

FCC STATEMENT

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.

Note:

This equipment has been tested and found to comply with the limits for Class B digital devices, 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 into 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

Use of shielded cable is required to comply with Class B limits in Subpart B of Part 15 of the FCC rules. Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

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- Macintosh is a trademark of Apple Computer, Inc.
- SD[™] is a trademark.
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READ THIS FIRST

Notice:

- Product design and specifications are subject to change without notice.
 This includes primary product specifications, software, software drivers, and user's manual. This User Manual is a general reference guide for the product.
- 2. The product and accessories that come with your camera may be different from those described in this manual. This is due to the fact that different retailers often specify slightly different product inclusions and accessories to suit their market requirements, customer demographics, and geographical preferences. Products very often vary between retailers especially with accessories such as batteries, chargers, AC adapters, memory cards, cables, carrying cases/pouches, and language support. Occasionally a retailer will specify a unique product color, appearance, and internal memory capacity. Contact your dealer for precise product definition and included accessories.
- The illustrations in this manual are for the purpose of explanation and may differ from the actual design of your camera.
- 4. The manufacturer assumes no liability for any errors or discrepancies in this user manual.
- 5. For driver updates, refer to our website.

Safety Instructions

Read and understand all Warnings and Cautions before using this product.

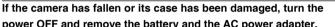
WARNING

the store of purchase.

If foreign objects or water have entered the camera, turn the power OFF and remove the battery and the AC power adapter.



Continued use in this state might cause fire or electric shock. Consult the store of purchase.



power OFF and remove the battery and the AC power adapter. Continued use in this state might cause fire or electric shock. Consult

Do not disassemble, change or repair the camera.

This might cause fire or electric shock. For repair or internal inspection. ask the store of purchase.



Use the specified AC power adapter only with the indicated power supply voltage.



Use with any other power supply voltage might cause fire or electric shock.



Do not use the camera in areas near water.

This might cause fire or electric shock. Take special care during rain. snow, on the beach, or near the shore.



Do not place the camera on inclined or unstable surfaces.

This might cause the camera to fall or tilt over, causing injury.



Keep the battery out of the reach of children.

Swallowing battery might cause poisoning. If the battery is accidentally swallowed, immediately consult a physician.



Do not use the camera while you are walking, driving or riding a vehicle.



This might cause you to fall over or result in traffic accident.

CAUTION

electric shock.

Insert the battery paying careful attention to the polarity (+ or -) of the terminals. Inserting the battery with its polarities inverted might cause fire and injury, or damage to the surrounding areas due to the battery rupturing or leaking. Do not fire the flash close to anyone's eves. This might cause damage to the person's eyesight. Do not subject the LCD monitor to impact. This might damage the glass on the screen or cause the internal fluid to leak. If the internal fluid enters your eyes or comes into contact with your body or clothes, rinse with fresh water. If the internal fluid has entered your eyes, consult a physician to receive treatment. A camera is a precision instrument. Do not drop it, strike it or use excessive force when handling the camera. This might cause damage to the camera. Do not use the camera in humid, steamy, smoky, or dusty places. This might cause fire or electric shock. Do not remove the battery immediately after long period of continuous use. The battery becomes hot during use. Touching a hot battery might cause burns. Do not wrap the camera or place it in cloth or blankets. This might cause heat to build up and deform the case, resulting in fire. Use the camera in a well-ventilated place. Do not leave the camera in places where the temperature may rise significantly, such as inside a car. This might adversely affect the case or the parts inside, resulting in fire. Before you move the camera, disconnect cords and cables.

Failure to do this might damage cords and cables, resulting in fire and

Notes on Battery Usage

When you use the battery, carefully read and strictly observe the *Safety Instructions* and the notes described below:

- Use only the specified battery (NP-60, 3.7V).
- Avoid using the battery in extremely cold environments as low temperatures can shorten the battery life and reduce camera performance.
- When you are using the new rechargeable battery or rechargeable battery that has not been used for an extended period of time (the battery that passed the expiry date is an exception) might affect the number of pictures that can be taken. Therefore, to maximize its performance and lifetime, we recommend that you fully charge the battery and discharge it for at least one complete cycle before use.
- The battery may feel warm after long period of continuous use of the camera or the flash. This is normal and not a malfunction.
- The camera may feel warm after long period of continuous use. This is normal and not a malfunction.
- If the battery is not to be used for a long period of time, remove it from the camera to prevent leakage or corrosion.
- If the battery is not to be used for a long period of time, store it after no battery power left. If the battery is stored for a long time in a fully charged state, its performance may be impaired.
- Always keep the battery terminals in a clean state.

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INTRODUCTION

Overview

Congratulations on your purchase of the new digital camera.

Capturing high-quality digital pictures is fast and easy with this state-of-the-art smart camera. Equipped with a 6.3 Mega pixel CCD, this camera is capable of capturing pictures with a resolution of up to 2816 x 2112 pixels.

Other cool features provided by the camera include the following:

LCD monitor - The 2.5" low temperature poly silicon TFT color LCD

monitor makes it easy to frame your subject when taking pictures. It also displays the pictures you have

taken.

Recording medium - External memory supports SD card up to 512MB.

Camera mode - Variety of camera modes allows you to operate for

your preference and take photographs according to

photographic condition.

Optical zoom - 3x optical lens allows you to take telephoto and wide-

angle pictures.

Digital zoom - 4.4x digital zoom and 3x optical zoom permit zoom

photography of up to 13.2 times; 2x and 4x playback captured images to enlarge a selected portion of an

image.

Flexible flash settings - Change the flash setting according to your lighting

environment and photography mode setting.

Focus mode - Photographs can be taken with the distance to the

subject set by auto focus, macro, infinity, 3 m, or 1 m.

Self-timer mode - Time selectable between 10 seconds, 2 seconds,

10+2 seconds and interval.

Still image capture - Take different still images including single, a series

of 3 images with different exposures, and 5 images

continuously.

Movie mode - Record video clips with voice.

Voice memo - A voice memo can be recorded once for 30 seconds

at photography mode immediately following a still image captured or at playback mode while viewing

the picture.

Camera settings - Have more control over picture quality by adjusting

the menu options.

Thumbnail display - Display in sets of nine pictures on the LCD for easier

and quicker selection of pictures.

TV and PC connection - View pictures on a television monitor or computer

while connected to the USB or A/V cable.

DPOF settings - Allow you to embed printing information on your SD

card and to print your images on a DPOF compatible

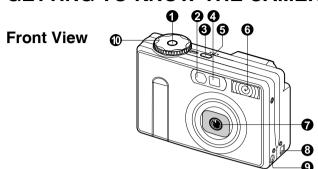
printer by simply inserting it.

Package Contents

Carefully unpack your camera and ensure that you have the following items.

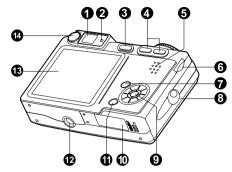
- 1 x Digital camera
- 1 x Camera pouch
- 1 x SD card
- 1 x Rechargeable Li-ion battery-pack
- 1 x AC-Mains Adapter/Charger
- 1 x Camera strap
- 1 x USB cable
- 1 x TV cable/Video cable
- 1 x User's manual

GETTING TO KNOW THE CAMERA



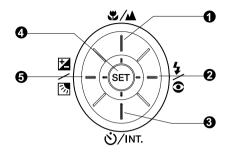
| # | Name | Description |
|-----|-------------------------------------|--|
| 1. | Shutter button | Focuses and locks the exposure of the camera when pressed halfway down, and takes the picture when pressed all the way down. |
| 2. | Self-timer LED (AF auxiliary light) | Blinks green during Self-timer mode until picture is taken. |
| | | Effective for still image capture mode when the luminance value of Auto and Macro focus mode is below 6. |
| 3. | POWER button | Turns the camera power on and off. |
| 4. | Viewfinder window | Allows you to frame the subject of the picture. |
| 5. | MIC (Microphone) | Records audio clips. |
| 6. | Flash | Provides flash illumination. |
| 7. | Zoom lens | 3x optical zoom lens allows you to take |
| | | telephoto and wide-angle pictures. |
| 8. | USB/A/V OUT terminal | Allows you to connect a USB cable or an A/V |
| | | cable to the camera. |
| 9. | DC IN 5V terminal | Allows you to connect AC power adapter to the |
| | | camera to operate the camera without battery, |
| | | or to charge rechargeable battery. |
| 10. | Mode dial | Sets the camera mode. |
| | | |

Rear View



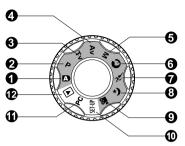
| # | Name | Description |
|-----|-------------------------|--|
| 1. | Viewfinder window | Allows you to frame the subject of the picture. |
| 2. | Viewfinder LED | Displays the camera current state. |
| 3. | I□I (Display) button | Turns the LCD monitor display and live view on and off. |
| 4. | [] (Zoom in) button | Zooms the lens to telephoto position. |
| | (Zoom out) button | Zooms the lens to wide-angle position. |
| 5. | Speaker | Produces camera sounds and plays recorded audio. |
| 6. | Search dial | Selects the next or previous picture in playback |
| | | mode, or changes the exposure compensation, |
| | | shutter speed or aperture value setting. |
| 7. | MENU button | Toggles OSD menu on and off. |
| 8. | Strap holder | Camera strap attachment. |
| 9. | SET /Direction button | Allows you to scroll through menus and pictures, and then select choices. |
| 10. | Battery/SD card cover | Allows access to the battery and insert or remove the memory card. |
| 11. | 亩 (Erase) button | Allows you to erase the picture. |
| 12. | Tripod socket | Allows tripod mounting. |
| 13. | LCD monitor | Provides menu information to operate the camera, and previews the picture before taking it and review it afterwards. |
| 14. | Diopter adjustment dial | Provides a more clear image when using the viewfinder. |

