

GR

DIGITAL

RICOH

GR DIGITAL II

Camera User Guide

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

Basic Operations

If you are using the camera for the first time, read this section.

This section provides a basic overview of how to turn on the camera, take pictures and play back pictures.

Advanced Operations

Read this section when you want to learn more about the different camera functions.

This section provides more detailed information about the functions used to take pictures and play back pictures, as well as information on how to customize the camera settings, print pictures, and use the camera with a computer.

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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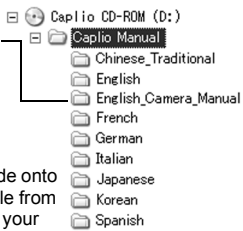
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Using These Manuals

The following two manuals are included with your GR DIGITAL II.

	<p>“Camera User Guide” (This booklet)</p> <p>This guide explains the usage and functions of the camera. It also explains how to install the provided software on your computer.</p> <p>* The “Camera User Guide” (English edition) is available from the provided CD-ROM as a PDF file.</p>
	<p>“Software User Guide” (PDF file)</p> <p>This guide explains how to download images from the camera to your computer and display and edit them on your computer. The “Software User Guide” is available in the following folders on the provided CD-ROM.</p> <p>“Camera User Guide” (English edition) (PDF file)</p> <p>Each language has its own “Software User Guide” in the respective folder.</p> <p>To copy the Software User Guide onto your hard disk, copy the PDF file from the respective folder directly to your hard disk.</p> 

The camera is provided with the Irodio Photo & Video Studio software that allows you to display and edit images on your computer. For how to use Irodio Photo & Video Studio, see the displayed “Help”.

For more information on Irodio Photo & Video Studio, contact the Customer Support Center below.

North America (U.S.)

TEL: (Toll Free) +1-800-458-4029

Europe

UK, Germany, France and Spain:

TEL: (Toll Free) +800-1532-4865

Other Countries:

TEL: +44-1489-564-764

Asia

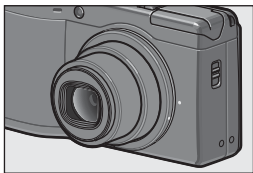
TEL: +63-2-438-0090

China

TEL: +86-21-5450-0391

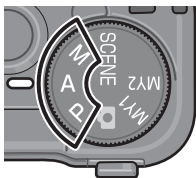
Business hours: 9:00 AM to 5:00 PM

Key Features



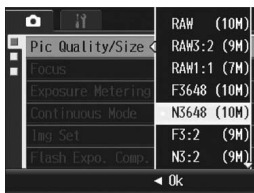
28-mm wide-angle GR lens for high depiction performance

The compact body is equipped with a 28-mm wide-angle GR lens. This lens enables the camera to reproduce high-resolution, high-contrast images and provide high image quality with low distortion.



Aperture priority mode, manual exposure mode, and program shift mode for fine-tuned adjustments

You can manually set the aperture value and shutter speed. This small, compact, and lightweight camera has advanced modes that rival those of digital SLR cameras.



10.01 megapixel CCD and RAW mode for high-quality shooting (P.91)

The camera has a CCD with 10.01 million effective pixels to ensure high-resolution images.

In addition, you can use RAW mode to save the raw picture data (as a .DNG file). This provides less image quality deterioration than JPEG files and easier image processing on a computer. A JPEG file based on the DNG file is recorded at the same time.

New image processing engine—GR Engine II

The camera comes with GR Engine II, a new image processing engine that allows you to take pictures with high resolution and low picture noise while reproducing natural colors in various shooting scenes. The GR Engine II maximizes the high depiction performance of the GR lens.

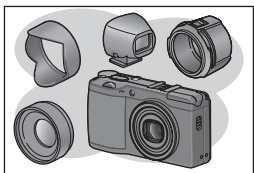




Macro shooting at 1.5 cm (P.43) and close-up flash shooting at 20 cm (P.44)

The unsurpassed macro shooting function allows you to capture details from a very close distance at only 1.5 cm from the front edge of the lens.

The camera also has a built-in flash for close-up shots at 20 cm that gives you clear macro shots even under low light conditions.



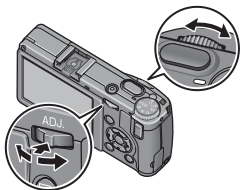
Variety of accessories for greater creative expression (P.14)

You can use the camera with a 21-mm wide conversion lens or 40-mm tele conversion lens, according to your shooting purpose. (Use with the hood & adapter.) Enhance your photographic experience with a variety of optional accessories, including an external viewfinder and cable switch.



Electronic level function to help keep the image level (P.59)

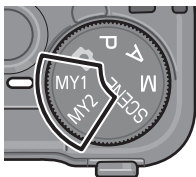
The camera is equipped with an electronic level function that is useful for keeping the image level when taking pictures of scenery or buildings. The camera uses a level indicator displayed on the picture display and a level sensor sound to let you know whether the image is level.



Up-down dial and ADJ. lever for faster and easier operations (P.21)

You can use the up-down dial and ADJ. lever to quickly and easily make the shooting settings and various menu operations.

You can also press the ADJ. lever to easily select ADJ. mode (P.64) and make various shooting settings.



Easily customize your favorite shooting settings with my settings mode (P.86)

You can customize two groups of settings, and then turn the mode dial to MY1 or MY2 to shoot with those registered settings.



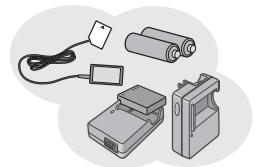
Fn (Function) button enables easy mode switching with a single push of the button (P.164)

When a function is assigned to the Fn (Function) button, you can perform the assigned function, such as switching to JPEG mode or RAW mode, switching to auto focus or manual focus, or switching to color or black-and-white mode, simply by pressing the Fn button. You can also assign various other shooting settings to the Fn button.



Depth of field display function useful for pan-focus shooting (P.95)

The camera comes with a function for displaying the depth of field (the distance range in which objects appear in focus). You can check the target depth of field on the picture display, which is useful for pan-focus shooting using manual focus and the aperture setting.



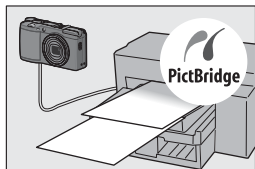
Power your camera in one of three ways (P.26)

You can power the camera in one of three ways for convenient shooting anytime, anywhere. Use the supplied large-capacity rechargeable battery for long periods of shooting and playback. Use commercially available alkaline batteries when traveling with your camera. Use the convenient AC adapter for transferring data to a computer.



Irodio Photo & Video Studio software for browsing, viewing, and editing still images and movies (P.204)

This bundled software enables you to view, organize, and edit shot images. You can also use the video editor function to create movies using still images, video clips, audio, and music files.



Direct printing without the use of a computer (P.149)

A direct print-compatible printer can be connected to the camera with the USB cable to directly transfer images to the printer. This allows for easy printing without using a computer. You can also print reports.

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Read this section when you want to learn more about the different camera functions.

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Basic Operations

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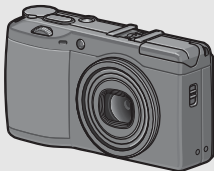
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Packing List

Open the package and make sure all the items are included.

GR DIGITAL II

The serial number of the camera is provided on the bottom face of the camera.



Hot Shoe Cover

Included with the camera.



USB Cable (mini-B type)

Used to connect the camera to a computer or direct print-compatible printer.

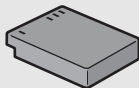


AV Cable

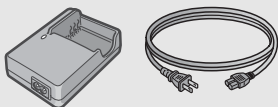
Used to view your images on a TV.



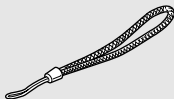
Rechargeable Battery



Battery Charger



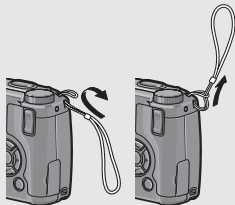
Handstrap



Note

Attaching the handstrap to the camera

Thread the small end of the strap through the strap eyelet on the camera and loop the ends as shown.



Camera User Guide



(This booklet)

Safety Precautions



Caplio Software CD-ROM

The provided software and the "Software User Guide" are included on this CD-ROM.



Caution

The Caplio Software supports the following languages. Operations are not guaranteed on operating systems with languages other than those listed below.

English, French, German, Spanish, Italian, Chinese (Traditional, Simplified), Korean

If you are using the camera for the first time, read this section.

Optional Accessories

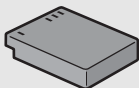
If you are using the camera for the first time, read this section.

AC Adapter (AC-4c)

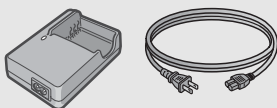
Used for power supply from a household outlet to the camera. Use this adapter for long periods of playback or when transferring images to a computer.



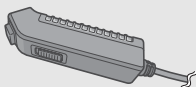
Rechargeable Battery (DB-60)



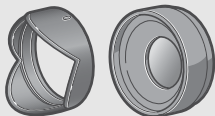
Battery Charger (BJ-6)



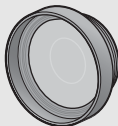
Cable Switch (CA-1)



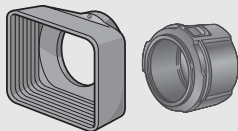
Wide Conversion Lens (GW-1)



Tele Conversion Lens (GT-1)

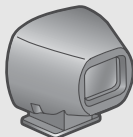


Hood & Adapter (GH-1)



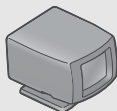
External Viewfinder (GV-1)

Optical viewfinder attaches to the hot shoe. Comes with frames that are equivalent to 28-mm and 21-mm on a 35-mm camera and a case.



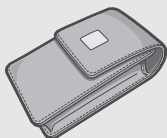
Mini External Viewfinder (GV-2)

Compact optical viewfinder attaches to the hot shoe. Comes with a frame that is equivalent to 28-mm on a 35-mm camera (with an indicator for shooting at a vertical/horizontal ratio of 1:1) and a case.



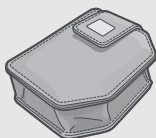
Soft Case (GC-1)

Compact leather camera case (with belt loop). This case cannot accommodate the camera with the external viewfinder attached.



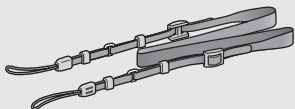
Soft Case (GC-2)

This leather camera case has a belt loop and can accommodate the camera with the GV-2 mini external viewfinder attached.



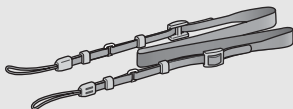
Neck Strap (GS-1)

A double-loop neck strap with embroidered GR DIGITAL logo.



Neck Strap (ST-2)

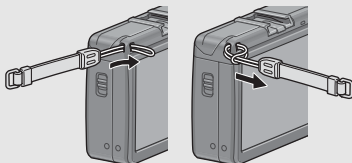
A double-loop neck strap with embroidered RICOH logo.



Note

Attaching the neck strap to the camera

Remove the end of the neck strap from the connector and attach it as shown in the figure.



Note

- For information on optional accessories, see P.224.
- For the latest information on optional accessories, see the Ricoh website (<http://www.ricohpmmc.com>).



Removing/attaching the ring cap -----

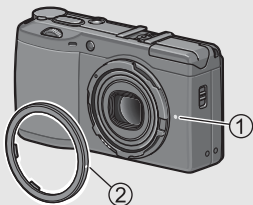
Remove the ring cap when using the wide conversion lens, tele conversion lens or hood & adapter.

Removing the ring cap

With the camera turned off, turn the ring cap counterclockwise and remove from the camera body.

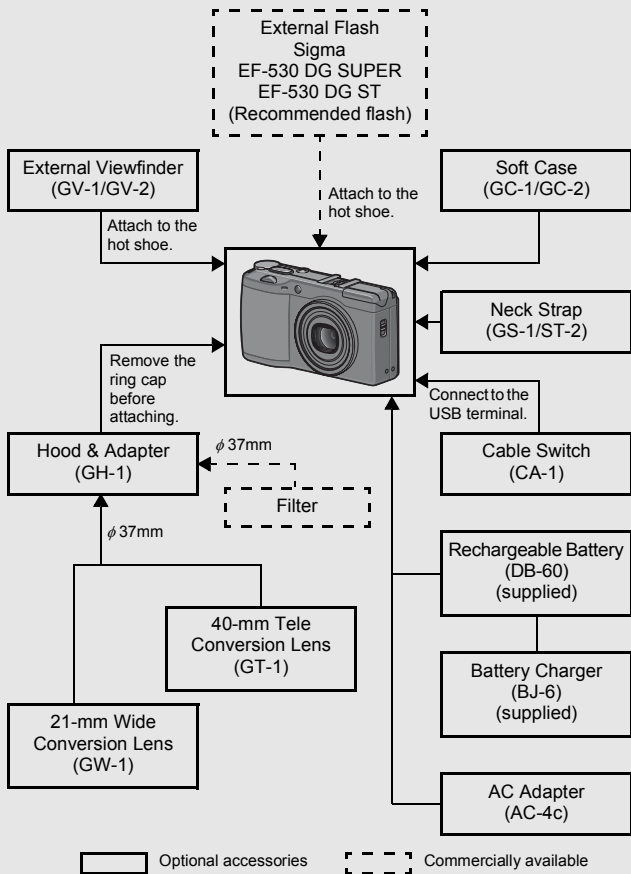
Attaching the ring cap

With the camera turned off, align the marking on the ring cap (2) with the marking on the camera body (1) and turn the ring cap clockwise until it clicks.



Camera System and Accessories

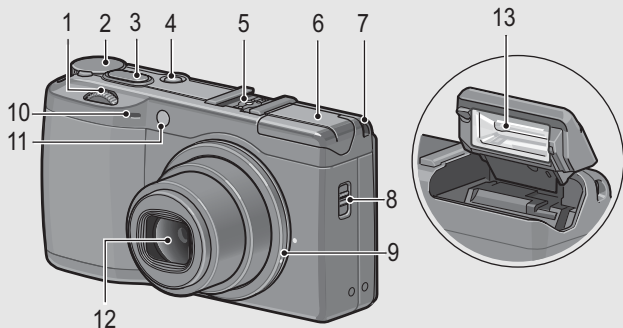
If you are using the camera for the first time, read this section.



Names of Parts

Camera

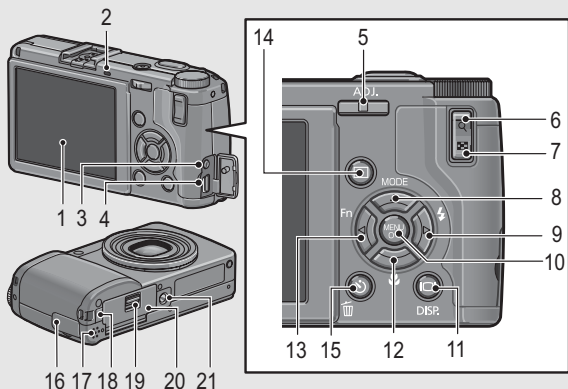
Front View



	Item Name	Refer to
1	Up-down Dial	P.21
2	Mode Dial	P.20
3	Shutter Release Button	P.36
4	POWER Button	P.33
5	Hot Shoe	P.17, 227
6	Flash Cover	P.44
7	Strap Eyelet	P.12
8	⚡ (Flash) OPEN Switch	P.44
9	Ring Cap	P.16
10	Microphone	-
11	AF Auxiliary Light	P.46, 174
12	Lens	P.36
13	Flash	P.44

If you are using the camera for the first time, read this section.

Rear View



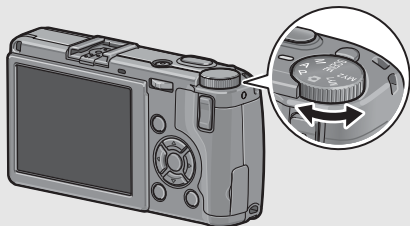
	Item Name	Refer to
1	Picture Display	P.23
2	Auto Focus/Flash Lamp	P.33, 38, 41, 44
3	AV Output Terminal	P.147
4	USB Terminal	P.150, 205, 206, 209
5	ADJ. Lever	P.64
6	Q (Englarged View) Button	P.41, 51
7	Thumbnail Display Button	P.41, 49
8	▲/MODE button	P.83
9	▶/⚡ (Flash) Button	P.44
10	MENU/OK Button	P.89, 133, 156
11	O (DISP.) Button	P.56
12	▼/🌿 (Macro) Button	P.43
13	◀/Fn (Function) Button	P.69
14	▶ (Playback) Button	P.47
15	🗑️ (Delete)/⌚ (Self-timer) Button	P.52, 46
16	Terminal Cover	P.147, 150, 205, 206, 209
17	Speaker	P.132
18	Power (DC input) Cable Cover	P.225
19	Release Lever	P.31, 225
20	Battery/Card Cover	P.31, 225
21	Tripod Screw Hole	P.220

If you are using the camera for the first time, read this section.


How to Use the Mode Dial

Set the mode dial to the desired mode before shooting still images or movies.

- 1** Turn the mode dial to the symbol of the function you want to use.



Mode Dial Symbols and Descriptions

Symbol	Function	Description
	Auto Shooting Mode	Automatically sets the optimal aperture value and shutter speed depending on the subject.
P	Program Shift Mode	Allows you to adjust the combination of aperture value and shutter speed.
A	Aperture Priority Mode	Allows you to set the aperture value, and then the camera automatically sets the optimal shutter speed.
M	Manual Exposure Mode	Allows you to manually set the aperture value and shutter speed.
SCENE	Scene Mode	Allows you to shoot with settings optimized for the shooting scene. You can also shoot movies.
MY1, MY2	My Settings Mode	Allows you to shoot using the settings registered in [Reg. My Settings].

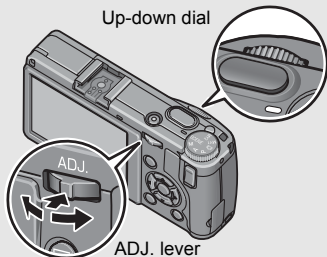
If you are using the camera for the first time, read this section.

How to Use the Up-down Dial and ADJ. Lever

You can use the up-down dial and ADJ. lever to easily perform various operations that are usually done using the ▲▼◀▶ buttons.

You can rotate the up-down dial as shown here.

You can press the ADJ. lever to the left and right and press the center.



You can use the up-down dial and ADJ. lever to perform the following operations.

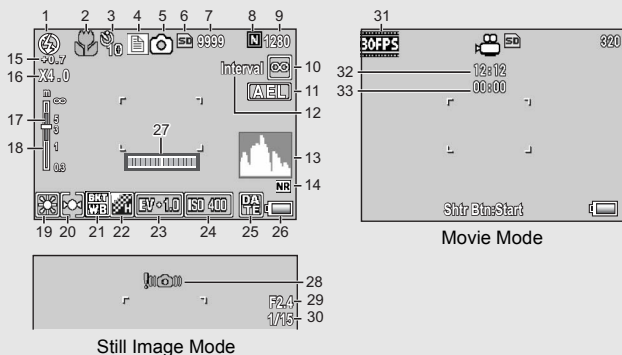
Mode/Display	Description		Refer to
	Up-down Dial	ADJ. Lever	
Select ADJ. Mode	-	Press the center to select ADJ. mode.	P.64
ADJ. mode	Same as ▲▼ buttons	Push to the left and right: Same as ◀▶ buttons. Press to set: Same as MENU/OK button.	P.64
Aperture Priority Mode (A)	Allows you to change the aperture value.	-	P.78
Manual Exposure Mode (M)	Allows you to change the aperture value.	Allows you to change the shutter speed.	P.79
Program Shift Mode (P)	Allows you to adjust the combination of aperture value and shutter speed.	-	P.81
Shooting/Playback/Setup Menu	Same as ▲▼ buttons	Same as ◀▶ buttons	P.87, 133, 155
Scene Mode (Scene Mode selection screen)	Same as ▲▼ buttons	-	P.83
Playback Mode (Normal playback screen)	Same as ◀▶ buttons	Same as ◀▶ buttons	P.47

If you are using the camera for the first time, read this section.

Mode/Display	Description		Refer to
	Up-down Dial	ADJ. Lever	
Playback Mode (Three-frame view)	Same as ◀▶ buttons	Same as ◀▶ buttons	P.49
Playback Mode (List)	Same as ▲▼ buttons	Same as ◀▶ buttons	P.49
Playback Mode (Enlarged view)	Allows you to change the display magnification.	Displays the previous or next image. (When displaying the previous or next image during magnify, the image is displayed at normal magnification (100%.))	P.51

Picture Display

Example of Picture Display when Shooting Pictures



	Item Name	Refer to		Item Name	Refer to
1	Flash Mode	P.44	17	Depth of Field	P.95
2	Macro Shooting	P.43	18	Focus Bar	P.94
3	Self-timer	P.46	19	White Balance Mode	P.122
4	Scene Mode/Multi-shot	P.83, 99	20	Exposure Metering Mode	P.98
5	Shooting Mode Types	P.20	21	Auto Bracket	P.110, 112, 114
6	Recording Destination	P.28	22	Image Settings	P.103
7	Remaining Number of Still Images	P.223	23	Exposure Compensation	P.120
			24	ISO Setting	P.126
8	Picture Quality	P.91	25	Date Imprint	P.119
9	Image Size	P.91	26	Battery Mark	P.25
10	Focus Mode	P.94	27	Level Indicator	P.59, 173
11	AE Lock	P.74	28	Camera Shake Warning Mark	P.37
12	Interval	P.117	29	Aperture Value	P.220
13	Histogram	P.61	30	Shutter Speed	P.79, 81
14	Noise Reduction	P.116	31	Frame Rate	P.130
15	Flash Exposure Compensation	P.109	32	Remaining Recording Time	P.223
16	Digital Zoom Magnification	P.41	33	Recording Time	P.132, 223

If you are using the camera for the first time, read this section.

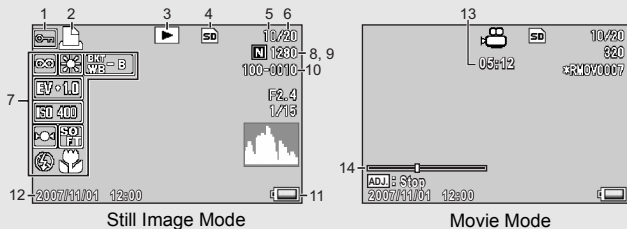


Note

- The number of remaining shots available may differ from the actual number of shots, depending on the subject.
- Movie recording time and the storage capacity of still pictures may vary depending on the capacity of the recording destination (internal memory or SD memory card), shooting conditions, and the type and manufacturer of the SD memory card.
- When the number of remaining shots is 10,000 or more, "9999" is displayed.

If you are using the camera for the first time, read this section.

Example of Picture Display During Playback



	Item Name	Refer to		Item Name	Refer to
1	Protect	P.135	8	Picture Quality	P.91
2	DPOF	P.138	9	Image Size	P.91
3	Mode Types	-	10	File No.	-
4	Playback Data Source	P.48	11	Battery Mark	P.25
5	Number of Playback Files	-	12	Date at Shooting	P.119, 188
6	Total Number of Files	-	13	Recording Time or Lapsed Time	-
7	Setting at Shooting (Recording)	-	14	Indicator	-






Note

The picture display may display messages to inform you of operational instructions or the camera's status while in use.





Battery Level Indication

A battery mark appears at the lower right of the picture display to indicate the battery level. Recharge the battery before it is depleted.

Battery Mark	Description
 Green	The battery is sufficiently charged.
	The battery level begins to drop. Recharging the battery or exchanging with new batteries is recommended.
	The battery level is low. Recharge the battery or exchange with new batteries.



Caution

- If you are using AAA nickel-hydrogen batteries or AAA Oxide batteries, depending on the type of batteries and usage conditions,  may not appear, or  or  may instantaneously appear. Check your batteries beforehand.
- If you are using the AC adapter,  may appear. This does not indicate a malfunction and you can continue to use the camera.

Getting Ready

Turn the power on and get ready to shoot.



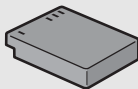
Note

- If the camera is already turned on, make sure it is turned off before inserting or removing the battery.
- For information on how to turn the camera off, see P.33.

About the Battery

Rechargeable Battery DB-60 (supplied)

This is a lithium-ion battery. It is economical because you can recharge it using the battery charger and use it over and over again.



Note

You can also use the following types of batteries.

- **AAA Alkaline Batteries (available in stores)**

You can obtain them anywhere, so they are convenient for travel.

However, in a low-temperature environment, the storage capacity of shots will decrease. Warm the batteries before use. It is recommended that you use the rechargeable battery when using the camera for a long time.

- **AAA Oxryde Batteries (available in stores)**

These are not rechargeable batteries, but they can be used longer in a digital camera than AAA alkaline batteries.

- **AAA Nickel-Hydrogen Batteries (available in stores)**

These batteries are economical because you can recharge and reuse them over and over again. Please use a battery charger available in stores.



Storage capacity of shots

- Approximate storage capacity of shots you can take

Battery Type	Storage capacity of Shots (Normal Mode)
Rechargeable Battery (DB-60)	Approx. 370
AAA Alkaline Batteries (available in stores)	Approx. 45

- Based on CIPA standard (Temperature: 23 degrees Celsius, picture display on, 30 seconds between shots, 50% flash usage, turning the power off after each 10 shots).
- The storage capacity of shots when using AAA alkaline batteries is based on the use of AAA alkaline batteries manufactured by Matsushita Battery Industrial Co., Ltd.
- The storage capacity of shots is for reference only. If the camera is used for long periods of time for setting and playback, the shooting time (the number of shots) will decrease. For long periods of use, it is recommended that you carry spare batteries.



Caution

- The nickel-hydrogen batteries available in stores are not factory-charged. Charge them before use.
- The nickel-hydrogen batteries may be inert and consequently may not supply power immediately after they are purchased or when left unused for more than a month. In such a case, recharge the batteries two or three times before use. The batteries self-discharge with time even if the camera is not used, so recharge them before use.
- The life of an AAA alkaline battery depends on the brand and the storage time from the date of production. In addition, the life of an alkaline battery becomes shorter at low temperatures.
- Other batteries, such as manganese dry cell and Ni-Cd batteries, cannot be used.
- The battery may become very hot immediately after operation. Turn the camera off and leave it to cool down sufficiently before removing the battery.
- Please remove the battery if you are not going to use the camera for a long period of time.
- When using a lithium-ion battery, use only the specified rechargeable lithium-ion battery (DB-60). Do not use other rechargeable lithium-ion batteries.

SD Memory Card (available in stores)

You can store still images you have taken either in the camera's internal memory or on an SD memory card (available in stores). The internal memory capacity is approx. 54 MB.

To record a lot of still images or movies at high resolutions, use a high-capacity SD memory card.

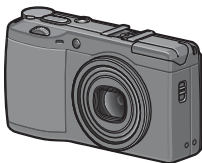
If you are using the camera for the first time, read this section.



Where images are recorded

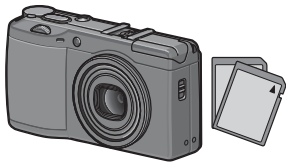
When no SD memory card is loaded, the camera records images to the internal memory; when an SD memory card is loaded, it records images to the SD memory card.

When no SD memory card is loaded



Records to the internal memory

When an SD memory card is loaded



Records to the SD memory card



Caution

- If an SD memory card is loaded, the camera does not record to the internal memory, even if the card is full.
- Take care not to get the contacts of the card dirty.

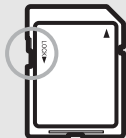


Write-protecting your images

Move the write-protection switch on the SD memory card to LOCK to prevent your still images from being accidentally erased or the card from being formatted. If you unlock the card (by returning the switch to its original position), it is once again possible to erase images and format the card.

It is recommended to move the write-protection switch to LOCK when you have some important data recorded.

Note that you cannot shoot images on a locked card because no data can be recorded to the card. Unlock the card before shooting.





Note

- For information on switching between the SD memory card and internal memory during playback, see P.48.
- Movie recording time and the storage capacity of still pictures varies depending on the SD memory card. (☞ P.223)
- Before using a new SD memory card, be sure to format it with this camera. (☞ P.158)
- You can copy images stored in the internal memory to an SD memory card. (☞ P.144)
- When using an SD memory card previously used with another camera, be sure to back up any necessary data on the card before formatting it. (☞ P.158)
- SDHC memory card (4 GB) can also be used.

If you are using the camera for the first time, read this section.

Charging the Rechargeable Battery

The rechargeable battery needs to be charged before use. The battery is not charged at the time of purchase.

- 1** Insert the battery into the battery charger, making sure that the $\oplus \ominus$ and $\oplus \ominus$ markings on the battery match those on the battery charger.

- The battery label should face up.

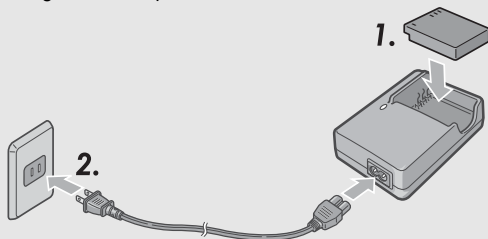


Caution

Be careful not to reverse the \oplus and \ominus sides.

