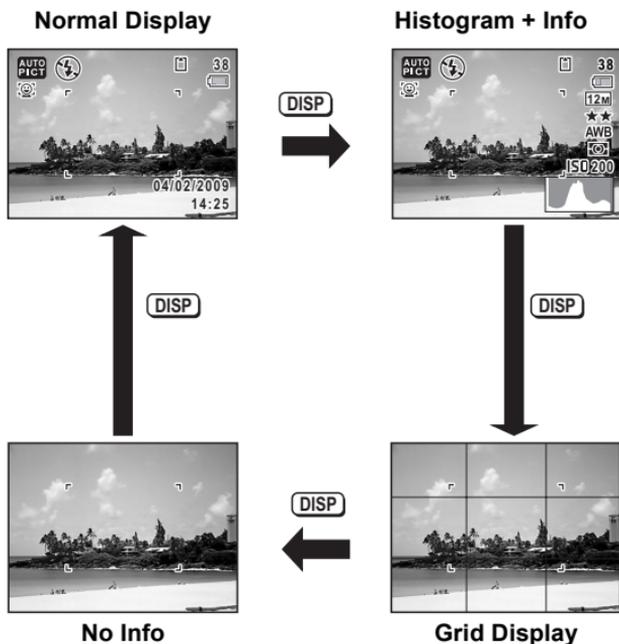
memo
- When the shooting mode is set to ● (Green) mode, the monitor display is as shown on the right. You cannot change the information on the display by pressing the **DISPLAY** button.

- To take pictures using the viewfinder, switch from the display to the viewfinder by pressing the ELV/LCD button. Press the button again to switch to the display.

Normal Display in Still Picture Capture Mode

1. Shooting mode (p.68)
2. Face Priority icon (p.78)
3. Bright area adjustment icon (p.130)
4. Shake Reduction icon (p.132)
5. Shutter speed
6. Aperture
7. Flash Mode (p.110)
8. Drive Mode (p.95 - p.101)
9. Focus Mode (p.113)
10. Digital Zoom/Intelligent Zoom icon (p.82)
11. Memory status (p.38)
12. Remaining image storage capacity
13. Battery level indicator (p.32)
14. Focus frame (p.64)
15. Date and time (p.44)
16. EV Compensation (p.108)
17. Date Imprint setting (p.139)
18. World Time setting (p.204)

* For 4, (ﷺ) appears if the shutter release button is pressed halfway when [Shake Reduction] in the [✿ Rec. Mode] menu is set to [On]. (ﷺ) appears when [Shake Reduction] is set to [Off].
* 5 and 6 always appear in **P**, **Tv**, **Av**, **M**, and **USER** modes. In other shooting modes, they are displayed only when the shutter release button is pressed half-way.
* For 9, when the focus mode is set to **AF** and the Auto-Macro function is activated, the ♥ appears on the display (p.113).
* Some indications may not appear depending on the shooting mode.

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Histogram + Info/Grid Display/No Info Display in Still Picture Capture Mode
A1 to A17 and B1 appear when "Histogram + Info" is selected. Only B1
appears when "Grid Display" or "No Info" is selected.

A1 Shooting mode (p.68)
A2 Face Priority icon (p.78)
A3 Bright area adjustment icon (p.130)
A4 Shake Reduction icon (p.132)
A5 Flash Mode (p.110)
A6 Drive Mode (p.95 - p.101)
A7 Focus Mode (p.113)
A8 Digital Zoom/
Intelligent Zoom icon (p.82)
A9 Memory status (p.38)
A10 Remaining image storage capacity
A11 Battery level indicator (p.32)

A12 Recorded pixels (p.120)
A13 Quality Level (p.122)
A14 White Balance (p.123)
A15 AE Metering (p.128)
A16 Sensitivity (p.125)
A17 Histogram (p.25)
A18 EV Compensation (p.108)
A19 Date Imprint setting (p.139)
B1 Focus frame (p.64)
B2 Shutter speed
B3 Aperture

* For A4, (((🖐))) appears if the shutter release button is pressed halfway
when [Shake Reduction] in the [🗖 Rec. Mode] menu is set to [On].
(🖐) appears when [Shake Reduction] is set to [Off].
* B2 and B3 always appear in **P**, **Tv**, **Av**, **M**, and **USER** modes. In other
shooting modes, they are displayed only when the shutter release
button is pressed half-way.
* When the shooting mode is AUTOPICT (Auto Picture) and if you press the
shutter release button halfway, the automatically selected shooting mode
appears in A1 even when "Grid Display" or "No Info" is selected (p.63).
* Some indications may not appear depending on the shooting mode.

Display in ▶ Mode

The display shows the shooting information of the image in the playback mode. The display changes in the following sequence each time you press the **DISPLAY** button: "Normal Display", "Histogram + Info" and "No Info".

Normal Display

DISP

Histogram + Info

DISP

DISP

No Info
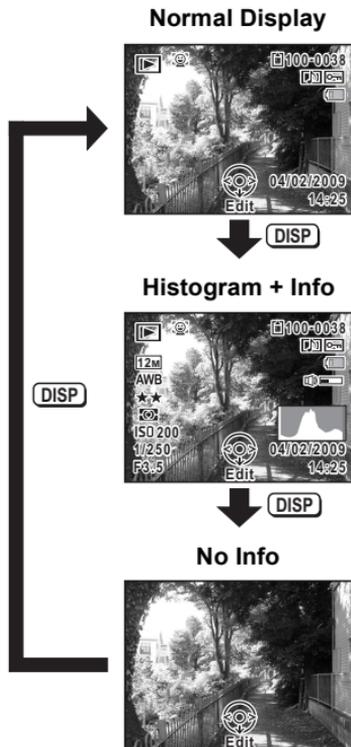
Normal Display/Histogram + Info Display in Playback Mode
(All of the display items are displayed here for explanatory purposes.)
The display shows information such as the shooting conditions. A1 to A11 appear when "Normal Display" or "Histogram + Info" is selected. B1 to B8 appear only when "Histogram + Info" is selected.

A1 Playback mode
- ▶ : Still Picture (p.150)
- ▸ : Movie (p.151)

A2 Face Priority icon (p.78)
A3 Memory status (p.38)
A4 Folder number (p.207)
A5 File number
A6 Protect icon (p.170)
A7 Voice memo icon (p.195)
A8 Battery level indicator (p.32)
A9 Volume icon

A10 Captured date and time (p.44)
A11 Four-way controller guide
B1 Recorded pixels (p.120)
B2 Quality Level (p.122)
B3 White Balance (p.123)
B4 AE Metering (p.128)
B5 Sensitivity (p.125)
B6 Shutter speed
B7 Aperture
B8 Histogram (p.25)

* A2 appears only if the Face Recognition function worked when the image was shot.
* In "Normal Display", A8 and A10 disappear if no operation is performed for two seconds.
* A9 appears only when the volume is being adjusted during playback of movies or voice memo. (p.151, p.195)
* A11 appears even when "No Info" is selected, but disappears if no operation is performed for two seconds. When no operation is performed for two seconds in "Normal Display" or "Histogram + Info", only "Edit" disappears.

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Guide Indications

A guide for each available button operation appears as follows on the display during operation.

▲	Four-way controller (▲)	Ⓠ / ☒	e-dial
▼	Four-way controller (▼)	OK	**OK** button
◄	Four-way controller (◄)	SHUTTER	Shutter release button
►	Four-way controller (►)	●, 🗑	Green/ 🗑 button
MENU	**MENU** button	☺, ☻	☺ button

Using the Histogram

A histogram shows the brightness distribution of an image. The horizontal axis represents brightness (dark at the left and bright at the right) and the vertical axis represents the number of pixels.

The shape of the histogram before and after shooting tells you whether the brightness and

(Dark) ←Brightness→ (Bright)

Dark portions   **Bright portions**

contrast are correct or not, and lets you decide if you need to use EV compensation and take the picture again.
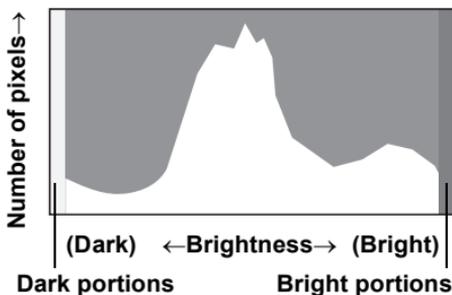
Setting the Exposure (EV Compensation) ☞p.108

Understanding Brightness

If the brightness is correct, the graph peaks in the middle. If the image is too dark, the peak is on the left side, and if it is too bright, the peak is on the right side.

Dark image   **Correct image**   **Bright image**
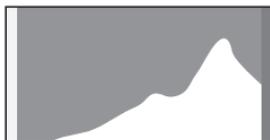
When the image is too dark, the part to the left is cut off (dark portions) and when the image is too bright, the part to the right is cut off (bright portions).

Understanding Contrast

The graph peaks gradually for images in which contrast is balanced. The graph peaks on both sides but sinks in the middle for images with a large difference in contrast and low amounts of mid-level brightness.

1 Getting Started

Attaching the Lens Cap and Strap

Attach the lens cap (O-LC92) and strap (O-ST92) supplied with the camera.

1 **Attach the string provided to the lens cap.**
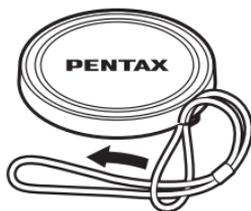
2 **Pass the end of the strap through the strap lug, then secure it on the inside of the clasp.**

As shown in the bottom-left illustration, passing the strap through the lens cap's string prevents the lens cap from being lost.

Pass the other end of the strap through the other strap lug on the camera, then secure it on the inside of the clasp (bottom-right illustration).
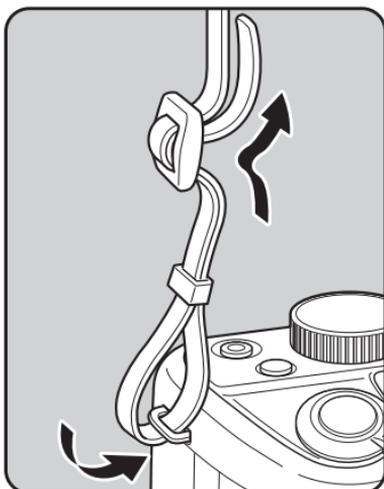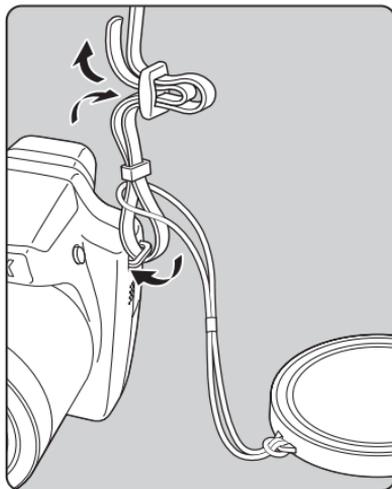
Powering the Camera

Charging the Battery

Use the supplied battery charger (D-BC92) to charge the supplied rechargeable lithium-ion battery (D-LI92) before using it in the camera for the first time or after a long period of non-use, or when the [Battery depleted] message appears.
Note: AC plug cord "Listed, Type SPT-2 or NISPT-2, 18/2 flexible cord, rated 125 V, 7A, minimum 6ft (1.8m)"

Charging indicator
While charging: Lights
Charging finished: Turns off

To power outlet

Battery

Battery charger
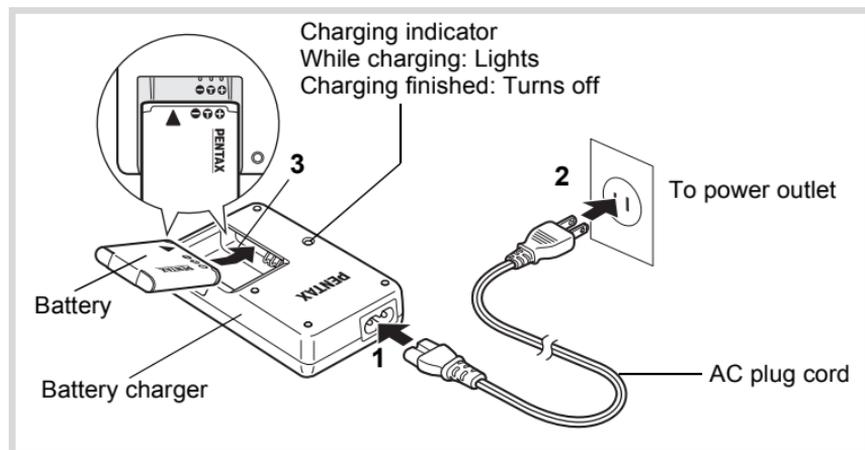
AC plug cord

1 **Connect the AC plug cord to the battery charger.**

2 **Plug the AC plug cord into the power outlet.**

3 **Place the battery in the battery charger so that the PENTAX logo is facing up.**
The charging indicator lights while the battery is charging and turns off when charging is finished.

4 **Remove the battery from the battery charger when charging is finished.**

memo
The time required to fully charge the battery is about 120 minutes (max.). (The charging time may vary depending on the ambient temperature and charging conditions.) The appropriate ambient temperature for charging the battery is 0°C to 40°C (32°F to 104°F).

Installing the Battery

Use the rechargeable lithium-ion battery D-LI92 that is provided with the camera. Charge the battery before using it in the camera for the first time.
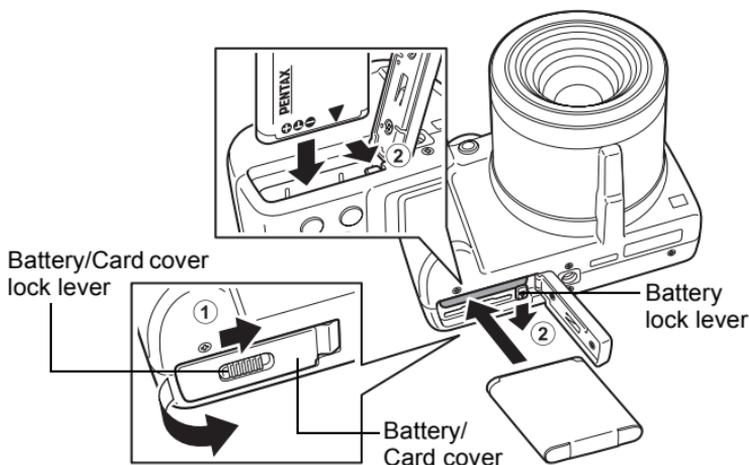
Battery/Card cover lock lever

Battery lock lever

Battery/ Card cover

1 Open the battery/card cover.

Slide the battery/card cover lock lever in the direction of the arrow to open the cover (①).

2 **Press the battery lock lever in the direction of (②) and insert the battery so that the PENTAX logo is facing toward the screen display.**

Match the marks on the battery to the marks inside the battery compartment and push the battery in until it is locked in place.

Caution

Make sure that the battery is inserted with the PENTAX logo pointing toward the screen display. If the battery is incorrectly oriented, malfunction may result.

3 **Close the battery/card cover.**

After closing the battery/card cover, slide the battery/card cover lock lever in the opposite direction of (①).

Removing the Battery

1 **Open the battery/card cover.**

2 **Press the battery lock lever in the direction of (②).**

The battery will be ejected. Take care not to drop the battery when removing it.

Caution

- This camera uses a rechargeable lithium-ion battery D-LI92. Use of any other type of battery may damage the camera and cause malfunction.
- Insert the battery correctly. If the battery is incorrectly oriented, malfunction may result.
- Do not remove the battery while the camera is turned on.
- When storing the battery for more than 6 months, charge the battery for 30 minutes using the battery charger and store the battery separately.
  Be sure to recharge the battery every 6 to 12 months. Storing the battery below room temperature is ideal. Avoid storing it in high temperatures.
- The date and time may be returned to the default setting if the camera is left without the battery for a long time.
- Be careful as the camera or the battery may become hot when the camera is used continuously for a long period of time.

- **Image Storage Capacity, Movie Recording Time, and Playback Time**

  (at 23°C with the display on and the battery fully charged)

Image Storage Capacity[*1] (flash used for 50% of shots)	Movie Recording Time[*2]	Playback Time[*2]
Approx. 170 pictures	Approx. 70 min.	Approx. 200 min.

*1 Recording capacity shows the approximate number of shots recorded during CIPA-compliant testing (with display on, flash used for 50% of the shots, and 23 degrees centigrade). Actual performance may vary according to operating conditions.

*2 According to the result of in-house testing.

memo
- In general, battery performance may temporarily deteriorate as the temperature decreases.
- Be sure to take a spare battery with you when traveling abroad or to a cold region, or if you intend to take a lot of pictures.

- **Battery Level Indicator**

You can check the battery level by the indicator on the display.

Screen Display		Battery Status
	(green)	Adequate power remains.
	(green)	Battery is running low.
	(yellow)	Battery is running very low.
	(red)	Battery is exhausted.
[Battery depleted]		The camera will turn off after this message appears.

Using the AC Adapter

Use of the optional AC adapter kit (K-AC64) is recommended if you intend to use the camera for a long time or connect it to a computer.
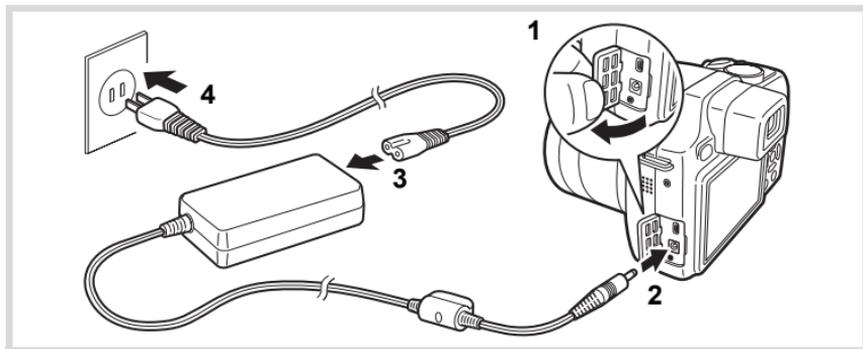
1 **Make sure that the camera is turned off and open the terminal cover.**

2 **Connect the DC terminal on the AC adapter to the camera's DC input terminal.**

3 **Connect the AC plug cord to the AC adapter.**

4 **Plug the AC plug cord into the power outlet.**

> • Make sure that the camera is turned off before connecting or disconnecting the AC adapter.
> • Make sure that the AC plug cord and the power cord connecting the AC adapter to the camera are inserted securely. The data may be lost if either becomes disconnected while data are being recorded on the SD Memory Card or the built-in memory.
> • Use the AC adapter with due care to avoid fire or electric shock. Be sure to read "About the Battery Charger and the AC Adapter" (p.4) before using the AC adapter.
> • Be sure to read the operation manual accompanying the AC adapter kit K-AC64 before using the adapter.

Installing the SD Memory Card

This camera uses either an SD Memory Card or an SDHC Memory Card.
(Both cards are referred to as SD Memory Cards hereafter.) Captured
images and sound files are saved on the SD Memory Card if a card is
inserted in the camera. They are saved in the built-in memory if a card is
not inserted (p.38).

Caution
- Be sure to use this camera to format (initialize) an SD Memory Card
  that is unused or has been used on other cameras or digital devices.
  Refer to "Formatting an SD Memory Card" (p.198) for instructions on
  formatting.
- Make sure that the camera is turned off before inserting or removing
  the SD Memory Card.

memo
- The still picture storage capacity varies depending on the capacity of
  the SD Memory Card and the selected number of recorded pixels and
  quality level (p.37).
- The power lamp blinks while the SD Memory Card is being accessed
  (data are being recorded or read).

Backing Up Data

The camera may not be able to access data in the built-in memory in the case
of a malfunction. Use a computer or other device to back up important data in
another location.
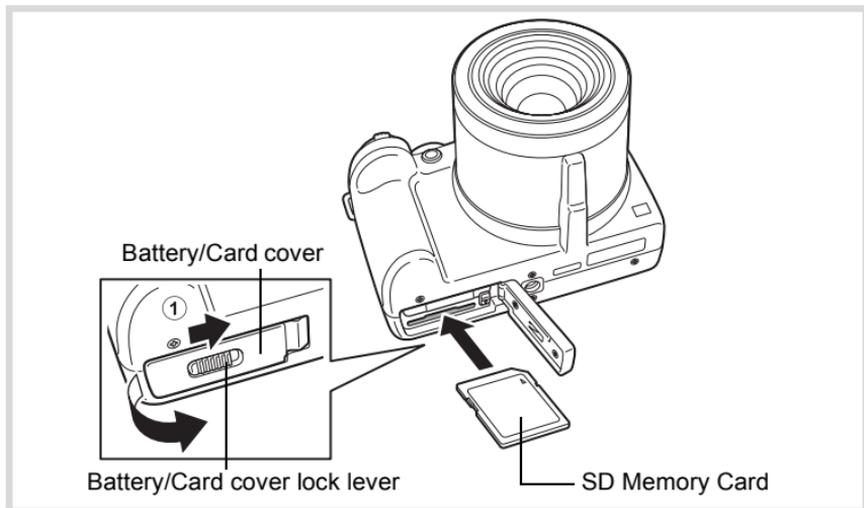
Getting Started

Battery/Card cover

①

Battery/Card cover lock lever — SD Memory Card

1 **Open the battery/card cover.**
Slide the battery/card cover lock lever in the direction of the arrow to open the cover (①).

2 **Insert the SD Memory Card into the SD Memory Card socket so that the label is facing toward the front of the camera (the side with the lens).**
Push the card in all the way. Data may not be recorded correctly if the card is not inserted all the way.

3 **Close the battery/card cover.**
After closing the battery/card cover, slide the battery/card cover lock lever in the opposite direction of (①).

To Remove the SD Memory Card

1 **Open the battery/card cover.**

2 **Push the card into the SD Memory Card socket to eject it.**
Pull the card out.

Precautions When Using an SD Memory Card

- The SD Memory Card is equipped with a write-protect switch. Setting the switch to LOCK prevents new data from being recorded on the card, the stored data from being deleted, and the card from being formatted by the camera or computer.

  Write-protect switch

  ⊞ appears on the display when the card is write-protected.
- Care should be taken when removing the SD Memory Card immediately after using the camera, as the card may be hot.
- Do not remove the SD Memory Card or turn the camera off while the data are being played back or saved to the card, or the camera is connected to a computer with the USB cable, as this may cause the data to be lost or the card to be damaged.
- Do not bend the SD Memory Card or subject it to violent impact. Keep it away from water and store away from high temperature.
- Do not remove the SD Memory Card during formatting as this may damage the card and render it unusable.
- The data on the SD Memory Card may be deleted in the following circumstances. We do not accept any liability for data that are deleted
  (1) when the SD Memory Card is mishandled by the user.
  (2) when the SD Memory Card is exposed to static electricity or electrical interference.
  (3) when the SD Memory Card has not been used for a long time.
  (4) when the SD Memory Card is ejected or the battery is removed while the data on the card are being recorded or accessed.
- If it is not used for a long time, the data on the card may become unreadable. Be sure to regularly make a backup of important data on a computer.
- Avoid using or storing the card where it may be exposed to static electricity or electrical interference.
- Avoid using or storing the card in direct sunlight or where it may be exposed to rapid changes in temperature or to condensation.
- When using an SD Memory Card with a slow recording speed, recording may stop while you are taking movies even when there is adequate space in the memory, or shooting and playback may take a long time.
- For information on compatible SD Memory Cards, visit the PENTAX website.
- Be sure to format an SD Memory Card that is unused or has been used on another camera. Refer to "Formatting an SD Memory Card" (p.198).
- Please note that formatting the SD Memory Card will not necessarily delete the data so that they cannot be recovered using off-the-shelf data recovery software. There are off-the-shelf secure data deletion software programs available that will completely delete the data. If you are going to discard, give away or sell your SD Memory Card, you should ensure that the data on the card are completely deleted or the card itself is destroyed if it contains any personal or sensitive information. In any case, the data on your SD Memory Card should be managed at your own risk.
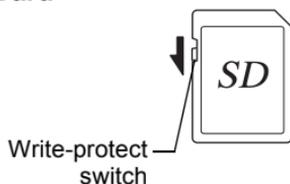
Number of Images Recordable on an SD Memory Card

The sizes of the recorded images differ depending on the number of recorded pixels of the images, so the number of images that will be saved on an SD Memory Card also differs.

Choose the appropriate number of recorded pixels for still pictures on the [🔲 Rec. Mode] menu.

Selecting the Recorded Pixels ☞p.120

Choose the appropriate number of recorded pixels and frame rate in [Movie] on the [🔲 Rec. Mode] menu.

Selecting the Recorded Pixels and Frame Rate for Movies ☞p.145

For an approximate guide to the number of images or the length of recorded movies that will be saved on an SD Memory Card, see "Main Specifications" (p.256).

Turning the Camera On and Off
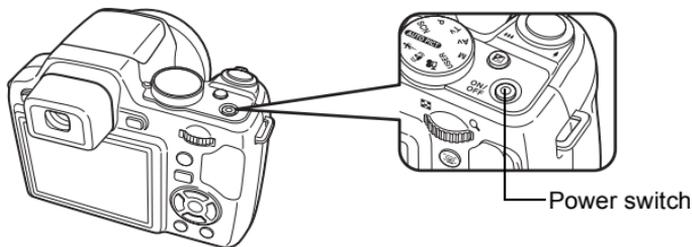
Power switch

1 Remove the lens cap.

2 Press the power switch.

The camera turns on and the display turns on.

When you turn the camera on, the lens will extend. (The lens will not extend if the default settings have not been configured.)

If the [Language/言語] screen or [Date Adjust] screen appears when you turn the camera on, follow the procedure on p.40 to set the display language and/or current date and time.

* When the camera is turned on, the screen flickers. This is not a malfunction.

3 Press the power switch again.

The display turns off, the lens is retracted, and the camera turns off.

Taking Still Pictures ☞p.62

Checking the Memory Card

The memory card is checked when the camera turns on and the memory status is displayed.

🗂	The SD Memory Card is inserted. Images and sound files will be saved on the SD Memory Card.	
🎞	The SD Memory Card is not inserted. Images and sound files will be saved in the built-in memory.	
🔒	The write-protect switch on the SD Memory Card is in the LOCK position (p.36). Images and sounds cannot be recorded.	

Memory status

Starting-up in the Playback Mode

Use this function when you want to play back images or sound files (voice memo) straightaway without taking any pictures.

└─ ▶ button   └─ Power switch
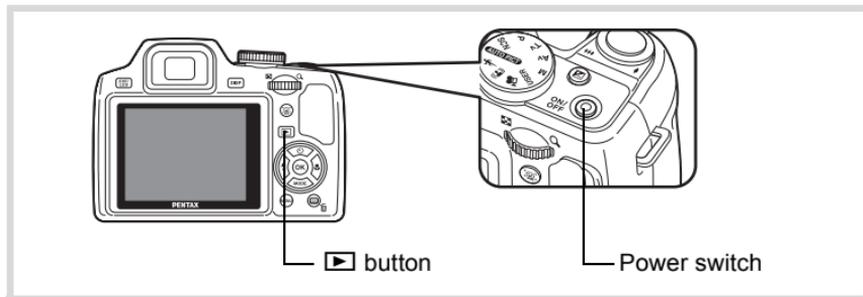
1 Press the power switch while holding down the ▶ button.

The display turns on with the lens retracted and the camera turns on in the playback mode.

memo   To switch from the playback mode to the �△ mode, press the ▶ button or press the shutter release button halfway.

Playing Back Still Pictures ☞p.150

Initial Settings

The [Language/言語] screen appears when the camera is turned on for the first time. Perform the operations in "Setting the Display Language" below to set the language, and in "Setting the Date and Time" (p.44) to set the current date and time.

The language, date, and time can be changed later. Refer to the pages below for instructions.
- To change the language, follow the steps in "Changing the Display Language" (☞p.206).
- To change the date and time, follow the steps in "Changing the Date and Time" (☞p.201).

Setting the Display Language
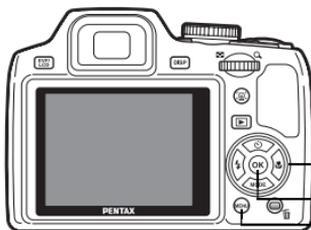
Four-way controller
OK button
MENU button

1 **Use the four-way controller (▲ ▼ ◄ ►) to choose the display language.**

Language/言語		
English	日本語	Türkçe
Français	Dansk	Ελληνικά
Deutsch	Svenska	Русский
Español	Suomi	ไทย
Português	Polski	한국어
Italiano	Čeština	中文繁體
Nederlands	Magyar	中文简体
MENU Cancel		**OK** OK

2 Press the OK button.

The [Initial Setting] screen appears in the selected language. If the desired settings for [Hometown] and [DST] (Daylight Saving Time) appear, use the four-way controller (▲▼) to move the frame to [Settings are completed], and press the OK button to display the [Date Adjust] screen. Go to "Setting the Date and Time" (p.44).
Go to Step 3 in "To Set Hometown and DST" (p.43) if the desired settings do not appear.

Initial Setting

Language/言語 **English** ▶

⌂Hometown
New York   DST OFF

Settings are completed

MENU Cancel
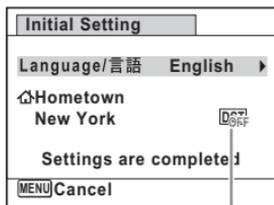
Daylight saving time

If you accidentally select another language and go to the next procedure, perform the following operation to set the language back.

● **When Another Language Has Been Inadvertently Selected**

1 **Press the four-way controller (▶).**

2 **Use the four-way controller (▲▼◀▶) to select the language and press the OK button.**

The [Initial Setting] screen appears in the selected language.

● **When the Screen After Step 2 Appears in Another Language**

1 **Press the MENU button.**

This exits the settings screen and returns the camera to capture status.

2 **Press the MENU button.**

The [✿ Rec. Mode] menu appears.

3 **Press the four-way controller (▶).**

4 **Use the four-way controller (▼▲) to select [Language/ 言語].**

5 **Press the four-way controller (▶).**

The [Language/言語] screen appears.

6 **Use the four-way controller (▲▼◀▶) to select the language.**

7 **Press the OK button.**

The [✎ Setting] menu appears in the selected language.

The language is now switched to your desired language. To reset [Hometown], [Date] and [Time], refer to the pages below for instructions.

- To change [Hometown], follow the steps in "Setting the World Time" (☞p.204).
- To change the [Date] and [Time], follow the steps in "Changing the Date and Time" (☞p.201).

3 **Press the four-way controller (▼).**
The frame moves to [Hometown].

4 **Press the four-way controller (▶).**
The [Hometown] screen appears.
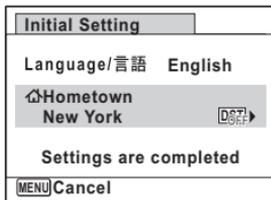
```
Initial Setting

Language/言語    English

⌂Hometown
 New York              DST▶

 Settings are completed

MENU Cancel
```

5 **Use the four-way controller (◀ ▶)
to choose the city.**

```
⌂ Hometown        14:25

City   ◀New York      ▶
DST      □
MENU Cancel          OK OK
```
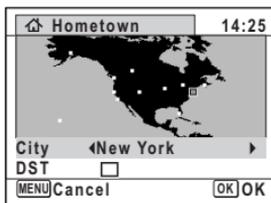
6 **Press the four-way controller (▼).**
The frame moves to [DST] (Daylight Saving Time).

7 **Use the four-way controller (◀ ▶) to select ☑ (On) or □ (Off).**

8 **Press the OK button.**
The [Initial Setting] screen appears.

9 **Press the four-way controller (▲ ▼) to move the frame to
[Settings are completed] and press the OK button.**
The [Date Adjust] screen appears. Next, set the date and time.

The video output format (NTSC/PAL) is set to the format of the city selected in
[Hometown] on the [Initial Setting] screen. Refer to "List of World Time Cities"
(p.254) for the video output format of each city set as the initial setting, and
"Changing the Video Output Format" (p.208) for changing the setting of the
video output format.

Getting Started

Setting the Date and Time

Set the current date and time and the display style.

1 **Press the four-way controller (▶).**
The frame moves to [mm/dd/yy].

2 **Use the four-way controller (▲ ▼) to choose the date and time display style.**
Choose from [mm/dd/yy], [dd/mm/yy] or [yy/mm/dd].

```
Date Adjust

Date Style    ◀ mm/dd/yy  24h
Date            01/01/2009
Time            00:00
   Settings are completed
MENU Cancel
```
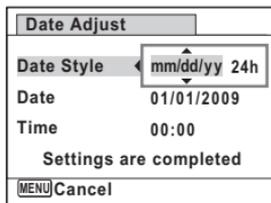
3 **Press the four-way controller (▶).**
The frame moves to [24h].

4 **Use the four-way controller (▲ ▼) to select [24h] (24-hour display) or [12h] (12-hour display).**

```
Date Adjust

Date Style    ◀ mm/dd/yy  24h
Date            01/01/2009
Time            00:00
   Settings are completed
MENU Cancel
```
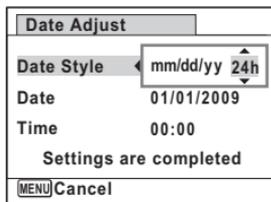
5 **Press the four-way controller (▶).**
The frame returns to [Date Style].

6 **Press the four-way controller (▼).**
The frame moves to [Date].

```
Date Adjust

Date Style      mm/dd/yy  24h
Date          ▶01/01/2009
Time            00:00
   Settings are completed
MENU Cancel
```
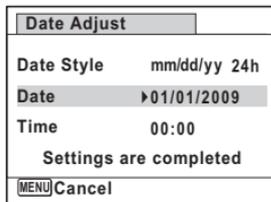
7 **Press the four-way controller (▶).**
The frame moves to the month.

8 Use the four-way controller (▲ ▼) to change the month.

Change the day and year in the same manner.
Next, change the time.
If you selected [12h] in Step 4, the setting switches between am and pm corresponding to the time.

```
Date Adjust

Date Style    mm/dd/yy 24h
Date        ◀ 01/01/2009
Time          00:00
    Settings are completed
MENU Cancel
```
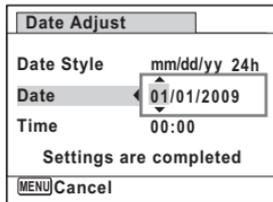
9 Press the four-way controller (▼).

The frame moves to [Settings are completed].

10 Press the OK button.

This confirms the date and time.

memo
> If you press the **OK** button in Step 9, the camera clock is reset to 00 seconds. To set the exact time, press the **OK** button when the time signal (on the TV, radio, etc.) reaches 00 seconds.

Caution
> When the [Initial Setting] or [Date Adjust] screen is displayed, you can cancel the setting operation and switch to the capture mode by pressing the **MENU** button. In this case, the [Initial Setting] screen will appear next time you turn the camera on.

[Language/言語], [Date], [Time], [Hometown] and [DST] can be changed. Refer to the pages below for instructions.

Memo

2 Common Operations

Understanding the Button Functions

A Mode

1 **Power switch**

Turns the camera on and off (p.38).

2 **Zoom lever**

Changes the captured area (p.82).

3 **Shutter release button**

Focuses the camera on the subject when pressed halfway in Still Picture Capture Mode (except when ▲ (Infinity) or **MF** is selected as the focus mode).

Takes the still picture when pressed down fully (p.65).

Starts and stops movie recording in 😁 (Movie) mode (p.143).

4 **☺ button**

Switches the Face Recognition function (p.78). The Face Recognition function is switched as follows each time the ☺ button is pressed:

Smile Capture → Face Priority Off → Face Priority On

⑤ **Q button**

Switches to the ▶ mode (p.52).

⑥ **Four-way controller**
- (▲) Changes the drive mode (p.95 - p.101).
- (▼) The Capture Mode Palette appears when **SCN** mode is selected with the mode dial (p.69).
- (◀) Changes the flash mode (p.110).
- (▶) Changes the focus mode (p.113).
- (▲▼) Adjusts **MF** in **MF** mode (p.114).

⑦ **DISPLAY button**

Changes the information on the display (p.20).

⑧ **MENU button**

Displays the [✿ Rec. Mode] menu (p.53).

⑨ **Green button**

Switches to the ● (Green) mode (p.80).
Calls up the assigned function (p.140).

⑩ **EVF/LCD button**

Switches between the viewfinder and the display.

⑪ **e-dial**

Changes the shutter speed, the aperture value, and the EV compensation value.

⑫ **⊠ button**

Sets the EV compensation value, shutter speed, and the aperture value.

⑬ **⚡ button**

The flash pops up.

2 Common Operations

49

Q Mode
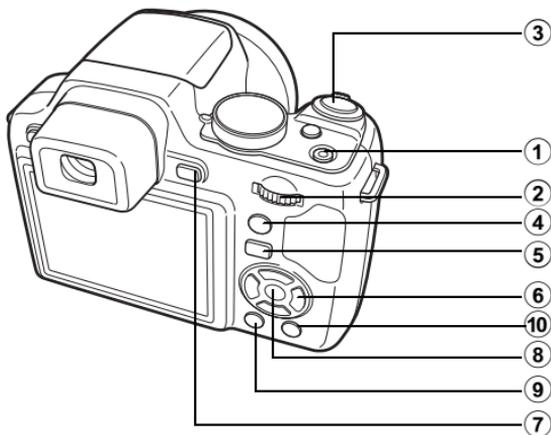
1 **Power switch**

   Turns the camera on and off (p.38).

2 **e-dial**

   Turn to the left (■) during single-image display to change to four-image display. Changes to nine-image display when turned to the left again. Returns to the previous display when turned to the right (Q) (p.152).
   Enlarges the image when turned to the right (Q) during single-image display. Returns to the previous display when turned to the left (■) (p.161).
   Turn to the left (■) during nine-image display to change to folder or calendar display (p.154).
   Turn to the right (Q) during folder/calendar display to change to nine-image display (p.154).
   Adjusts the volume during playback of movies or voice memo (p.151, p.195).

3 **Shutter release button**

   Switches to ▲ mode (p.52).

4 **I button**

   Zooms in on the subject's faces in the face-recognized image in the order the faces were recognized when the picture was taken. (Face close-up playback) (p.162).