SET /Direction button



| # | Name | | Description |
|----|-------------|----------------|--|
| 1. | A | button | Scrolls upwards. |
| | ₩/₩ | (Focus) button | Allows you to choose the appropriate focus |
| | | | setting. |
| 2. | > | button | Scrolls right. |
| | 4 /⊙ | (Flash) button | Allows you to choose the appropriate flash |
| | | | setting. |
| 3. | ▼ | button | Scrolls downwards. |
| | ♦/INT. | (Self-timer) | Allows you to toggle the self-timer on/off, |
| | | button | selects the desired self-timer mode or choose |
| | | | the interval photography. |
| 4. | ◀ | button | Scrolls left. |
| | 区/函 | (Exposure | Allows you to toggle the exposure |
| | | compensation | compensation/ backlight correction on and off. |
| | | / Backlight | |
| | | correction) | |
| | | button | |
| 5. | SET | button | Enters the menu page and confirms the chosen |
| | | | setting. |

Mode Dial



: photography mode

| # | Mod | e | Description |
|-----|----------|------------------------|---|
| 1. | A | Auto photography | The camera is automatically sets for exposure, etc. |
| 2. | Р | Program | This permits the shutter speed and aperture |
| | | (auto exposure) | to be set automatically and other factors to be |
| | | | set manually. |
| 3. | Tv | Shutter speed priority | Selects this when you want to photograph with |
| | | | shutter speed priority. |
| 4. | Αv | Aperture priority | Selects this when you want to photograph with |
| | | | aperture priority. |
| 5. | M | Manual photography | Selects this when you want to manually set the |
| | | | exposure, aperture and other settings. |
| 6. | 0 | Portrait | Selects this when you want to photograph a |
| | • | | person and blur the background. |
| 7. | ãi | Sports | Selects this when photographing fast-moving |
| | | | subjects. |
| 8. | (* | Night scene | Selects this when photographing evening or |
| | • | | night scenes. |
| 9. | ,00 | Movie | Selects this when recording video clips. |
| 10 | . SET-UI | PSet-up | Chooses your preferences on the camera's |
| | | | settings. |
| 11. | PC | PC | Downloads the image to the personal computer. |
| 12 | . 🕨 | Playback | Performs image playback, deletion and writing |
| | | | of the print information. |
| | | | · |

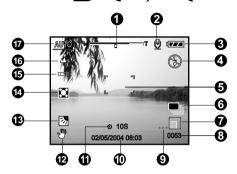
Viewfinder LED Indicator

This describes the color and state of the viewfinder LED.

| Color | State | During power off | During photography | During playback | During connection to a PC |
|--------|----------|-------------------------------|--|---|--|
| Green | On | Battery charging in progress. | Auto focusing successful. (AF is locked) | - | While the camera is connected to a PC. |
| | Flashing | - | - | - | - a PC. |
| Red | On | AC adaptor plug in | Writing to SD card in progress Auto focusing failure | Accessing of SD card in progress. DPOF file is being created. | Accessing of SD card in progress. PC mode stand by |
| | Flashing | - | Interval photography stand by | - | - |
| Orange | On | Battery charging error. | Processing image. Flash charging in progress. | - | Not recognized by the PC, or other status. |
| | Flashing | - | No battery power left. Camera malfunction. Battery cover open SD card wite-protect | No battery power left. | No battery power left. No SD card. |

LCD Monitor Icons

Photography modes [A] [A] [*]



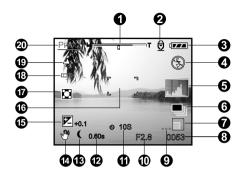
- 1. Zoom status
- 2. Voice memo
- 3. Remaining battery status
- Flash icon
- 5. Focus area (When the shutter button is pressed halfway.)
- 6. Capture mode icon
- 7. Image size
- 8. Possible number of shots
- 9. Quality

- 10. Date and time
- 11. Self-timer icon
- 12. Unsteady hold warning icon
- 13. Backlight correction
- 14. Metering icon
- 15. White balance icon
- 16. Focus icon
- 17. Mode icon



Each press of the | | button switches one step in the sequence of Normal display (displaying the icons, etc), display OFF, LCD monitor OFF.

Photography modes [P][Tv][Av][M]



- 1. Zoom status
- 2. Voice memo
- 3. Remaining battery status
- 4. Flash icon
- 5. Histogram
- 6. Capture mode icon
- 7. Image size
- 8. Possible number of shots
- 9. Quality
- 10. Aperture
- 11. Self-timer icon

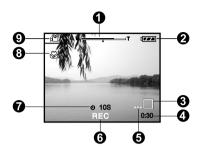
- 12. Shutter speed
- 13. Long time exposure mode icon
- 14. Unsteady hold warning icon
- 15. Exposure compensation
- Focus area (When the shutter button is pressed halfway.)
- 17. Metering icon
- 18. White balance icon
- 19. Focus icon
- 20. Mode icon



MOII

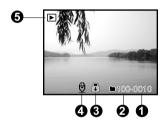
■ Each press of the |○| button switches one step in the sequence of Normal display (display the icons, etc), Normal and Histogram display, diaplay OFF, LCD monitor OFF.

Photography mode [2]



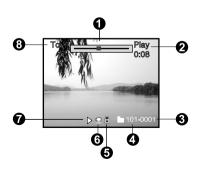
- 1. Zoom status
- 2. Remaining battery status
- 3. Image size
- Possible recording time/ elapsed time
- 5. Quality
- 6. Recording indicator
- 7. Self-timer icon
- 8. Focus icon
- 9. Mode icon

Playback mode [▶]-Still Picture Playback



- 1. File number
- 2. Folder number
- 3. Protect icon
- 4. Voice memo icon
- 5. Mode icon

Playback mode [>]-Video Playback

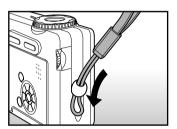


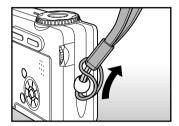
- Movie status bar
- Elapsed time
- 3. File number
- 4. Folder number
- 5. Protect icon
- 6. Mode icon
- 7. Play mode
- 8. Total time

GETTING STARTED

Attaching the Camera Strap

Attach the camera strap as shown in the illustration.



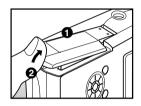


Inserting and Removing the Battery

We highly recommend using specified rechargeable lithium-ion battery (NP-60, 3.7V) to fully demonstrate this camera's function. Charge the battery before using the camera. Make sure that the power of the camera is off before inserting or removing the battery.

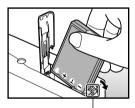
Inserting the Battery

1. Open the battery/SD card cover.

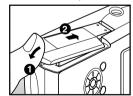


- 2. Insert the battery in the correct orientation shown.
 - Tilt the battery lock lever in the direction of the arrow and orient the battery so that its label is facing to the front side of the camera, and then insert the battery.





Battery lock lever

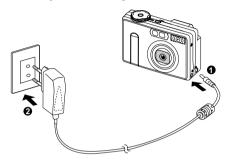


Removing the Battery

Open the battery/SD card cover and then release the battery lock lever. When the battery has come out a little, slowly pull it out the rest of the way.

Charging the Battery

Using the optional AC power adapter may charge the battery or operate the camera as power supply. Make sure that the power of the camera is off and then insert the battery before starting.



- Insert one end of the AC power adapter into the DC IN 5V terminal of the camera.
- 2. Insert the other end of the AC power adapter into a wall outlet.
 - The viewfinder LED lights green when charging is started and goes off when charging is completed. It lights orange when a charging error occurs.
 - It is recommended to fully discharge or exhaust the battery before being charged.
 - Charging time varies according to the ambient temperature and the status of battery.



This camera must be used with specified AC power adapter. Damage caused by the use of an incorrect adapter is not covered under the warranty.

NOTE

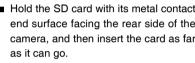
- When the charging is not started even if following the above procedure, turn the power on at any mode after LCD indication appears, and then turn the power off.
- The battery may feel warm after it has been charged or immediately after being used. This is normal and not a malfunction.
- When using the camera in cold areas, keep the camera and battery warm by holding them inside your outer cloth.
- If you open the battery cover without removing the battery, the power will not be terminated. If you remove the battery, you have to insert the battery again in a period of 2 hours in order to make sure that the date and time will not be reset.

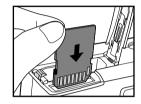
Inserting and Removing the SD Card

Images photographed with this camera will be stored on the SD card. Without inserting the SD card, you cannot take photographs using the camera. Before inserting or removing the SD card, make sure that the power of the camera is off.

