



RICOH

RDC-6000

IMAGE CAPTURING DEVICE

Operation Manual

To ensure correct use of your digital camera, read this manual carefully before use. Keep the manual handy for future reference.

Introduction

Thank you for purchasing a Ricoh digital camera. This manual explains the correct handling procedures and precautions for your camera. To ensure the best performance, please read the manual thoroughly before using the camera. Keep the manual handy for quick future reference.

Ricoh Co., Ltd.

Test Shots

Check that your camera is recording the images correctly by taking a number of test shots.

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Exemption from Liability

Ricoh Co., Ltd. assumes no liability for failure to record or play back images caused by malfunction of the digital camera.

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 therefor.

Radio Interference

Operating the digital camera 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.

- 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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Safety Precautions

Warning Symbols

Various symbols are used throughout this instruction manual and on the product to prevent physical harm to you or other people and damage to property. The symbols and their meanings are explained below.



Warning

This symbol indicates matters that may lead to death or serious injury if ignored or incorrectly handled.




Caution


This symbol indicates matters that may lead to injury or physical damage if ignored or incorrectly handled.


Sample Warnings



The  symbol alerts you to actions that must be performed.



The  symbol alerts you to prohibited actions.

The  symbol may be combined with other symbols to indicate that a specific action is prohibited.

● Examples



Do not touch



Do not disassemble

Observe the following precautions to ensure safe use of this equipment.



Warning



- Turn off the power immediately in the event of irregularity, such as the equipment emitting smoke or a strange smell. Remove the batteries as soon as possible, being careful to avoid electric shocks or burns. If you are drawing power from a household electrical outlet, be sure to unplug the power cord from the outlet to avoid fire or electrical hazards. Discontinue use of the equipment immediately if it is malfunctioning. Contact the nearest service center at your earliest convenience.

Warning



- Turn off the power immediately if any metallic object, water, liquid or other foreign object gets into the equipment. Remove the batteries as soon as possible, being careful to avoid electric shocks or burns. If you are drawing power from a household electrical outlet, be sure to unplug the power cord from the outlet to avoid fire or electrical hazards. Discontinue use of the equipment immediately if it is malfunctioning. Contact the nearest service center at your earliest convenience.



- Avoid any contact with the liquid crystal inside the LCD monitor, should the monitor be damaged. Follow the emergency measures below in the following circumstances.
 - SKIN: If any of the liquid crystal gets on your skin, wipe it off and rinse the affected area thoroughly with water, then wash well with soap.
 - EYES: If it gets in your eyes, wash your eyes with clean water for at least 15 minutes and seek medical advice immediately.
 - INGESTION: If any of the liquid crystal is ingested, rinse the mouth out thoroughly with water. Have the victim drink a large amount of water and induce vomiting. Seek medical assistance immediately.



- Follow these precautions to prevent the batteries from leaking, overheating, igniting or exploding.
 - Do not use batteries other than those specifically recommended for the equipment.
 - Do not carry or store together with metal objects such as ballpoint pens, necklaces, coins, hairpins, etc.
 - If a strange odor, color change, etc., is noticed either during use or during charging, disconnect the camera immediately.

Warning



- Please observe the following in order to prevent fire, electrical shock or cracking due to the adapter.
 - Use only the indicated power supply voltage. Also avoid bunching wiring and extension cords.
 - Do not damage, bundle or alter power cords. Also, do not place heavy objects on power cords, or strongly pull or bend power cords.
 - Do not connect or disconnect the power plug with wet hands. Always grip the plug section when disconnecting a power cord.
 - Do not wrap in cloth, etc., during use.



- Keep the equipment out of the reach of children. Their inability to read and understand warnings and safety precautions may lead to accidents.



- Keep this product out of the reach of children. Children cannot understand and observe the items in “Safety Precautions” and “Usage Precautions” and can thus cause a malfunction to occur.



- Do not touch the internal components of the equipment if they become exposed as a result of being dropped or damaged. The high-voltage circuitry in the equipment could lead to an electric shock. Remove the batteries as soon as possible, being careful to avoid electric shocks or burns. Take the equipment to your nearest dealer or service center if it is damaged.



- Do not attempt to disassemble, repair or alter the equipment yourself. The high-voltage circuitry in the equipment poses significant electrical hazard.



- Do not use the equipment in the bathroom or shower as this could result in fire or electric shock.

Warning



- Do not use the equipment near flammable gases, gasoline, benzene, thinner or similar substances to avoid the risk of explosion, fire or burns.
- Do not use the equipment in aircraft or other locations where usage is restricted or prohibited as this may lead to disasters or accidents.



- Wipe off any dust that accumulates on the electrical plug as this may lead to fire.
- Use only the specified AC adapters (supplied) for this equipment in household electrical outlets. Other adapters pose the risk of fire, electric shock or injury.



- To avoid the risk of fire, electric shock or injury, do not use the AC adapter with commercially available electronic transformers when traveling abroad.

Observe the following precautions to ensure safe use of this unit.

Caution



- Contact with fluid leaking from a battery can lead to burns. If part of your body comes in contact with a damaged battery, wash the area with water immediately. (Do not use soap.) If a battery starts to leak, remove it immediately from the equipment and wipe the battery chamber thoroughly before replacing it with a new battery.



- Plug the power cords securely into the electrical outlets. Loose cords pose a fire hazard.



- Do not allow the camera to get wet. In addition, do not operate it with wet hands. Both pose the risk of electric shock.



- Do not fire the flash at drivers of vehicles, such as bicycles, cars and trains, as this may cause the driver to lose control and result in a traffic accident.



- Do not grasp batteries with metallic tweezers as this may form a short circuit and lead to fire or electric shock.

Safety Warnings for Accessories

- Safety warnings for the optional accessories, such as the remote control unit or the AC adapter, are contained in the instruction manual provided with each product and should be read thoroughly before operating the equipment.

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Camera Features

● 2,140,000-pixel resolution compact camera

With a 2,140,000-pixel resolution CCD, the compact camera produces high-quality, high-resolution images (1600 × 1200). The camera is so light you can carry it with you anywhere.

● Immediate recording

Using the camera is as simple as clicking the shutter release button. Images thus shot are written to a SmartMedia memory card (2/4/8/16/32/64 MB).

● Instant playback

You can instantly review recorded image files simply by switching to Play mode. You can also magnify the images zoom playback or display several images at once (6-image display).

● Multiple image recording modes

The RDC-6000 offers multiple image recording modes to suit your specific photographic needs, including F (Fine) mode, which puts the emphasis on image quality, N (Normal) and E (Economy) mode, which allows you to capture more images than any other mode.

● Digital zoom

The 4.0 × zoom lens allows you to capture subjects in a variety of compositions, from close-ups to shots with a background.

● Natural colors

The white balance feature allows you to capture a subject in its natural colors under any lighting conditions, indoors or outdoors.

● Close-ups

Macro mode for taking close-up shots at distances up to 13 cm (5.1 inches) is ideally suited for taking pictures of flowers and small objects, etc.

● Motion picture

Motion pictures can be recorded in two different image quality modes.

● Monitors images on the TV screen

Connect the digital camera to a TV set with the video interface cable supplied and you can display your image files on the TV screen. You can also connect the camera to a video deck or video printer to dub the images onto a videotape or make full color prints.

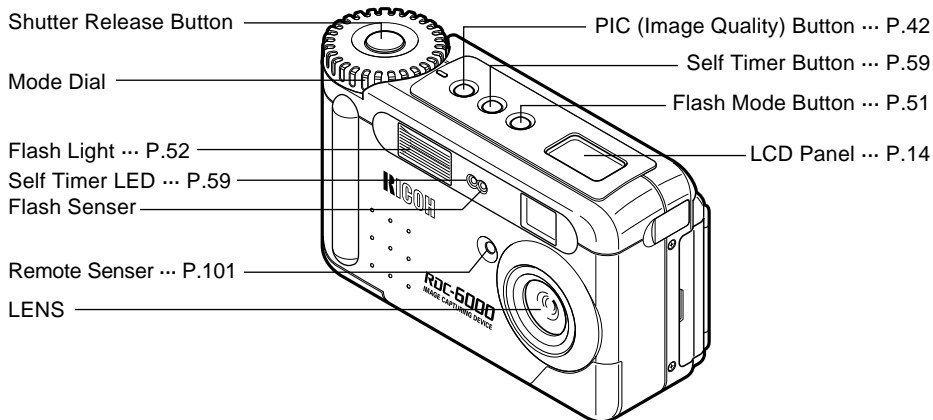
● Transfers images to a PC

You can transfer the images onto a PC using software compatible with the digital camera. When loaded onto a PC, the images can be printed on a color printer or color copier.

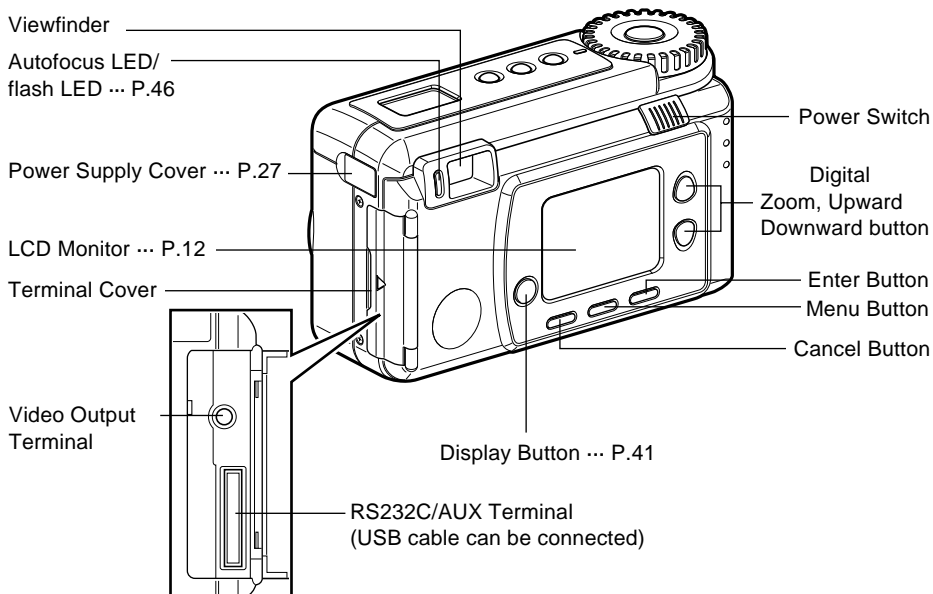
Parts & Names

■ Camera Body

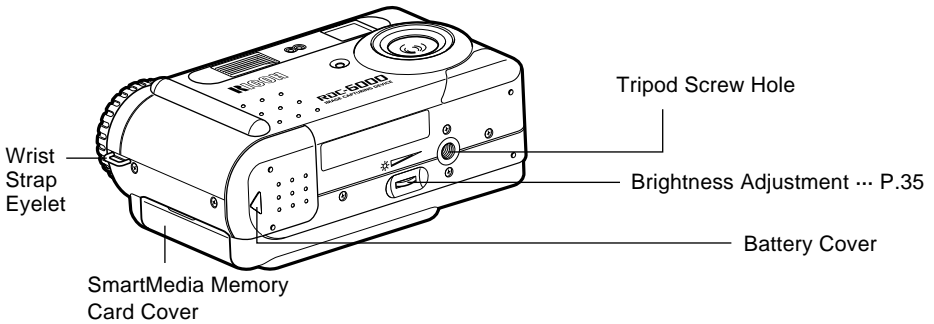
Front



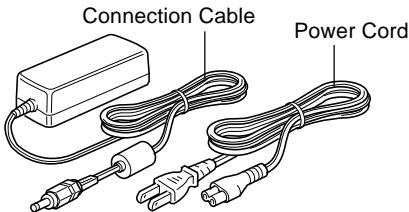
Back



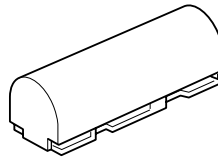
■ Bottom



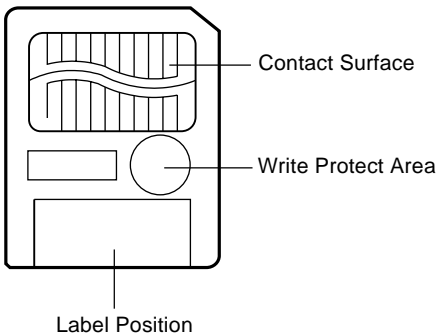
■ AC Adapter (100V – 240V)



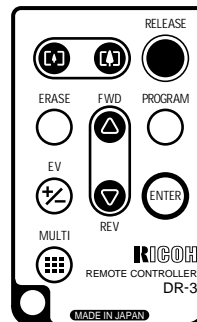
■ Rechargeable Battery DB-20



■ SmartMedia Memory Card



■ Remote Control Unit (Optional) (DR-3)



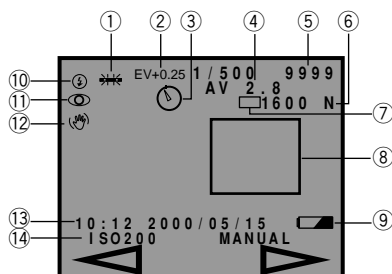
Explanation of LCD Monitor Displays

The LCD monitor or the LCD panel displays symbols and figures showing the status of your digital camera, such as the battery level, the number of pictures that can be taken, and the mode settings.

LCD Monitor

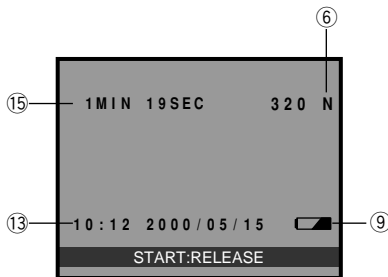
■ Recording Mode Display

- Recording Mode Display (Still image, Text, Quick shooting)

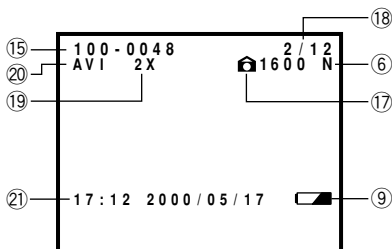


- White Balance Indicator (Auto, Daylight ☀, Overcast ☁, Tungsten 🔥, Fluorescent 💡, User Define (U), W/B Calibration (W)) (P.56)
- EV +/- (P.54)
- Self-Timer (⌚) (P.59)
- Exposure Mode Display (P.53)
- Recording Data Indicator (Displays the remaining no. of pictures)
- PIC Mode (1600, 800, 640, F, N, E) (P.42)
- Recording Mode (□, △, ▭) (P.43)
- Manual Focus Indicator (Displays when in manual focus)
- Battery (🔋) (P.26)
- Flash Mode (🔦, 🔦, 🔦, 🔦 Flashing) (P.51)
- Redeye Reduction Mode (👁) (P.64)
- Exposure Warning (⚠) (P.47)
- Date & Time Display
- ISO Sensitivity (P.64)
- Recordable time
- File Name
- Image Protected Mark (🔒) (P.80)
- Number of Image
- Zoom Playback (P.44)
- AV1 file (Motion Picture file)
- Shooting Date and Time

■ Motion Picture Mode Display



■ Playback Mode Display







• All items of information are shown for illustration purposes. During actual camera operation, only the relevant items are displayed.

■ Warning Message

If any of the warning messages listed below appear on the camera's LCD monitor, read the corresponding explanation and take the corrective action suggested.

Warning Message	Status	Explanation and Remedy	Reference Page
	Flashing	Indication low batteries. Have replacement batteries ready	P.27
	Lit	System in processing	–
CARD FULL	Flashing	The SmartMedia Memory Card has run out of memory	P.29
NO CARD	Flashing	The SmartMedia memory card is out of position. Mount a SmartMedia memory card	P.30
NO IMAGE	Lit	There are no files to play. Mount a SmartMedia memory card with files recorded on it.	P.74
WRITE PROTECTED	Flashing	A write-protected SmartMedia memory card is found. Remove the write protection label from the card to gain access to it	P.29
UNMATCHED FILE	Flashing	You attempted to play an unplayable file.	P.74
FILE NUMBER OVER	Flashing	No more file numbers can be added. Insert a new SmartMedia memory card to continue recording.	P.30
SET DATE/TIME	Flashing	The date has not been set. Set the date before starting operations with the camera.	P.33

■ Error Messages

If any of the error messages listed below appear on the camera's LCD monitor, read the corresponding explanation and take the corrective action suggested.

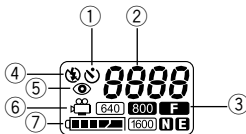
Error Message	Explanation and Remedy	Reference Page
CARD ERROR	The SmartMedia memory card is unformatted. Format the card with the camera before using it.	P.31
	A SmartMedia memory card of this type is not supported by this camera. Use another type of SmartMedia.	P.29

Note If the above remedies are carried out and the error display still won't clear, call your dealer or our service center.

LCD Panel

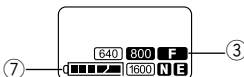
■ Displays Appearing during Recording

Recording





- ① Self-Timer (🕒) (P.59)
- ② Recording (📷)
- ③ PIC Mode (1600, 800, 640, F, N, E, B) (P.42)
- ④ Flash Mode (🔆, 🔆^A, 🔆^B, 🔆^C Blink) (P.51)
- ⑤ Redeye Reduction (👁) (P.64)
- ⑥ Motion picture (🎞) (P.50)
- ⑦ Battery (🔋) (P.26)

Playback/Erase






- Only the Motion Picture mode [], PIC mode [F,N] and battery mark [] are displayed when the motion picture mode is set.

■ Error display and countermeasure

When the following error is displayed, check the cause and take the proper countermeasure.

Error display	Countermeasure	Reference
	<ul style="list-style-type: none">• The SmartMedia is not formatted. Use this camera to format before continuing.• The SmartMedia cannot be used with this camera. Use a different SmartMedia.	31 30



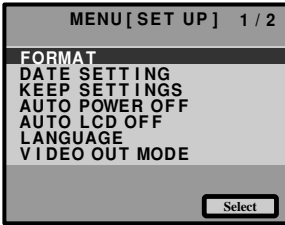
- If the error display does not disappear after the above countermeasures have been taken, please contact your local dealer or Ricoh repair center.

Menus

This camera features four menus which can be used to enter or change the settings for recording, playing or erasing image files.

■ SET Menu

With the camera turned on, set the mode dial to **[SET]**. To cancel the setup menu, turn the mode dial to select another mode.