5 **Q button**

Switches to A mode (p.52).

6 **Four-way controller**

- (▲)　　　　Plays back and pauses a movie or sound file (p.151, p.195).
- (▼)　　　　Displays the Playback Mode Palette (p.157).
  　　　　　　Stops a movie or sound file during playback (p.151, p.195).
- (◄►)　　　Displays the previous or next image during single-image
  　　　　　　display (p.150).
  　　　　　　Fast-forwards, fast-reverses, frame forwards, frame
  　　　　　　reverses, reverses a movie and makes a movie play
  　　　　　　forwards during playback (p.151).
- (▲▼◄►)　Moves the display area during zoom display (p.161).
  　　　　　　Selects an image in four-/nine-image display, a folder in
  　　　　　　folder display, and a date in calendar display (p.152, p.154).
  　　　　　　Moves the image when using the Frame Composite
  　　　　　　function (p.183).

7 **DISPLAY button**

Changes the information on the display (p.23).

8 **OK button**

Returns zoom display or four-/nine-image display to single-image
display (p.152, p.161).

Changes to nine-image display of the selected folder during folder
display (p.154).

Changes to single-image display of the selected date during calendar
display (p.155).

9 **MENU button**

Displays the [R Setting] menu during single-image display (p.53).

Returns to single-image display during Playback Mode Palette display
(p.155).

Returns zoom display or four-/nine-image display to single-image
display.

In folder/calendar display, changes to nine-image display with the
cursor placed to the most recent image.

10 **Green/ m̄ button**

Switches from single-image display to the Delete screen (p.164).

Switches from four-/nine-image display to the Select & Delete screen
(p.166).

Switches from folder display to the calendar display screen (p.154).

Switches from calendar display to the folder display screen (p.154).

Switching Between ◘ Mode and ▶ Mode

In this manual, the capture mode, such as for taking still pictures, is referred to as "◘ mode" (the capture mode). The playback mode, such as for displaying captured images on the monitor, is referred to as "▶ mode" (the playback mode). In ▶ mode, you can perform simple editing operations on the images that are played back.

Follow the procedure below to switch between ◘ mode and ▶ mode.

To Switch from ◘ Mode to ▶ Mode

1 Press the ▶ button.
The camera switches to ▶ mode.

To Switch from ▶ Mode to ◘ Mode

1 Press the ▶ button or the shutter release button halfway.
The camera switches to ◘ mode.

Displaying data stored in the built-in memory
When an SD Memory Card is inserted in the camera, images and movies on the SD Memory Card are displayed. If you want to display images and movies in the built-in memory, turn the camera off and remove the SD Memory Card, or follow the procedure below to use the "Built-in memory display" function.

> ⚠️ Make sure that the camera is turned off before inserting or removing the SD Memory Card.

● **Viewing images in the built-in memory while the SD Memory Card is inserted (built-in memory display)**
  • When you press and hold down the ▶ button for more than one second in ◘ mode, the lens is retracted. After the message [Display image/sound from built-in memory] appears, images and movies stored in the built-in memory are displayed.
  • In the built-in memory display, you can play back still pictures (including enlarged display) (p.150, p.161) or movies (p.151) and switch between four-/nine-image display, folder display and calendar display (p.152).
  • In the built-in memory display, you cannot delete data, delete a selection, display the Playback Mode Palette or display the menu. If you want to perform any of these operations on images, movies or sounds in the built-in memory, do so after removing the SD Memory Card.

Setting the Camera Functions

To change the camera settings, press the **MENU** button to display the [□ Rec. Mode] menu or [✎ Setting] menu. Menus for playing back and editing images and sound files are displayed from the Playback Mode Palette.

Operating the Menus

Press the **MENU** button in □ mode to display the [□ Rec. Mode] menu. Press the **MENU** button in ▣ mode to display the [✎ Setting] menu. Use the four-way controller (◀ ▶) to switch between [□ Rec. Mode] menu and [✎ Setting] menu.

During recording   During playback

AUTO PICT   38   100-0038

04/02/2009   04/02/2009
14:25   Edit   14:25

MENU   **MENU**

◻ Rec. Mode	1/4 ⚏
Image Tone	Bright
Recorded Pixels	12M
Quality Level	★★
White Balance	AWB
Sensitivity	AUTO
ISO Corction in AUTO	ISO50-400

MENU Exit

◻ ⚏ Setting	1/3
Save as USER	
Sound	
Date Adjust	01/01/2009
World Time	⌂
Language/言語	English
Folder Name	Date

MENU Exit

◻ Rec. Mode	1/4 ⚏
Image Tone	▶ Bright
Recorded Pixels	12M
Quality Level	★★
White Balance	AWB
Sensitivity	AUTO
ISO Corction in AUTO	ISO50-400

MENU Exit

◻ ⚏ Setting	1/3
Save as USER	▶
Sound	
Date Adjust	01/01/2009
World Time	⌂
Language/言語	English
Folder Name	Date

MENU Exit

SHUTTER   **MENU** or ▶
Press halfway

The setting is complete and the camera returns to ◻ mode.

AUTO PICT   38

04/02/2009
14:25

The setting is complete and the camera returns to ▶ mode.

100-0038

04/02/2009
Edit   14:25

memo: Available button operations appear on the display during menu operation.

2 Common Operations

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Ex.) To set the [Quality Level] on the [✿ Rec. Mode] menu

1 **Press the MENU button in ✿ mode.**
The [✿ Rec. Mode] menu appears.

2 **Press the four-way controller (▼).**
The frame moves to [Image Tone].

✿ Rec. Mode	1/4
Image Tone	▶Bright
Recorded Pixels	12M
Quality Level	★★
White Balance	AWB
Sensitivity	AUTO
ISO Corction in AUTO	ISO50-400

MENU Exit
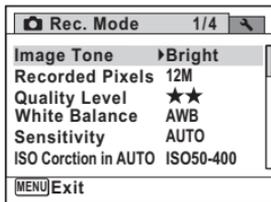
3 **Press the four-way controller (▼) two times.**
The frame moves to [Quality Level].

4 **Press the four-way controller (▶).**
A pull-down menu appears with the items
that can be selected.
The pull-down menu displays only those
items that can be selected with the current
camera settings.

⌐Recordable Image No.	12
Image Tone	Bright
Recorded Pixels	12M
Quality Level	★★★
White Balance	★★
Sensitivity	★
ISO Corction in AUTO	ISO50-400

MENU Cancel   OK OK
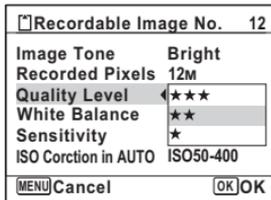
5 **Use the four-way controller (▲ ▼) to change the setting.**
The quality level changes each time the four-way controller (▲ ▼) is
pressed.

6 **Press the OK button or the four-way controller (◀).**
The setting is saved and then the camera is ready for setting the other
functions. To exit the settings, press the MENU button.

To use another operation, refer to the alternate Step 6 options on the
next page.

2 Common Operations

55

To Save the Setting and Start Taking Pictures

6 **Press the shutter release button halfway.**

The setting is saved and the camera returns to capture status.
When the shutter release button is pressed fully, the picture is taken.

memo   When the [✈ Setting] menu is displayed from ▶ mode, you can switch
        to ♦ mode by pressing the ▶ button.

To Save the Setting and Start Playback of Images

6 **Press the ▶ button.**

When the [♦ Rec. Mode] menu is displayed from ♦ mode, the setting
is saved and the camera returns to playback status.

To Cancel the Changes and Continue with Menu Operations

6 **Press the MENU button.**

The changes are canceled and the screen returns to Step 3.

memo   The MENU button function differs depending on the screen. Refer to the
        guide indications.

        MENU Exit   Exits the menu and returns to the original screen.

        MENU ⤺   Returns to the previous screen with the current
                       setting.

        MENU Cancel   Cancels the current selection, exits the menu and
                       returns to the previous screen.

2 Common Operations

Menu List

This displays the items that can be set with the menus and provides descriptions of each item. See the list of default settings in the Appendix "Default Settings" (p.249) to decide whether you want the settings saved when the camera is turned off and whether you want the settings returned to the defaults when the camera is reset.

[⚫ Rec. Mode] Menu

This menu shows the functions related to taking still pictures and recording movies.

Item		Description	Page
Image Tone		For setting the tone of still pictures	p.119
Recorded Pixels		For choosing the number of recorded pixels of still pictures	p.120
Quality Level		For setting the quality level of still pictures	p.122
White Balance		For adjusting the color balance according to the lighting conditions	p.123
Sensitivity		For setting the sensitivity	p.125
ISO Corction in AUTO		For setting the adjustment range when sensitivity is set to AUTO	p.127
AF Setting		For setting the autofocus conditions	p.116
AE Metering		For choosing the area of the screen that is metered to determine the exposure	p.128
Flash Exp. Comp.		For adjusting the flash output	p.129
Movie	Recorded Pixels	For choosing the number of recorded pixels of movies	p.145
	Movie SR	For choosing whether or not to use the movie shake reduction function	p.146
Bright Area Adj.		For choosing whether or not to adjust brightness.	p.130
Shake Reduction		For choosing whether to compensate for shaking while taking still pictures	p.132
Interval Shoot		For setting the interval, number of pictures, and start time for taking pictures	p.133
Blink Detection		For choosing whether to use the Blink Detection function when the Face Recognition function worked	p.135
Digital Zoom		For choosing whether or not to use the digital zoom function	p.84
Instant Review		For choosing whether to display Instant Review	p.135
Memory		For choosing whether to save the set values of the shooting function or return to the defaults when the camera is turned off	p.147
Green Button		For assigning a function to the Green button in ⚫ mode	p.140
Sharpness		For choosing sharp or soft outlines	p.136
Saturation (Tone Adjustment)		For setting the color saturation. When [Monochrome] is selected, [Tone Adjustment] is set	p.137
Contrast		For setting the image contrast level	p.138
Date Imprint		For choosing whether to imprint the date and/or time when taking still pictures	p.139

● **[✿ Rec. Mode] Menu 1**

✿ Rec. Mode	1/4 🔧
Image Tone	▶Bright
Recorded Pixels	12M
Quality Level	★★
White Balance	AWB
Sensitivity	AUTO
ISO Corction in AUTO	ISO50-400

MENU Exit

● **[✿ Rec. Mode] Menu 2**

✿ Rec. Mode	2/4 🔧
AF Setting	[ ] ▶
AE Metering	◙
Flash Exp. Comp.	±0.0
Movie	
Bright Area Adj.	☐
Shake Reduction	☑

MENU Exit

● **[✿ Rec. Mode] Menu 3**

✿ Rec. Mode	3/4 🔧
Interval Shoot	▶
Blink Detection	☑
Digital Zoom	☑
Instant Review	☑
Memory	
Green Button	☐

MENU Exit

● **[✿ Rec. Mode] Menu 4**

✿ Rec. Mode	4/4 🔧
Sharpness	◀▭▭▭▶
Saturation	▭▭▭
Contrast	▭▭▭
Date Imprint	Off

MENU Exit

memo
- Use the ● (Green) mode to enjoy easy picture-taking using standard settings, regardless of the settings in the [✿ Rec. Mode] menu (p.80).
- Assigning frequently used functions to the Green button enables you to go straight to the desired function (p.140).

[🔧 Setting] Menu

Item	Description	Page
Save as USER	For saving the current camera settings in USER mode.	p.199
Sound	For adjusting the operation volume and playback volume, and setting the start-up sound, shutter sound, key operation sound and self-timer sound	p.200
Date Adjust	For adjusting the date and time	p.201
World Time	For setting the Hometown and Destination	p.204
Language/言語	For setting the language in which menus and messages appear	p.206
Folder Name	For choosing how names are assigned to folders for storing images and sound files	p.207
USB Connection	Set the method for connecting to a PC (MSC or PTP)	p.224
Video Out	For setting the output format to the AV equipment	p.208
Brightness Level	For changing the brightness of the display	p.209

2 Common Operations

Item	Description	Page
Power Saving	For setting the time until the camera enters power-saving mode	p.210
Auto Power Off	For setting the time until the camera turns off automatically	p.211
Quick Zoom	For choosing whether to use the Quick Zoom function (p.161) when playing back images	p.212
Guide Display	For setting whether to display explanations for selected items in Capture Mode Palette and Playback Mode Palette displays.	p.213
Reset	For returning settings other than the date and time, language, world time and video out to their defaults	p.215
Delete all	For deleting all the saved images and sound files at once.	p.168
Format	For formatting the SD Memory Card	p.198

● **[✎ Setting] Menu 1**

```
┌──────────────────────────┐
│ ▣  ✎ Setting        1/3  │
│ Save as USER           ▶ │
│ Sound                    │
│ Date Adjust    01/01/2009│
│ World Time        ⌂      │
│ Language/言語    English  │
│ Folder Name       Date   │
│ MENU Exit                │
└──────────────────────────┘
```

● **[✎ Setting] Menu 2**

```
┌──────────────────────────┐
│ ▣  ✎ Setting        2/3  │
│ USB Connection ▶ MSC     │
│ Video Out         NTSC   │
│ Brightness Level  ▭▬▬▭   │
│ Power Saving      5sec.  │
│ Auto Power Off    3min.  │
│ Quick Zoom        □      │
│ MENU Exit                │
└──────────────────────────┘
```

● **[✎ Setting] Menu 3**

```
┌──────────────────────────┐
│ ▣  ✎ Setting        3/3  │
│ Guide Display    ◀ ☑   ▶ │
│ Reset                    │
│ Delete all               │
│ Format                   │
│                          │
│                          │
│ MENU Exit                │
└──────────────────────────┘
```
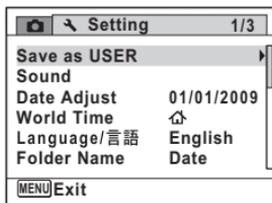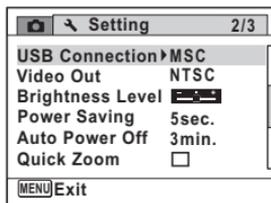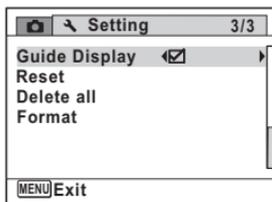
Memo

3 Taking Pictures

Taking Still Pictures

Holding the Camera

How you hold the camera is important when taking pictures.
- Hold the camera firmly with both hands.
- Press the shutter release button gently when taking a picture.
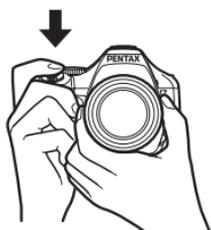
Horizontal position   Vertical position

Taking Pictures

memo To reduce camera shake, support your body or the camera on a solid object such as a table, tree or wall.

Taking Pictures

The X70 features various capture modes, focus modes, and drive modes for expressing your photographic vision. This section explains how to take pictures by simply pressing the shutter release button. In AUTO PICT (Auto Picture) mode, the camera automatically selects the most appropriate mode depending on the situations and subjects.

1 Remove the lens cap.

2 Press the power switch.
The camera turns on and is ready to take still pictures. In this manual, this is called Still Picture Capture Mode.

3 Set the mode dial to AUTO PICT.
The camera will select the optimal capture mode for the subject.

Dial indicator
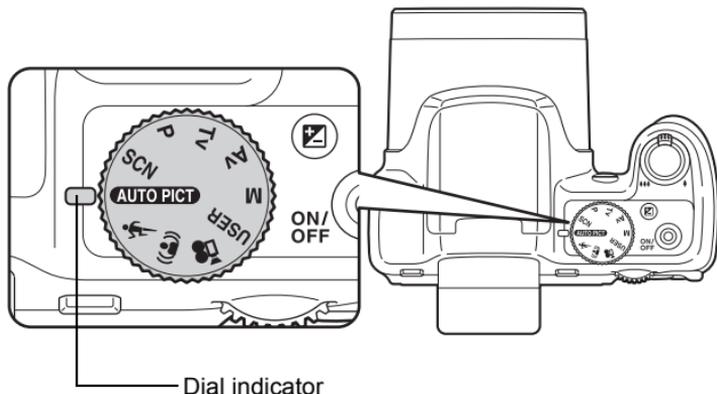
4 Confirm the subject and shooting information on the display.

The focus frame in the middle of the display indicates the zone of automatic focusing.

Focus frame

When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

Face recognition frame

You can change the captured area by turning the zoom lever to the left or right (p.82).

Right (◆)   Enlarges the subject.
Left (◆◆◆)   Widens the area that is captured by the camera.
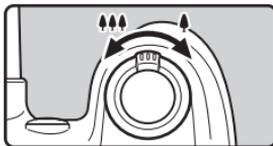
5 Press the shutter release button halfway.

The automatically selected capture mode appears on the top left of the display.

	Standard		Night Scene		Night Scene Portrait
	Landscape		Flower		Portrait
	Sport				

The focus frame (or face recognition frame) on the display turns green when the camera focuses on the subject at the correct distance.
When using the flash, press the ⚡ button to pop up the flash. (p.112)

3 **Taking Pictures**

6 Press the shutter release button fully.

The picture is taken.

The flash discharges automatically depending on the light conditions.

The image appears on the display for one second (Instant Review: p.67) and is saved to the SD Memory Card or the built-in memory.

memo
- Press the Green button to switch to the ● (Green) mode and let the camera set all the shooting functions automatically (p.80).
- The following restrictions apply in AUTOPICT mode:
  - You cannot turn the Face Recognition function off.
  - The [Focusing Area] setting is fixed at [ ] (Multiple).
  - The ✿ (Flower) mode cannot be selected when using Digital Zoom or Intelligent Zoom.
  - If the ■ (Night Scene) mode is selected when the flash mode is ⁴A (Auto), the flash mode automatically changes to ⑤ (Flash Off).
  - If the ■ (Night Scene) mode is selected when the flash mode is set to a mode other than ⁴A (Auto), the settings before selection are used. However, the flash is set to ⁴ₛ (Slow-speed Sync).
  - When the drive mode is set to ▤ (Continuous Shooting(L)), ▤ (Continuous Shooting(M)) or ▤ (Continuous Shooting(H)), pictures are taken continuously in the appropriate shooting mode selected for the first picture.
  - The camera automatically focuses on the subject when the [Auto Macro] is set to on, and the focus mode is set to **AF** (Standard) or ✿ (Macro).

Using the Shutter Release Button

The shutter release button works in a two-step action as follows.

Press halfway

This refers to pressing the shutter release button gently to the first position. This locks the focus setting and the exposure. The green focus frame lights on the display when the shutter release button is pressed halfway and the subject is in focus. If the subject is out of focus, the frame turns white.

Press fully

This refers to pressing the shutter release button all the way down to the fully depressed position. This takes a picture.

Not pressed   Pressed halfway   Pressed fully
               (first position)   (second position)
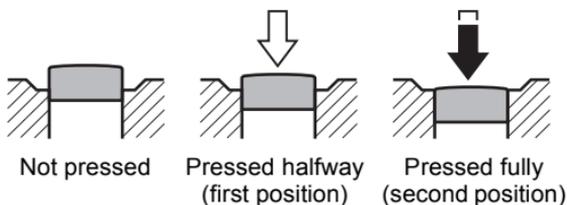
memo
- Press the shutter release button gently when taking a picture to prevent camera shake.
- Practice pressing the shutter release button halfway/fully to learn where the first position and second position are.

Poor focusing conditions

The camera may not be able to focus under the following conditions. In these cases, lock the focus on an object the same distance away as the subject (by pressing and holding the shutter release button halfway), then aim the camera at your subject and press the shutter release button fully.

- Objects that lack contrast such as a blue sky or white wall
- Dark places or objects, or conditions that prevent light being reflected back
- Horizontal lines or intricate patterns
- Fast moving objects
- When there is an object in the foreground and an object in the background in the captured area
- Strongly reflected light or strong backlighting (bright background)

---

3 **Taking Pictures**

Instant Review and Blink Detection

The image appears on the display for one second (Instant Review) immediately after it is captured. If the camera detects that the subject's eyes are closed while the Face Recognition (p.78) is activated, the message [Closed eyes have been detected.] appears for 3 seconds (Blink Detection).

memo
- When the Face Recognition function does not work, Blink Detection also does not function. Even if the subject's faces are recognized, Blink Detection may not function depending on the condition of the recognized faces.
- You can also disable Blink Detection function (p.135).

Selecting the Appropriate Capture Mode

You can switch the capture modes by setting the icons on the mode dial to the dial indicator.

Dial indicator
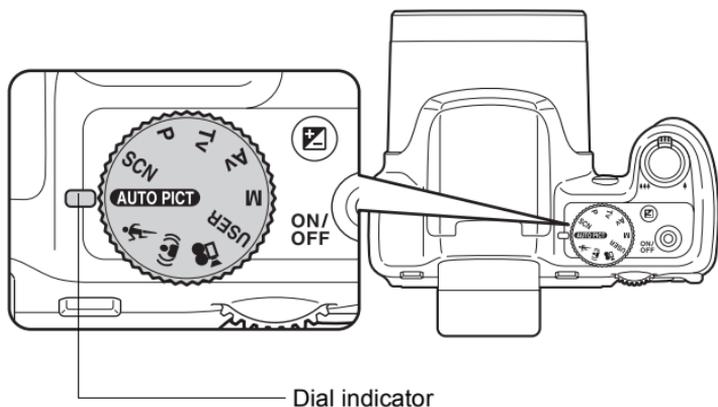
The X70 features various shooting modes, enabling you to take pictures with settings suited to your photographic vision.

In this manual, capture modes are referred to as follows.

Picture mode	AUTO PICT (Auto Picture)/ ✈ (Sport)/ ((▲)) (Digital SR)
SCN (Scene) mode	▲ (Landscape)/ ✿ (Flower)/ ◐ (Portrait)/ ⚡ (Backlight)/ 🖼 (Half-length Portrait)/ ■ (Night Scene)/ ◪ (Night Scene Portrait)/ ⬛ (Stage Lighting)/ ❄ (Surf & Snow)/ ⬡ (Baby)/ ⚡ (Kids)/ ⚘ (Pet)/ ▸◀ (Food)/ ❁ (Fireworks)/ ▢ (Frame Composite)/ ⌄ (Party)/ 🏛 (Museum)/ ⚡ (Sunset)/ WIDE (Digital Wide)/ ▮▮◀ (Digital Panorama)
Exposure mode	P (Program)/ Tv (Shutter Priority)/ Av (Aperture Priority)/ M (Manual)/ USER (USER)
Movie mode	▣ (Movie)

Picture Mode

You can use the mode dial to select AUTOPICT (Auto Picture), ✎ (Sports) or 《▲》 (Digital SR).
The characteristics of each mode are as follows.

Shooting Mode		Description	Page
AUTOPICT	Auto Picture	The optimal capture mode is automatically selected from standard settings (Normal mode).	p.63
✎	Sport	For a fast moving subject. Tracks the subject until the picture is taken.	p.90
《▲》	Digital SR	Higher sensitivity reduces blur.	p.85

SCN Mode

By setting the mode dial to SCN (Scene), you can choose from 20 shooting modes.

Selecting a Shooting Scene

1 **Set the mode dial to SCN, and press the (▼) button.**
The Capture Mode Palette appears.

2 **Use the four-way controller (▲ ▼ ◀ ▶) to choose a shooting mode.**
When an icon is selected in the Capture Mode Palette, the selected shooting mode guide appears.

3 **Press the OK button.**
The shooting mode is selected and the camera returns to capture status.
When using the flash, press the ✦ button to pop up the flash. (p.112)

There are 20 available shooting modes.

Shooting Mode		Description	Page
🏔	Landscape	For capturing landscape views. Enhances colors of sky and foliage.	—
✽	Flower	For images of flowers. The outline of the flower is softened.	—
😊	Portrait	For capturing portraits. Reproduces a healthy and bright skin tone.	p.86
🔆	Backlight	For backlit images. Please use flash to properly expose the subject.	—
👤	Half-length Portrait	For portraits with proper framing by automatic zoom. Fixed to 3ᴍ (2048×1536).	p.86
🌆	Night Scene	For night time images. Use of a tripod or other support is suggested.	p.85
🌃	Night Scene Portrait	For images of people at night. Use of a tripod or other support is advised.	p.85
🎭	Stage Lighting	For moving subjects on poorly lit stages. Resolution reduced to 2MP.	—
🏂	Surf & Snow	For bright images such as sand or snow. Accurately meters for bright scenes.	p.90
👶	Baby	For images of babies. Captures bright images of a baby's expressions.	—
🏃	Kids	For capturing moving kids. Reproduces healthy and bright skin tone.	p.88
🐾	Pet	For capturing moving pets. Select the color according to the pet's coat.	p.89
🍴	Food	For images of food and prepared dishes. Enhances saturation and contrast.	—
🎆	Fireworks	For capturing fireworks. Use of a tripod or other support is suggested.	p.85
▣	Frame Composite	For capturing images with a frame. Recorded pixels is fixed to 3ᴍ (2048×1536).	p.93
🍸	Party	For capturing images at parties or in dim light. Increases ISO and clarity.	p.92
🏛	Museum	For capturing images in places where a flash is prohibited.	—
🌅	Sunset	For images of sunsets and warm lighting	—
WIDE	Digital Wide	Stitches two pictures together to create a wider image.	p.102
▮▮▮	Digital Panorama	Stitches images taken with the camera to create a panoramic photograph.	p.104

Some functions may not be available or may not function fully depending on the selected shooting mode. For details, refer to "Functions Available for Each Shooting Mode" (p.240).

Exposure Mode

Use the exposure modes to change the sensitivity, shutter speed and aperture and take pictures according to your own photographic vision.

Shooting Mode		Description	Page
P	Program	Automatically sets shutter speed and aperture to the proper exposure according to Program line when taking pictures.	p.71
Tv	Shutter Priority	Lets you set the desired shutter speed to freeze or emphasize subject movement. Take pictures of fast moving subjects that look still or subjects that give a sense of movement.	p.72
Av	Aperture Priority	Lets you set the desired aperture for controlling the depth of field. Use it to obtain a blurred or sharp background.	p.73
M	Manual	Lets you set shutter speed and aperture to capture the picture with creative intent.	p.75
USER	USER	Lets you save user-defined settings.	p.76

Using the **P** (Program) Mode

1 **Set the mode dial to P.**
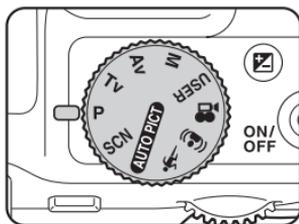
2 Turn the e-dial to change the shutter speed and aperture while maintaining the proper exposure.

Direction to turn the e-dial	Effect
Right	The shutter speed decreases by increments of 1/3EV and the aperture is closed by 1/3EV.
Left	The shutter speed increases by increments of 1/3EV and the aperture is opened by 1/3EV.
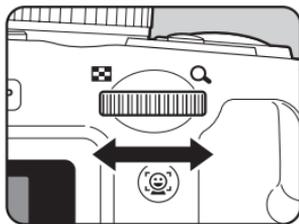
This allows you adjust blurring in the image.

Shutter speed —1/250
Aperture —F4.5

3 When using the flash, press the ⚡ button.
The flash pops up. (p.112)

4 Take a picture.

Using the Tv (Shutter Priority) Mode

1 Set the mode dial to Tv.
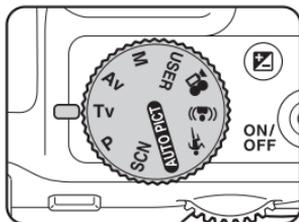
2 Turn the e-dial to change the shutter speed.

The shutter speed can be set within the range of 1/4000 to 4 seconds.
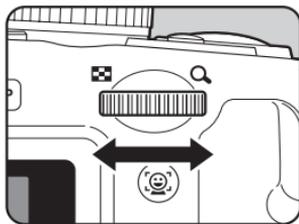
3 When using the flash, press the ↯ button.

The flash pops up. (p.112)

4 Take a picture.

⚠️ Caution
- The aperture and sensitivity (only when sensitivity is set to [AUTO]) are automatically set in combination with the shutter speed being used to achieve proper exposure. If the proper exposure cannot be achieved, the closest value is set and the aperture is displayed in red.
- ↯ᴀ (Auto), ❀ᴀ (Auto+Red-eye), ↯ (Flash On), and ❀ (Flash On +Red-eye) are unavailable.
- The shutter speed set in this mode is shared with manual mode. Changes to this value in one mode are reflected in the other.

memo
- Noise Reduction is used with shutter speeds slower than 1/4 seconds.
- The shutter speed will be saved whenever it is changed. It will return to default by using [Reset] on the menu. The default setting is 1/125 seconds.
- In **Tv** mode, the shutter speed is displayed in a larger font size than normal (height of 1.5x). When using EV compensation, the EV compensation value is displayed using a larger font.

Using the **Av** (Aperture Priority) Mode

Set aperture for controlling the depth of field. The depth of field is deeper and the front and back of the focused object is clear when aperture is set to a large value. The depth of field is shallower and the front and back of the focused object is blurred when aperture is set to a small value. Shutter speed is automatically set to appropriate exposure depending on the aperture value.

1 Set the mode dial to Av.
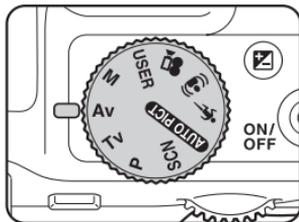
2 Turn the e-dial to change the aperture value.
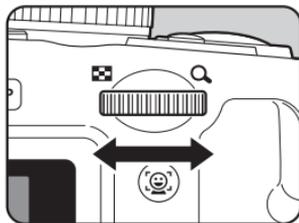
3 When using the flash, press the ↓ button.
The flash pops up. (p.112)

4 Take a picture.

⚠️ Caution
• The shutter speed and sensitivity (only when sensitivity is set to [AUTO]) are automatically set in combination with the aperture being used to achieve proper exposure. If the proper exposure cannot be achieved, the closest value is set and the shutter speed is displayed in red.
• ↓ₐ and ◎ₐ are unavailable.
• The aperture set in this mode is shared with manual mode. Changes to this value in one mode are reflected in the other.

📝 memo
• Noise Reduction is used with shutter speeds slower than 1/4 seconds.
• In Av mode, the aperture is displayed in a larger font size than normal (height of 1.5x). When using EV compensation, the EV compensation value is displayed using a larger font.
• Even when the zoom ratio is changed, the aperture is maintained. However, when the current aperture cannot be used with the selected zoom ratio, the closest aperture is set. Even in this case, if you change the zoom ratio again and the original aperture can be used, the setting is returned to the original aperture.

3 Taking Pictures

Using the **M** (Manual) Mode

You can set the shutter speed and aperture value. This mode is suitable to take pictures of your choice by combining them. This mode is convenient for taking pictures using the same combination of the shutter speed and aperture settings or taking intentionally underexposed (darker) or over-exposed (brighter) photographs.

1 **Set the mode dial to M.**
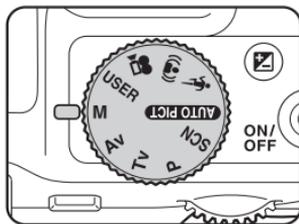
2 **Turn the e-dial to change the shutter speed/aperture value.**

Use the 🔲 button to switch between the shutter speed and the aperture value and to change the settings. In the default state, shutter speed is selected.
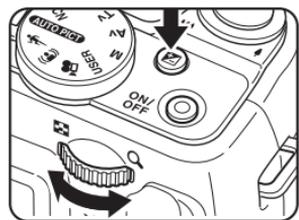
3 **When using the flash, press the ↟ button.**
The flash pops up. (p.112)

4 **Take a picture.**

- In M (Manual) mode, EV compensation is unavailable.
- A warning appears if there is a large difference between the current exposure and the proper exposure. If the exposure is greater than ±2.0EV, only the exposure warning icon is displayed. If the exposure is lower than ±2.0EV, the exposure warning icon is displayed and the difference between the current exposure and the proper exposure is shown in increments of 1/3EV.
- [AUTO] cannot be selected for sensitivity.
- 4_A, $\%_A$, 4, and $\%$ are unavailable.
- The shutter speed and aperture set for this mode are shared with Tv and Av modes. Changes to this value in one mode are reflected in the others.

memo

- Noise Reduction is used with shutter speeds slower than 1/4 seconds.
- Whenever the shutter speed or aperture is changed, the new value is shown in a larger font size than normal (height of 1.5x).
- Even when the zoom ratio is changed, the aperture is maintained. However, when the current aperture cannot be used with the selected zoom ratio, the closest aperture is set. Even in this case, if you change the zoom ratio again and the original aperture can be used, the setting is returned to the original aperture.

Using the USER (USER) Mode

You can take pictures with the settings saved in [Save as USER] on [$\setminus$ Setting] menu (p.199).

Save the settings for the P, Tv, Av, and M modes in advance for later use.

In USER mode, you can change the settings saved during shooting.

1 Set the mode dial to USER.

This recalls the saved settings.
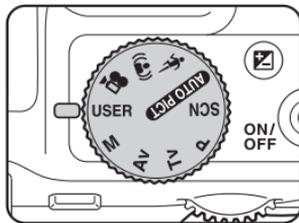
2 Turn the e-dial to change the settings.

The settings you can configure change depending on the saved mode.
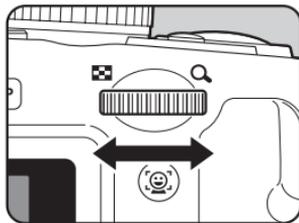
3 When using the flash, press the ✦ button.

The flash pops up. (p.112)

4 Take a picture.

⚠️ **Caution**

- You can save settings in the USER mode when the capture mode is set to **P**, **Tv**, **Av**, or **M** by selecting [Save as USER] from the [✎ Setting] menu. You cannot select [Save as USER] from other capture modes.
- When the saved capture mode is **Tv**, the shutter speed is saved. When the mode is set to **Av**, the aperture is saved. When the mode is **M**, the shutter speed and aperture are saved.
- In the default state, the default mode is **P** mode and the other settings are saved as their respective defaults. Using [Reset] on the menu returns the settings to their defaults.
- In USER mode, all settings saved as defaults for modes other than capture mode can be changed. However, the changes to them are only reflected in USER mode. Turning off the power will cancel all changes to them and they will return to the last saved settings in USER mode.
- Memory cannot be changed.
- In USER mode, the same restrictions apply as for the saved capture mode.
- If you do not select [Save as USER], changes to USER mode settings are not saved on the camera. Note that turning off the power or changing the capture mode returns the camera to the saved settings.

Using the Face Recognition Function

With the X70, the Face Recognition function is available with all shooting modes.
When the camera detects a person's face in the image, the Face Recognition function displays a yellow face recognition frame around the face on the display screen, sets the focus (Face Recognition AF) and compensates the exposure (Face Recognition AE).
If the subject in the face recognition frame moves, the frame also moves and changes size as it tracks the face.

The Face Recognition function can recognize up to 32 people's faces. If it recognizes multiple faces, the camera displays a yellow frame over the main face and white frames over the other face(s). It can display up to a total of 15 frames, including a main frame and white frame(s).

Face recognition frame

When the multiple faces are recognized

Main frame   White frame

memo
- Face Recognition AF and AE may not work if the subject is wearing sunglasses, has part of the face covered or is not looking toward the camera.
- If the camera cannot recognize the subject's face, the camera focuses using the setting currently selected in [Focusing Area].
- When the Smile Capture function is on, the shutter may not be released automatically because the Smile Capture function may not work in some situations, such as when the recognized face is too small.

To Switch the Face Recognition Function

By default, the Face Recognition function is set to Face Priority On. You can switch to the Smile Capture function, which automatically releases the shutter when your subject smiles. The Face Recognition function is switched as follows each time the 🙂 button is pressed:
Smile Capture → Face Priority Off → Face Priority On

[]{.Copic} button
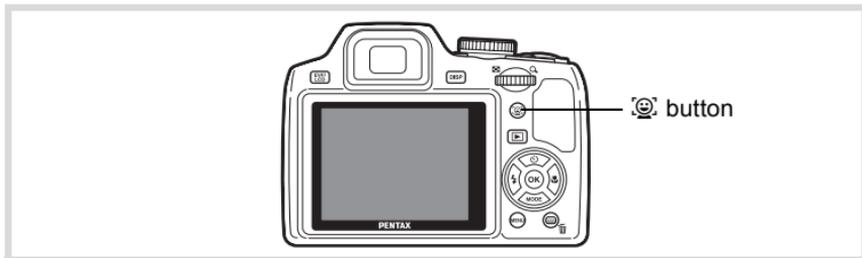
An icon indicating either Face Priority On or Smile Capture appears on the display. (The icon does not appear when the Face Recognition function is not activated.)

Face Priority On   Smile Capture   Face Priority Off
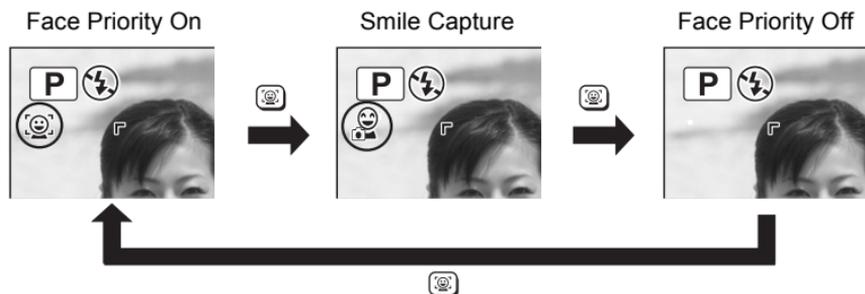
- memo
  - The Face Recognition function cannot be set to off in AUTO PICT (Auto Picture), 🌃 (Night Scene Portrait), 🖼 (Half-length Portrait), 🎎 (Portrait), ⅀ (Kids) or 👶 (Baby) mode. You can select either Face Priority On or Smile Capture in these modes.
  - When Face Priority Off is selected, selecting ● (Green), AUTO PICT (Auto Picture), 🌃 (Night Scene Portrait), 🖼 (Half-length Portrait), 🎥 (Movie), 🎎 (Portrait), ⅀ (Kids), or 👶 (Baby) modes automatically switches to Face Priority On. When switching to another mode from one of these modes, the Face Recognition setting returns to the previous setting.
  - If you use the Face Recognition function when the flash mode is set to ⚡ᴀ (Auto), ⚡◉ (Flash On + Red-eye) is automatically selected.

