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Introduction

Testing the camera

Always test the camera by taking several sample pictures to confirm that the pictures are recorded correctly.

Respecting copyrights

Reproduction or alteration of copyrighted documents and magazines other than for personal or family use or for a similarly limited extent, without the consent of the author, is prohibited.

About lost files

We regret that we cannot be responsible for files lost due to any malfunction of the camera.

About the warranty

This product is made according to local specifications. Should it malfunction while you are abroad, we cannot be responsible for the cost or availability of service in other countries.

Radio-frequency interference

Using the digital camera near electric devices could inhibit the performance of both the camera and nearby devices. Interference is likely to occur when the camera is placed near a radio or television. If this condition occurs, perform the following procedures:

- Relocate the camera as far as possible from the interference source.
- Change the orientation of the radio or television antenna.
- Plug the camera into a different electrical outlet.

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All trademarked product names mentioned in this manual are the property of their respective companies.

Camera Features

Recording quickly

Recording can be performed quickly and simply by determining the image composition while observing the LCD monitor and pressing the shutter release button. The memory is stored in the main unit of the camera.

Confirming a file after recording

A recorded file can be confirmed by the LCD monitor right after the recording. Playback the file by switching to the playback mode.

Taking several pictures by switching the mode

Three modes can be set. These modes include Normal mode, Fine mode (sets the recording priority on image quality), and Economy mode, which records several which images.

Natural color images

Use the Auto White Balance feature to place the subject in natural color, regardless of the lighting conditions.

Close-up shooting

You may approach a subject as close as a distance of 1 cm. This is called Macro Shooting and is appropriate for pictures of flowers, insects, or other detailed subjects.

Monitoring on a TV

A recorded file may be viewed on a TV by connecting the video cable. Dubbing to a video cassette tape and printing a full-color print are also possible if you connect the camera to a video deck or a video printer (NTSC only).

Easy to carry, compact size

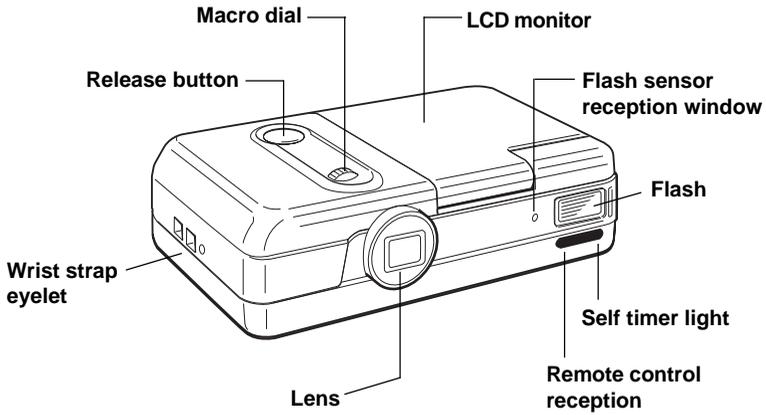
The compact size and light weight of the camera enable easy carrying. This camera has an optional hard case, making it easy for you to take it with you anywhere.

Transferring files to a computer

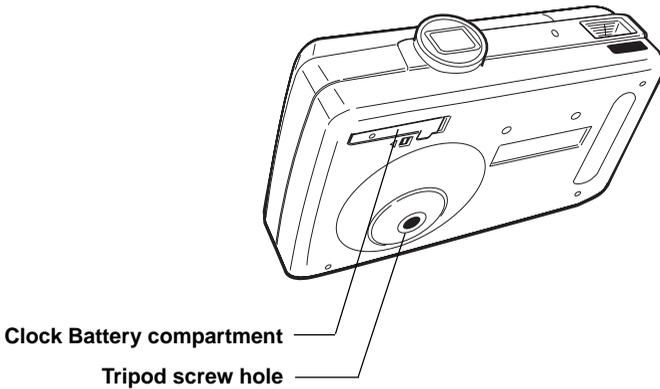
Files can be transferred to a computer using the software for the ESP2. The file can be printed with a color printer and color copier.

Parts and Names

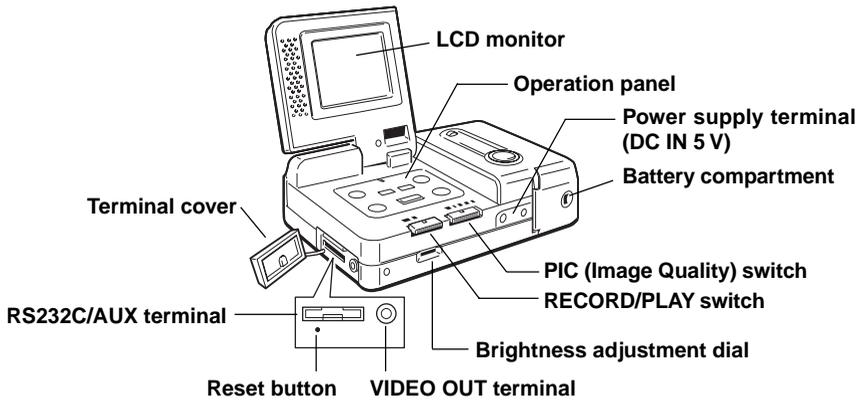
■ Camera (main unit) (Top)



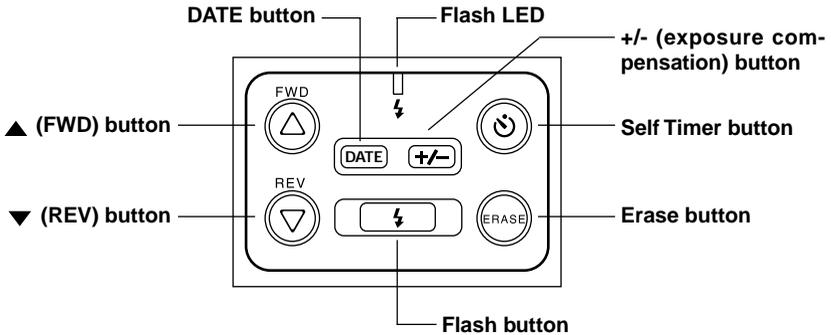
(Bottom)



(Operation part)

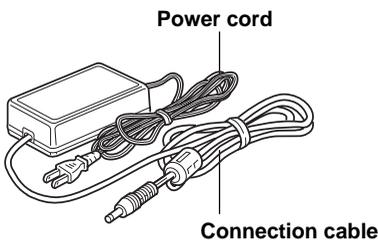


(Operation panel)



■ AC adaptor (not supplied)

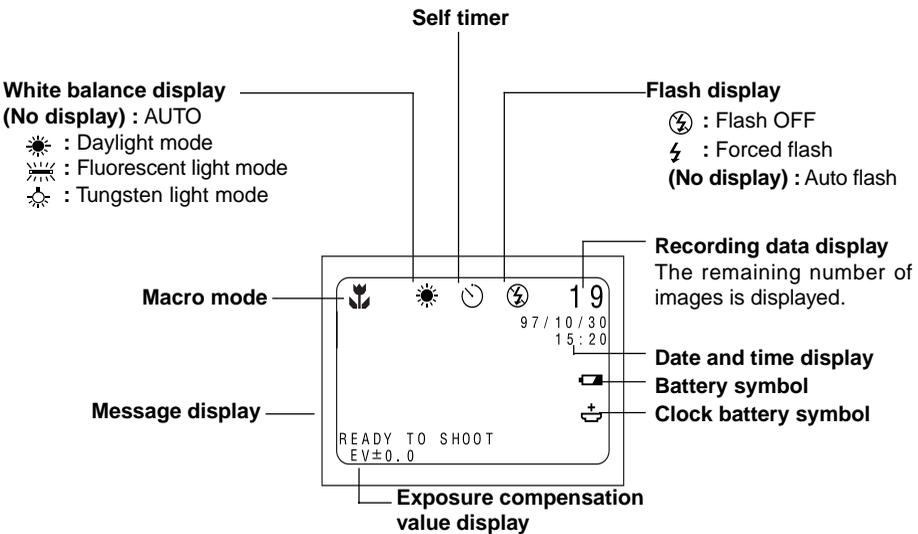
- AY3140 (100V to 240V)



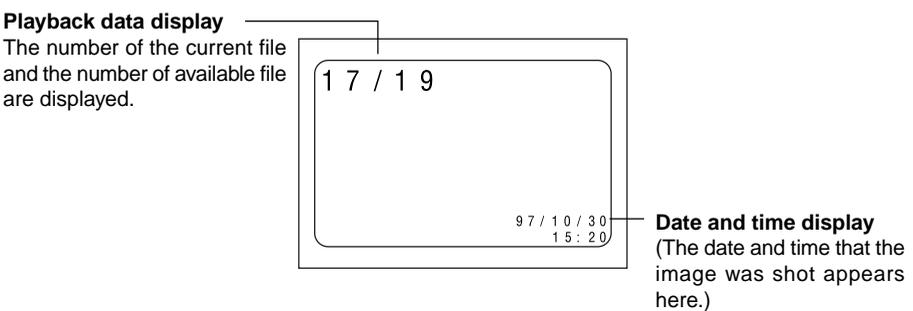
LCD Monitor

The battery condition, number of possible recordings, current mode, and other camera conditions appear as symbols and numbers on the LCD monitor.

Recording Display



Playback Display



Note:

- All data is displayed in this figure. However, only the necessary data is displayed.
- When the LCD monitor is opened, if no camera operations (button or switch operations) are performed for more than approximately five minutes, the Auto Power Off mode is activated to conserve energy. The display of the LCD monitor disappears. (The battery is only used slightly in this condition.) Supply the power again or press the release button for more than one second to turn the power on.
- The Auto Power Off setting can be changed. See page 56.

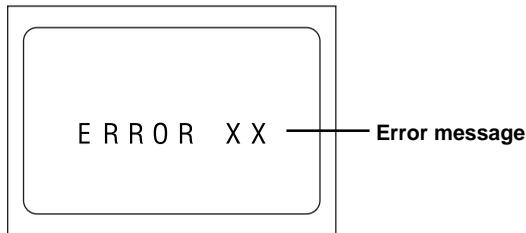
■ Warnings

When the following warnings appear on the LCD monitor, verify the problem and correct it.

Message	Condition	Description	Reference page
	Lights	This indicates that the batteries are depleted. Replace or recharge the batteries.	17
	Lights	The clock battery is depleted or the clock battery is not set. Replace or insert a new batteries.	19

■ Errors

When one of the following errors appears on the LCD monitor, verify the problem and correct it.



Error message	Description	Reference page
ERROR RECORD	The file is lost or damaged. Record the image again; the data that was recorded at this time may not be played back correctly. If the error message is still displayed, turn on the power again or press the Reset button.	28 59
ERROR ERASE	The erase operation was not performed correctly. Turn off the power by closing the LCD monitor, then turn it on again and take a test image. If the test image data is erased, the incorrectly erased data will also be erased at this time. If the error message is still displayed, press the Reset button.	28 52 59
ERROR PLAY	The playback failed. Turn on the power again or press the Reset button.	28 59
SYSTEM ERROR1 SYSTEM ERROR2 SYSTEM ERROR3	Turn on the power again. Otherwise, press the Reset button.	28 59

* When problems cannot be solved by following the steps above, please contact your dealer or the local service representative.

Basic Operation • Quick Reference

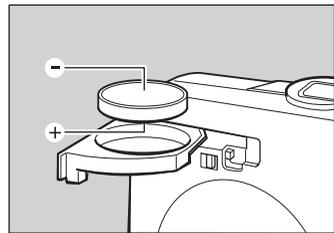
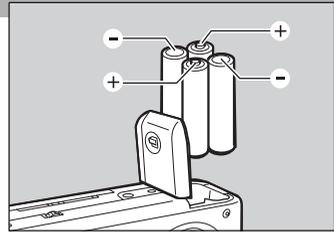
This section describes the basic operations. Refer to the additional pages for further details.