FORMAT: Formats a SmartMedia memory card. (P.31)
DATE SETTING: Sets the date and time. (P.33)
KEEP SETTINGS: Saves camera settings. (P.94)

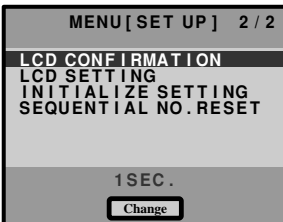
AUTO POWER

OFF: Enables or disables the camera (P.95)

AUTO LCD OFF Enables or disables the LCD (P. 96)

LANGUAGE: Switches the LCD monitor display between English, German, French and Japanese. (p.97)

VIDEO OUT MODE: ... Switches the camera between NTSC and PAL when it is connected to a TV set. (P.97)



LCD

CONFIRMATION: Sets the confirmation time for images after shooting. (P.98)

LCD SETTING: Selects whether to let the camera come up with the LCD monitor enabled or disabled when it is powered on in a recording mode. (P.99)



INITIALIZE

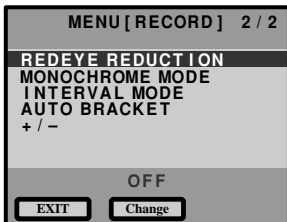
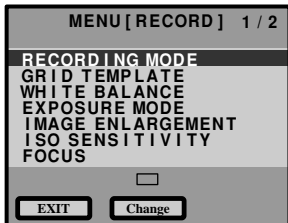
SETTING: Initialize all the settings. (P.99)

SEQUENTIAL

NO. RESET: Reset the images sequence number orderly. (P.100)

■ Record Menu

With the camera turned on, set the mode dial to [] and press the MENU button. To exit the record menu, press the CANCEL [] button.



RECORDING

MODE: Switches between recording modes, such as still picture, text, quick shooting (P.43).

GRID TEMPLATE Sets crossed lines to assist with image taking. (P.63)

WHITE BALANCE: Switches between the white balance settings (P.56).

EXPOSURE MODE: ... PROGRAM and AV F NO setting. (P.53)

IMAGE

ENLARGEMENT: Take the picture by 1.5 times magnification (P.69)

ISO SENSITIVITY: Selects ISO sensitivity among 100, 200 and 400. (P.64)

FOCUS: Switches between AUTO, MACRO, AREA, 2.5M, INFINITY and MANUAL. (P.61)

REDEYE

REDUCTION: Reduces the red-eye when shooting live subjects with flash. (P.64)

MONOCHROME



MODE: Records images in Black & White or sepia. (P.65)

INTERVAL MODE: Switches interval (time lapse) setting on and off (P.66).

AUTO BRACKET: Three frames are exposed: one frame at the current exposure compensation value, one at -0.5EV and another at +0.5EV. (P.68)

+/- (Exposure compensation): Sets the exposure compensation (P.54).

■ Play Menu

With the camera turned on, set the mode dial to [] and press the MENU button. To exit the play menu, press the CANCEL [] button.




ZOOM PLAYBACK: ... Displays an enlarged image. (P.78)

AUTO PLAYBACK: ... Plays all images automatically within a preset length of time. (P.79)

PROTECT: Protects image files from erasure. (P.80)

DPOF: Select this function to generate recorded images for submission to digital printing services or other applications. (P.81)

■ Erase Menu

With the camera turned on, set the mode dial to []. To exit the erase menu, set the mode dial to another mode.





SINGLE IMAGE: Erases selected images one at a time (except protected images) (P.86).

ALL IMAGES: Erases all the files from the card (except protected images) (P.87).

SELECTED IMAGES:.. Erases multiple selected images (except for protected files) at once. (P.88)

* Protected files cannot be erased.

Note

- The [] setting on the mode dial is used to take motion picture mode.
- The [] setting on the mode dial is used to transfer image files from the camera to a PC.

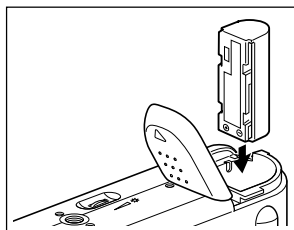
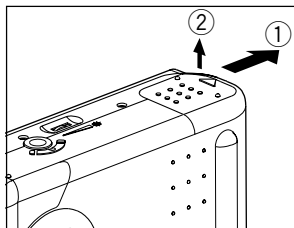
Basic Operation/Quick Reference

This section provides introductory information about the Ricoh RDC-6000 digital camera. Further details can be found in the reference pages mentioned below.

Preparations

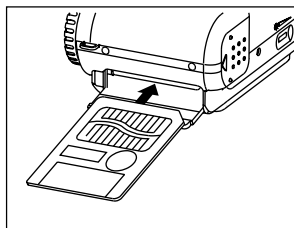
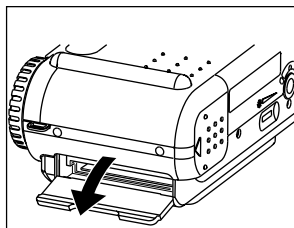
Loading the Batteries (P.25-26)

- 1 **Load the batteries into the camera.**
Charge the batteries before loading. (P.27)
* When using an AC adapter, connect it to the camera and then to the AC outlet. (P.27)



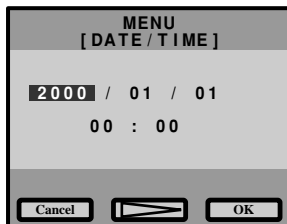
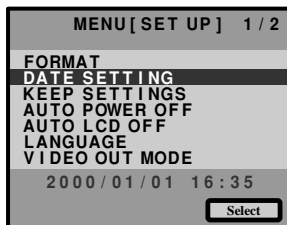
Inserting a SmartMedia Memory Card (P.29-32)

- 1 **Make sure that the camera is turned off.**
- 2 **Open the card cover and insert a SmartMedia memory card.**
 - Before using a new SmartMedia memory card, you must first format (initialize) it with the camera. (P.31)



Setting the Date and Time (P.33-34)

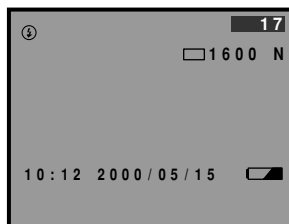
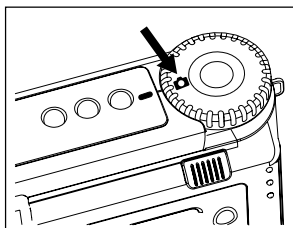
- ❶ Slide the power switch and set the mode dial to [SET].
- ❷ Press the or button to select [DATE SETTING].
- ❸ Press the ENTER button.
- ❹ Press the or button to change the digit.
- ❺ Press the MENU button.
Repeat steps ❹ and ❺ above to complete the settings.
* Each time you press the MENU button, the cursor will move, from year to month, day, hour and minute.
- ❻ After you have set the number of minutes, press the ENTER button.








Shooting

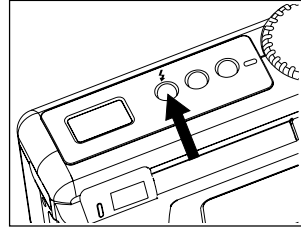
Basic Shooting Procedure (P.40-49)

- ❶ Slide the power switch and set the mode dial to [].
- ❷ Press the PIC button to select a PIC (Image quality) mode.
- ❸ Setting the recording mode
 1. Press the MENU button to display the Record menu.
 2. Press the and buttons and select Record Mode.
 3. Press the MENU button and select [].
 4. Press the CANCEL button to return the display.
- ❹ Press the or button to select the desired size of the subject.
* When digital zoom is used, use the LCD monitor to position the subject.
- ❺ Press the shutter release button to record the image.





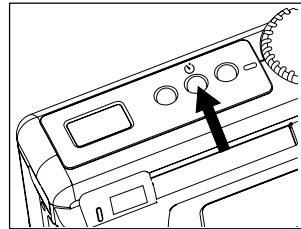
Changing the Flash Mode (P.51-52)

- 1 Set the mode dial to [].
- 2 Press the flash mode button to select a flash mode.
You can choose Flash Off () , Auto () , Forced Flash () , or Slow synchro mode ( : flashing).
The selected mark will be displayed on the LCD monitor or on the LCD panel.
- 3 Press the shutter release button to record the image.






Using the Self-Timer (P.59)

- 1 Set the mode dial to [].
- 2 Press the self timer button.
The self timer is now set.
The  mark will be displayed on the LCD monitor or on the LCD panel.
- 3 Press the shutter release button to record the image.
The self timer LED will start flashing and the shutter will be released after a delay of about 10 seconds.

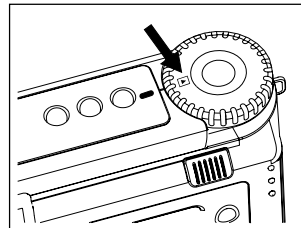


Playback

Playing Back Files (P.74-79)


- 1 Slide the power switch on and set the mode dial to [].
- 2 Press the  or  button to select a file you wish to view

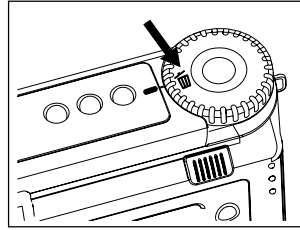
* The multi-image and zoom playback features allow you to view several image files at once or magnify an image. (P.77)






Erasing

Erasing Files (P.86-88)

- 1 Slide the power switch on and set the mode dial to [].





- 2 Press the  or  button to select the erase mode and press the ENTER  button.



* Remember that files cannot be restored once they are erased. Before starting to erase a file, make sure that you want to erase it.

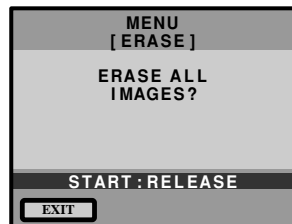
If you selected [SINGLE IMAGE]

- 3 Press the  or  button to select a file you want to erase and press the shutter release button.







If you selected [ALL IMAGES]

- 3 Press the shutter release button.

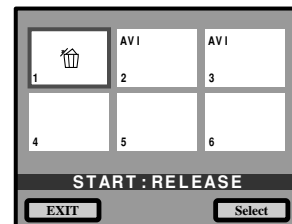


If you selected [SELECTED IMAGES]

- 3 Press the  or  button to select a file you want to erase and press the ENTER  button.

Repeat step 3, as needed, to erase additional files at a time. And press the ENTER  button again to cancel the erasure setting.

- 4 Press the shutter release button.



GETTING STARTED Chapter

1

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Before Using the Camera

Checking the Package Contents

Check that your digital camera comes complete with all the accessories listed below. Read the warranty card and keep it in a safe place.

- Camera
- SmartMedia Card (8 MB)
- 3.7V Lithium-ion Rechargeable Battery
- AC Adapter
- Soft Case
- Wrist Strap
- Camera Manual
- Warranty Card
- Questionnaire Card
- RICOH Software CD-ROM
- Video Out Cable
- PC Link Cable (RS232C)
- Mac-PC Link Cable
- USB Cable
- Software Guide

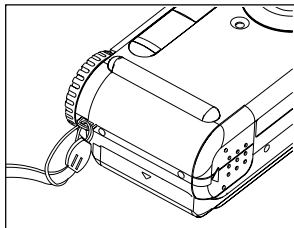
Attaching the Wrist Strap

Attach the wrist strap provided to prevent the camera from being dropped during use.

- 1 Pass the small loop of the strap through the wrist strap eyelet and pass the other end through the loop as illustrated.



- Do not swing the camera around by its strap.



Powering the Camera

The following explains how to load and charge the battery and how to use a home power outlet as the power source.

1

Getting Started

Loading the Battery

Load the battery (rechargeable type lithium ion battery) and operate the camera.

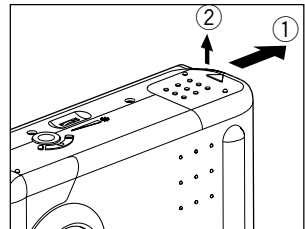
Important Note

- Always charge the battery when using it for the first time. (The battery is not charged at the factory.) → Page 27 “Charging the Battery”.

- 1 **Make sure the camera power is turned off, then open the battery cover by pressing down and sliding.**

See

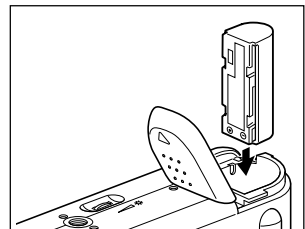
Reference: page 41 “Turning on the Camera”.



- 2 **Load the battery.**

Important Note

- Do not touch the battery or camera electrical contacts because this could cause damage due to static electricity.



- 3 **Close the battery cover.**

Make sure the battery cover is firmly closed.

● Recording and playback criteria

The available recording and playback times under the following measurement conditions are shown in the table below.

Recording: Continuous recording in the Record mode with the power on (Recording at 30 sec. intervals with 50% flash usage, without turning the power off at any time, and at a measurement temperature of 20 degrees C.)

Playback: Continuous playback in the Play mode with the power on, and at a measurement temperature of 20 degrees C.

Battery type	Approximate Recording Time	Approximate playback time
Lithium battery (fully charged)	Approx. 40 min	Approx. 60 min

= Tips to extend recording and playback times =

- * The available recording and playback times will vary depending on the ambient temperature. Recording and playback times can be improved at low temperatures by removing the battery and warming it with the hands.
- * Frequent use of the flash and LCD monitor will shorten the battery usage time. Use these operations only when necessary.
- * Battery usage time can be further increased by turning off the LCD monitor display while recording.


■ Usage cautions

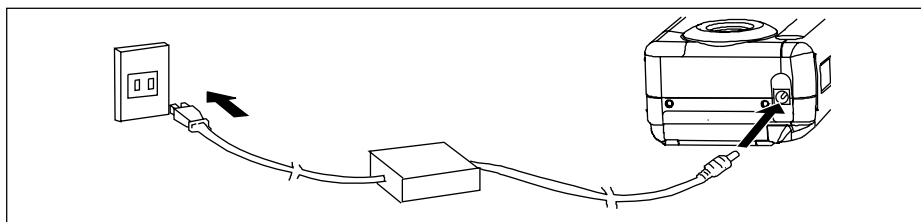
- Before using, always read the instruction manual provided with the battery.
- Use only the lithium battery specified by this company. Read Separately Available Products on page 108 of this manual before purchasing a battery.
- Charge the battery in a well ventilated location where the temperature is 10 - 40 degrees C.
- The battery can become hot under continuous usage. Wait until the battery cools before attempting removal.
- Wiping the battery and camera contacts with a dry cloth will increase the battery usage time.
- Always use the case provided when storing the battery.
- When use is not planned for an extended time, fully discharge the battery, then remove the battery and store it in a cool location. Fully charge the battery before using it again.
- When the battery life has expired, the usage time will be shorter even after correct charging. In such case, replace with a new battery.



- When a power outlet is located nearby and extended usage is planned, use the AC adapter. → Page 27 "Using an AC Adapter".
- When using only battery power, keep a spare available.
- The Battery mark (↔) lights to indicate that the battery is exhausted. In such case, recharge the battery. → Page 27 "Charging the Battery".



Charging the Battery

When using for the first time and when the Battery mark () lights, use the AC adapter and charge the battery.



- ❶ **Turn off the camera power.**
Loading the Battery.
- ❷ **Connect the AC adapter cable to the (DC IN) jack of camera.**
- ❸ **Insert the power plug into a power outlet.**
The battery mark will appear on the LCD panel.

Note • Following table is the explanation for each battery mark type. When charging is completed, remove the power plug from the power outlet.

LCD panel display	Explanation
	The remaining battery comes close to be exhausted. Charge the battery.
	When the capacity display of the battery mark becomes full, charging is completed. (full charge)

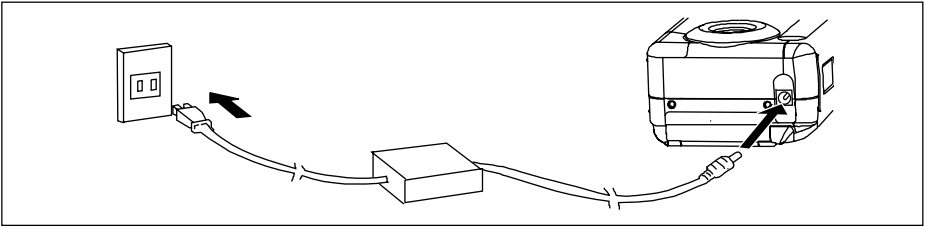
- Charging time for a full charge with an exhausted battery is approximately 3.5 hours.
- Battery mark is displayed in 5 steps depending on the remaining battery.

Using an AC Adapter

For extended recording and playback, connect the AC adapter and plug it into a power outlet.



- Always read Safety Precautions in this manual before using the AC adapter.



① Make sure the camera power is turned off, then connect the AC adapter cable to the camera power (DC IN) jack.

See Reference: Page 41 “Turning on the Camera”.

② Insert the power plug into a power outlet.

Note • When a battery is loaded in the camera, power from the AC adapter (power outlet) will take priority.

Important Note

- Make sure the power plug and connecting cable are firmly inserted. Data will be lost if the plug or cable becomes disconnected while recording.
- When the AC adapter is connected or disconnected while the camera is being operated (recording, playback, deletion, etc.), the power will be interrupted temporarily while the power source is being changed; therefore, turn off the camera's power before connecting or disconnecting the AC adapter.

SmartMedia Memory Cards

This section explains the types and usage of SmartMedia memory cards.

What is a SmartMedia Memory Card?

Files are recorded as data on the SmartMedia memory card in your camera. The following types of SmartMedia memory cards can be used:

- Capacity: 2 MB, 4 MB, 8 MB, 16 MB, 32 MB, 64MB
- Operating voltage: 3.3 V

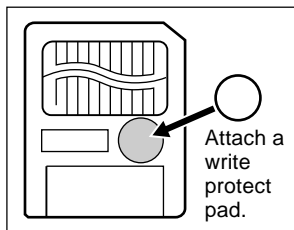
- Note** • There are numerous types of SmartMedia memory cards. Before using a commercially available SmartMedia memory card, check with its manufacturer to be certain it is compatible with your camera.
- By using an optional PC card adapter or floppy disk adapter, you can insert a SmartMedia memory card directly into the PC card slot or floppy disk drive of your PC.

■ Protecting Against Accidental Writing

Attaching a write protect pad to a SmartMedia memory card will prevent accidental erasure or overwriting of recorded files.

Remove the write protect pad from the SmartMedia memory card to record or erase data.

- Note** If the write protect pad gets dirty, wipe it clean with a soft, dry cloth.



■ Handling Precautions

● SmartMedia Memory Cards

- Never remove the SmartMedia memory card while data is being recorded or erased.
- Do not bend, subject to strong force or shock, or drop the SmartMedia memory card.
- Avoid using or storing SmartMedia memory cards in environments that are subject to static electricity or electrical interference.
- Avoid using or storing SmartMedia memory cards in environments that are subject to high temperature and humidity, where dust accumulates, or in atmospheres where corrosive substances are present.
- Keep the contact surface of the SmartMedia memory card clean and free from dust and foreign matter. Should the contact surface get dirty, wipe it clean with a soft, dry cloth.

