

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.

TRADEMARK INFORMATION

- Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.
- Pentium® is a registered trademark of Intel Corporation.
- Macintosh is a trademark of Apple Computer, Inc.
- SD™ is a trademark.
- PhotoSuite and PhotoVista are trademarks.
- Other names and products may be trademarks or registered trademarks of their respective owners.

READ THIS FIRST

Please start by reading the important messages below first.

E

1. Product design and specifications are subject to change without notice. This includes primary product specifications, software, software drivers, and user's manual. This User's 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.
3. The manufacturer assumes no liability for any errors or discrepancies in this user's manual.
4. For driver updates, refer to our website or contact your dealer.

WARNINGS

- Do not use this camera if it is emitting smoke (or an unusual odor), if it becomes unusually hot to be touched, produces a peculiar noise, or exhibits any other abnormal conditions. Operating the camera in any of these circumstances may cause a fire or an electrical shock. Stop using the camera immediately, turn the camera off, remove the batteries, and disconnect the power source if you are using an AC power adapter. Contact your dealer or authorized service facility for repairs. Never attempt to repair this camera by yourself, as this may be dangerous.

- Do not expose the camera to moisture and make sure no water gets into the camera. Take particular care when using the camera under extreme weather conditions, such as rain or snow, or when operating the camera at the beach or near water. Avoid using this camera in places subject to extreme moisture. Do not use the camera if water has entered the camera. Turn the camera off, remove the batteries, and disconnect the power source if you are using an AC power adapter. Unplug the adapter from the AC power outlet after you have disconnected the camera. Contact your dealer or authorized service facility. Do not continue to use the camera as this may cause a fire or an electrical shock.

- Do not touch the power plug during a thunderstorm if you are using the AC power adapter. This may cause an electrical shock.

- Do not use the camera if any foreign objects have entered the camera. Turn the camera off, remove the batteries, and disconnect the power source if you are using an AC power adapter. Unplug the adapter from the AC power outlet after you have disconnected the camera. Contact your dealer or authorized service facility. Do not continue to use the camera as this may cause a fire or an electrical shock.

- Do not place the camera in an unstable location such as on a wobbly table or sloping surface where the camera may fall or tip over and cause injury. If the camera has been dropped or damaged, turn the camera off and remove the batteries or AC power adapter. Contact your dealer or authorized service facility. Do not continue to use the camera as this may cause a fire or an electrical shock.

- Do not insert or drop metallic or other foreign objects into the camera through access points such as the SD memory card slot. This may cause a fire or an electrical shock.

- Do not attempt to modify this camera. Do not remove the camera casing. This may cause a fire or an electrical shock. Internal inspection and repairs should only be carried out by an authorized service facility.

- Never operate this camera in any way while driving a vehicle. This may cause a traffic accident.

CAUTIONS

- Do not place the camera in damp or dusty locations. This may cause a fire or an electrical shock.

- Do not place the camera in a location affected by oil fumes or steam, such as near a cooking stove or humidifier. This may cause a fire or an electrical shock.

- Do not cover or wrap the camera or the AC power adapter with a cloth or quilt. This may cause heat to build up, distort the case and cause a fire. Always use the camera and its accessories in well-ventilated locations.

- Handle the camera carefully and do not bump the camera into any hard object. Handling the camera roughly may cause a malfunction.

- Do not move the camera while it is switched on. (If you are using the AC power adapter, unplug the adapter from the AC power outlet after you have switched off the camera.) Ensure that any connector cords or cables to other devices are disconnected before moving the camera. Failure to do so may damage the cords or cables and cause a fire or an electrical shock.

- When leaving the camera unused for long periods, such as during a vacation, always unplug the camera from the power source (batteries or AC power adapter) for safety. (If you are using the AC power adapter, unplug the adapter from the AC power outlet after you have disconnected the camera.) Failure to do so could result in a fire.

- Do not use batteries other than those specified for use with the camera. The use of unsuitable batteries may result in the batteries splitting or leaking and causing a fire, injury, or soiling of the battery compartment.

- When fitting batteries into the camera, check the polarity markings on the battery (- and +) to ensure that you insert the battery correctly. Incorrect battery polarity may result in the batteries splitting or leaking and causing a fire, injury, or soiling of the battery compartment.

- Remove the batteries if the camera will not be used for an extended period of time. The batteries may leak and cause a fire, injury or soiling of the battery compartment. If the batteries leak, clean and wipe the battery compartment carefully and install new batteries. Wash your hands carefully if you touch the battery fluid.

CONTENTS

INTRODUCTION	7
Overview	7
Package Contents	7
Optional Accessories	7
GETTING TO KNOW YOUR CAMERA	8
Front View	8
Rear View	9
Control Panel	9
Mode Dial	10
LED Indicators and Beeper Function	10
LCD Monitor Information	11
GETTING STARTED	15
Installing the Batteries	15
Using an AC Power Adapter (optional accessory)	15
Attaching the Camera Strap ...	16
Inserting an SD Memory Card (optional accessory)	16
To remove an SD memory card	16
Setting the Date and Time	17
RECORD MODE	18
Taking Pictures	18
Using the Viewfinder	18
Using the LCD monitor	19
Using the Zoom Functions	19
Using the Digital Zoom	20
Using the Self-Timer	21
Using the Macro Mode	22
Setting the Flash	22

Setting Image Resolution and Quality	24
Taking Pictures Manually	26

PLAYBACK MODE

PLAYBACK MODE	27
Playing Back Captured Images (Single-Frame Playback)	27
Displaying Thumbnail Images	28
Zoom Playback	29
Slide Show Display	30

MOVIE MODE

MOVIE MODE	31
Recording Video Clips	31
Viewing Video Clips	32
Deleting Images/ Video Clips	33
To delete one image/ video clip at a time	33
To delete all images/ video clips at once	34
Formatting an SD Memory Card	35
Protecting Images	36
Setting the DPOF	37

TRANSFERRING RECORDED IMAGES/VIDEO CLIPS TO YOUR COMPUTER

TRANSFERRING RECORDED IMAGES/VIDEO CLIPS TO YOUR COMPUTER	38
Step 1: Installing the USB Driver on a Windows PC	39
Installing the USB Driver on a Macintosh Computer	39
Step 2: Connecting the Camera to Your Computer	39
Step 3: Downloading Images/ Video Clips	40

For Computers Running Windows . 40

For Computers Running Mac OS ... 40

INSTALLING PHOTOSUITE .. 41

INSTALLING PHOTOVISTA ... 42

MENU OPTIONS 43

Record Menu 43

IMAGE SIZE 43

QUALITY 44

DIGITAL ZOOM 44

PREVIEW 44

LCD BRIGHTNESS 44

Manual Record Menu 45

IMAGE SIZE 46

QUALITY 46

EV COMPENSATION 46

WHITE BALANCE 47

DIGITAL ZOOM 47

PREVIEW 47

LCD BRIGHTNESS 48

SHARPNESS 48

Movie Menu 49

EV COMPENSATION 49

WHITE BALANCE 49

LCD BRIGHTNESS 49

Playback Menu 50

SLIDE SHOW 50

PROTECT 50

LCD BRIGHTNESS 50

COPY TO SD CARD 51

DPOF 51

Setup Menu 52

BEEP 52

AUTO POWER OFF 53

RESET 53

DATE TYPE 53

DATE SETUP 53

VIDEO MODE 54

FRAME NO. RESET 54

LANGUAGE 54

VERSION 54

CONNECTING YOUR CAMERA TO OTHER DEVICES 55

CAMERA SPECIFICATIONS... 56

INTRODUCTION

Overview

Your new digital camera delivers high quality, 2048 x 1536 resolution images using a 3.1 Megapixels CCD sensor. Using either the optical viewfinder or the 1.5" TFT color image LCD monitor, you can compose images and then examine them in detail. An auto-flash sensor automatically detects the shooting (lighting) conditions and determines whether the flash should be used. This feature helps ensure that your images turn out right.