Inserting the SD card

- 1. Open the battery/SD card cover.
- Insert the SD card in the correct orientation. shown
 - Hold the SD card with its metal contact end surface facing the rear side of the camera, and then insert the card as far as it can go.





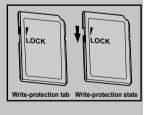
3. Close the battery /SD card cover.

Removing the SD card

Open the battery/SD card cover, press lightly on the edge of the SD card and it will eject.



- If the camera is powered on without an SD card inserted into the camera, the "NO CARD" message appears on the LCD monitor.
- To prevent valuable data from being accidentally erased from an SD card you can slide the writeprotected tab (on the side of the SD card) to "LOCK".



- To save, edit or erase data on an SD card, you must unlock the card.
- This camera does not support MultiMediaCardTM.

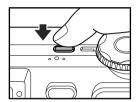
Turning the Power On/Off

Load the battery and insert an SD card before starting.

Turning the power on

Press the **POWER** button to turn the power on.

- The viewfinder LED lights green and the camera is initiated.
- When the power is turned on, the camera will start in the mode that was set with the mode dial.



Turning the power off

Press the **POWER** button to turn the power off.

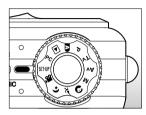


- The power is turned off automatically when the camera has not been operated for a fixed period time. To resume the operation condition, turn the power on again. Refer to section in this manual titled "Auto Off" in the Setup Menu (Basic) for further details.
- After the power is turned on, it may take several seconds to charge the flash. While the flash is being charged, the viewfinder LED lights orange, and then the camera is not yet ready for photography. Start photography after the viewfinder LED is turned off.

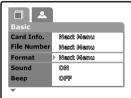
Formatting the SD Card

This erases all of the images and folders that have been recorded on the SD card. Formatting is not possible when the SD card in the locked condition.

- 1. Set the mode dial to [SET-UP].
 - [Basic] of the set-up menu is displayed.



2. Select [Format] with the ▲ / ▼ buttons from [Basic] of the set-up menu, then press the SET button.



- 3. Select [Execute] with the ▲ / ▼ buttons, and press the SET button.
 - To cancel formatting, select [Cancel] and press the SET button.



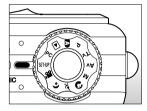


- You need to format an SD card before using it in this camera.
- Formatting the SD card also erases the protected images. All data other than images are also erased. Before formatting the card, make sure that all the images are unnecessary.
- Formatting is an irreversible action and data cannot be recovered at a later time.
- An SD card having any problem cannot be properly formatted.

Choosing the Language

When you first turn the camera on, choose a language for displayed information on the LCD monitor.

- Set the mode dial to [SET-UP] and press the ▶ button
 - [Custom] of the set-up menu is displayed.



- 2. Select [Language] with the ▲ / ▼ buttons and press the **SET** button.
 - The Language setting screen will be displayed.
 - Select the displayed language using the
 ▲ / ▼ buttons and press the SET button.
 The setting will be stored.



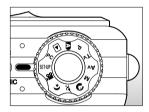
Setting the Date and Time

The date/time needs to be set if/when:

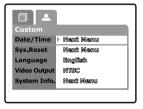
- Camera is turned on for the first time.
- Camera is turned on after leaving the camera without the battery for an extended period of time.

When the date and time information is not displayed on the LCD monitor, follow these steps to set the correct date and time.

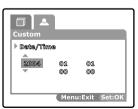
- Set the mode dial to [SET-UP] and press the
 button.
 - [Custom] of the set-up menu is displayed.



- 2. Select [Date/Time] with the ▲ / ▼ buttons and press the **SET** button.
 - The Date/Time setting screen will be displayed.



- Select the item's field with the ◀/▶ buttons and adjust the value for the date and time with the ▲/▼ buttons.
 - The date and time is set in the order year-month-day-hour-minute.
 - The time is displayed in 24-hours format.
- 4. After confirming all settings are correct, press the **SET** button.
 - The setting will be stored and the screen will return to the set-up menu.



Setting Image Resolution and Quality

Resolution and quality settings determine the pixel size (dimension), image file size, and compression ratio for your images. These settings affect the number of images that can be stored on a memory card. As you get to know the camera, it is recommended that you try each quality and resolution setting to get an appreciation for the effects that these settings will have on your images.

Higher resolution and higher quality images offer the best photographic results but produce large files sizes. Therefore, few images will take up a lot of memory space.

High resolution and quality settings are recommended for printed output and situations requiring the finest detail. Lower resolution/quality images take up less memory space and may be quite suitable for sharing images via e-mail, in a report, or on a web page.

To change image resolution or image quality, perform these steps below:

- Set the mode dial to one of the photography modes.
- 2. Press the MENU button.
 - [Picture] of the photography menu is displayed.
- 3. Select [Size] with the ▲ / ▼ buttons, and press the **SET** button.



- 4. Select the desired setting with the \triangle / \blacktriangledown buttons, and press the **SET** button.
- 5. Select [Quality] with the ▲ / ▼ buttons, and press the **SET** button.
- 6. Select the desired setting with the ▲ / ▼ buttons, and press the **SET** button.
- 7. To exit from the photography menu, press the **MENU** button.



Possible number of shots (Still picture)

The table shows the approximate shots that you can take at each setting based on an optional SD card from 32MB to 512MB.

| | | SD card | | | | |
|--------------------|----------------------|---------|------|-------|-------|-------|
| Image size | Quality | 32MB | 64MB | 128MB | 256MB | 512MB |
| | ★★★ (Fine) | 11 | 22 | 45 | 91 | 183 |
| (6M) 2816 x2112 | ★★ (Standard) | 18 | 38 | 77 | 154 | 311 |
| | ★ (Economy) | 34 | 70 | 142 | 283 | 571 |
| | TIFF | 2 | 5 | 10 | 21 | 43 |
| | ★★★ (Fine) | 18 | 37 | 76 | 151 | 305 |
| (4M) 2272 x1704 | ★★ (Standard) | 30 | 61 | 124 | 247 | 498 |
| | ★ (Economy) | 59 | 121 | 244 | 487 | 981 |
| | ★★★ (Fine) | 37 | 76 | 153 | 306 | 616 |
| (2M) 1600 x1200 | ★★ (Standard) | 59 | 121 | 244 | 487 | 981 |
| | ★ (Economy) | 118 | 242 | 489 | 975 | 1963 |
| | ★★★ (Fine) | 145 | 298 | 602 | 1200 | 2417 |
| (VGA) 640 x 480 | ★★ (Standard) | 210 | 430 | 870 | 1734 | 3491 |
| | ★ (Economy) | 379 | 775 | 1566 | 3121 | 6284 |

Possible recording time/sec (Video clip)

| l | O alita. | SD card | | | | |
|------------|------------------|---------|-------|-------|-------|-------|
| Image size | Quality | 32MB | 64MB | 128MB | 256MB | 512MB |
| | ★ ★ ★ (Fine) | 01:45 | 03:34 | 07:13 | 14:23 | 28:59 |
| 320 x 240 | ★★ (Standard) | 02:36 | 05:20 | 10:46 | 21:28 | 43:13 |

The data shows the standard testing results. The actual capacity varies according to the shooting conditions and settings.



 The memory card testing results are based on Toshiba, Panasonic and Sandisk SD card.

PHOTOGRAPHY MODE

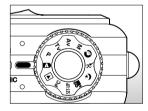
[A] Auto Photography Mode

Auto photography is a typical method of photography. Photographs can be taken simply because the exposure (the combination of shutter speed and aperture setting) is controlled automatically to suit the photographic conditions. You can use both a viewfinder and a 2.5" LCD monitor to compose the images. Taking photographs using the viewfinder will conserve the battery power. If the battery power is low, it is recommended that you only compose images using the viewfinder. Using the LCD monitor, you can compose images more accurately, but at the cost of the battery consumption.

Using the Viewfinder

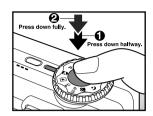
Make sure that the battery is inserted before taking photographs.

- Press the **POWER** button to turn the power on.
- 2. Set the mode dial to [A].



- 3. Compose your image in the viewfinder.
 - Turn the "diopter adjustment dial" until the image appears clearly within the viewfinder.

- 4. Press the shutter button.
 - Pressing the shutter button down halfway automatically focuses and adjusts the exposure, and pressing the shutter button down fully takes the photographs.
 - The focus area frame turns blue and the viewfinder LED lights green when the camera is in focus and the exposure is calculated.

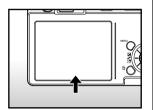


- When the focus or exposure is not suitable, the frame of the focus area turns vellow and the viewfinder LED flashes red.
- If the photographic quickview is set to "ON", the preview image (captured image) will be displayed while the image is being recorded onto the memory.
- When the voice memo is set to "ON", [VOICE RECORDING] will be displayed on the screen immediately after the photography, and the voice memo recording will start.
- Press the shutter button one more time during recording, or wait for 30 seconds, [VOICE RECORD END] will be displayed and the recording will end. A [🗓] icon is displayed with images that have been recorded with a voice memo.

Using the LCD Monitor

Make sure that the battery is inserted before taking photographs.