3 Taking Pictures

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Taking Pictures in the Basic Mode (Green Mode)

In the ● (Green) mode, you can enjoy easy picture-taking using standard settings, regardless of the settings in the [✿ Rec. Mode] menu. The ● mode settings are as shown below.

Flash Mode	⁴A (Auto)	Image Tone	Bright
Drive Mode	□ (Standard)	Quality Level	★★ (Better)
Focus Mode	**AF** (Standard)	Bright Area Adj.	□ (Off)
Face Recognition	☺ (On)	Sensitivity	AUTO
Information Display	Normal	ISO Corction in AUTO	Auto 50-800
Shake Reduction	☑ (On)	EV Compensation	±0.0
Recorded Pixels	12M (4000×3000)	Blink Detection	☑ (On)
White Balance	**AWB** (Auto)	Digital Zoom	☑ (On)
Focusing Area	[ ] (Multiple)	Instant Review	☑ (On)
Auto Macro	☑ (On)	Sharpness	▬▬ᵗ (Normal)
Focus Assist	☑ (On)	Saturation	▬▬ᵗ (Normal)
AE Metering	◙ (Multi-segment metering)	Contrast	▬▬ᵗ (Normal)
Flash Exp. Comp.	±0.0	Date Imprint	Off

Shutter release button
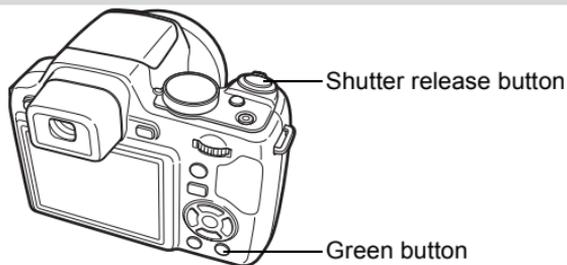
Green button

1 Press the Green button in ▲ mode.

The camera switches to ● mode.
Press the Green button again to return to
the status before ● mode was selected.
When the camera recognizes a person's
face, the Face Recognition function is
activated and the face recognition frame appears (p.78).
When using the flash, press the ✚ button to pop up the flash. (p.112)

2 Press the shutter release button halfway.

The focus frame on the display turns green when the camera focuses
on the subject at the correct distance.

3 Press the shutter release button fully.

The picture is taken.

> memo
> • Assign ● mode to the [Green Button] on the [▲ Rec. Mode] menu for
>   using ● mode (p.140). (The default setting is ● mode).
> • In ● mode, you cannot change the information on the display by
>   pressing the **DISPLAY** button.
> • Press the **MENU** button in ● mode to display the [✎ Setting] menu.
>   The [▲ Rec. Mode] menu cannot be displayed.

3

Taking Pictures

Using the Zoom

You can use the zoom to change the captured area.

Zoom lever

Four-way controller

OK button
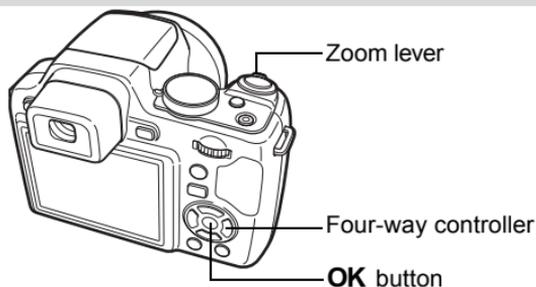
1 Turn the zoom lever in A mode.

Right (♦) Enlarges the subject.
Left (♦♦♦) Widens the area that is
captured by the camera.
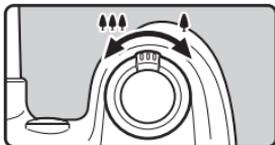
When you continue to turn to the right (♦),
the camera automatically switches from
optical zoom to Intelligent Zoom.
Once the lever is released and turned
again, the camera switches to Digital Zoom.

Zoom ratio

Zoom bar

3

Taking Pictures

The zoom bar is displayed as follow.

Zoom in with high image quality.   Zoom in with some degree of image deterioration.

▼**1cm**[*3]

Optical zoom range[*1]   Intelligent Zoom range[*2]   Digital Zoom range
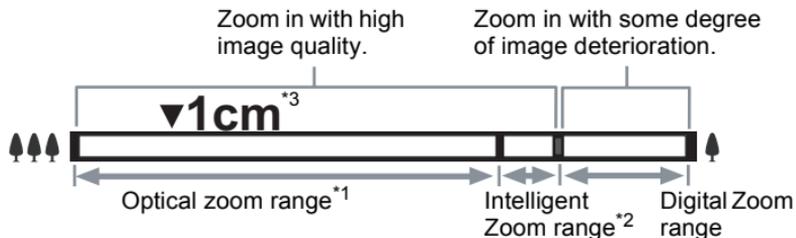
*1 You can zoom in to a maximum of 24× optically.
*2 The Intelligent Zoom range differs depending on the recorded pixels. See the following table.
*3 In ♣ (1cm Macro), the zoom position is fixed.

Recorded pixels and the maximum zoom ratio

Recorded pixels	Intelligent Zoom	Digital Zoom
12M	Not Available (24× optical zoom only)	Equivalent to approx. 150.0×
3:2		
16:9		
1:1		
7M	Approx. 31.3×	
5M	Approx. 37.0×	
3M	Approx. 46.9×	
1024	Approx. 93.8×	
640	Approx. 150.0× (Same as Digital Zoom)	

• It is recommended to use a tripod to prevent camera shake when taking pictures at a high magnification rate.

• Pictures taken in the digital zoom range appear grainier than pictures taken in the optical zoom range.

• Intelligent Zoom is not available under the following conditions:
   - when the recorded pixels is set to 12M / 3:2 / 16:9 / 1:1 (24× optical zoom and Digital Zoom are available)
   - in (◢) (Digital SR) mode (only 24× optical zoom is available)
   - when the sensitivity is set to 3200 or 6400 (only 24× optical zoom is available)

• The image enlarged using Intelligent Zoom may appear rough on the display. This does not affect the quality of recorded image.

• While recording a movie, only Digital Zoom is available.

To Set the Digital Zoom

The digital zoom is set to ☑ (On) in the default settings. To take pictures using only the optical zoom and Intelligent Zoom, set the digital zoom to □ (Off).

1 **Press the MENU button in ▲ mode.**
The [▲ Rec. Mode] menu appears.

2 **Use the four-way controller (▲▼) to select [Digital Zoom].**

3 **Use the four-way controller (◄►) to select ☑ (On) or □ (Off).**

☑ (On) Uses Digital Zoom
□ (Off) Uses only optical zoom and Intelligent Zoom

The setting is saved.

▲ Rec. Mode	3/4
Interval Shoot	
Blink Detection	☑
Digital Zoom	◄☑ ►
Instant Review	☑
Memory	
Green Button	▢

MENU Exit
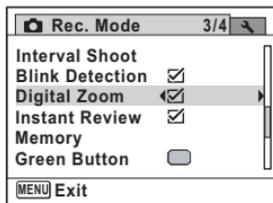
4 **Press the MENU button.**
The camera returns to capture status.

Saving the Digital Zoom Function setting ☞p.147

3 **Taking Pictures**

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Taking Pictures of Dark Scenes (Night Scene/ Night Scene Portrait/Digital SR/Fireworks)

You can choose settings appropriate for taking pictures of dark scenes, such as nightscapes.

Mode you can select with the mode dial only

(●)	Digital SR	Higher sensitivity reduces blur.

Modes you can select from the Capture Mode Palette by selecting SCN with the mode dial

🏙	Night Scene	For night time images. Use of a tripod or other support is suggested.
🌃	Night Scene Portrait	For images of people at night. Use of a tripod or other support is advised.
🎆	Fireworks	For capturing fireworks. Use of a tripod or other support is suggested.
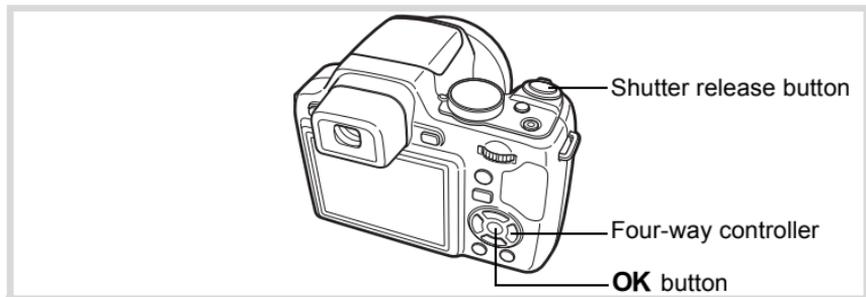
Shutter release button

Four-way controller

OK button

1 **In ○ mode, set the mode dial to (●), or set it to SCN and press the four-way controller (▼).**
If you set the mode dial to (●), proceed to Step 4.
If you set the mode dial to SCN, the Capture Mode Palette appears.

2 **Use the four-way controller (▲▼◀▶) to select 🏙, 🌃 or 🎆.**

3 **Press the OK button.**

The shooting mode is selected and the camera returns to capture status. When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

4 **Press the shutter release button halfway.**

The focus frame on the display turns green when the camera focuses on the subject at the correct distance.

5 **Press the shutter release button fully.**

The picture is taken.

memo
- To use the flash, press the 4 button in Step 3 to pop up the flash. (p.112)
- The shutter speed tends to be slower when taking pictures of dark scenes.
- To prevent camera shake, set the Shake Reduction function (p.132) or use a tripod and/or the self-timer function (p.95).
- In (**≜**) mode, the sensitivity is automatically set to [AUTO] and the number of recorded pixels is fixed at $\boxed{5\text{M}}$ (2592×1944).
- In ❄ mode, the the sensitivity is fixed at its minimum setting.
- If you use the Face Recognition function when the flash mode is set to $\frac{1}{4}$A (Auto) in ❷ mode, $^{\circledast}\frac{1}{4}$ (Flash On + Red-eye) is automatically selected.

Taking Pictures of People (Half-length Portrait/ Portrait Mode)

▣ (Half-length Portrait) and ❸ (Portrait) modes are suitable for taking pictures of people. Face Recognition function (p.78) operates for each shooting mode, making it easier to emphasize the subject's face when taking pictures.

▣	Half-length Portrait	For portraits with proper framing by automatic zoom. Fixed to $\boxed{3\text{M}}$ (2048×1536).
❸	Portrait	For capturing portraits. Reproduces a healthy and bright skin tone.

Shutter release button

Four-way controller
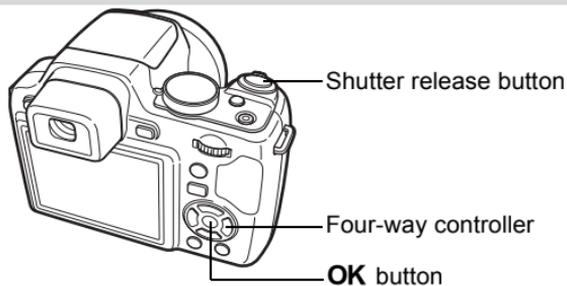
OK button

1 **In ○ mode, set the mode dial to SCN and press the four-way controller (▼).**

The Capture Mode Palette appears.

2 **Use the four-way controller (▲ ▼ ◀ ▶) to select 📧 or 📷 and press the OK button.**

The shooting mode is selected and the camera returns to capture status.
When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

If the camera recognizes a person's face in 📧 mode, an orange frame appears showing the area the camera will zoom in to.

3 **Press the shutter release button halfway.**

The focus frame on the display turns green when the camera focuses on the subject at the correct distance.

If the camera recognizes a person's face in 📧 mode, the camera automatically zooms in to enlarge the area in the orange frame shown in Step 2.

When using the flash, press the ✚ button to pop up the flash. (p.112)

4 **Press the shutter release button fully.**

The picture is taken.

3

Taking Pictures

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Taking Pictures of Children (Kids Mode)

¥ (Kids) mode is suitable for taking pictures of moving children. It also reproduces healthy and bright skin tone. Face Recognition function (p.78) operates automatically for this mode, making it easier to emphasize the subject's face when taking pictures.
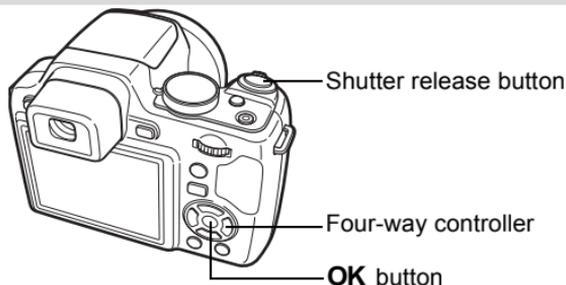
Shutter release button

Four-way controller

OK button

1 **In** A **mode, set the mode dial to** SCN **and press the four-way controller (▼).**
   The Capture Mode Palette appears.

2 **Use the four-way controller (▲ ▼ ◄ ►) to select** ¥**.**

3 **Press the** OK **button.**
   ¥ (Kids) mode is selected and the camera returns to capture status.
   When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

4 **Press the shutter release button halfway.**
   The focus frame on the display turns green when the camera focuses on the subject at the correct distance.
   When using the flash, press the ¥ button to pop up the flash. (p.112)

5 **Press the shutter release button fully.**
   The picture is taken.

Taking Pictures of Your Pet (Pet Mode)

Use this mode to keep your moving pet in focus while you take the picture and capture the color of your pet's coat. Choose the appropriate icon depending on what color your pet is (closer to black or white or in between).
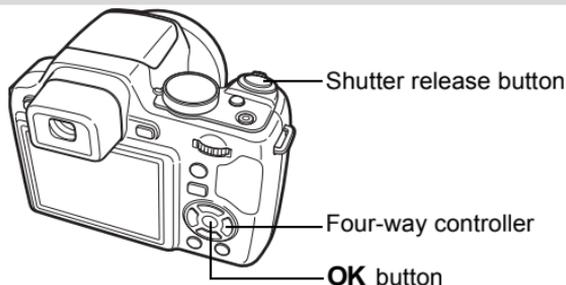
Shutter release button

Four-way controller

OK button

1 **In** 🗖 **mode, set the mode dial to** SCN **and press the four-way controller (▼).**

The Capture Mode Palette appears.

2 **Use the four-way controller (▲ ▼ ◄ ►) to select** 🐾.

3 **Press the** OK **button.**

The 🐾 mode selection screen appears.

4 **Use the four-way controller (▲ ▼) to select** 🐾**,** 🐾**,** 🐾**,** 🐾**,** 🐾 **or** 🐾**.**

There are two types of icons: a cat and dog icon. Choosing either the cat or dog icon does not affect the resulting picture. Choose whichever you prefer.

Choose an icon (white, gray, or black) whose tone best matches your pet's coat or fur.

MENU Cancel   OK OK

5 Press the OK button.

⌨ mode is selected and the camera returns to capture status.
When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

6 Press the shutter release button halfway.

The focus frame on the display turns green when the camera focuses on the subject at the correct distance.
The focus frame follows the subject while the shutter release button is pressed halfway.
When using the flash, press the ⚡ button to pop up the flash. (p.112)

7 Press the shutter release button fully.

The picture is taken.

Taking Pictures of Sports and Leisure Activities (Surf & Snow/Sport Mode)

Mode you can select with the mode dial only

🏃	Sport	For a fast moving subject. Tracks the subject until the picture is taken.

Mode you can select from the Capture Mode Palette by selecting SCN with the mode dial

🏂	Surf & Snow	For bright images such as sand or snow. Accurately meters for bright scenes.
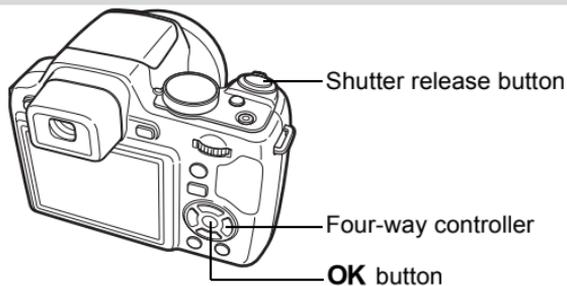
3 Taking Pictures

Shutter release button

Four-way controller

OK button

1 **In ■ mode, set the mode dial to ≮, or set it to SCN and press the four-way controller (▼).**

If you set the mode dial to ≮, proceed to Step 4.
If you set the mode dial to SCN, the Capture Mode Palette appears.

2 **Use the four-way controller (▲ ▼ ◄ ►) to select ◈.**

3 **Press the OK button.**

The shooting mode is selected and the camera returns to capture status.

When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

4 **Press the shutter release button halfway.**

The focus frame on the display turns green when the camera focuses on the subject at the correct distance.

When the Sport mode is selected, the focus frame follows the subject while the shutter release button is pressed halfway.

When using the flash, press the ⚡ button to pop up the flash. (p.112)

5 **Press the shutter release button fully.**

The picture is taken.

Taking Pictures Indoors (Party Mode)

Y (Party) mode is perfect for taking pictures indoors, such as snapshots at parties.

Shutter release button

Four-way controller

OK button

1 **In** A **mode, set the mode dial to** SCN **and press the four-way controller (▼).**
The Capture Mode Palette appears.

2 **Use the four-way controller (▲ ▼ ◄ ►) to select** Y**.**

3 **Press the** OK **button.**
Y mode is selected and the camera returns to capture status.
When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

4 **Press the shutter release button halfway.**
The focus frame on the display turns green when the camera focuses on the subject at the correct distance.
When using the flash, press the ♯ button to pop up the flash. (p.112)

5 **Press the shutter release button fully.**
The picture is taken.

3 Taking Pictures

Framing Your Pictures (Frame Composite Mode)

In ○ (Frame Composite) mode, you can take pictures using the frames stored in the camera.
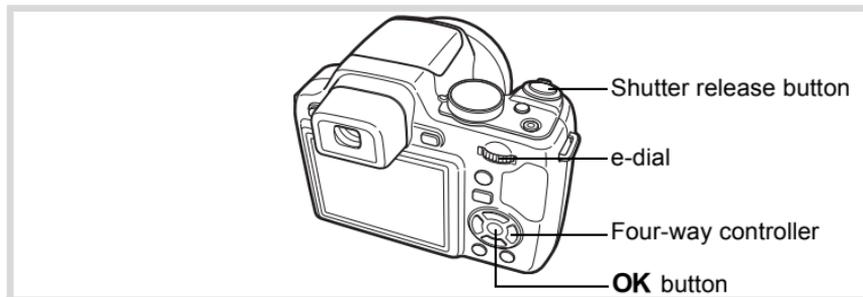
Shutter release button

e-dial

Four-way controller

OK button

1 **In** ○ **mode, set the mode dial to SCN and press the four-way controller (▼).**

The Capture Mode Palette appears.

2 **Use the four-way controller (▲ ▼ ◄ ►) to select** ○ **and press the OK button.**

A 9-frame display of the frame selection screen appears.

3 **Use the four-way controller (▲ ▼ ◄ ►) to choose the frame you want to use.**

4 Turn the e-dial to the right (Q).

The selected frame appears in single-image display.
You can choose another frame using either of the following operations.
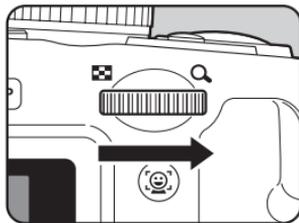
Four-way controller (◀ ▶)	Press to choose a different frame.
e-dial to the left (🖼)	Turn to return to the 9-frame display of the frame selection screen, and then perform Step 3 to choose a different frame.

5 Press the OK button.

The frame appears on the display.
When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

6 Press the shutter release button halfway.

The focus frame on the display turns green when the camera focuses on the subject at the correct distance.
When using the flash, press the ✦ button to pop up the flash. (p.112)

7 Press the shutter release button fully.

The picture is taken.

memo
- In ○ mode, recorded pixels is fixed at 3M (2048 × 1536).
- At shipment, the camera includes 3 default frames and 87 optional frames built-in. (The CD-ROM supplied with the camera contains a total of 90 frames, including the default frames.)
- In ○ mode, "Grid Display" is unavailable.

Optional Frames

The optional frames are stored in the built-in memory in the X70. These optional frames are deleted if the files on the built-in memory are deleted with a computer or the built-in memory is formatted. To reload the optional frames into the built-in memory, copy the files from the CD-ROM (S-SW87) supplied with the camera (p.185).

Adding a Frame to a captured image ☞p.183

Using the Self-timer

In Self-timer mode, the picture is taken ten seconds or two seconds after the shutter release button is pressed.

Stabilize the camera with a tripod or other support when taking a picture with the self-timer.

⟳	Use this mode when you want to be included in a group picture. The picture is taken approximately ten seconds after the shutter release button is pressed.
⟳₂ₛ	Use this mode to avoid camera shake. The picture is taken approximately two seconds after the shutter release button is pressed.
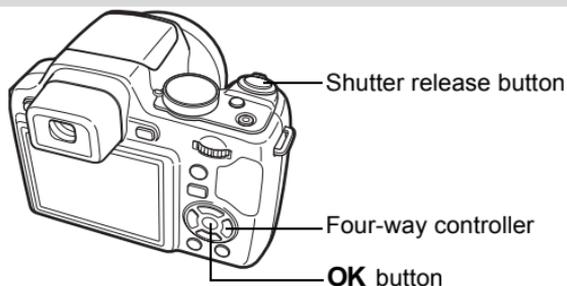
Shutter release button

Four-way controller

OK button

3 **Taking Pictures**

1 **Press the four-way controller (▲) in ● mode.**

2 **Use the four-way controller (◀ ▶) to select ⟲ or ⟲₂ and press the OK button.**

The camera is ready to take the picture using the self-timer.
When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

Drive Mode
Self-timer

MENU Cancel   OK OK

3 **Press the shutter release button halfway.**

The focus frame on the display turns green when the camera focuses on the subject at the correct distance.
When using the flash, press the ⚡ button to pop up the flash. (p.112)

4 **Press the shutter release button fully.**

The picture is taken ten seconds or two seconds later.

⚠️ Focusing may be compromised if you move the camera while the self-timer lamp is blinking when taking still pictures.

📝 • In 🎬 (Movie) mode, recording will start after ten seconds (or two seconds).
• Press the shutter release button halfway while the self-timer is engaged to stop the countdown and press fully to restart the countdown.

3 Taking Pictures

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Taking a Series of Pictures (Continuous Shooting Mode)

In this mode, pictures are taken continuously as long as the shutter release button is pressed.

▤	Continuous Shooting(L)	Recorded pixels is fixed at ⎡5M⎤, and you can take up to 7 pictures continuously at an interval of approximately 4 fps.
▤	Continuous Shooting(M)	Recorded pixels is fixed at ⎡5M⎤, and you can take up to 7 pictures continuously at an interval of approximately 6.3 fps.
▤	Continuous Shooting(H)	Recorded pixels is fixed at ⎡5M⎤, and you can take up to 21 pictures continuously at an interval of approximately 11 fps.
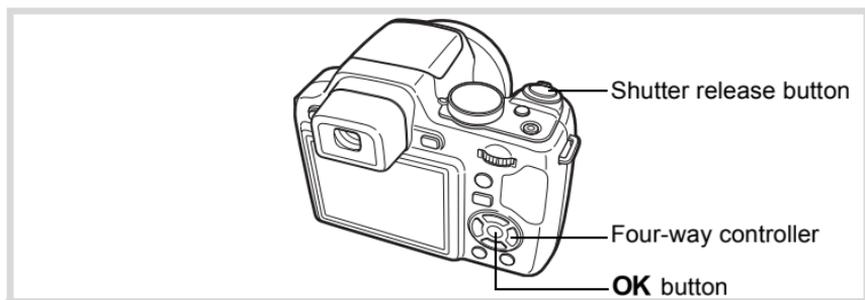
Shutter release button

Four-way controller

OK button

1 **Press the four-way controller (▲) in ○ mode.**

2 **Use the four-way controller (◄ ►) to select ▤, ▤ or ▤ and press the OK button.**

The camera is ready to take a series of pictures.

Drive Mode
Continuous Shooting(L)

MENU Cancel   OK OK

3 Taking Pictures

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3 **Press the shutter release button halfway.**

The focus frame on the display turns green when the camera focuses on the subject at the correct distance.

4 **Press the shutter release button fully.**

Pictures are taken continuously as long as you keep the shutter release button pressed.

> **Caution**
> - The flash does not discharge in ▤, ▤ and ▤ modes.
> - ▤, ▤ and ▤ cannot be selected in ● (Green), 🎥 (Movie), ※ (Fireworks), ▢ (Frame Composite), WIDE (Digital Wide) or ▶◀ (Digital Panorama) mode.
> - Digital Zoom and Intelligent Zoom are unavailable in ▤ and ▤ modes. When the sensitivity is set to 3200 and higher in ▤ mode, they are also unavailable.

> **memo**
> - The interval of ▤, ▤ and ▤ varies according to the [Recorded Pixels] and [Quality Level] settings.
> - The focus, exposure and white balance are locked with the first shot.
> - When the Face Recognition function is activated (p.78), it works only when taking the first shot.
> - The Blink Detection function works only for the last shot.
> - In AUTO PICT (Auto Picture) mode, pictures are taken continuously in the appropriate shooting mode selected for the first shot.

Taking Pictures at a Set Interval (Interval Shoot)

In this mode, a set number of pictures can be taken automatically at a set interval from a set time.

Interval	10 sec. – 99 min.	Set the camera to take pictures in one second increments from ten seconds to four minutes intervals or in one minute increments from four minutes to 99 minutes intervals. You cannot set the camera to take interval shots at intervals of less than ten seconds.
Number of Shots	2 shots – number of recordable images	You can set this to up to 1000 shots. However, this cannot exceed the number of recordable images.
Start Delay	0 min. – 24 hours	You can set one minute increments for the first 59 minutes and one hour increments from there. If the start time is set to 0 min., the first picture is taken as soon as the shutter release button is pressed.

3 **Taking Pictures**

1 **Press the four-way controller (▲) in ○ mode.**

2 **Use the four-way controller (◄►) to select ☒ (Interval Shoot) and press the OK button.**

The current interval shoot settings appear for approximately 1 minute. To take pictures with the current settings, go to Step 10.

Drive Mode
Interval Shoot

MENU Cancel   OK OK

3 **Press the OK button while the settings are displayed.**

The [Interval Shoot] setting screen appears. [Interval] is marked with the frame.

4 **Set the interval.**
   1 **Press the four-way controller (►).**
   2 **Use the four-way controller (▲▼) to set the minutes, then press the four-way controller (►).**
   3 **Use the four-way controller (▲▼) to set the seconds, then press the four-way controller (►).**

The frame returns to [Interval].

Interval Shoot

Interval   ► 0min. 10sec.

Number of Shots 2

Start Delay   0hr. 0min.

MENU ⤴

5 **Press the four-way controller (▼).**
The frame moves to [Number of Shots].

6 **Set the number of shots.**
   1 **Press the four-way controller (►).**
   2 **Use the four-way controller (▲▼) to set [Number of Shots], then press the four-way controller (►).**

The frame returns to [Number of Shots].

7 **Press the four-way controller (▼).**
The frame moves to [Start Delay].

8 **Set the start delay.**
   1 **Press the four-way controller (►).**
   2 **Use the four-way controller (▲▼) to set the hours, then press the four-way controller (►).**
   3 **Use the four-way controller (▲▼) to set the minutes, then press the four-way controller (►).**

The frame returns to [Start Delay].

9 **Press the MENU button.**

The [Interval Shoot] settings are saved and the camera returns to capture status.

10 **Press the shutter release button halfway.**

The focus frame on the display turns green if the subject is in focus.

11 **Press the shutter release button fully.**

Interval shooting starts.

The camera turns off between shots (during standby). Press the power switch during standby to display the remaining number of shots and interval on the monitor.

The [Stop interval shooting?] message is displayed when the power switch and then the **MENU** button are pressed during standby. Pressing the **OK** button cancels interval shooting.

> Interval shooting is not available in ●, ▐▐▐, WIDE, ◯ or ♠ mode.

> The [Interval Shoot] settings can also be configured from the [◻ Rec.Mode] menu. (p.133)

Shutter release button

Four-way controller
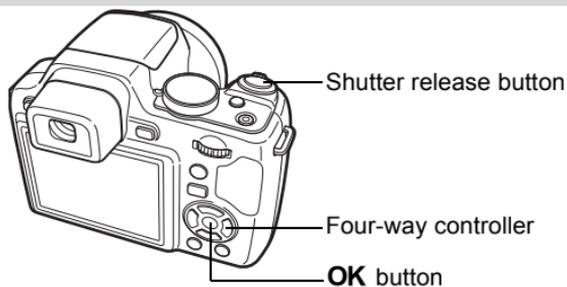
OK button

Taking Pictures with Automatic Exposure Adjustment (Auto Bracket)

Press the shutter release button once to automatically adjust the exposure and take three pictures in succession. After taking the pictures, you can select the best one.

You can set the adjustment from ± 0.3EV to ± 2.0EV.

The shooting order is as follows: correct exposure → negative compensation → positive compensation.

1   **Press the four-way controller (▲) in ✿ mode.**

2   **Use the four-way controller (◀ ▶) to select 🖾 (Auto Bracket).**

The camera is now ready to take pictures with Auto Bracket.

Drive Mode
Auto Bracket

🖾 ±0.3

MENU Cancel   OK OK

3   **Use the four-way controller (▲ ▼) to select EV compensation value and press the OK button.**

4   **Press the shutter release button halfway.**

The focus frame on the display turns green when the subject is in focus.

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Taking Pictures

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5 **Press the shutter release button fully.**

Press the shutter release button once to automatically adjust the exposure and take the three pictures at different exposures.

memo
- When the Instant Review is set to on (p.135), the third picture taken is shown in Instant Review after shooting (p.67).
- Auto Bracket is unavailable in 🎬 (Movie), ● (Green), 🎆 (Fireworks), **III** (Digital Panorama) and WIDE (Digital Wide) modes.

Using the Digital Wide Function (Digital Wide Mode)

In WIDE (Digital Wide) mode, you can stitch two captured images into a single frame up to approx. 20mm coverage (35mm film equivalent).
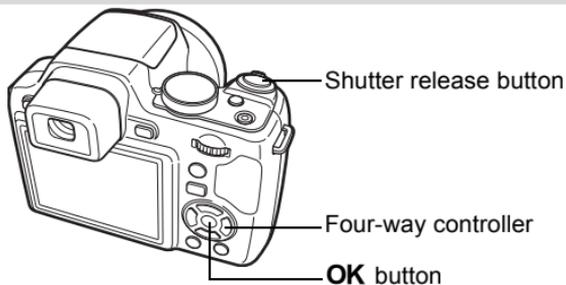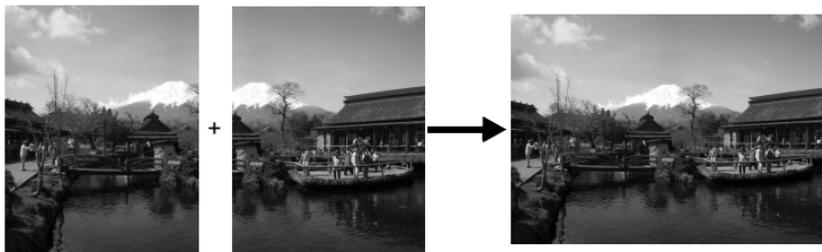
Shutter release button

Four-way controller

OK button

1 **In** ✿ **mode, set the mode dial to** SCN **and press the four-way controller (▼).**

The Capture Mode Palette appears.

2 Use the four-way controller (▲ ▼ ◀ ▶) to select WIDE.

3 Press the OK button.
The camera enters the WIDE mode.
Turn the camera 90º counterclockwise and align your first picture.
When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

4 Press the shutter release button halfway.
The focus frame on the display turns green when the camera focuses on the subject at the correct distance.

5 Press the shutter release button fully.
The first captured image is temporarily saved, and the shooting screen for the second image is displayed.

6 Take the second image.
Overlap the image on the preview guide on the left of the screen to compose the second image. Repeat Steps 4 and 5 to take the second image.
The stitched first and second image appears on the display for one second (Instant Review), and then is saved.

memo
- To minimize distortion when taking the second image, turn the camera so that it pivots around the right edge of the preview guide on the screen.
- Some distortion may result from moving objects, repeating patterns, or if nothing exists when overlapping the first and second image on the preview guide.
- When the Face Recognition function is activated (p.78), it works only when taking the first image.
- The number of recorded pixels for images captured with WIDE mode is fixed at 5M (2592 × 1944).

3 Taking Pictures

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To Cancel after Taking the First Shot

1 **When the shooting screen for the second image is displayed in Step 5 on p.103, press the OK button or the four-way controller (▼).**
   A confirmation dialog appears.

2 **Use the four-way controller (▲ ▼) to select an option and press the OK button.**

Save	Saves the first image and you can retake the first shot. The first image is saved in 3m (2048 × 1536).
Discard	Discards the first image and you can retake the first shot.
Cancel	Returns to the shooting screen for the second image.

Save the image(s) and exit this screen?
Save
Discard
Cancel

OK OK

Taking Panoramic Pictures (Digital Panorama Mode)

In ▮▮◀ (Digital Panorama) mode, you can stitch two or three captured frames to create a panoramic photograph with the camera.
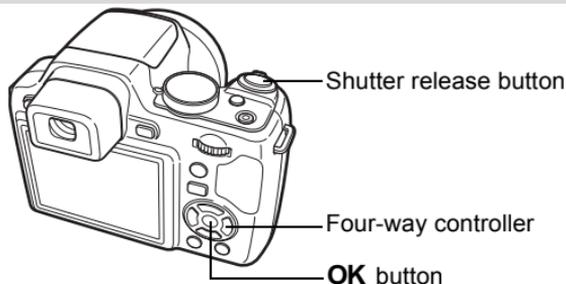
Shutter release button

Four-way controller

OK button

1 **In ✿ mode, set the mode dial to SCN and press the four-way controller (▼).**
   The Capture Mode Palette appears.

2 Use the four-way controller (▲ ▼ ◄ ►) to select ▐█▌.

3 Press the OK button.
The camera enters the ▐█▌ mode and the message [Set shift direction] is displayed.

4 Use the four-way controller (◄ ►) to choose the direction in which the images will be joined.
The screen for taking the first frame is displayed.

When the camera recognizes a person's face, the Face Recognition function is activated and the face recognition frame appears (p.78).

5 Press the shutter release button halfway.
The focus frame on the display turns green when the camera focuses on the subject at the correct distance.

6 Press the shutter release button fully.
The screen for taking the second frame is displayed after you take the first frame.

If you select right (►) in Step 4:
The right edge of the first frame appears in semi-transparent form on the left edge of the display.

If you select left (◄) in Step 4:
The left edge of the first frame appears in semi-transparent form on the right edge of the display.

7 Take the second frame.
Move the camera so that the semi-transparent image and the actual view overlap and press the shutter release button.

8 Take the third frame.

Repeat Steps 5 to 7 to take the third frame.

The panorama stitching starts and a stitched image appears.

The stitched image does not appear when the [Instant Review] (p.135) is off.

memo
- Some distortion may result from moving objects, repeating patterns, or if nothing exists when overlapping the first and second frames or the second and third frames on the preview guide.
- When the Face Recognition function is activated (p.78), it works only when taking the first frame.
- Unstitched images shot in ▉▉◀ mode are fixed at 2м (1600×1200).

To Cancel after Taking the First or Second Frame

1 After shooting the first frame in Step 6 on p.105 or second frame in Step 7, press the OK button or the four-way controller (▼).

A confirmation dialog appears.

2 Use the four-way controller (▲▼) to select an option and press the OK button.

Save	Saves the captured image(s) and you can retake the first frame. When this option is selected after shooting the second frame, the first and the second frames are stitched and saved as a panoramic photograph.
Discard	Discards the captured image(s) and you can retake the first frame.
Cancel	Returns to the previous shooting screen.

Setting the Exposure

Effect of Aperture and Shutter Speed

Correct exposure of the subject is determined by the combination of shutter speed and aperture setting. There are many correct combinations of shutter speed and aperture for a particular subject. Different combinations produce different effects.

Effect of Shutter Speed

By changing the shutter speed, you can manipulate how time is expressed in the pictures you create. Unlike with your own naked eyes, in a picture you can capture a fraction of a moment or a whole period of time, creating different effects. Use the Tv (Shutter Priority) mode.

● **Using slower shutter speed**
If the subject is moving, the image will be blurred because the shutter is open longer.
It is possible to enhance the effect of motion (rivers, waterfalls, waves, etc.) by intentionally using a slower shutter speed.
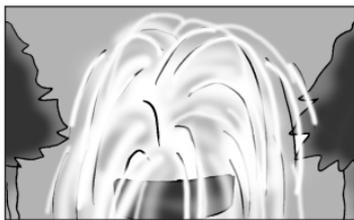
● **Using faster shutter speed**
Choosing a faster shutter speed will allow freezing the action of a moving subject.
A faster shutter speed also helps preventing camera shake.
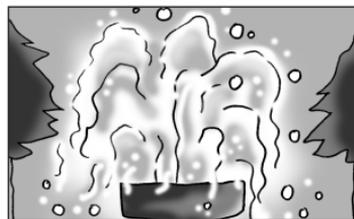
Effect of Aperture

By changing the aperture, you can control the depth of the area that appears in focus in the picture (the depth of field). By either narrowing the focus to emphasize a single point or giving depth to your picture instead you can completely change the feel of the picture you create. Use the Av (Aperture Priority) mode.

● Opening the aperture (reduce the aperture value)

Objects closer and farther than the focused subject will be more out of focus. For instance, if you take a picture of a flower against a landscape with the aperture open, the landscape in front and behind the flower will be blurred, emphasizing only the flower.
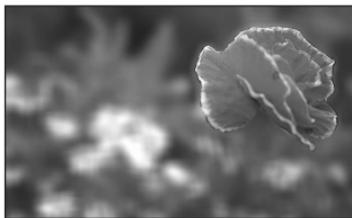
● Closing the aperture (increase the aperture value)

The range in focus expands forward and backward. For instance, if you take a picture of a flower against a landscape with the aperture narrowed, the landscape in front and behind the flower will be in focus.

