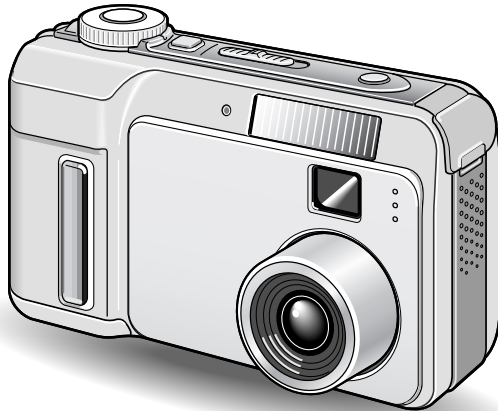




## INSTRUCTION MANUAL

# VPC-AZ1EX VPC-AZ1E VPC-AZ1

Digital Camera



### **Important note**

This manual explains how to safely operate the VPC-AZ1EX, VPC-AZ1E, and VPC-AZ1. Any information regarding only one of these products will be labeled as such.

Please read these instructions carefully before using the digital camera. Make sure to read and understand the section "USING YOUR DIGITAL CAMERA SAFELY AND CORRECTLY" on pages 3 to 13. Keep this manual in a safe place for later reference.

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TO PREVENT THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

## FOR AMERICAN USERS

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



Tested To Comply With FCC Standards

FOR HOME OR OFFICE USE

### Declaration of Conformity

Model Number : VPC-AZ1  
Trade Name : SANYO  
Responsible party : SANYO FISHER COMPANY  
Address : 21605 Plummer Street, Chatsworth, California 91311  
Telephone No. : (818) 998-7322

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.

## **FOR CANADIAN USERS**

- This Class B digital apparatus complies with Canadian ICES-003.

---

# BEFORE READING THE MANUAL

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Microdrive and PowerPC are registered trademarks of International Business Machines Corporation.

Apple, Macintosh and QuickTime are trademarks or registered trademarks of Apple Computer Inc.

Windows and Windows NT are registered trademarks of Microsoft Corporation.

CompactFlash is a trademark of SanDisk Corporation and handed over to CFA (CompactFlash Association).

All other company and product names are registered trademarks or trademarks of their respective owners.

## Regarding the data storage media

- This digital camera can use both CompactFlash and Microdrive cards for data storage. This manual is written with the premise that CompactFlash cards are used. In this manual, CompactFlash and Microdrive cards are both referred to as “card”.

## Caution

- It is forbidden to copy this manual, whole or in part, without prior written permission.
- All images and illustrations given in this manual are for explanation purposes and may differ slightly from that of the actual product. Also, actual specifications are subject to change without prior notice and therefore may differ from the contents of this manual.
- Sanyo Electric shall not be held responsible for any problems resulting from the use of this digital camera.
- Sanyo Electric declines all responsibility for damages due to improper use of the camera, failure to adhere to the instructions given in this manual, or repairs or changes done by those other than a technician authorized by the manufacturer.
- Sanyo Electric shall not be held responsible for any damage caused by optional devices or consumable items used with the digital camera other than those supplied with the digital camera or those specified by Sanyo Electric.
- Sanyo Electric shall not be held responsible for any losses or loss of revenue resulting from the loss of data caused by the malfunction, or the repairing of a malfunction, of the digital camera.
- The images captured with this camera will differ in quality from pictures taken with a standard film camera.

# Symbols used in this manual

<b>NOTE</b>	Points giving some extended instructions or special points to pay attention to.
<b>HINT</b>	Points that may prove useful when using the digital camera.
<b>HELP</b>	In case of a problem, this may help in certain situations.
<b>[page xx]</b>	Refer to the page indicated in brackets for detailed information.

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# CONTENTS

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USING YOUR DIGITAL CAMERA SAFELY AND CORRECTLY .....	3
CHECKING THE INCLUDED ACCESSORIES .....	14

## PREPARATION

USING THE HAND-STRAP AND SOFT CASE .....	15
QUICK START FOR CAPTURING IMAGES .....	17
PARTS NAMES .....	21
PREPARATION OF BATTERIES .....	23
INSTALLING AND REMOVING THE CARDS .....	27
TURNING THE POWER ON/OFF .....	29
DISPLAYING THE SETTING SCREEN AND OPTION SETTING SCREEN .....	31
SHOOTING SETTING SCREENS .....	33
PLAYBACK SETTING SCREEN .....	40
OPTION SETTING SCREEN .....	41
INFORMATION DISPLAY .....	42
SETTING SCREEN BASIC OPERATIONS .....	45
SETTING THE DATE AND TIME .....	46
REMAINING BATTERY CHARGE INDICATION .....	48
CHECKING THE REMAINING NUMBER OF IMAGES, VIDEO RECORDING TIME, AND AUDIO RECORDING TIME .....	50
CONCERNING IMAGE AND AUDIO DATA STORAGE .....	52

## SHOOTING AND RECORDING

SETTING THE SHOOTING MODE .....	54
SETTING THE RESOLUTION .....	55
SETTING THE COMPRESSION RATIO .....	57
CAPTURING IMAGES .....	59
SEQUENTIAL SHOT .....	63
VIDEO CLIP .....	69
USING THE AUTOFOCUS .....	71
USING THE VARIOUS SHOOTING FUNCTIONS .....	72
MONOCHROME PHOTOGRAPHY .....	77
ADDING A VOICE MEMO .....	78
PERFORMING AN AUDIO RECORDING .....	79
EXPOSURE CORRECTION .....	81
SETTING THE EXPOSURE CONTROL .....	82
SETTING QUICK SHOT (STILL IMAGE SHOOTING ONLY) .....	84
SETTING THE ISO SENSITIVITY .....	85
SETTING THE WHITE BALANCE .....	86
FLICKER REDUCTION SETTING (VIDEO CLIP SHOOTING ONLY) .....	87
SETTING THE ZOOM .....	88
SETTING THE NOISE REDUCTION .....	90
SETTING THE LIGHT MEASURING METHOD .....	91
SETTING THE FOCUS METHOD .....	92
SCENE SELECT FUNCTION .....	93

## **PLAYBACK DATA**

SETTING THE PLAYBACK MODE .....	96
PLAYING BACK STILL IMAGES .....	98
PLAYING BACK SEQUENTIAL SHOTS .....	102
PLAYING BACK VIDEO CLIPS .....	103
ENLARGING (ZOOMING IN) THE IMAGE .....	105
PLAYING BACK IMAGES ON A TV SET .....	106
LISTENING TO AUDIO RECORDINGS .....	107

## **OTHER FUNCTIONS**

ADDING A VOICE MEMO (ADD AUDIO FUNCTION) .....	109
ENTERING TEXT .....	111
RESIZING IMAGES .....	114
IMAGE PROTECT MODE (PREVENTING ACCIDENTAL ERASURE) .....	115
ERASING DATA .....	116
COPYING IMAGES .....	118
AUTO ROTATE PLAYBACK SETTING .....	119
REQUESTING PRINTING .....	120
REFORMATTING THE CARD .....	124
SETTING THE OPERATIONAL SOUNDS (BEEPS) .....	125
DISCHARGING THE BATTERIES .....	126
CHANGING THE DISPLAY LANGUAGE .....	127
SETTING THE TV SYSTEM .....	128
USING THE CAMERA WITH A COMPUTER .....	129

## **APPENDICES**

TROUBLESHOOTING .....	130
SPECIFICATIONS .....	134

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# USING YOUR DIGITAL CAMERA SAFELY AND CORRECTLY

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## CONCERNING THE DIGITAL CAMERA

### WARNING

■ **If the digital camera makes a strange noise, emits a strange odor, or if smoke comes out from it, immediately turn off the power and remove the batteries**

- If the digital camera is used under these conditions, it may cause a fire or electric shock. Immediately turn off the digital camera, remove the batteries, and wait to make sure no more smoke comes from the digital camera. Then take it to the dealer for service. Do not try to repair or open the digital camera yourself.



■ **Do not modify or open the cabinet**

- High voltage circuits are inside, and there is a high risk of fire or electric shock if they are touched. Any internal check, setting, or repair should be performed by the dealer.



■ **Do not use while driving**

- Do not capture images, play back images, or watch the LCD monitor while driving a vehicle. Doing so may cause an accident.
- Be careful where you put down the digital camera inside an automobile. During sudden stops or turns it may fall behind the brake pedal and prevent braking.
- When using the digital camera while walking, be very careful of your surroundings and especially the traffic to avoid accidents.



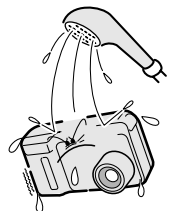
■ **Be aware of your surroundings when using the digital camera**

- Pay close attention to your surroundings when using the digital camera. Failure to do so may lead to an accident or injury.
- Do not use the digital camera inside an airplane or elsewhere where its use may be restricted.



■ **Do not get the digital camera wet**

- This digital camera is not water-resistant. Do not allow it to get wet for it may cause a fire or electric shock.
- Do not use the digital camera in a bathroom.
- If the digital camera gets wet, immediately turn it off and remove the batteries. Then take it to the dealer for repair. Using the digital camera after it has been become wet may cause a fire, electric shock, or other accident.





# WARNING

## ■ Do not use during a storm

- To avoid the risk of being struck by lightning, do not use the digital camera during a thunderstorm. In particular, if used in an open field, you have an increased chance of being struck by lightning. Quickly seek refuge in a place that will protect you from lightning.



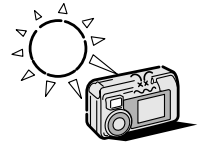
## ■ Do not place on an unstable surface

- The digital camera may fall, resulting in damage to the digital camera or injury.
- If the digital camera has fallen and its body is damaged, turn off the digital camera, remove the batteries, and take it to the dealer for repair. Using the digital camera after its body has been damaged may cause a fire or electric shock.



## ■ Do not look through the digital camera into the sun

- Do not look through the digital camera at the sun or any other strong source of light. Doing so may seriously injure your eyes.



## ■ Do not use the flash close to a person's face

- To prevent possible eye injury, do not use the flash near a person's face (especially young children or babies). If the flash is used close to a person's opened eyes, there is a risk that it may damage that person's eyesight.



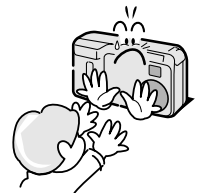
## ■ Do not use where there is risk of explosion

- Do not use the digital camera in a location where there is explosive gas, or any other flammable material in the air. Doing so may cause a fire or an explosion.



## ■ Keep the digital camera out of the reach of children

- The following may happen if children play with the digital camera:
  - They may wrap the strap around their neck and suffocate.
  - They may swallow the batteries or other small parts. In such a case, consult a physician immediately.
  - They may damage their eyesight if the flash goes off too close to their eyes.
  - They may get hurt by the digital camera.



# WARNING

## ■ Concerning the Batteries

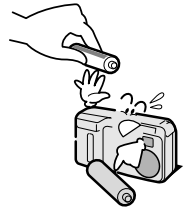
### Concerning the supplied nickel metal hydride batteries

- Follow all the warnings indicated below to prevent the batteries from leaking, overheating, exploding, catching fire, or becoming damaged.
  - Use only the supplied battery charger for recharging.
  - Do not install with the polarities ((+) and (-)) inverted.
  - Do not heat the batteries or throw them in a fire.
  - Do not allow metal objects to touch the terminals. Do not carry loose with necklaces, hairpins, etc.
  - Do not transform, open, or modify.
  - Do not put in water or any liquid, or get the terminals wet.
  - Always stop the recharging after the prescribed recharge time, even if the batteries are not fully charged.
- Operating and storage conditions

● Temperature	0 to 40°C (charged) 0 to 50°C (discharged) -20 to 30°C (storage)	● Humidity	45 to 85%
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## General precautions

- Use the nickel metal hydride batteries supplied with the digital camera. Manganese batteries cannot be used, as they have a short battery life and may overheat, causing damage to the digital camera.
  - Do not use a recharged battery together with a discharged battery. Do not use nickel metal hydride batteries together with Ni-Cd batteries, or batteries of different types or different brands at the same time.
  - Make sure not to invert the polarity (+) and (-) when installing the batteries. Install the batteries as described by the indicated polarity.
  - Use of different types of batteries at the same time may generate heat or cause the batteries to leak, resulting in fire, injury or burns, or damage to the digital camera and any other nearby object.
  - Use only specified batteries. Use of batteries without protective casings or other inferior products may cause a fire, injury, or burns.
- 
- The batteries may be warm immediately after the digital camera is used. If removing the batteries, turn off the digital camera and allow the batteries to cool down before removing them.
  - If a battery is leaking and the electrolyte gets on your skin or clothing, immediately rinse with clean water. If the electrolyte gets into your eyes, you risk losing your eyesight. Immediately rinse your eyes with clean, running water, and seek medical attention right away.
  - Do not drop or hit the batteries, or submit them to strong shocks.
  - If the digital camera is not going to be used for a long period of time, remove the batteries and store them in a cool place. (When the batteries are removed for a long period, the time and date settings will be cleared.)
  - When disposing of the batteries, make sure to follow all applicable regulations.
  - If used in temperatures below 10°C, the service life of the batteries will be shorter than normal.
  - Always read the instruction manuals that may come with the batteries you purchase before use.

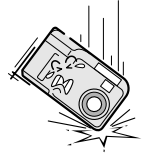


# Concerning the digital camera

## CAUTION

### ■ Cautions when carrying the digital camera

- Do not walk around holding the digital camera by the hand-strap. It may hit other objects and get damaged. When walking around, hold the digital camera in your hand or place it in a pocket.
- Be careful not to drop the digital camera or subject it to strong shocks.
- Make sure direct sunlight does not hit the digital camera lens, as that may damage the internal parts. When not using the digital camera, be sure to always turn it off and keep the lens cover closed.



### ■ Cautions during use and storage

- This digital camera is a precision instrument. When using or storing the digital camera, make sure to avoid the following locations to avoid damage.
  - Places in direct sunlight
  - Places where humidity and temperature are high
  - Places that may get wet
  - Places close to an air conditioner or heater
  - Inside a car
  - Places where there is dust and dirt
  - Places where there is a fire burning
  - Places where volatile products are stored
  - Places subject to vibrations



● Temperature	0 to 40°C (operation)	● Humidity	30 to 90% (operation, no condensation)
	-20 to 60°C (storage)		10 to 90% (storage, no condensation)

### ■ Cautions if the digital camera is not going to be used for a long period

- For safety, remove the batteries. The batteries may generate heat or leak, and that may start a fire, cause injuries or burns, and damage the digital camera and any other objects placed nearby. (When the batteries are removed for a long period, the time and date settings will be cleared.)



# Concerning the supplied battery charger

## DANGER

**Warning! Do not attempt to recharge non-rechargeable batteries. For indoor use only.**

**The appliance is not intended for use by young children or infirm persons without supervision.**

**Young children should be supervised to ensure that they do not play with the appliance.**

### ■ Use with nickel metal hydride or Ni-Cd batteries

- Do not use the supplied battery charger to recharge batteries other than the rechargeable nickel metal hydride batteries (HR-3USV, HR-3US or HR-4US, supplied with the digital camera or sold separately) or Ni-Cd batteries (N-3US, N-3U or N-4U, sold separately). Recharging a dry-cell battery or other type of rechargeable battery may cause excess heat, combustion, or leakage, and cause a fire, injuries, burns, or damage to nearby objects.



### ■ Do not invert the polarity ((+) and (-)) of the batteries

- Place the batteries in the battery charger with the (+) and (-) terminals oriented as indicated on the charger. If the batteries are placed with the wrong orientation, they may leak, overheat, explode, or be damaged.



### ■ Use a 100 to 240 V AC power supply

- If used with a power supply other than that specified, it may cause a fire or electric shock.



### ■ Do not disassemble or modify the battery charger

- It is dangerous to touch the inside of the battery charger. Doing so may cause a fire or electric shock.
- Do not use the battery charger as a direct current generator.



### ■ Do not get the battery charger wet

- Make sure the battery charger does not get wet, for it may cause a fire or electric shock.
- Do not use the battery charger in a bathroom.
- If the battery charger gets wet, immediately unplug it from the power outlet and remove the batteries. Then contact the place of purchase. If used while wet, it may cause a fire, electric shock, or an accident.



# WARNING

## ■ Cautions when plugging in the battery charger

- Securely plug the power cord all the way in the power outlet when using the battery charger. If the battery charger is used with the power cord not fully plugged in, it may generate heat and cause a fire.
- If the power cord is damaged, or cannot be correctly plugged into the power outlet, do not use the battery charger. Using the battery charger in this condition may cause a fire or electric shock.
- Do not allow dust, etc., to build up on the power cord or power outlet. A build-up of dust may cause a short circuit or generate heat and cause a fire.



## ■ Do not pull on the power cord to unplug it

- When unplugging the power cord, be sure to hold the power plug and slowly pull it out of the power outlet. Pulling the cord portion may damage the power cord and cause a fire or electric shock.



## ■ Cautions concerning the power cord

- Do not leave the power cord plugged into the power outlet while the other end is not plugged into the battery charger. The loose end can cause electrocution if touched with wet hands or if handled by children.
- Only use the power cord supplied with the battery charger. If a different power cord is used, it may be rated for a different current load, and that may cause a fire.
- The supplied power cord is for exclusive use with the supplied battery charger. Do not use it with other devices for it may cause a fire or electric shock.



## ■ Keep the battery charger out of the reach of children

- Children may place the batteries or other small components in their mouth or perform some other such unforeseeable action. If swallowed, consult a physician immediately.



## ■ If smoke or a strange odor is emitted, or if strange noises are heard, immediately unplug the power cord from the power outlet

- If the battery charger is used under these conditions, it may cause a fire or electric shock.
- If strange conditions such as these occur, immediately unplug the battery charger, remove the batteries, and wait to make sure no more smoke is emitted. Then contact the place of purchase. Do not try to repair or open the battery charger yourself.



## ■ Do not handle with wet hands

- Handling the battery charger with wet hands may cause an electric shock.



## ■ Do not use during a storm

- Do not touch the battery charger or power cord while it is plugged into a power outlet during a thunderstorm. Doing so may cause an electric shock.



# CAUTION

## ■ Unplug the power cord from the power outlet when finished

- If the battery charger is left plugged into the power outlet for a long period of time, there is a risk of fire.



## ■ Do not damage the power cord

- Do not place heavy objects on the power cord. Do not place the power cord near a heat source. Do not excessively bend the power cord, modify it, or secure it with staples. Doing so may damage the power cord and cause a fire or electric shock.
- If the power cord is damaged, or if it does not plug properly into the battery charger or wall outlet, contact the place of purchase.



## ■ Do not place on an unstable surface

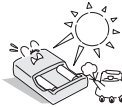
- It may fall down, causing injury or damage.
- If the battery falls down and the charger body is damaged, remove the batteries and contact the place of purchase. If used while damaged, it may cause a fire, electric shock, or other damages.



## ■ Operating and storage conditions

- Do not use close to a heat source (close to a stove or heater) or exposed to direct sunlight.

- |               |                       |            |                                  |
|---------------|-----------------------|------------|----------------------------------|
| ● Temperature | 0 to 40°C (charging)  | ● Humidity | 45 to 85% (charging and storage) |
|               | -20 to 60°C (storage) |            |                                  |



# Concerning the accessories

## CAUTION

### ■ Cautions concerning the use of the AC adapter

- Use only the separately sold AC adapter (model VAR-G4EX for the VPC-AZ1EX, model VAR-G4E for the VPC-AZ1E and model VAR-G4U for the VPC-AZ1) with your digital camera. Do not use an AC adapter other than the one indicated here, designed for specific use with your digital camera.
- If an AC adapter other than the specified one is used, it may damage the digital camera and cause a fire or electric shock.
- Normally when using an AC adapter, remove the batteries. Otherwise batteries may cause excess heat, leakage, injuries or damage to nearby objects.
- For complete information on how to use the AC adapter, refer to the instructions accompanying the AC adapter.

### ■ Cautions concerning the CompactFlash and Microdrive

- Immediately after use, the CompactFlash and Microdrive will be very hot. Before removing the CompactFlash or Microdrive, turn off the digital camera and wait for the temperature to cool down.
- Keep out of the reach of children. Young children may put the media in their mouth and choke or cause some other unexpected injury or accident.

### For correct use of your digital camera

#### ■ Cautions before capturing important images

- Before capturing important images, make sure that the digital camera is operating properly and in condition to capture the image properly.
- Sanyo Electric shall not be held responsible for any losses that result from images that could not be recorded, are erased, destroyed, or damaged in any way due to a problem with the digital camera, any of its accessories, or its software.

#### ■ Cautions concerning copyrights

- The images you capture with your digital camera are for your own private use; any other use may violate the rights of copyrights owners.

### ■ Cautions when cleaning the digital camera

- Do not use benzene or thinner products to clean the digital camera. Doing so may cause deformation, discoloration, or paint peeling. When using a chemically treated cloth, carefully read its instructions and warnings.
- Do not spray insecticides or volatile sprays on the digital camera. Do not leave rubber or vinyl objects against the digital camera for a long period. They may cause deformation, discoloration, or paint peeling.

### Cleaning procedure

- 1 Turn off the digital camera and remove the batteries.
- 2 Remove the dirt with a soft cloth.
- 3 If the digital camera is extremely dirty, wipe with a soft cloth moistened with a mild detergent diluted with water and wrung dry.



## ■ Cautions concerning the nickel metal hydride batteries

- Periodically clean with a dry cloth the terminals of the nickel metal hydride batteries ((+) and (-)) and the terminals located in the battery compartment of the digital camera.
- Do not touch the battery terminals or the terminals in the battery compartment of the digital camera with your bare hands. Doing so will allow contaminants from your hands to adhere to the terminals and oxidize, increasing the contact resistance. If the contact resistance increases, the usable life of the batteries will diminish.

## ■ Cautions when cleaning the lens

- If the lens gets dirty, use a commercially available air blower or a cleaning cloth for photographic equipment to clean it.

## ■ When not using the digital camera for a long period

- Remove the batteries. However, when the batteries are removed for a long time, the digital camera functions may begin to not work properly. Periodically reinstall the batteries and check the digital camera functions.
- If the batteries are left in the digital camera, a small amount of power is still used even if the digital camera is turned off. If the nickel metal hydride batteries are left in the digital camera for a long period, they may become completely discharged and lose their ability to be recharged again.

## ■ Cautions concerning condensation

- Using the digital camera with condensation inside it may damage the digital camera.

### Be careful of condensation under the following conditions

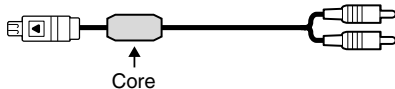
- When moving the digital camera suddenly from a cold place to a warm place.
- When the ambient temperature changes drastically, such as when a heater is turned on to quickly heat the room.
- When the digital camera is placed in the path of cool air from an air conditioner.
- When the digital camera is placed in a location of high humidity.

### If condensation seems likely to form

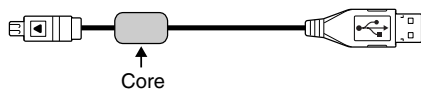
- Place the digital camera in a plastic bag and seal it, and then wait until the digital camera has reached the ambient temperature.

## ■ Cautions concerning undesired interference

- The digital camera may create undesired interference if used close to a television or radio. To avoid this type of interference, make sure the cores on the supplied AV cable and USB interface cable are not removed.



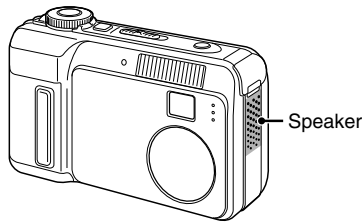
Dedicated AV cable



Dedicated USB interface cable

## ■ Cautions concerning magnetism

- Do not place credit cards, bank cards, floppy disks, or other items that may be damaged by magnetic fields near the speaker. Data may be lost or the magnetic strips on cards may be damaged.



## ■ Cautions concerning data storage

- It is recommended that any important data be copied onto a separate media (such as a hard disk, MO disk, or CD-R disk).
- Stored data may be lost (or corrupted) in cases such as those listed below. Sanyo Electric will not be held responsible for any damage or lost profits arising from the loss of data.
  - If the CompactFlash or Microdrive card is used incorrectly.
  - If the CompactFlash or Microdrive card is not inserted correctly into the digital camera.
  - If the CompactFlash or Microdrive card is subjected to electrical or mechanical shocks or other forces.
  - If the CompactFlash or Microdrive card is removed from the digital camera or if the digital camera is turned off during reading or writing operations.
  - If the CompactFlash or Microdrive card has reached the end of its usable life.

## ■ Cautions when handling the CompactFlash or Microdrive

- The CompactFlash and Microdrive cards are precision devices. Do not bend, drop, or subject them to strong forces or shocks. Be especially careful with the Microdrive for it is easily damaged by vibrations.
- Avoid using or storing the CompactFlash and Microdrive cards in places with extremely high or low temperatures, subject to direct sunlight, in a completely closed vehicle, near air conditioners or heaters, or in humid or dusty locations.
- Avoid using or storing the CompactFlash and Microdrive cards in locations where strong static electrical charges or electrical noise can be easily generated.
- Do not allow the edges of the CompactFlash and Microdrive cards to become contaminated with foreign materials. Gently wipe away any contamination with a soft, dry cloth.
- When not using the CompactFlash and Microdrive cards, put them back into their protective covers to protect them from damage due to static electricity.
- Do not carry the CompactFlash and Microdrive cards inside trouser pockets, as the cards may become damaged when you sit down or make other movements that may apply forces.
- Before using an unused card, be sure to format it using the digital camera (see page 124).
- When buying separately sold or commercially available products, carefully read the instructions and warnings that come with them.

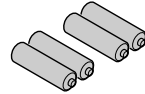
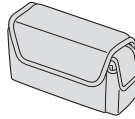
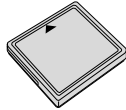
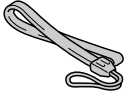
---

# CHECKING THE INCLUDED ACCESSORIES

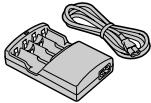
---

Open the box and check that all the accessories listed below are included. The page numbers listed next to the part names are the page numbers where that part is explained in detail.

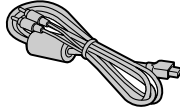
- **Hand-strap** [page 15]
- **CompactFlash (16MB) and protective case**
- **Soft case** [page 15]
- **4 AA nickel metal hydride rechargeable batteries** [page 23]



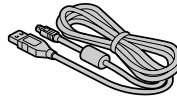
- **Nickel metal hydride battery charger and power cord** [page 23]



- **Dedicated AV cable: 1** [page 106]



- **Dedicated USB interface cable: 1** [page 129]



- **Software: 1 CD-ROM** [page 129]



---

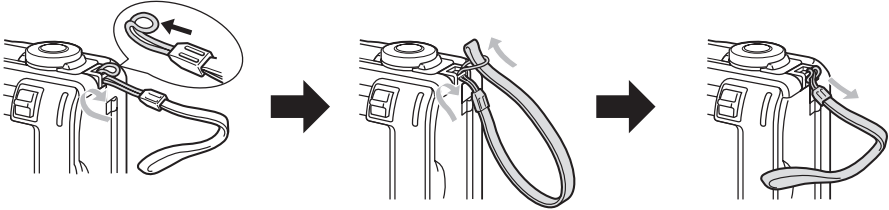
# USING THE HAND-STRAP AND SOFT CASE

---

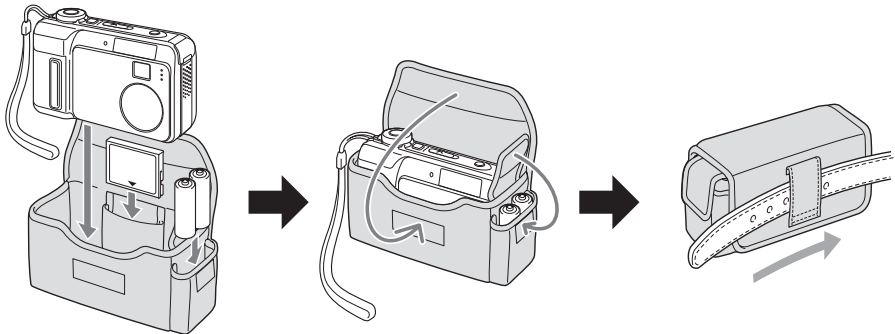
Attach the supplied hand-strap to the digital camera to aid in carrying. Also, when you are not using the digital camera, put it in the soft case for protection.

