

## Foreword

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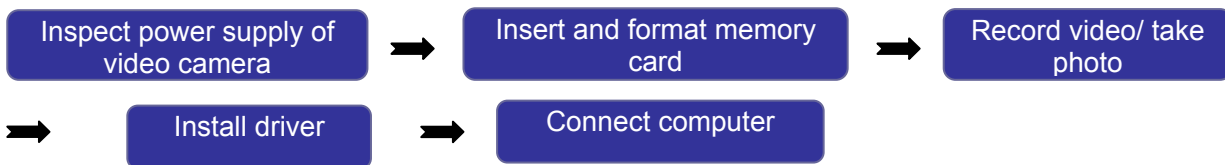
Thank you for purchasing this digital video camera. Before use of this video camera, please read this user's manual carefully and place it in a safe place for future reference.

The contents covered in this user's manual are based on the latest information obtained when this manual was prepared. The screen display pictures, and illustrations, etc., used in this manual are to describe the operations of the video camera in a more detailed and direct viewing manner, but they may be slightly different from the digital video camera you actually use due to the differences in technical developments and production batch.

## Note

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Please use this video camera according to the following sequence.



⚠ Attention: If a newly purchased memory card or a memory card having been used in another digital camera/video camera is to be used in this video camera, please format it using this video camera first. Before formatting, please back up the important data onto other media first, e.g., soft disk, hard disk, CD, etc.

## Notice for Use

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This video camera can use TF cards (multimedia memory cards).

Instructions for use of memory card

- If a newly purchased memory card is used for the first time, or a memory card contains data or other recorded video camera images, which the video camera cannot recognize, please be sure to format the memory card first.
- Before inserting or removing a memory card, please turn off the power of the video camera first.
- After a memory card is used many times, its performance will be degraded. If the memory card's performance is degraded, a new memory card should be purchased.

- Memory cards are precision electronic devices. Do not bend any memory card, and avoid dropping it or subjecting it to stress.
- Do not place any memory card into a strong electric field or magnetic field environment, e.g., near a speaker or TV receiver.
- Do not use or place any memory card in too hot or too cold an environment.
- Please keep any memory card clean and avoid it contacting any liquid. If the memory card contacts liquid, wipe it dry with a piece of soft cloth.
- When a memory card is not in use, put it into a card case.
- Note that a memory card will become hot after being used for a long time. This is fully normal.
- Do not use a memory card that has been used in another digital video camera or digital camera. If you want to use it in this digital video camera, format it using this video camera first.
- Do not use a memory card that is formatted in another digital video camera or memory card reader.
- If one of the following occurs for a memory card, the recorded data may be destroyed:
  - Use the memory card improperly.
  - Turn off the power or remove the memory card during recording, deleting (formatting), or reading.
- It is recommended that important data be backed up onto other media, such as a soft disk, hard disk, CD, etc.

### Maintenance and care of video camera

When the video camera is not in use, store it in a dry and dark place with the batteries removed.

- Use a proper protective case to avoid scratching the lens and screen.
- To clean the lens surface, blow off the sand and dust on the surface first, and then use a piece of cloth or paper towel suitable for cleaning optical devices to lightly wipe the lens. If necessary, employ lens cleanser. Do not use organic solvent to clean the video camera.
- Do not touch the lens surface by your fingers.

### System Requirements

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When operating or using this digital video camera, please refer to the minimum system requirements for a computer that uses the video camera. However, we strongly recommend that you use a better computer device to operate the video camera so as to offer the best efficiency. The minimum system requirements are as follows:

System requirements	
Operating system	Microsoft Windows 2000,XP,VISTA,Windows7
CPU	Intel PIII667 or above, or equivalent
Internal memory	128 MB or more
Sound card, display card	Sound card, display card, supporting DirectX8, or higher version
CD drive	4× or more
Hard disk	1 GB or more free space
Other	One standard USB 1.1 or USB 2.0 interface

## Functions and Features

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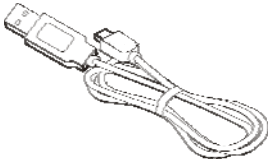
This video camera has many features and functions:

- Digital video camera
- Digital camera (130 million pixels)
- Mobile disk
- Pickup head
- 4× digital zoom

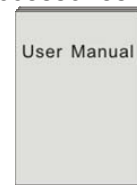
## Accessories

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When unpacking the video camera, you will see the following main accessories.