Setting the Exposure (EV Compensation)

You can adjust the overall brightness of the picture.
Use this function to take pictures that are intentionally overexposed or underexposed.

1 Press the ✚ button on the top of the camera in each capture mode.

2 Select the EV compensation value with the e-dial.

To brighten images, select a positive (+) value. To darken images, select a negative (-) value.
You can select compensation value with a range of ±2.0EV in increments of 1/3EV.

3 Press the ✚ button.

EV compensation is set and the camera returns to capture status.

- EV compensation stays displayed when set to a value other than ±0.0, but disappears after being displayed for 2 seconds at the bottom of the screen when set to ±0.0.
- In ● (Green)/ AUTOPICT (Auto Picture) modes, EV compensation is fixed at ±0.0.
- In **M** (Manual) mode, EV compensation is unavailable.
- The EV compensation value displayed on the screen is enlarged when you press the ⊿ button.

Normal Display

When the compensation button is pressed

Setting the Shooting Functions

Selecting the Flash Mode

$\,^{4}_{A}$	Auto	The flash discharges automatically depending on the light conditions.
$\circledast$	Flash Off	The flash does not discharge, regardless of the brightness. Use this mode to take pictures where flash photography is prohibited.
$\,^{4}$	Flash On	The flash discharges regardless of the brightness.
$\,^{\circledR}_{A}$	Auto + Red-eye	This mode reduces the phenomenon of red eyes caused by the light from the flash being reflected in the subject's eyes. The flash discharges automatically.
$\,^{\circledR}_{4}$	Flash On + Red-eye	This mode reduces the phenomenon of red eyes caused by the light from the flash being reflected in the subject's eyes. The flash discharges regardless of the light conditions.
$\,^{\text{slow}}_{4}$	Slow-speed Sync	For taking bright pictures of both people and background indoors and outdoors at night. The flash discharges automatically.
$\,^{\text{slow}}_{\circledast 4}$	Slow-speed Sync +Red-eye	For reducing red eye caused by the flash being reflected in the subject's eyes. The flash discharges automatically.

memo

- The flash mode is fixed at $\circledast$ in the following situations:
  - When 🎬 (Movie), ※ (Fireworks) or 🎭 (Stage Lighting) is selected as the capture mode.
  - When 🔳 (Continuous Shooting(L)), 🔳 (Continuous Shooting(M)) , 🔳 (Continuous Shooting(H)) or 🔳 (Auto Bracket) is selected as the drive mode.
  - When ▲ (Infinity) is selected as the focus mode.
- In ● (Green) mode, you can only select $\,^{4}_{A}$ or $\circledast$.
- In 🔳 (Night Scene), **Tv** or **M** mode, you cannot select $\,^{4}_{A}$, $\,^{\circledR}_{A}$, $\,^{4}$ and $\,^{\circledR}_{4}$.
- In **Av** mode, you cannot select $\,^{4}_{A}$ and $\,^{\circledR}_{A}$.
- If you use Face Recognition function when $\,^{4}_{A}$ is selected, the mode is automatically set to $\,^{\circledR}_{4}$.
- A pre-flash discharges when using the red-eye reduction function.
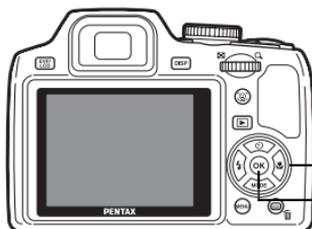
Four-way controller
OK button

Press the 4 button to pop up the flash and select a flash mode.

1 **Press the four-way controller (◄) in ✿ mode.**

The flash selection screen appears.
You can select a flash using the four-way controller (◄ ►).

2 **Press the OK button.**

The setting is saved and the camera returns to capture status.

About the red-eye phenomenon

Taking pictures using the flash may cause the subject's eyes to appear red in the resulting picture. This phenomenon occurs when the light from the flash is reflected in the subject's eyes. It can be reduced by illuminating the area around the subject or moving closer to the subject and zooming out to a wider angle. Setting the flash mode to ☜, ☜ or ☜☜ is also an effective way of reducing red eyes.

If the subject's eyes appear red despite such precautions, they can be corrected by the red-eye compensation function (p.182).

Saving the Flash Mode setting ☞ p.147

3 **Taking Pictures**

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Using the Flash

1 Select a capture mode.

2 Press the ✦ button.
The built-in flash pops up and begins charging. ✦ (Red) blinks on the display while charging. When the flash is fully charged, ✦ appears on the display. (Not displayed in ✦ᴀ mode)

✦ button

3 Press the shutter release button halfway.
The focus frame on the display turns green when the camera is focused.

4 Press the shutter release button fully.
The flash discharges and the picture is taken.

5 Push the flash down to retract.

Selecting the Focus Mode

AF	Standard	Use this mode when the distance to the subject is 40 cm (16 in.) or more. The camera is focused on the subject in the autofocus area when the shutter release button is pressed halfway.
❀	Macro	This mode is used when the distance to the subject is approx. 10 cm to 50 cm (4 in. to 20 in.). The camera is focused on the subject in the autofocus area when the shutter release button is pressed halfway.
☀	1cm Macro	This mode is used for taking pictures of the subject from a distance of 1 cm.
▲	Infinity	This mode is used for taking distant objects. The flash is set to ⑨ (Flash Off).
MF	Manual Focus	This mode lets you adjust the focus manually.
▦	AF Area Selection	Select an area of the subject to focus on.
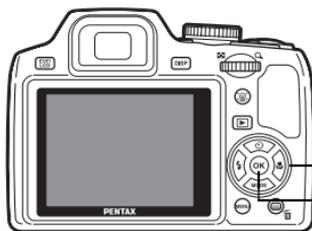
Four-way controller
OK button

1 Press the four-way controller (▶) in ● mode.

The focus mode selection screen appears. You can select a focus mode using the four-way controller (◀ ▶).

AF ❀ ☀ ▲ MF ▦

Focus Mode
Standard

MENU Cancel   OK OK

2 Press the OK button.

The setting is saved and the camera returns to capture status.

• In ● (Green) mode, you can only select **AF** or ♣.
• The focus mode is fixed at ▲ in ※ (Fireworks) mode.
• When [Auto Macro] is on and shooting with ♣ selected, if the subject is further than 50 cm away, the camera automatically focuses to ∞ (Infinity). By pressing the shutter release button fully, you can also take a picture even when the focus is not set.

Saving the Focus Mode setting ☞p.147

To Set the Manual Focus

The procedure for setting the focus manually (**MF**) is described below.

1 **Press the four-way controller (▶) in ✿ mode.**

2 **Use the four-way controller (▶) to select MF.**

3 **Press the OK button.**
The central portion of the image is magnified on the display to full screen.

AF ♥ ♣ ▲ MF ▦
Focus Mode
Manual Focus
MENU Cancel   OK OK
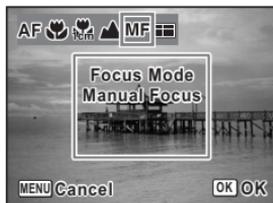
4 **Press the four-way controller (▲ ▼).**
The **MF** indicator appears on the display to indicate the approximate distance to the subject. Use the four-way controller (▲ ▼) to adjust the focus using the indicator as a guide.

▲   for distant focus
▼   for closer focus

MF
∞
4m
2
1
MENU ⇆   OK OK
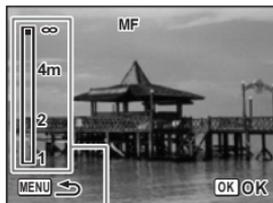
MF indicator

5 **Press the OK button.**
The focus is fixed and the camera returns to capture status.
After the focus is fixed, you can press the four-way controller (▶) again to display the **MF** indicator and readjust the focus.

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- The shooting mode and drive mode cannot be changed while the **MF** indicator is displayed.
- To focus at 1 cm in **MF** mode, turn the zoom lever and set the zoom position to the 1 cm indicator on the zoom bar.

memo To switch from **MF** to another focus mode, press the four-way controller (▶) while the **MF** indicator is displayed.

AF Area Selection

Select an area to focus on for use during shooting.

Select a location to focus on (AF Area Selection)

With this mode, you can select a location to focus on from 25 points.

1 **In ○ mode, press the four-way controller (▶).**

2 **Use the four-way controller (◀ ▶) to select ⊞ (AF Area Selection).**

3 **Press the OK button.**
The [AF Area Selection] screen appears with the central portion selected.

4 **Select the position you want to focus on with the four-way controller (▲ ▼ ◀ ▶).**

5 **Press the OK button.**
The focus is fixed and the camera returns to capture status.

memo To switch to another focus mode, press the **MENU** button while the [AF Area Selection] screen is displayed.

Selecting the Autofocus Settings

You can set the autofocus area and focusing method.

1 **Press the MENU button in ✿ mode.**
   The [✿Rec.Mode] menu appears.

2 **Use the four-way controller (▲ ▼) to select [AF Setting].**

3 **Press the four-way controller (▶).**
   The [AF Setting] screen appears.

```
✿ Rec. Mode      2/4  🔧
AF Setting       [  ]  ▶
AE Metering      ◙
Flash Exp. Comp. ±0.0
Movie
Bright Area Adj. □
Shake Reduction  ☑
MENU Exit
```
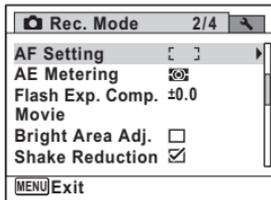
Changing the Focusing Area

When **AF** (Standard), ♥ (Macro), or ♣ (1cm Macro) is selected as the focus mode, you can change the autofocus area (Focusing Area).

Focusing Area

[ ]	Multiple	The camera measures a wide area in the center of the monitor (within the focusing area) and focuses on the nearest subject.
[ ]	Spot	The camera measures a narrow area in the center of the monitor (the spot focusing area) making easier for you to focus on a specific subject.
≋◖	Automatic Tracking	The camera continues to focus on the moving subject while you are pressing the shutter release button halfway.

3 **Taking Pictures**

4 Press the four-way controller (▶).

The pull-down menu appears.

AF Setting

Focusing Area	◀ ⌞ ⌟ ▶
Auto Macro	⌞⌟
Focus Assist	≡⟨⟩

MENU Cancel   OK OK
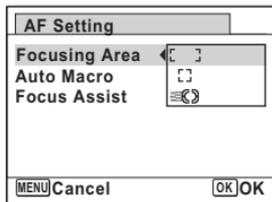
5 Use the four-way controller (▲ ▼) to change the [Focusing Area] setting.

6 Press the OK button.

The setting is saved.

7 Press the MENU button twice.

The camera is ready for taking pictures.

memo
- In 🎬 (Movie) and ▣ (Frame Composite) modes, [Focusing Area] cannot be set to ≡⟨⟩.
- In ❄ (Fireworks), ● (Green) and AUTOPICT (Auto Picture) modes, [Focusing Area] is fixed at ⌞ ⌟.

Setting the Auto Macro

When [Auto Macro] is on, the focus is adjusted to the macro range as necessary, regardless of the focus mode setting. However, when the focus mode is set to 🌷 (1cm Macro), focus is only adjusted for the 1-cm macro range (1cm - 30cm).

When set to off and the focus mode is set to **AF** (Standard), the AF operates only in the standard range, and focusing is not performed in the macro range. When the focus mode is set to 🌷 (Macro) or 🌷 (1cm Macro), the focus is only adjusted in the respective macro range. Focusing is not performed in the standard range.

4 Use the four-way controller (▲ ▼) to select [Auto Macro].
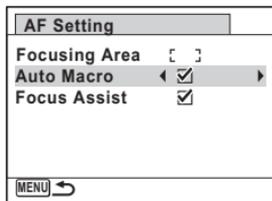
AF Setting

Focusing Area	⌞ ⌟
Auto Macro	◀ ☑ ▶
Focus Assist	☑

MENU ↩

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Taking Pictures

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5 **Use the four-way controller (◀ ▶) to select [☑ (On)/□ (Off)].**

The setting is saved.

6 **Press the MENU button twice.**

The camera is ready for taking pictures.

Setting the AF Assist Light (Focus Assist)

The AF assist light aids in focusing on dark subjects. This helps you to focus on the subject in low light conditions where auto focus does not work properly.

4 **Use the four-way controller (▲ ▼) to select [Focus Assist].**
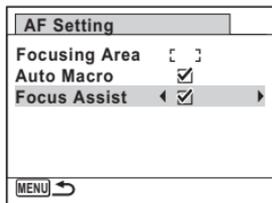
```
AF Setting
Focusing Area      [  ]
Auto Macro         ☑
Focus Assist    ◀ ☑ ▶

MENU ⤺
```

5 **Use the four-way controller (◀ ▶) to select [☑ (On)/□ (Off)].**

The setting is saved.

6 **Press the MENU button twice.**

The camera is ready for taking pictures.

> ⚠ **Caution**
> Looking at the light directly will not create safety hazard. However, do not look into the emitter from a very short distance since you may feel dazzled.

> memo
> The camera does not emit the AF assist light under the following conditions.
> - In Movie mode
> - When the focus mode is set to ▲ (Infinity) or **MF** (Manual Focus).

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Setting the Image Tone

Set the image tone of still pictures.
You can select from [Bright], [Natural], or [Monochrome].
The default setting is [Bright].

1   **Press the MENU button in ◘ mode.**
The [◘ Rec. Mode] menu appears.

2   **Use the four-way controller (▲▼) to select [Image Tone].**

3   **Press the four-way controller (▶).**
A pull-down menu appears.

4   **Use the four-way controller (▲▼) to select a finishing tone.**

◘ Rec. Mode	1/4
Image Tone	◀ Bright
Recorded Pixels	Natural
Quality Level	Monochrome
White Balance	AWB
Sensitivity	AUTO
ISO Corction in AUTO	ISO50-400
MENU Cancel	OK OK

5   **Press the OK button.**
The setting is saved.

6   **Press the MENU button.**
The camera returns to capture status.
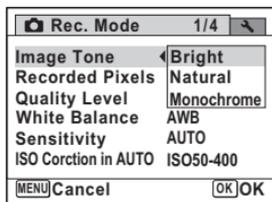
memo   When [Monochrome] is selected, [Tone Adjustment] appears on the [◘ Rec. Mode] menu for setting the tone of monochrome images instead of [Saturation].

Selecting the Recorded Pixels

You can choose from nine recorded pixels settings for still pictures. The larger your recorded pixels, the clearer the details will appear when you print your picture. As the quality of the printed picture also depends on the image quality, exposure control, resolution of the printer and other factors, you do not need to select more than the required number of recorded pixels. 3M is adequate for making postcard-size prints. The more pixels there are, the larger the picture and the bigger the file size. Refer to the following table for the appropriate settings according to use.

Recorded Pixels		Use
12M 4000×3000		For printing high quality photos or A4-size pictures or larger, or editing images on a computer.
$3:2$ 4000×2672		For a natural feeling of expansiveness with the same aspect ratio as HDTV.
$16:9$ 4000×2256	Clearer	
$1:1$ 2992×2992		
7M 3072×2304		
5M 2592×1944		
3M 2048×1536		For making postcard-size prints.
1024 1024× 768		
640 640× 480		For posting on a website or attaching to e-mail.

The default setting is 12M.

memo
> If you select $16:9$, the aspect ratio of the image is 16:9 and the monitor display for recording and playback is as shown on the right.

04/02/2009
14:25

1 **Press the MENU button in ￼ mode.**
The [￼ Rec. Mode] menu appears.

2 **Use the four-way controller (▲ ▼) to select [Recorded Pixels].**

3 **Press the four-way controller (▶).**
A pull-down menu appears.

4 **Use the four-way controller (▲ ▼) to change the number of recorded pixels.**

￼Recordable Image No.	12
Image Tone	12M
Recorded Pixels ◀	3:2
Quality Level	16:9
White Balance	1:1
Sensitivity	7M
ISO Corction in AUTO	5M
MENUCancel	OKOK
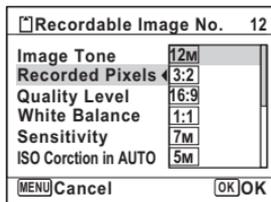
5 **Press the OK button.**
The setting is saved.

6 **Press the MENU button.**
The camera returns to capture status.

memo
- The number of recorded pixels for images captured in ● (Green) mode is fixed at 12M.
- The number of recorded pixels for images captured in ￼ (Half-length Portrait) or ○ (Frame Composite) is fixed at 3M.
- The number of recorded pixels for images captured in (￼) (Digital SR) or WIDE (Digital Wide) mode is fixed at 5M. (The number of recorded pixels will be 3M if you exit the WIDE mode without taking the second picture.)

3 Taking Pictures

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Selecting the Quality Level of Still Pictures

Select the quality (data compression ratio) for still images according to how the images will be used.

The more stars (★), the higher the quality of the image, but the file size becomes larger. The selected recorded pixels also affects the size of the image file (p.120).

Quality Levels

★★★	Best	Lowest compression ratio. Suitable for photo prints.
★★	Better	Standard compression ratio. Suitable for viewing the image on a computer screen. (default setting)
★	Good	Highest compression ratio. Suitable for attaching to e-mails or creating websites.

1 **Press the MENU button in ✿ mode.**
The [✿ Rec.Mode] menu appears.

2 **Use the four-way controller (▲ ▼) to select [Quality Level].**

3 **Press the four-way controller (▶).**
The pull-down menu appears.

4 **Use the four-way controller (▲ ▼) to change the quality level.**
The maximum number of pictures you can take is displayed at the top of the screen when you select a quality level.
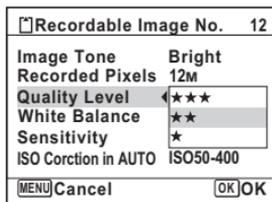
```
Recordable Image No.    12
Image Tone          Bright
Recorded Pixels     12M
Quality Level       ★★★
White Balance       ★★
Sensitivity         ★
ISO Corction in AUTO ISO50-400
MENU Cancel              OK OK
```

5 **Press the OK button.**
The setting is saved.

6 **Press the MENU button.**
The camera is ready for taking pictures.

memo
In ● (Green) mode, the quality level is fixed at ★★ (Better).

Adjusting the White Balance

You can take pictures in natural colors by adjusting the white balance according to the light conditions at the time of shooting.

AWB	Auto	The camera adjusts the white balance automatically.
☀	Daylight	Use this mode when taking pictures outside in sunlight.
⛅	Shade	Use this mode when taking pictures outside in the shade.
⚡	Tungsten Light	Use this mode when taking pictures under electric or other tungsten light.
🗮D	Daylight Colors Fluorescent	
🗮N	Daylight White Fluorescent	Use this mode when taking pictures under different types of fluorescent light.
🗮W	White Light Fluorescent	
🖵	Manual	Use this mode when adjusting the white balance manually.

memo
- Set another white balance if you are not satisfied with the color balance of pictures taken with the white balance set to **AWB**.
- Depending on the selected shooting mode, the white balance setting may not be changed. Refer to "Functions Available for Each Shooting Mode" (p.240) for details.

1 **Press the MENU button in ✿ mode.**
The [✿ Rec. Mode] menu appears.

2 **Use the four-way controller (▲▼) to select [White Balance].**

3 **Press the four-way controller (▶).**
The [White Balance] screen appears.

4 Use the four-way controller (▲ ▼) to change the setting.

You can check the results of available white balance settings on the preview image each time you press the four-way controller (▲ ▼). To select a type of fluorescent lighting, select an icon for Fluorescent Light and press the four-way controller (▶). On the pull-down menu that appears, use the four-way controller (▲ ▼) to select a type of lighting.

White Balance
AWB Auto

MENU Cancel   OK OK

5 Press the OK button.

The setting is saved.

6 Press the MENU button.

The camera returns to capture status.
Refer to the following "Manual Setting" for instructions on adjusting the white balance manually.

memo — If you change the [White Balance] setting frequently, you can save time by assigning it to the Green button (p.140).

Manual Setting

Have a blank sheet of white paper or similar material ready.

1   **In the [White Balance] screen, use the four-way controller (▲ ▼) to select ⬚ (Manual).**

2   **Point the camera at the blank sheet of paper or other material so that it fills the frame displayed in the center of the screen.**

White Balance

AWB
☀
☁
☀̣
🔆D
⬚
SHUTTER **Adjust**
MENU **Cancel**   OK **OK**
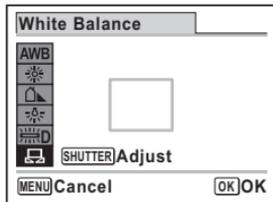
3   **Press the shutter release button fully.**
    The white balance is automatically adjusted.

4   **Press the OK button.**
    The setting is saved and the screen returns to the [🖝 Rec. Mode] menu.

5   **Press the MENU button.**
    The camera returns to capture status.

Setting the Sensitivity

You can select the sensitivity to suit the brightness of the surroundings.

AUTO	The sensitivity is automatically adjusted by the camera. (Sensitivity 50 - 800)
50	The lower the sensitivity, the less noise that affects the image. The shutter speed will be slower in low light conditions.
100	
200	
400	
800	
1600	Higher sensitivity settings use faster shutter speeds in low light conditions to reduce camera shake, but the image may be affected by noise.
3200	
6400	

⚠ Caution

When the [Bright Area Adj.] is set to on, the sensitivity cannot be set to 50.

1 Press the MENU button in ✿ mode.

The [✿ Rec. Mode] menu appears.

2 Use the four-way controller (▲ ▼) to select [Sensitivity].

3 Press the four-way controller (▶).

A pull-down menu appears.

4 Use the four-way controller (▲ ▼) to change the sensitivity.
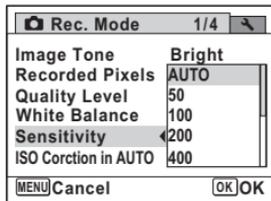
✿ Rec. Mode	1/4 🔧
Image Tone	**Bright**
Recorded Pixels	**AUTO**
Quality Level	**50**
White Balance	**100**
Sensitivity	**◀200**
ISO Corction in AUTO	**400**
MENU Cancel	OK OK

5 Press the OK button.

The setting is saved.

6 Press the MENU button.

The camera returns to capture status.

memo
- When the sensitivity is set to 3200 or 6400, the number of recorded pixels is fixed at 5M (2592×1944).
- When set to (▲) (Digital SR), ● (Green) or 🎬 (Movie) mode, only [AUTO] is available.
- When set to ※ (Fireworks) mode, the sensitivity is fixed at its minimum setting.
- When the 3:2 , 16:9 , 1:1 size is selected, you cannot select 3200 or 6400.
- In M (Manual) mode, you cannot select [AUTO].

Saving the Sensitivity setting ☞p.147

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Setting ISO Correction in AUTO

Set the sensitivity range when the sensitivity is set to AUTO.
You can select from 50-100, 50-200, 50-400, 50-800, and 50-1600.

> **Caution**
> • When [Bright Area Adj.] is on, the sensitivity cannot be set to 50. The minimum sensitivity is set to 100.
> • When the 🔲 (Continuous Shooting(M)) or 🔲 (Continuous Shooting(H)) mode is selected as the drive mode, the sensitivity is fixed at [AUTO].

1 **Press the MENU button in ✿ mode.**
The [✿ Rec. Mode] menu appears.

2 **Use the four-way controller (▲ ▼) to select [ISO Corction in AUTO].**

3 **Press the four-way controller (▶).**
A pull-down menu appears.

4 **Use the four-way controller (▲ ▼) to select the sensitivity adjustment range.**
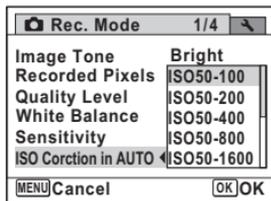
✿ Rec. Mode	1/4 🔧
Image Tone	**Bright**
Recorded Pixels	ISO50-100
Quality Level	ISO50-200
White Balance	ISO50-400
Sensitivity	ISO50-800
ISO Corction in AUTO ◀	ISO50-1600
MENU Cancel	OK OK

5 **Press the OK button.**
The setting is saved.

6 **Press the MENU button.**
The camera returns to capture status.

Setting the AE Metering

You can set the area of the screen where the brightness is metered to determine the exposure.

⊚	Multi-segment metering	The camera divides the image into 256 areas, meters the brightness and determines the exposure.
⊚	Center-weighted metering	The camera takes a reading of the overall brightness of the picture with the center of the image having more influence on the exposure.
•	Spot AE metering	The camera determines the exposure by metering the brightness only at the center of the image.

1 Press the MENU button in ✿ mode.
The [✿ Rec. Mode] menu appears.

2 Use the four-way controller (▲ ▼) to select [AE Metering].

3 Press the four-way controller (▶).
A pull-down menu appears.

4 Use the four-way controller (▲ ▼) to select a metering method.
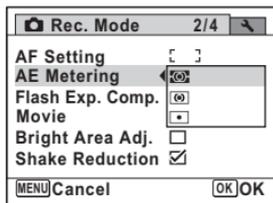
```
✿ Rec. Mode        2/4  🔧
AF Setting       [   ]
AE Metering      ◀ ⊚
Flash Exp. Comp.   ⊚
Movie              •
Bright Area Adj.   ☐
Shake Reduction    ☑
MENU Cancel            OK OK
```

5 Press the OK button.
The setting is saved.

6 Press the MENU button.
The camera returns to capture status.

- When the shutter release button is pressed halfway, the brightness is metered and the exposure is determined.
- When the subject is outside the focusing area and you want to use ⏺ (Spot AE metering), aim the camera at the subject and press the shutter release button halfway to lock the exposure, then compose your picture again and press the shutter release button fully.
- Depending on the selected shooting mode, the [AE Metering] setting may not be changed. Refer to "Functions Available for Each Shooting Mode" (p.240) for details.

Saving the AE Metering setting ☞p.147

Compensating for Flash Output

You can adjust the flash output.

1 **Press the MENU button in ✿ mode.**
The [✿ Rec. Mode] menu appears.

2 **Use the four-way controller (▲ ▼) to select [Flash Exp. Comp.].**

3 **Use the four-way controller (◀ ▶) to select the EV value.**

To brighten, select a positive (+) value. To darken, select a negative (–) value.
You can choose the EV value in the range of –2.0 EV to +2.0 EV in 1/3 EV steps.

✿ Rec. Mode	2/4
AF Setting	[ ]
AE Metering	◎
Flash Exp. Comp.	±0.0
Movie	
Bright Area Adj.	☐
Shake Reduction	☑

MENU Exit
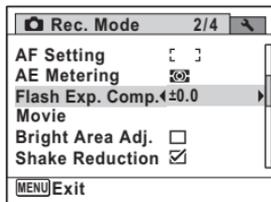
4 **Press the MENU button.**
The camera returns to capture status.

Compensating for Brightness

You can set whether to compensate for overexposed or blown-out parts of the subject. The default setting is □ (Off).

1 Press the MENU button in ✿ mode.

The [✿ Rec. Mode] menu appears.

2 Use the four-way controller (▲▼) to select [Bright Area Adj.].

3 Use the four-way controller (◀▶) to switch between ☑ (On) or □ (Off).

☑ (On) Compensates for brightness.
□ (Off) Does not compensate for brightness.

The setting is saved.

```
✿ Rec. Mode        2/4
AF Setting          [   ]
AE Metering         ◙
Flash Exp. Comp.    ±0.0
Movie
Bright Area Adj.  ◀□   ▶
Shake Reduction     ☑
MENU Exit
```
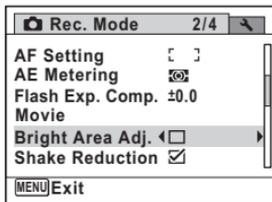
4 Press the MENU button.

The camera returns to capture status.

Taking Pictures Using the Shake Reduction Function

You can easily take sharp pictures using the Shake Reduction function.

Shake Reduction

The Shake Reduction function reduces camera shake that occurs when the shutter release button is pressed. This is useful for taking pictures in situations where camera shake is likely to occur.
The Shake Reduction function is ideal when taking pictures in the following situations.

- When taking pictures in dimly lit locations, such as indoors, at night, on cloudy days and in the shade
- When taking telephoto pictures

Blurred picture

Picture taken with
the Shake Reduction function

- The Shake Reduction function does not compensate for blurring caused by subject movement. To take pictures of a moving subject, increase the shutter speed.
- The Shake Reduction function may not fully reduce camera shake when taking close-up shots. In this case, it is recommended that the camera be used with a tripod.
- The Shake Reduction function will not fully work when shooting with a very slow shutter speed, for example when shooting a moving subject or night scenes. In this case, it is recommended that the camera be used with a tripod.

Setting the Shake Reduction

You can set this function to correct for camera shake during shooting. If the Shake Reduction is set to ☑ (On), the camera automatically corrects for camera shake in the images you shot. The default setting is ☑ (On).

1 **Press the MENU button in ✿ mode.**

The [✿ Rec. Mode] menu appears.

2 **Use the four-way controller (▲▼) to select [Shake Reduction].**

3 **Use the four-way controller (◄►) to switch between ☑ (On) or □ (Off).**

☑ (On) Automatically corrects for camera shake.

□ (Off) No correction for camera shake.

The setting is saved.

✿ Rec. Mode	2/4	🔧
AF Setting	[ ]	
AE Metering	◉	
Flash Exp. Comp.	±0.0	
Movie		
Bright Area Adj.	□	
Shake Reduction	◄☑	►

MENU Exit
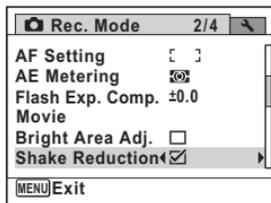
4 **Press the MENU button.**

The camera returns to capture status.

Setting the Interval Shooting

In this mode, a set number of pictures can be taken automatically at a set interval from a set time.

Interval	10 sec. – 99 min.	Set the camera to take pictures in one second increments from ten seconds to four minutes intervals or in one minute increments from four minutes to 99 minutes intervals. You cannot set the camera to take interval shots at intervals of less than ten seconds.
Number of Shots	2 shots – number of recordable images	You can set this to up to 1000 shots. However, this cannot exceed the number of recordable images.
Start Delay	0 min. – 24 hours	You can set one minute increments for the first 59 minutes and one hour increments from there. If the start time is set to 0 min., the first picture is taken as soon as the shutter release button is pressed.

1 **Press the MENU button in ✿ mode.**

The [✿ Rec.Mode] menu appears.

2 **Use the four-way controller (▲ ▼) to select [Interval Shoot].**

```
✿ Rec. Mode        3/4
Interval Shoot          ▶
Blink Detection      ☑
Digital Zoom         ☑
Instant Review       ☑
Memory
Green Button         ◯
MENU Exit
```

3 **Press the four-way controller (▶).**

The [Interval Shoot] setting screen appears. [Interval] is marked with the frame.

4 **Set the interval.**

1 **Press the four-way controller (▶).**
2 **Use the four-way controller (▲ ▼) to set the minutes, then press the four-way controller (▶).**
3 **Use the four-way controller (▲ ▼) to set the seconds, then press the four-way controller (▶).**

```
Interval Shoot

Interval      ▶ 0min. 10sec.

Number of Shots  2

Start Delay    0hr.   0min.

MENU ⤿
```
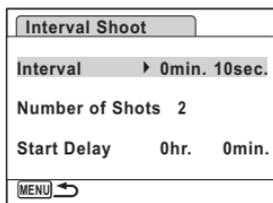
The setting is saved, and the frame returns to [Interval].

5 Press the four-way controller (▼).

The frame moves to [Number of Shots].

6 Set the number of shots.

1 Press the four-way controller (▶).
2 Use the four-way controller (▲▼) to set [Number of Shots], then press the four-way controller (▶).

The setting is saved, and the frame returns to [Number of Shots].

7 Press the four-way controller (▼).

The frame moves to [Start Delay].

8 Set the start delay.

1 Press the four-way controller (▶).
The current time and the recording start time are displayed in real-time.
2 Use the four-way controller (▲▼) to set the hours, then press the four-way controller (▶).
3 Use the four-way controller (▲▼) to set the minutes, then press the four-way controller (▶).

Interval Shoot	
Current Time	10:00 AM
Start Time	10:00 AM
Start Delay	0hr. 0min.
MENU Cancel	OK OK

The setting is saved, and the frame returns to [Start Delay].
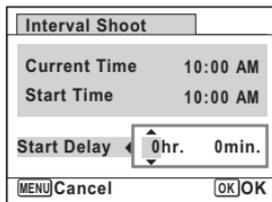
9 Press the MENU button twice.

The camera returns to the shooting screen. The operations up to this point have only configured the [Interval Shoot] settings. To actually use interval shooting, you must select [Interval Shoot] from the drive mode.

Taking Pictures at a Set Interval (Interval Shoot) ☞p.98

> Interval shooting is not available in ▇▇◀, ▇▇▇, ▇, ● or ○ mode.

> The [Interval Shoot] settings can also be configured from the drive mode. (p.98)

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Setting Blink Detection

This specifies whether Blink Detection works when you use the Face Recognition function. The default setting is ☑ (On).

1 **Press the MENU button in ✿ mode.**
The [✿ Rec. Mode] menu appears.

2 **Use the four-way controller (▲▼) to select [Blink Detection].**

3 **Use the four-way controller (◀▶) to select ☑ (On) or □ (Off).**

   ☑(On)   Blink Detection function works.
   □ (Off) Blink Detection function does not work.

The setting is saved.

✿ Rec. Mode	3/4
Interval Shoot	
Blink Detection ◀	☑ ▶
Digital Zoom	☑
Instant Review	☑
Memory	
Green Button	▢
MENU Exit	
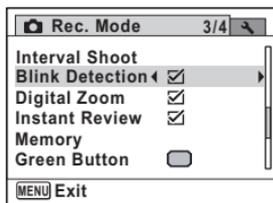
4 **Press the MENU button.**
The camera returns to capture status.

Blink Detection ☞p.67

Setting the Instant Review

Use this setting to specify whether or not an Instant Review is displayed immediately after images are shot. The default setting is ☑ (On: displays the image for 1 second).

1 **Press the MENU button in ✿ mode.**
The [✿ Rec. Mode] menu appears.

2 **Use the four-way controller (▲▼) to select [Instant Review].**

3 **Use the four-way controller (◄ ►) to select ☑ (On) or □ (Off).**

☑ (On) Instant Review is displayed for 1 second.

□ (Off) Instant Review is not displayed.

The setting is saved.

	Rec. Mode	3/4	
Interval Shoot			
Blink Detection	☑		
Digital Zoom	☑		
Instant Review	◄ ☑	►	
Memory			
Green Button	⬜		

MENU Exit
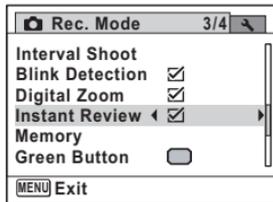
4 **Press the MENU button.**

The camera returns to capture status.

Instant Review ☞p.67

memo   If the Blink Detection function worked when shooting, [Closed eyes have been detected.] is displayed for 3 seconds during Instant Review.

Setting the Image Sharpness (Sharpness)

You can give the image sharp or soft outlines.

1 **Press the MENU button in ✆ mode.**
The [✆ Rec. Mode] menu appears.

2 **Use the four-way controller (▲ ▼) to select [Sharpness].**

3 **Use the four-way controller (◄ ►) to change the sharpness level.**

▄─·─· Soft

─▄─· Normal

─·─▄ Sharp
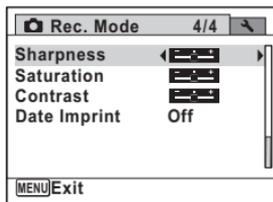
✆ Rec. Mode	4/4	
Sharpness	◄ ▭▬▭	►
Saturation	▭▬▭	
Contrast	▭▬▭	
Date Imprint	Off	

MENU Exit

4 **Press the MENU button.**

The setting is saved and the camera returns to capture status.

3

Taking Pictures

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Setting the Color Saturation/Tone (Saturation/ Tone Adjustment)

You can set either color brightness (Saturation) or the tone of monochrome images (Tone Adjustment).
The items displayed change depending on the [Image Tone] selected on the [A Rec. Mode] menu.

Selected Image Tone	Displayed item
Bright, Natural	Saturation
Monochrome	Tone Adjustment

1   **Press the MENU button in A mode.**
The [A Rec. Mode] menu appears.

2   **Use the four-way controller (▲ ▼) to select [Saturation (Tone Adjustment)].**

3   **Use the four-way controller (◀ ▶) to select the level of saturation (or tone).**

- ▪—⋅—⁺ Low (Blue for tone)
- ⁻—▪—⁺ Normal (B&W for tone)
- ⁻—⋅—▪ High (Sepia for tone)

```
┌─ A Rec. Mode      4/4  🔧 ─┐
│ Sharpness         ▭▬▭        │
│ Saturation      ◀ ▭▬▭ ▶     │
│ Contrast          ▭▬▭        │
│ Date Imprint      Off        │
│                              │
│                              │
│ MENU Exit                    │
└──────────────────────────────┘
```

4   **Press the MENU button.**
The setting is saved and the camera returns to capture status.
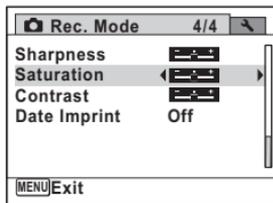
Setting the Image Contrast (Contrast)

You can set the image contrast level.

1 **Press the MENU button in ▲ mode.**
The [▲ Rec. Mode] menu appears.

2 **Use the four-way controller (▲ ▼) to select [Contrast].**

3 **Use the four-way controller (◀ ▶) to change the contrast level.**

    ▪— · —⁺ Low
    —▪—⁺ Normal
    — · —▪ High
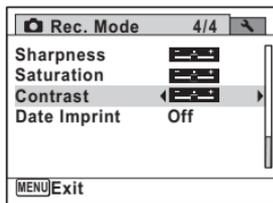
▲ Rec. Mode	4/4 🔧
Sharpness	▬▬▬
Saturation	▬▬▬
Contrast	◀▬▬▬▶
Date Imprint	Off

| MENU Exit |

4 **Press the MENU button.**
The setting is saved and the camera returns to capture status.

