

HD-DV Camcorder

Welcome:

Dear user, thank you for purchasing this product.

We hope that our commitment to delivering a reliable and well-engineered product will provide you with an excellent user experience and years of hassle-free use.

Safety Notice:

1. Warranty will be voided if the camera is dropped, punctured or disassembled.
2. Avoid all contact with water, and dry hands before using.
3. Do not expose the camera to high temperature or leave it in direct sunlight.
4. Avoid applying unnecessary pressure to the camera body.
5. For your own safety, avoid using the camera during a lightning storm.
6. Only use accessories supplied by the manufacturer.
7. Keep the camera out of the reach of infants.

FCC Compliance Statement:

This device complies with Part 15 of the FCC Rules. Operation is subjected 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.



This equipment has been tested and found to comply with 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 residential installations. 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 interference to radio or television equipment 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.
- Move the equipment away from the receiver.
- Plug the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for additional suggestions.

You are cautioned that any change or modifications to the equipment not expressly approved by the party responsible for compliance could void your authority to operate such equipment.



If the time arises to throw away your product, please recycle all the components possible.




Batteries and rechargeable batteries are not to be disposed of in your domestic waste! Please recycle them at your local recycling point.

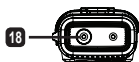
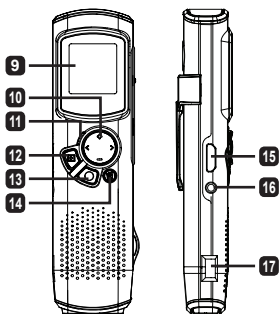
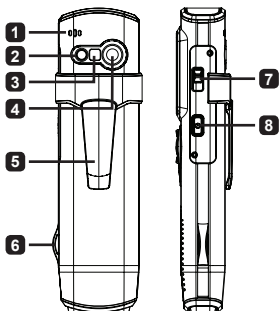
Together we can help to protect the environment.

Getting Started

Product overview

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- 1 Microphone
- 2 LED light/strobe
- 3 Mirror (for self-portrait)
- 4 Lens
- 5 Clip
- 6 Strap holder
- 7 Mode switch:
 - Camcorder ()
 - MP3 player ()
 - Camera ()
- 8 Power button
- 9 OLED display
- 10 Directional button
- 11 LED indicator
- 12 Playback button
- 13 OK (Record/Shutter) button
- 14 Delete button
- 15 HDMI output
- 16 TV-out/Earphone connector
- 17 USB port
- 18 Tripod connector



Bottom view

Product operations

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Product introduction

This digital camcorder comes with the following features:

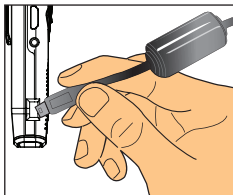
- Ultra slim, pen-like compact design offers maximum mobility and freedom
- 1280 x 720 (720P) HD high definition video resolution up to 30fps
- Multi-functions: digital camcorder, digital still camera, MP3 player
- 2.84cm (1.1") compact design and energy efficient high quality OLED display
- Up to 5 Mega-pixel still pictures
- Built-in 4GB/8GB* memory for storage
- Supports MOV, JPEG, and MP3 file format
- Supports USB PC connection
- Supports TV-out / HDMI-out / earphone

* Model dependent

Charging battery

When using for the first time, please charge the built-in Li-polymer battery for at least 8 hours.

- 1 Make sure that the camcorder is powered off. Then, insert one end of the USB cable provided into the USB port of the camcorder and the opposite end into a powered PC.
- 2 The LED light will appear red to indicate that the device is charging.
- 3 The LED light will turn off if the charging is interrupted or complete.

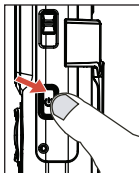


Note:

When using a PC to charge the battery, do not power on the camcorder or it will stop charging.

Powering on/off

Hold the Power button down for 1 second to turn on, or to turn off the unit.











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Note:

- 1) If the camcorder fails to turn on after pressing the Power button, please recharge the battery first.
- 2) If an AV cable or earphone connector is plugged in upon powering on, you will be prompted to select a connection option.