- 2** Plug the battery charger into an outlet.

- Use the battery charger (BJ-6) to recharge the battery.
- Charging starts, and the charger lamp indicates the progress, as shown below. Once charging has finished, unplug the battery charger from the power outlet.



Charger Lamp	Description
Lit	Charging started
Off	Charging complete
Flashing	Battery charger or battery may be faulty (unplug the battery charger from the power outlet and remove the battery from the battery charger).

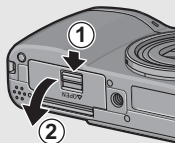
- Depending on the battery level, the charging time differs.

Rechargeable battery charging time	
DB-60	About two hours (25°C)

Loading the Battery and SD Memory Card

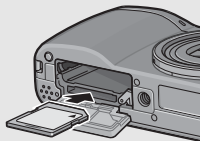
The rechargeable battery (DB-60) can be used to power this camera. This battery is convenient because the battery power lasts long and it can be used over and over again by recharging. If the camera is already turned on, make sure it is turned off before loading the battery and card.

1 Slide the release lever toward **OPEN** to open the battery/card cover.



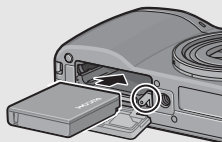
2 Make sure the SD memory card is facing the right way and then push the card all the way in until it clicks.

- The rechargeable battery may be inserted first.

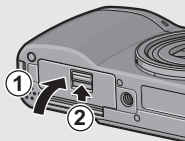


3 Insert the rechargeable battery.

- Press the latch with the battery and insert the battery all the way into the battery compartment.
- When the rechargeable battery is loaded in place, it is locked with the latch.



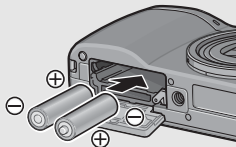
4 Close the battery/card cover and slide the release lever in the opposite direction of **OPEN** to lock it in place.



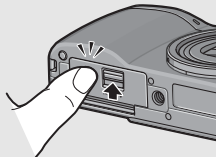
If you are using the camera for the first time, read this section.

Loading AAA Alkaline Batteries (Available in Stores)

Insert the batteries in the direction shown.



Close the battery/card cover by sliding the release lever while pressing close the battery/card cover with your finger.



Removing the SD Memory Card

Slide the release lever toward OPEN to open the battery/card cover. Push in the SD memory card and gently release to eject it. Pull the card out of the camera.

Removing the Rechargeable Battery

Slide the release lever toward OPEN to open the battery/card cover. Press and release the latch. The battery is ejected. Pull the battery out of the camera. Be careful not to drop the battery when removing it from the camera.

Removing the AAA Alkaline Batteries

Slide the release lever toward OPEN to open the battery/card cover, and then remove the alkaline batteries. Be careful not to drop the alkaline batteries when removing them from the camera.



Caution

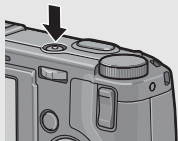
- When closing the battery/card cover, slide the release lever and be sure to lock it in place.
- Remove the batteries if you are not going to use the camera for a long period of time. Store the removed batteries in a dry cool place.

Turning the Power On/Off




Turn the camera on.

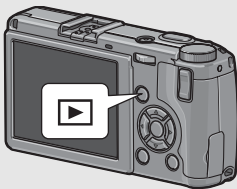
1 Press the POWER button.

- The POWER button lights, the start sound is emitted, and then the auto focus/flash lamp blinks for several seconds.



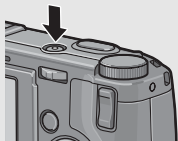
Using the Camera in Playback Mode

- Pressing the  (Playback) button for more than one second turns on the camera in playback mode, allowing you to start playback at once.
- When the camera is turned on with the  button, pressing the  button again switches playback mode to recording mode.



Turn the camera off.

1 Press the POWER button.



Caution

After the camera is turned on, it may take longer for the camera to become ready for shooting when using the flash than when not using the flash.



Auto power off

- If the camera goes unused for a set period of time, it automatically turns itself off to save power. (Auto Power Off)
- The auto power off setting can be changed. (☞ P.175)

If you are using the camera for the first time, read this section.

Setting the Language

When the power is turned on for the first time, the display language setting screen appears. After setting the language, go on to the date/time setting (for printing the date and time on your photos).

You can shoot without these settings. However, be sure to set the language, and the date/time later. Use the Setup menu for these settings.

If you are using the camera for the first time, read this section.

1 Turn the power on for the first time after purchase.

- The language selection screen appears.
- To skip language setting, press the MENU/OK button.
- When the MENU/OK button is pressed, the language setting is cancelled and the video signal format-setting screen appears.

2 Press the ▲▼◀▶ buttons to select a language.

3 Press the MENU/OK button.

- The display language is set, and the date/time setting screen appears.

Language/言語	
日本語	Русский
English	简体中文
Deutsch	繁体中文
Français	한국어
Italiano	
Español	
OK Ok	



Note

For how to set the display language and date/time on the Setup menu, see “Changing the Display Language (Language/言語)” (P.190) and “Setting the Date and Time (Date Settings)” (P.188) in this guide.

Setting the Date and Time

When the power is turned on for the first time, the date/time setting screen appears.

1 Press the **▲▼◀▶** buttons to set the year, month, date and time.

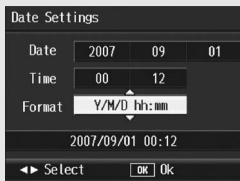
- Change the value with **▲▼** and move the frame with **◀▶**.



Setting at shipping

2 In [Format], choose the date and time format.

- Select the date and time format with **▲▼**.



3 Check the information on the screen and then press the **MENU/OK** button.

- The date is set.



Note

- If the battery is removed for more than one week, the date and time settings will be lost. These settings must be made again.
- To retain the date and time settings, load a battery with adequate remaining power for more than two hours.
- The set date and time can be changed later. (P.188)
- The date and time can be inserted into images. (P.119)

If you are using the camera for the first time, read this section.

Basic Shooting

Now you are ready.

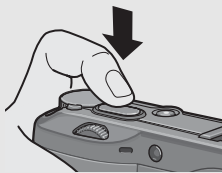
Holding the Camera

Hold the camera as shown below for best results.

- 1** Hold the camera with both hands and lightly press both elbows against your body.



- 2** Put your finger on the shutter release button.



Caution

When you are shooting, be careful not to obstruct the lens or flash with your fingers, hair, or the strap.




Preventing camera shake-----

If you move the camera when pressing the shutter release button, the still image might not come out clearly due to camera shake.

Camera shake tends to occur in the following cases:

- When shooting in a dark place without using the flash
- When using the digital zoom function (☞ P.41)

When the  symbol appears on the picture display, this indicates that camera shake may occur. To prevent camera shake, try any of the following.

- Setting the flash to [Auto] or [Flash On] (☞ P.44)
- Raising the ISO setting (☞ P.126)
- Using the self-timer (☞ P.46)

If you are using the camera for the first time, read this section.

Shooting

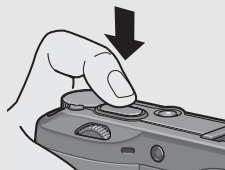
The shutter release button works in two steps. When you press the shutter release button halfway (Half-press), the auto-focus function is triggered to determine the focal distance. Next, press it all the way down to shoot. When your subject is not in the center of your composition, compose your photo after focusing. (Focus Lock)

If you are using the camera for the first time, read this section.

- 1** Press the **POWER** button to turn the camera on, and turn the mode dial to .

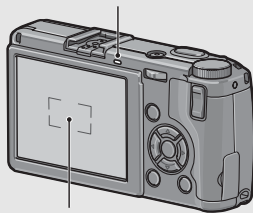


- 2** Put the subject of your photo in the center of the screen and press the shutter release button halfway.



- The camera focuses on the subject and the exposure and white balance are fixed.
- If automatic focusing fails, a red frame is displayed in the center of the picture display and the auto focus/flash lamp blinks green.
- The focal distance is measured at a maximum of nine points. Green frames appear to indicate the positions that are in focus.

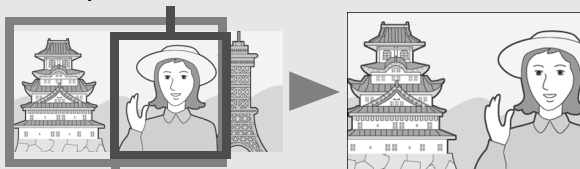
Auto Focus/Flash Lamp



Frame

- 3** To take a picture with the subject in the foreground in focus against a background, half-press the shutter release button to focus on the subject, and then compose your shot.

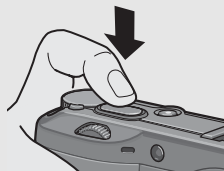
Subject to be focused on



Shooting range

- 4** Gently press the shutter release button all the way.

- The still image you have taken appears momentarily on the picture display and is recorded to the internal memory or SD memory card.



Focusing

- The color of the frame in the center of the picture display and the auto focus/flash lamp indicate whether the subject is in or out of focus.

Focus Status	Frame Color	Auto Focus/Flash Lamp
Before focusing	White	Off
Subject in focus	Green	Lights (green)
Subject not in focus	Red	Blinks (green)



- It may be impossible to bring the following subjects into focus.
 - Subjects lacking contrast (the sky, a white wall, the hood of a car, etc.)
 - Flat two-dimensional objects with only horizontal lines and no significant protrusions.
 - Quickly moving objects.
 - Things in poorly lit places.
 - Areas with strong backlighting, or reflections.
 - Things that flicker, such as fluorescent lights.

When you want to shoot subjects like this, first focus on an object the same distance as your subject and then shoot.

If you are using the camera for the first time, read this section.





Note

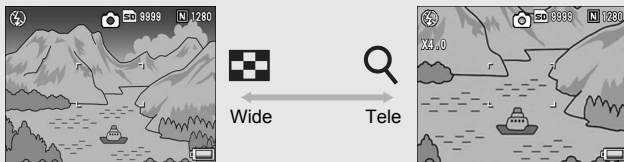
- Press the shutter release button gently to prevent camera shake.
- The  symbol indicates that camera shake may occur. Hold the camera still and focus the camera again.
- The flash fires a pre-flash to increase the AE accuracy.
- You can set the time the still image you have taken appears on the picture display. You can also make settings to have the image remain displayed until the shutter release button is half-pressed or not to display the image after shooting. ( P. 176)
- The aperture value is controlled up to F11 in auto shooting mode. (When the aperture value is between F7.1 and F11 in auto shooting mode, the aperture and internal ND filter are used together.)

Using the Digital Zoom

The digital zoom is activated when [Zoom Button] is set to [Dgtl Zoom] on the setup menu (👉 P.168).

Pressing the  (Enlarged View) button allows you to take a close-up picture of the subject. (Maximum magnification of 4.0×)

Pressing the  (Thumbnail) button allows you to take a wide-angle picture.

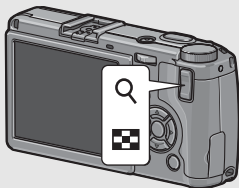


1 Set [Zoom Button] to [Dgtl Zoom] on the setup menu.

- For the operating procedure, see P.168.

2 With the camera ready to shoot, press the or button.

- The magnification is displayed on the picture display.







3 Compose your picture and half-press the shutter release button.

4 Full-press the shutter release button.

If you are using the camera for the first time, read this section.

**Note** -----


- You can also assign the exposure compensation and white balance functions to the  or  button instead of the digital zoom function.
- If [Pic Quality] is set to 3648 × 2736, you can also set [Digital Zoom Img] to [Auto Resize]. ( P.169)
- This function is not available when [Pic Quality/Size] is set to RAW mode. ( P.91)



If you are using the camera for the first time, read this section.

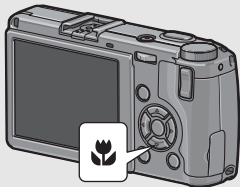
Shooting Close-Ups (Macro Shooting)

Using the  (Macro) button allows you to take a tight close-up of the subject. (Macro shooting)

This is good for shooting small subjects because you can shoot up to approximately 1.5 cm (0.6 in.) away from the front edge of the lens.


1 With the camera ready to shoot, press the  button.

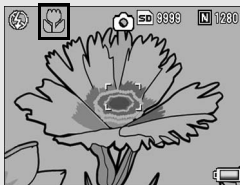
-  is displayed momentarily at the center of the picture display and then  is displayed at the top of the screen.



2 Compose your picture and half-press the shutter release button.

3 Full-press the shutter release button.

- To cancel macro mode, press the  button again.



Note

- Macro shooting can be performed up to approximately 1.5 cm (0.6 in) away from the front edge of the lens in a shooting area of approximately 31 × 23 mm (1.2 × 0.9 in.).
- The AF target shift function enables you to lock the focus for macro shooting with the simple touch of a button without moving the camera. This function is useful for shooting on a tripod. (👉 P.67)

If you are using the camera for the first time, read this section.

Using the Flash

To use the flash, slide the ⚡ (Flash) OPEN switch down to raise the flash cover and open the flash. The flash does not fire if it is not open.







With the flash open, press the ⚡ (Flash) button to change the flash mode. The default setting at the time of purchase is [Auto].

Range of flash light (when ISO Setting is set to [Auto])

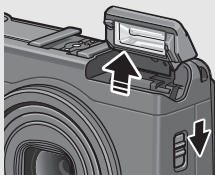
👉 P.126)

Approx. 20 cm to 3.0 m (0.7 to 9.8 ft.) (from the front edge of the lens)

Flash Modes

	Flash Off	The flash will not fire.
	Auto	The flash fires automatically when the subject is poorly lit or backlit.
	Red-eye Flash	Reduces the red-eye phenomenon, in which people's eyes appear red in pictures.
	Flash On	The flash fires regardless of the lighting conditions.
	Flash Synchro.	The flash fires with the shutter speed slowed. This is useful when taking portrait pictures in a nightscape. Camera shake may occur, so the use of a tripod is recommended.
	External Flash (Recommended flash)	Indicates that an external flash (Recommended flash) can be used.

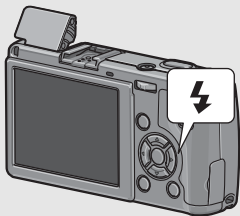
- 1** Slide the ⚡ OPEN switch down to raise the flash cover.



- 2** Turn the mode dial to 📷.

3 Press the **⚡** button to change the flash mode.

- The flash mode mark is displayed momentarily at the center of the picture display and then a smaller mark is displayed at the upper left of the screen.
- The auto focus/flash lamp blinks while the flash charges. Once the flash is charged, the lamp turns off and the camera is ready to shoot.



Note

- When you are finished using the flash, press the center of the flash cover down with your finger.
- The flash mode setting is saved until you press the **⚡** button again.
- The flash does not fire when shooting movies or in multi-shot, auto bracket, white balance bracket, or color bracket modes.
- When using AAA alkaline batteries, Oxyride batteries, or nickel-hydrogen batteries, the picture display turns off when the flash is charging.
- The flash fires a pre-flash to increase the AE accuracy.
- You cannot use the internal flash when using an external flash. (P.227)




Caution


You cannot use the internal flash when using the wide conversion lens, tele conversion lens, and hood.

Using the Self-Timer

You can set the Self-timer to shoot after either two or ten seconds. A setting of two seconds is useful for preventing camera shake.

1 Turn the mode dial to .

2 Press the  (Self-timer) button.

- The Self-timer symbol appears on the screen.
- The [10] to the right of the symbol indicates the number of seconds. In this case, if you press the shutter release button, the camera shoots after 10 seconds.
- Each press of the  button changes the self-timer setting in the following order: 10sec, 2sec, and Self-timer Off.




3 Press the shutter release button.

- The focus is locked, and the AF auxiliary light lights when the self-timer starts.



Note -----






- The camera remains in self-timer mode even after the image is shot. To cancel the self-timer, press the  button and change the self-timer setting to [Self-Timer Off].
- When the self-timer is set to 2 seconds, the AF auxiliary light does not light.

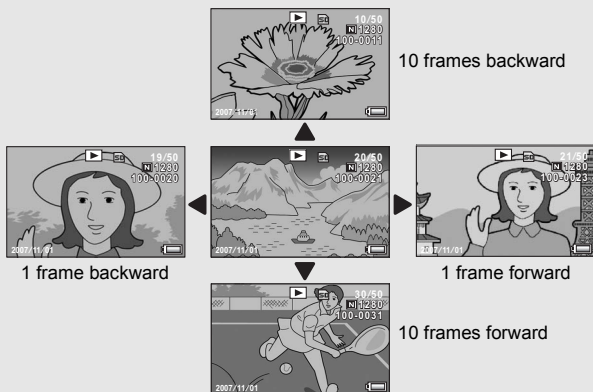
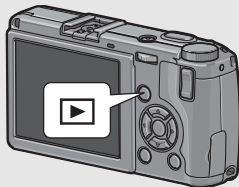
Playing Back Images

Viewing Your Images

In playback mode, you can check still images you have taken. You can also delete or zoom in on the images.

1 Press the (Playback) button.

- The camera switches to playback mode and the last still image you took is displayed.
- You can view your pictures in order by using the   buttons.
- Press the  button to display the still image 10 frames backward. If there are less than 10 still images, the first still image is displayed.
- Press the  button to display the still image 10 frames forward. If there are less than 10 still images, the last still image is displayed.
- To switch the camera from playback mode to shooting mode, press the  button again.



If you are using the camera for the first time, read this section.

**Caution**-----

When shooting with [Pic Quality/Size] set to RAW mode (☞ P.91), a JPEG file associated with the DNG file is recorded at the same time. If the JPEG file is deleted on a computer, for example, a thumbnail of the DNG file can be displayed, but the thumbnail cannot be enlarged.


**Note**-----



When playing back an image (RAW3648/RAW3:2/RAW1:1) shot with [Pic Quality/Size] set to RAW mode, the JPEG file recorded at the same time as the DNG file is displayed. A symbol appears on the screen indicating RAW mode.

**Checking the image in shooting mode**-----

In shooting mode, immediately after you take a still image, the still image is displayed on the screen for a moment so you can check it. You can change the image display time using [LCD Confirm.] on the setup menu (☞ P.176). When [LCD Confirm.] is set to [Hold], the image remains displayed until the next time you half-press the shutter release button. When [LCD Confirm.] is set to [Hold], the displayed image can also be enlarged or deleted. (☞ P.51, 52)

**Turning on the camera in playback mode**-----

When the camera is off, pressing the  button for more than one second turns the camera on. The camera starts up in playback mode.

When the camera is turned on with the  button, pressing the  button again switches playback mode to shooting mode.

**Where images are played back from**-----

When no SD memory card is loaded, the camera plays back from the internal memory. When an SD memory card is loaded, it plays back from the SD memory card.

Three-frame View/Grid View (Thumbnail Display)

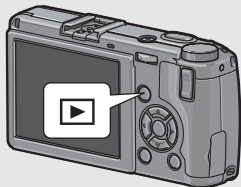
When playing back images on the picture display, the playback screen can be divided into three frames (three-frame view) or 12 frames (list). The three-frame view and list allow you to select a still image to enlarge or delete.

The playback screen changes as follows:

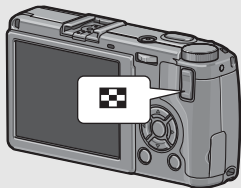


1 Press the (Playback) button.

- The last image you took is displayed.

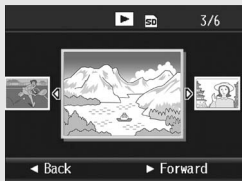


2 Press the (Thumbnail Display) button.



If you are using the camera for the first time, read this section.

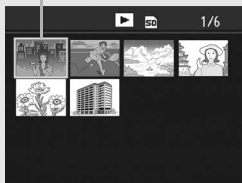
- The screen changes to three-frame view. The large frame at the center of the screen displays the currently selected still image.
- Press the ▲ button to display the still image 10 frames backward. If there are less than 10 still images, the first still image is displayed.
- Press the ▼ button to display the still image 10 frames forward. If there are less than 10 still images, the last still image is displayed.



3 Press the button again during three-frame view.

- The screen is divided into 12 frames and thumbnails are displayed (List).

Selected still image



Switching to Single-Picture Display

- In three-frame view

- 1 Press the ◀▶ buttons to select a still image.
- 2 Press the 🔍 (Enlarged View) button or the MENU/OK button.




- In list

- 1 Press the ▲▼◀▶ buttons to select a still image.
- 2 Press the 🔍 button twice.



Note

If any of the following operations is performed in the three-frame view, the display returns to the ordinary playback screen (single-picture display) and the operation is executed.

- Deletion ( P.52)
- Menu display ( P.133)
- Movie playback ( P.132)

Enlarging Images

You can enlarge a still image displayed on the picture display.

Image Size	Enlarged View (maximum magnification)
3648 × 2736, 3648 × 2432, 2736 × 2736, 3264 × 2448, 2592 × 1944, 2048 × 1536	16 times
1280 × 960	6.7 times
640 × 480	3.4 times

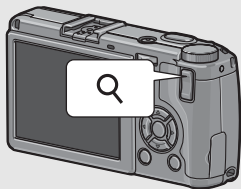
1 Press the (Playback) button.





- The last image you took is displayed.

2 Press the buttons to display the still image you want to magnify.

3 Press the (Enlarged View) button.


- The still image is enlarged.



In Enlarged View	
 Button	Enlarges the displayed still image. You can move the displayed still image by pressing the   buttons.
 Button	Returns the enlarged still image to its original size.
MENU/OK Button	Pressing this in enlarged view displays the still image at the maximum magnification. Pressing this again returns the still image to its original size.



Note

- When [LCD Confirm.] is set to [Hold] on the setup menu ( P.176), the image displayed on the screen after being taken can be enlarged.
- Movies cannot be enlarged.

If you are using the camera for the first time, read this section.

Deleting Files


You can delete unwanted or failed files from the SD memory card or internal memory.

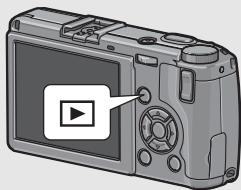


Note

When [LCD Confirm.] is set to [Hold] on the setup menu (P.176), the image displayed on the screen after being taken can be deleted.

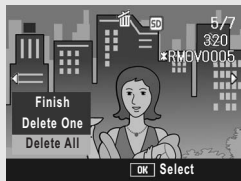
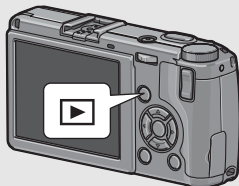
Deleting a File


- 1** Press the  (Playback) button.
- 2** Press the  buttons to display the file you want to delete.
- 3** Press the  (Delete) button.
- 4** Press the  buttons to select [Delete One].
 - You can change the image for deletion with the  buttons.
- 5** Press the MENU/OK button.
 - The display indicates that the files are being deleted; once finished, it returns to the screen in Step 4.





Deleting All Files

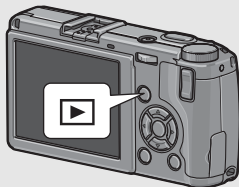
- 1** Press the  (Playback) button.
- 2** Press the  (Delete) button.
- 3** Press the   buttons to select [Delete All].
- 4** Press the MENU/OK button.
 - You are prompted to confirm that you want to delete all images. If so, press the  button to select [Yes], and then press the MENU/OK button.



Note -----
You can also delete files by pressing the  button during three-frame view. (P.49)


Deleting Multiple Files at One Time

- 1** Press the  (Playback) button.
- 2** Press the  (Thumbnail Display) button twice.
 - The screen is divided into 12 frames and thumbnails are displayed (List).
- 3** Press the  (Delete) button.

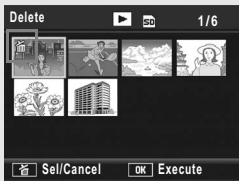


If you are using the camera for the first time, read this section.


● Specifying Individual Files to be Deleted

4 Press the ▲▼◀▶ buttons to select the file you want to delete and press the  button.

- The trash symbol is displayed in the upper left corner of the file.



5 Repeat Step 4 to select all the files you want to delete.

- If you selected a file by mistake, you can deselect it by selecting the file and pressing the  button.

6 Press the MENU/OK button.

7 Press the ◀▶ buttons to select [Yes] and then press the MENU/OK button.

- The display indicates that the files are being deleted; once finished, it returns to the thumbnail display screen.



● Specifying a Range of Files to be Deleted

4 Press ADJ. lever.

- Press the ADJ. lever again to return to the screen for deleting one file at a time.

5 Press the ▲▼◀▶ buttons to select the starting point of the range of files you want to delete and press the button.

- The trash symbol is displayed in the upper left corner of the file.




6 Press the ▲▼◀▶ buttons to select the ending point of the range of files you want to delete and press the button.

- The trash symbol is displayed in the upper left corner of the specified files.



7 Repeat Steps 5 and 6 to specify all the ranges of files you want to delete.

- If you selected a file by mistake, you can deselect it by pressing the ADJ. lever to return to the screen for deleting one file at a time, selecting the file, and pressing the  button.

8 Press the MENU/OK button.

9 Press the ◀▶ buttons to select [Yes] and then press the MENU/OK button.

- The display indicates that the files are being deleted; once finished, it returns to the thumbnail display screen.

If you are using the camera for the first time, read this section.

Changing the Display with the DISP. Button

Pressing the DISP. button allows you to change the screen display mode and toggle the information displayed on the picture display.

● Shooting Mode

Each time you press the DISP. button, the display changes in the following order: Histogram, Grid Guide, No Display, Picture Display Off, and Normal Symbol Display.

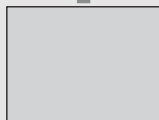
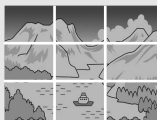
Normal Symbol Display



Histogram



Grid Guide



Picture Display Off

Press the DISP. button to change the display.



No Display



Grid Guide -----

This displays auxiliary lines on the picture display to help you compose your picture. These lines are not recorded with images.

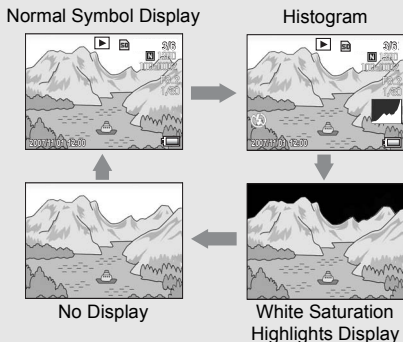


Note

- When [Level Setting] is set to [Display] or [Disp + Snd] (☞ P.173), the level indicator is displayed during normal symbol display and histogram. (☞ P.59)
- When [Enlrge Photo Icon] is set to [On] (☞ P.185), the following icons are not displayed in normal symbol display.
Digital zoom magnification, Focus bar, Date imprint, Image Settings (Img Set)
- If any of the following operations is performed, the picture display turns on even when it is turned off.
 - When the ADJ. lever, MENU/OK button, DISP. button, or (Playback) button is pressed.
 - When the / buttons are pressed except when [Zoom Button] is set to [Off]. (☞ P.168)
 - When the / buttons are pressed during manual focus. (☞ P.96)
 - When the MODE button is pressed in scene mode.

● During Playback Mode

Each time you press the DISP. button, the display changes in the following order: Histogram, White Saturation Highlights Display, No Display, and Normal Symbol Display.



Press the DISP. button to change the display.



White Saturation Highlights Display-----

The white saturation areas of the image flash in black. White saturation is the loss of grayscale that indicates the color shading in an image in which very bright areas of the subject are rendered in white. An image with a loss of grayscale cannot be edited later. It is recommended that you shoot another image while avoiding direct sunlight and setting the exposure level lower (-). (👉 P.120)



Note-----

The white saturation highlights display is for reference only.

If you are using the camera for the first time, read this section.

About the Electronic Level

When [Level Setting] is set to on in the setup menu or by pressing and holding the DISP. button (☞ P.173), the camera uses a level indicator and level sensor sound to let you know whether the image is level during shooting. The level indicator is displayed during normal symbol display and histogram.

This is useful for keeping the image level when taking pictures of scenery or buildings. This is also very useful for taking pictures with the horizon visible.

For information on how to set [Level Setting], see P.173.

- **With [Level Setting] set to [Display]:**

The level indicator appears on the picture display. When the camera is level, the level indicator becomes green, indicating that the scale is in the middle. When the camera is tilted, the marking of the level indicator becomes orange, and indicates the opposite side of the direction in which the camera is tilted.

- **With [Level Setting] set to [Disp + Snd]:**

The level indicator appears on the picture display. When the camera is level, the level indicator becomes green, indicating that the scale is in the middle, and the level sensor sound is continually emitted at a set interval. When the camera is tilted, the marking of the level indicator becomes orange, and indicates the opposite side of the direction in which the camera is tilted.