Preparations

Inserting the batteries Pages 17 - 21

q Insert the batteries.

- * When using the AC adaptor, connect the AC adaptor to the camera, then connect the adaptor to the wall outlet. See pages 19 - 20.



Setting the Date and Time Pages 22 - 23

q Open the LCD monitor.

w Press and hold the DATE button for more than two seconds.

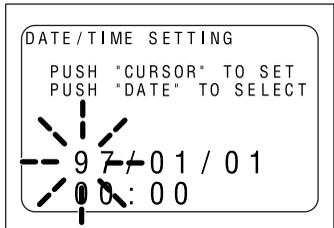
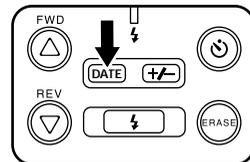
e Press the FWD U button or the REV T button to change the information.

Each time the DATE button is pressed, the next position starts flashing.

- * Press the DATE button repeatedly to set (in order) the year, month, date, hour, and minute. When the selected date or time area is flashing, press the U button or the T button to set the correct numbers.

r Start the clock.

When the information is correct, press the DATE button again to start the clock.



Taking Pictures

Taking Pictures Pages 28 - 31

- q Turn on the power. The recording mode is set.

Open the LCD monitor. Set the REC(ord) /PLAY switch to the REC position.

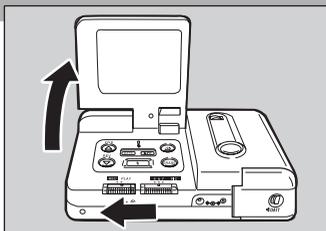
- w Set the image quality mode.

Set the PIC switch to F, N, or E.

- e While viewing the LCD monitor, move the camera toward the subject.

Briefly press the Release button and make sure the message "READY TO SHOOT" appears.

- r Press the Release button to take a picture.

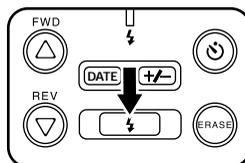


Changing the Flash Mode Pages 36 - 39

- q Open the LCD monitor and slide the REC(ord)/PLAY switch to the REC position.

- w Press the Flash button and select Flash Off (☺), Forced Flash (⚡) or Auto Flash (no symbol).

- e While viewing the LCD monitor, position the camera to frame the subject, then press the Release button to take the picture.



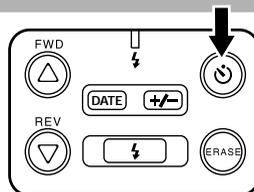
Using the Self Timer Page 44

- q Open the LCD monitor and set the REC(ord)/PLAY switch to REC.

- w Press the Self Timer button. The Self Timer (⌚) symbol will be displayed.

- e Position the camera to frame the subject, then press the Release button to take the picture.

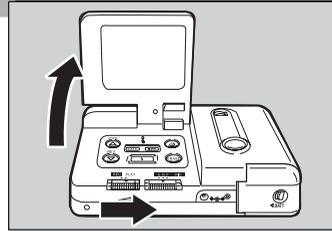
The Self Timer lights, the shutter will be released after approximately 10 seconds.



Playback and Erasure

Viewing a File (File Playback) Page 50

- q Open the LCD monitor and set the REC(ord)/PLAY switch to PLAY.
- w Press the U and T buttons to move through the files.

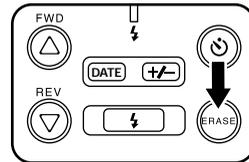


Erasing a File Pages 52 - 54

- q Open the LCD monitor and slide the REC(ord)/PLAY switch to PLAY.
- w Press the ERASE button.

Add a note:

The Release button is also referred to as the ENTER button in the LCD monitor.



ERASE

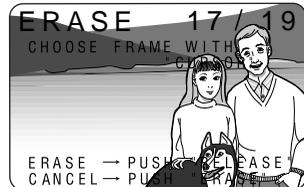
CHOOSE WITH "CURSOR"
AND PUSH "ENTER"

▶ ERASE

ERASE ALL

EXIT

- e To erase one file, press the U and T buttons to select ERASE, then press the Release button. Press the U and T buttons to select the file to be erased. Press the Release button be consistent. Repeat as desired.



- e To erase all the files, press the U and T buttons to select ERASE ALL, then Press the RELEASE button to erase all files. Or, press the Erase button if you do not want to erase all files.

Erased files cannot be restored.

Check the contents of the file carefully before erasing the file.

● ERASE ALL? ●

YES → PUSH "RELEASE"

NO → PUSH "ERASE"

Safety Precautions

Display

Various messages enable you to use the product safely and prevent unexpected danger to people or damage to property.

- | | |
|--|---|
|  Warning | This symbol means operations may result in a serious injury or death if this message is ignored or if incorrect operation is performed. |
|  Caution | This symbol means mishandling may injure the users or damage objects if the message is ignored. |

Display Example



- ⊘ Indicates a warning of a prohibited operation.
- ⊘ Indicates specifically prohibited items.

- Display example



Meaning: Touch prohibited.



Meaning: Disassembly prohibited.

Observe the following precautions in order to use this equipment safely.

Warning



- Turn off the power immediately if a fire, odor or other abnormal condition is observed. Remove the batteries carefully, being careful to avoid electrical shock or burning. When the power is supplied by an electrical outlet, always remove the electrical plug from the wall outlet to avoid fire or shock. Contact your nearest service representative. Do not use this equipment when it is damaged or is not operating correctly.



- Turn off the power immediately if foreign matter (metallic objects, water, fluid, etc.) enters the internal parts. Remove the batteries, being careful to avoid electrical shock or burning. When the power is supplied by an electrical outlet, always remove the electrical plug from the wall outlet to avoid fire or shock. Contact your nearest service representative. Do not use this equipment when it is damaged or is not operating correctly.



- When the LCD monitor is damaged, do not touch the fluid inside the display. If any of the following conditions occur, perform the appropriate action immediately.
- If liquid crystals contact the skin, wipe the crystals off the skin and rinse the affected area with plenty of water. Then, wash the area thoroughly with soap and water.
- If any fluid gets in your eyes, rinse your eyes with clean water for at least 15 minutes. Contact a doctor immediately.
- If someone drinks the fluid in the display, rinse out the mouth thoroughly with water. Drink a large quantity of water and induce vomiting. Then, contact a doctor immediately.



- Observe the following precautions to prevent the batteries from leaking, exploding, igniting, or breaking.
- Never use batteries that are not specifically recommended for use with this camera.
 - Never dispose of the batteries in a fire; do not short-circuit the terminals; and do not attempt to disassemble, heat, or recharge the batteries. (Only Nickel Cadmium or nickel-metal-hydrate (NiMH) batteries can be recharged.) Doing so may damage the batteries and cause a fire, injury, or environmental contamination.
 - Do not use batteries incorrectly; do not use batteries of a different type or name; do not use batteries of a different manufacturer; and do not mix old and new batteries.
 - Be sure to maintain the correct polarity (positive [+] and negative [-] poles) when inserting the batteries.
 - Do not solder the batteries. This may damage the batteries and may cause a fire, injury, or environmental contamination.



- When using rechargeable batteries, do not mix them with other types of batteries or with batteries in another charged condition.



- Store the batteries in a location that is not accessible to infants or children in order to prevent the batteries from being swallowed accidentally. Contact a doctor immediately if the batteries are swallowed accidentally. This may result in severe personal injury.



- Never leave this product within the reach of infants or children.



- Do not touch the inside of the camera. The internal high-voltage circuits may cause an electrical shock. Remove the batteries right away, being careful to avoid electrical shock or burns. When the unit is damaged, contact the store where you purchased the product or contact the service representatives.



- Never attempt to disassemble, repair, or modify the camera by yourself. There are internal, high-voltage circuits which may cause severe electrical shock.



- Never use the camera in the bathtub or shower. This may cause fire or electrical shock.



- Do not use the unit near flammable gas, gasoline, benzene, thinner, etc. This may cause an explosion, fire, or burns.
- Do not use the camera in an airplane or other location where usage is restricted. Using the camera in these locations may result in an accident.



- When dust accumulates on the electrical plug, wipe it off thoroughly. The dust may cause a fire.
- When using a household electrical outlet, always use the special AC adaptor (product name: AY3140, optional). If a non-recommended AC adaptor is used, this may cause fire, shock, or other damage.



- When traveling outside the U.S., do not contact the AC adaptor to power outlet. This may cause fire, shock or other damage.

Observe the following precautions in order to use this unit safely.

 **Caution**



- Fluid leaking from a battery can cause skin burns. If you touch a damaged battery, wash your hands with water immediately (do not use soap).
If fluid leaks from the batteries, wipe off the fluid and replace the batteries with new batteries.



- Make sure that the electrical plug is plugged securely into the wall.



- Do not get the camera wet. Do not touch the camera with wet hands. This may cause an electrical shock.



- Do not point the flash unit at the driver of a car, bicycle or train. This may cause an accident.



- To prevent fire and shock, do not use metal objects such as a tweezers to grasp the batteries. This may cause a short-circuit.

Special Products

- When using products that are optional, such as the Ricoh remote controller and AC adaptor, read the section Safety Precautions in the operation manual for each product before operation.

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Before Using the Camera

Confirming the Package Contents

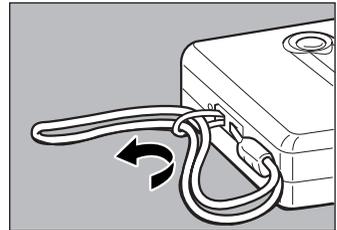
Check the packaging to ensure you have received the following items. Read the warranty, then store it in a safe place.

- Digital Camera (main unit)
- Video connection cable
- Soft Case
- Four AA Alkaline Batteries
- Lithium battery (CR2025)
- Wrist Strap
- Instructions for use
- Warranty Card

Attaching the Wrist Strap

For security, always use the wrist strap when carrying the camera.

- ① **To attach the wrist strap, pull the leading end of the strap through the wrist strap eyelet on the camera, then pull then remainder of the strap through the looped end of the strap as shown.**



Important

- *Avoid swinging the camera when carrying it.*
-

Supplying Power to the Camera

The procedures for loading the batteries (alkaline batteries, Lithium battery) are explained in this section. Electrical power supply by standard AC household current is also explained in this section.

Inserting Batteries

Insert four AA alkaline batteries to begin using the camera. It is recommended to use the same type of batteries which are included in the package.

Note: *The camera can also be powered by commercially available rechargeable nickel-cadmium (NiCad) batteries or nickel-metal-hydrate (NiMH) batteries. (It is recommended to use a high capacity type of battery for NiCad batteries.)*

Warning



Observe the following precautions to prevent the batteries from leaking, exploding, igniting fire or breaking.

- Never use batteries that are not specifically recommended for use with this camera.
- Never dispose of the batteries in a fire; do not short-circuit the terminals; and do not attempt to disassemble, heat, or recharge the batteries. (Only Nickel Cadmium or nickel-metal-hydrate (NiMH) batteries can be recharged.) Doing so may damage the batteries and cause a fire, injury, or environmental contamination.
- Do not use batteries incorrectly; do not use batteries of a different type or name; do not use batteries of a different manufacturer; and do not mix old and new batteries.
- Be sure to maintain the correct polarity (positive [+] and negative [-] poles) when inserting the batteries.
- Do not solder the batteries. This may damage the batteries and may cause a fire, injury, or environmental contamination.



- When using rechargeable batteries, do not mix them with other types of batteries or with batteries in another charged condition.



- Store the batteries in a location that is not accessible to infants or children in order to prevent the batteries from being swallowed accidentally. Contact a doctor immediately if the batteries are swallowed accidentally. This may result in severe personal injury.