## Attaching the hand-strap

Bend the looped extremity of the strap and slip it through the strap holder on the digital camera.



## Using the soft case



# Media cards that can be used with this digital camera

This digital camera stores the captured images and recorded voice memos on the storage media card inserted inside the digital camera. The number of images and amount of recording time that can be stored on one card depends on the capacity of the card used and the recording conditions.

The types of card that can be inserted into and used with this digital camera are given below.

- **CompactFlash**
- **Microdrive**

There are special precautions that must be followed when using Microdrive cards. Before using Microdrive cards, carefully read “Cautions when using the Microdrive” (see page 137).

## The use of “card” in this manual

- In this manual, CompactFlash and Microdrive cards that can be used in this digital camera are referred to as “card”.
- The cards in the illustrations in this manual are CompactFlash cards, but all installation, removal, and formatting procedures are the same for both the CompactFlash and Microdrive cards.

---

# QUICK START FOR CAPTURING IMAGES

---

Now that you have purchased a new digital camera, it is time to try and capture some images and then view them with the LCD monitor. Although your digital camera is packed with many useful and convenient functions, here is a simple explanation of how to capture and view images. Afterward, carefully read the rest of this manual to get the most out of your digital camera.

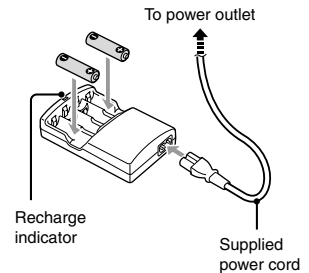
## Recharging the batteries (see page 23)

Recharge the supplied batteries before use.

---

### 1 Insert the two supplied batteries in the outside sockets and recharge them.

- Make sure the batteries are inserted with the polarity ((+), (-)) as indicated on the battery charger.
- During recharge, the recharge indicator on the battery charger will light.
- When the batteries are recharged, the indicator will go off.
- The recharge time for the supplied two nickel metal hydride AA batteries (HR-3USV) is approx. 115 minutes.

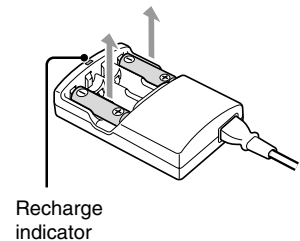


#### Caution!

First recharge the supplied batteries. Do not recharge other batteries with the supplied battery charger. To ensure safety, read "Concerning the batteries" on page 5 and "Concerning the supplied battery charger" on page 8.

### 2 Remove the batteries from the battery charger.

- When finished (the recharge indicator turns off), unplug the power cord from the power outlet and remove the batteries.

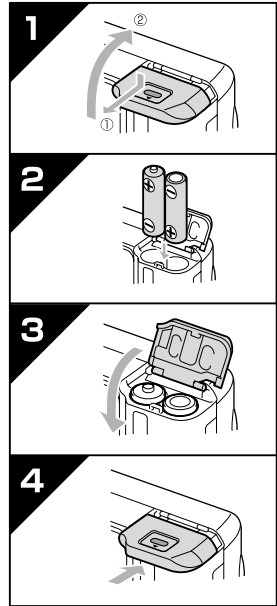


# Installing the batteries and card (see pages 26, 27)

## 3 Insert the batteries.

- Use the batteries recharged in step 1 above.
- Make sure the polarity ((+) and (-)) of the batteries is as indicated in the battery compartment.

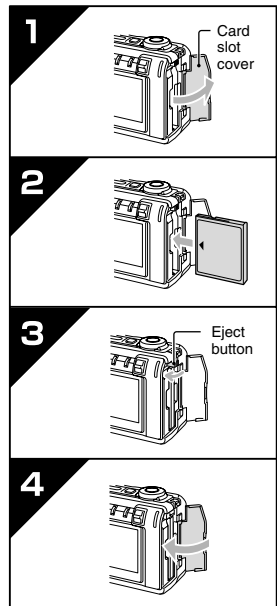
- 1 Open battery compartment cover on the digital camera bottom.
- 2 Insert the batteries.
- 3 Close the battery compartment cover.
- 4 Push the cover in the direction shown by the arrow until it clicks.



## 4 Insert the card.

- Make sure not to insert the card with it facing the wrong direction.

- 1 Open the card slot cover.
  - 2 Insert the card all the way.
  - 3 Fold down the eject button.
  - 4 Close the card slot cover.
- After installing the card, be sure to first format it with the digital camera (see page 124).



# Capturing images (see page 60)

Now that preparation is completed, your digital camera is ready to capture images. Here we will capture still images, but your digital camera can take sequential shots and even video clips.

---

**5** Set the main switch to .

---

**6** Turn the selector dial to .

---

**7** Press the power button.

- The power turns on.
  - The lens extends.
  - When the stand-by indicator lights green, the camera is ready to capture an image.
- 

**8** Point the camera lens at the subject.

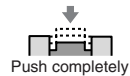
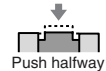
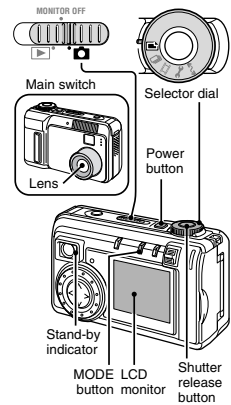
- Compose the desired image by looking at the LCD monitor.
- 

**9** Press the shutter release button halfway (focus-lock).

- The autofocus locks on the subject and the image in the LCD monitor appears clearly.
- 

**10** Continue to gently press the shutter release button all the way.

- The image is captured.
- In the still image shooting mode, you can view the image captured on the LCD monitor by holding the shutter release button down.
- The stand-by indicator will flash red while the image is being written to the memory. Another image can only be captured when the stand-by indicator lights green again.
- In the still image shooting mode, the camera is ready for capturing the next image after about 1 second.



---

## HELP

### What if the digital camera turns off by itself

- The power save function activated (see page 30). To turn the power on, press the MODE button once or press the shutter release button once.

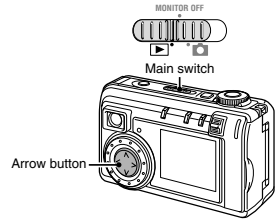


# Viewing the image (see pages 96, 98)

Now let's take a look at the images you've captured.

## 11 Set the main switch to .

- The image you captured shows up in the LCD monitor.
- Press ◀ or ▶ on the arrow button to display the images stored before and after the current image.



## 12 When finished, press the power button to turn it off.

- Your digital camera turns off.

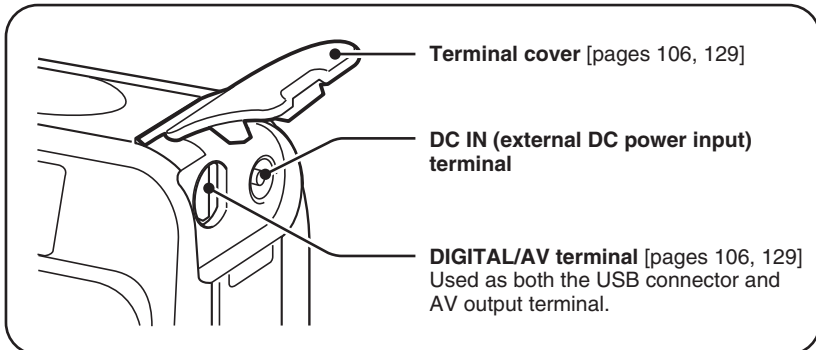
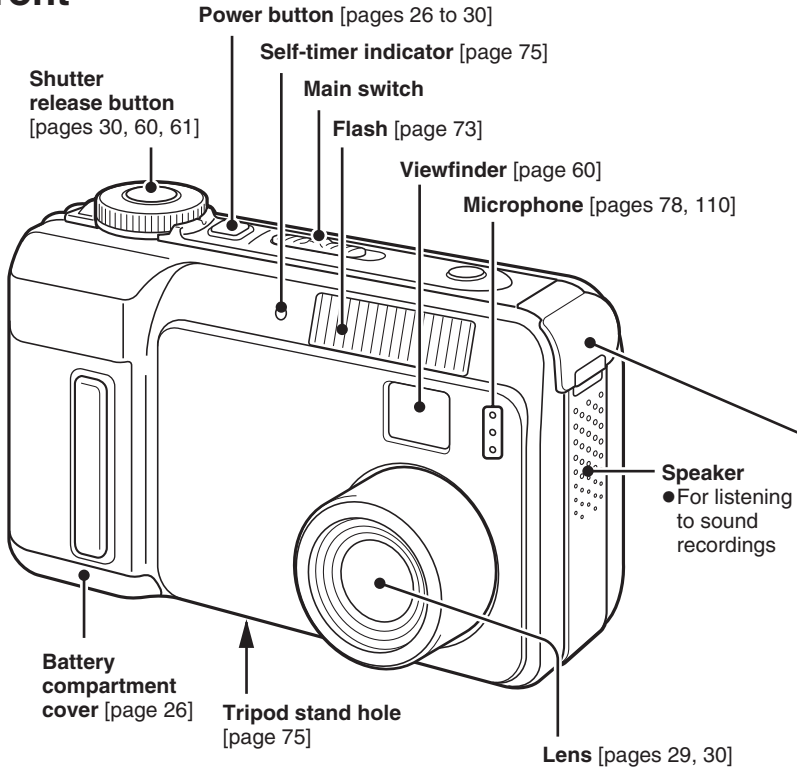
### How was it? Did everything turn out fine?

Of course what you have performed here is just a fraction of the many functions your digital camera is loaded with. But before you continue using your digital camera any further, be sure to read this instruction manual carefully.

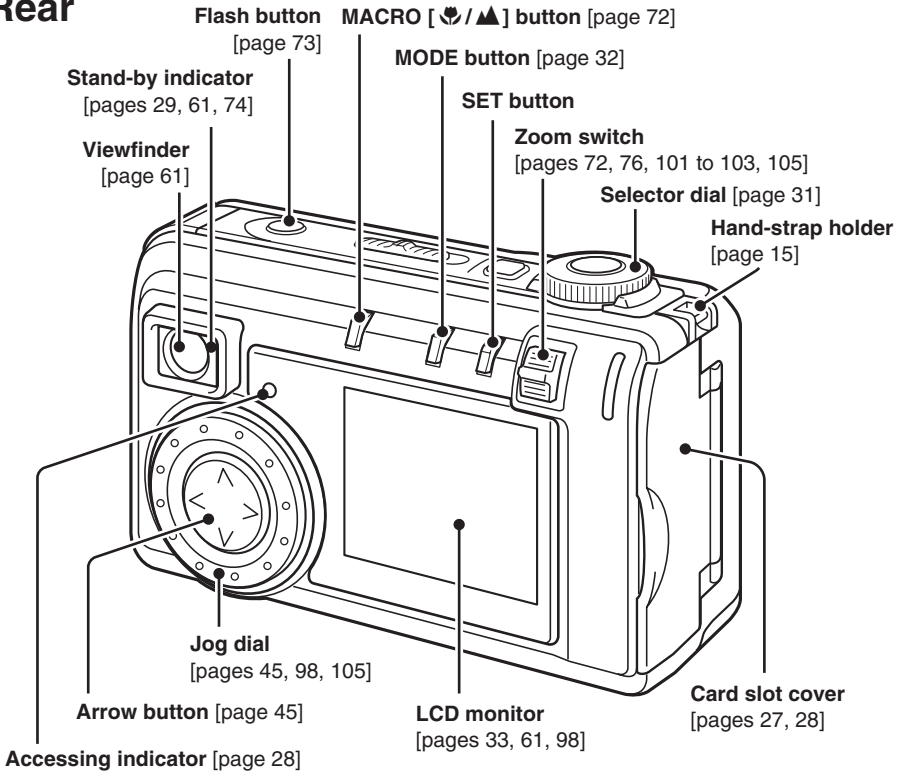
# PARTS NAMES

The page numbers listed next to the part names are the page numbers where that part is explained in detail.

## Front

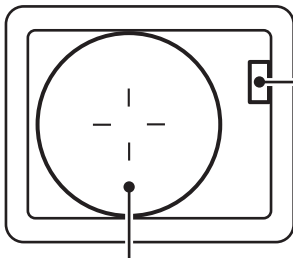


# Rear



- \* During use, the area around the LCD monitor may become warm. This is normal and does not indicate a malfunction.
- \* When viewing the LCD monitor, you may see some missing pixels (seen as black and white dots). This is normal and does not indicate a malfunction.

# Indications in the viewfinder



Autofocus mark [page 60]

**Stand-by indicator (red/green)** [pages 29, 60, 74]

- Red flashing:** When capturing an image, recording sound, charging the flash, storing an image or sound recording (image or sound cannot be recorded), or recording using the self-timer
- Red steady:** When the memory is full (image or sound cannot be recorded) [page 130]
- Green flashing:** When using the exposure correction or digital zoom functions (image and sound can be recorded) [pages 76, 81]

**Green steady:** Image and sound can be recorded, or when connected to a PC

---

# PREPARATION OF BATTERIES

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Use the supplied (or sold separately) AA nickel metal hydride batteries to power the digital camera. You can also use AA Ni-Cd batteries, but they will not last as long as the AA nickel metal hydride rechargeable batteries. However, if you do not have access to these batteries, you may use alkaline batteries and capture images. Also note that the duration of operation provided by the alkaline batteries will be very short.

## CAUTION

- Manganese batteries cannot be used, as they have an extremely short battery life and may overheat and damage the digital camera.
- For your safety, read “Concerning the batteries” on page 5 and “Concerning the supplied battery charger” on page 8 before handling the batteries.

## Recharging nickel metal hydride batteries

Make sure to completely recharge the supplied nickel metal hydride batteries before use. Use only the supplied battery charger to recharge the batteries. This battery charger can be used for both nickel metal hydride batteries (AA HR-3USV [supplied with the camera] or HR-3US, AAA HR-4US) and Ni-Cd batteries (AA N-3US or N-3U, AAA N-4U). Before using the batteries for the first time or when the batteries remaining charge is low (see “REMAINING BATTERY CHARGE INDICATION” on page 48), follow the steps below to recharge them.

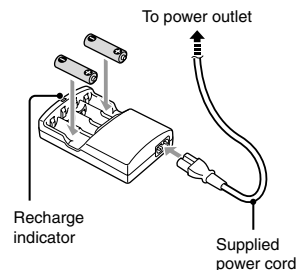
---

### 1 Insert two batteries in the outside sockets of the battery charger.

- Make sure the polarity ((+), (-)) of the batteries is as indicated on the charger.

---

### 2 Insert the power cord into the socket on the battery charger.



---

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

- Recharge will start automatically.
- During recharge, the recharge indicator on the battery charger will light.
- When discharged batteries are inserted, the indicator may flash. When it changes to a continuously lit indicator, battery recharge is proceeding normally.
- When the batteries are fully recharged, the recharge indicator goes out.

**Recharge time of the supplied nickel metal hydride batteries:**

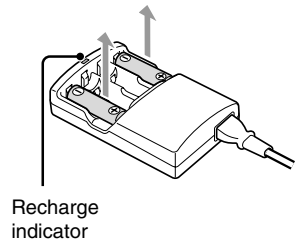
approx. 115 minutes for one or two batteries, and approx. 210 minutes for three or four batteries.

---

**4 When finished (the recharge indicator turns off), unplug the power cord from the power outlet.**

---

**5 Remove the batteries from the battery charger.**





---

## PREPARATION OF BATTERIES

---

### Using the nickel metal hydride batteries properly

- **Periodically clean with a dry cloth the terminals of the nickel metal hydride batteries ((+) and (-)) and the terminals located in the battery compartment of the digital camera.**  
Do not touch the battery terminals or the terminals in the battery compartment of the digital camera with your bare hands. Doing so will allow contaminants from your hands to adhere to the terminals and oxidize and increase the contact resistance. If the contact resistance increases, the usable life of the batteries will diminish.
- If you repeatedly remove the nickel metal hydride batteries before they run out and recharge them, or place them into the digital camera before they are fully recharged, then a "memory effect"\* may occur.
- Your digital camera is designed to handle the effects from voltage fluctuations caused by the "memory effect" of nickel metal hydride batteries. Nevertheless, there are times when the remaining charge indicator may show  or  earlier than usual.
- If any symptoms such as these occur, first discharge the batteries completely (see page 126) and then recharge them until they are fully charged again.

#### \* Memory effect

Memory effect is a phenomenon where the battery performance temporarily lowers. In general, the battery voltage during use drops below its normal voltage until it is fully discharged and recharged again.

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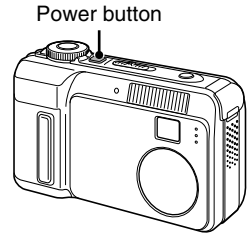
#### NOTE

- New batteries must be recharged before they are first used.
- Even if recharged batteries are stored and not used, they will slowly lose their charge. They must be recharged before they are used again.
- If the batteries are used for the first time or if they have not been used for a long time, they may not be recharged completely even when the recharge indicator goes off. The batteries will return to normal after they have been used and recharged two or three times.
- The batteries may have reached the end of their service life if the recharge indicator keeps on flashing even if the batteries have been inserted correctly, or if they overheat while being recharged. However, if the same conditions appear with new batteries, or if the recharge indicator does not go off after the normal time required, it may indicate a problem of the battery charger. In such a case, stop using it immediately and take it to the dealer for service.
- Recharge two batteries at the same time.
- During recharging, the battery charger and batteries will be warm. This is normal and does not indicate a malfunction.
- During recharging, the battery charger may create interference with a radio or TV. In such a case, make sure to plug the battery charger into a power outlet on a circuit different from the one of the radio or TV.
- It is recommended that the ambient temperature during battery recharging be within the range of 10 to 40°C. At temperatures below 10°C, due to the characteristics of the batteries, they may not become adequately charged.
- The two inner slots of the battery charger accept both AA and AAA batteries. A maximum of four AA batteries, or two AA and 2 AAA batteries can be recharged at the same time. (You can also recharge two AAA batteries only.)

# Installing the batteries

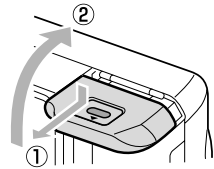
## 1 Confirm that the power is turned off.

- Press the power button to turn off the camera.
- When the power is turned off, the stand-by indicator turns off. In addition, if the lens is protruding, it automatically retracts and closes.



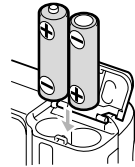
## 2 Open the battery compartment cover on the bottom of the digital camera.

- Push the button on the compartment cover and slide it outward to open it.



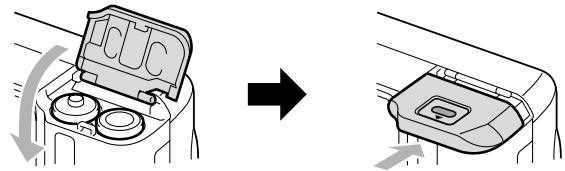
## 3 Insert two recharged nickel metal hydride batteries in the battery compartment.

- Make sure the polarity (+), (-) of the batteries is as indicated in the battery compartment.



## 4 Close the battery compartment cover.

- Slide the compartment cover in the direction of the arrow until it clicks.



### NOTE

- Battery power is still used even when the digital camera is turned off. It is recommended that you remove the batteries from the digital camera when it is not being used. However, when the batteries are removed for a long period, the date and time settings may be cleared. When reinstalling recharged batteries, recheck the date and time settings (see page 46).

# INSTALLING AND REMOVING THE CARDS

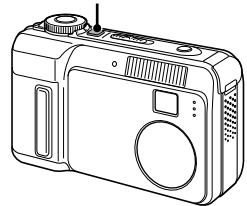
The images and audio recordings recorded by your digital camera are stored on the data storage card installed in the digital camera. You must install a card before you can capture images. For more information on handling the cards, see “Cautions when handling the CompactFlash or Microdrive” on page 13 and “Cautions when using the Microdrive” on page 137. Before using a card for the first time, format it using the digital camera (see page 124).

## Installing a card

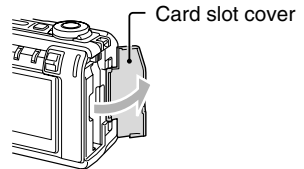
### 1 Confirm that the power is turned off.

- Press the power button to turn off the camera.
- When the power is turned off, the stand-by indicator turns off. In addition, if the lens is protruding, it automatically retracts and closes.

Power button

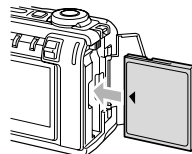


### 2 Open the card slot cover.



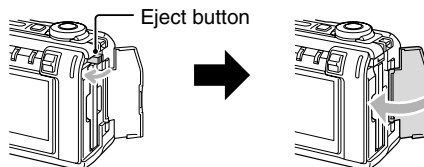
### 3 Insert the card.

- Insert the card from the connector side, in the direction shown by the arrow (◀ mark).
- Be sure to insert the card all the way until it is fully inserted.



### 4 Fold down the eject button and close the card slot cover.

- When a card is inserted, the eject button will protrude. Fold down the eject button in the direction indicated by the arrow.





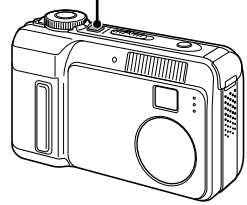
# Removing a card

---

## 1 Confirm that the power is turned off.

- Press the power button to turn off the camera.
- When the power is turned off, the stand-by indicator turns off. In addition, if the lens is protruding, it automatically retracts and closes.

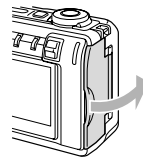
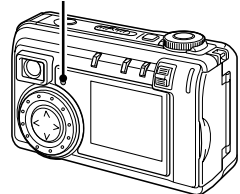
Power button



## 2 Make sure the accessing indicator is not flashing, then open the card slot cover.

- If the accessing indicator is lit or flashing, then the digital camera is writing to the card. Never remove the card at this time.

Accessing indicator

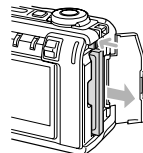


## 3 Raise the eject button.

## 4 Push in the eject button and remove the card.

## 5 Close the card slot cover.

Eject button



---

### NOTE

- Regarding the number of images that can be stored on the card, please refer to “Possible No. of images/possible shooting time/possible recording time” (see page 136).
- By using the card together with a commercially available PC card adapter for CompactFlash cards, the card can be used as a PC card conforming to PC Card Standard-ATA.

---

# TURNING THE POWER ON/OFF

---

## Turning the power on


Follow the steps indicated below when capturing images or when playing back images on the LCD monitor.

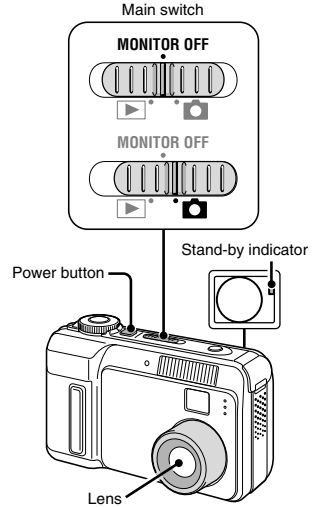
### To capture images

---

**1** Set the main switch to “MONITOR OFF” or .

**2** Press the power button.

- The stand-by indicator turns on and the lens extends.
- If the main switch was set to , an image will appear on the LCD monitor.



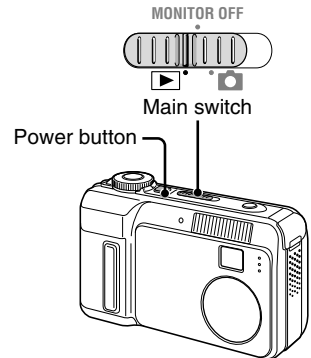
### To play back images

---

**1** Set the main switch to .

**2** Press the power button.

- The power is turned on.
- An image appears on the LCD monitor.



---

## HELP

### If “NO CARD” appears

- If no card is installed in the digital camera, then “NO CARD” will appear on the LCD monitor. Be sure to install a card before using the digital camera (see page 27).

# Turning the power off

---

## 1 Press the power button.

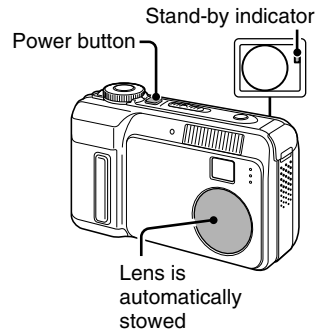
- The power turns off.

### During shooting

- The lens automatically retracts and closes.
- The stand-by indicator turns off.
- The LCD monitor turns off.

### During playback

- The LCD monitor turns off.

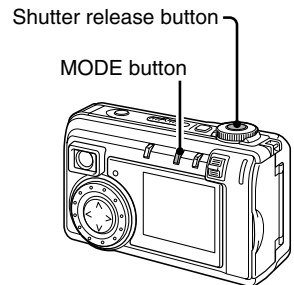


# Turning the power on when the power save function is active

In order to save the battery power, the power save function will automatically turn off the power after one minute of no use during shooting, or five minutes of no use during playback.

---

## 1 Press the MODE button or the shutter release button once.



---

### NOTE

- When using the AC adapter (sold separately), the power save function will become active after about 30 minutes of inactivity. Also, when using battery power and connecting the digital camera to a personal computer, the power save function will become active after about five minutes of no use.
- When the power save function has been active for 15 minutes, the lens automatically retracts and closes.


# DISPLAYING THE SETTING SCREEN AND OPTION SETTING SCREEN

For both shooting and playback, there is a Setting Screen and an Option Setting Screen. These screens allow you to perform various settings and operations.

## Displaying the Setting and Option Setting Screens


### 1 Set the main switch.

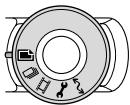
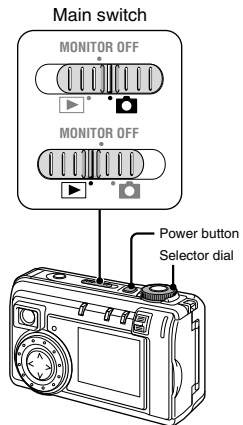
To display the Shooting Setting Screen or the Shooting Option Setting Screen: Set to .






To display the Playback Setting Screen or the Playback Option Setting Screen: Set to .

### 2 Press the power button.

### 3 Turn the selector dial to the mark for the desired setting screen.

- When set to , the Shooting Option Setting Screen or the Playback Option Setting Screen is displayed (see page 41).



	Shooting	Playback
	Still Image Shooting Setting Screen	Still Image Playback Setting Screen
	Sequential Shot Shooting Setting Screen	Sequential Shot Playback Setting Screen
	Video Clip Shooting Setting Screen	Video Clip Playback Setting Screen
	Shooting Option Setting Screen <ul style="list-style-type: none"> <li>• Audio recording</li> <li>• Date and time setting</li> <li>• Operational sound setting</li> <li>• Battery discharging</li> <li>• Language selection</li> <li>• TV system selection</li> <li>• Card initializing (reformatting)</li> </ul>	Playback Option Setting Screen <ul style="list-style-type: none"> <li>• Sound playback</li> <li>• Auto rotate playback setting</li> <li>• Date and time setting</li> <li>• Operational sound setting</li> <li>• Battery discharging</li> <li>• Language selection</li> <li>• TV system selection</li> <li>• Card initializing (reformatting)</li> </ul>
	PC connection mode (the LCD monitor turns off)	PC connection mode (the LCD monitor turns off)

#### NOTE

##### If “NO IMAGE” appears

- This appears if there is no image for the playback mode you selected. Turn the selector dial to a playback mode for which images exist.

