### **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.

### **READ THIS FIRST**

#### **Trademark Information**

- Microsoft®and Windows®are U.S. registered trademarks of Microsoft Corporation.
- Pentium®is a registered trademark of Intel Corporation.
- SD<sup>TM</sup> is a trademark.
- Other names and products may be trademarks or registered trademarks of their respective owners.

#### **Product Information**

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

## **Safety Instructions**

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

#### WARNING

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

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



If the camera has fallen or its case has been damaged, turn the power OFF and remove the batteries.

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



Do not disassemble, change or repair the camera.

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



Do not use the camera in areas near water.

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



Do not place the camera on inclined or unstable surfaces.

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



Keep the batteries out of the reach of children.

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



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

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



### **CAUTION**

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

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

## **Notes on Battery Usage**

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

- Different battery types and surrounding temperatures may affect the battery performance.
- Avoid using batteries in extremely cold environments as low temperatures can shorten the battery life and reduce camera performance. This low temperature will also influence Alkaline battery performance, therefore Ni-MH rechargeable battery is highly recommended.
- If you are using the new rechargeable batteries or rechargeable batteries that have not been used for an extended period of time (batteries that pass the expiry date are exceptions) might affect the number of pictures that can be taken. Therefore, to maximize their performance and lifetime, we recommend that you fully charge the batteries and discharge them for at least one complete cycle before use.
- The battery may feel warm when using the camera for an extended period of time or using the flash continuously. This is normal and not a malfunction.
- The camera may feel warm when being used continuously or for an extended period of time. This is normal and not a malfunction.
- 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 batteries of different types (together) or mix old and new batteries.
- Always keep the terminals in a clean state.
- Never use manganese batteries.

# **CONTENTS**

INTRODUCTION	
Overview	8
Package contents	
GETTING TO KNOW YOUR DIGITAL	VIDEO
CAMERA	10
Front view	10
Rear view	11
LCD monitor information	12
LED indicators	15
GETTING STARTED	16
Installing the batteries	16
Attaching the strap	16
Loading an SD memory card (o	ptiona
accessory)	17
Using the LCD panel	18
Turning the power on/off	18
Choosing the OSD (On-Screen D	)isplav)
language	
Setting the date and time	
•	
Formatting an SD memory card	
Setting image resolution and quality	21

PHOTOGRAPHY MODES	2
Capturing still images	.22
Recording video clips	2
Macro mode	2
Normal mode	.2
Zoom photography	24
Setting the flash	2
Setting the self-timer	26
PLAYBACK MODE	.27
Playing back still images	.2
Playing back video clips	
Playing back still images/video clips	10
TV	.2
Zoom playback	.29
Thumbnail display	.29
Protecting still images/video clips	.30
Slide show display	.3
Deleting still images/video clips	.32
MP3 MODE	.30

VOICE REC	VOICE RECORDER MODE34		
Recordi	ng voice files34		
Playing	back voice files34		
Deleting	MP3 / Voice files35		
MENU OPT	IONS36		
Record	menu36		
Playbac	k menu39		
MP3 me	enu41		
Voice m	enu42		
Setup m	nenu43		
TRANSFER	RRING RECORDED FILES TO YOUR		
COMPUTER	R47		
Step 1:	Installing the USB driver (Windows 98		
	users only)47		
Step 2:	Connecting the digital video camera to		
	your computer48		
Step 3:	Downloading still images, voice and		
	video file49		
TRANSFER	RING MP3 FILES50		
INSTALLING	S VIDEOSTUDIO51		

USING THE DIGITAL VIDEO CAMERA AS A F	
Step 1: Installing the PC camera driver	53
Step 2: Connecting the digital video camera	to
your computer	54
Step 3: Running your application software(i.e	e.
Windows NetMeeting)	54
CONNECTING THE DIGITAL VIDEO CAMERA OTHER DEVICES	
SPECIFICATIONS	56

### INTRODUCTION

#### **Overview**

Your new digital video camera delivers good quality, 2048 x 1536 resolution images using a 3.0 Megapixels CMOS sensor. This digital video camera is designed as an "entry-level" handy cam. You can simply use this small digital video camera for video recording.

Using the 2.0" LTPS color image LCD monitor, you can record images and then review 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.

64MB internal (built-in) memory lets you capture and store images without the need for an additional memory card. However, you may wish to expand the memory capacity (up to 512MB capacity) by using an external memory card.

In addition to still image and video, your digital video camera can act as a voice recorder, MP3 player and PC camera.

Video clips or still images that you have captured can be downloaded to your computer using the USB cable (USB driver required for Win 98). You can enhance and retouch your images on your computer by using the provided editing software. You may share your images with your friends via e-mail, in a report, or on a website.

To play back the video clips on the computer, we recommend you to use Windows Media Player 9.0 (WMP 9.0) or the Software Application we offered. You can download WMP version from the website at <a href="www.microsoft.com">www.microsoft.com</a>.

# **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.

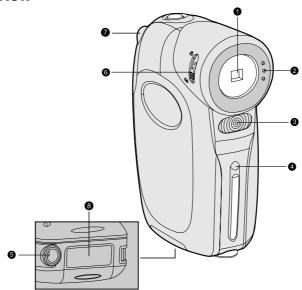
### Common product components:

- Digital video camera
- User's manual
- USB cable
- Software CD-ROM
- Tripod
- Traveler Rechargeable battery 1800mAH X 4

- AV cable
- Earphone
- Strap
- Pouch
- Traveler Charger

# **GETTING TO KNOW YOUR DIGITAL VIDEO CAMERA**

### **Front view**

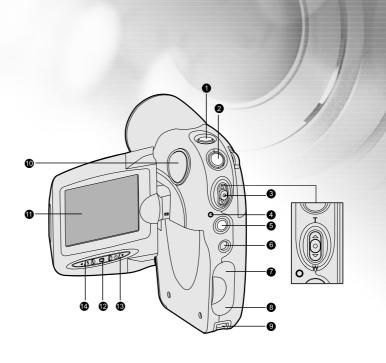


- 1. Lens
- 2. Microphone
- 3. Flash
- 4. Self-timer LED
- 5. Tripod socket
- 6. Focus switch
  - Macro mode
  - Normal mode
- 7. SD card cover
- 8. Battery cover

### **Rear view**

- 1. 