- **With [Level Setting] set to [Sound]:**

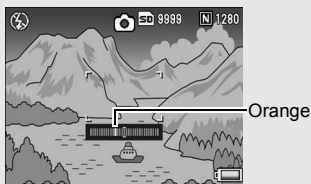
When the camera is level, a level sensor sound is continually emitted at a set interval and the level indicator is not displayed.

If you are using the camera for the first time, read this section.

Level indicator display



When level



When tilted to the right



When level status cannot be determined



When the camera is held vertically



Note

- If the camera is tilted too much, the marking of the level indicator becomes red and indicates the opposite end of the direction in which the camera is tilted.
- When shooting with the camera positioned vertically, the level function can be used to determine whether the image is vertically level.



Caution

- If the camera is tilted too far forward or backward, or it cannot be determined whether the camera is level, the level indicator becomes red.
- During grid guide, no display, or when the picture display is off (P.56), the level sensor sound is emitted, but the level indicator is not displayed. When [Level Setting] is set to [Disp + Snd], only the level sensor sound is emitted.
- The level function is not available if the camera is held upside down, when recording movies, and during interval shooting.
- The level function becomes less accurate when the camera is moving or when shooting in an environment subject to moving, such as on an amusement ride.
- No level sensor sound is emitted when [Level Setting] is set to [Disp + Snd] or [Sound] and [Vol. Settings] is set to [□ □ □] (Mute) (P.172).
- Use this function as reference so see if images are level when shooting images. The accuracy of the level when using the camera as a level cannot be guaranteed.

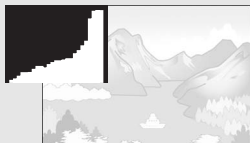
Histogram

When Histogram is on, a histogram appears in the lower right corner on the picture display. A histogram is a graph indicating the number of pixels on the vertical axis and the brightness on the horizontal axis (from left to right, shadows (dark areas), midtones, and highlights (bright areas)).



By using the histogram, you can determine the brightness of an image without being affected by the brightness around the picture display. This also helps you correct for areas that are overly bright or dark.

If the histogram has only peaks on the right side without anything else, this picture is over-exposed with too many pixels only for highlight sections.



If the histogram has only peaks on the left side without anything else, this picture is under-exposed with too many pixels only for shadow sections. Correct the exposure to an appropriate level.



Note

- The histogram displayed on the picture display is for reference only.
- Depending on the shooting conditions (use of the flash, dark surrounding light, etc.), the exposure level indicated in the histogram may not correspond to the brightness of the shot image.
- Exposure compensation has its limitation. It does not necessarily achieve the best possible result.
- A histogram with peaks in the center may not necessarily provide the best result to suit your particular requirements.
For example, an adjustment is required if you want to underexpose or overexpose the image.
- For information on how to correct the exposure compensation, see P.120.

If you are using the camera for the first time, read this section.

If you are using the camera for the first time, read this section.

Advanced Operations

Read this section when you want to learn more about the different camera functions.

- 1 Various Shooting Functions 64
- 2 Shooting/Playing Back Movies
..... 129
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Computer 192
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7

1 Various Shooting Functions

Using the ADJ. Lever

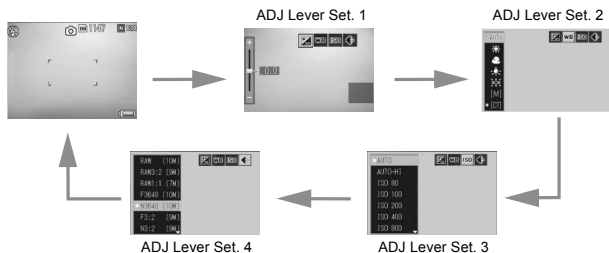
You can assign four shooting menu functions to the ADJ. lever. When a shooting function is assigned to the ADJ. lever, you can display the screen for that function with fewer button operations and without displaying the shooting menu. This is useful for assigning frequently used functions.

By default, three functions are assigned to the ADJ. lever. You can use the setup menu to add or change the functions assigned to the ADJ. lever. For information on how to add or change the assigned functions, see P.166.

To use the ADJ. mode, follow these steps.

- 1 In shooting mode, press the ADJ. lever.**
- 2 Press the ADJ. lever to the left or right or press the ◀▶ buttons to select the desired item.**

- The screenshots below are examples of the screen display when [Expo. Comp], [Wht. Bal.], [ISO], and [Quality] are assigned to [ADJ Level Set.1] to [ADJ Level Set.4].



- 3 Press the ▲▼ buttons to select the setting.**
- 4 Press the ADJ. lever or the MENU/OK button to set the setting.**

**Note**

You can also set the setting by half-pressing the shutter release button. (P.38)

Functions That Can Be Assigned to [ADJ Lever Set]

Expo. Cmp, Wht. Bal., ISO, Quality, Focus, Image, Expo. Met., Cont Mode, Auto BKT, Flash Comp

Functions That Can Be Set in Scene Mode

The functions that can be set with the ADJ. lever in scene mode differ from those in other shooting modes. The following settings can be made with the ADJ. lever. All other settings can be assigned to the ADJ. lever with [ADJ Lever Set], but they cannot be operated by pressing the ADJ. lever.

Scene Mode	Available Settings
[Movie]	Wht. Bal.
[Text Mode]	Density
[Skew Correct Mode]	Expo. Cmp, Wht. Bal.

Changing the Text Density (Scene Mode)

You can change the shading of text for shooting with [Text Mode] (P.83) in scene mode.

You can select from [Deep], [Normal] and [Light].

To change the setting, use the shooting menu or the ADJ. lever. This section explains easy ways to change the shading setting with the ADJ. lever.

To use the shooting menu, see "Using the Menu". (P.89)

1

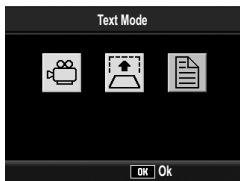
Various Shooting Functions

1 Turn the mode dial to **SCENE**.

2 Press the **MODE** button.

- The scene mode selection screen appears.

3 Press the ◀▶ buttons to select [Text Mode] and then press the MENU/OK button.

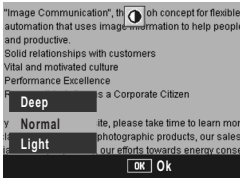


4 Press the **ADJ. lever**.

- The text density menu appears.

5 Press the ▲▼ buttons to select the desired density setting.

- You can also press the shutter release button to take a picture.



6 Press the **ADJ. lever** or the **MENU/OK** button.

- The text density setting does not appear on the screen.

Shifting the AF Target (Macro)

During macro shooting, pressing the ADJ. lever allows you to shift the AF target by using the ▲▼◀▶ buttons on the camera without moving the camera. You can lock the focus (P.38) at the position where the AF target is shifted and shoot the picture. This function is useful for shooting on a tripod.



When the AF target is shifted to the left with the ◀ button

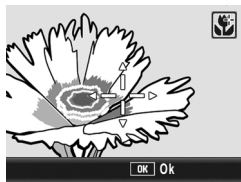


1 With the camera ready to shoot, press the  (Macro) button.

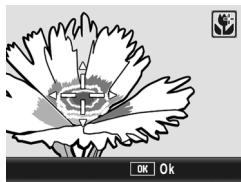
- The macro symbol appears on the screen.

2 Press the ADJ. lever.

3 Press the ADJ. lever to the left or right until the AF target shift function screen (cross-mark in the middle of the screen) appears.



4 Shift the cross-mark to the subject you want the camera to focus on with the ▲▼◀▶ buttons.



5 Press the MENU/OK button.

6 Half-press the shutter release button.

- The camera focuses on the area at the position of the cross-mark.

7 Gently press the shutter release button all the way.

- The AF target shift function automatically focuses the camera on the set position until macro mode is cancelled.

Using the Function Button

When a function is assigned to the Fn (Function) button with [Function Button] on the setup menu (☞ P.164), you can easily change the shooting menu setting, or switch from one function to another, simply by pressing the Fn button. At the time of purchase, [Function Button] is set to [AF/MF].

The following functions can be assigned to the Fn button. For the operating procedure of each function, see the corresponding reference page.

[Function Button]	Function	Refer to
AF/MF	Switching between auto focus and manual focus	P.71
AF/Snap	Switching between auto focus and snap mode	P.73
AE Lock	Locking the exposure	P.74
JPEG>RAW	Switching from JPEG to RAW mode	P.75
Color>B&W	Switching from color to black-and-white mode* ¹	P.76
Color>TE	Switching from color to black-and-white (TE)* ²	P.76
Expo. Cmp, Wht. Bal., ISO, Quality, Focus, Image, Expo. Met., Cont Mode, Auto BKT, Flash Comp	Changing the shooting menu function	P.77

*1 Image quality when [B&W] is set in [Image] (☞ P.105)

*2 Image quality when [B&W (TE)] is set in [Image] (☞ P.106)

Functions That Can Be Set in Scene Mode

The functions that can be set with the Fn (Function) button in scene mode differ from those in other shooting modes. The following settings can be made with the Fn button. All other settings can be assigned to the Fn button with [Function Button], but they cannot be operated by pressing the Fn button.

1

Various Shooting Functions

	Scene Mode		
	Movie	Text Mode	Skew Correct Mode
AF/MF	○		○
AF/Snap	○		○
AE Lock		○	○
JPEG>RAW			
Color>B&W			○
Color>TE			○
Expo. Cmp			○
Wht. Bal.	○		○
ISO			○
Quality	○	○	○
Focus	○		○
Image			○
Expo. Met.			○
Cont Mode			
Auto BKT			
Flash Comp			○

Switching Between Auto Focus and Manual Focus (AF/MF)

Assigning the Fn (Function) button to [AF/MF] (🔧 P.164) and then pressing the Fn button during shooting allows you to switch between auto focus (AF) and manual focus (MF). Pressing the Fn button switches between auto focus and manual focus depending on the [Focus] setting on the shooting menu (🔧 P.94), as shown below.

[Focus] setting	Pressing the Fn button
Multi AF	Switches between [MF] and [Multi AF]
Spot AF	Switches between [MF] and [Spot AF]
MF	Switches between [Multi AF] or [Spot AF] ¹ and [MF]

* The last selected AF mode ([Multi AF] or [Spot AF]) is selected.

1 Set [Function Button] to [AF/MF] on the setup menu.

- For the operating procedure, see P.164.

2 With the camera ready to shoot, press the Fn button.

- When the focus mode changes to manual focus, the [MF] symbol appears at the upper right of the screen.
- When the focus mode changes to auto focus ([Multi AF] or [Spot AF]), the [MF] symbol disappears.



⚠ Caution

When [Focus] is set to [Snap] or [∞] (🔧 P.94), pressing the Fn button does not switch AF/MF.

**Note**-----

- For information on how to use manual focus, see P.96.
- You can also use the shooting menu to make the [Focus] setting. (☞ P.94)
- You can press the Fn button to switch AF/MF and lock the focus at the focus lock position (AF Lock). Use the following operating procedure.
 - 1 With the camera set to auto focus, half-press the shutter release button to focus on the subject. (Focus Lock)
 - 2 Release the shutter release button and press the Fn button.
 - 3 The camera is set to MF and the shooting distance is fixed at the focus lock position.
 - To return to auto focus mode, press the Fn button again.

Switching Between Auto Focus and Snap Mode (AF/Snap)

Assigning the Fn (Function) button to [AF/Snap] (🔗 P.164) and then pressing the Fn button during shooting allows you to switch between auto focus (AF) and snap mode. Pressing the Fn button switches the mode depending on the [Focus] setting on the shooting menu (🔗 P.94), as shown below.

[Focus] setting	Pressing the Fn button
Multi AF	Switches between [Snap] and [Multi AF]
Spot AF	Switches between [Snap] and [Spot AF]
Snap	Switches between [Multi AF] or [Spot AF], and [Snap]

* The last selected AF mode ([Multi AF] or [Spot AF]) is selected.

1 Set [Function Button] to [AF/Snap] on the setup menu.

- For the operating procedure, see P.164.

2 With the camera ready to shoot, press the Fn button.

- When the focus mode changes to snap mode, the [Snap] symbol appears at the upper right of the screen.
- When the focus mode changes to auto focus ([Multi AF] or [Spot AF]), the [Snap] symbol disappears.



⚠ Caution

When [Focus] is set to [MF] or [∞] (🔗 P.94), pressing the Fn button does not switch AF/Snap.

📌 Note

You can also use the shooting menu to make the [Focus] setting. (🔗 P.94)

Locking the Exposure (AE Lock)

Assigning the Fn (Function) button to [AE Lock] (P.164) and then pressing the Fn button during shooting allows you to lock or cancel the exposure.

1 Set [Function Button] to [AE Lock] on the setup menu.

- For the operating procedure, see P.164.

2 Check that the camera is ready to shoot.

3 Put the subject of your photo in the center of the screen and press the Fn button.

- The exposure is locked and the AEL mark, aperture value, and shutter speed appear on the screen.
- Pressing the Fn button again cancels the AE lock.



Note

- The exposure continues to remain locked even after you shoot a picture.
- The AE lock does not work in manual exposure mode even if the Fn button is assigned to [AE Lock]. When the Fn button is pressed, the value is automatically set closer to the appropriate exposure (closer to the center of the exposure value indicator). This is useful when, for example, you want to change/adjust the exposure value from closer to the center of the exposure value indicator (the appropriate exposure).

Switching from JPEG to RAW Mode (JPEG>RAW)

Assigning the Fn (Function) button to [JPEG>RAW] (P.164) and then pressing the Fn button when a [Pic Quality/Size] setting other than a RAW setting is selected (P.91) allows you to switch to RAW mode with the same image ratio. Pressing the Fn button again returns to JPEG mode.

[Pic Quality/Size] setting	Pressing the Fn button
F3648(10M)/N3648(10M)/N3264(8M)/N2592(5M)/N2048(3M)/N1280(1M)/N640 (VGA)	Switches between RAW(10M) and the original [Pic Quality/Size] setting
F3:2(9M)/N3:2(9M)	Switches between RAW3:2(9M) and the original [Pic Quality/Size] setting
F1:1(7M)/N1:1(7M)	Switches between RAW1:1(7M) and the original [Pic Quality/Size] setting
RAW(10M)/RAW3:2(9M)/RAW1:1(7M)	Does not operate

1 Set [Function Button] to [JPEG>RAW] on the setup menu.

- For the operating procedure, see P.164.

2 With the camera ready to shoot, press the Fn button.

- The camera switches to RAW mode with the same image ratio and [RAW] is displayed in orange on the screen.
- Pressing the Fn button again returns to JPEG mode.



Caution


Pressing the Fn button does not switch to JPEG mode in the following cases.

- [Pic Quality/Size] is set to RAW mode (P.91)
- [Continuous Mode] is set to a setting other than [Off] (P.99)
- [Auto Bracket] is set to a setting other than [Off] (P.110)

Note

- Turning the camera off or changing the [Function Button] setting after switching to RAW mode returns the setting to JPEG mode.
- When shooting in RAW mode, see the notes on P.92.
- You can also use the shooting menu to switch between JPEG and RAW mode. (P.91)

Switching from Color to Black-and-White or Black-and-White (TE) Mode (Color>B&W, Color>TE)

Assigning the Fn (Function) button to [Color>B&W] or [Color>TE] ( P.164) and then pressing the Fn button with [Img Set] set to a setting other than [B&W] or [B&W (TE)] allows you to switch from [Color] to [B&W] or [B&W (TE)]. Pressing the Fn button again returns to color mode.

1 Set [Function Button] to [Color>B&W] or [Color>TE] on the setup menu.


- For the operating procedure, see P.164.

2 With the camera ready to shoot, press the Fn button.


- The setting switches to [B&W] or [B&W (TE)] and an orange symbol is displayed on the screen.
- Pressing the Fn button again returns to color mode.



Caution-----

When [Img Set] is set to [B&W] or [B&W (TE)] ( P.105, 106), pressing the Fn button does not switch to color mode.

Note-----

- Turning off the camera after switching to [B&W] or [B&W (TE)] returns the setting to color mode.
- You can also use the shooting menu to make the color setting. ( P.105, 106)

Setting Other Functions

When any of the following functions are assigned to the Fn (Function) button (☞ P.164), you can change the settings for the functions with fewer button operations.

Expo. Cmp, Wht. Bal., ISO, Quality, Focus, Image, Expo. Met., Cont Mode, Auto BKT, Flash Comp

1 Set [Function Button] to one of the above items on the setup menu.

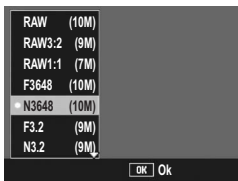
- For the operating procedure, see P.164.

2 With the camera ready to shoot, press the Fn button.

- The setting screen for that function appears.

3 Press the ▲▼ buttons to select the setting.

4 Press the ADJ. lever or the MENU/OK button to set the setting.



Note

The settings of the functions can be changed using the shooting menu. (☞ P.87)

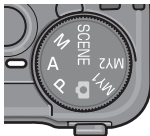
Shooting with a Set Aperture Value (A: Aperture Priority Mode)

Setting the mode dial to A (aperture priority mode) allows you to manually set the aperture value. Once the aperture value is set, the camera automatically sets the optimal shutter speed.

Selecting a lower aperture value (opening the aperture) allows you to blur the background and capture a sharp portrait of the foreground subject. Selecting a higher aperture value (closing the aperture) allows you to capture an image with everything from the foreground to the background in focus.

Use the up-down dial to set the aperture value.

1 Turn the mode dial to A.



- The mode symbol appears on the picture display, and the current aperture value is displayed in orange on the right edge of the screen.

2 Rotate the up-down dial to change the aperture value.



3 Half-press the shutter release button.

- The shutter speed is set and displayed on the screen.

4 Gently press the shutter release button all the way.



Note

The aperture opens or closes once the shutter release button is pressed.

Shooting with a Set Aperture Value and Shutter Speed (M: Manual Exposure Mode)

Setting the mode dial to M (manual exposure mode) allows you to manually set the aperture value and shutter speed. You can select from the following shutter speeds.

1/2000	1/1600	1/1250	1/1000	1/800	1/640
1/500	1/400	1/320	1/250	1/200	1/160
1/125	1/100	1/80	1/60	1/50	1/40
1/30	1/25	1/20	1/15	1/13	1/10
1/8	1/6	1/5	1/4	1/3	1/2.5
1/2	1/1.6	1/1.3	1	2	4
8	15	30	60	120	180



Note

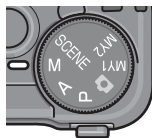
Depending on the aperture value, some shutter speeds may not be available.

Faster shutter speeds allow you to capture a sharp image of a fast-moving subject. Slower shutter speeds allow you to capture an image with a flowing effect and emphasize the movement of the subject.

Use the up-down dial to set the aperture value.

Use the ADJ. lever to set the shutter speed.

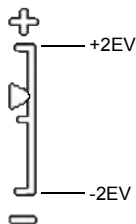
1 Turn the mode dial to M.



- The mode symbol appears on the picture display, and the current aperture value, shutter speed, and exposure value indicator are displayed on the right edge of the screen.



- When the exposure value is in the range of -2EV to +2EV, the brightness of the picture display changes according to the exposure value.
- When the exposure value exceeds the range of -2EV to +2EV, the indicator lights orange and the brightness of the picture display does not change.



- 2 Rotate the up-down dial to change the aperture value.
- 3 Press the ADJ. lever to the left or right to change the shutter speed.
- 4 Half-press the shutter release button.
- 5 Gently press the shutter release button all the way.



Note

- To increase the exposure time, lower the shutter speed. In this case, camera shake may occur. Hold the camera steady with two hands or use a tripod when shooting.
- While shooting with a slow shutter speed, the picture display turns off.
- When the ISO setting is set to [Auto] or [Auto-Hi] in manual exposure mode, the ISO is fixed at ISO 100. (☞ P.126)
- When [Zoom Button] on the setup menu is set to [Expo. Cmp], the exposure compensation setting screen is not displayed even if you press the \mathcal{Q} / \square buttons in manual exposure mode. When the \mathcal{Q} / \square buttons are pressed, the value is automatically set closer to the appropriate exposure (closer to the center of the exposure value indicator). This is useful when, for example, you want to change/adjust the exposure value from closer to the center of the exposure value indicator (the appropriate exposure).
- The AE lock does not work in manual exposure mode even if the Fn (Function) button is assigned to [AE Lock]. When the Fn button is pressed, the value is automatically set closer to the appropriate exposure (closer to the center of the exposure value indicator). This is useful when, for example, you want to change/adjust the exposure value from closer to the center of the exposure value indicator (the appropriate exposure).



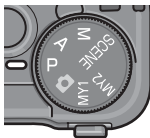
Caution

When the shutter speed is set to 15 or more seconds, the function to remove noise from images operates. Therefore, the time until image recording is complete is about twice the set shutter speed.

Shooting with an Combined Aperture Value and Shutter Speed (P: Program Shift Mode)

Setting the mode dial to P (program shift mode) allows you to shoot with a set combination of the aperture value and shutter speed. Use the up-down dial to set the program shift mode.

1 Turn the mode dial to P.



- The mode symbol appears on the picture display.



2 Half-press the shutter release button.

- The current combination of the aperture value and shutter speed appear on the screen.



3 Release your finger from the shutter release button.

4 Rotate the up-down dial to select the combination of the aperture value and shutter speed.

- The combination of the aperture value and shutter speed are displayed for 10 seconds. Rotate the up-down dial during that time to change the combination of the aperture value and shutter speed.



5 Press the shutter release button to shoot a picture.



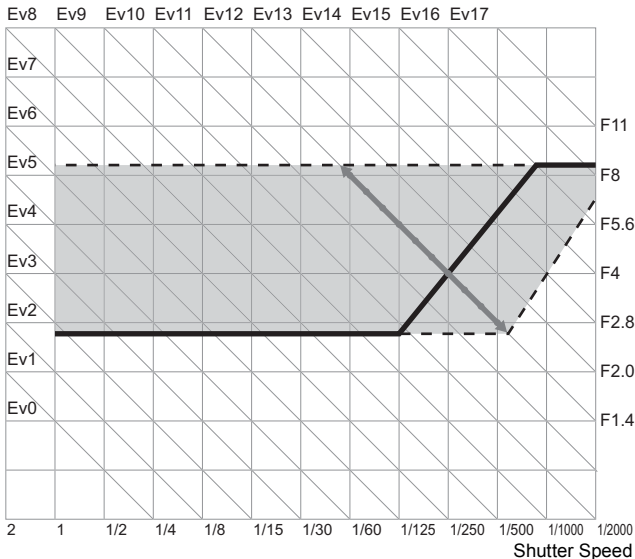
Note

The following is the program diagram.

- In this example, the flash mode is set to [Flash Off], and the ISO setting is set to [ISO 100].
- The aperture value and shutter speed can be shifted within the area indicated in gray. This changes depending on the exposure value (Ev).

1








Various Shooting Functions



Shooting with Optimal Settings According to Shooting Conditions (SCENE: Scene mode)

Setting the mode dial to SCENE allows you to select from among the following modes and shoot with settings automatically optimized for shooting conditions.

1

Scene Modes	
 Movie	Allows you to shoot movies with sound. For detailed operations, see P.129.
 Skew Correct Mode	Use to straighten a rectangular object, such as a message board or business card, shot at an angle to make it look as if it were shot squarely. For detailed operations, see P.85.  In skew correction mode, select [N1280] or [N640] for [Pic Quality/Size]. ( P.91)
 Text Mode	Use when capturing text images, for example notes written on a whiteboard at a meeting. Images are captured in black and white. You can also change the shading of text. ( P.66) You can set the image size to 3648 × 2736 or 2048 × 1536 pixels. ( P.91)



Note

For information on the shooting menu items in scene mode, see P.88.

1 Turn the mode dial to SCENE.



- The camera is ready to shoot and the selected scene mode is displayed at the top of the picture display.



2 Press the MODE button to change the scene mode.

- The scene mode selection screen appears.

3 Press the ◀▶ buttons to select the scene mode.



4 Press the MENU/OK button.

- The scene mode type is displayed at the top of the picture display.

5 Press the shutter release button to shoot the picture.

Using the Skew Correction Mode

1 Turn the mode dial to SCENE.

- The camera is ready to shoot and the selected scene mode is displayed at the top of the picture display.

2 Press the MODE button.

- The scene mode selection screen appears.

3 Press the ◀▶ buttons to select [Skew Correct Mode].

4 Press the MENU/OK button.

5 Press the shutter release button to shoot the picture.

- The display indicates that the image is being processed, and then the area recognized as the correction range is displayed with an orange frame. Up to five areas can be recognized.
- If the target area cannot be detected, an error message appears. The image before correction remains recorded.
- To select another correction area, move the orange frame to the target area by pressing the ▶ button.
- To cancel skew correction, press the ▲ button. Even if you cancel skew correction, the image before skew correction remains recorded.

6 Press the MENU/OK button.

- The display indicates that the image is being corrected, and then the corrected image is recorded. The image before correction is also recorded.



Caution

When [Skew Correct Mode] is selected, note the following:

- To shoot the subject as large as possible, position it so that the entire portion of the subject is visible on the picture display.
- The camera may fail to recognize the subject in the following cases:
 - When the image is out of focus
 - When four edges of the subject are not clearly visible
 - When it is hard to distinguish between the subject and background
 - When the background is complicated
- Two images, one before correction and the other after correction, are recorded. If the number of remaining shots is less than two, you cannot shoot the subject.



Note

You can also correct the skew of a previously shot still image. (P.145)

Shooting with Custom Settings (MY1, MY2: My Settings Mode)

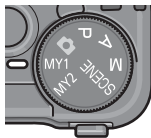
Setting the mode dial to MY1 or MY2 allows you to shoot with preset settings. Use [Reg. My Settings] on the setup menu to make the MY1 and MY2 settings. (☞ P.161)

1

Various Shooting Functions

1 Turn the mode dial to MY1 or MY2.

- Turn the mode dial to MY1 to make the settings for [Setting1] in [Reg. My Settings].
- Turn the mode dial to MY2 to make the settings for [Setting2] in [Reg. My Settings].



Symbol of shooting mode setting registered to [Reg. My Settings]

2 Press the shutter release button to shoot a picture.









Note

You can change the camera settings set in my settings mode. Changing the mode or turning the camera off returns the settings to the original MY1 and MY2 settings.

Shooting Menu

Press the MENU/OK button in shooting mode to display the shooting menu. The shooting menu can be used to set the following shooting settings.







When Mode Dial is Set to Any Mode Other Than SCENE

Setting	Options [Default Settings]	Refer to
Pic Quality/Size	RAW(10M), RAW3:2(9M), RAW1:1(7M), F3648(10M), [N3648(10M)], F3:2(9M), N3:2(9M), F1:1(7M), N1:1(7M), N3264(8M), N2592(5M), N2048(3M), N1280(1M), N640(VGA)	P.91
Focus	[Multi AF], Spot AF, MF, Snap, ∞	P.94
Exposure Metering	[Multi], Center, Spot	P.98
Continuous Mode	[Off], Continuous, S-Cont, M-Cont	P.99
Img Set	Hard, [Normal], Soft, B&W, B&W (TE), Setting1, Setting2	P.103
Flash Expo. Comp.	-2.0 to +2.0	P.109
Auto Bracket	[Off], On ±0.3, On ±0.5, WB-BKT, CL-BKT	P.110
Noise Reduction	On, [Off]	P.116
Interval	[0 Sec.], 5 seconds to 3 hours	P.117
Date Imprint	[Off], Date, Time	P.119
Exposure Comp.*	-2.0 to +2.0	P.120
White Balance	[AUTO],  (Outdoors),  (Cloudy),  (Incandescent Lamp),  (Fluorescent Lamp),  (Manual Settings),  (Detail)	P.122
ISO Setting	[Auto], Auto-Hi, ISO 80, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600	P.126
Restore Defaults**	_____	P.128







* This setting cannot be displayed when the mode dial is set to M.

**This setting can be displayed only when the mode dial is set to .

When Scene Mode is Set to [Movie]

Setting	Options [Default Settings]	Refer to
Movie Size	640, [320]	P.92
Frame Rate	[30Frame/S], 15Frame/S	P.130
Focus	[Multi AF], Spot AF, MF, Snap, ∞	P.94
White Balance	[AUTO],  (Outdoors),  (Cloudy),  (Incandescent Lamp),  (Fluorescent Lamp),  (Manual Settings),  (Detail)	P.122


When Scene Mode is Set to [Skew Correct Mode]

Setting	Options [Default Settings]	Refer to
Pic Quality/Size	[N1280], N640	P.91
Focus	[Multi AF], Spot AF, MF, Snap, ∞	P.94
Exposure Metering	[Multi], Center, Spot	P.98
Img Set	Hard, [Normal], Soft, B&W, B&W (TE), Setting1, Setting2	P.103
Flash Expo. Comp.	-2.0 to +2.0	P.109
Date Imprint	[Off], Date, Time	P.119
Exposure Comp.	-2.0 to +2.0	P.120
White Balance	[AUTO],  (Outdoors),  (Cloudy),  (Incandescent Lamp),  (Fluorescent Lamp),  (Manual Settings),  (Detail)	P.122
ISO Setting	[Auto], Auto-Hi, ISO 80, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600	P.126

When Scene Mode is Set to [Text Mode]

Setting	Options [Default Settings]	Refer to
Density	Deep, [Normal], Light	P.66
Size	[3648(10M)], 2048(3M)	P.91
Date Imprint	[Off], Date, Time	P.119

**Note**

The setup menu can be accessed from within the shooting menu. ( P.155)

Using the Menu

This explains how to make the settings.