16MB internal (built-in) memory let you capture and store images without the need for an additional memory card. However, you may wish to expand the memory capacity by using an external memory card.

In addition to still images, you can record short videos by using the movie function.

Images you have taken can be downloaded to your computer using the USB cable (USB driver is required for Win 98 and Mac OS 8.6). You can enhance and retouch your images on your computer by using the provided editing software, or image editing software you may already own. You may share your images with your friends via e-mail, in a report, or on a website.

DPOF functionality allows you to print your images on a DPOF compatible printer by simply inserting the memory card.

Package Contents

Carefully unpack your kit box and ensure that you have the following items. In the event that any item is missing or if you find any mismatch or damage, promptly contact your dealer.

- Digital camera
- USB cable
- AV cable
- User's manual
- Camera strap
- Camera pouch
- Software CD-ROM

Optional Accessories

- SD memory card
- AC power adapter
- 2 x AA alkaline batteries

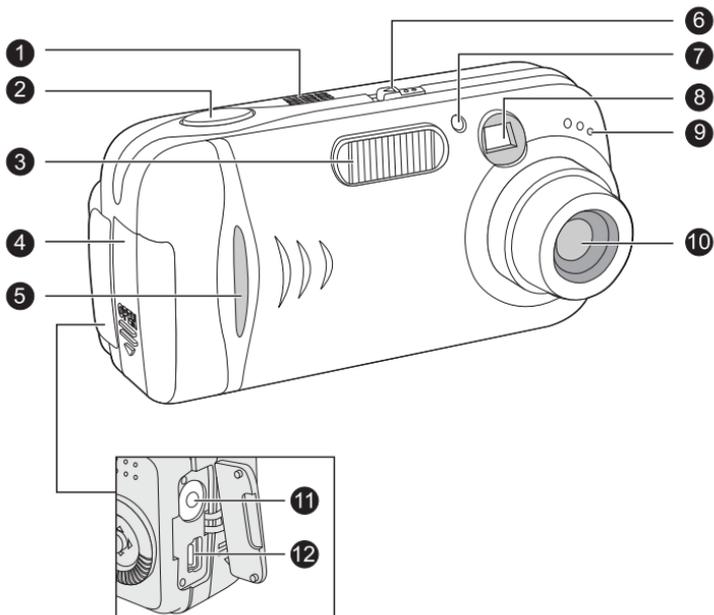


NOTE

- Accessories and components may vary by retailer.

GETTING TO KNOW YOUR CAMERA

Front View



1. Speaker

2. Shutter button

3. Flash

4. Battery cover

5. Function indicator

6. Power switch

7. Self-timer LED

8. Viewfinder window

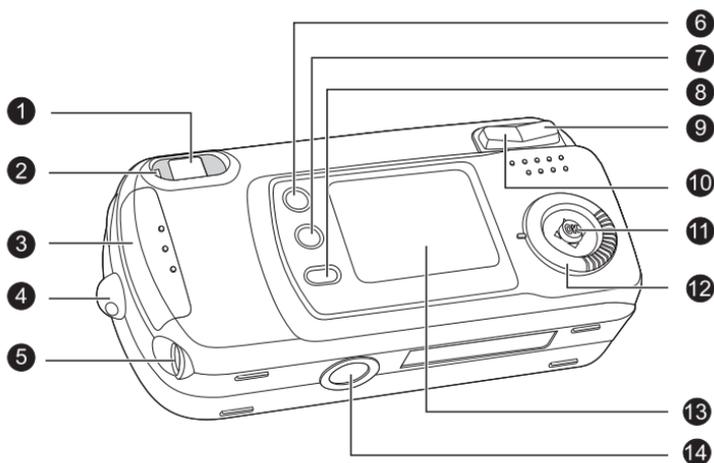
9. Microphone

10. Lens

11. DC-in connector

12. USB connector

Rear View



1. Viewfinder

2. LED indicator

3. SD card cover

4. Strap eyelet

5. A/V OUT (Audio/Video Out)
terminal

6.  Menu button

7.  Delete button

8.  Display button

9.  Zoom in button

10.  Zoom out button

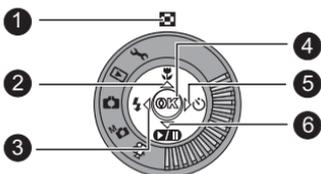
11. Control panel

12. Mode dial

13. LCD monitor

14. Tripod socket

Control Panel



1.  Thumbnail button

2.  Arrow button (Up)

 Macro button

3.  Arrow button (Left)

 Flash button

4. **OK** OK button

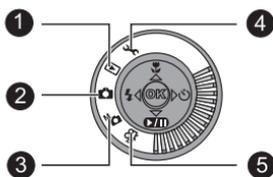
5.  Arrow button (Right)

 Self-timer button

6.  Arrow button (Down)

 Pause button

Mode Dial



1. Playback Mode
2. Record Mode
3. Manual Record Mode
4. Setup Mode
5. Movie Mode

Mode	Description
1. Playback Mode	Select this mode to play back your images and video clips.
2. Record Mode	Select this mode to capture still images.
3. Manual Record Mode	Select this mode to take still images using manual adjustments.
4. Setup Mode	Select this mode to choose your preferences on the camera's settings.
5. Movie Mode	Select this mode to record video (movie) clips

LED Indicators and Beeper Function

Indicator	Status	Description/Activity	Sound
Function indicator	Solid blue	The camera is powering up	No
LED indicator	Blinking orange	The camera is powering up	No
LED indicator	Solid green	The camera is powered and ready to capture image/video clip	Yes *(1)
LED indicator	Blinking red	Camera error	Yes *(3)
LED indicator	Blinking red	Charging the flash	No
LED indicator	Blinking green	Image is being recorded to the memory card	No
LED indicator	Blinking green	USB busy	No
LED indicator	Solid green	The camera is ready to record images (flash off)	Yes *(1)
LED indicator	Solid orange	The camera is ready to capture images (flash on)	Yes *(1)
Self-timer indicator	Blinking red	The self-timer function is activated	Yes *(1)
—	—	Error message	Yes *(3)
—	—	Valid button event	Yes *(1)
—	—	Capture over	No

*(1) The camera sounds one beep.

*(3) The camera sounds three beeps.