  O Power button
- 2. M button
- 3. Zoom lever
  - Record button
  - T / ▲ Zoom in
  - W / ▼ Zoom out
- 4. State LED indicator
- 5. **\(\Oddsymbol{\Odds**
- 6. O Earphone connector
- 7. A/V terminal
- 8. USB connector
- 9. Strap holder
- 10.Speaker
- 11.LCD panel / monitor
- 12. Menu button
- 13. Right / Fast forward button
  - ে Self-timer button
- 14. Left / Rewind button
  - Flash button

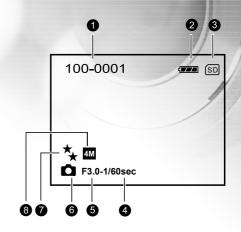


### **LCD** monitor information

Preview mode: w 💿 T 🗱 🕬)) 🖼 SD (F) 8 1. Zoom state +0.6 Macro mode ☆□ 3. Volume 2M 10 Low sound level 00:25:30 0150 Mild sound level Medium sound level White balance 10 **49 49 40** High sound level Auto ◄···)) Fully sound level Davlight **■** off Mute Shade 13. Image quality 4. Remaining battery status Fluorescent-1 ★ Super fine Full battery power Fluorescent-2 Fine Fairly consumed . . Lamp Normal Nearly exhausted EV compensation 14. Video quality Virtually no battery power 10. Image size \*\* Ultra fine 5. Memory card indicator Super fine 2560x1920 6. Flash mode Fine 2304x1728 Auto flash 4A Normal 2048x1536 Auto flash with red-eye reduction 48 15. Video size 1600x1200 Flash off (B) 640x480 800x600 7. Self-timer mode 320x240 3 sec. delay 11. Possible number of shots 3 SEC 16. Possible recording time 10 sec. delay 10 SEC 12. Still image mode 17. Video mode

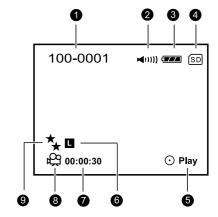
### Playback mode-Still image playback:

- 1. Folder & file number
- 2. Remaining battery status
- 3. Memory card indicator
- 4. Exposure time
- 5. Aperture value
- 6. Still image mode
- 7. Image quality
- 8. Image size



### Playback mode-Video clip playback:

- 1. Folder and file number
- 2. Volume
- 3. Remaining battery status
- 4. Memory card indicator
- 5. Play / Pause indicator
- 6. Video size
- 7. Total of recorded time
- 8. Video mode
- 9. Video quality



# **LED** indicators

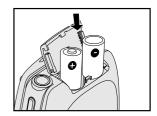
Indicator	State	Description/Activity
LED indicator	Solid green	The digital video camera is powering up.
		2. The digital video camera is ready to record images (or movies).
LED indicator	Blinking green	USB communication/transfer in progress.
LED indicator	Blinking red	Charging the flash.
Self-timer indicator	Blinking red	The self-timer function is activated.

## **GETTING STARTED**

## **Installing the batteries**

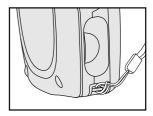
You can use 2 AA size batteries to power the digital video camera.

- 1. Slide the battery cover.
- 2. Insert the batteries, noting correct polarity (+ or -).
- 3. Close the battery cover firmly.



# **Attaching the hand strap**

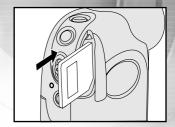
Attach the strap as shown in the illustration.



# Loading an SD memory card (optional accessory)

The digital video camera comes with 64MB of internal memory, allowing you to record video clips, captured still images, MP3 and voice files in the digital video camera. However, you can also expand the memory capacity by using an optional SD (Secure Digital) memory card so that you can store more files.

- 1. Open the SD memory card cover.
- 2. Inset the SD memory card.
  - If the card cannot be inserted, check the orientation.
- 3. Close the SD card cover firmly.

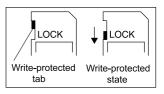


### To remove an SD memory card

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

#### Note:

- Be sure to format an SD memory card with this digital video camera before using it. Refer to section in the manual titled "Formatting an SD memory card" for further details.
- 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.



# **Using the LCD panel**

- 1. Open the panel by pulling it away from the digital video camera.
- 2. Choose the angle of the monitor that suits you best by rotating the panel.







#### Note:

- Make sure you open the LCD panel at 90 degrees before attempting to rotate it.
- Rotate the LCD panel carefully and with the correct direction, over rotation and rotation with the wrong direction may damage the hinge that connects the LCD monitor to the digital video camera.
- Avoid contact with the LCD monitor when moving the LCD panel.
- Do not hold the digital video camera by the LCD panel.

## Turning the power on/off

Press and hold the ① button until the digital video camera turns on.

■ To turn the power off, press and hold the ① button again.

# Choosing the OSD (On-Screen Display) language

Specify in which language menus and messages are to be displayed on the LCD monitor for the first time. Select the displayed language with the zoom lever and pres the  $\odot$  button. The setting will be stored. Refer to section in this manual titled "Language" in the [Setup] menu for further details.

