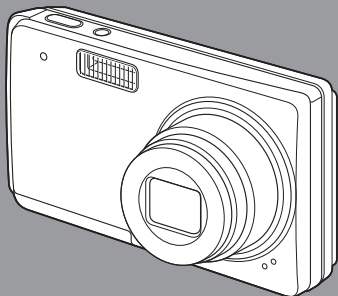


R50

RICOH

Instruction Manual Camera Section



The serial number of this product is given on the bottom face of the camera.

L749 2971
Printed in China
1AG6P1P3944--
SG2G2/EX, U (0108CR-HS)



Preface

This manual provides information on how to use the shooting and playback functions of this product, as well as warnings on its use. To make the best use of this product's functions, read this manual thoroughly before use. Please keep this manual handy for ease of reference.

Ricoh Co., Ltd.

Safety Precautions	For the safe use of your camera, be sure to read the safety precautions thoroughly.
Test Shooting	Please be sure to do some test shooting to make sure it is recording properly before normal use.
Copyright	Reproduction or alteration of copyrighted documents, magazines, music and other materials, other than for personal, home or similarly limited purposes, without the consent of the copyright holder is prohibited.
Exemption from Liability	Ricoh Co., Ltd. assumes no liability for failure to record or play back images caused by malfunction of this product.
Warranty	This product is manufactured to local specifications and the warranty is valid within the country of purchase. Should the product fail or malfunction while you are abroad, the manufacturer assumes no responsibility for servicing the product locally or bearing the expenditure incurred thereof.
Radio Interference	Operating this product in the vicinity of other electronic equipment may adversely affect the performance of both devices. In particular, operating the camera close to a radio or television may lead to interference. If interference occurs, follow the procedures below. <ul style="list-style-type: none">• Move the camera as far away as possible from the TV, radio or other device.• Reorient the TV or radio antenna.• Plug the devices into separate electrical outlets.

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This booklet was created with thorough attention to its content. If, however, you have a question, spot an error, or find a description lacking, please refer to the end of this booklet for information on how to contact us.

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QUICK SEARCH BY OPERATION

Your camera has an abundance of convenient features and functions. From creating precisely the photo you want, to viewing images using various techniques, you can locate the exact operation for your purposes in the following table.

Shooting/recording		
Basic operation	Convenient functions	Additional functions
Getting started shooting <ul style="list-style-type: none"> • "Recording a video clip" on page 46 • "Shooting single shots" on page 36 • "SHOOTING SEQUENTIAL SHOTS" on page 45 	Change the setting to sequential shots <ul style="list-style-type: none"> • "How to use the best shot feature" on page 53 Log the date and time of your photos <ul style="list-style-type: none"> • "DATE AND TIME SETTING" on page 25 • "DATE IMPRINT" on page 77 Zoom in on the subject <ul style="list-style-type: none"> • "USING THE ZOOM" on page 56 Close-up photography <ul style="list-style-type: none"> • "FOCUS RANGE" (macro mode) on page 61 	For more accurate focus <ul style="list-style-type: none"> • "FOCUS RANGE" (manual focus) on page 61 Set the focus to a narrow range <ul style="list-style-type: none"> • "FOCUS AREA SETTING" on page 71 Check the focus status <ul style="list-style-type: none"> • "Zoom jump playback" on page 42
Optimize the photo quality <ul style="list-style-type: none"> • "RESOLUTION/VIDEO SIZE SETTING" on page 67 		
Capture fast-moving subjects <ul style="list-style-type: none"> • "USING THE SCENE FUNCTION" (sports mode) on page 50 		

QUICK SEARCH BY OPERATION

Shooting/recording		
Basic operation	Convenient functions	Additional functions
Shoot in dark conditions <ul style="list-style-type: none"> • “EXPOSURE CORRECTION” on page 76 • “FLASH SETTING” on page 57 • “USING THE SCENE FUNCTION” (night view portrait mode/fireworks mode/lamp mode) on page 50 		
		Increase the camera’s sensitivity <ul style="list-style-type: none"> • “ISO SENSITIVITY” on page 74
Photographing people <ul style="list-style-type: none"> • “USING THE SCENE FUNCTION” (portrait mode/night view portrait mode/cosmetic mode/face chaser mode) on page 50 • “How to use the face chaser feature” on page 55 • “FLASH SETTING” (red-eye reduction) on page 57 		
Photographing landscapes <ul style="list-style-type: none"> • “USING THE SCENE FUNCTION” (landscape mode) on page 50 		
Take a self-photo <ul style="list-style-type: none"> • “SELF-TIMER” on page 59 		
	Make images lighter or darker <ul style="list-style-type: none"> • “EXPOSURE CORRECTION” on page 76 	Measure the brightness of a specific area <ul style="list-style-type: none"> • “LIGHT-MEASURING MODE SETTING” on page 73 Adjust the camera’s sensitivity <ul style="list-style-type: none"> • “ISO SENSITIVITY” on page 74
	Change the color of the images <ul style="list-style-type: none"> • “USING THE SCENE FUNCTION” (monochrome mode/sepia mode) on page 50 	Make white appear natural <ul style="list-style-type: none"> • “WHITE BALANCE” on page 75

Playback		
Basic operation	Convenient functions	Additional functions
Getting started viewing images <ul style="list-style-type: none"> • “Playing back the video clip” on page 47 	Adjust the playback volume <ul style="list-style-type: none"> • “SOUNDS” on page 101 	
<ul style="list-style-type: none"> • “Viewing still images” on page 38 	Search for image data <ul style="list-style-type: none"> • “9-image display playback” on page 39 • “Folder playback” on page 40 Magnify an image <ul style="list-style-type: none"> • “Magnifying (zooming in) the image” on page 41 	Check the focus status <ul style="list-style-type: none"> • “Zoom jump playback” on page 42 Change the orientation <ul style="list-style-type: none"> • “ROTATE IMAGE” on page 81
Slideshow playback <ul style="list-style-type: none"> • “SLIDESHOW PLAYBACK” on page 96 		
Adjust the monitor brightness <ul style="list-style-type: none"> • “Adjust the monitor brightness” on page 34 		
Playback on a TV <ul style="list-style-type: none"> • “CONNECTING TO A TV” (for playback) on page 118 	Set the TV system <ul style="list-style-type: none"> • “TV SYSTEM SETTING” on page 105 	

QUICK SEARCH BY OPERATION

Data managing/processing		
Basic operation	Convenient functions	Additional functions
Edit photos <ul style="list-style-type: none">• "BLUR CORRECTION" on page 83• "CONTRAST CORRECTION" on page 85• "RED-EYE CORRECTION" on page 87		
Copy files from the internal memory to the card, or vice versa <ul style="list-style-type: none">• "COPY DATA" on page 89		
Delete files <ul style="list-style-type: none">• "Deleting files" on page 43	Protect images from accidental erasure <ul style="list-style-type: none">• "IMAGE PROTECT" on page 80 Format a card <ul style="list-style-type: none">• "INITIALIZING THE CARD MEMORY AND INTERNAL MEMORY" on page 110	
Specify the number of prints and date imprint <ul style="list-style-type: none">• "PRINT SETTINGS" on page 91		
View the settings that were in effect when the image/audio data was recorded <ul style="list-style-type: none">• "DISPLAYING IMAGE PROPERTIES (INFORMATION SCREEN)" on page 97		

Using with a computer		
Basic operation	Convenient functions	Additional functions
<p>Use the camera as a card reader</p> <ul style="list-style-type: none"> • "BEFORE MOUNTING YOUR CAMERA" on page 6 in the R50 Software INSTRUCTION MANUAL • "MOUNTING AND DISMOUNTING YOUR CAMERA" on page 9 in the R50 Software INSTRUCTION MANUAL 		
<p>Copy files from your camera to a computer</p> <ul style="list-style-type: none"> • "BEFORE MOUNTING YOUR CAMERA" on page 6 in the R50 Software INSTRUCTION MANUAL • "MOUNTING AND DISMOUNTING YOUR CAMERA" on page 9 in the R50 Software INSTRUCTION MANUAL 		
<p>Playback</p> <ul style="list-style-type: none"> • "About video clip files recorded with this camera" on page 8 in the R50 Software INSTRUCTION MANUAL 		

CHECKING THE INCLUDED ACCESSORIES

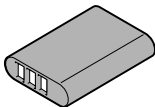
- Handstrap: 1



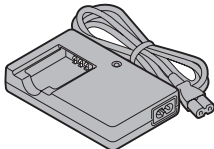
- R50 Software (CD-ROM): 1



- Lithium-ion battery pack (battery pack): 1



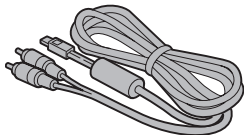
- Lithium-ion battery pack charger and power cord



- Dedicated USB interface cable: 1



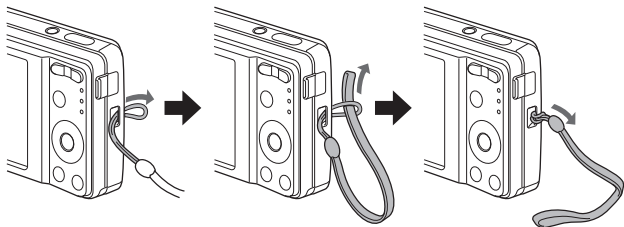
- Dedicated AV interface cable: 1



- “SAFETY MANUAL” (safety precautions booklet)
Please read this booklet carefully before using the digital camera.



Attaching the handstrap



Media cards that can be used with this camera

The types of card that can be inserted into and used with this camera are:

- SD Memory Card
- SDHC Memory Card

What “card” means in this manual

- In this manual, SD Memory Cards and SDHC Memory Cards that can be used in this digital camera are referred to as “card”.

GETTING THE MOST OUT OF YOUR CAMERA

It's loaded with lots of functions that are possible only in a digital camera, including a super-quick focus, a more extensive scene function, and more.

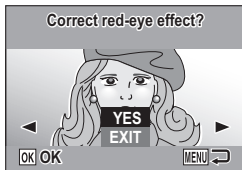
■ **Abundant scene functions (page 50)**

You can select from a variety of preset settings (aperture, shutter speed, etc.) for specific shooting conditions.



■ Photo correction feature (page 83)

Your camera can correct some problems in still images—red eyes resulting when the flash is used (red-eye effect) and blurred images due to camera movement (camera shake)—to produce more natural-looking photos. In addition, hazy images can be enhanced to show sharper outlines (contrast correction).

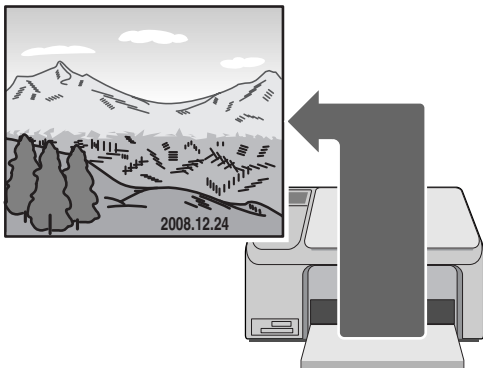


<Example: Red-eye correction>

GETTING THE MOST OUT OF YOUR CAMERA

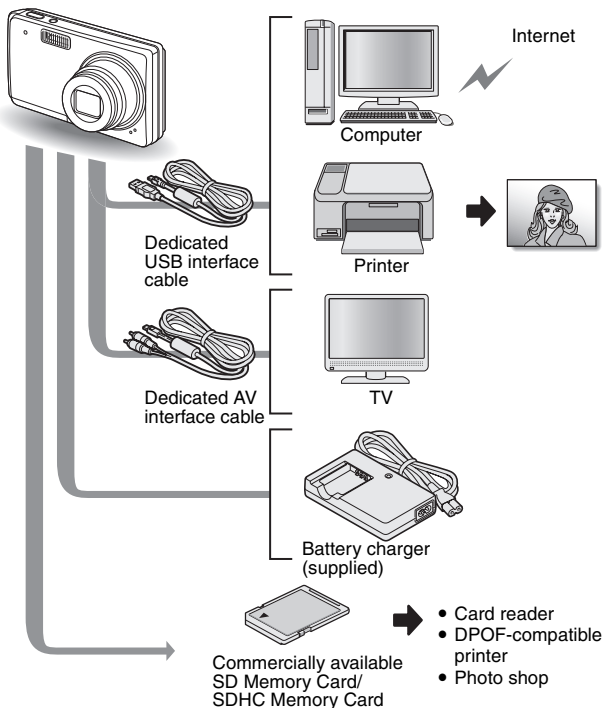
■ Date/time stamp feature (page 77)

Use the “date stamp feature” to print the capture date and time on your photo, even if your printer does not have a date stamp function.



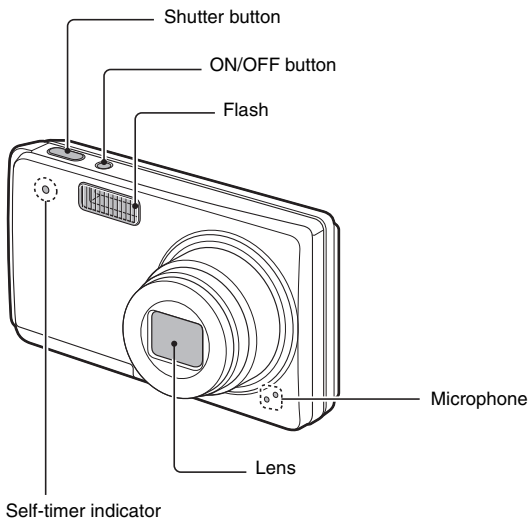
SYSTEM MAP

The included accessories can be used to connect your camera to a computer, printer or TV. By connecting the camera to your computer, you can, for example, copy your photos to the computer's hard disk. You can connect it to a printer for direct printing of your photos. Or take the card to a photo shop to have your photos printed there.

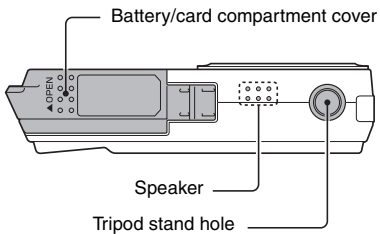


PARTS NAMES

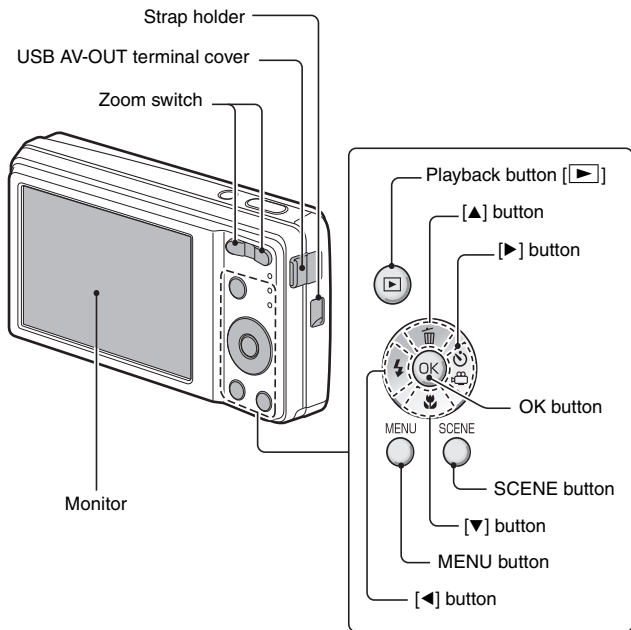
Front



Bottom



Rear

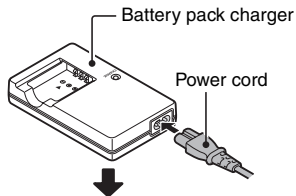


CHARGING THE BATTERY PACK

Please charge the supplied battery pack before using it.

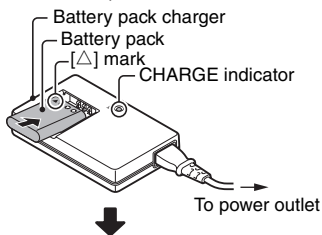
- 1** Connect the supplied power cord to the socket on the battery pack charger.

- Insert the connector straight and securely.



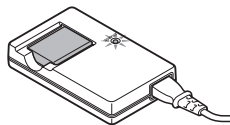
- 2** Insert the battery pack in the battery charger.

- Insert it in the direction indicated by the [Δ] mark on the battery pack.

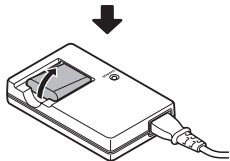


- 3** Plug the power plug into a power outlet (AC 100 V to 240 V).

- Charging begins.
- The CHARGE indicator is lit during charging.



- 4** When the CHARGE indicator turns off, unplug the power cord from the power outlet, and remove the battery pack from the charger.



HINT

- Charging takes approximately 2 hr. 30 min.

FOR AMERICAN USERS:

- Use a UL Listed, 1.8-3m (6-10ft), Type SPT-2 or NiSPT-2, AWG No.18 power supply cord, rated for 125V 7A, with a non-polarized NEMA 1-15P plug rated for 125V 15A.

Charging the battery pack

Be sure to fully charge the supplied or separately sold battery pack before using it in your camera. For charging the battery pack, use the supplied charger.

Charge the battery pack if it is being used for the first time, and recharge it whenever the remaining charge is low (see "CHECKING THE REMAINING BATTERY CHARGE" on page 116).

Does the battery pack feel hot?

- During charging, the charger and battery pack will be warm. This is normal and does not indicate a malfunction.

If there is interference to your TV or radio during charging...

- Move the battery pack and charger further away from the TV or radio.