⚠ Caution



- Fluid leaking from a battery can cause skin burns. If you touch a damaged battery, wash your hands with water immediately (do not use soap).

If fluid leaks from the batteries, wipe off the fluid and replace the batteries with new batteries.

Rechargeable batteries

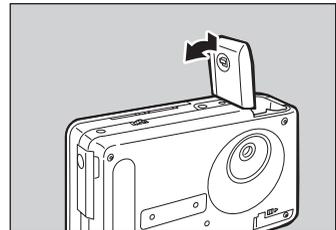
- Before using commercially available Nickel Cadmium or nickel-metal-hydride batteries, thoroughly read the safety precautions provided with each product.

Important

- Use only specified AA-type batteries.
- Never use manganese batteries, or any other type of battery that is not specifically recommended. Use of such batteries may damage the camera or LCD monitor.
- Some batteries may become hot after a long period of use. Remove the batteries after they have cooled.

- ① **Close the LCD monitor, then press slide the lever to open the battery compartment.**

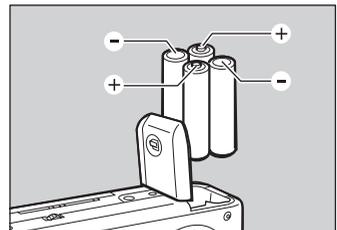
Note: See "Turning on the Power" on page 28 for information about the camera power supply.



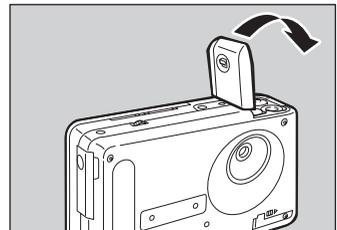
- ② **Insert the batteries.**

Important

- Carefully note the proper battery polarities (positive [+]
poles and negative [-] poles).



- ③ **Close the battery compartment lid.**



● Recording and playback capacities

The following table shows the number of recordable images and the playback time available with AA alkaline batteries (at temperatures between 10 °C and 30 °C).

Type of battery	Number of recordable standard images	Standard playback time
AA alkaline batteries	Approximately 150 images	Approximately 2 hours

- * The battery life varies according to flash usage and other factors.
- * Results may vary according to the type and brand of battery.

Note:

- Whenever you do not have access to an electrical outlet, always carry four extra batteries.
 - The battery symbol () appears on the LCD monitor to indicate that the batteries are weak or depleted. Replace the batteries.
- [For rechargeable Nickel Cadmium or nickel-metal-hydride batteries, the time between lighting of the battery symbol and complete depletion of the batteries is shorter than when alkaline batteries are used. The batteries run out quickly after the symbol lights.]

■ Safety Precautions

- Do not use damaged batteries or batteries that are almost depleted.
- Do not subject the batteries to strong impact.

Inserting a Lithium Battery

The lithium battery (CR2025) maintains the set date and time. Insert the lithium battery before starting to operate the camera.

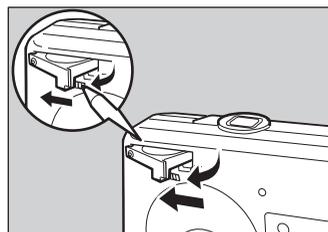
Caution



- To prevent fire and shock, do not use metal objects, such as tweezers, to grasp the batteries. This may short out the circuit.

- ① After closing the LCD monitor, use a ball point pen to move the battery compartment switch (on the bottom of the camera) to the left.

Note: See “Turning on the Power” on page 28 for more information on the power supply of the camera.

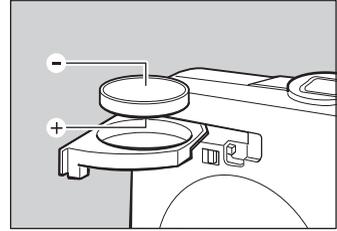


- ② Then, pull out the lithium battery tray by pulling the tray's lever out and to the left.

- ③ Insert the lithium battery in the battery tray so that the positive (+) pole surface is facing down.

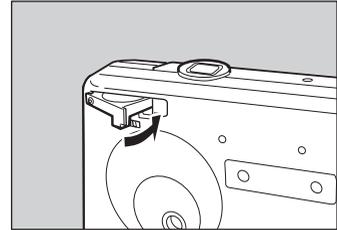
Important

- Use the lithium battery (CR2025) that is installed in the camera. Do not use any other type of battery that is not specifically recommended.
- Be sure to maintain the correct polarity (positive [+] poles and negative [-] poles) when inserting the batteries.



- ④ Close the battery tray.

Note: The battery symbol (🔋) appears in the LCD monitor to indicate that the lithium battery is worn out or is not inserted. Replace or insert the battery.



■ Safety Precautions

- The lithium battery (CR2025) maintains the date and time. Battery life is approximately one year.
- To prevent imperfect contact, wipe off the battery with a dry cloth before inserting it.
- Dispose of the battery according to the local ordinances and regulations.

Using AC Power

If you intend to use your camera to record or playback files for a long period of time, use the optional AC adapter to connect the camera to a household electrical outlet.

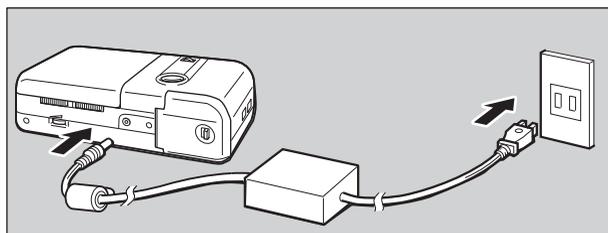
⚠ Caution



- Make sure the electrical plug is plugged securely into the wall.

About the AC Adaptor

Be sure to read the safety precautions in the manual supplied with the AC adaptor.



① Close the LCD monitor.

Note: See “Turning on the Power” on page 28 for information about the camera power source.

② Connect the cable of the AC adaptor to the DC IN 5 V jack of the camera.

③ Insert the plug into an electrical outlet.

Note: When the AC adaptor is used with the camera, it becomes the active power source, even when the batteries are installed in the camera.

Important

- Plug the power cord firmly into the power source and into the camera. If the power plug or connecting cable loosens during recording, data could be lost or damaged.
- When the AC adaptor is connected to the camera, the power supply to the camera is temporarily interrupted during the change of the power source. If this occurs while the camera is in use such as during recording, playback or erasing, data can be damaged or lost. Therefore, always turn off the power of the camera before connecting the AC adaptor.

Before You Begin Recording

This section explains the initial camera adjustments and basic camera operations.

Adjusting the Date and Time

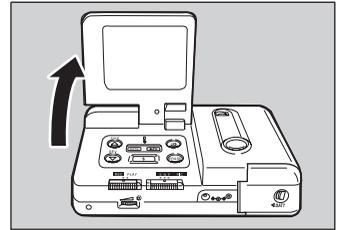
The camera records the date and time of every image that is recorded. You should set the correct date and time when you first begin using your camera, as well as when you travel to a different time zone.

Note:

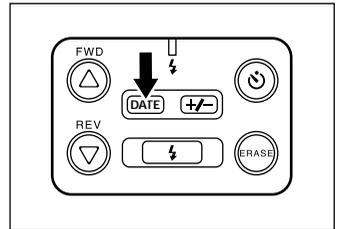
- Enter the date in following order: year/month/day.
- The camera uses a 24-hour clock, where 00:00 indicates midnight and 12:00 indicates noon.

Q Open the LCD monitor.

Note: The REC(ord)/PLAY switch can be set to either REC or PLAY.



W Press and hold the DATE button for more than two seconds.



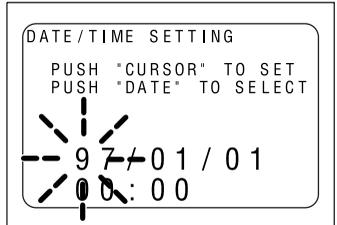
e Press the U button or the T button to change the flashing number (the year, for example).

To increase the number

Press the U button. Press and hold the button to rapidly increase the number.

To decrease the number

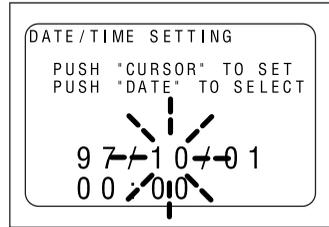
Press the T button. Press and hold the button to decrease the numbers rapidly.



- ④ **Press the DATE button to advance to next item (the month, for example).**

Repeat steps 3 and 4 to correct the necessary items.

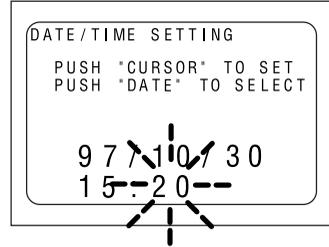
Note: Every time the DATE button is pressed, the year, month, day, hour, and minute flashes (in that order).



- ⑤ **After setting the minutes, press the DATE button again.**

The clock starts and the display reappears on the LCD monitor.

Note: The current date and time will be displayed only when in the RECORD mode.



Press the DATE button repeatedly to display the date and time on the LCD monitor.

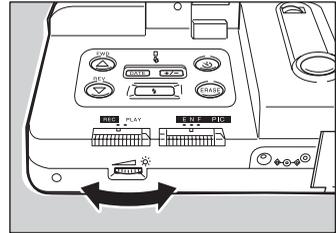
- * When the REC(ord)/PLAY switch is set to REC. The current date and time will appear on the LCD monitor. When the REC(ord)/PLAY switch is set to PLAY, the date and time that the image was captured will appear on the LCD monitor.

Adjusting the LCD

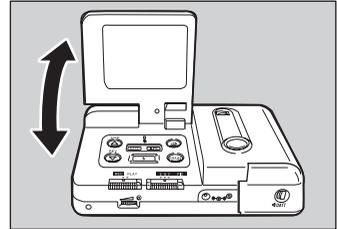
This section explains how to adjust the brightness and angle of the LCD monitor.

- ① **Turn the brightness adjustment dial to the right or left to adjust the brightness.**

The brightness increases when you turn the brightness adjustment dial to the right. It decreases when you turn the brightness adjustment dial to the left.



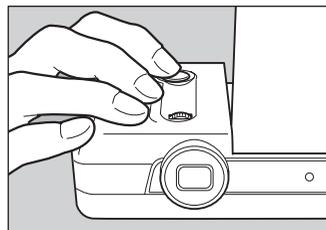
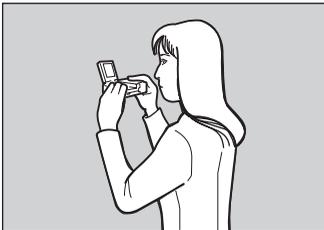
- ② **Adjust the LCD monitor toward you or away from you to obtain the optimal angle.**
The LCD monitor can be adjusted between 60° and 140°.



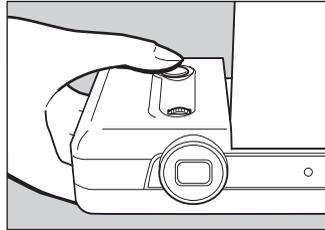
Holding the Camera

Moving the camera during picture taking will result in blurred pictures. For best results, hold the camera steady when pressing the Release button.

- ① **Securely hold the camera with both hands; hold your elbows lightly against your side. Point the camera toward the subject and view the subject in the LCD.**
- ② **Lightly press the Release button.**
 - **When holding the camera in a high position:**



● **When holding the camera in a low position:**

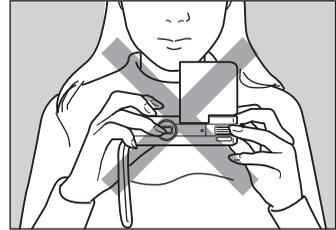


Important

- If you place your finger too far from the Release button, then press the button too fast, the camera may shake and a blurred picture may result.