#### Note:

■ The OSD language setting screen appears and prompts you to choose a language for displayed information on the LCD monitor only when you first turn the digital video camera on. It will not appear again for the next time as you power on it.

# Setting the date and time

The date/time setting screen will automatically appear:

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

#### To adjust the date and time:

- 1. Select the year, month, day and time fields with the **೨**/**೨** buttons.
- 2. Press the ① button after all fields are set.
  - To increase a value, slide the zoom lever to the ▲ / T side.
  - To decrease a value, slide the zoom lever to the ▼ / W side.
  - The time is displayed in 24-hours format.

## Formatting an SD memory card

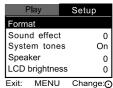
Format an SD memory card before its initial usage.

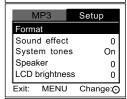
- 1. Turn on the power by pressing and hold the ① button.
  - If you want to access [Setup] menu from the [Image/Movie] / [MP3] / [Voice] mode, first press the ® button twice to go to [Select Mode] to select one of the mode with the zoom lever, and press the ⊙ button.
- 2. Press the 
  button, and select [Setup] with the button.
  - [Setup] menu is displayed on the screen.
- 3. Select [Format] with the zoom lever, and press the ⊙ button.
- 4. Select [Yes] with the zoom lever, and press the ⊙ button.

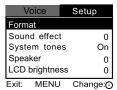
#### Note:

- Formatting an SD memory 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 memory 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 in memory, or on a memory card. As you get to know the digital video camera, it is recommended that you try each quality and resolution setting to get an appreciation for the effects that these settings will have on your images.

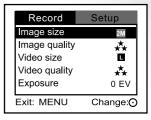
Higher resolution and higher quality images offer the best photographic results but produce large files sizes. Therefore, few images will take up a lot of memory space.

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

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

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the 

  button.
  - [Record] menu is displayed.
- 3. Select [Image size] with the zoom lever, and press the ⊙ button.
- 4. Select the desired setting with the zoom lever, and press the  $\odot$  button.
- 5. Follow the same steps 3 and 4 to set the [Image quality], [Video size] and [Video quality].



#### Note:

■ The possible number of shots and recording time depend on the storage size, resolution and quality settings and the subject of the image to be captured.

### PHOTOGRAPHY MODES

## **Capturing still images**

- 1. Turn on the power by pressing and holding the ① button.
- 2. Compose the shot.
- 3. Press the **b**utton to capture a still image.

#### Note:

■ The actual captured image appears to be larger than the one on LCD preview after image captured.

#### 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. The number of recordable images may vary depending on the recorded subject, the capacity of the memory card, there are files other that images or when the recording is made while switching the picture quality or resolution.

Resolution	Quality	Compression ratio	64 MB internal memory
2560 x 1920 pixels	Super fine	4:1	25
5M	Fine	8:1	38
_	Normal	12:1	59
2304 x 1728 pixels	Super fine	4:1	29
4M	Fine	8:1	46
	Normal	12:1	67
2048 x 1536 pixels	Super fine	4:1	33
3M	Fine	8:1	50
	Normal	12:1	71
1600 x 1200 pixels	Super fine	4:1	54
2M	Fine	8:1	84
	Normal	12:1	126
800 x 600 pixels	Super fine	4:1	182
3M	Fine	8:1	249
_	Normal	12:1	354

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

### **Recording video clips**

- 1. Turn on the power by pressing and holding the ① button.
- 2. Compose the shot.
- 3. Press the ⊙ button.
  - The recording of the video clip will start.
  - Pressing the ⊙ button again will pause the recording. Pressing the ⊙ button during pause will resume recording.
- 4. Press the **\textstyle button** to stop recording.

### **Approximate Duration of Recording Time**

The table below indicates the approximate duration of recording time that you can record at each setting based on 64 MB internal memory.

Resolution	Video Quality		Estimated Recording Time
640 x 480 pixels	ls 🗱 Ultra fine		Approx. 2 min. 01 sec.
	**	Super fine	Approx. 2 min. 12 sec.
	**	Fine	Approx. 2 min. 32 sec.
_	*	Normal	Approx. 3 min. 34 sec.
320 x 240 pixels	**	Ultra fine	Approx. 3 min. 08 sec.
	**	Super fine	Approx. 3 min. 46 sec.
М	**	Fine	Approx. 5 min. 14 sec.
-111	*	Normal	Approx. 7 min. 25 sec.

<sup>\*</sup> The above data shows the standard testing results. The actual capacity varies according to shooting conditions and settings.

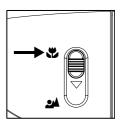
#### **Macro mode**

Select this when you want to take a close-up photography.

- 1. Turn on the power by pressing and holding the  $\mathbin{\textcircled{\scriptsize 1}}$  button.
- 2. Slide the focus switch to the side.
- 3. Compose the shot.
- 4. Press the 
  button to capture a still image.
  - To record video clips, press the ⊙ button to start recording, and then press the button to end the recording.

#### Note:

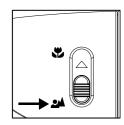
- After a macro shot is taken **DO NOT FORGET** to reset the lens to the normal position.
- Flash mode is automatically set to off once you switch to Macro mode.



### **Normal mode**

This mode is suitable for scenery and portrait shooting.

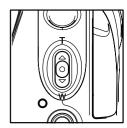
- 1. Turn on the power by pressing and holding the ① button.
- 2. Slide the focus switch to the side.
- 3. Compose the shot.
- 4. Press the 
  button to capture a still image.
  - To record video clips, press the ⊙ button to start recording, and then press the ☎ button to end the recording.



