

## WELCOME

### **endogo® Portable Endoscopic Camera**

Manufactured for:  
Envisionier medical technologies, LLC  
9700 Great Seneca Hwy  
Rockville, MD 20850  
(888) endogo1/363-6461  
www.envisionier.com

Congratulations on the purchase of your **endogo®** portable endoscopic camera! You have purchased the world's first palm sized, portable endoscopic imaging device. You will soon discover other "firsts" in technology that the **endogo®** has for use in endoscopy. Much investment in time and effort has gone into its development, and it is our hope that it will give you many years of trouble-free service.

The **endogo®** is a unique device built on a simple principle – ease of use. The story behind the **endogo®** is as unique as it is. The **endogo®** was conceived by a surgeon and endoscopist. An endoscopist just like you: a professional with a desire to bring the ease of use and functionality of consumer electronics into the field of digital endoscopy. While the **endogo®** provides a very specific and skillful function, it is also uniquely designed to appeal to your aesthetic and ergonomic demands.

After the idea was conceived, Envisionier employed highly skilled engineers and designers to deliver a medical device that is unlike any that you have used before. After careful planning, skilled endoscopists from various fields of endoscopy were then enlisted to fine-tune the design, look, and feel of the **endogo®**. We hope that you will appreciate the time and effort that has gone into crafting it.

Combining the latest design and electronics features will ensure you immediately feel comfortable using the **endogo®**.

It is our hope that we can employ the **endogo®** for various imaging solutions for an "Open Architecture Imaging"™ environment. You will see future products and services from Envisionier utilizing these features.

Another very exciting aspect to the **endogo®** is its "plug and play" capability. You will find that no matter your environment, you can utilize the **endogo®** on the go, in a semi-stationary or stationary environment. While viewing from a 2.4" TFT screen may be fine in some situations, you may desire a larger viewing environment. With the USB2 and AV output of the **endogo®**, you can use any compatible computer, TV, or LCD/Plasma TV for viewing (See warnings and cautions below).

#### **Indication for use**

The **endogo®** Portable Endoscopic Camera is an integrated color video camera and archiving system which can be used with rigid or flexible endoscopes for video endoscopy. The camera head is coupled to the endoscope. The endoscopic images are displayed on the integrated TFT Flat Panel display. Images may be archived directly onto the device in a flash RAM format via MPEG-4 video compression or may be transmitted to a computing device or video monitor for viewing.

The **endogo**® Portable Endoscopic Camera may also be used with a pict-bridge® compatible printer. All standard and portable endoscopic light sources may be used with the **endogo**®. The type of light source may affect image quality. White light sources (Xenon, metal-halide, LED) offer excellent image quality.

### **General description**

The **endogo**® Portable Endoscopic Camera is a battery operated portable hand-held endoscopic video camera with integrated viewing and archiving capability which fits in the palm of your hand. The **endogo**® can be used with current flexible or rigid endoscopes in any clinical setting requiring simple, inexpensive, and easy to use video endoscopy with/without archiving the examination. An endoscope is placed in the coupler of the camera and once the camera is turned on, it is ready for live viewing of an examination on the 2.4" TFT flip screen. Examination may continue without recording or the user may take video or still photos of the area to be examined.

Video compression in DV quality is performed using MPEG-4 video compression. Stills are compressed using a JPEG compression algorithm: both are industry standard methods for data compression. After use, images may be transported from the removable flash RAM drive (SD RAM) or transmitted via USB-2 to another computing device.

Image viewing can also be performed live via the USB-2 cable to a computing device or via the AV output to a compatible video monitor (See warnings and cautions below). Voice recordings may also be captured while recording to annotate clinical findings.

### **Warning and cautions**

Please read this manual and follow its instructions carefully. The words **WARNING**, **CAUTION**, and **NOTE** convey special meanings. When they are used throughout this manual, they should be carefully reviewed to ensure the safe and effective operation of this product.

**WARNING** A WARNING indicates that the personal safety of the patient or physician may be involved. Disregarding a WARNING could result in injury to the patient or physician.

**CAUTION** A CAUTION indicates that particular service procedures or precautions must be followed to avoid possible damage to the product.

**NOTE** A NOTE indicates special information to improve the ease of maintaining the product, or to clarify important information.

**WARNING** Read this instruction manual thoroughly and be familiar with its contents prior to connecting or using this equipment.

**WARNING** High energy radiated light through endoscopes may give rise to high temperatures in front of the light outlet and to the tip of the endoscope. To minimize the risk of burns, always adjust the light source to the minimum illumination intensity necessary to achieve optimum illumination of the endoscopic scene when coupled to the video camera.

**WARNING** To reduce the risk of electrical shock, do not disassemble the unit. Disassembly will void the warranty.

**CAUTION** Federal law restricts this device to sale to or on the order of a physician.

**WARNING** Before each use, the outer surface of the portions of the endoscope and any endoscopically-used accessories which are intended to be inserted into the patient should

be checked to ensure there are no unintended rough surfaces, sharp edges or protrusions which may cause a safety hazard.

**WARNING** Keep out of reach of patients.

**WARNING** Refer to the appropriate section of this manual for validated cleaning instructions. THIS DEVICE IS NOT AUTOCLABLE.

**CAUTION** Do not store liquids above the camera.

**CAUTION THE endogo® CAN NOT BE STERILIZED.**

**NOTE** Disposal of these system products, at the end of their useful life, must be in accordance with local regulations. This system contains a Lithium-Ion Battery.

- Keep the battery away from fire or high-temperature environment (over 140°F or 60°C).
- Do not drop the battery or try to disassemble it.
- If the battery is not used for long periods, fully discharge and charge the battery at least once a year to maintain its lifecycle.
- Upon using the battery for the first time, you are recommended to fully discharge and then charge the battery to ensure its lifecycle.

**WARNING** Accessory equipment connected to the analog and digital interfaces must be certified according to the respective IEC standards (e.g. IEC 60950 for data processing equipment and IEC 60601-1 for medical equipment). Furthermore all configurations shall comply with the system standard IEC 60601-1-1. Any person who connects additional equipment to the signal output configures a medical system, and is therefore responsible for ensuring that the system complies with the requirements of the system standard IEC 60601-1. If in doubt, consult the technical service department or your local representative.

**NOTE** Before shipping, please disconnect ALL cables and remove battery. Unit should always be transported in its original packaging. The TFT should be secured to prevent strain or breakage of the screen and swivel.

**NOTE** Do not discard as unsorted municipal waste

**NOTE** Discard as electrical/electronic waste; recycle or reuse accordingly

**NOTE** Consult local authorities for reuse/recycle instructions.

# SAFETY NOTICE

## **Safety**

Please read these safety instructions carefully. Before using the **endogo®** for general endoscopic use, it is imperative that you are familiar with the equipment operation and control.

## **Normal use**

The **endogo®** Portable Endoscopic Camera is intended for general endoscopic use. The **endogo®** may only be used with accessories, wearing parts, and disposable items which are designed by Envisionier as suitable for the **endogo®** or the safe use of which is proven.

## **User qualification**

**WARNING** The **endogo®** Portable Endoscopic Camera may only be used by physicians, medical assistants or other health care providers who have a corresponding specialized qualification and are instructed in the use of it.

## **Safety precautions when operating the equipment**

It is the user's responsibility to make sure the equipment is safe and operates properly before use.