LCD Monitor Information

These indicators are displayed when recording still images:



1. Battery level

- Full battery power
- Fairly consumed
- Nearly exhausted
- Virtually no battery power

2. Hand shake

- Auto flash
- Red-eye reduction

Slow synchro

Fill flash (on)

Flash off

4. Macro

5. Self-timer mode

10-seconds delay

2-seconds delay

6. White balance

AUTO Auto

Sun

Shade

Tungsten

Fluorescent 1

Fluorescent 2

7. Record mode

8. Zoom state

9. Possible number of shots

10. Image size (resolution)

2048 x 1536

1600 x 1200

1280 x 960

1024 x 768

640 x 480

11. Image quality

*** Fine

** Normal

* Basic

12. Card indicator

13. Time

14. Date (year/month/day)

These indicators are displayed when playing back still images:



1. Battery level

- Full battery power
- Fairly consumed
- Nearly exhausted
- Virtually no battery power

2. Playback mode

3. File (image) number

4. Image size (resolution)

2048 x 1536

1600 x 1200

1280 x 960

1024 x 768

640 x 480

5. Image quality

- Fine
- Normal
- Basic

6. Card indicator

7. Protect indicator

8. DPOF indicator

These indicators are displayed when recording video clips:



E

1. Battery level

- Full battery power
- Fairly consumed
- Nearly exhausted
- Virtually no battery power

2. Press the **shutter** button to start recording a video clip

3. White balance

- AUTO** Auto
- Sun
- Shade
- Tungsten
- Fluorescent 1
- Fluorescent 2

4. Movie mode

5. Zoom state

6. Recordable movie time

7. Card indicator

8. Time

9. Date (year/month/day)

These indicators are displayed when playing back video clips:



E

1. Battery level

- Full battery power
- Fairly consumed
- Nearly exhausted
- Virtually no battery power

2. Press the ▼ button to start playing back recorded video clips

3. Movie mode

4. File (movie) number

5. Card indicator

GETTING STARTED

You can use either 2 AA size batteries (Alkaline, Ni-MH), one CR-V3 or an AC power adapter (optional accessory) to power on the camera. Battery power is convenient for capturing images or video clips while an AC power adapter is useful when transferring images to your computer.

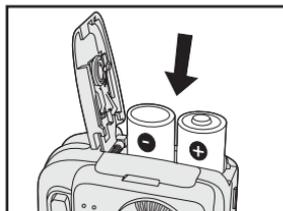
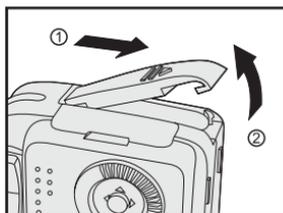
Installing the Batteries

1. Make sure the camera is turned off.
2. Slide the battery cover.
3. Insert the batteries, noting correct polarity (+ or -).
4. Close the battery cover firmly.



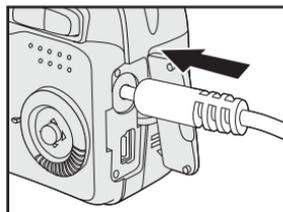
NOTE

- A CR-V3 Lithium battery pack can also be used as the power supply.
- If you will not be using the batteries for an extended period of time, remove them from the camera to prevent leakage or corrosion.
- Never use manganese batteries.
- Never use batteries of different type (together) or mix old and new batteries.
- Avoid using batteries in extremely cold environments as low temperatures can shorten the battery life and reduce camera performance. (Such damage is not covered under the warranty).



Using an AC Power Adapter (optional accessory)

1. Make sure the camera is turned off.
2. Connect one end of the AC power adapter to the jack labeled "DC IN".
3. Connect the other end to an electrical outlet.



NOTE

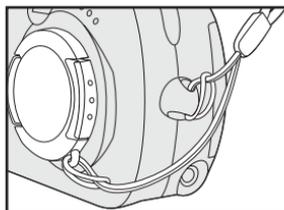
- Make sure to use only the AC power adapter specified for the camera. Damage caused by the use of an incorrect adapter is not covered under the warranty.
- Using an AC power adapter while transferring images to your computer prevents unexpected automatic power off of the camera.

Attaching the Camera Strap

To prevent accidental dropping of the camera, always use the camera strap.

Attach the camera strap as follows:

1. Thread the small loop of the lens strap through the strap eyelet on the camera.
2. Pull the large loop through the small loop until the strap is firmly secured.



Inserting an SD Memory Card (optional accessory)

The camera comes with 16MB of internal memory, allowing you to store images and video clips in the camera. However, you can also expand the memory capacity by using an optional SD memory card so that you can store more images and video clips.

1. Make sure the camera is turned off.
2. Slide the SD memory card cover open.
3. Insert the SD memory card.
 - The front side of the memory card (printed arrow) should face towards the side with the LCD display.
 - If the card cannot be inserted, check the orientation.
4. Close the SD card cover.



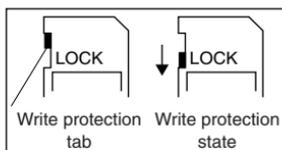
To remove an SD memory card

1. Make sure the camera is off.
2. Open the SD card cover.
3. Press lightly on the edge of the memory card and it will eject.



NOTE

- To prevent valuable data from being accidentally erased from an SD card you can slide the write protect tab (on the side of the SD memory card) to "LOCK".
- To save, edit, or erase data on an SD memory card, you must unlock the card.



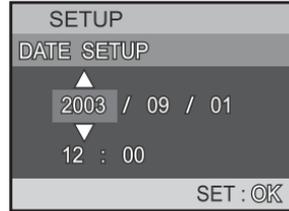
Setting the Date and Time

The date and time setting screen will automatically appear:

- When first turning the camera on;
- When turning the power on after leaving the camera without batteries for an extended period of time.

To adjust the Date or Time at any other time:

1. Slide the **POWER** switch and power on the camera.
2. Set the mode dial to the  Setup mode.
3. Select to the DATE SETUP by using the ▲ or ▼ button, and press the ► button.
 - To increase the value for each option, press the ▲ button.
 - To decrease the value for each option, press the ▼ button.
 - Press the ► button to move to the next item field.
4. When all options are set, press the **OK** button.



E

RECORD MODE

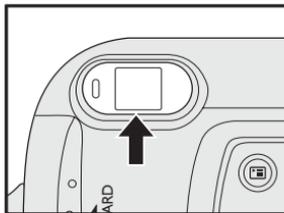
Taking Pictures

Your camera is equipped with both an optical viewfinder and a 1.5" LCD monitor to compose images. Taking images using the optical viewfinder will conserve battery power. If your batteries are low, it is recommended that you only compose images by using the viewfinder. Using the LCD monitor, you can compose images more accurately, but at the cost of battery consumption. The LCD monitor must be used when Digital Zoom is used.

Using the Viewfinder

E Using the viewfinder helps you to compose images and adjust the subject in the crisp focus.

1. Turn the camera on by sliding the **POWER** switch.
2. Set the mode dial to the  Record mode or the  Manual Record mode.
3. Compose your picture in the viewfinder.
4. Press the shutter button.

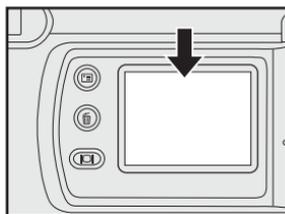


Using the LCD Monitor

Using the LCD monitor can help you to confirm an image while taking pictures, to replay recorded images/video clips or to adjust menu settings.

The mode icons, text and numbers that are displayed on the LCD monitor may vary according to the current settings.