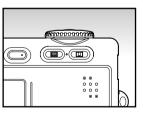
- Press the **POWER** button to turn the power on.
- 2. Set the mode dial to [A].
 - By default, the LCD monitor setting is on.
- 3. Compose your image in the LCD monitor.
- 4. Press the shutter button down halfway, then press it down fully.



Using the Optical Zoom

Zoom photography allows you to take zoom photographs up to 3 times the size or wide-angle photography depending on the distance up to the subject. You can also enlarge the center of the screen and take photographs in the digital zoom mode.

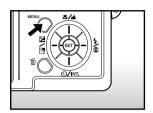
- Set the mode dial to one of the photography modes.
- If required, turn on the LCD monitor by pressing the □ button.
- 3. Compose the picture with the zoom button.
 - Pressing the [♣] button zooms in on the subject, and enlarges the subject on the LCD monitor.
 - Pressing the ••• button provides a wider angle picture.
 - The lens position moves according to the zoom button setting.
- 4. Press the shutter button down halfway, then press it down fully.



Using the Digital Zoom

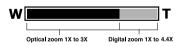
Using a combination of 3 times optical zoom and 4.4 times digital zoom permits zoom photography of up to 13.2 times to suit the subject and the distance. The digital zoom is a compelling feature, the more an image is enlarged (zoomed), the more pixilated (grainer) the image will appear.

- Set the mode dial to one of the photography modes.
- Turn on the LCD monitor by pressing the I□I button
- 3. To enable the digital zoom:
 - a. Press the MENU button.
 - b. Select [Function] with the ◀ / ▶ buttons.
 - c. Select [Digital Zoom] with the ▲ / ▼ buttons, and press the SET button.
 - d. Select [ON] with the ▲ / ▼ buttons again, and press the SET button.
 - e. Press the **MENU** button to exit from the menu screen.
 - f. To activate the digital zoom, press the button completely and hold it until the image on the LCD monitor expands.





4. Press the shutter button to capture a "zoomed" image.



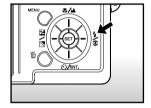


- The digital zoom is cancelled when the |□| button is pressed and the LCD monitor is turned off.
- The zoom setting is automatically cancelled by either turning the camera off or the activation of the Auto Off function.

Setting the Flash

Set the flash for taking photographs. The flash firing mode can be set to suit for the photographic conditions.

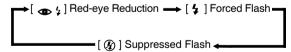
- 1. Set the mode dial to one of the photography modes.
 - The flash setting is limited depending on the selected photography mode, scene mode, and capture mode.
- Toggle the \$/⊙ button to select the desired flash mode.
 - Each press of the \$/② button moves the icon one step through the sequence and displays it on the screen.



■ For the mode of [🛕]:



 \blacksquare For the modes of [P], [Tv], [Av] and [M]:



The table below will help you choose the appropriate flash mode:

| Flash mode | Description |
|-------------------|--|
| [Blank] Auto | The flash fires automatically to suit the photographic conditions. |
| | This is only effective when the camera is set to the |
| | [A] mode. |
| [👁 ધ] | Use this mode to reduce the red-eye phenomenon |
| Red-eye Reduction | when you want to take natural-looking photographs of people and animals in low-light conditions. When taking photographs, the red-eye phenomenon can be reduced by asking the subject (person) to look at the camera or get as close to the camera as possible. The flash always fires twice, and the photograph is taken at the second firing. When the camera mode is [A] and [P], the flash will fire to suit the brightness of the subject. When the camera mode is [Tv], [Av] and [M], the |
| [4] | flash will always fire. In this mode, the flash always fires. Use this mode for |
| Forced Flash | photographing under artificial light such as |
| 3.0 | backlighting, fluorescent lighting, etc. |
| [36] | Use this mode when taking pictures using indoor |
| Suppressed Flash | lighting, for stages and indoor competitions, and when the subject is too far away for the flash to be effective. |



- $\ \blacksquare \$ On the [$\$] scene mode, the flash mode is fixed to [$\$] Suppressed Flash.
- NOTE On the [(*) scene mode, the flash mode is fixed to [*) Forced Flash.
 - On the [▲] focus mode, the flash mode is fixed to [④] Suppressed Flash.

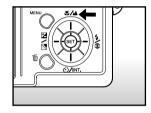
Setting the Focus

Photographs can be taken with the distance to the subject set by auto focus,

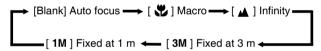
[🗱] macro, [🛕] infinity, [3M] fixed at 3 m, or [1M] fixed at 1 m.

The settings will be maintained even when the power is turned off or when Auto Off is activated. The focus settings will be limited depending on the selected photography.

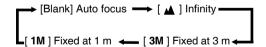
- Set the mode dial to one of the photography modes.
- Toggle the ♥/▲ button to select the desired focus mode.
 - Each press of the 尤/▲ button moves the icon one step through the sequence and displays it on the screen.



 \blacksquare For the modes of [\blacksquare], [P], [Tv], [Av], [M], [$\cancel{\sim}$] and [$\cancel{\sim}$]:



■ For the modes of [and [(*):



The table below will help you choose the appropriate focus mode:

| Focus mode | Description | |
|--------------|---|--|
| [Blank] | Selects this when you want to leave the settings up to | |
| Auto Focus | the camera so that you can take photographs without | |
| | paying attention to settings. | |
| | Approximately 80 cm (both Wide and Tele) | |
| [#] | Selects this when you want to takes a close up | |
| Macro | photography. | |
| | Wide (zoom off) : Approximately 9 cm to infinity | |
| | Tele (at optical zoom 3x) : Approximately 30 cm to infinity | |
| [🛕] | Selects this when you want to take photographs of | |
| Infinity | subjects at a distance of 5 m or more from the camera. | |
| [3M] | Selects this when you want to take photographs of | |
| Fixed at 3 m | subjects at a distance of about 3 m from the camera. | |
| [1M] | Selects this when you want to take photographs of | |
| Fixed at 1 m | subjects at a distance of about 1 m from the camera. | |

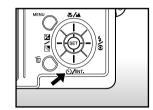


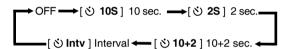
■ When [▲], [3M] or [1M] is set, the camera takes photographs with the focus fixed at those distances.

Self-timer/Photographing at Intervals

This setting allows photographs to be taken with the self-timer and allows interval photography.

- Set the mode dial to one of the photography modes.
- Toggle the O/INT. button to select the setting.
 - Each press of the ��/INT. button moves the icon one step through the sequence and displays it on the screen.





■ For the [\textstyle] mode and capture mode ([Continuous] and [Auto Exp.])

- Compose the picture, press the shutter button down halfway, then press it down fully.
 - The self-timer LED flashes and the photograph is taken after the preset time has elapsed.
 - The countdown is displayed on the LCD monitor.
 - To cancel the self-timer during operation, press the **SET** button.

The table below will help you choose the appropriate self-timer mode:

| Self-timer mode | Description |
|----------------------------|---|
| [改 10S]10 sec. | The picture is taken about 10 seconds after the shutter |
| | button is pressed. |
| [🖄 2S] 2 sec. | The picture is taken about 2 seconds after the shutter |
| | button is pressed. |
| [🖒 10+2]10+2 sec. | One picture is taken about 10 seconds after the shutter |
| | button is pressed, then the camera prepares for another |
| | photograph (charging the flash). The other photograph |
| | is taken 2 seconds after this preparation is completed. |
| | This is convenient when taking group photographs in |
| | succession. |
| [ல Intv] Interval | This allows photographs to be taken with settings of a |
| | fixed interval and number of photograph cycles. |
| | The photographic interval can be set to 1, 3, 10, or 60 |
| | minutes, and the number of photograph cycles can be |
| | set from 2 to 99. |
| | During the interval between one photograph and |
| | another, the viewfinder LED flashes red and the LCD |
| | monitor is automatically turned off. (standby mode) |

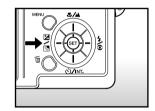


- The self-timer setting is automatically cancelled after a photograph is taken.
- Use of the [🖒 2S] self-timer setting is effective in preventing the blurring that can result when the shutter button is pressed.
- The number of photographs that can be taken will differ depending on the capacity of the memory, the image settings, and other factors.
- The interval photography is not available for TIFF setting.

Exposure Compensation/Backlight Correction

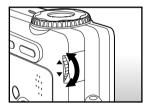
Photographs can be taken with the overall screen intentionally made brighter or darker. These settings are used when a suitable brightness (exposure) cannot otherwise be obtained in circumstance where the difference in brightness between the subject and the background (the contrast) is large, or when the subject that you want to photograph is very small within the screen. Exposure can be set in 0.3 EV units.

- Set the mode dial to one of [P], [Tv] or [Av] and press the ☑/☒ button.
 - Each press of the 2/3 button displays the setting in the order of [Blank], 3 Backlight Correction, and 2 Exposure Compensation.



- 2. Set the exposure value with the search dial.
 - Turn the search dial to the ▲ side to decrease the value.
 - Turn the search dial to the ▼ side to increase the value.
 - The setting range of the exposure compensation is as follows.

■ The larger the value, the brighter the image. The smaller the value, the darker the image. The set value is displayed on the screen.