Setting the Date Imprint Function

You can choose whether to imprint the date and/or time when taking still pictures.

1. **Press the MENU button in ○ mode.**
   The [○ Rec. Mode] menu appears.

2. **Use the four-way controller (▲ ▼) to select [Date Imprint].**

3. **Press the four-way controller (▶).**
   A pull-down menu appears.

4. **Use the four-way controller (▲ ▼) to select the Date Imprint details.**
   Choose from [Date], [Date & Time], [Time] or [Off].
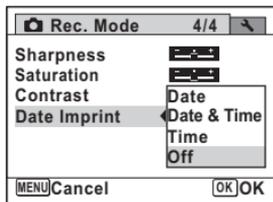
○ Rec. Mode	4/4 🔧
Sharpness	▭▬▭
Saturation	▭▬▭
Contrast	Date
Date Imprint	◀ Date & Time
	Time
	Off
MENU Cancel	OK OK

5. **Press the OK button.**
   The setting is saved.

6. **Press the MENU button.**
   The camera returns to capture status.

> ⚠ Caution
> • The date and/or time imprinted with the [Date Imprint] function cannot be deleted.
> • Note that if the printer or the image editing software is set to print the date and the images to be printed already have the date and/or time imprinted, the imprinted dates and/or times may overlap.

> memo
> • 🗓 appears on the display in ○ mode when [Date Imprint] is set to any setting other than [Off].
> • The date and/or time are imprinted on the picture with the display style set in the [Date Adjust] screen (p.44).

3 Taking Pictures

139

Setting the Green Button

You can assign one of the following functions to the Green button:
[Green Mode] (p.80) or [Fn Setting] (p.141). You can activate the
assigned function by just pressing the Green button.

Assigning a Function

1 **Press the MENU button in ◘ mode.**
The [◘ Rec.Mode] menu appears.

2 **Press the four-way controller
(▲▼) to select [Green Button].**

◘ Rec. Mode	3/4
Interval Shoot	
Blink Detection	☑
Digital Zoom	☑
Instant Review	☑
Memory	
Green Button	▭ ▶

MENU Cancel
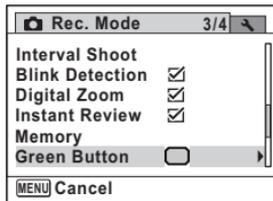
3 **Press the four-way controller (▶).**
The [Green Button] setting screen appears.

4 **Use the four-way controller (▲▼)
to select the function you want to
register.**
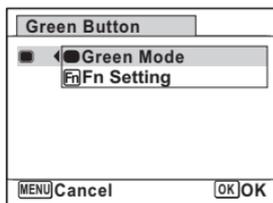
Green Button
■ ◀ ● Green Mode
Fn Fn Setting

MENU Cancel   OK OK

5 **Press the OK button.**
The setting is saved.

6 **Press the MENU button.**
The camera returns to capture status.

memo [Green Mode] is registered as the default setting.

Registering Frequently Used Functions (Fn Setting)

You can register frequently used functions on the four-way controller. Using this function, you can directly set the functions by pressing the four-way controller without displaying the menu in capture mode. In [Fn Setting], still picture mode and movie mode have different settings. To execute [Fn Setting] in movie mode, press **MENU** button in movie mode in Step 1 on page 140.

4 **Use the four-way controller (▲ ▼) to select [Fn Setting].**

```
Green Button
 ■  ◀ ● Green Mode
       Fn Fn Setting
 + ⓐ   Recorded Pixels
 + ⓥ   Quality Level
 + ⓐ WB White Balance
 + ⓑ ISO Sensitivity
 MENU Cancel           OK OK
```
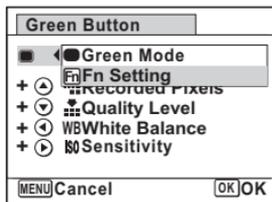
5 **Press the OK button.**
The [Fn Setting] screen appears.

6 **Use the four-way controller (▲ ▼) to select a key you want to assign a function to.**

```
Green Button
 ■  ▶ Fn Fn Setting
 + ⓐ   Recorded Pixels
 + ⓥ   Quality Level
 + ⓐ WB White Balance
 + ⓑ ISO Sensitivity
 MENU ←
```
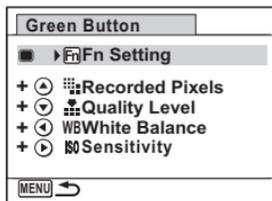
7 **Press the four-way controller (▶).**
The pull-down menu appears.

8 **Use the four-way controller (▲ ▼) to select a function you want to assign.**
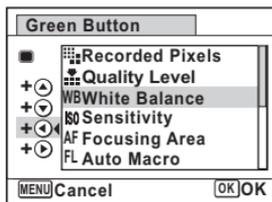
```
Green Button
 ■        Recorded Pixels
          Quality Level
 + ⓐ   WB White Balance
 + ⓥ   ISO Sensitivity
 + ⓐ   AF Focusing Area
 + ⓑ   FL Auto Macro
 MENU Cancel           OK OK
```

9 **Press the OK button.**
The setting is saved.

10 Press the MENU button twice.

The camera returns to capture status.

> ⚠️ Caution
> This function is activated only when you assign the [Fn Setting] to the Green button.

> memo
> You can assign only one function to each key.

The initial settings for Fn Setting

	Still picture mode	Movie mode
Initial settings	(▲) Recorded Pixels	(▲) Movie SR
	(▼) Quality Level	(▼) Recorded Pixels
	(◀) White Balance	(◀) White Balance
	(▶) Sensitivity	(▶) Focusing Area

Functions that can be assigned to each key

	Still picture mode	Movie mode
Selectable items	Recorded Pixels	Recorded Pixels
	Quality Level	Movie SR
	White Balance	White Balance
	Sensitivity	Focusing Area
	Focusing Area	Sharpness
	Auto Macro	Saturation (Tone Adjustment) *
	AE Metering	Contrast
	Bright Area Adj.	
	Shake Reduction	
	Sharpness	
	Saturation (Tone Adjustment) *	
	Contrast	

* The items displayed change depending on the [Image Tone] selected on the [🖿 Rec. Mode] menu. When you have selected either [Bright] or [Natural], [Saturation] is displayed, and when [Monochrome] is selected, [Tone Adjustment] is displayed.

Changing Assigned Items

Press the Green button in the shooting mode to display the Fn Setting screen. Select an item with the four-way controller (▲ ▼ ◀ ▶), and press either the (▲ ▼) or (◀ ▶) four-way controller to change the settings.

Recording Movies

Recording a Movie

This mode enables you to record movies. Sound is recorded at the same time.

Zoom lever
Shutter release button
Four-way controller
OK button
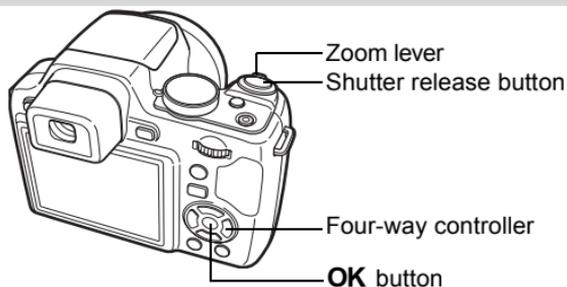
1 In ○ mode, set the mode dial to 🎬.

🎬 (Movie) mode is selected and the camera returns to capture status.

The following information appears on the display.

1 Movie mode icon
2 Recording indicator (blinks during recording)
3 Remaining recordable time
4 Focus frame (does not appear during recording)
5 Movie Shake Reduction function icon
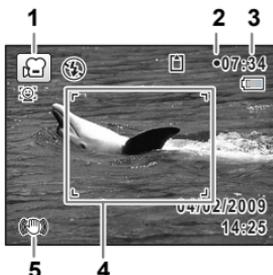
You can change the captured area by turning the zoom lever to the left or right.

Right (♦)   Enlarges the subject.
Left (♦♦♦)   Widens the area that is captured by the camera.
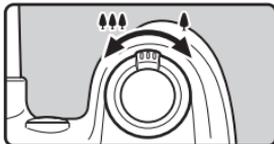
2 **Press the shutter release button fully.**

Recording starts. You can continue recording until the built-in memory or the SD Memory Card is full, or the size of the recorded movie reaches 2 GB.

3 **Press the shutter release button fully.**

Recording stops.

Playing Back a Movie ☞p.151

- The flash does not discharge in 🎥 (Movie) mode.
- The focus mode can be changed before recording starts.
- When the focus mode is set to **MF** (Manual Focus), you can adjust the focus before recording starts.
- You can use the optical zoom only before recording, while the Digital Zoom is available both before and during recording.
- While recording a movie, you cannot use the **DISPLAY** button to switch the shooting information displayed on the monitor.
- When the shooting mode is set to 🎥 (Movie), Face Priority is automatically set to on. You can select Smile Capture or Face Priority Off by pressing the 😃 button before starting recording a movie (p.78). When Smile Capture function is activated, movie recording starts automatically when the camera recognizes the subject's smile. However, depending on the condition of the recognized faces, movie recording may not start automatically because the Smile Capture function may not work. If this happens, press the shutter release button to start movie recording.

Keeping the Shutter Release Button Pressed

If you keep the shutter release button pressed for more than one second, recording will continue as long as you keep the button pressed. Shooting stops when you take your finger off the shutter release button.

3

Taking Pictures

Selecting the Recorded Pixels and Frame Rate for Movies

You can choose the recorded pixels and frame rate settings for movies. The more pixels there are, the clearer the details and the bigger the file size. The more frames per second, the better the quality of the movie, but the file size becomes larger.

Setting	Recorded Pixels	Frame Rate	Use
1280	1280×720	15 fps	Records images in HDTV format (default setting).
848	848x480	30 fps	Records images in HDTV format.
640	640×480	30 fps	Suitable for viewing on a TV or computer screen. Movement is recorded smoothly.
640	640×480	15 fps	Suitable for viewing on a TV or computer screen. Increases the total recording time by making the file size smaller.
320	320×240	30 fps	Suitable for posting on a website or attaching to e-mail. Movement is recorded smoothly.
320	320×240	15 fps	Suitable for posting on a website or attaching to e-mail. Increases the total recording time by making the file size smaller.

* The frame rate (fps) indicates the number of frames per second.

1 **Press the MENU button in $\bullet$ mode.**
   The [$\bullet$ Rec. Mode] menu appears.

2 **Use the four-way controller (▲▼) to select [Movie].**

3 **Press the four-way controller (▶).**
   The [Movie] screen appears.

4 **Use the four-way controller (▲▼) to select [Recorded Pixels].**

5 **Press the four-way controller (▶).**
   A pull-down menu appears.

6 **Use the four-way controller (▲ ▼)
to change the number of recorded
pixels and frame rate.**

☐Rec. Time	00:20
Recorded Pixels	1280
Movie SR	848
	640
	640
	320
	320
MENU Cancel	**OK** OK
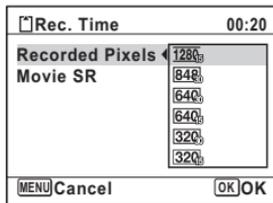
7 **Press the OK button.**
The setting is saved.

8 **Press the MENU button twice.**
The camera returns to capture status.

Setting the Movie SR (Movie Shake Reduction) Function

In 💭 (Movie) mode, you can compensate for camera shake while you are recording a movie with the Movie SR (Movie Shake Reduction) function.

1 **Press the MENU button in ✿ mode.**
The [✿ Rec. Mode] menu appears.

2 **Use the four-way controller (▲ ▼) to select [Movie].**

3 **Press the four-way controller (▶).**
The [Movie] screen appears.

4 **Use the four-way controller (▲ ▼) to select [Movie SR].**

5 **Use the four-way controller (◀ ▶)
to select ☑ (On) or □ (Off).**

☑ (On) Automatically corrects for camera shake.
□ (Off) No correction for camera shake.

Movie	
Recorded Pixels	1280
Movie SR	☑ ▶
MENU ⤴	

The setting is saved.
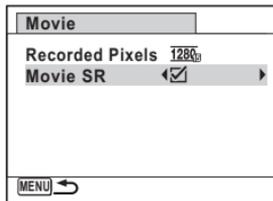
6 **Press the MENU button twice.**
The camera returns to capture status.

Saving the Settings (Memory)

The Memory function is for saving the current camera settings when the camera is turned off.

For some camera settings, the Memory function is always set to ☑ (On) (the settings are saved when the camera is turned off), while for others you can choose on or off (to choose whether the settings are saved or not when the camera is turned off). The items which can be set to ☑ (On) or □ (Off) in the Memory function are shown in the table below. (Items not listed here are always saved in the selected settings when the camera is turned off.)

If you select ☑ (On), the settings will be saved in the status they were in immediately before the camera was turned off. If you select □ (Off), the settings will be reset to the defaults when the camera is turned off. The table below also shows whether the Memory default setting for each item is on or off.

Item	Description	Default Setting	Page
Face Priority	A Face Recognition mode set by using the ☺ button.	□	p.78
Flash Mode	The flash mode set with the four-way controller (◀)	☑	p.110
Drive Mode	The drive mode set with the four-way controller (▲)	□	p.95 - p.101
Focus Mode	The focus mode set with the four-way controller (▶)	□	p.113
Zoom Position	The zoom position set with the zoom lever	□	p.82
MF Position	The manual focus position set with the four-way controller (▲ ▼)	□	p.114
White Balance	The [White Balance] setting on the [✿ Rec. Mode] menu	□	p.123
Sensitivity	The [Sensitivity] setting on the [✿ Rec. Mode] menu	□	p.125
EV Compensation	The [EV Compensation] setting on the [✿ Rec. Mode] menu	□	p.108
AE Metering	The [AE Metering] setting on the [✿ Rec. Mode] menu	□	p.128
Digital Zoom	The [Digital Zoom] setting on the [✿ Rec. Mode] menu	☑	p.84
DISPLAY	The information display mode set with the **DISPLAY** button	□	p.20
File No.	If a new SD Memory Card is inserted when On has been selected, file numbers are assigned sequentially.	☑	—

1   **Press the MENU button in ✿ mode.**
    The [✿ Rec. Mode] menu appears.

2   **Use the four-way controller (▲ ▼) to select [Memory].**

3   **Press the four-way controller (▶).**
    The [Memory] screen appears.

4   **Use the four-way controller (▲ ▼) to choose an item.**

Memory	1/3
Face Priority	◄□ ▶
Flash Mode	☑
Drive Mode	□
Focus Mode	□
Zoom Position	□
MF Position	□
MENU ⤺	
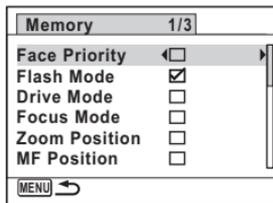
5   **Use the four-way controller (◄ ▶) to select ☑ (On) or □ (Off).**

6   **Press the MENU button twice.**
    The camera returns to capture status.

4 Playing Back and Deleting Images

Playing Back Images
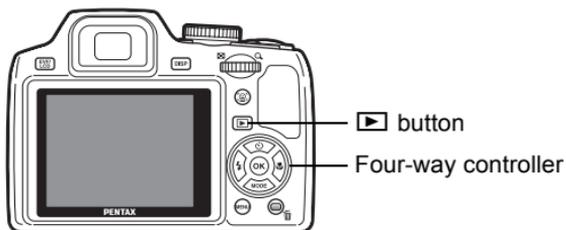
Playing Back Still Pictures

1 Press the ▶ button after taking a picture.

The camera enters the ▶ mode and the image appears on the display. Displaying one image in full in ▶ mode (▶ mode default setting) is called single-image display.

File number

```
100-0038

04/02/2009
Edit                14:25
```

To Play Back the Previous or Next Image

2 Press the four-way controller (◄ ►).

The previous or next image appears.

To Delete the Displayed Image

Press the 面 button while the image is displayed to display the Delete screen. Press the four-way controller (▲) to select [Delete] and press the **OK** button.

```
100-0017

Delete
Cancel

OK OK
```

For information on other deletion procedures ☞p.164

Playing Back a Movie

You can play back the movies you have taken. The sound is played back at the same time.

- e-dial
- $\boxed{\blacktriangleright}$ button
- Four-way controller
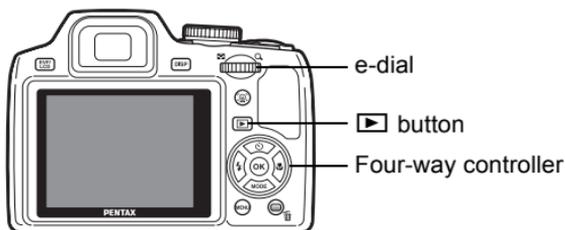
1 **Enter the $\boxed{\blacktriangleright}$ mode and use the four-way controller ($\blacktriangleleft\blacktriangleright$) to choose the movie you want to play back.**

2 **Press the four-way controller ($\blacktriangle$).**
   Playback starts.

The following operations can be performed during playback.

Four-way controller ($\blacktriangleleft$)   Plays back in reverse
Four-way controller ($\blacktriangle$)   Pauses playback
e-dial to the right (Q)   Increases the volume
e-dial to the left ($\boxed{\blacksquare}$)   Reduces the volume
Press and hold the four-way controller ($\blacktriangleright$)
                                        Fast-forwards playback
Press and hold the four-way controller ($\blacktriangleleft$)
                                        Fast-reverses playback

The following operations can be performed while playback is paused.

Four-way controller ($\blacktriangleleft$)   Reverses the frame
Four-way controller ($\blacktriangleright$)   Forwards the frame
Four-way controller ($\blacktriangle$)   Resumes playback

4

Playing Back and Deleting Images

3 **Press the four-way controller (▼).**

Playback stops.

Multi-Image Display

e-dial

▶ button

Four-way controller

OK button
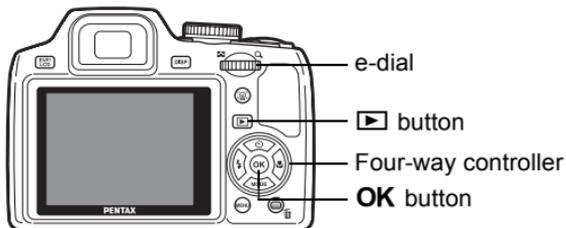
Four-Image Display/Nine-Image Display

You can display four or nine thumbnails of captured images at a time.

1 **In ▶ mode, turn the e-dial to the left (⊡).**

The four-image display appears showing a page consisting of four thumbnail images. Turn the e-dial to the left (⊡) again to switch to the nine-image display.
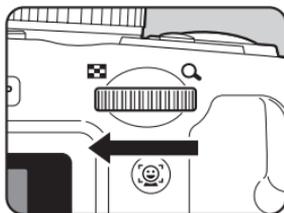
A page consisting of four or nine thumbnail images appears. The displayed images change four or nine images at a time page by page.

Use the four-way controller (▲ ▼ ◀ ▶) to move the frame. If there are too many images to fit on one page, pressing the four-way controller (▲ ◀) while the image ① is selected will display the previous page. Similarly, if you choose image ② and press the four-way controller (▼ ▶), the next page appears.

♦ Indicates that the previous or next screen is stored in a separate folder.
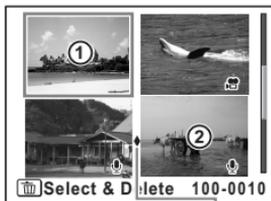
Four-Image Display
Folder divider icon
Frame
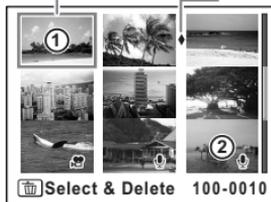
Nine-Image Display

The icons that appear on the images indicate the following:

(No icon)	Still picture without sound
🎤 (with image)	Still picture with sound
🎬	Movie (the first frame appears)

Press the **OK** button to switch to single-image display of the selected image.

Press the ▶ button to switch to ▲ mode.

Folder Display/Calendar Display

In nine-image display, turn the e-dial to the left (◪) to switch to folder display or calendar display. Press the Green button to switch between folder display and calendar display.

1 **In** ▣ **mode, turn the e-dial to the left (◪) twice.**

The screen changes to nine-image display.
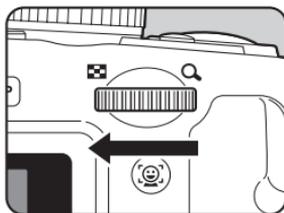
2 **Turn the e-dial to the left (◪).**

The screen changes to folder display or calendar display.

Folder display

The list of folders with recorded images and sound files appears.

Use the four-way controller (▲ ▼ ◀ ▶) to move the frame.

Press the **OK** button or turn the e-dial to the right (Q) to display the images in the selected folder in nine-image display.

Frame

```
┌──────────────────────────┐
│ 100    101    102         │
│                           │
│ 103    104                │
│                           │
│ ■▦              100_0707  │
└──────────────────────────┘
```

4 **Playing Back and Deleting Images**
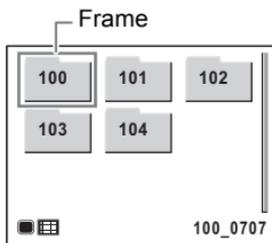
Calendar display

Recorded images and sound files are displayed by date in calendar format. The first image recorded on a date is displayed for that date on the calendar. $\mathbb{\Psi}$ appears for dates on which a still picture with voice memo was the first recorded file. Use the four-way controller ($\blacktriangle \blacktriangledown \blacktriangleleft \blacktriangleright$) to move the frame to a different date.

Turn the e-dial to the right (Q) to display the images for a date in nine-image display.

Select a date and press the **OK** button to switch to single-image display of the first image recorded on that date.

Frame

SUN MON TUE WED THU FRI SAT

2009. 04

---
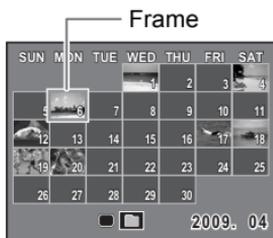
memo
- Press the **MENU** button in folder display or calendar display to switch to nine-image display.
- Press the $\boxed{\blacktriangleright}$ button or half-press the shutter release button in folder display or calendar display to switch to $\boxed{\bullet}$ mode.

Using the Playback Function

1 **Press the four-way controller ($\blacktriangledown$) in $\boxed{\blacktriangleright}$ mode.**
The Playback Mode Palette appears.

2 **Use the four-way controller ($\blacktriangle \blacktriangledown \blacktriangleleft \blacktriangleright$) to choose an icon.**
The guide for the selected function appears below.

3 **Press the OK button.**
The playback function is recalled.

4

Playing Back and Deleting Images
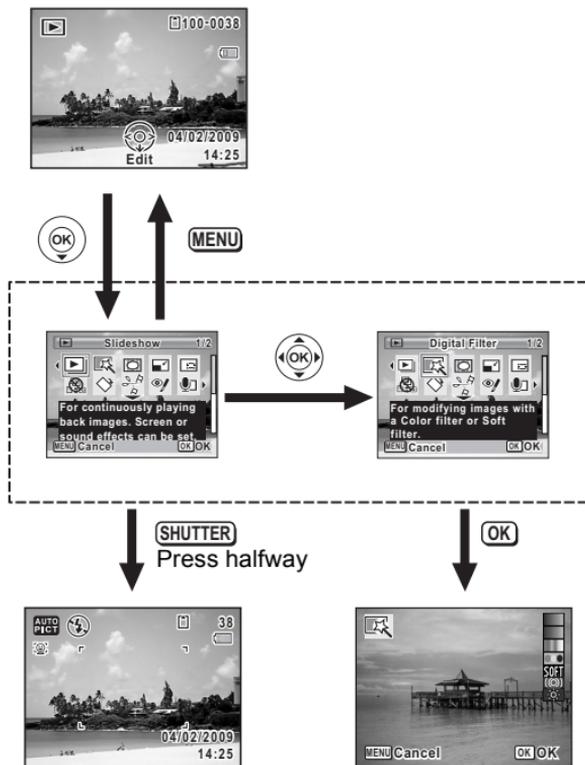
Closes the Playback Mode
Palette and goes to $\bigcirc$ mode.

Goes to the screen for
selected playback function.

memo
- When the frame is placed over each icon on the Playback Mode
  Palette, a guide for each function appears.
- You can turn the guide display off for each function on the Playback
  Mode Palette. (p.213)

Playback Mode Palette

Playback Mode			Description	Page
▣	Slideshow		For continuously playing back images. Screen or sound effects can be set.	p.158
🔆	Digital Filter		For modifying images with a Color filter or Soft filter.	p.178
◯	Frame Composite		For composing an image with a frame. Select Overwrite or Save as to save.	p.183
◪	Resize		Changes Recorded Pixels and Quality Level to make the file size smaller.	p.176
⬚	Cropping		For cropping images to the size you like. Saved as a new image.	p.177
🎞	Image/Sound Copy		For copying images and sounds between the built-in memory and SD Memory Card.	p.188
◇	Image Rotation		Rotates captured images. Useful when viewing vertical images on a TV.	p.160
✂	Movie Edit	Save as Still Image	For saving one frame from a movie as a still picture.	p.186
		Divide Movies	For dividing a movie into two.	
◎	Red-eye Compensation		For compensating red-eye. May not work due to the condition of the image.	p.182
🎤	Voice Memo		Attaches sound to images. Recording is possible till the memory card is full.	p.194
⊶	Protect		Protects images and sounds from accidental deletion. Formatting will delete.	p.170
🖨	DPOF		For the print settings. Useful when printing at a printing service.	p.190
✎	Image Recovery		For recovering image and sound files which were accidentally deleted.	p.169
▣	Start-up Screen		For setting a captured image as the Start-up Screen.	p.213

Slideshow

You can play back recorded images one after another.

1 **Enter the ▶ mode and use the four-way controller (◀ ▶) to choose the image to start the slideshow with.**

2 **Press the four-way controller (▼).**
The Playback Mode Palette appears.

3 **Use the four-way controller (▲ ▼ ◀ ▶) to select ▣ (Slideshow).**

Slideshow   1/2

For continuously playing back images. Screen or sound effects can be set.

MENU Cancel   OK OK

4 **Press the OK button.**
The slideshow setting screen appears.

5 **Press the OK button.**
The slideshow starts.
Pressing the **OK** button during the slideshow pauses the slideshow. To resume the slideshow, press the **OK** button again.

▶ **Slideshow starts**

Start

Interval   3sec.
Screen Effect   Wipe
Sound Effect   ☑

MENU ↩   OK OK
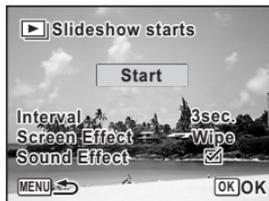
6 **Press any button other than the OK button.**
The slideshow stops.

To Set the Slideshow Conditions

You can set the playback interval and also a screen effect and sound effect for when one image changes to the next.

1   **Use the four-way controller (▲ ▼) to select [Interval] in Step 5 on p.158.**
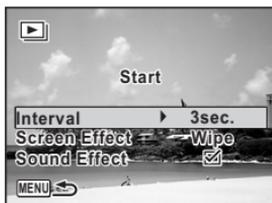
2   **Press the four-way controller (▶).**
A pull-down menu appears.

3   **Use the four-way controller (▲ ▼) to change the interval and press the OK button.**
Choose from [3sec.], [5sec.], [10sec.], [20sec.] or [30sec.].

4   **Use the four-way controller (▲ ▼) to select [Screen Effect].**
After selecting [Screen Effect], press the four-way controller (▶). A pull-down menu appears with the following items. Use the four-way controller (▲ ▼) to select an item and press the OK button.

Wipe	The next image slides over the previous one from left to right
Checker	The next image appears in small square mosaic blocks
Fade	The current image gradually fades out and the next image fades in
Off	No effect

5   **Use the four-way controller (▲ ▼) to select [Sound Effect].**

6   **Use the four-way controller (◀ ▶) to select ☑ (On) or ☐ (Off).**
Except when the [Screen Effect] is set to Off, you can choose ☑ (On) or ☐ (Off) for the sound that is played when one image changes to the next.

7   **Use the four-way controller (◀ ▶) to select [Start].**

8 Press the OK button.

The slideshow starts using the selected interval and effect.

memo
- The slideshow will continue until you press any button other than the **OK** button.
- Movies or pictures with sound will be played through to the end before the next picture is played back, regardless of the interval setting. However, pressing the four-way controller (▶) while playing back a movie or a picture with sound skips to the next image.
- Panorama images will be scrolled for display from left to right in 4 seconds before the next picture is played back, regardless of the Interval or Screen Effect setting.

Connecting the Camera to AV Equipment ☞p.173

Rotating the Image

▶ button

Four-way controller
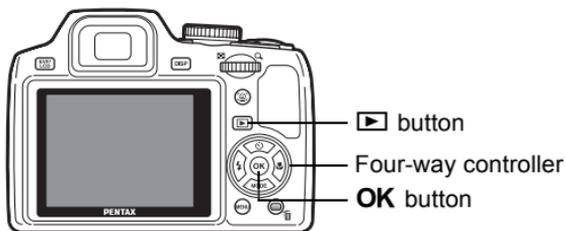
OK button

## 1 Press the ▶ button after taking a picture.

The image appears on the display.

2 Press the four-way controller (▼).

The Playback Mode Palette appears.

3 Use the four-way controller (▲▼◀▶) to select ◇ (Image Rotation) and press the OK button.

The rotation selection screen (0°, Right 90°, Left 90°, or 180°) appears.

4

Playing Back and Deleting Images

4 **Use the four-way controller (▲ ▼ ◀ ▶) to choose the rotation direction and press the OK button.**

The rotated image is saved.

MENU Cancel   OK OK
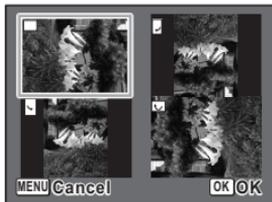
memo
- Panoramic images and movies cannot be rotated.
- Protected images can be rotated, but they cannot be saved in a rotated state.

Zoom Playback

You can magnify an image up to ten times.

e-dial

▶ button

Four-way controller

OK button
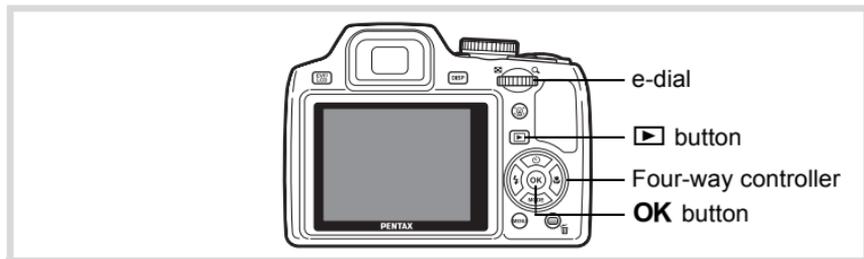
1 **Enter the ▶ mode and use the four-way controller (◀ ▶) to choose the image you want to magnify.**

2 **Turn the e-dial to the right (Q).**

The image is magnified (×1.1 to ×10). Continuing to turn the e-dial to the right (Q) changes the magnification continuously.

When the Quick Zoom function (p.212) is set to ☑ (on), you can magnify the image at 10x by simply rotating the e-dial to the right (Q).
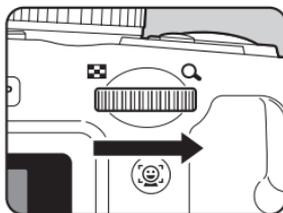
You can use the + mark of the guide at the bottom left of the screen to check which portion of the image is magnified.

The following operations can be performed while the magnified image is displayed.

Four-way controller (▲ ▼ ◀ ▶)	Moves the position to be magnified
e-dial to the right (Q)	Makes the image bigger (max. ×10)
e-dial to the left (⊞)	Makes the image smaller (min. ×1.1)

Guide

3 Press the OK button.
The image returns to single-image display.

memo Movies cannot be magnified.

Zoom In on the Subject's Face Automatically (Face Close-up Playback)

You can enjoy playing back images with the subject's faces zoomed up simply by pressing the ◉ button (Face close-up playback) if the Face Recognition function operated when the images were taken.
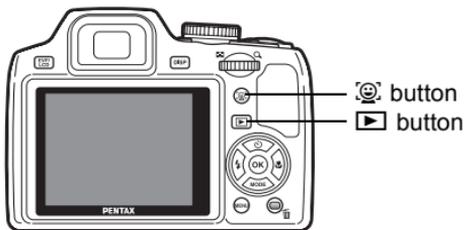
◉ button
▶ button

1 Enter the ▶ mode and use the four-way controller (◀ ▶) to choose the image you want to magnify.

2 Confirm that the 😊 icon is displayed in the image and press the 😊 button.

The image is magnified around the face first recognized when the image was taken.
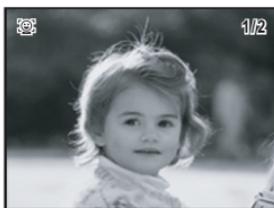
If multiple faces were recognized when the image was taken, the subject's faces are zoomed up on each time the 😊 button is pressed in order of the recognition during shooting.
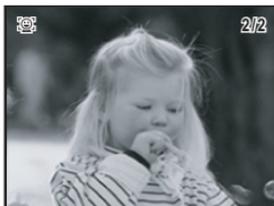
The following operations can be performed during Face close-up playback mode.

e-dial to the right (Q)	Zooms in on the subject being displayed for face close-up playback from an equal or slightly larger magnification ratio.
e-dial to the left (🖼)	Zooms out on the subject being displayed for face close-up playback from an equal or slightly smaller magnification ratio.
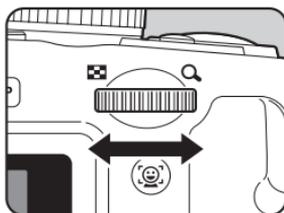
3 Press the OK button.

The image returns to single-image display.

memo
The magnification ratio for Face close-up playback may differ depending on the conditions such as the size of the face recognized when shooting.

Deleting Images and Sound Files

Delete images and sound files with mistakes or that you do not want to keep.

When images or sound files are inadvertently deleted
Deleted images and sound files can be recovered with the X70 (p.169).
Deleted images and sound files can be recovered even if the camera has been turned off after deletion as long as the SD Memory Card has not been removed. However, deleted images and sound files cannot be recovered after operations to write data such as taking pictures, recording movies, protecting images, saving DPOF settings, resizing images, cropping images, or formatting have been performed.

Deleting a Single Image

You can delete a single image.

> **Caution** Protected images cannot be deleted (p.170).

- ▶ button
- Four-way controller
- **OK** button
- ⌫ button
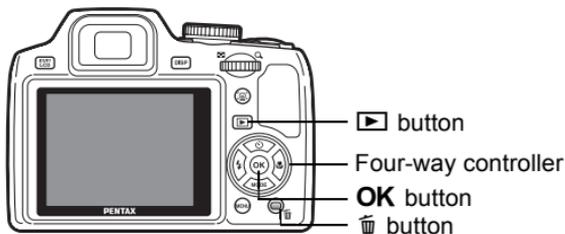
1 **Enter the ▶ mode and use the four-way controller (◀ ▶) to choose the image you want to delete.**

2 **Press the ⌫ button.**
A confirmation screen appears.

4

Playing Back and Deleting Images

3 **Use the four-way controller (▲)**
to select [Delete].

Delete
Cancel

100-0017

OK OK

4 **Press the OK button.**
The image is deleted.

Recovering Deleted Images ☞p.169

To Delete a Sound File

If sound (voice memo) has been recorded with an image (p.194), you
can delete the sound without deleting the image.

1 **Enter the ▶ mode and use the four-way controller**
(◀▶) to choose the image with sound.

2 **Press the 🗑 button.**
A confirmation screen appears.

3 **Use the four-way controller (▲) to**
select [Delete Sound].

Delete Sound
Delete
Cancel

100-0017

OK OK
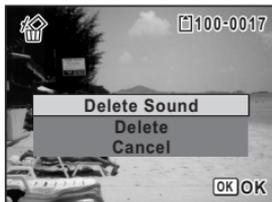
4 **Press the OK button.**
The sound file is deleted.

memo
- Select [Delete] in Step 3 above to delete both the image and sound file.
- You cannot delete only the sound in a movie.

4 Playing Back and Deleting Images

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Deleting Selected Images and Sound Files

You can delete several images/sound files selected from the four-/nine-image display at once.

> **Caution**
>
> Protected images and sound files cannot be deleted (p.170).

e-dial

Q button

Four-way controller
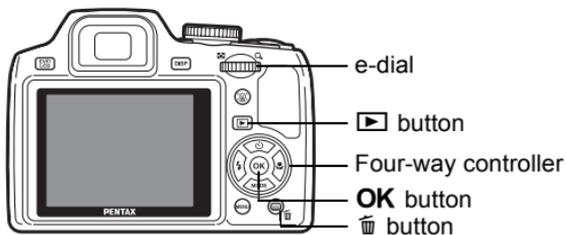
OK button

i button

1 **In Q mode, turn the e-dial to the left (⊞) once or twice.**

Four-image display or nine-image display appears.
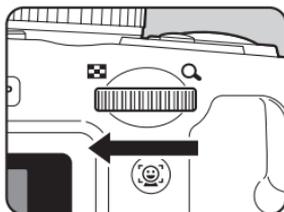
2 **Press the i button.**

□ appears on the images and sound files.

Select & Delete   100-0010

3 **Use the four-way controller (▲ ▼ ◀ ▶) to choose the images and sound files that you want to delete and press the OK button.**

☑ appears on the selected images and sound files.

Turn the e-dial (Q) to display the selected image in a single screen and check whether you want to delete the image. Turning to the left returns to four/nine-image display. However, protected images cannot be displayed in single-image display.

4 **Press the ☖ button.**
A confirmation dialog appears.

5 **Use the four-way controller (▲) to select [Select & Delete].**

Delete all selected images/sounds

Select & Delete

Cancel

6 **Press the OK button.**
The selected images and sound files are deleted.

4

Playing Back and Deleting Images

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Deleting All Images and Sound Files

You can delete all the images and sound files at once.

> **Caution**
> Protected images and sound files cannot be deleted (p.170).