Use the ▲▼► buttons and MENU/OK button to select and set an item.

1 Press the MENU/OK button in shooting mode.

- The shooting menu is displayed.

The menu items are provided on three screens.



2 Press the ▲▼ buttons to select the desired item.

- Press the ▼ button at the bottom item to display the next screen.



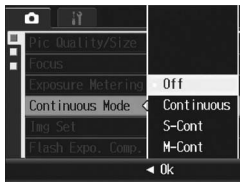
3 Press the ► button.

- The menu item settings are displayed.

4 Press the ▲▼ buttons to select the setting.

5 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.

- The setting is set.
- The shooting menu disappears and the camera is ready to shoot.





Changing the display

You can select a screen by the tab:

- 1 Press the ◀ button to select a tab on the left of the screen.
- 2 Press the ▲▼ buttons to change screens.
- 3 Press the ▶ button to return to menu item selection.



Choosing Picture Quality Mode/ Image Size (Pic Quality/Size)

The file size of a shot still image depends on the picture quality mode and image size settings. For movies, choose the movie size. Figures inside the bold frame indicate those shown on the screen.

Still Images

Image Size	Picture Quality Mode	Pic Quality/Size	Remarks
3648 × 2736	RAW	RAW (10M)	<ul style="list-style-type: none"> For creating images with little deterioration. For downloading to a computer for advanced image editing.
3648 × 2432		RAW3:2 (9M)	
2736 × 2736		RAW1:1(7M)	
3648 × 2736	F (Fine) N (Normal)	F3648(10M) N3648(10M)	<ul style="list-style-type: none"> For downloading and editing images on your computer. For creating large prints.
3648 × 2432	F (Fine) N (Normal)	F3:2(9M) N3:2(9M)	
2736 × 2736	F (Fine) N (Normal)	F1:1(7M) N1:1(7M)	
3264 × 2448	N (Normal)	N3264(8M)	<ul style="list-style-type: none"> For creating prints.
2592 × 1944	N (Normal)	N2592(5M)	
2048 × 1536	N (Normal)	N2048(3M)	
1280 × 960	N (Normal)	N1280(1M)	<ul style="list-style-type: none"> For shooting a large number of pictures.
640 × 480	N (Normal)	N640(VGA)	<ul style="list-style-type: none"> For shooting a large number of pictures. For attaching to e-mail. For posting on a website.

- When scene mode is set to [Skew Correct Mode], you can select 1280 × 960 or 640 × 480.
- When scene mode is set to [Text Mode], you can select 3648 × 2736 or 2048 × 1536.
- When the image size is set to [RAW3:2], [F3:2] or [N3:2], a black border is added to the top and bottom of the image on the picture display in accordance with the shooting range.
- When the image size is set to [RAW1:1], [F1:1] or [N1:1], a black border is added to the left and right sides of the image on the picture display in accordance with the shooting range.

Movies

Image Size	Movie Size
640 × 480	640
320 × 240	320

- You can also choose the number of frames for movies. (☞ P.130)



Note

- The number of images that can be stored in the internal memory or SD memory card depends on the [Pic Quality/Size] setting. (☞ P.223)
- There are three picture quality modes: Normal mode (N), Fine mode (F), and RAW mode.

Normal mode: The compression ratio is high, resulting in a small file. Normally, shooting is done in this mode.

Fine mode: The compression ratio is low, resulting in a large file, but the picture quality is better than in Normal mode.

RAW mode: The raw image data is saved as a RAW format file (.DNG file). A JPEG file is also recorded at the same time. This allows you to use image editing software to edit the image while retaining the high quality at the time the image was shot.



Shooting with RAW mode

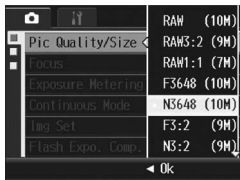
Normally, a shot image is processed and compressed by the camera and then saved as a small JPEG file. To make a JPEG file small, the image data is compressed and the image quality is lowered.

When shooting in RAW mode, shot images are not processed by the camera. The raw data loaded from the camera's sensor is stored in the DNG file created when shooting in RAW mode. A DNG file is a raw image format designed by Adobe Systems. You can use image editing software compatible with the DNG file format to edit the near-original image data on a computer. You can use the provided Irodio Photo & Video Studio to edit DNG files on Windows. However, you cannot use the Irodio Photo & Video Studio to edit DNG files on a Macintosh. Use a commercially-available software that can edit DNG files.

When shooting in RAW mode, note the following:

- You cannot use in multi-shot, auto bracket, white balance bracket, color bracket, or digital zoom in RAW mode.
- No date is added to the DNG file even if [Date Imprint] is set. The date is added to the JPEG file recorded at the same time as the DNG file.
- [Img Set] settings on the shooting menu apply only to the JPEG file recorded at the same time.
- You can use [RAW/JPEG Setting] on the setup menu to change the picture quality and image size of the JPEG recorded at the same time. (☞ P.182)

- 1** Turn the mode dial to **P/A/M/SCENE**.
- 2** Press the **MENU/OK** button.
 - The shooting menu is displayed.
- 3** Press the **▼** button to select **[Pic Quality/Size]** and press the **▶** button.
- 4** Press the **▲▼** buttons to select the desired setting.



Still Images






Movies

- 5** Press the **MENU/OK** button, or press the **◀** button and then the **MENU/OK** button.
 - The setting appears on the screen.

Changing the Focusing Mode (Focus)

When you shoot the subject in the default focusing mode, the camera focuses automatically with Auto Focus (AF). Select from the following five focusing modes.

Focusing Modes

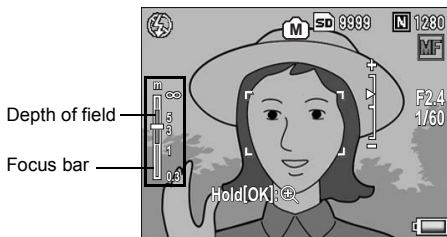
Symbol	Method	Description
None	Multi AF	Measures the distances from 9 AF areas and focuses to the nearest AF area. This prevents the center of the picture display from becoming out of focus and enables you to shoot with a minimum number of out-of-focus pictures.
None	Spot AF	Selects one AF area at the center of the picture to allow the camera to focus on this area automatically.
	MF (Manual Focus)	Enables you to adjust the focus manually.
	Snap	Fixes the shooting distance to a short distance (about 2.5m (8.2 ft.)).
	∞ (Infinity)	Fixes the shooting distance to infinity. Infinity is useful for shooting distant scenes.

- 1 Turn the mode dial to **P/A/M/SCENE**.
- 2 Press the **MENU/OK** button.
 - The shooting menu is displayed.
- 3 Press the **▼** button to select **[Focus]** and press the **▶** button.
- 4 Press the **▲▼** buttons to select the desired setting.



5 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.

- If you selected [MF], [Snap], or [∞], the symbol appears on the screen.
- If you selected [MF], [Snap], or [∞] in manual exposure mode or aperture priority mode, the depth of field appears on the screen. The depth of field is displayed in green inside the focus bar. It increases or decreases in relation to the aperture value. If you selected [MF], [Snap], or [∞] in program shift mode, the depth of field appears only after half-pressing the shutter release button (only when the aperture value is displayed). The depth of field is not displayed in auto shooting mode and scene mode. The displayed depth of field is for reference only.



Depth of Field

The depth of field is the distance range in which objects appear in focus. The higher the aperture value (the more the aperture is closed), the greater the range in which objects are in focus. Conversely, the lower the aperture value (the more the aperture is opened), the smaller the range in which objects are in focus.



Note

- Assigning the Fn (Function) button to [AF/MF] (☞ P.164) allows you to switch between auto focus and manual focus by pressing the Fn button. (☞ P.69)
- Assigning the Fn button to [AF/Snap] (☞ P.164) allows you to switch between auto focus and snap mode by pressing the Fn button. (☞ P.69)

Manual Focus Shooting (MF)

If the camera fails to focus automatically, you can focus manually (MF: Manual Focus).

Manual focus enables shooting at a fixed distance.



Note

- Manual focus is not available when scene mode is set to [Text Mode].
- You can also use manual focus to focus on objects within the macro shooting range.
- Assigning the Fn (Function) button to [AF/MF] (P.164) allows you to switch between auto focus and manual focus by pressing the Fn button. (P.69)

1 Turn the mode dial to P/A/M/SCENE.

2 Press the MENU/OK button.

- The shooting menu is displayed.

3 Press the button to select [Focus] and press the button.

4 Press the buttons to select [MF].



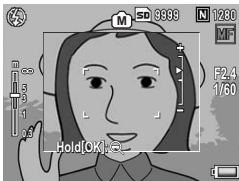
5 Press the MENU/OK button.

- [MF] appears on the screen.
- The depth of field (P.95) and the focus bar are displayed on the screen.
- The depth of field and the numbers indicated on the focus bar are for reference only.



6 Press and hold the MENU/OK button as required.

- Pressing and holding the MENU/OK button enlarges only the center of the screen.
- Pressing and holding the MENU/OK button again returns to normal display.

**7 Press the ▲▼ buttons to adjust the focus.**

- Pressing the ▲ button adjusts the focus to farther objects.
Pressing the ▼ button adjusts the focus to closer objects.



8 Press the shutter release button to shoot the picture.

Changing the Exposure Metering Modes (Exposure Metering)

You can change the exposure metering modes (the range to use for metering) used to determine the exposure value. There are three exposure metering modes.

1

Exposure Metering Modes

Symbol	Mode	Description
No symbol	Multi	The entire shooting range is divided into 256 partitions, and each is metered to determine the overall exposure value.
	Center	The entire image is metered, with emphasis on the center, to determine the exposure value. Use this when the brightness of the center and surroundings are different.
	Spot	Only the center of the image is metered to determine the exposure value. Use this setting when you want to use the brightness at the center. This is useful if there is a marked difference in contrast or backlighting.

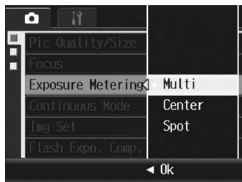
1 Turn the mode dial to **P/A/M/SCENE**.

2 Press the **MENU/OK** button.

- The shooting menu is displayed.

3 Press the **▼** button to select **[Exposure Metering]** and press the **▶** button.

4 Press the **▲▼** buttons to select the desired setting.



5 Press the **MENU/OK** button, or press the **◀** button and then the **MENU/OK** button.

- If you select the setting **[Center]** or **[Spot]**, the symbol appears on the screen.

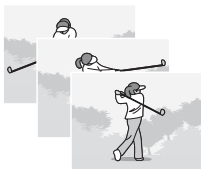


Shooting with Multi-Shot (Continuous/S-Cont/M-Cont)

With Multi-shot, you can shoot consecutive images. Multi-shot has the following three modes:

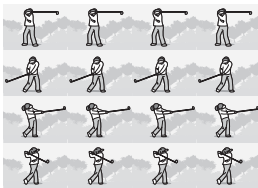
Continuous

Pictures continue to be taken for as long as you hold down the shutter release button. Still images are recorded one at a time, just as in normal shooting.



S (Stream)-Cont

With just one full-press of the shutter release button, you can take 16 consecutive shots at intervals of 1/7.5 seconds in about 2 seconds. The 16 still images are grouped together as a set and are recorded as one image file (3648 × 2736 pixels).

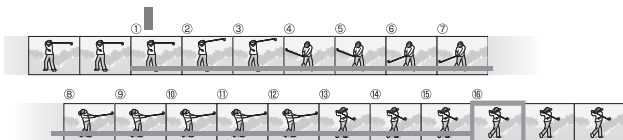


M (Memory-reversal)-Cont

The camera memorizes the scene while you hold down the shutter release button, and once you release it, the previous 2 seconds of shots are recorded.

The 16 still images are grouped together as a set and are recorded as one image file (3648 × 2736 pixels).

(2) The camera records the previous (approx.) 2 seconds



(1) If you release the shutter release button here...

Caution-----

- This function is not available when [Pic Quality/Size] is set to RAW mode.
- When shooting with S-Cont or M-Cont, the digital zoom is activated even when [Digital Zoom Img] is set to [Auto Resize] on the setup menu.

Note-----

- The image does not appear during S-Cont and M-Cont.
- When shooting with S-Cont or M-Cont, the ISO setting is fixed at [Auto] even if it is set to [ISO 80] or [ISO 100].
- The storage capacity of images in the multi-shot mode depends on the image size setting.
- The storage capacity of images in the multi-shot mode with the internal memory are as shown in the table below.

Image Size	Storage Capacity of Multi-shot Mode
3648 × 2736, 3648 × 2432, 2736 × 2736, 3264 × 2448, 2592 × 1944, 2048 × 1536	4
1280 × 960, 640 × 480	10

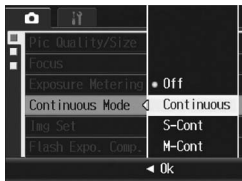
1 Turn the mode dial to /P/A/M.

2 Press the MENU/OK button.

- The shooting menu is displayed.

3 Press the ▼ button to select [Continuous Mode] and press the ► button.

4 Press the ▲▼ buttons to select [Continuous], [S-Cont], or [M-Cont].



5 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.

- The symbol appears on the screen.





Continuous

6 Compose your picture and then press and hold the shutter release button.

- Pictures continue to be taken for as long as you hold down the shutter release button.

7 Release your finger from the shutter release button to stop taking pictures.

- To playback consecutive images shot in multi-shot mode, switch the camera to playback mode (P.47) and select the still image you want to play back with the ◀▶ buttons.



S-Cont (S Multi-Shot)

6 Compose your picture and then press the shutter release button.

- 16 pictures are taken automatically.



M-Cont (M Multi-Shot)

6 Compose your picture and then press and hold the shutter release button.

- The camera memorizes the scene while you hold down the shutter release button.

7 Release your finger from the shutter release button.

- The camera stops shooting and the 16 still images (in the previous 2 seconds) are recorded as one still image.



Note

- To return to normal single-image shooting, follow Steps 1 to 3, select [Off] in Step 4, and press the MENU/OK button.
- In M-Cont mode, if you release the shutter release button within 2 seconds from the time you first pressed it, the shots from the time you pressed the shutter until you released it are recorded and the number of consecutive shots will be less than 16.
- The flash is turned off.
- During Multi-shot, the focus and exposure value are locked.
- When [Sequential No.] is set to [On] (P.186) and the last four digits of the file number exceed [9999] during Multi-shot, a separate folder is created in the SD memory card and successive pictures taken in Multi-shot are stored in this folder.

Viewing an S-Cont or M-Cont Still Image in Enlarged Display Mode

While a still image (16 frames in an image file) taken with S-Cont or M-Cont is displayed, you can enlarge any one of the 16 frames. You can also switch between frames while viewing the image in enlarged display mode.

To view a frame from an S-Cont or M-Cont still image in enlarged display mode, follow the steps below.



1 Press the (Playback) button.

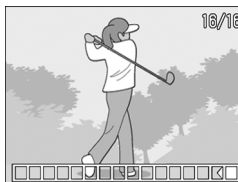
- The last shot taken is displayed.

2 Press the buttons to display an S-Cont or M-Cont still image.



3 Press the (Enlarged View) button.

- The first frame of the consecutive images is displayed in enlarged display mode. The frame position bar appears at the bottom of the screen.
- Press the   buttons to switch frames. To return to the 16-frame display, press the MENU/OK button.



Note

Press the DISP. button to switch between displaying the bar at the bottom of the screen, displaying the grid guide, and hiding the display. (P.56)

Setting the Picture Quality and Color (Img Set)

You can change the picture quality of an image, including the contrast, sharpness, color and color depth.

You can select from the following picture quality settings.

Picture Quality Modes

Type	Description
Hard	The Contrast, Sharpness, and Color Depth are increased to create a stronger, sharper image.
Normal	Normal picture quality
Soft	The Contrast, Sharpness, and Color Depth are decreased to create a softer image.
B&W	Creates a black and white picture. You can select from five [Contrast] and [Sharpness] levels.
B&W (TE)*	You can set the toning effect for black-and-white images. You can select from five [Toning Effect], [Color Depth], [Contrast], and [Sharpness] levels. You can select from [Sepia], [Red], [Green], [Blue], and [Purple] for the [Toning Effect].
Setting1 Setting2	You can select from five [Contrast], [Sharpness], and [Color Depth] levels.

* Toning Effect

1 Turn the mode dial to **P/A/M/SCENE**.

2 Press the **MENU/OK** button.

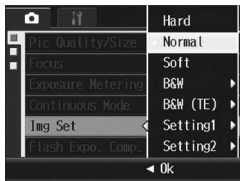
- The shooting menu is displayed.

3 Press the **▼** button to select **[Img Set]** and press the **▶** button.

4 Press the **▲▼** buttons to select the desired picture quality.

- For [B&W], [B&W (TE)], [Setting1], or [Setting2], set the values. (☞ P.105, 106, 108)

If the values are already set, you can set the picture quality by selecting [B&W], [B&W (TE)], [Setting1], or [Setting2].



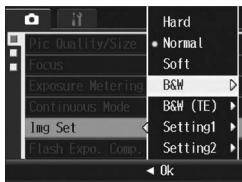
5 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.

- If you selected a setting other than [Normal], the symbol appears on the screen.



Setting the Black-and-White Picture Quality (B&W)

- 1 Turn the mode dial to **P/A/M/SCENE**.
- 2 Press the **MENU/OK** button.
 - The shooting menu is displayed.
- 3 Press the **▼** button to select **[Img Set]** and press the **▶** button.
- 4 Press the **▲▼** buttons to select **[B&W]** and press the **▶** button.
 - The [Img Set] screen appears.
- 5 Press the **▲▼** buttons to select **[Contrast]** and **[Sharpness]**, and press the **◀▶** buttons to adjust the settings.
- 6 Press the **MENU/OK** button.
 - The [B&W] setting is saved, and the display returns to the shooting menu.
- 7 Press the **MENU/OK** button, or press the **◀** button and then the **MENU/OK** button.
 - The symbol appears on the screen.



Note

Assigning the Fn (Function) button to [Color>B&W] (P.164) allows you to switch between color and black-and-white mode by pressing the Fn button. (P.69)

Setting the Toning Effect for Black-and White Images (B&W (TE))

1

Various Shooting Functions

1 Turn the mode dial to **P/A/M/SCENE**.

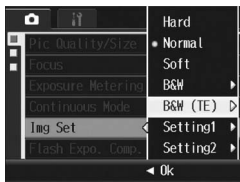
2 Press the **MENU/OK** button.

- The shooting menu is displayed.

3 Press the **▼** button to select **[Img Set]** and press the **▶** button.

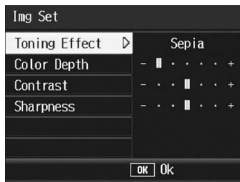
4 Press the **▲▼** buttons to select **[B&W (TE)]** and press the **▶** button.

- The [Img Set] screen appears.



5 Press the **▲▼** button to select **[Toning Effect]** and press the **▶** button.

6 Press the **▲▼** button to select from **[Sepia]**, **[Red]**, **[Green]**, **[Blue]**, or **[Purple]**, and press the **MENU/OK** button or the **◀** button.



7 Press the **▲▼** buttons to select **[Contrast]** and **[Sharpness]**, and press the **◀▶** buttons to adjust the settings.

8 Press the **MENU/OK** button.

- The [B&W (TE)] setting is saved, and the display returns to the shooting menu.

- 9** Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.

- The symbol appears on the screen.

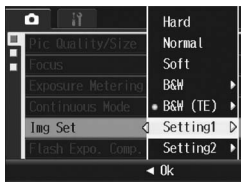


Note-----

Assigning the Fn (Function) button to [Color>TE] (☞ P.164) allows you to switch between color and black-and-white (TE) mode by pressing the Fn button. (☞ P.69)

Customizing the Picture Quality (Setting1, Setting2)

- 1** Turn the mode dial to **P/A/M/SCENE**.
- 2** Press the **MENU/OK** button.
 - The shooting menu is displayed.
- 3** Press the **▼** button to select **[Img Set]** and press the **▶** button.
- 4** Press the **▲▼** buttons to select **[Setting1]** or **[Setting2]**.
- 5** Press the **▶** button.
 - The [Img Set] screen appears.
- 6** Press the **▲▼** buttons to select **[Contrast]**, **[Sharpness]**, and **[Color Depth]**, and press the **◀▶** buttons to adjust the settings.
- 7** Press the **MENU/OK** button.
 - The settings for [Setting1] or [Setting2] are saved, and the display returns to the shooting menu.
- 8** Press the **MENU/OK** button, or press the **◀** button and then the **MENU/OK** button.
 - The symbol appears on the screen.



Adjusting the Light Intensity of the Flash (Flash Expo. Comp.)

You can adjust the light intensity of the flash. You can set the light intensity from -2.0 EV to +2.0 EV in increments of 1/3 EV.

1 Turn the mode dial to **P/A/M/SCENE**.

2 Press the **MENU/OK** button.

- The shooting menu is displayed.

3 Press the **▼** button to select **[Flash Expo. Comp.]** and press the **▶** button.

- The flash exposure compensation bar appears.

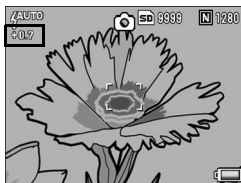


4 Press the **▲▼** buttons to make the setting.



5 Press the **MENU/OK** button.

- The setting appears on the screen except when the flash is set to [Flash Off].



Note

For information on how to use the flash, see P.44.



Caution

Flash exposure compensation may not work outside the flash range (see P.44).

Shooting Consecutively with Different Exposures (Auto Bracket)

The auto bracketing function automatically shoots three consecutive shots at three exposure levels based on the set exposure level. Select from -0.3EV , ± 0 , $+0.3\text{EV}$ or -0.5EV , ± 0 , $+0.5\text{EV}$ for the difference in exposure level.

1

Various Shooting Functions



Note

This function is not available when [Pic Quality/Size] is set to RAW mode.

1

Turn the mode dial to **P/A/M**.

2

Press the **MENU/OK** button.

- The shooting menu is displayed.

3

Press the **▼** button to select **[Auto Bracket]** and press the **▶** button.

4

Press the **▲▼** buttons to select **[ON ± 0.3]** or **[ON ± 0.5]**.

5

Press the **MENU/OK** button, or press the **◀** button and then the **MENU/OK** button.

- The symbol appears on the screen.

6

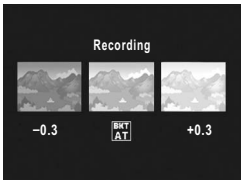
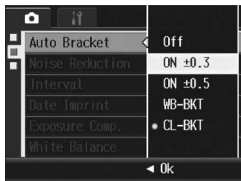
Press the shutter release button to shoot the picture.

- The screenshot to the right shows the images shot with the **[ON ± 0.3]** setting.

Three consecutive shots are taken at -0.3EV , ± 0 , and $+0.3\text{EV}$ based on the set exposure compensation setting.

They are, from left to right, at -0.3EV

(darker), standard exposure compensation setting, and $+0.3\text{EV}$ (brighter).



**Note**-----

- The exposure compensation can be changed using the shooting menu. (☞ P.120)
- This function is not available during Multi-shot shooting.
- The flash cannot be used.
- With auto bracket, you can shoot using different white balance or color settings as well as different exposures. However, you can only select one setting.

Shooting Consecutively with Different White Balance (WB-BKT: White Balance Bracket)

The white balance bracket function automatically records three images - a reddish image, a bluish image, and an image of the current white balance.

This is useful if you cannot determine the appropriate white balance.

1

Various Shooting Functions

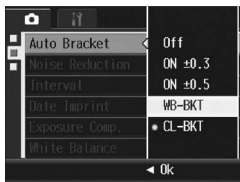
1 Turn the mode dial to **P/A/M**.

2 Press the **MENU/OK** button.

- The shooting menu is displayed.

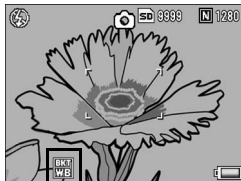
3 Press the **▼** button to select **[Auto Bracket]** and press the **▶** button.

4 Press the **▲▼** buttons to select **[WB-BKT]**.



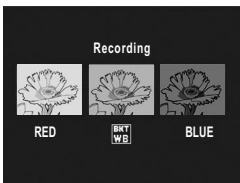
5 Press the **MENU/OK** button, or press the **◀** button and then the **MENU/OK** button.

- The symbol appears on the screen.



6 Press the shutter release button to shoot the picture.

- Three images (a reddish image, an image equal to the current white balance, and a bluish image) are automatically recorded.





Note

- This function is not available when [Pic Quality/Size] is set to RAW mode.
- This function is not available during Multi-shot shooting.
- The flash cannot be used.
- If [Img Set] is set to [B&W], the white balance bracket function can be set but it does not operate.
- The white balance can be changed using the shooting menu. (☞ P.122)

Shooting Consecutively with Different Color (CL-BKT: Color Bracket)

1

Various Shooting Functions

When [CL-BKT] is selected and a still image is shot, the camera records three images – a black-and-white image, a color image, and a black-and-white (TE) image, or the camera records two images – a black-and-white image and a color image. Before taking a picture, use [CL-BKT B&W (TE)] on the setup menu to set whether the camera records three images – a black-and-white image, a color image, and a black-and-white (TE) image, or two images – a black-and-white image and a color image. (P.181)

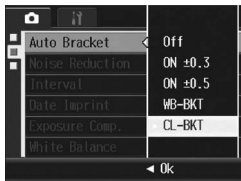
1 Turn the mode dial to **P/A/M**.

2 Press the **MENU/OK** button.

- The shooting menu is displayed.

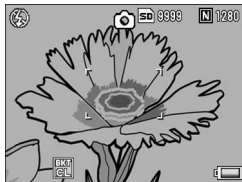
3 Press the **▼** button to select [**Auto Bracket**] and press the **▶** button.

4 Press the **▲▼** buttons to select [**CL-BKT**].



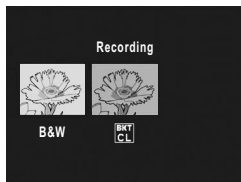
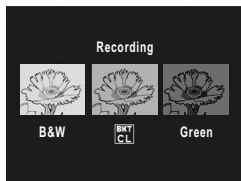
5 Press the **MENU/OK** button, or press the **◀** button and then the **MENU/OK** button.

- The symbol appears on the screen.



6 Press the shutter release button to shoot the picture.

- When [CL-BKT B&W (TE)] is set to [On] (P.181), a black-and-white image, a color image, and a black-and-white (TE) image are recorded.
- When [CL-BKT B&W (TE)] is set to [Off] (P.181), a black-and-white image and a color image are recorded.
- * When [Img Set] is set to [B&W (TE)] on the shooting menu, a black-and-white image, a color image, and a black-and-white (TE) image are recorded even if [CL-BKT B&W (TE)] is set to [Off].



Note

- This function is not available when [Pic Quality/Size] is set to RAW mode.
- This function is not available during Multi-shot shooting.
- The flash cannot be used.
- The color can be changed using the shooting menu. (P.103)



Contrast, Sharpness and Color Depth during Color Bracket Shooting

The [Contrast] and [Sharpness] values set for the type of image in [Img Set] are set to the color, black-and-white, and black-and-white (TE) image shot in Color Bracket shooting. The [Color Depth] value is only applied to color images if color images are selected in [Img Set] and only to black-and-white (TE) images if [B&W (TE)] is selected. If [B&W] is selected, the [Color Depth] for color images becomes the central value, and the [Color Depth] for black-and-white (TE) images becomes the value set in [B&W (TE)]. (Example)

- If [Setting1] is selected in [Img Set] and images are shot using Color Bracket shooting: The [Sharpness] and [Contrast] values set in [Setting1] are applied to color, black-and-white, and black-and-white (TE) images. The [Color Depth] value is only applied to color images.
- If [B&W (TE)] is selected in [Img Set] and images are shot using Color Bracket shooting: The [Sharpness] and [Contrast] values set in [B&W (TE)] are applied to color, black-and-white, and black-and-white (TE) images. The [Color Depth] value is only applied to black-and-white (TE) images. The central value is applied for [Color Depth] for color images.

Reducing Image Noise (Noise Reduction)

This camera reduces image noise when shooting still images.

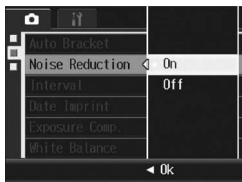
1 Turn the mode dial to  P/A/M.