Note: Hold the camera vertically for a more vertical image. The image will appear vertically on the LCD monitor.

Be sure to keep your fingers and the wrist strap away from the camera lens and the flash window.



Chapter 2. Recording Basics

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 - Picture-taking Sequence 28
 - Turning on the Power 28
 - Selecting the Image Quality 29
 - Taking Pictures 30
 - Exposure Compensation 32

Taking Pictures

This chapter explains the basic operations and other information needed to record images.

Picture-taking Sequence

To take a picture follow these steps. Details of each steps follow.

Turn on the power.

Open the LCD monitor, then slide the REC(ord)/PLAY switch to the REC side.

Select the image quality.

Select the image quality of either E, N, or F (Economy, Normal, or Fine). See page 29.

Take the picture.

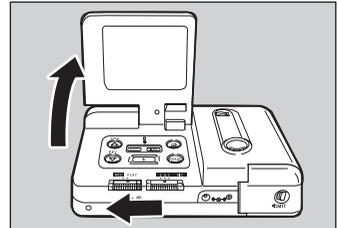
Press the Release button to record the image. See page 30.

Turning on the Power

The power is turned on by opening the LCD monitor (approximately 60°).

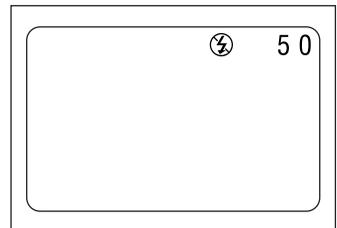
- ① **Open the LCD monitor, then set the REC(ord)/PLAY switch to REC.**

The lens cover opens and the power is turns on.



Note:

- When the power is turned on, the Recording Data Display and the Flash display appear on the monitor in approximately three seconds.
- If the LCD monitor is closed, the power turns off and the lens cover closes.



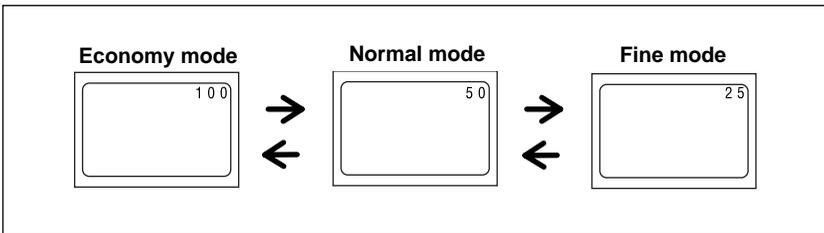
Hint: Auto Power Off Function

If no operations are performed for five minutes or longer while the LCD monitor is opened, the LCD monitor will dim. This operation saves battery power. To turn the power back on, press the Release button for more than one second. To disable Auto Power Off, see page 56.

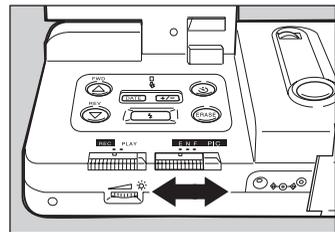
Note: When the Auto Power Off feature operates, the FLASH MODE, WHITE BALANCE MODE, AUTO POWER OFF, and INTERVAL TIME SETTING are saved. See "Saving Your Settings" on page 58 for further details.

Selecting the Image Quality

This digital camera uses compression and decompression schemes to record a large amount of information. N (Normal) mode is standard; F (Fine) mode improves picture quality; and E (Economy) mode allows you to record and store more images. You may change the image quality for each image. The number of pixels is set to the VGA resolution (640 (H) x 480 (V)).



- ① **Slide the image mode switch (ENF PIC) to select the desired mode (E, N, or F).**
The number of images that can be recorded appears on the LCD monitor (see illustration above).



● Standard Data

Image Quality Mode	Data Size/Image
Fine mode	Approx. 160 KB/image
Normal mode	Approx. 80 KB/ image
Economy mode	Approx. 40 KB/ image

Note: The following chart indicates the maximum number of images that can be recorded when the image quality mode is selected.

Image Quality Mode	Number of Recorded images
Fine mode	Approx. 25 images
Normal mode	Approx. 50 images
Economy mode	Approx. 100 images

Taking Pictures

This section explains the basic operations and other information needed to record images.

Note: See “Holding the Camera” on page 24

① Look at the LCD monitor and position the camera to compose the image.

Use the macro mode to take pictures of subjects at distances from 1 to 60 cm.

Note: See “Macro Shooting” on page 45.



② Press the Release button lightly so that it is halfway down.

The Release button has two steps. Messages are displayed if the button is pressed halfway down. The exposure and white balance are set at this time.

● Displayed Messages

Pictures can be taken when the message “READY TO SHOOT” is displayed.

When the message “SLOW SHUTTER CHECK FLASH MODE” appears, press the FLASH button to select a Flash mode.

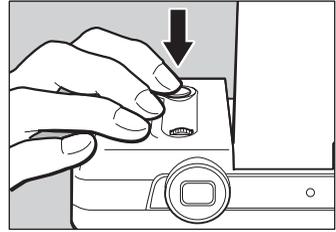


Note: See “Selecting a Flash Mode” on page 36.

- e **To take the picture, depress the Release button completely.**

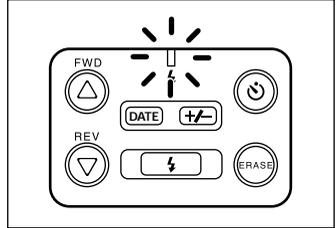
The Flash LED will light to indicate that an image is recorded.

If the image is recorded, the remaining number of images that can be recorded appears on the LCD monitor.



- When Forced Flash or Auto Flash is set:
When taking a flash photo in dark locations, the Flash LED will light when the Release button is pressed lightly.

Note: The strobe lamp flashes when the flash is charging. A photo cannot be taken at this time.



Tip:

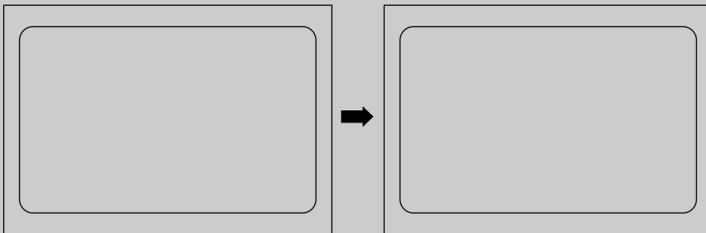
If no operation is performed for five minutes or longer while the power is on, the Auto Power Off function dims the LCD monitor to save power. Turn off the Auto Power Off function if a certain amount of time is required until a picture can be taken. Prepare a spare set of batteries; the batteries may be worn out if they are used for a long time. Connect an optional AC adaptor to use the camera with power from an electrical outlet.

Note: See "Setting the Auto Power Off mode" on page 56.

Tip:

You may disable the LCD monitor during recording.

The following message appears when the FLASH button is pressed while pressing the U and T buttons. Press the U or T button to switch ON and OFF.



Exposure Compensation

When there is a significant difference in brightness between the background and the subject, the subject may be underexposed (too dark) or overexposed (too light). In such cases, adjust the exposure. This function allows you to intentionally underexpose or overexpose an image.

● Exposure compensation range

± 2.0 EV (in 0.5 EV increments)

● Shooting with backlighting

When the background is bright, the subject is underexposed. In this case, adjust the exposure by increasing the value (positive (+) compensation).

Important

- *In backlit conditions, place the subject at the center of the shooting range. If the subject is not placed at the center of the shooting range, the camera cannot determine the backlit conditions.*

● Shooting images that are too light

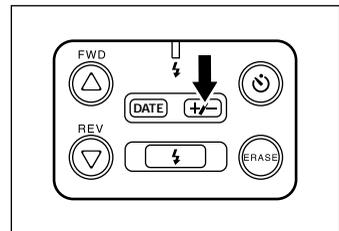
When shooting an image that is too light, the entire image is underexposed. The image is recorded too dark; light-colored subjects are recorded in a grayish tone. In this case, increase the value (positive (+) compensation) to adjust the exposure.

● Shooting images that are too dark

When shooting an image that is too dark, the entire image is overexposed. The image is recorded too light; light-colored subjects are recorded in a grayish tinge. In this case, decrease the value (negative (-) compensation) to adjust the exposure. Follow the same procedures as when shooting an image in direct light.

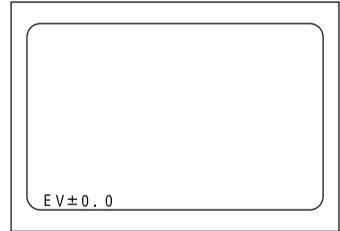
■ Exposure compensation setting

- **When the REC(ord)/PLAY switch is set to REC, press the +/- button to display the exposure compensation value on the LCD monitor.**



② **Press the ▲ or ▼ button to increase or decrease the exposure compensation.**

Each press the ▲ or ▼ button will increase or decrease the exposure 0.5 EV. After adjusting the value, take the picture.



Note: To cancel the setting, press the +/- button again.

Important

About the exposure compensation

- ① *To confirm the effect of the exposure compensation on the recorded image, watch the image on the LCD monitor after the picture is taken, or play back the image.*
- ② *The exposure compensation value is retained in memory even when the exposure compensation setting is released. However, the exposure compensation setting only affects the images recorded when the exposure compensation appears on the LCD monitor.*

Chapter 3. Picture-Taking Applications

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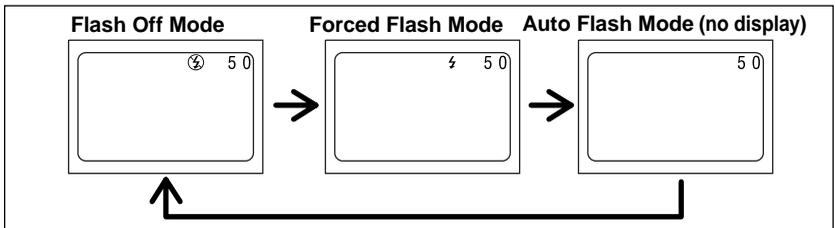
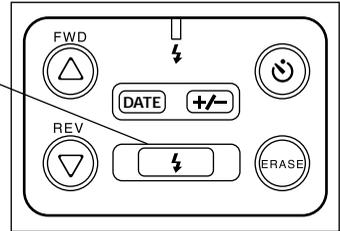
Flash Mode

This section explains how to change the flash mode. You can select the flash mode best suited to the lighting conditions.

Selecting a Flash Mode

Press the FLASH button repeatedly to select the desired mode.

FLASH button:
Sets the flash mode



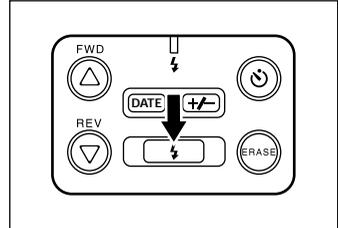
Important

- The White Balance Mode is set for the Flash Off mode and cannot be changed except when the White Balance Mode is set to AUTO mode. Perform the operations after changing the White Balance Mode to AUTO. See "Setting the White Balance Mode" on page 40.
- When performing Macro Shooting, the Flash Off mode is set. The flash mode cannot be changed.
- The light from the flash appears red in the picture if the flash discharges on the subject at a distance less than the minimum distance (approximately 0.6 m).

Flash Off Mode

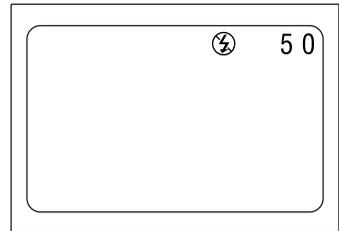
If this mode is used, the flash will not discharge, even in dark locations. This feature is convenient when you wish to take a picture where flash photography is prohibited. It is also convenient for using the available room light when taking a picture.