Ambient temperature during charging

- It is recommended that the ambient temperature during charging be between about 10°C and 35°C (50°F and 95°F). Due to the characteristics of the battery pack, at temperatures below 0°C (32°F), it may not be possible to sufficiently charge it.
- When the battery pack temperature is high, the safety function may be activated and halt charging.

Charge a battery pack in the following cases

- A battery pack which has not been used for a long time
- Newly purchased battery pack

CHARGING THE BATTERY PACK

About the CHARGE indicator

The CHARGE indicator shows the status of the battery pack and the charger. Please refer to the following table if the indicator flashes abnormally.

CHARGE indicator	
Not lit	Not connected properly <ul style="list-style-type: none">• To recharge the battery pack, the power cord of the charger must be connected to a power outlet, and the plug at the other end inserted in the charger's power socket (page 17).• The battery pack is not installed, or it is not installed correctly (page 17). Charging finished
Lit	Charging
Flashing	Problem with the battery pack or battery pack charger <ul style="list-style-type: none">• Immediately remove the battery pack from the charger.• Do not use an abnormal battery pack. (The usable life of the battery pack has probably expired.)

CAUTION

Do not charge the battery pack immediately after the camera has been in continuous use for a long time

- The battery pack becomes hot when the camera is used continuously for a long time. If you attempt to charge the battery pack in this state, the safety function may be activated and it may not be possible to charge the battery pack. Wait until the battery pack has cooled down before attempting to charge it.

Does the battery pack appear swollen?

- The lithium-ion battery used in this camera may expand slightly when stored in a hot environment or repeatedly used, but this is not a safety hazard.

HINT

About the internal backup battery

- This camera's internal battery serves to maintain the date and time settings, as well as the shooting settings. The backup battery will be fully charged when the battery pack is kept in the camera continuously for about 2 days. In the fully charged state, the backup battery will maintain the camera settings for about 7 days.

When not using the camera for a long time, remove the battery pack

- A small amount of power is still used even if the digital camera is turned off, and it is therefore recommended that the battery pack be removed from the camera if it is not going to be used for a long time. Note that when the battery pack is removed for a long period, the time and date settings may be cleared. Before using your camera again, be sure to confirm that the camera settings are correct.

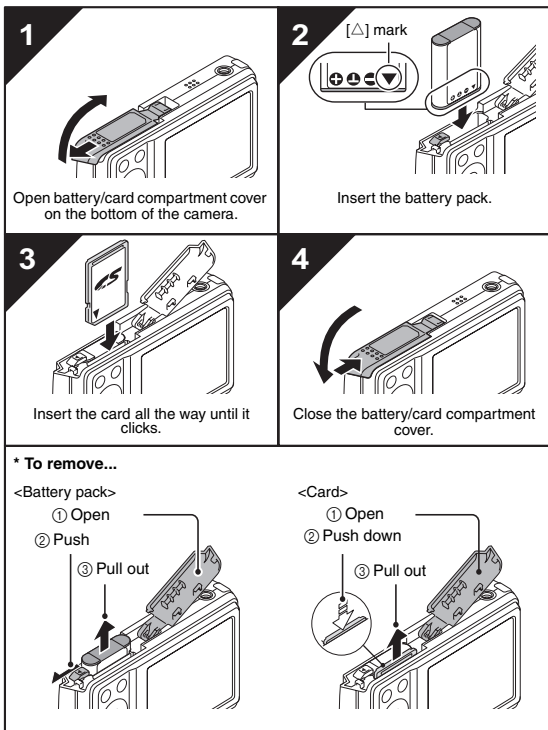
To prolong the life of the battery pack

- Although the battery pack is an expendable item, you can maximize the life of the battery by heeding the following suggestions.
 - Do not leave the battery under the hot summer sun or exposed to other high-temperature environments.
 - Do not continually recharge the battery when it is already fully charged. After fully charging it once, for example, use it for a while to partially discharge it before charging it again.
 - When the battery is not to be used for a long time, if possible store the partially charged (not fully charged) battery in a cool environment.

INSTALL THE BATTERY PACK AND CARD

Installation

- The card can be used after it has been formatted with the camera (page 110).
- Make sure that the battery pack and card orientation are correct.



CAUTION

Be careful when removing the card


- Do not attempt to forcibly remove the card.
- Never remove the card when the camera is connected to a computer or printer, or when the self-timer indicator is flashing quickly. In doing so, you risk losing the data stored in the card.

Keep your finger on the card until it is completely inserted or released


- If you remove your finger too soon, the card may spring out and become lost or hit someone in the eye.

HINT

Shooting without a card installed

- When a card is installed, images are recorded to and played back from the card. When no card is installed, images are recorded to and played back from the camera's internal memory. When the camera is turned on with no card installed, the internal memory icon  is shown on the monitor to let you know that the images you capture will be saved to the camera's internal memory.

Warning concerning battery pack temperature

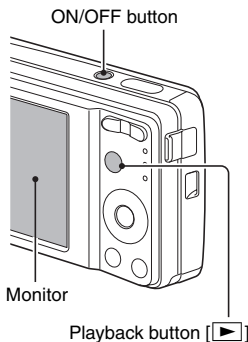
- If the battery pack in the camera becomes too hot, a blinking temperature warning icon  will appear on the monitor. If the blinking icon does appear, the camera should be turned off as soon as possible and the battery pack allowed to cool before the camera is turned on again.
- Note that the camera will turn off automatically if it continues to be used with the battery pack temperature elevated.

TURNING THE CAMERA ON AND OFF

Turning on the camera

In the shooting mode

- 1 Press the **ON/OFF** button.
 - The camera turns on.
 - The camera turns on in the shooting mode that was active before it was last turned off.



In the playback mode

- 1 Press the **playback button [▶]** for **at least one second**.
 - The Playback Screen appears on the monitor (pages 38 and 47).

Turning off the camera

- 1 Press the **ON/OFF** button.
 - The camera turns off.

<If the camera was turned on by pressing the playback button [▶]>

 - When the playback button [▶] or ON/OFF button is pressed, the camera turns off.


About the auto power off function

In order to preserve battery pack power when, for example, the camera has accidentally been left on, the camera is furnished with an “auto power off” function by which the camera automatically turns off after a certain period of inactivity (about 1 minute during shooting or about 3 minutes during playback [factory default settings]).

- If the auto power save function has operated to turn the camera off, press the ON/OFF button to turn it back on.
- You can change the setting for the time elapsed before the camera automatically turns off (page 106).
- When the camera is connected to a computer or printer using the dedicated USB interface cable, the auto power save function is disabled, and the camera turns off after about 12 hours.

HINT

If the  icon appears...

- When a picture is taken, the date and time it was captured is recorded with it. When the date and time cannot be recorded with the image because the date and time have not yet been set (page 25), the  icon appears. To have the date and time recorded with images, please make this setting before capturing images.

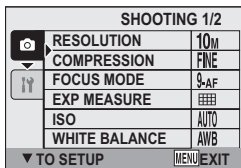
DATE AND TIME SETTING

The camera will record the date and time an image is captured so that you can display them during playback. Therefore, before capturing images, make sure the correct date and time are set.

Example: To set the clock to 7:30 p.m. on December 24, 2008

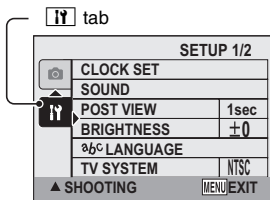
1 Press the ON/OFF button to turn the camera on, and press the MENU button.

- The Shooting Menu appears (page 65).



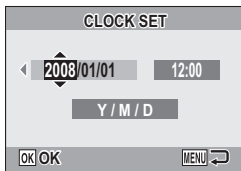
2 Press the [▼] button to select the [iY] tab, and press the [▶] button.

- The Setup Menu appears (page 99).



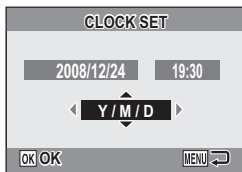
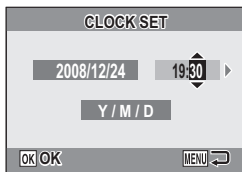
3 Press the [▲] or [▼] button to select “CLOCK SET”, and press the OK button or the [▶] button.

- The Clock Set Screen appears.
- The current date and time settings are shown.
- Follow the procedures below to enable or disable the date display during playback, to set the display format for the date, and to set the date and time.
- To return to the Setup Menu, press the MENU button.

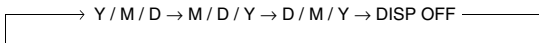


4 Set the date and time.

- ① Press the [▲] or [▼] button to change the year indication.
 - You can press the [▶] button to select the indication you wish to change.
 - Repeat these steps to select the month indication and day indication, and set the date to December 24, 2008.
- ② Press the [▶] button to select the time indication.
- ③ Press the [▲] or [▼] button to change the time setting.
- ④ Press the [▶] button to select the Y/M/D indication.
- ⑤ Press the [▲] or [▼] button to change the displayed date order.



- Press the [▼] button to change the displayed date order as follows:



- Press the [▲] button to change it in the reverse order.

DATE AND TIME SETTING

5 Press the OK button.

- The date and time setting is completed, and you are returned to the Setup Menu.
- The Setup Menu is canceled when the MENU button is pressed.

HINT

- Under normal conditions, while the battery pack is being replaced, an internal battery will maintain the date and time settings. However, there is a small chance the settings may be lost. (The backup will last for about 7 days.) It is recommended to check that the date and time settings are still correct after replacing the battery pack and before shooting or recording of any type (follow steps **1** to **3**).
- To correct the date and time settings**
- In step **4**, select the indication that you want to change, and follow the procedure to change the indication.

BEFORE TAKING PICTURES

How to hold the camera

Hold the camera securely, keeping your elbows close to your body and making sure the camera is stable.

Correct hold



Incorrect hold



A finger is blocking the lens or flash.

Make sure that the lens and flash are not blocked by your fingers or the handstrap.

HINT

- Images captured in the still image shooting mode can be rotated when they are played back (page 81).
- When the optical zoom is used or when the autofocus is operating, the image may appear to waver, but this is not a malfunction.

BEFORE TAKING PICTURES

Using the autofocus

The autofocus will work in almost all situations; however, there are certain conditions that may cause the autofocus function to not work properly. If the autofocus function is not working properly, set the focus range to capture images (page 61).

■ Conditions that may cause incorrect focus

The following examples are some of the situations where the autofocus function may not work.

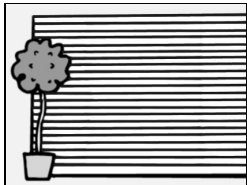
- **Subjects with low contrast, very bright subjects at the center of the image or dark subjects or locations**

Use the focus-lock function to lock the focus on an object with contrast at the same distance as the desired subject.



- **Subjects without vertical lines**

Use the focus-lock function to lock the focus while framing the subject vertically, then re-orient the camera to compose a horizontally framed image.



The following examples are some of the situations where the autofocus function may work, but not as desired.

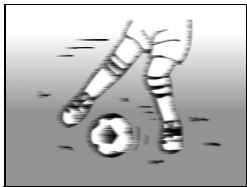
- **When both near and far objects are present**

Use the focus-lock function to lock the focus on an object at the same distance as the desired subject, then reposition the camera to compose the picture.



- **Fast-moving subjects**

Use the focus-lock function to lock the focus on an object at the same distance as the desired subject, then reposition the camera to compose the picture.



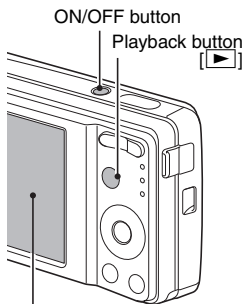
BEFORE TAKING PICTURES

Switching between the shooting mode and playback mode

Switch between shooting and playing.

- 1 Press the ON/OFF button to turn the camera on.

- 2 Press the playback button [▶].
 - Each time the playback button is pressed, the camera switches between the shooting mode and the playback mode.



<Shooting mode>



<Playback mode>

HINT

To turn the camera on in the playback mode

- Press the playback button [▶] for at least 1 second, and the camera will turn on in the playback mode.

How to switch the shooting mode

Your camera can capture single still photos (single-shot mode), record video clips (video clip recording mode), and also capture a series of still photos (sequential shots mode).

1 Press the ON/OFF button to turn the camera on.

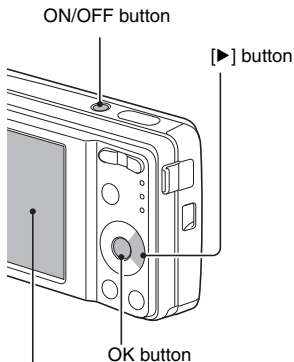
2 Press the [▶] button.

- The screen to set the shooting mode and the self-timer appears.

3 Press the [▶] button to select the shooting mode.

4 Press the OK button.

- The selected shooting mode is set.
- An icon in the upper left area of the monitor indicates the active shooting mode setting.



<Shooting mode>

- : Single-shot mode
- : Sequential shots mode
- : Video clip recording mode

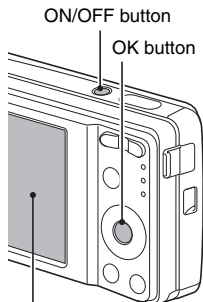
BEFORE TAKING PICTURES

Switching the display mode

In the shooting mode, you can select either the “settings display mode” which allows you to confirm the shooting settings on the monitor while you shoot, or the “normal display mode” in which the setting indications are turned off, providing a full view of the subject.

- 1 Press the ON/OFF button to turn the camera on.

- 2 Press the OK button.
 - Each time the OK button is pressed, the camera switches between the settings display mode and the normal display mode.



Adjust the monitor brightness

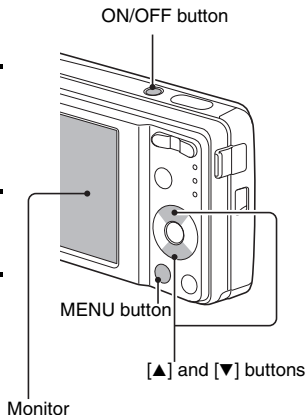
The brightness of the monitor is adjustable. Adjust the brightness to the optimum readability in the ambient light.

- 1** Press the **ON/OFF** button to turn the camera on.

- 2** Press the **MENU** button for at least 1 second.
 - The monitor brightness menu appears.

- 3** Press the **[▲]** and **[▼]** buttons to adjust the brightness.

- 4** Press the **MENU** button.
 - The monitor brightness is set, and the monitor brightness menu is canceled.



HINT

- You can also adjust the monitor brightness by selecting "BRIGHTNESS" from the Setup Menu (page 99).

BEFORE TAKING PICTURES

Hints for taking pictures

Muting the camera sounds

- The operation sounds that are generated, for example, when the shutter button, MENU button or OK button is pressed, can be muted (page 101).

Where is the image data saved?

- All the image and sound data is recorded in the camera's internal memory or on the card installed in the camera.
- When a card is installed in the camera, the data is recorded on the card. If no card is installed, the data is recorded in the camera's internal memory.

Taking pictures in backlight conditions...

- When taking pictures with the light coming from behind the subject, due to the characteristics of the CCD, light lines or ghost patterns (flare effect) may appear in the captured image. In this situation, it is recommended that you avoid taking pictures with the subject lit from behind.

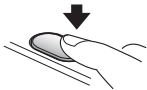
CAPTURING AND PLAYING BACK STILL IMAGES

There are two modes for capturing still images. In the single-shot mode, one image is captured each time the shutter button is pressed. In the sequential shots mode, when you press the shutter button, several successive images are captured. For more information about taking sequential shots, please see page 45.

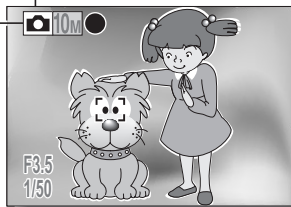
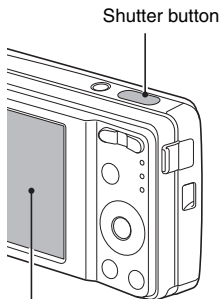
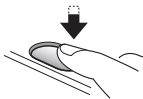
Shooting single shots

- 1 Set the camera to the single-shot mode (page 32).**

- 2 Press the shutter button halfway.**
 - Engage the autofocus by pressing the shutter button halfway (focus lock).



- 3 Gently press the shutter button.**
 - Press the shutter button gently, taking care not to move the camera.
 - The image that was captured appears on the monitor as long as the shutter button is kept pressed (post view).



Single-shot icon

<Single-Shot Screen>

CAPTURING AND PLAYING BACK STILL IMAGES

4 Release your finger from the shutter button.

- The captured image is recorded.

HINT

When the focus mode (page 71) is set to the 9-point focus mode [9-**AF**...

- A target mark [] on the monitor shows the area the camera is focusing on.
- The camera automatically determines the correct focus by measuring from 9 different focus points within the shooting area. If the target mark is at a position that is different from the point you wish to focus on, you can refocus, for example, by changing the shooting angle.
- The large target mark appears when the camera focuses on a wide area in the center of the screen.

About the focus indicator

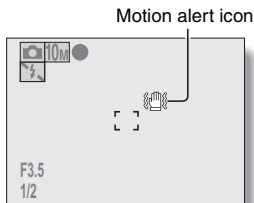
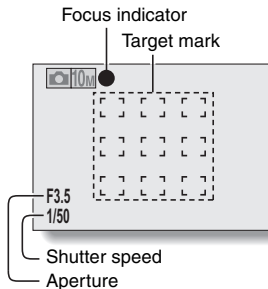
- A green focus indicator appears when the subject is successfully focused, or a red focus indicator when the camera was not able to focus the subject.