---

## 4 Press the **MODE** button (if the selector dial is set to , or ).

- The setting screen selected in step 3 appears (see pages 33 to 40).
- You can also access the shooting setting screen by turning the jog dial.
- For how to operate the setting screens, see “SETTING SCREEN BASIC OPERATIONS” on page 45.

---

## Exiting the Setting Screen


Press the **MODE** button.

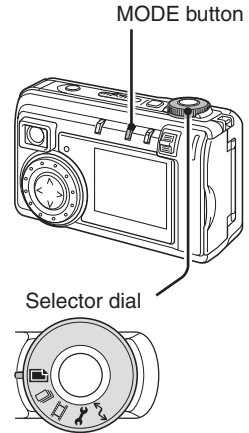
- The Setting Screen disappears.

---

## Exiting the Option Setting Screen

Turn the selector dial to a mark other than .

- The Option Setting Screen is exited and either a shooting screen or playback screen appears.
- If the selector dial is set to , the mode changes to PC connection, and the LCD monitor turns off.

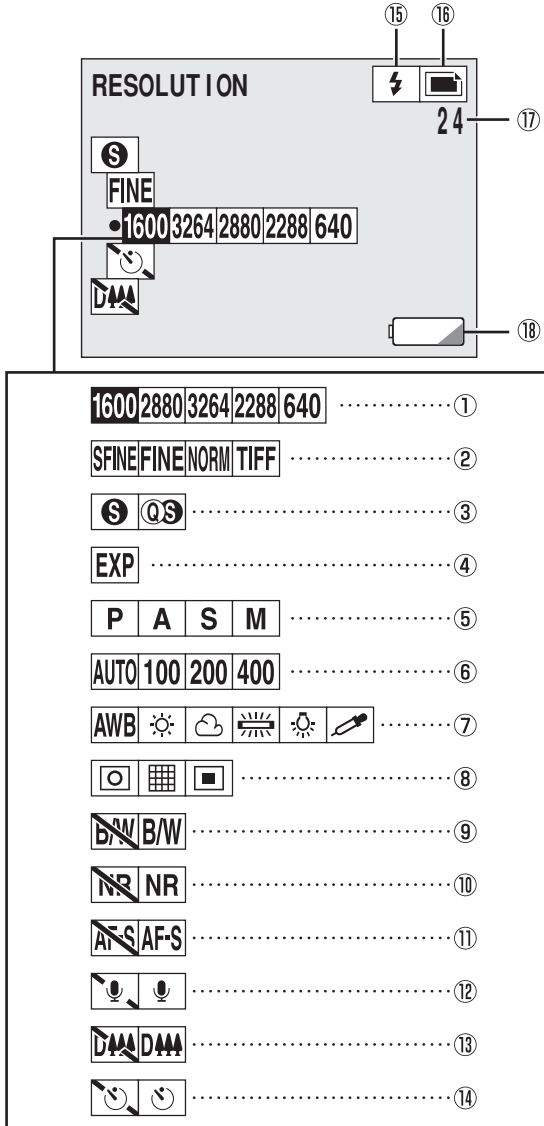


















































# SHOOTING SETTING SCREENS

These screens are used for various settings related to capturing pictures. For the operation procedure for the shooting setting screens, see “SETTING SCREEN BASIC OPERATIONS” on page 45.

## Still Image Shooting Setting Screen

\* All the icons never appear at the same time.

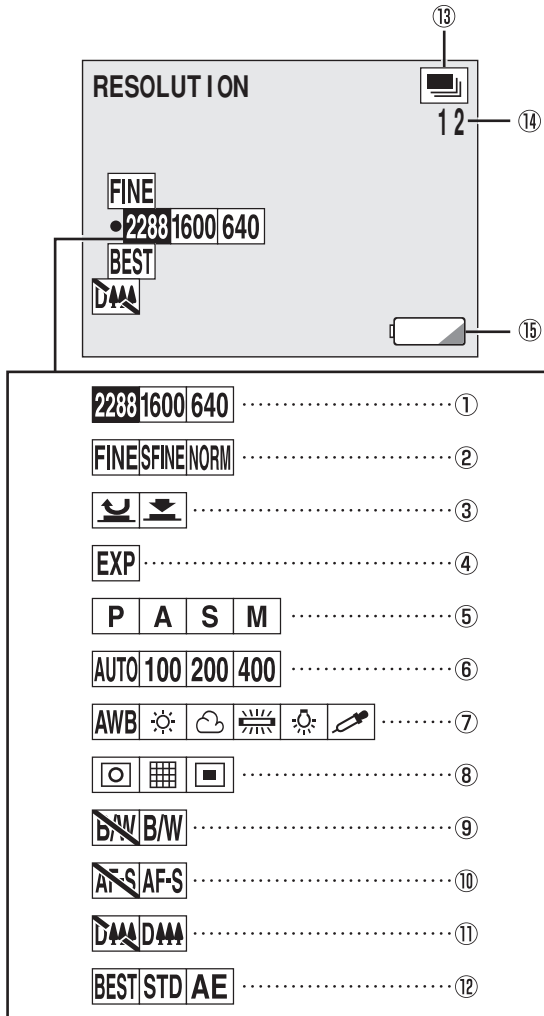


- ① **Resolution menu** [page 55]  
: 3,264 x 2,448-pixel resolution icon  
: 2,880 x 2,160-pixel resolution icon  
: 2,288 x 1,712-pixel resolution icon  
: 1,600 x 1,200-pixel resolution icon  
: 640 x 480-pixel resolution icon
- ② **Compression menu** [page 57]  
: SFINE icon (super-low compression)  
: FINE icon (low compression)  
: NORM icon (moderate compression)  
: TIFF icon (no compression)  
 Only appears when the resolution is set to .
- ③ **Quick Shot menu** [page 84]  
: Quick Shot off icon  
: Quick Shot on icon
- ④ **Exposure correction icon** [page 81]  
 ● When selected, the exposure correction bar appears.  

- ⑤ **Exposure control menu** [page 82]  
: Program AE icon  
: Aperture priority AE icon  
: Shutter speed priority AE icon  
: Manual exposure control icon
- ⑥ **ISO sensitivity menu** [page 85]  
: Auto sensitivity icon (ISO100 to 400)  
: ISO100 icon  
: ISO200 icon  
: ISO400 icon
- ⑦ **White balance menu** [page 86]  
 During monochrome shooting, the white balance menu cannot be selected.  
: Auto white balance icon  
: Fair icon  
: Overcast icon  
: Fluorescent lighting icon  
: White (incandescent) light icon  
: Color fill icon
- ⑧ **Light measuring method menu** [page 91]  
: Center point light measuring icon  
: Multi-section light measuring icon  
: Spot light measuring icon
- ⑨ **Monochrome shooting menu** [page 77]  
: Monochrome shooting off icon  
: Monochrome shooting on icon
- ⑩ **Noise reduction menu** [page 90]  
: Noise reduction off icon  
: Noise reduction on icon
- ⑪ **Spot focus menu** [page 92]  
: Spot focus off icon  
: Spot focus on icon
- ⑫ **Voice memo menu** [page 78]  
: Voice memo off icon  
: Voice memo on icon
- ⑬ **Digital zoom menu** [page 89]  
 Cannot be selected when resolution is set to , , or   
: Digital zoom off icon  
: Digital zoom on icon
- ⑭ **Self-timer menu** [page 75]  
: Self-timer off icon  
: Self-timer on icon
- ⑮ **Flash operation mode icon** [page 73]  
 When using flash, indicates the flash operation mode.  
 No icon: Automatic flash mode  
: Forced flash mode icon  
: Flash off mode icon  
: Red-eye reduction mode icon
- ⑯ **Still image shooting mode icon**
- ⑰ **Number of images that can be captured** [page 50]
- ⑱ **Remaining battery charge** [page 48]  
 Not displayed when the remaining battery charge is near full or when the AC adapter (sold separately) is used.






































# SHOOTING SETTING SCREENS

## Sequential Shot Shooting Setting Screen

\* All the icons never appear at the same time.



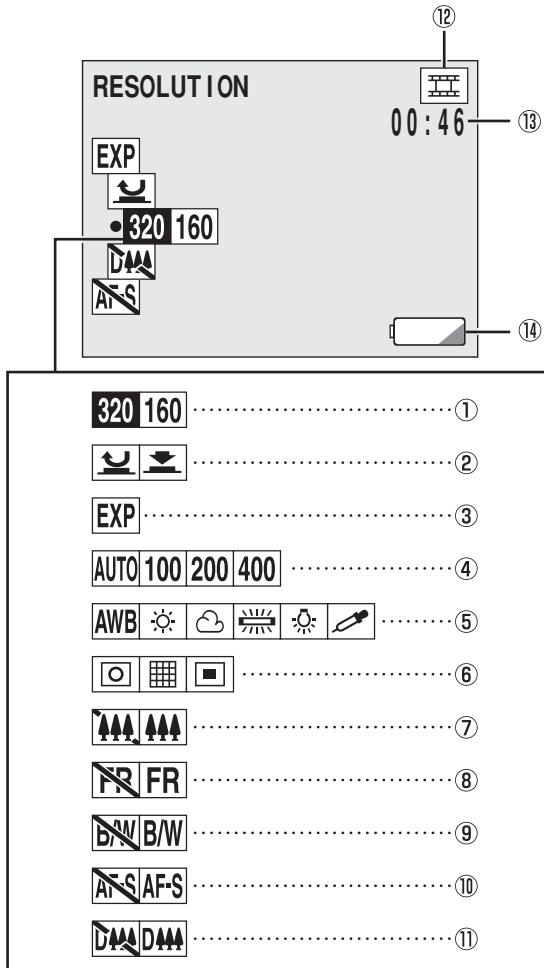






























- ① **Resolution menu** [page 55]  
: 2,288 x 1,712-pixel resolution icon  
: 1,600 x 1,200-pixel resolution icon  
: 640 x 480-pixel resolution icon
- ② **Compression menu** [page 57]  
: SFINE icon (super-low compression)  
: FINE icon (low compression)  
: NORM icon (moderate compression)
- ③ **Shutter operation menu** [page 64]  
 Only appears when the sequential shot method is set to .  
: Images are captured only while the shutter release button is pressed.  
: Capturing of the images starts when the shutter release button is pressed and stops when it is pressed again.
- ④ **Exposure correction icon** [page 81]  
 ● When selected, the exposure correction bar appears.  

- ⑤ **Exposure control menu** [page 82]  
: Program AE icon  
: Aperture priority AE icon  
: Shutter speed priority AE icon  
: Manual exposure control icon
- ⑥ **ISO sensitivity menu** [page 85]  
: Auto sensitivity icon (ISO100 to 400)  
: ISO100 icon  
: ISO200 icon  
: ISO400 icon
- ⑦ **White balance menu** [page 86]  
: Auto white balance icon  
: Fair icon  
: Overcast icon  
: Fluorescent lighting icon  
: White (incandescent) light icon  
: Color fill icon
- ⑧ **Light measuring method menu** [page 91]  
: Center point light measuring icon  
: Multi-section light measuring icon  
: Spot light measuring icon
- ⑨ **Monochrome shooting menu** [page 77]  
: Monochrome shooting off icon  
: Monochrome shooting on icon
- ⑩ **Spot focus menu** [page 92]  
: Spot focus off icon  
: Spot focus on icon
- ⑪ **Digital zoom icon** [page 89]  
 Cannot be selected when resolution is set to .  
: Digital zoom off icon  
: Digital zoom on icon
- ⑫ **Sequential shot method menu** [page 63]  
 Displays the selected sequential shot method even when Shooting Setting Screen is exited.  
: Best select shot icon  
: Standard sequential shot icon  
: AE shift sequential shot icon
- ⑬ **Sequential shot shooting mode icon**
- ⑭ **Number of images that can be captured** [page 50]
- ⑮ **Remaining battery charge** [page 48]  
 Not displayed when the remaining battery charge is near full or when the AC adapter (sold separately) is used.

# SHOOTING SETTING SCREENS

## Video Clip Shooting Setting Screen

\* All the icons never appear at the same time.

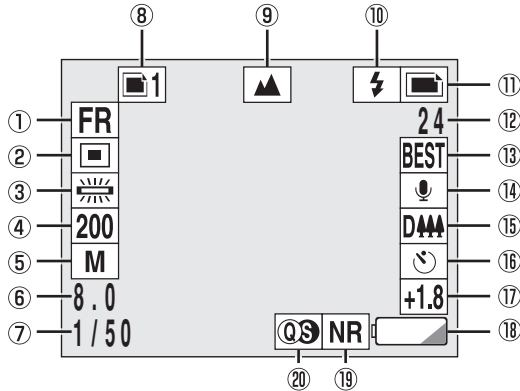


- ① **Resolution menu** [page 55]  
: 320 x 240-pixel resolution icon  
: 160 x 120-pixel resolution icon
- ③ **Shutter operation menu** [page 69]  
: Images are captured only while the shutter release button is pressed.  
: Capturing of the images starts when the shutter release button is pressed and stops when it is pressed again.
- ③ **Exposure correction icon** [page 81]  
 ● When selected, the exposure correction bar appears.  

- ④ **ISO sensitivity menu** [page 85]  
 When the flicker-reduction setting is on, the ISO sensitivity menu cannot be selected.  
: Auto sensitivity icon (ISO100 to 400)  
: ISO100 icon  
: ISO200 icon  
: ISO400 icon
- ⑤ **White balance menu** [page 86]  
 During monochrome shooting, the white balance menu cannot be selected.  
: Auto white balance icon  
: Fair icon  
: Overcast icon  
: Fluorescent lighting icon  
: White (incandescent) light icon  
: Color fill icon
- ⑥ **Light measuring method menu** [page 91]  
: Center point light measuring icon  
: Multi-section light measuring icon  
: Spot light measuring icon
- ⑦ **Optical zoom menu** [page 88]  
: Optical zoom off icon  
: Optical zoom on icon
- ⑧ **Flicker reduction menu** [page 87]  
: Flicker reduction function off icon  
: Flicker reduction function on icon
- ⑨ **Monochrome shooting menu** [page 77]  
: Monochrome shooting off icon  
: Monochrome shooting on icon
- ⑩ **Spot focus menu** [page 92]  
: Spot focus off icon  
: Spot focus on icon
- ⑪ **Digital zoom icon** [page 89]  
: Digital zoom off icon  
: Digital zoom on icon
- ⑫ **Video clip shooting mode icon**
- ⑬ **Remaining recording time available** [page 50]  
 Display shows the remaining minutes and seconds.  
 Depending on the memory capacity of the card, the remaining time is shown as “hours:minutes:seconds”.
- ⑭ **Remaining battery charge** [page 48]  
 Not displayed when the remaining battery charge is near full or when the AC adapter (sold separately) is used.

# SHOOTING SETTING SCREENS

## Shooting status display area

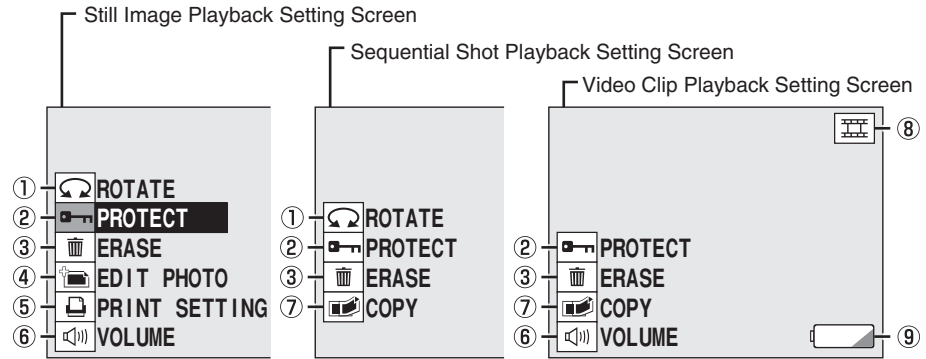
After you exit the Shooting Setting Screen, the status of the digital camera and card are displayed in this shooting status display area. The icons and the positions in which they appear differ depending on the shooting mode.



- ① **Flicker-reduction indicator** [page 87]
- ② **Light measuring method indicator** [page 91]
- ③ **White balance indicator** [page 86]
- ④ **ISO sensitivity indicator** [page 85]
- ⑤ **Exposure control indicator** [page 82]  
In the video clip shooting mode, the optical zoom setting indicator appears [page 88].
- ⑥ **Aperture indicator** [page 82]
- ⑦ **Shutter speed indicator** [page 82]
- ⑧ **Shooting setting indicator**  
Appears when preset shooting settings [page 93] or original shooting settings [page 94] are selected.
- ⑨ **Focus indicator** [page 72]
- ⑩ **Flash action mode indicator** [page 73]  
In the video clip shooting mode, the shooting time display is shown [page 50].
- ⑪ **Shooting mode indicator** [page 54]
- ⑫ **Number of images remaining** [page 50]  
In the video clip shooting mode, the remaining recording time is shown.
- ⑬ **Sequential shot method indicator** [page 63]
- ⑭ **Voice memo indicator** [page 78]  
In the sequential shot shooting mode and video clip shooting mode, the shutter operation setting indicator appears [pages 64 and 69].
- ⑮ **Digital zoom indicator** [page 89]
- ⑯ **Self-timer indicator** [page 75]
- ⑰ **Exposure control indicator** [page 81]
- ⑱ **Remaining battery charge** [page 48]
- ⑲ **Noise reduction indicator** [page 90]
- ⑳ **Quick Shot indicator** [page 84]

# PLAYBACK SETTING SCREEN




## Still Image, Sequential Shot, and Video Clip Playback Setting Screens



- ① **Image rotation** [page 98]  
Appears only when auto rotate playback is not set.
- ② **Protect icon** [page 115]
- ③ **Erase icon** [page 116]
- ④ **Edit still image icon** [pages 109, 111, 114]
- ⑤ **Print setting icon** [page 120]
- ⑥ **Volume icon** [pages 104, 106, 108]  
When selected, the volume bar appears.



Appears only in the Still Image Playback Setting Screen when an image with a voice memo appears.

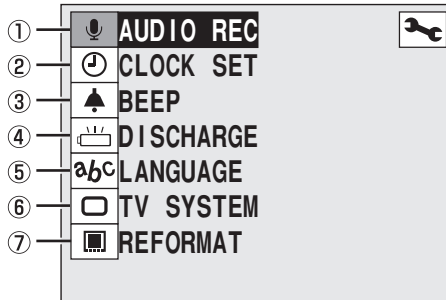
- ⑦ **Copy icon** [page 118]
- ⑧ **Playback mode indicator** [page 96]  
  -  : Still image playback icon
  -  : Sequential shot playback icon
  -  : Video clip playback icon
- ⑨ **Remaining battery charge** [page 48]  
Shows the remaining battery charge. Not displayed when the remaining battery charge is near full or when the AC adapter (sold separately) is used.

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# OPTION SETTING SCREEN

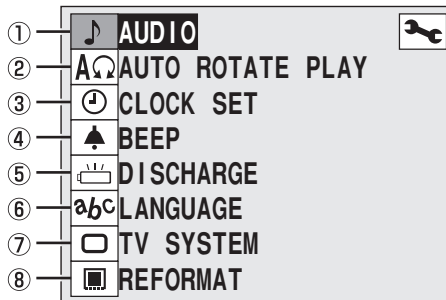
---

## Shooting Option Setting Screen



- |  |   |
|--|---|
| ① <b>Audio recording</b> [page 79]                   | ⑤ <b>Language selection</b> [page 127]  |
| ② <b>Date and time setting</b> [page 46]             | ⑥ <b>TV system selection</b> [page 128] |
| ③ <b>Operational sound (beep) setting</b> [page 125] | ⑦ <b>Card reformatting</b> [page 124]   |
| ④ <b>Battery discharge function</b> [page 126]       |   |

## Playback Option Setting Screen



- |   |  |
|---|--|
| ① <b>Playback of audio recordings</b> [pages 97, 107] | ⑤ <b>Battery discharge function</b> [page 126] |
| ② <b>Auto rotate playback</b> [page 119]              | ⑥ <b>Language selection</b> [page 127]         |
| ③ <b>Date and time setting</b> [page 46]              | ⑦ <b>TV system selection</b> [page 128]        |
| ④ <b>Operational sound (beep) setting</b> [page 125]  | ⑧ <b>Card reformatting</b> [page 124]          |

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### NOTE

- You can set the LCD monitor of your digital camera to display messages in English or Japanese. See "CHANGING THE LANGUAGE DISPLAY" on page 127.

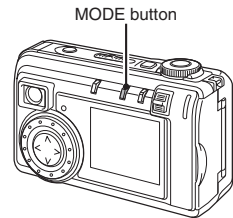
# INFORMATION DISPLAY

The Information Screen allows you to check the current settings while shooting. Also, during playback, you can check what the settings were during shooting.

## Information Screen during shooting

### 1 Put the digital camera in the shooting/recording status.

- When shooting, turn on the LCD monitor.  
For still image shooting, see page 61.  
For sequential shot shooting, see page 64.  
For video clip shooting, see page 69.



### 2 Press the MODE button for at least 2 seconds.

- The Information Screen appears.

\* All the icons never appear at the same time.

#### ① **Currently selected settings** [page 93]

#### ② **Compression ratio setting** [page 57]

- In the video clip shooting mode, the shutter operation setting is shown.

#### ③ **Resolution setting** [page 55]

#### ④ **ISO setting** [page 85]

- In the video clip shooting mode, the white balance setting is shown.

#### ⑤ **White balance setting** [page 86]

- In the video clip shooting mode, the light measuring method setting is shown.

#### ⑥ **Noise reduction setting** [page 90]

- In the sequential shot shooting mode, the spot focus setting is shown. In the video clip shooting mode, the monochrome shooting setting is shown.

#### ⑦ **Spot focus setting** [page 92]

- In the sequential shot shooting mode, the digital zoom setting is shown.

#### ⑧ **Exposure control setting** [page 82]

#### ⑨ **Quick shot setting** [page 84]

- In the sequential shot shooting mode, the shutter release button setting is shown. In the video clip shooting mode, the exposure correction setting is shown.

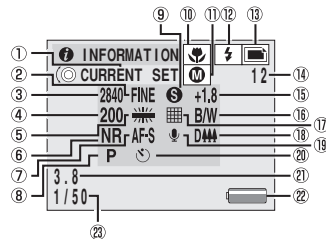
#### ⑩ **Focus setting** [page 72]

#### ⑪ **Execute data save** [page 95]

#### ⑫ **Flash setting** [page 73]

#### ⑬ **Shooting mode setting** [page 54]

#### ⑭ **Remaining images** [page 50]



For still images

#### ⑮ **Exposure correction setting** [page 81]

- In the video clip shooting mode, the ISO sensitivity setting is shown.

#### ⑯ **Monochrome shooting setting** [page 77]

- In the video clip shooting mode, the flicker-reduction setting is shown.

#### ⑰ **Light measuring method setting** [page 91]

- In the video clip shooting mode, the optical zoom setting is shown.

#### ⑱ **Digital zoom setting** [page 89]

#### ⑲ **Voice memo setting** [page 78]

- In the sequential shot shooting mode, the sequential shot method setting is shown. In the video clip shooting mode, the digital zoom setting is shown.

#### ⑳ **Self-timer setting** [page 75]

#### ㉑ **Aperture setting** [page 82]

#### ㉒ **Remaining battery charge indication** [page 48]

#### ㉓ **Shutter speed setting** [page 82]

# INFORMATION DISPLAY

- To exit the Information Screen, press the MODE button again.

## Displaying the shooting settings during playback

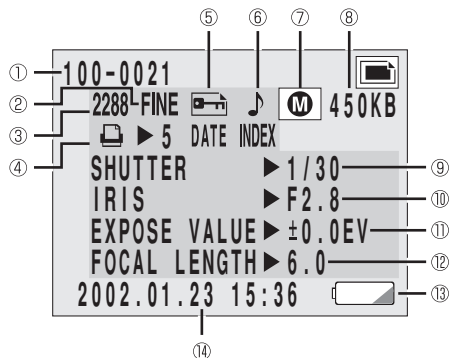
This screen displays the shooting settings during playback.

The Information Screen appears when the MODE button is pressed for at least 2 seconds during playback (see pages 98 to 104). To exit the Information Screen, press the MODE button again.

### Information Screen in the still image, sequential image, and video clip playback modes

#### For still images

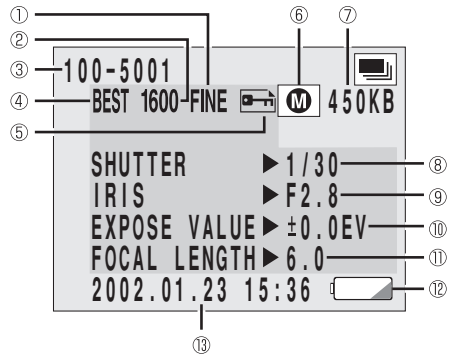
- ① Location of data (folder number) and file name [page 53]
- ② Compression rate [page 57]
- ③ Resolution [page 55]
- ④ Print setting [page 120]
- ⑤ Protect setting [page 115]
- ⑥ Voice memo indicator [page 98]
- ⑦ Execute data save [page 95]
- ⑧ File size
- ⑨ Shutter speed
- ⑩ Aperture
- ⑪ Exposure correction
- ⑫ Focus distance
- ⑬ Remaining battery charge [page 48]
- ⑭ Date and time of image [page 46]





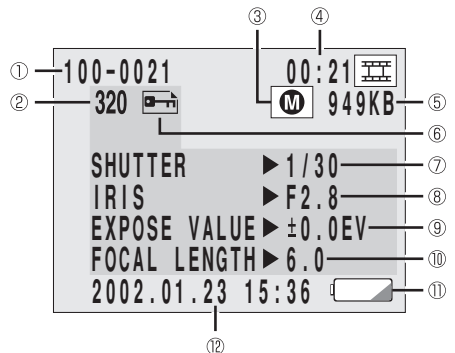
## For sequential shots

- ① **Compression rate** [page 57]
- ② **Resolution** [page 55]
- ③ **Location of data (folder number) and file name** [page 53]
- ④ **Sequential shot method** [page 63]
- ⑤ **Protect setting** [page 115]
- ⑥ **Execute data save** [page 94]
- ⑦ **File size**
- ⑧ **Shutter speed**
- ⑨ **Aperture**
- ⑩ **Exposure correction**
- ⑪ **Focus distance**
- ⑫ **Remaining battery charge** [page 48]
- ⑬ **Date and time of image** [page 46]



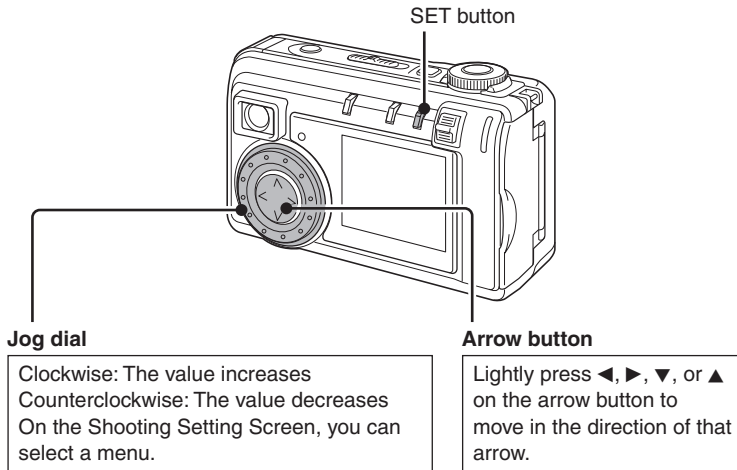
## For video clips

- ① **Location of data (folder number) and file name** [page 53]
- ② **Resolution** [page 55]
- ③ **Execute data save** [page 94]
- ④ **Length of recording (min:sec)**
- ⑤ **File size**
- ⑥ **Protect setting** [page 115]
- ⑦ **Shutter speed**
- ⑧ **Aperture**
- ⑨ **Exposure correction**
- ⑩ **Focus distance**
- ⑪ **Remaining battery charge** [page 48]
- ⑫ **Date and time of image** [page 46]



# SETTING SCREEN BASIC OPERATIONS

At the setting screens, use the jog dial or arrow button and the SET button to perform the desired settings. The selected menu or icon will turn orange in color (or reverse video). To enter or exit the setting screens, see “DISPLAYING THE SETTING SCREEN AND OPTION SETTING SCREEN” on page 31.