- Keep the SmartMedia memory card slot free from dust and foreign matter.
- To avoid possible hazards, keep SmartMedia memory cards away from flames and do not dispose of them in fire.
- SmartMedia memory cards have a limited service life. Cards that have been used over an extended period of time may fail to record additional files.

● **Data**

- Data recorded on a SmartMedia memory card may be lost by improper handling by the customer or a third party, by being subjected to electricity or electrical interference, or during camera malfunction or repair. Ricoh Co., Ltd. assumes no liability for damages incurred by such loss of recorded data.
- Do not remove the batteries from the camera, turn off the camera, or connect the AC adapter while data is being recorded on the SmartMedia memory card. The data stored on the SmartMedia memory card could be lost or damaged.
- You are advised to copy valuable data from the SmartMedia memory card onto other media, such as floppy disks or hard disks.

Inserting a SmartMedia Memory Card

Check that the camera is turned off before inserting the SmartMedia memory card.

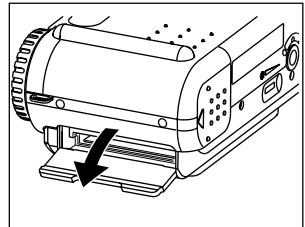


- Slide the power switch to turn the power off before inserting or ejecting smart media; otherwise, the contents of the SmartMedia may be destroyed and the camera may malfunction.

■ Inserting Card

- 1 **Check that the camera is turned off, and then open the card cover.**

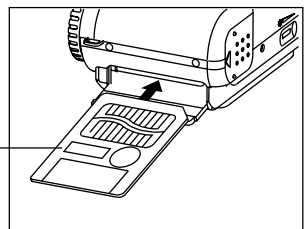
See “Turning on the Camera” (P.41)



- 2 **Insert the SmartMedia memory card into the card insert slot and close the card door.**

Push the SmartMedia memory card fully into position, with the contact surface facing up.

Contact surface





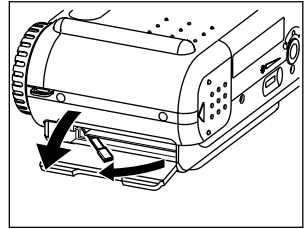
- Insert the SmartMedia memory card in the correct direction. Do not insert it at an angle.

■ Removing Card

- 1 Check that the camera is turned off, and then open the card cover. And pull out the lever.

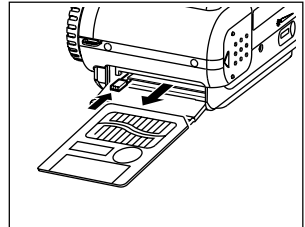


“Turning on the Camera” (P.41)



- 2 Press the lever and pull the SmartMedia memory card straight out of the slot.

Pressing the lever will cause the SmartMedia memory card to pop out a little. Then, pull it straight out of position.



- 3 Close the card door.



- Never remove the SmartMedia memory card while data is being recorded or erased. The data stored on the card could be lost or damaged.
- When the SmartMedia memory card has been removed, place it in the antistatic case supplied or other protective cover.

Formatting a SmartMedia Memory Card

Before using a new SmartMedia memory card or a SmartMedia memory card that has been used on another device (such as a PC), you need to format (initialize) it with the camera.

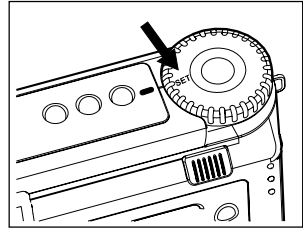





- Formatting will erase all the files recorded on the SmartMedia memory card (including protected files).
- Do not format SmartMedia memory cards on a PC.
- The SmartMedia formatted by other devices may not be used.

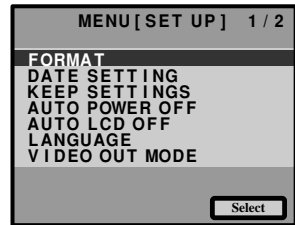
- 1 **Insert the SmartMedia memory card and slide the power switch to turn on the camera. Set the mode dial to [SET].**

The setup menu will be displayed.

- See** “Inserting a SmartMedia Memory Card” (P.30)
“Turning On the Camera” (P.41)



- 2 **Press the  or  button to select [FORMAT] and press the ENTER  button.**



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

The “FORMATTING” message is displayed while the camera is formatting the SmartMedia memory card.

When formatting is completed, the set menu will reappear. Turn the mode dial to choose another mode.



- Note** • A SmartMedia memory card with a write protect pad attached to it cannot be formatted. Remove the pad to format the SmartMedia memory card.

Setting the Date and Time

The date and time are recorded when you shoot a picture. You will need to adjust these settings when you first use the camera and each time you change time zones on trips.

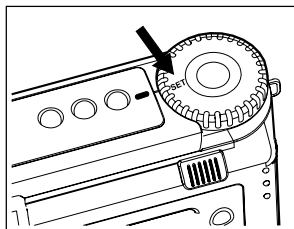
- Note** • Use the yyyy/mm/dd format to set the date.
- Time is displayed in the 24-hour clock format. Midnight is expressed as 00:00 and noon as 12:00.
- Setting is possible from [2000/01/01 00:00] to [2099/12/31].

1 Slide the power switch to turn on the camera. And set the mode dial to [SET].

The set menu is displayed.

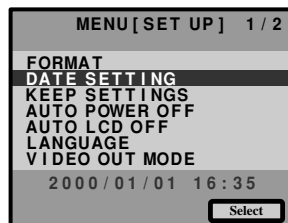
- Note** • To cancel the operation, turn the mode dial to another mode.

See "Turning On the Camera" (P.41)






2 Press the or button to select [DATE SETTING] and press the ENTER button.

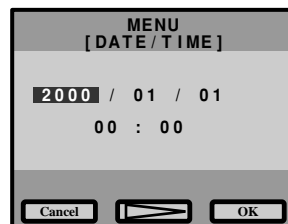
The date/time setting menu is displayed.




3 Press the MENU button to select the date display method.


4 Press the and buttons to change the numeral.

Pressing the up  button increases the numeral; pressing the down  button decreases the numeral. Keep pressing the  button changes the digit fast.



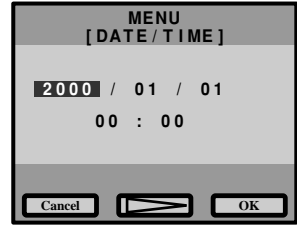
5 Repeat steps 3 and 4 above to make necessary corrections.

- Note** • Each time you press the MENU  button, the cursor moves from year to month, day, hour and minute.

6 After you have set the number of minutes, press the ENTER  button again.

The clock starts and the LCD monitor returns to the SET menu. Turn the mode dial to select another mode.

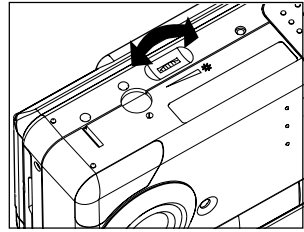
- Note** • The date will be reset when the battery is removed for a period of 3 min. or more. In such case, set the date again.



Adjusting the LCD Monitor Brightness

You can adjust the brightness setting of the LCD monitor.

- 1 Turn the brightness adjustment dial on the bottom of the camera, left or right to adjust the LCD monitor brightness to a favorable setting for viewing.



1

Getting Started

How To Hold the Camera

Unintentional movement of the camera during shooting will result in blurred images. To keep the camera steady, hold the camera in the fashion described below. Be particularly careful to keep the camera steady when taking telephoto zoom shots.

① Hold the camera steady with both hands with the elbows lightly touching your body.

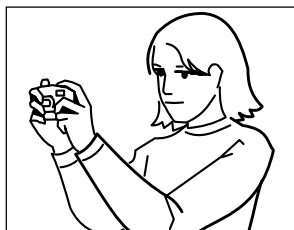
● When viewing through the viewfinder

With the camera lightly pressed against your head, aim it at your subject and look through the viewfinder.

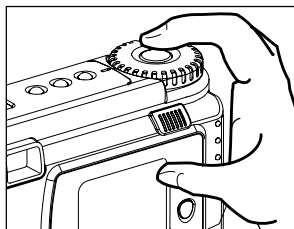


● When viewing using the LCD monitor

Hold the camera firmly in both hands, and aim it at your subject and look at the LCD monitor.



② Press the shutter release button lightly with your fingertip.



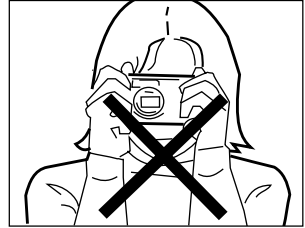
Important Note

- Pressing the shutter release button at once with the finger initially apart from it could result in a blurred image.

Note

- When an image of a subject that has been shot with the camera held in vertical position is played, the subject will appear sideways.

Be careful to keep the camera lens, flash, and the flash sensor reception window from being covered by your fingers or hair.



BASIC SHOOTING Chapter

2

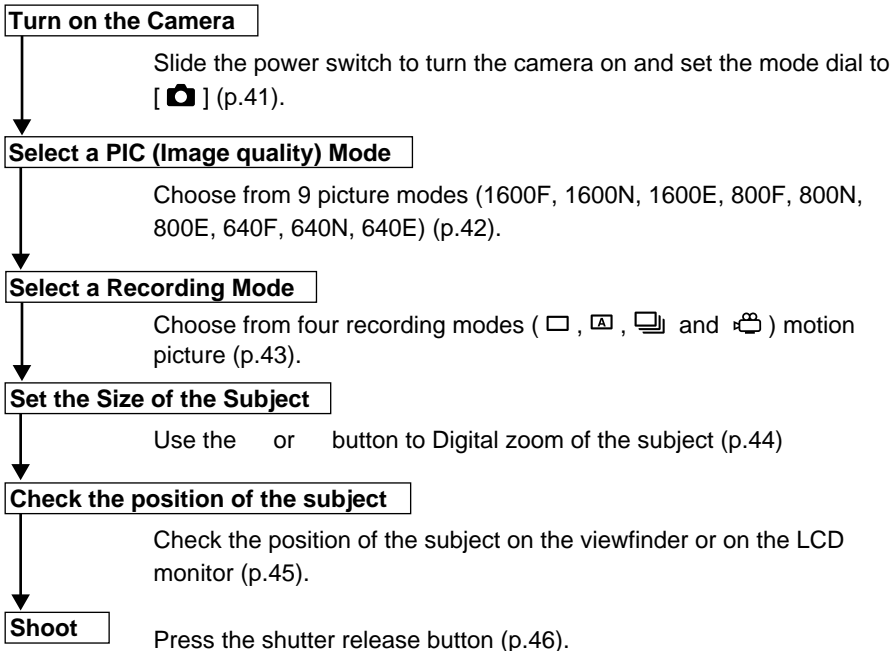
Basic Shooting	40
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Basic Shooting

This section explains the general flow of shooting operation, and provides basic shooting instructions.

Operation Flow

To record an image, follow the steps below:



Turning on the Camera

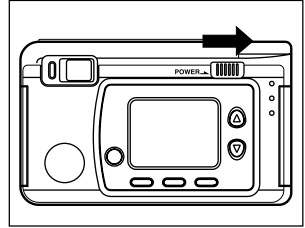
Slide the camera power switch to the right to turn the power on.



- The camera can be turned off when anything emitting magnetic force comes close to it.
Keep it out of the camera.

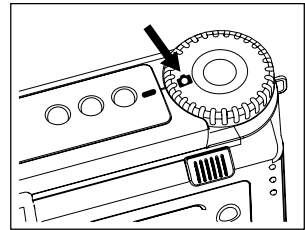
1 Slide the power switch to on.

- Sliding the power switch again will turn off the power.



2 Set the mode dial to [].

The LCD panel or the LCD monitor will display recording information.



● LCD Monitor Display

Press the DISPLAY button to switch displays appearing on the LCD monitor. If the LCD monitor is not used, press the DISPLAY button to save the batteries. Press the DISPLAY button again to enable the LCD monitor.

You may set the camera to come up with the LCD monitor disabled when it is powered on. See “Changing the LCD Setting” (p.99).



Auto Power-Off

The camera will turn off automatically (auto power-off) to conserve the battery if it is left idle (no buttons, switches or other controls operated) for fixed time. To resume use, turn the power on again.

You can disable the auto power-off mode.

See “Auto Power Off Setting” (p.95).

* The auto power-off mode does not function when the camera is powered by an AC adapter.



- If the keep settings function is enabled, the flash, exposure compensation, white balance, recording mode, language, ISO setting, focus, auto bracket grid template, Exposure mode and redeye reduction in effect just before the camera was turned off are saved. See “Keep settings” (p.94).

Selecting PIC (Image quality) Mode

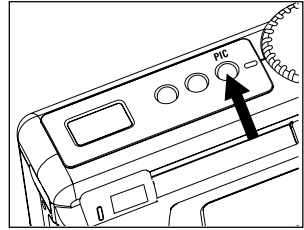
The camera offers nine picture (PIC) modes to suit your photographic needs.

- **1600** / **F N E** : 1600 × 1200 (F), 1600 × 1200 (N), 1600 × 1200 (E)
- **800** / **F N E** : 800 × 600 (F), 800 × 600 (N), 800 × 600 (E)
- **640** / **F N E** : 640 × 480 (F), 640 × 480 (N), 640 × 480 (E)

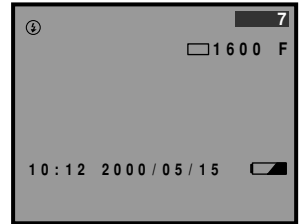
* The recordable picture count varies as you switch the PIC mode.

* The factory default setting is 1600 N (**1600** **N**).

1 Press the PIC button and select a PIC (Image quality) mode.



Pressing the PIC button displays the settings menu. The PIC (Image quality) mode changes each time the PIC button is pressed. Press the PIC button and make your choice.



● Approximate File Sizes by PIC (Image quality) Mode

PIC Mode \ Approx. File Size	F	N	E
1600 × 1200	960 KB	480 KB	240 KB
800 × 600	240 KB	120 KB	60 KB
640 × 480	154 KB	77 KB	39 KB

- Note**
- Image sizes are 1600 × 1200 pixels, 800 × 600 pixels and 640 × 480 pixels. The number of pixels indication for this manual and this product is **1600**, **800**, **640**.
 - For the number of recordable images by SmartMedia memory card capacity and by PIC (Image quality) mode, see “Recording Capacities” (p.119).

Selecting Recording Mode

The camera offers three recording modes – still, text and Quick Shooting. Select the mode best suited to your photographic needs.

● Still image mode

One frame is taken each time the release button is pressed. The frames are stored one at a time.


● Text mode

To record text clearly, blacks are made very black and then the surrounding colors are sensed. The frames are stored one at a time.

● Quick shooting mode

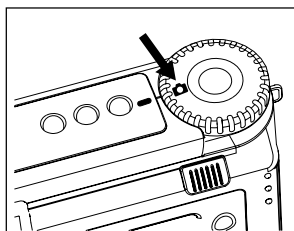
A series of frames can be taken continuously at the rate of approximately 1 frame/sec. as long as the release button is pressed. Since the images are stored in the camera memory, the interval at which frames can be taken is shorter, so the next frame can be taken faster.



- The initial status is still image mode.
- Set Keep Setting to save the recording mode setting. See “Keep Settings”. (p.94)
- To use the Motion Picture Mode, set the Mode dial to [] and then press the shutter button. Press the shutter button once to start recording and then press again to stop. See “Recording Motion Picture Mode”. (p.50)


1 Set the mode dial to [] and press the MENU button.

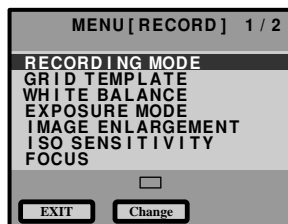
The record menu will be displayed.



2 Press the or button to select [RECORDING MODE].

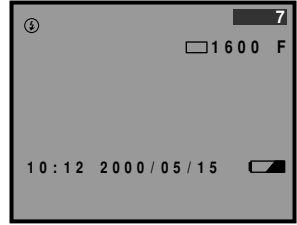
3 Press the MENU button to choose the recording mode (• •).

The recording mode changes each time you press the MENU  button.



4 Press the CANCEL (EXIT) button to close the record menu.

The selected record mode will be displayed on the LCD monitor.



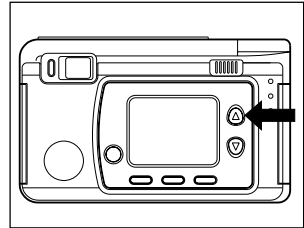
Digital Zoom

The size of the subject can be changed without changing the distance from the camera to the subject by pressing the zoom () buttons.

The subject size can be enlarged 2X, 3X or 4X.

1 Press the button.

- The subject size will change in the order of 2X, 3X and 4X.
- When the button is pressed, the subject will return to the standard size.



- When using the zoom function, it is recommended that you turn on the LCD monitor, check the zoom effect and then record the image.
- During playback, the image will be displayed at the magnification ratio (2X, 3X, 4X) used during recording.

How to View Images on the LCD Monitor

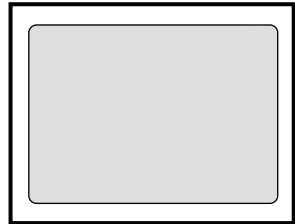
Check the position of your subject by looking through the viewfinder or at the LCD monitor.

■ Viewing Through the Viewfinder

Aim the camera at the subject while viewing through the viewfinder.

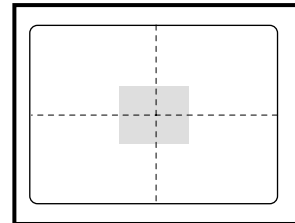
● Shooting Scope

Frame the subject within the viewfinder.



● Autofocus Field

Located at the center of the viewfinder screen and roughly corresponding to the area shown on the right, the autofocus field determines the focal distance.



■ Viewing Through the LCD Monitor

Aim the camera at the subject while viewing through the LCD monitor.

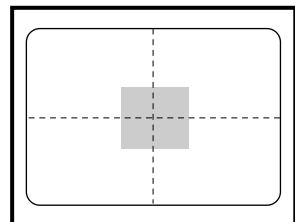
● Shooting Scope

Frame the subject within the LCD monitor screen.



● Autofocus Field

Located at the center of the LCD monitor screen and roughly corresponding to the area shown on the right, the autofocus field determines the focal distance.



Note • The shaded area and dotted lines are shown for illustration purposes only and do not actually appear on the LCD monitor.

