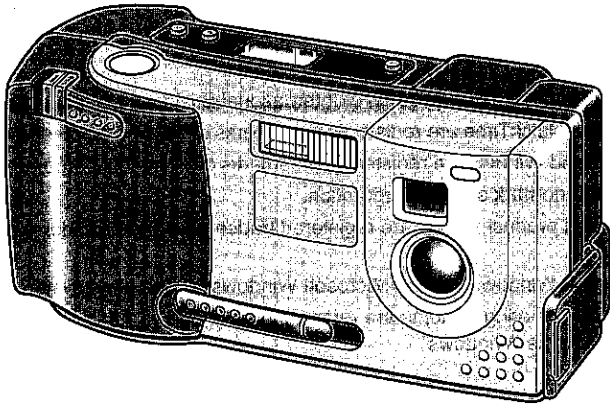


SANYO

INSTRUCTION MANUAL

VPC-G100EX

Color Digital Camera



Please read these instructions carefully before using the camera. Be sure to keep this manual for later reference.

BEFORE READING THE MANUAL

Caution

If the digital camera is used close to a radio or TV receiver, it may cause interference. Make sure to follow the instructions in your instructions manual for proper connection and use.

Be sure to use only the supplied cables when connecting your digital camera. Also, make sure that the cores installed on the supplied cables are not removed and that their mounting location is not changed.

- This manual or part of this manual may not be reproduced without prior written permission.
- The contents of this manual may be changed without any prior notice.
- We decline all responsibility for any damage or other resulting from the use of this camera.
- We decline all responsibility for any damage due to an improper use of the camera, due to improper application of the instructions given in this manual, or due to repairs or changes done by other than a technician authorised by the manufacturer.
- We will not be held responsible for any damage caused by the use of add-ons other than the original accessories, or equivalent as specified.
- We decline all responsibility concerning the loss of data, down time, loss of revenue due to a repair done by other than a technician authorised by the manufacturer.
- The pictures taken with this camera differ in quality from pictures taken with a standard film camera.

Symbols used in this manual

NOTE Points giving some extended instructions or special points to pay attention to.

HINT Points that may prove useful when using the camera.

HELP In case of problem, this may help in certain situations.

IBM PC and IBM are registered trademarks of International Business Machines Corporation.

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

Microsoft, Windows and Win32S are registered trademarks of Microsoft Corporation.

i486 is a registered trademark of Intel Corporation.

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

A note about Microsoft Windows 3.x and Microsoft Windows 95 operating systems:

In this manual, these operating systems are referred to as Windows 3.1 or Windows 95, and sometimes abbreviated as "Windows".

TABLE OF CONTENTS

	Page
USING YOUR DIGITAL CAMERA SAFELY AND CORRECTLY	3
USING YOUR DIGITAL CAMERA	10
ENJOYING YOUR DIGITAL CAMERA	13
PARTS NAMES	14
USING THE HAND-STRAP	18
INSTALLING THE BATTERIES	19
TURNING THE POWER ON/OFF	20
POWER SAVE FUNCTION	21
BATTERIES CHARGE LEVEL INDICATOR	22
PICTURE QUALITY (RESOLUTION)	23
TAKING PICTURES	24
AUTOFOCUS	27
NUMBER OF PICTURES THAT CAN BE TAKEN	28
FLASH	30
MULTIPLE PICTURES PHOTOGRAPHY	32
SELF-TIMER	33
MACRO PHOTOGRAPHY	34
PLAYING BACK ONE PICTURE	35
AUTOMATIC PLAYBACK, 9 PICTURES MULTI-PLAYBACK	36
PLAYING BACK PICTURES ON A TV SET	38
PICTURE PROTECTION	39
ERASING PICTURES	41
USING THE CAMERA WITH THE COMPUTER	45
TROUBLESHOOTING	46
SPECIFICATIONS	49

USING YOUR DIGITAL CAMERA SAFELY AND CORRECTLY

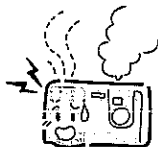
Safety Precautions

WARNING

■ Do not use the camera if it makes a strange noise, emits a strange odor or if smoke comes out from it

- If the camera is used under these conditions, that may cause a fire or electric shock. Immediately remove the batteries, wait to make sure no more smoke comes from the unit, then take it to the dealer for service.

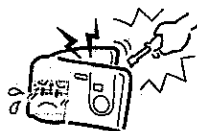
The user should not try to open or repair the unit.



■ Do not modify or open the cabinet

- High tension circuits inside, high risk of fire or electric shock if touched.

Any internal check, setting or repair should be referred to the dealer.



■ Do not use while driving

- While driving a car, motorcycle, etc., do not take pictures, playback pictures or look at the LCD monitor screen. That may cause an accident.
- It is dangerous to have the camera inside a car. Be careful with the camera inside the car, as it may fall behind the brake pedal and prevent braking.
- If using the camera while walking, be very careful with your environment and the traffic, in order to avoid accidents.



■ When taking pictures be aware of your environment

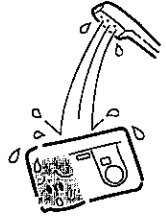
- Do not take pictures without fully understanding the environment situation, or that may cause an accident or injuries.
- Do not use the camera inside a plane or other places where its use may be restricted, as that may cause an accident.



WARNING

■ **Do not get the camera wet**

- This camera is not water-resistant, make sure it does not get wet, or that may cause a fire or electric shock.
- Do not use in a bathroom.
- If it got wet, turn the camera off, remove the batteries immediately, then take the camera to the dealer.
If used like that, it may cause a fire, electric shock or an accident.



■ **Do not use during a storm**

- Do not use when there is thunder as that indicates the risk of lightning.
In particular, if used in an open field you may be struck by lightning.
Quickly seek refuge in a place that will protect you from lightning.



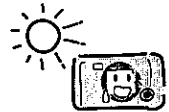
■ **Do not place on an unstable surface**

- It may fall down, causing injuries or damages.
- If the camera has fallen down, and the cabinet has been damaged, turn the camera off, remove the batteries and take it to the dealer.
If used like that, it may cause a fire or electric shock.



■ **Do not look into the sun**

- Do not take a picture of the sun or any other strong source of light. That may cause injuries to the eyes.



USING YOUR DIGITAL CAMERA SAFELY

AND CORRECTLY (CONTINUED)

WARNING

■ Do not take a picture using the flash close a person's face

- To prevent possible eye injury, do not take pictures of people's face (babies in particular) at close range using the flash. If the flash is discharged too close to a person's opened eyes, there is a risk that it may damage that person's eyesight. Never take a picture of people's face, especially babies, from a distance of less than 1 m.



■ Do not use where there is a risk of explosion

- Do not use the camera in a location where there is explosive gas, or any other flammable material in the air. That may set it on fire or cause an explosion.



■ Keep the camera away from children's reach

- The following may happen if children play with the 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 doctor immediately.
 - They may damage their eyesight if the flash goes off too close to their eyes.
 - They may get hurt by the camera.



CAUTION

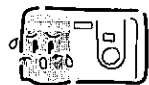
■ Precautions when carrying the camera

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



■ Precautions during use and for storage

- This camera is a precision instrument. When using or storing it, make sure to avoid the following types of conditions, in order to avoid damage.
 - Places in direct sunlight.
 - Places where humidity and temperature are high.
 - Places that may get wet.
 - 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.

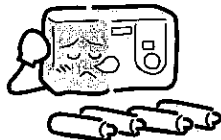


Environment of use

- | | |
|----------------------|---------------------------------------|
| • Temperature | • Humidity |
| 0 – 40°C (operation) | 30 – 90 % (operation, non condensing) |
| –20 – 60°C (storage) | 10 – 90 % (storage, non condensing) |

■ Precautions if the 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 camera and any other object placed close by. (When the batteries are removed, the time and date settings will be cleared.)
- The damages caused if the batteries leak are not covered by the manufacturer's warranty.



USING YOUR DIGITAL CAMERA SAFELY

AND CORRECTLY (CONTINUED)

CAUTION

■ Precautions concerning the batteries

- Use only AA Alkaline batteries, or the other specified types of batteries. Manganese batteries cannot be used, as they have a short battery life and may overheat causing damage to the camera.
- Do not use old batteries together with new ones. Do not use different types, such as Alkaline batteries or NiCd rechargeable batteries, etc., or batteries of different brands at the same time.
- Make sure not to invert the polarity ((+) and (-)) when installing the batteries. Install the batteries respecting the indicated polarity.
- If different types or brands of batteries are used at the same time, they may generate heat or leak, and that may start a fire, cause injuries or burns and damage the camera and any other object placed close by.

- Right after use, the batteries may be warm, if removing the batteries, turn off the camera and wait for the batteries to cool down.
- If the batteries leak and liquid gets on your hands or clothing, rinse with clean water. If the liquid gets into your eyes, you may lose your eyesight. Immediately rinse your eyes with clean water, then seek medical attention.
- Do not drop or hit the batteries.
- If the camera is not going to be used for a long period, remove the batteries and store them in a cool place. (When the batteries are removed, the time and date settings will be cleared.)
- When disposing of batteries, make sure to follow all applicable regulations.
- If used by temperatures below 10°C, the batteries service life will be shorter than normal.
- If using rechargeable batteries, make sure you use only the charger specified for the concerned batteries, and that they can be recharged safely.
- Read carefully all the documentation accompanying the rechargeable batteries and their charger.