The shutter speed and aperture are displayed

- The shutter speed and aperture settings are also displayed on the monitor. You can use them as a reference when shooting.

If the motion alert icon appears...

- During still image shooting, if the shutter speed is slow and the possibility that the image may be blurred due to camera shake becomes high, the motion alert icon may appear on the monitor. In this case, use a tripod to stabilize the camera when shooting, or set the flash operation mode to automatic (page 57).
- When shooting with the fireworks [] scene function, the motion alert icon always appears, but this is normal.

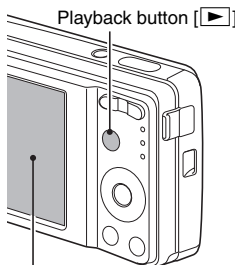


Viewing still images

The steps for viewing both single shots and sequential shots are the same.

5 Press the playback button [▶].

- If the playback button [▶] was pressed to turn the camera on, however, press the playback button [▶] for at least 1 second.
- The image most recently captured appears on the monitor.



6 View other images.

- Press the [◀] or [▶] button to display the previous or next image.
To display the previous image:
Press [◀].
To display the next image:
Press [▶].
- To return to Shooting Screen, press the playback button [▶].



<If the camera was turned on by pressing the playback button [▶]>

- When the playback button [▶] or ON/OFF button is pressed, the camera turns off.

When you are finished viewing images...

- Press the ON/OFF button to turn the camera off.

HINT

For still images with voice memo (page 52)...

- When the shutter button is pressed, the voice memo is played back.

CAPTURING AND PLAYING BACK STILL IMAGES

9-image display playback

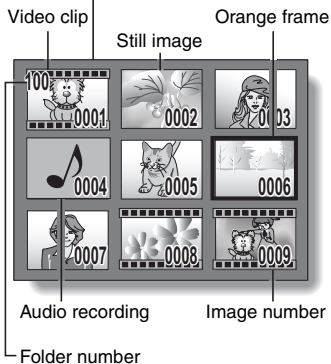
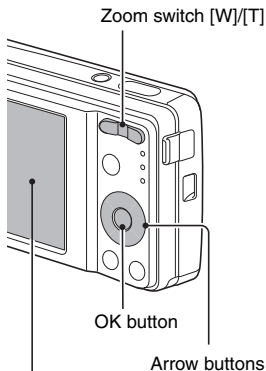
1 Press the playback button [▶].

2 Press [W] ([⊞]) on the zoom switch.

- The 9-image display appears.

3 Select the image to play back.

- Press the arrow buttons to move the orange frame to the desired image, and press the OK button. Instead of pressing the OK button, you can press [T] ([⊞]) on the zoom switch to show the image full screen.




Folder playback

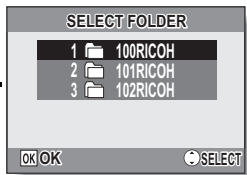
A convenient way to search through multiple folders.

1 Access the 9-image display (page 39).

- ### 2 Press [W] ([]) on the zoom switch.
- The Select Folder Screen appears.

3 Select the desired folder, and press the OK button.

- The first image in the selected folder is displayed.
- At this time, if you press [T] ([]) on the zoom switch, the images in the selected folder are shown in the 9-image display.



CAPTURING AND PLAYING BACK STILL IMAGES

Magnifying (zooming in) the image

1 Display the image that you want to magnify.

2 Press [T] ([🔍]) on the zoom switch.

- Magnification is enabled.
- The image is magnified, and the central portion of image is displayed.
- Press the arrow buttons to view different parts of the magnified image.

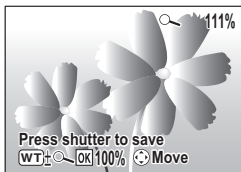
To magnify:

Magnification increases with each press of [T] ([🔍]) on the zoom switch.

To go back:

Magnification decreases with each press of [W] ([🔍]) on the zoom switch.

- Press the OK button to return to the normal (100%) view.



HINT

The magnified portion of the image can be saved as a separate image

- Press the shutter button. The magnified portion is saved as a new still image.

Zoom jump playback

You can magnify a portion of a still image to check the accuracy of the focus.

1 Display a still image to view using zoom jump playback.

2 Press the OK button.

- The image is magnified.
- If the magnified view appears to be in focus, then the overall image will be in focus.

3 Press the arrow buttons to move to the part you wish to magnify, and press [T] ([🔍]) on the zoom switch.

- The displayed area is further magnified.

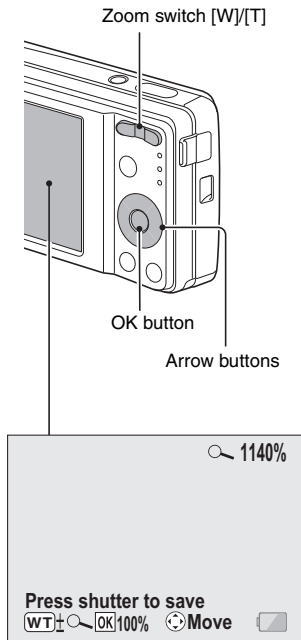
To magnify further:

Magnification increases with each press of [T] ([🔍]) on the zoom switch.

To go back:

Magnification decreases with each press of [W] ([📐]) on the zoom switch.

- Press the OK button again to return to the normal size (100%) screen.



CAPTURING AND PLAYING BACK STILL IMAGES

Deleting files

You can delete files that are stored on the card if you no longer need them. You can delete the files one at a time, or all at once.

-
- 1** To delete files from the card, perform the delete procedure with the card installed in the camera. To delete files from the camera's internal memory, remove the card before performing the delete procedure.

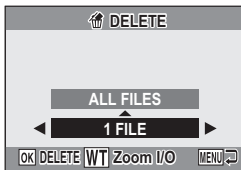
-
- 2** Set the camera to the playback mode, and press the [▲] button.
- The Delete Screen appears.

ALL FILES:

Deletes all the files.

1 FILE:

Deletes one file at a time.



-
- 3** Delete the files.

<To delete all the files>

- ① Use the [◀] and [▶] buttons to view the images and check if it is OK to delete all the files.
- ② Press the [▲] or [▼] button to select "ALL FILES".
- ③ Press the OK button.
 - The Delete Confirmation Screen appears. To delete the files, select "YES", and press the OK button. When the file delete is completed, "No image" is shown.

<To delete one file>

- ① Use the [◀] and [▶] buttons to display the file you wish to delete.
- ② Press the [▲] or [▼] button to select "1 FILE".
 - There is no confirmation screen when deleting single files. Before pressing the OK button in step ③, please make sure that the displayed image is one you wish to delete.
- ③ Press the OK button.
 - The currently displayed file is deleted.
 - To delete other files, repeat steps ① to ③.

CAUTION

About protected images

- Files that are protected from accidental delete cannot be deleted. To delete protected files, set the protect setting for the file to off (page 80), and then follow the file delete procedure.

SHOOTING SEQUENTIAL SHOTS

When the shutter button is pressed, still images are captured in succession.

- 1 Set the camera to the sequential shots mode (page 32).

Sequential shots icon



- 2 Press the shutter button to start shooting.
 - Shooting sequential shots begins.

<Estimated maximum number of sequential shots>

Resolution	Max. no. of shots
10M	Approx. 7 shots
7.5M	Approx. 9 shots
6M	Approx. 12 shots
4M	Approx. 19 shots
2M	Approx. 40 shots
0.3M	Approx. 170 shots

- * The quantities indicate the number of shots when the compression rate is set to **FINE**.
- * The maximum number of sequential shots will differ depending on the subject.
- Note that if the shutter button is released during shooting, shooting stops immediately.

HINT

About the focus when shooting sequential shots

- When sequential shots are captured, the autofocus operates when the focus lock is activated, fixing the focus.

Can the self-timer and/or flash be used?

- The self-timer and flash do not operate when shooting sequential shots.
- The following scene functions cannot be set.



VIDEO CLIP RECORDING AND PLAYBACK

Recording a video clip

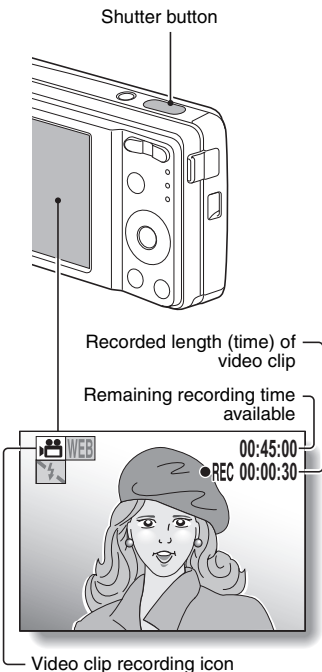
1 Set the camera to the video clip recording mode (page 32).

2 Press the shutter button.

- Video clip recording begins. During recording, the length of the video clip and the remaining recording time available are shown on the monitor.
- It is not necessary to continue pressing the shutter button while shooting.

3 End the recording.

- Press the shutter button again to stop recording and save the video clip.



VIDEO CLIP RECORDING AND PLAYBACK

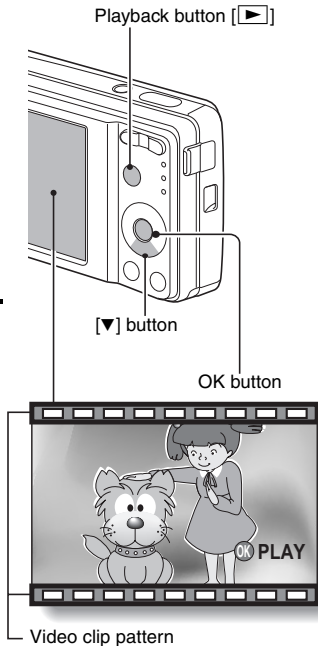
Playing back the video clip

4 Press the playback button [▶].

- If the playback button [▶] was pressed to turn the camera on, however, press the playback button [▶] for at least 1 second.
- The video clip just recorded appears on the monitor.
- Video clips are indicated by a video clip pattern along the top and bottom of the screen.

5 Press the OK button.

- Video clip playback begins.
- To stop playback, press the [▼] button.



Outline of playback operation

To do this...		Do this
Stop playback		During playback, press the [▼] button
Pause		During playback, press the OK button. During accelerated or slow playback, press the [▲] button.
To extract a still image		While playback is paused, press the shutter button.
To play back one image at a time (single-frame step)	Forward	While playback is paused, press the [▶] button.
	Reverse	While playback is paused, press the [◀] button.
Slow playback	Forward	While playback is paused, press and hold the [▶] button.
	Reverse	While playback is paused, press and hold the [◀] button.
To accelerate playback	Forward	During forward playback, press the [▶] button. * The playback speed changes each time the [▶] button is pressed, as follows: Normal playback → 2x → 5x → 10x → 15x Press the [◀] button to resume normal playback speed.
	Reverse	During forward playback, press the [◀] button. * The playback speed changes each time the [◀] button is pressed, as follows: 15x ← 10x ← 5x Press the [▶] button to resume normal playback speed.
Return to normal playback speed		Press the OK button.
Adjusting the volume		Louder: During playback, press [T] on the zoom switch. Softer: During playback, press [W] on the zoom switch.

VIDEO CLIP RECORDING AND PLAYBACK

When you are finished viewing video clips...

- Press the ON/OFF button to turn the camera off.
-

CAUTION

If no audio is heard...

The audio is not played back when the video clip is played back in the frame-by-frame, slow playback, fast playback or reverse playback mode.

The data for a video clip is very large

- Therefore, be aware that if the video clip is uploaded to a computer to be played back, the computer may not be able to play back the video fast enough, making it appear jerky. (The video will always be displayed properly on the camera monitor.)

If video clip recording stops even when there is card memory remaining...

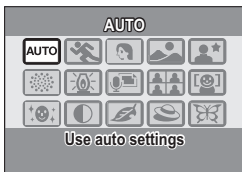
- Depending on the card you are using, recording may stop even if there is remaining memory in the card.
- For video clip recording, it is recommended that a high-speed memory card be used.

USING THE SCENE FUNCTION

You can select from a variety of preset settings (aperture, shutter speed, etc.) for specific shooting conditions.

- 1 Set the camera to the shooting mode (page 31), and press the **SCENE** button.











- The screen to select a scene function appears.














- 2 Use the arrow buttons to select the desired scene function.

<Features of each scene function>

<Example: In the single-shot mode>

Scene function	Features	Shooting mode setting		
				
 Auto	The camera makes the optimum settings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 Sports	Capture a split-second image of a fast-moving subject.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 Portrait	Enhance the three-dimensional feel of the subject by blurring the background. (With face chaser function)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 Landscape	For beautiful shots of distant scenery.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
 Night view portrait	Photograph the subject while keeping the background night scenery.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
 Fireworks	For capturing fireworks at night.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
 Lamp	Photograph in low-light conditions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

USING THE SCENE FUNCTION

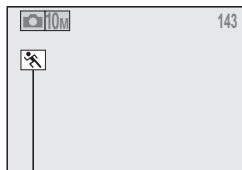
Scene function	Features	Shooting mode setting		
				
 Still image with audio	Shoot a still image and add a voice memo.	○	×	×
 Best shot	Four successive still images are captured as the exposure changes.	○	×	×
 Face chaser	The subject's face is kept in focus and the exposure adjusted as the image is captured.	○	○*	○*
 Cosmetic	Enhance skin tones during close-up shots.	○	○	○
 Monochrome	Create black-and-white photos.	○	○	○
 Sepia	Create sepia-tone photos.	○	○	○
 Contrast	Accentuates the light and dark areas in the image.	○	○	○
 Vivid	Accentuates the colors in the image.	○	○	○

○: Available ×: Not available

*: Disabled during recording


3 Press the OK button.

- This completes the scene select setting.
- The display returns to the Shooting Screen.
- The scene function setting is shown on the monitor.



Scene function setting
(**AUTO** is not displayed)

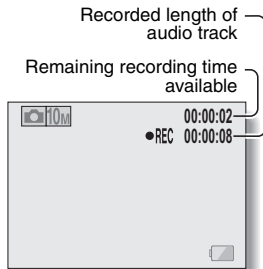
Capture a still image with a voice memo

With the still-image-plus-audio  scene function, you can add an audio track (about 10 seconds maximum) to a captured still image. This audio track is called a “voice memo”.

1 On the screen to select a scene function (page 50), select , and press the OK button.


2 Press the shutter button to take the picture, then speak into the microphone.

- During recording, be careful not to obstruct the microphone with your fingers, for example.
- Audio recording begins. During recording, the length of the audio track and the remaining recording time available are shown on the monitor.
- The maximum recording time for a voice memo is about 10 seconds.
- To end the recording before 10 seconds has elapsed, press the shutter button.



USING THE SCENE FUNCTION

How to use the best shot feature

- 1 Set the camera to the single-shot mode (page 32).
- 2 On the screen to select a scene function (page 50), select , and press the OK button.

- 3 Press the shutter button.
 - While the settings change, four still images are shot in sequence.
 - After the images are captured, the four still images are displayed on the monitor.



- 4 Use the arrow buttons to move the orange frame to the image you wish to save.
 - For a full-size view of the selected image, press the OK button.
 - With the full-size view active, you can use the [◀] and [▶] buttons to view the previous or next image.

<To save all four images>

 - With all four images showing on the monitor, press the MENU button.

5 With the full-size view of the image you wish to save, select “YES”, and press the OK button.

- The image currently displayed is saved, and the other images are deleted.



USING THE SCENE FUNCTION

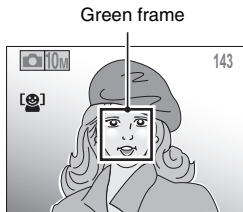
How to use the face chaser feature

To attain the best possible face shots, the camera automatically focuses on the face and adjusts the exposure.

1 On the screen to select a scene function (page 50), select , and press the OK button.

2 Aim the camera lens at the subject.

- The camera searches for the subject's face. When it detects the face, a green frame appears.
- Do not touch the shutter button while the camera is searching. The camera cannot search when the autofocus is activated.



3 The focus locks on the subject (page 36).

- The camera focuses on the subject and the exposure is adjusted.
- When the face is in focus, the green frame changes to orange.

4 Press the shutter button.

- The image is captured.

CAUTION

- The digital zoom is disabled.
- The face chaser function does not work when zooming in or out.
- The face chaser function may not work when the subject's face in the monitor is relatively small or appears dark.

USING THE ZOOM

Your camera has two zoom functions: optical zoom and digital zoom.

1 Set the camera to the shooting mode (page 31), and point the camera lens at the subject.

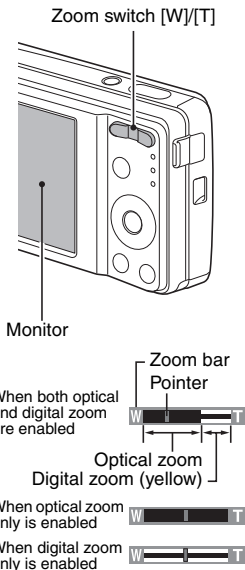
2 Press the zoom switch to compose the desired image.

[T]: Zoom in on the subject.

[W]: Zoom out.

- When the zoom switch is pressed, the zoom bar appears on the monitor.
- When the optical zoom factor is at maximum, zooming stops temporarily. When [T] on the zoom switch is pressed again, the mode changes to the digital zoom mode and zooming continues.

3 Take the picture.



HINT

Can't access the digital zoom?

