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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 6.20 Mega pixels CCD, this camera is capable of capturing pictures with a resolution of up to 2816 x 2112 pixels.

Package Contents

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

Common Product Components:

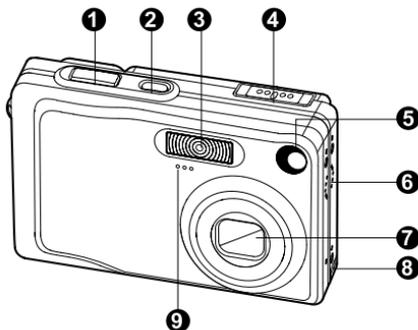
- Digital camera
- A/V cable
- User's manual
- USB cable
- Camera strap
- Conversion adapter
- AC power adapter

Common (Optional) Accessories:

- SD card
- Rechargeable lithium-ion battery
- Software CD-ROM
- Camera pouch
- Battery charger

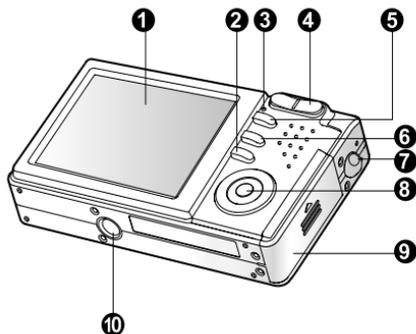
GETTING TO KNOW THE CAMERA

Front View



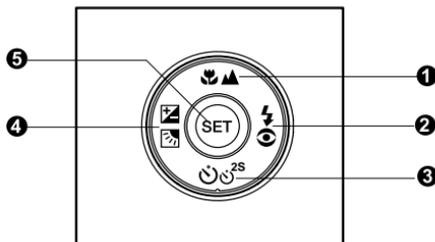
#	Name	Description
1.	Shutter button	Focuses and locks the exposure of the camera when pressed halfway down, and takes the picture when pressed all the way down.
2.	POWER button	Turns the camera power on and off.
3.	Flash	Provides flash illumination.
4.	Mode switch	Sets the camera mode.  Selects this when taking still images.  Selects this when recording video clips.  Performs image playback and deletion.
5.	Self-timer LED (AF auxiliary light)	Blinks green during Self-timer mode until picture is taken.
6.	Speaker	Produces camera sounds and plays recorded audio.
7.	Lens	3x optical zoom lens allows you to take telephoto and wide-angle pictures.
8.	Conversion adapter terminal	Allows you to connect the conversion adapter to an AC power adapter to the camera to operate the camera without battery, or to charge rechargeable lithium-ion battery or to connect a USB cable or an A/V cable to the camera.
9.	Microphone	Records audio clips.

Rear View



#	Name	Description
1.	LCD monitor	Provides menu information to operate the camera, and previews the picture before taking it and review it afterwards.
2.	 Display button	Turns the LCD monitor display and live view on and off.
3.	Status LED	Displays the camera current state.
4.	 Zoom in button	Zooms the lens to telephoto position.
	 Zoom out button	Zooms the lens to wide-angle position.
5.	MENU button	Toggles OSD menu on and off.
6.	 Erase button	Allows you to erase the picture.
7.	Strap holder	Camera strap attachment.
8.	SET /Direction button	Allows you to scroll through menus and pictures, and then select choices.
9.	Battery/SD card cover	Allows access to the battery and insert or remove the memory card.
10.	Tripod socket	Allows tripod mounting.

SET /Direction button



#	Name	Description
1.	▲ button 📷▲ Focus button	Scrolls upwards. Allows you to choose the appropriate focus setting.
2.	▶ button ⚡👁 Flash button	Scrolls right. Allows you to choose the appropriate flash setting.
3.	▼ button 🕒 ^{2S} Self-timer button	Scrolls downwards. Allows you to toggle the self-timer on and off, selects the desired self-timer mode.
4.	◀ button 📷📷 Exposure compensation / Backlight correction button	Scrolls left. Allows you to toggle the exposure compensation / backlight correction on and off.
5.	SET button	Enters the menu page and confirms the chosen setting.

Status LED Indicator

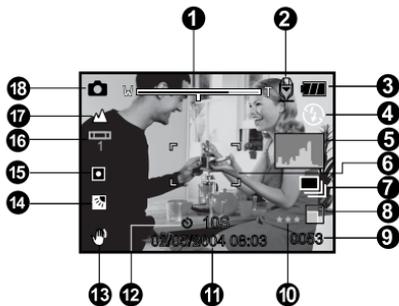
This describes the color and state of the status LED.