## Basic button operations

### To select a menu:

- Press [▲] to select the item above.
- Press [▼] to select the item below.
- From the Shooting Setting Screens, turn the jog dial.

### To select a setting:

- Press [▶] to select the next icon (item) to the right.
- Press [◀] to select the next icon (item) to the left.
- Press [▲] to select the next icon (item) above.
- Press [▼] to select the next icon (item) below.

### To finalize the selected setting:

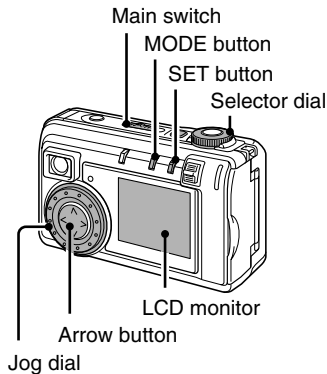
- Press the SET button to set the selected menu item.
- In the Shooting Setting Screens, the selected icon moves to the far left.
- In the Playback Setting Screens, the screen corresponding to the selected icon appears.

### To cancel the operation

- Press the MODE button. Or select the **EXIT** icon or “EXIT” and press the SET button.

# SETTING THE DATE AND TIME

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

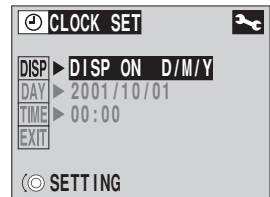
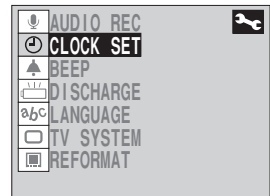


Example: To set the clock to August 28, 2002 at 7:30 p.m.

## 1 Display the Shooting Option Setting Screen (or Playback Option Setting Screen) (see page 31).

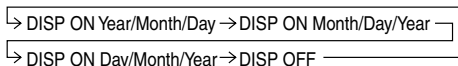
## 2 Press [▼] on the arrow button to select "CLOCK SET", and then press the SET button.

- The CLOCK SET menu appears.
- The current date and time settings appear.
- Follow the procedures below to set whether to display the date during playback, to set the date and time, and to set the display format for the date.
- To return to the Option Setting Screen, press the MODE button, or select [EXIT] and press the SET button.



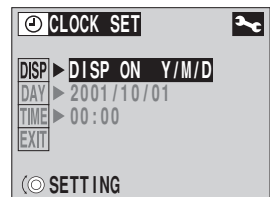
## 3 Set the order of the date display during playback.

- When the jog dial is turned, the date display order changes as follows:



Turn counterclockwise to change in the reverse order.

- If "DISP OFF" is selected, the date the image was captured is not shown during playback.



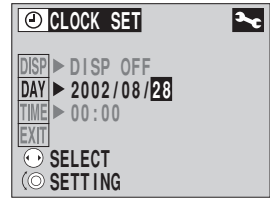
---

# SETTING THE DATE AND TIME

---

## 4 Set the date.

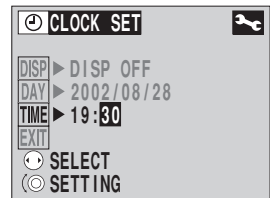
- ① Press [▼] to select the **DAY** icon.
- ② Turn the jog dial and press the arrow button to set the date to "2002/8/28".
  - Year setting → [▶] → Month setting → [▶] → Day setting.
  - Turn clockwise to increase the number.
  - Turn counterclockwise to decrease the number.



---

## 5 Set the clock.

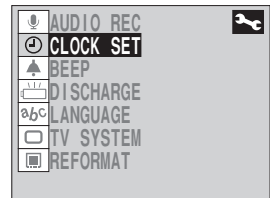
- ① Press [▼] to select the **TIME** icon.
- ② Turn the jog dial and press the arrow button to set the time to "19:30".
  - Hour setting → [▶] → Minute setting.
  - A 24-hour clock is used for the time display.



---

## 6 Select the **EXIT** icon, and press the SET button.

- The date and time setting is completed, and you return to the Option Setting screen.



- 
- Turn off the digital camera (see page 30).

---

### NOTE

- If the date and time are not set, October 1, 2001 midnight is recorded as the date and time. Consequently, "2001/10/01 00:00" appears during playback.
- Under normal conditions, while the batteries are replaced, an internal battery will maintain the date and time settings. However, there is a small chance the settings may be lost. (The backup will last for approx. 30 minutes.) It is recommended to check that the date and time settings are still correct after replacing the batteries and before shooting or recording of any type (follow steps 1 and 2).



### To correct the date and time settings.

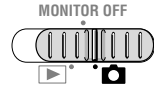
- After steps 1 and 2, press [▼] to select the line of the setting that you want to change and press [▶] to select that setting. Then use the jog dial to set the new setting.

# REMAINING BATTERY CHARGE INDICATION



When using nickel metal hydride batteries, the remaining battery charge can be checked on the LCD monitor. Make sure to check this indicator before capturing an image. For an indication of the possible length of time for battery operation, see "Battery Operation" on page 135.







## 1 Set the main switch to , and press the power button.


- Set the selector dial to anything other than  or .



## 2 Press the MODE button for at least 2 seconds.

- The Information Screen will appear and the batteries remaining charge indicator appears in the lower right corner of the LCD monitor. (If any data is present, you can also check the remaining battery charge at the Information Screen of the playback mode. See pages 42 to 44.)
-  and  (flashing) will appear even when the Information Screen is not displayed.

Indicator		Remaining charge
Information Screen	When Information Screen is not displayed	
	No indication	Approx. full.
	No indication	Battery power is low.
		It will soon be impossible to capture or playback images.
 Flashing	 Flashing	If this icon flashes when the shutter button is pressed, images cannot be captured. If it flashes while editing a video clip, the editing cannot be performed. Recharge the batteries.

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

- To cancel the display, press the MODE button.

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# REMAINING BATTERY CHARGE INDICATION

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## NOTE

- The remaining battery charge indicator will give an accurate indication of the remaining charge only when the supplied AA nickel metal hydride batteries are used. The indication will not be accurate if you are using Ni-Cd batteries.
- For optimum performance, use only Sanyo nickel metal hydride batteries. If you are using Ni-Cd batteries, the possible operation time will be much shorter.
- Depending on the usage of the digital camera (such as the number of times the flash is used, the use of the LCD monitor, etc.) or the environmental conditions (temperature, etc.) the number of images that can be saved on a set of fully charged batteries will vary greatly.

## HELP

### **If the LCD monitor goes off suddenly**



- When capturing images using the LCD monitor and the battery charge is about half full, the LCD monitor may turn off momentarily. This is to allow a quick recharge of the flash. When the flash has been recharged, the LCD monitor will come back on automatically.

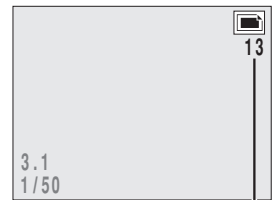
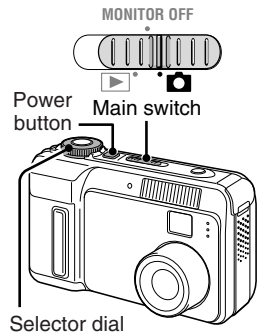
# CHECKING THE REMAINING NUMBER OF IMAGES, VIDEO RECORDING TIME, AND AUDIO RECORDING TIME

The images, video clips, and audio recordings you take are stored on the card installed in the digital camera. If a card is not loaded into the digital camera or if the card is full, capturing or playing back images will not be possible. Make sure to check the status of the card in the digital camera before capturing images. For an indication of how many images can be captured and how much recording time is available for your card, see “Possible No. of Images/Possible Shooting Time/Possible Recording Time” on page 136.

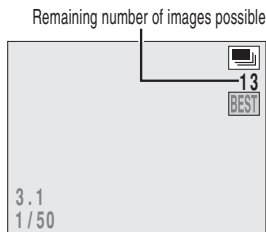
## Checking the remaining number of images and video recording time

### 1 Set the main switch to , and press the power button.

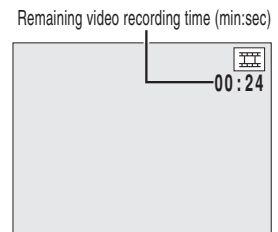
- Set the selector dial to anything other than  or .
- The remaining number of images appears in the upper right of the LCD monitor (for the still image and sequential shot shooting modes).
- The remaining video recording time appears in the upper right of the LCD monitor (for the video clip shooting mode).
- The remaining number of images and video recording time will differ depending on the resolution and compression settings.
- When the remaining number of images or the remaining time of video clips that can be taken is “0”, you cannot capture any more images. To capture more images, either install a new card, or save the current images (see page 52) and then erase them (see page 116) from the card.
- When the remaining number of images or the remaining time of video clips that can be taken is “0”, it may be possible to capture a few more images by changing the shooting mode, setting a lower resolution by changing the shooting mode, setting a lower resolution setting (see page 55), or selecting a different compression setting (see page 57).



Remaining number of images possible  
(Still Image Shooting Screen)



(Sequential Shot Shooting Screen)



Depending on the memory capacity of the card, the remaining time is shown as “hr:min:sec”.  
(Video Clip Shooting Screen)

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# CHECKING THE REMAINING NUMBER OF IMAGES, VIDEO RECORDING TIME, AND AUDIO RECORDING TIME

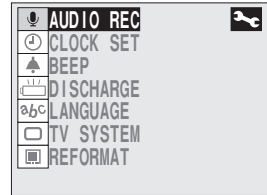
---

## Checking the remaining audio recording time

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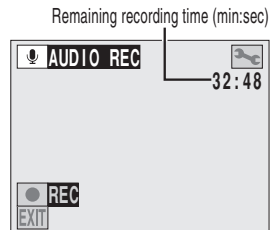
**1** Display the Shooting Option Setting Screen (see page 31).

- Set the selector dial to .
- "AUDIO REC" is highlighted.



**2** Press the SET button.

- The Audio Recording Screen appears, and the remaining recording time appears in the upper right of the LCD monitor.



Depending on the memory capacity of the card, the remaining time is shown as "hr:min:sec".



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# CONCERNING IMAGE AND AUDIO DATA STORAGE

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## Saving the images captured with your digital camera

### ● Saving the images to a computer

**Requires:** Included CD-ROM (Sanyo Software Pack) [page 129], commercially available personal computer.

**Advantages:** The images are saved as data on the computer hard disk. They can then be processed or edited, sent over a network or the Internet, etc.

### ● Printing on paper

The images captured with your digital camera can be printed using a commercially available printer. This unit supports PRINT Image Matching feature. When shooting, print commands are added to the picture data, and the printer prints the pictures in accordance with these commands. If used in combination with a printer supporting PRINT Image Matching feature, it is possible to print with optimal colors, as purported by the digital camera when taking the pictures. For more information regarding the PRINT Image Matching feature and printing method etc., please read the instruction manuals that were included with your printer and personal computer.

- PRINT Image Matching is a term for the print command that is embedded in the header file of the image created by digital camera. It contains color setting and image parameter information.

- SEIKO EPSON Corporation holds the copyright for PRINT Image Matching Version 1.0.

**Requires:** Commercially available printer, and commercially available personal computer depending on the situation.

**Caution:** When printing a single shot from a sequential shot or from a video clip, you may not be able to print the shot if it has not first been copied as still image data (see page 118).

### ● Print out in high quality with a digital print service

For high-quality print outs of your captured images, you can take your image data to digital print service centers for digital cameras (see page 120). Network print services are also available for access if necessary.

**Advantages:** You can receive high-quality printouts of the images you capture.

**Caution:** To print out a single shot from a sequential shot or a single picture from a video clip, you must first copy the data as a still image (see page 118).

If the image resolution is low, depending on the print size, the output image may not be high quality.

## Data file formats

The format of the files saved on the card and the method in which the file names are determined are explained below.

### Still image data

**Data format:** JPEG or TIFF format (Design rule for Camera File system compliant)

**File name structure:** SANY0000.jpg or SANY0000.tif  
The "0000" represents a sequential number assigned automatically.

### Voice memo data

**Data format:** WAVE format

**File name structure:** SANY0000.wav  
The "0000" represents the same sequential number as the image file to which the sound memo corresponds.

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# CONCERNING IMAGE AND AUDIO DATA STORAGE

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## Sequential shots data

Data format: JPEG format

File name structure: SEQTxxxy.jpg

The "xx" represents the folder number where the sequential shots are stored. The "yy" represents a sequential number assigned automatically.

## Video clip data

Data format: QuickTime Movie format

File name structure: VCLPoooo.mov

The "oooo" represents a sequential number assigned automatically.

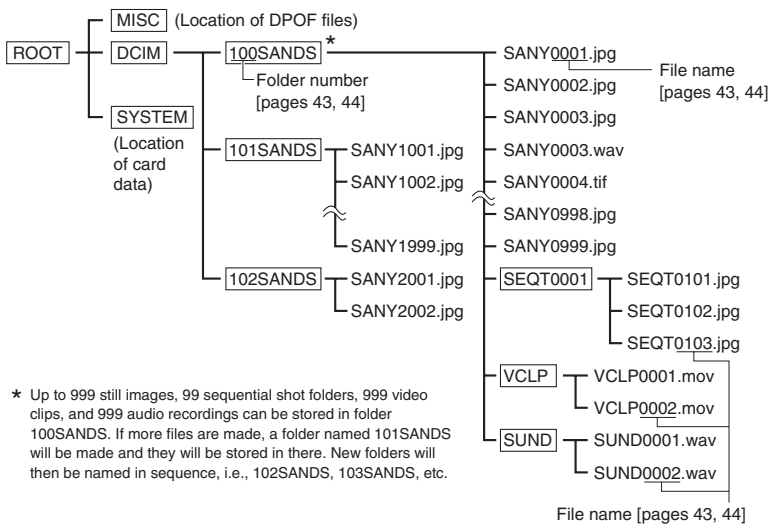
## Audio recording data

Data format: WAVE format

File name structure: SUNDo000.wav

The "oooo" represents a sequential number assigned automatically.

## Configuration of directories for the stored data



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## NOTE

### Do not modify the folders and file names in the card using your computer

- If the folders, file names, or their configuration is modified using a personal computer, it will be impossible to play back the data using the digital camera, and the digital camera may not operate properly.

### Concerning the video clip data saved by the digital camera

- You can use QuickTime Ver. 3.0 or later from Apple to play back the video clips. QuickTime5 for Windows and Macintosh is supplied with the included CD-ROM (Sanyo Software Pack).

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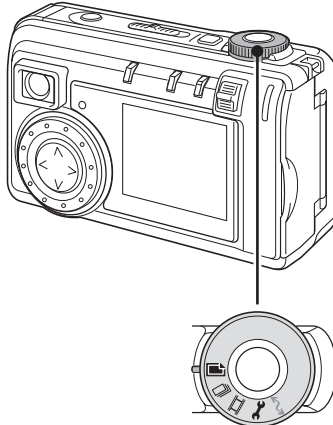
# SETTING THE SHOOTING MODE

---





Before using the digital camera, you must set the desired shooting mode (still image, sequential shot, video clip, or audio recording). The setting is performed with the selector dial.

---

- 1** Turn the selector dial to the desired shooting mode.










Selector dial

-  Still image shooting mode (see pages 60 and 61)
  -  Sequential shot shooting mode (see page 63)
  -  Video clip shooting mode (see page 69)
  -  Option (for audio recording) (see page 79)
- The shooting mode changes to that set by the selector dial.


# SETTING THE RESOLUTION


If the resolution is increased, the image quality will improve, but the remaining number of images that can be taken will decrease. In the video clip shooting mode, if the resolution is decreased, the length of time possible for the video clip will increase. It is therefore important to select the resolution according to the desired image quality and purpose.


		Resolution (units: pixels) [Icon displayed on LCD monitor]						
		3,264 x 2,448 	2,880 x 2,160 	2,288 x 1,712 	1,600 x 1,200 	640 x 480 	320 x 240 	160 x 120 
Shooting mode	Still image	Yes	Yes	Yes	Yes	Yes	Not available	Not available
	Sequential shot	Not available	Not available	Yes	Yes	Yes	Not available	Not available
	Video clip	Not available	Not available	Not available	Not available	Not available	Yes	Yes


## 1 Display the Shooting Setting Screen (see page 31).


## 2 Select the desired resolution from the resolution menu.


: For 3,264 x 2,448 resolution\*


: For 2,880 x 2,160 resolution\*

: For 2,288 x 1,712 resolution

: For 1,600 x 1,200 resolution

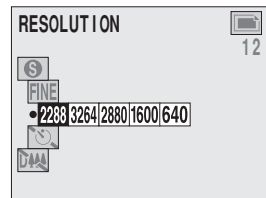
: For 640 x 480 resolution



: For 320 x 240 resolution

: For 160 x 120 resolution

- The selected icon turns orange in color.

- Some resolutions cannot be selected depending on the shooting mode that is set (refer to the table above).



\* At  and  resolutions, the camera processes the image internally to produce a 3,264 x 2,448-pixel or 2,880 x 2,160-pixel image.

## 3 Press the SET button.

- The selected resolution is set.

■ To exit the Shooting Setting Screen, press the MODE button.

---

## NOTE

- When the resolution menu is selected in the Video Clip Shooting Screen, the remaining video recording time appears (see page 37).

### About the resolution and compression settings (see page 57)















- The image captured by a digital camera consists of a collection of small dots. The resolution refers to the number of these dots, and the greater the number, the higher the image quality. As the resolution increases, the size of the resulting data also increases, and the number of images that can be captured decreases. To compensate for this, this digital camera is able to compress the data. This digital camera uses JPEG compression. If JPEG compression is used, when the image is returned to its original size, an extremely small portion of it is lost. The higher the compression ratio, the more of the original image is lost.

Therefore, this digital camera also allows you to store image data without any compression to ensure that none of the original image is lost. This is the **TIFF** mode. Since the image data is large when the **TIFF** mode is used, the digital camera requires approximately 30 seconds to store the data after the shutter release button is pressed, and approximately 10 seconds to display the image in the playback mode (when using the supplied 16MB CompactFlash card).

- When capturing images at **3264** **2880** resolution, it takes 5 seconds after the shutter release button is pressed before the data is recorded.

# SETTING THE COMPRESSION RATIO

Use the procedure given below to set the compression ratio. Even if the same resolution is used, you can change the compression setting to decrease the image data size so that you can capture more images, or increase the image data size for no loss in image quality.

		Compression ratio	Resolution (units: pixels) [Icon displayed on LCD monitor]						
			3,264 x 2,448 	2,880 x 2,160 	2,288 x 1,712 	1,600 x 1,200 	640 x 480 	320 x 240 	160 x 120 
Shooting mode	Still image		Yes	Yes	Yes	Yes	Yes	Not available	Not available
			Yes	Yes	Yes	Yes	Yes	Not available	Not available
			Yes	Yes	Yes	Yes	Yes	Not available	Not available
			Not available	Not available	Yes	Not available	Not available	Not available	Not available
	Sequential shot		Not available	Not available	Yes	Yes	Yes	Not available	Not available
			Not available	Not available	Yes	Yes	Yes	Not available	Not available
		Not available	Not available	Yes	Yes	Yes	Not available	Not available	

---

# 1 Display the Shooting Setting Screen (see page 31).

---

## 2 Select the desired compression ratio from the compression menu.

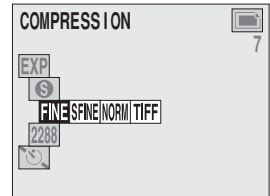
**[FINE]**: Stores the data with an extremely low compression (super high quality).

**[FINE]**: Stores the data with a low compression (high quality).

**[NORM]**: Stores the data with moderate compression (normal quality).

**[TIFF]**: Stores the data in TIFF format (no compression for highest quality).

- The selected icon turns orange in color.
- Some compression ratios cannot be selected depending on the shooting mode that is set (see page 57).



---

## 3 Press the SET button.

- The selected compression ratio is set.

- 
- To exit the Shooting Setting Screen, press the MODE button.

---

# CAPTURING IMAGES

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## NOTE




- When a picture is taken with the camera held vertically, the image played back on the LCD monitor screen or on a TV set will be shown on the side. However, images captured in the still image shooting mode or sequential shot shooting mode can be rotated when they are played back (see pages 98 and 102). In addition, if images are played back with the auto rotate playback function set (see page 119), even pictures taken with the camera held vertically will be played back automatically rotated. Note that video clips cannot be rotated when they are played back.

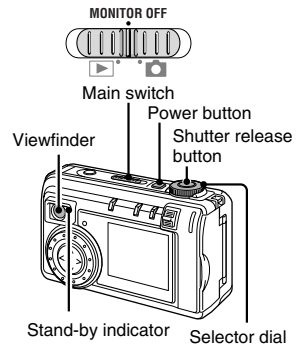


# Capturing images using the viewfinder

Compose the desired image by looking into the viewfinder. Compared to capturing images using the LCD monitor, this method saves the battery power.

## 1 Set the main switch to “MONITOR OFF”. Press the power button to turn on the camera.

- Set the selector dial to anything other than  or .
- When the stand-by indicator lights in green, you are ready to capture the image.
- No image appears on the LCD monitor.
- Set the focus to  when the photographic subject is close to the camera (10 to 50 cm) (see page 72).



## 2 Point the camera lens at the subject.

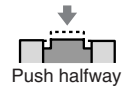
## 3 Look straight into the viewfinder and center the subject in the autofocus area.



Autofocus mark

## 4 Slowly press and hold the shutter release button halfway (focus-lock).

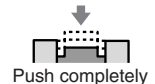
- The autofocus function locks the focus on the subject.
- If “ALL” or “SHUTTER” is selected as the operational sound setting (see page 125), then the digital camera will beep twice when the subject is in focus.



Push halfway

## 5 Finish pressing the shutter release button all the way.

- The image is captured.
- If “ALL” or “SHUTTER” is selected as the operational sound setting (see page 125), then the digital camera will beep once when the image is captured.
- The stand-by indicator will flash red while the image is being written to the memory. Another image can only be captured when the stand-by indicator lights green again.



Push completely

### NOTE

- Although nickel metal hydride batteries are recommended, you may use alkaline batteries and capture images using the viewfinder.
- If an operational sound setting is set, then two quick beeps are heard when the shutter release button is pressed fast. (No beep is heard when the shutter closes.)

---

# CAPTURING IMAGES




---

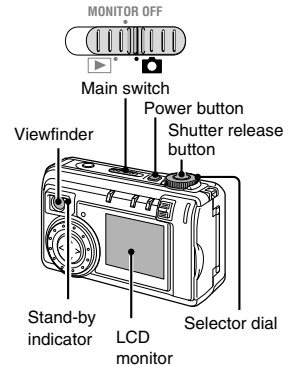
## Capturing images using the LCD monitor

This method allows you to view the exact composition of the image on the LCD monitor before you capture it.

---

### 1 Set the main switch to . Press the power button to turn on the camera.

- Set the selector dial to anything other than  or .
- When the stand-by indicator lights in green, you are ready to capture the image.
- An image appears on the LCD monitor.
- Set the focus to  when the photographic subject is close to the camera (10 to 50 cm) (see page 72).




---

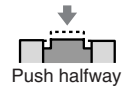
### 2 Point the camera lens to the subject.

- Compose the desired image by looking at the LCD monitor.

---

### 3 Slowly press and hold the shutter release button halfway (focus-lock).

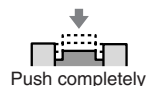
- The autofocus function operates, and the subject in the center of the LCD monitor screen is focussed. The focus icon  appears in the upper left of the LCD monitor.
- If the focus does not lock as desired, release the shutter release button and press it again halfway to achieve the desired results.
- If "ALL" or "SHUTTER" is selected as the operational sound setting (see page 125), then the digital camera will beep twice when the subject is in focus.



---


### 4 Finish pressing the shutter release button all the way.

- The image is captured.
- If "ALL" or "SHUTTER" is selected as the operational sound setting (see page 125), then the digital camera will beep once when the image is captured.
- In the still image shooting mode, you can view the image captured on the LCD monitor by holding the shutter release button down.
- The stand-by indicator will flash red while the image is being written to the memory. Another image can only be captured when the stand-by indicator lights green again.



---

## NOTE

- Compared to taking pictures using the viewfinder, this method consumes the battery power more quickly.
- After taking the picture, you can immediately view the captured image by setting the main switch to .
- When the shutter release button is pressed halfway, the image in the LCD monitor may waver vertically. This is the result of internal image processing and is not a malfunction. This wavering is not recorded and will not affect your images in any way.

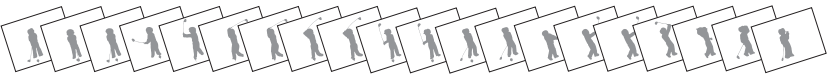

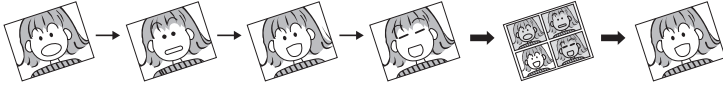
### **To lock the focus on an object that is not in the center**

- In step **3**, point your digital camera at an object of the desired distance, lock the focus, and then compose the image (see page 71).

# SEQUENTIAL SHOT

This digital camera allows three types of sequential shots: standard, AE shift sequential shot, and best select shots.

- **Sequential shot methods**

<p>Standard sequential shot <b>[STD]</b>: A normal sequential shot. (For the number of images captured, see "Maximum number of sequential shots" below.)</p> 	
<p>AE shift sequential shot <b>[AE]</b>: Seven sequential images are captured while the exposure (or shutter speed) is changed automatically.</p> <p>Dark image (under exposed) → (Standard exposure) → Bright image (over exposed)</p> 	
<p>Best select shot <b>[BEST]</b>: Four sequential images are captured for you to select which one to save.</p>  <p>Select your favorite one to save. The other three are deleted.</p>	

- **Maximum number of sequential shots**

The maximum possible number of sequential shots depends on the resolution and compression ratio settings, which are shown in the table below.

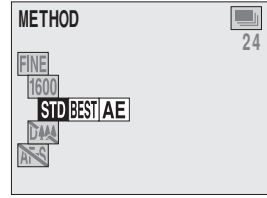
Resolution	Compression ratio		
	<b>[SFINE]</b>	<b>[FINE]</b>	<b>[NORM]</b>
<b>[2288]</b>	8 images	13 images	20 images
<b>[1600]</b>	18 images	27 images	40 images
<b>[640]</b>	99 images	99 images	99 images

# Standard sequential shot **STD**


**1** Display the Sequential Shot Shooting Setting Screen (see page 31).


**2** Select standard sequential shot **STD** from the sequential shot method menu, and press the **SET** button.


- This sets the standard sequential shot method.

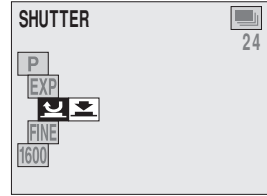


**3** Select the desired shutter operation from the shutter operation menu and press the **SET** button.

: Images are captured only while the shutter release button is pressed.

: Capturing of the images starts when the shutter release button is pressed and stops when it is pressed again.

- This completes the shutter operation setting.
- The sequential shot method and shutter operation settings are retained even if the main switch is set to "MONITOR OFF" or , or the digital camera is turned off.
- You can set the main switch to "MONITOR OFF" and take pictures using the viewfinder.
- To exit the Shooting Setting Screen, press the **MODE** button.