- The digital zoom cannot be used when the face chaser (👤) or portrait mode (👤) scene function is active, or the focus mode is set to AF seeker (AF).

Can't access the optical zoom?

- When the focus range is set to pan (PF) or during video clip recording, the optical zoom cannot be used.

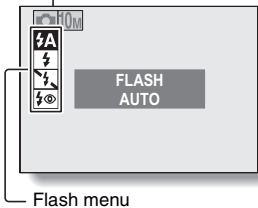
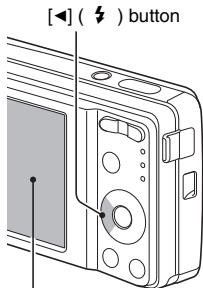
FLASH SETTING

The flash is used not only for taking pictures where there is insufficient light, but also when the subject is in shade or in backlight conditions. Your camera's flash has four modes of operation (auto mode, forced flash mode, flash off mode and red-eye reduction mode). Select the flash mode that is appropriate for the surrounding conditions. The flash can be enabled only when taking single-shot still images.

1 Set the camera to the single-shot mode (page 32), and press the [◀] (⚡) button.

- The flash menu appears.

- : The camera will detect the subject brightness and use the flash only when required. In a backlight situation, if only the center of the image is very dark, the flash will operate to compensate (auto).
- : The flash will operate with every image captured regardless of the conditions. Use this setting under backlight conditions, when the subject is in shade, under fluorescent lighting conditions, etc. (forced flash).
- : The flash will not operate even in dark situations. Use this setting when capturing an image in a location where flash photography is prohibited, or when shooting a night landscape scene (flash off).
- : The digital camera will detect the subject brightness and use the flash only when required. At this time the flash will operate in a manner that reduces the red reflection ("red-eye") in the subject's eyes (red-eye reduction).



-
- 2** Press the [▲] or [▼] button to select the desired flash mode, and press the OK button.
-

- 3** Press the shutter button.
- The picture is snapped and the flash operates according to the selected mode.
-

HINT

When auto is selected...

- The icon indicating the flash setting is not shown on the Shooting Screen.

When auto or red-eye reduction is selected...


- When the subject is in focus, if the camera determines that the flash is necessary, a or icon appearing on the monitor indicates that the flash will operate.


SELF-TIMER

Self-timer photography is available in the single-shot mode.

1 Set the camera to the single-shot mode (page 32), and press the **[▶] (⏸)** button.

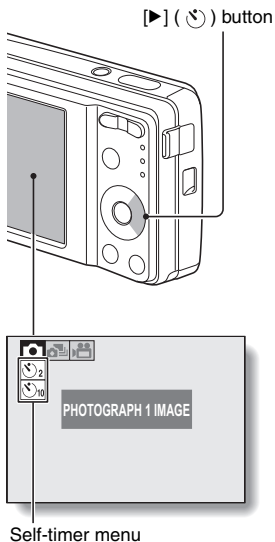
- The self-timer menu appears.

: The image is captured about 2 seconds after the shutter button is pressed.

: The image is captured about 10 seconds after the shutter button is pressed.

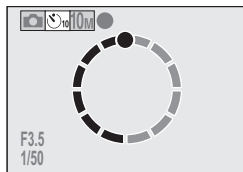
2 Use the **[▲]** and **[▼]** buttons to select the desired self-timer setting, and press the **OK** button.

- The self-timer is set, and you are returned to the Shooting Screen.




HINT

- The countdown time until shutter release is shown graphically on the monitor.



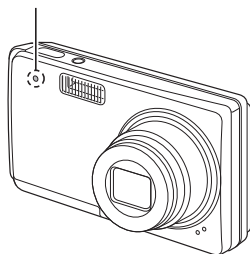
To pause or cancel the self-timer function...

- If the shutter button is pressed again before the shutter is released, the self-timer countdown temporarily stops. Press the shutter button one more time to restart the self-timer.
- To cancel self-timer photography, set the self-timer setting to off .
- After the self-timer picture is snapped, the self-timer is automatically reset to off.

When is selected...

- When the shutter button is pressed, the self-timer indicator flashes for approximately 10 seconds, after which shooting begins.
- About 3 seconds before shooting, the self-timer indicator flashes faster.

Self-timer indicator



FOCUS RANGE

- 1** Set the camera to the shooting mode (page 31), and press the [▼] (👉) button.

• The focus range menu appears.

[PF]: The focus operates within the ranges shown below (pan).

<Still image shooting>

- At maximum aperture setting: 2.2 m (7.22 ft.) to ∞
- At minimum aperture setting: 1.3 m (4.27 ft.) to ∞

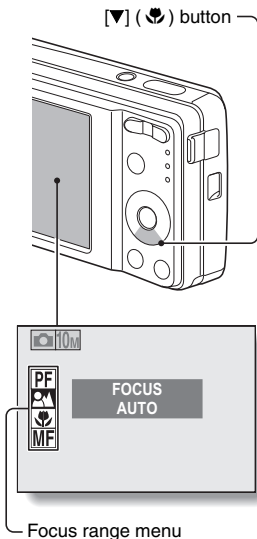
<Video clip recording>

- Wide end:
 - At maximum aperture setting: 45 cm (17.72 in.) to ∞
 - At minimum aperture setting: 28 cm (11.02 in.) to ∞
- Tele end:
 - At maximum aperture setting: 4.8 m (15.75 ft.) to ∞
 - At minimum aperture setting: 4.2 m (13.78 ft.) to ∞

[👤]: The camera automatically focuses on the subject within a range of 40 cm (15.75 in.) (Wide end) or 90 cm (2.95 ft.) (Tele end) to infinity (auto).

[👉]: You can focus on a subject within the following ranges (macro):
Wide end: 10 cm (3.94 in.) to 50 cm (19.69 in.)
Tele end: 60 cm (23.62 in.) to 1 m (3.28 ft.)



[MF]: The focus can be manually set to any distance from 10 cm (3.94 in.) to 10 m (32.81 ft.), as well as to infinity (manual).



2 Press the [▲] or [▼] button to select the desired focus range, and press the OK button.

- The specified focus range is set, and the camera returns to the Shooting Screen.

HINT

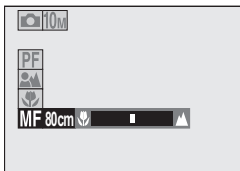
- In the single-shot mode and sequential shots mode, when the focus range is set to macro , the zoom is automatically set to one step from the wide end. When the focus range is set to pan , the zoom is automatically set to the Wide end.

FOCUS RANGE

How to use the manual focus

- 1 Select manual **[MF]** from the focus range menu, and press the OK button.

- The focus distance adjustment bar appears.



- 2 Press the [**◀**] or [**▶**] button to adjust the focus distance, and press the OK button.

- The focus distance is set, and you are returned to the Shooting Screen.

HINT

About the focus range

- The focus distance indication shows the distance between the lens surface and the subject.
- In some cases there may be a slight variance between the distance (numerical figure) you set in the manual focus mode and the actual distance. Use the monitor to confirm the focus and compose the photo.

About zoom movement when using the manual focus

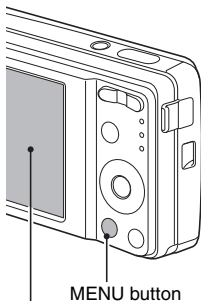
- If the focus distance is set to 50 cm (19.69 in.) or less, the zoom changes to the largest setting that is suitable for that focus distance.
- When the focus distance is set to 50 cm (19.69 in.) or less, the zoom will function only within the range at which the image is focused.

ACCESSING THE SHOOTING MENU

Detailed shooting settings are accessed from the Shooting Menu.

- 1** Set the camera to a shooting mode (page 32).

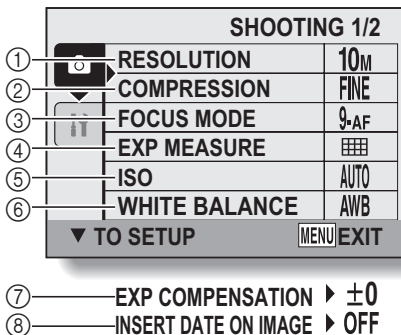
- 2** Press the MENU button.
 - The Shooting Menu corresponding to the shooting mode set in step 1 appears.
 - The Shooting Menu can be canceled by pressing the MENU button.



SHOOTING 1/2	
RESOLUTION	10M
COMPRESSION	FINE
FOCUS MODE	9-AF
EXP MEASURE	■■■■
ISO	AUTO
WHITE BALANCE	AWB
▼ TO SETUP	[MENU] EXIT

ACCESSING THE SHOOTING MENU


Overview of the Shooting Menu





- ⑦ and ⑧ are displayed when you press the [▲] or [▼] button to scroll.


① **Resolution menu/video size menu (page 67)**

<Single-shot/sequential shots mode>

: Shoot at 3648 × 2736 pixels

: Shoot at 3648 × 2056 pixels (16:9 aspect ratio)

: Shoot at 2816 × 2112 pixels


: Shoot at 2288 × 1712 pixels


: Shoot at 1600 × 1200 pixels

: Shoot at 640 × 480 pixels


<Video clip recording mode>


: Shoot at 640 × 480 pixels

: Shoot at 320 × 240 pixels

: Make an audio recording (page 68)


② **Compression rate menu (single-shot/sequential shots mode only) (page 70)**


: For shooting at low compression

: For shooting at normal (moderate) compression


③ **Focus mode menu (page 71)**


: 9-point focus mode

: Spot focus mode

: The focus follows the focus-locked subject.


④ **Light-measuring mode menu (page 73)**


: Multi-section light-measuring


: Center-weighted light-measuring


: Spot light-measuring


⑤ **ISO sensitivity menu (page 74)**


: Sets the ISO sensitivity automatically (ISO50 to 200).

: ISO50

: ISO100

: ISO200


: ISO400


: ISO800


: ISO1600

: ISO3200


⑥ **White balance menu (page 75)**


: The camera will determine the setting automatically.

: For photography in fair weather (sunny) conditions

: In overcast conditions

: Under fluorescent lighting

: Under incandescent lighting

: For setting the most accurate white balance

⑦ **Exposure correction menu (page 76)**

- Change the brightness of the image.

⑧ **Date imprint menu (page 77)**

- Imprint the capture date on still images.

- When you specify multiple functions that cannot be simultaneously enabled, the function which was last set becomes the active setting, and the other settings accordingly change automatically.

RESOLUTION/VIDEO SIZE SETTING

By setting the image resolution (pixels) to a higher setting, image detail is enhanced for a smoother, finer picture. However, the file size also becomes large and uses more memory. Select the resolution setting that suits your purpose.

1 Display the Shooting Menu (page 64).

2 In the single-shot or sequential shots mode select “RESOLUTION”, or in the video clip recording mode select “CLIP SIZE”, and press the OK button.

- The resolution menu or video size menu appears.

<Single-shot/sequential shots mode>

10M: Shoot image at 3648 × 2736 pixels

7.5M: Shoot image at 3648 × 2056 pixels (16:9 aspect ratio)

6M: Shoot image at 2816 × 2112 pixels

4M: Shoot image at 2288 × 1712 pixels


2M: Shoot image at 1600 × 1200 pixels

0.3M: Shoot image at 640 × 480 pixels

<Video clip recording mode>

TV: Shoot at 640 × 480 pixels

WEB: Shoot at 320 × 240 pixels

: Make an audio recording (page 68)


3 Select the desired icon, and press the OK button.

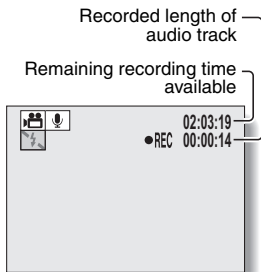
- The selected resolution setting or video size setting is set.

Record and play back an audio file

In the video clip recording mode, your camera can make audio recordings. The audio recordings are monaural.

■ Record an audio file

- 1 Display the Shooting Menu for the video clip recording mode (page 64).**
- 2 Select the audio recording icon  from the video size menu, and press the OK button.**
- 3 Press the MENU button.**
 - The recording mode is enabled.
- 4 Press the shutter button.**
 - Audio recording begins. During recording, the length of the audio track and the remaining recording time available are shown on the monitor.
 - It is not necessary to continue pressing the shutter button while recording.
 - Take care not to cover the microphone with your fingers.
- 5 End the recording.**
 - Press the shutter button again to stop recording.



RESOLUTION/VIDEO SIZE SETTING

■ Playing back audio recordings

1 Display the desired audio data.

- A musical note graphic appears on the screen.



2 Play back the recording.

To do this...	Do this
Forward playback	Press the OK button.
Stop playback	During playback, press the [▼] button
Pause	During playback, press the OK button. During fast forward or fast reverse, press the [▲] button.
Fast forward	During forward playback, press the [▶] button. * The speed changes each time the [▶] button is pressed, as follows: Normal playback → 2x → 5x → 10x → 15x Press the [◀] button to resume normal speed.
Fast reverse	During forward playback, press the [◀] button. * The speed changes each time the [◀] button is pressed, as follows: 15x ← 10x ← 5x Press the [▶] button to resume normal speed.
Return to normal playback speed	Press the OK button.
Adjusting the volume	Louder: During playback, press [T] on the zoom switch. Softer: During playback, press [W] on the zoom switch.

HINT

- During 5x or faster accelerated playback, the audio is not played back.

COMPRESSION RATE SETTING

Set the data compression rate when shooting images. Even if the same resolution is used, you can change the compression setting to decrease the image data size so that you can capture more images, or increase the image data size for no loss in image quality.

1 Display the Shooting Menu (page 64).

2 Select the compression rate menu, and press the OK button.

- The menu to select the desired compression rate is shown.
 - FINE**: Stores the data at a low compression rate. The file size is large, but the image quality is optimum.
 - NORM**: Stores the data at a normal compression rate. The file size is smaller, but the image quality is reduced.
-


3 Select the desired compression rate from the compression menu, and press the OK button.

- This completes the compression rate setting.

FOCUS AREA SETTING

You can choose from different types of autofocus:

9-point range finder focus:

The correct focus is determined from 9 different focus points within the shooting area visible on the monitor. When the image is focused, a target mark  appears.

Spot focus:

The camera focuses on the subject in the center of the monitor.

AF seeker:


Once the focus is locked on a subject (page 36), it follows the subject. The focus point automatically changes to remain continuously focused on a moving subject.


1 Display the Shooting Menu (page 64).



2 Select "FOCUS MODE" and press the OK button.

- The focus mode menu appears.

: 9-point range finder focus is selected (page 37).

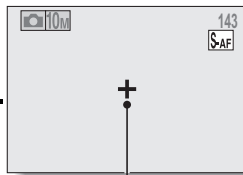
: Spot focus is selected.

: AF seeker is selected.

- When the  or  setting is selected, the focus mark appears in the center of the monitor.

3 Select the desired icon, and press the OK button.

- The focus area is set.



Focus mark

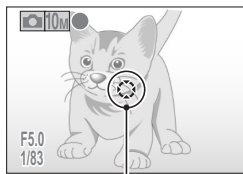
HINT

When spot focus is selected...

- The focus mark + appears in the center of the monitor.

When AF seeker is selected...

- The focus mark + appears in the center of the monitor.
- When the focus-lock is activated, the seeker mark appears on the focused subject.
- During focus-lock, even if the focused subject moves, the seeker mark automatically follows the subject.
- If the camera loses the focus-lock on the subject, the seeker mark disappears.
- In dark environments, the seeker mark may follow the subject more slowly.
- When the **AF-C** setting is selected, the digital zoom is not available.



Seeker mark

LIGHT-MEASURING MODE SETTING

You can select from 3 types of light-measuring modes.

Multi-section light-measuring:

The exposure is adjusted after sampling from multiple areas of the entire shooting screen.

Center-weighted light-measuring:

The exposure is adjusted after light is measured from the entire image, but with emphasis on the center area.


Spot light-measuring:

You can compose the picture and capture the image after first measuring the light only at the center spot of the monitor.


1 Display the Shooting Menu (page 64).

2 Select “EXP MEASURE”, and press the OK button.

- The light-measuring mode menu appears.

: Multi-section light-measuring

: Center-weighted light-measuring

: Spot light-measuring

3 Select the desired icon, and press the OK button.

- This completes the light-measuring mode setting.

ISO SENSITIVITY

With the initial settings, the ISO sensitivity is automatically set according to the brightness of the subject. However, the ISO sensitivity can be set to a fixed setting.

1 Display the Shooting Menu (page 64).

2 Select “ISO” and press the OK button.

- The ISO sensitivity menu appears.

ISO-A: Sets the ISO sensitivity automatically (ISO50 to 400 [video clip recording mode: ISO450 to 3600]).

50: Sets the sensitivity to ISO50 (video clip recording mode: ISO450).

100: Sets the sensitivity to ISO100 (video clip recording mode: ISO900).

200: Sets the sensitivity to ISO200 (video clip recording mode: ISO1800).

400: Sets the sensitivity to ISO400 (video clip recording mode: ISO3600).

800: Sets the sensitivity to ISO800 (video clip recording mode: ISO7200).

1600: Sets the sensitivity to ISO1600 (video clip recording mode: ISO7200).

3200: Sets the sensitivity to ISO3200 (video clip recording mode: ISO7200).

3 Select the desired icon, and press the OK button.

- The ISO sensitivity is set.
-

HINT

- By setting a higher ISO sensitivity, you can set higher shutter speeds and capture images in darker locations, but noise in the captured images may increase.
-

CAUTION

Does the image appear to flicker when recording a video clip?