- q **Press the FLASH button until the [⚡] symbol appears on the LCD monitor.**



- w **Press the Release button.**

The camera will take a picture without the flash discharging.



Important

- *In dim light, the camera's shutter speed is automatically reduced. The message SLOW SHUTTER CHECK FLASH MODE will appear. To prevent a blurred picture, steadily hold the camera or stabilize the camera with a tripod.*

Canceling the selected Flash Mode

Press the FLASH button repeatedly to select another mode.

Forced Flash Mode

When taking photographs of subjects in strong light or with backlighting, dark shadows may appear on the image. Forced Flash Mode is used to soften shadows. The flash will operate in all lighting conditions.

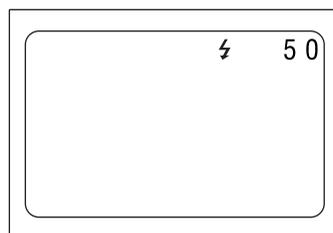
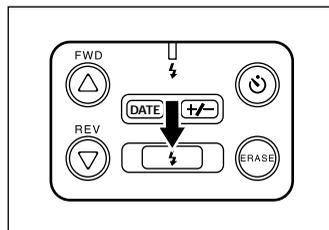
- q **When the REC(ord)/PLAY switch is set to REC, press the FLASH button until the [⚡] symbol appears on the LCD monitor. The Flash LED will blink.**

The FLASH LED will light when the Release button is pressed lightly.

Note: The flash LED flashes while the flash is charging; a picture cannot be taken at this time.

- w **Press the RELEASE button.**

The camera will take a picture with the flash.



Canceling the Mode

Press the FLASH button repeatedly to select another mode.

Flash Distance

The recommended shooting range is approximately 0.6 m to 3.0 m if the flash is used. If the flash does not reach the subject, a dark, underexposed image may result. If the lens-to-subject distance is less than 25 cm (10 in.), the image may look washed-out.

Auto Flash Mode

The flash discharges automatically when shooting in dark locations or in backlighting. Take the photo according to the lighting conditions.

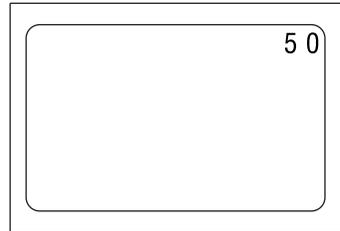
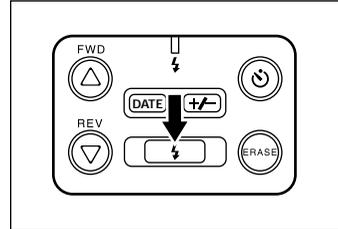
- Q **Press the FLASH button repeatedly until neither flash symbol (⚡ and ⚡) appears on the LCD monitor.**

When shooting in a dark location, press the Release button lightly. The flash will operate.

Note: The flash LED flashes while the flash is recharging. A photo cannot be taken at this time.

- W **Press the Release button.**

The flash will discharge automatically in dark locations or in backlighting.



Canceling the Mode

Press the FLASH button repeatedly to select another mode.

Flash Distance

The recommended shooting range is approximately 0.6 m to 3.0 m if the flash is used. If the flash does not reach the subject, a dark, underexposed image may result. If the lens-to-subject distance is less than 25 cm (10 in.), the image may look washed-out.

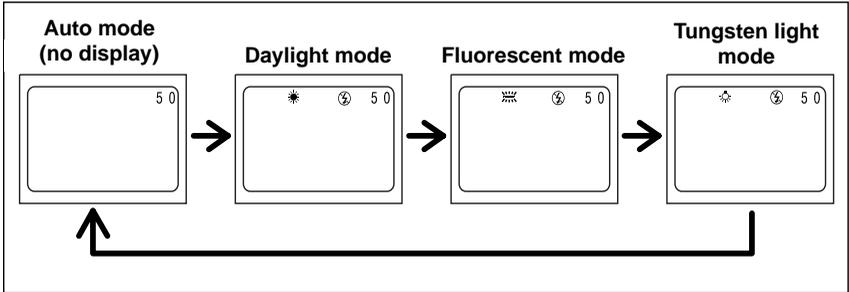
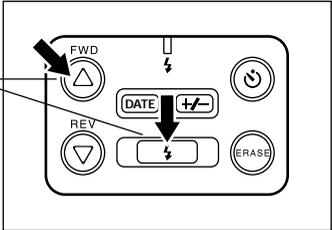
Setting the White Balance Mode

You may adjust the White Balance Mode so that subjects appear in natural colors, even when under a light source. Normally, Auto is the preferred setting.

The white balance is adjusted automatically, using the white portion as a reference. The white balance sometimes cannot be adjusted correctly. If the white area of the subject is too small. If this occurs, set the White Balance Mode to the Daylight mode, Fluorescent mode or Tungsten light mode, then take the picture.

Selecting a White Balance Mode

While pressing the U button, press the FLASH button. Then, press the U or T button to select a white Balance Mode.



Subjects that the Auto White Balance may not work properly

- Monotone subjects.
- Subjects with multiple light sources.
- Subjects with a deep background, especially when a flash is used.

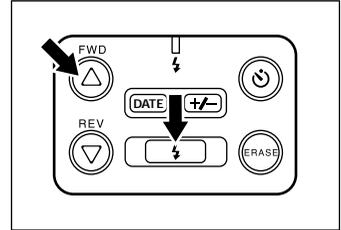
Note:

- If the white area of subject is insufficient, move the camera to increase the white portion of the subject then shoot the picture.
- To adjust the White Balance Mode, make sure that REC(ord)/PLAY switch is set to REC.

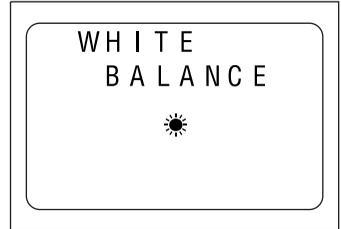
Daylight Mode

Use Daylight Mode when shooting a picture outdoors or when the Auto White Balance does not work properly.

- q **When the REC(ord)/PLAY switch is set to REC, press the FLASH button while pressing the U button.**



- w **Within three seconds, press the U or T button repeatedly until the ☀ symbol appears on the LCD monitor. The ☀ will remain on the LCD monitor for about three seconds.**



Important

- The Flash Off mode is set when the Daylight mode is set. At this time, the flash mode cannot be switched, even if the FLASH button is pressed.
- The color tone of the same subject may vary depending on weather conditions.

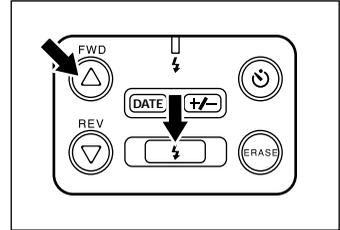
Canceling the Mode

Press the FLASH button while pressing the U button, then use the U or T button to choose a White Balance mode.

Fluorescent Mode

Use the fluorescent mode when shooting a picture in fluorescent lighting or when the Auto White Balance does not work properly.

- Q **When the REC(ord)/PLAY switch is set to REC, press the FLASH button while pressing the U button.**



- W **Within three seconds, press the U or T button to display the  symbol on the LCD monitor.**

The  will remain on the LCD monitor for about three seconds.



Important

- The Flash Off mode is set when the Fluorescent mode is set. At this time, the Flash mode cannot be switched, even if the FLASH button is pressed.
- The color tone for the same subject may vary depending on the type of the fluorescent light .

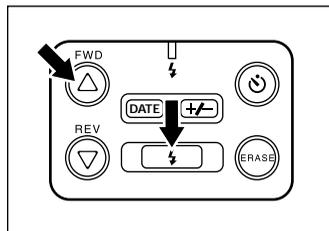
Canceling the Mode

Press the FLASH button while pressing the U button. Within three seconds, press the U or T button to select AUTO.

Tungsten Light Mode

Use the Tungsten Light mode when shooting a picture in incandescent lighting or when the Auto White Balance does not work properly.

- Q **When the REC(ord)/PLAY switch is set to REC, press the FLASH button while pressing the U button.**



- W **Within three seconds, press the U or T button to display the  symbol on the LCD monitor.**

The  will remain on the LCD monitor for about three seconds.



Important

- The Flash Off mode is set when the Tungsten Light mode is set. At this time, the Flash mode cannot be switched, even if the FLASH button is pressed.
- The color tone for the same subject may vary depending on the type of incandescent light.

Canceling the Mode

Press the FLASH button while pressing the U button. Within three seconds, press the U or T button to select AUTO.

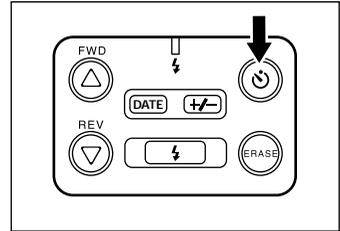
Special Functions

This camera has a variety of special functions available.

Using the Self Timer

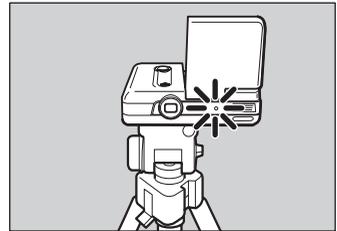
This function is convenient for taking a group picture that includes the photographer. Before using the Self Timer, securely place the camera on a steady support or tripod.

- q **When the REC(ord)/PLAY switch is set to REC, press the self timer mode button to display the ⌚ symbol on the LCD monitor.**



- w **Frame the subject and make sure that the camera is positioned securely. Press the Release button.**

Within 10 seconds position yourself in front of the camera. The Self Timer light on the front of the camera glows. The Self Timer light will flash for nearly two seconds just before the picture is taken. The Self Timer is disabled after one picture is taken.



Note: The Self Timer cannot be activated when the flash is recharging. Wait until recharging is completed before starting the Self Timer.

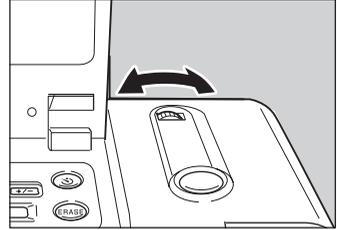
Note: You also may use this function with an optional remote control.

Macro Shooting (Close-up Shooting)

Macro shooting is tight, close-up photography.

- ① **Approach the subject and compose the picture. Adjust the focus by turning the Macro to the dial right or left.**

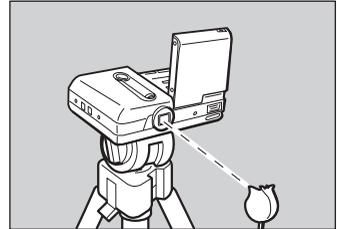
When you turn the Macro dial, the  symbol appears on the LCD monitor.



- ② **When the subject is focused, press the Release button to take the picture.**

Important

- When the camera is repositioned, the subject may go out of focus; the accurate focus range for macro shooting is quite narrow. Position the camera on a stable surface or tripod before taking a close-up picture.



Important

- The Flash Off mode is set when the Macro mode is set. The Flash mode cannot be switched at this time, even if the FLASH button is pressed.
- The Macro dial automatically returns to the original position when the LCD monitor is closed.

Chapter 4. Picture Playback/ Erasure

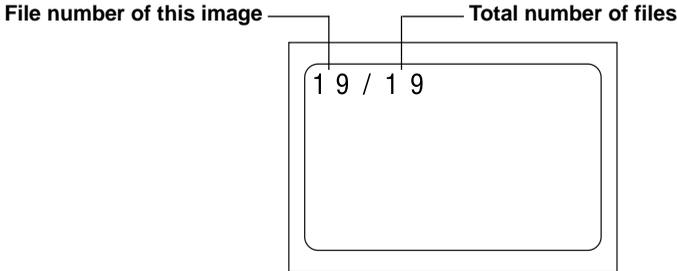
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 - Displaying Information 48
 - Connecting to a TV 49
- File Playback 50
 - File Playback 50
 - Automatic Playback 50
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 - Operation Flow 52
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Before Playback

This section explains the preparation file the playback and provides information about the images played back on the LCD monitor or TV.