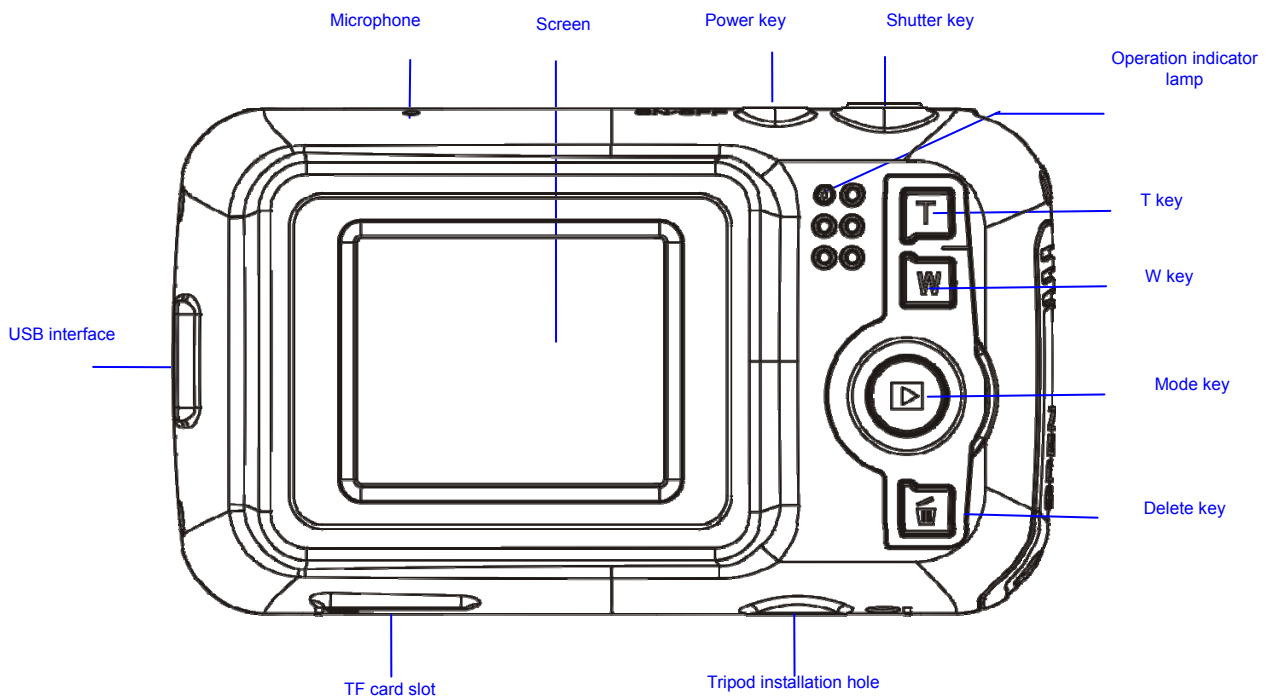
USB connecting cable

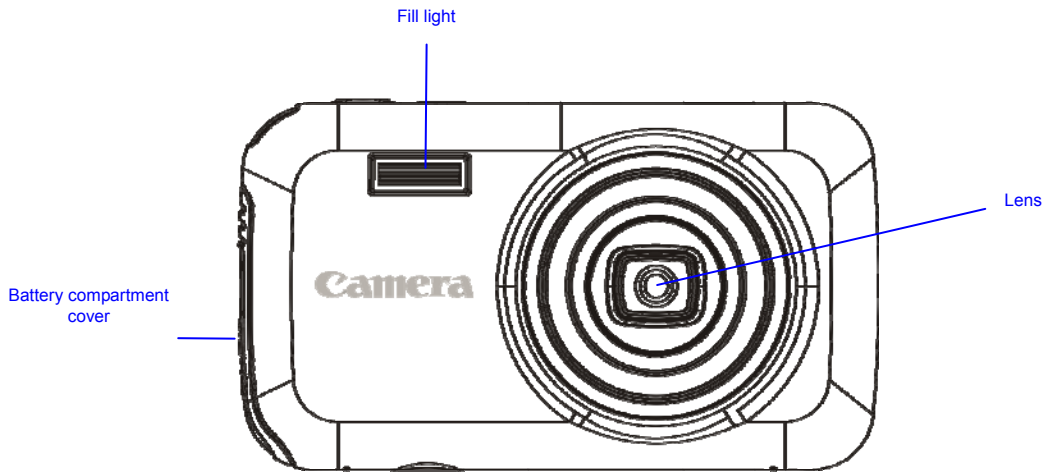


User's manual

## Brief Introduction to Outside

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### Key Functions and Indicator Lamps of Video Camera

Key	Photographing /Video-recording mode	Playback mode	Menu setup mode
Power key	Long press to start up/shut down Short press to enter menu	Long press to start up/shut down Short press to enter menu	Long press to start up/shut down Short press to close menu
Shutter key	Take a photo Start/pause video recording	Start/stop playing	Switch over to setup menu; confirm menu
T key	Digital zoom in	Select file rightwards	Switch over to the previous menu
W key	Digital zoom out	Select file leftwards	Return to the next menu
Mode key	Switch over between video-recording mode and playback mode	Enter photographing mode	N/A
Delete key	Turn on/ Turn off fill light	Delete a photo or video rapidly	N/A

## Start Use

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### Install batteries

This video camera uses 3 AAA alkaline batteries. For replacement of batteries, turn off the power of the video camera first.

Open the battery compartment cover, install batteries according to the prompt marks for positive and negative polarities on the sides of the battery compartment, and then close the battery compartment cover.

### Install TF memory card

Insert a TF memory card into the memory card slot with the metal pins facing inwards according to the prompt marks on the sides of the card slot.

To remove the memory card, press the TF memory card down and then remove it.

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Attention:



- Before replacing the memory card, please turn off the power of the video camera.