- If recording a video clip under fluorescent lights with the ISO sensitivity set to **400** or higher, a noticeable flicker may appear in the image.
-

WHITE BALANCE

This camera automatically adjusts the white balance under most lighting conditions. However, if you want to specify the lighting conditions or change the overall tone of the image, the white balance can be manually set.

1 Display the Shooting Menu (page 64).


2 Select “WHITE BALANCE” and press the OK button.


- The white balance menu appears.


AWB: The camera will make the white balance adjustment automatically based on the natural and artificial light conditions. This is the setting used in the auto mode.


: For shooting outside on a sunny day.

: For shooting outside on a cloudy day.

: For shooting inside under fluorescent lighting.

: For shooting inside under incandescent lighting.

: For more accurate adjustment or when the light source cannot be specified (one-push).

Select the  icon from the white balance menu, fill the entire screen with a plain white paper, and press the OK button to set the white balance. To use any of the other white balance settings, proceed to step 3.

3 Select the desired icon, and press the MENU button.

- This completes the white balance setting.
-

HINT

To cancel the white balance setting

- Perform steps 1 and 2, select **AWB**, and then press the MENU button.

EXPOSURE CORRECTION

When capturing images, you can make the image lighter or darker.

1 Point the camera lens at the subject, and display the Shooting Menu (page 64).

2 Select “EXP COMPENSATION” and press the OK button.

- The screen to adjust the exposure appears.

3 Use the [▲] and [▼] buttons to select the desired exposure numerical value, and press the OK button.

- The specified exposure is set, and you are returned to the Shooting Menu.

HINT

- The exposure correction setting returns to ± 0 after the camera is turned off.

DATE IMPRINT

You can choose to have the date the image was captured imprinted on the image.

1 Display the Shooting Menu (page 64).

2 Select “INSERT DATE ON IMAGE”, and press the OK button.

- The date imprint menu appears.

ON: The date of the capture is imprinted on the image.

OFF: The date of the capture is not imprinted on the image.

3 Press the [▲] or [▼] button to select the desired setting, and press the OK button.

- The date imprint mode is set, and you are returned to the Shooting Menu.
-

HINT

About the capture date and date imprinting

- When an image is edited, the date of the image file changes to the date and time the image was edited. However, the imprinted capture date remains unchanged.

Is the sequential shots speed slow?

- When the date imprint mode is set to “ON”, the sequential shots speed may become slower.

If the imprinted date is shown as [- - - - . - - -] ...

- The date and time settings have not yet been completed. Set the camera to the correct date and time (page 25).

DISPLAYING THE PLAYBACK MENU

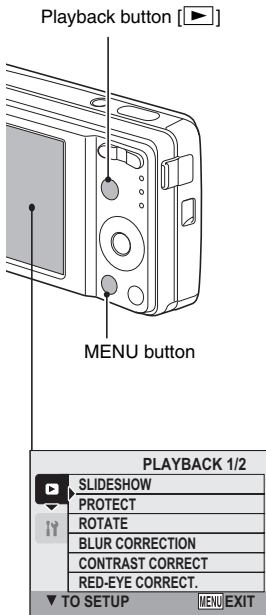
The Playback Menu is used to adjust your camera's playback settings.

1 Press the playback button [▶].

- The display changes to the Playback Screen.

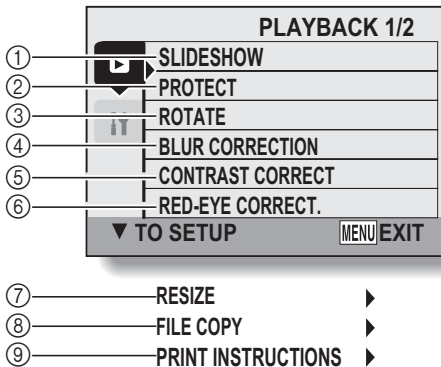
2 Press the MENU button.

- The Playback Menu appears.
- The Playback Menu is canceled when the MENU button is pressed.



DISPLAYING THE PLAYBACK MENU

Overview of the Playback Menu



① **[Slideshow] (page 96)**

- Play back the images in a slideshow format.

② **[Protect] (page 80)**

- Protect data from accidental erasure (write protect).

③ **[Rotate image] (page 81)**

- Rotate still images.

④ **[Blur correction] (page 83)**

- Correct the effects of camera shake in still images.

⑤ **[Contrast correction] (page 85)**

- Add contrast (light and dark) to the image to make it clearer.

⑥ **[Red-eye correction] (page 87)**

- Repair the red-eye effect to make eyes look more natural.

⑦ **[Resize] (page 82)**

- Reduce the resolution of a still image.

⑧ **[File copy] (page 89)**

- Copy files from the card to the internal memory, or vice versa.

⑨ **[Print instructions] (page 91)**

- Specify the print settings.

- ⑦ through ⑨ are displayed when you press the [▲] or [▼] button to scroll.

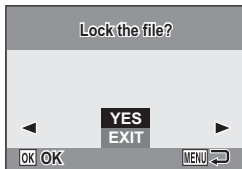
IMAGE PROTECT

Prevent accidental erasure of data.


- 1** Display the data that you want to protect from accidental erasure, and display the Playback Menu (page 78).
-

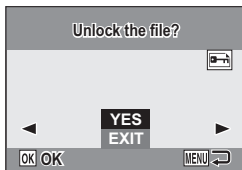
- 2** Select “PROTECT” and press the OK button.

- The screen to set the protect setting appears.



- 3** Select “YES” and press the OK button.

- The protect mode is set for the data.
- The protect mark  indicates that the data is locked.



CAUTION

- Even if the protect mode is set for certain data files, they will be deleted if the card is reformatted (page 110).
-

HINT

To select a different image in steps 2 and 3...

- Press the [◀] or [▶] button.

To cancel the protect mode for an image...

- Display the desired data and repeat steps 1 to 3.

ROTATE IMAGE

Captured still images can be rotated to the correct orientation for viewing.

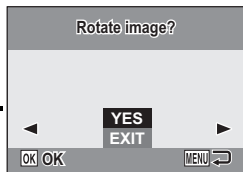
1 Display the image you wish to rotate, and display the Playback Menu (page 78).

2 Select “ROTATE” and press the OK button.

- The screen to rotate the image appears.
-

3 Select “YES” and press the OK button.

- Each time the OK button is pressed, the image is rotated another 90 degrees.
-



HINT

- On the 9-image display playback, rotated images are shown in their original orientation.
- An image for which the protect (locked) mode has been set cannot be rotated.

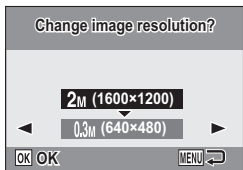
CHANGING IMAGE SIZE (RESIZE)

The size of a still image that has already been captured at a resolution of **2M** or higher can be changed to 1600 × 1200 pixels or 640 × 480 pixels. The resized image is saved as a separate image.

1 Display the still image whose size you want to change, and display the Playback Menu (page 78).

2 Select “RESIZE” and press the OK button.

- The screen to change the still image resolution appears.



3 Select the new image size.

2M (1600 × 1200): The saved image will be 1600 × 1200 pixels.

0.3M (640 × 480): The saved image will be 640 × 480 pixels.

4 Press the OK button.

- Resizing begins.
-

HINT

Why can't the image be resized?

- An image can be resized only to a smaller (or the same) size, not to a larger size.
- An image that was captured at a resolution of **7.5M** cannot be resized.

BLUR CORRECTION

Correct the effects of camera movement (camera shake) to produce a sharper image.

1 Display the image to be modified, and display the Playback Menu (page 78).

2 Select “BLUR CORRECTION”, and press the OK button.

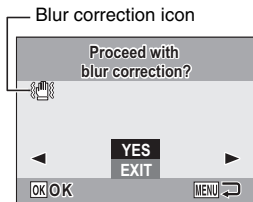
- The Blur Correction Screen appears.

YES:

Proceed with the blur correction.

EXIT:

Return to the Playback Menu.



3 Select “YES”, and press the OK button.

- Image processing begins.
- During image processing, “Processing” is shown on the screen.
- When processing is completed, the modified image is shown. Check the image to see if the post-processing result is satisfactory.

4 If the modified image is satisfactory, press the OK button.

- The screen to save the corrected image appears.
- To discontinue the procedure, press the MENU button. The modified image is discarded, and you are returned to the Blur Correction Screen.

SAVE AS NEW:

The modified image is saved as a separate image, and the original image is preserved.

OVERWRITE:

The original file is deleted, and only the modified image is saved.



5 Select the desired method to save the modified image, and press the OK button.

- The modified image is saved, and you are returned to the Blur Correction Screen.

HINT

About the blur correction icon

- On the Blur Correction Screen, an icon indicating the degree of blur appears.



: Blur correction unnecessary or blur correction completed.



: Blur correction possible



: Blur correction not possible

If the “Blur correction not successful” message appears...

- The camera was not able to successfully repair the image.
- The correction function works to automatically edit flaws that the camera detects in captured images. In some cases, the camera may not be able to repair the image.
- Blur correction is not possible for images captured at a shutter speed of 1/8 sec or less, for resized images, or for images captured using a different digital camera. Also, blur correction may not be possible in cases of extreme blur.

Concerning the date and time information for the modified image

- The date display that is shown when an edited image is played back is the date that the image was saved after it was modified.

CONTRAST CORRECTION

Add contrast (light and dark) to an image to make it clearer.

- 1** Display the image to be modified, and display the Playback Menu (page 78).
-

- 2** Select “**CONTRAST CORRECT**”, and press the **OK** button.

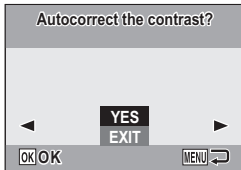
- The Contrast Correction Screen appears.

YES:

Proceed with the contrast correction.

EXIT:

Return to the Playback Menu.



- 3** Select “**YES**”, and press the **OK** button.

- Image processing begins.
- During image processing, “Processing” is shown on the screen.
- In some cases, it may take several seconds to process the image.
- When processing is completed, the modified image is shown. Check the image to see if the post-processing result is satisfactory.

4 If the modified image is satisfactory, press the OK button.

- The screen to save the corrected image appears.
- To discontinue the procedure, press the MENU button. The modified image is discarded, and you are returned to the Contrast Correction Screen.

SAVE AS NEW:

The modified image is saved as a separate image, and the original image is preserved.

OVERWRITE:

The original file is deleted, and only the modified image is saved.



5 Select the desired method to save the modified image, and press the OK button.

- The modified image is saved, and you are returned to the Contrast Correction Screen.

HINT

Concerning the date and time information for the modified image

- The date display that is shown when an edited image is played back is the date that the image was saved after it was modified.

RED-EYE CORRECTION

If you photograph your subjects at night using the flash, they may appear in the image with glowing red eyes (red-eye effect). Now you can amend the image so that the subjects' eyes appear more natural (red-eye correction).

1 Display the image to be modified, and display the Playback Menu (page 78).

2 Select “RED-EYE CORRECT.”, and press the OK button.

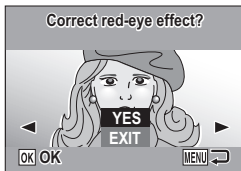
- The Red-eye Correction Screen appears.

YES:

Proceed with the red-eye correction.

EXIT:

Return to the Playback Menu.



3 Select “YES”, and press the OK button.

- Image processing begins.
- During image processing, “Processing” is shown on the screen.
- When processing is completed, the modified image is shown. Check the image to see if the post-processing result is satisfactory.

4 If the modified image is satisfactory, press the OK button.

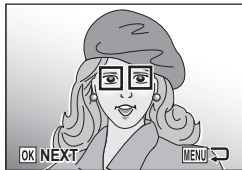
- The screen to save the corrected image appears.
- To discontinue the procedure, press the MENU button. The modified image is discarded, and you are returned to the Red-eye Correction Screen.

SAVE AS NEW:

The modified image is saved as a separate image, and the original image is preserved.

OVERWRITE:

The original file is deleted, and only the modified image is saved.



5 Select the desired method to save the modified image, and press the OK button.

- The modified image is saved, and you are returned to the Red-eye Correction Screen.

HINT

If the “Red-eye correction not successful” message appears...

- The camera was not able to successfully correct the red-eye effect.
- The red-eye correction function works to automatically edit the red-eye effect that the camera detects in captured images. In some cases, the camera may fail to correctly detect the red-eye effect, or it may incorrectly identify the red-eye effect where it does not exist.

Concerning the date and time information for the modified image

- The date display that is shown when an edited image is played back is the date that the image was saved after it was modified.

COPY DATA

Images recorded in the camera's internal memory can be copied to the card, and likewise from the card to the internal memory.

1 Insert the card in the camera (page 21).

2 Display the Playback Menu (page 78).

3 Select "FILE COPY" and press the **OK** button.

- The screen to copy files appears.
-

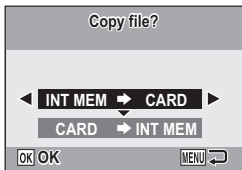
4 Select the copy direction.

INT MEM → **CARD**:

Copy image data from the internal memory to the card.

CARD → **INT MEM**:

Copy image data from the card to the internal memory.



* If no card is set in the camera, you cannot copy data.

5 Press the OK button.

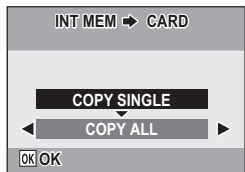
- The screen to select the type of copy appears.
- The copy source image is shown in the background on the screen.

COPY SINGLE:

Copy the data for one image.

COPY ALL:

Copy all the data from the copy source to the copy destination.



6 Select the desired type of copy.

<When selecting COPY SINGLE>

- ① Press the [◀] or [▶] button to display the image you wish to copy.
- ② Press the [▲] or [▼] button to select "COPY SINGLE".

<When selecting COPY ALL>

- ① Press the [▲] or [▼] button to select "COPY ALL".

7 Press the OK button.

- The files are copied.

PRINT SETTINGS

In addition to using your printer to print out still images captured with your camera, as with conventional film, you can have prints made at shops offering digital print services. Moreover, this camera is DPOF-compatible, so you can use the camera to specify the number of prints, or whether or not the date is displayed on the print.

Display the screen to set the print settings

1 Display the Playback Menu (page 78).

2 Select “PRINT INSTRUCTIONS” and press the OK button.

- The screen to set the print settings appears.

EACH IMAGE:

The print settings are specified for each individual image.

ALL IMAGES:

The specified print settings apply to all the still images.

ALL CLEAR:

Clear all the print settings.



HINT**About the DPOF format**

- DPOF (Digital Print Order Format) is a print order format. You can connect your camera to a DPOF-compatible printer to produce your prints. You can also set the print settings (page 124) for the desired images, and then have the reserved images printed automatically.

About the finished prints

- Images that have been rotated will be printed in their original orientation.
- The quality of the print output will differ depending on the print service and printer used.

CAUTION

- It is not possible to set the print settings when there are 10,000 or more files saved on the card.

PRINT SETTINGS

Specifying date imprinting and number of prints

You can specify print settings for each individual image (EACH IMAGE), or apply the print settings to all the images on the card (ALL IMAGES).

1 Display the screen to set the print settings (page 91).

2 Select EACH IMAGE or ALL IMAGES.

EACH IMAGE:

The set print settings are applied only to the image currently displayed.

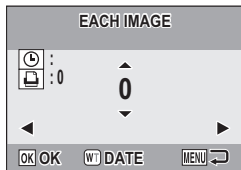
ALL IMAGES:

The set print settings are applied to all the still images on the card.



3 Press the OK button.

- The Date/Copies Print Screen appears.
- If "EACH IMAGE" was selected, press the [◀] or [▶] button to display the desired image to print.
- The print settings for the currently displayed image are shown in the upper left area of the monitor. You can press the [◀] or [▶] button to confirm the print settings for each image.

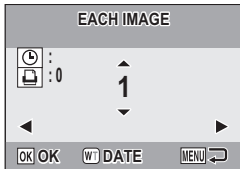


4 Specify the number of prints and whether the date is imprinted.


- Please specify the number of prints before setting the date imprint setting. The date imprint setting cannot be set until the number of prints has been entered.

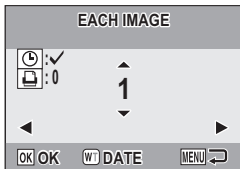
<Specifying the number of prints>

- Press the [▲] or [▼] button to specify the number of prints.
 - Press the [▲] or [▼] button until the desired number of prints is displayed.



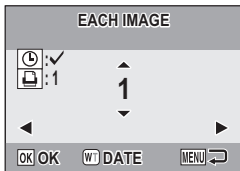
<Specifying dated prints>

- Press [W] on the zoom switch to add a check mark (✓) next to .



5 Press the OK button.

- This completes the settings for the number of prints and date imprinting.
- If you press the MENU button, you are returned to the screen to set the print settings (step 1).



CAUTION

- Do not specify dated prints for images that were captured with the date imprint function (page 77) set to ON, or else the date will appear on the photo print twice.

PRINT SETTINGS

Clearing all the print settings

Delete the print settings for all images.

1 Display the screen to set the print settings (page 91).

2 Select "ALL CLEAR".



3 Press the OK button.

- The Confirm All Clear Screen appears.

YES: Clear the print settings for all images.

EXIT: Cancel the clear procedure and return to the screen to set the print settings.

4 Select "YES", and press the OK button.

- All the print settings are cleared and you are returned to the Playback Menu.