Color	State	During power off	During photography	During connection to a PC
Green	On	The completion of battery charge.	AE or AF is locked with the shutter button held halfway.	-
	Flashing	Battery charging in progress.	-	-
Red	On	Battery charging error.	Writing to SD card in progress.	In communication to PC. (SD card is inserted.)
	Flashing	-	When the image is not in focus.	-
Orange	On	-	Charging of the flash in progress.	-
	Flashing	-	Hardware malfunction.	SD card is not inserted.

LCD Monitor Icons

Photography mode []

1. Zoom status
2. Voice memo
3. Remaining battery status
 [] Full battery power
 [] Medium battery power
 [] Low battery power
 [] No battery power
4. Flash icon
 [Blank] Auto
 [] Red-eye Reduction
 [] Forced Flash
 [] Suppressed Flash
 [] Night Scene
 [] Histogram
5. Focus area (When the shutter button is pressed halfway)
6. Capture mode icon
 [Blank] Single
 [] Continuous
 [**AEB**] Auto Exp.
8. Image size
 [] 2816 x 2112
 [] 2272 x 1704
 [] 1600 x 1200
 [] 640 x 480
9. Possible number of shots
10. Quality
 [*******] Fine
 [******] Standard
 [*****] Economy
11. Date and time
12. Self-timer icon
 [ **10s**] 10 sec.
 [ **2s**] 2 sec.
 [ **10+2s**] 10+2 sec.
13. Unsteady hold warning icon
14. [] Exposure compensation
 [] Backlight correction
15. Metering icon
 [Blank] Multi
 [] Spot
16. White balance icon
 [Blank] Auto
 [] Incandescent
 [] Fluorescent 1
 [] Fluorescent 2
 [] Day Light
 [] Cloudy
 [] Manual
17. Focus icon
 [Blank] Auto focus
 [] Macro
 [] Infinity
18. [] Still image mode

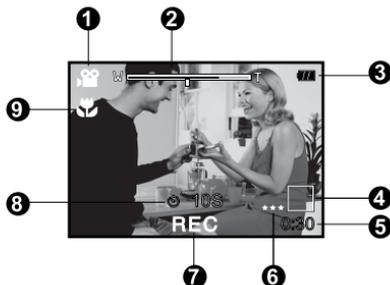


NOTE

- Each press of the [] button switches one step in the sequence of Normal display (displaying the icons, etc), Normal and Histogram, display OFF, LCD monitor OFF.

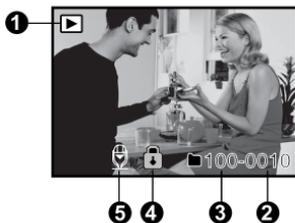
Photography mode [📷]

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



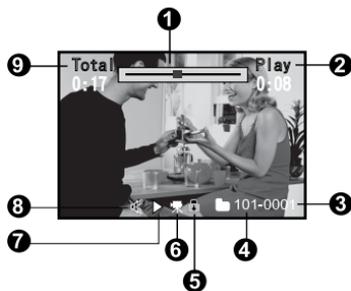
Playback mode [▶] -Still image playback

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



Playback mode [▶]-Video playback

1. Video status bar
2. Elapsed time
3. File number
4. Folder number
5. Protect icon
6. Mode icon
7. Play mode
8. Sound off icon (When the [▲] button is pressed during video playback)
9. Total time



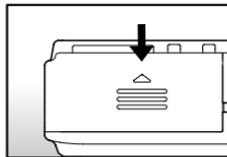
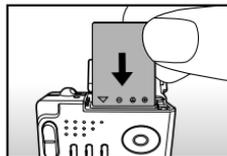
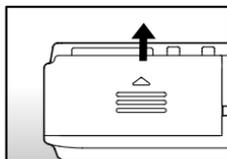
GETTING STARTED

Inserting and Removing the Battery (Optional Accessory)

We highly recommend using specified rechargeable lithium-ion battery (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 rear side of the camera, and then insert the battery.
3. Close the battery/SD card cover.



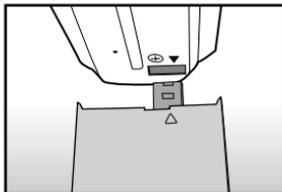
Removing the Battery

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.

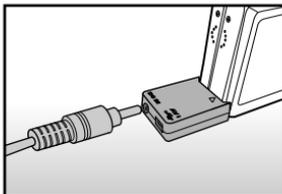
Charging the Battery

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.

1. Insert the conversion adapter into the conversion adapter terminal of the camera as shown in the illustration.



2. Insert one end of the AC power adapter into the DC IN terminal of the conversion adapter.
3. Insert the other end of the AC power adapter into a wall outlet.