  - For card insertion, insert the card in the correct direction. Do not apply excessive force onto the card when inserting the card, to avoid damaging the card or the parts of the video camera. If you cannot insert the card, please check whether the card is inserted in correct the direction.
  - If a memory card is used the first time or a memory card has been used in another video camera, please format the memory card first.
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### Startup

Press the power key for 3 seconds and then release it; the camera is started up.

### Mode switchover

After startup, the camera will enter the photographing mode; you can press the mode key to switch over to the video recording mode and the playback mode; in the playback mode, you can press the mode key to switch over back to the photographing mode.

### Video recording

In the video recording mode, you can press the shutter key once to start video recording, and press it again to stop video recording.

### Photographing

In the photographing mode, you can press the shutter key to take a photo.

### Playback

In the playback mode, you can view photos and can also play the video camera recorded videos.

View a photo: Use the T key or W key to select a photo or video.

Play a movie: Use the T key or W key to select a movie you want to play, and press the shutter key once to start playing; you can press the shutter key again to stop the playing.

### Shutdown

In the power-on state, press the power key for 3 seconds, the video camera will be shut down.

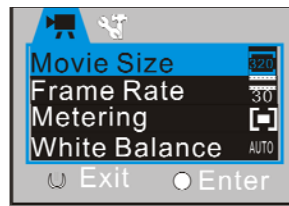
If the video camera is in a free state and is not operated for a time period exceeding the set automatic shutdown time (1 min/ 3 min/ 5 min), it will be automatically shut down to save power.