2 Press the MENU/OK button.

- The shooting menu is displayed.

3 Press the  button to select [Noise Reduction] and press the  button.

4 Press the  buttons to select [On].



5 Press the MENU/OK button, or press the  button and then the MENU/OK button.

- The symbol appears on the screen.



Note

- This function is not available during scene mode.
- Noise reduction is not available for DNG files if [Pic Quality/Size] is set to RAW mode. Noise reduction is only applied to the JPEG file recorded with the DNG file.

Shooting Pictures Automatically at Set Intervals (Interval)

You can set the camera to automatically take pictures at fixed intervals.

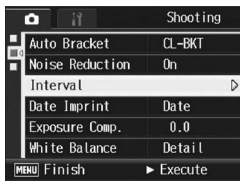
You can set the shooting interval from 5 seconds to 3 hours in increments of 5 seconds.

1 Turn the mode dial to **P/A/M**.

2 Press the **MENU/OK** button.

- The shooting menu is displayed.

3 Press the **▼** button to select **[Interval]** and press the **▶** button.

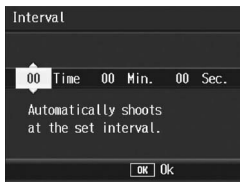


4 Press the **▲▼** buttons to set the hours.

5 Press the **▶** button to move to the minutes setting, then use the **▲▼** buttons to set the minutes.

- You can press and hold either the **▲▼** buttons to quickly raise or lower the minute setting.

6 Press the **▶** button to move to the seconds setting, then use the **▲▼** buttons to set the seconds.



7 Press the MENU/OK button.

- [Interval] appears on the screen.

8 Press the shutter release button to shoot the picture.

- A picture is taken every time the fixed interval elapses.



9 To stop shooting, press the MENU/OK button.

Caution

- The interval shooting setting is cleared when the camera is turned off.
- The time until the next picture can be taken according to the shooting menu setting may be longer than the time set for interval shooting. In this case, the shooting interval becomes longer than the set time.
- Interval is not available during scene mode.

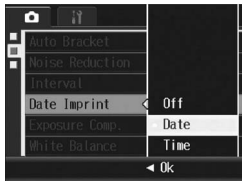
Note

- Depending on the remaining battery level, the battery may become depleted during interval shooting. Use of a battery with adequate remaining power or the AC adapter (sold separately) is recommended.
- If you press the shutter release button during interval shooting, the camera shoots as usual. However, the interval shooting setting is unaffected. After shooting, once the time specified in interval shooting elapses, the next shot is taken.
- When interval shooting is turned on, Multi-shot is automatically set to [Off] even if it had been set to [Continuous] or [M-Cont].
- A card with sufficient available memory or a high speed memory card is recommended.

Inserting the Date into a Still Image (Date Imprint)

You can insert the date (YY/MM/DD) or the date and time (YY/MM/DD hh:mm) at the lower right of a still image.

- 1** Turn the mode dial to **P/A/M/SCENE**.
- 2** Press the **MENU/OK** button.
 - The shooting menu is displayed.
- 3** Press the **▼** button to select **[Date Imprint]** and press the **▶** button.
- 4** Press the **▲▼** buttons to select **[Date]** or **[Time]**.



- 5** Press the **MENU/OK** button, or press the **◀** button and then the **MENU/OK** button.
 - The symbol appears on the screen.



Note

- If the date and time have not been set, [Date Imprint] cannot be used. First make the date and time settings. (☞ P.188)
- [Date Imprint] cannot be used with movies.
- When shooting in RAW mode, the date cannot be imprinted on the DNG file. The date is added to the JPEG file recorded at the same time as the DNG file.
- The date imprinted in an image cannot be deleted.

Changing the Exposure (Exposure Comp.)

1

Various Shooting Functions

The exposure setting enables you to select the brightness level for your picture. Normally, if your subject is centered, backlight compensation is automatically activated, and you can shoot with the correct exposure.

In the following cases, or when you intentionally want to change the exposure, you can adjust the exposure setting. Exposure can be specified in the range from -2.0 EV to +2.0 EV. Setting the level higher (+) makes the picture brighter and lower (-) makes the picture darker.

For backlighting

When the background is particularly bright, the subject will appear dark (underexposed). In this case, set the exposure level higher (+).

When your subject is whitish

The entire picture will turn out dark (underexposed). Set the exposure level higher (+).






When your subject is darkish

The entire picture will turn out bright (overexposed). Set the exposure level lower (-).

The same happens when you take a photo of a subject in a spotlight.

To change the setting, use the shooting menu or the ADJ. lever. This section explains easy ways to change the shading setting with the ADJ. lever. (📖 P.64)

To use the shooting menu, see "Using the Menu". (📖 P.89)

- 1 Turn the mode dial to /P/A/SCENE, and press the ADJ. lever.**
- 2 Press the ADJ. lever, or press the   buttons until the exposure compensation bar appears.**
- 3 Press the   buttons to set the exposure setting.**
 - You can also press the shutter release button to take a picture.

4 Press the ADJ. lever or the MENU/OK button.

- The setting appears on the screen.











! **Caution**-----


- This function is not available in manual exposure mode.
- When shooting in particularly bright places, you may not be able to correct the exposure level. In that case, the [!AE] symbol appears on the screen.


Using Natural and Artificial Lighting (White Balance)






Adjust the white balance so that a white subject will appear white. At purchase, the white balance mode is set to [AUTO]. Normally you do not need to change the setting, but if the camera is having difficulty determining the white balance when shooting an object of a single color or when shooting under multiple light sources, you can change the setting.

White Balance Modes

Symbol	Mode	Description
AUTO	Auto	Adjusts the white balance automatically.
	Outdoors	Select this when shooting outdoors (sunny) and white balance fails to adjust properly.
	Cloudy	Select this when shooting in cloudy weather or shade and the white balance fails to adjust properly.
	Incandescent Lamp	Select this when shooting under incandescent light and white balance fails to adjust properly.
	Fluorescent Lamp	Select this when shooting under fluorescent light and white balance fails to adjust properly.
	Manual Settings	Adjust the white balance manually.  P.124
	Detail	Select from among 16 levels including values close to incandescent lamp, sunny, and cloudy conditions.  P.125

To change the setting, use the shooting menu or the ADJ. lever. This section explains easy ways to change the shading setting with the ADJ. lever. ( P.64)

To use the shooting menu, see "Using the Menu". ( P.89)

- 1 Turn the mode dial to /P/A/M/SCENE, and press the ADJ. lever.
- 2 Press the ADJ. lever, or press the   buttons until the white balance menu appears.
- 3 Press the   buttons to select a setting other than [M] or [CT].
 - You can also press the shutter release button to take a picture.

4 Press the ADJ. lever or the MENU/OK button.

- The symbol appears on the screen.



Note

- The white balance may not be adjusted correctly for a subject that is mostly dark. In this case, add something white to the subject.
- When shooting with the flash, the white balance may not be adjusted correctly if [Auto] is not selected. In this case, switch to [Auto] to shoot with the flash.

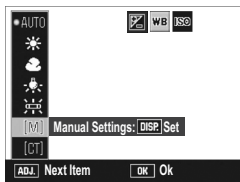
Setting the White Balance Manually (Manual Settings)

1

Various Shooting Functions

- 1 Turn the mode dial to **P/A/M/SCENE**, and press the **ADJ.** lever.
- 2 Press the **ADJ.** lever, or press the **◀▶** buttons until the white balance menu appears.

- 3 Press the **▲▼** buttons to select **[M]**.



- 4 Point the camera at a piece of paper or something white under the lighting conditions for your picture.

- 5 Press the **DISP.** button.

- The white balance is set.

- 6 Press the **MENU/OK** button.

- The symbol appears on the screen.
- The screen is displayed with the white balance set in Step 5. If the result is not as expected, repeat Steps 4 and 5 to change the settings as many times as required.



Note

To cancel **[Manual Settings]**, select a setting other than **[M]** in Step 3.

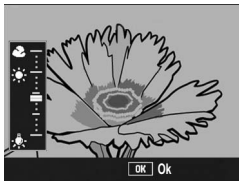
Setting the White Balance Details (Detail)

- 1 Turn the mode dial to **P/A/M/SCENE**, and press the **ADJ.** lever.
- 2 Press the **ADJ.** lever, or press the **◀▶** buttons until the white balance menu appears.
- 3 Press the **▲▼** button to select **[CT]** and press the **DISP.** button.

- The white balance details screen appears.



- 4 Press the **▲▼** buttons to set the desired setting.
- 5 Press the **MENU/OK** button.



- 6 Press the **MENU/OK** button.
- The symbol appears on the screen.



Note

To cancel [Detail], select a setting other than [CT] in Step 3.

Changing the Sensitivity (ISO Setting)

1

Various Shooting Functions

ISO sensitivity indicates how sensitive film is to light. A greater value means higher sensitivity. High sensitivity is suitable for shooting an object in a dark place or a fast-moving object while minimizing blurring.

You can select from the following ISO settings:

Auto, Auto-Hi, ISO 80, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600


When ISO setting is set to [Auto], the camera automatically changes the sensitivity according to the distance, brightness, macro settings, and quality/size. Usually, use the camera in the [Auto] mode.

When the ISO setting is set to [Auto-Hi] (auto high sensitivity), the sensitivity is automatically set according to the shooting conditions, but the upper limit of the sensitivity can be set higher than in [Auto]. When shooting a dark subject, the shutter speed set in [Auto-Hi] is faster than in [Auto], which may reduce camera shake or blurring of the subject. Set the maximum sensitivity for [Auto-Hi] in the setup menu. (☞ P.163)

If you do not want to allow the camera to change the ISO sensitivity, select an ISO setting other than [Auto] or [Auto-Hi].

To change the setting, use the shooting menu or the ADJ. lever. This section explains easy ways to change the shading setting with the ADJ. lever. (☞ P.64)

To use the shooting menu, see "Using the Menu". (☞ P.89)

- 1** Turn the mode dial to /P/A/M/SCENE, and press the ADJ. lever.
- 2** Press the ADJ. lever, or press the ◀▶ buttons until the ISO setting menu appears.
- 3** Press the ▲▼ buttons to select the desired setting.

4 Press the ADJ. lever or the MENU/OK button.

- The setting appears on the screen.



Note

- Images shot with a higher sensitivity may appear grainy.
- When the ISO setting is set to [Auto], the sensitivity is equivalent to ISO 125 if the flash is used.
- When ISO Setting is set to [Auto] and flash is not used, ISO sensitivity range is as follows.


Pixels	Default sensitivity	Minimum sensitivity	Maximum sensitivity
640	100	80	283
1280	100	80	238
2048	100	80	176
2592	100	80	154
3264	100	80	154
3648	100	80	154

Returning the Shooting Menu Settings to their Defaults (Restore Defaults)

To return the shooting menu settings to their defaults, follow the steps below.

1

Various Shooting Functions

- 1 Turn the mode dial to .
- 2 Press the MENU/OK button.
 - The shooting menu is displayed.
- 3 Press the ▲▼ buttons to select [Restore Defaults] and press the ► button.
- 4 Make sure that [Yes] is selected, and then press the MENU/OK button.



- A confirmation message appears.

- The display indicates the camera is restoring the initial settings. Once it is finished, the display returns to the shooting mode screen.



Note

For a list of functions whose settings are saved when the camera is turned off, see P.229.

2 Shooting/Playing Back Movies

Shooting Movies

You can shoot movies with sound.

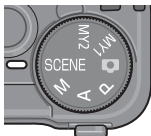
You can set the image size to 640 × 480 or 320 × 240 pixels.

You can set the number of frames shot per second (frame rate) to either 30 or 15.

Each movie you shoot is recorded as an AVI file.

1 Turn the mode dial to **SCENE**.

- The camera is ready to shoot and the selected scene mode is displayed at the top of the picture display.



2 Press the **MODE** button.

- The scene mode selection screen appears.

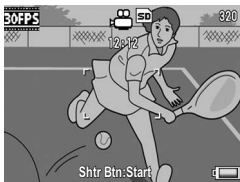
3 Press the **◀▶** buttons to select **[Movie]**.

4 Press the **MENU/OK** button.

5 Press the shutter release button to begin recording the movie.

- Recording continues until you press the shutter release button again.

6 Press the shutter release button to finish recording the movie.



⚠ Caution-----

- While shooting movies, operation sounds may be recorded.
- The maximum recording time per shooting depends on the size of your SD memory card. (P.131) Even if you are within the maximum recording time, recording may end depending on your card.
- The maximum recording time per shooting is 90 minutes or the equivalent of 4 GB.

**Note**

- The flash cannot be used.
- When the shutter release button is pressed in Step 5, the camera focuses on the subject.
- The remaining recording time may not change uniformly because it is recalculated from the remaining memory capacity during movie recording.
- Use the shooting menu to set the image size and frame rate of movies.
- The shooting menu items for movie mode differ from those in still image mode. (P.88)
- Depending on the remaining battery level, the battery may become depleted during movie shooting. Use of a battery with adequate remaining power or the AC adapter (sold separately) is recommended.
- Use of a high speed memory card or a SD memory card with sufficient memory is recommended when shooting for long periods.

Setting the Frame Rate (Frame Rate)

You can select the number of shot frames per second (frame rate) in movie mode.

- 1** In scene mode, select [Movie].
- 2** Press the MENU/OK button.
 - The shooting menu is displayed.
- 3** Press the ▼ button to select [Frame Rate] and press the ► button.
- 4** Press the ▲▼ buttons to select [30Frame/S] or [15Frame/S].
- 5** Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.
 - The setting appears on the screen.

**Movie frames**

Movies consist of many frames whose images appear to be moving when displayed at high speed.

**Note**

- Movie recording time may vary depending on the capacity of the recording destination (internal memory or SD memory card), shooting conditions, and the type and manufacturer of the SD memory card.
- The estimated total recording time is shown below. The maximum recording time per shooting is 90 minutes or the equivalent of 4 GB.

	Internal Memory	256 MB	512 MB	1 GB	2 GB	4 GB	8 GB
640 × 480 (15Frame/S)	1 Min. 22 Sec.	6 Min. 7 Sec.	12 Min. 19 Sec.	23 Min. 42 Sec.	48 Min. 13 Sec.	99 Min. 8 Sec.	193 Min. 30 Sec.
640 × 480 (30Frame/S)	41 Sec.	3 Min. 5 Sec.	6 Min. 14 Sec.	11 Min. 59 Sec.	24 Min. 23 Sec.	50 Min. 10 Sec.	97 Min. 55 Sec.
320 × 240 (15Frame/S)	2 Min. 40 Sec.	11 Min. 57 Sec.	24 Min. 5 Sec.	46 Min. 19 Sec.	94 Min. 11 Sec.	193 Min. 41 Sec.	378 Min. 2 Sec.
320 × 240 (30Frame/S)	1 Min. 22 Sec.	6 Min. 7 Sec.	12 Min. 19 Sec.	23 Min. 42 Sec.	48 Min. 13 Sec.	99 Min. 8 Sec.	193 Min. 30 Sec.





Playing Back Movies

To playback movies, follow the steps below.

1 Press the (Playback) button.

- The last shot taken is displayed.
- The first frame of the movie is displayed as a still image.









2 Select the movie you want to view using the buttons.

- Press the  button to display the next file.
- Press the  button to display the previous file.
- Press the  button to display the file 10 frames backward.
- Press the  button to display the file 10 frames forward.



3 Press the ADJ. lever.

- Playback begins.
The elapsed playback indicator or the elapsed time is displayed on the screen.

Fast Forward	Press the  button during playback.
Rewind	Press the  button during playback.
Pause/Playback	Press the ADJ. lever.
Slow Playback	Press and hold the  button during pause.
Slow Rewind	Press and hold the  button during pause.
Next Frame	Press the  button during pause.
Previous Frame	Press the  button during pause.
Volume Adjustment	Press the   buttons during playback.

3 Other Playback Functions

Playback Menu

Press the MENU/OK button in playback mode to display the playback menu. The playback menu allows you to make the settings for the following functions.

Setting	Options	Refer to
Slide Show	_____	P.134
Protect	Select/Cancel 1 File, Select/Cancel All Files, Select Multi-Files	P.135
DPOF	Select/Cancel 1 File, Select/Cancel All Files, Select Multi-Files	P.138
Resize	1280, 640	P.142
Copy To Card	_____	P.144
Skew Correction	_____	P.145



Note

The Setup menu can be accessed from within the playback menu. (☞ P.155)

Using the Menu


This explains how to make the settings.

- 1 Press the (Playback) button to select the playback mode.**
- 2 Press the MENU/OK button.**
 - The playback menu appears.
- 3 Press the buttons to select the desired item.**
- 4 Press the button.**
 - The screen for the selected menu item appears.



Displaying Photos in Order Automatically (Slide Show)



You can display the recorded still images and movie files sequentially on the screen. This is called a slide show. To view a slide show, follow the steps below.

1 Press the  (Playback) button.

- The last shot taken is displayed.

2 Press the MENU/OK button.

- The playback menu appears.

3 Press the  button to select [Slide Show] and press the  button.

- The slide show starts and files are played back in order.
- If you want to stop the slide show in progress, press any button on the camera.
The slide show repeats itself until stopped.



Note-----

- Each still image is displayed for three seconds.
- For movies, not just one frame, but the entire movie you shot is played back.

Preventing the Deletion of Files (Protect)






You can protect files from being accidentally deleted.



Caution

Protected files cannot be deleted normally. However, they will be deleted if you format the memory where the files are stored.

Protecting a File

- 1 Press the  (Playback) button.**
 - The last shot taken is displayed.
- 2 Press the   buttons to display the file you want to protect.**
- 3 Press the MENU/OK button.**
 - The playback menu appears.
- 4 Press the  button to select [Protect] and press the  button.**
- 5 Make sure that [1 File] is selected, and then press the MENU/OK button.**

- The selected file is protected and the symbol appears on the screen.






Note



To unprotect a file, display the file you want to unprotect and perform Steps 3 to 5.

Protecting All Files

To protect all your files, follow the steps below.

- 1** Press the  (Playback) button.
- 2** Press the MENU/OK button.
 - The playback menu appears.
- 3** Press the  button to select [Protect] and press the  button.



- 4** Press the   buttons to select [All Files].
- 5** Make sure that [Select] is selected, and then press the MENU/OK button.
 - All files are protected and the symbol appears on the screen.




Note

To cancel protection for all protected files, select [Cancel] in Step 5.



Protecting Multiple Files at Once

To protect selected files all at once, follow the steps below.

1 Press the  (Playback) button.



2 Press the  (Thumbnail Display) button twice.

- The screen is divided into 12 frames and thumbnails are displayed (Grid view).




3 Press the    buttons to select the first file you want to protect.

4 Press the MENU/OK button.

- The playback menu appears.

5 Press the  button to select [Protect] and press the  button.

- The Protect symbol appears in the upper-right corner of the file.

6 Press the    buttons to select the next file you want to protect, and then press the MENU/OK button.

7 Repeat Step 6 to select all the files you want to protect.

- If you selected a file by mistake, you can deselect by selecting the file and pressing the MENU/OK button again.

8 Press the DISP. button.

- The display indicates that the selected images are being processed; once finished, the display returns to the thumbnail display screen (Grid view).



Note

- To unprotect multiple files, follow the same steps described above to select the files to unprotect, and then press the DISP. button.
- You can also unprotect all files at once. (☞ P.136)
- For information on thumbnail display, see P.49.



Using a Printing Service (DPOF)

The still images recorded on an SD memory card can be printed out if you take them to a store that offers a digital camera print service. To use a print service, you must make print settings on your camera. These settings are called Digital Print Order Format (DPOF) settings. The DPOF setting specifies one print per still image. When making DPOF settings in grid view, you can also specify the number of copies to print. (P.140)



Note

When you make DPOF settings for images shot in RAW mode, DPOF settings are only made for JPEG files.

3

Other Playback Functions

Setting DPOF for the Displayed Still Image

1 Press the (Playback) button.

2 Press the buttons to display the still image for which you want to make the DPOF setting.

3 Press the MENU/OK button.

- The playback menu appears.

4 Press the button to select [DPOF] and press the button.



5 Make sure that [1 File] is selected, and then press the MENU/OK button.

- Once the DPOF setting is made, the DPOF symbol appears on the screen.





Note

To remove the DPOF setting, display the still image with the DPOF setting and perform Steps 3 to 5.

Setting DPOF for All Still Images

To apply DPOF settings to all your still images, follow the steps below.

1 Press the (Playback) button.

2 Press the MENU/OK button.

- The playback menu appears.

3 Press the button to select [DPOF] and press the button.

4 Press the buttons to select [All Files].

5 Make sure that [Select] is selected, and then press the MENU/OK button.

- Once the DPOF setting is made, the DPOF symbol appears on the screen.




















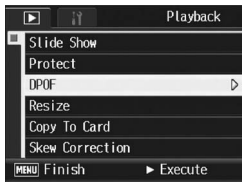
Note

To cancel the DPOF settings for all still images with DPOF settings, select [Cancel] in Step 5.

Setting DPOF for Multiple Still Images

To make the DPOF settings for selected still images all at once, follow the steps below.

- 1 Press the  (Playback) button.**
- 2 Press the  (Thumbnail Display) button twice.**
 - The screen is divided into 12 frames and thumbnails are displayed (Grid view).
- 3 Press the    buttons to select the first still image for which you want to make the DPOF setting.**
- 4 Press the MENU/OK button.**
 - The playback menu appears.
- 5 Press the  button to select [DPOF] and press the  button.**
- 6 Press the   buttons to set the number of copies to print.**
 - Press the  button to increase the number of copies, or press the  button to decrease the number of copies.
- 7 Press the   buttons to select the next still image for which you want to make the DPOF setting.**
- 8 Press the   buttons to set the number of copies to print.**
 - Press the  button to increase the number of copies, or press the  button to decrease the number of copies.
- 9 Repeat Steps 7 and 8 to select all the still images for which you want to make the DPOF setting.**
- 10 Press the MENU/OK button.**
 - The display indicates that the selected images are being processed; once finished, the display returns to the thumbnail display screen.



**Note**

- To remove the DPOF settings for multiple still images, follow the same steps described above to set the number of copies to print to [0] for each image, and then press the MENU/OK button.
- You can also cancel the DPOF settings for all still images at once. (☞ P.139)

Changing the Image Size (Resize)

You can reduce the image size of a shot still image to create a new file with a different image size.

Original	Resized	
F3648/N3648/F3:2/N3:2/F1:1/N1:1/N3264/N2592/N2048	N1280	N640
N1280	N640	



Caution

- You can resize only still images. Movies cannot be resized.
- You cannot change the image size of images shot in RAW mode.



Note

- The ratio of width to height of [F3:2] and [N3:2] images are 3:2. When an image of this type is resized, it is reduced to a 4:3 image with black borders at the top and bottom.
- The ratio of width to height of [F1:1] and [N1:1] images are the same (1:1). When an image of this type is resized, it is reduced to a 4:3 image with black borders on the left and right.
- You can also change the image size during shooting. (P.91)

To change the image size, follow the steps below.

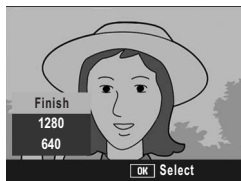
- 1** Press the (Playback) button.
- 2** Press the buttons to display the file with the image size you want to change.
- 3** Press the MENU/OK button.
 - The playback menu appears.
- 4** Press the button to select [Resize] and press the button.



5 Press the ▲▼ buttons to select [1280] or [640].




6 Press the MENU/OK button.

- The display indicates that the image is being processed, and then the still image with the changed image size is recorded. The image before the image size is changed is also recorded.



Copying the Contents of the Internal Memory to an SD Memory Card (Copy To Card)

You can copy all movies, still images, and sound data stored in the internal memory onto an SD memory card at once.

- 1** Turn the camera off.
- 2** Insert an SD memory card.
- 3** Turn the camera on.
- 4** Press the  (Playback) button.
- 5** Press the MENU/OK button.
 - The playback menu appears.
- 6** Press the  button to select [Copy To Card] and press the  button.
 - The display indicates copying is in progress; once finished, the display returns to the playback screen.




Note

- If the capacity of the SD memory card to which you are copying is insufficient, a message will be displayed indicating there is not enough capacity. To copy only the number of shots that will fit into the available capacity, select [Yes] and then press the MENU/OK button. To cancel copying, select [No] and then press the MENU/OK button.
- It is not possible to copy the contents of an SD memory card to the internal memory.

Straightening Skewed Images (Skew Correction)



You can straighten rectangular objects, such as a message board or business card, shot at an angle, to make them look as if they were shot squarely.



1 Press the  (Playback) button.

2 Press the   buttons to display the file you want to straighten.

3 Press the MENU/OK button.

- The playback menu appears.

4 Press the  button to select [Skew Correction] and press the  button.

- The display indicates that the image is being processed, and then the area recognized as the correction range is displayed with an orange frame. Up to five areas can be recognized.
- If the target area cannot be detected, an error message appears. The image before correction remains recorded.
- To select another correction area, move the orange frame to the target area by pressing the  button.
- To cancel skew correction, press the  button. Even if you cancel skew correction, the image before skew correction remains recorded.

5 Press the MENU/OK button.

- The display indicates that the image is being corrected, and then the corrected image is recorded. The image before correction is also recorded.



**Caution**

- You can use skew correction for still images shot with this camera.
- You cannot use skew correction for movies or images taken with S-Cont or M-Cont.
- For images shot in RAW mode (P.91), the skew is corrected in the JPEG file recorded at the same time as the raw data. No skew is corrected in the DNG file.

**Note**

- The image size does not change for skew corrected images.
- If the image size is large, skew correction will take time. Resize the image (P.142) before performing skew correction to speed up the process.
- The following table shows the approximate time required for skew correction.

Image Size	Correction time
3648 × 2736	Approx. 46 seconds
3264 × 2448	Approx. 36 seconds
2592 × 1944	Approx. 24 seconds
2048 × 1536	Approx. 14 seconds
1280 × 960	Approx. 6 seconds
640 × 480	Approx. 2 seconds

- When scene mode is set to [Skew Correct Mode], you can shoot an image and then immediately correct any skew in the image. (P.85)

Viewing on a Television

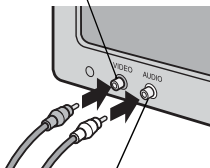
You can view files you have taken on a TV screen. The camera displays everything on the TV screen just as it would on the picture display.

To use your television for viewing, connect your camera to the television with the AV cable that came with your camera. To view files on a television, follow the steps below.

1 Securely connect the AV cable to the Video In terminal on the television.

- Connect the white plug of the AV cable to the audio input terminal (white) of the TV unit and the yellow plug to the video input terminal (yellow).

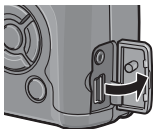
Video input terminal (yellow)



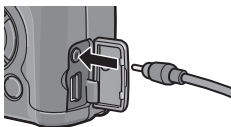
Audio input terminal (white)

2 Make sure that the camera is off.

3 Open the terminal cover.



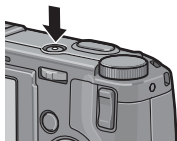
4 Securely connect the AV cable to the AV output terminal on the camera.



5 Set the television to Video mode. (Set the input to Video)

- For details, see the documentation that came with the television.

6 Press the POWER button or the (Playback) button for more than one second to turn the camera on.





Caution

- When the AV cable is connected to the camera, the indicators on picture display disappear and the speaker output turns off.
- Do not force the AV cable into the terminal.
- Do not apply excessive force with the AV cable connected.
- When using the AV cable, do not move the camera with the AV cable.



Note

- You can connect the AV cable to the Video In terminal on your video recorder and record what you have shot to a video recorder.
- Your camera is set to NTSC playback format (used in Japan and other countries/regions) for use with television equipment and other audiovisual equipment. If the equipment you want to connect to uses PAL format (used in Europe and elsewhere), then switch your camera to PAL format before connecting. (P.191)
The default setting varies depending on where you purchased the camera.

Direct Print Function

The direct print standard enables direct printing from a camera to a printer by connecting them via a USB cable. Photos can be printed quickly and easily from your digital camera without using a computer.



Caution

- You cannot print movies (.AVI files) with this function.
- For images shot in RAW mode, the JPEG file recorded at the same time as the raw data is printed. The DNG file is not printed.



Note

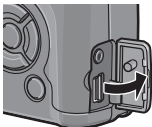
- This camera uses PictBridge, an industry standard for direct printing.
- Your printer must be compatible with PictBridge to use the direct print function. For support information, see the documentation that came with the printer.

Connecting the Camera to a Printer

Connect your camera to a printer using the USB cable provided.

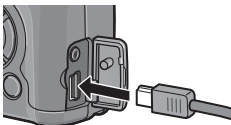
1 Make sure that the camera is off.

2 Open the terminal cover.



3 Connect your camera to a printer using the USB cable provided.

- Your camera turns on automatically.
- Turn on the printer if it is not already on.