- The status LED flashes green when charging is started and lights green when charging is completed. It lights red 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.



NOTE

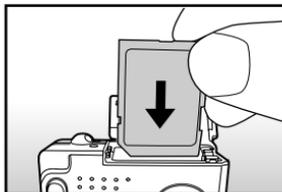
- This camera must be used with specified AC power adapter. Damage caused by the use of an incorrect adapter is not covered under the warranty.
- When the charging is not started even if following the above procedure, turn the power on at any mode after LCD monitor turns on, and then turn the power off.
- 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.
- We recommend the battery should be charged 8 hours as first time use.

Inserting and Removing the SD Card (Optional Accessory)

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

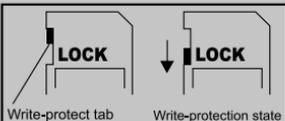
1. Open the battery/SD card cover.
2. Insert the SD card in the correct orientation shown.
 - Hold the SD card with its front side of the SD card (printed arrow) facing the rear side of the camera, and then insert the card as far as it can go.
3. Close the battery /SD card cover.



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 write-protected 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 MultiMediaCard™.

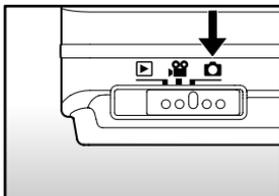
Setting the Date and Time

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.

1. Slide the mode switch to [] or [].
2. Press the **MENU** button and select [Setup] menu with the  button
3. Select [Date/Time] with the  /  buttons and press the **SET** button.
 - The Date/Time setting screen will be displayed.
4. 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.
5. 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.



Picture	Function	Setup
	Beep	ON
	Fr. No. Reset	Next Menu
	Date/Time	Next Menu
	Auto OFF	1 Min
	Sys. Reset	Next Menu
	Language	English

Menu:Exit ◀ or ▶ Select Page
Set : Adjust ▲ or ▼ Select Item

Picture	Function	Setup
	Date / Time	
	2004	01
		01
	01	01

Menu:Exit ◀ or ▶ Select Item
Set : Adjust ▲ or ▼ Change Value

Choosing the Language

Specify in which language menus and messages are to be displayed on the LCD monitor.

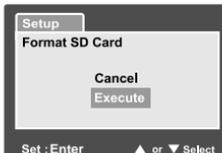
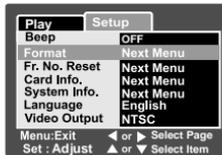
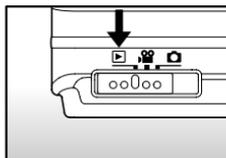
- Slide the mode switch to [] or [] or [].
- Press the **MENU** button and select [Setup] menu with the **▶** button.
 - If no images/video clips are recorded on the SD card, press the **MENU** button and then [Setup] menu is displayed.
- Select [Language] with the **▲** / **▼** buttons and press the **SET** button.
 - The Language setting screen will be displayed.
- Select the displayed language with the **▲** / **▼** buttons and press the **SET** button.
 - The setting will be stored.



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 is in the locked condition.

- Slide the mode switch to [].
- Press the **MENU** button.
 - [Setup] menu is displayed.
 - If images/video clips are recorded on the SD card, press the  button after the **MENU** button is pressed.
- Select [Format] with the  /  buttons, then press the **SET** button.
- Select [Execute] with the  /  buttons, and press the **SET** button.
 - To cancel formatting, select [Cancel] and press the **SET** button.



NOTE

- You need to format an SD card before using it for the first time.
- 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.

Setting Image Resolution and Quality

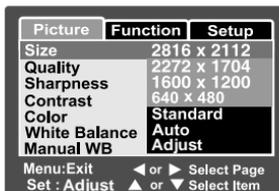
Resolution and quality settings determine the pixel size (dimension), image file size, and compression ratio for your images. These settings affect the number of images that can be stored on a memory card. As you get to know the camera, it is recommended that you try each quality and resolution setting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

1. Slide the mode switch to [] or [].
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 **▲** / **▼** 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.



[] Mode



[] Mode

PHOTOGRAPHY MODE

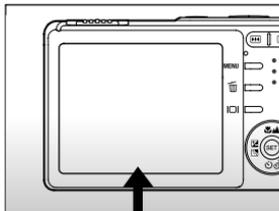
[] Still Image Mode

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 the 2.5" LCD monitor to compose the images.

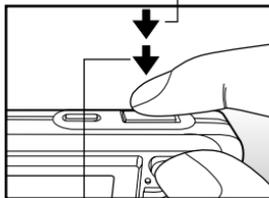
Make sure that the battery and SD card are inserted before taking photographs.