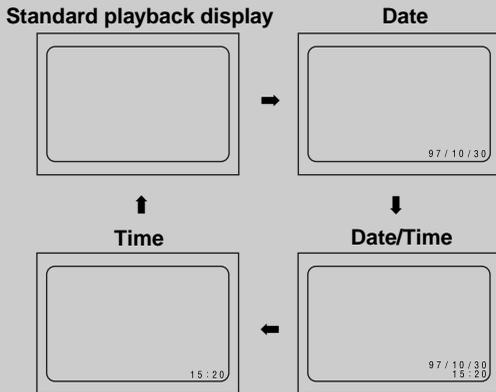
Displaying Information

The file number of the recorded image appears on the monitor for three seconds as shown in the following figure.



Tips:

The monitor displays information about the recorded images including the date and time of recording. Press the DATE button repeatedly to change the display in the following sequence:



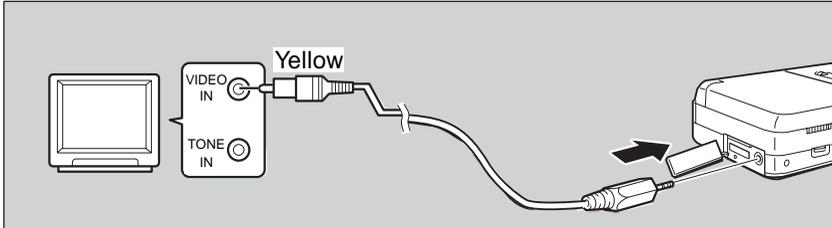
* The date and time setting mode is set if the DATE button is pressed and held for more than two seconds. Refer to "Adjusting the Date and Time" on page 22 for the setting procedures.

Connecting to a TV

The recorded images can be played back on a TV by connecting the Video cable to the camera and to the TV.

Important

- Refer to the TV manual for more information.



- q Close the LCD monitor and turn off the TV power.
- w Remove the terminal cover, then connect the Video cable to the VIDEO OUT terminal.
- e Connect the opposite end of the Video cable to the VIDEO IN terminal of the TV.
- r Set your TV to Line Input or Auxiliary mode. For details, refer to your TV owner's manual.

Note: When the Video cable is connected to the camera, no image is displayed on the LCD monitor.

Extended Playback

For extended playback, use the optional AC adaptor. See "Using AC Power" on page 21.

- * Be sure to close the LCD monitor before connecting the AC adaptor.

3

4

Picture Playback/Erase

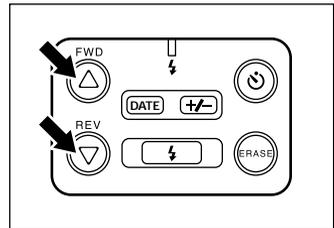
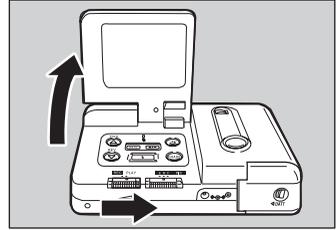
File Playback

This section explains how to view a recorded images.

File Playback

To view a file, follow these steps.

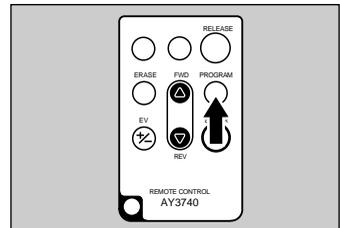
- Q **Open the LCD monitor, then slide the REC(ord)/PLAY switch to PLAY.**
The monitor displays the most recently recorded file.
- W **Press the U or T button to move through the available files.**



Automatic Playback

The files may be played back in sequence using the optional remote control. This is called the automatic playback function. The playback interval (length of time each image is displayed) may be set between 0.5 to 30 seconds.

- Q **Press the PROGRAM button of the remote control.**



W **Press the U or T button to set the length of time for playback.**

To display the previous page or the next page

Use the U or T button to select the previous page or the next page, then press the ENTER button on the remote control unit.

To cancel the settings

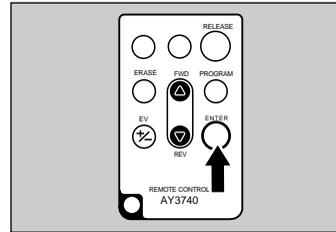
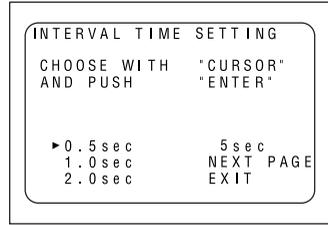
Use the U or T button to select EXIT, then press the ENTER button.

e **Press the ENTER button of the remote control.**

The recorded files will be played back in sequence.

To stop the playback

Press the ENTER button or the PROGRAM button on the remote control.

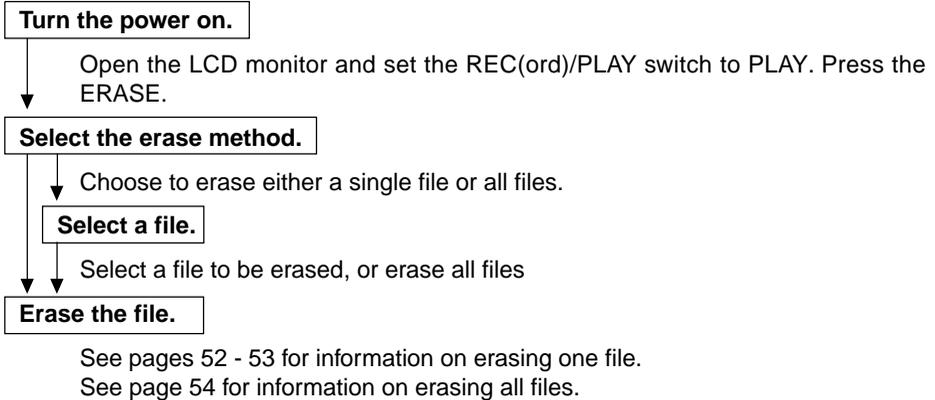


File Erasing

This section explains how to erase recorded files. You may erase one file at a time, or you may erase all files at one time.

Operation Flow

The following is the basic explanation of how to erase a file.



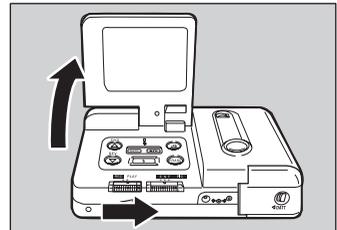
Erasing One File

The following steps explain how to erase a specific file.

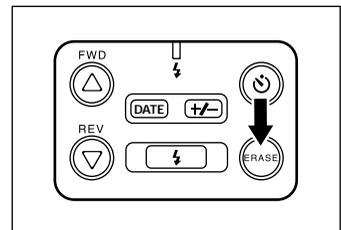
Important

- An erased file cannot be restored. Carefully confirm the contents of a file before erasing it.

- q **Open the LCD monitor, then set the REC(ord)/PLAY switch to PLAY.**



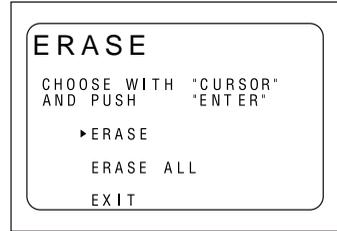
- w **Press the ERASE button.**



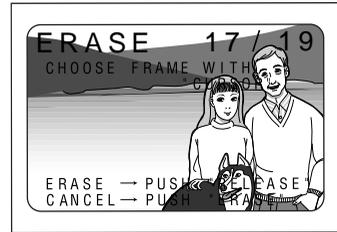
- ③ Press the ▲ or ▼ button to select ERASE with the arrow, then press the RELEASE button.

Note: To stop erasing, select EXIT, then press the Release button.

The Release button is also referred to as the ENTER button in the LCD monitor.



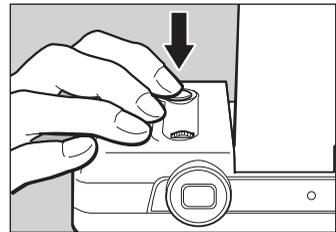
- ④ Press the ▲ or ▼ button to select the file to be erased.



- ⑤ Press the RELEASE button.

The selected file is erased. Repeat steps ④ and ⑤ to erase another file. When you finish, press the ERASE button.

Note: When a file is erased, the file numbers of the succeeding files decrease by one.



Canceling the Mode

Press the ERASE button again.

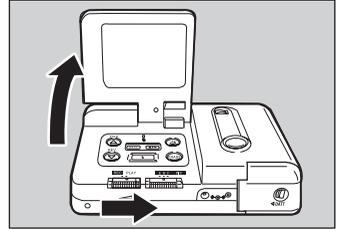
Erasing All Files

The following section explains how to erase all the files at one time.

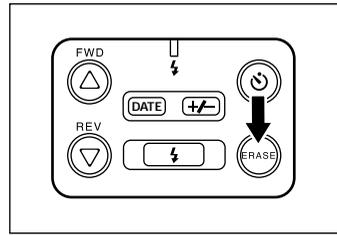
Important

- Erased files cannot be restored. Carefully confirm the contents of files before erasing them.

- q **Open the LCD monitor, then slide the REC(ord)/PLAY switch of the camera to PLAY.**



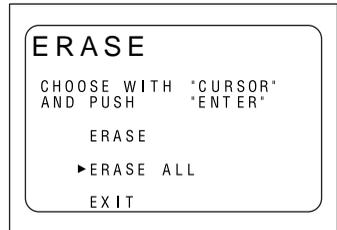
- w **Press the ERASE button.**



- e **Press the U or T button to select ERASE ALL with the arrow. Then, press the RELEASE button.**

An ERASE ALL message will appear.

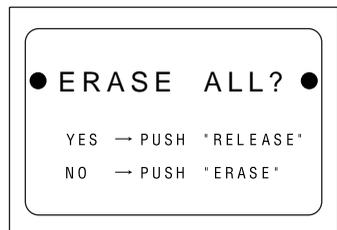
Note: The Release button is referred to as the ENTER button in the LCD monitor.



- r **Press the RELEASE button.**

The ERASING message appears and all files are erased. After erasing is finished, the NO IMAGE RECORDED message appears.

Note: To cancel erasure, press the ERASE button.



Chapter 5. Additional Information

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Changing a Camera Setting

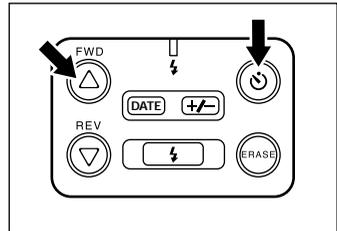
You may change the camera setting to “Auto Power Off”, “Energy Saving” or “Power-Off memory” according to the usage.

Setting the Auto Power Off mode

If no buttons or switches are operated for five minutes, the Auto Power Off function turns off the main power in order to conserve power.

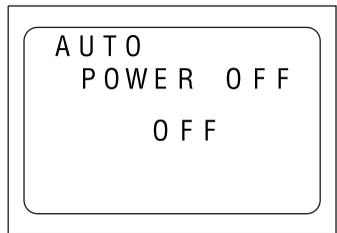
- q **Press the SELF TIMER button while pressing the U button.**

The REC(ord)/PLAY switch can be set to either REC or PLAY. Auto Power Off is enabled.