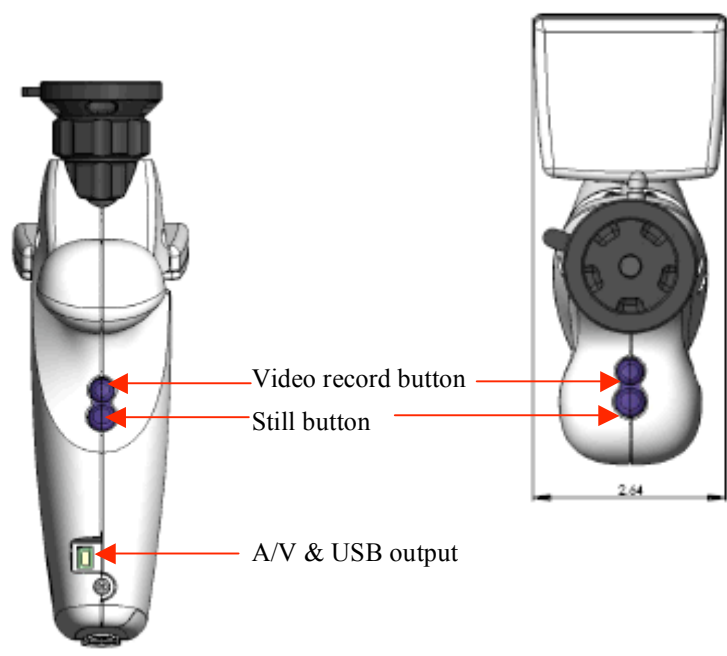
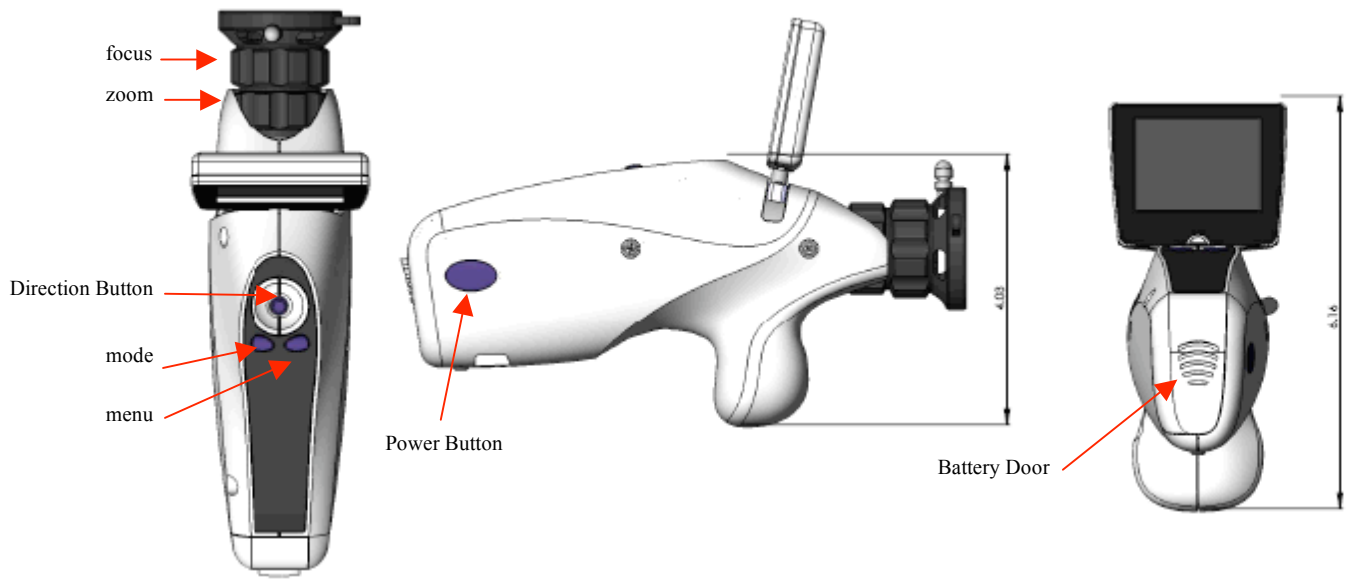
CE marked equipment has been tested and found to comply with the EMC limits for the Medical Device Directive 93/42/EEC (EN 55011 Class A and EN 60601-2). These limits are designed to provide reasonable protection against harmful interference in a typical medical installation. The equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with other devices, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device
- Increase the separation between the equipment
- Connect the equipment into an outlet on a circuit different from that which the other device(s) is connected
- Consult the manufacturer or field service technician for help

1. Do not puncture or disassemble the **endogo®**; otherwise the warranty will be voided. The **endogo®** has been designed to withstand shock which it may encounter in a clinical practice; however, the outer casing may sustain cosmetic damage if such an accident does occur. Envisionier does not warranty the outer casing against such damage.
2. We have designed the **endogo®** to be cleaned with a mild cleanser (Isopropyl alcohol); however, it is not a soakable device, but it has been designed to be splash proof. You may clean it with Isopropyl alcohol being careful to avoid over use and soaking of the internal electronics. The optics can be cleaned in a similar fashion. **THE endogo® CAN NOT BE STERILIZED.**
3. Do not expose the **endogo®** to high temperatures or leave it in direct sunlight. Doing so may damage the **endogo®**.
4. Use the **endogo®** with care. Avoid pressing hard on the **endogo®** body.
5. Do not use batteries of different specifications. Doing so may lead to the potential for serious damage and void any warranty or service agreement.
6. Remove the battery during long periods between usage, as a deteriorated battery may affect the functionality of the **endogo®**.
7. Remove the battery if it shows signs of leaking or distortion.
8. Use only the accessories supplied by Envisionier medical technologies.
9. Since the **endogo®** is a compact device, keep the **endogo®** out of the reach of infants and children.



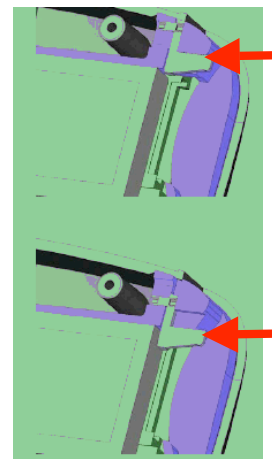
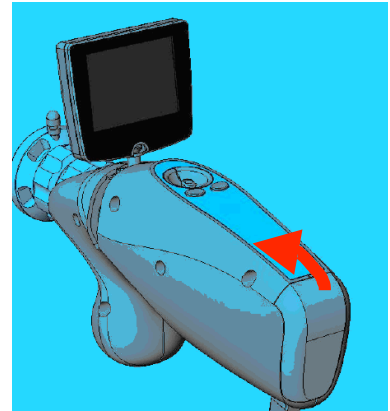
# OVER VIEW



## GETTING STARTED

### Installing the battery

1. Open the battery cover. Slide the battery cover open as indicated.
2. Install the battery. Place the accessory Li-Ion battery into the compartment. Note that the metallic contacts must be aligned with the contacts in the compartment. Ensure that the battery lock clicks into place as shown and secures the battery (red arrow). The label of the battery faces to the left of the camera (viewed from behind).



#### Treat the Li-Ion battery with care:

- Keep the battery away from fire or high-temperature environment (over 140°F or 60°C).
- Do not drop the battery or try to disassemble it.
- If the battery is not used for long periods, fully discharge and charge the battery at least once a year to maintain its lifecycle.
- Upon using the battery for the first time, you are recommended to fully discharge and then charge the battery to ensure its lifecycle.

#### Purchasing additional batteries:

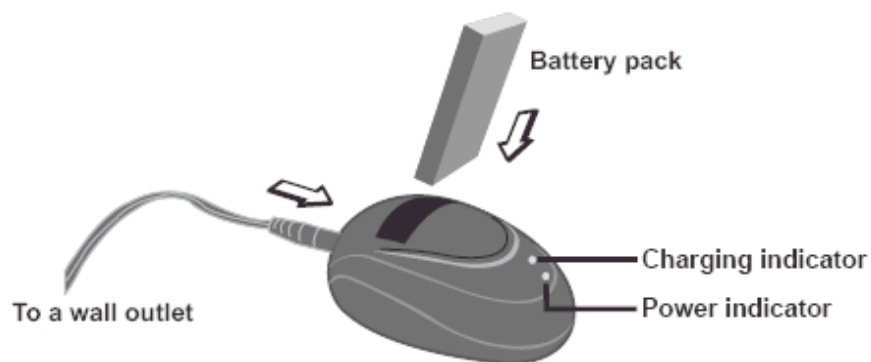
- This **endogo®** uses one 8210 Li-Ion battery as power source. You can purchase the 8210 Li-Ion Rechargeable battery (3.7 volt; 850mAh) from Envisionier medical technologies.

Intentionally left blank

## Using the charger

The battery attached is not fully charged. Please charge the battery at least 4 hours for first time use.

1. Connect one end of the supplied AC adapter to the charger stand and the other end to a wall outlet.
2. Place the depleted battery pack into the charger. **Note that the metallic contacts must be aligned with the contacts in the charger.**



3. The charging indicator turns red and the charge starts.
4. When the charging indicator turns green, the battery pack is fully charged.

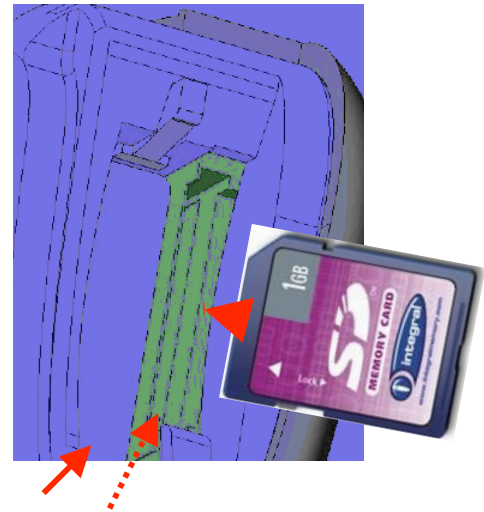
- This charger can only be used to charge the accessory battery pack.
- Do not use it to charge other unknown batteries.
- When in use, do not place the charger near fire or in an enclosed area that retains heat.
- Do not charge the battery in an environment with flammable anesthetics or agents.