1. Press the **POWER** button to turn the power on.
2. Slide the mode switch to [].
3. Compose your image in the LCD monitor.
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 status 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 yellow and the status LED flashes red.
- If the photographic preview is set to "ON", the preview image (captured image) will be displayed while the image is being recorded onto the SD card.



① Press down halfway

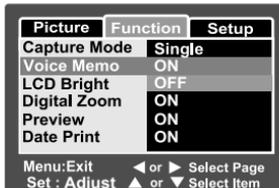


② Press down fully

Recording Voice Memos

A voice memo can be recorded once for 30 seconds at still image mode immediately following a still image captured or at playback mode while viewing the picture.

- Slide the mode switch to [].
- Press the **MENU** button, and select the [Function] menu with the **▶** button.
 - [Function] of the still image menu is displayed.
- Select [Voice Memo] with the **▲ / ▼** buttons, and press the **SET** button.
- Select [ON] with the **▲ / ▼** buttons, and press the **SET** button.
- Press the **MENU** button to exit from the still image menu.
 - [] icon is displayed on the screen.
- Compose the picture, press the shutter button down halfway, then press it down fully.
 - [VOICE RECORDING] is displayed on the screen immediately, and the voice memo recording starts.
- 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.



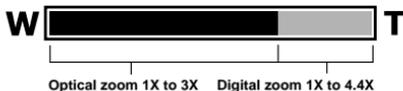
NOTE

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

Using the Digital Zoom

Using a combination of 3 times optical zoom and 4.4 times digital zoom permits zoom photography of up to 12 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.

1. Slide the mode switch to [] or [].
2. Turn on the LCD monitor by pressing the [] 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 and hold the [] button completely until the image on the LCD monitor expands.



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



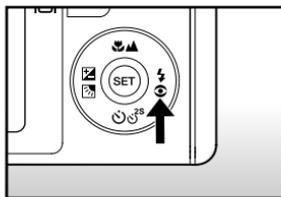
NOTE

- 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. Slide the mode switch to [].
2. Toggle the  button to select the desired flash mode.
 - Each press of the  button moves the icon one step through the sequence and displays it on the screen.



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.
[] Red-eye Reduction	Use this mode to reduce the red-eye phenomenon 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.
[] Forced Flash	In this mode, the flash always fires. Use this mode for photographing under artificial light such as backlighting, fluorescent lighting, etc.
[] Suppressed Flash	Use this mode when taking pictures using indoor lighting, for stages and indoor competitions, and when the subject is too far away for the flash to be effective.
[] Night Scene	Use this mode when taking pictures of people at dark or night-time background. When the Night Scene is selected, the flash mode is fixed to Slow Synchronization. (the flash is fired at a slower shutter speed.)



NOTE

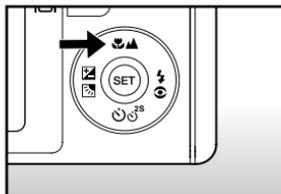
- In the [] focus mode and capture mode [Continuous] and [Auto Exp.], the flash mode is fixed to [] Suppressed Flash.
- The flash cannot be set in the [] mode.

Setting the Focus

Photographs can be taken with the distance to the subject set by auto focus, [] macro or [] infinity.

The settings will be maintained even when the power is turned off or when Auto OFF is activated.

- Slide the mode switch to [] or [].
- Toggle the  button to select the desired focus mode.
 - Each press of the  button moves the icon one step through the sequence and displays it on the screen.



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

Focus mode	Description
[Blank]Auto Focus	Selects this when you want to leave the settings up to the camera so that you can take photographs without paying attention to settings. Approximately 50 cm to infinity (both Wide and Tele)
[] Macro	Selects this when you want to takes a close up photography. Wide (zoom off) : Approximately 6 cm to infinity Tele (at optical zoom 3x) : Approximately 35 cm to infinity
[] Infinity	Selects this when you want to take photographs of subjects at a distance of infinity.

Setting the Self-timer

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

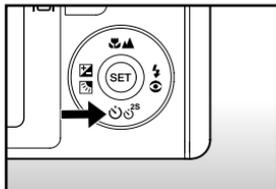
- Slide the mode switch to [] or [].
- Toggle the button to select the setting.

- Each press of the button moves the icon one step through the sequence and displays it on the screen.

OFF → [10s] 10 sec. → [2s] 2 sec.
 ↻ [10+2s] 10+2 sec. ↻

- For the [] mode and capture mode ([Continuous] and [Auto Exp.])

OFF → [10s] 10 sec. → [2s] 2 sec.
 ↻



- 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
[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+2s] 10+2 sec.	One picture is taken about 10 seconds after the shutter button is pressed, and the other photograph is taken again after 2 seconds. This is convenient when taking group photographs in succession.