---

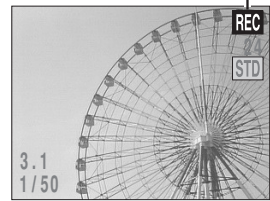
# SEQUENTIAL SHOT

---

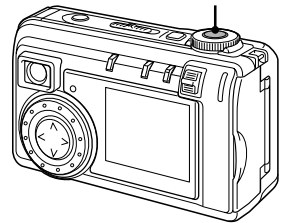
## 4 Press the shutter release button to capture the sequential shot.

- If  is selected for the shutter operation, sequential shot images are captured while the shutter release button is pressed. If the shutter release button is released before the maximum number of images is captured, the sequential shot will stop there.
- If  is selected for the shutter operation, the sequential shot begins when the shutter release button is pressed and continues until the shutter release button is pressed again or the maximum number of images is captured.
- During shooting using the LCD monitor, **REC** will appear in the LCD monitor while images are being captured.
- After taking the picture, you can view the first captured image by setting the main switch to  (see page 102).

REC (recording) indicator



Shutter release button



- 
- When you have finished capturing images, turn off the digital camera.

---

## AE shift sequential (auto bracket) shot **AE**

Seven sequential images are captured while the exposure automatically changes over a range, from underexposed to overexposed.

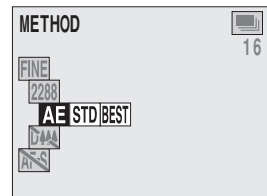
---

### 1 Set the shooting mode to the sequential shot shooting mode (see page 31).

---

### 2 Select AE shift sequential shot **AE** from the sequential shot method menu and press the SET button.

- This sets the AE shift sequential shot method.



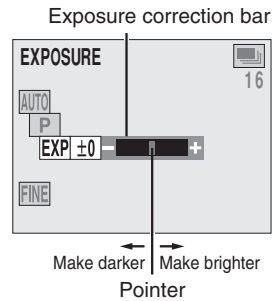
---

#### NOTE

- When the exposure control method [page 82] is set to manual **M**, the AE shift sequential shot method cannot be used. To use the AE shift sequential shot method, set the exposure control method to a setting other than manual **M**.

### 3 Select the exposure correction menu, and set the basic exposure.

- Press [◀] or [▶] on the arrow button to set the base exposure setting. For how to set the exposure, see “Exposure correction” on page 81.
- Based on the set exposure setting, 7 images are captured over a range of exposures, from underexposed to overexposed. The base exposure can be set anywhere from  $-0.9$  EV to  $+0.9$  EV.
- For AE shift sequential shots, the shutter operation setting is not necessary. (The shutter operation menu is not available.)
- You can set the main switch to “MONITOR OFF” and take pictures using the viewfinder.
- To exit the Shooting Setting Screen, press the MODE button.



### 4 Press the shutter release button to capture the sequential shot.

- For AE shift sequential shots, the digital camera will capture all seven images (it is not necessary to hold down the shutter release button).
- During shooting using the LCD monitor, **REC** will appear in the LCD monitor while images are being captured.
- After taking the picture, you can view the first captured image by setting the main switch to [▶] (see page 102).



- When you have finished capturing images, turn off the digital camera.

#### HINT

##### Shortcut for setting the exposure correction

- If the Shooting Setting Screen or Information Screen is not displayed, you can press the arrow button to quickly display the icon for setting the exposure correction (see page 81).

#### NOTE

- In the sequential shot mode, the flash and self-timer cannot be used.
- With AE shift sequential shots, the exposure may not change depending on the ambient lighting.

---

# SEQUENTIAL SHOT

---

## Best select shot **BEST**

The best select shot captures four sequential images so that you can choose which one to save.

---

**1** Set the shooting mode to the sequential shot shooting mode (see page 31).

---

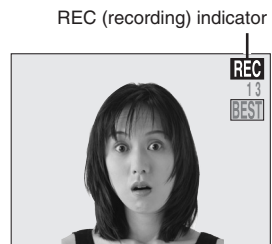
**2** Select best select shot **BEST** from the sequential shot method menu, and press the SET button.

- This sets the best select shot method.
- For the best select shot, you do not need to set the shutter operation. (The shutter operation menu will not appear.)
- If the main switch is set to “MONITOR OFF”, you can take pictures using the viewfinder. However, if the main switch is set to “MONITOR OFF”, the 4-image display (step 4) will not appear and the four images will automatically be saved as a sequential shot in the sequential shot folder.
- To exit the Shooting Setting Screen, press the MODE button.



**3** Press the shutter release button to capture the sequential shot.

- For the best select shot, it is not necessary to hold down the shutter release button.
- During shooting using the LCD monitor, **REC** will appear in the LCD monitor while images are being captured.
- After a few moments, the 4-image display appears showing the images captured.





## 4 Select the image that you want to save.

- ① Press the arrow button to move the orange frame to the image you want to save.
- ② Press the SET button.
  - The Best Shot Confirmation Screen appears with the selected image displayed full screen. You can press [◀] or [▶] to select a different image.
  - To return to the 4-image display, select “EXIT” and press the SET button.

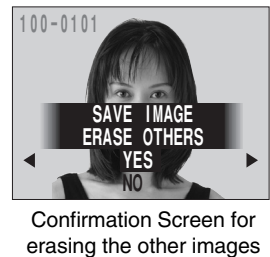
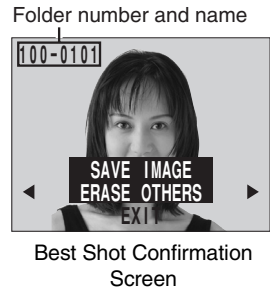
### To save all four images

- At the 4-image display, press the MODE button. All four images are saved as a sequential shot in the sequential shot folder.



## 5 Save the selected image and erase the others.

- ① Make your final check of the image and select “SAVE IMAGE ERASE OTHERS”.
- ② Press the SET button.
  - A screen confirming whether or not you want to save the selected image and erase the others appears.
  - To return to the Best Shot Confirmation Screen, select “NO” and press the SET button.
- ③ Select “YES” and press the SET button.
  - “PROCESSING” appears for a few moments and then you return to the sequential shot shooting mode.
  - The selected image is saved in the still image folder and the other three images are deleted (nothing is saved in the sequential shot folder).



- When you have finished capturing images, turn off the digital camera.

## HELP

### If power is cut off during the sequential shot

- If the digital camera is left alone for approximately one minute at step 4 (when using batteries), the power save function activates (see page 30), the power is turned off, and all four images are saved as a sequential shot in the sequential shot folder. If this occurs, copy the desired image from the sequential shot folder (see page 118) and then erase the sequential shot.

---

# VIDEO CLIP

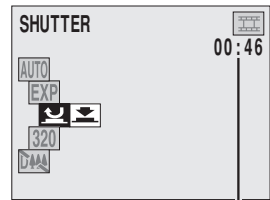
---

This digital camera allows you to record video clips, which are moving images with audio.

---

## 1 Display the Video Clip Shooting Setting Screen (see page 31).


- The remaining memory on the card is calculated, and the remaining recording time available is displayed.
- Depending on the memory capacity of the card, the remaining time is shown as “hr:min:sec”.






Remaining video recording time  
(min:sec)

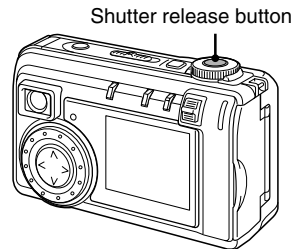
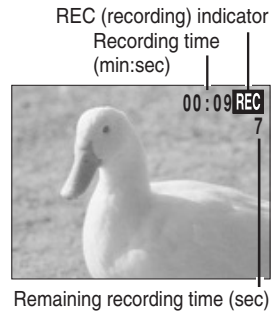
---

## 2 Select the desired shutter operation from the shutter operation menu, and press the SET button.

- ☑: Recording of the video clip starts when the shutter release button is pressed and stops when it is pressed again.
- ☑: Recording of the video clip occurs only while the shutter release button is pressed.
- This completes the shutter operation setting.
- The shutter operation setting is retained even if the main switch is set to “MONITOR OFF” or , or the digital camera is turned off.
- You can set the main switch to “MONITOR OFF” and record a video clip using the viewfinder.
- To exit the Shooting Setting Screen, press the MODE button.

### 3 Press the shutter release button to record the video clip.

- If  is selected for the shutter operation, recording of the video clip continues while the shutter release button is pressed. If the shutter release button is released before the maximum recording time is reached, the video clip will stop there.
- If  is selected for the shutter operation, the video clip begins when the shutter release button is pressed and continues until the shutter release button is pressed again or the maximum recording time is reached.
- If using the LCD monitor, the recording indicator **REC** appears during recording.
- When the remaining recording time available for the currently recording clip becomes less than about 30 seconds, the remaining recording time available appears on the display.
- After recording, you can view the first captured image by setting the main switch to . See “PLAYING BACK VIDEO CLIPS” on page 103.



- When you have finished capturing images, turn off the digital camera.

#### HINT

##### Short cut for setting the exposure correction

- If the Shooting Setting Screen or Information Screen is not displayed, you can press the arrow button to quickly display the icons for setting the exposure correction (see page 81).

#### NOTE

- In the video clip mode, the flash and self-timer cannot be used.
- The data for a video clip is very large. Therefore, be aware that if the video clip is downloaded to a computer to be played back, the computer may not be able to play back the video fast enough and the video may appear jerky. (The video will always be displayed properly on the LCD monitor or a television.)

---

# USING THE AUTOFOCUS

---

The autofocus will work in almost all occasions; however, there are certain conditions that may cause the autofocus function not to work properly.

## ■ Conditions that may cause incorrect focus

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

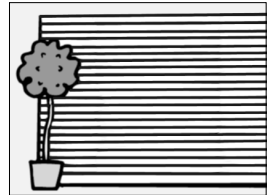
- Subjects with low contrast or very bright subjects at the center of the image

Use the focus-lock function (see pages 60 and 61) to lock the focus on a subject with contrast at the same distance as the desired subject.



- Subjects without vertical lines

Use the focus-lock function to lock the focus on the subject while holding the digital camera vertically.



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

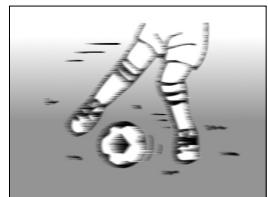
- When both near and far objects are present

Use the focus-lock function to lock the focus on a subject at the same distance as the desired subject.



- Fast-moving subjects

Use the focus-lock function to lock the focus on a subject at the same distance as the desired subject.



---

## HINT

### About sequential shots

- During sequential shots, the autofocus function will work when the shutter release button is pressed and lock the focus.

# USING THE VARIOUS SHOOTING FUNCTIONS

## Macro photography


Use the macro photography function when capturing images at close range (10 to 50 cm).

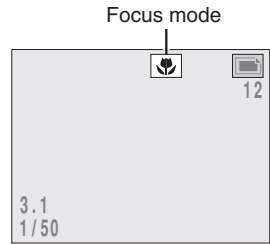
### 1 Press the MACRO button.

- The current focus mode appears on the LCD monitor screen.

No icon: For photography at normal focus.

: For photography at macro focus.

: For photography at distant focus (7 meters or more).  
Select this setting when you know the distance to your subject beforehand or when photographing a subject that is difficult to get into focus.



Ex.: Still Image Shooting Mode Screen

### 2 Press the MACRO button to display the macro icon .

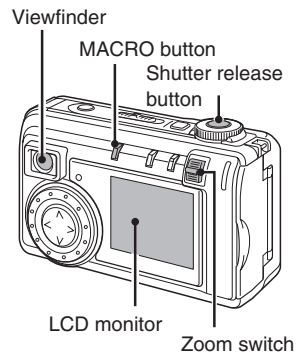
- Each time the MACRO button is pressed, the focus mode changes as follows:

 →  (macro photography) →  (distant subject)

- For photography using the viewfinder, press the MACRO button. The LCD monitor will turn on briefly, and the current focus mode is shown. Press the MACRO button within 5 seconds to select the focus mode.
- This completes the macro photography setting.

### 3 Compose the image.

- You can set the main switch to "MONITOR OFF" and take pictures using the viewfinder. However, it is recommended to compose the image while viewing it on the LCD monitor. Due to the unavoidable misalignment between the viewfinder and camera lens, as the digital camera gets closer and closer to the subject, the image that is actually captured is seen lower and lower in the viewfinder.





### 4 Press the shutter release button.

- The image is captured in the macro photography mode.

- When you have finished capturing images, turn off the digital camera.

#### HINT

- The shortest distance for taking macro photography is 10cm if the zoom switch is pressed to  (Wide), and 25cm if it is pressed to  (Tele).

---

# USING THE VARIOUS SHOOTING FUNCTIONS

---

## Using the flash

The flash is used not only for taking pictures where there is insufficient light, but also when the subject is in shade or in backlight conditions. Your camera has four modes of operation (automatic flash mode, forced flash mode, flash off mode, and red-eye reduction mode).

The flash can be used only in the still image shooting mode. The effective flash range is:

Normal focus: 0.5 to 3.9 meters (widest lens setting) and 0.5 to 2.3 meters (telephoto lens setting)

Macro focus: 0.15 to 0.5 meters (wide lens setting) and 0.25 to 0.5 meters (telephoto lens setting)

---




## Shooting using the viewfinder

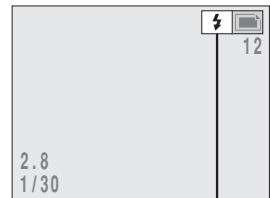
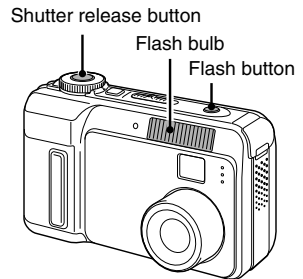
---

### 1 Press the flash button.

- The current flash mode is shown on the LCD monitor.
- To change the flash mode, proceed to step 2 within five seconds. To keep the same flash mode, proceed to step 3.

No icon: The digital camera will detect the subject brightness and use the flash only when required. In a backlight situation, if only the center of the image is very dark, the flash will operate to compensate.

- : The flash will operate with every image captured regardless of the conditions. Use this setting under backlight conditions, when the subject is in the shade, under fluorescent lighting conditions, etc.
- : The flash will not operate even in dark situations. Use this setting when capturing an image in a location where flashes are forbidden, or when shooting a night landscape scene.
- : The digital camera will detect the subject brightness and use the flash only when required. At this time the flash will operate in a way that reduces the red reflection ("red-eye") in the subject's eyes.



Flash mode

---

### 2 Press the flash button to set the flash mode.

- For details, refer to step 1 on next page.

---

### 3 Press the shutter release button.




- The image is captured in the desired flash mode.


## Shooting using the LCD monitor

---

### 1 Press the flash button to set the flash mode.

- Each time the flash button is pressed, the flash mode changes as follows:

→ No icon (automatic flash) →  (forced flash) →  (flash off) →  (red-eye reduction)

- This completes the flash setting.
- The flash setting is retained even if the main switch is set to "MONITOR OFF" or , or the digital camera is turned off.

---

### 2 Press the shutter release button.


- The image is captured in the desired flash mode.

---

#### ■ When you have finished capturing images, turn off the digital camera.

---

#### HINT

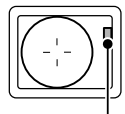
- In the automatic flash mode using the LCD monitor, at the time of the flash, when you depress the shutter release button halfway, the  icon appears in the upper right area of the LCD monitor to let you know.

#### NOTE

- The flash cannot be used in the sequential shot shooting (see page 63), video clip shooting (see page 69), and audio recording (see page 79) modes.

#### HELP

- While the flash is being charged, the stand-by indicator in the viewfinder will flash red. During this time an image cannot be captured, even if the shutter release button is pressed. Wait until the stand-by indicator lights green to capture the next image.



Stand-by indicator (red/green)

---

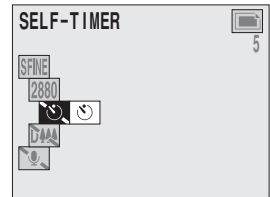
# USING THE VARIOUS SHOOTING FUNCTIONS


---


## Using the self-timer


Use the self-timer function to have the digital camera automatically capture the image for you 10 seconds after the shutter release button is pressed. The self-timer can only be used in the still image shooting mode.


**1** Display the Still Image Shooting Setting Screen (see page 31).




**2** Select the self-timer on icon  from the self-timer menu, and press the SET button.

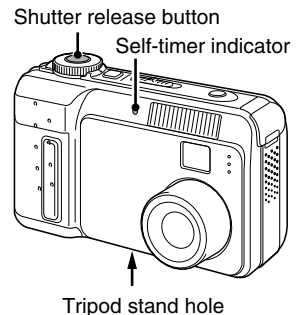
: For turning on the self-timer function.

: For turning off the self-timer function.

- This completes the self-timer setting.
- The self-timer setting returns to off when the main switch is set to “MONITOR OFF” or , or the digital camera is turned off.

**3** Press the shutter release button.

- When the shutter release button is pressed, the self-timer indicator will light for about 7 seconds, flash for about 3 seconds, and then the image is captured. At this time, if the beep sound setting is “ALL” or “SHUTTER”, a warning tone (beep-beep-beep) sounds.
- When using the self-timer function, be sure to use a tripod or place the digital camera on a level, stable surface.
- After the image has been captured, the self-timer function is turned off.
- If the shutter release button is pressed before the image is captured, the self-timer mode is stopped temporarily. Press the shutter release button one more time to restart the self-timer.
- To cancel the self-timer mode, select the self-timer off icon  and press the SET button.



---

■ When you have finished capturing images, turn off the digital camera.



# Using the zoom

There are two zoom functions (optical zoom and digital zoom). When you first zoom in on the subject, it is magnified with the optical zoom. When the limit of the optical zoom has been reached, zooming in further will then magnify the image using the digital zoom. You can set whether or not the digital zoom becomes active when shooting (see page 89).

The digital zoom can be used when the resolution is set to **1600** or less.


## 1 Set the digital zoom to on (see page 89), and point the camera lens at the subject.

- When the digital zoom is set to on, the digital zoom icon will appear on the LCD monitor.




Digital zoom icon

## 2 Press or on the zoom switch to compose the desired image.

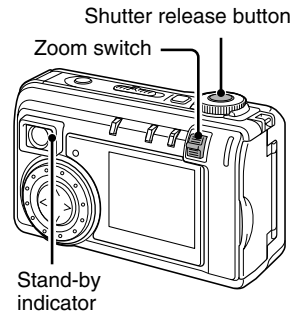
: Zoom in on the subject.

: Zoom out.

- When the optical zoom factor becomes 2.8x, zooming stops temporarily. When the zoom switch is again pressed to , it changes to the digital zoom mode, and zooming continues (if digital zooming is available).
- While the digital zoom is active, the stand-by indicator flashes green and the digital zoom icon becomes yellow.

## 3 Press the shutter release button.

- The image is captured with the subject zoomed up (enlarged).



- When you have finished capturing images, turn off the digital camera.

### NOTE

- When the digital zoom is used, the image quality will deteriorate slightly.
- If the optical zoom is operated during video clip photography, the noise from the zoom movement may be picked up by the microphone. In this case, change the camera setting so that the optical zoom does not move (see page 88).

### The digital zoom cannot be used when capturing images using the viewfinder

- If the main switch is set to "MONITOR OFF" while the digital zoom is active, the digital zoom is canceled and only the optical zoom (2.8x) will function.

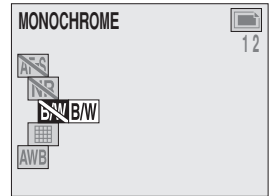
---

# MONOCHROME PHOTOGRAPHY


---


You can take pictures as black-and-white images with this camera.

- 1 Display the Shooting Settings Screen (see page 31).**



- 2 Select the monochrome shooting on icon  from the monochrome shooting menu, and press the SET button.**

: For black-and-white photography.

: For color photography.

- This completes the monochrome photography setting.

- 3 Press the shutter release button.**

- The picture is captured as a black-and-white image.

- **When you have finished capturing images, turn off the digital camera.**

---

## NOTE

- During monochrome shooting, the white balance cannot be set.

---

# ADDING A VOICE MEMO


---


In the still image shooting mode, you can record approximately 4 seconds of sound (called a “voice memo”) when capturing the image. You can also add a voice memo to an image previously recorded (see “ADDING A VOICE MEMO (ADD AUDIO FUNCTION)” on page 109).


---



**1** Display the Still Image Shooting Setting Screen (see page 31).

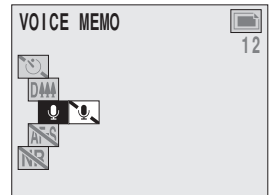
---

**2** Select the add voice memo icon  from the voice memo menu, and press the SET button.

: For adding a voice memo.

: For not adding a voice memo.

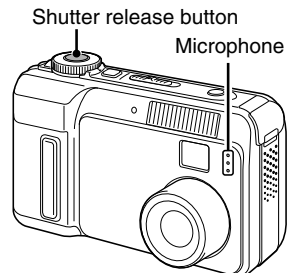
- This completes the voice memo setting.
- The voice memo setting returns to off when the main switch is set to “MONITOR OFF” or , or the digital camera is turned off.
- To exit the Shooting Setting Screen, press the MODE button. When the Shooting Setting Screen disappears, the voice memo icon  appears in the upper right area of the LCD monitor.



---

**3** Press the shutter release button to capture the image and then talk into the microphone.

- About 4 seconds of sound are recorded.
- During the recording, **REC** appears in the upper right area of the LCD monitor.
- When the voice memo is finished, the setting returns to the no voice memo setting.
- The voice memo can be played back in the still image playback mode (see page 98).



---

■ When you have finished capturing images, turn off the digital camera.

---

## NOTE

- When the compression ratio is set to **TIFF**, it takes approximately 30 seconds for the image data to be recorded (when using the supplied 16MB CompactFlash card). The voice memo will start after this. When the recording for the voice memo begins, **REC** will appear in the upper right area of the LCD monitor.
- The voice memo function cannot be used in the sequential shot shooting mode.
- In the video clip mode, the sound is recorded automatically.
- Each voice memo uses one-half the memory of an image captured at a resolution of **640** and compression rate of **NORM**.

---

# PERFORMING AN AUDIO RECORDING

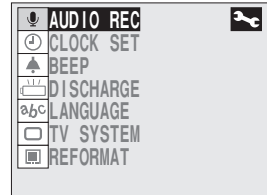
---

Like a normal tape recorder, your digital camera can record sounds. Since the recording is digital, rewinding to the beginning of the recording is quick and easy. When you add a voice memo to a still image, only 4 seconds of recording time is allowed, but with the audio recording function, you can record sound until the available memory of the installed card expires. (With the supplied 16MB CompactFlash card, the maximum recording time for one audio recording is 15 minutes, and the total maximum recording time is 33 minutes and 35 seconds.)

---

**1** Display the Shooting Option Setting Screen (see page 31).

- The “audio recording” is selected on this screen.

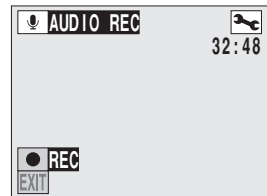


Shooting Option Setting Screen

---

**2** Press the SET button.

- The Audio Recording Screen appears.

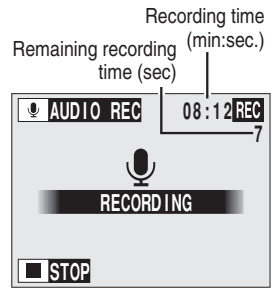


Audio Recording Screen

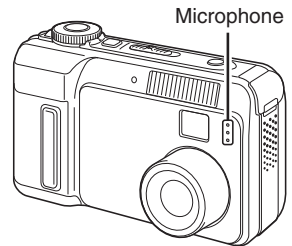
---

### 3 Press [▲] or [▼] on the arrow button to select , and press the SET button.

- Recording begins. Point the microphone toward the sound you wish to record.
- For more information on the maximum recording time, see page 136.
- “RECORDING” and **REC** appears during recording.
- To stop the sound recording, press the SET button again.
- When the recording time available for sound is approximately less than 30 seconds, the remaining recording time is shown.
- To return to the Shooting Option Setting Screen, press the MODE button, or select the **EXIT** icon and press the SET button.



Recording screen




- 
- When you have finish making the audio recording, turn off the digital camera.

---

#### HINT

##### To perform audio recording even after you exit the Audio Recording Screen

- After displaying the Audio Recording Screen (perform steps 1 and 2 on page 79) and  is selected, you can set the main switch to “MONITOR OFF” and put the digital camera into the audio recording stand-by state. In this state, just press the SET button to start recording.

# EXPOSURE CORRECTION

Use the exposure correction function when shooting to make the entire image that you capture darker (underexposed) or lighter (overexposed) as desired.

**1** Display the Shooting Setting Screen (see page 31).

**2** Select the exposure correction icon **EXP**.

**3** Press **[◀]** or **[▶]** on the arrow button to adjust the exposure.

- Press **[◀]** or **[▶]** to move the pointer on the exposure correction bar to the left or right and correct the exposure accordingly.
- The exposure setting numerical value is shown at the left end of the exposure bar. The exposure can be set within the range shown below.

Still image/normal sequential shot/best shot/video clip shooting:

-1.8EV to +1.8EV

Auto bracket shooting (AE shift sequential):

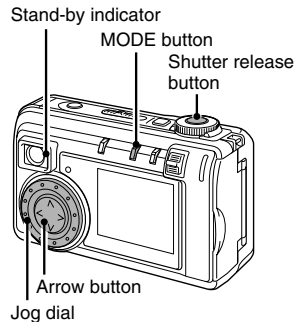
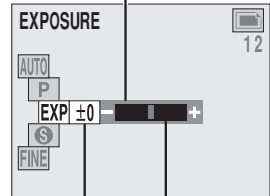
-0.9EV to +0.9EV

- While the exposure is corrected, the stand-by indicator will flash green.
- Exposure correction is cancelled when the main switch is set to "MONITOR OFF" or **[▶]**, the camera is turned off, or the pointer is returned to the center position.

**4** Press the shutter release button.

- The image is captured with exposure correction.

Exposure correction bar



■ When you have finished capturing images, turn off the digital camera.

## NOTE

- When the exposure control setting [page 82] is set to manual **[M]**, exposure correction is not possible. To use the exposure correction, set the exposure control to a setting other than manual **[M]**.

## HINT

### Shortcut for setting the exposure correction

- When the Shooting Setting Screen or Information Screen is not displayed, you can press the arrow button to quickly display the exposure correction bar. (The exposure correction bar will not appear if exposure correction is not available.) Press **[◀]** or **[▶]** to set the exposure correction.

---

# SETTING THE EXPOSURE CONTROL

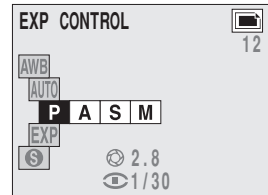
---

By setting the shutter speed and aperture size, various exposure controls are possible. By changing the settings in accordance with the scene to be photographed, you can create the image that you want to express.

The exposure controls can be set in the still image shooting mode and sequential shot shooting mode.

---

## 1 Display the Still Image Setting Screen or Sequential Shot Setting Screen (see page 31).



---

## 2 Select an exposure control method from the exposure control menu, and press the SET button.

**P**: The optimum shutter speed and aperture size are set according to the brightness of the subject. (Aperture and shutter variable program AE)

Example: For simple shooting with minimum setup, using the camera's automatic settings.

**A**: This allows you to set a specific aperture size. The camera automatically sets an appropriate shutter speed based on this setting. (Aperture priority AE)

Example: To open the aperture for portraits with a blurred background (for a shallow field depth), or to close the aperture for a clear foreground and background (for a deep field depth).