■ Precautions concerning the use of the AC adaptor

- If you plan to use an AC adaptor with your digital camera (VPC-G100EX), only use the specified AC adaptor (model VAR-G2EX) sold separately. Make sure to never use an AC adaptor other than the one indicated here, conceived for specific use with your digital camera.
- If an AC adaptor other than the specific one listed here is used it may damage the camera, and cause a fire or electric shocks.
- For complete information on how to use the AC adaptor, please refer to the instructions accompanying the AC adaptor (model VAR-G2EX).

POINTS TO FOLLOW FOR CORRECT USE OF THE CAMERA

■ Before taking important pictures

- When taking important pictures, check to make sure that they can be correctly recorded.
- We cannot accept any responsibility, for pictures that cannot be recorded, or if all or any of the recorded pictures are erased or otherwise destroyed or damaged due to a problem with the camera, any of the accessories or software.

■ Concerning copyrights

- The pictures you take with your digital camera are for your own private use, any other use may violate the rights of copyrights owners.

■ Precautions when cleaning the cabinet

Cleaning

- ① Remove the batteries.
- ② Remove the dirt with a humid soft cloth.
To remove stains...
- ③ Wipe with a soft cloth moistened with a mild detergent solution and wrung dry, then wipe with a dry soft cloth.

Caution

- Do not use benzene, thinner or other chemical product on the cabinet, as that may cause deformation and/or discoloration and paint peeling.
When using chemically treated cloth, make sure to read carefully the instructions and warnings.
- Do not spray insecticide, etc., or any volatile products on the cabinet. Do not leave rubber or vinyl objects against the camera for a long period.
That may cause deformation and/or discoloration and paint peeling.

■ Precautions 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.

■ Precaution when not using the camera

When not used

- Set the Power and Lens cover switch to the "OFF" position.

When not used for a long period of time

- Remove the batteries. To keep all features functioning properly, from time to time, insert the batteries and check the camera operation.
- When batteries are left in the camera, a small amount of their power is used by certain functions of the camera. If using NiCd rechargeable batteries, they may become completely discharged and lose their ability to be recharged again.

USING YOUR DIGITAL CAMERA SAFELY AND CORRECTLY (CONTINUED)

■ Precautions concerning condensation (dew)

- If the digital camera is used with condensation inside, that may damage it.

What is condensation...

- Condensation (or dew) is the moisture that forms on the outside of a glass when filled with cold water. Condensation can also form in the inside of the camera.

Be careful of condensation in the following conditions

- When moving the camera suddenly from a cold place to a warm room.
- When the heater has been turned on to quickly heat the room.
- When the camera is placed in the path of cool air from an air conditioner.
- When the camera is placed where the humidity is high.

If condensation has formed

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

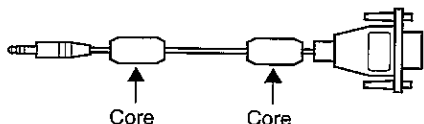
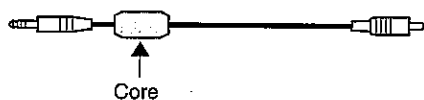
■ Precautions concerning undesired interference

- The digital camera may create undesired interference if used close to a TV or radio.

To avoid these interferences, follow the steps below.

When using the supplied video cable and the computer serial port interface cable

- Make sure the cores are not removed.



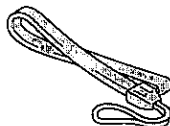
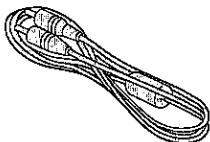
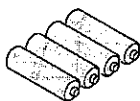
USING YOUR DIGITAL CAMERA

The basic operations of your digital camera are the same as for a standard film camera.

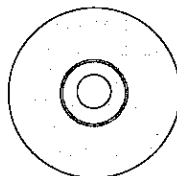
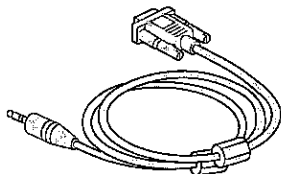
Preparation

❶ Open the box and check that all accessories are included.

- Before using or connecting any of the components, see "USING YOUR DIGITAL CAMERA SAFELY AND CORRECTLY" on page 3.
- 4 AA alkaline batteries [page 19]
- Video cable [page 38]
- Hand-strap [page 18]
- Computer serial port interface cable [page 45]
- Adaptor for Macintosh computer [page 45]
- Software



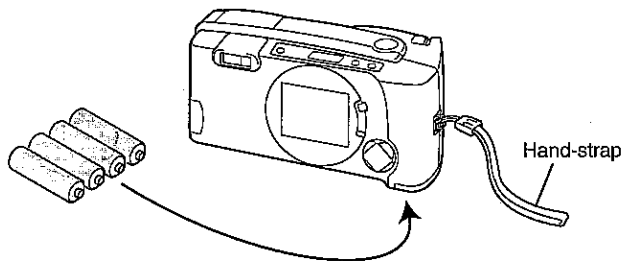
- Computer serial port interface cable [page 45]
- Adaptor for Macintosh computer [page 45]
- Software



- Instruction manuals



❷ Install the hand-strap, then insert the batteries.



See "USING THE HAND-STRAP" on page 18.

See "INSTALLING THE BATTERIES" on page 19.

USING YOUR DIGITAL CAMERA (CONTINUED)

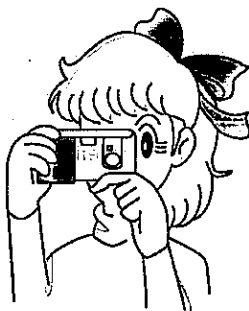
Using the Camera

1 Take pictures

- The pictures can be played back right on the spot.

If for any reason you do not wish to keep some or all of the pictures, they can be erased.

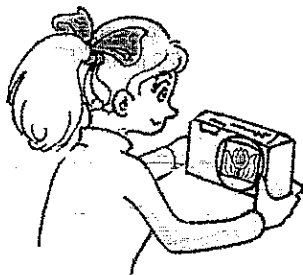
Take as many pictures as desired, without worrying about missed pictures. (For detailed information, see "TAKING PICTURES" starting on page 24.)



2 Playback your pictures

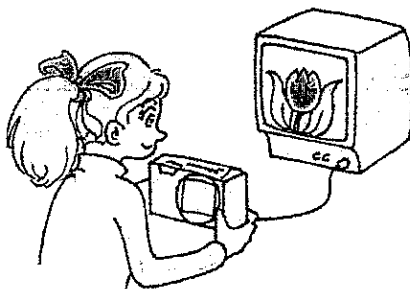
- The pictures do not need to be developed.

The pictures can be immediately displayed on the camera liquid crystal display (LCD) monitor screen. (For detailed information, see "PLAYING BACK ONE PICTURE" on page 35, and "AUTOMATIC PLAYBACK, 9 PICTURES MULTI-PLAYBACK" on page 36.)



The pictures can also be played back on any TV set.

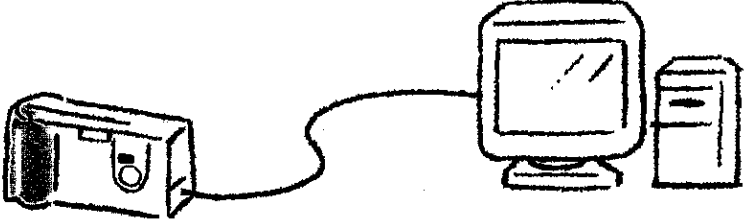
(For detailed information, see "PLAYING BACK PICTURES ON A TV SET" on page 38.)



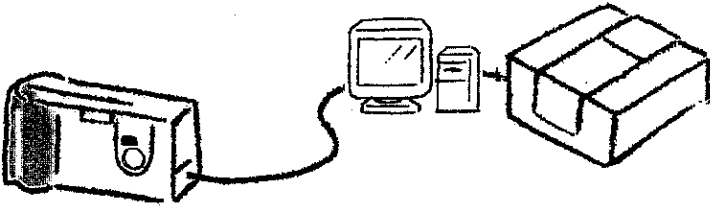
Using the supplied utility software, the possibilities are even greater.

Other Uses

- Using the computer connecting cable, the camera can be connected to a commercially available personal computer and the following becomes possible.
- ❶ The pictures can be downloaded to the computer hard disk.



- ❷ The pictures can be processed or edited.
- ❸ The pictures can be printed.
 - The pictures can be printed on any printer connected to the computer.



ENJOYING YOUR DIGITAL CAMERA

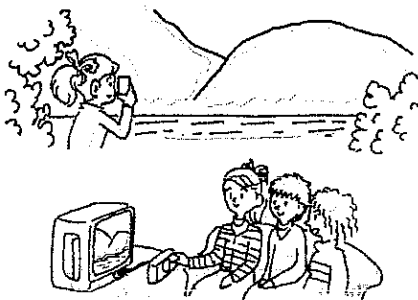
This digital camera is more convenient to use than a standard film camera, it can also be enjoyed in many different ways.

On a trip...

Playing back your pictures on a TV set.

View the pictures with friends or family, sound can also be added.

(See "PLAYING BACK PICTURES ON A TV SET" on page 38.)



At home...

Make postcards or invitations.

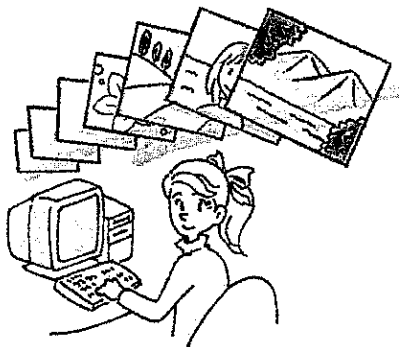
Using your personal computer, you can make personal and attractive postcards, invitations, etc.



At work...