## Zoom photography

Zoom photography allows you to capture telephoto and wide-angle shots.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Compose the shot with the zoom lever.
  - The subject appears closer by sliding the zoom lever to the ▲ / T side.
  - The subject appears farther away by sliding the zoom lever to the ▼ / W side.
- 3. Press the **b** button to capture a "zoomed" image.
  - To record video clips, press the ⊙ button to start recording, and then press the ♠ button to end the recording.
  - You can also use the zoom lever to zoom in or zoom out the subject while recording the video clips.



# Setting the flash

Set the flash to suite for the photographic conditions.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the (4) button to select the desired flash mode.



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

Flash Mode	Description	
4A Auto flash	The flash fires automatically to suit the photographic conditions.	
∰ Auto flash with 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 digital video camera or get as close to the digital video camera as possible.	
Flash off	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.	

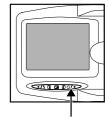
#### Note:

■ The flash cannot be set in the video mode.

# Setting the self-timer

This setting allows still images to be captured with the self-timer.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the (3) button to select the setting.
- 3. Compose the shot.
- 4. Press the n button.
  - The self-timer LED and self-timer icon flash, and then the image is captured after the preset time has elapsed.
  - To cancel the self-timer during operation, press again the (೨) button.
  - Once the self-timer has been activated and the button has been pressed, you can not slide the zoom lever.



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

Self-timer mode	Description
3 sec.	The picture is taken about 3 seconds after the     button is pressed.
10 sec.	The picture is taken about 10 seconds after the  button is pressed.

#### Note:

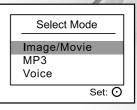
- Self-timer cannot be set in the video mode.
- The self-timer setting is automatically cancelled after an image is captured.

### PLAYBACK MODE

### Playing back still images

You can playback the still images on an LCD monitor.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the @ button twice to go to [Select Mode].
- 3. Select [Image/Movie] with the zoom lever and press the ⊙ button.
  - The last image/video clip appears on the LCD monitor.
- 4. Select the desired images with the zoom lever.
  - To view the previous image, slide the zoom lever to the ▲ / T side.
  - To view the next image, slide the zoom lever to the ▼ / W side.



### Playing back video clips

You can playback video clips recorded on the digital video camera. You can also playback voice.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the M button twice to go to [Select Mode].
- 3. Select [Image/Movie] with the zoom lever and press the  $\odot$  button.
  - The last image/video clip appears on the LCD monitor.
- 4. Select the desired images with the zoom lever.
  - To view the previous image, slide the zoom lever to the ▲ / T side.
  - To view the next image, slide the zoom lever to the ▼ / W side.

- 5. Press the O button.
  - A press of the ② / ③ buttons during playback allows fast forward play / fast reverse play.
  - To pause video playback, press the ⊙ button.
  - To cancel pause, press the ⊙ button again.
  - To stop video playback, press the 🏚 button. This stops playback and returns to the start of the video clip.

#### Note:

- To playback the video clips on the computer, we recommend you to use Windows Media Player 9.0 (WMP 9.0) or the Software Application we offered. You can download WMP version from the website at www.microsoft.com.
- To adjust the sound level, sliding the zoom lever to the T / A side will increase the volume, sliding the zoom lever to the W / ▼ side will decrease the volume.

# Playing back still images/video clips on TV

You can also playback your images on a TV screen. Before connecting to any devices, make sure to select NTSC / PAL system to match the video output system of the video equipment you are going to connect to the digital video camera, then turn all connected devices off.

- 1. Connect one end of the A/V cable to the A/V terminal of the digital video camera.
- 2. Connect the other end to the A/V input socket of the TV set.
- 3. Turn the TV and digital video camera on.
- 4. Playback the still images / video clips.
  - The method of operation is the same as playing back still images and video clips on the digital video camera.

# Zoom playback

Images that are being playback can be enlarged and displayed in 2 levels of 2 times and 4 times enlargement.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the M button twice to go to [Select Mode].
- 3. Select [Image/Movie] with the zoom lever and press the ⊙ button.
- 4. Select the desired images with the zoom lever.
  - To view the previous image, slide the zoom lever to the ▲ / T side.
  - To view the next image, slide the zoom lever to the ▼ / W side.
- 5. Each press of the **\( \text{\chi} \)** button switches the displayed image in the sequence of 1x enlargement, 2x enlargement, 4x enlargement and thumbnail display.
  - During zoom playback, the outer frame indicates the entire image; while the inner frame indicates the location of the currently enlarged area.
- 6. Slide the zoom lever upward or downward or press the ♠/♠ buttons to select the area to enlarge.





### 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.

- Follow "Zoom Playback" section steps 1-5 until the thumbnail display on the screen.
- Press the ♠ /♠ buttons to select the image/video clip to be displayed at regular size.
- 3. Press the  $\odot$  button.

#### Note:

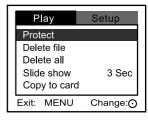
■ A [ [ ], [ ] ] icon will be displayed in a thumbnail display.



# Protecting still images/video clips

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

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the M button twice to go to [Select Mode].
- 3. Select [Image/Movie] with the zoom lever and press the  $\odot$  button.
- Select the still image/video clip that you want to protect with the zoom lever.
  - You may select the still image/ video clip that you want to protect from the thumbnail display.
- 5. Press the @ button.
  - [Play] menu is displayed.
- 6. Select [Protect] with the zoom lever, and press the ⊙ button.
- Select [One image] or [All images] with the zoo lever, and press the 
   button.
- 8. Select [Lock] with the zoom lever, and press the  $\odot$  button.
  - Protect is executed and the digital video camera returns to the play mode.
  - The protect icon is displayed with protected images. When [All images] are selected, is displayed with all the images.
  - To cancel protection, select [Unlock] with the zoom lever, and press the ⊙ button.
  - The removal of image protection is executed and the digital video camera returns to the play mode.