1. Turn the camera on by sliding the **POWER** switch.
2. Set the mode dial to the **Record** mode or the **Manual Record** mode.
 - By default, the LCD monitor is on.
3. Compose your picture on the display screen.
4. Press the shutter button.



E



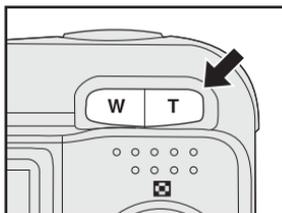
NOTE

- The LCD monitor darkens in strong sunlight or bright light. This is not a malfunction.
- Using the LCD monitor for an extended period of time will decrease the number of images you can take. To conserve battery power and increase the number of shots you can take, it is recommended to turn the LCD monitor off and use the viewfinder instead.
- The LCD monitor must be on when Digital Zoom is to be used.

Using the Zoom Functions

The lens moves when using zoom photography. Zoom photography allows you to take telephoto and wide-angle shots. The subject appears closer by pressing the **T** Telephoto button and appears farther away by pressing the **W** Wide-angle button.

1. Set the mode dial to the **Record** mode or the **Manual Record** mode.
2. If required, turn on the LCD monitor by pressing the **Display** button.
3. Compose the picture using the **T** Telephoto or **W** Wide-angle button.
 - Pressing the **T** Telephoto button zooms in on the subject, and enlarges the subject on the LCD monitor.
 - Pressing the **W** Wide-angle button provides a wide-angle picture.
 - The lens position moves according to the zoom button setting.
4. Press the shutter button.



Using the Digital Zoom

Using digital zoom, images appear closer. Whereas digital zoom is a compelling feature, the more an image is enlarged (zoomed), the more pixilated (grainier) the image will appear. The digital zoom function is only available when you set the LCD monitor and the digital zoom to on. To enable the digital zoom, refer to DIGITAL ZOOM in Record/Manual Record menu.

1. Set the mode dial to the Record mode or the Manual Record mode.
2. Turn on the LCD monitor by pressing the Display button.
3. To enable the digital zoom:
 - a. Press the menu button.
 - b. Press the or button to select DIGITAL ZOOM, and press the button.
 - c. Press the or button again to select ON, and press the button.
 - d. Press the menu button again to exit from the menu mode.
 - e. To activate the digital zoom, press the telephoto button completely and hold it until the image on the LCD monitor expands.
4. Press the shutter button to capture a "zoomed" image.



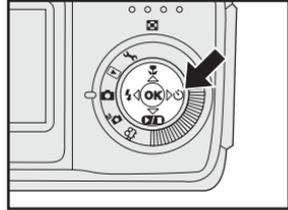
NOTE

- Digital zoom photography is not possible when the LCD monitor display is turned off.
- Digital zoom is only available at a resolution of 2048x1536 pixels.
- Digital zoom cannot be used in Movie mode.
- The maximum digital zoom magnification is 2x for recording an image.

Using the Self-Timer

When the self-timer is set, the camera automatically takes a shot after 10 or 2 seconds. This allows you to get into the scene when taking group images.

1. Secure your camera to a tripod or place it on a stable surface.
2. Turn the camera on by sliding the **POWER** switch, and set the mode dial to the  Record mode or the  Manual Record mode.
3. Press the  button.
 - You may select  or  self-timer mode by toggling the  button.
 - The selected self-timer mode is displayed on the LCD monitor.
4. Compose the scene.
5. Press the shutter button.
 - The self-timer function is activated.
 - The photograph is then taken after the preset time.
 - To cancel the self-timer at any time, press the  button or the  menu button.



E



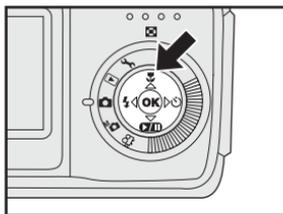
NOTE

- After an image is taken using self-timer, the self-timer mode is turned off.
- If you wish to take another image using the self-timer, repeat these steps.
- When the self-timer is set for 10 seconds, the self-timer lamp blinks relatively slow for 7 seconds and then blinks rapidly for the last 3 seconds.

Using the Macro Mode

Use the macro mode to capture a close-up of the subject, such as flowers or insects.

1. Set the mode dial to the  Record mode or the  Manual Record mode.
2. Press the  Macro button.
 - The  icon appears on the LCD monitor.
3. Compose the picture.
4. Press the shutter button.
 - To cancel macro photography at any time, press the  button again.



E



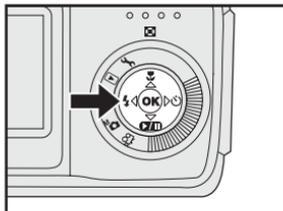
NOTE

- In  macro mode, the LCD monitor is automatically turned On (even if the previous shot was taken with the LCD monitor off).
- There is not a distinct point (subject range) at which normal mode is favored over macro mode; take an image in both optical and macro modes and compare the results.
- In  Macro mode, the internal flash cannot be used.

Setting the Flash

The flash is designed to function automatically when lighting conditions warrant the use of flash. You can take an image using a flash mode suitable to your circumstances.

1. Set the mode dial to the  Record mode or the  Manual Record mode.
2. Press the  button located on the rear side of the camera repeatedly until your desired flash mode appears on the LCD monitor.
3. Compose the picture and press the shutter button.



The camera has five flash modes: Auto Flash, Red-Eye Reduction, Slow Synchro, Fill Flash (on) and Flash off.

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

Flash Mode	Description
 Auto Flash	The flash fires automatically according to the ambient lighting conditions. Select this mode for general photography.
 Red-Eye Reduction	The flash emits a precursor-flash before the main flash fires. This causes the pupil in the human eye to constrict, reducing the red-eye phenomenon. Select this mode when taking images of people and animals in low-light conditions.
 Slow Synchro	The flash is fired at a slower shutter speed. This flash mode is effective when taking pictures so that not only the subject but also the background are both clearly reproduced in artificial light (backlighting, fluorescent lighting, etc.) or with people against the night as a background scene.
 Fill Flash (on)	The flash will always fire regardless of the surrounding brightness. Select this mode for recording images with high contrast (backlighting) and deep shadows.
 Flash Off	The flash will not fire. Select this mode when taking images in a place where flash photography is prohibited, or when the distance to the subject is beyond the effective range of the flash.

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 in memory, or on an SD 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, fewer images will take up more 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 and quality settings:

1. Slide the **POWER** switch and power on the camera.
2. Set the mode dial to the  Record mode or the  Manual Record mode.
3. Press the  menu button.
4. Select IMAGE SIZE or QUALITY by using the  /  button and then press the  button.
5. Change the settings with the  or  button and then press the **OK** button.
6. Press the  menu button again to exit from the menu mode.
7. Compose your picture.
8. Press the shutter button.



Number of Recordable Images

The frame counter indicates the approximate number of images that can be stored on the internal memory or the SD memory card at the camera's image quality and size settings. The number of recordable images may vary depending on the recorded subject and the capacity of the memory card, or if there are files other than images, or when the recording is made while switching the picture quality/resolution.