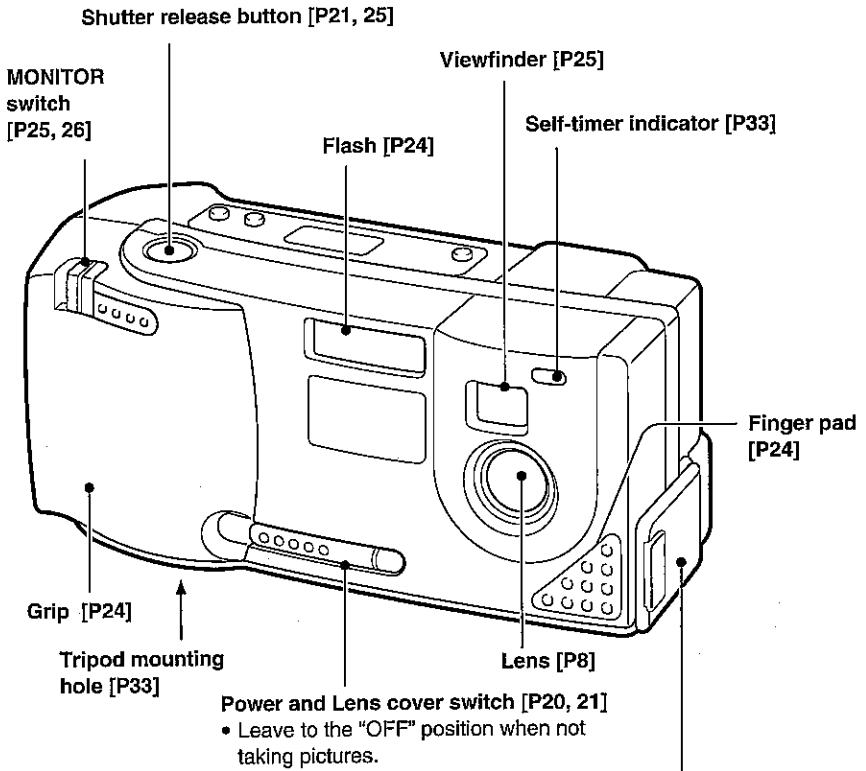
Send your pictures over a network, or publish them on the Internet.

Your pictures are saved as digital data and they can be sent using a computer connected to a network, or included in a Web page for Internet publications.



PARTS NAMES (FRONT)

[P] refers to the page(s) where the concerned part is explained.

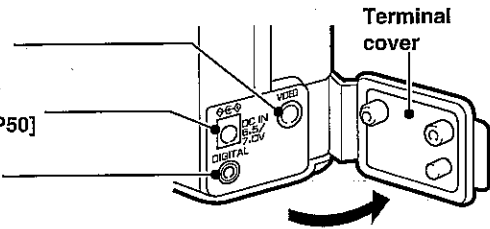


Connectors

VIDEO (Picture) output terminal [P29, 38]

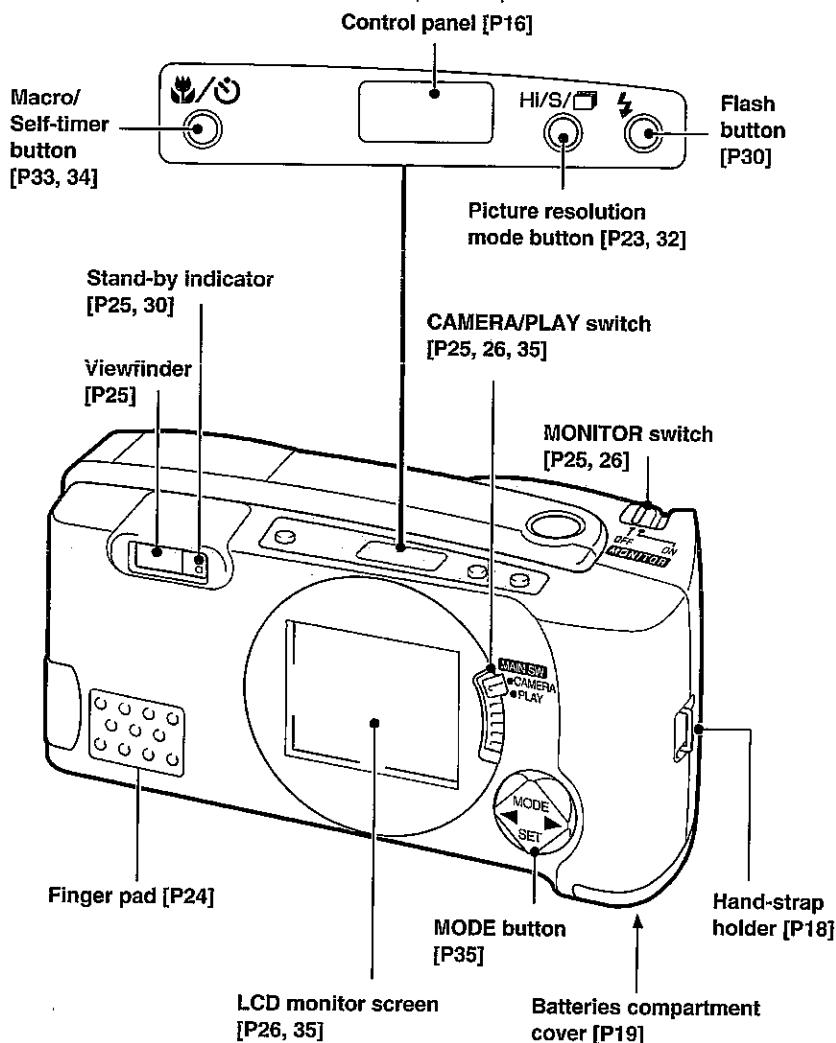
DC IN (External DC power input) terminal [P50]

DIGITAL (Communication) terminal [P45]



PARTS NAMES (REAR)

[P] refers to the page(s) where the concerned part is explained.



NOTE:

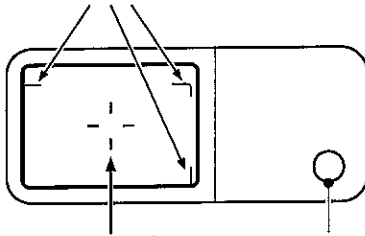
- During use, the area around the LCD monitor screen may become warm. This is due to a rise in temperature of the internal parts and is normal.
- When displaying pictures on the LCD monitor screen, you may see some missing pixels (such as black or white dots), this is normal and they will not appear when the picture is played back on a TV set or computer screen.

PARTS NAMES (VIEWFINDER, CONTROL PANEL)

[P] refers to the page(s) where the concerned part is explained.

Indications Inside the Viewfinder

Close-up alignment correction marks [P34]



Autofocus mark [P25]

Stand-by indicator [P25, 30]

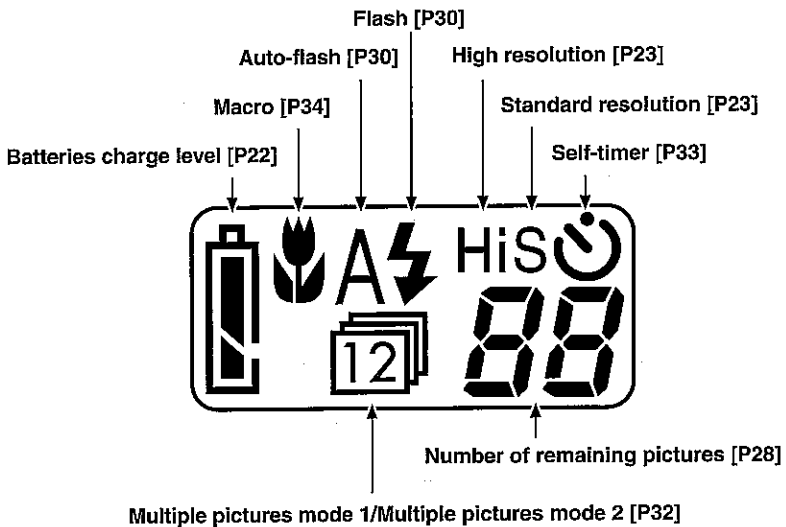
Red flashing: Getting ready to take a picture, the flash is being charged, storing a picture (a picture cannot be taken).

Red steady: Memory full (a picture cannot be taken)

Green: Ready (a picture can be taken)

Control Panel Indicators

All the indicators will not be displayed simultaneously as in the illustration.



PARTS NAMES (LCD MONITOR SCREEN)

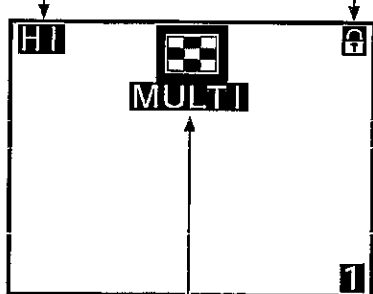
[P] refers to the page(s) where the concerned part is explained.

LCD Monitor Screen Icons

[1 picture display]

High resolution [P23]

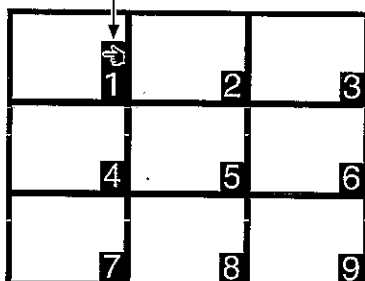
Protect mark [P39]









Picture number [P37]

[9 pictures multi-playback display]

Selection mark [P37]



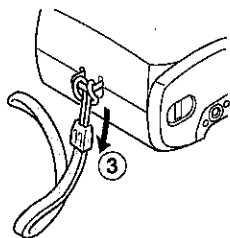
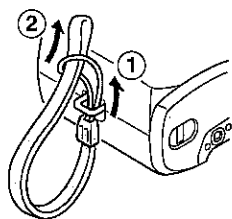
Picture number [P37]

icon	Meaning
	<p>Multi-playback mode To select the 9 pictures multi-playback mode.</p>
	<p>Protect mode To select or cancel the picture erasure protection mode.</p>
	<p>Erase mode To select the picture erase mode.</p>
	<p>One/All erase mode To select the erase one picture mode or the erase all pictures mode.</p>
	<p>Erase all confirmation To confirm the erase all pictures mode.</p>
	<p>Erasing During erasing.</p>

USING THE HAND-STRAP

Install the supplied hand-strap for convenience and security when holding the camera.