## Inserting the SD Card

In addition to the built-in flash memory, your **endogo®** can store data on a Secure Digital (SD) card, mini SD card with SD card adapter, or a MultiMedia card (MMC).

To insert a memory card, do the following:

- (1) Open the battery cover.
- (2) Gently push the card into the memory slot (dashed arrow). The label of the memory card should face the battery (solid arrow). The electrical contacts face to the left of the camera as viewed from behind. The memory card should click into position.



To remove the memory card, gently push the card and it will pop up. Then pull the card out of the slot.

The SD card comes with a write-protect switch. When the write-protect switch is set to the Lock position, the card will become non-writable. To ensure that the **endogo®** can operate normally, you should set the write-protect switch to the Unlock position before inserting the SD card.

- Do not remove the memory card while the **endogo®** is processing data (when the LED is blinking).
- When a memory card is inserted, the **endogo®** will use the card as the main storage medium. **Files stored in the endogo's® built-in memory will become inaccessible until the card is removed.**

## BASIC OPERATIONS

### **Turning on your endogo®**

When the endogo® is powered off press and hold down the Power button for 1 second to turn on the endogo®.

### **Turning off your endogo®**

Press and hold down the Power button for 1 - 3 seconds to turn off the endogo®.

OR

If the endogo® stays inactive for a long period of time, it may automatically shut down due to the Auto-Off setting. See page 28 for more information.

If the endogo® is not turned on after pressing the Power button, please check:

1. That the battery pack is well installed in the endogo®.
2. That the battery pack has enough power left.

## Using the LCD monitor

The LCD monitor can be used to compose image settings for shooting, to review recorded files, or to change menu options.

The LCD monitor can be rotated to the following positions:

1. Open the LCD monitor.
2. Rotate the LCD monitor.

You can position the panel at many angles to serve your needs. However, The LCD screen CAN NOT be tilted forward as indicated. This will result in damage to the camera and LCD monitor. When folding the LCD monitor flat against the LEFT side of the **endogo®**, please ensure that the alignment marks are aligned before folding the LCD screen. Improper alignment may result in damage to the **endogo®** and the LCD monitor.



## Reading LCD indicators

**Digital Camcorder mode:**

Flash mode  
Selftimer  
Focus

Mode icon  
Video resolution  
Zoom ratio

Photo resolution  
White balance  
Storage medium\*1  
Battery Life  
Number of recordings

\*1 This icon will change according to the storage medium you are using:  
: internal memory.  
: memory card.

**Playback mode:**




File type  
Current / Total recordings

Mode icon  
Highlight box  
Image thumbnail

Battery Life  
Storage medium

## Setting time and language

When you power on the **endogo®** for the first time, you are recommended to adjust the time and language settings.

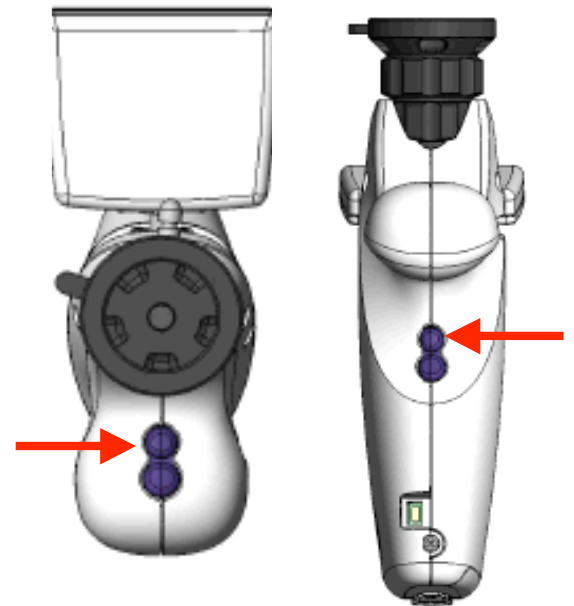
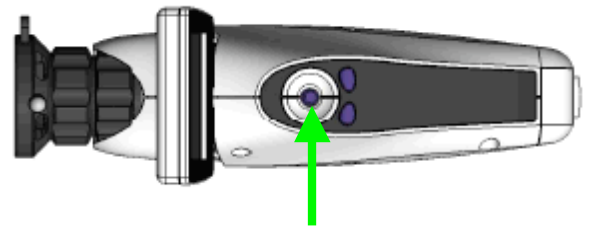
1. Turn on the **endogo®**.
2. Press the Mode button and use the Direction buttons to select the Setting (  ) mode. Then press the OK key to enter.
3. Use the Direction buttons to select the Date & Time (  ) item.
4. Press the OK key or move the Direction buttons toward right to enter the sub-menu.
5. Move the Direction buttons left or right to shift between items. Move the Direction buttons up or down to adjust the value. Press the OK key or right key of the Direction buttons to confirm the setting.
6. Press the Menu button or Mode button to return to the menu, and then use the Direction buttons to select the Language (  ) item.
7. Press the OK key or move the Direction buttons toward right to enter the sub-menu.
8. Use the Direction buttons to select a suitable language and press the OK key to confirm.

## Recording a video clip

1. Adjust the focus.
2. Zooming

Move the Direction button (Green arrow) up or down to zoom in or zoom out the screen. The maximum (digital) magnification is 4X. You may also zoom using the optical coupler.

3. Press the Record button (red arrow) to start recording.
4. Press the Record button again to stop recording.



- The zoom function is also available during recording.
- Adjust other advanced settings if necessary. See the section “Advanced Operations” on page 20 for more information.

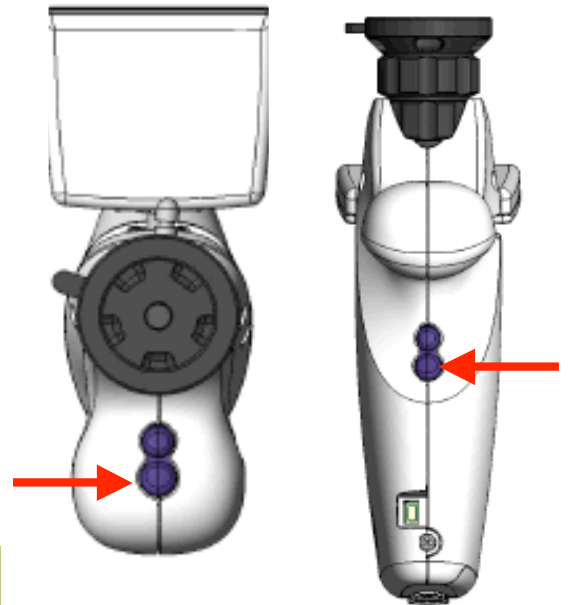
## Taking a still picture

1. Adjust the focus.

2. Zooming


Move the Direction button (Green arrow) up or down to zoom in or zoom out the screen. The maximum magnification is 4X.

3. Press the Shutter button (red arrow) to take a still picture. Note the different buttons for video & still photography.



Adjust other advanced settings if necessary. See the section "Advanced Operations" on page 20 for more information.


## Recording a voice clip

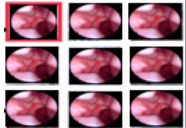

1. Press the Mode button and use the Direction buttons to select the Voice (  ) mode. Then press the OK key to enter.
2. Press the Record button to start recording.

Before or during recording, you can move the Direction button toward left or right to adjust microphone sensibility, thus setting the sound volume of the recording.