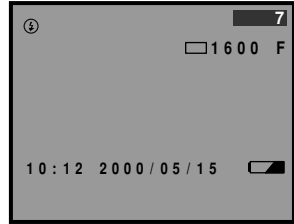
Shooting

Basic shooting instructions are given below. Hold the camera correctly to keep it steady.

① Aim the camera at your subject.

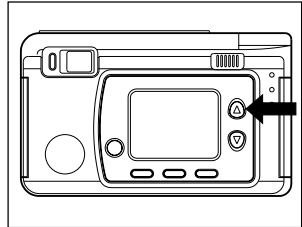
Use macro mode to shoot subjects when the distance to it is about 13 – 30 cm (5 – 12 inches)

See “Focus Modes” (p.61)



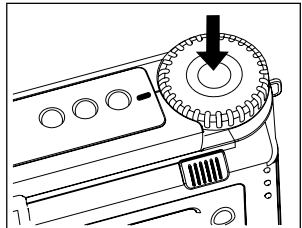
② Press the or button to set the size of the subject.

See “Digital Zoom” (p.44)
“How to View Images on the LCD Monitor” (p.45)



③ Press the shutter release button lightly with your fingertip.

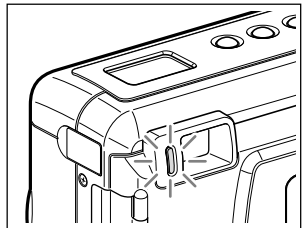
The shutter release button works in a two-step action. When you press it lightly (halfway), the autofocus function is triggered to focus on the subject automatically. Keep the camera as steady as possible during this step to ensure correct focusing.



When the subject is in sharp focus, the autofocus LED will light green and focus, exposure and white balance will be locked.

● When the flash LED lights

When the flash fires while taking photographs in dark places, etc., the flash LED will light red when the release button is pressed lightly. During charging, the flash LED will blink and the display on the LCD monitor will disappear. Photographs cannot be taken at this time.



- **Note**
 - A flashing auto focus LED green indicates that the subject is out of focus. If this occurs, use the focus lock function. See “Focus Lock to Take Pictures” (p.60).
 - If the “(S)” message (slow shutter) appears on the LCD monitor, you are recommended to shoot with the flash enabled. See “Changing the Flash Mode” (p.51).

4 Press the shutter release button down fully without removing your finger.



- Do not open the battery cover or card cover, or disconnect the AC adapter, while images are stored to the memory or while images are being recorded.

● Still frame mode ()/text mode ()

When the release button is fully pressed, a photograph is taken and recorded. When set for the image to appear on the LCD monitor, the image will first be displayed and then recorded. See “Changing LCD Confirmation”.



- The flash does not fire in the text mode.

● Quick shooting mode []

As long as the release button is pressed, frames will be photographed at the rate of approximately one frame per second.

Picture taking stops when the finger is removed from the release button. The finally photographed image is displayed in the middle of LCD monitor smaller sized frame, and is recorded automatically to SmartMedia.



- The flash does not fire in the Quick Shooting mode.
- Focus, exposure compensation and white balance are locked when the shutter button is pressed.
- The continuous mode cannot be used when the total number of file names reaches 9999. Format the SmartMedia before attempting to take more photographs.
- Set the Keep Settings mode to save the recorded setting mode. See “Keep Settings” (p.94).

- Depending on the image quality mode, the maximum number of frames that can be exposed continuously in the Quick shooting mode is as follows.

Recording mode	F mode	N mode	E mode
1600 × 1200	3 frames	5 frames	11 frames
800 × 600	12 frames	26 frames	50 frames
640 × 600	22 frames	44 frames	80 frames

* This is the maximum number of frames that can be exposed continuously at one time. Photographs can be taken continuously depending on the number of frames remaining in the SmartMedia.



Using the Camera for Extended Periods of Time

The camera will switch off automatically (auto power-off) to conserve a battery if it is left idle (no buttons, switches or other controls operated) for fixed time. When you require more time to compose a shot, disable the auto power-off feature. Have spare batteries or an AC adapter handy before using the camera for an extended period of time. See “Auto Power Off Setting” (p.95).

■ When Focusing is Difficult

You may experience difficulty focusing on the following subjects:

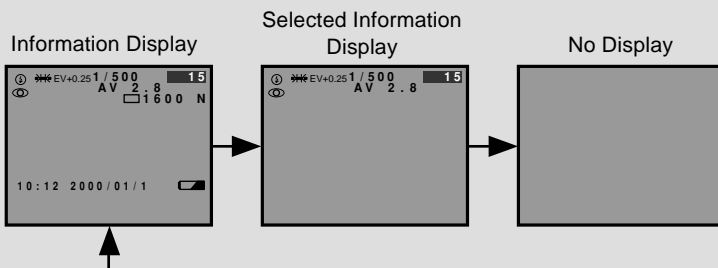
- Objects with little or no contrast (such as the sky, white walls, and car hoods)
- Flat two-dimensional objects with only horizontal lines and no significant protrusions or indentations
- Fast-moving targets
- Low-brightness objects (in dark places)
- Strongly backlit objects and objects struck by strong reflected light
- Flickering objects (such as fluorescent lights)

When shooting subjects like these, focus on another subject that is located at about the same distance and then aim at the target with that focus setting.



LCD Monitor Display Function

Press the ENTER button to display recording information, such as the recording mode, picture mode, and recordable picture count, on the LCD monitor. Each time you press the ENTER button, the display will switch in the following order:

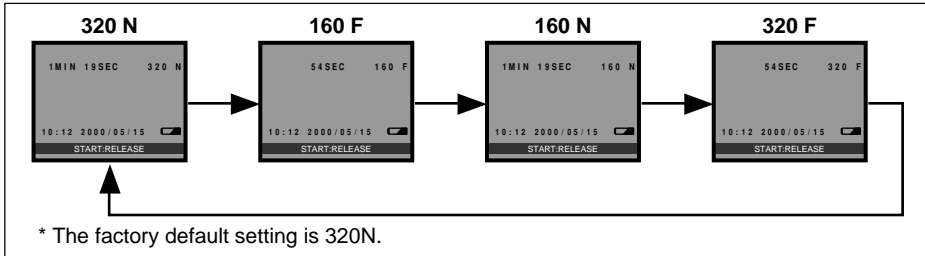


Special Shooting Functions

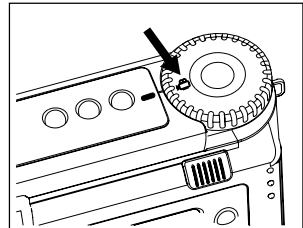
The various photographic functions are explained below.

Recording Motion Picture Mode

Four different image qualities can be used for recording motion pictures. (320 × 240F, 320 × 240N, 160 × 120F, 160 × 120N)

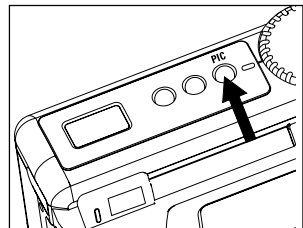


1 Set the Mode dial to [].



2 Press the PIC button and select the desired Image Quality mode.

- The Image Quality mode will be displayed on the LCD monitor.
- The Image Quality mode will change each time the PIC button is pressed.



3 Press the shutter button to start recording.

Press the shutter button again to stop.



- The message "CARD FULL" will be displayed when the smartmedia memory card capacity is used up.
- The flash will not fire in the Motion Picture mode.
- The focus, exposure and white balance in the state in effect when you start recording motion picture.
- The Interval mode cannot be used in the Motion Picture mode.
- The selftimer setting cannot be used in the Motion Picture mode.

Changing the Flash Mode

This section explains how to change the flash mode. Switch the flash mode to meet your photographic needs.

● Flash off mode ()

The flash will not fire, even in dark places. Use this mode in places where flash photography is prohibited and in bright indoor settings.

● Auto Flash mode ()

The flash will fire automatically in dark places and where there is backlighting.

● Forced Flash mode ()

Backlighting and strong light can produce dark shadows in photographs of the faces of subjects. Use this mode in such situations. The flash will always fire, regardless of the brightness.

● Slow synchro mode (: Blink)






The flash can be fired to illuminate the subject while a slow shutter speed correctly exposes the background. Use at indoor parties, etc., to clearly photograph the subjects while avoiding a dark background.

* The factory default setting is OFF.

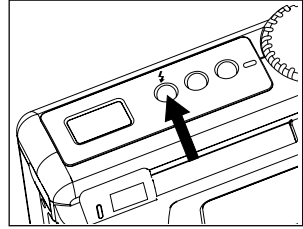
Effective Range of the Flash


When you shoot with the flash activated, the flash has an effective range of about 0.3 to 3.0 m (1 ft to 9.9 ft) for the telephoto setting and 0.4 to 3.4 m (1.3 ft to 11.2 ft) for the wide-angle setting. The subject will appear dark in the picture if the light from the flash fails to reach it.

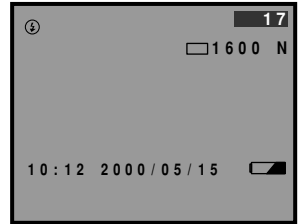
① Set the Mode dial to [].

② Press the Flash button to select the flash mode ( •  •  •  •  Blink).

The flash mode will change each time the Flash mode button is pressed.



The flash mode will be displayed on the LCD panel and LCD monitor. In the Auto Flash mode, however, the  mark will be displayed only on the LCD monitor. This mark will not be displayed on the LCD panel.



③ Press the release button to take the photograph.

When the flash fires, the flash LED (red) will light when the release button is pressed lightly.

When the flash is being recharged, the flash LED will flash and the display will disappear from the LCD monitor. Photographs cannot be taken at this time.



- When using the flash for nearby subjects (approx. 0.3m (12 inches) or less), the light from the flash may appear to be reddish in some cases. This also causes overexposure so the subject may appear whitish in the photograph. At such times, select the Flash off mode.
- The shutter speed will automatically become slower in dark places. In such cases, either grip the camera firmly or mount the camera on a tripod to prevent camera shake.



- The flash does not fire in the Text mode, Quick shooting or Motion Picture mode.
- The flash does not fire in the White Balance mode.
- Use the keep Setting Mode to hold the Flash mode setting. → Page 94 “Keep Settings”.
- The Redeye Reduction mode can be used to reduce the occurrence of the redeye phenomenon. → Page 64 “Redeye Reduction Mode”.

Setting the Exposure Modes

■ Changing the exposure mode

Two exposure modes are available: PROGRAM and AV Mode.

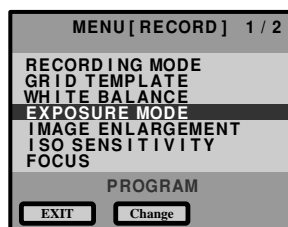
PROGRAM: In PROGRAM mode, the camera automatically determines the shutter speed and aperture in accordance with the subject brightness. This mode is generally suitable for snapshots, commemorative pictures, landscapes, etc.

AV Mode: AV Mode uses aperture priority; therefore, when the aperture is set, the camera automatically determines the shutter speed. This mode is used when it is desired to utilize depth of field for certain specific purposes. For example, for portraits, etc., the aperture can be opened up to blur the background. Or the aperture can be closed down for sharp focus over a wider range in landscapes, etc. Four aperture settings can be selected with AV Mode: F2.8, F4, F6.5 and F13.



① Set the Mode dial to [] and then press the MENU button.

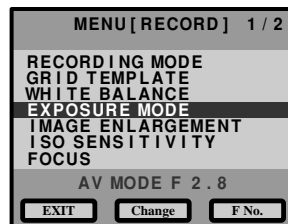
The Record menu will be displayed.

② Press the or button to select [EXPOSURE MODE].



③ Press the MENU button and change the setting.

The exposure mode alternates between PROGRAM and AV Mode each time the MENU  button is pressed. In the case of AV Mode, also press the ENTER  button. Any one of the four different apertures can be selected.



④ Press the CANCEL button.

The Record menu will return.

5 Press the shutter button to take the picture.



- Keep setting function can be used to store the exposure mode setting.

■ Exposure Compensation Settings

As long as the subject is centered in the shooting range, you can take the picture normally as the camera will automatically adjust the exposure compensation for backlighting. If there is a significant difference in brightness between the background and subject, however, the subject tends to be under- or over-exposed. Exposure compensation is useful in this situation. You can also use exposure compensation to produce intentionally under- or over-exposed images.

● Exposure Compensation Range

±2.0 EV (in 0.25 EV steps)

● Shooting Against the Light

The bright background will make the subject appear under-exposed. Set the exposure compensation level to a positive value to adjust the exposure.



- If the subject is not centered in the shooting range when taking a picture against the light, the camera will not assume that the subject is in a backlit state. Exposure compensation is required in this situation.

● Shooting a White Image

If you shoot an image that appears generally white, the shot will be under-exposed as a whole, with people appearing dark and white objects appearing gray. Set the exposure compensation level to a positive (+) value to adjust the exposure.

● Shooting a Black Image

If you shoot an image that appears generally black, the shot will be over-exposed as a whole, with people appearing white and black objects appearing gray. Set the exposure compensation level to a negative (–) value to adjust the exposure. Follow the same procedure when shooting a person under a spotlight, for example.

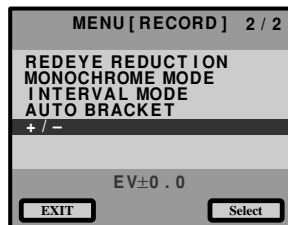
Set the exposure compensation level.

1 Set the mode dial to [] and press the MENU button.

The record menu will be displayed.

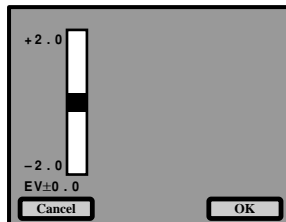
- ② Press the **+** or **-** button to select [+/-] and press the ENTER button.

The exposure compensation settings menu will be displayed.



- ③ Press the **+** or **-** button to change the compensation level.

When the **+** button is pressed, the numerals will become higher; when the **-** button is pressed, the numerals will become lower.



- ④ Press the ENTER button

The record menu will be displayed.

Press the CANCEL button.

- ⑤ Press the shutter release button to shoot the subject.

Note

- To save the exposure compensation setting, set Keep Setting mode. See "Keep Settings". (p.94)
- Three frames will be exposed continuously: one at the exposure compensation value, one at -0.5EV and one at $+0.5\text{EV}$. This function is convenient for checking the exposure compensation value setting. See "Using Auto Bracket". (p.68)

Changing the White Balance

The White Balance mode is a function for adjusting the white balance so that color balance is natural under any type of lighting. Normally, the Auto mode is used. When in the Auto mode, the white balance of white areas is automatically adjusted to a standard, so white objects will appear white under any type of lighting. Because of this, the white balance may not be correct with subjects having white areas or dark areas. In such cases, change to the White Balance mode before the start of recording.

- **Auto** : Adjustment is performed automatically by the camera.
- **Daylight** ☀ : Used when recording outdoors where white balance adjustment is difficult.
- **Overcast** ☁ : Used in cloudy weather and in the shade where white balance adjustment is difficult.
- **Tungsten** 🔦 : Used under Tungsten lighting where white balance adjustment is difficult.
- **Fluorescent** 💡 : Used under fluorescent lighting where white balance adjustment is difficult.
- **User Define (U)** : The white balance can be adjusted by adjusting red (R), green (G) and blue (B).
- **W/B Calibration (W)** : The white balance is corrected using a white subject as the standard.



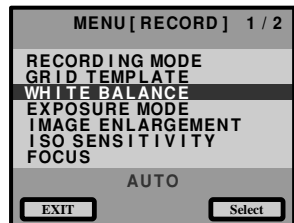
Subjects with which auto white balance adjustment is difficult

- Single-color subjects
- Subjects under multiple light sources

① Set the Mode dial to [] and then press the MENU button.

② Press the and buttons to select [WHITE BALANCE], then press the ENTER button.

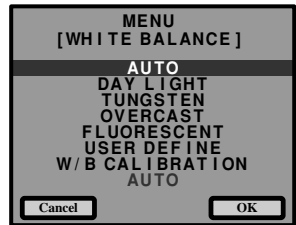
The Settings menu will be displayed.



- When AUTO, DAYLIGHT (☀), OVERCAST (☁), TUNGSTEN (💡) or FLUORESCENT (💡) is selected:

- 3 Press the **▲** and **▶** buttons to select White Balance mode, then press the ENTER **[OK]** button.

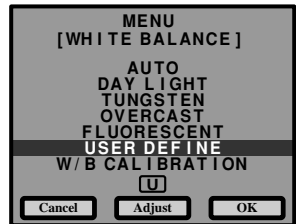
The Record menu will be displayed.



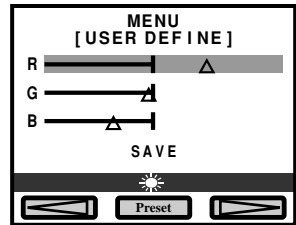
- 4 Press the CANCEL **[EXIT]** button.
- 5 Press the shutter release button to take the picture.

- When USER DEFINE is selected:

- 3 Press the **▲** and **▶** buttons to select [USER DEFINE], then press the MENU **[Adjust]** button.



- 4 Press the MENU **[Preset]** to select White Balance mode (☀, ☁, 💡, 💡). Then the RGB setting values for each White Balance are displayed as **△**.



- 5 Press the **▲** and **▶** buttons to select R, G and B, then press the CANCEL **[◀▶]** button and ENTER **[▶▶]** button to adjust the colors.

- 6 Press the **▲** and **▶** buttons to select [SAVE] and then press the ENTER **[OK]** button.

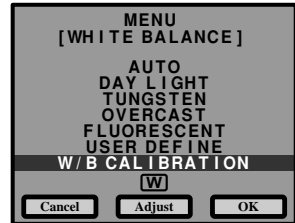
Setting will end and the Setting menu will return.

- 7 Press the CANCEL **[EXIT]** button to return to the Record menu.

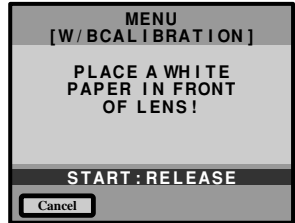
8 Press the shutter release button to take the picture.

■ When calibrating the white balance (W/B CALIBRATION)

3 Press the **W** and **W** buttons to select [W/B CALIBRATION] and then press the MENU **Adjust** button.



4 Press the shutter release button.
Place paper that passes nearly colorless light in front of the lens.
Setting will end and the SET menu will return when the shutter release button is pressed.