Installing the Hand-Strap



INSTALLING THE BATTERIES

This camera operates on four (4) AA size batteries. Make sure to use four batteries of one of the types indicated below.

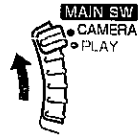
- Alkaline batteries
- NiCd rechargeable batteries

Caution

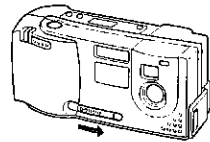
- Manganese batteries cannot be used, as they have a short battery life and may overheat causing damage to the camera.
- Before handling the batteries, see "Precautions concerning the batteries" on page 7.)

NOTE: For greater reliability, it is recommended to use NiCd batteries when available.

- 1** Set the CAMERA/PLAY switch to the "CAMERA" position.

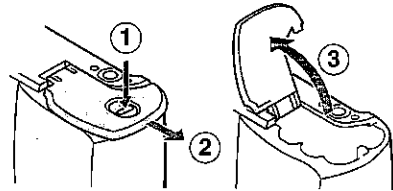


- 2** Set the Power and Lens cover switch to the "OFF" position.



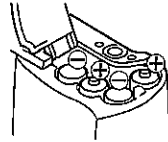
- 3** Open the batteries compartment cover.

- Slide the compartment cover button, while pushing it down.



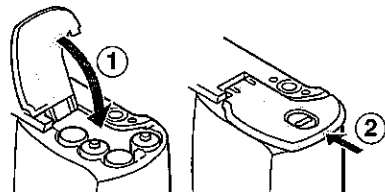
- 4** Insert the batteries in the batteries compartment.

- Make sure the batteries polarity ((+) (-)) is as indicated.



- 5** Close the batteries compartment cover.

- Close the cover, then slide the compartment cover in the direction of the arrow 2.



NOTE:

- Battery power is still being used even when the camera is turned off. It is recommended to remove the batteries from the camera when not being used. However, note that when the batteries are removed, the settings (time, date) entered with the utility software are cleared.

TURNING THE POWER ON/OFF

Turning the Power On

Follow the steps indicated below when taking pictures or playing back the pictures already taken on the LCD monitor screen.

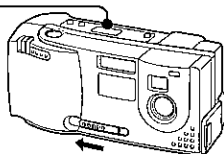
■ To take pictures

① Set the CAMERA/PLAY switch to the "CAMERA" position.



② Set the Power and Lens cover switch to the "ON" position.

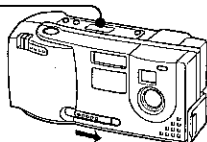
- The lens cover opens and the power is turned on.
- A display appears on the control panel.



■ To playback pictures on the LCD monitor screen

Set the CAMERA/PLAY switch to the "PLAY" position.

- The power is turned on.
- A display appears on the control panel.
- An image appears on the LCD monitor screen.
- Pictures can be played back whether the Power and Lens cover switch is set to the "ON" or "OFF" position. However, to protect the lens, we recommend to keep the Power and Lens cover switch to the "OFF" position.



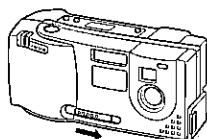
Turning the Power Off

① Set the CAMERA/PLAY switch to the "CAMERA" position.



② Set the Power and Lens cover switch to the "OFF" position.

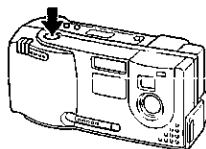
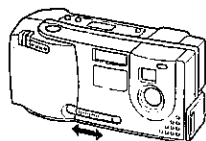
- The lens cover closes and the power is turned off.
- The display from the control panel is erased, and the power is turned off.



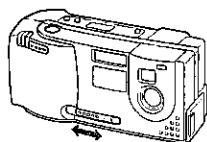
POWER SAVE FUNCTION

In order to save the batteries power, the power save function will automatically turn off the power after 1 minute in camera mode or 5 minutes in picture playback mode, if the camera is left on and is not used.

To continue taking pictures, restore the power by setting the Power and Lens cover switch to the "OFF" and "ON" position again, or pressing the Shutter release button once.



To continue playing back pictures, restore the power by setting the Power and Lens cover switch to the "OFF" and "ON" position again, or setting the CAMERA/PLAY switch to "CAMERA" then back to the "PLAY" position.



NOTE:





- The power save function will not be effective if the camera is powered by the AC adaptor (sold separately).

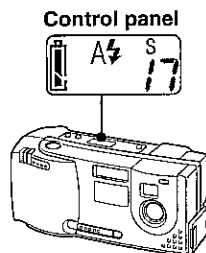
BATTERIES CHARGE LEVEL INDICATOR

When using AA alkaline batteries (standard), the remaining charge level can be checked using the control panel display.

(If using NiCd rechargeable batteries, the remaining charge level indicator may not be accurate.)

Every time the power is turned on, the remaining charge level indicator is displayed.

Indicator	Meaning
	When the remaining charge is from full to about 1/4 full.
	When the remaining charge is less than 1/4 full.
	The batteries are almost out of charge. Replace the batteries. It will soon be impossible to take pictures. The remaining charge is not sufficient to download the pictures to a computer using the computer connecting cable.
 (flashing)	The batteries are dead and it is not possible to take pictures. Replace the batteries.



Concerning the batteries power

- Usually, alkaline batteries will give more power than NiCd rechargeable batteries. However, the power available may vary depending on the batteries brand.
- Depending on the conditions of use of the camera (such as the number of times the flash is used, the number of times the LCD monitor screen is turned on/off) or the environmental conditions (temperature below 10°C) the number of pictures that can be taken on a set of batteries will vary greatly.

NOTE:

- When taking your camera on a trip or to a wedding, for example, or if it is used in cold weather, it is recommended to keep spare batteries on hand.
- Even if the batteries power runs out completely, the pictures that have been taken are still kept in memory.

PICTURE QUALITY (RESOLUTION)

You can select to take high resolution (high quality) pictures at a definition of 640 x 480 pixels, standard resolution (standard quality) pictures at a definition of 320 x 240 pixels. The number of pictures that can be taken depends on the resolution setting, more pictures can be taken at the standard resolution setting, but more beautiful pictures can be taken at the high resolution setting. Please set the resolution according to the desired result.

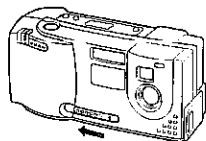
Setting the Resolution

- 1 Set the CAMERA/PLAY switch to the "CAMERA" position.



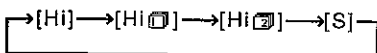
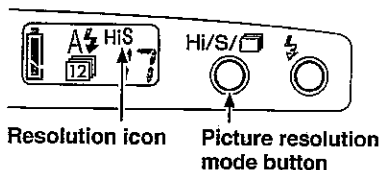
- 2 Set the Power and Lens cover switch to the "ON" position.

- The lens cover opens and the power is turned on.



- 3 Press the Picture resolution mode button to select the desired resolution (picture quality).

- Each time the button is pressed, the resolution and the multiple pictures modes setting switches as indicated below.



[Hi]:	High resolution mode ... for nicer pictures
[Hi with picture icon]:	Multiple pictures mode 1
[Hi with 2 picture icons]:	Multiple pictures mode 2
[S]:	Standard resolution mode ... to take more pictures than at the high resolution mode

... for multiple pictures picture taking, see page 32.

NOTE:

- This camera can take 27 pictures at the high resolution mode, and 54 pictures at the standard resolution mode. For the number of pictures that can be taken, see page 28.
- The set picture resolution mode will stay selected until changed, even after the power is turned off, or the batteries are replaced.

TAKING PICTURES

Holding the Camera

Hold the camera by the finger pads with your left hand and by the grip with your right hand.

Horizontal hold



Keep your elbows close to your body.

Vertical hold



Make sure that the flash or the lens are not blocked by a finger or the hand-strap.

Incorrect hold



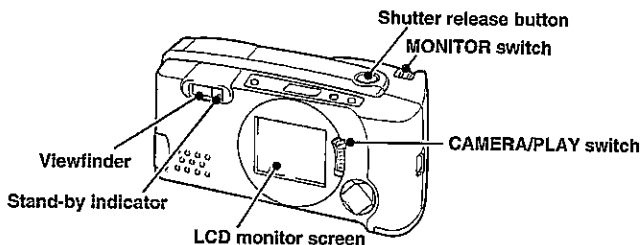
NOTE:

- 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.

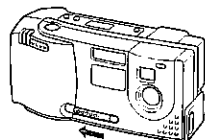
TAKING PICTURES (CONTINUED)

Taking Pictures Using the Viewfinder

Compose the desired picture by looking into the viewfinder.



- 1** Set the CAMERA/PLAY switch to the "CAMERA" position.
- 2** Set the Power and Lens cover switch to the "ON" position.
 - The lens cover opens and the power is turned on.
 - When the stand-by indicator turns to green, you can take a picture.
- 3** Set the MONITOR switch to the "OFF" position.
 - No image is displayed on the LCD monitor screen.
- 4** Point the camera lens to the subject.
- 5** Look straight into the viewfinder and make sure the autofocus mark is on the subject.
- 6** Press the Shutter release button halfway (focus-lock).
 - The autofocus function will lock the focus on the subject.
- 7** Slowly press the Shutter release button fully.
 - The picture will be taken.
 - The stand-by indicator will flash in red while the picture is being written to the memory, another picture can only be taken when the stand-by indicator lights green again.