Resolution	Quality	Compression Ratio	Internal Memory	SD Memory Card					
			16MB	8MB	16MB	32MB	64MB	128MB	256MB
 2048 x 1536	***	4:1	11	4	9	20	42	85	170
	**	8:1	21	8	19	39	81	164	327
	*	12:1	31	12	28	59	122	246	491
 1600 x 1200	***	4:1	17	7	15	32	66	133	266
	**	8:1	34	14	30	64	132	267	532
	*	12:1	51	21	46	97	198	400	798
 1280 x 960	***	4:1	27	10	24	50	103	208	415
	**	8:1	54	21	48	101	206	417	831
	*	12:1	81	32	72	151	310	626	1247
 1024 x 768	***	4:1	42	17	38	79	162	329	655
	**	8:1	84	34	75	158	323	654	1303
	*	12:1	126	51	113	237	484	979	1950
 640 x 480	***	4:1	108	43	96	202	413	835	1663
	**	8:1	216	87	193	404	826	1670	3326
	*	12:1	324	131	289	606	1240	2506	4990

*** FINE, ** NORMAL, * BASIC

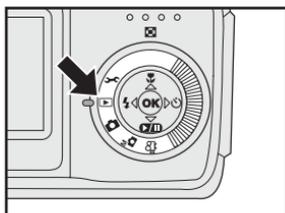
PLAYBACK MODE

In the  Playback mode, you can view, magnify your images or play video clips back. This mode even provides thumbnail images display and slide show, allowing you to quickly search for the image that you want or play the images back one by one automatically.

Playing Back Captured Images (Single-Frame Playback)

Play back still images one image at a time.

1. Slide the **POWER** switch and power on the camera.
2. Set the mode dial to the  Playback mode.
 - The last recorded image appears on the LCD monitor.
3. View and select your recorded images by using the   button.
 - To view the previous image, press the  button.
 - To view the next image, press the  button.



E



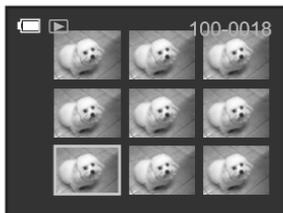
NOTE

- If there is no image stored in the internal memory or on the memory card,  NO IMAGE] message will appear on the LCD monitor.
- You can also view your images on the TV screen. First connect one end of the A/V cable to the A/V OUT jack of the camera. Then connect the other end to the video input socket of the TV. Turn the mode dial to the  Playback mode and then turn the TV and camera on.

Displaying Thumbnail Images

This function allows you to view nine thumbnail images on the LCD monitor simultaneously so that you can quickly scan for a particular image.

1. Slide the **POWER** switch and power on the camera.
2. Set the mode dial to the  Playback mode.
 - The last image frame appears on the LCD monitor.
3. Press the **▲** button.
 - Nine thumbnail images appear on the LCD monitor (assuming there are nine or more recorded images in the memory).
4. Use the **▲**, **▼**, **◀** or **▶** button to move the cursor to select the image to be displayed at regular size.
5. Press the **OK** button to display the selected image on the full screen.



E



NOTE

- While displaying thumbnail images, pressing the  delete button, the screen will display "DELETE SELECT", you may choose CANCEL, 1 FRAME, DELETE ALL or FORMAT by using the **▲** / **▼** button. To confirm your choice, press the **OK** button.

Zoom Playback

While reviewing your images, you may enlarge a selected portion of an image. This magnification allows you to view fine details.

1. Slide the **POWER** switch and power on the camera.
2. Set the mode dial to the  Playback mode.
 - The last image frame appears on the LCD monitor.
3. Use the  or  button to select the frame you want to enlarge.
4. Adjust the zoom ratio by using the **T** telephoto button or **W** wide-angle button.
 - Pressing the **T** telephoto button will enlarge the image.
 - To return to normal magnification, press the **W** wide-angle button.
 - The image is displayed enlarged, you will see a red frame with a red box inside.
 - The red frame indicates the entire image, while the red box shows the location of the currently enlarged area.
5. Use the , ,  or  button to select the area to enlarge.
6. To return to the regular display from 4X-enlarged status, press the **W** button twice.



E



NOTE

- Pressing the **T** button magnifies the image from X1 → X2 → X4.
- Pressing the **W** button reduces the image from X4 → X2 → X1.

Slide Show Display

The slide show function enables you to play your images back automatically in sequential order as a slide show. This is a very useful and entertaining feature reviewing recorded images and for presentations.

1. Slide the **POWER** switch and power on the camera.
2. Set the mode dial to the  Playback mode.
3. Press the  menu button.
4. Select SLIDE SHOW by using the  or  button, and press the  button.
5. Set the playback interval by using the  or  button and then press the **OK** button.
 - The slideshow starts displaying your images on the LCD monitor, one by one, with the interval that you set.
 - To stop the slideshow display, press the  or  button.
 - To pause the slideshow display, press the  () button.
 - To cancel the pause, press pause state, press the  () button.



NOTE

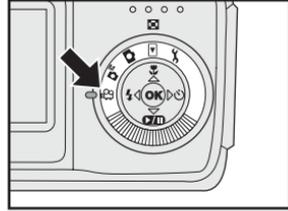
- You can adjust the slideshow display interval within the range of 3 sec, 5 sec, 7 sec or 9 sec. For Slide show interval, refer to SLIDE SHOW in the Playback menu.

MOVIE MODE

Recording Video Clips

The movie mode allows you to record video clips at a resolution of 320x240 pixels. Voice can also be recorded.

1. Slide the **POWER** switch and power on the camera.
2. Set the mode dial to the  Movie mode.
 - The recordable movie time displays on the LCD monitor.
3. You can start recording a video clip by pressing the shutter button.
 - The elapsed time displays on the LCD monitor while recording a video clip.
4. To stop recording, press the shutter button again.



NOTE

- In movie mode, image size/quality, macro, self-timer, flash and digital zoom cannot be set or activated.
- Before recording the video clip, you cannot zoom in or out on the subject by pressing the **T / W** button.
- Be sure not to cover the camera's microphone while recording a video clip.
- The maximum recording time may vary based on the recording medium:
 - SD memory card: remaining storage on memory card.
 - MultiMediaCard: 15 seconds for each video shot.

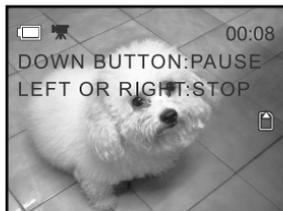
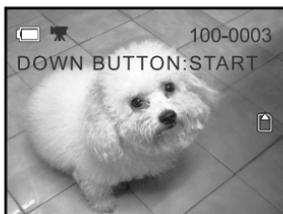
E

Viewing Video Clips

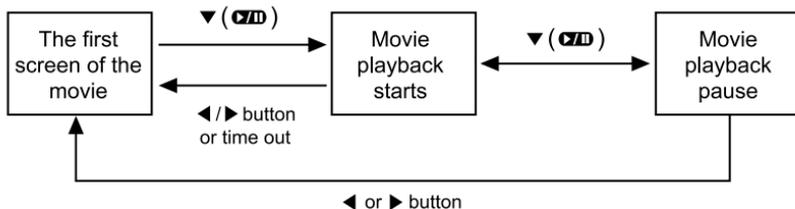
Play back video clips recorded on the camera. Voice is also played back.

To view the recorded video clips, follow the steps below.