# Slide show display

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

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the m button twice to go to [Select Mode].
- 3. Select [Image/Movie] with the zoom lever and press the ⊙ button.
- 4. Press the @ button.
  - [Play] menu is displayed.
- 5. Select [Slide show] with the zoom lever, and press the  $\odot$  button.
- 6. Set the playback interval with the zoom lever, and press the ⊙ button.
  - The slide show starts.
  - The video clips are displayed the first frame image, and not played back.
  - To stop slide show, press the ⊙ button.

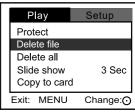


### Note:

■ You can adjust slide show display interval within the range of 1 sec., 3 sec., 5 sec., 7 sec., and 9 sec.

### **Deleting still images/video clips**

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the m button twice to go to [Select Mode].
- 3. Select [Image/Movie] with the zoom lever and press the ⊙ button.
- 4. Select the still image/video clip that you want to erase with the zoom lever
  - You may select the still image/ video clip that you want to erase from the thumbnail display.
- 5. Press the @ button.
  - [Play] menu is displayed.
- Select [Delete file] or [Delete all] with the zoom lever, and press the ⊙ button.
  - Delete file: Delete the current still image/video clip.
  - Delete all: Delete all still images/video clips.
- 7. Select [Yes] with the zoom lever, and press the ⊙ button.
  - To not delete, select [No], and press the ⊙ button.
  - If all video clips/images are deleted, [ No images!] pops up.
  - If you want to turn back to the photography mode, press the @button.

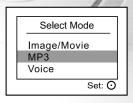




## **MP3 MODE**

The digital video camera offers you to playback MP3 files. You may download MP3 files to your computer and then copy them into the digital video camera via the USB cable or insert an SD memory card with MP3 files recorded into the digital video camera. Refer to section in this manual titled "TRANSFERRING MP3 FILES" for further details.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the m button twice to go to [Select Mode].
- 3. Select [MP3] with the zoom lever and press the ⊙ button.
  - MP3 playlist appears on the screen.



#### **Button operations**

State	MP3	
Button	Playlist	During playback
0	Power off (press & hold)	Power off (press & hold)
T/A	Scroll up	Volume +
W / <b>▼</b>	Scroll down	Volume -
0	Previous page	Playing previous MP3 music / Fast reverse playback
0	Next page	Playing next MP3 music / Fast forward playback
M	Back to LCD preview	Repeat 1/ Repeat all / Off
<b>(3)</b>	Enter MP3 menu	Playing previous or next MP3 music / Fast reverse or forward playback
Δ	Select/Un-select	Stop playing MP3 music
$\odot$	Start to play MP3 music	Pause playing MP3 music

## **VOICE RECORDER MODE**

The digital video camera enables you to record and playback voice files anytime and anywhere.

### **Recording voice files**

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the M button to select voice record mode as the illustration.
- 3. Press the O button.
  - Voice starts recording.
  - To pause recording, press the ⊙ button again.
  - To stop recording, press the button.
  - The maximum recordable time for voice recording is over 2 hours.

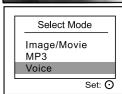
### Playing back voice files

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the @ button twice to go to [Select Mode].
- 3. Select [Voice] with the zoom lever and press the  $\odot$  button.
  - Voice playlist appears on the screen.

### **Button operations**

State	Voice	
Button	Playlist	During playback
0	Power off (press & hold)	Power off (press & hold)
T/A	Scroll up	Volume +
W/▼	Scroll down	Volume -
0	Previous page	Playing previous voice file / Fast reverse playback
0	Next page	Playing next voice file / Fast forward playback
M	Back to LCD preview	Repeat 1 / Repeat all / Off
<b>(3)</b>	Enter Voice menu	Playing previous or next MP3 music / Fast reverse or forward playback
۵	Select/Un-select	Stop playing voice file
0	Start to play voice file	Pause playing voice file





### **Deleting MP3 / Voice files**

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the M button twice to go to [Select Mode].
- 3. Select [MP3] / [Voice] with the zoom lever and press the  $\odot$  button.
  - MP3 / Voice playlist appears on the screen.
- 4. Press the 
  button.
  - [MP3] / [Voice] menu appears on the screen.
- 5. Select [Delete file] or [Delete all] with the zoom lever and press the  $\odot$  button.
  - Delete file: Delete the current MP3 / Voice file.
  - Delete all: Delete all MP3 / Voice files.
- 6. Select [Yes] with the zoom lever, and press the ⊙ button.
  - To not delete, select [No], and press the ⊙ button.
  - If all files are deleted, [ No files!] pops up.
  - If you want to turn back to the photography mode, press the ® button.

### **MENU OPTIONS**

### **Record menu**

This menu is for the basic settings to be used when capturing still images/video clips in the photography mode.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the @ button.
  - [Record] menu is displayed on the screen.
- 4. Select the desired setting with the zoom lever, and press the ⊙ button.
- 5. To exit from the menu, press the 

  button.

### Image size

This sets the size of the still image that will be captured.

丽: 2560 x 1920

4M: 2304 x 1728

3M: 2048 x 1536 2M: 1600 x 1200

M: 800 x 600

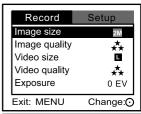
### Image quality

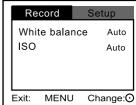
This sets the quality (compression rate) at which the still image is captured.

★: Super fine

ኒ: Fine

★: Normal





# Video size

This sets the size of the video clip that will be captured.