5 Press the ENTER **OK** button to return to the record menu.
Press the CANCEL **EXIT** button.

6 Press the shutter release button to take the picture.




- Even with the same subject, the color balance can differ depending on the weather and type of light source (Tungsten or fluorescent).



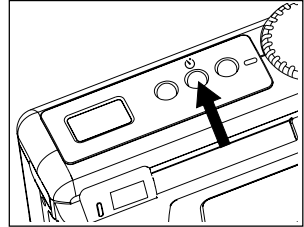
- The white balance may not be correct in the Auto mode when a subject includes few white areas. In such cases, place some white object near the subject when taking the picture.
- The flash will not fire when Daylight, Tungsten, Cloudy (overcast), Fluorescent or User Settings is used.
- White balance can only be set while in the record mode. Setting is not possible in the Play mode.
- Set Save Mode to save the white balance setting. Reference → page 94 "Keep Settings".


Using the Self-Timer

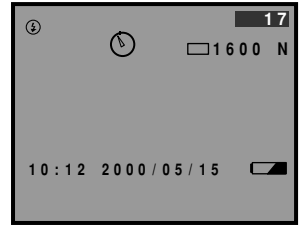
The self-timer offers a convenient way to take group pictures with the photographer included. Mount the camera on a tripod or a flat, secure surface to shoot pictures with the self-timer.

- 1 **Set the mode dial to [] and press the self timer button.**

The self timer is now set.

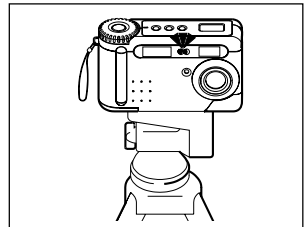


The self timer symbol [] will be displayed on the LCD monitor or on the LCD panel.



- 2 **Decide the composition of the picture, position the camera securely, and press the shutter release button.**

The self timer LED will start flashing and the shutter will be released with an approximate delay of 10 seconds. The self timer LED will stay lit for about 2 seconds before the shutter is released. The self-timer mode ends automatically when the shutter is released.



- If the flash is charging, the self-timer will start when charging is completed.
- When the release button is pressed, the focus is locked.
- The selftimer will be canceled if another mode is selected within approx. 10 sec. from the time the selftimer starts.



Remote Control

To operate the camera from a remote position or when the camera is fixed in one spot, use the optional remote control unit.

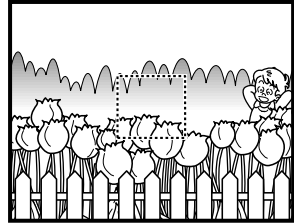
Using Focus Lock to Take Pictures

Normally, subjects within the autofocus range as seen in the viewfinder and on the LCD monitor are in focus. Under certain conditions, however, the desired subject may not be in focus. In such cases, use the Focus Lock to assure that the desired subject is in sharp focus.

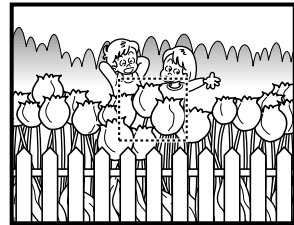
Note • Page 44 “Digital Zoom”.

■ Use Focus Lock at times like these

When the desired subject is not within the autofocus range, resulting in a sharply focused background and blurred subject.



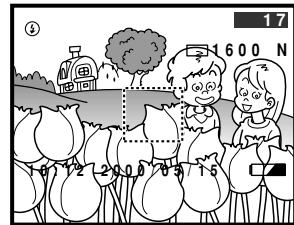
When an object other than the subject occupies most of the autofocus range, resulting in that object being in sharp focus while the main subject is blurred.



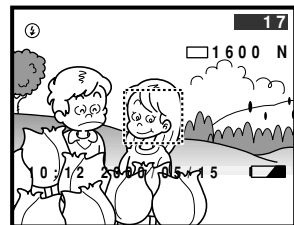
Macro focus can be used to take close-ups.

■ How to Use the Focus Lock

① Press the **or** button to set the size of your subject.

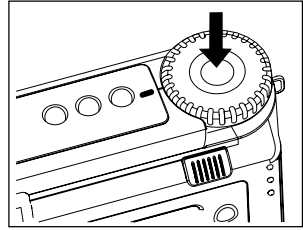


② Bring the subject on which you wish to focus into the autofocus field.

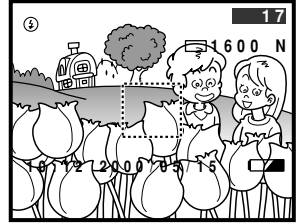


3 Press the shutter release button lightly and hold it.

The focus will be locked at this point.
The focus lamp (green) will light.



4 Decide the composition of the shot by moving the camera with the shutter release button held, and then press the shutter release button down fully.



- You can also use the manual focus to focus on the subject. See “Focus Modes” (p.61).

Focus Modes

This camera is capable of six types of focus (Auto, Macro, Area, 2.5 M, Infinity, Manual). Focusing can thus be performed for snapshots, landscapes, etc., in accordance with the photographic conditions.

- Auto** : The camera focuses automatically.
- Macro** : Close-up pictures of the subject can be taken. (subject distance: 13 - 30cm).
- Area** : The distance range within which the subject will be in sharp focus can be selected freely.
- 2.5M** : Suitable for snapshots, etc.
- Infinity** : Suitable for scenic shots of distant subjects such as mountains, etc.
- Manual** : Focusing is performed manually.

1 Set the Mode dial to [📷] and then press the MENU button.

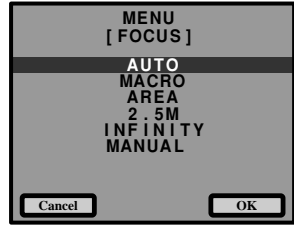
The Record menu will be displayed.

2 Press the Select and Select buttons to select [FOCUS] and then press the ENTER

Select button.



- ③ Press the **▲** and **▼** buttons to select a focus mode (AUTO, MACRO, AREA, 2.5M, INFINITY, MANUAL) and then press the ENTER **OK** button.



- ④ Press the CANCEL **EXIT** button to return to the Record mode.

- ⑤ Press the shutter release button to take the picture.

- When the focus mode is set to Area, use the CANCEL **◀▶** and ENTER **▶** buttons to set the area to be in sharp focus and then press the shutter button.
- When the Manual focus mode is set, press the CANCEL **◀▶** or ENTER **▶** button to adjust the focus and then press the shutter button to take the picture.



- Depth of focus is shallow in macro photography, so focus can be disturbed if the camera is moved. Mount the camera on a tripod, etc., to prevent camera movement.
- When the flash is used, the light from the flash may appear red in the picture. Pictures may also appear wash out in the case of overexposure.
- The view through the viewfinder and the actual picture coverage differ considerably; therefore, for greater accuracy, connect the camera to LCD monitor or TV set to check the coverage before taking a picture.



- Set Keep Settings to save the focus mode setting. → Page 94 "Keep Settings".

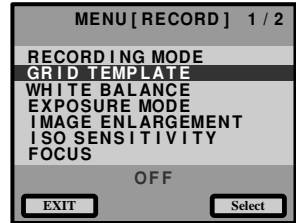
Using the Grid Templates



A grid can be displayed as an aid to composing pictures. There are two grid templates.


- 1 Set the Mode dial to [] and then press the MENU button.

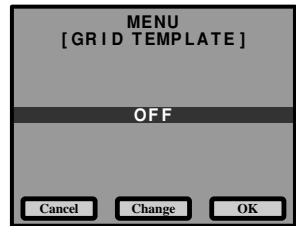
The Record menu will be displayed.

- 2 Press the  and  buttons to select Grid [GRID TEMPLATE] and then press the ENTER  button.

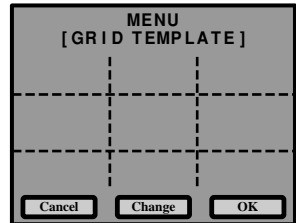


- 3 Set grid display to on or off. Press the MENU  button to display the grid and then press the ENTER  button.

- The two grid templates are alternately turned on and off each time the MENU  button is pressed.



- 4 Press the CANCEL  button to return to the record mode.




- 5 Press the shutter release button to take the picture.

The grid template will be displayed on the LCD monitor.

 Tips

To cancel the grid template setting


- To turn off the grid template, select [OFF] and press the ENTER  button in step 3 above.

2




Basic Shooting

Redeye Reduction Mode


If you shoot a subject, with the flash activated, in a dark place, the eyes of the subject may appear red in the resultant picture. In redeye reduction mode, the flash will fire several times before the shutter releases to lessen the redeye effect.

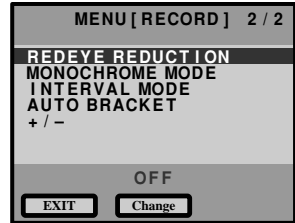
1 Set the mode dial to [] and press the MENU button.

The record menu is displayed.

2 Press the  or  button to select [REDEYE REDUCTION] and press the MENU  button to select [ON] or [OFF].

Press the CANCEL  button to return to the Record mode.

The [] will be displayed on the LCD panel and LCD monitor.



3 Press the shutter release button to shoot the subject.

When you press the shutter release button, the flash will fire several times in succession preliminarily before firing last when the shutter releases.



- The shutter takes about 1 second to release after you press the shutter release button. Hold the camera steady meanwhile to shoot.



- Redeye reduction mode does not work when the flash mode is Flash off mode.

Changing the ISO Sensitivity

The photographic sensitivity can be changed.



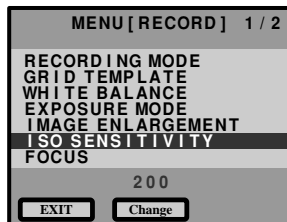
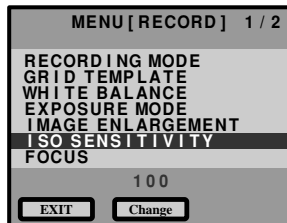
- When ISO 200 or 400 is set, the shutter speed will become faster but the images will become coarser.
- The initial value is 100.

1 Set the Mode dial to [] and then press the MENU button.

The Record menu will be displayed.

- ② Press the **▲** and **▶** buttons to select [ISO SENSITIVITY], then press the MENU **Change** button to select the desired sensitivity (100, 200, 400). Press the CANCEL **EXIT** button to return to the Record mode.

There is no display at ISO 100.



- ③ Press the shutter release button to take the picture.

Note • Set Keep settings to save the ISO sensitivity setting. → Page 94 “Keep Settings”.

Recording Monochrome Images

Images can be recorded in black & white or sepia.

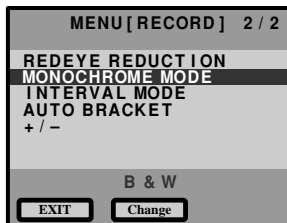
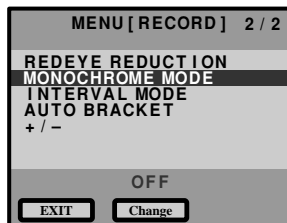
- ① Set the Mode dial to [📷] and then press the MENU button.

The Record menu will be displayed.

- ② Press the **▲** and **▶** buttons to select [MONOCHROME MODE], and press the MENU **Change** button, select Monochrome mode (B&W, sepia) and then press the CANCEL **EXIT** button.

The Record menu will be displayed.

Select B&W for monochrome pictures, and select Sepia for sepia pictures.



- ③ Press the shutter release button to take the picture.

Note • White balance does not function in the Monochrome mode.

Interval (Time Lapse) Shooting

Pictures can be taken automatically at a specified time interval. The time interval can be set in 30-sec. increments from 30 sec. to 180 min. (3 hrs.).

If the time interval is set to 60 min., for example, the shutter will be released once each hour until the smart media capacity has all been utilized.



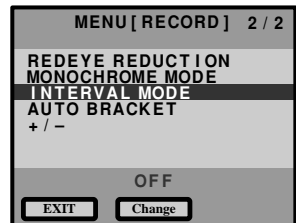
- The initial interval setting is 1 min. 30 sec.
- When using interval photography, check the number of pictures that can be recorded on the smart media before setting.

1 Set the Mode dial to [] and then press the MENU button.

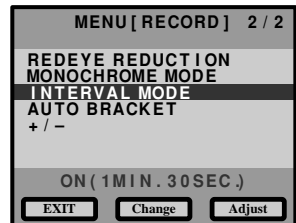
The Record menu will be displayed.

2 Press the and buttons to select [INTERVAL MODE].

The Interval Settings screen will be displayed.

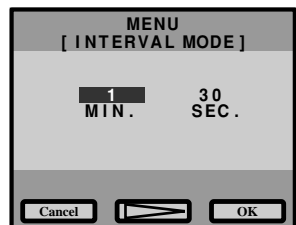


3 Press the MENU button, select [ON] and then press the ENTER button.



4 Press the and buttons to set the interval.

5 Press the MENU button and move to the item to be set. Repeat this operation to set the time and interval.



6 When setting is completed, press the ENTER button.

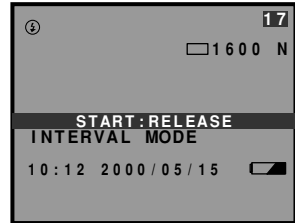
Return to the Record menu.

Press the CANCEL button

- Note** • Interval shooting mode can be interrupted by either turning the Mode dial or by turning the power off while the message Interval is lighted.

7 Press the shutter release button.

The first picture will be taken. After that, pictures will continue to be taken at the set interval. The message Interval will light during interval photography. Picture taking will end when the capacity of the smart media is used up.



- The interval at which pictures are taken may be extended in some cases, depending on the Image quality mode and Flash mode settings.
- When battery power is used, the battery may become exhausted during interval photography. It is recommended that the AC adapter be used.



Using Auto Bracket

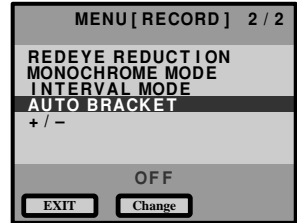
This function takes three continuous frames: one each at the set exposure and at -0.5EV and $+0.5\text{EV}$. This feature makes it possible to obtain correct exposure under difficult conditions.

Mount the camera on a tripod or level surface to prevent the camera from moving.

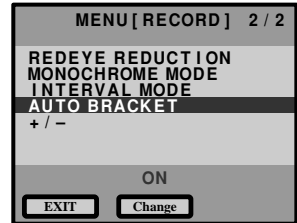
- 1 Set the MODE dial to [] and then press the MENU button.

The Record menu will be displayed.

- 2 Press the up  or down  button to select [AUTO BRACKET].




- 3 Press the MENU  button to turn [ON] [OFF] and press the CANCEL  button



- 4 Press the shutter release button to take the picture.

When the shutter release button is pressed, three frames will be taken at the set exposure of -0.5EV , 0 , $+0.5\text{EV}$.

 • The flash will not fire when Auto Bracket is used.

Adding Image Quality Modes (Image Enlargement)

Used for taking pictures with higher image quality. Pictures can be taken at a size of 2000 x 1480 pixels.



- In some cases, the data volume is large and time is required to take a picture, so use caution concerning the remaining battery capacity.

1 Set the Mode dial to [] and then press the MENU button.

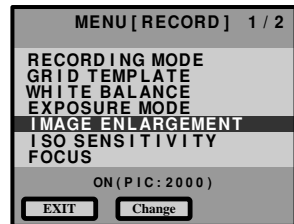
The Record menu will be displayed.

2 Press the and buttons to select [IMAGE ENLARGEMENT].



3 Press the MENU button, select [ON] and then press the CANCEL button.

The Record menu will be displayed.



4 Press the shutter release button to take the picture.



- The digital zoom function does not work for the Image Enlargement mode.

PLAYBACK Chapter

3

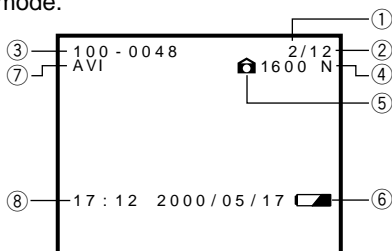
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Before Starting to Playback Recorded Images

This section explains the preparations for playing back recorded images and how to read the playback display.

Playback Display

Information about a recorded file, including its number and type, will be displayed when you select PLAY mode.



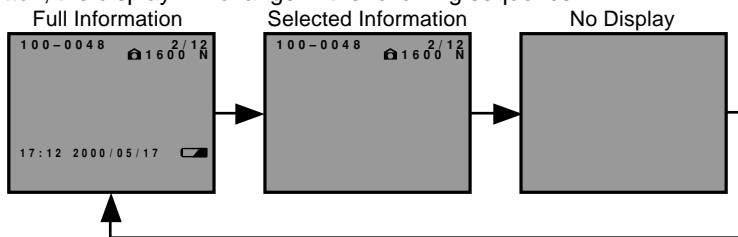
① File Number	Number of the file being played
② Total Number of Files	Total number of files recorded
③ File name	Name of the file being played. But, when a file that does not conform to the DCF (Design rule for Camera File system) image file format is played, no file name will appear.
④ PIC Mode	Displays the PIC mode of the file being played.
⑤ Image Protect Mark	Indicates that a protected file is being played.
⑥ Battery Mark	Displays the status or exhaustion of the battery loaded in the camera.
⑦ AVI file	Displayed when moving images are taken.
⑧ Date and Time Recorded	Displays the date and time at which the file was recorded.



- Recorded images are played back assuming that the camera was held horizontally to shoot them. Accordingly, pictures shot with the camera held vertically will be displayed sideways.

LCD Monitor Display Function

Press the ENTER button to display information, such as the date and time recorded, on the LCD monitor. Each time you press the ENTER button, the display will change in the following sequence:

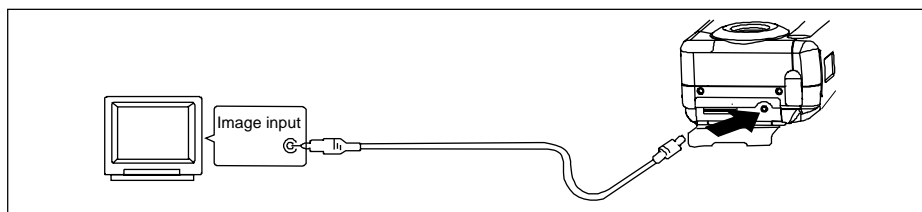


Connecting to a TV

Connect the camera to a TV set with the video interface cable supplied to play recorded image files on the TV screen.



- Please refer to the instruction manual for the equipment to which the camera is connected.



- 1 Check that both the camera and the TV are turned off.
- 2 Open the camera's terminal cover and connect the video interface cable to the video out terminal.
- 3 Connect the other end of the video interface cable to the Video In terminal on the TV.