Display ratio

Due to the nature of OLED screens, the display ratio of still picture/video on the camcorder and TV/PC will vary. Please see the following table for details.


Mode	1.1" OLED display	TV/PC display
Video (preview/recording)	 (1:1)	 (16:9)
Video (playback)	 (1:1)	 (16:9)
Picture (preview/snapshot)	 (1:1)	 (4:3)
Picture (playback)	 (1:1)	 (4:3)

Note:

When outputting videos to a 4:3 screen, the display will be framed by black areas towards the top and bottom. When displaying pictures on a 16:9 screen, the display will be framed by black areas to the left and right.

Recording/Reviewing a video

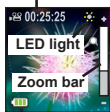
To record a video:

- 1 Power on the camcorder and switch to camcorder mode ().
- 2 Press the OK (Record) button to start recording. Use the directional button up/down to zoom in/out.
- 3 To stop recording, press the OK (Record) button again.

Note:

Press the directional button to the right to enable the LED Light when operating in a dark environment.

Recordable time



Battery life

To review a video:


- 1 In camcorder preview mode, press the Playback button and the last recorded video will play automatically.
- 2 When the unit is connected to TV or earphones, you can press the directional button up/down to adjust the volume. While playing, you can press the Playback button to pause/resume video playback.
- 3 During playback, press and hold down the directional button left/right to fast rewind/forward the video. Tap left/right to shift between video files.
- 4 To switch back to preview mode, press the OK button.

Note:

After copying your videos onto your PC, you can play them back using the "Quicktime" player.

Taking/Reviewing a picture

To take a picture:

- 1 Power on the camcorder and switch to camera mode ().
- 2 Use the directional button up/down to zoom in/out.
- 3 Press the OK (Shutter) button to take a picture.

Note:

Press the directional button to the right to enable the LED Strobe for picture taking in dark environments.

Remaining shots



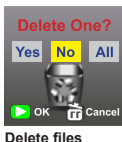
Battery life

To review a picture:

- 1 In camera preview mode, press the Playback button.
- 2 Use the directional button left/right to select the picture you wish to review.
- 3 While in Playback mode you can zoom in/out by pressing up/down. You can then press the Playback button to lock the ratio and navigate the picture by using the directional button. Press the Playback button again to unlock the ratio.
- 4 To return to preview mode, press the OK button.

Deleting files

- 1 Press the Playback button while in preview mode.
- 2 Use the directional button left/right to select the file you want to delete and press the Delete button.
- 3 **To delete the current file:**
Use the directional button left/right to select "Yes" and press the Playback button.
To delete all files:
Use the directional button left/right to select "All" and press the Playback button. Then select "Yes" and press the Playback button to confirm.
- 4 To leave the deletion screen, press the Delete button.



MP3 player


To listen to music, you must copy MP3 files from your PC first. Please refer to the "PC connection" section for more information.

To use earphones, insert them into the earphone jack on the side of the unit. When prompted, select the earphone icon and press OK to confirm.



Set earphone connection

Operations in MP3 player mode:

How to...	Action
Switch to MP3 player mode	Power on the camcorder and move the switch to the () icon.
Select file	Press the directional button up/down in MP3 list.
Play/Pause/Resume while playing	Press the Playback button.
Adjust sound volume	Press the directional button up/down while playing.
Return to MP3 list	Press the OK button. The music will continue playing.
Delete one file / all files	Press the Delete button in MP3 list, and follow the instructions in the "Deleting files - Step 3" section.

Note:

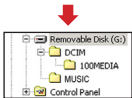
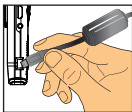
- 1) Sub folders are supported by the camcorder. To browse a sub-folder, use the directional button up/down to select a folder and press the Playback button to enter. To return to an upper-level folder, press the OK button.
- 2) Only one-tier of sub folders can be accessed by the camcorder.
- 3) When you choose to Delete All MP3 files, the sub-folders and all of the MP3 files within them will be erased completely.
- 4) The length of MP3 file name cannot be greater than 54 English (single-byte, including space) characters. MP3 files with names exceeding the above regulation may cause the camcorder to malfunction.