NOTE

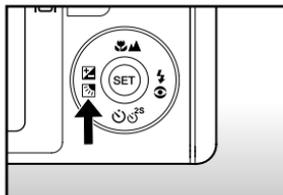
- The self-timer setting is automatically cancelled after a photograph is taken.

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.

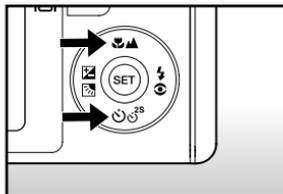
- Slide the mode switch to [] and press the  button.

- Each press of the  button displays the setting in the order of [Blank], [] Backlight Correction, and [] Exposure Compensation.



- Set the exposure value with the  /  buttons.

- Press the  button to increase the value.
- Press the  button to decrease the value.
- The setting range of the exposure compensation is as follows.
-2.0, -1.7, -1.3, -1.0, -0.7, -0.3, 0, +0.3, +0.7, +1.0, +1.3, +1.7, +2.0
- The larger the value, the brighter the image. The smaller the value, the darker the image. The set value is displayed on the screen.



[] Movie Mode

This mode allows you to record video clips at a resolution of 320 x 240 / 640 x 480 pixels. Voice can also be recorded.

1. Slide the mode switch to [].
2. Compose the picture with the zoom button.
3. 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 into the SD card.
 - The recording time depends on the storage size and the subject of the image to be recorded.
 - Zoom function cannot be used while a video clip is recording.



NOTE

- In the [] mode, the LCD monitor cannot be turned off.
- When recording a video clip, 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.
- While composing the image, optical zoom and digital zoom functions can be used at the resolution of 320 x 240 pixels. However, digital zoom function cannot be activated at the resolution of 640 x 480 pixels.

[] 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.

- Slide the mode switch to [].
 - The last image appears on the screen.
- The images can be fed in reverse or fed forward with the  /  buttons.

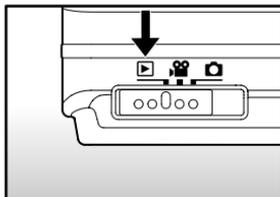
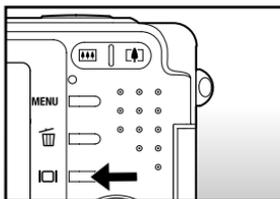


Image Display Information

You can switch the state of the information display by pressing the  button when playing back images. Each press of the  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.
- [] 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. Slide the mode switch to [].
 - The last image appears on the screen.
2. 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 **SET** button.
This pauses video playback.
To cancel pause, press the **SET** button again.

Button Operations

	During Playback	During a Pause	During a Stop
▶ button	<p>Forward play</p> <p>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.</p>	1-frame feed	
◀ button	<p>Reverse play</p> <p>Each press of the ◀ button moves the operation one step in the sequence of 2 times fast reverse play, 4 times fast reverse play, and regular play.</p>	Reverse 1-frame feed	
▲ button	Sound On/Off	Sound On/Off	The previous image is displayed.
▼ button	Stop (The display returns to the 1st frame playback)		The next image is displayed.
SET button	Pause	Canceling pause	Regular forward play



NOTE

- Video clips cannot be displayed rotated or enlarged.

Attaching 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. Slide the mode switch to [].
 - The last image appears on the screen.
2. Select the image that you want to attach the voice memo with the ▲ / ▼ buttons.
3. Press the shutter button.
 - [VOICE RECORDING] is displayed on the screen and recording starts.
4. To stop recording voice memo during recording, press the shutter button again.
 - [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.

Playing back voice memo

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



NOTE

- 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.

- Slide the mode switch to [].
 - The last image appears on the screen.
- Press the  button.
 - The images are displayed in the thumbnail display.
 - Images that have been selected with the  /  /  /  buttons will be indicated by a green frame.
 - When there are ten or more images, scroll the screen with the  /  buttons.
- Press the  /  /  /  buttons to select the image to be displayed at regular size.
- Press the **SET** button.
 - The selected image is displayed at its regular size.



NOTE

- A [], [], [] icon will be displayed in a thumbnail display.

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.

- Slide the mode switch to [].
- Press the  /  buttons to select the image you want to enlarge.
 - You can also select the image you want to enlarge from the thumbnail display.
- Adjust the zoom ratio with the  /  buttons.
 - 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.
- Press the  /  /  /  buttons to select the area to enlarge.
- To return to regular display, toggle the  button until the regular display appears on the screen.



Entire image Current position of enlargement



NOTE

- Pressing the  button magnifies the image from 1x → 2x → 4x.
- Pressing the  button reduces the image from 4x → 2x → 1x.