### Menu setup

In the photographing, video recording or playback mode, press the power key to open the menu (after opening the menu, you can press the shutter key to switch over from the photographing menu or video recording menu to the setup menu), and then press the W key or T key to select a submenu and press the shutter key to enter the submenu. In menu selection, the selected menu option will be highlighted.



▲ Photographing menu



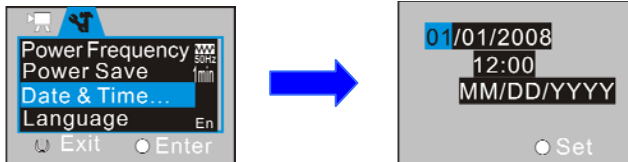
▲ Setup menu



▲ Playback menu

### Date and time setup

Press the power key to open the menu, and then press the shutter key to enter the setup menu. Press the W key to select the “Date & Time” menu option, and then press the shutter key to enter the setup window.



In the setup window, press the mode key to select the option to be adjusted (date, time), and the selected option will be displayed in blue background. Afterwards, press the T/W key to adjust the value; after the adjustment is over, press the shutter key to confirm or press the power key to cancel the setting and to return. Finally, press the power key to exit the setup mode.

### Computer connection

Before connecting a computer, please use the installation CD to install the video camera driver first. Start up the video camera, and then use the USB cable in the accessories to connect the video camera to a usable USB port of a computer; select the USB mode as MSDC (mobile disk) or PC CAM (pickup head mode), and then connect the USB port to the video camera, the video camera will accordingly enter the mobile disk or pickup head mode.

## Advanced Operations

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### Photographing mode

After startup, use the mode key to select the video recording mode.

Press the shutter key to start video recording; press the shutter key again to stop video recording.

Press the T key or W key to conduct digital zoom.

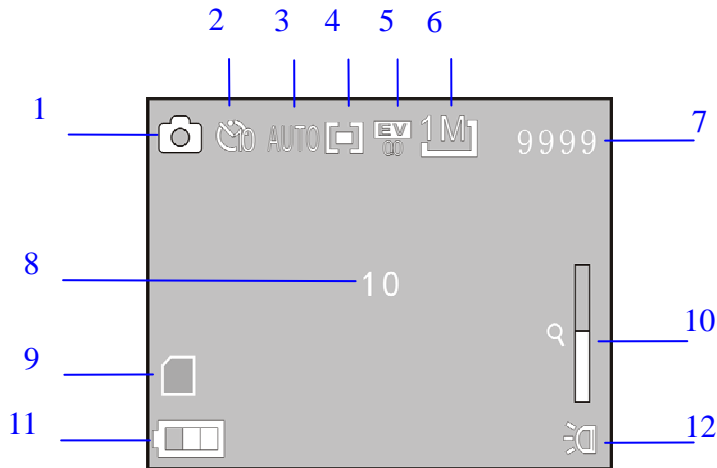
Use of LED fill light: In the photographing or video recording mode, you can press the delete key to turn on or off the fill light. (In the playback mode, the fill light is unusable.)

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- Attentions:
- Hold the video camera stably when photographing; it is preferable to place it onto a support, e.g., tripod, etc., so as to obtain clear photos.
  - After the shutter key is pressed to take a photo, the BUSY lamp will light up; at this moment, do not move the video camera. The video camera can be moved only after the BUSY lamp goes out, so as to avoid taking blurry photos.
  - Do not press the photographing key during video recording, as the key does not function at this time.