PC connection

When the camcorder is powered on and connected to a PC via the accessory USB cable, the system enters USB Slave mode. The internal memory is then treated as a removable disk on the PC, allowing you to directly copy or delete files stored in the camcorder.

Note:

Once connected to a PC, you can copy MP3 files directly into the "Music" folder for playback.

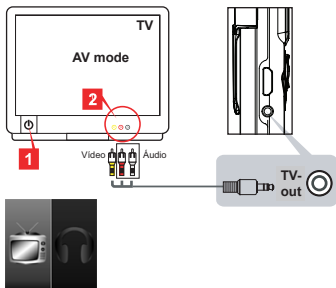


Connecting to a standard TV and HDTV

Connect your camcorder and TV via the included AV cable for real-time display.

TV : Traditional CRT TV

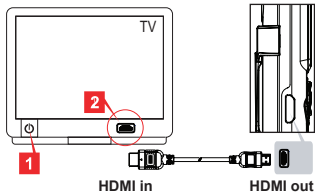
- 1 Turn on your TV and switch to AV mode.
- 2 Connect the audio and video ends of the AV cable to the TV.
- 3 Turn on the camcorder.
- 4 Connect the other end of the AV cable to your camcorder.
- 5 Select the TV icon and press the OK button.



Select the TV icon on the left

TV : HDTV with HDMI input port

- 1 Turn on your HDTV.
- 2 Connect the HDMI-in connector (the larger end) of the HDMI cable to the HDTV.
- 3 Turn on the camcorder.
- 4 Connect the other end of the HDMI cable to your camcorder.
- 5 Switch the HDTV to "HDMI input" mode.







Addendum

Troubleshooting

Problem	Cause	Solution
Q The camcorder is frozen and unresponsive.	A The camcorder has encountered a software failure.	S Press and hold down the power button to force a manual shut down to reset the camcorder.

Battery life indicator

Icon	Description
	Full battery life
	Moderate battery life
	Low battery life * The LED light/strobe will be disabled.
	Empty battery life

Note: To avoid sudden and unexpected loss of power, it is recommended that you recharge the battery once the indicator reaches “Low”.

Battery life

Still picture	Video clip
Number of shots	Recording time (minutes)
310	125
* shoot every 30 seconds ** alternate flash (CIPA standard test method) *** resolution set to 5M (2592x1944)	* resolution set to HD 30f (1280x720)

Note: This table is for reference purposes only and is approximate. Actual battery life may vary slightly due to numerous factors including recharge level.

Storage capacity

Memory	Video (HD30f 1280x720)	Still picture (5M)	Music (.MP3)
4GB	100 min	2357	1000
8GB	200 min	4714	2000

Note: This table is for reference purposes only and is approximate. Actual capacity may vary (up to $\pm 30\%$) depending on the complexity of your subject and surroundings.

System requirements

Video Resolution	PC system requirements
HD 30f (1280x720) @30fps	OS = Windows XP SP2, Vista or above CPU = Pentium 4 3.2GHz or above System RAM = 1GB (2GB recommended) Display card = 256MB of RAM

Note: These are recommended minimum system requirements. The videos may be viewed and edited on lower spec. systems, but those systems may experience a noticeable decrease in performance.

Specifications

Item	Specification
Image Sensor	5 Mega-pixel (2592x1944)
Resolution	Camcorder: HD 720P (1280x720) Camera: 5 Mega-pixel
File Format	MOV, JPEG, MP3
Video Frame Rate	HD 720P up to 30fps
Internal Memory	4GB/8GB for storage*
LCD Display	2.84cm OLED (1.1")
Lens	Fixed lens (F 3.0; f=7.15mm)
Flash Light	LED Back Lighting Support
Digital Zoom	3X
Night Shot Mode	Auto
White Balance	Auto
Music	Yes
Microphone	Yes
Speaker	None
TV out	HDMI-out / Composite AV-out (NTSC/PAL system supported)
Power Save Mode	3 min.
Battery	Built-in Li-Polymer battery (950mAh)
* Model dependent.	

Note: Specifications are subject to change without notification.

For additional information and the Video User's Manual, please visit the PenCam HD website at: <http://www.aiptek.com/PenCamHD>