Effective Subjects and Set Values

- + (positive) compensation
- * Printed matter comprising black text on whitish paper
- * Backlighting
- * Bright scenes or strong reflected light such as ski slopes
- * When the sky accounts for a large area on the screen
- (negative) compensation
- * People illuminated by a spotlight, in particular, against dark background
- * Printed matter comprising white text on blackish paper
- * Weak reflecting bodies such as evergreen trees or darkish leaves
- Backlight correction (+1.3, fixed)
- * When the background is bright and the subject is dark.
- * When subjects (people) have a light source such as the sun to their backs.



■ The backlight correction setting can be set in the [♠], [P], [Tv], [Av], [♠] and [➢] modes.

NOTE

[P] Program (Automatic Exposure) Photography Mode

The camera automatically sets the shutter speed and the aperture to suit the brightness of the subject. This allows you to take photographs with ease just like when the [A] mode is selected.

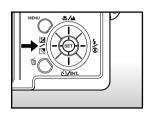
- 1. Set the mode dial to [P].
- Compose the picture, press the shutter button down halfway, then press it down fully.



■ Exposure compensation can be set.

[Tv] Shutter Speed Priority Photography Mode

In this mode, photographs are taken with the priority given to shutter speed. The aperture is automatically set according to the shutter speed. If you set a fast shutter speed, you can take photographs of moving subjects that look as if they are still. If you set a slow shutter speed, you can take photographs that give the impression that the subject is in motion.



- 2. Set the shutter speed with the search dial.
 - Turn the search dial to the ▲ side (toward faster shutter speeds)
 - Turn the search dial to the ▼ side (toward slower shutter speeds)
 - The setting range is as follows.

 1/1500, 1/1250, 1/1000, 1/800, 1/650,

 1/500, 1/400, 1/320, 1/250, 1/200,

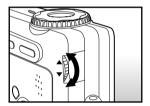
 1/160, 1/125, 1/100, 1/80, 1/64, 1/50,

 1/40, 1/32, 1/25, 1/20, 1/16, 1/13, 1/10,

 0.13s, 0.16s, 0.20s, 0.25s, 0.3s, 0.4s,

 0.5s, 0.6s, 0.8s, 1s, 1.3s, 1.6s, 2s, 2.5s,

 3.2s, 4s, 5s, 6.4s, 8s



- The shutter speed and corresponding aperture value are displayed on the screen. If an appropriate combination cannot be set, the aperture value is displayed in red, but photographs can be taken.
- Compose the picture, press the shutter button down halfway, then press it down fully.



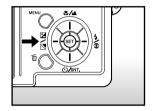
- Setting the shutter speed slower than 0.5 second will result in long exposure photography and the [() will be displayed on the screen.
- In the flash photography mode, when [4] and [4] are set, the fastest shutter speed is 1/250 second.
- In the capture mode [Continuous] and [Auto Exp.], the shutter speed cannot be set slower than 0.5 second.

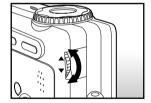
[Av] Aperture Priority Photography Mode

In this mode, photographs are taken with the priority given to aperture. The shutter speed is automatically set according to the aperture.

If you set a small aperture (higher F value), you can take portrait photographs with an out-of-focus background. Alternatively, if you set a large aperture (lower F value), both close objects and distant objects will be in focus, for example when taking landscape photographs.

- 1. Set the mode dial to [Av] and press the ☑/⅓ button
- 2. Set the aperture value with the search dial.
 - Turn the search dial to the ▲ side to increase the value.
 - Turn the search dial to the ▼ side to decrease the value.
 - The setting range is as follows. F6.7/F5.6/F 4.8/F4.0/F3.5/F2.8
 - The aperture and corresponding shutter speed are displayed on the screen. If an appropriate combination cannot be set, the shutter speed value is displayed in red, but photographs can be taken.
- 3. Compose the picture, press the shutter button down halfway, then press it down fully.







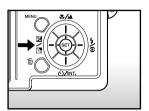
The aperture value is adjusted automatically depending on the position

of the zoom lens

[M] Manual Photography Mode

In this mode, photographs are taken by setting the aperture value and the shutter speed individually.

- 1. Set the mode dial to [M].
- 2. Select the shutter speed or the aperture with the ☑/⅓ button.
- 3. Set the shutter speed or the aperture value with the search dial.
- Compose the picture, press the shutter button down halfway, then press it down fully.





- In the flash photography mode, when [4] and [4] are set, the fastest shutter speed is 1/250 second.
- Setting the shutter speed slower than 0.5 second will result in long exposure photography and the [() will be displayed on the screen.

Setting the Scene Mode

This sets the scene setting such as [a] portrait, [*] sports or [*] night scene and takes the photograph.

- 1. Set the mode dial to one of the scene modes.
 - When the camera mode is set to the [] or [|], [] cannot be selected.
- Compose the picture, press the shutter button down halfway, then press it down fully.

The table below will help you choose the appropriate scene mode:

| Scene Mode | Description |
|--------------------|--|
| [🧑] Portrait | Selects this when you want to take a photograph that |
| | makes the person stand out and blurs the background. |
| | The flash setting is fixed at [$_{lacktlefta}$ $_{\clipsystyle 4}$] which is effective |
| | in reducing the red-eye phenomenon. |
| [🎉] Sports | Selects this when you want to photograph fast-moving |
| | subjects. |
| | The flash mode cannot be set. |
| [(*] Night scene | Selects this when you want to photograph people with |
| | an evening or night scene background. |
| | The flash is fixed at [4]. |



 The description of each scene serves as a general guide. Set the camera to suit your own preferences.

MOLE

[🔐] Movie Mode

This mode is for recording video clips. Voice can also be recorded.

- 1. Set the mode dial to [12].
- 2. Compose the picture with the zoom button.
 - Optical zoom and digital zoom can be set while composing.
- Press the shutter button.
 - The recording of the video clip will start.
 - Pressing the shutter button one more time will end the recording of the video clip, and record the image on the SD card.
 - The recording time depends on the storage size and the subject of the picture to be recorded.



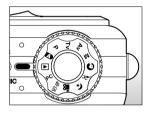
- On the [) mode, the LCD monitor cannot be turned off.
- When recording video clips, flash photography is not possible.
- While the image is being recorded into the SD card, do not open the battery/SD card cover, nor remove the battery or SD card. Doing so might damage the SD card or destroy the data of the SD card.

[▶] PLAYBACK MODE

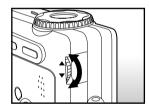
Playing Back Still Images

You can play back the still images on an LCD monitor. Insert the SD card into the camera and turn on the power before starting.

- 1. Set the mode dial to [].
 - The last image appears on the screen.



- Turn the search dial to move forward or reverse.
 - Turn to the ▲ side: go back to the previous frame.
 - Turn to the ▼ side: advance to the next frame.
 - The images can also be fed in reverse or fed forward by pressing the ▲ / ▼ buttons.



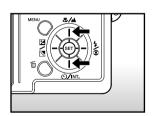
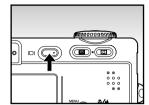
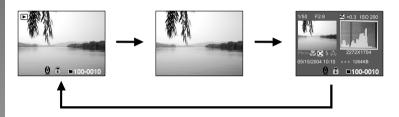


Image Display Information

You can switch the state of the information display by pressing the | button when playing back images. Each press of the I□I button switches the information display state in the following order:







- NOTE
- Pressing the ◀/ ▶ buttons during image playback will result in a 90 degree rotated display. The button rotates the image clockwise and displays it, whereas the ◀ button rotates the image counterclockwise and displays it. A press of the button opposite to the direction in which the image was rotated will return the image to the normal display.
- A [□] icon is displayed with the video data. Video clips cannot be rotated.
- A [] icon is displayed with images which have an audio memo recorded.
- Press the **SET** button to playback the voice memo data.
- The condition of the information display cannot be switched with video clips.

Playing Back Video Clips

You can play back video clips recorded on the camera. You can also play back voice.

- 1. Set the mode dial to [].
 - The last image appears on the screen.
- 2. Select the desired video clip with the search dial.
 - You can also select the desired video clip with the ▲ / ▼ buttons.
- 3. Press the **SET** button.
 - A press of the ▶ / ■ buttons during playback allows fast forward play / fast reverse play.
 - To stop video playback:

Press the ▼ button.

This stops playback and returns to the start of the video clip.

■ To pause video playback

Press the ▲ button.

This pauses video playback.

To cancel pause, press the ▲ button again.

Button Operations

| | During playback | During pause | During a Stop |
|--------------------|--|-------------------|----------------------------------|
| button | Fast forward play Each press of the ▶ button moves the operation one step in the sequence of 2 times fast forward play, 4 times fast forward play, and regular play. | 2x-speed playback | |
| ◀ button | Reverse play Each press of the ◀ button moves the operation one step in the sequence of 2 times fast reverse play, 4 times reverse play, and regular play. | Reverse playback | |
| ▲ button | Pause | Canceling pause | The previous image is displayed. |
| ▼ button | Stop (The display returns to the 1st frame playback) | | The next image is displayed. |
| SET button | Regular forward play | Canceling pause | Regular forward play |



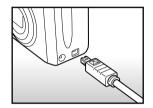
■ Video clips cannot be displayed rotated or enlarged.

Turning the search dial during a pause, feeds the video forward or backward, respectively, one frame at a time. Turning the search dial to the ▼ side feeds the video forward, turning to the ▲ side feeds the video backward.