3. When you are done, press the Record button again to stop recording.

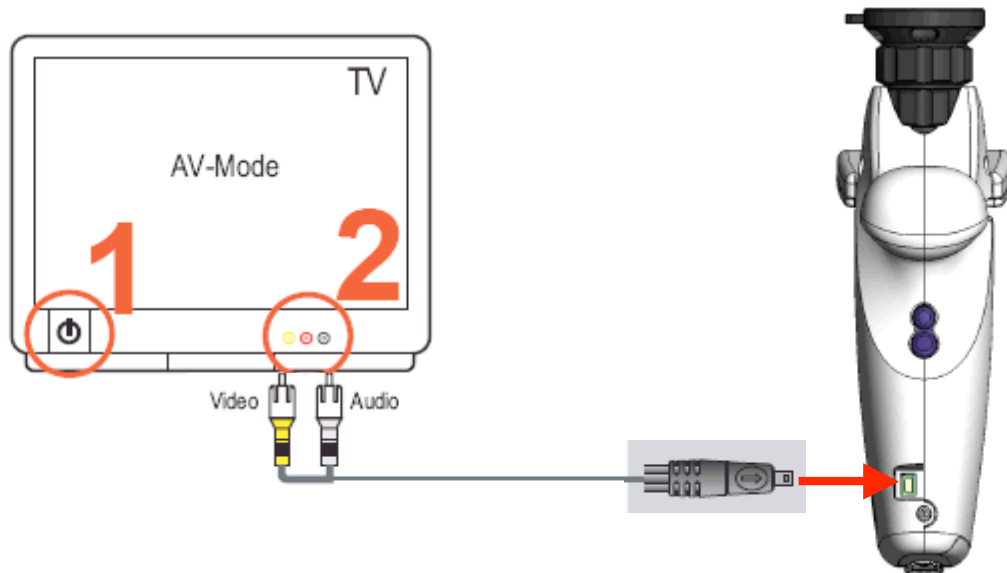
## Playing back your recordings

1. Press the Mode button and use the Direction buttons to select the Playback (  ) mode. Then press the OK key to enter.
2. Operations in Playback:

File type	How to...	Action
Index mode  Full-screen mode 	Shift between index mode and full-screen mode	In index mode, press the OK key to switch to full-screen mode. In full-screen mode, press the <b>Menu</b> button to switch to index mode. (When reviewing a picture, if you move the Direction buttons down when the zoom ratio is 1.0x, the screen will switch to index mode.)
	Shift between files	1. In index mode: Use the Direction buttons to move the highlight box. 2. In full-screen mode: Use the Direction buttons to move left or right.
Picture	Zoom in/out	Use the Direction buttons to move up or down.
	Lock/Release zoom ratio	When the zoom ratio is greater than 1.0x, press the OK key.
	Browse the enlarged picture	When the zoom ratio is locked, use the Direction buttons to browse the picture.
Video & Audio	Start playing	When selected (in full-screen mode), the file automatically starts playing.
	Pause/Resume playing	During playing/While paused, press the OK key.
	Adjust the volume level	During playing, use the Direction buttons to move up or down.
	Stop playing	During playing, press the <b>Menu</b> button.
	Return to the preview screen	Press the <b>Shutter</b> button.
	Fast forward	During playing, press the <b>Next (▶)</b> button. To stop, press the <b>Play/Pause (⏮)</b> button.
	Fast backward	During playing, press the <b>Previous (◀)</b> button. To stop, press the <b>Play/Pause (⏮)</b> button.
	Select the next file	While paused/stopped, press the <b>Next (▶)</b> button.
Select the previous file	While paused/stopped, press the <b>Previous (◀)</b> button.	

## Connecting the **endogo®** to a TV

Connect your **endogo®** and TV via the accessory AV cable for real-time display. You can display your video clips, still pictures, and audio recordings directly on a TV or other video source. See warnings.



1. Turn on your TV and switch the TV to AV mode.
2. The TV system is different across countries. (ex. Taiwan/America: NTSC; Europe/China: PAL)
3. Connect the audio and video ends of the AV cable to the TV.
4. Turn on the **endogo®**.
5. Connect the other end of the AV cable to your **endogo®** (see diagram)

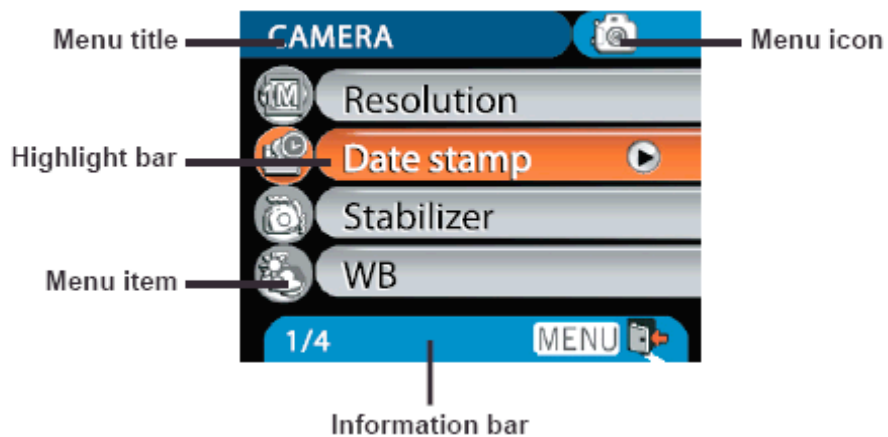
# Advanced Operations

## Menu operation

The menu items provide several options for you to fine-tune your **endogo®** functions. The following table gives details on menu operations.








How to...	Action
Bring up the menu	Press the <b>Menu</b> button.
Move the highlight bar	Use the Direction buttons to move up or down.
Enter sub-menu/ Confirm an item	Press the <b>OK</b> key.
Exit menu/Go back to upper menu	Press the <b>Menu</b> button (when in sub-menu).

## Menu Illustration









## Menu items in **endogo®** mode








Power-on → Press the Menu button.

Item	Option	Description
	 1M	Set picture resolution to 1280x960.
	 3M	Set picture resolution to 2048x1536.
	 6M	Set picture resolution to 2816x2112.
Date Stamp	 On	Print a date mark on each picture.
	 Off	Disable date mark.
Stabilizer	 On	Minimize blur caused by hand shake.
	 Off	Disable stabilizer.


Menu items in **endogo®** mode (continued)

Item	Option	Description
WB	 Auto	The camera automatically adjusts white balance.
	 Sunny	This setting is suitable for outdoor recording in sunny weather.
	 Cloudy	This setting is suitable for recording in cloudy weather or shady environments.
	 Fluorescent	This setting is suitable for indoor recording with fluorescent lamp lighting, or environments with high color temperature.
	 Tungsten	This setting is suitable for indoor recording with incandescent lamp lighting, or environments with low color temperature.
 Histogram	On	Image histogram displays on the screen.
	Off	Disable histogram.


Menu items in **endogo®** mode (continued)




Item	Option	Description
Effect	 Normal	Make recordings in natural color.
	 B&W	Make recordings in black and white.
	 Classic	Make recordings in sepia-toned color.
 Exposure	-2~+2	Manually adjust the exposure to gain better effect when the preview image appears too bright or too dark. A positive value indicates the image will be brighter than usual; while a negative value makes the image dimmer.
Selftimer	 On	Enable the selftimer. After the selftimer is turned on, the camera will have ten seconds delay before recording when the Shutter button is pressed.
	 Off	Disable selftimer.
 Icon	On	Enable OSD (on screen display) icons to display on the screen.
	Off	Disable OSD icons.
Video	VGA VGA	Set the video resolution to VGA (640x480 pixels).
	QVGA QVGA	Set the video resolution to QVGA (320x240 pixels).

Menu items in **endogo®** mode (continued)

Item	Option	Description
 Two-in-One	On	This setting allows you to combine two images taken individually into one photo.
	Off	Disable the Two-in-One function.

## Menu items in Playback mode


Power-on → Press the **Mode** button → Enter the Playback (  ) mode → Press the **Menu** button.

Item	Option	Description
 Delete	One	Delete current file.
	All	Delete all pictures and video/audio files stored in the memory.
 Slide Show	-	The camera displays images in sequence. Only JPEG pictures and the first frames of MPEG files will be displayed. You can press the Menu button to stop the slide show.
 Print	One	Print current image when connected to a PictBridge-ready printer.
	All	Print all images when connected to a PictBridge-ready printer.
	Cancel	Cancel action.

\* If there is no files in the camera, no items will be seen.


Before using the Print command in the menu, you need to connect the camera to a PictBridge compatible printer via the accessory USB cable.











## Menu items in Voice mode

Power-on → Press the **Mode** button → Enter the Voice (  ) mode → Press the **Menu** button.









Item	Description
Delete One	Delete current voice recording.
Delete All	Delete all voice recordings.

## Menu items in Setting mode

Power-on → Press the **Mode** button → Enter the Setting (  ) mode → Press the **Menu** button.