4

Direct Printing

Caution

- Do not force the USB cable into the terminal.
- Do not apply excessive force with the USB cable connected.
- When using the USB cable, do not move the camera with the USB cable.

Note

To disconnect the camera from the printer, check that the camera is turned off after printing is finished, and disconnect the USB cable.

Printing Still Images

You can print still images from the camera with a PictBridge-compatible printer.

Still images are sent from the internal memory when no SD memory card is loaded or from an SD memory card when one is loaded.



Caution

Do not disconnect the USB cable during printing.



Note

If a [Printer Error] message appears during image transfer, check the printer status and take the appropriate action.

Printing One or All Still Images

1 Check that the printer is ready to print.

- The [Connecting...] screen appears.

2 Press the ADJ. lever.

- The direct print playback mode screen appears.

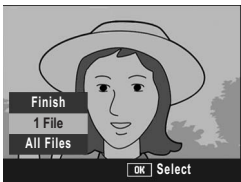
3 Press the ◀▶ buttons to select an image for printing.

4 Press the ADJ. lever.

5 Press the ▲▼ buttons to select [1 File] or [All Files].

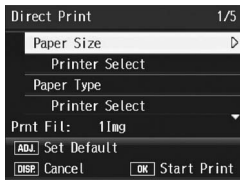
6 Press the MENU/OK button.

- The direct print menu appears.



7 Press the ▲▼ buttons to select an item, and then press the ► button to display the detailed options screen.

- When [Connecting...] is displayed, the connection to the printer is not yet established. When a connection is established, [Connecting...] disappears and [Direct Print] appears. Proceed with this step after the connection is established.
- The following items can be selected. Each item is available only when supported by the printer connected to the camera.



Item Name	Description
Paper Size	Sets the paper size.
Paper Type	Sets the paper type.
Layout	Sets the number of images printed on a sheet of paper. The number of images that can be laid out on a sheet of paper varies depending on the connected printer.
Date Print	Selects whether to print the date (shooting date). The date format can be set using the date/time option in the Setup menu.
File Name Print	Selects whether to print the file name.
Optimize Image	Selects whether to optimize the image data (still image) prior to printing on the printer.
Print Size	Sets the print image size.
Print Quality	Sets the print quality.
Report Print*	Prints on forms.
Printing Quantity	Sets the print quantity.
Toner Saving*	Selects whether to conserve toner by using less ink during printing.
1-Side/2-Side*	Selects whether to print on both sides of the paper. Set this to [Duplex] for duplex printing. During duplex printing, one copy is printed for each still image. Only one copy is printed even if you selected more than one copy to print in Step 6 on P.153.

* Each item is available only when supported by the Ricoh printer connected to the camera. For the latest information on Ricoh printers, refer to the Ricoh website (<http://www.ricoh.com/>).

8 Press the ▲▼ buttons to select the setting, and then press the MENU/OK button.

- The display returns to the direct print menu.

9 Repeat Steps 7 and 8 to change other settings as required.



Note

- To specify the settings as the default settings next time the camera is connected to the printer, press the ADJ. lever when the screen in Step 7 is displayed. When the screen at the right appears, press the ◀▶ buttons to select [Set] and press the MENU/OK button.
- To use the settings last set the next time the camera is connected to the printer, select [Cancel].



10 Press the MENU/OK button.

- The selected still images are sent to the printer and the [Sending...] screen appears.
- Pressing the DISP. button cancels the operation.
- When the images have been sent to the printer, the display returns to the direct print playback mode screen and printing starts.

Printing Several Still Images

1 Check that the printer is ready to print.

- The [Connecting...] screen appears.

2 Press the ADJ. lever.

- The direct print playback mode screen appears.

3 Press the (Thumbnail Display) button.

- The screen is divided into 12 frames and thumbnails are displayed (Grid view).

4 Press the ▲▼◀▶ buttons to select an image for printing.

5 Press the MENU/OK button.

6 Press the ▲▼ buttons to set the number of copies to print.

- Press the ▲ button to increase the number of copies, or press the ▼ button to decrease the number of copies.



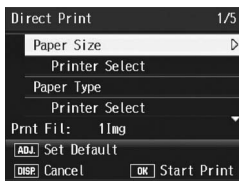
- 7** Press the ◀▶ buttons to select the next image for printing.
- 8** Press the ▲▼ buttons to set the number of copies to print.
- 9** Repeat Steps 7 and 8 to select all the still images to be printed and the number of copies for each.

10 Press the MENU/OK button.

- The direct print menu appears.

11 Press the ▲▼ buttons to select an item, and then press the ▶ button to display the detailed options screen.

- When [Connecting...] is displayed, the connection to the printer is not yet established. When a connection is established, [Connecting...] disappears and [Direct Print] appears. Proceed with this step after the connection is established.
- For available settings, see P.152.



12 Press the ▲▼ buttons to select the setting, and then press the MENU/OK button.

- The display returns to the direct print menu.


13 Repeat Steps 11 and 12 to change other settings as required.

14 Press the MENU/OK button.

- The selected still images are sent to the printer and the [Sending...] screen appears.
- Pressing the DISP. button cancels the operation.
- When all the selected still images have been sent from the camera to the printer, the camera display returns to the direct print playback mode screen.



Note-----

- Only images with a printer mark () are printed. If you cancel printing and then try to print again, make sure that the printer mark is on the images you want to print.
- The same still image can also be printed several times on a single sheet.
- The available items vary depending on the functions of the printer.
- To print images using the printer's default settings, select [Printer Select] on the detailed options screen.

5 Changing Camera Settings

Setup Menu

You can change the camera settings by displaying the setup menu from the shooting menu (P.87) or playback menu. (P.133) The setup menu enables you to set the items listed in the table below.

Setting	Options [Default Settings]	Refer to
Format [Card]	_____	P.158
Format [Internal]	_____	P.159
LCD Brightness	_____	P.160
Reg. My Settings	[Setting1], Setting2	P.161
ISO Auto-High	AUTO 200, [AUTO 400], AUTO 800, AUTO1600	P.163
Function Button	Off, [AF/MF], AF/Snap, AE Lock, JPEG>RAW, Color>B&W, Color>TE, Expo. Cmp, Wht. Bal., ISO, Quality, Focus, Image, Expo. Met., Cont Mode, Auto BKT, Flash Comp	P.164
Fn Set. My Set.	On, [Off]	P.165
ADJ Lever Set.1 ^{*1}	[Off] ^{*4} , [Expo. Cmp] ^{*1} , [Wht. Bal.] ^{*2} , [ISO] ^{*3} , Quality,	P.166
ADJ Lever Set.2 ^{*2}	Focus, Image, Expo. Met., Cont Mode, Auto BKT,	
ADJ Lever Set.3 ^{*3}	Flash Comp	
ADJ Lever Set.4 ^{*4}		
ADJ Shutter	On, [Off]	P.167
Zoom Button	Off, Dgfl Zoom, [Expo. Cmp], Wht. Bal.	P.168
Digital Zoom Img	[Normal], Auto Resize	P.169
Operation Sounds	[All], Shutter	P.171
Vol. Settings	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> (Mute), <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> (Small), <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> (Medium), <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> (Large)	P.172
Level Setting	[Off], Display, Display + Snd, Sound	P.173
AF Aux. Light	[On], Off	P.174
Auto Power Off	Off, [1 Min.], 5 Min., 30Min.	P.175
LCD Confirm.	Off, [0.5Sec.], 1 Sec., 2 Sec., 3 Sec., Hold	P.176
Info Disp	On, [Off]	P.177
AutoRotate	[On], Off	P.179
CL-BKT B&W (TE)	[On], Off	P.181
RAW/JPEG Setting	[Fine], Normal, N640	P.182
Color Space Set	[sRGB], Adobe RGB	P.183

Setting	Options [Default Settings]	Refer to
Enlrge Photo Icon	On, [Off]	P.185
Sequential No.	[On], Off	P.186
Date Settings	_____	P.188
Language/言語*	日本語, English, Deutsch, Français, Italiano, Español, Русский, 简体中文, 繁体中文, 한국어	P.190
Video Out Mode*	NTSC, PAL	P.191

* The default setting varies depending on where you purchased the camera.

Using the Setup Menu

This explains how to make the settings.

Use the ▲▼▶ buttons and MENU/OK button to select and set an item.

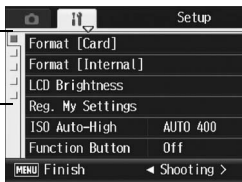
1 Press the MENU/OK button.

- The shooting menu (or the playback menu) appears.

2 Press the ▶ button.

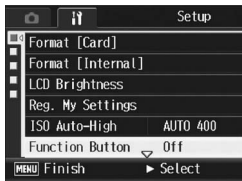
- The setup menu appears.

The menu items are provided on five screens.



3 Press the ▲▼ buttons to select the desired item.

- Press the ▼ button at the bottom item to display the next screen.



4 Press the ► button.

- The menu item settings are displayed.

5 Press the ▲▼ buttons to select the setting.

6 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



- The setup menu disappears and the camera is ready for shooting or playback.
- The setup menu may appear depending on the setting. In this case, press the MENU/OK button again to return to the shooting or playback screen.



Note

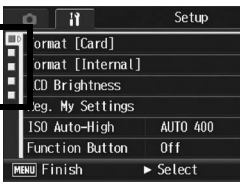
For some functions, the setting selection method may differ from what is explained here. For detailed operation, see the explanation of each function.



Changing the display

You can select a screen by the tab:

- 1 Press the ◀ button to select a tab on the left of the screen.
- 2 Press the ▲▼ buttons to change screens.
- 3 Press the ► button to return to menu item selection.



Preparing the SD Memory Card (Format [Card])

If the error message [Card Error] is displayed when an SD memory card is loaded into the camera or the card has been used with a computer or other device, you must format the card prior to use with this camera.

Formatting is the process of preparing a card so image data can be written on it.



Caution

If you format a card that still has images stored on it, the images will be lost.

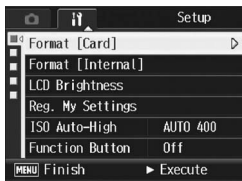
To format a card, follow the steps below.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [Format [Card]] and press the ► button.

- A screen appears to confirm formatting.



3 Press the ◀▶ buttons to select [Yes] and then press the MENU/OK button.

- Formatting starts. When it is done, the display returns to the setup menu.
- If no SD memory card is loaded, a message will be displayed. After turning the power off, load an SD memory card and repeat the formatting process again.

4 Press the MENU/OK button.



Protecting your images from being deleted

- Move the write-protection switch on the SD memory card to “LOCK” to prevent your still images from being accidentally erased or the card from being formatted. (P.28)
- Return the switch to its original position and disable “LOCK” to enable deletion and formatting.

Formatting the Internal Memory (Format [Internal])

If the error message [Format internal memory] is displayed, you must format the internal memory prior to use.



Caution

Formatting the internal memory deletes all of the data recorded in the memory. If you have images in the internal memory that you do not want to delete, copy the images to the SD memory card before formatting the internal memory. (P.144)

To format the internal memory, follow the steps below.

1

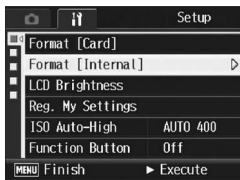
Display the setup menu.

- For the operating procedure, see P.156.

2

Press the ▼ button to select [Format [Internal]] and press the ► button.

- A screen appears to confirm formatting.



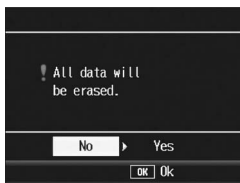
3

Press the ◀► buttons to select [Yes] and then press the MENU/OK button.

- Formatting starts. When it is done, the display returns to the setup menu.

4

Press the MENU/OK button.



Adjusting the brightness of the picture display (LCD Brightness)

To adjust the brightness of the picture display, follow the steps below.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [LCD Brightness] and press the ► button.

- The screen for setting the brightness appears.



3 Press the ▲▼ buttons to adjust the brightness.

- Move the slider on the LCD brightness adjustment bar down to make the picture display darker and up to make it brighter. The brightness of the picture display changes as the slider is moved along the bar.



4 When you reach the desired brightness, press the MENU/OK button.

- The display returns to the setup menu.

5 Press the MENU/OK button.

Registering Custom Settings (Reg. My Settings)

The My Settings function allows you to easily shoot with your desired settings.

You can register two groups of settings as “My Settings”. Setting the mode dial to MY1 allows you to shoot with the settings registered in [Scene Custom 1]. Setting the mode dial to MY2 allows you to shoot with the settings registered in [Scene Custom 2]. (☞ P.86)

To register the current camera settings as My Settings, follow the steps below.

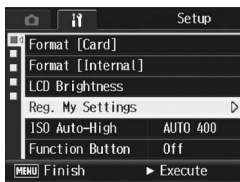
1 Change the camera settings to the values you want to register as My Settings.

2 Display the setup menu.

- For the operating procedure, see P.156.

3 Press the ▼ button to select [Reg. My Settings] and press the ► button.

- A confirmation message appears.



4 Select [Setting 1] or [Setting 2] and press the MENU/OK button.

- The current camera settings are registered and the display returns to the setup menu.
- If you do not want to register them, press the DISP. button.



5 Press the MENU/OK button.

Settings Saved with My Settings Function

Shooting mode (P/A/M/SCENE)

Aperture value in aperture priority mode

Focal distance used in manual focus

Scene Mode

Macro

Flash Mode

Self-Timer

DISP. Mode

Pic Quality/Size

Focus

Exposure Metering

Continuous Mode

Img Set

Flash Expo. Comp.

Auto Bracket

Date Imprint

Exposure Comp.

White Balance

ISO Setting

Density

Frame Rate

Function Button *

Level Setting

Enlarge Photo Icon

* [Function Button] is saved in My Settings only when [Fn Set. My Set.] is set to [On].

Changing the ISO Auto-High Setting (ISO Auto-High)

You can change the upper limit of the ISO setting for [Auto-Hi] (Auto high sensitivity) (☞ P.126) in [ISO Setting] on the shooting menu.

Available Settings

AUTO 200

AUTO 400 *Default setting

AUTO 800

AUTO1600

To change the auto high sensitivity setting, follow the steps below.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [ISO Auto-High] and press the ► button.

3 Press the ▲▼ buttons to select the desired setting.

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



Note

Images shot with a higher sensitivity may appear grainy.

Assigning a Function to the Function Button (Function Button)

When a function is assigned to the Fn (Function) button, you can easily change the shooting menu setting, or switching from one function to another, simply by pressing the Fn button.

The following functions can be assigned to the Fn button. For information on how to use the Fn button, see the corresponding reference page.

Available Settings	Description	Refer to
AF/MF *Default setting	Switching between auto focus and manual focus	P.71
AF/Snap	Switching between auto focus and snap mode	P.73
AE Lock	Locking the exposure	P.74
JPEG>RAW	Switching from JPEG to RAW mode	P.75
Color>B&W	Switching from color to black-and-white mode* ¹	P.76
Color>TE	Switching from color to black-and-white (TE) mode* ²	P.76
Expo. Cmp, Wht. Bal., ISO, Quality, Focus, Image, Expo. Met., Cont Mode, Auto BKT, Flash Comp	Changing the shooting menu function	P.77

*1 Image quality when [B&W] is set in [Image] (☞ P.105)

*2 Image quality when [B&W (TE)] is set in [Image] (☞ P.106)

To assign a function to the Fn button, follow the steps below.

- 1 Display the setup menu.**
 - For the operating procedure, see P.156.
- 2 Press the ▼ button to select [Function Button] and press the ► button.**
- 3 Press the ▲▼ buttons to select the desired setting.**
- 4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.**



Setting Whether to Save the Fn (Function) Button Function to My Settings (Fn Set. My Set.)

You can set whether the function assigned to the Fn (Function) button with [Function Button] (P.69) is saved with [Reg. My Settings] (P.161).

Available Settings	Description
On	Save function registered to the Fn button with [Reg. My Settings].
Off *Default setting	Do not save function registered to the Fn button with [Reg. My Settings].

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [Fn Set. My Set.] and press the ► button.

3 Press the ▲▼ buttons to select the desired setting.

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



Assigning a Function to the ADJ. Lever (ADJ Lever Set.1)

When any of a number of shooting functions is assigned to the ADJ. lever, you can display the screen for that function with fewer button operations and without displaying the shooting menu. You can also use [ADJ Lever Set.1] to [ADJ Lever Set.4] to assign a camera function that can be activated by pressing the ADJ. lever. For information on how to use the ADJ. mode, see P.64.

Available Settings		Refer to
Off	*Default setting for [ADJ Lever Set.4]	-
Expo. Cmp	*Default setting for [ADJ Lever Set.1]	P.120
Wht. Bal.	*Default setting for [ADJ Lever Set.2]	P.122
ISO	*Default setting for [ADJ Lever Set.3]	P.126
Quality		P.91
Focus		P.94
Image		P.103
Expo. Met.		P.98
Cont Mode		P.99
Auto BKT		P.110
Flash Comp		P.109

To assign a function to [ADJ Lever Set.1] to [ADJ Lever Set.4], follow the steps below.

- 1 Display the setup menu.**
 - For the operating procedure, see P.156.
- 2 Press the ▼ button to select [ADJ Lever Set.1], [ADJ Lever Set.2], [ADJ Lever Set.3], or [ADJ Lever Set.4], and then press the ► button.**
- 3 Press the ▲▼ buttons to select the desired setting.**
- 4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.**



Using the Shutter Release Button to Set a Setting in ADJ. Mode (ADJ Shutter)

In ADJ. mode (P.64), you usually press the MENU/OK button or the ADJ. lever to set a setting.

When [ADJ Shutter] is set to [On], you can also set a setting by half-pressing the shutter release button.

Available Settings	Description
On	Press the ADJ. lever, the MENU/OK button, or half-press the shutter release button to set the setting.
Off *Default setting	Press the ADJ. lever or the MENU/OK button to set the setting.

To change the shutter release button setting, follow the steps below.

- 1 Display the setup menu.**
 - For the operating procedure, see P.156.
- 2 Press the ▼ button to select [ADJ Shutter] and press the ► button.**
- 3 Press the ▲▼ buttons to select [On].**
- 4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.**



Assigning a Function to the Zoom Button (Zoom Button)

You can assign the following functions to the Q/Z buttons in shooting mode.

Available Settings	Description
Off	No functions are assigned to the Q/Z button.
Dgtl Zoom	The digital zoom function is assigned to the Q/Z button. For information on how to use the digital zoom, see P.41. For the digital zoom, you can select normal digital zoom or auto resize zoom with [Digital Zoom Img] (P.169).
Expo. Cmp *Default setting	The exposure compensation function is assigned to the Q/Z button. For information on how to set the exposure compensation after pressing the Q/Z button, see Step 3 and beyond on P.120.
Wht. Bal.	The white balance function is assigned to the Q/Z button. For information on how to set the white balance after pressing the Q/Z button, see Step 3 and beyond on P.122, 124, 125.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the \blacktriangledown button to select [Zoom Button] and press the \blacktriangleright button.

3 Press the $\blacktriangle\blacktriangledown$ buttons to select the desired setting.

4 Press the MENU/OK button, or press the \blacktriangleleft button and then the MENU/OK button.



Caution

This function is not available when [Pic Quality/Size] is set to RAW mode.

Using the Auto Resize Zoom (Digital Zoom Img)

This function allows you to crop and record a shot image. Conventional digital zoom enlarges a portion of an image to a set magnification. Whereas, auto resize zoom saves the cropped portion of the image, the image quality is not decreased, however the image size may become smaller. The image recording size changes depending on the auto resize zoom magnification. Auto Resize Zoom is only available when [Zoom Button] is set to [Dgtl Zoom] (P.168) and [Pic Quality/Size] is set to 3648×2736 . (P.91)

Available Settings

Available Settings	Description
Normal *Default setting	Normal digital zoom. Records the image at the image size set with [Pic Quality/Size].
Auto Resize	Automatically resizes and then records the image.



Note

The digital zoom is enabled when [Pic Quality/Size] is set to a size other than 3648×2736 .

Zoom Magnification and Recorded Image Size

Zoom Magnification	Image Size
1.0 times	3648×2736 (10M)
Approx. 1.1 times	3264×2448 (8M)
Approx. 1.4 times	2592×1944 (5M)
Approx. 1.8 times	2048×1536 (3M)
Approx. 2.9 times	1280×960 (1M)
Approx. 5.7 times	640×480 (VGA)

1

Display the setup menu.

- For the operating procedure, see P.156.

2

Set [Zoom Button] to [Dgtl Zoom] on the setup menu.

- For the operating procedure, see P.168.

3

Press the ▼ button to select [Digital Zoom Img] and press the ► button.

4 Press the ▲▼ buttons to select [Auto Resize].

5 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



6 With the camera ready to shoot, press the 🔍 (Enlarged View) button.

- Each time the 🔍 button is pressed, the image size changes one factor and the image is recorded.
- The size at which the image is recorded is displayed on the picture display.



⚠ Caution-----

- This function is not available when shooting with S-Cont or M-Cont, or when scene mode is set to [Skew Correct Mode]. If [Auto Resize] is set in these situations, the digital zoom is activated instead.
- This function is not available when [Pic Quality/Size] is set to RAW mode.

Changing the Operation Sound Setting (Operation Sounds)

The following five operation sounds are made during camera operation.

- Start sound : Sound when the camera is turned on.
- Shutter release sound : Sound when the shutter release button is pressed.
- Focus sound : Sound when the shutter release button is half-pressed and the camera focuses on the subject.
- Beep sound : Error sound indicating an operation that cannot be performed.
- Level sensor sound : When [Level Setting] is set to [Sound] or [Disp + Snd] (P.173), the sound is continually emitted at a set interval when the camera is level in shooting mode.

Available Settings	Description
All *Default setting	All sounds on
Shutter	Shutter release sound, beep sound, and level sensor sound.

To change the operation sound setting, follow the steps below.

- 1 Display the setup menu.**
 - For the operating procedure, see P.156.
- 2 Press the ▼ button to select [Operation Sounds] and press the ► button.**
- 3 Press the ▲▼ buttons to select the desired setting.**
- 4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.**



Note-----
The operation sound setting can be changed. (P.172)

Changing the Operation Sound Volume (Vol. Settings)

You can change the operation sound volume.

Available Settings

- (Mute)
- (Small)
- (Medium) *Default setting
- (Large)

To change the operation sound volume, follow the steps below.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [Vol. Settings] and press the ► button.

3 Press the ▲▼ buttons to select the desired setting.

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



Note

The level sensor sound is not emitted, even when [Level Setting] is set to [Disp + Snd] or [Sound] and [Vol. Settings] is set to (Mute) (P.173).

Changing the Level Confirmation Setting (Level Setting)

When [Level Setting] is set to on, the camera uses a level indicator and sounds to let you know whether the image is level during shooting. You can select from the following level confirmation settings. For information on how to use the level function during shooting, see P.59.

Available Settings	Description
Off *Default setting	The level indicator does not appear on the screen and the level sensor sound is not emitted.
Display	The level indicator appears on the screen, but the level sensor sound is not emitted.
Disp + Snd	The level indicator appears on the screen and a level sensor sound is emitted when the camera is level.
Sound	The level indicator does not appear on the screen, but a level sensor sound is emitted when the camera is level.

1 Display the setup menu.

- For the operating procedure, see P.156.
- You can also press and hold the DISP. button in shooting mode to display the setting menu. If you pressed and held the DISP. button, skip to Step 3.

2 Press the ▼ button to select [Level Setting] and press the ► button.

3 Press the ▲▼ buttons to select the desired setting.

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



Note

- For information on how to use the level function during shooting, see P.59.
- The level function is not available when recording movies or during interval shooting.
- The level sensor sound is not emitted, even when [Level Setting] is set to [Disp + Snd] or [Sound] and [Vol. Settings] is set to [□ □ □] (Mute).

Changing the AF Auxiliary Light Setting (AF Aux. Light)

You can set whether to use the AF auxiliary light when shooting with auto focus.

When [AF Aux. Light] is set to [On], the AF auxiliary light lights and the auto focus distance is measured when shooting in dark surroundings and when it is difficult for the camera to measure the auto focus distance.

To change the AF auxiliary light setting, follow the steps below.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [AF Aux. Light] and press the ► button.

3 Press the ▲▼ buttons to select the desired setting.

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



Changing the Auto Power Off Setting (Auto Power Off)

If you do not operate the camera for a set period of time, it shuts off automatically to conserve battery power (Auto Power Off).

By default, auto power off is set to one minute, but you can change this setting.

Available Settings

Off (Auto Power Off is turned off)

1 Min. *Default setting

5 Min.

30 Min.

To change the auto power off setting, follow the steps below.

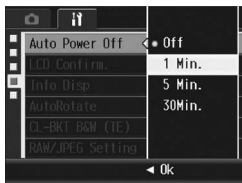
1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [Auto Power Off] and press the ► button.

3 Press the ▲▼ buttons to select the desired setting.

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



Note

- To continue using the camera after auto power off turned the camera off, press the POWER button to turn the camera on again. You can also press and hold the [▶] (Playback) button for more than one second to turn on the camera in playback mode.
- Auto power off does not work when the camera is connected to a computer or printer.
- When using interval shooting, the [Auto Power Off] setting is not valid and auto power off does not work.

Changing Image Confirmation Time (LCD Confirm.)

Immediately after you press the shutter release button and take a still image, the image taken is displayed on the screen for a moment so you can check it. By default, the image confirmation time is set to 0.5 second, but this can be changed.

Available Settings

Off (Image not displayed for confirmation)

0.5 Sec. *Default setting

1 Sec.

2 Sec.

3 Sec.

Hold (The image remains displayed until the next time you half-press the shutter release button.)

To change the image confirmation time, follow the steps below.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the \blacktriangledown button to select [LCD Confirm.] and press the \blacktriangleright button.

3 Press the $\blacktriangle\blacktriangledown$ buttons to select the desired setting.

4 Press the MENU/OK button, or press the \blacktriangleleft button and then the MENU/OK button.



Caution

When [LCD Confirm.] is set to [0.5Sec.], symbols such as the battery mark may remain on the picture display while the image is displayed.



Note

When [LCD Confirm.] is set to [Hold], the displayed image can also be enlarged (\blacktriangleleft P.51) or deleted (\blacktriangleleft P.52).

Displaying Information When the Picture Display is Off (Info Disp)

When [Info Disp] is set to [On], information is displayed on the picture display in the following cases even when the picture display is turned off in shooting mode (☞ P.56). (Only information, not the shooting screen, is displayed.) This is useful when using the external viewfinder.

- When the ⏱ (Self-timer) button or 📷 (Macro) button is pressed.
- When the mode dial setting is switched.
- When the up-down dial is rotated.
- When the ADJ. lever is pressed to the left or right during manual exposure mode (☞ P.79).
- When [AF/MF], [AF/Snap], [JPEG>RAW], [Color>B&W], or [Color>TE] is set in [Function Button] (☞ P.164) and the Fn (Function) button is pressed.
- When the ⚡ (Flash) OPEN switch is pressed to open the flash.

After the information is displayed and operations are performed for several seconds, or when the shutter release button is half-pressed, the information display disappears and the picture display turns off again.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [Info Disp] and press the ► button.

3 Press the ▲▼ buttons to select [On].

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.





Note

- When the ADJ. lever or the MENU/OK button is pressed, the corresponding menu appears even when the picture display is turned off, regardless of the [Info Disp] setting.
- If any of the following operations is performed, the picture display turns on even when it is turned off, regardless of the [Info Disp] setting.
 - When the ADJ. lever, MENU/OK button, DISP. button, or (Playback) button is pressed.
 - When the / buttons are pressed except when [Zoom Button] is set to [Off]. (P.168)
 - When the / buttons are pressed during manual focus.
 - When the MODE button is pressed in scene mode.
- When [Level Setting] is set to [Display] or [Disp + Snd] (P.173), the level indicator is not displayed in the information display when the picture display is turned off.

Automatically Rotating the Playback Image (AutoRotate)

You can set the camera to automatically rotate the image during playback according to the position of the camera.

Available Settings	Description
On *Default setting	The playback image is automatically rotated.
Off	The playback image is not automatically rotated.

When [AutoRotate] is set to [On] and you play back images with the camera held horizontally, images shot horizontally will appear with the same horizontal orientation, and images shot vertically will be rotated to a vertical orientation. Likewise, when you playback images with the camera held vertically, images shot vertically will appear with the same vertical orientation, and images shot horizontally will be rotated to a horizontal orientation.

When the camera is rotated during playback, the image is automatically rotated according to the camera position.

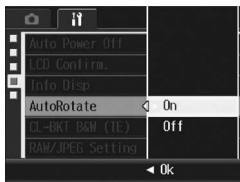
1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [AutoRotate] and press the ► button.



3 Press the ▲▼ buttons to make the setting.

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.