640 x 480320 x 240

#### Video quality

This sets the quality (compression rate) at which the video clip is captured

\*\*: Ultra fine

★: Super fine

★: Fine

★: Normal

#### Exposure

Your digital video camera adjusts the exposure of each scene automatically. However, if the subject is very dark, or very bright, you may override the digital video camera's automatic exposure determination to make the subject brighter or darker. This is called EV compensation. The EV compensation can be adjusted from -1.8EV to +1.8EV.

#### **Examples of Exposure Compensation -**

- + (positive) compensation
  - \* Printed matter comprising black text on whitish paper
  - \* Backlighting
  - \* Bright scenes or strong reflected light such as ski slopes

- (negative) compensation
  - \* People illuminated by a spotlight, in particular, against dark background
  - \* Printed matter comprising white text on blackish paper
  - \* Weak reflecting bodies such as evergreen trees or darkish leaves

# 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

[\*] Daylight: For recording outdoors on a bright day

[\_\_] Shade: For recording outdoors on a cloudy day

[兴] Fluorescent-1: Cool white fluorescent (W3900-4500K)

[#] Fluorescent-2: Day white fluorescent (W4600-5400K)

[ . Lamp: For recording under lamp light

#### ISC

This sets the sensitivity for photography. 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.

[Auto]: Auto adjustment

[100]: Equivalent to ISO100

[200]: Equivalent to ISO200

[400]: Equivalent to ISO400

# Playback menu

This menu sets which settings are to be used for playback.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the m button twice to go to [Select Mode].
- 3. Select [Image/Movie] with the zoom lever and press the ⊙ button.
- 4. Press the @ button.
  - [Play] menu is displayed on the screen.
- Select the desired [Play] option item with the zoom lever, and press the 
  button.
- 6. Select the desired setting with the zoom lever, and press the ⊙ button.
- 7. To exit from the menu, press the 

  button.



#### **Protec**

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

#### Delete file

Delete the current file [No]: Disable deletion [Yes]: Enable deletion

#### Delete all

Delete all files.

[No]: Disable deletion [Yes]: Enable deletion

#### Slide show

Automatically displays one image at a time in sequence with a selected interval time.

Refer to section in this manual titled "Slide show display" for further details.

[1 Sec], [3 Sec], [5 Sec], [7 Sec], [9 Sec]

# Copy to card

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

[No]: Disable copy files from digital video camera's internal memory to a memory card.

[Yes]: Copy files from digital video camera's internal memory to a memory card.

# MP3 menu

This sets whether or not to play MP3 files repeatedly or delete MP3 files.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the M button twice to go to [Select Mode].
- 3. Select [MP3] with the zoom lever, and press the  $\odot$  button.
  - MP3 playlist is displayed.
- 4. Press the @ button.
  - [MP3] menu is displayed on the screen.
- Select the desired [MP3] option item with the zoom lever, and press the ⊙ button.
- 6. Select the desired setting with the zoom lever, and press the  $\odot$  button.
- 7. To exit from the menu, press the 

  button.

#### Repeat

This sets to playback the files repeatedly.

- [@] All: Repeat all files or all selected files.
- [⑦] Single: Repeated one file or the selected file. Off: Does not repeat.

#### Delete file

Delete the current file.

[No]: Disable deletion

[Yes]: Enable deletion

#### Delete all

Delete all files.

[No]: Disable deletion [Yes]: Enable deletion



#### Voice menu

This sets whether or not to play voice files repeatedly or delete voice files.

- 1. Turn on the power by pressing and holding the ① button.
- 2. Press the m button twice to go to [Select Mode].
- 3. Select [Voice] with the zoom lever, and press the ⊙ button.
- Voice playlist is displayed.
- 4. Press the (a) button.
  - [Voice] menu is displayed on the screen.
- Select the desired [Voice] option item with the zoom lever, and press the button.
- 6. Select the desired setting with the zoom lever, and press the  $\odot$  button.
- 7. To exit from the menu, press the button.

# Voice Setup Repeat © Delete file Delete all Exit: MENU Change: ©

#### Repeat

This sets to playback the files repeatedly.

- [@] All: Repeat all files or all selected files.
- $[\ensuremath{\mathfrak{D}}]$  Single: Repeated one file or the selected file.

Off: Does not repeat.

#### Delete file

Delete the current file. [No]: Disable deletion [Yes]: Enable deletion

#### Delete all

Delete all files.

[No]: Disable deletion [Yes]: Enable deletion

# Setup menu

Sets your digital video camera's operating environment.

- 1. Turn on the power by pressing and holding the ① button.
  - This menu can be accessed from all modes.
- 2. Press the 
  button, and select [Setup] with the button.
  - [Setup] menu is displayed on the screen.
- 4. Select the desired setting with the zoom lever, and press the ⊙ button.
- 5. To exit from the menu, press the 

  button.

#### Format

This function will delete all still images/video clips and other data recorded on the internal memory or external memory card. Memory card cannot be formatted if it is write-protected.

[No]: Does not format the internal memory (or memory card).

[Yes]: Formats the internal memory (or memory card) and erase all still images/video clips and other data.

#### Sound effect

Selects power on sound effect.

[0]: No sound effect.

[#]: Select the number of sound effects.

Record	Setup
Format	
Sound effect	0
System tones	On
Speaker	0
LCD brightness	0
Exit: MENU	Change:⊙

	Re	cord	Setup
P	owe	er off	3 Min
F	ese	et to defai	ult
[	ate	type	Y/M/D
		setup	
	ate	imprint	On
E:	kit:	MENU	Change:⊙

Re	cord	Setup
Video	out	NTSC
Light freq.		50Hz
Langi	uage	
Exit:	MENU	Change:⊙

#### System tones

This sets the operating sound.