- w **Within three seconds, press the U or T button to turn off the function.**

Within three seconds, the Auto Power Off will be disabled.



Note: When the Auto Power Off feature turns off the LCD monitor, you may turn on the LCD monitor by these methods: close and reopen the LCD monitor, slide the REC(ord)/PLAY switch, or press the Release button for one second or more.

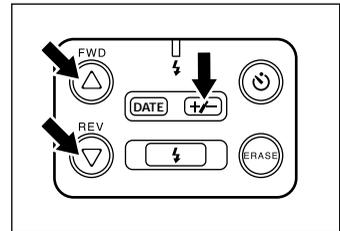
Setting the Power Saving Mode

This function saves battery power by adjusting the LCD monitor brightness. MODE 1, MODE 2, or MODE 3 can be set. However, the operations vary depending on whether the record mode and playback mode is set. Figure 57-1

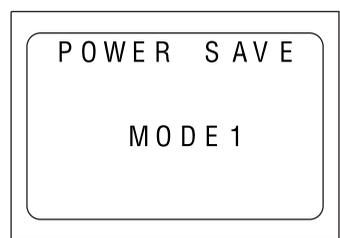
Power saving mode	Record mode	Playback mode
OFF	Regular operation	Regular operation
MODE1	The LCD monitor is slightly dark. This condition remains until the setting is changed.	The LCD monitor is slightly dark. This condition remains until the setting is changed.
MODE2	The LCD monitor becomes dark. If the Release button is pressed lightly, the LCD monitor returns to the regular brightness. When the Release button is pressed and released, the picture is taken and the LCD monitor turns dark again after a few seconds.	This setting can be operated, however, the power saving function cannot be operated.
MODE3	The LCD monitor becomes dark. If the Release button is pressed lightly, the LCD monitor becomes slightly dark. When the Release button is pressed and released, the picture is taken and the LCD monitor turns dark again after a few seconds.	Same as MODE 1.

To select a power saving mode, follow these steps.

- Q **Press the +/- button while pressing the U button, and the T button at the same time.**
The REC(ord)/PLAY switch may be set to either REC or PLAY.
The power saving setting mode is set.



- W **Press the U or T button to select the power saving mode.**
In three seconds, the power saving mode will be set.



To cancel the setting

Repeat the operation described above, selecting OFF at step 2.

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Additional Information

Important

- The power saving mode is automatically set to OFF when the LCD monitor is closed.
- When the camera is used in an environment where the temperature is approximately 40°C or higher, the LCD monitor may have a certain uneven quality. The LCD monitor will return to normal when the temperature decreases.

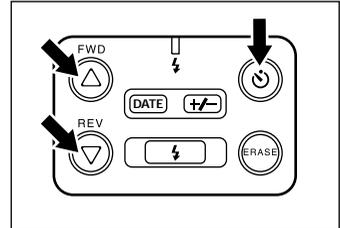
Note: Depending on the environment in which the camera is used, the power saving mode can vary because in the number of recording files can be 1.2 times greater than usual and the playback time is approximately 2.5 hours.

Saving Your Settings

The Power Off Memory function saves your settings when the power is turned off. If the power is turned off when the Power Off Memory is set, the Flash mode (see page 36), White Balance mode (see page 40), Auto Power Off (see page 56) and Automatic Playback (see page 51) settings are saved. They will be available when the power is turned on next. All other camera settings will return to the original positions.

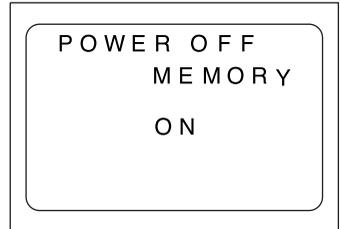
- q **Press the SELF TIMER button, the U button, and the T button at the same time.**

The REC(ord)/PLAY can be set to either REC or PLAY. The power-off memory setting mode is set.



- w **Within three seconds, press the U or T button to select ON.**

Within three seconds, the Power Off Memory will be set to ON.



To cancel the setting

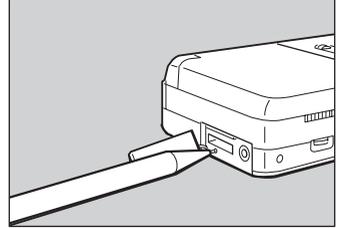
Repeat steps 1 and 2 above, selecting OFF at step 2.

Returning the Settings to the Original Position

This section explains how to reset Flash mode, White Balance mode, Auto Power Off, Automatic Playback and Power Off Memory settings the original positions.

- ① **Remove the terminal cover on the side of the camera. Depress the RESET button with the tip of a sharp pencil or similar object.**

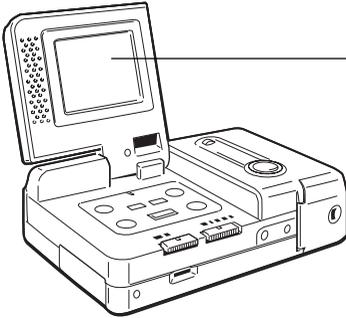
The settings also are reset when the batteries or the clock batteries are installed. The recorded images are not erased even after a reset is performed.



Important

- *Do not use a sharp object or an object that breaks easily.*

System Configuration Figure



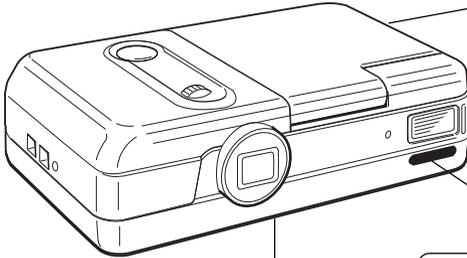
Computer

● File transmission to a personal computer

Philips utility software for ESP2 and a serial cable are required.

● Image transmission to a personal computer

You can transmit your file to a personal computer using the utility software for the ESP2. The file can be transmitted using a special cable from the camera.

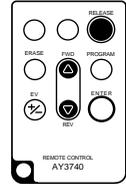


Digital camera

● Remote control

- Remote control AY3740

* When using this unit with the camera, the screen display button and the monitor button do not function.



● Power supply

- AC adaptor
AY3140 (100 V to 240 V)



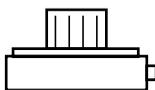
● Batteries

- Alkaline batteries
- Nickel Cadmium batteries
- Nickel-metal-hydride batteries

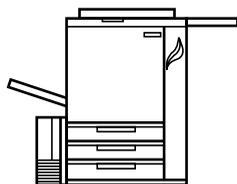
● **Playback**

- LCD monitor
- TV monitor (Connects to the camera with the Video cable that is included.)

● **Output**



Color printer



Color copier

Once data is sent to your personal computer, you can print it with a color printer or color copier.

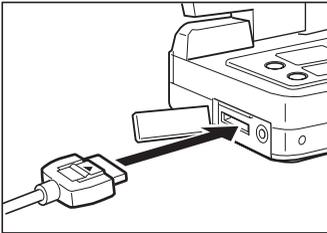
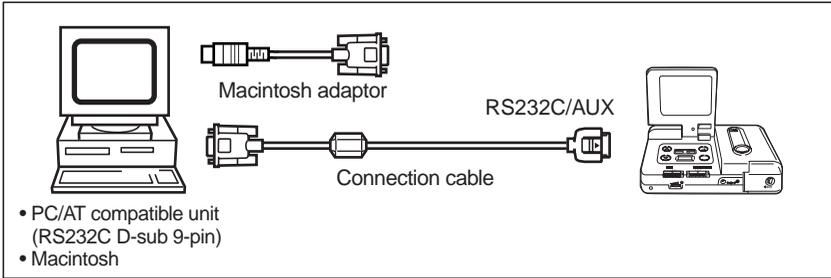
- * A video printer can be connected to the camera for printing still pictures.

* Accessories for ESP2 on page 62 for information on products mentioned above.

Accessories for ESP2

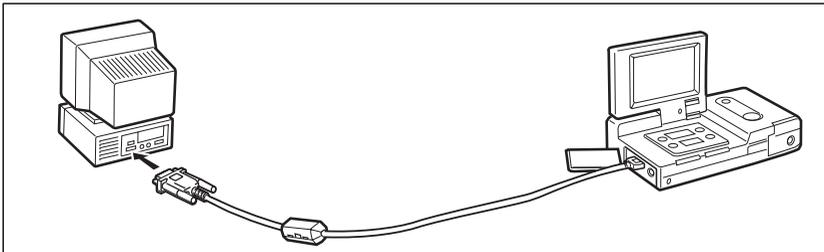
Item	Model	Remarks
AC Adaptor	AY3140	For operating on AC power. See page 21, "Using AC Power."
Remote Control Unit	AY3740	For recording or playback by remote control. The Automatic Playback feature enables you to program the sequence of pictures to be played back. This function is available only with this Remote Control.

Computer and DC Connections



1. Open the terminal cover on the side of the camera.
2. Connect the cable to the RS232C/ AUX terminal.

3. Connect the other end of the cable to the serial port of the computer.

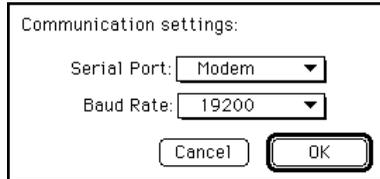


For the Macintosh® Users:

- ① Select the New catalogue from the File menu.

Note: To import an image into a catalogue that already exists, select File and Open the Catalogue to select the catalogue into which you want to import the image.

- ② Enter the new catalogue name in the dialog box, then click the Save button.
The new catalogue window is displayed.
- ③ Set the REC(ord)/PLAY switch to PLAY.
- ④ Select [Load from Philips Camera] in the File menu.
The dialog box is displayed.



- ⑤ Set the serial port and the communication speed (Baud Rate) then click the OK button.

Important:

- When connecting to the camera through the printer port, set the Apple Talk item to Not used in the Selector of the Apple menu.

When the computer and the camera are connected correctly, the following dialog box is displayed.

- ⑥ Select the image to be imported.
 - To specify one image at a time
Press the < button or the > button to select the image, then click the Select check button. Repeat the operation and specify the images to be imported in image sequence.
 - To specify all images
Click the Select All button. All images that are recorded in the camera are selected.

Note: To cancel the image selection, remove the check in the Select check box or click the No select button. The image that is currently selected is canceled.

- ⑦ After selecting the image, click the OK button.
The specified image is imported.

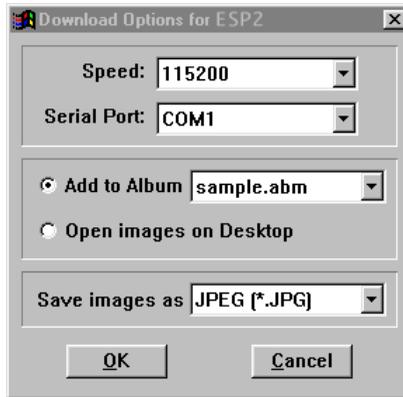
Note:

- Use the AC adaptor when you transfer images to the computer.
- Refer to the on-line HELP menu in the software for further details. The Acrobat Reader should be installed to view the HELP menu.

For Windows®:

Transfer files from the camera

- ① Select [DOWNLOAD Philips FILES] from the FILE menu.
- ② Specify the communication speed (Baud Rate) and the serial port for the cable connection. Select whether a file is to be added to the album or to be developed on the desktop.
- ③ Select the format in which the file should be saved.



- ④ Click OK to start the file transfer.

Note:

- It is recommended to use an AC adapter when images are uploaded or downloaded. The file transfer operations will be interrupted if the power is cut off during the operation.
- Refer to the on-line help menu in the software for further details.