SLIDESHOW PLAYBACK

1 Display the Playback Menu (page 78).

2 Select “SLIDESHOW” and press the OK button.

- The screen to set the slideshow appears.

TIME: Adjust the transition speed (the period that an image is displayed before it changes to the next image).

EFFECT: Select a transition effect as an image changes to the next image.

START: Begin slideshow playback.



<Changing the slideshow controls>

- ① Select one of the slideshow controls, and press the OK button.
- ② Press the [▲] or [▼] button to change the setting.
- ③ Press the OK button.

3 Select “START”, and press the OK button.

- Slideshow playback starts.
- To stop slideshow playback, press the OK button or MENU button.

HINT

- Audio data is not played during slideshow playback.

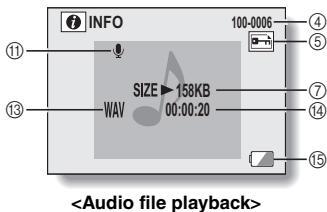
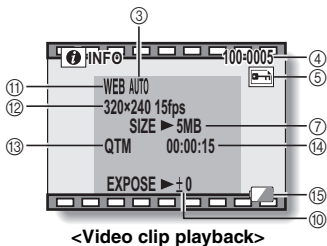
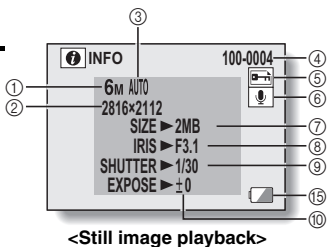
DISPLAYING IMAGE PROPERTIES (INFORMATION SCREEN)

On the Information Screen you can check what the settings were when an image was captured.

1 Display the desired image.

2 Press and hold the MENU button for at least 1 second.

- The Information Screen appears.
- If the MENU button is pressed again, the Information Screen is canceled.



- ① Resolution setting
- ② Resolution
- ③ Scene function setting
- ④ Image number
- ⑤ Protect setting
- ⑥ Voice memo setting
- ⑦ File size
- ⑧ Aperture value
- ⑨ Shutter speed
- ⑩ Exposure correction setting
- ⑪ Video size setting/
audio file indicator
- ⑫ Resolution and frame
rate
- ⑬ File format
- ⑭ Playback time
- ⑮ Remaining battery power

DISPLAYING THE SETUP MENU

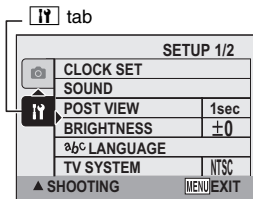
The Setup Menu is used to adjust various camera settings.

1 Display the Shooting Menu or Playback Menu.

- Shooting Menu, see page 64
- Playback Menu, see page 78

2 Press the [▲] or [▼] button to select the option tab .

- The Setup Menu appears.



To exit the Setup Menu

To return to the Shooting Screen or Playback Screen

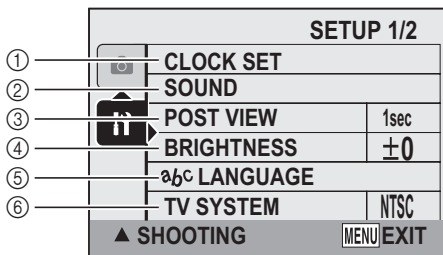
→ Press the MENU button.

To return to the Shooting Menu or the Playback Menu

→ With the option tab  selected, press the [▲] or [▼] button.

DISPLAYING THE SETUP MENU

Overview of the Setup Menu



- ⑦ ————— AUTO POWER OFF
- ⑧ ————— FILE NO. CONT'D
- ⑨ ————— FORMAT
- ⑩ ————— RESET SETTINGS

- ① **[Date and time setting] (page 25)**
 - Set the camera's internal clock.
- ② **[Sounds] (page 101)**
 - Adjust the sounds produced by the camera.
- ③ **[Post-view] (page 103)**
 - Specify how long a still image is displayed on the monitor after it is captured.
- ④ **[LCD brightness] (page 34)**
 - Adjust the brightness of the monitor.
- ⑤ **[^{abc} language] (page 104)**
 - Select the language in which the monitor messages are displayed.
- ⑥ **[TV system setting] (page 105)**
 - Select the type of TV signal that is output from the camera's USB AV-OUT terminal.
- ⑦ **[Auto power off] (page 106)**
 - Specify the time elapsed before the auto power off function operates to turn the camera off.
- ⑧ **[File number memory] (page 107)**
 - Set the file number memory function to ON or OFF.
- ⑨ **[Format] (page 110)**
 - Reformat the camera's internal memory or the card installed in the camera.
- ⑩ **[Reset camera settings] (page 113)**
 - Reset the camera to the factory-preset settings.

- ⑦ through ⑩ are displayed when you press the [▲] or [▼] button to scroll.

SOUNDS

Set the sounds that are produced by the camera.

1 Display the Setup Menu (page 98).

2 Select "SOUND" and press the OK button.

- The screen to set the sounds appears.

OPERATION VOL:

Volume setting for all camera buttons.

SHUTTER:

Select the sound that is produced when the shutter button is pressed.

KEY SW:

Select the sound that is produced when a camera button (OK button, MENU button, etc.) is pressed.

PLAY VOLUME:

Adjust the volume for playing back video clips and audio files.



3 Select the desired item, and press the OK button.

4 Press the [▲] or [▼] button to change the setting.

<If “SHUTTER” or “KEY SW” is selected>

- The respective screen to enable or disable the sound appears.

ON: Activates the sound.

OFF: Deactivates the sound.

<If “OPERATION VOL” or “PLAY VOLUME” is selected>

- The screen to select the volume setting appears.
- You can select a volume setting from 1 (minimum) to 5 (maximum).
- If “OFF” is selected, no sound is produced.

5 Press the OK button.

- The sound settings are completed.
- To return to the Setup Menu, press the MENU button.

POST-VIEW SETTING

Specify the duration that the captured image appears on the monitor (post-view) after the shutter button is pressed.

1 Display the Setup Menu (page 98).

2 Select “POST VIEW” and press the OK button.

- The Post View Menu appears.

1sec:

The post-view image is displayed for 1 second.

2sec:

The post-view image is displayed for 2 seconds.

OFF:

The post-view image is not displayed.

3 Select the desired setting, and press the OK button.

- This completes the post-view setting.

SCREEN LANGUAGE

You can set the monitor of your camera to display the messages in any one of several languages.

- 1** Display the Setup Menu (page 98).
- 2** Select “LANGUAGE” and press the OK button.
- 3** Select the desired language, and press the OK button.
 - The selected display language is set.

TV SYSTEM SETTING

Specify the type of image signal that is output from your camera's USB AV-OUT terminal.

1 Display the Setup Menu (page 98).

2 Select "TV SYSTEM" and press the OK button.

- The TV System Menu appears.

NTSC:

Outputs NTSC video signals.

PAL:

Outputs PAL video signals.

3 Select the desired setting, and press the OK button.

- The selected TV system is set.
-

HINT

If no image appears on the TV...

- If the TV system setting is not correct for the connected equipment, no image will appear on the TV.

AUTO POWER OFF FUNCTION

Your camera has an “auto power off” function whereby the power automatically turns off after a specified period of inactivity. The auto power off function works to conserve the battery pack power when the camera is not being used, or to prevent the battery pack from dying if the camera has accidentally been left on. You can specify the elapsed time (standby time) before the auto power off function operates to turn the camera off.

1 Display the Setup Menu (page 98).

2 Select “AUTO POWER OFF” and press the OK button.

- The screen to set the standby time appears.

RECORDING:

Set the standby time for the shooting mode.

PLAYBACK:

Set the standby time for the playback mode.



3 Select the desired option, and press the OK button.

- The Standby Time Menu appears.

4 Press the [▲] or [▼] button to select the standby time.

5 Press the OK button.

- The auto power off function is set.
- To return to the Setup Menu, press the MENU button.

FILE NO. MEMORY

If a newly formatted card is used, the file name (image number) of the captured image automatically begins from 0001. If the card is subsequently reformatted, or if a different reformatted card is used, the file names again begin from 0001. This is because the file number memory function is set to "OFF", and consequently it results in more than one card containing images with the same numbers. By setting the file number memory function to "ON", even if the card is reformatted or the card is replaced with another card, the consecutive numbering of file names continues from the last number recorded by the camera.

<File number memory function "OFF">

	File name (image number)
Card A	0001, 0002 0012, 0013

⋮
Replace card

▼

Card B	0001, 0002 0012, 0013
--------	-----------------------------

<File number memory function "ON">

	File name (image number)
Card A	0001, 0002 0012, 0013

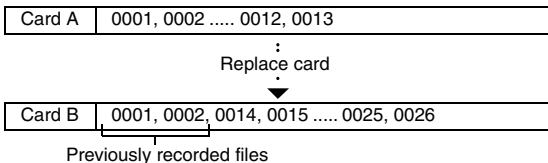
⋮
Replace card

▼

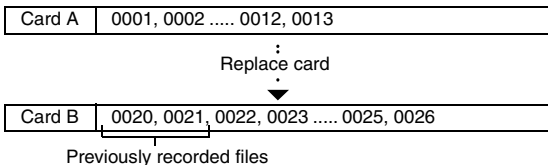
Card B	0014, 0015 0025, 0026
--------	-----------------------------

- If Card B already has files in it when it replaces Card A, file names are assigned as follows.

When the highest file number on Card B (before replacing) is lower than the highest file number on Card A: the file name of the next recorded image continues from last file name recorded on Card A.



When the highest file number on Card B (before replacing) is higher than the highest file number on Card A: the file name of the next recorded image continues from last file name recorded on Card B.



HINT

What about the internal memory?

- The file number reset function works the same for the internal memory.

FILE NO. MEMORY

- 1** Display the Setup Menu (page 98).
- 2** Select “FILE NO. CONT’ D”, and press the OK button.
ON:
The file number memory function is on.
OFF:
The file number memory function is off.
- 3** Select the desired setting, and press the OK button.
 - The selected file number memory function is set.

HINT

- Until the file number memory function is turned “OFF”, consecutive file names are assigned. It is recommended that the file number memory function be returned to “OFF” at the end of each photography session.

INITIALIZING THE CARD MEMORY AND INTERNAL MEMORY

A card must be formatted with this camera:

- After purchasing, when used for the first time, or
- If it was formatted using a personal computer or another digital camera.

The card cannot be reformatted if the lock switch is set to the "LOCK" position. Proceed with the reformat procedure after setting the lock switch to the unlocked position.

1 To reformat a card, install it in the camera. To reformat the camera's internal memory, remove the card from the camera.

2 Display the Setup Menu (page 98).

3 Select "FORMAT" and press the OK button.

<Card format>

- The screen to select the type of format appears.
- Follow steps 4 to 6.

FORMAT:

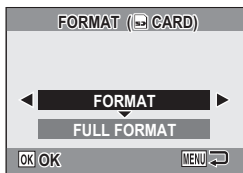
A normal formatting is executed.

FULL FORMAT:

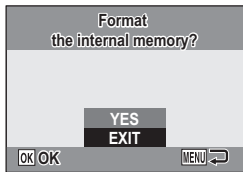
The entire card is scanned and reformatted. It is not possible to select this when there is no card installed, when a MultiMedia card is installed, or when the remaining battery charge is low.

<Internal memory format>

- The screen to confirm formatting appears.
- Follow steps 5 and 6.



<With card installed>



<No card installed>

INITIALIZING THE CARD MEMORY AND INTERNAL MEMORY

4 Select the desired format option, and press the OK button.

- The screen to confirm formatting appears.

5 Select “YES”.

6 Press the OK button.

- Formatting begins.
- During formatting, “Formatting” and “do not power off” are shown on the monitor.

CAUTION

Caution during reformatting

- Please do not turn off the camera or insert/remove the card while the card is being formatted.

Reformatting erases the data

- When the card or internal memory is initialized, all the recorded data is erased. Protected data is also erased, so before reformatting a card, any data you want to keep should be copied to your personal computer's hard disk or other storage medium.

Caution regarding disposing/transferring the card (recovering data from a reformatted card)

- If a card is reformatted or the data is erased from the card using the camera or a computer, the card's control data may be merely modified and the data itself may not be completely erased from the card.
- In some cases it may be possible to recover the data from a reformatted card using special software for that purpose. However, if the camera is used to execute a full format, it will be impossible to recover the data even by the use of data recovery software.
- If you are disposing of a card, it is recommended that you physically destroy it. If you are transferring the card to someone else to use, it is recommended that you use the camera's full format function to reformat the card, or use commercially available software for erasing card data. Managing data is the responsibility of the user.

HINT**To cancel reformatting**

- In step **5**, select “EXIT”, and press the OK button.

RESETTING THE CAMERA SETTINGS

Reset the camera to the factory-preset settings.

1 Display the Setup Menu (page 98).

2 Select “RESET SETTINGS” and press the OK button.

- The Reset Settings Menu appears.

YES:

Reset to the factory-preset settings.

NO:

Do not change the settings, and return to the Setup Menu.

3 Select “YES”, and press the OK button.

- The camera settings are reset to the factory-preset settings.

HINT

- Note that the following settings do not change with this procedure:

Date and time setting

Language setting

TV system setting

File No. memory setting

CHECKING THE REMAINING INTERNAL MEMORY AND CARD MEMORY

You can check the possible number of images, audio recording time and video clip recording time remaining on the card. For a table showing the maximum number of images and recording time for the internal memory and for a specific card, please see “Possible Number of Images/Video Recording Time/Audio Recording Time” on page 144.

1 Press the ON/OFF button to turn the camera on.

<To check the remaining number of still images>

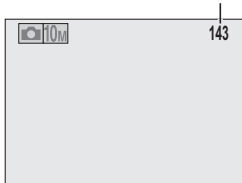
Set the shooting mode to the single-shot or sequential shots mode (page 32).

<To check the remaining video clip recording time>

Set the shooting mode to the video clip recording mode (page 32).

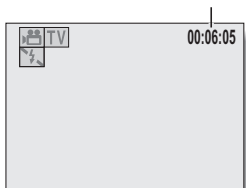
- The remaining recording time is shown on the monitor.
- The remaining number of images and video recording time will differ depending on the resolution and video size settings.

Remaining number of images



<Still Image Shooting Screen>

Remaining recording time

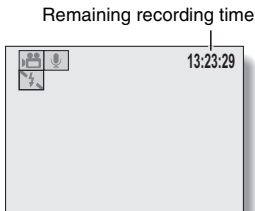


<Video Clip Recording Screen>

CHECKING THE REMAINING INTERNAL MEMORY AND CARD MEMORY

For audio data

- 1 **Set the camera to the audio recording mode (page 68).**
 - The remaining audio recording time is shown.




HINT

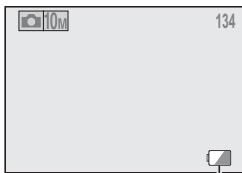
- When the remaining number of images or the remaining video recording time is "0", you cannot capture any more images. To capture more images, either install a new card, or save the images to a computer and then erase them (page 43) from the card.
- When the remaining number of images or the remaining video recording time is "0", it may be possible to capture a few more images by changing the resolution setting or video clip mode setting (page 67).
- The maximum number of images is 9,999, and the maximum video/audio recording time is 99:59:59. Note that if a large-capacity card is used, the remaining number of images or recording time may not be correctly displayed.

CHECKING THE REMAINING BATTERY CHARGE






When using the battery pack, the remaining battery pack charge can be checked on the monitor. Make sure to check this indicator before capturing an image. For an indication of the possible length of time for battery pack operation, see page 143.

1 Press the ON/OFF button to turn the camera on.

- The battery pack remaining charge indicator appears in the lower right corner of the monitor.
- Due to the battery pack characteristics, when the ambient temperature is low,  may appear early for an incorrect indication of the remaining charge. Also, depending on the conditions of use of the camera or the ambient conditions (temperature, etc.), the indicated remaining charge may change. Therefore, this indication can only be used as a general approximation of the remaining charge.



Battery pack remaining charge indicator

Battery pack remaining charge indicator	Battery remaining charge
No indication, or 	Approx. full. ( appears only in certain operation modes.)
	Power is low.
	It will soon be impossible to capture or play back images.
	If this icon flashes when the shutter button is pressed, images cannot be captured. Recharge the battery pack.

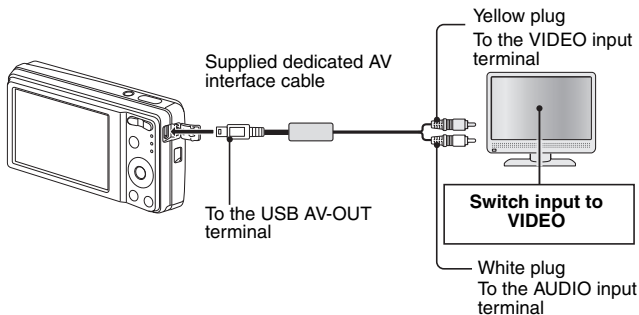
CHECKING THE REMAINING BATTERY CHARGE

HINT

- If any data is present, you can also check the remaining battery pack charge on the Information Screen (page 97).
- Battery life may differ even among battery packs of the same type.
- Depending on the usage of the camera (such as the number of times the flash is used, etc.) or the ambient temperature (temperatures below 10°C [50°F]) the number of images that can be saved on a fully charged battery pack will vary greatly.
- It is recommended that you prepare an extra battery pack(s) when taking pictures at a wedding or while traveling, for example, so you don't miss capturing images of important moments due to the battery pack power running out. The same is recommended for taking photos in cold environments. (In a ski area, for example, the battery pack can be kept warm in your pocket until ready to use.)