Using the Camera for Extended Periods of Time

Supplying power to the camera from a household AC outlet using AC adapter is recommended for shooting over extended periods of time. See "Using an AC Adapter" (p.27).

- Make sure that the camera is turned off before connecting the AC adapter.



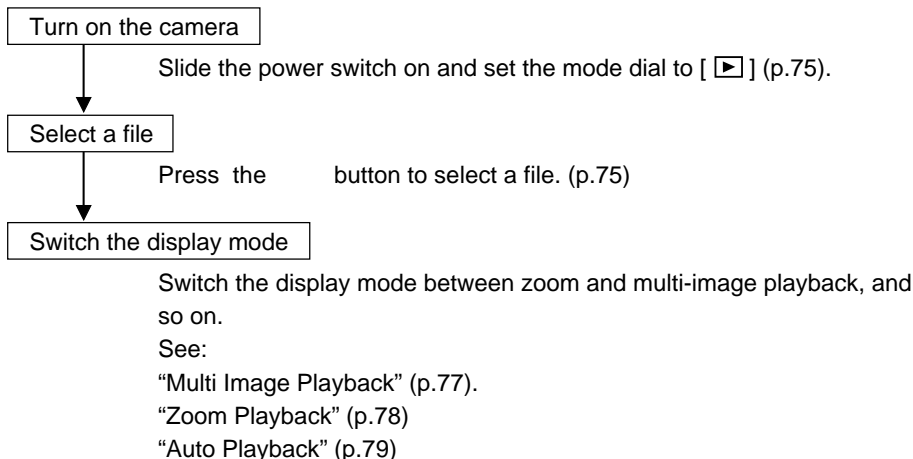
- When you are away on overseas trips, you may view recorded images on a PAL TV set. See "Changing Video-out Signal Method (NTSC/PAL)" (p.97).
- The LCD monitor would appear blank if you connect the video interface cable to the camera.

Playing Back a File

This section provides instructions for playing back recorded image files.

■ Operation Flow

To play back an image file, follow the steps below:



■ Files that can be played on the camera

The following kinds of files can be played on this camera:

- Files recorded on this camera
- Data recorded on the Ricoh RDC-4200, 5000, 5300 digital camera.
- Files shot with another brand of camera



- The “UNMATCHED FILE” message will be displayed if an unplayable file is encountered.
- In some cases, data recorded with the cameras of other companies cannot be played back.

Playing Back Still Images, Text and Quick Shooting

Recorded files containing still images, text and continuous pictures can be played back.

① Set the Mode dial to [▶].

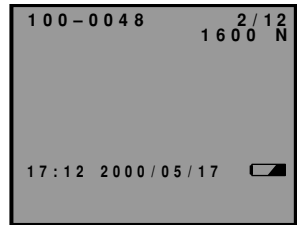
The last file recorded will be displayed on the LCD monitor.

Note Page 72 “Playback Display”.

② Press the **▶** and **◀** buttons to select the file to be played back.

When the **▶** button is pressed, the next file will be displayed.

When the **◀** button is pressed, the previous file will be displayed.



Note

- Depending on the smartmedia capacity, some time may be required for file playback to start after the power is turned on and the Mode dial is changed.
- Files can be protected to prevent deletion. → Page 80 “Protecting a File”.



3


Playback


Playing Back Motion Pictures

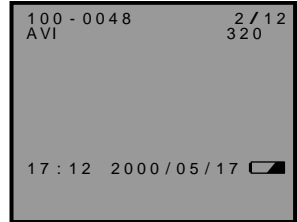
Files containing moving images can be played back.

① Set the Mode dial to [].



② Use the  and  buttons to select the motion picture file to be played back. Press the shutter button to replay the motion picture.

When the  button is pressed, the next file will be played.

When the  button is pressed, the previous file will be played.



● Ending playback

- Playback can be stopped by pressing the shutter release button during playback. Pressing the shutter release button again will restart playback.
- Playback can be interrupted by pressing  and  buttons to play the next or previous files.

Note

- Files can be protected to prevent deletion. → Page 80 "Protecting a File".

Special Playback Functions

The following explains the various playback functions.

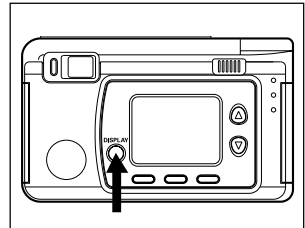
Multi Image Playback



Multi-image playback lets you view six images at once on the LCD monitor for quick searching.

① Set the mode dial to [].

② Press the **DISPLAY** button.


The multi-image playback function is now set.




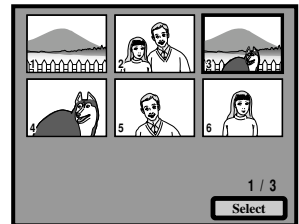
③ Press the  or  button to select the file to be played back.

Six files can be displayed on the LCD monitor at one time.

The green framed will appear highlighted to indicate that a file has been selected.

Press the  button to move to the previous file.



Press the  button to move to the next file.



④ Press the **DISPLAY** button or the **ENTER**  button.

The normal screen will be displayed. And the file of the selected number will be displayed in the single-image mode.

Note

- Unplayable files recorded on other equipment will be displayed on a blue background.
- Pressing the  button while the cursor is on the last (lower right) file, will display the next set of six files: Pressing the  button while the cursor is on the first (upper left) file will display the previous set of six files.

3

Playback

Zoom Playback

An image file that is played is displayed x1.5 and twice the height and width of the original.

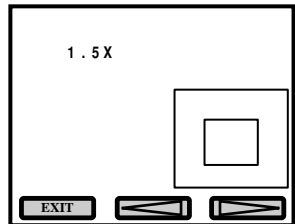
1 Set the mode dial to [] and press the MENU button.



The play menu will be displayed.

2 Press the or button to select [ZOOM PLAYBACK] and press the ENTER  button.




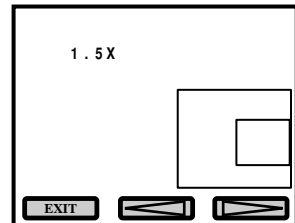
The file is enlarged 1.5X and displayed. When the DISPLAY button is pressed again, the file will be enlarged 2X and a frame will also be displayed.



3 Press the or button, or MENU  or ENTER  button to verify the image file.

When the button is pressed, the frame will shift and the display position will shift.

To return to playback menu, press the CANCEL . The playback menu will be displayed.



Note

- Zoom playback is possible only with files containing still images or text recorded with this camera.

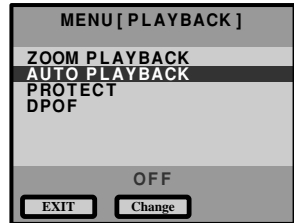
Auto Playback

This function automatically plays all the files stored on the SmartMedia memory card. Play times of 1, 5, 10 and 30 sec. can be selected.

1 Set the mode dial to [] and press the MENU button.

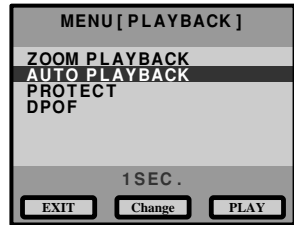
The play menu will be displayed.

2 Press the or button to select [AUTO PLAYBACK].



3 Press the MENU Change buttons to select the playback time (1 SEC, 5 SEC, 10 SEC, 30 SEC) and then press the ENTER Play button.

When the ENTER Play button is pressed, auto playback starts at the set time interval. Auto playback will then continue until canceled.



3

Playback

● Canceling auto playback

Auto playback can be canceled by pressing the shutter release button or buttons, etc., during playback.



- Playback times do not include the time required to call out the files.
- For motion picture, the picture will be played until the end, then the last view is stayed for the set time.

Protecting a File

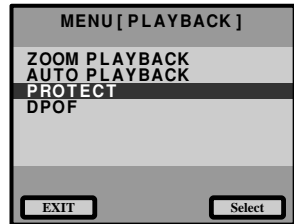
You can protect valuable files from being erased accidentally.



- Formatting the SmartMedia memory card will erase protected, as well as unprotected, files.

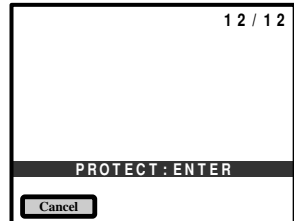
1 Set the mode dial to [] and press the MENU button.

2 Press the or button to select [PROTECT] and press the ENTER button.



3 Press the or button to select the file you wish to protect and press the ENTER button.

The selected file will be protected and the mark will be displayed. If you keep the setting, repeat step **3**.



- To cancel protection, press the MENU button. The mark will disappear.

4 Press the CANCEL button to end the protect setting.

The screen returns to the play menu. Press the CANCEL button again to end the operation.

How To Cancel the Setting

Choose a protected file in step **3** above and press the MENU button to erase the mark.

Setting DPOF (Digital Print Order Format)

DPOF is a special feature built into your camera that allows you to assign information to your images for use by digital printing services, desktop printers that accept memory cards or devices that allow direct to print from your camera. By assigning DPOF information to an image, you may designate the quantity of images you wish to have printed or have an index of selected images printed directly from the memory card or image file.

When submitting recorded images to digital printing services or other applications, set the number of copies of the images to print and that of copies of the index. This setting is possible only when you select the RICOH folder.

Setting a Print Service

When having prints made by a digital print service, set the number of prints and number of indexes. After setting, you can visit your local digital camera service center and have prints made of specified data.

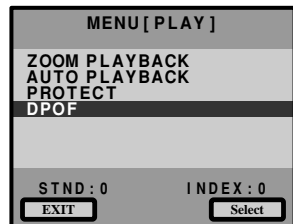


- Leave enough space for 1 - 2 prints on the smart media so the print service settings can be saved.
- After making the print service settings, do not change the record, erase, or other, settings. If this is done, reset playback.

1 Set the mode dial to [] and press the MENU button.

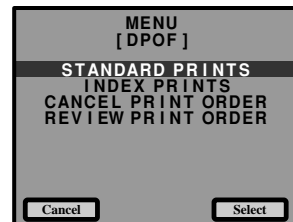
2 Press the and buttons to select [DPOF] and then press the ENTER button.

The Setting menu will be displayed.



3 Press the and buttons to select and then press the ENTER button.

- Specify the number of prints. → p.82
- Specify the number of indexes. → p.83
- Cancel DPOF settings. → p.84
- Checking DPOF. → p.84



■ Specifying the number of prints

- 1 Press the **ENTER** and **SELECT** buttons to select [STANDARD PRINTS] and then press the **ENTER** button.

The screen will change to 6-screen display.

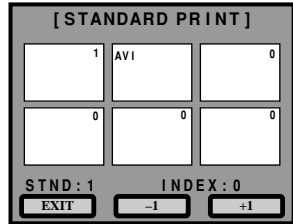
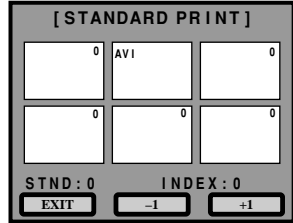
- 2 Press the **ENTER** and **SELECT** buttons to select the file that specifies the number of prints.

- 3 Press the **MENU** button and **ENTER** buttons to specify the number of prints.

To continue setting the number of prints, repeat the operations in procedures 2 - 3.

- 4 Press the **CANCEL** button.

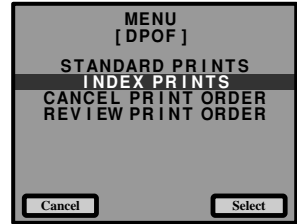
The setup menu will return. Press the **CANCEL** button again to exit the operation.



■ Specifying the number of indexes

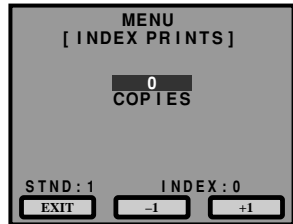
All of the files can be reduced and printed. These are called index prints. These are convenient for making a list of the files in the Ricoh folder and for specifying the number of prints.

- 1 Press the **and** buttons to select [INDEX PRINTS] and then press the ENTER button.



- 2 Press the MENU button and the ENTER buttons to specify the number of indexes.

- Note**
- To cancel the setting, set the number of indexes to zero (0).



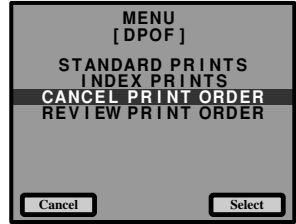
- 3 Press the CANCEL button.
The Playback menu will return. Press the CANCEL button again to exit the operation.

3

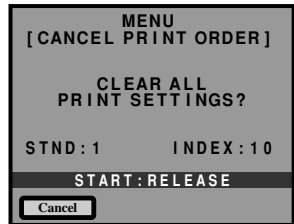
Playback

■ Canceling DPOF settings

- 1 Press the **▲** and **▶** buttons to select [CANCEL PRINT ORDER], then press the ENTER button.

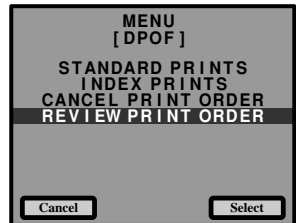


- 2 Press the shutter release button.
All of the settings will be cleared and the Settings menu will return.



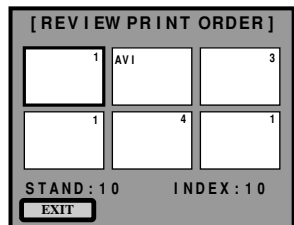
■ Checking DPOF

- 1 Press the **▲** and **▶** buttons, select [REVIEW PRINT ORDER], then press the ENTER button.



- 2 Check the number of prints to be made for the specified file.
To reset or increase the number of prints, repeat the number of prints setting operation.

- 3 Press the CANCEL button.
The Settings menu will return.



ERASING Chapter

4

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Erasing a File (Image)

This section explains how to erase recorded files. There are three ways to erase files: single file deletion, deletion of all files and deletion of multiple specified files.



- Remember that files cannot be restored once they are erased. Before starting to erase a file, make sure that you want to erase it.



- Files on a write-protected SmartMedia memory card cannot be erased unless the write protect pad is removed from the card. See “Protecting Against Accidental Writing” (p.29).
- Depending on the SmartMedia capacity, it may take a short time to erase a file after turning on the power or changing the mode dial.

Erase

The selected file is erased.

1 Set the mode dial to [].

An erase menu will be displayed.

2 Press the or button to select [SINGLE IMAGE] and press the ENTER

 button.



3 Press the or button to select an image file to erase, and press the shutter release button.

The image file selected is erased. If you want to erase more files, repeat step 3 above.



4 Press the **CANCEL** button.

The erase menu is displayed again.



- When a lower numbered file is erased, the higher numbers are reassigned.
- Files which have been set in Protect mode cannot be erased until they are unprotected. See “Protecting a File” (p.80).

Erase All Images

All recorded files are erased.

1 Set the mode dial to [].

2 Press the or button to select [ALL IMAGES] and press the **ENTER** button.



3 Press the shutter release button.

All the files are erased, and return to erase menu.



- High-capacity SmartMedia cards or larger number of files may take a long time to erase.
- Files which have been set in Protect mode cannot be erased until they are unprotected. See “Protecting a File” (p.80).

Erase Selected Files (Images)




Erases multiple selected image files.


❶ Set the mode dial to [].

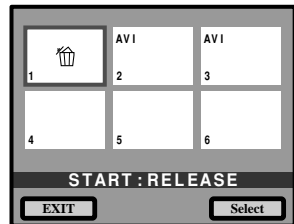
❷ Press the  or  button to select [SELECTED IMAGES] and press the ENTER  button.



The screen will change to 6-screen display.



❸ Press the  or  button to select an image file to erase and press the ENTER  button.

The image file is designated by the () mark.
To select more files, repeat step ❸ as many times as needed.



- Note**
- To cancel selected file bearing the  mark, press the ENTER  key again.

❹ Press the shutter release button.

The image files selected are erased.

The erase menu is displayed again after erasing the selected files.

- Note**
- Files may take time to erase, depending on the capacity of the SmartMedia memory card mounted and the file type.
 - Files which have been set in Protect mode cannot be erased until they are unprotected. See "Protecting a File" (p.80).

MISCELLANEOUS Chapter

5

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Transferring Images to a PC

You can transfer recorded files to a personal computer by using a serial or USB cable and software bundled with the camera.

Installing Camera Utility Software

Install the CD-ROM-based software (Camera utility Windows/Macintosh) (Ricoh Camera Utility) bundled with the camera.



- Refer to the separate sheets attached to this manual concerning the installation and operation methods.

● PC Operating Platforms and Installation Instructions

○ Windows

Windows	Description
Operating system	Microsoft Windows 95/98/2000/NT4.0
PC	PC running Microsoft Windows 95/98/2000/NT4.0
CPU	Pentium 166 or more (recommended Pentium II 300 or more)
Memory	• Windows : 32 MB or more (recommended 64 MB or more)
Hard drive space	100 MB or more (recommended 150 MB or more)
Display resolution	640 × 480 dots or more (recommended 1024 × 768 dots or more)
Display colors	256 or more (recommended 65,000 or more)
CD-ROM drive	CD-ROM drive supported by Microsoft Windows 95/98/2000



- The Camera utility software does not run under Windows NT3.51.
- The Camera utility software does not run under Windows 3.1.

○ **Macintosh**

Macintosh	Description
OS	8.1 – 9
CPU	PowerPC or more
Internal memory	64 MB or more (recommended 128 MB or more)
Required memory	2 MB of uncompressed application memory space
Hard drive space	100 MB or more (recommended 150 MB or more)
Display resolution	640 × 480 dots or more (recommended 1024 × 768 dots or more)
Display colors	256 or more (recommended 32,000 or more)
Keyboard mouse	Keyboard and mouse connectable to the Macintosh PC used
CD-ROM drive	CD-ROM drive supported by the Macintosh PC used

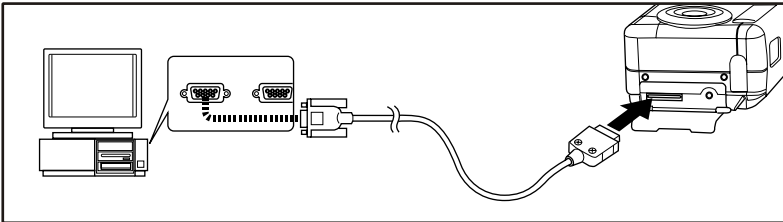
■ Connecting the Camera to a PC

Use the cable supplied when connecting the RDC-6000 to a personal computer.