**S**: This allows you to set a specific shutter speed. The camera automatically sets an appropriate aperture size based on this setting. (Shutter speed priority AE)

Example: To set a fast shutter speed for capturing a clear image of an fast-moving object, or to set a slow shutter speed to shoot the flow of a background scene.  
To combine flash use with a slow shutter speed (slow shutter) so that both the foreground subject and the nighttime background scene(s) appear clearly in the picture (slow-synchro photography), use a tripod to eliminate camera movement.

**M**: This allows you to set a specific shutter speed and aperture size. (Manual exposure control)

Example: When shooting in a dark location without using a flash, set the shutter to stay open for a longer time (slow shutter). When used for shooting nighttime scenes, you can capture lights flowing across the image.

---

# SETTING THE EXPOSURE CONTROL

---

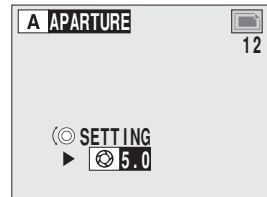
## 3 Make the setting.

<If aperture and shutter variable program AE [P] is selected>

- The setting changes to aperture and shutter variable program AE, and the camera returns to the Shooting Setting Screen.

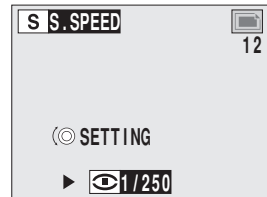
<If aperture priority AE [A] is selected>

- The display to set the aperture size appears.
- Turn the jog dial to set the desired aperture size.



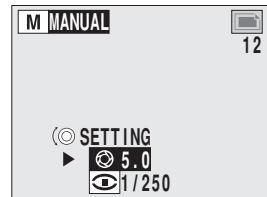
<If shutter speed priority AE [S] is selected>

- The display to set the shutter speed appears.
- Turn the jog dial to set the desired shutter speed.



<If manual exposure control [M] is selected>

- The display to set the aperture size and shutter speed appears.
- Press [▲] or [▼] on the arrow button to select aperture size or shutter speed, and turn the jog dial to change the setting.



---

## 4 Press the SET button.

- This completes the exposure control setting.
- The display returns to the Shooting Setting Screen.

---

### NOTE

- A slow shutter speed makes shooting pictures in darker locations possible; however, image noise may increase.
- To reduce the noise, set the noise reduction to on.
- When the manual exposure control mode is set, the AE shift sequential shot method cannot be selected. Also, when the AE shift sequential shot method is set, the manual exposure control mode cannot be selected.
- When the manual exposure control mode is selected, the exposure correction value becomes  $\pm 0$ .
- Even when shutter speed priority AE [S] or manual exposure control [M] is selected and the shutter speed is set to 1/1000 second, in some cases the shutter speed at the time an image is captured may not be 1/1000 second. To take a picture with a shutter speed of 1/1000 second, set the zoom to a wide lens setting and the aperture to its smallest setting.



---

# SETTING QUICK SHOT (STILL IMAGE SHOOTING ONLY)



---

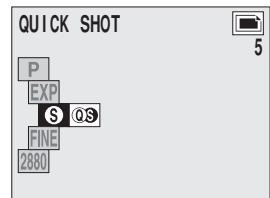
With the normal settings, when the shutter release button is pressed, the digital camera performs the exposure correction, the white balance settings, the focussing, and other settings before the image is captured. This leads to a time lag between when the shutter release button is pressed and the image is actually captured. By turning on the quick shot setting, these settings are set less precisely, but the lag time from when the shutter release button is pressed to when the image is actually captured is drastically reduced.

---

**1** Display the Still Image Shooting Setting Screen (see page 31).

**2** Select a quick shot setting from the quick shot menu, and press the SET button.

- : Turns off the quick shot setting.
- : Turns on the quick shot setting.
- This completes the quick shot setting.



---

## NOTE

### How to shoot with the quick shot

- When the quick shot setting is on, the first time the shutter release button is pressed, the digital camera performs the normal settings. If the shutter release button is again pressed within 1 second after the camera becomes ready (the stand-by indicator lights green), the quick shot function works to capture the image quickly. It is possible to take sequential quick shots if it is within one second. If the shutter release button is pressed after an interval of one second or more following the previous shot, the digital camera performs the settings as for normal shooting.

---

# SETTING THE ISO SENSITIVITY

---

With the normal settings, the ISO sensitivity is set automatically according to the brightness of the subject. However, in the special mode, you can fix the ISO sensitivity to the equivalent of 100, 200, or 400.

---

## 1 Display the Shooting Setting Screen (see page 31).

---

## 2 Select an ISO sensitivity setting from the ISO sensitivity menu, and press the SET button.

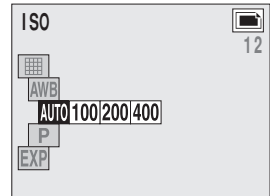
**AUTO**: Sets the ISO sensitivity automatically (equivalent to ISO100 to 400).

**100**: Sets the sensitivity equivalent to ISO100.

**200**: Sets the sensitivity equivalent to ISO200 (twice the sensitivity of **100**).

**400**: Sets the sensitivity equivalent to ISO400 (four times the sensitivity of **100**).

- This completes the ISO sensitivity setting.



---

### NOTE

- By setting a higher ISO sensitivity, you can set higher shutter speeds and capture images in darker locations, but noise in the captured images may increase.
- If the flicker reduction is set to **FR** (see page 87) in the video clip shooting mode, then the ISO sensitivity setting is fixed to **AUTO**.

---

# SETTING THE WHITE BALANCE

---

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






---

## 1 Display the Shooting Setting Screen (see page 31).









---

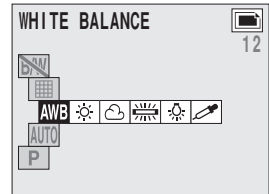
## 2 Select a white balance setting from the white balance setting menu, and press the SET button.

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

- : For shooting outside on a sunny day.
- : For shooting outside on a cloudy day.
- : For shooting inside under fluorescent lighting.
- : For shooting inside under incandescent lighting.
- : For more accurate adjustment or when the light source cannot be specified.

### Setting procedure

- ① Select the  icon and press the SET button.
    - The  icon moves to the left.
  - ② Fill the entire screen with plain white card (or piece of paper, etc.)
  - ③ Press the SET button.
    - The white balance setting programmed with the  icon is retained even if another white balance setting (**AWB**, , , , or ) is set. By selecting the  icon and pressing the SET button, these same settings can be used again.
- This completes the white balance setting.



---

### NOTE

- To cancel the white balance setting and return to the automatic setting, perform step 1 and select **AWB**, then press the SET button.

### HINT

#### To capture sepia-tone images

- In step ② of step 2, instead of using a white card, use a blue card to set the white balance. You can experiment by changing the card color with which the white balance is performed for different results.

---

# FLICKER REDUCTION SETTING (VIDEO CLIP SHOOTING ONLY)

---

The flicker reduction setting reduces the flicker that results when filming video clips underneath fluorescent lights and the like where the background lighting pulsates at the frequency of the power supply. The flicker reduction setting is set for a frequency of 50 Hz.

\* The flicker reduction setting is possible only for the video clip shooting mode.

---

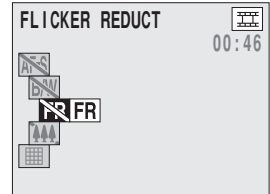
**1** Display the Video Clip Shooting Setting Screen (see page 31).

**2** Select a flicker reduction setting from the flicker reduction setting menu, and press the SET button.

: Turns off the flicker reduction setting.



: Turns on the flicker reduction setting.

- This completes the flicker reduction setting.



---

## NOTE

- Note that although the flicker reduction setting decreases the image flicker that occurs underneath fluorescent lighting, the image quality may deteriorate slightly.
- If the flicker reduction is set to , then the ISO sensitivity setting (see page 85) is fixed to .

---

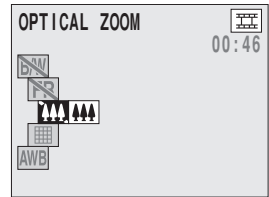
# SETTING THE ZOOM

---


## Setting the optical zoom (video clip shooting only)


If the optical zoom is operated during video clip photography, the noise from the zoom movement may be picked up by the microphone. In this case, change the camera setting so that the optical zoom does not move.

- 
- 1** Display the Video Clip Shooting Setting Screen (see page 31).



- 
- 2** Select an optical zoom shooting setting from the optical zoom setting menu, and press the SET button.

: Optical zoom moves during the video clip shooting.

: Optical zoom does not move during the video clip shooting.

- This completes the optical zoom setting.

---

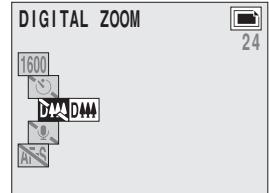
# SETTING THE ZOOM

---


## Setting the digital zoom


This setting allows you to set whether or not the digital zoom becomes active during magnified shooting at a resolution of **1600** or less.

**1** Display the Shooting Setting Screen (see page 31).



**2** Select a digital zoom setting from the digital zoom menu, and press the SET button.

: Digital zoom cannot be used.

: Digital zoom can be used.

- This completes the digital zoom setting.

---

### NOTE

- The maximum digital zoom magnification ratio is 4x.
- When the digital zoom is used, the image may not be as sharp.
- The digital zoom does not work at resolutions of **2288** or above.

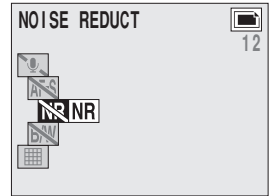
---

# SETTING THE NOISE REDUCTION

---

Noise which occurs in captured images when the shutter button is pressed during still image shooting is reduced. The initial setting for noise reduction is off.

- 1** Display the Still Image Shooting Setting Screen (see page 31).



- 2** Select the noise reduction on icon **NR** from the noise reduction menu, and press the **SET** button.

**NR**: Noise is reduced.

**NR**: Noise is not reduced.

- This completes the noise reduction setting.

---

## NOTE

- The noise reduction function works when the shutter speed is 1/4 second or more.
- The time it takes to record the shooting data after the shutter release button is pressed is longer when the noise reduction function is used than when it is not used.

---

# SETTING THE LIGHT MEASURING METHOD

---

You can select from 3 types of light measuring methods.

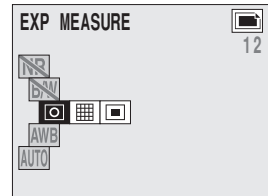
Center light measuring: Light is measured only in the central portion of the shooting screen. This is the initial setting.

Multi-section light measuring: Light is measured by sampling from multiple areas of the entire shooting screen.

Spot measuring: Light is measured only in the central portion of the LCD monitor.


---

## 1 Display the Shooting Setting Screen (see page 31).





---

## 2 Select a light measuring method from the light measuring method menu, and press the SET button.

: Center light measuring

: Multi-section light measuring

: Spot measuring

- This completes the light measuring method setting.
  - When the spot measuring method is selected, the spot mark  appears in the center of the LCD monitor.
- 

### NOTE

#### When the spot measuring method is selected

- To measure light at a specific spot, point the camera so that the spot is in the center of the LCD monitor, and press the shutter release button halfway. The light at the center of the LCD monitor will be measured. In this condition, compose the picture and press the shutter release button all the way down to capture the image.



---

# SETTING THE FOCUS METHOD

---

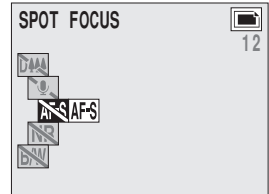
You can choose from the following 2 types of autofocus:

Multi-section focus: Subject distance detected by sampling from multiple areas of the entire shooting screen. This is the initial setting.

Spot focus: The camera focuses on the subject in the center of the LCD monitor.


---


## 1 Display the Shooting Setting Screen (see page 31).



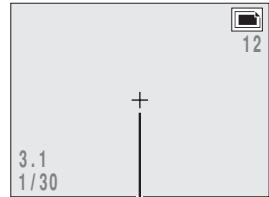
---

## 2 Select a focus method from the spot focus menu, and press the SET button.

: Multi-section focus is used.

: Spot focus is used.

- This completes the focus method setting.
- When the spot focus setting is selected, the focus mark + appears in the center of the LCD monitor.



Focus mark

---

### NOTE

#### When the spot focus setting is selected

- To focus on a specific object, point the camera so that the object matches the focus mark in the center of the LCD monitor, and press the shutter release button halfway. The camera will focus on the subject at the focus mark in the center of the LCD monitor. In this condition, compose the picture and press the shutter release button all the way down to capture the image.
- It may be difficult to focus if there is little contrast in the subject.

# SCENE SELECT FUNCTION

You can select from stored settings you have completed for specific shooting conditions. Also, you can set your custom shooting conditions and then store them.

## Selecting from stored shooting settings

Select from stored shooting settings. The following settings (preset settings) are already stored in the digital camera for specific shooting conditions.

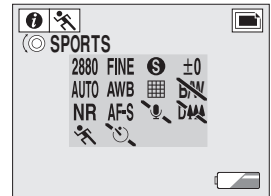
Possible preset settings		Setting features
Still image shooting mode	Sequential shot shooting mode	
Sports		For shooting running and jumping, fast-moving subjects.
Night scene	—	For amusement park and fireworks displays at night, produces a good balance between the bright lights and the dark background.
Portrait		Focussed subject at the center, softened background for beautiful effect.
Auto		Returns various shooting settings to the initialized settings.

### 1 Set to a shooting mode, and press the MODE button for at least 2 seconds to display the Information Screen (see page 42).

- The current shooting settings are shown on the information screen.

### 2 Turn the jog dial.

- The stored shooting settings will appear on the LCD monitor. Turn the jog dial to display the desired shooting setting in the LCD monitor.



### 3 Press the SET button.

- The shooting settings shown in the LCD monitor are set.
- An icon showing the shooting mode appears in the upper left corner of the LCD monitor.

: Sports

: Night scene

: Portrait

: No indication ( 1 to 3 are for your custom settings [page 94].)

## NOTE

### About the preset settings

- When selecting a stored shooting setting, the Program AE mode is effective. Consequently, the following settings are fixed.

Exposure control : Suitable program AE for each preset setting

ISO sensitivity :

Furthermore, when sports is selected, spot focus is on; when night scene is selected, the noise reduction on is set.

- When capturing images using the night scene setting, use a tripod or other method to stabilize the camera.

### To return to normal shooting

- Display the Information Screen, turn the jog dial to select “AUTO”, and press the SET button.

# Storing shooting settings

You can store your custom settings in the digital camera (original settings). Up to 3 different custom settings can be stored. Also, you can edit your stored original settings and save the new settings. Your original settings are selected using the same procedure as for the preset settings.

## 1 Adjust the various settings.

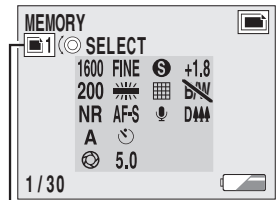
- Adjust the various settings that appear on the Information Screen, such as resolution, compression ratio, white balance, light measuring method, exposure control, etc.
- When a preset setting is selected, the settings cannot be stored.

## 2 Set to a shooting mode, and press the MODE button for at least 2 seconds to display the Information Screen (see page 42).

- The current settings are shown on the Information Screen.

## 3 Press the SET button.

- The Store Settings Screen appears.
- Turn the jog dial to select a number to store your settings.
- Screens (1) to (3) are for storing the settings.

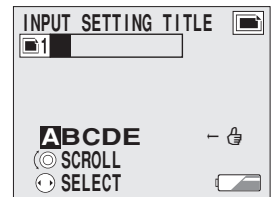


## 4 Press the SET button.

- "OVERWRITE?" appears on the screen.

## 5 Confirm the settings, and press the SET button.

- The screen to enter a name for the settings appears.
- Up to 6 characters can be entered for the name.

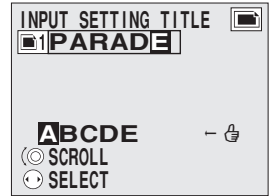


---

## SCENE SELECT FUNCTION

---

- 6** Enter a name for the settings. Up to 6 characters can be entered.
- For entering the name, see “ENTERING TEXT” on page 111.



- 7** Press the SET button.
- The screen to confirm the settings appears. After you confirm the settings, the Store Settings Screen turns off.

---

## Play back a captured image and store the shooting settings

The shooting settings of a captured image can be stored as your original shooting settings.

- 1** Display the desired image [pages 96 to 103].
- 2** Press the MODE button for at least 2 seconds to display the Information Screen.
- 3** Press the SET button.
- The Store Settings Screen appears.
  - The rest of the procedure is the same as that beginning in step 3 on page 94.

---

### HELP

- If the settings cannot be stored...

**The settings cannot be stored in the following cases.**

**Images captured with the scene select function; images captured with another digital camera.**

**Resized images; images copied from a sequential shot series or video clip.**

**Images that have been enlarged using the digital zoom.**

### NOTE

#### To modify the settings based on a stored setting

- (1) Display the Information Screen, select the original settings you wish to change, and turn off the Information Screen once.
- (2) Change the shooting settings.
- (3) Display the Information Screen, and press the SET button.
  - “OVERWRITE?” appears.
- (4) Press the SET button, and enter a name for the settings.
- (5) Press the SET button.
  - After storing the settings, the Information Screen turns off.





# SETTING THE PLAYBACK MODE

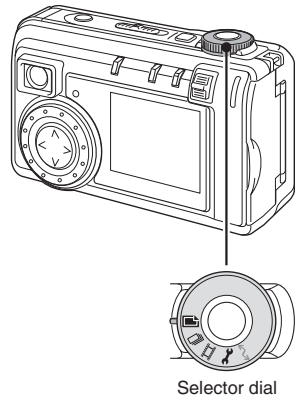
The data of the images and recordings captured with this digital camera are saved as one of four following types: still image data, sequential shot data, video clip (image and sound) data, or audio data. Therefore, it is necessary to set the type of data you wish to play back before starting playback.

## ● Playback modes

- Still image playback mode  
For viewing the still image data. Saved enlarged images (with the playback zoom) (see page 105) and copied images (see page 118) can also be viewed in the still image playback mode.
- Sequential shot playback mode  
For viewing sequential shot data.
- Video clip playback mode  
For viewing video clip data.
- Audio recording playback mode  
For listening to audio recording data.

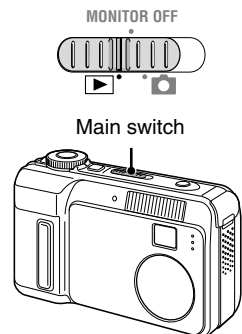
## 1 Turn the selector dial to the desired playback mode.

-  Still image playback mode  
To view images captured in the still image shooting mode (see page 98).
-  Sequential shot playback mode  
To view images captured in the sequential shot shooting mode (see page 102).
-  Video clip playback mode  
To view video clips recorded in the video clip shooting mode (see page 103).
-  Audio recording playback mode  
To listen to audio recordings (see page 107).



## 2 Set the main switch to , and press the power button.

- The power is turned on.
- A playback image (or the Playback Option Setting Screen) appears on the LCD monitor.
- When playing back an audio recording, go to “Points concerning the audio recording playback mode” on the next page.




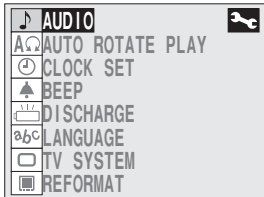
---

# SETTING THE PLAYBACK MODE

---

## Points concerning the audio recording playback mode

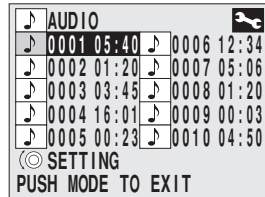
- Turn the selector dial to [  ] to display the Playback Option Setting Screen with “AUDIO” selected. Then press the SET button to display the audio recording selection screen. On this screen, turn the jog dial to select the desired audio recording, and press the SET button. The Audio Recording Playback Screen appears.



Playback Option  
Setting Screen

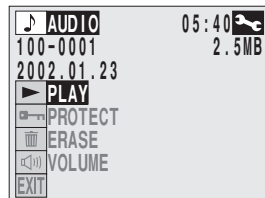


Press the  
SET button



Audio Recording  
Selection Screen

Select the desired  
recording with the jog dial  
and press the SET button.



Audio Recording  
Playback Screen

---

## HELP

If “NO IMAGE” or “NO AUDIO” appears

- There is no image or audio file for the playback mode that you have selected. Turn the selector dial to a playback mode for which files exist (see page 96).

# PLAYING BACK STILL IMAGES

Use the still image playback mode to play back still images.

## Playing back the still images one by one

Follow this procedure to view the images one by one.

### 1 Select the still image playback mode (see page 96).

- An image appears on the LCD monitor.

### 2 Press [◀] or [▶] on the arrow button.



To play back the previous image: Press ◀.

To play back the next image: Press ▶.


#### <To use the jog dial>

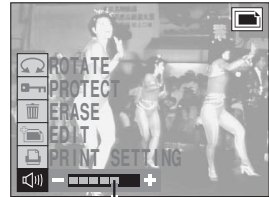
To play back the previous image: Turn the jog dial counterclockwise.

To play back the next image: Turn the jog dial clockwise.

- If an image has a voice memo attached to it, the volume icon  appears on the Playback Setting Screen. To listen to the voice memo, first exit the Playback Setting Screen or Information Screen and then press the SET button.
- To adjust the volume of the voice memo, first select the volume icon  on the Playback Setting Screen to display the volume bar. Then press [◀] or [▶], or turn the jog dial to adjust the volume as desired.
- When you display the Information Screen and press the SET button, you can store the settings for the displayed image as your original settings (see page 94).

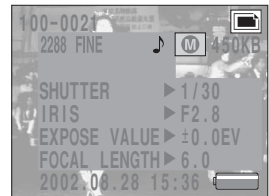
#### Rotating an image

- ① Press the MODE button.
  - The Playback Setting Screen appears.
- ② Select the “ROTATE” icon  and press the SET button.
  - The Rotate Screen appears.
- ③ Set which direction to rotate the image by selecting either “RIGHT” or “LEFT” and press the SET button.
  - Each time the SET button is pressed, the image is rotated 90 degrees in the direction selected.
  - To return to the Playback Setting Screen, press the MODE button.



Decreases the volume | Increases the volume  
Volume bar

Playback Setting Screen



Information Screen



Rotate Screen

- When you have finished playing back images, turn off the digital camera.

---

# PLAYING BACK STILL IMAGES

---

## CAUTION

- When the auto rotate playback function (see page 119) is set, the image rotation icon does not appear.

## NOTE

### For continuous playback

- In step 2, if you press and hold [▶] on the arrow button, the images will be played back in succession. If you press and hold [◀], the images will be played back in the reverse order.



# Automatic playback (slide show)

You can play back the images automatically in a slide show fashion. If voice memos are attached, they can also be heard.

---

## 1 Select the still image playback mode (see page 96).

- An image appears on the LCD monitor.

---

## 2 If the Playback Setting Screen appears, press the MODE button to exit it.

- If the Information Screen appears, press the MODE button to exit it.

---


## 3 Press and hold [▲] or [▼] on the arrow button until "SLIDESHOW" appears.

- The Slideshow Screen appears.
- Select "TIME", and turn the jog dial to select the time that each image is shown. Select 1 sec., 4 sec., 7 sec. or 10 sec.


If 1 sec. is selected, any audio recording attached to the image will not be played back.

- Select "EFFECT", and turn the jog dial to select one of the wipe effects below.

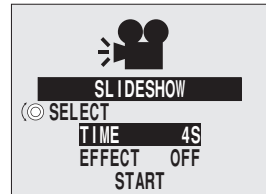
OFF: The images change without any wipe effect.

: The new image replaces the previous image in a "wipe" from top to bottom.

: The image changes from bottom to top.

: The image changes from the middle to the top and bottom.

: The image changes in a mosaic pattern.



---

## 4 Select the START indicator, and press the SET button.

- Slideshow playback begins.

---

### ■ To stop the slide show, press the MODE, SET, or arrow button.

- "SLIDESHOW END" appears and automatic playback stops.

# 9-image display playback

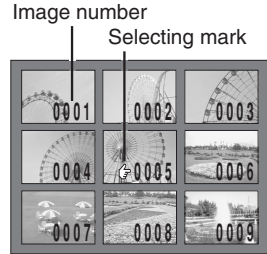
You can display 9 still images at once on the LCD monitor.

## 1 Select the still image playback mode (see page 96).



- An image appears on the LCD monitor.

## 2 Push the zoom switch towards .

- The 9-image display appears.
- The number displayed for each image is the number for that image.




## 3 Use the arrow button to move the mark to the desired image, and press the SET button.

- The selected image is displayed full screen.
- You can also turn the jog dial to move the  mark.
- Instead of pressing the SET button, you can also enlarge the image by moving the zoom switch to the  position.

- When you have finished viewing the images, turn off the digital camera.

### HINT

To jump forward or backward 100 images if more than 100 images exist

- ① Display the 9-image display playback screen.
- ② Press the MACRO button.
  - The frame around the images turns dark blue.
- ③ Press either [◀] or [▶].
  - Press [◀] to move back 100 images.
  - Press [▶] to move forward 100 images.
  - The frame around the images returns to black.
  - To jump another 100 images, repeat steps ② and ③ above.
- ④ Use the arrow button to move the  mark to the desired image and press the SET button.
  - The selected image is displayed full screen.

### HELP

If  appears in the 9-image display

-  may be displayed if the images were saved on the card using a different digital camera.

What if the image numbers are not consecutive?

- The number for each image is its specific file number. For this reason, even if you erase an image from the line-up, the numbers of the subsequent images do not change. For example, in the case above, if you were to erase image number 0005, in step 3 image number 0005 is skipped, and the displayed numbers will be, in order, 0001 to 0004, followed by 0006 to 0010.

---

# PLAYING BACK SEQUENTIAL SHOTS

---

Sequential shot images can be played back one image at a time.

---

## 1 Select the sequential shot playback mode (see page 96).

- If the 9-image display appears, perform step 4 below and then come back to step 2.

---

## 2 Press [◀] or [▶] on the arrow button.

To play back the previous image: Press [◀].

To play back the next image: Press [▶].

### <To use the jog dial>

To play back the previous image: Turn the jog dial counterclockwise.

To play back the next image: Turn the jog dial clockwise.

- Hold down the arrow button to display the images of the sequential shot one after another consecutively (consecutive playback). To stop the consecutive playback, release the arrow button.
- To change to a different sequential shot, perform steps 3 and 4 below.
- You can also rotate images for viewing (see page 98).

---

## 3 Push the zoom switch towards .



- The 9-image display appears.

Sequential shot folder number  
Selecting mark



---

## 4 Use the arrow button to move the mark to the desired sequential shot, and press the SET button.

- The selected sequential shot appears full screen.  
Perform step 2 to view the images of the sequential shot.
- You can also turn the jog dial to move the  mark.
- Instead of pressing the SET button, you can also enlarge the image by moving the zoom switch to the  position.

- 
- When you have finished viewing the images, turn off the digital camera.

---

### HINT

#### To display rotated sequential images

- The sequential shot images can be rotated in the same way that still images are rotated (see page 98).

#### To quickly display a different sequential shot

- In step 2 with the Playback Setting Screen or Information Screen not displayed, press [▲] or [▼] to change to the previous or following sequential shot respectively.

---

# PLAYING BACK VIDEO CLIPS

---


Use the video clip playback mode to view video clips taken in the video clip shooting mode. In the video clip playback mode, the sound can also be heard.




- 
- 1** Select the video clip playback mode (see page 96).
- If the 9-image display appears, perform step 5 below and then come back to step 3.

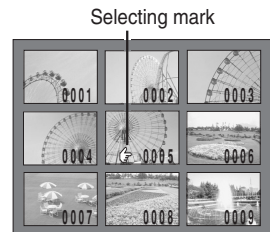


- 
- 2** If the Playback Setting Screen appears, press the **MODE** button to exit it.
- If the Information Screen appears, press the **MODE** button to exit it.

- 
- 3** Press the **SET** button or **[▶]** on the arrow button.
- The video clip is played back (the video and audio).
  - To change to a different video clip, perform steps 4 and 5 below.