Autofocus mark

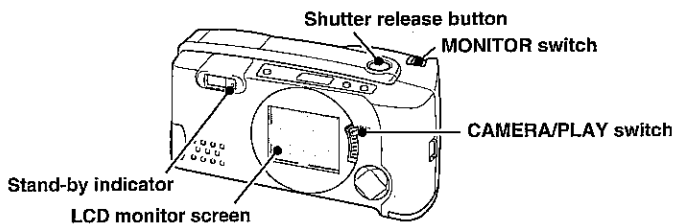


- When finished taking pictures, do not forget to set the Power and Lens cover switch to the "OFF" position.

- The lens cover closes.

Taking Pictures Using the LCD Monitor Screen

This feature is convenient for checking the picture composition when taking pictures at close range (Macro), etc.

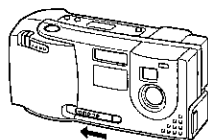


- 1 Set the CAMERA/PLAY switch to the "CAMERA" position.



- 2 Set the Power and Lens cover switch to the "ON" position.

- The lens cover opens and the power is turned on.
- When the stand-by indicator turns to green, you can take a picture.



- 3 Set the MONITOR switch to the "ON" position.

- An image is displayed on the LCD monitor screen.



- 4 Compose the desired picture by looking at the LCD monitor screen.

- 5 Press the Shutter release button halfway (focus-lock).

- The autofocus function will lock the focus on the subject.
- If the focus is not locked as desired, release the Shutter release button, then press it again halfway.



- 6 Slowly press the Shutter release button fully.

- The picture will be taken.
- The stand-by indicator will flash in red while the picture is being written to the memory, another picture can only be taken when the stand-by indicator lights green again.



- When finished taking pictures, do not forget to set the MONITOR switch to the "OFF" position, and to set the Power and Lens cover switch to the "OFF" position.

- The lens cover closes.

NOTE:

- Taking pictures using the LCD monitor screen uses a lot more battery power than taking pictures using the viewfinder (see page 25).

AUTOFOCUS

Notes About the Autofocus Function

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

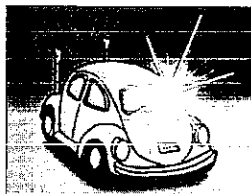
■ Conditions that may cause incorrect focus

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

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

To take the picture:

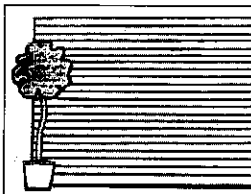
Use the focus-lock function to lock the focus on a subject with contrast at the same distance as the subject you wish to take the picture of, then without releasing the Shutter release button, take the picture of the desired subject.



Subjects without vertical lines

To take the picture:

Use the focus-lock function to lock the focus on the subject while holding the camera vertically, then without releasing the Shutter release button, turn the camera to the horizontal position and take the picture.



The following examples are some of the situations where the autofocus function may not focus at the desired distance.

Subjects at different distances

To take the picture:

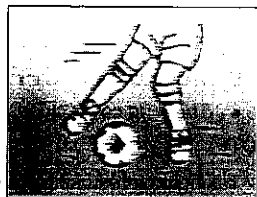
Use the focus-lock function to lock the focus on a subject at the same distance as the subject you wish to take the picture of, then without releasing the Shutter release button, take the picture of the desired subject.



Fast moving subjects

To take the picture:

Use the focus-lock function to lock the focus on a subject at the same distance as the subject you wish to take the picture of, then without releasing the Shutter release button, take the picture of the desired subject.



NUMBER OF PICTURES THAT CAN BE TAKEN

This digital camera saves the pictures as data in its memory.

You can select one of the two resolution modes, high resolution mode or standard resolution mode. The high resolution mode will save more data for each picture taken, therefore using more memory than pictures taken in the standard resolution mode, and less pictures can be taken.

Number of Pictures that Can Be Taken

Standard resolution mode: 54

High resolution mode: 27

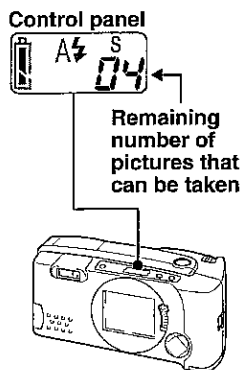
- Each series of multiple pictures in mode 1 or 2 is equivalent to one picture in high resolution mode.

Checking the Remaining Number of Pictures that Can Be Taken

- When the power is turned on, the remaining number of pictures that can be taken is displayed on the control panel.
- The displayed remaining number of pictures that can be taken changes according to the selected resolution mode.

For example, if when the standard resolution mode is selected the displayed remaining number of pictures that can be taken is "4", then it will change to "2" when the resolution mode is switched to high resolution mode.

- When the displayed remaining number of pictures that can be taken is "00", you cannot take any more pictures. To take more pictures either erase some or all pictures from the camera memory (see page 41) or first download the pictures to your computer hard disk using the computer connecting cable (see page 45), then erase all the pictures from the camera memory.



NOTE:

- It is recommended to download your pictures to your computer hard disk for safeguarding as soon as possible after taking them, then erasing them from the camera memory.
- If when taking pictures the displayed remaining number of pictures that can be taken becomes "00", or if when the Power and Lens cover switch is set to the "ON" position the displayed remaining number of pictures that can be taken is "00", then the stand-by indicator will light in red.

NUMBER OF PICTURES THAT CAN BE TAKEN

(CONTINUED)

Saving the Pictures Taken with your Digital Camera

● Saving the pictures to a computer

Requires: Computer connecting cable, commercially available personal computer

Advantages: The pictures are saved as data on the computer hard disk, they can then be processed or edited, sent on a network, etc.

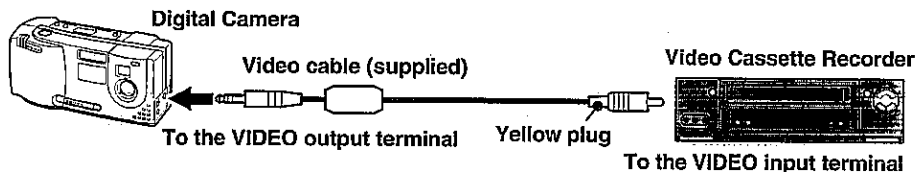
● Recording the Pictures onto Video Tape

Requires: Video Cassette Recorder

Advantages: You can save your pictures even if you do not have a computer. You can then play them back on your TV set.

Points to remember: Once saved to video tape, the pictures cannot be edited digitally. The pictures will be saved to video tape as a PAL format signal.

Connection:



Method:

VCR

- 1 Load a video tape with erasure prevention tab.
- 2 Press the input mode button to select the external input mode.
- 3 Set the tape seed.
- 4 Set to recording pause mode (press the recording button, then the pause button).

Camera

- 5 Start the Automatic playback mode (see page 36).

VCR

- 6 When the desired picture is displayed, start recording (press the recording button or the pause button).

■ When finished recording, stop the VCR, then press **MODE** or **SET** of the **MODE** button.

FLASH

The flash has three modes of operation (Automatic flash mode, Forced flash mode and Flash off mode), use a different mode according to the conditions of the picture taken.

The flash range is 0.6 to 2.4 m (standard photography range), 0.2 to 0.6 m (macro photography range).

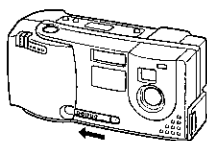
Setting the Flash Operation Mode

- 1 Set the CAMERA/PLAY switch to the "CAMERA" position.



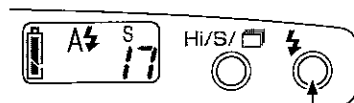
- 2 Set the Power and Lens cover switch to the "ON" position.

- The lens cover opens and the power is turned on.



- 3 Press the Flash button to select the desired mode.

- Each time the Flash button is pressed, the selected mode switches as indicated below.



Flash button

→ [A⚡] → [⚡] → No display

[A⚡]:	Automatic flash mode
[⚡]:	Forced flash mode
No display:	Flash off mode

NOTE:

- The set flash mode will stay selected until changed, even after the power is turned off. However, when the batteries are replaced it will be automatically reset to [A⚡] (Automatic flash mode).
- In multiple pictures mode (see page 32), the flash will automatically be set to Flash off mode.

HELP:

- While the flash is being charged, the stand-by indicator in the viewfinder will flash in red. During that time, a picture cannot be taken. Please wait until the stand-by indicator lights in green to take the next picture.



Stand-by indicator

Red flashing: Getting ready to take a picture, the flash is being charged, storing a picture (a picture cannot be taken).

Red steady: Memory full (a picture cannot be taken)

Green: Ready (a picture can be taken)

FLASH (CONTINUED)

Automatic Flash Mode

- Use this setting under normal conditions. The camera will detect the subject brightness and light the flash only as required.

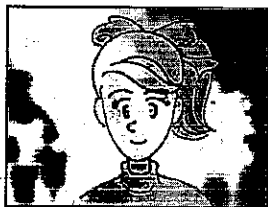
In a back-light situation, if the center of the picture only is very dark, the automatic flash will operate in order to try to compensate.



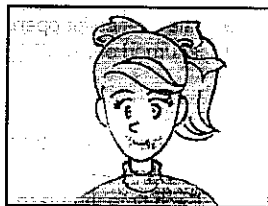
Forced Flash Mode

- The flash will operate with every picture taken without depending on the subject brightness.