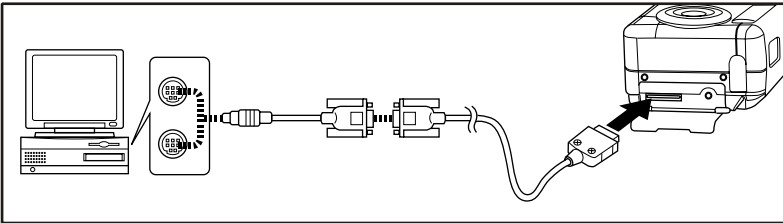
- 1 Turn off the personal computer power.
- 2 Make sure the power of this device is off and then use the indicated cable to connect to the personal computer.

- Note**
- Avoid using the camera battery whenever possible. Use the AC adapter instead. If the power fails during operation, it will be necessary to repeat.
 - Do not connect the AC adapter while the camera power is on.

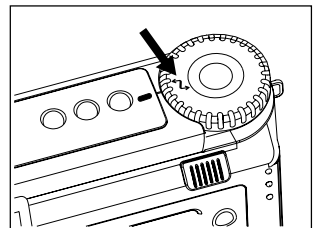
Typical Windows connection



Typical Macintosh connection



- 3 Turn on the digital camera power and set the camera mode dial to [2].



- 4 Turn on the personal computer power and start the utility software.

Changing Camera Settings

The various camera settings can be changed in accordance with the method of usage.

Formatting SmartMedia

New SmartMedia and SmartMedia used in another device (personal computer, etc.) can be formatted (initialized) by the camera.



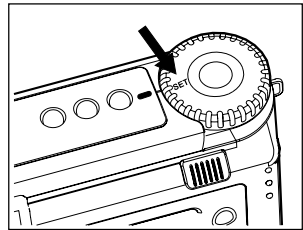
- Formatting SmartMedia erases all previously recorded files, including protected files.
- Do not use a personal computer to format (initialize) SmartMedia.
- In some cases, SmartMedia formatted by another device cannot be used.

1 Insert the SmartMedia and then slide the power switch to ON and set the Mode dial to [SET].

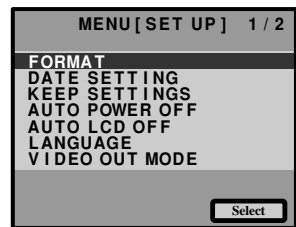
The Set-up will be displayed.



- Page 30 “Inserting a SmartMedia Memory Card”
- Page 41 “Turning On the Camera”



2 Press the **SELECT** and **ENTER** buttons to select [FORMAT] and then press the **ENTER** button.



3 Press the shutter release button.

The message “Formatting” will be displayed and the SmartMedia will be formatted.

When formatting is completed, the Set-up will return. Rotate the Mode dial and switch to another mode.



- SmartMedia with a write protect pad attached cannot be formatted. Remove the write protect pad and then proceed with the formatting.

Keep Settings

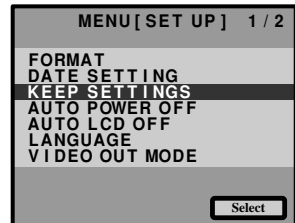
The keep settings mode is for preserving settings after the power is turned off. Each setting is saved and becomes effective when the camera is powered. The following settings can be saved.

- FLASH (p.51)
- RECORDING MODE (p.43)
- FOCUS (p.61)
- ISO SENSITIVITY (p.64)
- EXPOSURE MODE (p.53)
- REDEYE REDUCTION (p.64)
- +/- (Exposure Compensation) (p.54)
- WHITE BALANCE (p.56)
- LANGUAGE (p.97)
- AUTO BRACKET (p.68)
- GRID TEMPLATE (p.63)

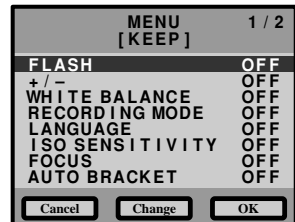
1 Set the mode dial to [SET].

The set-up menu will be displayed.

2 Press the or button to select [KEEP SETTINGS] and press the ENTER button.



3 Press the or button to select a mode for setting the keep settings.

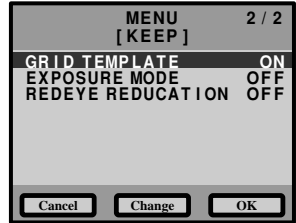
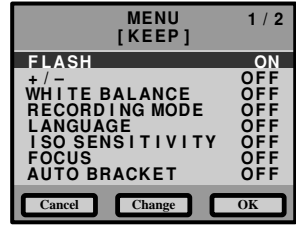


4 Press the MENU button to change the setting to [ON].

Keep Setting will be programmed. To program more items, repeat steps 3 and 4 as many times as needed.



- The settings of the items for which Keep Setting is programmed will be retained even when the camera is turned off.



5 After confirming the setting, press the ENTER button.

The set-up menu will be displayed. Set the mode dial to another mode.

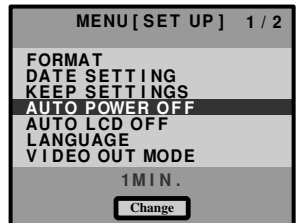
Auto Power Off Setting

The camera will turn off automatically (auto power-off) in the recording and play modes to conserve the battery if it is idle (no buttons or switches manipulated) for a length of time. The auto power-off mode can be disabled by setting it to off in either the record or play mode.

1 Set the mode dial to [SET].

The set menu is displayed.

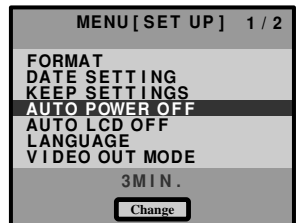
2 Press the or button to select [AUTO POWER OFF].



3 Press the MENU button and select the setting time (1 MIN, 3 MIN, 5 MIN, OFF)

Select OFF to disable the auto power off.

When the setting is complete, turn the mode dial to switch to another mode.



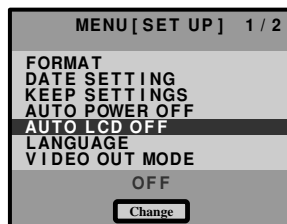
Note

- The initial value is 1 MIN.
- Slide the power switch to reactivate the camera if it shuts off in auto power-off mode.
- When using an AC adapter, the auto power-off function is disabled even if you have set the auto power-off mode to on.

Changing the LCD Off Setting

When the camera buttons and switches are not operated for the set time during recording or playback, the Auto LCD Off function will activate and turn off the LCD monitor to conserve energy. The Auto LCD Off time can be set to 1 min., 3 min., 5 min. or Off.

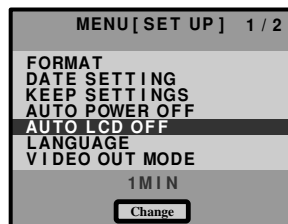
- 1 Set the Mode dial to [SET].
- 2 Press the **MENU** and **Change** buttons and select [AUTO LCD OFF].



- 3 Press the **MENU** **Change** button and select a time setting (1 min., 3 min., 5 min. or Off).

Select OFF to disable the auto LCD off.




When the setting is complete, turn the mode dial to switch to another mode.

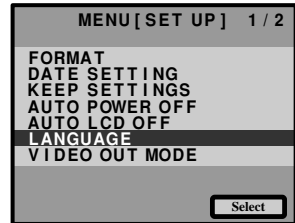
**Note**




- The initial OFF.
- There will be a display on the panel even when Auto LCD is operating and the LCD monitor is turned off.
- Press the DISPLAY button when the LCD monitor is turned off by the Auto LCD Off function.
- The Auto LCD Off function will not operate when the AC adapter is used (except during interval photography), even if a time is set.

Changing OSD (On-Screen Display) Language

The display of data on the LCD monitor can be switched between English, German, French and Japanese.

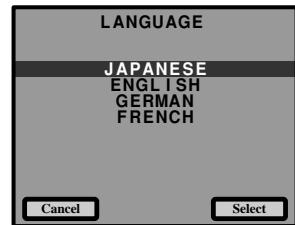
- 1 Set the mode dial to [SET].
- 2 Press the  or  button to select [LANGUAGE] and press the ENTER  button.



- 3 Press the  or  button to select a language, and press the ENTER  button.

The display language setting is updated and the set menu is displayed again.



When the setting is complete, set the mode dial to select another mode.

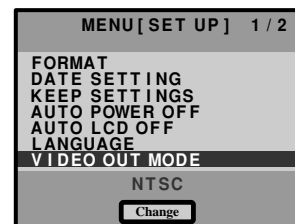


- Enable the save mode to save the language setting. See “Keep Settings” (p.94).

Changing Video-Out Signal Method (NTSC/PAL)

Switches the video system for connecting the camera to a TV set to play recorded images on TV.

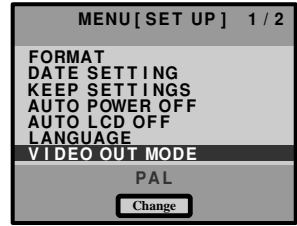
- 1 Set the mode dial to [SET].
- 2 Press the  or  button to select [VIDEO OUT MODE].



3 Press the MENU Change button and select between [NTSC] and [PAL].

The video system setting is updated.

When the setting is complete, set the mode dial to select another mode.



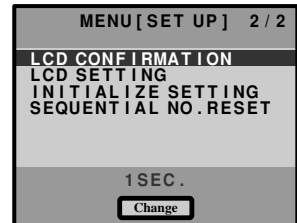
- The LCD monitor would appear blank when the video cable is inserted.

Changing LCD Confirmation

When you press the shutter release button to take a picture, the shot image appears on the LCD monitor, accompanied by a beep, before it is recorded. You can select the image confirmation time from among 0 second, 1 second, 2 seconds, and 3 seconds.

1 Set the mode dial to [SET].

2 Press the Change or Change button to select [LCD CONFIRMATION].

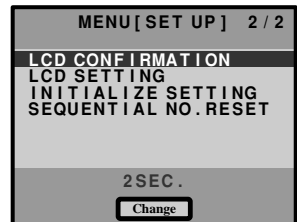


3 Press the MENU Change button and select the image confirmation time (1 sec., 2 sec., 3 sec., OFF).

When the setting is complete, set the mode dial to select another mode.



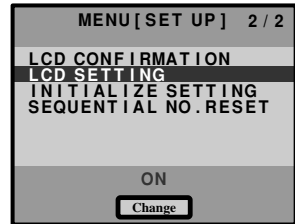
- The initial value is 1 sec.
- Images are not displayed when the image confirmation time is set to OFF. The images are recorded immediately after the photograph is taken.



Changing the LCD Setting

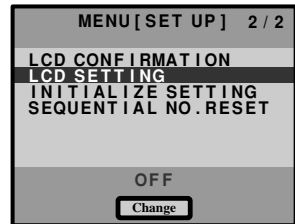
The camera comes up with the LCD monitor enabled when it is powered on in a recording mode. You may set the camera to have the LCD monitor disabled when it is powered on, to save the batteries.

- 1 Set the mode dial to [SET].
- 2 Press the **or** button to select [LCD SETTING].



- 3 Press the MENU **Change** button to select [OFF].

The camera, when powered on in a recording mode, will now come up with the LCD monitor disabled. Press the DISPLAY button to switch the monitor display. See "LCD Monitor Display" (p.41).



When the setting is complete, turn the mode dial to switch to another mode.

- Note** • The initial value is ON.

Initializing Settings

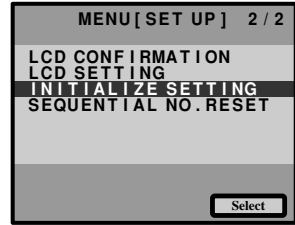
You can reset all settings, except for the date.



- Data set by Keep Settings will also be initialized to its factory defaults.

- 1 Set the mode dial to [SET].

- ② Press the or button to choose [INITIALIZE SETTING] and press the ENTER button.



- ③ Press the shutter release button.
The settings will be reset to their factory defaults.
Recorded files are preserved intact even when the settings are initialized.

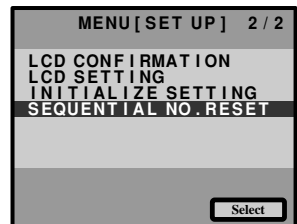
When the initialization is complete, the SET-UP menu appears again. Turn the mode dial to choose another mode.



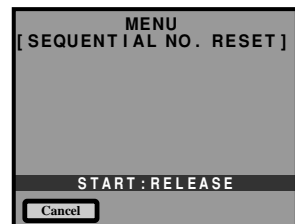
Sequence Number Initialization

The sequence numbers assigned to the recorded files are reset.

- ① Set the Mode dial to [SET].
- ② Press the and buttons and select [SEQUENTIAL NO. RESET] and press the ENTER button.



- ③ Press the shutter release button.
When initialization is completed, the Set-up menu will return.
Rotate the Mode dial and switch to another mode.



Using the Remote Control

This section explains how to operate the camera using the optional DR-3 remote control unit.



- Operate the remote control unit by pointing to the remote control receiver located on the front.



- For instructions on replacing the batteries and maintaining the remote control unit, refer to the accompanying manual.
- Some procedures differ when performed on the remote control unit and on the camera itself. Follow the instructions below to use the remote control unit.

Shooting

The remote control unit can be used to operate the camera. It is particularly convenient when the camera is set up at a remote location or is in a fixed position.

1 Set the mode dial to shooting mode [] [].

2 Decide the composition of the picture and press the **RELEASE** button.

● In (still picture) mode

The self-timer LED will light and recording will start about 2 seconds later.

● In (Text) mode

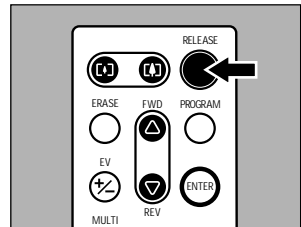
Press the **RELEASE** button to start recording immediately.

● In (Quick shooting) mode

Shots will be taken continuously while the **RELEASE** button is pressed. Shooting will stop when the **RELEASE** button is released and the shots will be recorded.

● In **Motion Picture mode**

Press the **RELEASE** button to start recording. Press the **RELEASE** button again to stop recording.

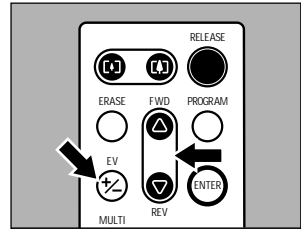


■ Setting Exposure Compensation

- 1 Press the EV (+/-) button.
- 2 Set the exposure compensation level using the FWD (Δ) or REV (∇) button and press the RELEASE button to take the picture.

- To cancel the setting

Use the procedure in step 2 to set the compensation value to $[\pm 0.0]$.



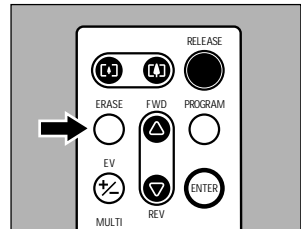
■ Setting the focus

- 1 Press the Erase button and set the focus mode.

Each time the Erase button is pressed, the focus mode will change.

- 2 Focus mode operation is as shown in the table (operation button allocation) below.

Body button name	Remote control button name
CANCEL	MULTI
ENTER	ENTER
	FWD (Δ)
	REV (∇)



- 3 Press the release button to take the picture.

- To cancel the setting

Press the Erase button to end focus mode setting.

Playing

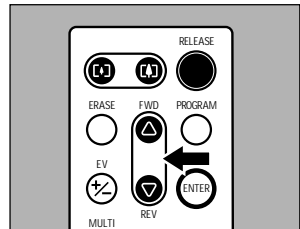
Use the remote control unit to play back recorded files.

- 1 **Set the mode dial on the camera to [] and press the MENU button to select the playback source.**

The most recently recorded file will be played.

- 2 **Press the FWD (Δ) or REV (∇) button to select a file.**

The remote control unit buttons are operated in the same way as the buttons on the camera.



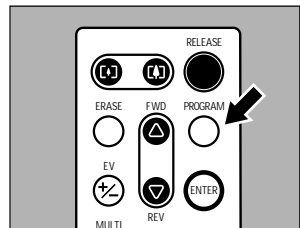
■ Magnifying an Image (Zoom Playback)

- 1 **Press the PROGRAM button.**

The image will be magnified by 2.0 times and it will be displayed in 9 multi-display.

- 2 **Press the Program button again.**

The images will be displayed one at a time. When the Program button is pressed after 9 images have been displayed, the standard image will return.



■ Displaying Multiple Images (Multi Image Playback)

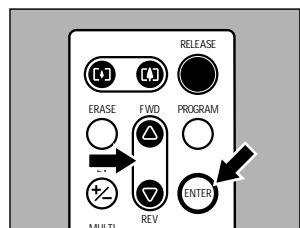
- 1 **Press the MULTI button.**

The image will be displayed in Multi playback.

- 2 **Press the FWD (Δ) or REV (∇) button to move the selected image.**

- 3 **Press the ENTER button.**


The selected image will be displayed in single-image mode and multi-image playback mode will be canceled.





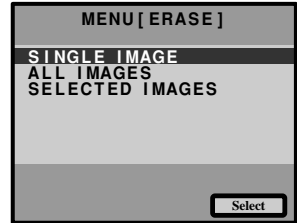
Erasing



You can use the remote control unit to erase a recorded file.

- Remember that files cannot be restored once they are erased. Before starting to erase files, make sure that you want to erase them.

❶ Set the mode dial on the camera to [].

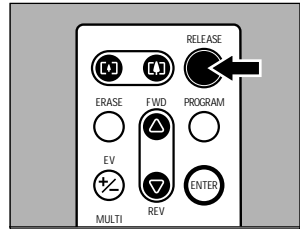
❷ Use the FWD () or REV () button to select [SINGLE IMAGE] and press the ENTER button.



❸ Use the FWD () or REV () button to select the file to be erased and press the RELEASE button.

The selected file will be erased.

- Note** • To cancel operation, press the MULTI button on the remote control.



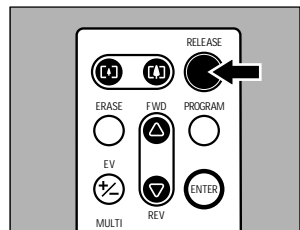
■ Erasing All Files

❶ Select [ALL IMAGES] and press ENTER button.

❷ Press the RELEASE button.

All the files will be erased.

- Note** • To cancel operation, press the MULTI button on the remote control.



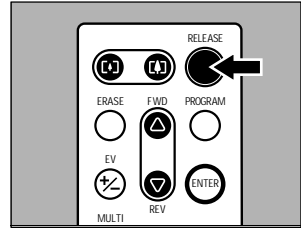
■ Erasing Selected Images

- 1 Select [SELECTED IMAGES] and press the ENTER button.
- 2 Use the FWD (△) or REV (▽) button to select the file to be erased and press the ENTER button.

Note • To cancel selection, press the ENTER button again.

- 3 Press the RELEASE button.