- ▶ button
- Four-way controller
- OK button
- MENU button

1 **Press the MENU button in ▶ mode.**

The [✦ Setting] menu appears.
When you press the MENU button in ◻ mode, press the four-way controller (▶) once.

2 **Use the four-way controller (▲▼) to select [Delete all].**

```
◻  ✦ Setting          3/3
Guide Display      ☑
Reset
Delete all           ▶
Format

MENU Exit
```
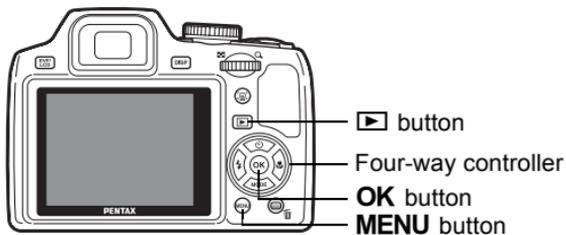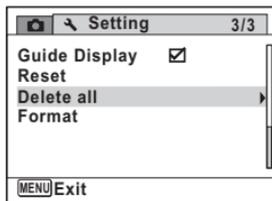
3 **Press the four-way controller (▶).**

A confirmation dialog appears.

4 **Use the four-way controller (▲) to select [Delete All].**

```
Delete all

Delete all images/sounds


   Delete All
   Cancel

OK OK
```
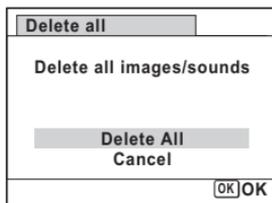
5 Press the OK button.

All the images and sound files are deleted.

Recovering Deleted Images

You can recover images or sound files that were taken with this camera and then deleted.

> **Caution**
>
> After deleting an image, once operations to write data such as taking pictures, recording movies, protecting images, saving DPOF settings, resizing images, cropping images, or formatting have been performed, or the SD Memory Card has been removed, the message [No image to be processed] appears in Step 3 and the deleted images and sound files cannot be recovered.

1 After deleting a file, press the four-way controller (▼).

The Playback Mode Palette appears.

2 Use the four-way controller (▲ ▼ ◄ ►) to select 徻 (Image Recovery).

For recovering image and sound files which were accidentally deleted.

3 Press the OK button.

The number of recoverable images appears.
If there are no recoverable images, the message [No image to be processed] appears.

4 Use the four-way controller (▲) to select [Recover].

5 image(s)
Want to recover?

Recover
Cancel

5 Press the OK button.

The files are recovered.

memo
- Recovered images and sound files have the same file name as before they were deleted.
- Up to a maximum of 999 deleted image files can be recovered.

Protecting Images and Sound Files from Deletion (Protect)

You can protect stored images and sound files from being accidentally deleted.

1 Enter the ▶ mode and use the four-way controller (◀ ▶) to choose the image you want to protect.

2 Press the four-way controller (▼).

The Playback Mode Palette appears.

3 Use the four-way controller (▲ ▼ ◀ ▶) to select O- (Protect).

Protect 2/2

Protects images and sounds from accidental deletion. Formatting will delete.

MENU Cancel | OK OK

4 Press the OK button.

The screen for selecting [Single Image/Sound] or [All Images/Sounds] appears.

5 Use the four-way controller (▲) to select [Single Image/Sound].

O-

Single Image/Sound

All Images/Sounds

Cancel

OK OK

6 Press the OK button.

The message [Protect this image/sound] appears.
To protect another image or sound file, use the four-way controller
(◀▶) to select another image or sound file.

7 Use the four-way controller (▲) to select [Protect].

100-0017

Protect this image/sound

Protect
Unprotect
Cancel

OK OK

8 Press the OK button.

The selected image or sound file is protected.

memo
- To cancel the Protect setting, select [Unprotect] in Step 7.
- ▣ appears on the top right of the protected images and sound files during playback.
- The maximum number of images and sound files you can protect in succession with [Single Image/Sound] cannot exceed 99.

To Protect All Images and Sound Files

1 Select [All Images/Sounds] in Step 5 on p.170.

Single Image/Sound
All Images/Sounds
Cancel

OK OK

2 Press the OK button.

3 **Use the four-way controller (▲) to select [Protect].**

Protect all images/sounds

Protect
Unprotect
Cancel

OK OK
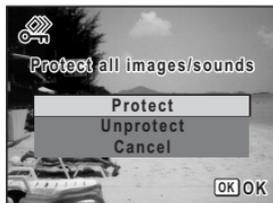
4 **Press the OK button.**

All the images and sound files are protected.

> Caution
>
> Protected images and sound files will be deleted when the SD Memory Card is formatted (p.198).

> memo
>
> To cancel the Protect setting on all your images and sound files, select [Unprotect] in Step 3.

Connecting the Camera to AV Equipment

By using the supplied AV cable (I-AVC7), you can capture and play back images on equipment with a video IN jack, such as a TV.
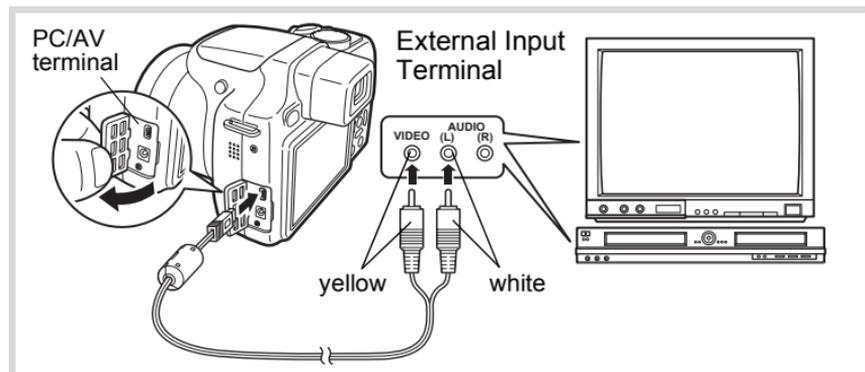
1 **Turn the AV device and camera off.**

2 **Open the camera's terminal cover and connect the AV cable to the PC/AV terminal.**
Connect the terminal of the AV cable with ⇦ pointing toward the ◀ on the PC/AV terminal of the camera.

3 **Connect the other ends of the AV cable (yellow: video, white: audio) to the video input terminal and audio input terminal of the AV device.**
When using stereo sound equipment, insert the sound terminal into the L (white) terminal.

4 **Turn the AV device on.**
When the device that the camera is connected to and the device that plays back images are different, turn both devices on.
When viewing images on AV equipment with multiple video input terminals (such as a TV), refer to the operation manual of the device and select the video input terminal to which the camera is connected.

5 **Turn the camera on.**

memo
- It is recommended to use the optional AC adapter kit K-AC64 if you intend to use the camera for a long time (p.33).
- Depending on the country or region, images and sound files may fail to be played back if the video output format is set different from the one in use there. If this happens, change the video output format setting (p.208).
- The camera display turns off while the camera is connected to AV equipment.
- The volume cannot be adjusted with the zoom lever while the camera is connected to AV equipment.

5 Editing and Printing Images

Editing Images

Changing the Image Size (Resize)

By changing the size and quality of a selected image, you can make the file size smaller than the original. You can use this function to continue taking pictures when the SD Memory Card or the built-in memory is full, by making the images smaller and overwriting the original images to make more space available.

> **Caution**
> - Images taken with 3:2 (4000×2672), 16:9 (4000×2256) or 1:1 (2992×2992), panoramic images and movies cannot be resized.
> - You cannot select a larger resolution and higher quality level than that of the original image.

1 **Enter the ▶ mode and use the four-way controller (◄ ►) to choose the image you want to resize.**

2 **Press the four-way controller (▼).**
The Playback Mode Palette appears.

3 **Use the four-way controller (▲ ▼ ◄ ►) to select ▣ (Resize).**

```
┌─────────────────────────────┐
│ ▶            Resize      1/2 │
│ ◄ ▶  ▣  ▣  ▣  ▣  │
│    ▣  ◇  ▣  ◉  ▣ ▶│
│ Changes Recorded Pixels     │
│ and Quality Level to make   │
│ the file size smaller.      │
│ MENU Cancel           OK OK │
└─────────────────────────────┘
```

4 **Press the OK button.**
The screen for choosing the image size appears.

5 **Select [Recorded Pixels] and [Quality Level].**
Use the four-way controller (◄ ►) to choose the size and quality.
Use the four-way controller (▲ ▼) to switch between [Recorded Pixels] and [Quality Level].

```
┌─────────────────────────────┐
│ ▣                           │
│                             │
│     Recorded Pixels ◄ 12M ► │
│     Quality Level      ★★   │
│ MENU Cancel           OK OK │
└─────────────────────────────┘
```

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Editing and Printing Images

6 Press the OK button.

A confirmation dialog for overwriting the image appears.
When the selected image is protected, the resized image will be saved as a new image without the following confirmation dialog displayed on the screen.

7 Use the four-way controller (▲▼) to select [Overwrite] or [Save as].

Overwrite
original image?
Overwrite
Save as
Cancel
OK OK

8 Press the OK button.

The resized image is saved.

Cropping Images

You can delete the unwanted part of a picture and save the cropped image as a separate image.

> Caution: Images taken with 3:2 (4000×2672), 16:9 (4000×2256) or 1:1 (2992×2992), panoramic images and movies cannot be cropped.

1 Enter the ▶ mode and use the four-way controller (◀▶) to choose the image you want to crop.

2 Press the four-way controller (▼).

The Playback Mode Palette appears.

3 Use the four-way controller (▲▼◀▶) to select ▣ (Cropping).

Cropping 1/2

For cropping images to the size you like. Saved as a new image.
MENU Cancel OK OK

4 Press the OK button.

The cropping screen appears.

The largest size of the cropped image is shown with a green frame on the screen.

The cropped image cannot be larger than this cropping frame size.

5 Choose the cropping area.

The following operations move the green frame and set the area for cropping on the screen.

e-dial	Changes the size of the cropped section
Four-way controller (▲ ▼ ◄ ►)	Moves the cropping position up, down, left and right
Green button	Rotates the cropping frame • The button is only displayed when the cropping frame size can be rotated.

6 Press the OK button.

The cropped image is saved with a new file name.

The number of recorded pixels is selected automatically according to the size of the cropped section.

Using the Digital Filters

This mode lets you change the color tones and perform special processing on a selected image.

B&W filter	Changes color images to black and white.
Sepia filter	Processes the image using the sepia filter.
Color filter	Processes the image using the selected color filter. You can choose from six filters: red, pink, purple, blue, green, and yellow.
Color extraction filter	Processes the image using the selected color extraction filter. You can choose from three filters: red, green, and blue.
Soft filter	Processes the image into a soft image.
Fish-eye filter	Applies a fish-eye lens effect to images.
Brightness filter	Adjusts the brightness of the image.

Panoramic images, movies or images taken with another camera cannot be edited using Digital Filter function. An error message appears if you choose this function from the Playback Mode Palette and press the **OK** button.

1 Enter the Q mode and use the four-way controller (◀▶) to choose the image you want to edit.

2 Press the four-way controller (▼).
The Playback Mode Palette appears.

3 Use the four-way controller (▲▼◀▶) to select ⬚ (Digital Filter).

```
┌─────────────────────────────┐
│ ▣ Digital Filter      1/2   │
│ ◀ ▣ ⬚ ▢ ▣ ▦ ▶          │
│   ✿ ◇ ♗ ◉ ▮             │
│ For modifying images with   │
│ a Color filter or Soft      │
│ filter.                     │
│ MENU Cancel          OK OK  │
└─────────────────────────────┘
```
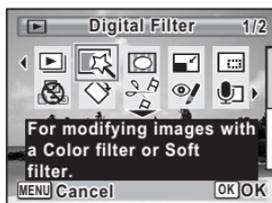
4 Press the **OK** button.
The digital filter selection screen appears.

1 B&W filter
2 Sepia filter
3 Color filter
4 Color extraction filter
5 Soft filter
6 Fish-eye filter
7 Brightness filter
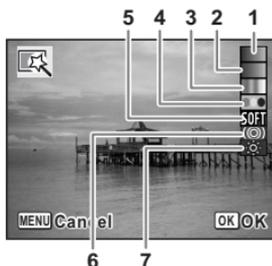
To Select a B&W Filter, Sepia Filter or Soft Filter

5 Use the four-way controller (▲▼) to choose a digital filter.
The preview image of the results of the filter effect appears.

6 Press the **OK** button.
A confirmation dialog for overwriting the image appears.
When the selected image is protected, the processed image will be saved as a new image without the following confirmation dialog displayed on the screen.

5 Editing and Printing Images

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7 **Use the four-way controller (▲▼) to select [Overwrite] or [Save as].**

Overwrite
original image?

Overwrite
Save as
Cancel

OK OK

8 **Press the OK button.**
The images processed with the filter are saved.

To Select a Color Filter or Color Extraction Filter

5 **Use the four-way controller (▲▼) to choose a digital filter type.**

6 **Use the four-way controller (◀▶) to choose the effect.**
The color filter changes in the following sequence each time you press the four-way controller (▶): Red, Pink, Purple, Blue, Green, Yellow. The color extraction filter changes in the following sequence each time you press the four-way controller (▶): Red, Green, Blue.

7 **Press the OK button.**
A confirmation dialog for overwriting the image appears.
When the selected image is protected, the processed image will be saved as a new image without the following confirmation dialog displayed on the screen.

8 **Use the four-way controller (▲▼) to select [Overwrite] or [Save as].**

Overwrite
original image?

Overwrite
Save as
Cancel

OK OK

9 **Press the OK button.**
The images processed with the filter are saved.

5 **Use the four-way controller (▲ ▼) to choose a digital filter you want to use.**

6 **Use the four-way controller (◀ ▶) to adjust the effect.**

For the brightness filter, the brightness increases each time you press the four-way controller (▶) and decreases each time you press the four-way controller (◀).

With the fish-eye filter, pressing the four-way controller to (▶) strengthens the effect and (◀) lessens the effect.

7 **Press the OK button.**

A confirmation dialog for overwriting the image appears.
When the selected image is protected, the processed image will be saved as a new image without the following confirmation dialog displayed on the screen.

8 **Use the four-way controller (▲ ▼) to select [Overwrite] or [Save as].**

9 **Press the OK button.**

The images processed with the filter are saved.

5

Editing and Printing Images

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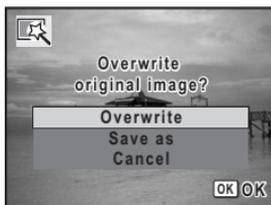
Red-eye Compensation

You can correct images where the flash has caused the subject to appear with red eyes.

> **Caution**
> - The red-eye compensation function cannot be used on panoramic images, movies or on images where red eyes cannot be detected on the camera. An error message appears in Step 4.
> - The red-eye compensation function can only be used with still pictures taken with this camera.

1 Enter the ▶ mode and use the four-way controller (◄ ►) to choose the image you want to correct.

2 Press the four-way controller (▼).
The Playback Mode Palette appears.

3 Use the four-way controller (▲ ▼ ◄ ►) to select ◉/ (Red-eye Compensation).
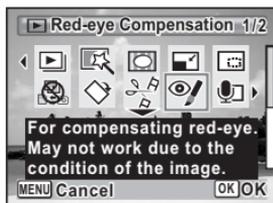
> ▶ Red-eye Compensation 1/2
>
> **For compensating red-eye. May not work due to the condition of the image.**
>
> MENU Cancel   OK OK

4 Press the OK button.
A confirmation dialog for overwriting the image appears.
When the selected image is protected, the corrected image will be saved as a new image without the following confirmation dialog displayed on the screen.

5 Use the four-way controller (▲ ▼) to select [Overwrite] or [Save as].

> ◉/
>
> **Overwrite original image?**
>
> Overwrite
> Save as
> Cancel
>
> OK OK

6 Press the OK button.
The edited image is saved.

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Editing and Printing Images

Adding a Frame (Frame Composite)

This function lets you add a decorative frame to still pictures. There are 90 frames already stored in the camera.

The Frame Composite function cannot be used on images taken with 3:2 (4000×2672), 16:9 (4000×2256) or 1:1 (2992×2992), panoramic images, movies or images of size 3M (2048×1536) or smaller. An error message appears in Step 4.

1 **Enter the ▶ mode and use the four-way controller (◀ ▶) to choose the image to which you want to add a frame.**

2 **Press the four-way controller (▼).**
The Playback Mode Palette appears.

3 **Use the four-way controller (▲ ▼ ◀ ▶) to select ◯ (Frame Composite).**

For composing an image with a frame. Select Overwrite or Save as to save.

MENU Cancel   OK OK
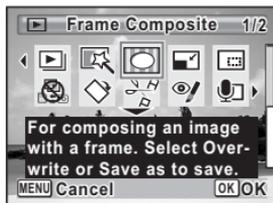
4 **Press the OK button.**
The 9-frame display of the frame selection screen appears.

5 **Use the four-way controller (▲ ▼ ◀ ▶) to choose a frame.**

6 Turn the e-dial to the right (Q).

The selected frame appears in single-image display.

You can choose another frame using either of the following operations.

Four-way controller (◄ ►)	Press to choose a different frame.
e-dial to the left (❙▲❙)	Turn to return to the 9-frame display of the frame selection screen, and then perform Step 5 to choose a different frame.
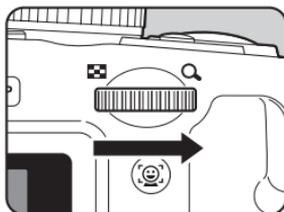
7 Press the OK button.

The frame position and size adjustment screen appears.
You can adjust the image using either of the following operations.

Four-way controller (▲▼◄►)	Press to adjust the position of the image
e-dial	Turn to make the image larger or smaller.
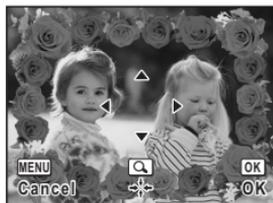
8 Press the OK button.

A confirmation dialog for overwriting the image appears.
When the selected image is protected, the processed image will be saved as a new image without the following confirmation dialog displayed on the screen.

9 Use the four-way controller (▲▼) to select [Overwrite] or [Save as].

10 Press the OK button.

The edited image is saved with the recorded pixels of 3M (2048×1536).

Optional Frames

The optional frames are stored in the built-in memory in the X70. These optional frames are deleted if the files on the built-in memory are deleted with a computer or the built-in memory is formatted. To reload the optional frames into the built-in memory, copy the files from the CD-ROM (S-SW87) supplied with the camera.

To Copy Frames

1 **Remove the SD Memory Card from the camera.**
   If you leave the SD Memory Card in the camera, the frames will be copied onto the card, not into the camera's built-in memory.

2 **Connect the camera to the computer using the provided USB cable (I-USB7).**
   Refer to "Connecting to a Computer" (p.217) for instructions on connecting the camera to a computer.

3 **When the device detection window opens, click [Cancel].**

4 **Insert the CD-ROM (S-SW87) into the CD-ROM drive.**

5 **When the installer window opens, click [EXIT].**

6 **If there is not already a "FRAME" folder in the root directory of the camera (removable disk), create the folder.**

7 **Copy the desired files from the FRAME folder in the root directory of the CD-ROM to the FRAME folder on the camera (removable disk).**
   For information on working with files on your computer, refer to the instruction manual supplied with the computer.

8 **Disconnect the USB cable from the computer and camera.**
   Refer to "Connecting to a Computer" (p.217) for instructions on disconnecting the cable.

• Frames can be stored both in the built-in memory and on the SD Memory Cards, but using large numbers of frames may slow down processing times.

To Use a New Frame

The frames downloaded from the PENTAX website or other source can be used for adding a frame to pictures.

memo
- Extract the downloaded frame and copy it to the FRAME folder in the built-in memory or the SD Memory Card.
- The FRAME folder is created when the SD Memory Card is formatted with this camera.
- For more information on downloading, refer to the PENTAX website.

Editing Movies

You can select a frame from the recorded movie to save as a still picture or divide a movie into two.

1 **Enter the ▶ mode and use the four-way controller (◀ ▶) to choose the movie you want to edit.**

2 **Press the four-way controller (▼).**
The Playback Mode Palette appears.

3 **Use the four-way controller (▲ ▼ ◀ ▶) to select ✂ (Movie Edit).**

For cutting out a still image from a movie or dividing a movie.

MENU Cancel   OK OK

4 **Press the OK button.**
The movie edit selection screen appears.
You can proceed to the following steps.

Save as Still Image
Divide Movies
Cancel

OK OK

To Save a Frame from a Movie as a Still Picture

5 **Select [Save as Still Image] on the movie edit selection screen.**

6 **Press the OK button.**

The screen appears for selecting a frame to be saved as a still picture.

7 **Use the four-way controller (▲ ▼ ◀ ▶) to choose the frame you want to save.**

- ▲ Plays or pauses the movie
- ▼ Stops the movie and returns to the first frame
- ◀ Reverses the movie frame by frame
- ▶ Advances the movie frame by frame
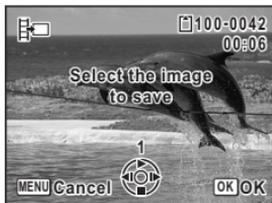
8 **Press the OK button.**

The selected frame is saved as a still picture.

To Divide a Movie

5 **Select [Divide Movies] on the movie edit selection screen.**

6 **Press the OK button.**

The screen for choosing the dividing position appears.

7 **Use the four-way controller (▲ ▼ ◀ ▶) to determine the dividing position.**

- ▲ Plays or pauses the movie
- ▼ Stops the movie and returns to the first frame
- ◀ Reverses the movie frame by frame
- ▶ Advances the movie frame by frame

8 **Press the OK button.**

A confirmation dialog appears.

9 **Use the four-way controller (▲) to select [Divide].**
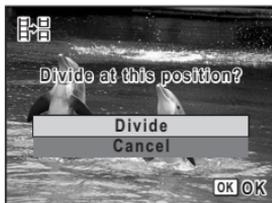
10 **Press the OK button.**

The movie is divided at the specified position, the two portions are saved as new files, and the original one is deleted.

⚠️ The protected movies cannot be divided.

Copying Images and Sound Files

You can copy images and sound files from the built-in memory to the SD Memory Card and vice versa. This function can only be selected when an SD Memory Card has been inserted in the camera.

⚠️ Make sure that the camera is turned off before inserting or removing the SD Memory Card.

1 **Press the four-way controller (▼) in ▣ mode.**

The Playback Mode Palette appears.

2 **Use the four-way controller (▲▼◄►) to select ▦ (Image/Sound Copy).**

3 **Press the OK button.**

The copying method selection screen appears.

To Copy Files from the Built-in Memory to the SD Memory Card

All the images and sound files in the built-in memory are copied to the
SD Memory Card at once. Before copying the images, make sure that
there is enough space on the SD Memory Card.

4   **Use the four-way controller (▲ ▼)
    to select [● ➡ SD].**

5   **Press the OK button.**
    All the images and sound files are copied.

To Copy Files from the SD Memory Card to the Built-in Memory

Selected images and sound files from the SD Memory Card are copied
to the built-in memory one at a time.

4   **Use the four-way controller (▲ ▼) to select [SD ➡ ●].**

5   **Press the OK button.**

6   **Use the four-way controller (◀ ▶)
    to select the image/sound file you
    want to copy.**

7   **Press the OK button.**
    The selected image/sound file is copied.

memo
- If sound (Voice memo) has been recorded with the image, the sound
  file is copied with the image.
- When a file is copied from the SD Memory Card to the built-in memory,
  it is assigned a new file name.

5

Editing and Printing Images

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Setting the Printing Service (DPOF)

DPOF (Digital Print Order Format) is the format for storing print order data on still pictures captured with a digital camera. Once the print order data have been stored, the pictures can be printed according to the DPOF settings using a DPOF-compatible printer or photo processing lab.

You cannot store print order data for movies.

> **Caution**
> If the picture already has the date and/or time imprinted on it (p.139), do not set [Date] ☑ (On) in DPOF settings. If you select ☑ (On), the imprinted date and/or time may overlap.

Printing a Single Image

Set the following items for each image.

Copies	Choose the number of copies up to 99.
Date	Specify whether you want the date inserted on the print or not.

1 **In ▶ mode, press the four-way controller (▼).**
The Playback Mode Palette appears.

2 **Use the four-way controller (▲▼◀▶) to select ♪ (DPOF).**

> **DPOF** 2/2
>
> **For the print settings. Useful when printing at a printing service.**
> MENU Cancel   OK OK

3 **Press the OK button.**
The screen for selecting [Single Image] or [All Images] appears.

4 **Use the four-way controller (▲ ▼) to select [Single Image].**

Single Image
All Images
Cancel
OK OK

5 **Press the OK button.**

The message [DPOF setting for this image] appears.

To make DPOF settings for another image, use the four-way controller (◄ ►) to select another image.

If DPOF settings have already been made for an image, the previous number of copies and date setting (☑ or ☐) will be displayed.

6 **Use the four-way controller (▲ ▼) to choose the number of copies.**

100-0017
DPOF setting for this image
Copies   00
Date   ☐
☐Date
MENU Cancel   OK OK

7 **Use the Green button to choose whether to insert the date or not.**

☑ (On)   The date will be imprinted.

☐ (Off)   The date will not be imprinted.

To continue setting DPOF print order data, use the four-way controller (◄ ►) to choose another image and repeat Steps 6 and 7.

100-0017
DPOF setting for this image
Copies   01
Date   ☑
☐Date
MENU Cancel   OK OK

8 **Press the OK button.**

The setting is saved and the screen returns to the DPOF menu.

> Depending on the printer or printing equipment at the photo processing lab, the date may not be imprinted on the pictures even if ☑ (On) is selected in the DPOF settings.

> To cancel DPOF settings, set the number of copies to [00] in Step 6 and press the OK button.

Printing All Images

When you choose the number of copies and whether or not to insert the date, the settings are applied to all the images stored in the camera.

1 Select [All Images] in Step 4 on p.191.

2 Press the OK button.
The message [DPOF setting for all images] appears.

3 Choose the number of copies and whether to insert the date or not.

Refer to Steps 6 and 7 in "Printing a Single Image" (p.191) for details of how to make the settings.


```
DPOF setting for
   all images
  Copies      01
  Date
Date
MENU Cancel          OK OK
```

4 Press the OK button.
The settings for all the images are saved and the camera returns to the DPOF setting screen.

> **Caution**
> • The number of copies specified in the DPOF settings applies to all the images. Before printing, check that the number is correct.
> • Settings for single images are canceled when settings are made with [All Images].

6 Recording and Playing Back Sound

Adding a Voice Memo to Images

You can add a voice memo to your still pictures.

Recording a Voice Memo

1 **Enter** ▣ **mode and use the four-way controller (◄ ►) to choose the still picture to which you want to add a voice memo.**

2 **Press the four-way controller (▼).**
The Playback Mode Palette appears.

3 **Use the four-way controller (▲ ▼ ◄ ►) to select** 🎙 **(Voice Memo).**

▣ Voice Memo 1/2

Attaches sound to images.
Recording is possible till
the memory card is full.
MENU Cancel   OK OK

4 **Press the** OK **button.**
Recording starts. You can record a voice memo continuously for up to 24 hours.

🎙   📁 100-0038
            · 01:31:44

5 **Press the** OK **button.**
Recording stops.

memo
- A voice memo cannot be added to the image that already has a voice memo. Delete the old voice memo (p.165) and record a new one.
- A voice memo cannot be added to protected images (p.170).

Playing Back a Voice Memo

e-dial

► button

Four-way controller
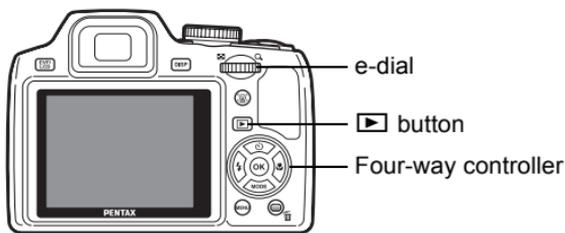
1 **Enter ► mode and use the four-way controller (◄ ►) to choose the still picture with the voice memo that you want to play back.**

 appears on images with voice memos in single-image display.

2 **Press the four-way controller (▲).**
Playback starts.

100-0001

04/02/2009
14:25
Edit

The following operations can be performed during playback.

e-dial to the right (Q)   Increases the volume
e-dial to the left (⊞)   Reduces the volume

3 **Press the four-way controller (▼).**
Playback stops.

To Delete a Sound File ☞p.165

Memo

7 Settings

Camera Settings

Formatting an SD Memory Card

Formatting will delete all the data on the SD Memory Card.
Be sure to use this camera to format (initialize) an SD Memory Card that is unused or has been used on other cameras or digital devices.

> **Caution**
> • Do not remove the SD Memory Card during formatting as this may damage the card and render it unusable.
> • Formatting will delete protected images and any data recorded on the card with a computer or camera other than this camera.
> • SD Memory Cards formatted on a computer or device other than the camera cannot be used. Be sure to format the card with the camera.
> • The built-in memory cannot be formatted except when an error occurs.

1 Press the MENU button in ▶ mode.

The [✎ Setting] menu appears.
When you press the **MENU** button in ◘ mode, press the four-way controller (▶) once.

2 Use the four-way controller (▲▼) to select [Format].

3 Press the four-way controller (▶).

The [Format] screen appears.

4 Use the four-way controller (▲) to select [Format].

```
┌─────────────────────────┐
│ Format                  │
│                         │
│   All data deleted      │
│                         │
│       Format            │
│       Cancel            │
│                  OK OK  │
└─────────────────────────┘
```
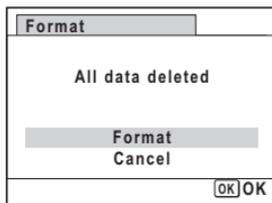
5 Press the OK button.

Formatting starts.
When formatting is completed, the camera returns to ◘ mode or ▶ mode.

Saving USER Mode

If you save the current camera settings in USER mode, you can easily recall them by simply setting the mode dial to USER.
You can save the following settings. Be sure to configure all the settings you want to save in USER mode before saving.
After saving the settings, you can use them to take pictures by setting the mode dial to USER.

- Capture Mode (either of P/Tv/Av/M)
- Settings on the [△ Rec. Mode] menu
- Flash Mode
- Drive Mode
- Focus Mode
- EV Compensation
- **DISPLAY**
- Face Priority Mode

1 **Press the MENU button in ▶ mode.**
   The [🔧 Setting] menu appears.
   When you press the MENU button in △ mode, press the four-way controller (▶) once.

2 **Use the four-way controller (▲▼) to select [Save as USER].**

3 **Press the four-way controller (▶).**
   The [Save as USER] screen appears.

4 **Use the four-way controller (▲) to select [Save].**

```
┌─────────────────────────┐
│ Save as USER            │
│                         │
│  Saves current shooting │
│  settings in USER mode  │
│                         │
│      Save               │
│      Cancel             │
│                 OK OK   │
└─────────────────────────┘
```
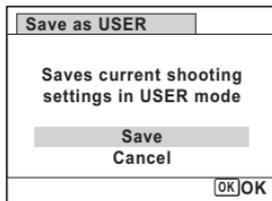
5 **Press the OK button.**
   The process to save starts.
   When the process is complete, the camera returns to △ or ▶ mode.

> **Caution** • If the dial is set to **USER** before you save the settings in USER mode, the capture mode is set to **P** and all other configurable settings revert to their default values.
> • When the capture mode dial is set to other than **P**, **Tv**, **Av**, or **M**, you cannot save the settings in USER mode.

Changing the Settings in USER Mode

You can change the settings during shooting in **USER** mode.
If you do not save the settings with [Save as USER], they are not saved in the camera. Be careful as turning off the power returns to the saved settings.

Changing the Sound Settings

You can adjust the volume of operation sounds and change the type of sound.

1 Press the MENU button in ▶ mode.

The [✖ Setting] menu appears.
When you press the MENU button in ● mode, press the four-way controller (▶) once.

2 Use the four-way controller (▲▼) to select [Sound].

3 Press the four-way controller (▶).

The [Sound] screen appears.

```
Sound
Operation Volume ◁ ◉▭ ▷
Playback Volume   ◉▭
Start-up Sound    1
Shutter Sound     1
Operation Sound   1
Self-timer Sound  1
MENU ↰
```
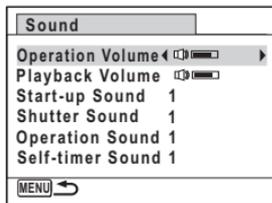
To Change the Operation Volume/Playback Volume

4 Use the four-way controller (▲▼) to select [Operation Volume].

5 Use the four-way controller (◀ ▶) to adjust the volume.

Set the volume to 🔇 to mute the start-up sound, shutter sound, operation sound, and self-timer sound.

6 Change [Playback Volume] in the same way as in Steps 4 and 5.

To Change the Sound Type

4 Use the four-way controller (▲ ▼) to select [Start-up Sound].

5 Press the four-way controller (▶).
A pull-down menu appears.

6 Use the four-way controller (▲ ▼) to select the sound type.
Choose from [1], [2], [3] or [Off].

7 Press the OK button.

8 Set [Shutter Sound], [Operation Sound] and [Self-timer Sound] in the same way as in Steps 4 to 7.

9 Press the MENU button.
The screen returns to the [✎ Setting] menu.

Changing the Date and Time

You can change the initial date and time settings (p.44). You can also set the style in which the date appears on the camera.

1 Press the MENU button in ▶ mode.
The [✎ Setting] menu appears.
When you press the MENU button in ▲ mode, press the four-way controller (▶) once.

2 Use the four-way controller (▲ ▼) to select [Date Adjust].

3 **Press the four-way controller (▶).**

The [Date Adjust] screen appears.

```
Date Adjust

Date Style    ▶mm/dd/yy 24h
Date          01/01/2009
Time          00:00
  Settings are completed
MENU Cancel
```

4 **Press the four-way controller (▶).**

The frame moves to [mm/dd/yy].
Depending on the initial setting or previous setting, [dd/mm/yy] or [yy/mm/dd] may be displayed.

5 **Use the four-way controller (▲ ▼) to choose the date and time display style.**

Choose from [mm/dd/yy], [dd/mm/yy] or [yy/mm/dd].

```
Date Adjust

Date Style    ◄ mm/dd/yy 24h
Date          01/01/2009
Time          00:00
  Settings are completed
MENU Cancel
```

6 **Press the four-way controller (▶).**

The frame moves to [24h].

7 **Use the four-way controller (▲ ▼) to select [24h] (24-hour display) or [12h] (12-hour display).**

```
Date Adjust

Date Style    ◄ mm/dd/yy 24h
Date          01/01/2009
Time          00:00
  Settings are completed
MENU Cancel
```

8 **Press the four-way controller (▶).**

The frame returns to [Date Style].

9 **Press the four-way controller (▼).**

The frame moves to [Date].

```
Date Adjust

Date Style    mm/dd/yy 24h
Date          ▶01/01/2009
Time          00:00
  Settings are completed
MENU Cancel
```

10 Press the four-way controller (▶).

The frame moves to one of the following items depending on the date style set in Step 5.

Month for [mm/dd/yy]
Day for [dd/mm/yy]
Year for [yy/mm/dd]

The following operations and screens use [mm/dd/yy] as an example. The operations are the same even if another date style has been selected.

11 Use the four-way controller (▲ ▼) to change the month.

```
Date Adjust

Date Style    mm/dd/yy 24h
Date        ◀ 01/01/2009
Time          00:00

      Settings are completed

MENU Cancel
```

12 Press the four-way controller (▶).

The frame moves to the day field. Use the four-way controller (▲ ▼) to change the day. After changing the day, change the year in the same manner.

13 Change the time in the same way as in Steps 8 to 12.

If you selected [12h] in Step 7, the setting switches between am and pm corresponding to the time.

14 Press the OK button.

15 Press the four-way controller (▼).

The frame moves to [Settings are completed].

16 Press the OK button.

The date and time settings are saved and the screen returns to the [✎ Setting] menu.

memo

When you press the OK button in Step 16, the camera clock is reset to 00 seconds. To set the exact time, press the OK button when the time signal (on the TV, radio, etc.) reaches 00 seconds.

Setting the World Time

The date and time selected in "Setting the Date and Time" (p.44) and "Changing the Date and Time" (p.201) serve as the ⌂ (Hometown) date and time. By using the world time function, you can display the time in a city other than the Hometown (→Destination). This is useful when taking pictures in a different time zone.

To Set the Destination

1 **Press the MENU button in ▶ mode.**
   The [ゝ Setting] menu appears.
   When you press the **MENU** button in ◘ mode, press the four-way controller (▶) once.

2 **Use the four-way controller (▲ ▼) to select [World Time].**

3 **Press the four-way controller (▶).**
   The [World Time] screen appears.

4 **Use the four-way controller (▲ ▼) to select → (Destination).**

World Time	
Select Time	▶ ⌂
→Destination New York	DST OFF 14:25
⌂Hometown New York	DST OFF 14:25
MENU ↩	
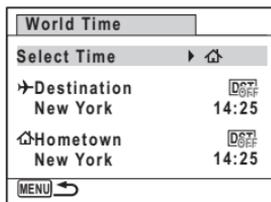
5 **Press the four-way controller (▶).**
   The [Destination] screen appears. The city that is currently selected blinks on the map.

6 **Use the four-way controller (◀ ▶) to change the Destination city.**
   The current time, location and time difference of the selected city appear.

→ Destination	14:25
City	◀New York ▶
DST ☐	TimeDif. ±0:00
MENU Cancel	OK OK
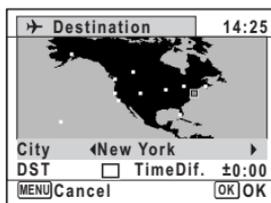
7   **Use the four-way controller (▲▼) to select [DST].**

8   **Use the four-way controller (◀▶) to select ☑ (On) or ☐ (Off).**
Select ☑ (On) if the Destination city uses daylight saving time.

9   **Press the OK button.**
The [World Time] setting is saved.

10   **Press the MENU button twice.**
The camera returns to capture status with the current setting.

memo   Select ⌂ (Hometown) in Step 4 to set the city and DST setting for the Hometown city.