CONNECTING TO A TV

Connect the supplied AV interface cable from the USB AV-OUT terminal on the digital camera to the AUDIO and VIDEO input terminals on the TV.



Playback

- After connecting the digital camera to the television, set the TV input switch to VIDEO input.
- When an AV interface cable is connected, no image appears on the camera's monitor.
- The playback method is the same as when viewing images on the camera's monitor.
- The same playback procedure as when playing back with the camera is used to play back voice memos and audio recordings as well.

Voice memo playback: see page 38

Audio file playback: see page 69

CAUTION

Insert and pull out the cable carefully

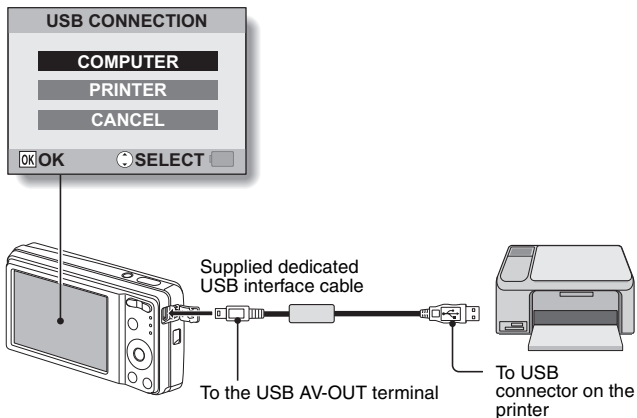
- When connecting the cables, make sure that the cable plugs are correctly oriented and that they match the shapes of the terminal sockets on the devices. Push the plugs in straight when connecting them. If undue force is used to connect a cable, it may permanently damage the connector pins in the terminal socket.
- Do not use excessive force when connecting and disconnecting cables.

DIRECT PRINTING

Your camera supports the PictBridge function. By connecting the camera directly to a PictBridge-enabled printer, the camera's monitor can be used to select images and initiate printing (PictBridge printing).

Print preparations

- 1 Turn the printer on, use the supplied USB interface cable to connect the camera to the printer.
 - Connect the camera's USB AV-OUT terminal to the printer's USB connector.
 - The USB Connection Screen appears on the camera's monitor.



2 Select "PRINTER", and press the OK button.

- The screen to select the images to print appears.



CAUTION

Caution when connecting a printer

- If the power to the printer is turned off while it is connected, the camera may not operate correctly. If the camera does not operate correctly, disconnect the USB interface cable, turn off the camera, and then reconnect the cable.
- During PictBridge printing, the camera's button operation response is slower.
- If the camera is powered by the battery pack for printing, make sure that the remaining battery charge is sufficient.

Insert and pull out the cable carefully

- When connecting the cables, make sure that the cable plugs are correctly oriented and that they match the shapes of the terminal sockets on the devices. Push the plugs in straight when connecting them. If undue force is used to connect a cable, it may permanently damage the connector pins in the terminal socket.
- Do not use excessive force when connecting and disconnecting cables.

DIRECT PRINTING

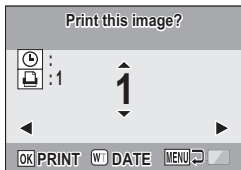
To select one image and print it (print selected image)

Procedure to select one still image and print it.

1 Complete the printing setup (page 119).

2 Press the [◀] or [▶] button.

- Display the image you wish to print.




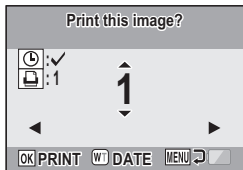
3 Specify the number of prints or date-imprinted prints.

<Specifying the number of prints>

- Press the [▲] or [▼] button to specify the number of prints.
 - Press the [▲] or [▼] button until the desired number of prints is displayed.

<Specifying dated prints>

- Press [W] on the zoom switch to add a check mark (✓) next to .



4 Press the OK button.

- Printing begins.

HINT

To cancel printing

- ① During printing, press the [▼] button.
 - The Confirm Cancel Printing Screen appears.
- ② Select "YES", and press the OK button.
 - If "EXIT" is selected and the OK button is pressed, printing resumes.

CAUTION

- Do not specify dated prints for images that were captured with the date imprint function (page 77) set to ON, or else the date will appear on the photo print twice.

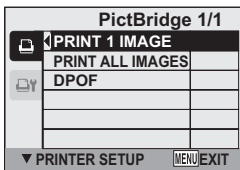
DIRECT PRINTING

To print all the images (all images)


Print all of the images.

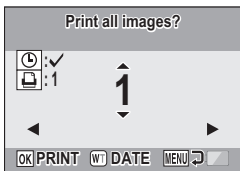
1 Complete the printing setup (page 119).

2 Press the MENU button.
• The PictBridge Menu appears.



3 Select "PRINT ALL IMAGES", and press the OK button.
• The Print All Images Screen appears.

4 Specify the number of prints or date-imprinted prints.
<Specifying the number of prints>
• Press the [▲] or [▼] button to specify the number of prints.
• Press the [▲] or [▼] button until the desired number of prints is displayed.
<Specifying dated prints>
• Press [W] on the zoom switch to add a check mark (✓) next to .



5 Press the OK button.
• Printing begins.

CAUTION

Printing is not possible if there are more than 999 still images in the card or internal memory

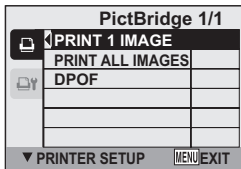
- Delete unwanted images before printing.

To print the images that are set to print (print reserved images)

Procedure to print all the images that are set to print.

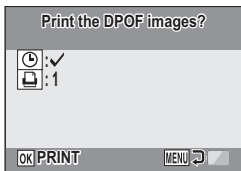
- 1 Make the print settings (page 91), and complete the printing setup (page 119).**

- 2 Press the MENU button.**
 - The PictBridge Menu appears.



- 3 Select "DPOF", and press the OK button.**

- The Print Scheduled Images Screen appears.
- An image that is set to print (page 91) is displayed.



- 4 Press the OK button.**
 - Printing begins.
 - Printing begins about 1 minute after the OK button is pressed.

HINT

- In step 3, if you press the [◀] or [▶] button, you can confirm the images that are set to print and their DPOF settings.

CAUTION

- Reserved images printing is not possible if a printer is used that does not support your camera's DPOF function.
- Multi-prints are not possible.

DIRECT PRINTING

To change the printer setup and print images (change printer setup)

Images are printed according to settings specified by the camera, such as paper type, size, layout, printing quality, etc.

1 Complete the printing setup (page 119).

2 Press the **MENU** button.

- The PictBridge Menu appears.

3 Select the printer setup tab , and press the **OK** button.

- The Printer Setup Menu appears.

DATE STAMP:

Print the date the photo was taken.

MEDIA TYPE:

Specify the type of paper used for printing.

PAPER SIZE:

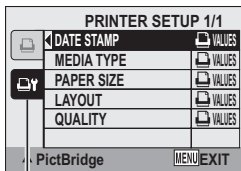
Specify the size of paper used for printing.

LAYOUT:

Specify how the images are to be arranged on the paper.


QUALITY:

Select the print quality for the images.





Printer Setup tab

4 Change the printer setup.


- ① Use the arrow buttons to select a printer setting parameter, and press the OK button.
 - The screen to set the selected parameter appears.
 - ② Press the [▲] or [▼] button to adjust the setting, and press the OK button.
 - The selected parameter is set, and you are returned to the Printer Setup Menu.
 - Follow the same procedure to adjust the other parameters, as desired.
 - The contents of the settings that can be made for each parameter will differ depending on the printer.
- <When “ VALUES” is selected>**
- The images will be printed according to the settings specified on the printer side.

HINT

- The parameters that are displayed on the Printer Setup Menu will differ depending on the printer that is connected.
- To use printer functions which do not appear on your camera's Printer Setup Menu, select “ VALUES”.
- If a function set by the camera is not available in the printer, the camera's printer setup will automatically change to “ VALUES”.


COMMONLY ASKED QUESTIONS

If you have a question about the camera operation, you might find the answer in this compilation of commonly asked questions.

	Question	Answer	Action
Power	Why doesn't the power turn on?	Due to cold temperatures, the battery pack temporarily lost its power.	Place the camera in your pocket to warm it up before using it.
	Why is the battery pack consumed so quickly?	The ambient temperature is very low.	Keep the battery pack in an environment of 10 to 40°C (50 to 104°F).
		The battery pack life has expired.	Replace with a new battery pack.
Why does the  icon appear?	The remaining battery pack power is low.	Recharge the battery pack.	
Shooting	Why doesn't the flash operate?	The camera has determined that the image is bright enough and the flash is not necessary.	Not a malfunction. Capture the image; the camera will determine when the flash is necessary.

	Question	Answer	Action
Shooting	Are the settings retained even after the camera is turned off?	—	All settings except the self-timer and the exposure correction are retained even after the camera is turned off.
	Which resolution setting should I use?	—	Select the resolution setting according to the intended use: 10M 6M 4M 7.5M : Appropriate for printing letter-size or larger, and for printing a close-up of part of a photo (trimming). 2M : For printing standard photo (photo service) sizes. 0.3M : For photos displayed on a web page, or sent as e-mail attachments.
	What is the difference between the digital zoom and the optical zoom?	—	Because shooting with the optical zoom uses the optics of a physical lens, you can shoot without losing minute details in the image. The digital zoom, on the other hand, works by magnifying a portion of the image that hits the CCD sensor and may produce a coarser image.

COMMONLY ASKED QUESTIONS

	Question	Answer	Action
Shooting	How can I get the distant view into focus?	—	Set the scene function to the landscape  mode when photographing. Or, set the focus range setting to manual focus [MF] , and set the distance to ∞.
Monitor	When used in cold weather, why does the image seem to leave traces as it moves?	Condition due to the liquid crystals.	Not a malfunction. Spots that appear in the monitor only appear in the monitor and will not be recorded with the images.
	Why does the displayed image contain some red, blue and green dots, or why are black spots visible?		

	Question	Answer	Action
Viewing images	Why is the image too bright?	The subject was too bright.	When capturing an image, devise a way to compensate for a bright subject, for example, by changing the shooting angle.
	Why is the image out of focus?	The focus is not locked properly.	Hold the camera correctly, and when the image is locked in focus, gently press the shutter button all the way to capture the image.
	Why doesn't the zoom jump playback work?	Zoom jump playback does not work for an image that was created from a magnified portion of a zoom jump image, or for video clips.	Not a malfunction.
	Why is there no image (ⓧ is shown)?	This may happen when trying to play back images stored on a card from a different digital camera.	Play back images that were recorded on a card using this camera.
	Why do vertical stripes appear?	If a bright subject is shot in the video clip recording mode, vertical stripes may appear on the monitor or in the image.	Not a malfunction.

COMMONLY ASKED QUESTIONS

	Question	Answer	Action
Viewing images	Why isn't the magnified image clear?	Due to the characteristics of the camera, magnified images appear less clear.	Not a malfunction.
	Why isn't the captured image clear?	The image was captured using the digital zoom.	Not a malfunction. Zoom in only within the optical zoom range when shooting.
	Can I play back image data that I edited using my computer?	—	We cannot guarantee the accurate playback of data that has been edited using a computer.
Printing	Why does a message appear during PictBridge printing?	There is a problem with the printer.	Please refer to the instruction manual for your printer.
Misc.	Why does the "Card full" or "Internal memory full" message appear?	There is no more available memory on the card or in the camera's internal memory.	Delete unnecessary data, or use a card that has more memory available.
	Why does the "Card is protected" message appear?	The lock switch on the card is in the locked (protect) position.	Move the lock switch to the unlocked position.

	Question	Answer	Action
Misc.	Why can't the camera be operated?	A temporary internal circuitry problem may be the cause.	Remove the battery pack from the camera, wait a few minutes, then reinstall the battery pack and try again.
	Can I use my camera abroad?	—	If you have questions about using the power cord abroad, please consult with a dealer near you for advice.
	Why does the "System error" message appear?	A problem has occurred within the camera or card.	Check the following items: ① Remove the card and then install it again. ② Remove the battery pack and then install them again. ③ Install a different card. If "System error" still appears after performing the above steps, then take the camera to the dealer for service.

TROUBLESHOOTING

Before taking your camera to the repair shop, check the following table for a possible solution to the problem.

CAMERA

	Problem	Cause	Action	Reference page
Power	No power.	The battery pack is dead.	Recharge the battery pack.	17
		The battery pack has not been inserted correctly.	Reinsert the battery pack, making sure to orient it correctly.	21
		The battery/card compartment cover is not completely closed.	Close the battery/card compartment cover completely.	
	The camera turns off by itself.	The power save function is operating.	Not a malfunction.	24
Shooting	An image is not captured when the shutter button is pressed.	The power is not turned on.	If the auto power off function was activated, turn the camera on before shooting. If the camera was turned off, press the ON/OFF button to turn it on.	24

	Problem	Cause	Action	Reference page
Shooting	An image is not captured when the shutter button is pressed.	The maximum number of images that can be captured or the maximum video clip recording time has been reached.	Install a new card.	21
			Delete the images that are not necessary. Save the images to separate media, then delete all the images from the card.	43
	The operation buttons (arrow buttons, MENU button, etc.) do not work.	A finger is touching the shutter button, and the focus lock is active.	Remove your finger from the shutter button, and then use the operation buttons.	—
	The flash does not operate.	The flash off mode is selected.	Set the flash to automatic flash mode or forced flash mode.	57
		The battery pack is dead.	Recharge the battery pack.	17
	The “Battery depleted” message appears.	The battery pack is consumed.	Recharge the battery pack.	17
	When zooming in or out, the zoom movement stops momentarily.	The optical zoom has moved to the maximum magnification position.	Not a malfunction. Release the zoom switch, and press it again.	56

TROUBLESHOOTING













	Problem	Cause	Action	Reference page
Shooting	There is noise in the captured image.	The ISO sensitivity setting is too high.	Set the ISO sensitivity to a lower setting.	74
	When recording a video clip under fluorescent lights, a noticeable flicker appears in the image.	This occurs when the shutter speed is too fast.	Set the ISO sensitivity to 400 or less.	74
Monitor	No playback image appears.	The playback mode is not active.	Press the playback button [▶].	31
Viewing images	The image is too dark.	The flash was blocked by a finger or other object.	Hold the camera correctly, and make sure the flash is not obstructed.	28
		The subject was too far away.	Capture the image in the range of operation of the flash.	142
		The subject was lit from behind.	Use the forced flash mode.	57
			Use the exposure correction function.	76
		There is not enough light.	Adjust the ISO sensitivity setting.	74

	Problem	Cause	Action	Reference page
Viewing images	The image is too bright.	The forced flash mode is selected.	Select a different flash mode.	57
		The subject was too bright.	Use the exposure correction function.	76
		The ISO sensitivity setting is incorrect.	Set the ISO sensitivity to ISO-A .	74
	The image is not in focus.	The subject is too close to the camera.	Select the correct focus setting for your needs.	36, 61
		The focus setting is not correct.		
		The camera moved when the shutter button was pressed.	Hold the camera correctly and press the shutter button correctly.	28, 36
		The focus is not locked properly.		
	The lens is dirty.	Clean the lens.	—	
	The colors of the images captured indoors are not correct.	This is due to ambient lighting.	Capture the image using the forced flash mode.	57
		The white balance setting is incorrect.	Set the white balance setting correctly.	75

TROUBLESHOOTING

	Problem	Cause	Action	Reference page
Viewing images	A part of the image is missing.	The handstrap or a finger was blocking the lens.	Hold the camera correctly, and make sure the lens is not obstructed.	28
	“No image” is shown.	There is no image stored in the installed card or the internal memory.	Play back after capturing images.	—
Image editing	You cannot edit or rotate an image.	The protect mode is set.	Cancel the protect mode.	80
Misc.	The “Image is protected” message appears and the data cannot be deleted.	You have attempted to delete data that is protected from accidental erasure.	Cancel the protect mode.	80
	The recording capacity is less than that indicated in the section “Possible Number of Images/Video Recording Time/Audio Recording Time”.	The recording capacity is less than the value specified for the card.	Depending on the card, the capacity may be less than the specified value. Please refer to the instructions that accompanied the card.	144

Notes regarding the scene function

	The macro  focus range setting is not available.
	The pan [PF] , macro  and manual focus [MF] focus range settings are not available. The AF seeker [AF] focus mode setting is not available. The digital zoom is not available.
	The resolution cannot be set to [4M] or more. The flash is disabled even when shooting single shots.
	The macro  focus range setting is not available.
	
	The macro  and manual focus [MF] focus range settings are not available. The flash is disabled even when shooting single shots. The AF seeker [AF] focus mode setting is not available.
	The pan [PF] , macro  and manual focus [MF] focus range settings are not available. The AF seeker [AF] focus mode setting is not available. The digital zoom is not available.