Playing Back Still Images/Video Clips on a TV

You can also playback your images on a TV screen. Before connecting to any devices, make sure to select NTSC / PAL system to match the video output system of the video equipment you are going to connect to the camera, then turn all connected devices off. It is also recommended to use the AC power adapter while transferring the recorded images and video files.

- 1. Set the mode dial to [].
- Connect one end of the A/V cable to the A/V OUT terminal of the camera.
- Connect the other end to the A/V input socket of the TV set.
- 4. Turn the TV and camera on.
- 5. Play back the still images / video clips.
 - The method of operation is the same as playing back still images and video clips on the camera.





- In the case of the PAL system, images are surrounded by a black frame.
- Refer to section in this manual titled "Video Output" in the Setup Menu (Custom) for further details.

Recording Voice Memos

A maximum of 30 seconds of audio can be recorded like a memo for photographed still images. The voice memo can be recorded only once.

- 1. Set the mode dial to [].
 - The last image appears on the screen.
- 2. Select the image with the search dial.
- 3. Press the shutter button.
 - [VOICE RECORDING] is displayed on the screen and recording starts.
- To stop recording voice memo during recording, press the shutter button again.
 - [VOICE RECORD END] will be displayed and the recording will end.
 - A [\bigcirc] icon is displayed with images that have been recorded with a voice memo.

Playing back voice memo

A press of the **SET** button displays [VOICE PLAYBACK] and plays back the voice memo.

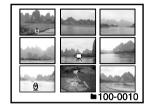


■ Voice memo is only available in the still single image capture mode.

Thumbnail Display

This function allows you to view 9 thumbnail images on the LCD monitor at the same time, which can quickly search for the image that you want.

- 1. Set the mode dial to [].
 - The last image appears on the screen.
- 2. Press the ••• button once.
 - The images are displayed in the thumbnail display.
 - Images that have been selected with the
 ▲ / ▼ / ◀ / ▶ buttons or the search dial
 will be indicated by a green frame.
 - When there are ten or more images, scroll the screen with the ▲ / ▼ buttons or the search dial.
- Press the ▲ / ▼ / ◀ / ▶ buttons to select the image to be displayed at regular size.
- 4. Press the SET button.
 - The selected image is displayed at its regular size.



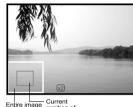


NOTE

Zoom Playback

Images that are being play back can be enlarged and displayed in 2 levels of 2 times and 4 times enlargement. This mode also allows you to enlarge your image on the selected portion of the image to check for small details.

- 1. Set the mode dial to [].
- Press the ▲/▼ buttons to select the image you want to enlarge.
 - You can also select the image you want to enlarge with the search dial or from the thumbnail display.
- 3. Adjust the zoom ratio with the [4] / [444] huttons



Entire image position of enlargement

- Pressing the [♠] button enlarges the image.
- To return to normal magnification, press the [button.
- The image is displayed enlarged, and a white frame and green frame are displayed on the LCD monitor.
- The white frame indicates the entire image, while the green frame shows the location of the currently enlarged area.
- 4. Press the ▲ / ▼ / ◀ / ▶ buttons to select the area to enlarge.
- 5. To return to regular display, toggle the [+++] button until the regular display appears on the screen.



- Pressing the $\downarrow\downarrow\downarrow\downarrow$ button reduces the image from $4x \longrightarrow 2x \longrightarrow 1x$.

Slideshow Display

The slideshow function enables you to playback your still images automatically in order one image at a time.

- 1. Set the mode dial to [▶].
- 2. Press the MENU button.
 - The playback menu is displayed.
- 3. Select [Slide Show] with the ▲ / ▼ buttons, and press the **SET** button.
 - The slideshow starts.
- 4. To stop the slide show during playback, press the **SET** button.
 - The image is displayed on screen when you press the **SET** button.





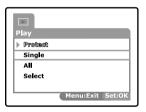
- The Auto Off function does not operate during slide show.
- All still images in the folder are automatically played back.

Protecting Images

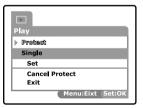
Set the data to read-only to prevent images from being erased by mistake.

Protecting Images

- 1. Set the mode dial to [].
- 2. Select the image that you want to protect with the search dial.
- 3. Press the MENU button.
 - The playback menu is displayed.
- 4. Select [Protect] with the ▲ / ▼ buttons, and press the **SET** button.
- Select [Single] or [All] with the ▲ / ▼ buttons, and press the SET button.



- 6. Select [Set] with the ▲ / ▼ buttons, and press the **SET** button.
 - Protect is executed and the camera returns to the play mode.
 - The protect icon [] is displayed with protected images. When [All] has been selected, [] is displayed with all the images.



Canceling the Protection

To cancel protection for only one image, display the image that you want to remove the image protection.

- Select [Protect] with the ▲ / ▼ buttons from the playback menu, and press the SET button.
- 2. Select [Single] or [All] with the ▲ / ▼ buttons, and press the **SET** button.
- 3. Select [Cancel Protect] with the ▲ / ▼ buttons, and press the SET button.
 - The removal of image protection is executed and the camera returns to the play mode.

Protecting multiple images simultaneously

- Select [Protect] with the ▲ / ▼ buttons from the playback menu, and press the SET button.
- 2. Select [Select] with the ▲ / ▼ buttons, and press the **SET** button.
 - The images are displayed in the thumbnail display.
- Select the image you want to protect with the ▲ / ▼ / ◀ / ▶ buttons, and press the |□| button.
 - The protect icon [] is displayed with protected images. Selecting a protected image and pressing the button again will cancel the protection. This procedure is repeated to select multiple images.
- 4. Press the SET button.
 - Protection and cancellation the protection are executed and the camera returns to the play mode.



- Formatting the SD card undoes the protection, and erases all images.
- Even when multiple folders exist in the SD card, the images of all of the folders can be selected with the ▲ / ▼ buttons or the search dial.

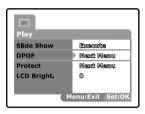
DPOF Settings

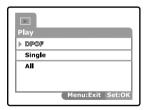
DPOF is the abbreviation for Digital Print Order Format, which allows you to embed printing information on your memory card. You can select the images to be printed and how many prints to make with the DPOF menu in the camera and insert the memory card to the card compatible printer. When the printer starts printing, it will read the embedded information on the memory card and print the specified images.

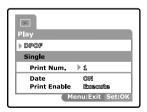
- 1. Set the mode dial to [].
- Select the image that you want to set DPOF with the search dial
- 3. Press the MENU button.
 - The playback menu is displayed.
- Select [DPOF] with the ▲ / ▼ buttons, and press the SET button.
 - The DPOF setting screen is displayed.
- Select [Single] or [All] with the ▲ / ▼ buttons, and press the SET button.
 - Single: Sets DPOF for each individual image.

All: Sets DPOF for all images at once.

- Select [Print Num.] with the ▲ / ▼ buttons, and press the SET button.
 - This displays the number of prints setting screen.
- Set the number of prints with the ▲ / ▼ buttons, and press the SET button.
 - You can set up to 9 prints for each image.
- Select [Date] with the ▲ / ▼ buttons, and press the SET button.







- The date setting screen appears.
- Select date to [ON] or [OFF] with the ▲ / ▼ buttons, and press the SET button.
 - ON: The date of the photograph will also be printed.
 OFF: The date of the photograph will not be printed.
- 10. Select [Print Enable] with the ▲ / ▼ buttons, and press the **SET** button.
- 11. Select [Execute] with the ▲ / ▼ buttons, and press the **SET** button.
 - This creates a file containing the DPOF information, and when the operation is finished, the screen returns to the playback screen.



The date that is printed on the photo is the date set on the camera. To print the correct date on the photo, set the date on the camera before you photograph the image. Refer to section in this manual titled "Setting the Date and Time" for further details.

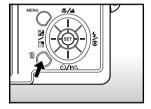
■ Even when multiple folders exist in the SD card, the images of all of the folders can be selected with the ▲ / ▼ buttons or the search dial.

[m] Erasing Images

Erasing at Photography Mode (Quick Delete Function)

Quick delete function enables you to erase the image during photography. The quick delete menu provides you to directly erase the last image without further settings.

- Set the mode dial to one of the photography modes.
- 2. Press the in button.
 - The last image and quick delete menu appear on the screen.



- 3. Press the SET button to erase the image.
 - To not erase, select [Cancel], and press the **SET** button.



Erasing at Playback Mode

Erasing single image / Erasing all images

- 1. Set the mode dial to ▶.
 - The last image will be displayed on the screen.
- 2. Select the image you want to erase with the search dial.
- 3. Press the fi button.
 - The deletion menu will be displayed.

Select [Single] or [All] with the ▲ / ▼ buttons, and press the SET button.

■ Single: Erases the selected image or

the last image.

All: Erases all of the images on

the SD card except for the

protected images.

Select: Erases a number of selected

images.



■ To not erase, select [Cancel], and press the **SET** button.



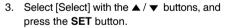
Even if you take photographs after erasing an image, the file number is assigned the next number of the very last one before the image was erased.

> Delete Simale

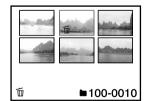
Erasing selected images.

This erases a number of selected images.