◆ The screen displayed information in the photographing mode



	Icon	Icon name	Description
1		Photographing icon	Indicates that the photographing mode has been selected
2		Self-timer icon	Indicates switchover to 10-second self-timer mode, and  Indicates switchover to 2-second self-timer mode
3		White balance	Indicates the current white balance setting
4		Metering mode	Indicates the current metering mode
5		Exposure compensation	Indicates the currently set exposure compensation value
6		Photo size	Indicates the current photo resolution
7	9999	Number of photographable photos	Indicates the number of remaining photographable photos
8	10	Countdown photographing	Indicates that the video camera is currently in 10-second countdown photographing
9		Card	Indicates that a memory card has been inserted
10		Zoom indication	Indicates the current digital zoom ratio
11		Battery	Indicates the current battery state; when the icon is in red, it indicates low battery and the video camera will be automatically shut down
12		Fill light	Indicates that the fill light has been turned on

◆ Menu setup

Press the menu key to open the main menu for video recording, press the W/T key to select a menu option and then press the shutter key to enter the sub-menu. In the sub-menu, press the shutter key to confirm and to return to the main menu (or directly press the power key to return to the main menu), and press the W/T key to conduct selection. After returning to the main menu, you can press the power key to exit the menu.

In menu selection, the selected menu option will be highlighted.

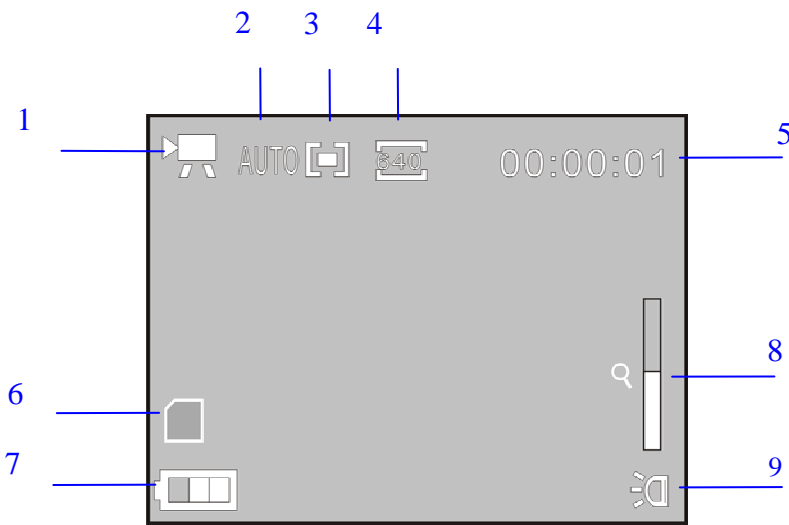
Options in photographing menu:

Main menu	Sub-menu	Description
Image size	2592x1944	5 million-pixel resolution
	2048x1536	3 million-pixel resolution
	1280x960	1.3 million-pixel resolution
	640x480	0.3 million-pixel resolution
Image quality	Excellent	The best image quality
	Good	Better image quality
	Normal	General image quality
Metering mode	Center-weighted metering	
	Multi-spot metering	
	Spot metering	
White balance	Automatic	Automatic white balance is suitable for most cases
	Daylight	Suitable for daylight environment
	Cloudy	Suitable for cloudy environment
	Fluorescent lamp	Suitable for fluorescent lamp light source environment
	Tungsten lamp	Suitable for tungsten lamp light source environment
Exposure	/	Using the mode key to adjust the exposure compensation
Photographing mode	Off	Using general single-frame shooting mode
	2s	Using 2-second-delay self-timer mode
	10s	Using 10-second-delay self-timer mode
	Continuous shooting	Continuous shooting
Special effects	Normal	Normal effect
	Black and white	Black and white effect
	Aging	Old style photo effect
	Negative	Negative effect
	Red	Reddish effect
	Green	Greenish effect
	Blue	Bluish effect



Attention: When you enter the exposure sub-menu to adjust the exposure compensation, and use the mode key to adjust the exposure compensation value, the brightness of picture on the screen will change accordingly. After the setting is completed, press the shutter key to confirm and to return to the main menu, or press the power key to cancel the setting.