To Display the Time of the Destination (Select Time)

1   **Press the MENU button in ▶ mode.**
The [✎ Setting] menu appears.
When you press the MENU button in ▲ mode, press the four-way controller (▶) once.

2   **Use the four-way controller (▲▼) to select [World Time].**

3   **Press the four-way controller (▶).**
The [World Time] screen appears.

4   **Use the four-way controller (▲▼) to select [Select Time].**

```
World Time
Select Time        ▶ ⌂
→Destination       DST
 London           20:25
⌂Hometown         DST
                   OFF
 New York         14:25
MENU ↩
```

7
Settings

205

5 Press the four-way controller (▶).

A pull-down menu appears.

6 Use the four-way controller (▲▼) to select ✈ (Destination) or ⌂ (Hometown).

✈ Displays the time of the Destination city

⌂ Displays the time of the Hometown city
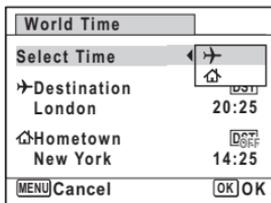
World Time	
Select Time	◀ ✈
✈**Destination**	⌂
London	20:25
⌂**Hometown**	
New York	14:25
MENU**Cancel**	OK**OK**

7 Press the OK button.

The setting is saved.

8 Press the MENU button twice.

The camera returns to ◻ mode or ▶ mode.

When ✈ (Destination) is selected in Step 6, the ✈ icon appears on the display to indicate that the destination date and time are displayed in ◻ mode.

04/02/2009
✈ 00:25
38

Changing the Display Language

You can change the language in which the menus, error messages, etc. are displayed.

The camera supports the following 20 languages: English, French, German, Spanish, Portuguese, Italian, Dutch, Japanese, Danish, Swedish, Finnish, Polish, Czech, Hungarian, Turkish, Greek, Russian, Thai, Korean and Chinese (traditional and simplified).

1 Press the MENU button in ▶ mode.

The [✕ Setting] menu appears.
When you press the MENU button in ◻ mode, press the four-way controller (▶) once.

2 Use the four-way controller (▲▼) to select [Language/言語].

7

Settings

3 **Press the four-way controller (▶).**
The [Language/言語] screen appears.

4 **Use the four-way controller
(▲ ▼ ◀ ▶) to select the language.**

Language/言語		
English	日本語	Türkçe
Français	Dansk	Ελληνικά
Deutsch	Svenska	Русский
Español	Suomi	ไทย
Português	Polski	한국어
Italiano	Čeština	中文繁體
Nederlands	Magyar	中文简体
MENU Cancel		OK OK

5 **Press the OK button.**
The menus and messages are displayed in the selected language.

Changing the Naming Rule of the Folder

You can change the naming rule of the folder for storing images. When the naming rule is set to the date, pictures are saved in separate folders by the date they were taken.

Date	xxx_mmdd (3-digit folder number_month day) * xxx_ddmm (3-digit folder number_day month) when the date style is set to [dd/mm/yy]
Standard	xxxPENTX (where xxx is the 3-digit folder number)

Taken with the folder name setting [Standard]. (e.g. September 25)
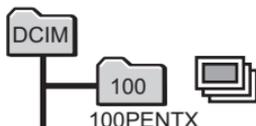
Taken with the folder name setting [Date]. (e.g. September 25)
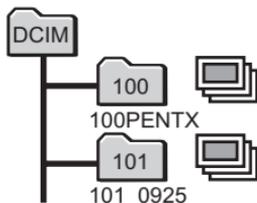
Next time, taken with the folder name setting [Date] again. (e.g. October 1)
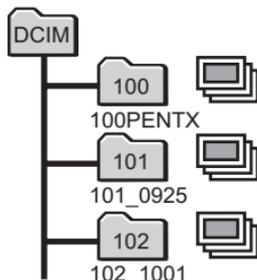
• Up to 900 folders can be created.
• Up to 9999 images or sounds can be saved in a folder.

1 Press the MENU button in ▶ mode.

The [✤ Setting] menu appears.
When you press the **MENU** button in ▲ mode, press the four-way controller (▶) once.

2 Use the four-way controller (▲▼) to select [Folder Name].

3 Press the four-way controller (▶).

A pull-down menu appears.

4 Use the four-way controller (▲▼) to select [Standard] or [Date].

5 Press the OK button.

The setting is saved.

Changing the Video Output Format

When you connect the camera to AV equipment, choose the appropriate video output format (NTSC or PAL) for taking and playing back images.

1 Press the MENU button in ▶ mode.

The [✤ Setting] menu appears.
When you press the **MENU** button in ▲ mode, press the four-way controller (▶) once.

2 Use the four-way controller (▲▼) to select [Video Out].

3 Press the four-way controller (▶).

A pull-down menu appears.

4 Use the four-way controller (▲▼) to select a video output format.

Choose the video output format to match the output format of the AV equipment.
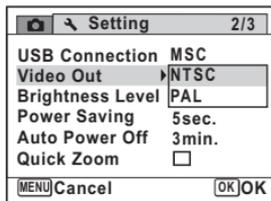
```
 ▲  ✦ Setting        2/3
 USB Connection  MSC
 Video Out      ▶NTSC
 Brightness Level PAL
 Power Saving    5sec.
 Auto Power Off  3min.
 Quick Zoom      ☐
 MENU Cancel         OK OK
```

5 Press the OK button.

The setting is saved.

memo Depending on the country or region, images and sound files may fail to be played back if the video output format is set different from the one in use there. If this happens, change the video output format setting.

Connecting the Camera to AV Equipment ☞p.173
Video output format of each city ☞p.254

Adjusting the Brightness of the Display

You can adjust the brightness of the display.

1 Press the MENU button in ▶ mode.

The [✎ Setting] menu appears.
When you press the MENU button in ◘ mode, press the four-way controller (►) once.

2 Use the four-way controller (▲ ▼) to select [Brightness Level].

3 Use the four-way controller (◄ ►) to adjust the brightness.

　　　 Dark
　　　 Normal
　　　 Bright

◘ ✎ Setting	2/3
USB Connection	MSC
Video Out	NTSC
Brightness Level	
Power Saving	5sec.
Auto Power Off	3min.
Quick Zoom	☐
MENU Exit	
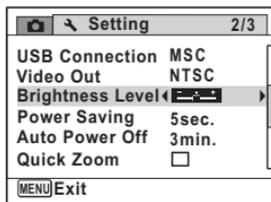
4 Press the MENU button.

The camera returns to ◘ mode or ▶ mode.
The display appears with the set brightness.

7

Settings

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Using the Power Saving Function

You can save battery power by setting the display to dim automatically when no operation is performed for a fixed time. After the power saving function has been activated, the display returns to the ordinary brightness by pressing any of the buttons.

1 **Press the MENU button in ▶ mode.**
The [✎ Setting] menu appears.
When you press the MENU button in ✿ mode, press the four-way controller (▶) once.

2 **Use the four-way controller (▲▼) to select [Power Saving].**

3 **Press the four-way controller (▶).**
A pull-down menu appears.

4 **Use the four-way controller (▲▼) to select the time until the camera enters power saving mode.**
Choose from [2min.], [1min.], [30sec.], [15sec.], [5sec.] or [Off].

```
┌─────────────────────────────┐
│ ✿ │ ✎ Setting        2/3     │
│ USB Connection    2min.      │
│ Video Out         1min.      │
│ Brightness Level  30sec.     │
│ Power Saving    ◀15sec.      │
│ Auto Power Off    5sec.      │
│ Quick Zoom        Off        │
│ MENU Cancel           OK OK  │
└─────────────────────────────┘
```
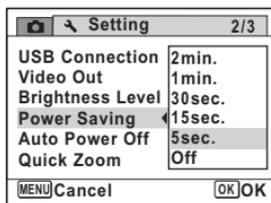
5 **Press the OK button.**
The setting is saved.

memo
- Power Saving does not function in the following situations:
  - while taking pictures in continuous shooting mode
  - in the playback mode
  - during movie recording/playback
  - while the camera is connected to a computer
  - when using the AC adapter
  - while a menu is being displayed
  - while using the VIDEO output
  - when switching to the viewfinder using the EVF/LCD button
- When no operation is performed after the camera is turned on, Power Saving is activated only after 15 seconds elapse even if [5sec.] is set.

Setting Auto Power Off

You can set the camera to turn off automatically when no operation is performed for a fixed time.

1   **Press the MENU button in ▶ mode.**
    The [✎ Setting] menu appears.
    When you press the **MENU** button in ✿ mode, press the four-way controller (▶) once.

2   **Use the four-way controller (▲ ▼) to select [Auto Power Off].**

3   **Press the four-way controller (▶).**
    A pull-down menu appears.

4   **Use the four-way controller (▲ ▼) to select the time until the camera turns off automatically.**
    Choose from [5min.], [3min.] or [Off].

✿ ✎ Setting	2/3
USB Connection	MSC
Video Out	NTSC
Brightness Level	▭▬▭
Power Saving	5min.
Auto Power Off	◀ 3min.
Quick Zoom	Off
MENU Cancel	**OK** OK
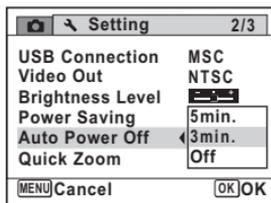
5   **Press the OK button.**
    The setting is saved.

memo   Auto Power Off does not function in the following situations:
        - while taking pictures in the continuous shooting mode
        - while recording a movie
        - during a slideshow or movie/sound playback
        - while the camera is connected to a computer

Setting the Quick Zoom Function

You can set whether to use [Quick Zoom] to magnify playback images to a maximum of 10x by simply turning the e-dial to the right during playback of images in ▶ mode.

1 **Press the MENU button in ▶ mode.**

The [✎ Setting] menu appears.
When you press the MENU button in ○ mode, press the four-way controller (▶) once.

2 **Use the four-way controller (▲▼) to select [Quick Zoom].**

3 **Use the four-way controller (◀▶) to select ☑ (On) or □ (Off).**

☑ (On): The Quick Zoom is available.
□ (Off): The Quick Zoom is not available.

○ ✎ Setting	2/3
USB Connection	MSC
Video Out	NTSC
Brightness Level	▱▰▱
Power Saving	5sec.
Auto Power Off	3min.
Quick Zoom	◀□ ▶

MENU Exit
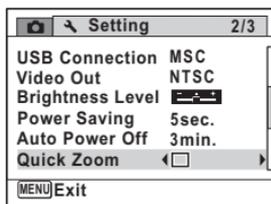
4 **Press the MENU button.**

The camera returns to ○ mode or ▶ mode.

Setting the Guide Display

Set whether to display the guides in playback mode or when setting the capture mode.

1 Press the **MENU** button in ▶ mode.

The [✎ Setting] menu appears.
When you press the **MENU** button in ▲ mode, press the four-way controller (▶) once.

2 Use the four-way controller (▲ ▼) to select [Guide Display].

▲ ✎ Setting	3/3
Guide Display ◀☑	▶
Reset	
Delete all	
Format	
MENU Exit	
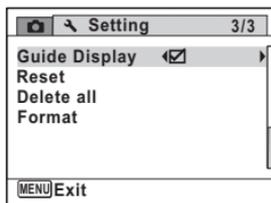
3 Use the four-way controller (◀ ▶) to select ☑ (On) or □ (Off).

☑ (On): The mode guides are displayed.
□ (Off): The mode guides are not displayed.

4 Press the **MENU** button.

The camera returns to ▲ mode or ▶ mode.

Changing the Start-up Screen

You can choose the start-up screen displayed when the camera is turned on.

You can choose any of the following images as the start-up screen:
- The Guide Display Start-up Screen showing a guide to the shooting modes and buttons
- One of the 3 PENTAX logos
- One of your own images (compatible images only)

1 In ▶ mode, press the four-way controller (▼).

The Playback Mode Palette appears.

2 Use the four-way controller (▲ ▼ ◀ ▶) to select ▣ (Start-up Screen).

```
┌─────────────────────────┐
│ ▶  Start-up Screen   2/2 │
│                          │
│ ◀ ⛐ ▷ ⊘ ▣ ▷            │
│      DPOF                │
│                          │
│ For setting a captured   │
│ image as the Start-up    │
│ Screen.                  │
│ MENU Cancel        OK OK │
└─────────────────────────┘
```

3 Press the OK button.
The image selection screen appears.

4 Use the four-way controller (◀ ▶) to choose the image for the start-up screen.

Only images suitable for the start-up screen are displayed. You can also choose one of the 3 PENTAX logos or the Guide Display Start-up Screen already stored in the camera.

```
┌─────────────────────────┐
│ ▣           □100-0017    │
│                          │
│                          │
│                          │
│                          │
│ MENU Cancel       OK OK  │
└─────────────────────────┘
```

5 Press the OK button.
The setting is saved.

memo
- Once the start-up screen has been set, it will not be deleted even if the original image is deleted or the SD Memory Card is formatted.
- Select [Off] to hide the start-up screen.
- The start-up screen is not displayed when you turn the camera on in the playback mode.
- Images or movies taken at 16:9 , 3:2 , 1:1 and ▮▮▮ (Digital Panorama mode) cannot be used for the start-up screen.

Resetting to Default Settings (Reset)

You can reset the camera settings to their defaults. Refer to "Default Settings" (p.249) for the reset settings.

1 Press the MENU button in ▶ mode.
The [✎ Setting] menu appears.
When you press the MENU button in ☐ mode, press the four-way controller (▶) once.

2 Use the four-way controller (▲ ▼) to select [Reset].

3 Press the four-way controller (▶).
The [Reset] screen appears.

4 Use the four-way controller (▲) to select [Reset].

```
Reset

     Reset to
  initial setting?


      Reset
      Cancel
               OK OK
```
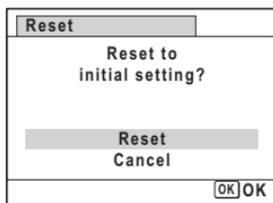
5 Press the OK button.
The settings return to the defaults.

memo The following settings are not affected by resetting:
- Date Adjust
- World Time
- Language/言語
- Video Out

Memo

8 Connecting to a Computer

Setting Up Your Computer

By installing the software included on the provided CD-ROM on your computer and connecting the camera to your computer with the USB cable, you can transfer images and movies captured with your camera to the computer and then display and manage them. This section explains how to install the provided software and the other necessary preparations for enjoying the captured pictures and movies on your computer.

Provided Software

The following software is included in the provided CD-ROM (S-SW87).

Windows
• Image viewing/managing/editing software "ACDSee for PENTAX 3.0" (Nine languages: English, French, German, Spanish, Italian, Russian, Chinese [traditional and simplified], Korean, Japanese)

Macintosh
• Image viewing/managing software "ACDSee 2 for Mac" (Six languages: English, French, German, Spanish, Italian, Japanese)

> **Caution**
> It is recommended to use the optional AC adapter kit K-AC64 when the camera is connected to the computer (p.33). If the battery runs out of power while images are being transmitted to the computer, the image data may be lost or damaged.

System Requirements

The following system requirements must be met for you to fully enjoy the images and movies captured with the camera on your computer.

Windows

OS	Windows 2000, Windows XP or Windows Vista • The OS must be preinstalled and updated to the latest version.
CPU	Pentium III or higher
Memory	256 MB minimum (512 MB or more recommended)
Hard Disk Space	100 MB minimum (1 GB or more recommended)
Others	CD-ROM drive USB port as standard equipment Internet Explorer 5.0 or later DirectX 9.0 or later and Windows Media Player 9.0 or later (for playing movies)

* Operation is not guaranteed on all computers meeting the system requirements.
* The system requirements describe the minimum environment for playing and editing movies.

Caution
> Windows 95, Windows 98, Windows 98SE, Windows Me and Windows NT are not supported.

memo
> The versions of Internet Explorer, Windows Media Player and DirectX required for using "ACDSee for PENTAX 3.0" are not included in the provided CD-ROM (S-SW87). Visit the following sites to download the necessary items and install/update them on your computer.
>
> • **Internet Explorer**
>   http://www.microsoft.com/windows/products/winfamily/ie/default.mspx
> • **Windows Media Player**
>   http://www.microsoft.com/windows/products/winfamily/mediaplayer/default.mspx
> • **DirectX**
>   http://www.microsoft.com/windows/directx/default.mspx

Macintosh

OS	Mac OS X (Ver.10.3-10.5) • The OS must be preinstalled and updated to the latest version. * When you connect the camera to a Macintosh without using the provided software, Mac OS X (Ver.10.1.2-10.5) is available.
CPU	Power Macintosh 233 MHz or higher
Memory	8 MB minimum
Hard Disk space	6 MB minimum
Others	CD-ROM drive USB port as standard equipment QuickTime 4.0 or later

* Operation is not guaranteed on all computers meeting the system requirements.

Installing the Software

Windows

Install the image viewing/managing/editing software (ACDSee for PENTAX 3.0).

> **Caution**
> • Make sure your Windows PC meets the system requirements before installing the software.
> • When multiple accounts have been set up in Windows 2000, Windows XP or Windows Vista, log on with an account that has administrative rights before installing the software.

1 **Turn your Windows PC on.**

2 **Insert the provided CD-ROM into the CD-ROM drive.**
The language selection screen appears.

If you are using Windows Vista
When the [AutoPlay] screen appears, display the language selection screen following the steps below.
   1) Click [Run setup.exe].
   2) Click [Allow].

If the language selection screen does not appear
Display the language selection screen following the steps below.
   1) Double-click [My Computer] on the desktop.
   2) Double-click the [CD-ROM drive (S-SW87)] icon.
   3) Double-click the [Setup.exe] icon.

3 Choose a language from the displayed screen.
The "ACDSee for PENTAX 3.0" installation screen appears.

PENTAX™ Software Installer

English	한국어
Français	Русский
Deutsch	日本語
Español	繁體中文
Italiano	简体中文

4 Click [Install].
The setup screen appears.
Follow the on-screen guidance to input registration information and install the software.

PENTAX™ Software Installer

acdsee   Install

Product Registration

5 Click [Finish].

"ACDSee for PENTAX 3.0" installation is complete.
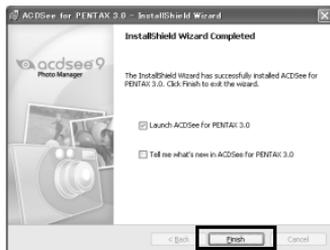
6 Click [Exit] on the installation screen.

The window is closed.

7 Reboot your Windows PC.

Go to "Product Registration on the Internet" (p.224).

Macintosh

Install the image viewing/managing software (ACDSee 2 for Mac).

1 Turn your Macintosh on.

2 Insert the provided CD-ROM into the CD-ROM drive.

3 Double-click the CD-ROM (S-SW87) icon.

4 Double-click the [ACDSee Install] icon.

The language selection screen appears.
When the [Master Installer] icon appears, double-click it to display the language selection screen.

5 Choose a language from the displayed screen.

The "ACDSee 2 for Mac" installer screen appears.

PENTAX™ Software Installer

English   Italiano
Français   Español
Deutsch   日本語

6 Click [Install].

The setup screen appears.
Follow the on-screen guidance to input registration information and install the software.

PENTAX™ Software Installer

acdsee   Install

Product Registration

7 When the screen shown on the right appears, click [Yes].

ACDSee

Do you want to use ACDSee Device Detector when you connect your digital camera?

You can change this option under ACDSee Preferences.

No   Yes
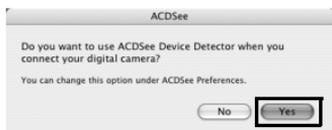
8 Click [Close].

"ACDSee 2 for Mac" installation is complete.

Install ACDSee 2

Introduction
License
Select Destination
Installation Type
Install
Finish Up

The software was successfully installed

acdsee2
for Mac

Close

9 Click [Exit] on the installation screen.

The window is closed.

Product Registration on the Internet

In order to better serve you, we request that you complete the product registration.

If your computer is connected to the Internet, please click [Product Registration] on the setup screen after the language selection screen is displayed. The world map screen shown on the right for Internet Product Registration is displayed. Click the displayed country or region and then follow the instructions to register your product.

Only customers in countries and regions displayed on the software installation screen can register their products on the Internet Product Registration.

Setting the USB Connection Mode

Set the device to which the camera is connected with the USB cable.

> Make sure to set the USB Connection mode before connecting your camera to the computer. You cannot perform the following setting if the camera is connected to your computer with the USB cable.

1 Turn your camera on.

2 Press the MENU button in ▶ mode.
The [✎ Setting] menu appears.
When you press the MENU button in ✚ mode, press the four-way controller (▶) once.

3 Use the four-way controller (▲ ▼) to select [USB Connection].

4 Press the four-way controller (▶).

A pull-down menu appears.

5 Use the four-way controller (▲ ▼) to select [MSC].

▢ ꜩ Setting	2/3
USB Connection ◀	**MSC**
Video Out	PTP
Brightness Level	▬▬▬
Power Saving	5sec.
Auto Power Off	3min.
Quick Zoom	☐
MENU Cancel	**OK** **OK**
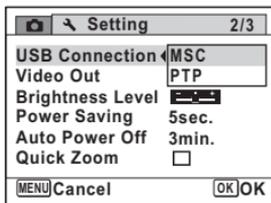
6 Press the OK button.

The setting is saved.

Go to the following pages depending on your computer.

Connecting to a Windows PC (p.226)

Connecting to a Macintosh (p.234)

MSC (Mass Storage Class) and PTP (Picture Transfer Protocol)

MSC (Mass Storage Class)

A general-purpose driver program that handles devices connected to the computer via USB as a memory device. Also indicates a standard for controlling USB devices with this driver.

By simply connecting a device that supports USB Mass Storage Class, you can copy, read, and write files from a computer without installing a dedicated driver.

PTP (Picture Transfer Protocol)

A protocol that allows transfer of digital images and control of digital cameras via USB, standardized as ISO 15740.

You can transfer image data between devices that support PTP without installing a device driver.

Unless otherwise specified, select MSC when connecting the X70 to your computer.

8

Connecting to a Computer

225

Connecting to a Windows PC

Connecting the Camera and a Windows PC

Connect your camera to the Windows PC using the provided USB cable (I-USB7).

1 **Turn your Windows PC on.**

2 **Turn your camera off.**

3 **Connect your camera to the Windows PC using the USB cable.**

Connect the terminal of the USB cable with ⬅ pointing toward the ◀ on the PC/AV terminal on the side of the camera.
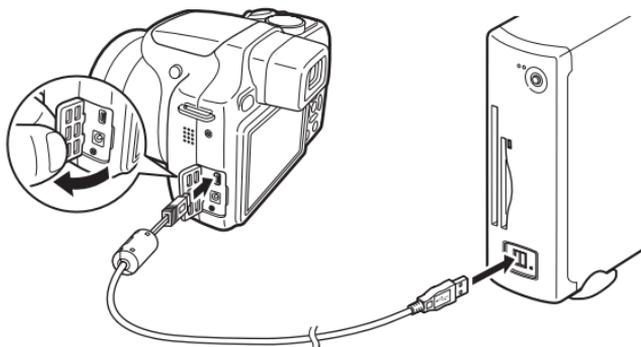
4 **Turn your camera on.**

The "Device Detector" screen appears.

If the "Device Detector" screen does not appear, follow the steps in "When the "Device Detector" screen does not appear" (p.228).

memo
The power lamp is lit while the camera is connected to a PC, whereas it blinks while the card is being accessed.

Caution
It is recommended to use the optional AC adapter kit K-AC64 when the camera is connected to the computer (p.33). If the battery runs out of power while images are being transmitted to the computer, the image data may be lost or damaged.

Transferring Images

Transfer the images captured with the camera to your Windows PC.

> memo
>
> If there is no SD Memory Card in the camera, the images stored in the built-in memory will be transferred to your Windows PC.

5 **Confirm that [Acquire images from the device with ACDSee] is checked and click [OK].**

6 **Click [Next].**

7 **Select an image to copy and click [Next].**
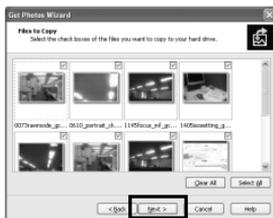
8 **Specify [File names] and [Destination folder], and click [Next].**
The images are copied to your Windows PC.
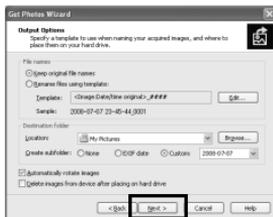
9 Click [Finish].

The "ACDSee for PENTAX 3.0" starts.

Completing the Get Photos
Wizard

Your pictures have been acquired from the selected
device and saved to your hard drive.

☑ Browse to your new images

[< Back][**Finish**][Cancel][Help]

When the "Device Detector" screen does not appear

5 Double-click the [ACDSee for PENTAX 3.0] icon on the desktop.

ACDSee for
PENTAX 3.0

6 Click [My Computer].
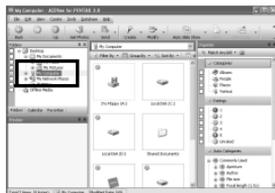
7 Double-click [Removable Disk].
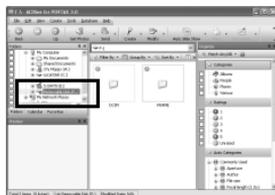
> memo
>
> If the SD Memory Card has a volume label, the volume label name appears instead of [Removable Disk]. A new unformatted SD Memory Card may show the manufacturer name or model number.

8 **Double-click the [DCIM] folder.**

Images are stored in folders named by the shooting date ("XXX_0202" for February 2. "XXX" is a three-digit number.).
If [Standard] is selected for [Folder Name] in the [✎ Setting] menu, a folder named "XXXPENTX" (XXX is a three-digit folder number) is displayed and images are stored here.

9 **Select the folders you want to copy to the Windows PC.**

10 **Select [Copy To Folder...] from the [Edit] menu.**

The "Copy Files" screen appears.

11 **Specify the destination folder and click [OK].**

The images are copied to your Windows PC.
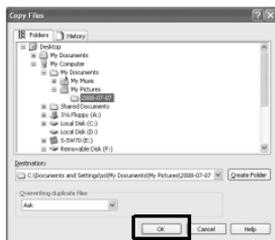
Disconnecting the Camera from Your Windows PC

1 **Double-click the [Safely Remove Hardware] icon in the task bar.**

The "Safely Remove Hardware" screen appears.

2 **Select [USB Mass Storage Device] and click [Stop].**

The "Stop a Hardware device" screen appears.

3 **Select [USB Mass Storage Device] and click [OK].**

A message appears indicating that the hardware can be safely removed.

4 **Click [OK].**
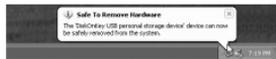
5 **Disconnect the USB cable from your Windows PC and the camera.**

memo
- If the camera (removable disk) is being used by an application such as "ACDSee for PENTAX 3.0", the camera cannot be disconnected until the application is closed.
- The camera will automatically switch to the Playback Mode when the USB cable is disconnected from your Windows PC or the camera.

Starting "ACDSee for PENTAX 3.0"

"ACDSee for PENTAX 3.0" lets you view, edit, manage, search for, share, and print images.

1 Double-click the [ACDSee for PENTAX 3.0] icon on the desktop.

ACDSee starts and the main browser window appears.

ACDSee Browser Interface
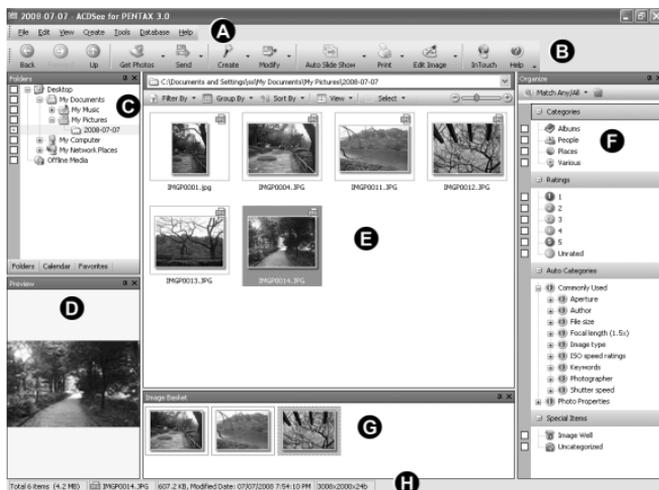
* The screen shown is an example with the default settings.

A Menu bar

Provides access to the various menu commands.

B Toolbar

Provides quick access to frequently used tasks and functions.

C Folders pane

Displays the configuration of folders in your computer. When you browse a folder, the contents of the folder appear in the File List pane.

D Preview pane

Displays a preview of the image or media file currently selected in the File List pane. You can change the size of the preview image or play back the media file.

E File List pane

Displays the contents of the selected folder or the results of the most recent search (the file or folder that matches the search item). It is the only pane that always appears in the browser and it cannot be hidden or closed.

F Category pane

Displays a list of categories and priorities. By dragging and dropping files from the File List pane to here, you can set category and priority for files.

G Image Basket pane

Displays files selected in the File List pane. By choosing images and files and putting them in the Image Basket pane, you can use the editing and creating functions on images from different folders and categories.

H Status bar

Displays information and properties for the selected file.

Viewing Images

1 **Select and click the folder containing the image you want to view in the Folders pane of the ACDSee browser.**

Images are displayed in the File List pane.

2 **Select and double-click the image you want to view in the File List pane.**

The selected image is displayed with the viewer.

With the viewer, you can enlarge/reduce the display size of the image or edit the image. You can also play back movies or sound files.

ACDSee Quick View

The image is displayed on the "ACDSee Quick View" screen if you double-click the image file directly from the browser without starting ACDSee. (You cannot play back or display the file with ACDSee Quick View even if you double-click a movie or sound file.)

You can also enlarge/reduce the display size of the image on the "ACDSee Quick View" screen.

Click [Full Viewer] on the "ACDSee Quick View" screen to switch the display to the viewer.

Click [Photo Manager] to switch the display to the ACDSee browser.

Details on How to Use "ACDSee for PENTAX 3.0"

You can find more information on how to use "ACDSee for PENTAX 3.0" by using the help pages.

1 **Click the [?] icon at the top right of the screen.**
The help screen appears.

2 **Double-click the desired topic.**
The explanation is displayed.

Connecting to a Macintosh

Connecting the Camera and a Macintosh

Connect your camera to the Macintosh using the provided USB cable (I-USB7).

1 Turn your Macintosh on.

2 Turn your camera off.

3 Connect your camera to the Macintosh using the USB cable.

Connect the terminal of the USB cable with ⇦ pointing toward the ◀ on the PC/AV terminal on the side of the camera.
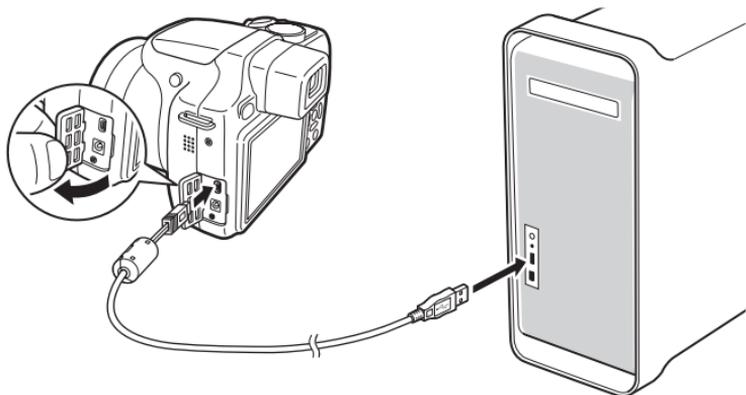
4 Turn your camera on.

The camera is recognized as [NO_NAME] on the desktop.

memo
- If the SD Memory Card has a volume label, the volume label name appears instead of [NO_NAME]. A new unformatted SD Memory Card may show the manufacturer name or model number.
- The power lamp is lit while the camera is connected to a Macintosh, whereas it blinks while the card is being accessed.

Transferring Images

Transfer the images captured with the camera to your Macintosh.

memo
If there is no SD Memory Card in the camera, the images stored in the built-in memory will be transferred to your Macintosh.

5 **Specify a save location, make sure that [Launch ACDSee] is checked, and click [Download].**

After images are copied to your Macintosh, the "ACDSee 2 for Mac" starts.
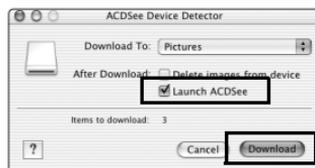
memo
When [Delete images from device] is checked, images are deleted from the camera after transfer is complete.

Disconnecting the Camera from Your Macintosh

1 **Drag [NO_NAME] on the desktop to the trash.**

If the SD Memory Card has a volume label, drag the icon of that name to the trash.

2 **Disconnect the USB cable from your Macintosh and the camera.**

memo
• If the camera (removable disk) is being used by an application such as "ACDSee 2 for Mac", the camera cannot be disconnected until the application is closed.
• The camera will automatically switch to the Playback Mode when the USB cable is disconnected from your Macintosh or the camera.

Starting "ACDSee 2 for Mac"

"ACDSee 2 for Mac" lets you display and manage images.

1 **Double-click the [ACDSee] folder inside the [Applications] folder.**

2 **Double-click the [ACDSee 2 for Mac] icon.**
ACDSee starts and the main browser window appears.

ACDSee Browser Interface

A Menu bar
Provides access to the various menu commands.

B Toolbar
Provides quick access to frequently used tasks and functions.

C Folders pane
Displays the configuration of folders in your Macintosh. When you browse a folder, the contents of the folder appear in the File List pane.

D Preview pane
Displays a preview of the image or media file currently selected in the File List pane. You can change the size of the preview image or play back the media file.

E Favorites pane

You can add frequently used items (folders, etc.).

F File List pane

Displays the contents of the selected folder or the results of the most recent search (the file or folder that matches the search item). It is the only pane that always appears in the browser and it cannot be hidden or closed.

G Status bar

Displays information and properties for the selected file.

Viewing Images

1 **Select and click the folder containing the image you want to view in the Folders pane of the ACDSee browser.**

Images are displayed in the File List pane.

2 **Select and double-click the image you want to view in the File List pane.**

The selected image is displayed.
You can enlarge/reduce the display size of the image.

Details on How to Use "ACDSee 2 for Mac"

You can find more information on how to use "ACDSee 2 for Mac" by using the help pages.

1 **Select [ACDSee 2 for Mac] from [Help] on the menu bar.**
The help screen appears.

2 **Click the desired topic.**
The explanation is displayed.

Memo

9 Appendix

Functions Available for Each Shooting Mode

Yes: Can be set.　　No: Cannot be set.