Use this setting when taking the picture in a bright place but the subject is in the shade, under backlight conditions, under fluorescent lighting conditions, etc.



Subject in the shadow

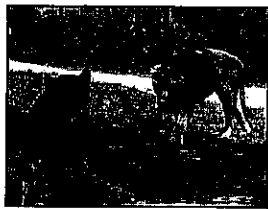


Backlight conditions

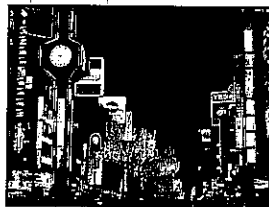
Flash Off Mode

- The flash will not light even under dark conditions.

Use this setting when taking a picture in a location where you may not use the flash, or when taking a night scene.



Location where the flash may not be used



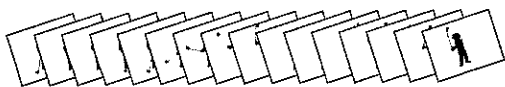
Night scene

HELP:

- When taking a picture in the dark without the flash, the camera will use the slowest shutter speed of 1/4 sec. In order to avoid blurred pictures, use a tripod or other to stabilise the camera. If the subject moves, the picture will not be clear.

MULTIPLE PICTURES PHOTOGRAPHY

The multiple pictures function will take 16 sequential pictures at 1/16 of the normal size and save them as one normal size picture. The multiple pictures function has two modes that can be selected according to the picture condition.



Multiple pictures mode 1:16 pictures will be taken at a 0.1 second interval (total of 1.6 second)



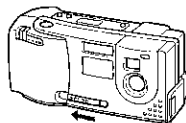
Multiple pictures mode 2:16 pictures will be taken at a 0.2 second interval (total of 3.2 seconds)

- 1 Set the CAMERA/PLAY switch to the "CAMERA" position.



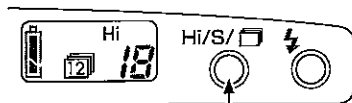
- 2 Set the Power and Lens cover switch to the "ON" position.

- The lens cover opens and the power is turned on.

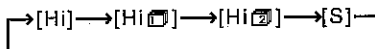


- 3 Press the Picture resolution mode button to select the desired mode.

- Each time the button is pressed, the resolution and the multiple pictures modes setting switches as indicated below.



Picture resolution mode button



[Hi]: High resolution mode ... for nicer pictures (see page 23)

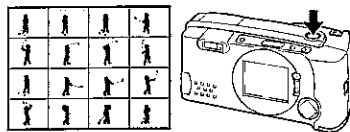
[Hi]: Multiple pictures mode 1

[Hi]: Multiple pictures mode 2

[S]: Standard resolution mode ... to take more pictures than at the high resolution mode (see page 23)

- 4 Press on the Shutter release button.

- The camera will take the 16 pictures according to the selected mode.



Multiple pictures mode example

NOTE:

- In multiple pictures mode, the flash will automatically set to Flash off mode.

SELF-TIMER

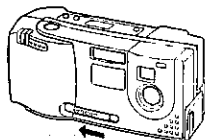
The self-timer function will take the picture automatically 10 seconds after the Shutter release button is pressed.

- 1 Set the CAMERA/PLAY switch to the "CAMERA" position.



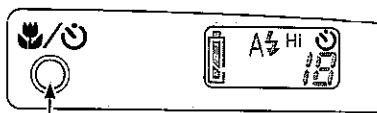
- 2 Set the Power and Lens cover switch to the "ON" position.

- The lens cover opens and the power is turned on.

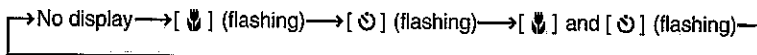


- 3 Press the Macro/Self-timer button until the [⊙] indicator is displayed flashing.

- Each time the button is pressed, the macro/self-timer mode switches as indicated below.



Macro/Self-timer button

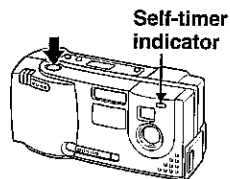


No display:	Macro/Self-timer function off (normal mode for taking pictures)
[⊙] (flashing):	Macro photography (see page 34)
[⊙] (flashing):	Self-timer
[⊙] and [⊙] (flashing):	Macro photography with self-timer (see page 34)

- 4 Press on the Shutter release button.

- The Self-timer indicator will light for about 7 seconds, flash for 3 seconds then the picture is taken.
- After the picture has been taken, the self-timer is automatically canceled.
- If you press on the Shutter release button before the picture has been taken while using the self-timer function, that will interrupt it.

To cancel the self-timer function, press the Macro/Self-timer button until the Self-timer [⊙] indicator is not displayed anymore.



Self-timer indicator

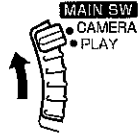
NOTE:

- When using the self-timer function, use a tripod or place the camera on a level, stable surface.

MACRO PHOTOGRAPHY

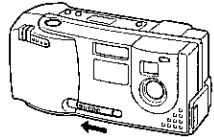
When taking pictures at close range (20 – 50 cm) use the macro function. The macro function can be used together with the self-timer function.

- 1 Set the **CAMERA/PLAY** switch to the “CAMERA” position.



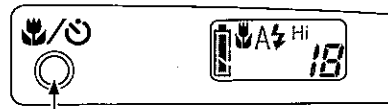
- 2 Set the **Power and Lens cover switch** to the “ON” position.

- The lens cover opens and the power is turned on.

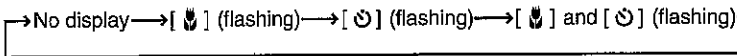


- 3 Press the **Macro/Self-timer button** until the [] indicator is displayed flashing.

- Each time the button is pressed, the macro/self-timer mode switches as indicated below.



Macro/Self-timer button



- For macro photography using the self-timer function, select the [] and [] indicators.

- 4 **Compose the picture.**

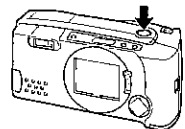
- To compensate for viewfinder-lens relative disalignment, compose the picture in the area delimited by the close-up alignment correction marks when taking a picture of a subject at about 20 cm from the lens.
- For macro photography, it is recommended to compose the image while viewing it on the LCD monitor screen (see page 26).



Close-up alignment correction marks

- 5 Press on the **Shutter release button**.

- The picture will be taken in the macro mode.
- After the picture has been taken, the macro mode is automatically canceled.

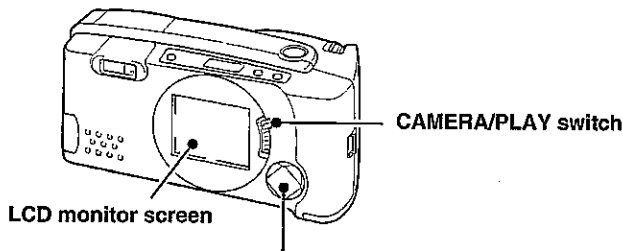


NOTE:

- To avoid blurred pictures, it is recommended to use a tripod, or rest the camera on some stable surface.

PLAYING BACK ONE PICTURE

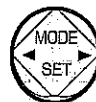
You can playback individually the pictures taken and saved in the camera, on the LCD monitor screen.



Using the MODE button

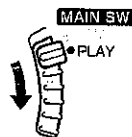
This button has 4 functions. To operate, press on the appropriate inscription "MODE", "SET", ◀ or ▶, moving your finger from the center to the outside of the button.

MODE button



1 Set the CAMERA/PLAY switch to the "PLAY" position.

- An image appears.
- Pictures can be played back whether the Power and Lens cover switch is set to the "ON" or "OFF" position. However, to protect the lens, we recommend to keep the Power and Lens cover switch to the "OFF" position.



2 Press ◀ of the MODE button.

- Each time the button is pressed, the previous image is displayed.
- To playback the next image, press ▶ of the MODE button.



- When finished, set the CAMERA/PLAY switch to the "CAMERA" position, then set the Power and Lens cover switch to the "OFF" position.

AUTOMATIC PLAYBACK, 9 PICTURES MULTI-PLAYBACK

Automatic Playback

You can playback the pictures taken and saved in the camera sequentially in a "slide-show" fashion.

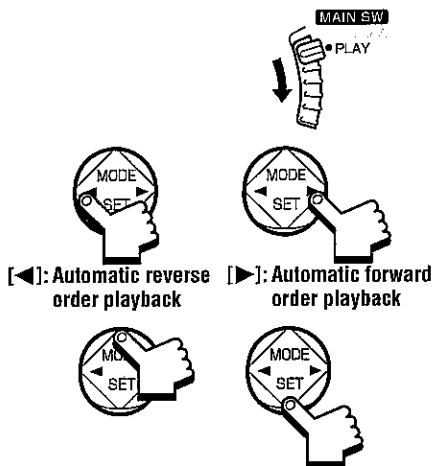
- 1 Set the CAMERA/PLAY switch to the "PLAY" position.

- An image appears.

- 2 Press ◀ or ▶ of the MODE button for about 2 seconds.

- Automatic sequential playback (each picture will be displayed for about 6 seconds) of the images will start.

- 3 To stop automatic playback, press MODE or SET of the MODE button.



- When finished, set the CAMERA/PLAY switch to the "CAMERA" position, then set the Power and Lens cover switch to the "OFF" position.

9 Pictures Multi-playback

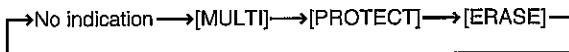
You can displayed 9 pictures simultaneously, then select one to playback full screen.

- 1 Set the CAMERA/PLAY switch to the "PLAY" position.