- Set the mode dial to ▶.
- 2. Press the fi button.
 - The deletion menu will be displayed.



- The images are displayed in the thumbnail display.
- Select the image you want to erase with the ▲/▼ / ◀/▶ buttons, and press the find button.



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- The [m] icon will be displayed. One more press of the erase button will cancel the operation. Repeat this procedure and select all the images that you want to erase.
- Press the SET button.

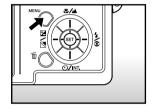


MENU OPTIONS (FULL FUNCTION)

Photography Menu (Picture)

This menu is for the basic settings to be used when taking pictures in the photography mode. The setting is not canceled even if the camera is turned off or the Auto Off function is activated.

- Set the mode dial to one of the photography modes.
- Press the MENU button.
 - [Picture] of the photography menu is displayed.
- Select the desired [Picture] option item with the ▲ / ▼ buttons, and press the SET button to enter its respective menu.



- 4. Select the desired setting with the ▲ / ▼ buttons, and press the SET button.
- 5. To exit from the photography menu, press the **MENU** button.

Size

This sets the size of the image that will be photographed.

[Still picture]

2816 x 2112: 2816 x 2112 pixel (6M)
2272 x 1704: 2272x1704 pixel (4M)
1600 x 1200: 1600x 1200 pixel (2M)
640 x 480: 640 x 480 pixel (VGA)





■ In the [are] mode, size setting is not possible.

Quality

This sets the quality (compression rate) at which the photograph is taken.

Fine: Low compression rate

Standard: Normal

Economy: High compression rate

TIFF: No compression rate (the highest image quality and the largest

file sizes.)



■ Economy and TIFF settings cannot be set in the [🍄] mode.

■ TIFF setting is selectable only when size setting is set to 2816x2112.

Sharpness

This sets the sharpness of the image that will be photographed.

Hard: Hard touch
Normal: Normal touch
Soft: Soft touch



■ This setting cannot be set in the [are] mode.

Contrast

This sets the difference between the bright and dark portions of the image that will be photographed.

Hard: Increases the contrast.

Normal: Set the contrast automatically.

Standard color

Soft: Decreases the contrast.

Color

Standard:

This sets the color of the image that will be photographed.

Vivid: Bright color

Sepia: Sepia

Monochrome: Black-and-white

Photography Menu (Function)

- Set the mode dial to one of the photography modes.
- Press the MENU button, and select the [Function] menu with the ▶ button.
 - [Function] of the photography menu is displayed.
- Select the desired [Function] option item with the ▲ / ▼ buttons, and press the SET button to enter its respective menu.
- Select the desired setting with the ▲ / ▼ buttons, and press the SET button.
- 5. To exit from the photography menu, press the **MENU** button.





Capture Mode

This sets the recording method at the time of taking pictures.

(Blank) Single: Takes one photograph at a time.

(🔲) Continuous: Permits continuous photography of 5 pictures max, at

the fastest interval of 0.62 seconds.

(AEB) Auto Exp.: Effective when it is difficult to determine the exposure

for continuous photography with exposure at the 3 levels of standard exposure (0), underexposure (-0.67) and

overexposure (+0.67) compensation.



In continuous photography, press and hold the shutter button until 5 images have been captured. If the shutter button is released earlier, the continuous photography will end at that point.

NOTE

When the size setting is set to TIFF, the maximum recordable number is 3 shots.

Voice Memo

A voice memo can be recorded for 30 seconds immediately following a still single image photography. This feature is also available during playback mode. Refer to section in this manual titled "[A] Auto Photography Mode" for further details.

ON: Enable voice memo. OFF: Disable voice memo.



■ When voice memo is set to on, the quickview setting is also fixed to on.

LCD Bright.

Select a brightness level for the LCD monitor. The LCD becomes brighter with the ▲ button and darker with the ▼ button. The adjustment range is from -5 to +5.



Digital Zoom

This sets whether or not to use digital zoom at the time of photography.

ON: Enable digital zoom. OFF: Disable digital zoom.

Quickview

This sets whether or not to display the photographed image on the screen immediately after the picture is taken.

ON: Displayed when images are being recorded on the SD card.

OFF: Does not display.



NOTE

- A photographed image is displayed on the LCD monitor for 2 seconds.
- When quickview is set to off, the voice memo setting is also fixed to off.

Date Print

The date of recording can be printed directly on the still images. This function must be activated before the image is taken.

ON: Imprints the date on the still images

when taking pictures.

OFF: Does not imprint the date on the still

images when taking pictures.



Date imprinted here.

Interval/Count

This automatically photographs at a fixed interval for the number of set cycles. It is effective when the $[\circlearrowleft]$ Intv] is set with the \blacksquare button.

1 Min.: Photographs at a 1-minute interval.

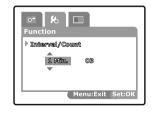
3 Min.: Photographs at a 3-minute interval.

10 Min.: Photographs at a 10-minute interval.

60 Min.: Photographs at a 60-minute interval. Number of photographs: Can be set from 2 to

99 times.

Refer to section in this manual titled "Selftimer/Photographing at Intervals" for further details.





 The number of photographs that can be taken will differ depending on the capacity of the memory, the image settings, and other factors.

Photography Menu (AE/AWB)

- Set the mode dial to one of the photography modes.
- Press the MENU button, and select the [AE/AWB] menu with the ▶ button.
 - [AE/AWB] of the photography menu is displayed.
- Select the desired [AE/AWB] option item with the ▲ / ▼ buttons, and press the SET button to enter its respective menu.
- Select the desired setting with the ▲ / ▼ buttons, and press the SET button.
- 5. To exit from the photography menu, press the **MENU** button.



White Balance

This sets the white balance photographing under a variety of lighting conditions and permits photographs to be taken that approach the conditions that are seen by the human eye.

Auto: Automatic adjustment.

Incandescent: Photography under incandescent lighting.

Fluorescent 1: Photography under a daylight fluorescent tube with a bluish

cast.

Fluorescent 2: Photography under a daylight white fluorescent tube with a

reddish cast.

Day Light: Outdoor photography.

Cloudy: Photography under a cloudy sky.

Manual: Photography with a Manual WB.

Metering

This sets the metering method for calculating the exposure.

Multi: The entire area of the screen is measured, and the exposure is calculated.

Spot: A very small portion of the center of the screen is measured, and the exposure is calculated.

ISO

This sets the sensitivity for taking pictures. When the sensitivity is raised (and the ISO figure is increased), photography will become possible even in dark locations, but the more pixilated (grainer) the image will appear.

50: Equivalent to ISO 50.100: Equivalent to ISO 100.

200: High-sensitive photography equivalent to ISO 200.

 $\textbf{Auto:} \quad \text{Automatic setting in the range of ISO 50 to 200 (Selection is permitted}$

only when set to the [P] mode.)

Manual WB

This manually sets the white balance and stores it. Use of this is convenient when the white balance does not offer a good match.

Before select [Execute] determine the subject (such as a white paper) that will be used to set the white balance.

Cancel: Disable manual white balance. **Execute:** Enable manual white balance.

Playback Menu

In the [] mode, set which settings are to be used for playback. The setting is not canceled even if the camera is turned off or the Auto Off function is activated.

 \triangleright

Play

Slide Show

LCD Bright.

Protect

Escacation

numerial space/a

Menu:Exit Set:OF

- Set the mode dial to [▶].
- 2. Press the MENU button.
 - The playback menu is displayed.
- Select the desired setting with the ▲ / ▼ buttons, and press the SET button.
- 5. To exit from the playback menu, press the **MENU** button.

Slide Show

Automatically plays back still images in order one image at a time.

Refer to section in this manual titled "Slideshow Display" for further details.

DPOF

Set the number of prints and date display in DPOF format to images that you want to print. (This function is available for still images only.) You can print images easily just by inserting the SD card to a DPOF-compatible printer or a print shop.

Refer to section in this manual titled "DPOF Settings" for further details.

Protect

Set the data to read-only to prevent images from being erased by mistake. Refer to section in this manual titled "**Protecting Images**" for further details.

LCD Bright.

Adjust the brightness of the LCD monitor. This function does not adjust the brightness of recorded images.

Refer to section in this manual titled "LCD Bright." in Photography Menu (Function) for further details.

Setup Menu (Basic)

Set your camera's operating environment. The setting is not canceled even if the camera is turned off or the Auto Off function is activated.

- 1. Set the mode dial to [SFT-IIP].
 - [Basic] of the set-up menu is displayed.
- Select the desired [Basic] option item with the ▲ / ▼ buttons, and press the SET button to enter its respective menu.
- Select the desired setting with the ▲ / ▼ buttons, and press the SET button.
- 4. To exit from the set-up menu, change the mode dial setting.





Card Info.

This allows a check of the free capacity of the SD card as well as other information.

File Number

This creates a new folder. The photographed images are recorded to the newly created folder from number 0001.

Cancel: Does not reset the file number.

Execute: Resets the file number and creates a new folder.

Format

This function erases all images and reformats the SD card loaded in your camera. Protected images are also erased. SD card cannot be formatted if it is write-protected.

Refer to section in this manual titled "Formatting the SD Card" for further details.

Sound

This sets whether or not to mute the playback sound of the recorded voice memo and voice recorded with the video clip.