◆ The screen displayed information in the video recording mode



	Icon	Icon name	Description
1		Video recording icon	Indicates that the video recording mode has been selected
2		White balance	Indicates the current white balance setting
3		Metering mode	Indicates the current metering mode
4		Video format	Indicates the current video resolution
5	00:00:1	Recording time	Indicates the remaining recordable time in free state and the used recording time in recording state
6		Card	Indicates that a memory card has been inserted, and  Indicates that the employed SD card is write-protected
7		Battery	Indicates the current battery state; when the icon is in red, it indicates low battery and the video camera will be automatically shut down
8		Zoom indication	Indicates the current digital zoom ratio
9		Fill light	Indicates that the fill light has been turned on

◆ Menu setup

Press the menu key to open the main menu for video recording, press the W/T key to select a menu option and then press the shutter key to enter the sub-menu. In the sub-menu, press the shutter key to confirm and to return to the main menu (or directly press the power key to return to the main menu), and press the W/T key to conduct selection. After returning to the main menu, you can press the power key to exit the menu.

In menu selection, the selected menu option will be highlighted.

Options in video recording menu:

Main menu	Sub-menu	Description
Video format	640X480	High resolution format
	320X240	Low resolution format
Frame rate	30 fps	High
	15 fps	Low
Image quality	Excellent	The best image quality
	Good	Better image quality
	Normal	General image quality
Metering mode	Center-weighted metering	/
	Multi-spot metering	/
	Spot metering	/
White balance	Automatic	Automatic white balance is suitable for most cases
	Daylight	Suitable for daylight environment
	Cloudy	Suitable for cloudy environment
	Fluorescent lamp	Suitable for fluorescent lamp light source environment
	Tungsten lamp	Suitable for tungsten lamp light source environment

## Setup menu

Whether in video recording mode or in photographing or playback mode, press the menu to open the main menu, and then press the shutter key to enter the main menu of setup menu. Afterwards, press the W/T key to select a menu option and then press the shutter key to enter the sub-menu. In the sub-menu, press the W key or T key to select an option, and then press the shutter key to confirm (press the power key to directly return to the main menu for setup). After returning to the main menu, you can press the menu key to exit the menu.

In menu selection, the selected menu option will be highlighted.

Main menu	Sub-menu	Description
Power frequency	50 Hz	Setting the power frequency to 50 Hz
	60 Hz	Setting the power frequency to 60 Hz
Automatic shutdown	1 min	Automatic shutdown after 1 minute in free state
	3 min	Automatic shutdown after 3 minutes in free state
	5 min	Automatic shutdown after 5 minutes in free state
Date & time	/	Setting date & time and date format
Language	English	Setting the menu language to English
	French	Setting the menu language to French
	Spanish	Setting the menu language to Spanish
	German	Setting the menu language to German
	Italian	Setting the menu language to Italian
	Portuguese	Setting the menu language to Portuguese
USB mode	Mobile hard disk	Used as a mobile hard disk
	Pickup head	Used as a pickup head
Format	Y/N	Formatting the memory card
Reset to factory default	Y/N	Resetting to factory default

For date & time setting, use the mode key to switch over the option to be set, and press the W key or the T key to adjust the value. Press the shutter key to confirm, or press the power key to cancel the setting and to return to the main menu.

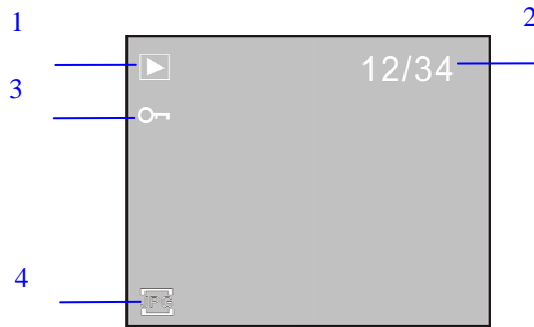
## Playback mode

In the video recording mode, press the mode key to enter the playback mode.

In the playback mode, press the T key to select a file forwards or press the W key to select a file backwards.