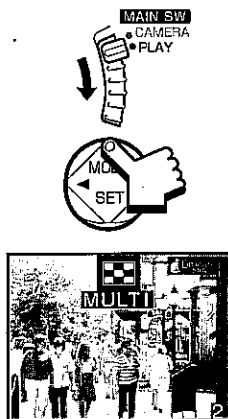
- An image appears.

- 2 Press MODE of the MODE button once.

- The multi-playback mode icon is displayed on the LCD monitor screen.
- Each time the button is pressed, the mode switches as indicated below.



No indication:	Normal playback mode
[MULTI]:	9 Pictures Multi-playback mode
[PROTECT]:	Protect mode (see page 39)
[ERASE]:	Erase mode (see page 41)



AUTOMATIC PLAYBACK,

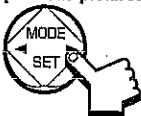
9 PICTURES MULTI-PLAYBACK (CONTINUED)

③ Press ◀ or ▶ of the MODE button.

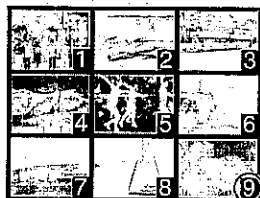
- 9 pictures multi-playback starts. If the button is pressed again, the 9 previous or 9 following pictures are displayed.



[◀]: To display the 9 previous pictures



[▶]: To display the 9 following pictures

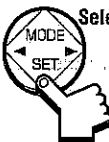


9 Pictures Multi-playback mode

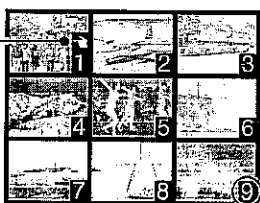
Picture number (will go off after 2 seconds)

④ If you wish to playback one of the 9 pictures displayed, press SET of the MODE button.

- The selection mark [▶] is displayed.



Selection mark

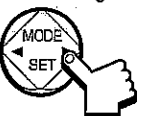


Picture number (will not go off)

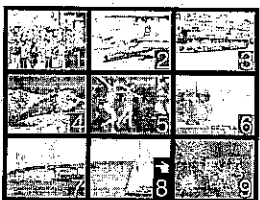
⑤ Press ◀ or ▶ of the MODE button, to select the desired picture.



[◀]: To select the previous image

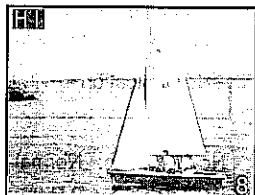
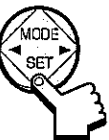


[▶]: To select the next image



⑥ Press SET of the MODE button.

- The selected picture will be displayed full-screen.



■ When finished, set the CAMERA/PLAY switch to the "CAMERA" position, then set the Power and Lens cover switch to the "OFF" position.

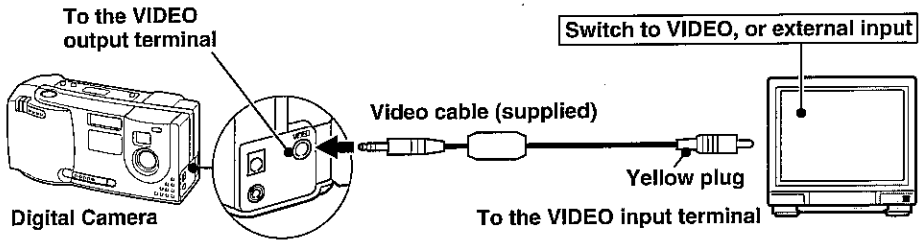
PLAYING BACK PICTURES ON A TV SET

The pictures you have saved in the camera, can also be played back on your TV set.

Connections

Connect the supplied video cable from the VIDEO (Picture) output terminal on the camera, to the VIDEO input terminal on your TV.

Then, press the input mode button on the TV, to select the external input or "VIDEO" mode.



Playing Back the Images

The playback method is the same as indicated under "PLAYING BACK ONE PICTURE" on page 35 or "AUTOMATIC PLAYBACK, 9 PICTURES MULTI-PLAYBACK" on page 36.

NOTE:

When the video cable is connected to the camera, that will cut off the display on the LCD monitor screen.

PICTURE PROTECTION

You can prevent accidental erasure of the important pictures you wish to keep.

1 Set the **CAMERA/PLAY** switch to the “PLAY” position.

- An image appears.

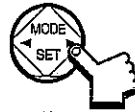


2 Press **◀** or **▶** of the **MODE** button to display the image to protect.

- For images already protected, the protect mark (a padlock) [🔒] is displayed in the top right corner.
- If there are a lot of images saved in the camera, use the “9 Pictures Multi-Playback” method (see page 36), for faster selection.



To display the previous picture



To display the next picture



Protect mark

3 Press **MODE** of the **MODE** button twice.

- [PROTECT] will be displayed on the LCD monitor screen.
- Each time the button is pressed, the mode switches as indicated below.


→No indication→[MULTI]→[PROTECT]→[ERASE]





PROTECT display

- | | |
|----------------|--|
| No indication: | Normal playback mode |
| [MULTI]: | 9 Pictures multi-playback mode (see page 36) |
| [PROTECT]: | Protect mode |
| [ERASE]: | Erase mode (see page 41) |

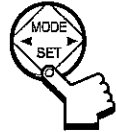
4 Press SET of the MODE button.

- The protection feature will be set for the displayed image, and the protect mark [] will be displayed.
- Each time the button is pressed, the mode switches as indicated below.

→No indication→[]→

No indication: Protection feature off
[]: Protection feature on

- To protect more than one picture, repeat steps ② and ④.
- Press MODE of the MODE button, to return to normal picture playback.



Protect mark

■ When finished, set the CAMERA/PLAY switch to the "CAMERA" position, then set the Power and Lens cover switch to the "OFF" position.

HELP:

To turn off the protection feature

- Display the protected image you wish to turn the protection feature off. Follow steps ③ and ④ above. The protection feature will be turned off for the displayed image, and the protect mark will be erased.

ERASING PICTURES

You can erase the missed pictures, or pictures that are no longer needed. You can erase the pictures one by one, or erase at once all the pictures saved in the camera.

Erasing One Picture

❶ Set the CAMERA/PLAY switch to the "PLAY" position.

- An image appears.



❷ Press ◀ or ▶ of the MODE button to display the image to erase.

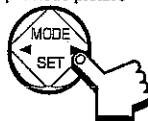
- The protected pictures cannot be erased. If necessary, turn the protection feature off before erasing the image (see page 40).
- If there are a lot of images saved in the camera, use the "9 Pictures Multi-Playback" method (see page 36), for faster selection.



To display the previous picture



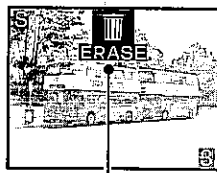
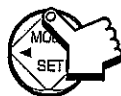
Protect mark



To display the next picture

❸ Press MODE of the MODE button three times.

- [ERASE] will be displayed on the LCD monitor screen.
- Each time the button is pressed, the mode switches as indicated below.



ERASE display

→No indication→[MULTI]→[PROTECT]→[ERASE]

No indication: Normal playback mode

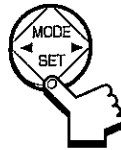
[MULTI]: 9 Pictures multi-playback mode (see page 36)

[PROTECT]: Protect mode (see page 39)

[ERASE]: Erase mode

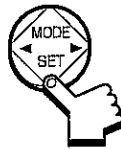
4 Press SET of the MODE button.

- The ONE (erase one picture) / ALL (erase all pictures) selection screen will be displayed.
- Make sure the selection mark [↵] points to ONE.



5 Press SET of the MODE button.

- [ERASING] is displayed, and the selected image is erased.
- To erase more than one picture, repeat steps 2, 4, 5.
- Press MODE of the MODE button, to return to normal picture playback.



- When finished, set the CAMERA/PLAY switch to the "CAMERA" position, then set the Power and Lens cover switch to the "OFF" position.

NOTE:

To cancel the erase operation

- In steps 3 or 4, press MODE of the MODE button to return to the previous steps. Press MODE of the MODE button until [ERASE] is not displayed any more.

ERASING PICTURES (CONTINUED)

Erasing All the Pictures

All the pictures saved in the camera can be erased together. However, the protected pictures cannot be erased.

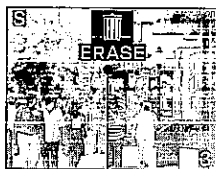
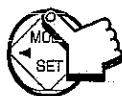
- 1 Set the CAMERA/PLAY switch to the "PLAY" position.

- An image appears.

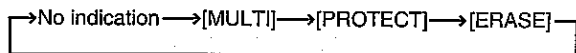


- 2 Press MODE of the MODE button three times.

- [ERASE] will be displayed on the LCD monitor screen.
- Each time the button is pressed, the mode switches as indicated below.



ERASE display



No indication: Normal playback mode

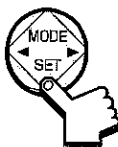
[MULTI]: 9 Pictures multi-playback mode (see page 36)

[PROTECT]: Protect mode (see page 39)

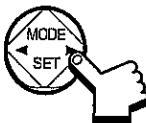
[ERASE]: Erase mode

- 3 Press SET of the MODE button.

- The ONE (erase one picture) / ALL (erase all pictures) selection screen will be displayed.

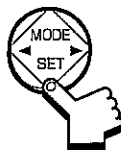


- 4 Press ◀ or ▶ of the MODE button, until the selection mark [] points to ALL.



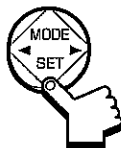
5 Press SET of the MODE button.