- 
- 4** Press the zoom switch towards .
- The 9-image display appears.

- 
- 5** Use the arrow button to move the  mark to the desired video clip, and press the **SET** button.
- The selected video clip appears full screen. Perform step 3 to view the video clip.
  - You can also turn the jog dial to move the  mark.
  - Instead of pressing the **SET** button, you can also enlarge the image by moving the zoom switch to the  position.



- 
- When you have finished viewing the images, turn off the digital camera.

## HINT

### To pause playback of a video clip

- Press the SET button to pause the video clip while it is being played back. While the video clip is paused, press the SET button again or [▶] to restart the playback.

### To play back the video clip one image at a time

- While the video clip playback is paused, you can turn the jog dial clockwise to view the frames in order, or counterclockwise to view them in reverse order.

### To accelerate the playback of a video clip, or to view reverse playback of a video clip

- During a video clip playback, press [▶] to start 2x fast forward playback (the audio will not be heard). Press it one more time to start 20x fast forward playback. Press it one more time to return to normal speed playback.
- During a video clip playback, press [◀] to start reverse playback (the audio will not be heard). Press [◀] one more time to start 2x fast reverse playback. Press it one more time to start 20x fast reverse playback. Press it one more time to return to normal speed reverse playback. To return to normal forward playback, press [▶].

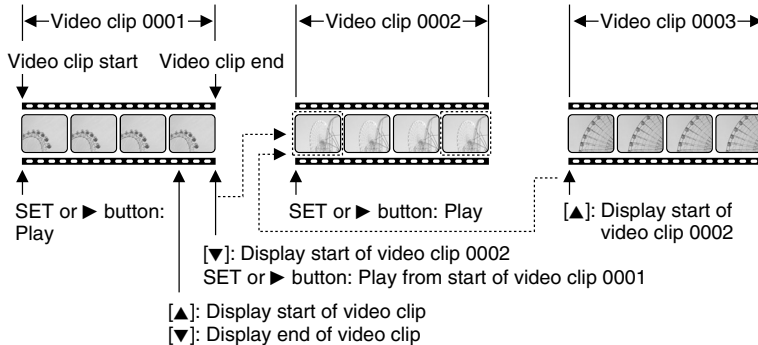
### To return to the beginning of the video clip

- During a video clip playback, press [▲] to jump to the beginning of the video clip and press [▼] to jump to the end of the video clip.

### To switch to other video clips quickly

- With the video clip playback paused, press [▲] to move to the first image of the previous video clip, or press [▼] to move to the first image of the next video clip.


#### Example of button operations



### To jump forward or backward 100 video clips if more than 100 video clips exist

- The procedure is the same as that for still images (see page 101).
- ① Display the 9-image display playback screen.
  - ② Press the MACRO button.
  - ③ Press either [◀] or [▶].
    - To jump another 100 video clips, repeat steps ② and ③ above.

### To adjust the volume of the video clip sound

- Display the Playback Setting Screen, select the volume icon , and press [◀] or [▶], or turn the jog dial to adjust the volume as desired (see page 98).

---

# ENLARGING (ZOOMING IN) THE IMAGE

---

The saved images can be magnified for viewing during playback.


---

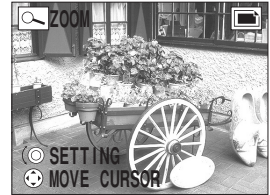
## 1 Display the image that you want to magnify.

See “PLAYING BACK STILL IMAGES” on page 98, “PLAYING BACK SEQUENTIAL SHOTS” on page 102, or “PLAYING BACK VIDEO CLIPS” on page 103.

---

## 2 Press the zoom switch towards .

- The zoom mark  appears on the LCD monitor, and enlargement is enabled.



---

## 3 To magnify the image, turn the jog dial.

- The image is magnified, and the central portion of the image is displayed.

To magnify: Turn clockwise.

To return to normal size: Turn counterclockwise.

- You can use the arrow button to view different parts of the enlarged image.
- The maximum degree of magnification will depend on the resolution of the original image.

**3264** resolution: up to 11 magnifications

**2880** resolution: up to 10 magnifications


**2288** resolution: up to 9 magnifications

**1600** resolution: up to 7 magnifications

**640** resolution: up to 4 magnifications

**320** resolution: up to 3 magnifications

**160** resolution: up to 2 magnifications

- You can press the shutter release button to save the magnified portion of the image being displayed as a separate still image.
- To reset to the normal display size, push the zoom switch towards  during the magnification display mode.



---

### ■ When you have finished viewing the images, turn off the digital camera.

---

#### NOTE

- As the image is enlarged, the quality will become rougher.
- One scene (still image) of a video clip can be enlarged; however, a video clip cannot be played while enlarged.
- For **3264** resolution, the maximum magnification is 51 times.
- If the image has been rotated, it will be returned to its original orientation and then enlarged.

#### HELP

#### If “MEMORY FULL” appears when you try to save the magnified image

- This indicates that there is not enough available memory to save the image. If you wish to save the image, you must first erase some data in order to free some of the memory (see page 116).

---

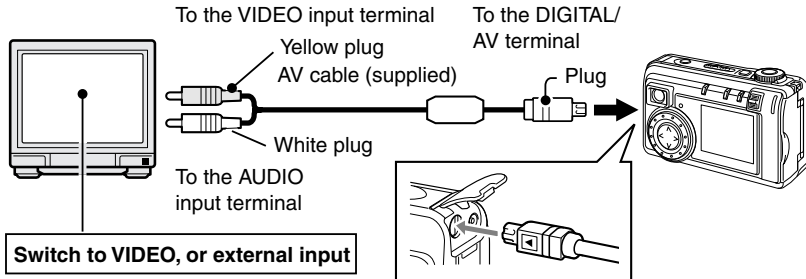
# PLAYING BACK IMAGES ON A TV SET

---

The images and audio recordings saved on the card in the digital camera can also be played back on a television set for viewing and listening. (When connected to a television set, the speaker of the digital camera is muted.)

## Connections

Connect the supplied AV cable from the DIGITAL/AV terminal on the digital camera to the AUDIO and VIDEO input terminals on the TV.



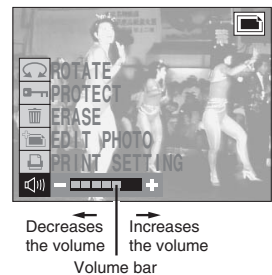
- Do not use excessive force when connecting and disconnecting cables.
- The sound output from the digital camera is monaural.

## Playback

- After connecting the digital camera to the television, set the television to VIDEO or external input.
- The playback method is the same as when viewing images on the LCD monitor.
- When an AV cable is connected, the LCD monitor display appears smaller than usual.
- The same playback procedure as when playing back with the camera is used to play back voice memos and audio recordings as well.

Voice memo playback: [page 98]

Audio recording playback: [page 107]



---

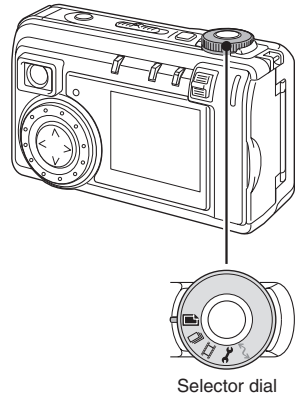
### NOTE

- If the TV system setting is not correct for the connected TV, you will not be able to view the images on the TV (see page 128).
- Some televisions may not display the entire screen as displayed on the digital camera LCD monitor. This is a characteristic of the television and does not indicate a malfunction.

# LISTENING TO AUDIO RECORDINGS

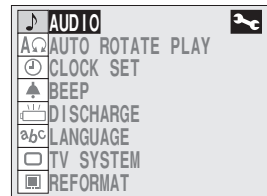
Follow the procedure below to listen to audio recordings taken with the digital camera from the speaker of the digital camera.

**1** Turn the selector dial to .



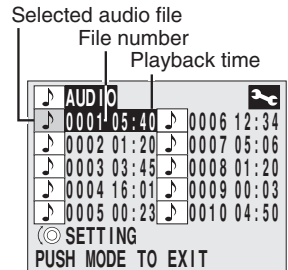
**2** Set the main switch to .

- The Playback Option Setting Screen appears.
- “AUDIO” is highlighted.



**3** Press the SET button.

- The Audio Recording Selection Screen appears.





---

# LISTENING TO AUDIO RECORDINGS

---

## 4 Turn the jog dial to select the desired audio recording, and press the SET button.

- The Audio Recording Playback Screen for the selected audio recording appears.

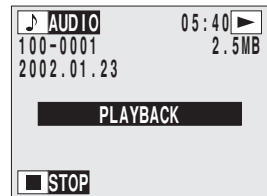


Audio Recording Playback Screen

---

## 5 Select , and press the SET button.

- Playback starts.
- To play back a different audio recording, while no audio recording is being played back (Audio Recording Playback Screen), select "EXIT", and press the SET button. You return to the Audio Recording Selection Screen. Repeat steps 4 and 5.



- 
- When you have finished listening to audio recordings, turn off the digital camera.
- 

### HINT




#### To quickly change to a different audio recording

- Turn the jog dial at the Audio Recording Playback Screen in step 4 to change to a different audio recording.




#### To pause playback of an audio recording

- Press the SET button to pause the audio recording while it is being played back. While the audio recording is paused, press the SET button again to restart the playback.

#### To fast forward, rewind, or return to the beginning of an audio recording

- During an audio recording playback, press  to fast forward and  to rewind (the audio will not be heard). Press  one more time to return to normal speed playback.

#### To adjust the volume of the audio recording sound

- While the audio recording is not being played back (at the Audio Recording Playback Screen), press the MODE button. Then select the volume icon  and press  or , or turn the jog dial, to adjust the volume as desired (see page 98).

---

# ADDING A VOICE MEMO (ADD AUDIO FUNCTION)

---

You can add a voice memo to a still image captured in the still image mode, an image saved after magnifying (see page 105), or a copied image (see page 118).

---

**1** Display the image you wish to add a voice memo to (see page 98).


- If there are a great number of still images, it may be quicker to find it using the 9-image display playback.

---

**2** Press the **MODE** button to display the Playback Setting Screen.



---

**3** Select the “EDIT PHOTO” icon , and press the SET button.

- The Edit Photo Screen appears.

---

**4** Select the “ADD AUDIO” icon .



Edit Photo Screen

---

## NOTE

- If an image with a voice memo is protected, you cannot add a voice memo. To add a voice memo, first remove the protection (see page 115) and then add the voice memo.


---

## 5 Press the SET button.


- You enter the preparation screen to record a voice memo.

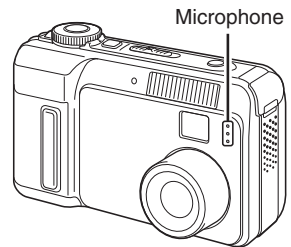
---

## 6 Press the SET button.

- Voice memo recording starts. Talk into the microphone on the digital camera. The sound will be recorded for about 4 seconds. While the voice memo is being recorded, "RECORDING" and **REC** are displayed.
- When recording is finished, you return to the Edit Photo Screen.
- To record voice memos for other images, press [◀] or [▶], or turn the jog dial to select the desired image, and repeat steps 5 and 6.
- To return to the Playback Setting Screen, press the MODE button, or select **EXIT** and press the SET button.
- For images with a voice memo added, the volume icon  is shown on the Playback Setting Screen.
- To listen to the voice memo, press the MODE button to cancel the Playback Setting Screen, then press the SET button.
- The playback volume can be adjusted with the procedure described in page 98.



 appears for images with a voice memo.



REC (recording) indicator



---

■ **When you have finished adding voice memos, turn off the digital camera.**

---

### NOTE

- Voice memos can also be recorded when the image is captured (see page 78).
- After a voice memo has been added to an image, you cannot erase only the voice memo. When the image is erased, the attached voice memo is also erased.
- If a voice memo is added to an image that already has a voice memo, the new recording will replace the previous one.

### HELP

#### If "MEMORY FULL" appears

- This indicates that there is not enough available memory to add a voice memo. If you wish to add a voice memo, you must first erase some data in order to free some of the memory (see page 116).

---

# ENTERING TEXT

---

You can enter characters for titles and the like on still images.

---

## 1 Display the still image to which you want to add text (see page 98).

- If there are a great number of still images, it may be quicker to find it using the 9-image display playback (see page 101).

---

## 2 If the Still Image Playback Setting Screen does not appear, press the MODE button.

- The Still Image Playback Setting Screen appears.

---

## 3 Select the “EDIT PHOTO” icon , and press the SET button.

- The Edit Photo Screen appears.



---

## 4 Select the “ADD TEXT” icon .

- “ADD TEXT” turns orange.

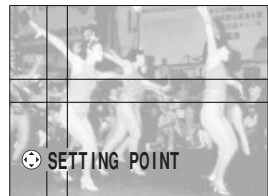


Edit Photo Screen

---

## 5 Press the SET button.

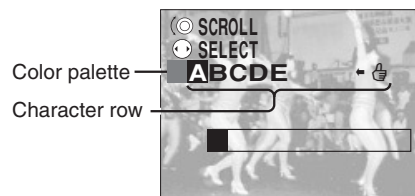
- You enter the preparation screen for text entry.
- Press the arrow button to set the location where the first character is entered.
- The character position can be changed again later in this procedure (see page 113).
- If the image has been rotated, it will be returned to its original orientation.



---

## 6 Press the SET button.

- You enter the text entry mode and a row of characters appears.
- To return to the screen in step 3, press the MODE button.



## 7 Turn the jog dial and select the desired character row.

Character row chart															
A	B	C	D	E	0	1	2	3	4	<	>	"	¥	\$	%
F	G	H	I	J	5	6	7	8	9	#	&	*	@	★	●
K	L	M	N	O	,	.	,	.	?	▲	▼	※	→	←	↑
P	Q	R	S	T	!	_	/	~	( )	↓	♪	♥			
U	V	W	X	Y	Z	「	」	+	-	×	=				

### HINT

#### You can change the color of the text

- ① Before entering text, press [◀] to select the color palette located to the left of the characters on the character row.
- ② Turn the jog dial to select the color for the text.
  - Turning it clockwise cycles through the available colors as shown below.

→ White → Yellow → Orange → Red → Purple → Green → Blue → Dark blue → Gray → Black →

Turn it counterclockwise to change colors in the reverse order.

- This completes the text color selection.
- Press [▶] and enter the desired text.
- By selecting the color palette and pressing the SET button, you can change the color of all the characters you have entered at one time.

### NOTE

- Once you have entered text onto an image, it is not possible to delete only the characters from that image.
- If the remaining number of images that can be captured is down to "0", then you may not be able to add text (see page 50).

### HELP

#### If the message "CAN NOT ADD" appears

- Text cannot be entered on the selected image. Select another image. Text cannot be entered on the image types given below.
  - Still images that have been enlarged and saved (text entry may be possible depending on their resolution).
  - Still images that have been saved from a video clip, or images that have been resized to 320.
  - Images captured with another camera.

---

# ENTERING TEXT

---

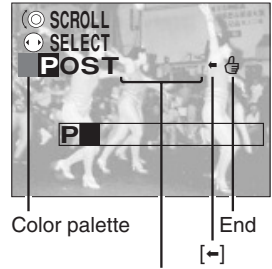
**8** Press [◀] or [▶] on the arrow button to select the character to enter.

[■]: Select when you want to choose the color for a character (color palette).

(Blank space): Select to enter a space. [ ] appears in the character position.

[←]: Select to move back one space (delete one character).

[⏪]: Select after you finish entering the desired text.



Select to enter a space

---

**9** Press the SET button.

- Enters the selected character.
- Repeat steps 7 to 9 to add more characters. You can enter up to 13 characters provided that the first character entered (in step 5) is set at the leftmost edge of the screen.

---

**10** Select [ ] once you have entered all the desired characters, and press the SET button.

- This completes character entry.



---

**11** Press the arrow button to finalize the position of the text.

---

**12** Press the shutter release button.

- The characters are imposed on the image and you return to the Edit Photo Screen.
- The image that you entered characters onto will be saved as the last still-image file.
- You can enter more characters on the same image as desired.



---

■ When you have finished entering text, turn off the digital camera.

---

## HELP

If “MEMORY FULL” appears

- Text could not be entered because there is no remaining space on the card. Before entering the text, erase any unnecessary images (see page 116).

---

# RESIZING IMAGES

---

The size of still images that have already been captured at a resolution of **1600** or more can be changed (resized) to 640 x 480 pixels or 320 x 240 pixels. The resized image is saved as a different image.

This function is convenient for displaying images on a computer monitor, or for decreasing the time it takes to send an e-mail.

---

**1** Display the still image that you want to resize (see page 98).

- If there are a great number of still images, it may be quicker to find it using the 9-image display playback (see page 101).
- 

**2** Press the **MODE** button to display the Playback Setting Screen.



**3** Select the “**EDIT PHOTO**” icon , and press the **SET** button.

- The Edit Photo Screen appears.
- 

**4** Select the “**RESIZE**” icon , and press the **SET** button.



**5** Press **[▲]** or **[▼]** on the arrow button to select the finished image size.

**640**: The saved image will be 640 x 480 pixels.

**320**: The saved image will be 320 x 240 pixels.

**EXIT**: Return to the Edit Photo Screen.

---



**6** Press the **SET** button.

- A screen confirming whether the size change is correct appears.
- 

**7** Select “**YES**”, and press the **SET** button.

- “**PROCESSING**” appears on the screen, and then you return to the Edit Photo Screen.



---

## HELP

### If the message “**CAN NOT RESIZE**” appears

- The selected image cannot be resized. Select an image with a resolution of **1600** or greater. If an image with a resolution of **640** is selected, select **320** in step 5.

---


# IMAGE PROTECT MODE (PREVENTING ACCIDENTAL ERASURE)

---

By using the image protect mode, you can prevent accidental erasure of the important data that you wish to keep. The protect mode can be applied to a still image, to single images of a sequential shot, to a video clip, or to an audio recording.

---

- 1 Display the data that you want to protect.**
    - See “PLAYING BACK STILL IMAGES” on page 98, “PLAYING BACK SEQUENTIAL SHOTS” on page 102, “PLAYING BACK VIDEO CLIPS” on page 103, or “LISTENING TO AUDIO RECORDINGS” on page 107.
  - 2 Press the MODE button to display the Playback Setting Screen.**
- 

- 3 Select the “PROTECT” icon , and press the SET button.**
    - “LOCK?” appears.
    - If the protect mode has already been set for the data, then “UNLOCK?” appears.
- 

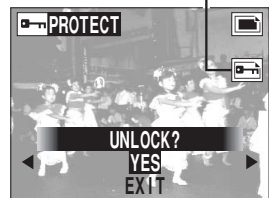
- 4 Select “YES” and press the SET button.**
  - The protect mode is set for the data.
  - The protect indicator is displayed for the data.
  - To set the protect mode for other data of the same type, press [◀] or [▶] to display the desired data and perform this step again.
  - To return to the Playback Setting Screen, press the MODE button, or select “EXIT” and press the SET button.



Ex.: Still Image Playback Setting Screen



Protect indicator



---

## NOTE

- Even if the protect mode is set for certain data files, they will be erased if the card is reformatted (see page 124).

### To cancel the protect mode for an image

- Display the desired data and repeat steps 2 to 4 above. The protect indicator will disappear and the protect mode is cancelled.



---

# ERASING DATA

---

You can erase data that is stored on the card if you no longer need it. You can erase the images, video clips, and sound recordings one at a time, or all at once.

---

## 1 Display the data that you want to erase.

- See “PLAYING BACK STILL IMAGES” on page 98, “PLAYING BACK SEQUENTIAL SHOTS” on page 102, “PLAYING BACK VIDEO CLIPS” on page 103, or “LISTENING TO AUDIO RECORDINGS” on page 107.

---

## 2 Press the MODE button to display the Playback Setting Screen.

---

## 3 Select the “ERASE” icon , and press the SET button.

- The Erase Screen appears.



---

## 4 Press [▲] or [▼] on the arrow button to select the type of erase.

### For still images:

- ONE ERASE: Erases one still image at a time.  
GROUP ERASE: Erases all the still images.  
EXIT: Returns to the Playback Setting Screen.

### For sequential shots:

- ONE ERASE: Erases the one still image displayed.  
GROUP ERASE: Erases the entire folder for the sequential shot displayed (the data for other sequential shots remains).  
EXIT: Returns to the Playback Setting Screen.

### For video clips:

- ONE ERASE: Erases the video clip displayed.  
GROUP ERASE: Erases all the video clips.  
EXIT: Returns to the Playback Setting Screen.

### For audio recording:

- ONE ERASE: Erases one audio recording at a time.  
GROUP ERASE: Erases all the audio recordings.  
EXIT: Returns to the Playback Setting Screen.



---

# ERASING DATA

---

## 5 Press the SET button.

- The Erase Confirmation Screen appears.
- If “ONE ERASE” has been selected, you can press [◀] or [▶] to select the data to erase.



---

## 6 Press [▲] on the arrow button to select “YES”.

YES: Erases the selected data.

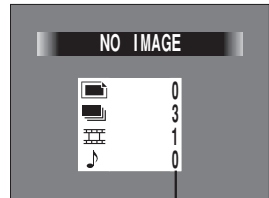
EXIT: Does not erase the selected data and returns to the Erase Screen.



---

## 7 Press the SET button.

- “ERASING” is displayed while the data is erased.
- If you try to erase a protected image, “PROTECTED” will appear and you return to the Erase Confirmation Screen. The data is not erased. To erase the data, you must first cancel the protect mode (see page 115).
- To erase other data, press [◀] or [▶] to display the data that you want to erase and repeat steps 6 and 7.
- If all data is erased, then “NO IMAGE” or “NO AUDIO” will appear.



Displays the number of remaining still images, sequential shots, video clips, and audio recordings.

---

■ When you have finished erasing data, turn off the digital camera.

---

### NOTE

- Even if you select “GROUP ERASE”, protected data will not be erased. If you want it to be erased, you need to first remove the protection (see page 115).

---

# COPYING IMAGES

---

You can select one image from a sequential shot or one image (scene) from a video clip and copy it and save it as a still image (the original data remains untouched).

---

## 1 Display the desired image from a sequential shot or video clip.

- See “PLAYING BACK SEQUENTIAL SHOTS” on page 102, or “PLAYING BACK VIDEO CLIPS” on page 103.
- 

## 2 Press the MODE button to display the Playback Setting Screen.

## 3 Select the “COPY” icon and press the SET button.

- The Copy Screen appears with “YES” selected.  
YES: Copies and saves the image displayed as a still image (the original data is left untouched).  
EXIT: Cancels the copy and returns you to the Playback Setting Screen.
- To copy a different image, press [◀] or [▶], or turn the jog dial, to display the desired image.



Ex.: Sequential Shot  
Playback Setting Screen



Copy Screen

---

## 4 Press the SET button.

- “PROCESSING” appears and you return to the Copy Screen.
  - The image is copied and saved in the still image folder.
  - Press the MODE button to return to the Playback Setting Screen.
- 

### HELP

#### If “MEMORY FULL” appears

- This indicates that there is not enough available memory to save the copied image. The image copy will use up the same amount of memory as the original image. If you wish to save the image, you must first erase some data in order to free some of the memory (see page 116).

---

# AUTO ROTATE PLAYBACK SETTING

---

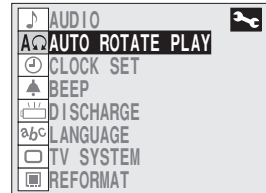
Images captured in the still image shooting mode or sequential shot shooting mode with the camera held vertically can be rotated automatically 90 degrees when they are played back.

---

**1** Display the Playback Option Setting Screen (see page 41).

---

**2** Select “AUTO ROTATE PLAY”.

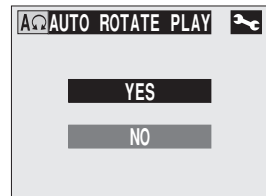


**3** Press the SET button.

- The Auto Rotate Play Setting Screen appears.

YES: Images captured with the camera held vertically are automatically rotated 90 degrees when they are played back.

NO: Images are not rotated.



**4** Select “YES”, and press the SET button.

- The auto rotate playback is set, and the LCD monitor returns to the Playback Options Setting Screen.
- 

## CAUTION

**If the auto rotate playback function does not work...**

- The auto rotate playback function uses the gravity exerted on the camera when the image was captured [page 59] to record the image orientation data. For this reason, when an image is captured with the lens pointed downward, for example, the image orientation data may not be recorded. When the image orientation data is correctly recorded, it is indicated by an arrow above the focus icon that appears when the image is focussed. To take advantage of the auto rotate playback function, confirm that an arrow appears above the focus icon when you are capturing the image.

---

# REQUESTING PRINTING


---

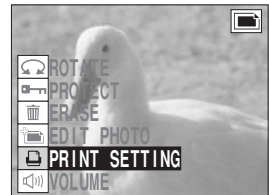
You can take your card to shops offering digital print services and have your still images printed out like photographs. This digital camera is DPOF-compatible so that if you take your digital camera to shops that handle the DPOF format, you can set the number of printouts and the printing of the date at the digital camera. If you want to print out a still image from sequential shots or a scene of a video clips at a digital print service shop, you must first copy the image and save it as a still image (see page 118). For more information regarding printing out your images, consult your nearest digital print service.

---

## Displaying the Print Setting Screen

---

- 1** Display the still image to be printed (see page 98).
- 2** Press the **MODE** button to display the Playback Setting Screen.
- 3** Select the “**PRINT SETTING**” icon , and press the **SET** button.
  - The Print Setting Screen appears.
    - STANDARD:** For printing one image on one sheet (see page 121).
    - INDEX:** For printing out a small copy of all the images for indexing purposes (see page 122).
    - ALL CLEAR:** For clearing all print settings (see page 123). This does not appear when no print settings have been made.
    - EXIT:** For returning to the Playback Setting Screen.
  - To return to the Playback Setting Screen, press the **MODE** button, or select “**EXIT**” and press the **SET** button.



---

### NOTE

#### About the DPOF format

- DPOF (Digital Print Order Format) is a print order format. It enables highly efficient printing from digital cameras and allows DPOF-compatible digital cameras to print out to DPOF-compatible printers.

---

# REQUESTING PRINTING

---

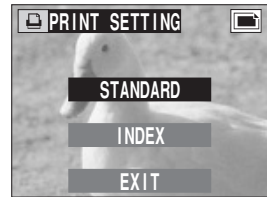
## Standard print

Printing out one image on one sheet is called a “standard print”. With the standard print, you can specify how many copies you want to print out and whether you want the date printed out as well.

### Setting the Number of Printouts

---

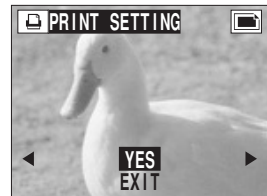
**1** Display the Print Setting Screen (see page 120).



**2** Select “STANDARD”.

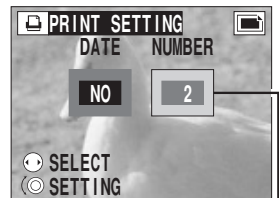
**3** Press the SET button.

- The Standard Print Screen appears.  
YES: To set the standard print settings.  
NO: To clear the number of printout and date settings made for the selected image. (This does not appear if nothing has been specified.)  
EXIT: To return to the Print Setting Screen.
- Press [◀] or [▶] on the arrow button, or turn the jog dial, to specify a different image for the print settings.



**4** Select “YES” and press the SET button.

- The Copies/Date Printout Screen appears.
- The setting for the number of printouts is displayed in orange.



Number of printouts

**5** Turn the jog dial to set the number of printouts.

- The number of printouts can be set from 1 to 9.
- This completes the setting for the number of printouts.  
To print out the date, perform steps 6 and 7 after setting the desired number of printouts.
- To not print out the date, skip to step 7.