1. Set the mode dial to the  Playback mode with the camera powered on.
2. Select the video clip that you want to view by using the  or  button.
3. Press the  () button to start.
 - To pause playback at any time, press the  () button.
 - To stop playback, press the  or  button.



Pressing the  () ,  or  button while playing the video clip will change the status as follows:



NOTE

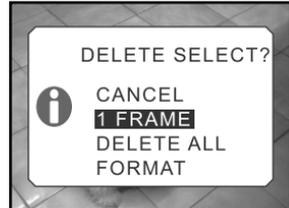
- To play the video clip back on the computer, we recommend that you use the "Quick Time Player". This software is free of charge, compatible with Mac and Windows-based computers and can be downloaded from the website at www.apple.com. For Quick Time Player usage, please refer to its on-line help for more information.

Deleting Images/ Video Clips

You can delete one image/video clip or all images/video clips at a time by pressing the button.

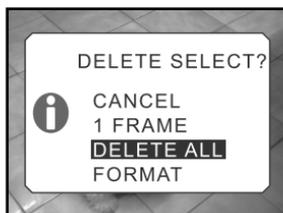
To delete one image/video clip at a time:

1. Set the mode dial to the  Record mode, the  Manual Record mode or the  Playback mode.
 - In the  Record mode or the  Manual Record mode, only the last recorded image can be erased.
 - In the  Playback mode, select the image that you want to view by using the  or  button.
2. Press the  delete button.
3. Select **1 FRAME** by using the  or  button, and then press the **OK** button.
4. "DELETE THIS?" message appears on the image.
 - Use the  or  button to select [YES], and press the **OK** button.
 - If you want to cancel the deletion, select [NO].
5. Repeat the above steps to delete further images if necessary.
 - If all images are deleted,  **NO IMAGE!** pops up.



To delete all images/ video clips at once:

1. Set the mode dial to the  Record mode, the  Manual mode or the  Playback mode.
2. Press the  delete button.
3. Select **DELETE ALL** by using the  or  button, and then press the **OK** button.
4. "DELETE ALL?" message appears on the image.
 - Use the  or  button to select [YES], and press the **OK** button.
 - If you want to cancel the deletion, select [NO].
 - If all images are deleted, [ NO IMAGE!] pops up.



Formatting an SD Memory Card

Formatting an SD card will erase all the images on the SD memory card. Be sure the SD memory card is properly inserted into the camera before formatting it.

1. Set the mode dial to the Record mode, the Manual Record mode or the Playback mode.
2. Press the delete button.
3. Select **FORMAT** by using the or button, and then press the **OK** button.
4. "FORMAT?" message appears on the image.
 - Use the or button to select [YES], and press the **OK** button.
 - If you want to cancel the action, select [NO].
5. If you select [YES], the "Frame No. Reset" message appears.
 - To reset the frame number, use the or button to select [YES], and press the **OK** button.



E

NOTE

- The SD memory card cannot be formatted when it is locked. Unlock the SD memory card first.
- Formatting the SD memory card also erases the protected images. All data other than images are also erased. Before formatting the card, make sure that none of the images on the card are still required.
- If the SD memory card is having problems then it won't be properly formatted.
- If no memory card is inserted into the camera, the internal memory will be formatted. This will erase all images stored in the internal memory.

Protecting Images

This feature prevents images from being deleted accidentally (Protect).

1. Set the mode dial to the  Playback mode.
2. Select the image that you want to protect by using the ◀ or ▶ button
3. Press the  menu button.
4. Select "PROTECT" by using the ▲ or ▼ button, and press the ▶ button.
5. You can select to protect one image or all images at one time by using the ◀ or ▶ button, and press the ▶ button.

ONE IMAGE: Protect one image at one time

ALL IMAGES: Protect all images at once

6. Select "UNLOCK" or "LOCK" by using the ▲ or ▼ button.

UNLOCK: Unlock the protected image

 LOCK: Protect the selected image or all images

7. Press the **OK** button.



NOTE

- The protected images will be erased if you format the internal memory or the memory card.

Setting the DPOF

DPOF (Digital Print Order Format) allows you to embed printing information on your SD memory card.

By using DPOF, you can select an image to be printed and then specify how many prints or which image you would like. Take your SD memory card to a DPOF enabled printer or through laboratory printing services that accept memory cards. The DPOF/card-compatible printer will read the embedded information on the memory card and print your images as specified.

1. Set the mode dial to the  Playback mode.
2. Select the image that you want to set the DPOF setting by using the  or  button.
3. Press the  menu button.
4. Select "DPOF" by using the  or  button, and press the  button.
5. You can select the desired DPOF sub-menu by using the  or  button, and press the  button.
6. Select the desired setting by using the  or  button, and press the **OK** button.

The DPOF sub-menu options:



- [QUANTITY]** : Select the print quantity from 0~99.
[DATE PRINT] : Add date of captured image to print.
[PRINT ENABLE] : Save or Cancel the DPOF settings.

TRANSFERRING RECORDED IMAGES/ VIDEO CLIPS TO YOUR COMPUTER

You can share recorded images/ video clips with your family or friends via e-mail or post them on the Web. Before doing those things, you need to connect the camera to your computer by using the USB cable and then transfer your recorded images/video clips.

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

Step 1: Installing the USB driver (only for Windows 98)

Step 2: Connecting the camera to your computer

Step 3: Downloading images/video clips

E

	System Requirements (Windows)	System Requirements (Macintosh)
CPU	Pentium 166 MHz processor or higher	PowerPC G3/G4
OS	Windows 98/98SE/Me/2000/ XP	OS 8.6 or higher
Memory	32MB (64MB RAM recommended)	32MB (64MB RAM recommended)
Free Space on Hard Disk	128 MB hard disk space	128 MB hard disk space
Required Devices	A CD-ROM Drive, An Available USB Port	A CD-ROM Drive, An Available USB Port
Color Monitor	Color Monitor (800x600, 24-bit or higher recommended)	Color Monitor (800x600, 24-bit or higher recommended)

Step 1: Installing the USB Driver on a Windows PC

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

1. Insert the CD-ROM packaged with the camera into the CD-ROM drive.
The welcome screen appears.
2. Click "Install USB Driver". Follow the on-screen instructions to complete the installation. After the USB driver installation is complete, restart your computer.



E

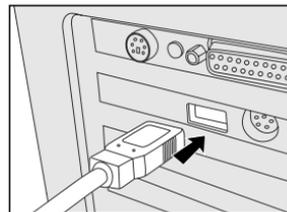
Installing the USB Driver on a Macintosh Computer

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.

1. Insert the CD-ROM that came with the camera into the CD-ROM drive.
2. Select and double-click "Digital Camera Driver Installer".
3. Select "Install Location" and click "Install".
4. Follow the on-screen instructions to complete the installation and restart your computer.

Step 2: Connecting the Camera to Your Computer

1. Connect one end of the USB cable to an available USB port on your computer.
2. Connect the other end of the USB cable to the USB connector on the camera.
3. Turn the camera on.
4. Look for a new "Removable Disk" icon appearing in the "My Computer" window. Your recorded images/video clips will be in a folder on this "removable disk". (For Mac users, double-click the "untitled" disk on the desktop.)