Function		AUTO PICT	🏃	((♪))	P	Tv	Av	M	●
Face Priority On		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Smile Capture		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Face Priority Off		No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Blink Detection		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Flash Mode	⚡A (Auto)	Yes	Yes	Yes	Yes	No	No	No	Yes
	🚫 (Flash Off)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	⚡ (Flash On)	Yes	Yes	Yes	Yes	No	Yes	No	No
	⚡A (Auto + Red-eye)	Yes	Yes	Yes	Yes	No	No	No	No
	⚡ (Flash On + Red-eye)	Yes	Yes	Yes	Yes	No	Yes	No	No
	⚡ (Slow-speed Sync)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
	⚡ (Slow-speed Sync+Red-eye)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Drive Mode	□ (Standard)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	🔳/🔳/🔳 (Continuous Shooting (L/M/H))	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
	♻ (Self-timer)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	♻ (2 Sec. Self-timer)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	🔳 (Interval Shoot)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
	🔳 (Auto Bracket)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Focus Mode	AF (Standard)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	🌷 (Macro)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	🌷 (1cm Macro)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
	▲ (Infinity)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
	MF (Manual Focus)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
	🔲 (AF Area Selection)	No	Yes	Yes	Yes	Yes	Yes	Yes	No
Image Tone		No*8	No*8	Yes	Yes	Yes	Yes	Yes	No*12
Recorded Pixels		Yes	Yes	No*9	Yes	Yes	Yes	Yes	No*13
Quality Level		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No*14
White Balance		No*2	No*2	Yes	Yes	Yes	Yes	Yes	No*2
Sensitivity		Yes	Yes	No*10	Yes	Yes	Yes	Yes*23	No*10
ISO Corction in AUTO		Yes	Yes	No*26	Yes	Yes	Yes	Yes	No
EV Compensation		No*3	Yes	Yes	Yes	Yes	Yes	No	No*3
AF Setting	Focusing Area	No*4	Yes	Yes	Yes	Yes	Yes	Yes	No*4
	Auto Macro	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No*15
	Focus Assist	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No*15
AE Metering		No*5	No*5	Yes	Yes	Yes	Yes	Yes	No*5
Flash Exp. Comp.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No*3
Bright Area Adj.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No*24
Shake Reduction *1		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No*15
Zoom		Yes*6	Yes	Yes*11	Yes	Yes	Yes	Yes	Yes*16
Sharpness		No*7	No*7	Yes	Yes	Yes	Yes	Yes	No*7
Saturation (Tone Adjustment)		No*7	No*7	Yes	Yes	Yes	Yes	Yes	No*7
Contrast		No*7	No*7	Yes	Yes	Yes	Yes	Yes	No*7
Date Imprint		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

🎥	🔺	✿	👤	🔅	🖼	🎞	Shooting Mode
							Function
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Face Priority On
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Smile Capture
Yes	Yes	Yes	No	Yes	No	Yes	Face Priority Off
No	Yes	Yes	Yes	Yes	Yes	Yes	Blink Detection
No	Yes	Yes	Yes	Yes	Yes	No	4ᴀ (Auto)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	⑤(Flash Off)
No	Yes	Yes	Yes	Yes	Yes	No	4 (Flash On)
No	Yes	Yes	Yes	Yes	Yes	No	®ᴀ (Auto + Red-eye)
No	Yes	Yes	Yes	Yes	Yes	No	®₄ (Flash On + Red-eye)
No	Yes	Yes	Yes	Yes	Yes	Yes	$_{4}^{SLOW}$ (Slow-speed Sync)
No	Yes	Yes	Yes	Yes	Yes	Yes	$_{⊛4}^{SLOW}$ (Slow-speed Sync + Red-eye)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	□ (Standard)
No	Yes	Yes	Yes	Yes	Yes	Yes	�馬/馬/馬 (Continuous Shooting (L/M/H))
Yes	Yes	Yes	Yes	Yes	Yes	Yes	⟳ (Self-timer)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	⟳ (2 Sec. Self-timer)
No	Yes	Yes	Yes	Yes	Yes	Yes	凹 (Interval Shoot)
No	Yes	Yes	Yes	Yes	Yes	Yes	閏 (Auto Bracket)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	**AF** (Standard)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	♥ (Macro)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	益 (1cm Macro)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	▲ (Infinity)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	**MF** (Manual Focus)
Yes	Yes	Yes	Yes	Yes	Yes	Yes	▦ (AF Area Selection)
Yes	No[8]	No[8]	No[8]	No[8]	No[8]	Yes	Image Tone
Yes	Yes	Yes	Yes	Yes	No[19]	Yes	Recorded Pixels
No[17]	Yes	Yes	Yes	Yes	Yes	Yes	Quality Level
Yes	No[2]	No[2]	No[2]	No[2]	No[2]	Yes	White Balance
No[10]	Yes	Yes	Yes	Yes	Yes	Yes	Sensitivity
No	Yes	Yes	Yes	Yes	Yes	Yes	ISO Corction in AUTO
Yes	Yes	Yes	Yes	Yes	Yes	Yes	EV Compensation
Yes[18]	Yes	Yes	Yes	Yes	Yes	Yes	Focusing Area
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Auto Macro
No	Yes	Yes	Yes	Yes	Yes	Yes	Focus Assist
No[5]	No[5]	No[5]	No[5]	No[5]	No[5]	Yes	AE Metering
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Flash Exp. Comp.
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Bright Area Adj.
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Shake Reduction *1
Yes[16]	Yes	Yes	Yes	Yes	Yes	Yes	Zoom
Yes	No[7]	No[7]	No[7]	No[7]	No[7]	Yes	Sharpness
Yes	No[7]	No[7]	No[7]	No[7]	No[7]	Yes	Saturation (Tone Adjustment)
Yes	No[7]	No[7]	No[7]	No[7]	No[7]	Yes	Contrast
No	Yes	Yes	Yes	Yes	Yes	Yes	Date Imprint

Rightmost grouping labels:
- Flash Mode
- Drive Mode
- Focus Mode
- AF Setting

Function / Shooting Mode		🎪	🏛	🍴	🏖	🏃	🐾	🍽
Face Priority On		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Smile Capture		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Face Priority Off		No	Yes	Yes	No	No	Yes	Yes
Blink Detection		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Flash Mode	𝄃ᴀ (Auto)	Yes	No	Yes	Yes	Yes	Yes	Yes
	𝄃 (Flash Off)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	𝄃 (Flash On)	Yes	No	Yes	Yes	Yes	Yes	Yes
	𝄃ᴀ (Auto + Red-eye)	Yes	No	Yes	Yes	Yes	Yes	Yes
	𝄃 (Flash On + Red-eye)	Yes	No	Yes	Yes	Yes	Yes	Yes
	𝄃 (Slow-speed Sync)	Yes	No	Yes	Yes	Yes	Yes	Yes
	𝄃 (Slow-speed Sync+Red-eye)	Yes	No	Yes	Yes	Yes	Yes	Yes
Drive Mode	□ (Standard)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	▤/▥/▦ (Continuous Shooting (L/M/H))	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	⟳ (Self-timer)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	⟳ (2 Sec. Self-timer)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	▤ (Interval Shoot)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	▦ (Auto Bracket)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Focus Mode	**AF** (Standard)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	🌷 (Macro)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	🌷 (1cm Macro)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	▲ (Infinity)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MF (Manual Focus)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	▦ (AF Area Selection)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Image Tone		No*8	No*8	No*8	No*8	No*8	No*8	No*8
Recorded Pixels		Yes	No*25	Yes	Yes	Yes	Yes	Yes
Quality Level		Yes	Yes	Yes	Yes	Yes	Yes	Yes
White Balance		No*2	No*2	No*2	No*2	No*2	No*2	No*2
Sensitivity		Yes	Yes	Yes	Yes	Yes	Yes	Yes
ISO Corction in AUTO		Yes	Yes	Yes	Yes	Yes	Yes	Yes
EV Compensation		Yes	Yes	Yes	Yes	Yes	Yes	Yes
AF Setting	Focusing Area	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Auto Macro	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Focus Assist	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AE Metering		No*5	No*5	No*5	No*5	No*5	No*5	No*5
Flash Exp. Comp.		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bright Area Adj.		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Shake Reduction *1		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Zoom		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sharpness		No*7	No*7	No*7	No*7	No*7	No*7	No*7
Saturation (Tone Adjustment)		No*7	No*7	No*7	No*7	No*7	No*7	No*7
Contrast		No*7	No*7	No*7	No*7	No*7	No*7	No*7
Date Imprint		Yes	Yes	Yes	Yes	Yes	Yes	Yes

☀	◯	🍸	🏛	🌄	WIDE	▮▮▮	Shooting Mode / Function	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Face Priority On	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Smile Capture	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Face Priority Off	
Yes	Yes	Yes	Yes	Yes	No	No	Blink Detection	
No	Yes	Yes	Yes	Yes	Yes	Yes	⚡A (Auto)	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	⚡(Flash Off)	Flash Mode
No	Yes	Yes	Yes	Yes	Yes	Yes	⚡ (Flash On)	
No	Yes	Yes	Yes	Yes	Yes	Yes	⚡A (Auto + Red-eye)	
No	Yes	Yes	Yes	Yes	Yes	Yes	⚡ (Flash On + Red-eye)	
No	Yes	Yes	Yes	Yes	Yes	Yes	⚡ (Slow-speed Sync)	
No	Yes	Yes	Yes	Yes	Yes	Yes	⚡ (Slow-speed Sync + Red-eye)	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	□ (Standard)	
No	No	Yes	Yes	Yes	No	No	▤/▤/▤ (Continuous Shooting (L/M/H))	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	⟳ (Self-timer)	Drive Mode
Yes	Yes	Yes	Yes	Yes	Yes	Yes	⟳ (2 Sec. Self-timer)	
Yes	No	Yes	Yes	Yes	No	No	▤ (Interval Shoot)	
No	No	Yes	Yes	Yes	No	No	▤ (Auto Bracket)	
No	Yes	Yes	Yes	Yes	Yes	Yes	AF (Standard)	
No	Yes	Yes	Yes	Yes	Yes	Yes	♣ (Macro)	
No	Yes	Yes	Yes	Yes	Yes	Yes	♣ (1cm Macro)	Focus Mode
Yes	Yes	Yes	Yes	Yes	Yes	Yes	▲ (Infinity)	
No	Yes	Yes	Yes	Yes	Yes	Yes	MF (Manual Focus)	
No	Yes	Yes	Yes	Yes	Yes	Yes	▦ (AF Area Selection)	
No[8]	Yes	No[8]	No[8]	No[8]	Yes	Yes	Image Tone	
Yes	No[19]	Yes	Yes	Yes	No[21]	No[22]	Recorded Pixels	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Quality Level	
No[2]	Yes	No[2]	No[2]	No[2]	Yes	Yes	White Balance	
No[20]	Yes	Yes	Yes	Yes	Yes	Yes	Sensitivity	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	ISO Corction in AUTO	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	EV Compensation	
No[4]	Yes[18]	Yes	Yes	Yes	Yes	Yes	Focusing Area	AF Setting
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Auto Macro	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Focus Assist	
No[5]	Yes	No[5]	No[5]	No[5]	Yes	Yes	AE Metering	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Flash Exp. Comp.	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Bright Area Adj.	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Shake Reduction [1]	
Yes	Yes	Yes	Yes	Yes	No	Yes	Zoom	
No[7]	Yes	No[7]	No[7]	No[7]	Yes	Yes	Sharpness	
No[7]	Yes	No[7]	No[7]	No[7]	Yes	Yes	Saturation (Tone Adjustment)	
No[7]	Yes	No[7]	No[7]	No[7]	Yes	Yes	Contrast	
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Date Imprint	

*1 Movie SR is used for movies, while Shake Reduction is used for still pictures
*2 Fixed to **AWB**
*3 Fixed at ±0.0
*4 Fixed to Ⅰ ⅃ (Multi)
*5 Fixed to 🔲 (Multi-segment metering)
*6 Flowers cannot be detected when using Digital Zoom or Intelligent Zoom.
*7 Fixed as Standard
*8 Fixed at Natural
*9 Fixed to 5M
*10 Fixed at [AUTO]
*11 Only optical zoom is available
*12 Fixed at Bright
*13 Fixed to 12M
*14 Fixed to ★★ (Better)

*15 Fixed to ☑ (On)
*16 Only optical zoom and Digital Zoom are available
*17 Fixed to ★★★ (Best)
*18 ≋🕄 (Automatic Tracking) is not available.
*19 Fixed to 3M
*20 The sensitivity is fixed at its minimum setting
*21 Fixed to 3M for individual pictures, fixed to 5M for composite images
*22 Fixed to 2M for individual pictures
*23 [AUTO] cannot be selected.
*24 Fixed to □ (Off)
*25 Fixed to 2M
*26 Fixed at 50-6400

Messages

Messages such as the following may appear on the display during camera operation.

Message	Description
Battery depleted	The battery is exhausted. Charge the battery using the battery charger (p.29).
Memory card full	The SD Memory Card is full and no more images can be saved. Insert a new SD Memory Card or delete unwanted images (p.34, p.164). Change the recorded pixels or quality level of recorded images and try again (p.176).
Memory card error	Shooting and playback are impossible due to a problem with the SD Memory Card. You may be able to display or copy the images on the card using a computer.
The built-in memory is not formatted	The data within the built-in memory are damaged. Format the built-in memory.
Card is not formatted	The SD Memory Card you have inserted is unformatted or has been formatted on a computer or other device and is not compatible with this camera. Format the SD Memory Card in the camera (p.198).
Card locked	The SD Memory Card is write-protected (p.36).
Compression error	This message occurs when the camera fails to compress an image. Change the quality level or recorded pixels of the image and try shooting or saving it again.
No image/sound	There are no image/sound files on the SD Memory Card.
Movie recording stopped	This message appears when the internal temperature of the camera has exceeded normal operating limits while recording a movie.
Deleting	This message appears when deleting an image or sound file.
Camera cannot play this image and sound	You are trying to play back an image or sound in a format not supported by this camera. You may be able to play it back on another brand of camera or on your computer.
Image folder cannot be created	The largest file number (9999) has been assigned to an image in the largest folder number (999) and no more images can be saved. Insert a new SD Memory Card or format the card (p.198).
Protected	The image or sound file you are trying to delete is protected.

Message	Description
Data being recorded	Displayed when you try to switch to ▶ mode while an image is still being recorded, or when the protect setting or DPOF setting is being changed. It disappears after the image is recorded or the setting is changed.
Data being processed	Displayed when the camera takes more than five seconds to display an image due to image processing, or when the SD Memory Card or the built-in memory is being formatted.
Built-in memory full	Displayed if the built-in memory is full when saving a file.
No image to be processed	Displayed when there are no images or sound files.
This image/sound cannot be processed	Displayed for files that cannot be processed.
No card in the camera	Displayed when no SD Memory Card is inserted.
The built-in memory is not enough to copy images/sounds	Displayed when there is insufficient built-in memory to perform copying.
Cannot process correctly	Displayed when Red-eye Compensation processing fails.
Display image/sound from built-in memory	Displayed when the camera enters the built-in memory display.
Please pop-up the flash.	Press the ↯ button to use the flash.
Please confirm the lens cap is removed.	Appears when the power is turned on with the lens cap attached. Turn on the power again after removing the lens cap.

Troubleshooting

Problem	Cause	Remedy
The camera will not turn on	The battery is not installed	Check if a battery is installed. If not, install a battery.
	The battery is installed incorrectly	Check orientation of the battery. Reinsert the battery according to the $\oplus\ominus$ symbols in the battery compartment (p.30).
	The battery is exhausted	Charge the battery.
No image appears on the display	The camera is connected to a computer	The display is off when the camera is connected to a computer.
	The camera is connected to a TV	The display is off when the camera is connected to a TV.
	The viewfinder is selected	Press the EVF/LCD button.
The display is hard to see	The brightness level of the display is set too dark	Adjust the brightness level in [Brightness Level] in the [✎ Setting] menu (p.209).
	Power Saving function is on	When the Power Saving function is on, the display automatically darkens after a certain amount of time. Press a button to return to the normal brightness level. Select [Off] in [Power Saving] in the [✎ Setting] menu to turn the Power Saving function off (p.210).
The shutter will not release	The flash is charging	Pictures cannot be taken while the flash is charging. Wait until charging is finished.
	There is no available space on the SD Memory Card or in the built-in memory	Insert an SD Memory Card with available space or delete unwanted images (p.34, 164).
	Recording	Wait until recording is finished.
The picture is dark when using the flash	The subject is too far away in a dark environment, such as a night scene	The picture becomes dark if the subject is too far away. Take pictures within the specified flash range.

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Problem	Cause	Remedy
The subject is not in focus	The subject is difficult to focus on with autofocus	The camera may have difficulty in focusing on such subjects as: low contrast subjects (a white wall: a blue sky, etc.), dark subjects, finely-patterned objects, rapidly-moving objects. It is also difficult to get proper focus when shooting through a window or a net. Try shooting using the focus lock (p.66), or **M** (Manual Focus) (p.114).
	The subject is not in the focusing area	Locate the desired subject in the focus frame (focusing area) in the center of the display. If it is difficult to do so, first lock the focus on the desired subject (focus lock), and then move the camera to recompose. You can also take photos by setting the focusing area on your subject in [AF Area Selection] mode.
The flash does not discharge	The flash is not popped up	Pop up the flash.
	The flash mode is set to ⑤ (Flash Off)	Set to Auto or ⚡ (Flash On) (p.110).
	The Drive Mode is set to Continuous Shooting (L), Continuous Shooting (M), Continuous Shooting (H) or ▣ (Auto Bracket); the Focus Mode is set to ▲ (Infinity); and the Capture mode is set to 🎥 (Movie), ※ (Fireworks) or 🎭 (Stage Lighting).	The flash does not discharge in these modes.
The flash is not set	The flash is not popped up	Pop up the flash.

memo Very occasionally, static electricity may cause camera malfunction. In this case, remove the battery and install it again. If the camera is then working properly, normal condition is restored and you can continue using the camera.

Default Settings

The table below lists the factory default settings.
The meaning of the indications for menu items with a default setting is explained below.

Last Memory Setting

- Yes : The current setting (last memory) is saved when the camera is turned off.
- No : The setting returns to the default setting when the camera is turned off.
- * : The setting depends on the [Memory] setting (p.147).
- — : N/A

Reset Setting

- Yes : The setting returns to the default setting with the Reset function (p.215).
- No : The setting is saved even after reset.
- — : N/A

● [Rec. Mode] Menu Items

Item		Default Setting	Last Memory Setting	Reset Setting	Page
Image Tone		Bright	Yes	Yes	p.119
Recorded Pixels		12M (4000×3000)	Yes	Yes	p.120
Quality Level		★★ (Better)	Yes	Yes	p.122
White Balance		AWB (Auto)	*	Yes	p.123
Sensitivity		AUTO (50-800)	*	Yes	p.125
ISO Corction in AUTO		50-800	*	Yes	p.127
AF Setting	Focusing Area	L ⅃ (Multiple)	Yes	Yes	p.116
	Auto Macro	☑ (On)	Yes	Yes	p.117
	Focus Assist	☑ (On)	Yes	Yes	p.118
AE Metering		▣ (Multi-segment)	*	Yes	p.128
Flash Exp. Comp.		±0.0	Yes	Yes	p.129
Movie	Recorded Pixels	1280 (1280×720/15fps)	Yes	Yes	p.145
	Movie SR	☑ (On)	Yes	Yes	p.146
Bright Area Adj.		□ (Off)	Yes	Yes	p.130
Shake Reduction		☑ (On)	Yes	Yes	p.132

Item		Default Setting	Last Memory Setting	Reset Setting	Page
Interval Shoot	Interval	0 min. 10 sec.	Yes	Yes	p.133
	Number of Shots	2 pictures	Yes	Yes	
	Start Delay	In 0 hr. 0 min.	Yes	Yes	
Blink Detection		☑ (On)	Yes	Yes	p.135
Digital Zoom		☑ (On)	*	Yes	p.84
Instant Review		☑ (On)	Yes	Yes	p.135
Memory	Face Priority	☐ (Off)	Yes	Yes	p.147
	Flash Mode	☑ (On)	Yes	Yes	
	Drive Mode	☐ (Off)	Yes	Yes	
	Focus Mode	☐ (Off)	Yes	Yes	
	Zoom Position	☐ (Off)	Yes	Yes	
	MF Position	☐ (Off)	Yes	Yes	
	White Balance	☐ (Off)	Yes	Yes	
	Sensitivity	☐ (Off)	Yes	Yes	
	EV Compensation	☐ (Off)	Yes	Yes	
	AE Metering	☐ (Off)	Yes	Yes	
	Digital Zoom	☑ (On)	Yes	Yes	
	DISPLAY	☐ (Off)	Yes	Yes	
	File No.	☑ (On)	Yes	Yes	
Green Button		Green Mode	Yes	Yes	p.140
Sharpness		⎯■⎯ (Normal)	Yes	Yes	p.136
Saturation		⎯■⎯ (Normal)	Yes	Yes	p.137
Tone Adjustment		⎯■⎯ (Black and white)	Yes	Yes	p.137
Contrast		⎯■⎯ (Normal)	Yes	Yes	p.138
Date Imprint		☐ (Off)	Yes	Yes	p.139

● [🔧 Setting] Menu Items

Item		Default Setting	Last Memory Setting	Reset Setting	Page
Save as USER		Cancel	Yes	Yes	p.199
Sound	Operation Volume	3	Yes	Yes	p.200
	Playback Volume	3	Yes	Yes	
	Start-up Sound	1	Yes	Yes	
	Shutter Sound	1	Yes	Yes	
	Operation Sound	1	Yes	Yes	
	Self-timer Sound	1	Yes	Yes	
Date Adjust	Date Style (date)	According to initial setting	Yes	No	p.44 p.201
	Date Style (time)	24h	Yes	No	
	Date	1/1/2009	Yes	No	
	Time	According to initial setting	Yes	No	
World Time	Select Time	Same as ⌂ Hometown	Yes	Yes	p.204
	Destination (City)	According to initial setting	Yes	No	
	Destination (DST)	According to initial setting	Yes	No	
	Hometown (City)	According to initial setting	Yes	No	
	Hometown (DST)	According to initial setting	Yes	No	
Language/言語		According to initial setting	Yes	No	p.40 p.206
Folder Name		Date	Yes	Yes	p.207
USB Connection		MSC	Yes	Yes	p.224
Video Out		According to initial setting	Yes	No	p.208
Brightness Level		‒⋅■⋅+	Yes	Yes	p.209
Power Saving		5 sec.	Yes	Yes	p.210
Auto Power Off		3 min.	Yes	Yes	p.211
Quick Zoom		□ (Off)	Yes	Yes	p.212
Guide Display		☑ (On)	Yes	Yes	p.213
Reset		Cancel	—	—	p.215
Delete all		Cancel	—	—	p.168
Format		Cancel	—	—	p.198

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● Playback Mode Palette Items

Item		Default Setting	Last Memory Setting	Reset Setting	Page
Slideshow	Interval	3 sec.	Yes	Yes	p.158
	Screen Effect	Wipe	Yes	Yes	
	Sound Effect	☑ (On)	Yes	Yes	
Digital Filter		B&W	No	—	p.178
Frame Composite		Default1	Yes	Yes	p.183
Resize	Recorded Pixels	Depending on the picture taken	—	—	p.176
	Quality Level	Depending on the picture taken	—	—	p.176
Cropping		Depending on the picture taken	—	—	p.177
Image/Sound Copy		Built-in memory → SD Memory Card	—	—	p.188
Image Rotation		Normal	—	—	p.160
Movie Edit	Save as Still Image	—	—	—	p.186
	Divide Movies	—	—	—	
Red-eye Compensation		—	—	—	p.182
Voice Memo		—	—	—	p.194
Protect	Single Image/ Sound	Depending on the recorded image/sound	—	—	p.170
	All Images/Sounds	Depending on the recorded image/sound	—	—	
DPOF	Single Image	Copies: 0	—	—	p.190
	All Images	Date:□ (Off)	—	—	
Image Recovery		Cancel	—	—	p.169
Start-up Screen		Off	Yes	Yes	p.213

● Key Operation

Item		Function	Default Setting	Last Memory Setting	Reset Setting	Page
▶ button		Operation Mode	▶ mode	—	—	—
Zoom lever		Zoom Position	Full wide-angle	*	No	p.82
Four-way controller	▲	Drive Mode	□ (Standard)	*	Yes	p.95 - p.101
	◄	Flash Mode	⚡A (Auto)	*	Yes	p.110
	▶	Focus Mode	AF (Standard)	*	Yes	p.113
MENU button		Menu Display	Capture mode: [�‧ Rec. Mode] menu Playback mode: [⚲ Setting] menu	—	—	p.53
DISPLAY button		Information Display	Normal	*	Yes	p.20
☺ button		Operation Mode	Face Priority On	*	Yes	p.78
EVF/LCD button		Monitor display switching	Display	Yes	Yes	—
Green button		Capture Mode	Green Mode	Yes	Yes	p.80

List of World Time Cities

City: indicates cities that can be set as either the Initial Setting (p.40) or the World Time (p.204).
Video Output Format: indicates the video output format of the city set as the Initial Setting.

Region	City	Video Output Format	Region	City	Video Output Format
North America	Honolulu	NTSC	Africa/ West Asia	Istanbul	PAL
	Anchorage	NTSC		Cairo	PAL
	Vancouver	NTSC		Jerusalem	PAL
	San Francisco	NTSC		Nairobi	PAL
	Los Angeles	NTSC		Jeddah	PAL
	Calgary	NTSC		Tehran	PAL
	Denver	NTSC		Dubai	PAL
	Chicago	NTSC		Karachi	PAL
	Miami	NTSC		Kabul	PAL
	Toronto	NTSC		Male	PAL
	New York	NTSC		Delhi	PAL
	Halifax	NTSC		Colombo	PAL
Central and South America	Mexico City	NTSC		Kathmandu	PAL
	Lima	NTSC		Dacca	PAL
	Santiago	NTSC	East Asia	Yangon	NTSC
	Caracas	NTSC		Bangkok	PAL
	Buenos Aires	PAL		Kuala Lumpur	PAL
	Sao Paulo	PAL		Vientiane	PAL
	Rio de Janeiro	NTSC		Singapore	PAL
Europe	Lisbon	PAL		Phnom Penh	PAL
	Madrid	PAL		Ho Chi Minh	PAL
	London	PAL		Jakarta	PAL
	Paris	PAL		Hong Kong	PAL
	Amsterdam	PAL		Beijing	PAL
	Milan	PAL		Shanghai	PAL
	Rome	PAL		Manila	NTSC
	Copenhagen	PAL		Taipei	NTSC
	Berlin	PAL		Seoul	NTSC
	Prague	PAL		Tokyo	NTSC
	Stockholm	PAL		Guam	NTSC
	Budapest	PAL	Oceania	Perth	PAL
	Warsaw	PAL		Adelaide	PAL
	Athens	PAL		Sydney	PAL
	Helsinki	PAL		Noumea	PAL
	Moscow	PAL		Wellington	PAL
Africa/ West Asia	Dakar	PAL		Auckland	PAL
	Algiers	PAL		Pago Pago	NTSC
	Johannesburg	PAL			

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Optional Accessories

A number of dedicated accessories are available for this camera.
Products marked with an asterisk (*) are the same as those supplied with
the camera.

● **Power supply**

  Rechargeable lithium-ion battery D-LI92 (*)

  Battery charger kit K-BC92 (*)
    (Battery charger D-BC92, AC plug cord)

  AC adapter kit K-AC64
    (AC adapter D-AC64, AC plug cord)

  The battery charger and AC plug cord are only sold as a set.

● **Cable**

  USB cable I-USB7 (*)

  AV cable I-AVC7 (*)

● **Strap**

  O-ST92 (*)

● **Camera case**

  O-CC92

● **Lens cap (*)**

  O-LC92

Main Specifications

Type	Fully automatic compact digital still camera with built-in zoom lens
Number of Effective Pixels	Approx. 12 megapixels
Image Sensor	1/2.33 inch CCD
Number of Recorded Pixels	Still 12M (4000×3000), 3:2 (4000×2672) 16:9 (4000×2256) 7M (3072×2304), 5M (2592×1944) 3M (2048×1536), 1024 (1024×768) 640 (640×480)
	* Fixed at 3M (2048×1536) in Half-length Portrait mode. * Fixed at 2M (1600×1200) in Stage Lighting mode. * Fixed at 5M (2592×1944) in Digital SR mode. * Fixed at 3M (2048×1536) in Frame Composite mode. * Fixed at 5M (2592×1944) in Digital Wide mode, however, the first frame uses 3M (2048×1536). * Fixed at 2M (1600×1200) for one frame in Digital Panorama mode. * Fixed at 5M (2592×1944) when the sensitivity is set to 3200 or 6400. * Fixed at 5M (2592×1944) in Continuous Shooting (L), Continuous Shooting (M) or Continuous Shooting (H) mode.
	Movie 1280 (1280×720/15 fps), 848 (848x480/30 fps) 640 (640×480/30 fps), 640 (640×480/15 fps) 320 (320×240/30 fps), 320 (320×240/15 fps)
Sensitivity (Standard Output Sensitivity)	AUTO, Manual (ISO 50 - 6400) * The sensitivity is fixed at Auto (50 - 6400) in Digital SR mode.
File Format	Still JPEG (Exif 2.2), DCF 2.0, DPOF, PRINT Image Matching III
	Movie AVI (Motion JPEG), approx. 30 fps/15 fps, PCM system, monaural sound, Movie SR (Movie Shake Reduction)
	Sound Voice memo: WAVE (PCM) system, monaural
Storage Media	Built-in memory (approx. 33.6 MB), SD Memory Card, SDHC Memory Card

Approximate Image Storage Capacity and Recording Time

Still Pictures

Quality Level / Recorded Pixels	Built-in Memory			512 MB SD Memory Card		
	★★★	★★	★	★★★	★★	★
12M 4000×3000	7	14	22	107	209	321
3:2 4000×2672	8	16	24	114	228	343
16:9 4000×2256	9	18	26	126	253	368
1:1 2992×2992	9	18	26	126	253	368
7M 3072×2304	11	21	28	160	299	397
5M 2592×1944	13	26	37	192	368	530
3M 2048×1536	21	42	61	299	592	863
1024 1024× 768	74	126	165	1042	1777	2324
640 640× 480	153	239	268	2158	3357	3777

- The image storage capacity is for reference only. The actual image storage capacity may vary depending on the SD Memory Card and the subject.

Movie

	Built-in Memory	512 MB SD Memory Card
1280 (1280×720/15 fps)	32 sec.	7 min. 31 sec.
848 (848×480/30 fps)	22 sec.	5 min. 18 sec.
640 (640×480/30 fps)	32 sec.	7 min. 31 sec.
640 (640×480/15 fps)	1 min. 3 sec.	14 min. 48 sec.
320 (320×240/30 fps)	51 sec.	11 min. 59 sec.
320 (320×240/15 fps)	1 min. 37 sec.	22 min. 53 sec.

- The above figures are based on our standard shooting conditions and may vary depending on the subject, shooting conditions and type of the SD Memory Card used.
- Recording can continue until the built-in memory or the SD Memory Card is full, or the size of the recorded movie reaches 2 GB (when using an SDHC card). If recording stops at 2 GB, start recording again to continue to record the rest of the movie in blocks of 2 GB.

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White Balance		Auto, Daylight, Shade, Tungsten Light, Fluorescent Light (Daylight colors fluorescent, Daylight White Fluorescent, White Light Fluorescent), Manual
Lens	Focal Length	4.6 mm - 110.4 mm (approx. 26 mm - 624 mm in 35 mm equivalent focal length)
	Aperture	F2.8 (W) - F5.0 (T)
	Lens Composition	14 elements in 11 groups (4 aspherical elements)
	Zoom Type	Electrically driven
Optical Zoom		24×
Intelligent Zoom		7M: approx. 31.3x, 5M: approx. 37.0x, 3M: approx. 46.9x, 1024: approx. 93.8x, 640: approx. 150x (when combined with optical zoom)
Digital Zoom		Max. approx. 6.25× (combines with 24× optical zoom to give zoom magnification equivalent to 150×)
Motion Blur Reduction	Still	CCD Image Sensor Shift (Shake Reduction), Hi-sensitivity shake reduction mode (Digital SR)
	Movie	Movie shake reduction (Movie SR)
Display		2.7 inch LCD, approx. 230,000 dots, Wide viewing angle
Viewfinder		Electronic viewfinder with approx. 200,000 dots
Playback modes		Single-frame, 4-frame, 9-frame, Enlargement (max. 10×, scrollable), Face Close-up Playback, Folder Display, Calendar Display, Histogram Display, Deleting Selected Images, Slideshow, Resize, Cropping, Image&Sound Copy, Image Rotation, Digital Filter, Movie Playback/Edit (Save as Still Image, Divide Movies), Frame Composite, Red-eye Compensation, Voice Memo, Protect, DPOF, Image Recovery, Start-up Image Setting
Focus Modes		Autofocus, Macro, 1cm Macro, Infinity, Manual Focus, AF Area Selection (Selectable from among 25 points)
Focus	Type	TTL contrast detection system by sensor (multiple (9-point autofocus)/spot/automatic tracking AF changeable)
	Focus range (From lens face)	Standard : 0.4 m - ∞ (Wide-angle) 1.7 m - ∞ (Telephoto) Macro : 0.1 m - 0.5 m 1cm Macro : 0.01 m - 0.3 m * It is possible to switch to Infinity, Manual Focus or AF Area Selection. * Face Recognition AF is available only while the camera recognizes the subject's face.
	Focus Lock	By half-pressing the shutter release button
Exposure control	Metering System	Multi-segment metering, Center-weighted metering, Spot metering
	Exposure Compensation	±2 EV (can be set in 1/3 EV steps)
Face Priority		Recognition of up to 32 people's faces (up to 15 faces in the face recognition frame on the display), Smile Capture, Blink Detection * Face Recognition AE is available only while the camera recognizes the subject's face.

Shooting modes	Auto Picture, Sport, Digital SR, Program, Shutter Priority, Aperture Priority, Manual, USER, Landscape, Flower, Portrait, Backlight, Half-length Portrait, Night Scene, Night Scene Portrait, Stage Lighting, Surf & Snow, Baby, Kids, Pet, Food, Fireworks, Frame Composite, Party, Museum, Sunset, Digital Wide, Digital Panorama, Movie, Green	
Digital Filters	B&W, Sepia, Red, Pink, Purple, Blue, Green, Yellow, Soft, Color extraction (Red, Green, Blue), Fish-eye, Brightness	
Movie	Continuous Recording Time	Approx. 1 second - until built-in memory or SD Memory Card is full (however, maximum size is limited to 2 GB)
Shutter Speed	1/4000 sec. - 1/4 sec., max. 4 sec. (Shutter Priority, Aperture Priority, Manual Exposure, Night Scene mode)	
Built-in Flash	Modes	Auto, Flash Off, Flash On, Auto + Red-eye, Flash On + Red-eye, Slow-speed Sync, Slow-speed Sync+Red-eye
	Flash Range	Wide-angle:approx. 0.2 m - 9.1 m (approx. 0.66 ft - 29.9 ft) (Sensitivity:in Auto condition) Telephoto: approx. 1.7 m - 5.1 m (approx. 5.6 ft - 16.7 ft) (Sensitivity:in Auto condition)
Drive Modes	Single-frame, Continuous Shooting(L/M/H), Self-timer (approx. 10 sec., approx. 2 sec.), Interval, Auto Bracket	
Self-timer	Electronic control type, control time: Approx. 10 sec., 2 sec.	
Time Function	World Time	75 cities (28 time zones)
Power Source	Rechargeable lithium-ion battery D-LI92, AC adapter kit (optional)	
Battery Life	Number of Recordable Images approx. 170 pictures	* Recording capacity shows approximate number of shots recorded during CIPA-compliant testing (with display on, flash used for 50% of the shots, and 23 degrees centigrade). Actual performance may vary according to operating conditions.
	Playback Time approx. 200 min.	* According to the result of in-house testing. Actual time may differ depending on usage conditions.
	Movie Recording Time approx. 70 min.	
Interfaces	USB 2.0 (high-speed compatible) / PC/AV terminal/ External input terminal	
Video Output	NTSC/PAL (monaural)	
Dimensions	Approx. 110.5 (W) × 82.5 (H) × 89.5 (D) mm (excluding operating or protruding parts)	
Weight	Approx. 390 g (excluding battery and SD Memory Card) Approx. 410 g (including battery and SD Memory Card)	
Accessories	Rechargeable lithium-ion battery, battery charger, AC plug cord, USB cable, AV cable, software (CD-ROM), lens cap, strap, Operating Manual, Quick Guide	

WARRANTY POLICY

All PENTAX cameras purchased through authorized bona fide photographic
distribution channels are guaranteed against defects of material or workmanship
for a period of twelve months from date of purchase. Service will be rendered, and
defective parts will be replaced without cost to you within that period, provided the
equipment does not show evidence of impact, sand or liquid damage,
mishandling, tampering, battery or chemical corrosion, operation contrary to
operating instructions, or modification by an unauthorized repair shop. The
manufacturer or its authorized representatives shall not be liable for any repair or
alterations except those made with its written consent and shall not be liable for
damages from delay or loss of use or from other indirect or consequential
damages of any kind, whether caused by defective material or workmanship or
otherwise; and it is expressly agreed that the liability of the manufacturer or its
representatives under all guarantees or warranties, whether expressed or
implied, is strictly limited to the replacement of parts as hereinbefore provided. No
refunds will be made on repairs by non-authorized PENTAX service facilities.

Procedure During 12-month Warranty Period
Any PENTAX which proves defective during the 12-month warranty period should
be returned to the dealer from whom you purchased the equipment or to the
manufacturer. If there is no representative of the manufacturer in your country,
send the equipment to the manufacturer, with postage prepaid. In this case, it will
take a considerable length of time before the equipment can be returned to you
owing to the complicated customs procedures required. If the equipment is
covered by warranty, repairs will be made and parts replaced free of charge, and
the equipment will be returned to you upon completion of servicing. If the
equipment is not covered by warranty, regular charges of the manufacturer or of
its representatives will apply. Shipping charges are to be borne by the owner. If
your PENTAX was purchased outside of the country where you wish to have it
serviced during the warranty period, regular handling and servicing fees may be
charged by the manufacturer's representatives in that country. Notwithstanding
this, your PENTAX returned to the manufacturer will be serviced free of charge
according to this procedure and warranty policy. In any case, however, shipping
charges and customs clearance fees to be borne by the sender. To prove the date
of your purchase when required, please keep the receipt or bills covering the
purchase of your equipment for at least a year. Before sending your equipment
for servicing, please make sure that you are sending it to the manufacturer's
authorized representatives or their approved repair shops, unless you are
sending it directly to the manufacturer. Always obtain a quotation for the service
charge, and only after you accept the quoted service charge, instruct the service
station to proceed with the servicing.

- **This warranty policy does not affect the customer's statutory rights.**
- **The local warranty policies available from PENTAX distributors in some countries can supersede this warranty policy. Therefore, we recommend that you review the warranty card supplied with your product at the time of purchase, or contact the PENTAX distributor in your country for more information and to receive a copy of the warranty policy.**

$C \in$ The CE Mark is a Directive conformity mark of the European Union.

For customers in USA
STATEMENT OF FCC COMPLIANCE
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
  Increase the separation between the equipment and receiver.
  Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
* Consult the dealer or an experienced radio/TV technician for help.

For customers in Canada
This Class B digital apparatus complies with Canadian ICES-003.

Pour les utilisateurs au Canada
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

FOR CALIFORNIA, U.S.A. ONLY
Perchlorate Material-special handling may apply. The lithium battery used in this camera contains perchlorate material, which may require special handling. See www.dtsc.ca.gov/hazardouswaste/perchlorate

Declaration of Conformity
According to 47CFR, Parts 2 and 15 for
Class B Personal Computers and Peripherals

We: PENTAX Imaging Company
A Division of PENTAX of America, Inc.

Located at: 600 12th Street, Suite 300
Golden, Colorado 80401 U.S.A.
Phone: 303-799-8000 FAX: 303-790-1131

Declare under sole responsibility that the product identified herein complies with 47CFR Parts 2 and 15 of the FCC rules as a Class B digital device. Each product marketed is identical to the representative unit tested and found to be compliant with the standards. Records maintained continue to reflect the equipment being produced can be expected to be within the variation accepted, due to quantity production and testing on the statistical basis as required by 47CFR §2.909. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. The above named party is responsible for ensuring that the equipment complies with the standards of 47CFR §15.101 to §15.109.

Product Name: PENTAX Digital Still Camera

Model Number: X70

Contact person: Customer Service Manager

Date and Place: March, 2009, Colorado

Information for Users on Collection and Disposal of Old Equipment and Used Batteries

1. In the European Union

These symbols on the products, packaging and/or accompanying documents mean that used electrical and electronic equipments and batteries should not be mixed with general household waste.

Used electrical/electronic equipments and batteries must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of these products.
Following the implementation by member states, private households within the EU states may return their used electrical/electronic equipments and batteries to designated collection facilities free of charge*.
In some countries your local retailer may also take back your old product free of charge if you purchase a similar new one.
*Please contact your local authority for further details.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

2. In other countries outside the EU

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

For Switzerland: Used electrical/electronic equipment can be returned free of charge to the dealer, even when you don't purchase a new product. Further collection facilities are listed on the home page of www.swico.ch or www.sens.ch.

Note for the battery symbol (bottom two symbol examples): This symbol might be used in combination with a designation for the chemical element or compound in use. In this case you have to comply with the requirement set by the Directive for the chemicals involved.

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Memo

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• Specifications and external dimensions are subject to change without notice.