Item	Option	Description
 Date & Time	-	Set date and time.
Beep	 On	Enable beep sound.
	 Off	Disable beep sound.
Flicker	 50Hz	Set flicker frequency to 50Hz.
	 60Hz	Set flicker frequency to 60Hz.
TV-out	 NTSC	Set TV system compatibility to NTSC. This option is suitable for America, Taiwan, Japan, and Korea areas.
	 PAL	Set TV system compatibility to PAL. This option is suitable for Germany, England, Italy, Netherlands, China, Japan, and Hong Kong.
 Icon	On	Enable OSD icons to display on the screen.
	Off	Disable OSD icons.
 LCD Bright	-2~+2	Set LCD brightness. A positive value makes the LCD brighter; while a negative value makes the LCD dimmer.
 Format	Yes	Format the storage medium. Note that all files stored in the medium will be gone.
	No	Cancel action.

## Menu items in Setting mode (continued)

Item	Option	Description
Auto Off	 Off	Disable Auto-off function.
	 1 min	The camera automatically shuts down when staying inactive for over 1 minute.
	 3 min	The camera automatically shuts down when staying inactive for over 3 minutes.
	 5 min	The camera automatically shuts down when staying inactive for over 5 minutes.
 Language	-	Lets you select the language used for OSD.
 Default	Yes	Restore factory defaults. Note that your current settings will be overridden.
	No	Cancel action.
 USB Mode	Menu	When connected to a PC, the camera displays a menu for you to choose a desired connection mode.
	Disk	When connected to a PC, the camera automatically enters Disk (removable disk) mode.
	Printer	When connected to a PC, the camera automatically enters Printer mode.
 Start Movie	On	Enable Start Movie function.
	Off	Disable Start Movie function.

## Menu items in Setting mode (continued)

To connect the **endogo®** to a PictBridge compatible printer, follow these steps:

1. Power on the **endogo®**.
2. Set the **endogo®** USB mode to printer.
3. Connect one end of the accessory USB cable to the **endogo®**.
4. Connect the other end of the USB cable to the printer.
5. Power on the printer.

## Copying files to your PC

### Installing the driver to your PC

You need to install the **endogo®** driver to ensure that video clips can be played back on your PC. **Do not connect the endogo® to your computer at this stage.** To install the software:

1. Insert the driver CD. Turn on your computer. Then place the accessory CD into the CD-ROM drive.
2. Shut down all other applications running on your computer.

**If the autorun screen does not appear automatically, double-click on My Computer and then the CD-ROM drive. Then start the Setup.exe program manually.**

3. Start the installation. Click on the driver icon to launch the installation of the driver.

**Notice for Windows 2000 users: During the installation process, a warning message regarding digital signature may appear twice or more. Please click on Yes to continue the process. The software is fully compatible with Windows 2000 operation system.**

4. Install the driver.

The Install Shield Wizard will then appear and automatically install the program. Click on Next and follow the on-screen instructions to complete the installation.

5. Install codecs.

After the driver installation is completed, the program will prompt you to install Windows Media Player Codecs. If you are not sure whether the codecs have been installed in your computer, please click on Yes and follow the on-screen instructions to complete the installation.

6. Install Direct X 9.0c or above.

After the codecs installation is completed, you will be prompted to install Direct X 9.0c or above if the program is not yet installed in your computer. Please click on Yes to continue. Windows Media Player Codecs and Direct X 9.0c or above are necessary for viewing the video clips recorded by the [endogo®](#).

## 7. Restart the computer.

After the installation is completed, you may need to restart your computer for the driver to take effect.

## Connecting the **endogo®** to your computer

1. Connect the USB cable to your computer.



Turn on your computer, and then connect the accessory USB cable to the USB port of your computer. Make sure the cable and the port are correctly aligned.

2. Turn on the **endogo®**.

3. Connect the USB cable to your **endogo®**. Connect the other end of the USB cable to your **endogo®**.

The default is set to “Disk” mode; if you would like to set other modes as default, please refer to “USB Mode” section on page 28 for more information.

**Notice for Windows 2000/XP/ME users: If you want to disconnect the Endogo from your computer, please follow these steps:**

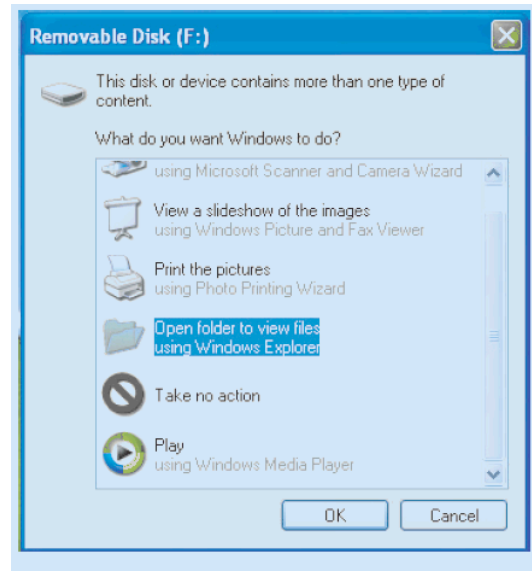
1. Double-click  in the system tray.
2. Click  (USB Disk), and then click Stop.
3. Select the **endogo®** when the confirmation screen appears and click OK.
4. Follow the on-screen instructions to safely disconnect the **endogo®** from your computer.

## Copying files to your PC

1. This step varies depending on your operation system:

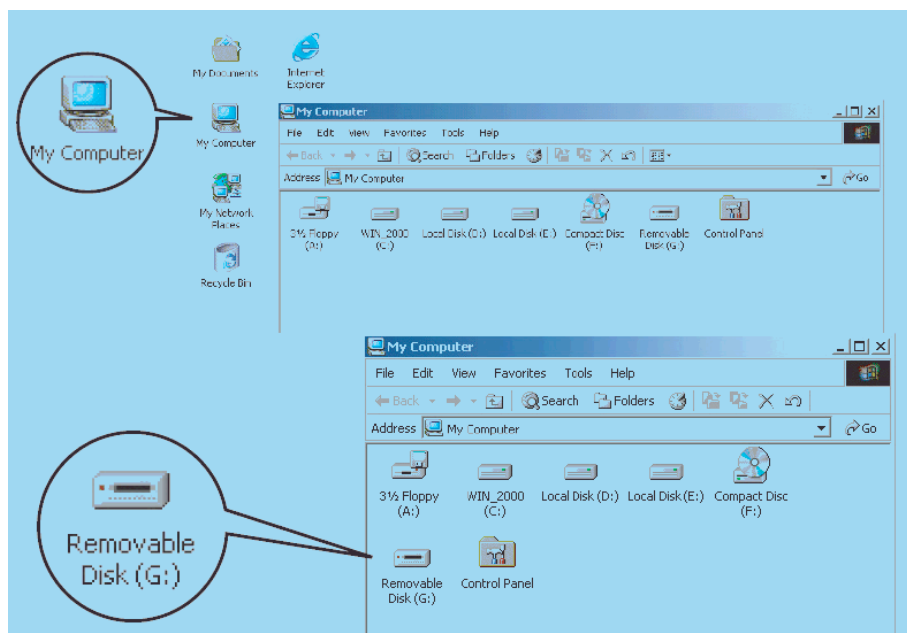
### For Windows XP users:

After the **endogo®** is connected to your computer, a dialogue window will appear automatically. Please select the item Open folder to view files using Windows Explorer and click OK.



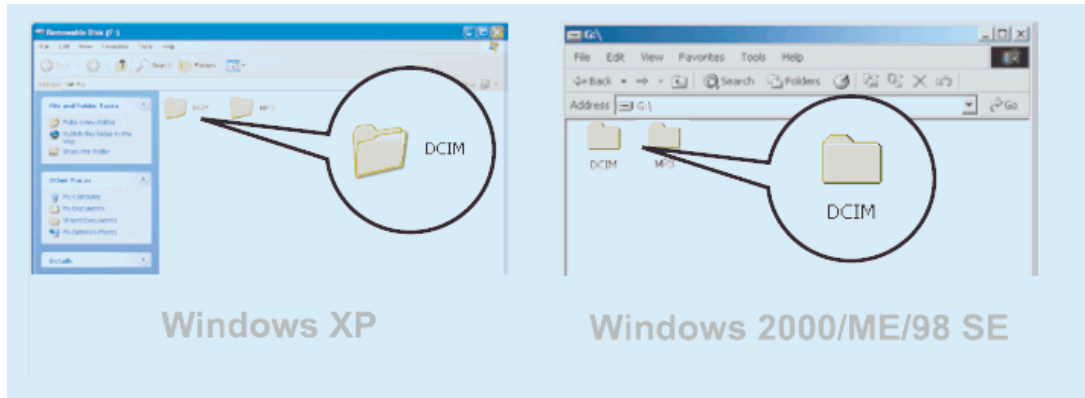
### For Windows 2000/ME/XP users:

Double-click on My Computer. Then double-click on the icon of the removable disk that has just appeared.