Note • To cancel operation, press the MULTI button on the remote control.



APPENDIX

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Accessories

Item	Model	Remarks	
AC adapter	AC-3	For drawing power directly from a household electrical outlet. See "Using an AC Adapter" (p.27).	
Lithium Ion Battery	DB-20	Rechargeable lithium ion battery.	
Remote Control Unit	DR-3	For remote operation of the camera's recording and playback functions.	
SmartMedia Memory Cards		A postage stamp-sized storage media with a thickness of 0.76 (mm).	
	4 M	FS-4	Capable of storing a maximum of (7) images recorded in 1600N mode.
	8 M	FS-8	Capable of storing a maximum of (15) images recorded in 1600N mode.
	16 M	FS-16	Capable of storing a maximum of (32) images recorded in 1600N mode.
	32 M	FS-32	Capable of storing a maximum of (67) images recorded in 1600N mode.
PC Card Adapter	FS-B53	Used to insert the SmartMedia memory card directly into the PC floppy disk drive.	
Floppy Disk Adapter	FS-B10	This floppy disk adapter makes it possible to load SmartMedia directly into the floppy disk drive of the personal computer.	

- All trademarked company and product names mentioned in this manual are the property of their respective owners.
- SmartMedia™ is a registered trademark of Toshiba Corporation.

Handling Precautions

- This camera is not waterproof. Keep away from water, rain, beverages, etc. Consult your nearest Ricoh service office if any liquid gets into the camera.
- Be careful not to drop the camera or subject it to impacts.
- Do not use the flash more than necessary in continuous shots to avoid overheating.
- Never look through the viewfinder directly at the sun or intense light. Your eyesight may be impaired.
- Do not fire the flash close to a baby or infant's eyes.
- Do not fire the flash by aiming the camera at a driver behind the wheel. A traffic accident may result.
- Exercise caution to prevent sand or dust from getting into the camera in such environments as beaches or work sites.
- Do not leave the camera for any length of time in particularly hot or humid places, such as an automobile with the windows closed, beaches or bathrooms.
- Verify that the camera power is off before you attach the AC adapter.
- Direct sunlight and strong light striking the LCD monitor or the LCD panel will reflect white light, making it difficult to view.
- The LCD monitor or the LCD panel may contain some pixels that always or never illuminate and the brightness of some areas of the monitor may appear uneven. These are typical LCD performance characteristics and do not constitute malfunctions.
- Do not force any of the external moving parts, such as the card cover, terminal cover or battery cover.
- Do not lift the camera by the hard cover, terminal cover or battery cover.
- Be careful not to hit the lens unit or the LCD monitor while carrying the camera.
- Extreme temperature differentials may cause condensation to form inside the camera body and lens unit, reducing performance. To avoid this, place the camera in a plastic bag and let it slowly acclimate to the new temperature before exposing it.

Potential Causes of Condensation

- Transporting the camera from a cold place to a warm place.
- Storing or using the camera in places subject to high humidity.
- Bringing the camera into a recently heated room or leaving it directly in the path of air conditioning.

Care and Storage

■ Care

- Fingerprints or dirt on the lens will reduce performance so take extra care not to get it dirty.
 - Do not wipe dust or smears off the lens with your fingers. Use a lens blower, readily available at most photographic suppliers, to blow dust off, or a very soft cloth to wipe it lightly.
 - Be particularly diligent in cleaning the lens after use at the beach or around chemicals.
 - If your camera should malfunction, contact the Ricoh service center. This product generates high voltages and disassembly is hazardous. Under no circumstances should you attempt to disassemble it yourself.
 - Never use solvents, benzine, insecticides or other volatile substances on the equipment as this may deform or dissolve it.
 - Be careful not to let objects rub against the LCD monitor or the LCD panel as it is readily susceptible to scratching.
 - To clean the LCD monitor or the LCD panel, wipe it gently with a soft cloth that has been moistened in diluted detergent and well-wrung. Wipe off any moisture with a soft, dry cloth.
- * Remove the batteries and AC adapter from the camera before commencing any of the above.

■ Storage

To prevent possible failures, avoid storing the camera in places that are:

- Hot and damp, or subject to sharp temperature or humidity changes.
- Sandy or dusty.
- Subject to strong vibrations.
- In contact with chemicals, such as insecticides, or rubber or PVC products for extended periods of time.
- Near sources of strong electromagnetism (such as motors, transformers, and magnets).


Troubleshooting


Refer to the pointers listed below before submitting the equipment for repairs. If the problem persists after trying the suggestions, contact the Ricoh service center listed at the back of this manual.

■ Power Source

Problem	Cause	Solution	Page
Power will not come on	Battery dead, improperly installed or missing	Insert the battery correctly or recharge it.	25
	AC adapter not attached correctly	Attach correctly again.	27
Power cuts out	No buttons touched so auto power-off function was activated	Restart camera.	41
	Dead battery	Recharge with new battery.	27
Battery quickly consumed	Camera operated in extremely high or low temperature location	–	–
	Camera operated in dark area requiring frequent use of the flash	–	–




■ Recording and Playback

Problem	Cause	Solution	Page
Shutter release button pressed but no image recorded	Battery dead, improperly installed or missing	Recharge or reposition battery.	27
	No power, or mode dial is not set	Slide power on and set mode dial to []	41
	Shutter release button only pressed halfway	Press shutter release button all the way.	46
	SmartMedia memory card not formatted (initialized)	Format SmartMedia memory card.	31
	No space on SmartMedia memory card	Erase unimportant files or replace SmartMedia memory card.	31, 86
	SmartMedia memory card not working (service life exceeded)	Replace SmartMedia memory card.	29
	Self-timer on	Press the self timer button to disengage the self timer recording mode.	59
	Flash is charging	Wait until flash LED ceases flashing.	46
SmartMedia memory card contact surface dirty	Clean contact surface with soft dry cloth.	29	
Cannot confirm a shot picture	The image confirmation time is too short.	Make the image confirmation time longer.	98
No image on the LCD monitor	The LCD monitor is turned OFF.	Press the DISPLAY button to turn ON the LCD monitor, or set [LCD Initialization] to [ON].	41, 99
Autofocus is on but camera not focusing	Dirty lens	Clean lens with blower or soft dry cloth.	–
	Subject not in the center of the autofocus field	Use focus lock	60
	Subject difficult to focus	Use focus lock or switch to manual focus.	60, 61

Problem	Cause	Solution	Page
Flash won't fire, or won't charge	Camera not set to still mode	Use record menu to set record to still mode.	43
	Camera set to flash off mode	Cancel the flash off mode with flash button.	51
	White balance mode set to setting other than auto	Use record menu to set the white balance to auto.	56
	Batteries dead	Replace batteries.	25
Image is too bright	The camera is too close to the subject.	Retake picture without flash.	51
	Over-exposed	Use record menu to adjust exposure compensation.	54
	Brightness setting of LCD monitor not adjusted	Adjust brightness adjustment dial.	35
Image is too dark	Shot in low light area with camera set to flash off mode	Press the flash button disengage flash off mode.	51
	Under-exposed	Use record menu to adjust exposure compensation.	54
	Brightness setting of LCD monitor not adjusted	Adjust brightness adjustment dial.	35
Unnatural coloration of image	Shooting conditions difficult for white balance in auto mode	Place a white object near the subject, use the flash or select one of the manual white balance modes.	51, 56
Date and other recording data will not display	Screen display set to off	Press the ENTER button to switch screen display mode.	49
Can't playback or image won't appear	Camera not set to play mode	Set mode dial to [].	75
	SmartMedia memory card not installed or doesn't contain any files	Insert a SmartMedia memory card with recorded images.	30
	Use of a SmartMedia memory card not formatted by your camera	Use a SmartMedia memory card that has been formatted and recorded by your camera.	31
	SmartMedia memory card contains files in a format not read by the camera.	Check the format type	72
	Video interface cable poorly connected	Check connection.	73
	Source of interference, such as electric motor, nearby	Relocate camera away from source.	–
	SmartMedia memory card contact surface dirty	Clean contact surface with soft dry cloth.	29
Replay is not clear	Error with SmartMedia memory card	Test camera with another SmartMedia memory card. If second card displays well, problem is with card not camera.	–

Problem	Cause	Solution	Page
Display shut off	Dead battery	Recharge battery.	25
	Auto power-off activated	Slide power on again.	41
Remote control unit will not work	Obstruction between the remote control unit and camera sensor	Remove the obstruction. (Sensor is on the left side of the lens.)	–
	Dirty remote control transmitter or camera sensor	Clean with a soft dry cloth.	–
	Dead remote control batteries	Replace CR2032 lithium batteries.	–
LCD monitor brightness changes during autofocus operation	Area captured by autofocus field and the surrounding area have contrasting light levels or the entire subject is dark.	There is no malfunction.	–
Vertical lines appear on image	Phenomenon occurring with pictures of bright subjects, known as the smudge phenomenon	There is no malfunction. Never shoot the Sun, etc.	–

■ Miscellaneous

Problem	Cause	Solution	Page
SmartMedia memory card will not fit into slot	Wrong type of SmartMedia memory card	Use a SmartMedia memory card specified for the camera.	30
	SmartMedia memory card incorrectly oriented	Insert the SmartMedia memory card the correct way.	30
Camera will not operate even when buttons and switches are manipulated	Dead battery	Recharge battery.	25
	Camera malfunction	Slide the power off and on once. Turn the mode dial to [] or []. If the problem persists, (1) reset the camera by sliding the power switch after removing the main batteries, and (2) reinstall the batteries and try to operate the camera again.	–
Date and time are wrong	Date and time setting is incorrect	Reset the date and time.	33
Date and time were set but disappeared	Battery removed	The date setting is reset if the battery has been removed for about 3 minutes or longer. Set the date again.	34
File won't erase or SmartMedia memory card won't format	Camera not set to erase mode	Turn the mode dial to [].	86
	Write protect pad on SmartMedia memory card	Remove pad from SmartMedia memory card.	29
	File protected	Use the play menu to reset the file's protection setting.	80
	Power switch off or auto power-off activated.	Slide power on and retry.	41
Mode settings have changed	Batteries have been removed	Reset keep setting.	94
Auto power-off will not activate	Auto power-off setting is disabled	Enable setting.	95
	Camera powered by AC adapter (auto power-off is automatically disabled when powered by an AC adapter)	–	–
No image on the TV screen	The television system setting is incorrect.	Select the correct television system.	97

Using Your Digital Camera in Other Countries

Ricoh AC-3 AC adapter

- The AC-3 AC adapter adjusts automatically to voltages ranging from 100V to 240V AC and frequencies of 50Hz to 60Hz.
- Some countries use electrical outlets which have different shapes. Before leaving on a trip, obtain the necessary plug adapter from a travel agent or electric store.

Using a Local TV Receiver for Playing Pictures

- You can play pictures taken with this camera on a TV receiver (or monitor) furnished with a video input terminal. Use the video interface cable supplied.
- This camera supports two television systems: NTSC and PAL. Switch your camera's video system to meet the local video environment. See "Changing Video-Out Signal Method (NTSC/PAL)" (p.97).
- If you plan to take the camera with you on a trip abroad, identify the local television system beforehand.

About the Warranty and Servicing

1. The Ricoh RDC-6000 camera is backed by a one-year limited warranty. During the warranty period, which starts from the date of purchase, 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 contact the nearest Ricoh service office. Please note that you will be charged for the cost of shipping the camera from the Ricoh service office to your residence.
2. This warranty does not cover any damage resulting from:
 - ① Failure to follow the instructions in this instruction manual;
 - ② Repair, modification or overhaul not conducted by an authorized service center;
 - ③ Fires or natural disaster;
 - ④ Improper storage, such as exposing the camera to high temperatures, humidity, or mothballs; storing it with leaking batteries; storing the camera in a dirty condition so that it becomes moldy; or otherwise insufficiently caring for the camera.
 - ⑤ Submergence; exposure to floods or spilled alcoholic or other beverages; allowing sand or mud to enter the camera; exposure to physical shocks; or dropping of the camera.
3. After a full year has passed from the purchase date, you will become responsible for all repair fees, including those incurred at an authorized service center.
4. Expenses for overhauls and thorough inspections as a result of a customer's special request will be charged to the customer, whether or not they are incurred during the warranty period.
5. This warranty only applies to the camera and not to the accessories, such as the hard case and wrist strap, nor does it apply to the consumables provided, such as batteries.
6. Any consequential damage arising from the failure of this camera, such as expenses for taking pictures or loss of expected profit, will not be reimbursed whether it occurs during the warranty period or not.
7. 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.
8. Parts essential to the servicing of this camera - that is, components required to maintain the functions and quality of this camera - will be available for a period of seven years after the camera is discontinued. However, as some of those parts are kept for a longer period, do not hesitate to contact your distributor or the nearest Ricoh service representative even after the seven-year period.
9. Please note that, if the camera is seriously damaged from flooding, submergence, infiltration of sand or mud, violent shocks or dropping, the camera may not be repairable, and restoration to its original condition may be determined to be impossible.

Note

- Before sending the camera in for repair, check the batteries and read this instruction manual again to ensure proper operation.
- Some repairs require a significant amount of time to be completed. Please allow sufficient time for repairs.
- When sending the camera to a service representative, 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 a service representative.
- Before taking any important pictures (such as at weddings, on trips abroad, etc.) test the camera to check its operation and ensure proper functioning. We recommended that you keep this manual and spare batteries on hand.

Specifications

■ General

- **Video Signal Protocol** : NTSC/PAL
- **Power Source and Voltage** : Batteries: 3.7 volts
AC: 5 volts
- **Dimensions (W × H × D)** : 110 × 67.0 × 39.5 mm (4.33" × 2.64" × 1.56")
- **Weight** : Approximately 220 g (7 oz.) (excluding batteries)
- **Operating Range - Temperature** : 0° to 40° C (32° to 104 F)
- **Operating Range - Relative Humidity** : 85% or less
- **Storage** : -20° to 60°C (-4° to 140°F)

■ Camera

- **CCD** : 2,140,000 million square pixels
- **Lens** : Zoom lens F=2.8
 - Focal length : f= approx. 8.24 mm (equivalent to 40 mm on 35 mm camera format)
 - Minimum shooting range : Approximately 0.13 m (5.1")
- **Viewfinder**
 - Type : Reverse
Galilean TYPE
 - Magnification : Telescope 0.54X
 - Parallax correction : No
- **Monitor**
 - Display Size : 1.8"
 - Drive System : D-TFD Active Matrix
 - Picture Elements : Approximately 71,760 pixels
- **White Balance** : Auto/Preset (Daylight, Cloudy (Overcast),
Fluorescent Light, Tungsten Light,/RGB/W/B)
- **Exposure Compensation**
 - Light Metering System : Centerweighted
 - Exposure Value Memory System : Auto backlighting detection
Manual compensation, ±2.0 EV (in 0.25 EV increments)
 - Metering : TTL-CCD method
 - Flash Automatic Exposure : Yes (daylight synchro)
 - Shutter Speed : Still image: 1/4 sec. – 1/500 sec. (Mechanical)
Motion picture: 1/30 sec. – 1/2000 sec. (Electronic)
 - ISO Sensitivity : Approximately equivalent to 100, 200,400
- **Distance Adjustment**
 - Autofocus Method : TTL-CCD AF
 - Autofocus Range : Normal: 0.3 m – infinity
Macro: 0.13 m – 0.3 m

● Built-in Flash

- Type : Auto
- Range : About 0.3 m to 3.0 m
- Modes : Off/On (Forced flash/Slow synchro)/Red-eye reduction

■ Image Data Recording and Playback

● Image Resolution

: Still image; 1600 × 1200, 800 × 600, 640 × 480 pixels, 2000 × 1480 pixels (for Image Enlargement)
Motion picture; 320 × 240, 160 × 120

● File Format

: JPEG (Exif2.1)

● Camera

: DCF is the abbreviation of the standard "Design rule for Camera File system" which was standardized by the JEIDA

● Compression Format

: JPEG baseline method

● Approximate File Sizes

- 1600 × 1200 : F mode: approx. 960 KB, N mode: approx. 480 KB, E mode: approx. 240 KB,
- 800 × 600 : F mode: approx. 240 KB, N mode: approx. 120 KB, E mode: approx. 60 KB
- 640 × 480 : F mode: approx. 154 KB, N mode: approx. 77 KB, E mode: approx. 39 KB
- 2000 × 1480 : F mode: approx. 1475 KB

■ Input/Output Terminal

- Power input : 5 V (AC adapter)
- Video output : 1.0 V_{p-p} (75 ohm)
- RS-232 C/AUX/USB : Exclusive

■ Body

● Tripod Screw Hole

: Tapped (1/4-20 UNC)
: Length: less than 6.0 mm

■ Power Supply

● Main Batteries

- Type : Rechargeable lithium-ion battery
- Voltage : 3.7 volts

● Date backup battery

: About 3 minutes

● Auto Power-Off

: Activated after more than 1, 3, 5 minutes

■ Compatible Memory Cards for Recording and Playback

- Type of Memory : SmartMedia memory card
- Capacity : 2, 4, 8, 16, 32, 64 MB
- Operating Voltage : 3.3 volts

Recording Capacities

The table below gives approximate recording picture counts available by SmartMedia memory card capacity and by PIC mode.

			2MB	4MB	8MB	16MB	32MB	64MB
2000		F	1	3	8	16	33	68
1600		F	1	3	7	16	33	67
		N	3	7	15	32	67	135
		E	6	14	31	65	134	270
800		F	6	14	31	65	134	270
		N	12	29	63	131	268	541
		E	25	58	127	263	536	1082
640		F	9	23	49	102	209	422
		N	19	46	99	205	418	845
		E	39	92	198	411	837	1690
Motion pictures (sec.)	320 × 240 pixels	F	13	27	54	107	215	430
		N	20	40	79	158	317	634
	160 × 120 pixels	F	13	27	54	107	215	430
		N	20	40	79	158	317	634

* The file sizes are as follows.

- 2000** : 2000 × 1480 pixels
- 1600 : 1600 × 1200 pixels
- 800** : 800 × 600 pixels
- 640 : 640 × 480 pixels

* The picture quality (Compression ratio) is as follows:

- F** : Fine
- N** : Normal
- E** : Economy



- Recording capacity can be different from actual capacity because it depends on the shooting objects.



Declaration of Conformity

“The Product complies with the requirements of the EMC Directive 89/336/EEC.”



Declaration of Conformity

“The Product complies with the requirements
of the EMC Directive 89/336/EEC and the Low
Voltage Directive 73/23/EEC.”

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, user, 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. In this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to 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: IMAGE CAPTURING DEVICE

Model Number: RDC-6000

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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 B est conforme à la norme NMB-003 du Canada

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

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