Step 3: Downloading Images/Video Clips

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" disk on a Macintosh) to your computer hard drive.

For Computers Running Windows

Open the "removable disk" by double clicking on it. Double click on the folder that contains your recorded images/video clips. Select the images/video clips that you prefer and then choose "Copy" from the "Edit" menu. After that, open the destination location and choose "Paste" from the "Edit" menu.

E

For Computers Running Mac OS

Open the "untitled" disk window and the hard disk or the destination location. Drag and drop from the camera disk to the desired destination.



NOTE

- It is recommended that you use the AC power adapter as a power supply for the camera while transferring your images/video clips from the camera to your computer to avoid the camera maybe cut off unexpectedly when the batteries run out.
- Memory card users may prefer to use a memory card reader (highly recommended).

INSTALLING PHOTOSUITE

PhotoSuite is a very user-friendly image-editing program. With PhotoSuite, you can breezily retouch, compose and organize your images. It contains a variety of templates, such as photo frames, birthday cards, calendars and more. Get your images ready and go explore this amazing program.

To Install PhotoSuite:

1. Insert the CD-ROM packaged with the camera into the CD-ROM drive. The welcome screen appears.
2. Click "Install PhotoSuite". Follow the on-screen instructions to complete the installation.



E



NOTE

- For information on how to use PhotoSuite to edit and retouch your recorded images, please refer to its online help.
- For Windows 2000/XP users, make sure to install and use the PhotoSuite while logged in as a user with an Administrator account.
- PhotoSuite is not supported on the Mac.

INSTALLING PHOTOVISTA

PhotoVista is an easy-to-use program that lets you create spectacular 360° panoramic images in a snap. When you view these panoramas, you get the experience of being totally immersed in a realistic environment. PhotoVista's powerful engine quickly and automatically stitches images together, and its intuitive interface will let even a novice get great results in minutes.

To Install PhotoVista:

1. Insert the CD-ROM packaged with the camera into the CD-ROM drive. The welcome screen appears.
2. Click "Install PhotoVista". Follow the on-screen instructions to complete the installation.



NOTE

- For information on how to use PhotoVista to create spectacular 360° panoramic images, please refer to its online help.
- For Windows 2000/XP users, make sure to install and use the PhotoVista while logged in as a user with an Administrator account.
- For Windows XP users which OS version does not include Service Pack 1 or higher, make sure to link to http://www.java.com/en/download/windows_automatic.jsp first and download the Java Virtual Machine. For more detail information about Java, please refer to its on-line help at <http://java.sun.com/getjava/help.html>.
After java software installation, you can start to install iSee Media Photovista Panorama. Hereunder is iSee Media Photovista Panorama System Requirements and Recommendations:
 - Windows 95, Windows 98, Windows NT 4 (Service Pack 3 or higher)
 - Windows 2000*, Windows ME*, Windows XP* (Service Pack 1 or higher)
- PhotoVista is not supported on the Mac.

MENU OPTIONS

Record Menu

Record menu items: IMAGE SIZE, QUALITY, DIGITAL ZOOM, PREVIEW and LCD BRIGHTNESS.

1. Set the mode dial to the Record mode.
2. Press the menu button.
3. Select the desired menu item by using the or button, and press the button.
4. Change the setting by using the or button and then press the **OK** button.
To exit from the menu mode at anytime, press the menu button again.



IMAGE SIZE

Set the desired image size (resolution).

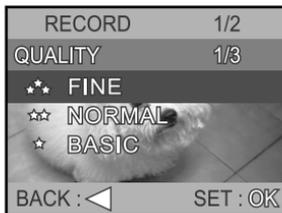
- [] 2048 x 1536
- [] 1600 x 1200
- [] 1280 x 960
- [] 1024 x 768
- [] 640 x 480



QUALITY

Set the quality (compression ratio) sharpness at which the image is to be recorded.

- [**] : Fine
- [**] : Normal
- [*] : Basic



DIGITAL ZOOM

You can take digital zoom shots by activating the digital zoom function.

- [OFF] : Disable digital zoom
- [ON] : Enable digital zoom



PREVIEW

Set to display a photographed image on LCD monitor immediately after you have taken the shot.

- [OFF] : Do not display preview
- [ON] : Display preview



LCD BRIGHTNESS

This option adjusts the brightness of the LCD monitor.



Manual Record Menu

Manual Record menu items: IMAGE SIZE, QUALITY, EV COMPENSATION, WHITE BALANCE, DIGITAL ZOOM, PREVIEW, LCD BRIGHTNESS and SHARPNESS.

1. Set the mode dial to the  Manual Record mode.
2. Press the  menu button.
3. Select the desired menu item by using the  or  button, and press the  button.
4. Change the setting by using the  or  button and then press the **OK** button.
 - To exit from the menu mode at anytime, press the  menu button again.



E

IMAGE SIZE

Refer to "IMAGE SIZE" in Record menu.

QUALITY

Refer to "QUALITY" in Record menu.

EV COMPENSATION

Your camera adjusts the exposure of each scene automatically. However, if the subject is very dark, or very bright, you may override the camera automatic exposure determination to make the subject brighter or darker. This is called EV compensation.

The EV compensation of the camera can be adjusted from -2.0EV to +2.0EV in 0.5EV step.



E

WHITE BALANCE

The human eye adapts to changes in light so that white objects still appear white even when the light changes. With cameras, however, the color of the subject is influenced by the color of the light surrounding it. This color adjustment is called “white balance adjustment”. This setting allows you to set the white balance when taking photographs under specific lighting condition.

- [ AUTO] : Automatic adjustment
- [ SUN] : For recording outdoors on a bright day
- [ SHADE] : For recording outdoors on a cloudy day
- [ TUNGSTEN] : For recording under tungsten-light
- [ FLUORESCENT1] : For recording under bluish fluorescent lighting condition
- [ FLUORESCENT2] : For recording under reddish fluorescent lighting condition



DIGITAL ZOOM

Refer to “DIGITAL ZOOM” in Record menu.

PREVIEW

Refer to “PREVIEW” in Record menu.

LCD BRIGHTNESS

Refer to "LCD BRIGHTNESS" in Record menu.

SHARPNESS

Set the level of image sharpness.

- [HARD] : Sharpen the edge of the image detail
- [NORMAL] : Leave the image detail as captured
- [SOFT] : Soften the edge of the image detail
for special effect



E

Movie Menu

Movie menu items: EV COMPENSATION, WHITE BALANCE and LCD BRIGHTNESS.

1. Set the mode dial to the  Movie mode.
2. Press the  menu button.
3. Select the desired menu item by using the  or  button, and press the  button.
4. Change the setting by using the  or  button and then press the **OK** button.
 - To exit from the menu mode at anytime, press the  menu button again.



E

EV COMPENSATION

Refer to "EV COMPENSATION" in Manual Record menu.

WHITE BALANCE

Refer to "WHITE BALANCE" in Manual Record menu.

LCD BRIGHTNESS

Refer to "LCD BRIGHTNESS" in Record menu.

Playback Menu

Playback menu items: SLIDE SHOW, PROTECT, LCD BRIGHTNESS, COPY TO SD CARD and DPOF.