- The confirm screen [ERASE ALL ?] is displayed.
- To cancel the erase operation, press MODE, ◀ or ▶ of the MODE button, to return to step 4.



6 To erase, press SET of the MODE button.

- [ERASING] is displayed, and all the images without the protection feature on are erased.
- After all the pictures have been erased, a blue screen will appear on the LCD monitor screen.
- If some pictures were protected, then one of the protected picture and [ERASE] will be displayed on screen. Press MODE of the MODE button, to return to normal picture playback.



Protect mark

- When finished, set the CAMERA/PLAY switch to the "CAMERA" position, then set the Power and Lens cover switch to the "OFF" position.

NOTE:

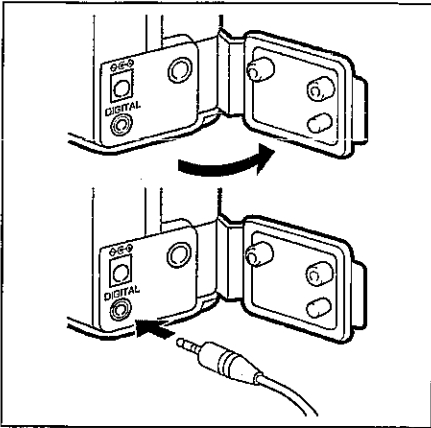
To cancel the erase operation

- In steps 2, 3, 4 or 5, press MODE of the MODE button to return to the previous steps. Press MODE of the MODE button until [ERASE] is not displayed any more.

USING THE CAMERA WITH THE COMPUTER

Your camera takes pictures that are saved as image files and can be directly downloaded to an IBM compatible personal computer running Windows 3.x, Windows 95 software, or a MAC or Power Mac computer. The images can then be edited using the supplied software, and added to documents such as reports, multimedia presentations, World-Wide Web (Internet) home pages, etc.

Connecting the Camera to the Computer



- 1 Make sure the camera is turned off.
- 2 Open the terminal cover on the side of the camera.
- 3 Plug the mini jack of the supplied interface cable into the DIGITAL port.
- 4 Plug the other connector of the interface cable into the computer serial port (9-pin male connector), and tighten the screws.

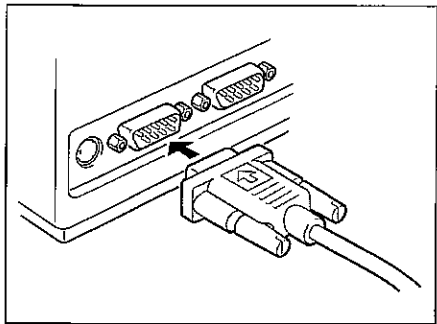
NOTE:

- If your computer is only equipped with one 9-pin serial port, you may have to temporarily unplug the connected device to connect the camera to the computer. (If using a MAC computer, you will need an adaptor.)

- 5 Open the lens cover on the camera and turn on the computer.
- 6 For the software installation and instructions, please refer to the utility software manual.

NOTE:

- When the camera is connected to a computer there is no display on the LCD monitor screen.



TROUBLESHOOTING

	Problem	Cause	Action	Reference page
Power	No power	The Power and Lens cover switch is set to the "OFF" position (the lens cover is closed, when taking pictures).	Set the Power and Lens cover switch to the "ON" position, the lens cover opens.	20 • 21
		The batteries have not been inserted correctly.	Reinsert the batteries, making sure the polarity (+), (-) is as indicated.	19
		The batteries are dead.	Insert new batteries.	
		Due to cold temperatures, the batteries temporarily lost their power.	Place the camera in your pocket to warm it up before using it.	
Taking pictures	A picture cannot be taken when pressing on the Shutter release button.	The power is not turned on.	If the power save function has turned the camera off, restore the power by setting the Power and Lens cover switch to the "OFF" and "ON" position again, or pressing the Shutter release button once.	20 • 21
		The stand-by indicator is flashing red (the camera is getting ready to take a picture).	Wait until the stand-by indicator lights in green to take the picture.	16
		The memory is full (the stand-by indicator lights in red).	Check the displayed remaining number of pictures that can be taken, erase any picture that is not necessary, before taking new pictures. If all the pictures are needed, save them before erasing them from the camera.	16 • 28 • 41
	The flash does not light.	The flash off mode is selected.	Press the Flash button to select the forced flash or automatic flash mode.	30
		The camera has determined that the picture is bright enough and the flash is not necessary.	Take the picture, the camera will determine when the flash is necessary.	
		The batteries are dead.	Insert new batteries.	19

TROUBLESHOOTING (CONTINUED)

	Problem	Cause	Action	Reference page
LCD monitor screen	When taking a picture, no image is displayed on the LCD monitor screen.	The Power and Lens cover switch is set to the "OFF" position, or the MONITOR switch is set to the "OFF" position.	Set the Power and Lens cover switch to the "ON" position, or set the MONITOR switch to the "ON" position.	26
	No playback picture appears.	The CAMERA/PLAY switch is set to the "CAMERA" position.	Set the CAMERA/PLAY switch to the "PLAY" position.	35
	If played back in cold weather, the picture may seem to present curved sides.	Condition due to the liquid crystals.	Normal condition.	
	The image presents some red, blue and green dots, or there are black spots visible.			
The area around the LCD monitor screen may become warm.	This is due to a rise in temperature of the internal parts and is normal.			
Picture quality	The focus does not work.	The subject is too close to the camera.	The distance for macro photography is 20 – 50 cm. The distance for standard photography is 50 cm or more.	
		The camera moved when the shutter was released.	Hold the camera correctly, then press slowly on the Shutter release button.	25 • 26
		The desired subject was not centered in the autofocus mark.	Make sure the subject is at the center of the picture, or use the focus-lock function.	25
		The lens is dirty.	Clean the lens.	8

	Problem	Cause	Action	Reference page
Picture quality	The picture is too dark.	The flash was blocked by a finger or other.	Hold the camera correctly, make sure a finger or hand-strap does not cover the flash.	24
		The subject was too far away.	Take the picture in the range of operation of the flash (2.4 m or less).	30
		The subject was backlit.	Use the forced flash mode.	
	The picture is too bright.	The forced flash mode is selected.	Select a different flash mode.	/
		The subject was too bright.	Change the angle of the camera.	
	The colors of the pictures taken indoors are not correct.	This is due to fluorescent lighting.	Take the picture using the forced flash mode.	30
	A part of the picture is missing.	The hand-strap or other was blocking the lens.	Hold the camera correctly, make sure a finger or hand-strap does not cover the lens.	24
The picture was taken at close range.		When taken a picture at close range, use the close-up alignment correction marks or compose the picture using the LCD monitor screen.	26 • 34	
Playing back the pictures on a TV set	No image.	The camera is not correctly connected to the TV screen.	Follow the instructions to make the connection correctly.	38
		The TV input is not set to "VIDEO".	Set the input on the TV to "VIDEO".	

SPECIFICATIONS

Type	CCD Digital still-frame camera (recording and playback)	
Recording system	Digital recording	
Image compression format	JPEG	
Image storage device	Internal 2MB Flash memory	
Recording capacity	27 pictures (high resolution, multiple pictures mode 1/2) 54 pictures (standard resolution)	
Erase method	1 picture erase, all pictures erase	
Image sensor	1/3 inch CCD progressive scan type image sensor, 350,000 pixels	
Image recording	640 x 480 pixels (High resolution)	
White balance	Full auto TTL	
Lens	f=5mm, auto-focus F2.8 (equivalent to a 36mm on a 35mm camera)	
Aperture	F2.8, F5.6, F11 (automatic selection)	
Photometric system	Image sensor based TTL center balanced average metering type	
Exposure control type	Aperture, shutter range programmed exposure	
Range	50 cm – ∞ (normal photography), 20 cm – 50 cm (macro photography)	
Shutter	1/4 – 1/10,000 sec.	
Exposure	Equivalent to ISO 80	
Viewfinder	Optical direct image viewfinder (Close-up alignment correction marks, autofocus mark)	
LCD monitor screen	2.0 inch, Low-temperature Polysilicon TFT color LCD	
Monitor pixels	Approx. 110,000 pixels	
Flash working range	0.6 m – 2.4 m (normal photography), 0.2 m – 0.6 m (macro photography)	
Flash modes	Auto-flash, Flash off, Forced flash	
Auto-focus	TTL system AF	
Self-timer	10 sec. delay	
Time/Date	Set using the computer connecting cable Recorded with picture data (automatic calendar to the year 2023)	
Operating environment	Temperature	0 – 40°C (operation), –20 – 60°C (storage)
	Humidity	30 – 90 % (operation, non condensing), 10 – 90 % (storage, non condensing)

Power supply	Battery	4 AA Alkaline batteries, AA NiCd rechargeable batteries (AA NiCd batteries can be used but the remaining charge level indicator may not be accurate) (Manganese batteries cannot be used)
	AC adaptor (sold separately)	VAR-G2EX
Dimensions	138.5 (W) x 66 (H) x 43.5 (D) mm	
Weight	Approx. 250 g (without batteries)	

Connectors Specifications

VIDEO (Picture) output terminal	φ3.5 mm mini jack	
	Video output	1.0 Vp-p, 75 Ω unbalanced, sync negative composite video, PAL color TV system
DIGITAL (Communication) terminal	φ2.5 mm mini jack RS-232C serial port (115.2kbps max)	
DC IN (External DC power input) terminal	6.5/7.0 V (for AC adaptor (VAR-G2EX) (sold separately))	

- Products are subject to change in design and specifications without notice and without incurring any obligation.

1AG6P1P0407--
SR46/EX (1197KP-SY01)



SANYO Electric Co., Ltd.
Printed in Japan