Slideshow Display

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

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



NOTE

- 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

- Slide the mode switch to [].
- Select the image that you want to protect with the ▲ / ▼ buttons.
- Press the **MENU** button.
 - The playback menu is displayed.
- Select [Protect] with the ▲ / ▼ buttons, and press the **SET** button.
- Select [Single] or [All] with the ▲ / ▼ buttons, and press the **SET** button.
- 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.

1. 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

1. 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.
3. 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.



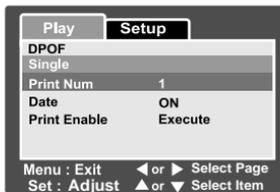
NOTE

- Formatting the SD card undoes the protection, and erases all images.

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.

- Slide the mode switch to [].
- Select the image that you want to set DPOF with the **▲** / **▼** buttons.
- 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.



9. 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.

**NOTE**

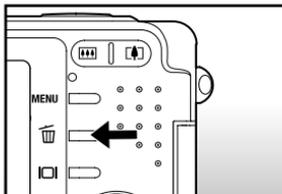
- The date that is printed on the photo is the date set on the camera. To print the correct date on the photo, set the date on the camera before you photograph the image. Refer to section in this manual titled “**Setting the Date and Time**” for further details.

[] 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.

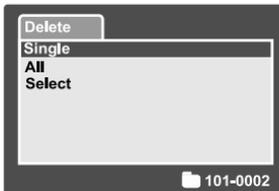
1. Slide the mode switch to [] or [].
2. Press the  button.
 - The last image and quick delete menu appear on the screen.
3. Press the **SET** button to erase the image.
 - To not erase, select [Cancel], and press the **SET** button.



Erasing at Playback Mode

Erasing single image / Erasing all images

1. Slide the mode switch to [].
 - The last image will be displayed on the screen.
2. Select the image you want to erase with the  /  buttons.
3. Press the  button.
 - The deletion menu will be displayed.
4. 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.



5. Select [Execute] with the ▲ / ▼ buttons, and press the **SET** button.
 - To not erase, select [Cancel], and press the **SET** button.

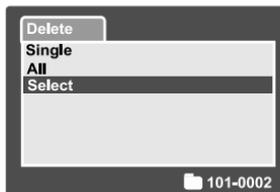
**NOTE**

- 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.

Erasing selected images

This erases a number of selected images.

1. Slide the mode switch to [].
2. Press the  button.
 - The deletion menu will be displayed.
3. Select [Select] with the ▲ / ▼ buttons, and press the **SET** button.
 - The images are displayed in the thumbnail display.
4. Select the image you want to erase with the ▲ / ▼ / ◀ / ▶ buttons, and press the  button.
 - The [] 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.
5. Press the **SET** button.



EDITING SOFTWARE INSTALLATION

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:

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



NOTE

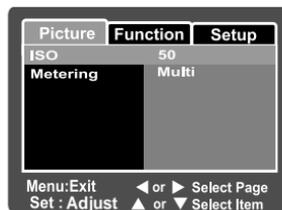
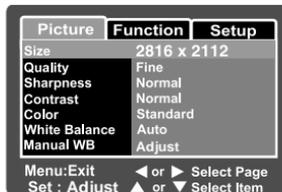
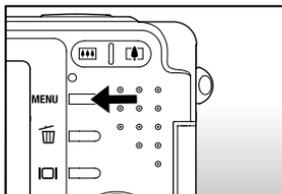
- To use NTI Photo Suite to edit and retouch your recorded images, please refer to the on-line help.
- For Windows 2000/XP users, please make sure to install and use the NTI Photo Suite in "Administrator" mode.
- NTI Photo Suite is not supported on the Mac. iPhoto or iPhoto2 is recommended.

MENU OPTIONS

Still Image Menu (Picture)

This menu is for the basic settings to be used when taking still images.

1. Slide the mode switch to [].
2. Press the **MENU** button.
 - [Picture] of the still image menu is displayed.
3. 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 still image menu, press the **MENU** button.



Size

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

- [] **2816 x 2112:** 2816 x 2112 pixels
- [] **2272 x 1704:** 2272 x 1704 pixels
- [] **1600 x 1200:** 1600 x 1200 pixels
- [] **640 x 480:** 640 x 480 pixels

Quality

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

- [★★★] **Fine:** Low compression rate
- [★★] **Standard:** Normal
- [★] **Economy:** High compression rate

Sharpness

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

- Hard:** Hard touch
- Normal:** Normal touch
- Soft:** Soft touch

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.
- Soft:** Decreases the contrast.