Handling Precautions

- This camera is not waterproof. Take great care to avoid water, rain, or spilled drinks. If the camera gets wet, contact your local Philips service office.
- Never drop the camera or subject it to strong shock.
- To avoid overheating the system, do not continuously operate the built-in flash unit more than necessary.
- Protect the camera from sand or dust, especially at the beach or in dusty environments (construction sites, etc.).
- Do not expose the camera to high temperatures or high humidity for long periods of time, such as in a closed car, at the beach, or in a bath.
- Turn off the camera before connecting it to the optional AC adaptor.
- Sudden changes of temperature may cause condensation to form inside and outside the camera body and lens, resulting in malfunctions. If this occurs, place the camera into a bag or plastic bag temporarily to moderate any drastic change of temperature. Keep it in the bag until the temperature difference is minimized.
- If the LCD monitor is exposed to sunlight or other bright light, it may appear white and may become difficult to observe.
- Sometimes a pixel that always lights or never lights is present in the LCD monitor. The brightness may have an unevenness due to the characteristics of the LCD. However, these are not malfunctions.
- Do not pull the terminal cover with excessive force. Do not lift the camera by grasping terminal cover.
- Do not open the LCD monitor while holding the lens cover.
- Always close the LCD monitor when carrying the camera.

Condensation occurs when:

- The camera is suddenly brought into a warm place from a cold place.
- The camera is used in a location subject to high humidity.
- The camera is used in a recently heated room. The camera was in a location subject to direct cool air flow from an air conditioner.

Caring for Your Digital Camera

■ Camera Care

- Keep the lens of the camera clean; stains or dirt on the lens may lessen the precision of the image quality.
- Do not attempt to remove dust or smears on the lens with your fingers. Use a blower to blow the dust away, or wipe the surface gently with a soft cloth.
- After using the camera at the beach or exposing it to a chemical environment, take special care to wipe off any dirt.
- If the camera does not operate properly, contact a service representative. The camera is equipped with a hazardous high-voltage circuit. Never attempt to repair the camera by yourself.
- Keep the camera away from volatile liquids such as thinner, benzene, and insecticide. These chemicals may peel off the paint or damage the surface.
- Do not scrub the surface of the LCD monitor with a hard object; the LCD monitor is scratched or damaged easily.
- Wipe off the surface of the LCD monitor gently, using a moistened, soft cloth with thinned detergent; wipe off the moisture with a dry cloth.
- * Remove the batteries and AC stet from the camera before cleaning.

■ Safekeeping

- Do not store the camera in a closet with insect repellents, which may damage the camera and cause a malfunction.

Troubleshooting

Before sending the unit for repairs, first refer to the following checklist for a possible solution to the problem. If you still cannot correct the problem, please contact the service representatives.

■ Power Source Problems

Problem	Cause	Remedy
No power	The batteries are not installed properly or are depleted.	Install the batteries correctly or replace with fresh batteries.
	The AC adaptor is not connected properly.	Reconnect the AC adaptor.
Sudden loss of power	The Auto Power Off feature shuts down the camera after several minutes of inactivity.	Press the Release button more than one second or turn on the power again.
	The batteries are depleted.	Replace the old batteries with fresh batteries.
The batteries go dead quickly.	The batteries were subjected to excessively low or high temperatures.	Replace the batteries.
	The built-in flash was used too frequently because of dark conditions or other reasons.	—

■ Shooting and Playback Problems

Problem	Cause	Remedy
The camera fails to record the picture when the Release button is pressed.	The batteries are not inserted properly (incorrect polarity) or are dead.	Reposition the batteries correctly or replace with fresh batteries.
	The power is off, or the REC(ord)/PLAY switch is set to PLAY.	Slide the main switch to [Record].
	The shutter release button is not fully pressed down. (Button was pressed only halfway down.)	Press the Release button all the way down.
	The internal memory is full.	Delete some files to secure enough space.
	The Self Timer mode is selected.	Press the SELF TIMER button to cancel the Self Timer mode.
	The flash is recharging.	Wait until the flash lamp stops flashing.
The flash does not work or recharge.	Flash Off mode is selected.	Press the FLASH button to change the setting.
	The White Balance mode or Macro mode is set.	Press the flash button while pressing the ▲ button, then cancel the White Balance mode, or rotate the Macro dial to cancel the Macro mode.
	The batteries are dead.	Replace with fresh batteries.

Problem	Cause	Remedy
The flash discharged properly but the image is dark.	The distance to the subject exceeds approximately 3.0 meters.	Reduce the distance to the subject.
The picture is too bright.	The flash discharged when distance to the subject was less than 60 cm.	Select the Flash Off mode.
	The image is overexposed.	Compensate the exposure with the +/- button.
	The brightness adjustment dial is not set correctly.	Turn the brightness adjustment dial to the right or to the left to adjust the brightness.
The image is underexposed.	The picture was taken in the Flash Off mode under dark conditions.	Press the FLASH button to change the setting.
	The image is underexposed.	Compensate the exposure with the +/- button.
	The brightness adjustment dial is not set correctly.	Turn the brightness adjustment dial to the right or to the left to adjust the brightness.
The picture does not show natural colors.	The image conditions prevent the Automatic White Balance system from functioning properly.	Include a white or light-colored object in the subject, or use the flash or Fixed White Balance.
The camera fails to play back the data or display an image on the monitor.	The REC(ord)/PLAY switch is not set to PLAY.	Slide the REC(ord)/PLAY switch to PLAY.
	Video connection cable is not correctly connected to the video output terminal of the camera and the input terminal of the TV.	Connect the cable properly.
	A noise source, such as a motor, is close to the camera.	Place the camera where it is not close to a noise source.
The image does not play back clearly.	This is a malfunction in the camera's internal memory.	Transfer important images to a computer, then erase all files.
The image on the monitor has disappeared.	The batteries are dead.	Replace the batteries with fresh batteries.
	The Auto Power Off system has activated.	Close the LCD monitor to turn off the power, then turn on the power again. Or, press the Release button more than one second.
The remote control (optional) is malfunctioning.	There is an obstruction in the path between the reception window of the camera and the transmission window of the remote control.	Clear the path between the camera and the remote control.
	The reception window on the camera or the transmission window on the remote control is dirty.	Clean both windows.
	The lithium battery in the remote control is dead.	Replace the battery with a fresh lithium battery (CR2032).
The image has a vertical trail.	This condition occurs when a picture is taken of a well-lit subject. It is called a smear.	This is not a malfunction.

■ Other Problems

Problem	Cause	Remedy
The camera buttons and switches do not function.	The batteries are dead.	Replace the batteries with fresh batteries.
	The camera does not function properly.	Close the LCD monitor to turn off the power. Reopen the LCD monitor and set the REC(ord)/PLAY switch to either REC or PLAY. If the camera still fails to function properly, try the following. 1. Remove and reinstall all batteries in the camera. 2. Reset the REC(ord)/PLAY switch to either REC or PLAY.
The date is incorrect.	The correct date and time have not been set.	Reset the time and date correctly.
The date cannot be displayed.	The batteries are dead.	Replace the batteries with fresh batteries and reset the date.
The camera fails to erase a file.	The REC(ord)/PLAY switch is not set to PLAY.	Slide the REC(ord)/PLAY switch to PLAY.
The camera changes to a mode other than the one selected.	The power was shut off manually or the Auto Power Off function turned off the power.	Select the mode again.
	The batteries were removed.	Select the mode again.
The Auto Power Off feature does not work.	The Auto Power Off feature is set to off.	Confirm the Auto Power Off setting.

Using Your Digital Camera in Other Countries

AY3140 AC adaptor (optional)

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

Viewing the Image on a TV

- Check if the TV operates in the NTSC format with an image input terminal.
- The optional video connection cable is required.

● The NTSC format is used in the following countries.

American Samoa	Dominican Republic	Nicaragua
Barbados	El Salvador	Panama
Bermuda	Ecuador	Peru
Bolivia	Guam	Philippines
Canada	Guatemala	Puerto Rico
Chile	Haiti	Surinam
Columbia	Honduras	Taiwan
Costa Rica	Japan	Trinidad and Tobago
Cuba	Mexico	U.S.A
Democratic People's Republic of Korea	Micronesia	Venezuela
	Myanmar	

Specifications

■ General

Video signal method	: NTSC
Dimensions (W × H × D)	: 125.8 mm (W) × 34 mm (H) × 72.6 mm (D) (excluding protruding parts)
Weight	: Approx. 230 g without batteries
Operating humidity range	: less than 85%
Operating temperature range	: 0°C to 40°C
Storage temperature range	: -20°C to 60°C

■ Camera

CCD	: 1/4", 350,000 pixels (effective 330,000 pixels VGA) with complementary color checkers
Lens	: Single reflex F: 3.8
• Focal length	: f:4 mm (equivalent to a 38 mm lens on a 35mm camera)
• Minimum shooting range	: Approx. 60 cm
• Macro shooting range	: Approx. 1 cm to 60 cm
• Composition	: 5 elements in 5 groups
LCD Monitor	
• Screen size	: 1.8 type (36.9 mm (W) × 27.5 mm (H))
• Drive system	: TFT active matrix system
• Picture elements	: 61,380 dots (279 (H) × 220 (V))
Brightness adjustment	: Brightness adjustment dial is attached.
Color temperature	
• Standard setting	: 4200 ± 50K
• Automatic adjustment range	: 2800K to 8000K
• Fixed adjustment range	: Fluorescent light 4000K Outdoor 5100K Incandescent light 3200K
■ Exposure adjustment	
• AE range	: EV6.3 to EV17
• Light measuring system	: Centerweighted
• EV memory system	: With automatic backlight control program Manual exposure adjustment range ± 2.0EV (in 0.5 EV increments)
• Exposure mode	: Program AE
• Exposure measurement	: TTL CCD method
• AE with flash	: Included (with daylight synchro)
• Shutter speeds	: Still picture: 1/5 to 1/8000 (electronic shutter)
• Focusing	: F 2.8 fixed
• ISO sensitivity	: Equivalent to ISO 80
Distance adjustment	
• Standard	: Fixed. Approx. 60 cm to ∞
• Macro	: Manual adjustment. Approx. 1 cm to 60 cm

Built-in flash

- **Method** : Automatic
- **Interval between flash** : 5 sec. maximum
- **Effective distance** : 0.6 m to 3.0 m
- **G no.** : 12 (ISO140)
- **Operating modes** : OFF/ON/AUTO
The Flash is turned off when the Macro mode and White Balance mode are set.

■ Image Data Recording

- Internal memory** : 4 MB
- Picture element** : 640 × 480 (VGA)
- File format** : JPEG (Exif)
- Compression method** : Based on the JPEG base line method.
- Number of recording files**
 - Economy mode** : Approx. 100 files
 - Normal mode** : Approx. 50 files
 - Fine mode** : Approx. 25 files

■ Input/Output

- Power input** : 5V (AC adaptor)
- Video output** : 1.0 Vp-p (75Ω)
- RS232C/AUX** : Special

■ Body

- Hole for tripod** : 1/4-20 UNC
5.7 mm max. bolt length

■ Power Supply

- Batteries of main unit**
 - **Battery types** : AA alkaline batteries
AA Nickel-metal-hydride batteries
AA Nickel Cadmium batteries
 - **Voltage** : 6 V (1.5V × 4 cells)

■ Clock Battery

- Battery type** : Lithium battery CR2025
- **Voltage** : 3V 160mAh
- **Service life** : Approx. 1 year

■ Auto Power Off

- : Activates when camera is used for approx. 5 minutes.

INFORMATION TO THE USER

U.S. Federal Communications Commission (FCC) Part 15 Class B

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

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

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

COMPLIANCE INFORMATION STATEMENT

Product Name: Philips Digital Camera

Model Number: ESP2/17

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.

Philips Consumer Electronics Company

One Philips Drive

Knoxville, TN 37914-1810

USA

PHONE NUMBER:423-521-4409

FAX NUMBER:423-521-4728

CANADA Class B

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement

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