ON: Does not mute the playback sound of the voice memo and voice recorded with the video clip.

OFF: Mute the playback sound of the voice memo and voice recorded with the video clip.

Beep

This sets the camera sound each time you press the camera button if this function is enabled.

ON: Sounds the beep tone.

OFF: Does not sound the beep tone.

Auto Off

If no operation is performed for a specific period of time, the power to the camera is automatically turned off. This feature is useful to reduce battery wear.

1 Min.: When the camera has not been operated, it turns the power off after 1 minute.

2 Min.: When the camera has not been operated, it turns the power off after 2 minutes.

3 Min.: When the camera has not been operated, it turns the power off after 3 minutes.

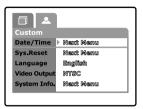


 This function does not operate during a slideshow or in the [PC] mode and during PC connection.

NOTE

Setup Menu (Custom)

- Set the mode dial to [SET-UP], and select the [Custom] menu with the ▶ button.
 - [Custom] of the set-up menu is displayed.
- Select the desired [Custom] option item with the ▲ / ▼ buttons, and press the SET button to enter its respective menu.
- Select the desired setting with the ▲ / ▼ buttons, and press the SET button.
- 4. To exit from the set-up menu, change the mode dial setting.



Date/Time

This sets the date and the time.

Refer to section in this manual titled "Setting the Date and Time" for further details.

Sys. Reset

This returns all basic settings to the camera's default settings. The time setting will not be reset.

Cancel: Does not return to the default settings.

Execute: Returns to the default settings.

Language

This sets the language that is displayed on the LCD monitor.

Refer to section in this manual titled "Choosing the Language" for further details.

English: English Français:French Deutsch: German Español: Spanish Italiano: Italian

繁體中文: Chinese (Traditional) 简体中文: Chinese (Simplified)

Video Output

This sets video output system of the video equipment that you are going to connect to the camera.

NTSC: NTSC system.

PAL: PAL system.

System Info.

This displays the firmware version of the camera.

TRANSFERRING RECORDED IMAGES AND VIDEOS TO YOUR COMPUTER

To transfer images/video clips from the camera to your computer, follow these steps:

Step 1: Installing the USB driver (Windows 98 and Mac OS 8.6 users only)

Step 2: Connecting the camera to your computer

Step 3: Downloading images and video files

System Requirements (Windows)

- Pentium 166 MHz or higher
- Windows 98/98SE/Me/2000/XP
- 64MB RAM
- 128MB hard disk space
- CD-ROM drive
- Available USB port

System Requirements (Macintosh)

- PowerPC G3/G4
- OS 8.6 or later
- 64MB RAM
- 128MB hard disk space
- CD-ROM drive
- Available USB port

Step 1: Installing the USB Driver

Windows 98 computers

The USB driver on the CD-ROM is exclusively for Windows 98 computers. Installing the USB driver on computers running Windows 2000/ME/XP is not necessary.

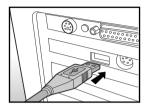
- Insert the CD-ROM that came with the camera into your CD-ROM drive.
 The welcome screen appears.
- Click "Install USB Driver". Follow the on-screen instructions to complete the installation. After the USB driver has been installed, restart your computer.

Macintosh OS 8.6 computers

Mac OS 8.6 users must install a USB driver. For Mac OS 9.0 or higher, the computer will automatically recognize the camera and load its own USB drivers.

Step 2: Connecting the Camera to Your Computer

- 1. Set the mode dial to [PC].
- 2. Connect one end of the USB cable to an available USB port on your computer.
- 3. Connect the other end of the USB cable to the USB connector on the camera.
- 4. Turn on the camera.
- From the Windows desktop, double click on "My Computer".



- Look for a new "Removable disk" icon. This "Removable disk" is actually the memory card in your camera. Typically, the camera will be assigned drive letter "e" or higher.
- 7. Double click on the removable disk and locate the DCIM folder.
- 8. Double click on the DCIM folder to open it to find more folders.
 - Your recorded images and video clips will be inside these folders.
 - Copy & Paste or Drag-N-Drop image and video files to a folder on your computer.

Mac users: Double-click the "untitled" or "unlabeled" disk drive icon on our desktop. iPhoto may automatically launch.

Step 3: Downloading Images and Video Files

When the camera is turned on and connected to your computer, it is considered to be a disk drive, just like a floppy disk or CD. You can download (transfer) images by copying them from the "Removable disk" ("untitled" or "unlabeled" disk on a Macintosh) to your computer hard drive.

Windows

Open the "removable disk" and subsequent folders by double clicking on them. Your images are inside these folder(s). Select the images that you want, and then choose "Copy" from the "Edit" menu. Open the destination location (folder) and choose "Paste" from the "Edit" menu. You may also drag and drop image files from the camera to a desired location.

Macintosh

Open the "untitled" disk icon, and the destination location on your hard disk. Drag and drop from the camera to the desired destination.



- Memory card users may prefer to use a memory card reader (highly recommended).
- Video playback application is not included with the package. Make sure that video playback application has been installed in your computer.

INSTALLING NTI PHOTO SUITE

PC users will find that NTI Photo Suite is a very user-friendly image-editing program. With NTI Photo Suite, you can retouch, compose, and organize your images. It includes a variety of templates, such as photo frames, birthday cards, calendars and more. Get your images ready and explore this amazing program.

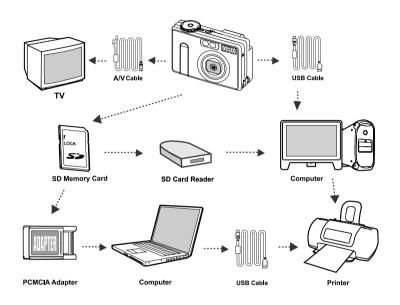
To install NTI Photo Suite:

- Insert the CD-ROM that came with the camera into your CD-ROM drive.
 The welcome screen appears.
- Click "INSTALL NTI PHOTO SUITE". Follow the on-screen instructions to complete the installation.



- To use NTI Photo Suite to edit and retouch your recorded images, please refer to the on-line help.
- For Windows 2000/XP users, please make sure to install and use the NTI Photo Suite in "Administrator" mode.
- NTI Photo Suite is not supported on the Mac. iPhoto or iPhoto2 is recommended.

CONNECTING THE CAMERA TO OTHER DEVICES



CAMERA SPECIFICATIONS

| Item | Description | |
|--------------------|---|--|
| Image sensor | 1/1.8" CCD sensor | |
| | Approx. 6.3 mega pixels | |
| Image resolution | <still picture=""></still> | |
| | 2816x2112, 2272x1704, 1600x1200, 640x480 | |
| | <video clip=""></video> | |
| | 320x240 | |
| LCD monitor | 2.5" low temperature poly silicon TFT color LCD | |
| Viewfinder | Real image optical zoom viewfinder | |
| Image quality | Fine/Standard/Economy/TIFF (selectable at | |
| | 2816x2112 only) | |
| Recording medium | External memory: Supports SD card (up to 512MB) | |
| Compression format | t JPEG compliant | |
| Image file format | DCF 1.0, DPOF 1.1, EXIF 2.2, AVI, TIFF | |
| Lens | f=7.2 mm - 21.6 mm (equivalent to 35 mm - 105 mm | |
| | on a 35 mm camera) | |
| | F=2.8 - 4.7 | |
| Focus range | Approx. 80 cm to infinity (both Wide and Tele) | |
| | Approx. 9 cm to infinity (Macro Wide) | |
| | Approx. 30 cm to infinity (Macro Tele) | |
| Auto-Focus | TTL method AF | |
| Shutter speed | Long exposure: 8sec - 0.6 sec. | |
| | Normal exposure: 1/2 sec1/1500 sec. | |
| Image capturing | Single/ 3 images with -0.67, 0, +0.67EV/ 5 images | |
| | continuously | |
| Digital zoom | 4.4x (Capture mode) | |
| | 2x and 4x (Playback mode) | |
| Metering system | Multi metering, Spot metering | |

| Exposure | Program AE/Shutter speed priority/Aperture priority/ | | |
|-----------------------|--|--|--|
| | Manual/Portrait /Sports / Night scene | | |
| Exposure compensation | -2EV - +2EV (in 0.3EV increments) | | |
| White balance | Auto/Incandescent/Fluorescent 1/Fluorescent 2/ | | |
| | Day light/Cloudy/Manual | | |
| Flash | Auto/Red-eye reduction/Suppressed Flash/ | | |
| | Forced flash | | |
| Flash effective range | 0.6 m -3.0 m (Wide / ISO=200) | | |
| ISO sensitivity | Equivalent to ISO 50/100/200/Auto (ISO 50-ISO 200) | | |
| Self-timer | 10 sec./2 sec./10+2 sec./Interval (1, 3, 10, 60 min) | | |
| Video output | NTSC/PAL | | |
| Interface | DC IN 5V terminal | | |
| | A/V OUT terminal | | |
| | USB 1.1 | | |
| Power supply | Lithium-ion battery (NP-60 3.7V, optional) | | |
| | AC power adapter (5V, optional) | | |
| Dimension (WxHXD) | Approx. 94 x 63 x 36mm (without protruding parts) | | |
| Weight | Approx. 180g (without the battery & SD card) | | |

^{*} Design and specifications are subject to change without notice.