Caution

- The playback image is not automatically rotated, even when [AutoRotate] is set to [On], in the following cases.
 - When playing back movies or images shot with S-Cont. or M-Cont.
 - In three-frame view or list ( P.49)
 - When playing back images shot with the camera tilted too far forward or backward.
 - When playing back images upside-down (with the shutter release button facing down) or images shot upside-down.
 - When changing the camera position during magnified playback.
 - When the image is going through skew correction (the correction area is displayed in playback mode ( P.145))
- When playing back a slide show or viewing camera images on a TV, the camera is detected as being in the horizontal position even when [AutoRotate] is set to [On]. In this case, when you play back images with the camera positioned vertically, images shot horizontally are not automatically rotated. The playback images are not automatically rotated even if you rotate the camera during playback.



Note

Images shot in multi-shot, auto bracket, white balance bracket, and color bracket are automatically rotated according to the orientation of the first image.

Setting the Recorded Image During Color Bracket Shooting (CL-BKT B&W (TE))

When [Auto Bracket] is set to [CL-BKT] and a still image is shot (☞ P.114), the camera records three images - a black-and-white image, a color image, and a black-and-white (TE) image, or the camera records two images - a black-and-white image and a color image. Before taking a picture, use [CL-BKT B&W (TE)] on the setup menu to set whether the camera records three images - a black-and-white image, a color image, and a black-and-white (TE) image, or two images - a black-and-white image and a color image.

Available Settings	Description
On *Default setting	When [Auto Bracket] is set to [CL-BKT] on the shooting menu, a black-and-white image, a color image, and a black-and-white (TE) image are recorded.
Off	When [Auto Bracket] is set to [CL-BKT] on the shooting menu, a black-and-white image and a color image are recorded.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [CL-BKT B&W (TE)] and press the ► button.

3 Press the ▲▼ buttons to make the setting.

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



Note

When [Img Set] is set to [B&W (TE)] on the shooting menu, a black-and-white image, a color image, and a black-and-white (TE) image are recorded even when [CL-BKT B&W (TE)] is set to [Off].

Changing the RAW Mode JPEG Image Setting (RAW/JPEG Setting)

When shooting with [Pic Quality/Size] set to RAW mode (P.91), a JPEG file associated with the RAW format file (.DNG file) is recorded at the same time. You can change the picture quality and image size of this JPEG file.

Available Settings	Description
Fine *Default setting	Picture quality: Fine mode; Image size: Recorded at the same size as the RAW format file.
Normal	Picture quality: Normal mode; Image size: Recorded at the same size as the RAW format file.
N640	Recorded at the same picture quality and image size as [N640] (P.91) in [Pic Quality/Size].

To change the picture quality and image size settings of the JPEG file, follow the steps below.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [RAW/JPEG Setting] and press the ► button.

3 Press the ▲▼ buttons to select the desired setting.

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



Note

When [RAW/JPEG Setting] is set to [N640] with [Pic Quality/Size] set to [RAW3:2], black borders are added to the top and bottom of the JPEG image. When set to [RAW1:1], black borders are added to the left and right of the JPEG image.

Setting the Color Space (Color Space Set)

For the color space during shooting, you can select from sRGB, which is commonly used in the digital world, or Adobe RGB, which offers wider color space.

The Adobe RGB setting of this camera is the color space that was developed by Adobe Systems Incorporated and is compatible with the default color space in Photoshop and other image editing software.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the **▼** button to select [Color Space Set] and press the **▶** button.



To select [sRGB]

3 Press the **▲▼** buttons to select [sRGB].

4 Press the MENU/OK button, or press the **◀** button and then the MENU/OK button.

To select [AdobeRGB]

3 Press the **▲▼** buttons to select [AdobeRGB] and then press the MENU/OK button.

- A confirmation message appears.

4 Press the **▶** button to select [Yes] and then press the MENU/OK button.

5 Press the MENU/OK button.

**Caution**

- Adobe RGB is used for commercial printing and is not suitable for general printing services or printing at home. Although Adobe RGB has a wider color space than sRGB, colors may appear faded when displayed on or printed with equipment that is not compatible with Adobe RGB.
- To display images shot with the [AdobeRGB] setting on a computer monitor, you must use a software application that can correctly reproduce the Adobe RGB color space or the colors in the images will not be faithfully reproduced.

Enlarging Icon Display (Enlrge Photo Icon)

The following icons are enlarged in normal symbol display.

( P.56)

Flash mode, Macro Shooting, Self-timer, White balance, Focus, Exposure compensation, ISO setting, Exposure Metering, Auto Bracket

When the icons are enlarged, the following items are not displayed:

Digital zoom magnification, Focus bar, Date imprint, Image Settings (Img Set)

To enlarge the icons on the screen, follow the steps below.

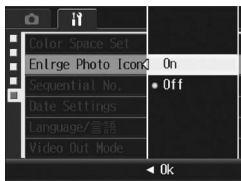
1 Display the setup menu.

- For the operating procedure, see P.156.


2 Press the ▼ button to select [Enlrge Photo Icon] and press the ► button.

3 Press the ▲▼ buttons to select [On].

4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.



Note

The icons only on those screens with normal symbol displays are enlarged. The icons on histogram screens are not enlarged. ( P.56)

Changing the File Name Setting (Sequential No.)

When you shoot a still image, it is stored on an SD memory card or in the internal memory with a consecutively numbered file name that is automatically assigned.

When you switch SD memory cards, you can set your camera to continue consecutive numbering from the previously loaded card.

Available Settings	Description
On (Continue numbering) *Default setting	File names are automatically assigned to still images you take, in the format of "R" followed by seven digits, from R0010001.jpg to R9999999.jpg. With this setting, file numbering is continued from one card to the next.
Off (Do not continue numbering)	File numbering is assigned, from RIMG0001.jpg to RIMG9999.jpg, for each SD memory card. When file name RIMG9999 is reached, no more data can be recorded to that card.

To change the file name setting, follow the steps below.

5

Changing Camera Settings

- 1 Display the setup menu.**
 - For the operating procedure, see P.156.
- 2 Press the ▼ button to select [Sequential No.] and press the ► button.**
- 3 Press the ▲▼ buttons to select the desired setting.**
- 4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.**



**Note**

- When data is recorded to the internal memory, files are assigned consecutively numbered file names, just as if [Sequential No.] is set to [Off].
- When images are transferred to a computer using RICOH Gate La (P.205), the file being transferred is renamed and saved. The file is saved with the name "RIMG****.jpg" (where **** indicates a number) even if [Sequential No.] is set to [On].

**Caution**

When RIMG9999 is reached, no more files can be saved. In this case, move image data from the SD memory card to the memory of the computer or a storage medium, and then format the SD memory card.

Setting the Date and Time (Date Settings)

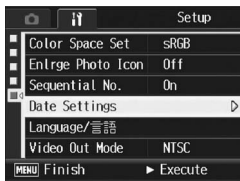
You can shoot still images with the time or date stamped onto the picture.

The date/time setting on the setup menu is explained here.

1 Display the setup menu.

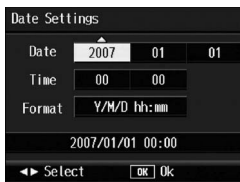
- For the operating procedure, see P.156.

2 Press the ▼ button to select [Date Settings] and press the ► button.



3 Press the ▲▼◀▶ buttons to set the year, month, date and time.

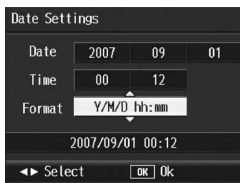
- You can press and hold down the ▲▼ buttons to quickly raise or lower the setting.
- Press the ◀▶ buttons to move to the next item.



4 In [Format], choose the date and time format.

5 Check the information on the screen and then press the MENU/OK button.

- Once you have set the date and time, the display returns to the setup menu.



6 Press the MENU/OK button.

**Note**-----

- If the battery is removed for more than one week, the date and time settings will be lost. These settings must be made again.
- To retain the date and time settings, load a battery with adequate remaining power for more than two hours.

Changing the Display Language (Language/言語)

You can change the language displayed on the screen.
The default setting varies depending on where you purchased the camera.

Available Settings

日本語 (Japanese)

English

Deutsch (German)

Français (French)

Italiano (Italian)

Español (Spanish)

Русский (Russian)

简体中文 (Simplified Chinese)

繁体中文 (Traditional Chinese)

한국어 (Korean)

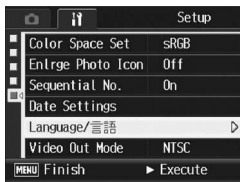
To change the display language, follow the steps below.

1 Display the setup menu.

- For the operating procedure, see P.156.

2 Press the ▼ button to select [Language/言語] and press the ► button.

- The language selection screen appears.



3 Press the ▲▼◀▶ buttons to select the desired setting.

4 Press the MENU/OK button.

- Once you have set the language, the display returns to the setup menu.

5 Press the MENU/OK button.



Changing the Playback Method for Viewing on TV (Video Out Mode)

You can view your still images and movies on a television screen by connecting your camera to a television with the AV cable that came with your camera. (P.147)

Your camera is set to NTSC video format (used in North America and other countries/regions) for use with television equipment and other audiovisual equipment. If the equipment you want to connect to uses PAL format (used in Europe and elsewhere), then switch your camera to PAL format before connecting.

The default setting varies depending on where you purchased the camera.

Available Settings

NTSC

PAL

To change the video format, follow the steps below.

- 1 Display the setup menu.**
 - For the operating procedure, see P.156.
- 2 Press the ▼ button to select [Video Out Mode] and press the ► button.**
- 3 Press the ▲▼ buttons to select the desired setting.**
- 4 Press the MENU/OK button, or press the ◀ button and then the MENU/OK button.**



Note

This camera is not compatible with SECAM TV System.

6 Downloading Images to Your Computer

The screen images shown here may differ from the images displayed on your computer depending on your computer OS.

For Windows

Refer to P.209 for Macintosh.

You can download images to a computer using either of the following methods.

- You can use the supplied RICOH Gate La software to collectively download images automatically. To use this method, you must install the software from the supplied Caplio Software CD-ROM.
- You can download images without using the RICOH Gate La software.



Note

- For details on how to download images from the camera to your computer, see the "Software User Guide" available from the Caplio Software CD-ROM. For how to display the "Software User Guide", see P.195.
- The Caplio Software contained on the supplied CD-ROM is used in common for the Ricoh digital camera series GR DIGITAL II and Caplio.

Using the Caplio Software CD-ROM

Once you insert the Caplio Software CD-ROM in the CD-ROM drive, the installer screen appears automatically.



Item Name	Description	Refer to
Installing the Software	Use this button to install software required for batch downloading and editing of images.	P.194
Installing DeskTopBinder Lite	Use this button to install Desk Top Binder Lite.	P.200
Browse User's Manual (Software Version)	Click this to display the "Software User Guide" (PDF).	P.195
Browse CD-ROM Content	Click this to display the list of files contained on the CD-ROM.	P.195



Caution

The Caplio Software supports the following languages. Operations are not guaranteed on operating systems with languages other than those listed below.

English, French, German, Spanish, Italian, Chinese (Traditional, Simplified), Korean

When [Installing the software] is clicked: (👉 P.197)

The following software is installed:

Software	Description
RICOH Gate La	Downloads images collectively to your computer.
Irodio Photo & Video Studio	Shot images can be displayed, managed, or edited.
USB Driver	Used to connect an earlier model Ricoh camera to a computer running Windows 98 SE/Me/2000. Not available with this camera.
WIA Driver	Used to connect an earlier model Ricoh camera to a computer running Windows XP/Vista. Not available with this camera.



Note

The camera is provided with Irodio Photo & Video Studio software that allows you to display and edit images from your computer. For how to use Irodio Photo & Video Studio, see the displayed "Help".

For the latest information about Irodio Photo & Video Studio, access the Web page of Pixela Co., Ltd. (<http://www.pixela.co.jp/oem/ricoh/e/index.html>).

When [Installing DeskTopBinder Lite] is clicked: (👉 P.200)

The following software is installed:

Software	Description
DeskTopBinder Lite	Software used to manage business documents.
USB Driver	Used to connect an earlier model Ricoh camera to a computer running Windows 98 SE/Me/2000. Not available with this camera.
WIA Driver	Used to connect an earlier model Ricoh camera to a computer running Windows XP/Vista. Not available with this camera.



Note

- For details about the DeskTopBinder Lite, refer to the Introduction Guide, Setup Guide, Auto Document Link Guide, and Help supplied with the DeskTopBinder Lite.
- For how to use Auto Document Link, which is installed with DeskTopBinder Lite, refer to the Auto Document Link Guide.

When [Browse User's Manual (Software Version)] is clicked:

The "Software User Guide" (PDF file) on the Caplio Software CD-ROM is displayed on your computer screen.

If you have Acrobat Reader installed on your computer, simply click [Browse User's Manual (Software Version)]. Acrobat Reader must be installed to view the PDF file. (👉 P.202)

When [Browse CD-ROM Content] is clicked:

You can check folders and files on the CD-ROM. The CD-ROM contains not only the software installed by clicking [Installing the software] but also Acrobat Reader software. This software product runs on Windows.

For the installation of Acrobat Reader, see P.202.



Note-----

- For details about Acrobat Reader, see Help for Acrobat Reader.
- To install Irodio Photo & Video Studio alone, double-click "Irodio Photo & Video Studio.exe" in the Irodio Photo & Video Studio folder.

System Requirements for Using Caplio Software CD-ROM

The following environments are necessary for using Caplio Software CD-ROM.

Please check your computer, or the computer's user manual.

Operating Systems Supported	Windows 2000 Professional Windows Me Windows XP Home Edition/Professional Windows Vista
CPU	Windows 2000/Me/XP: Pentium® III 500 MHz or faster Windows Vista: Pentium® III 1 GHz or faster
Memory	Windows 2000/Me/XP: 256 MB or more Windows Vista: 512 MB or more
Hard drive space required for installation	160 MB or more
Display Resolution	1024 × 768 pixels or greater
Display Colors	65,000 colors or greater
CD-ROM Drive	A CD-ROM drive compatible with the above-mentioned computer
USB Port	A USB port compatible with the above-mentioned computer



Caution

- The Caplio Software CD-ROM is not supported on Windows 98/98 SE.
- If your computer has an upgraded OS, the USB function may not work normally, so it cannot be supported.
- The provided software may not operate properly if changes are made to the operating system, such as with patches and service package releases.
- The camera does not support connection to a USB port added by using an extension function (PCI bus or other).
- If used in conjunction with a hub or other USB devices, the software may not work properly.
- When dealing with movies and other large files, a larger memory environment is recommended.

Installing Image Batch Downloading and Editing Software



Caution

- Do not install the software when the camera is connected to your computer with a USB cable.
- If software is already installed from a Caplio Software CD-ROM from a previous model, a message stating that the old software must be uninstalled before installing the new one is displayed.

Follow the message instructions and uninstall the old software before installing the new software. Functions of the old model can still be used as before.

If DU-10 is installed, it is replaced by Caplio Viewer (an upgraded version of DU-10). If the old software is uninstalled before the message is displayed, Caplio Viewer is not installed even if the new software is installed. (For how to uninstall the software, see P.203.)

- For Windows Vista, Windows XP or Windows 2000, administrator privileges are required to install the software.
- RICOH Gate La is not network-compatible. Use as a stand-alone application.

Here is an example of the Windows XP screen.

1 Start your computer and insert the Caplio Software CD-ROM in the CD-ROM drive.

Operating systems other than Windows Vista

- The installer screen appears automatically.

Windows Vista

- The Autorun screen appears automatically.
- Select [Run Autorun.exe]. The installer screen appears automatically.



2 Click [Installing the software].

Operating systems other than Windows Vista

- After a while, the [Choose Setup Language] screen appears.

Windows Vista

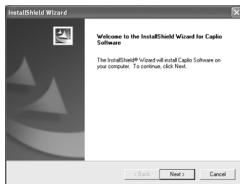
- A screen appears to confirm user account management.
- Select [Allow] for the access request to the computer. After a while, the [Choose Setup Language] screen appears.

3 Confirm the language, and then click [OK].

- The [Welcome to the InstallShield Wizard for Caplio Software] screen appears.

4 Click [Next].

- The [Choose Destination Location] screen appears.



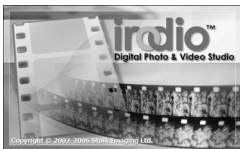
5 Confirm where you want to install and then click [Next].

- The [Select Program Folder] screen appears.



6 Confirm the destination location and then click [Next].

- The Irodio Photo & Video Studio installer starts. Install Irodio Photo & Video Studio following the messages displayed on the screen. Depending on your computer, it may take some time until the next screen is displayed.
- When installation of Irodio Photo & Video Studio is completed, a dialog box appears, indicating that all software applications have been installed.



7 Click [Finish].

- A dialog box indicating that installation of Caplio Software is complete appears.



8 Click [Finish].

9 Restart your computer.

- After restarting your computer, a Windows security warning message appears.

10 Click [Unblock] for RICOH Gate La for DSC.



Note-----

You can remove (uninstall) the software. (☞ P.203)

Installing the DeskTopBinder Lite

DeskTopBinder Lite is used for managing business documents. As well as still images captured with a digital camera, you can manage a variety of documents, including documents input by scanner, documents created with various applications and image files. You can also store files with different formats in a single document.



Note

- For details about the DeskTopBinder Lite, refer to the Introduction Guide, Setup Guide, Auto Document Link Guide, and Help supplied with the DeskTopBinder Lite.
- For how to use Auto Document Link, which is installed with DeskTopBinder Lite, refer to the Auto Document Link Guide.

Here is an example of the Windows XP screen.

1 Start your computer and insert the Caplio Software CD-ROM in the CD-ROM drive.

- The installer screen appears automatically.



2 Click [Installing DeskTopBinder Lite].

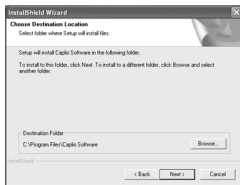
- After a few moments, the [Welcome to the InstallShield Wizard for Caplio Software S] screen appears.

3 Click [Next].

- After a few moments, the [Choose Destination Location] screen appears.

4 Confirm where you want to install and then click [Next].

- The [Select Program Folder] screen appears.



5 Confirm the destination location and then click [Next].

6 Click [OK].

7 Click [DeskTopBinder Lite].

- The DeskTopBinder Lite installer starts.
- Install DeskTopBinder Lite following the messages displayed on the screen.
- When the screen where you verify digital ID is displayed, click [OK].



Caution-----

- DeskTopBinder Lite cannot coexist with a different version of DeskTopBinder Lite, DeskTopBinder Professional, or Job Binding. Before installing DeskTopBinder Lite, uninstall these applications. The data used in the previous application can be saved and inherited by DeskTopBinder Lite. However, when the previous application is DeskTopBinder Professional, some functions will no longer be available.
- If you turned the camera off and then on again while connected to the computer with DeskTopBinder Lite open, reboot the computer with the camera connected.

Installing Other Software on Your Computer



Caution

- Do not install the software when the camera is connected to your computer with a USB cable.
- For Windows Vista, Windows XP or Windows 2000, administrator privileges are required to install the software.

Acrobat Reader

Acrobat Reader is required to display the operation manual (PDF file).

If the computer is running under Windows, Acrobat Reader can be installed. Acrobat Reader need not be installed if already installed on your computer.

1 Start your computer, and insert the included Caplio Software CD-ROM into the CD-ROM drive.

- The installer screen appears automatically.

2 Click [Browse CD-ROM Content].

- The files on the CD-ROM are listed.

3 Double-click the [Acrobat] folder.

4 Double-click the [English] folder.

5 Double-click [ar500enu] (ar500enu.exe).

- A screen appears to confirm user account management for Windows Vista. Select [Continue].

6 Install Acrobat Reader by following the messages displayed.



Uninstalling the Software



Caution

- For Windows Vista, Windows 2000/XP, administrator privileges are required to uninstall the software.
- If any other program is active or unsaved data remains, save the data and terminate the program before uninstalling.
- If you install both Irodio Photo & Video Studio and the DeskTopBinder Lite and then uninstall either one, camera connection to the computer may fail. In this case, uninstall both [Caplio Software] and [Caplio Software S] and then install only the required one.

Caplio Software

- 1** Click [Start] on the Windows task bar.
- 2** Select [Settings]-[Control Panel] ([Control Panel] for XP).
- 3** Double-click the [Add/Remove Programs] icon (or the [Add or Remove Programs] icon in Windows XP).
- 4** Select [Caplio Software] (select [Caplio Software S] if you have installed the DeskTopBinder Lite), and then click the [Change/Remove] button.
- 5** Confirm file deletion and click [OK].
 - The [Shared File Detected] dialog box appears.
- 6** Select the [Don't display this message again.] check box, and then click [Yes].
 - The uninstallation process begins. When it is finished, close the displayed window.

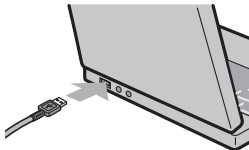
Irodio Photo & Video Studio

- 1** Click [Start] on the Windows task bar.
- 2** Select [Settings]-[Control Panel] ([Control Panel] for XP).
- 3** Double-click the [Add/Remove Programs] icon (or the [Add or Remove Programs] icon in Windows XP).
- 4** Select [Irodio Photo & Video Studio] and then click [Change/Remove].
- 5** Confirm file deletion and click [OK].
 - The uninstallation process begins. When it is finished, close the displayed window.
- 6** Restart your computer.

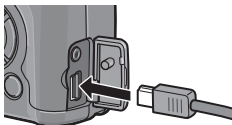
Downloading Images Using the RICOH Gate La

After installing the software on your computer, connect your camera to the computer.

- 1** Make sure the camera power is off.
- 2** Connect the USB cable to the USB port of your computer.



- 3** Connect the USB cable to the USB terminal of your camera.
 - Your camera turns on and the computer automatically reads the necessary files.



- 4** RICOH Gate La starts and image transfer begins automatically.
- 5** When image transfer is completed, disconnect the camera and the computer. (☞ P.208)



Caution

- Do not force the USB cable into the terminal.
- Do not apply excessive force with the USB cable connected.
- When using the USB cable, do not move the camera with the USB cable.



Note

- For how to use RICOH Gate La, refer to the "Software User Guide" (PDF file) contained in the provided CD-ROM. (☞ P.193)
- If image transfer does not begin, re-start your computer and perform steps 1 to 5 again.

Downloading Images Without Using RICOH Gate La

You can download images from the camera to a computer without having to use software.

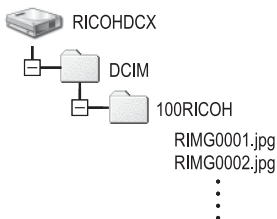
- 1 Make sure that the camera power is off.**
- 2 Connect the accessory USB cable to a USB port of your computer.**
- 3 Connect the USB cable to the USB terminal of your camera.**



Example of the display in Windows XP

- Your camera turns on.
- Your computer automatically reads a file necessary for recognizing the camera as a drive.
- After this preparation, the camera is displayed as a drive under [My Computer].

- 4 From the displayed drive, copy a file to the desired location.**



Example of the display in Windows XP

- Caution**-----
- Do not turn off the camera or disconnect the USB cable during image transfer.
 - If a file with the same name already exists at the destination, it is overwritten. If you do not want the file to be overwritten, transfer data to another folder, or change the file name of the file at the destination.

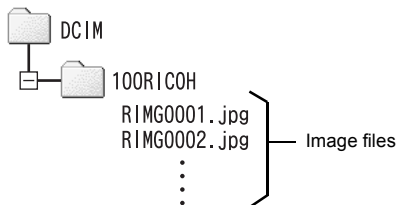
- Note**-----
- When an SD memory card is loaded, its files are displayed. Otherwise, files in the internal memory are displayed.



Downloading Images from an SD Memory Card-----

It is possible to download images from an SD memory card to the computer via a PC card slot or card reader. Depending on the type of PC card slot or card reader, a memory card adapter may be required when using an SD memory card. If the SD memory card can be used in the PC card slot, no memory card adapter is required.

- Images are stored in an SD memory card in the hierarchy shown below.



Example of the display in Windows XP

Card Reader

This is a device connected to a computer to read the contents of cards. In addition to the memory card adapter-type, there are card readers compatible with various types of cards, into which you can directly load an SD memory card.

Use a card reader that is compatible with your computer's operating system and the size of the SD memory card.

Disconnecting the Camera from Your Computer

Perform the following operations when disconnecting the camera from your computer. (The display is an example of Windows XP. The terms are different for other operating systems but the operations are the same.)

- 1** Double-click the [Safely Remove Hardware] icon at the right end of the task bar.
- 2** Select [USB Mass Storage Device] and click [Stop].
- 3** Check that [USB Mass Storage Device] is selected and click [OK].
- 4** Click [Close].
- 5** Disconnect the USB cable.



Note

- If the USB cable is disconnected without disabling the connection, the Unsafe Removal of Device screen may be displayed. Be sure to stop the connection before removing the USB cable.
- Do not disconnect the USB cable during image downloading. Make sure that downloading has completed, disable the connection, and then disconnect the cable.

For Macintosh

Refer to P.192 for Windows.

This camera supports the following Macintosh operating systems.

- Mac OS 9.0 to 9.2.2
- Mac OS X 10.1.2 to 10.4.9



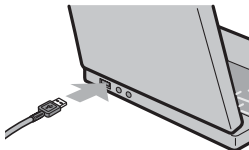
Caution

Mac OS 8.6 is not supported.

Downloading Images to Your Computer

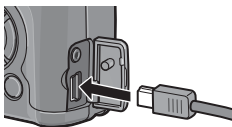
1 Make sure that the camera power is off.

2 Connect the accessory USB cable to a USB port of your computer.



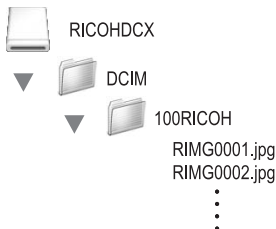
3 Connect the USB cable to the USB terminal of your camera.

- Your camera turns on.
- Your computer automatically reads the file necessary for recognizing the camera as a drive.
- After this preparation, the camera is displayed as a drive on the Desktop.



4 From the displayed drive, copy a file to the desired location.

- The figure below shows the folder configuration in the drive.
- When the contents of the internal memory are displayed, the drive name is [RICOHDCI].





Caution-----

- Do not force the USB cable into the terminal.
- Do not apply excessive force with the USB cable connected.
- When using the USB cable, do not move the camera with the USB cable.

Disconnecting the Camera from Your Computer

1 Drag and drop the displayed drive or the volume icon to the “Trash”.

- If a screen appears prompting you to enter the administrator’s password, enter the password.

2 Disconnect the USB cable.



Note-----

- You can also click [Eject] on the [Special] menu in Mac OS 9 or the [File] menu in Mac OS X to cancel the connection.
- If the USB cable is disconnected without disabling the connection, the Unsafe Removal of Device screen may be displayed. Be sure to stop the connection before removing the USB cable.
- Do not disconnect the USB cable during image downloading. Make sure that downloading has completed, disable the connection, and then disconnect the cable.
- When you connect your camera to a Macintosh computer, a file called “Finder .DAT/DS_Store” may be created in your SD memory card, which will appear as [Unmatched File] on your camera. You can delete this file from the SD memory card if you wish.

Troubleshooting

Error Messages

If an error message is displayed on the screen, take the corresponding action.