SPECIFICATIONS

Camera

Type	CCD digital camera (recording and playback)
Image file format	Still images: JPEG format (DCF, DPOF, Exif 2.21 compliant) Note:Designed mainly by the Japan Electronics and Information Technology Industries Association (JEITA), DCF (Design rule for Camera File system) is standard for digital still camera image files to provide interoperability between digital photography devices for the images stored on removable memory cards. However, it is not guaranteed that all devices will support the DCF standard. Video clips: QuickTime Movie (Photo-JPEG) Audio recordings: WAVE format (monaural)
Data storage media	Internal memory: Approx. 52 MB External memory: SD Memory Card (equivalent to a 8 GB SDHC Memory Card)
Camera effective number of pixels	Approx. 10 million pixels
Image sensor	1/2.3-inch (1.1 cm) CCD Virtual number of pixels: Approx. 10.34 million pixels, interlace scan, primary color filter

Recording resolution	<p><Still image shooting> 10M:3648 × 2736 pixels 7.5M:3648 × 2056 pixels 6M:2816 × 2112 pixels 4M:2288 × 1712 pixels 2M:1600 × 1200 pixels 0.3M:640 × 480 pixels</p> <p><Video clip recording> TV:640 × 480 pixels, 30 frames/second WEB:320 × 240 pixels, 15 frames/second</p>	
White balance	Full-auto TTL, manual setting possible	
Lens	5.0× optical zoom lens	f=6.3 mm to 31.5 mm (35 mm film camera conversion: 36 mm to 180 mm) Autofocus, 6 groups, 8 elements (4 with aspheric surfaces)
Aperture	Open F=3.5 (Wide) to 5.6 (Tele)	
Exposure control type	Programmable AE Exposure correction available from the Shooting Menu (0±1.8EV in 0.3EV steps)	
Light-measuring modes	Multi-section measuring, center-weighted measuring, spot measuring	

SPECIFICATIONS

Range	Normal photography: 40 cm (15.75 in.) to ∞ (Wide), 90 cm (2.95 ft.) to ∞ (Tele) Macro photography: 10 cm (3.94 in.) to 50 cm (19.69 in.) (Wide), 60 cm (23.62 in.) to 1 m (3.28 ft.) (Tele)
Digital zoom	For shooting: 1× to 4× For playback: 1× to 57.5× (varies with resolution)
Shutter speed	Single-shot mode: 1 to 1/2,000 sec. (Maximum approx. 2 seconds when the scene function is set to fireworks  etc.) (During flash: 1/30 to 1/2,000 sec.) Sequential shots mode: 1/2 to 1/2,000 sec. Video clip recording mode: 1/30 to 1/10,000 sec.
Sensitivity (standard output sensitivity)	Single-shot mode/sequential shots mode (standard output sensitivity): Auto (ISO50 to 400)/ISO50, ISO100, ISO200, ISO400, ISO800, ISO1600, and ISO3200 (switchable from Shooting Menu) Video clip recording mode: Auto (ISO450 to 3600)/ISO450, ISO900, ISO1800, ISO3600 and ISO7200 (switchable from Shooting Menu) * Sensitivity measured in compliance with the ISO standard (ISO 12232:2006).
Monitor	2.5-inch (6.4 cm) TFT color LCD Approx. 230,000 pixels (Frame coverage: Approx. 100%) Brightness adjustment: 5-step

Flash working range		GN = 5.5 Approx. 40 cm (15.75 in.) to 2.9 m (9.51 ft.) (Wide) Approx. 60 cm (23.62 in.) to 1.8 m (5.91 ft.) (Tele)
Flash modes		Auto-flash, forced flash, flash off, red-eye reduction
Focus		TTL-type AF (9-point range finder/spot focus/AF seeker), manual focus (14 steps)
Self-timer		Approx. 2-second delay, 10-second delay
Ambient environment	Temperature	0 to 40°C (32 to 104°F) (operation), -20 to 60°C (-4 to 140°F) (storage)
	Humidity	30 to 90% (operating, no condensation) 10 to 90% (storage, no condensation)
Power supply		Lithium-ion battery pack (DB-80) × 1
Dimensions (at narrowest part, not including grip or lens protrusion)		97.3 (W) × 56.3 (H) × 23.4 (D) mm 3.83" (W) × 2.22" (H) × 0.92" (D)
Weight		Approx. 116 g (4.09 oz.) (without battery pack and card)

SPECIFICATIONS

Camera connectors

USB AV-OUT (communication/audio and video output) terminal	Dedicated regrouped jack	
	Audio output	250 mVrms (-1.1 dBs), 2.2 k Ω or less, monaural
	Video output	1.0 Vp-p, 75 Ω unbalanced, sync negative, composite video, NTSC color TV system/PAL TV system (switchable from the Setup Menu)
	USB	USB 2.0 High Speed

Battery life

Maximum recording time	220 images: CIPA standard (when a Toshiba 128 MB SD Memory Card is used)
Maximum playback time	250 minutes: LCD monitor on, continuous playback

- Until battery pack runs out when using a fully charged battery pack at a 25°C (77°F) ambient temperature.
- The operation time may vary depending on the conditions of the battery pack and the conditions of use. Especially when used at temperatures below 10°C (50°F), the battery pack operation time is drastically reduced.

Possible Number of Images/Video Recording Time/Audio Recording Time

The table shows the possible number of captured images and the possible recording time for the camera's internal memory and for the commercially available 2 GB and 8 GB SD Memory Cards.

Shooting mode setting	Resolution setting	Compression rate setting	Internal memory	SD Memory Card	
				2 GB	8 GB
Single-shot mode/ Sequential shots mode	10M	FINE	15 images	585 images	2,340 images
		NORM	23 images	861 images	3,450 images
	7.5M	FINE	20 images	775 images	3,110 images
		NORM	30 images	1,140 images	4,610 images
	6M	FINE	26 images	984 images	3,950 images
		NORM	38 images	1,440 images	5,790 images
	4M	FINE	39 images	1,470 images	5,920 images
		NORM	58 images	2,130 images	8,580 images
	2M	FINE	79 images	2,950 images	11,800 images
		NORM	114 images	4,130 images	17,100 images
	0.3M	FINE	416 images	18,000 images	71,000 images
		NORM	555 images	25,300 images	10,200 images
Video clip recording mode	TV	—	50 sec.	31 min. 10 sec.	2 hr. 4 min.
	WEB	—	2 min. 46 sec.	1 hr. 43 min.	6 hr. 50 min.
Audio file mode	—	—	1 hr. 50 min.	68 hr. 54 min.	275 hr.

- Up to 9 hours of continuous audio recording is possible.
- When recording a video clip using an 8 GB card, recording terminates when the size of the file currently being recorded reaches approx. 4 GB.
- The values were determined using an SD Memory Card by Sandisk.
- Even with cards of the same capacity, the amount of data that can actually be stored may differ depending on the card brand, etc.
- The continuous shooting time for each video clip will differ depending, for example, on the card capacity, environmental conditions (temperature and shooting conditions, etc.).

SPECIFICATIONS

Supplied battery pack charger

Part No.	BJ-8	
Power source	AC 100 to 240 V, 50 to 60 Hz, 2.6 W	
Rated output	DC 4.2 V, 330 mA	
Compatible batteries	Supplied or separately sold Lithium-ion battery pack (DB-80)	
Ambient environment	Temperature	0 to 40°C (32 to 104°F) (recharge), -20 to 60°C (-4 to 140°F) (storage)
	Humidity	20 to 80% (no condensation)
Dimensions	62 (W) × 23.8 (H) × 90 (D) mm 2.44" (W) × 0.94" (H) × 3.54" (D)	
Weight (without power cord)	Approx. 63 g (2.22 oz.)	
Power cord rated value	AC 125 V, 7 A/AC250 V, 2.5 A (A cable specific to the country of destination is supplied)	

- When using the supplied battery pack charger abroad, the power cord may need to be replaced in accordance with local requirements.

Supplied Li-ion battery pack

Part No.	DB-80	
Voltage	3.7 V	
Rated output	680 mAh	
Ambient environment	Temperature	0 to 40°C (32 to 104°F) (during use, recharged) -10 to 30°C (14 to 86°F) (storage)
	Humidity	10 to 90% (no condensation)
Dimensions	26.9 (W) × 7.5 (H) × 38 (D) mm 1.06 (W) × 0.30 (H) × 1.50 (D) in.	
Weight	Approx. 15 g (0.53 oz.)	

Others

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- All images and illustrations given in this manual are for explanation purposes and may differ slightly from that of the actual product. Also, actual specifications are subject to change without prior notice and therefore may differ from the contents of this manual.

SPECIFICATIONS

Before capturing those important shots, be sure to first take a test shot to confirm that your camera is set up and ready to go

- Ricoh shall not be held responsible for any problems resulting from the use of this camera.
- Ricoh declines all responsibility for damages due to improper use of the camera, failure to adhere to the instructions given in this manual, or repairs or changes done by those other than a technician authorized by the manufacturer.
- Ricoh shall not be held responsible for any damage caused by optional devices or consumable items used with the camera other than those supplied with the camera or those specified by Ricoh.
- Ricoh shall not be held responsible for any losses or loss of revenue resulting from the loss of data caused by the malfunction, or the repairing of a malfunction, of the camera.
- The images captured with this camera will differ in quality from pictures taken with a standard film camera.

Using Your Camera Abroad

Battery Charger (Model BJ-8)

The battery charger can be used in regions with a current of 100-240V, 50Hz/60Hz. If you are going to travel to a country that uses a different shaped wall outlet/plug, please consult your travel agent on a plug adapter suitable for wall outlets in your country of destination. Do not use electrical transformers. It may damage the camera.

Warranty

This product was manufactured for use in the country in which it was purchased. The warranty is only valid in the country in which the camera was purchased. Should the product fail or malfunction while you are abroad, the manufacturer assumes no responsibility for servicing the product locally or bearing the expenditure incurred therefore.

Playback on Television in Other Regions

Playback is possible on televisions (or monitors) equipped with a video input terminal. Please use the AV cable provided. This camera is compatible with both NTSC and PAL television formats. Set the video format on the camera to match that of the television you are using. When you go abroad, set your camera to the local video format.

Cautions on Use

Cautions on Use

- This product was manufactured for use in the country in which it was purchased. The warranty is only valid in the country in which the camera was purchased.
- Should the product fail or malfunction while you are abroad, the manufacturer assumes no responsibility for servicing the product locally or bearing the expenditure incurred therefore.
- Be sure not to drop or apply any sudden force to the camera.
- While you are carrying the camera, be careful not to hit it against other objects. Take special care to not hit the lens and LCD monitor.
- Firing the flash consecutively may heat the firing unit. Do not fire it consecutively more than necessary.
- Do not touch the flash and keep foreign objects away from the firing unit. Doing so can cause burns and fires.
- Do not fire the flash near eyes. It could cause visual impairment (particularly for infants).
- Do not fire the flash near the driver of a vehicle to avoid causing accidents.
- The batteries may become hot after extended use. Touching the batteries immediately after use could result in burns to your fingers.
- If the LCD monitor or panel is exposed to sunlight, they may become washed out and images may become hard to view.
- The LCD monitor and panel may contain some pixels that do not remain lit up continually in part or at all. Also, the brightness may become uneven because of the characteristics of LCDs. These are not failures.
- Do not forcefully press the surface of the LCD monitor.
- In an environment where the temperature changes suddenly, condensation may occur in the camera, resulting in troubles such as fogging of the glass surface or malfunctions of the camera. If this occurs, place the camera in a bag to slow the temperature change as much as possible. Take it out of the bag after the temperature difference from the atmosphere has decreased to a fairly small amount.
- To avoid damaging the connectors, do not put any objects into the camera's microphone or speaker holes.



Conditions in which condensation may easily occur:-----

- When the camera is moved to an environment where the temperature differs greatly.
- In humid places.
- In a room immediately after being heated, or when the camera is exposed directly to cooled air from an air-conditioner or another similar appliance.

Care and Storage

Care

- Please note that if fingerprints, dirt, etc. get onto the lens, picture quality will suffer.
- When dust or dirt does get on the lens, do not touch it directly with your fingers, and either use a blower (available in stores) to blow it off, or a soft cloth to gently dust it off.
- After use at the beach or around chemicals, wipe it off particularly carefully.
- In the unlikely event that your camera fails to work properly, please consult your Ricoh Repair Center.
- There are high voltage circuits in this camera. As this is dangerous, do not dismantle this camera under any circumstances.
- Do not get volatile substances, such as thinner, benzene, or pesticides on your camera. This may cause a change in quality, paint to peel, etc.
- As the surface of the LCD monitor is easily scratched, do not rub hard objects against it.
- Clean the surface of the LCD monitor by wiping gently with a soft cloth containing a small amount of display cleaner sold in stores.

Use and Storage

- Please avoid using or storing your camera in the following kinds of places, as this may damage the camera.
 - In high heat and humidity, or where there is severe change in temperature or humidity.
 - Places with a lot of dust, dirt or sand.
 - Places with severe vibration.
 - Places where it is in direct contact with vinyl or rubber products or chemicals, including mothballs or other insect repellent, for long periods of time.
 - Places with strong magnetic fields (near a monitor, transformer, magnet, etc.).
- Remove the batteries if you are not going to use the camera for a long period of time.

Precautions regarding care of your camera

1. Be sure to turn the power off.
2. Remove the battery before caring for your camera.

Warranty and Servicing

1. This product is backed by a limited warranty. During the warranty period mentioned in the Warranty supplied with your camera, any defective parts will be repaired free of charge. In the event of a camera malfunction, contact the dealer from which you purchased the camera or your nearest Ricoh Repair Center. Please note that you will not be reimbursed for the cost of bringing the camera to the Ricoh Repair Center.
2. This warranty does not cover any damage resulting from:
 - ① failure to follow the instructions in the instruction manual;
 - ② repair, modification or overhaul not conducted by an authorized service center listed in the instruction manual;
 - ③ fire, natural disaster, act of God, lightning, abnormal voltage, etc;
 - ④ improper storage (noted in the instruction manual), leaking of battery and other fluids, mold, or otherwise insufficient care of the camera.
 - ⑤ submergence in water (flooding), exposure to alcohol or other beverages, infiltration of sand or mud, physical shock, or dropping of the camera, or pressure on the camera, and other unnatural causes.
3. After the warranty period has passed, you will be liable for all repair fees, including those incurred at an authorized service center.
4. You will be liable for all repair fees, even within the warranty period, if the warranty card is not attached or if the distributor's name or the purchase date has been changed or is not indicated on the card.
5. Expenses for overhaul and thorough inspection by special request of the customer will be charged to the customer, whether or not they are incurred during the warranty period.
6. This warranty only applies to the camera and not to the accessories, such as the case and strap, nor does it apply to the battery and other consumables provided.
7. Any consequential damages arising from failure of the camera, such as expenses incurred in taking pictures or loss of expected profit, will not be reimbursed whether they occur during the warranty period or not.
8. The warranty is only valid in the country in which the camera was purchased.
 - * The above provisions refer to repairs offered free of charge, and do not limit your legal rights.
 - * The intention of the above provisions is also described in the warranty card provided with this camera.
9. Parts essential to the servicing of the camera (that is, components required to maintain the functions and quality of the camera) will be available for a period of five years after the camera is discontinued.
10. Please note that if the camera is seriously damaged by flooding, submergence, infiltration of sand or mud, violent shocks or dropping, it may not be repairable, and restoration to its original condition may be impossible.



Note

- Before sending the camera in for repair, check the battery and read the instruction manual again to ensure proper operation.
- Some repairs require a significant amount of time to be completed.
- When sending the camera to a service center, please include a note which describes the defective part and the problem as precisely as possible.
- Remove all accessories not related to the problem before sending the camera to the service center.
- Before taking any important pictures (such as at weddings, on trips abroad, etc.), test the camera to check operation and ensure proper functioning. We recommend that you keep this manual and spare battery on hand.
- This warranty does not apply to data stored on an SD memory card or in internal memory.

INFORMATION TO THE USER

USA FCC Part15 Class B

The equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, then 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 to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help. (FCC 15.105B)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. (FCC 15.21)

Properly shielded and grounded cables and connectors must be used for connection to a host computer in order to comply with FCC emission limits. (FCC 15.27)

COMPLIANCE INFORMATION STATEMENT

Product Name: DIGITAL CAMERA

Model Number: R50

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

RICOH AMERICAS CORPORATION

5 Dedrick Place, West Caldwell NJ, 07006 Tel.: 1-800-225-1899

Note to Users in Canada

Note: This Class B digital apparatus complies with Canadian ICES-003

Remarque Concernant les Utilisateurs au Canada

Avertissement : Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada

IMPORTANT SAFETY INSTRUCTIONS-SAVE THESE INSTRUCTIONS

DANGER-TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS.

Telephone Support Numbers in Europe

UK	(from within the UK) (from outside of the UK)	02073 656 580 +44 2073 656 580
Deutschland	(innerhalb Deutschlands) (außerhalb Deutschlands)	06331 268 438 +49 6331 268 438
France	(à partir de la France) (en dehors de la France)	0800 91 4897 +49 6331 268 439
Italia	(dall'Italia) (dall'estero)	02 696 33 451 +39 02 696 33 451
España	(desde España) (desde fuera de España)	91 406 9148 +34 91 406 9148

<http://www.service.ricohpmmc.com/>

From environmental friendliness to environmental conservation and to environmental management

Ricoh is aggressively promoting environment-friendly activities and also environment conservation activities to solve the great subject of management as one of the citizens on our precious earth.

To reduce the environmental loads of digital

cameras, Ricoh is also trying to solve the great subjects of "Saving energy by reducing power consumption" and "Reducing environment-affecting chemical substances contained in products".



If a problem arises

First of all, see "COMMONLY ASKED QUESTIONS" (☞ P.127) and "TROUBLESHOOTING" (☞ P.133) in this manual. If the issues still persist, please contact a Ricoh office.

Ricoch Offices	
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RICOH AMERICAS CORPORATION	5 Dedrick Place, West Caldwell, New Jersey 07006, U.S.A. 1-800-22RICOH http://www.ricoh-usa.com
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2008 March

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