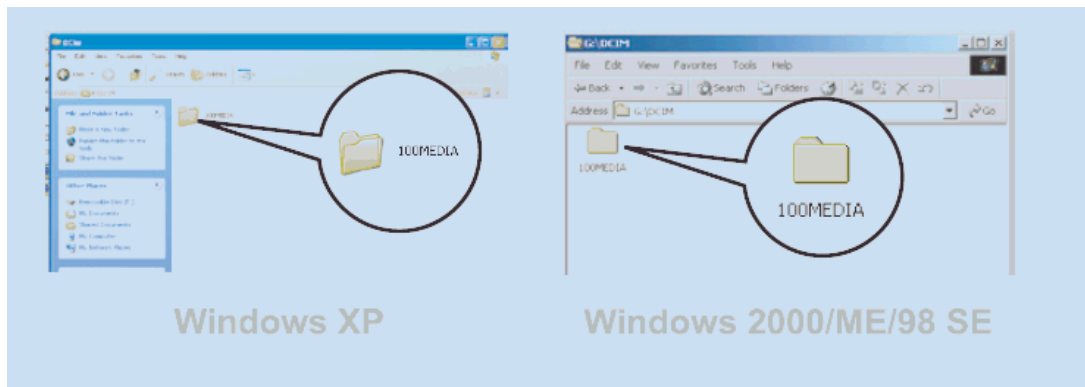


## Copying files to your PC (continued)

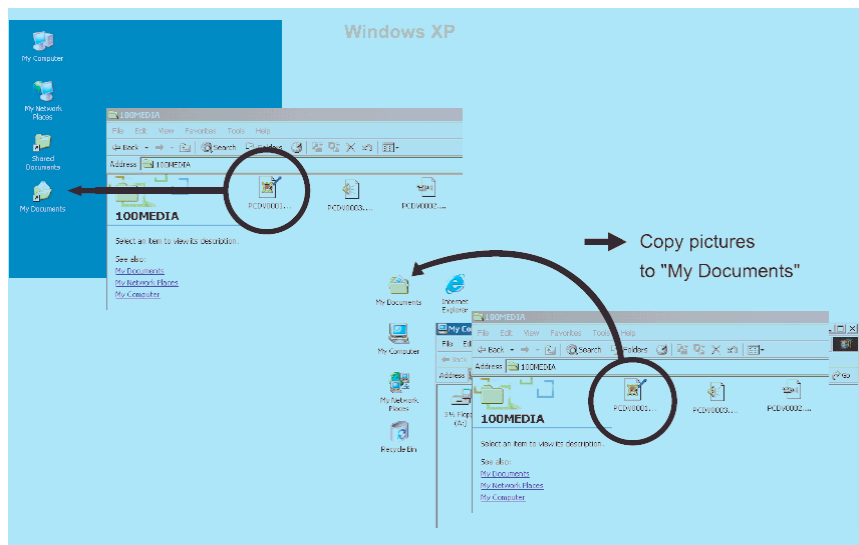
2. Double-click on the **DCIM** file folder.