Color

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

- Standard:** Standard color
- Vivid:** Bright color
- Sepia:** Sepia
- Monochrome:** Black-and-white

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.

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.

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 ISO50.

100: High-sensitive photography equivalent to ISO100.

200: High-sensitive photography equivalent to ISO200.

Auto: Automatic adjustment.

Metering

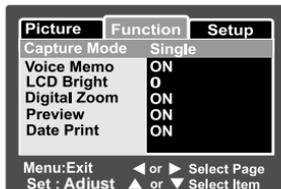
This sets the metering method for calculating the exposure.

[] **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.

Still Image Menu (Function)

- Slide the mode switch to [].
- Press the **MENU** button, and select the [Function] menu with the **▶** button.
 - [Function] of the still image 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.
- To exit from the still image 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 0.6 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.

Voice Memo

A voice memo can be recorded for 30 seconds immediately following still single image photography. This feature is also available during playback mode.

Refer to section in this manual titled "**Recording Voice Memos**" for further details.

ON: Enable voice memo.

OFF: Disable voice memo.



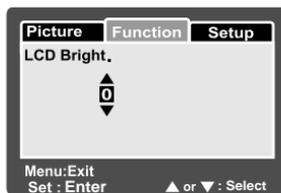
NOTE

- When voice memo is set to on, the preview 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.

Preview

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. Pressing the shutter button during preview cancels the operation.
- When preview 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.

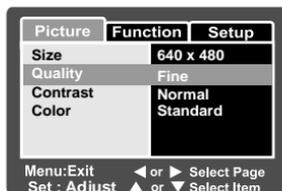


Date imprinted here.

Movie Menu (Picture)

This menu is for the basic settings to be used when recording video clips.

- Slide the mode switch to [].
- Press the **MENU** button.
 - [Picture] of the movie menu is displayed.
- Select the desired [Picture] 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.
- To exit from the movie menu, press the **MENU** button.



Size

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

[] **640 x 480**: 640 x 480 pixels

[] **320 x 240**: 320 x 240 pixels

Quality

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

[**★★★**] **Fine**: Low compression rate.

[**★★**] **Standard**: Normal

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.

Soft: Decreases the contrast.

Color

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

Standard: Standard color

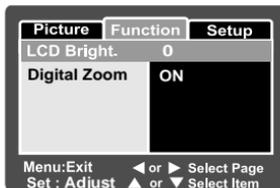
Vivid: Bright color

Sepia: Sepia

Monochrome: Black-and-white

Movie Menu (Function)

- Slide the mode switch to [].
- Press the **MENU** button, and select the [Function] menu with the **▶** button.
 - [Function] of the movie 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.
- To exit from the movie menu, press the **MENU** button.



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 **Still Image Menu (Function)** for further details.

Digital Zoom

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

ON: Enable digital zoom.

OFF: Disable digital zoom.

Playback Menu

In the [] mode, set which settings are to be used for playback.

1. Slide the mode switch to [].
2. Press the **MENU** button.
 - The playback menu is displayed.
3. Select the desired 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 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.

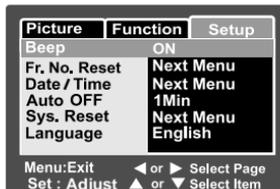
Adjust the brightness of the LCD monitor. This function does not adjust the brightness of recorded images.

Refer to section in this manual titled “**LCD Bright.**” in **Still Image Menu (Function)** for further details.

Setup Menu (In Photography Mode)

Set your camera's operating environment.

- Slide the mode switch to [] or [].
- Press the **MENU** button, and select the [Setup] menu with the **▶** button.
 - [Setup] of the photography menu is displayed.
- Select the desired [Setup] 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.
- To exit from the photography menu, press the **MENU** button.



Beep

This sets whether or not to mute the startup sound, and the camera sound each time you press the camera button.

ON: Sounds the beep tone.

OFF: Does not sound the beep tone.

Fr. No. Reset

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.

Date/Time

This sets the date and the time.

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

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.



NOTE

- This function does not operate during a slideshow or during PC connection.

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.

Setup Menu (In Playback Mode)

- Slide the mode switch to [].
- Press the **MENU** button.
 - [Setup] of the playback menu is displayed.
 - If images/video clips are recorded on the SD card, press the **▶** button after the **MENU** button is pressed.
- Select the desired [Setup] 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.
- To exit from the playback menu, press the **MENU** button.



Beep

This sets whether or not to mute the startup sound, and the camera sound each time you press the camera button.

ON: Sounds the beep tone.

OFF: Does not sound the beep tone.

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.

Fr. No. Reset

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.

Card Info.

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

System Info.

This displays the firmware version of the camera.

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.