[On]: Enable the system tone.

[Off]: Disable the system tone.

#### Note:

- If the system tones is set to [On], the operating sound of some buttons will be enabled based on the following situations:
  - 1. One press of the M button
  - 2. One press of the ① button
  - 3. The countdown of Self-timer

#### Speaker

This sets the playback volume. The volume becomes louder by sliding the zoom lever to the  $\mathbf{T}/ \triangle$  side and softer to the  $\mathbf{W}/ \nabla$  side. The adjustment range is from 0 to 5.

# LCD brightness

This adjusts the brightness of the LCD monitor. The LCD becomes brighter by sliding the zoom lever to the  $\mathbf{T}$  /  $\blacktriangle$  side and darker to the  $\mathbf{W}$  /  $\blacktriangledown$  side. The adjustment range is from -5 to +5.

# Power off

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

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

[5 Min]: When the digital video camera has not been operated, it turns the power off after 5 minutes.

[10 Min]: When the digital video camera has not been operated, it turns the power off after 10 minutes.

[30 Min]: When the digital video camera has not been operated, it turns the power off after 30 minutes.

[Cancel]: The system turns into idle mode and LCD monitor turns off. You can press any button to resume operation.

# Reset to default

This returns all basic settings to the digital video camera's default settings.

[No]: Does not return to the default settings.

[Yes]: Returns to the default settings.

# Date type

This sets the displayed type of date and time on the screen.

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

# Date setup

This sets the date and the time.

Refer to section in this manual titled "Setting the date and time" for further details.

#### Date imprint

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

[On]: Imprints the date on the still images when capturing images.

[Off]: Does not imprint the date on the still images when capturing images.

#### Video out

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

[NTSC]: NTSC system [PAL]: PAL system

#### Light freq

This digital video camera supports different lighting frequencies: 50Hz and 60Hz. Select the correct frequency setting depending on your local area's voltage.

#### Language

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

The provided languages are [English], [Français], [Deutsch], [Español], [Portuguès], [Italiano], [日本語], [繁體中文], [简体中文].

# TRANSFERRING RECORDED FILES TO YOUR COMPUTER

To transfer the recorded files from the digital video camera to your computer, follow these steps:

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

Step 2: Connecting the digital video camera to your computer.

Step 3: Downloading image, voice and video files.

#### System requirements (Windows)

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

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

#### Windows 98 computers

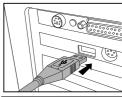
The USB driver on the CD-ROM is exclusively for Windows 98 computers. Installing the USB driver on computers running Windows 2000/ME/XP is not necessary.

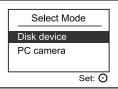
- 1. Insert the CD-ROM that came with the digital video camera into your CD-ROM drive. The welcome screen appears.
- Click "Install USB/PC-Cam driver". Follow the on-screen instructions to complete the installation. After the USB driver has been installed, restart your computer.



# Step 2: Connecting the digital video camera to your computer

- Connect one end of the USB cable to the USB connector on the digital video camera.
- Connect the other end of the USB cable to an available USB port on your computer.
- 3. Turn on the power.
  - [Select Mode] menu appears on the screen.
- 4. Select [Disk device] with the zoom lever, and press the ⊙ button.
- 5. From the Windows desktop, double click on "My Computer".
- 6. Look for a new "Removable disk" icon. This "Removable disk" is actually the memory or memory card in your digital video camera.
- Double click on the removable disk and locate the DCIM, MP3 and VOICE folders.
  - If a memory card is not inserted in the digital video camera, double click on the removable disk and locate the CAMERA, MP3 and VOICE folders.





- When connecting to the computer, there is no need to install any batteries into the digital video camera.
- Whenever the USB power supply is used while transferring images to your computer, the other buttons on your digital video camera will not perform the functions.

# Step 3: Downloading still images, voice and video files

When the digital video 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" to your computer hard drive.

#### Windows

Open the "removable disk" and double click on the DCIM / CAMERA folder to open it to find more folders. Your images are inside these folder(s). Select the still images / video clips that you want, and then choose "Copy" from the "Edit" menu. Open the destination location (folder) and choose "Paste" from the "Edit" menu. You may also drag and drop image files from the digital video camera to a desired location.

- The recorded voice files is stored on the "VOICE" folder.
- Memory card users may prefer to use a memory card reader (highly recommended).
- Video playback application is not included with the package. Make sure that video playback application has been installed in your computer.

# TRANSFERRING MP3 FILES

You may download MP3 files to your computer and then copy them into the digital video camera via the USB cable or insert an SD memory card with MP3 files recorded into the digital video camera.

To transfer the MP3 files from your computer to the digital video camera, follow these steps:

- 1. Install the USB driver (Windows 98 users only).
- 2. Connect one end of the USB cable to the USB connector on the digital video camera.
- 3. Connect the other end of the USB cable to an available USB port on your computer.
- 4. Turn on the power.
  - [Select Mode] menu appears on the screen.
- 5. Select [Disk device] with the zoom lever, and press the ⊙ button.
- 6. From the Windows desktop, double click on "My Computer".
- 7. Look for a new "Removable disk" icon. This "Removable disk" is actually the memory or memory card in your digital video camera.
- 8. Double click on the removable disk and locate the DCIM, MP3 and VOICE folders.
  - If a memory card is not inserted in the digital video camera, double click on the removable disk and locate the CAMERA, MP3 and VOICE folders.
- Copy MP3 files from your computer hard drive to the "MP3" folder and playback music via the digital video camera.