3. Double-click on the **100MEDIA** file folder.

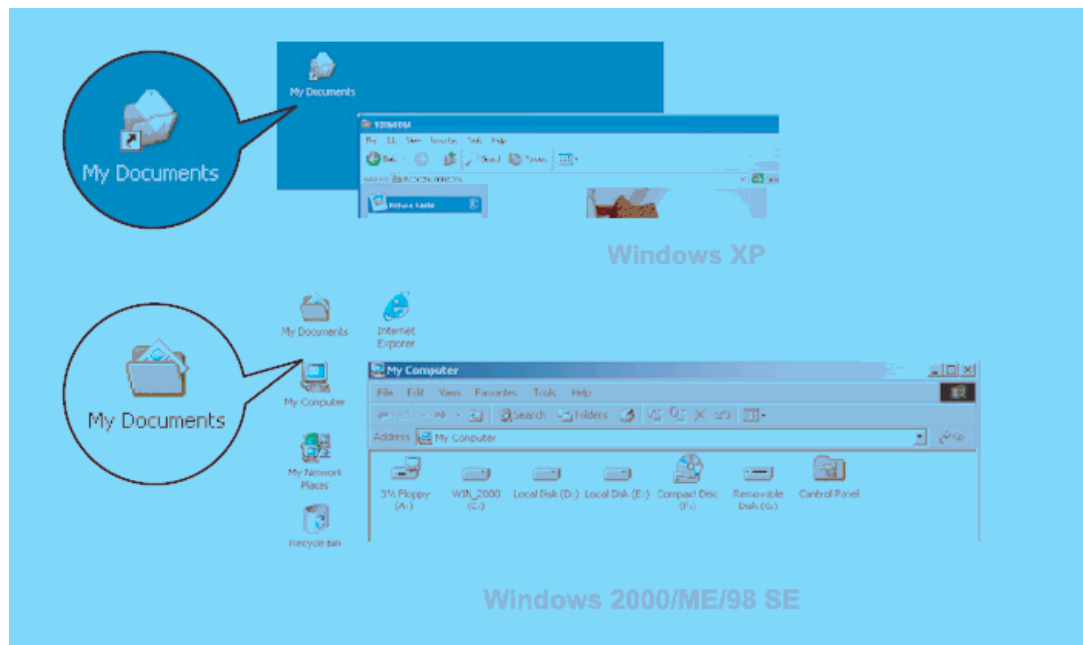


4. Drag the target file into My Documents or the destination folder.

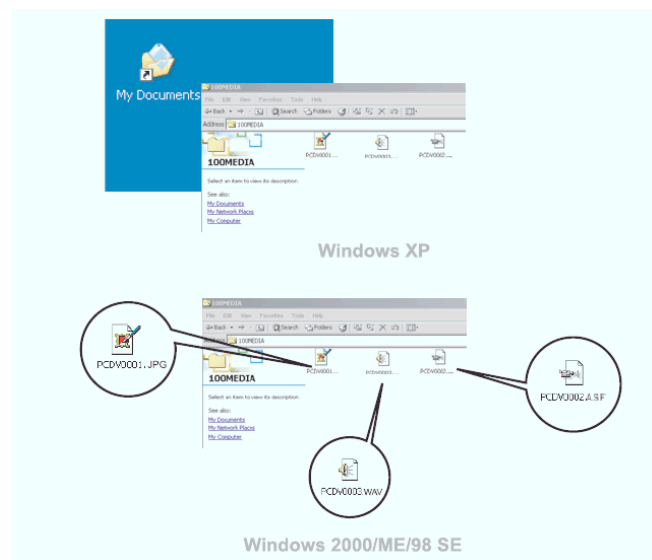


## Viewing/Playing files on your PC

1. Double-click on My Documents or any other folder that stores your files.

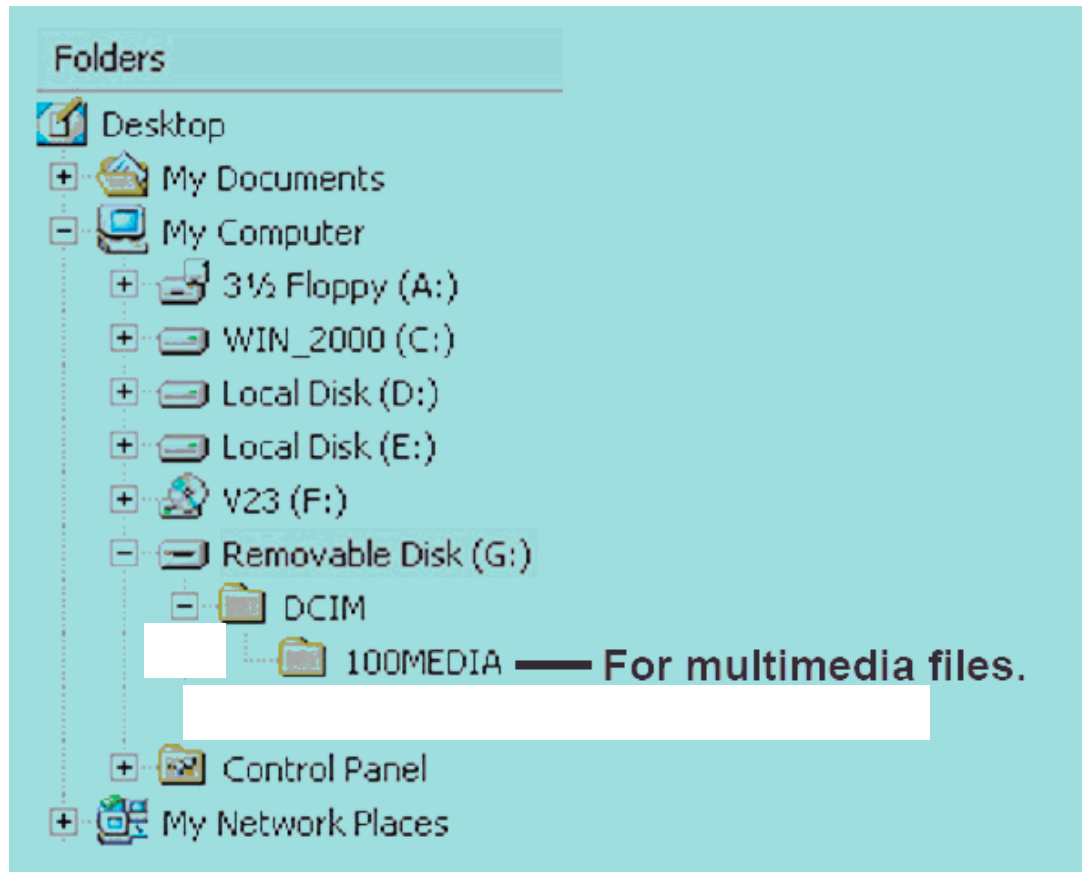


2. Double-click on the desired file, and the file will be opened by the program matching the file type.



## File location

After connecting the **endogo®** to your computer, a removable disk will appear in your computer. The removable disk actually represents the storage medium of your **endogo®**. In the disk you can find all of your recordings. Refer to the figure below to see where the files are stored.



## Appendix A

### Troubleshooting

When using the camera:		
Problem	Cause	Solution
The camera can not be powered on normally.	The battery is out of power.	Replace the battery.
	The battery is incorrectly installed.	Re-install the battery.
The camera is still powered on, but the LCD monitor does not display.	If the camera stays idle over one minute, the LCD monitor will automatically shut down to save power.	Press any button except the power button to reactivate the display.
Can not take pictures or video clips when pressing the Shutter or Record button.	Out of memory.	Free some space from the SD/MMC card or the internal memory.
	The camera is recharging the flash strobe.	Wait until the flash strobe is fully charged.
	Using a "protected" SD card.	Set the SD card to be writable.
The LCD monitor displays "MEMORY ERROR" or "CARD ERROR" message. Or the camera cannot read the memory card.	The format of the memory card is not compatible with the camera.	Use the camera "Format" function to format the card.
	The memory card is corrupted.	Replace the memory card with a new one.

## Flicker Settings

<b>Country</b>	England	Germany	France	Italy	Spain	Netherlands
<b>Setting</b>	50Hz	50Hz	60Hz	50Hz	50Hz	50Hz
<b>Country</b>	Portugal	America	Taiwan	China	Japan	Korea
<b>Setting</b>	50Hz	60Hz	60Hz	50Hz	50/60Hz	60Hz

## System Message

Message	Description
Recording	The camera is recording a file.
Please Unlock SD Card	If you insert a SD card and the card is set to "Protected", this message will show up when the camera tries to write data into the card.
No File	When the camera is set to Playback mode without any existing file to play, this message will show up.
Please Change Battery	The battery life of the camera is low. You should replace the battery with a new one immediately.
Memory Full	The storage memory is full and can not store any more files. Please change the SD/MMC card or delete some files to free some memory space.
Card Error	The inserted card is not compatible with the camera. Please change the card or try formatting the card.
Memory Error	The camera can not access data in the internal memory. Please format the medium to solve this problem.
Strobe Is Charging	The flash strobe is charging.
File Format Error	The file being played is not compatible with the camera.
Deleting	The camera is performing file deletion.
Formatting	The camera is formatting the storage medium.
Setting	The camera is performing a setting action.





## Storage Capacity

Memory	Video (min.)		Audio (min.)
	VGA	QVGA	Maximum
Flash memory (16MB for storage)	2	7	15
SD/MMC card (128MB)	6	22	90
SD/MMC card (256MB)	12	44	190
SD/MMC card (512MB)	24	88	380
SD/MMC card (1GB)	48	176	760

Memory			
	6M	3M	1M
Flash memory (16MB for storage)	25	50	170
SD/MMC card (128MB)	170	300	1000
SD/MMC card (256MB)	340	600	2000
SD/MMC card (512MB)	680	1200	4000
SD/MMC card (1GB)	1360	2400	8000

**Note: The actual value of capacity may actual vary (+/- 30%) depending on color saturation and complexity of the photo.**

## Battery life indicator

Icon	Description
	Full battery life
	Moderate battery life
 (white)	Low battery life * If the indicator turns red, flash strobe is disabled.
	Empty battery life

To avoid sudden outage of power, we recommend you change the battery when the icon indicates low power.

## Battery life

Still picture	Video clip
Number of shots	Recording time (minute)
>400	90

### Stills:

Shoot every 30 seconds  
Resolution is set to 2816x2112 pixels

### Video:

Resolution is set to VGA

This table is for reference only. The actual battery life depends on the charge of the battery and battery type.

# Appendix B

## Instruction for ArcSoft MediaConverter™

### Introduction

ArcSoft MediaConverter™ is a powerful all-in-one multimedia file converter. This utility quickly and effortlessly converts photo, video, and music files into formats optimized for use on your portable device.

Multiple files and file types can be converted at the same time. It's easy! Three simple steps are all it takes.

### System requirements

To install and run the MediaConverter, your system must meet the following minimum requirements:

Microsoft Windows 98 SE/ME/2000/XP (Home or Professional)  
50 MB free hard drive space  
256 MB RAM  
DirectX 9 (DirectX 9c recommended)  
Microsoft Windows Media Player 9.0 (for converting WMA and WMV files)  
Microsoft Windows 98 SE/ME/2000/XP (Home or Professional)  
Apple QuickTime 6.5 (for converting MOV files)

### Supported file formats

#### Video

Video files are converted and copied to the selected location as MPEG-4 encoded AVI files, WMV files or MPEG-4 encoded ASF files (Default).

#### Supported file types for conversion

- AVI (Microsoft Video 1 format, Cinepak, Intel Indeo, uncompressed, etc.)
- MPEG-1 in MPEG, MPG, MPE
- DAT (VCD MPEG1)
- MPEG-4 in AVI format
- MPEG-4 in ASF
- WMV
- QuickTime MOV

QuickTime 6.5 and Windows Media Player 9.0 or above are required for QuickTime MOV and WMV file conversion, respectively.

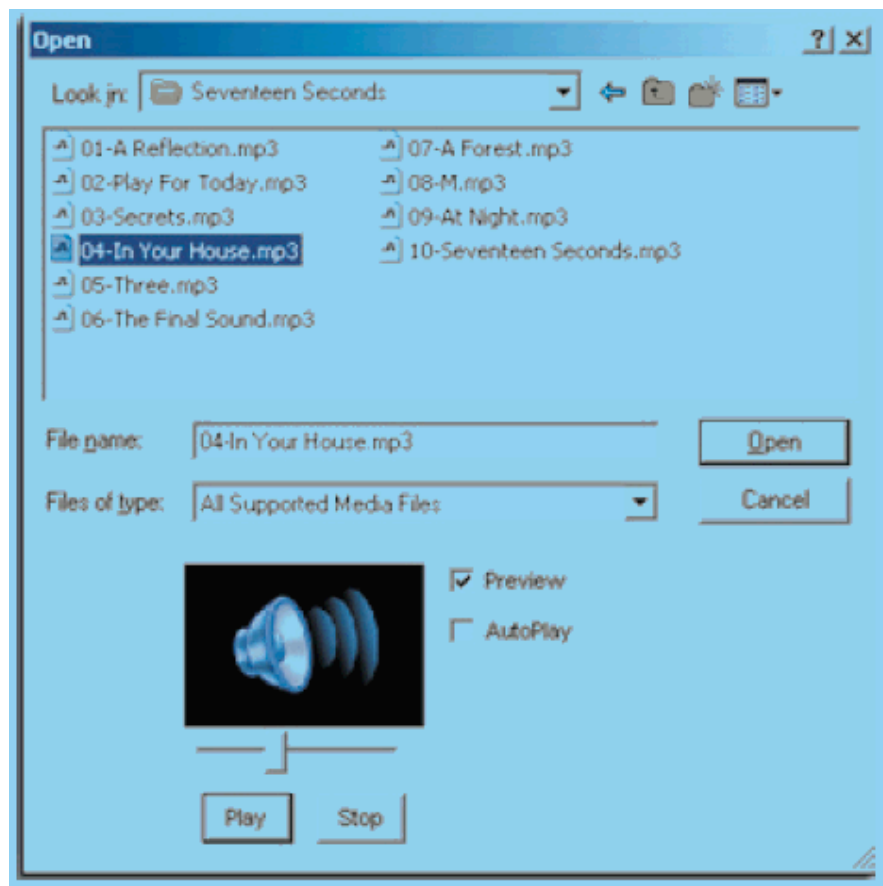
#### Supported file types for export

- AVI (MPEG-4 SP)
- WMV
- ASF(MPEG-4 SP)