1. Set the mode dial to the  Playback mode.
2. Press the  menu button.
3. Move to the desired menu item by using the  or  button, and press the  button.
4. Change the settings by using the  or  button and then press the **OK** button.
 - To exit from the menu mode at anytime, press the  menu button again.



SLIDE SHOW

Your camera can display your images sequentially as a slide show at a selected interval.

[3 SEC], [5 SEC], [7 SEC], [9 SEC]



PROTECT

This feature prevents images from being deleted accidentally. Refer to section in this manual titled "Protecting Images" for further detail.

LCD BRIGHTNESS

Refer to "LCD BRIGHTNESS" in Record menu.

COPY TO SD CARD

This feature allows you to copy your images from the camera's internal memory to a memory card. Of course, you can only do this if you have a memory card installed and some images in internal memory.

[NO] : Does not copy the images

[YES] : Copy all images to the memory card



E

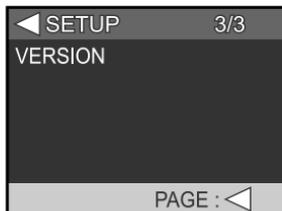
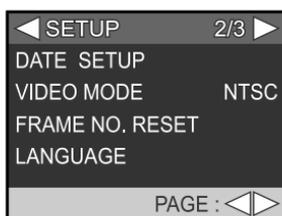
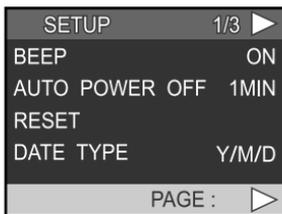
DPOF

DPOF allows you to embed printing information on your memory card. Refer to section in this manual titled "Setting the DPOF" for further detail.

SETUP MENU

Setup menu items: BEEP, AUTO POWER OFF, RESET, DATE TYPE, DATE SETUP, VIDEO MODE, FRAME NO. RESET, LANGUAGE and VERSION.

1. Set the mode dial to the  Setup mode.
2. Select the desired menu item by using the  or  button, and press the  button.
3. Change the setting by using the  or  button and then press the **OK** button.



BEEP

Specify whether or not beeps are to be generated when buttons are pressed.

- [OFF] : Beeps are not generated
[ON] : Beeps are generated



AUTO POWER 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.

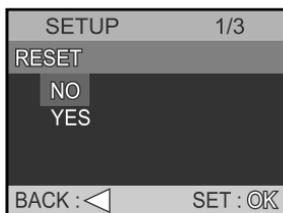
[1 MIN], [3 MIN], [5 MIN]



RESET

This function will restore all the parameters to the default settings.

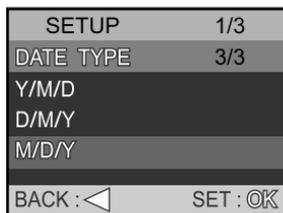
[NO] : Remain the current settings
[YES] : Reset to default settings



DATE TYPE

Set the displayed date format on the LCD monitor.

[Y/M/D] : Year/Month/Day
[D/M/Y] : Day/Month/Year
[M/D/Y]] : Month/Day/Year



DATE SETUP

Set current date and time. Refer to section in this manual titled "Setting the Date and Time" for further detail.

VIDEO MODE

Set the video output format for displaying recorded images on a television.

[NTSC] : Select this format when located in the U.S.A., Canada, Japan, Korea, Taiwan, Central America, or Mexico.

[PAL] : Select this format when located in Australia, Belgium, China, Denmark, Finland, Germany, Great Britain, Holland, Italy, Kuwait, Malaysia, New Zealand, Singapore, Spain, Sweden, Switzerland, Thailand or Norway.



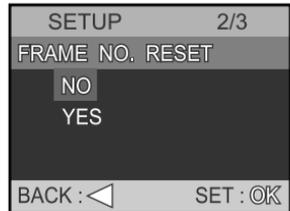
E

FRAME NO. RESET

Set whether or not to reset the file and folder number when you take photographs. (Default reset, folder number is 100 and file number is 0001)

[NO] : Does not reset the folder and file number

[YES] : Reset the folder and file number



LANGUAGE

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

- The provided languages are [ENGLISH], [FRANÇAIS], [DEUTSCH], [ESPAÑOL], [ITALIANO], [日本語], [繁體中文], [简体中文]



VERSION

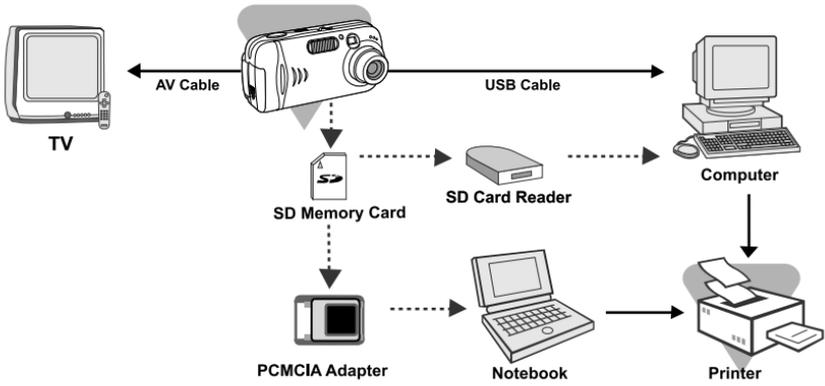
Show the firmware version on this camera.

To view the firmware version on this camera, press the ▶ button.

And, to return to the SETUP menu, press the ◀ button.



CONNECTING YOUR CAMERA TO OTHER DEVICES



E

CAMERA SPECIFICATIONS

Item	Description
Image sensor	1/2.7" CCD
Effective pixels	3.1 Mega Pixels
Image size	Still Image : 2048x1536, 1600x1200, 1280x960, 1024x768, 640x480 Movie image: 320 x 240
Image quality	Fine, Normal, Basic
Recording media	16MB internal memory; SD memory card (optional) MultiMediaCard (MMC) (15 sec. for each video shot)(optional)
Lens	Focal length: 5.8mm~17.4mm Focal range: Macro: 0.2m~0.5m Normal: 0.5m~infinity F-number: 3.1~5.2
Flash effective range	Wide: 0.5m ~3m Tele: 0.5m ~ 2.5m
LCD monitor	1.5" color TFT LCD
Self-timer	2-seconds delay 10-seconds delay
Zoom	Digital: Capture mode: 2X/ Playback mode: 2X and 4X
Exposure compensation	Auto; Manual: -2.0 ~ +2.0 EV (0.5 EV)
White balance	Auto; Manual: SUN, SHADE, TUNGSTEN, FLUORESCENT 1, FLUORESCENT 2
Compressed format	JPEG, Motion JPEG
Standards	EXIF 2.2, DPOF 1.0, DCF 1.0, AVI
Interface	DC IN jack, USB connector, AUDIO OUT jack (NTSC or PAL)
Operating environment	Operation: -0°C ~40°C, 15% ~90% humidity Storage: -20°C ~70°C, 10 ~95% humidity
Power	2 x AA Alkaline batteries, 2 x AA Ni-MH batteries, CR-V3, AC power adapter (3.0V/2.5A)
Tripod socket	Yes
Dimensions	112mm x 56mm x 37mm (WxHxD)
Weight	Approx. 160g (without batteries and the SD memory card)

* Design and specifications are subject to change without notice.