After the video recording mode is selected, press the shutter key to start playing; at this moment, there is a playing timer displayed on the upper right corner of the screen. During playing, you can press the shutter key to stop the playing.

◆ The screen displayed information in the video playback mode



	Icon	Icon name	Description
1		Playback mode icon	Indicates that the playback mode has been selected
2	12/34	File number	Indicates the position of the current file and the total number of files (a playing timer is displayed in the video playing mode)
3		File protection	Indicates that the current file is being protected
4		video file icon,  photo file icon	Indicates that the currently selected file is a photo

◆ Menu setup

Press the menu key to open the main menu for video recording, press the W/T key to select a menu option, and then press the shutter key to enter the sub-menu. In the sub-menu, press the shutter key to confirm and to return to the main menu (or directly press the power key to return to the main menu), and press the W/T key to conduct selection. After returning to the main menu, you can press the power key to exit the menu.

In menu selection, the selected menu option will be highlighted.

Options in playback menu:

Main menu	Sub-menu	Description
File locking	Lock/ unlock this file	Lock/ unlock the current file
	Lock all	Lock all files
	Unlock all	Unlock all files
File deleting	Delete this file	Delete the current file
	Delete all	Delete all files
Slide show playing	Start	Start to play a slide show
	Interval	1 sec – 10 sec
	Cycle	Y/N

### Connect computer to download photos /videos

After the video camera is connected to a computer and enters the mobile disk mode, there will be a newly added mobile disk in the “My Computer” window, you can store the taken photos or recorded videos under the directory “DCIM\100MEDIA” in the mobile disk, and you can enter the directory to copy files to the hard disk of your computer.

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Attention: During file download, do not disconnect the USB connection; insertion or removal of the memory card shall not be conducted under USB connection condition to avoid data loss.

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For the use method, click the “User’s manual” key in the installation guide window.

## Specifications

Image sensor	1.30 million-pixel CMOS image sensor
Photo resolution	2592×1944, 2048×1536, 1280×960, 640×480
Memory	External TF card (512 MB to 32 GB)
File format	JPEG, AVI
Video resolution	VGA 640×480 ,QVGA 320×240
Self-timer delay	2 sec / 10 sec
Digital zoom	4×
White balance	Automatic/ Daylight/ Cloudy/ Fluorescent lamp/ Tungsten lamp
Exposure compensation control	-2.0 – +2.0
USB interface	USB2.0
Screen	1.77” TFT LCD
Power supply	3 AAA alkaline batteries
Menu language	English/ French/ Spanish/ German/ Portuguese/ Italian/
Focal length	f = 6.5 mm
Aperture	F 3.1
Automatic shutdown	1 min/ 3 min/ 5 min
Operating requirement system	Windows 2000 / XP / Vista / Windows7
Dimensions	101*56*23 mm

Attention: The product specifications are defined according to the latest information that can be obtained when the user's manual is prepared, and they are subject to change without notice; the actual video camera shall govern.

## FAQ

The video camera cannot be started after the batteries are installed	Low battery; please replace the batteries (or recharge the lithium battery.)
	The battery packaging is not removed.
	Any battery is installed reversely; please confirm that the batteries are installed correctly.
No photographing and video recording can be conducted after the shutter key is pressed	No memory card is inserted; photographing or video recording can be conducted only after a memory card is inserted.
	The internal memory of the TF card is full.
The taken photos are vague	Hand shaking in photographing. Please hold the video camera stably by both hands, or stabilize the camera body using other objects such as tripod, etc.; do not shake the video camera in photographing.
The taken photos or recorded videos are lackluster	Insufficient light in the photographing environment. Please photograph at places with sufficient light, or use lamps to increase the brightness.
The video camera is automatically shut down	Low battery, please replace the batteries (or recharge the lithium battery.)
	To save electric energy, if no operation is conducted for more than 1 min (3 min or 5 min, depending on the setting), the video camera will be automatically shut down according to the setting.

**FCC Warning:**

- 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.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, 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.