## Step 1: Select media

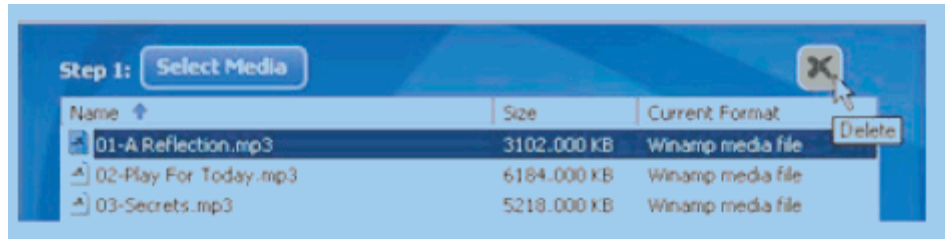
- **Adding files for conversion**

1. Click the “Select Media” button.
2. An “Open” window will appear. Navigate to the folder that contains the files you’d like to convert.
  - a. Use the “Files of type” pull-down to filter the file types you’d like to display.
  - b. Preview highlighted files to be sure that they’re the ones you want. Check the “AutoPlay” box to start the playback automatically after you click a file.
3. Repeat steps 1 and 2 above until all the files you want are added. In addition to using the above method, you can also drag-and-drop files directly to the file list in the program window.



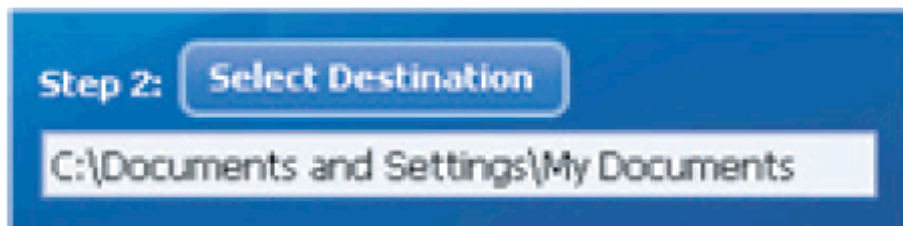
- **Removing files**

To delete a file from the list, highlight it and click the “X” icon.



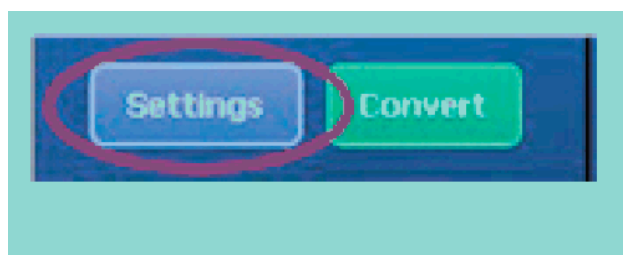
## Step 2: Select destination

Click the “Select Destination” button to select the location where your converted files will be saved. The default save location is “C:\Documents and Settings[current user]\My documents”. However, you’ll most likely want to save the files to your portable device. In this case, make sure your device is connected, and then click “Select Destination” and choose the device.



## Settings

Various program settings can be accessed by clicking the “Settings” button. Each section lets you select one of two settings: “Optimize for the selected device,” and “Use custom conversion settings.”

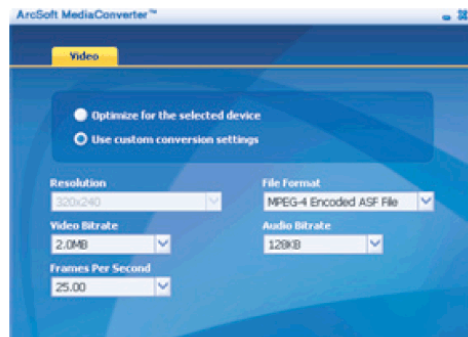


### Optimize for the selected device

This is the default setting. The program will automatically set the conversion parameters according to your selected device.

### Use custom conversion settings

If you decide to use this option, you can set the various conversion parameters manually.



### Video settings

When converting a video file, there are several different parameters:

- **Resolution** (Options include QVGA (320 x 240) [default] and VGA (640 x 480))
- **File Format** (MPEG-4 encoded AVI files, WMV files or MPEG-4 encoded ASF files)
- **Video Bitrate** (Options include 500KB, 1.0MB, 1.5MB, 2.0 MB [default], 2.5 MB, and 3.0 MB)
- **Audio Bitrate** (Options include 96 KB, 128 KB [default], 192 KB)
- **Frame Per Second** (Options include [in fps] 15.00, 20.00, 24.00, 25.00 [default], and 29.97)

Selecting “Optimize for the selected device” uses the default values above, where applicable.

After viewing/modifying the various settings, select either “Save” or “Cancel” to return to the main screen. Click “Save” if you’d made changes that you’d like to keep. Otherwise, click “Cancel.”

### Step 3: Convert

When you’re ready, select (highlight) the files you’d like to convert from the list, and then click the “Convert” button.



A progress bar will display the current status. Various pop-ups may appear asking for specific confirmation. A popup will appear and inform you once all the files have been converted and stored to the location you selected.

## Playing the converted ASF files in your **endogo®**

To play the video clips or movies (MPEG-4 in ASF format only) converted by ArcSoft MediaConverter in your MPEG-4 digital **endogo®**, please follow the steps below.

### Step 1

Insert a SD/MMC card in the card slot of the **endogo®** and connect the **endogo®** to PC via the USB cable. You could follow the instructions of “Connecting the Endogo to your PC” for more information.

### Step 2


Save the ASF files converted by MediaConverter on PC to your **endogo®**.

- Copy the converted ASF files.
- Open Windows Explorer to find a “Removable Disk” appeared in My Computer.
- Double-click on the icon of Removable Disk.
- Double-click on the DCIM file folder.
- Double-click on the 100MEDIA file folder.
- Paste the files into 100MEDIA file folder.
- Change the file names to CLIP\*\*\*\*.ASF.

\*\*\*\* could be any 4-digit number from 0001 to 9999.

The file name must follow the naming principle of your **endogo®**, so that the **endogo®** could identify the files saved on 100MEDIA.

### Step 3

Now you can use the Playback (  ) mode to view the video clips! The ArcSoft MediaConverter in this package is a customized version for your digital **endogo®**. You may visit the website <http://www.arcsoft.com> for more product information.

## Appendix C

### Specifications

<b>Item</b>	<b>Description</b>
<b>Image Sensor</b>	<b>3 Mega (2048x1536 pixels)</b>
<b>Resolution</b>	<b>Still image: 1M/3M/6M Movie: 640x480 (VGA) 320x240 (QVGA)</b>
<b>File Format</b>	<b>ASF, JPEG WAV, MP3</b>
<b>Video frame rate</b>	<b>640x480, up to 30fps; 320x240, up to 30fps</b>
<b>Internal memory</b>	<b>32MB flash memory (16MB for storage)</b>
<b>External memory</b>	<b>SD/MMC (Max 2GB)</b>
<b>LCD display</b>	<b>2.4" TFT LCD</b>
<b>TV out</b>	<b>NTSC/PAL system supported</b>
<b>AV in</b>	<b>Yes</b>
<b>Interface</b>	<b>USB 2.0</b>
<b>Microphone</b>	<b>Yes</b>
<b>Speaker</b>	<b>Yes</b>
<b>Stabilizer</b>	<b>Yes</b>
<b>Direct print</b>	<b>Supports PictBridge compatible printer</b>
<b>Battery</b>	<b>8210 Li-ion rechargeable battery (3.7 850mAh)</b>

## Appendix D

### **System Requirements**

**Operating System: Windows 98SE/ME/2000/XP**

**CPU: Pentium III or above**

**System RAM: 128MB or above**

**Graphic Card: 64MB, 24 bit true color**

**CD-ROM speed: 4x or above**

**Software: Direct X 9.0c or above and Windows Media Player**

**Codecs**

**Other: USB connector**