Error Message	Cause and Action	Refer to
Insert Card	No card is loaded. Insert a card.	P.31
Set Date.	The date is not set. Set the date.	P.188
File Number Over Limit	The file number limit has been exceeded. Use another card.	P.186 P.187
Unmatched File	The camera cannot display this file. Check the file contents on your computer, and then delete the file.	-
Insufficient Memory. Continue?	Because there is not sufficient capacity on the card, all the files cannot be copied. Use another card.	P.28
Protected	You are trying to delete a protected file.	P.135
Card Is Write- Protected.	The card is locked (write-protected). Unlock the card.	P.28
Print settings cannot be set for this file.	Print settings cannot be set for this file (movie, etc.).	-
Insufficient Memory/ Capacity short	Files cannot be stored. Make sure there is enough free space or delete unwanted files.	P.52 P.158 P.159
	The image print number limit has been exceeded. Select an image and set the number to 0.	P.140
Format internal memory	You must format the internal memory.	P.159
Format card	The card is not formatted. Format the card with this camera.	P.158
Card Error	Reformat the card. If, after doing so, the error message still appears, the card may be faulty. Do not use the card.	P.158
Writing Data	Writing file to memory. Wait until writing finishes.	-
No File	There are no files that can be played back.	-
Cannot Record	The storage capacity is 0. Switch to another card or the internal memory.	P.28

Camera Troubleshooting


Power Supply

Problem	Cause	Solution	Refer to
The camera does not turn on.	Battery is not loaded or is exhausted.	Load the rechargeable battery correctly or charge the battery as required. Use the AC adapter as required. Replace the alkaline batteries with new batteries.	P.31 P.30 P.225
	A (manganese dry cell or other) unacceptable battery is used.	Use the dedicated rechargeable battery or alkaline batteries.	P.26
	The AC adapter is not connected correctly.	Reconnect it properly.	P.225
	The camera is automatically turned off by auto power off.	Turn the camera back on.	P.33
	The battery is loaded in wrong direction.	Load correctly.	P.31
The camera turns off during use.	The camera was left unattended and unused, so auto power off turned it off.	Turn the camera back on.	P.33
	Battery is exhausted.	Charge the rechargeable battery or use the AC adapter. Replace the alkaline batteries with new batteries.	P.30 P.31 P.225
	A unacceptable battery is used.	Use the dedicated rechargeable battery or alkaline batteries.	P.26
The camera does not turn off.	Camera malfunction.	Remove the battery and load it again. Reconnect the AC adapter cable properly, if using.	P.31 P.225
The battery has adequate remaining power, but: <ul style="list-style-type: none"> The battery mark is displayed, indicating a low battery level. The camera turns off. 	A unacceptable battery is used.	Use the dedicated rechargeable battery or alkaline batteries.	P.26
Cannot charge the battery.	Battery has reached the end of its useful life.	Replace with a new battery.	P.31
Battery runs out quickly.	It is being used at extreme high or low temperatures.	-	-
	Many shots are being taken in dark places or other location requiring extensive use of flash.	-	-


Shooting

Problem	Cause	Solution	Refer to
The camera does not shoot even if you press the shutter release button.	Battery is exhausted.	Charge the rechargeable battery or use the AC adapter. Replace the alkaline batteries with new batteries.	P.30 P.31 P.225
	The camera is not on or it is not in the shooting mode.	Press the POWER button to turn the camera on or press the  (Playback) button to select the shooting mode.	P.33 P.47
	The camera is in playback mode.	Press the  button to select the shooting mode.	P.47
	The shutter release button is not pressed all the way.	Press the shutter release button all the way.	P.38
	The SD memory card is not formatted.	Format the card.	P.158
	The SD memory card is full.	Load a new card, or delete unwanted files.	P.31 P.52
	The SD memory card has reached the end of its useful life.	Load a new SD memory card.	P.31
	The flash is charging.	Wait until the Auto Focus/Flash lamp stops blinking.	P.44
	The SD memory card is locked.	Unlock the card.	P.28
Unable to view the shot image.	The contact surface of the SD memory card is dirty.	Wipe with a soft, dry cloth.	-
	The image confirmation time is too short.	Lengthen the image confirmation time.	P.176
Images do not appear on the picture display.	The camera is not on or the picture display is dark.	Turn the camera on or adjust the brightness of the picture display.	P.33 P.160
	The picture display is off.	Press the DISP. button to turn the picture display on.	P.56
	The VIDEO/AV cable is connected.	Disconnect the VIDEO/AV cable.	P.147
Although the camera is set to auto focus, it is unable to focus.	The lens is dirty.	Wipe clean with a soft, dry cloth.	P.18
	The subject is not in the center of the shooting range.	Shoot with focus lock.	P.38
	It is a hard-to-focus subject.	Shoot with focus lock or manual focus.	P.38 P.96
	You are too close to the subject.	Shoot with macro mode or move a little away from the subject.	P.43

Problem	Cause	Solution	Refer to
The picture is blurred.	You moved the camera when pressing the shutter release button.	Hold the camera with your elbows pressed against your body. Use a tripod.	P.36
	When shooting in a dark place (such as indoors), the shutter speed slows down and pictures become easily blurred.	Use the flash. Raise the ISO setting.	P.44 P.126
The flash does not fire or the flash cannot charge.	The flash is not open.	Slide the ⚡ (Flash) OPEN switch down to open the flash.	P.44
	The flash cover is not fully raised.	Do not press or cover the flash cover.	P.44
	The flash cannot be used in the following cases: <ul style="list-style-type: none"> • When auto bracket, white balance bracket, or color bracket is set • In multi-shot mode • In movie mode 	To shoot with the flash, change the settings or mode.	P.44 P.110 P.112 P.114 P.99 P.129
	The flash is set to flash off.	Open the flash. Use the ⚡ (Flash) button to cancel flash off.	P.44
	Battery is exhausted.	Charge the rechargeable battery or use the AC adapter. Replace the alkaline batteries with new batteries.	P.30 P.31 P.225
Even though the flash fired, the picture is dark.	The distance to the subject is greater than 3.0 m (9.8 ft).	Get closer to your subject and shoot.	P.44
	The subject is dark.	Adjust the light intensity of the flash.	P.109
	The light intensity of the flash is not appropriate.	Adjust the light intensity of the flash.	P.109
	The flash cover is not fully raised.	Do not press or cover the flash cover.	P.44

Problem	Cause	Solution	Refer to
The image is too bright.	The light intensity of the flash is not appropriate.	Adjust the light intensity of the flash. Alternatively, move a little away from the subject or illuminate the subject with another light source instead of using the flash.	P.109
	Subject is overexposed.	Correct the exposure. Decrease the exposure time.	P.120 P.79
	The brightness of the picture display is not appropriate.	Adjust the brightness of the picture display.	P.160
The image is too dark.	The shot was taken in a dark place while set to flash off.	Open the flash. Use the  (Flash) button to cancel flash off.	P.44
	The subject is underexposed.	Correct the exposure. Increase the exposure time.	P.120 P.79
	The brightness of the picture display is not appropriate.	Adjust the brightness of the picture display.	P.160
The image lacks natural color.	The picture was shot in conditions that made it difficult for auto white balance to adjust the white balance.	Add a white object to the composition or use a white balance mode other than [AUTO].	P.122
The date or recording information does not appear on the screen.	Display is set to no symbol display.	Press the DISP. button to change the display.	P.56
The brightness of the picture display changes during AF.	You are using AF in a dark place or when the auto focus range and surrounding brightness are different.	This is normal.	-
There is a vertical smear on the image.	This is a phenomenon that occurs when a bright subject is shot. It is called the smear phenomenon.	This is normal.	-
The level indicator is not displayed.	[Level Setting] is set to [Off] or [Sound].	Set [Level Setting] to [Display] or [Disp + Snd].	P.173
	The display is set to a setting other than normal symbol display or histogram.	Press the DISP. button to change the display to normal symbol display or histogram.	P.56
	The camera is upside down (shutter release button is on the bottom).	Hold the camera correctly.	-
The image is tilted even though it was shot with the level indicator in the middle or while the level sensor sound was sounding.	You shot the image while moving, such as on an amusement ride.	Shoot in an environment that is not moving.	-
	The subject is not level.	Check the subject.	-

Playback/Deleting

Problem	Cause	Solution	Refer to
Cannot play back, or the playback screen does not appear.	The camera is not in playback mode.	Press the  (Playback) button.	P.47
	The VIDEO/AV cable is not connected properly.	Reconnect it properly.	P.147
	The [Video Out Mode] setting is incorrect.	Set it to the correct format.	P.191
The contents of the SD memory card cannot be played back, or the playback screen does not appear.	No SD memory card is loaded, or an SD memory card with no stored images is loaded.	Load a card with stored images.	P.31
	You played back an SD memory card that was not formatted with this device.	Load a card that was formatted and recorded with this device.	P.31 P.158
	You played back an SD memory card that was not recorded normally.	Load a normally recorded card.	-
	The contact surface of the SD memory card is dirty.	Wipe with a soft, dry cloth.	-
	There is something wrong with the SD memory card.	Play back images from another card and if there is nothing wrong with the card, the camera is okay. There may be something wrong with the card, so do not use it.	-
The picture display turned off.	Battery is exhausted.	Charge the rechargeable battery or use the AC adapter. Replace the alkaline batteries with new batteries.	P.30 P.31 P.225
	The camera was left unattended and unused, so auto power off turned it off.	Turn the camera back on.	P.33
A file cannot be deleted.	The file is protected.	Unprotect the file.	P.136
	The SD memory card is locked.	Unlock the card.	P.28
Cannot format the SD memory card.	The SD memory card is locked.	Unlock the card.	P.28

Other Problems

Problem	Cause	Solution	Refer to
Cannot load the SD memory card.	The card is facing the wrong way.	Load correctly.	P.31
The camera does not operate even when the buttons are pressed.	Battery is exhausted.	Charge the rechargeable battery or use the AC adapter. Replace the alkaline batteries with new batteries.	P.30 P.31 P.225
	Camera malfunction.	Press the POWER button to turn the camera off, and then press the POWER button to turn the camera on again.	P.33
		Remove the battery and load it again. Reconnect the AC adapter cable properly, if using.	P.31 P.225
The date is incorrect.	The correct date/time are not set.	Set the correct date/time.	P.188
The set date disappeared.	The battery was removed.	If the battery is removed for about one week, the date setting will be lost. Make the settings again.	P.188
Auto power off does not work.	Auto power off is set to [Off].	Set the time for auto power off.	P.175
The beep sound cannot be heard.	The beep sound volume is turned off.	Use [Vol. Settings] to set the volume to a setting other than mute.	P.172
Images do not appear on the TV.	The [Video Out Mode] setting is incorrect.	Set it to the correct format.	P.191
	The AV cable is not connected.	Connect the AV cable properly.	P.147
	The TV is not correctly set to VIDEO IN.	Check that the TV is correctly set to VIDEO IN.	-

Software and Computer Troubleshooting

For details about the software, refer to the “Software User Guide” (PDF file).

Warning Messages Under Windows XP Service Pack 2 and Windows Vista

When software for your Ricoh digital camera is used on a computer with Windows XP Service Pack 2 or Windows Vista installed, the following warning message may appear at software activation or USB connection.

With this in mind, refer to the following:

The screenshots are examples when using Windows XP.

When this warning message is displayed:

- 1 Check the information provided on the message screen to make sure that it comes from a reputable source, and then click [Unblock].



Caution

If you do not recognize the program, you should block it because it may be a virus. Click [Keep Blocking] to prevent the program from connecting to the Internet.

If you clicked [Keep Blocking]:

Follow the steps below to check the Windows Firewall settings.

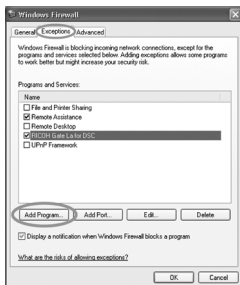
- 1 Click [Start] and then [Control Panel].

- 2 Double-click [Windows Firewall].

- If [Windows Firewall] is not displayed, click [Switch to Classic View] at the top left of the window.



- 3 Click the [Exceptions] tab.
- 4 Check that the software is in [Programs and Services].
- 5 Click [Add Program] to add software that uses the network.



If you clicked [Ask Me Later]:

Each time the program is activated, the [Windows Security Alert] dialog box appears. Then you can select [Unblock].

Specifications

Image Sensor		10.01 million effective pixels (Total 10.3 million pixels), 1/1.75" CCD
Lens	Focal Length	5.9 mm (equivalent to 28 mm on a 35-mm camera)
	F-aperture	F2.4 to F11 (Auto shooting mode Use with ND filter when F7.1 or higher)
	Shooting Distance	Approx. 30 cm to ∞ (from the front edge of the lens) Approx. 1.5 cm to ∞ (Macro shooting, from the front edge of the lens)
	Lens Construction	6 elements in 5 groups (2 aspherical lens elements with 3 surfaces)
Zoom Magnification		Digital zoom at 4.0 times, Auto resize zoom at approx. 5.7 times (VGA image)
Focus Modes		Multi AF (CCD method)/Spot AF (CCD method)/MF/Snap/ ∞ (with Focus Lock, AF Aux. Light)
Shutter Speed	Still Image	180, 120, 60, 30, 15, 8, 4, 2, 1 to 1/2000 seconds (The upper and lower limits differ for each shooting mode and flash mode.)
	Movie	1/30 to 1/2000 seconds
Exposure Control	Exposure Metering Mode	Multi Light Metering (256 segments)/Center-weighted Light Metering/Spot Metering (TTL-CCD Metering, AE Lock available)
	Exposure Mode	Program AE, Aperture Priority AE, Manual Exposure
	Exposure Compensation	Manual exposure compensation (+2.0 to -2.0EV in 1/3EV Steps), Auto bracket function (-0.5 EV, ± 0 , +0.5 EV/ -0.3 EV, ± 0 , +0.3 EV)
ISO Sensitivity (Standard Output Sensitivity)		Auto/Auto-Hi/ISO 80/ISO 100/ISO 200/ISO 400/ISO 800/ISO 1600
White Balance Mode		Auto/Outdoors/Cloudy/Incandescent Lamp/Fluorescent Lamp/Manual Settings/Detail/White balance bracket function
Flash	Flash Mode	Auto flash (during low light and when subject is backlight)/Red-eye Flash/Flash On/Flash Synchro/Flash Off
	Built-in flash Range	Approx. 20 cm to 3.0 m (ISO Auto)
	Flash Compensation	± 2.0 EV (1/3 EV Steps)
Picture Display		2.7" Transparent Amorphous Silicon TFT LCD, approx. 230,000 pixels
Shooting Mode		Auto shooting mode/Program shift mode/Aperture priority mode/Manual exposure mode/Scene mode (Text Mode/Movie/Skew Correct Mode)/My Settings Mode
Picture Quality Mode ^{*1}		F (Fine), N (Normal), RAW (DNG file format) ^{*2}
Number of Recorded Pixels	Still Image	3648 × 2736, 3648 × 2432, 2736 × 2736, 3264 × 2448, 2592 × 1944, 2048 × 1536, 1280 × 960, 640 × 480
	Movie	640 × 480, 320 × 240
	Text	3648 × 2736, 2048 × 1536
Recording Media		SD memory card, SDHC memory card, MultiMedia card, Internal Memory (approx. 54 MB)

Recording Data Capacity	3648 × 2736	N: approx. 2082 KB/Screen, F: approx. 3617 KB/Screen, RAW: approx. 18.2 MB/Screen
	3648 × 2432	N: approx. 1854 KB/Screen, F: approx. 3219 KB/Screen, RAW: approx. 16.2 MB/Screen
	2736 × 2736	N: approx. 1570 KB/Screen, F: approx. 2721 KB/Screen, RAW: approx. 13.7 MB/Screen
	3264 × 2448	N: approx. 1673 KB/Screen
	2592 × 1944	N: approx. 1068 KB/Screen
	2048 × 1536	N: approx. 680 KB/Screen
	1280 × 960	N: approx. 365 KB/Screen
	640 × 480	N: approx. 95 KB/Screen
Recording File Format	Still Image	JPEG (Exif Ver. 2.21) ^{1,3} , RAW (DNG)
	Movie	AVI (Open DML Motion JPEG Format Compliant)
	Compression Format	JPEG Baseline Format Compliant (Still image, movie)
Other Major Shooting Functions	Cont/S-Cont/M-Cont, Self-timer (operation time: approx. 10 seconds, approx. 2 seconds), Interval shooting (shooting interval: 5 seconds to 3 hours, in increments of 5 seconds) ⁴ , Color bracket, B&W (TE), Color space set, Noise reduction, Histogram, Grid guide, Depth of field display, Enlarge photo icon, Electronic level, Hot shoe	
Other Major Playback Functions	Auto Rotate Playback, three-frame/list view, Magnify (maximum ×16), Resize	
Interface	USB2.0 (High-Speed USB) Mini-B, Mass storage ⁵ audio output 1.0Vp-p (75 Ω)	
Video Signal Format	NTSC, PAL	
Power Supply	Rechargeable Battery DB-60 (3.7 V) × 1	
	AAA Dry Alkaline Battery, AAA Nickel-Hydrogen Battery, AAA Oxiride Battery × 2	
	AC adapter (AC-4c Optional): 3.8 V	
Battery Consumption ⁶	Usage time of DB-60: Approx. 370 pictures; Usage time of AAA alkaline batteries: Approx. 45 pictures ⁷ (based on CIPA standard)	
Dimensions	107.0 mm (W) × 58.0 mm (H) × 25.0 mm (D) (excluding projecting parts)	
Weight	Camera: Approx. 168 g (excluding battery, SD memory card, and strap) Accessories: Approx. 30 g (battery and strap)	
Tripod Hole Shape	1/4-20UNC	
Date Maintain Time	Approx. 1 week	
Operating Temperature	0°C to 40°C	
Operating Humidity	85% or less	
Storage Temperature	-20°C to 60°C	

¹ The picture quality mode that can be set varies depending on the image size.

² A JPEG file in Normal 640 or in Fine/Normal mode with the same size as the RAW file is recorded at the same time. The DNG file format is a RAW image file format and is the standard format of Adobe Systems.

³ Compatible with DCF and DPOF. DCF is the abbreviation for "Design rule for Camera File system," a JEITA standard. (Fully compatibility with other devices is not guaranteed.)

⁴ When the flash is set to [Off].

- *5 Mass storage mode is supported by Windows Me, 2000, XP, Vista, Mac OS 9.0 - 9.2.2, and Mac OS X 10.1.2 - 10.4.9.
- *6 The number of remaining shots is based on the CIPA standard and may vary depending on usage conditions. This is for reference only.
- *7 Use of Panasonic AAA alkaline batteries.

Number of Images That Can be Stored in Internal Memory/SD Memory Card

The following table shows the approximate number of images that can be recorded in the internal memory and onto an SD memory card at various image size and picture quality settings.

Mode	Quality	Image Size	Internal Memory	256 MB	512 MB	1 GB	2 GB	4 GB	8 GB
Still Image	RAW	3648 × 2736	2	13	26	51	105	207	423
	F	3648 × 2736	14	62	126	243	495	973	1989
	N	3648 × 2736	24	109	219	422	853	1676	3426
	RAW	3648 × 2432	3	15	30	58	118	232	475
	F	3648 × 2432	15	70	142	273	553	1087	2222
	N	3648 × 2432	27	122	247	476	960	1885	3854
	RAW	2736 × 2736	3	17	35	68	140	274	561
	F	2736 × 2736	18	83	168	323	653	1284	2624
	N	2736 × 2736	32	144	291	559	1138	2235	4568
	N	3264 × 2448	30	135	273	525	1059	2080	4253
	N	2592 × 1944	47	213	430	828	1661	3261	6667
	N	2048 × 1536	73	331	667	1285	2560	5027	10277
	N	1280 × 960	133	599	1208	2323	4726	9282	18973
	N	640 × 480	497	2227	4488	8632	15359	30159	61643
Text Mode		3648 × 2736	24	109	219	422	853	1676	3426
		2048 × 1536	73	331	667	1285	2560	5027	10277
Movie	640 × 480 15Frame/S		1 Min. 22 Sec.	6 Min. 7 Sec.	12 Min. 19 Sec.	23 Min. 42 Sec.	48 Min. 13 Sec.	99 Min. 8 Sec.	193 Min. 30 Sec.
	640 × 480 30Frame/S		41 Sec.	3 Min. 5 Sec.	6 Min. 14 Sec.	11 Min. 59 Sec.	24 Min. 23 Sec.	50 Min. 10 Sec.	97 Min. 55 Sec.
	320 × 240 15Frame/S		2 Min. 40 Sec.	11 Min. 57 Sec.	24 Min. 5 Sec.	46 Min. 19 Sec.	94 Min. 11 Sec.	193 Min. 41 Sec.	378 Min. 2 Sec.
	320 × 240 30Frame/S		1 Min. 22 Sec.	6 Min. 7 Sec.	12 Min. 19 Sec.	23 Min. 42 Sec.	48 Min. 13 Sec.	99 Min. 8 Sec.	193 Min. 30 Sec.



Note

- The maximum recording time is the estimated total recording time. The maximum recording time per shooting is 90 minutes or the equivalent of 4 GB.
- The number of remaining shots displayed on the picture display may differ from the actual number of shots, depending on the subject.
- Movie recording time and the storage capacity of still pictures may vary depending on the recording destination (internal memory or SD memory card), shooting conditions, and the type and manufacturer of the SD memory card.
- A high speed memory card is recommended when shooting for long periods.

Optional Accessories

The GR DIGITAL II can be used with the items (sold separately) listed below.

Item	Model	Remarks
AC Adapter	AC-4c	Used for power supply from a household outlet to the camera.
Rechargeable Battery	DB-60	Rechargeable battery for use with this camera.
Battery Charger	BJ-6	Used to charge the rechargeable battery (DB-60).
Wide Conversion Lens	GW-1	A wide conversion lens that enables wide-angle shooting at a lens magnification of 0.75 times (equivalent to a 21-mm wide-angle lens on a 35-mm camera). Use with the hood & adapter (case included).
Tele Conversion Lens	GT-1	Used for shooting with a standard range equivalent to 40-mm on a 35-mm. A tele conversion lens with a lens magnification of 1.43 times. Use with the hood & adapter (case included).
Hood & Adapter	GH-1	Includes a hood to protect the lens from sunlight and an adapter for ϕ 37-mm general-use filters. These can be used to enhance the shooting quality when the subject is backlit.
External Viewfinder	GV-1	Optical viewfinder attaches to the hot shoe. Comes with frames that are equivalent to 21-mm and 28-mm on a 35-mm camera and a case.
Mini External Viewfinder	GV-2	Compact optical viewfinder attaches to the hot shoe. Comes with a frame that is equivalent to 28-mm on a 35-mm camera (with an indicator for shooting at a vertical/horizontal ratio of 1:1) and a case.
Cable Switch	CA-1	Used to release the camera shutter.
Neck Strap	GS-1	A double-loop neck strap with embroidered GR DIGITAL logo.
	ST-2	A double-loop neck strap with embroidered Ricoh logo.
Soft Case	GC-1	Compact leather camera case (with belt loop). This case cannot accommodate the camera with the external viewfinder attached.
Soft Case (Support GV-2)	GC-2	This leather camera case has a belt loop and can accommodate the camera with the GV-2 mini external viewfinder attached.

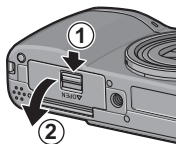
- Before using an optional accessory, see the documentation that came with the product.
- You cannot use the internal flash when using the wide conversion lens, tele conversion lens, and hood.

Using the AC Adapter (sold separately)

When shooting or viewing still images for a long time, or when connecting to your computer, use of the AC adapter (sold separately) is recommended.

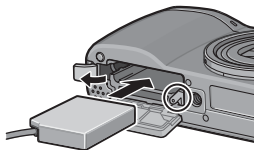
If you have already used this camera, make sure it is turned off before loading the AC adapter coupler.

- 1 Slide the release lever toward OPEN to open the battery/card cover.**



- 2 Insert the AC adapter coupler.**

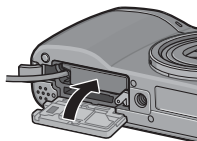
- When the AC adapter coupler is loaded in place, it is locked with the hook shown in the figure.




- 3 Open the power (DC input) cable cover and place the cable outside.**

- 4 Close the battery/card cover and slide the release lever in the opposite direction of OPEN to lock it in place.**

- 5 Plug the power cord into an outlet.**



Caution

- When closing the battery/card cover, slide the release lever and be sure to lock it in place.
- Be sure to attach the AC cable and plug the power cord into the outlet firmly.
- When you are not using the camera, unplug the AC adapter from the camera and the power outlet.
- If you disconnect the AC adapter from the camera or the plug from the outlet while the camera is in use, data may be lost.
- If you are using the AC adapter,  may appear. This does not indicate a malfunction and you can continue to use the camera.
- When using the AC adapter, do not carry the camera by the cable of the AC adapter.

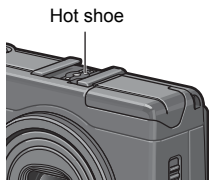
Disconnecting the AC Adapter

Make sure the camera is turned off before disconnecting the AC adapter.

- 1** Unplug the power plug from the outlet.
- 2** Slide the release lever toward **OPEN** to open the battery/card cover.
- 3** Remove the AC adapter coupler from the camera.
- 4** Close the battery/card cover and slide the release lever in the opposite direction of **OPEN** to lock it in place.

Using the External Flash

The camera has a hot shoe, allowing you to attach an external flash (available in stores).



The following external flashes are recommended for use with this camera.

Distributor	Item	Model
Sigma	EF-530 DG SUPER	SA-STTL
Sigma	EF-530 DG ST	SA-STTL

Using a recommended flash

- 1** Close the flash cover (☞ P.18).
- 2** With the camera and external flash powered off, attach the external flash to the hot shoe.
- 3** Turn on the external flash.
- 4** Turn on the camera.
 - The external flash symbol appears on the picture display.



Note

- The internal flash will not fire while the external flash symbol appears on the picture display.
- If the external flash is not recognized, turn off the flash and the camera, and then remove and reattach the external flash.

Using a non-recommended external flash

- 1** Close the flash cover (👉 P.18).
- 2** With the camera and external flash powered off, attach the external flash to the hot shoe.
- 3** Turn on the camera, turn the mode dial to **A** or **M**, and set the aperture value (👉 P.78, P.79).
- 4** Set the ISO sensitivity to a value other than [Auto] (👉 P.126).
- 5** Turn on the external flash, turn its mode to **Auto**, and set the aperture value and ISO sensitivity to the same values on the camera.
 - Be sure to turn off the external flash before detaching the external flash from the camera.



Caution

- Camera shake may occur when using slower shutter speeds.
- When using a commercially-available external flash that is not in the list of recommended flashes (👉 P.227), make sure the flash has the following specifications.
 - It must not have a signal terminal other than an X contact.
 - The polarity of the X contact must be positive (+).
 - The voltage of the X contact must not exceed 20V.
- You cannot use the internal flash when an external flash is attached as this can cause injury or damage.
- Irrespective of flash setting, a flash ON signal is output to the X contact of the hot shoe. To stop an external flash, use a switch on the flash.
- Exposure may not be appropriate even when the aperture value and ISO sensitivity of the external flash are the same as those of the camera. If so, change the aperture value and ISO sensitivity of the flash.
- Use an external flash with a lighting angle that covers the angle of view of the shooting lens.
- Use an external flash basically at a distance where the internal flash is not adequate (long distance). Shooting at a short distance with an external flash may result in over-exposure of the subject.

Functions Whose Defaults are Restored When Camera is Turned Off

Turning the camera off resets some function settings to their defaults.

The table below indicates whether or not the function is reset to its default when the camera is turned off.

O : setting is saved × : setting is reset

Type	Function		Default Settings
Shooting options	Pic Quality/Size	O	N3648(10M)
	Focus	O	Multi AF
	Exposure Metering	O	Multi
	Continuous Mode	×	Off
	Img Set	O	Normal
	Flash Expo.Comp.	O	0.0
	Auto Bracket	O	Off
	Noise Reduction	O	Off
	Interval	×	0 Sec.
	Date Imprint	O	Off
	Exposure Comp.	O	0.0
	White Balance	O	AUTO
	ISO Setting	O	Auto
	Macro	O	Macro Off
	Flash	O	Flash Off
	Self-Timer	×	Self-Timer Off
	Movie Size	O	320
	Frame Rate	O	30Frame/S
	Density	O	Normal
Size (Text Mode)	O	3648(10M)	
Playback options	Volume setting for movies	O	-

O : setting is saved × : setting is reset

Type	Function		Default Settings
Items set with the setup menu	LCD Brightness	O	-
	Reg. My Settings	O	-
	ISO Auto-High	O	AUTO 400
	Function Button	O	AF/MF
	Fn Set. My Set.	O	Off
	ADJ Lever Set. 1	O	Expo. Cmp
	ADJ Lever Set. 2	O	Wht. Bal.
	ADJ Lever Set. 3	O	ISO
	ADJ Lever Set. 4	O	Off
	ADJ Shutter	O	Off
	Zoom Button	O	Expo. Cmp
	Digital Zoom	O	Normal
	Operation Sounds	O	All
	Vol. Settings	O	■ ■ □ (Medium)
	Level Setting	O	Off
	AF Aux. Light	O	On
	Auto Power Off	O	1 Min.
	LCD Confirm.	O	0.5 Sec.
	Info Disp	O	Off
	AutoRotate	O	On
	CL-BKT B&W (TE)	O	On
	RAW/JPEG Setting	O	Fine
	Color Space Set	O	sRGB
	Enlrge Photo Icon	O	Off
Sequential No.	O	On	
Date Settings	O	-	
Language/言語	O	*	
Video Out Mode	O	*	

* The default setting varies depending on where you purchased the camera.

Using Your Camera Abroad

AC Adapter (Model AC-4c), Battery Charger (Model BJ-6)

This AC adapter and 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 picture display.
- 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 picture display or panel is exposed to sunlight, they may become washed out and images may become hard to view.
- The picture display 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 picture display.
- 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 picture display is easily scratched, do not rub hard objects against it.
- Clean the surface of the picture display 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 batteries or AC adapter 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 be 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 "Camera User Guide"), 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, 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 have been changed or are 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)

An AC adapter with a ferrite core must be used for RF interference suppression.

COMPLIANCE INFORMATION STATEMENT

Product Name: DIGITAL CAMERA

Model Number: GR DIGITAL II

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 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 Best conforme a 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.

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<http://www.service.riohpmmc.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 "Troubleshooting" (☞ P.211) in this manual. If the issues still persist, please contact a Ricoh office.

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