Video Output

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

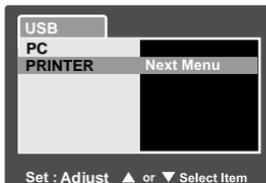
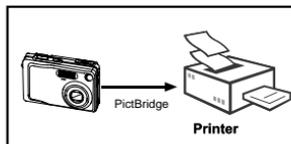
NTSC: NTSC system.

PAL: PAL system.

CONNECTING THE CAMERA DIRECTLY TO THE PRINTER FOR PRINTING IMAGES

If a printer that support PictBridge is available, images can be printed by connecting the camera directly to the PictBridge-compatible printer without using a computer.

1. Connect one end of the USB cable to the conversion adapter terminal of the camera.
2. Connect the other end of the USB cable to the USB port on the printer.
3. Turn on your camera.
4. The [USB] screen is displayed. Select [PRINTER] with the ▲ / ▼ buttons, and press the **SET** button.
5. Select the item you want to configure with the ▲ / ▼ buttons, and press the **SET** button.



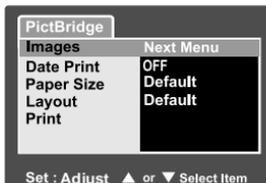
[Images]: Select whether you want to print specific image or all images. You may also select printing number for specific image.

[Date Print]: According to the printer type, select whether you want to print the image with date imprint or not.

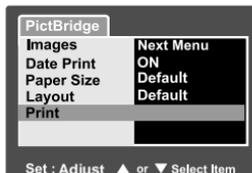
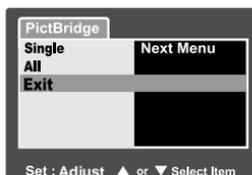
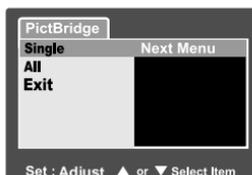
[Paper Size]: Select the desired paper size according to the printer type.

[Layout]: Select the desired printing layout according to the printer type.

[Print]: After all settings is configured, select this item to start printing.



6. If you select [Images] in the previous step, the figure shown on the right hand side will appear. Select [Single] or [All] with the ▲ / ▼ buttons, and press the **SET** button.
7. If you select [Single] in the previous step, the figure shown on the right hand side will appear.
 - Select the image that you want to print with the ◀ / ▶ buttons.
 - Select the printing number (up to 99) with the ▲ / ▼ buttons.
 - After selecting the desired image and printing number, press the **SET** button to confirm.
8. Select [Exit] with the ▲ / ▼ buttons, and press the **SET** button.
9. Select [Print] with the ▲ / ▼ buttons, and press the **SET** button to start printing.
10. The printing starts and the figure shown on the right hand side appears.
 - The [Complete] screen will be displayed temporarily, reminding you that the printing procedure is finished.
 - If a print error is detected, the [Print Error] screen will be displayed.

**NOTE**

- The image printing may be failed if the power to the camera is cut off. We recommend that you use the AC power adapter when connecting the camera to the printer.

CAMERA SPECIFICATIONS

Item	Description
Image sensor	6.20 Mega pixels CCD sensor
Image resolution	<Still image> 2816 x 2112, 2272 x 1704, 1600 x 1200, 640 x 480 < Video clip> 640 x 480, 320 x 240
LCD monitor	2.5" LTPS TFT color LCD
Image quality	Fine / Standard / Economy
Recording media	External memory: Supports SD card (optional, up to 512MB)
Compression format	JPEG compliant
Image file format	DCF 1.0, DPOF 1.1, EXIF 2.2, AVI
Lens	3x optical zoom lens F=2.8 - 4.8 f=5.4 mm - 16.2 mm (equivalent to 32 mm - 96 mm on a 35 mm camera)
Focus range	Approx. 50 cm to infinity (both Wide and Tele) Approx. 6 cm to infinity (Macro Wide) Approx. 35 cm to infinity (Macro Tele)
Auto-Focus	TTL method AF
Shutter speed	1/2 -1/1000 sec.
Interface	DC IN 5V terminal (Via conversion adapter) A/V OUT terminal (Via conversion adapter) USB 2.0 (Full speed)
Power supply	Rechargeable Lithium-ion battery (3.7V, optional) AC power adapter (5V)
Dimension (WxHxD)	Approx. 89 x 55 x 24mm (without protruding parts)
Weight	Approx. 130 g (without the battery & SD card)

*Design and specifications are subject to change without notice.



NOTE

- If the access speed of your SD card is not enough for recording video clips in the currently selected quality, a warning icon [!] will appear, and then the movie recording will stop. In this case, select a video quality lower than the current one.