---

#### NOTE

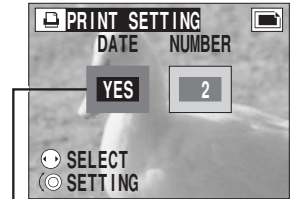
- The quality of the print output will differ depending on the print service and printer used.
- Images that have been rotated will be printed out in their original orientation.

## Specifying the Printout of the Date

- 6** Press [◀] on the arrow button to select the date printout command field and then turn the jog dial to specify the desired setting.

YES: To print out the date.

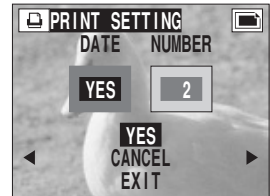
NO: To not print out the date.



Specifying the Printout of the Date

- 7** Press the SET button.

- This completes the setting of the number of printouts and the date printout.
- You return to the Standard Print Screen.
- To continue and set the print settings for another image, turn the jog dial to display the desired image, and repeat steps 4 to 7.
- To return to the Playback Setting Screen, press the MODE button, or select "EXIT" and press the SET button.



- When you have finished making the settings, turn off the digital camera.

## Index print

Printing out many images in a very small size on one sheet is called an "index print". This is convenient for use as a list of the images you have captured.

- 1** Display the Print Setting Screen (see page 120).

- 2** Select "INDEX".



Print Setting Screen

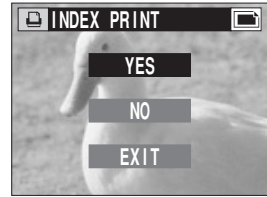
---

# REQUESTING PRINTING

---

## 3 Press the SET button.

- The Index Print Screen appears.  
YES: To set the index print settings.  
NO: To clear the index settings.  
EXIT: To return to the Print Setting Screen.



Index Print Screen

## 4 Select "YES" and press the SET button.

- This completes the setting for the index print.
- You return to the Print Setting Screen.
- To return to the Playback Setting Screen, press the MODE button, or select "EXIT" and press the SET button.

---

# Clearing the print settings

---

## 1 Display the Print Setting Screen (see page 120).

## 2 Select "ALL CLEAR".

## 3 Press the SET button.

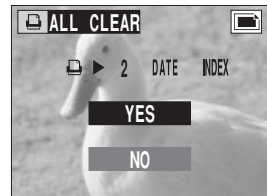
- The All Clear Screen appears.  
YES: To clear the print settings for all images.  
NO: To not clear the print settings and return to the Print Setting Screen.



Print Setting Screen

## 4 Select "YES" and press the SET button.

- All the print settings are cleared and you return to the Print Setting Screen.
- To return to the Playback Setting Screen, press the MODE button, or select "EXIT" and press the SET button.



All Clear Screen

---

### NOTE

- The current print settings for each image can be checked on the Information Screen.

Ex.: Two copies of a standard print  
with the date and one index print.





---

# REFORMATTING THE CARD

---

The data for all images, video clips, and sound files taken by the digital camera are stored on the card installed inside the digital camera. Therefore, you must first install a card to enable the digital camera to be used (see page 27).

Before you first use a card with the digital camera, or if a card you are using begins to operate incorrectly or becomes unreadable due to static electricity or some other cause, it is necessary to reformat the card by following the procedure given below. Also, if you use a card from another manufacturer or use a card formatted with a personal computer, it is also necessary to reformat the card with the digital camera.

If you reformat the card and it continues to operate improperly, then the card may be damaged. Replace it with a new one.

## WARNING:

When you reformat a card, remember that all data on the card is erased, even data with the protect mode set (see page 115).

---

**1** Display the Shooting Option Setting Screen (or Playback Option Setting Screen) (see page 31).

---

**2** Select “REFORMAT” and press the SET button.

- The Reformat Screen appears.

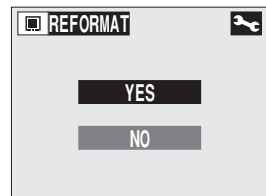
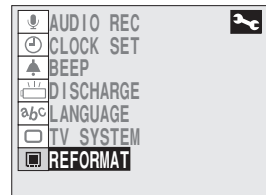
---

**3** Press [▲] on the arrow button to select “YES”.

---

**4** Press the SET button.

- Reformatting begins.
- Do not turn off the digital camera while it is reformatting the card.
- When reformatting is completed, you return to the Shooting Option Setting Screen (or Playback Option Setting Screen).



Reformat Screen

---

■ When you have finished reformatting the card, turn off the digital camera.

---

## NOTE

- The cards installed in the digital camera will become inoperable through time and eventually the recording and replaying of data will become impossible. At this time, it will become necessary to replace the card with a new one.
- Do not remove the card while the digital camera is accessing data on the card or while the accessing indicator is flashing (see page 28). Doing so may corrupt the data on the card. Sanyo Electric shall not be held responsible for any data that is damaged.
- For more details regarding the handling of the CompactFlash or Microdrive cards, see page 13.
- When not using the card, put it back into its protective cover.

---

# SETTING THE OPERATIONAL SOUNDS (BEEPS)

---

This setting allows you to set whether or not a beep sound is heard when the shutter release button, SET button, or MODE button is pressed.

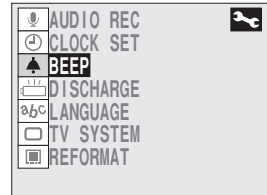
---

**1** Display the Shooting Option Setting Screen (or Playback Option Setting Screen) (see page 31).

---

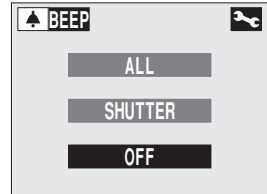
**2** Select “BEEP” and press the SET button.

- The Beep Sound Setting Screen appears.



**3** Select the desired setting and press the SET button.

- To cancel the setting, press the MODE button. You return to the screen in step 1.  
ALL: A beep is heard when any of the buttons is pressed.  
SHUTTER: A beep is heard when the shutter release button is pressed.  
OFF: The beep sound is turned off.
- This completes the beep sound setting.
- The display returns to the Shooting Option Setting Screen (or Playback Option Setting Screen).



---



## NOTE

- The beep volume cannot be adjusted.

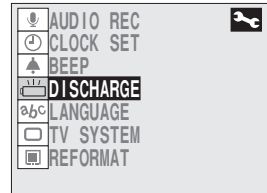
---

# DISCHARGING THE BATTERIES

---

Your digital camera is designed not to be affected by voltage fluctuations caused by the “memory effect” of nickel metal hydride batteries. However, there may be times when the remaining charge indicator for the batteries turns to  or  early. If this happens, discharge the batteries completely before charging them again.

- 
- 1** Display the Shooting Option Setting Screen (or Playback Option Setting Screen) (see page 31).



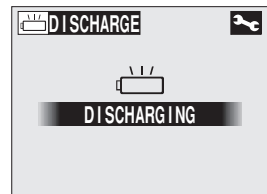
- 
- 2** Select “DISCHARGE” and press the SET button.

- The Discharge Screen appears.



- 
- 3** Select “START” and press the SET button.

- Battery discharge begins.
- The message “DISCHARGING” appears in the display while the batteries are being discharged.
- Leave your digital camera until the power turns off. Once discharge of the batteries is complete, your digital camera will turn off.
- Place the discharged batteries in the supplied battery charger and charge them until the recharge indicator turns off (see page 23).
- If you press the MODE button while the batteries are being discharged, battery discharge stops and you return to the Shooting Option Setting Screen (or Playback Option Setting Screen).



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## NOTE

- When discharging the batteries, make sure an AC adapter is not connected to your digital camera. If an AC adapter is connected, the battery discharge function will not operate.
- If an AC adapter is connected to your digital camera, “PLEASE USE BATTERIES” will appear. Insert the batteries to be discharged.
- Batteries cannot be charged by your digital camera. Remove the batteries and charge them in the battery charger supplied with your digital camera.

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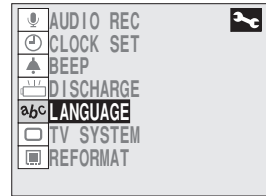
# CHANGING THE DISPLAY LANGUAGE

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You can set the LCD monitor of your digital camera to display messages in Japanese or English.

---

- 1** Display the Shooting Option Setting Screen (or Playback Option Setting Screen) (see page 31).



- 2** Select “LANGUAGE” and press the SET button.

- The Language Screen appears.
  - 日本語 : Select for Japanese display.
  - ENGLISH: Select for English display.



- 3** Select the desired language and press the SET button.

- You return to the Shooting Option Setting Screen (or Playback Option Setting Screen).

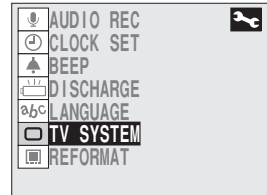
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# SETTING THE TV SYSTEM

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This setting is to specify the type of image signal that is output from the camera's DIGITAL/AV terminal.

**1** Display the Shooting Option Setting Screen (or Playback Option Setting Screen) (see page 31).



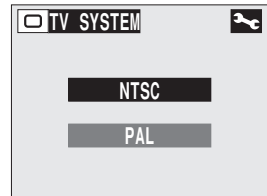
**2** Select “TV SYSTEM”, and press the SET button.  
● The TV System Setting Screen appears.

**3** Press [▲] or [▼] on the arrow button to select the appropriate TV system, and press the SET button.

NTSC: To output NTSC video signals

PAL: To output PAL video signals

- This completes the TV system setting.
- The display returns to the Shooting Option Setting Screen (or Playback Option Setting Screen).
- The TV system setting is retained even if the main switch is set to [▶] or “MONITOR OFF”, or if the camera is turned off.



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## NOTE

- If the TV system setting is not correct for the connected TV, you will not be able to view the images on the TV.
- When “PAL” is the selected setting, if the AV cable is connected to the camera's DIGITAL/AV terminal, no indication appears on the LCD monitor screen.

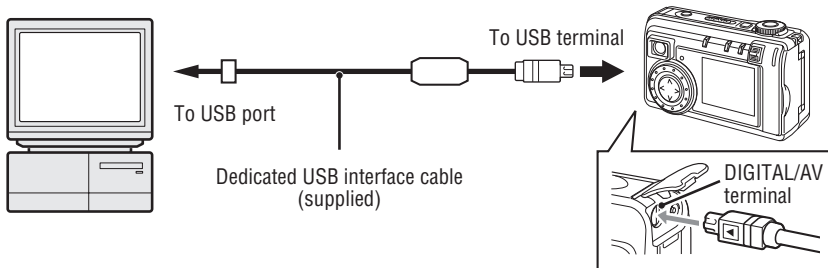
# USING THE CAMERA WITH A COMPUTER

When the supplied Sanyo Software Pack (CD-ROM) is installed in your personal computer, the data in the camera's card can be copied to the computer and processed. For more information, please read the Instruction Manual that accompanies the Sanyo Software Pack.

**1** Turn off your digital camera (see page 30).

**2** Open the terminal cover on the side of the digital camera (see page 21).

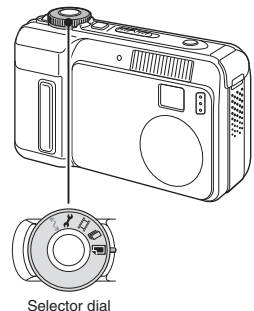
**3** Using the supplied dedicated USB interface cable, connect the camera connector to the camera and the computer connector to the proper terminal on your computer.



- Please connect the dedicated USB interface cable to your computer's USB connector. Do not connect it to the USB connector on your monitor or keyboard, or to the USB hub. Be especially careful when installing the driver software. In some instances, it may not be possible to correctly install the driver software.

**4** Set the selector dial to .

- When the camera is connected to a personal computer, you can use the Sanyo Software Pack to copy the data in the camera's card to your computer (download).
- More information about these operations can be found in the instructions included with the Sanyo Software Pack.







## NOTE

- When your digital camera is connected to a computer, there is no display on the LCD monitor.


# TROUBLESHOOTING

	Problem	Cause	Action	Reference page
Power	No power.	The batteries are dead.	Change or recharge the batteries.	23, 26
		The batteries have not been inserted correctly.	Reinsert the batteries, making sure the polarity (+), (-) is as indicated.	
		The battery compartment cover is not fully closed.	Close battery compartment cover properly.	
		Due to cold temperatures, the batteries temporarily lost their power.	Place the digital camera in your pocket to warm it up before using it.	48
Shooting	An image is not captured when the shutter release button is pressed.	The power is not turned on.	If the power save function has turned the digital camera off, then press the MODE button, or press once on the shutter release button to turn the digital camera back on.	30
		The stand-by indicator is flashing red (the digital camera is becoming ready to capture an image).	Wait until the stand-by indicator lights green to capture the image.	22
	Accessing indicator lights red.	Recorded data is being saved on the card.	Not a malfunction. Wait until the stand-by indicator lights green to capture the image.	—
	An image is not captured when the shutter release button is pressed.	The memory is full (the stand-by indicator lights red, the displayed remaining number of images that can be captured becomes [0] on the LCD monitor).	Install a new card.	27, 28
			Erase the images that are not necessary. Save the images to separate media, then erase all the images from the card.	52, 116
	The flash does not light.	The flash off mode is selected.	Set the flash to automatic flash mode or forced flash mode.	73
			The digital camera has determined that the image is bright enough and the flash is not necessary.	Not a malfunction. Capture the image; the digital camera will determine when the flash is necessary.
The batteries are dead.			Change or recharge the batteries.	23, 26



# TROUBLESHOOTING

	Problem	Cause	Action	Reference page
LCD monitor	When used in cold weather, the image may seem to leave traces as it moves.	Condition due to the liquid crystals.	Not a malfunction. Spots that appear in the LCD monitor only appear in the monitor and will not be recorded with the images.	—
	The image displayed contains some red, blue and green dots, or there are black spots visible.			
	The area around the LCD monitor is warm.	This is due to the internal structure and is normal.	Not a malfunction.	
	When capturing an image, no image is displayed on the LCD monitor.	The main switch is set to "MONITOR OFF".	Set the main switch to  .	61
	No playback image appears.	The main switch is not set to  .	Set the main switch to  .	96
Viewing images	The focus does not work.	The subject is too close to the digital camera.	The distance for macro photography (focus set to  ) is 10 to 50 cm. The distance for standard photography is 50 cm or more.	61, 71, 72
		The focus is not set properly.		
		The digital camera moved when the shutter was released.	Hold the digital camera correctly and slowly press the shutter release button halfway to lock the focus. Then press the shutter release button all the way to capture the image.	60, 61
		The focus is not locked properly.		
				When using a slow shutter setting, use a tripod to stabilize the digital camera.
		The lens is dirty.	Clean the lens.	12



	Problem	Cause	Action	Reference page
Viewing images	The image is too dark.	The flash was blocked by a finger or other object.	Hold the digital camera correctly, and make sure the flash is not obstructed.	—
		The subject was too far away.	Capture the image in the range of operation of the flash.	73
		The subject was lit from behind.	Use the forced flash mode. Use the exposure correction function.	81
		There is not enough light.	Adjust the shutter speed.	82
	Adjust the ISO sensitivity setting.		85	
	The image is too bright.	The forced flash mode is selected.	Select a different flash mode.	73
		The subject was too bright.	Change the angle of the digital camera.	—
			Use the exposure correction function.	81
	The ISO sensitivity setting is incorrect.	The ISO sensitivity setting is incorrect.	Set the ISO sensitivity to <b>AUTO</b> .	85
	The colors of the images captured indoors are not correct.	This is due to ambient lighting.	Capture the image using the forced flash mode.	73
		The white balance setting is incorrect.	Set the white balance setting correctly.	86
	Video clip picture is flickering.	The video clip was filmed under fluorescent lighting.	Set the flicker reduction setting.	87
	A part of the image is missing.	The hand-strap or a finger was blocking the lens.	Hold the digital camera correctly, and make sure the lens is not obstructed.	—
		The image was captured at close range.	When capturing an image at close range, use the close-up alignment correction marks or compose the image using the LCD monitor.	72
No image (  is displayed).	This may happen when trying to play back images stored on a card from a different digital camera.	Play back images stored on a card using this digital camera.	101	
Vertical stripes appear.	If a bright subject is shot in the video clip shooting mode, vertical stripes may appear on the LCD monitor or in the image.	Not a malfunction.	—	

# TROUBLESHOOTING

	Problem	Cause	Action	Reference page
Audio recordings	No sound.	The volume setting on the digital camera is too low.	Select the volume icon  and adjust the volume.	98
		No voice memo was recorded with the image.	Add a voice memo as desired.	109
	When using the Microdrive, excess noise was also recorded.	The drive noise for the Microdrive was also recorded.	Not a malfunction.	—
	A mechanical sound is heard during video clip playback.	The sound of the autofocus motor was recorded.	Not a malfunction.	—
Connecting to television set	No image or sound.	The digital camera is not correctly connected to the TV.	Follow the instructions to make the connection correctly.	106
		The TV input is not set correctly.	Set the input on the TV to "VIDEO".	
		The TV system setting is not correct.	Set to the correct TV system.	128
	There is no sound.	The volume on the TV is set to the minimum.	Adjust the volume on the TV.	106
The volume setting on the digital camera is too low.		Select the volume icon  and adjust the volume.		
Miscellaneous	A sound is heard when the main switch is moved or the digital camera is turned on.	Normal condition.	Not a malfunction.	—
	The digital camera cannot be operated.	A temporary internal circuitry problem may be the cause.	Remove the batteries from the digital camera, wait a few minutes then reinstall the batteries and try again.	
	"SYSTEM ERROR" is displayed.	A problem has occurred within the digital camera or card.	<p>Check the following items</p> <ol style="list-style-type: none"> <li>① Remove the card and then install it again.</li> <li>② Remove the batteries and then install them again.</li> <li>③ Remove the batteries, wait approx. 1 hour, and then install them again.</li> <li>④ Install a different card.</li> </ol> <p>If "SYSTEM ERROR" still appears after performing the above steps, then take the digital camera to the dealer for service.</p>	

# SPECIFICATIONS

## Digital Camera

Type	CCD digital camera (recording and playback)
Recording system	Digital recording
Image file format	Still images: JPEG format, TIFF (no compression) format (DCF and DPOF compliant) Note: The DCF (Design rule for Camera File System) is a standard established by the JEIDA (Japan Electronic Industry Development Association) for digital data files such as image files including DSC, so they can be shared mutually by peripheral electronic devices. It does not, however, mean that DCF-compliant files are perfectly compatible among such peripheral electronic devices. Video clips: QuickTime Movie Audio: wav (monaural)
Data storage media	CompactFlash (Type I/II) Microdrive
Camera resolution (pixels)	3.95 million pixels
Image sensor	1/1.8-inch CCD solid-state type image pickup, about 4,130,000 pixels (image elements)
Recording resolution	3,264 x 2,448 pixels (still images only) 2,880 x 2,160 pixels (still images only) 2,288 x 1,712 pixels (still images and sequential shots only) 1,600 x 1,200 pixels (still images and sequential shots only) 640 x 480 pixels (still images and sequential shots only) 320 x 240 pixels (video clips only) 160 x 120 pixels (video clips only)
Video clip frame rate	15 fps
Data compression	SFINE (super compression) (for still images and sequential shots only) FINE (low compression) (for still images and sequential shots only) NORM (moderate compression) (for still images and sequential shots only) TIFF (no compression) (for still images only)
White balance	Full-auto TTL, manual setting possible
Lens	Optical 2.8x zoom lens f=7.25mm-20.3mm (35mm film camera conversion f=35mm-98mm) Auto focus, auto iris 5 groups, 7 elements
Focus type	Multi-section focus, spot focus
Aperture	Open F=2.8 (Wide) to 4.8 (Tele) Minimum F=8.0 (Wide) to 8.3 (Tele)
Exposure control type	Aperture and shutter programmable AE, shutter speed priority AE, aperture priority AE, manual exposure control Exposure correction available from the Shooting Setting Screen (0±1.8EV in 0.3EV steps)
Light measuring method	Multi-section light measuring, center light measuring, spot measuring
Range	50 cm to infinity (normal photography), 10 cm (wide), 25 cm (tele) to 50 cm (macro photography)
Digital zoom	For shooting Resolution [1600] [640] [320] [160]: 1x to 4x For playback 1x to 51x (varies with resolution)

# SPECIFICATIONS

Shutter	Still image shooting mode: 16 to 1/1,000 sec. (Slow shutter: 16, 8, 4, 2, 1 sec.) (Flash: 1/30 to 1/1,000 sec.) Sequential shot and video clip shooting modes: 1/30 to 1/1,000 sec.	
Sensitivity	Auto (equivalent to ISO100 to 400), and equivalent to ISO100, ISO200, and ISO400 (set from Shooting Setting Screen)	
Viewfinder	Optical direct image zoom viewfinder	
LCD monitor	1.8-inch low temperature polysilicon TFT color liquid crystal	
LCD monitor pixels	Approx. 110,000 pixels	
Flash working range	0.5m to 3.9m (normal shooting lens at Wide setting), 0.5m to 2.3m (normal shooting lens at Tele setting), 0.15m to 0.5m (macro shooting lens at Wide setting), 0.25m to 0.5m (macro shooting lens at Tele setting)	
Flash modes	Auto-flash, forced flash, flash off, and red-eye reduction	
Autofocus	TTL-type AF	
Self-timer	10-second delay	
Time/date	Recorded with image data	
Ambient environment	Temperature	0 to 40°C (operation), -20 to 60°C (storage)
	Humidity	30 to 90% (operating, no condensation), 10 to 90% (storage, no condensation)
Power supply	Battery	2 AA nickel metal hydride batteries (HR-3USV)
	AC adapter (sold separately)	VAR-G4EX: for VPC-AZ1EX only VAR-G4E: for VPC-AZ1E only VAR-G4U: for VPC-AZ1 only
Dimensions	106 (W) x 63 (H) x 41 (D) mm	
Weight	Approx. 230 g (without batteries and card)	

## Digital Camera Connectors

DIGITAL/AV (communication/sound and image output) terminal	Regrouped jack	
	Audio output	207 mVrms (-12 dBs), 2.2 kΩ or less, monaural
	Video output	1.0 Vp-p, 75 Ω unbalanced, sync negative, composite video NTSC color TV system/PAL TV system switchable
	USB connector	USB port
DC IN (external DC power input) terminal	DC 3.4 V (for exclusive use with separately sold AC adapter VAR-G4EX/E/U)	

## Battery Operation

Shooting	640 images: LCD monitor off, images captured in 20-second intervals, and flash used 1 in 3 times
	180 images: LCD monitor on, images captured in 20-second intervals, and flash used 1 in 3 times
Playback	130 minutes: LCD monitor on, and continuous playback

- Approx. number of images/time until batteries run out when using the supplied 16MB CompactFlash card and batteries (fully charged) at a 20°C ambient temperature.
- The time of operation may vary depending on the conditions of the batteries and the conditions of use. Especially when used at temperatures below 10°C, the battery operation time is drastically reduced.

## Possible No. of Images/Possible Shooting Time/Possible Recording Time

The table shows the possible number of images, the possible shooting time, and the possible recording time when using the supplied 16MB CompactFlash card and a commercially available 1GB Microdrive card.

Shooting/recording mode	Resolution setting	Compression or sound quality setting	CompactFlash (16MB)		Microdrive (1GB)	
			The maximum no. of images, shooting time, recording time when the shutter release button is pressed once	The maximum no. of images, shooting time, recording time that can be stored	The maximum no. of images, shooting time, recording time when the shutter release button is pressed once	The maximum no. of images, shooting time, recording time that can be stored
Still image mode (no voice memo)	3264	(FINE)	–	4 images	–	267 images
		(FINE)	–	6 images	–	400 images
		(NORM)	–	8 images	–	597 images
	2880	(FINE)	–	5 images	–	342 images
		(FINE)	–	7 images	–	513 images
		(NORM)	–	11 images	–	764 images
	2288	(TIFF)	–	1 images	–	91 images
		(FINE)	–	8 images	–	538 images
		(FINE)	–	12 images	–	801 images
		(NORM)	–	18 images	–	1,173 images
	1600	(FINE)	–	16 images	–	1,095 images
		(FINE)	–	24 images	–	1,564 images
(NORM)		–	36 images	–	2,347 images	
640	(FINE)	–	93 images	–	5,476 images	
	(FINE)	–	135 images	–	8,215 images	
	(NORM)	–	187 images	–	10,953 images	
Sequential shot mode	2288	(FINE)	8 images	8 images	8 images	538 images
		(FINE)	12 images	12 images	13 images	801 images
		(NORM)	18 images	18 images	20 images	1,173 images
	1600	(FINE)	16 images	16 images	18 images	1,095 images
		(FINE)	24 images	24 images	27 images	1,564 images
		(NORM)	36 images	36 images	40 images	2,347 images
	640	(FINE)	93 images	93 images	99 images	5,476 images
		(FINE)	99 images	135 images	99 images	8,215 images
		(NORM)	99 images	187 images	99 images	10,953 images
Video clip mode	320	–	46 sec.	46 sec.	70 sec.	51 min. 32 sec.
	160	–	3 min. 04 sec.	3 min. 04 sec.	5 min. 00 sec.	3 hr. 26 min. 10 sec.
Sound recording mode	–	–	15 min.	33 min. 35 sec.	15 min.	37 hr. 23 min. 18 sec.

- Even with cards of the same capacity, the amount of data that can actually be stored may differ depending on the card brand, etc.

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# SPECIFICATIONS

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## **Cautions when using the Microdrive**

- When using the Microdrive continuously, the card will become very hot. Be careful when touching the card for removal, etc.
- When using the Microdrive, it will take a few seconds after the digital camera is turned on before the card can be used. This time will increase when more data is stored on the card.
- When erasing a large amount of data with the "GROUP ERASE" command, you may have to wait a few seconds. (It will take approx. 2 minutes to erase 400 still images from the Microdrive.)
- It will take a great deal of time to download large amounts of data from the Microdrive to your computer.
- Microdrive cards require more power than CompactFlash cards. Therefore the possible battery operation time (see page 135) when using the Microdrive will be much less than that when using a CompactFlash card.
- Microdrive cards are easily damaged by vibrations. Be sure to read the cautions supplied with the Microdrive.

## Supplied CompactFlash

Memory capacity	16 MB	
Ambient environment	Temperature	0 to 60°C (operation), -20 to 65°C (storage)
	Humidity	8 to 95% (operation, storage, no condensation)
Operating voltage	DC 3.3 V/5 V	
Dimensions	42.8 (L) x 36.4 (W) x 3.3 (H) mm	
Weight	Approx. 9 g	

## Supplied Battery Charger

Power source	AC 100 to 240 V, 50 to 60 Hz, 10 to 16 VA	
Rated output	DC 1.2V, 460 mA x 4/920 mA x 2	
Compatible batteries	Supplied or separately sold AA/AAA-size nickel metal hydride batteries (HR-3USV, HR-3US, HR-4US) Separately sold AA/AAA-size Ni-Cd batteries (N-3US, N-3U, N-4U)	
Ambient environment	Temperature	0 to 40°C (recharge), -20 to 60°C (storage)
	Humidity	10 to 90% (no condensation)
Dimensions	65 (W) x 105 (H) x 26 (D) mm	
Weight (without power cord)	Approx. 90 g	
Power cord rated value	VPC-AZ1	AC 125 V, 3 A
	VPC-AZ1E	AC 250 V, 2.5 A
	VPC-AZ1EX	AC 250 V, 2.5 A

- When using the supplied battery charger abroad, the power cord may need to be replaced in accordance with local requirements. Please contact your local dealer for details.

## Supplied Nickel Metal Hydride Batteries

Model number	HR-3USV (AA nickel metal hydride batteries)	
Voltage	1.2 V	
Capacity	Min. 1,600 mAh	
Ambient environment	Temperature	0 to 40°C (recharged) 0 to 50°C (discharged) -20 to 30°C (storage)
	Humidity	45 to 85% (no condensation)
Weight	Approx. 27 g (each)	

- Products are subject to change in design and specifications without notice and without incurring any obligation.



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**SANYO Electric Co., Ltd.**



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