# **INSTALLING VIDEOSTUDIO**

Ulead® VideoStudio is home video-editing software that makes editing movies as fun as shooting them. Users can make one in three easy steps using the new Movie Wizard mode. VideoStudio features fully customizable filters and special effects and shares finished projects on diversified devices by supporting the latest formats.

#### To install VideoStudio:

- Insert the CD-ROM that came with the camera into your CD-ROM drive.
   The welcome screen appears.
- Click "Install Ulead® VideoStudio". Follow the on-screen instructions to complete the installation.



- For more information about the operation of VideoStudio application software, refer to its respective help documentation.
- For Windows 2000/XP users, please make sure to install and use the VideoStudio in "Administrator" mode.
- VideoStudio is not supported on the Mac.

# USING THE DIGITAL VIDEO CAMERA AS A PC CAMERA

Your digital video camera can act as a PC camera, which allows you to videoconference with business associates, or have a real-time conversation with friends or family.

To use the digital video camera as a PC camera, follow these steps:

Step 1: Installing the PC camera driver (same as USB driver).

Step 2: Connecting the digital video camera to your computer.

Step 3: Running your application software (i.e. Windows NetMeeting)

#### Note:

- Video conferencing (or video editing) software is not included with the digital video camera.
- This mode is not supported for Mac.

#### General system requirements for videoconference

To use the digital video camera for videoconference, your computer system must include:

- Microphone
- Sound card
- Speakers or headphones
- Network or Internet connection

# Step 1: Installing the PC camera driver (same as USB driver)

The PC-camera driver included on the CD-ROM is exclusively for Windows. The PC camera function is not supported for Mac platforms.

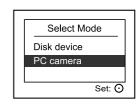
- Insert the CD-ROM that came with the camera into your CD-ROM drive.
   The welcome screen appears.
- Click "Install USB/PC-Cam driver". Follow the on-screen instructions to complete the installation. After the driver installation is completed, restart your computer.



- The USB driver that bundled inside the CD-ROM is designed in a form 2 in 1 (USB & PC camera driver).
  - a) On Windows 98, the Windows OS will install both USB & PC camera drivers.
  - b) On Windows 2000/ME/XP, it will only install PC camera driver.

# Step 2: Connecting the digital video camera to your computer

- Connect one end of the USB cable to the USB connector on the digital video camera.
- Connect the other end of the USB cable to an available USB port on your computer.
- 3. Turn on the power.
  - [Select Mode] menu appears on the screen.
- 4. Select [PC camera] with the zoom lever, and press the  $\odot$  button.
- Position the digital video camera steadily on top of your computer monitor or use a tripod.



#### Note:

■ When using this digital video camera as a PC camera, there is no need to install any batteries into the digital video camera.

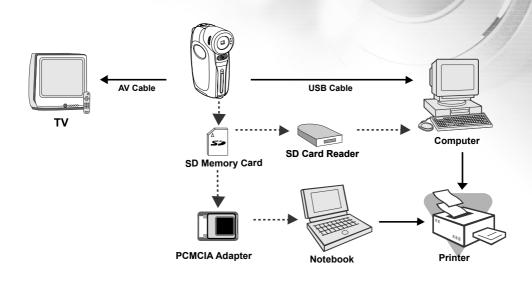
# Step 3: Running your application software(i.e. Windows NetMeeting)

To use Windows NetMeeting for videoconference:

- Go to Start => Programs => Accessories => Communications => Net Meeting to launch the NetMeeting program.
- 2. Click the Start Video button to view live video.
- 3. Click the Place Call button.
- 4. Type the e-mail address or the network address of the computer that you are calling.
- Click Call. The person that you are calling must also have Windows NetMeeting running and be willing accept your call to start the videoconference.

- The video resolution for videoconferencing applications is generally 320 x 240.
- For more information about the operation of videoconference application software, refer to its respective help documentation.
- When the PC cam function is activated (i.e. images are being transferred), the LED (green color) blinks. If the USB cable is unplugged at the time of transferring images, the screen would become blank the next time when you run the PC cam function. In this situation, you should restart the computer. The proper operating method should be: Close the PC cam application, then remove the USB cable.

# CONNECTING THE DIGITAL VIDEO CAMERA TO OTHER DEVICES



# **SPECIFICATIONS**

Item	Description
Image Sensor	1/2" CMOS sensor
Effective pixels	3.0 Mega pixels
Image size	Still image: 2560 x 1920 (interpolation), 2304 x 1728 (interpolation),
	2048 x 1536, 1600 x 1200, 800 x 600
	Video clip: 640 x 480, 320 x 240
Image quality	Still image: Super fine, Fine, Normal
	Video clip: Ultra fine, Super fine, Fine, Normal
Recording media	64MB internal memory
	SD memory card (up to 1GB)
Compression format	MPEG 4 SP (Video), IMA-ADPCM (Audio)
File format	EXIF 2.1, DCF 1.0, JPEG, ASF (Video)
Lens	F-no. 3.0
	Focal length:7.7mm
Focus range	Normal: 1.5m-infinity
	Macro: 0.4m-0.5m
LCD monitor	2.0" LTPS color LCD
	High-resolution 130K pixels display
Self-timer	3-sec delay, 10-sec delay
Exposure compensation	-1.8EV- +1.8EV (in 0.3EV increments)
White balance	Auto, Daylight, Shade, Fluorescent-1, Fluorescent-2, Lamp
ISO	Auto, 100, 200, 400
Interface	USB connector, A/V terminal, earphone jack
Power	2 x AA Alkaline/Ni-MH batteries
Dimension	Approx. 98 x 66 x 34 mm (excluding protruding parts)
Weight	Approx. 156g (without batteries and the SD memory card)

<sup>\*</sup> Design and specifications are subject to change without notice.