High Definition Video Camera

All-in-one type Full HD sports camera with 2.0” screen

Full HD 1080P
**WARNING**
To prevent fire or shock hazard, do not expose the unit to rain or moisture.

**Attention**
The electromagnetic fields at the specific frequencies may influence the picture of the recorder.

Be sure to read the following before using the recorder and the mini Camera.

**Trial recording**
Before you record one-time events, you may want to make a trial recording to make sure that the recorder and the camera are working correctly.

**Notes on image data compatibility**
Playback of moving images recorded with your recorder on other equipment and playback of moving images recorded or edited with other equipment on your recorder are not guaranteed.

Do not shake or strike the recorder
In addition to malfunctions and inability to record moving images, this may render the SD card unusable of image data breakdown, damage or loss may occur.

**LCD screen and mini camera**
Be careful when placing the camera near a window or outdoors. Exposing the LCD screen or the lens of camera to direct sunlight for long period may cause malfunctions.

**Back up recommendation**
To avoid the potential risk of data loss always copy data to a disk.

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Thank you for purchasing the high resolution digital camcorder. The camcorder is a small, all-in-one design that is convenient for you to record activities anytime and anywhere. With the high speed dynamic photograph function, it can clearly record any activity, and let you share the experience with anybody.

Please read this manual carefully to ensure you understand it before using this product. Please also keep this manual safe for future reference.

This product has authoritative CE, RoHS & FCC certification to assure customer safety when using it.

The camcorder has world leading digital video/photography/audio storage, high-speed HDMI video transmission and other functions, as well as a number of invention patents & technical patents.
### Installing the Battery

1. Slide the lock on the rear cover and it will open automatically. (Refer to picture1)
2. Follow the instructions. Insert the battery with the correct Polarity (+/-). (Refer to picture2)
3. Push the rear cover closed. (Refer to picture3)

![Picture1](image1.png)

![Picture2](image2.png)

![Picture3](image3.png)

**Note:** If you do not intend to use the product for a long time, please remove the battery. Batteries contain chemical substances so they should be handled and disposed of correctly.

### Installing the Micro SD card

1. Slide the lock on the rear cover and it will automatically open. (Refer to picture1)
2. Follow the instructions. Insert the micro SD card in the correct direction. (Refer to picture4)
3. Push the back cover to the closed position. (Please refer to picture3)

![Picture4](image4.png)

**Note:** The camcorder requires a class 4 or above Micro SD card to operate correctly. Most faults with operating cameras are because a cheap card is used.
Recording Instructions

1. Press [O] key and hold for 2 seconds to power up the camera.
2. Adjust the lens to the proper angle.
   a) Face a blank surface and press [S] to turn on the lasers (The lasers will disappear in 15 seconds). The laser can be turned on or off at any time with the laser light button.
   b) Check whether the laser light is horizontally aligned. If not, rotate the lens until it is in the horizontal state. (Refer to picture 1)

WARNING: DO NOT DIRECT THE LASER LIGHT INTO ANYBODY'S EYES

3. Start / stop recording
   a) Slide the recording switch forward. The recording indicator (red) turns on and flashes while camera beeps (These audio beeps can be turned off in the menu), and camera is recording. (Refer to picture 2)
   b) To stop recording, slide the switch backwards, the camera beeps and the indicator light turns green indicating standby mode. (Refer to picture 3)

* With the LCD screen constantly on the battery will only last for approximately 30 minutes.
  By pressing the LCD button the screen will turn off and then the battery will last for 2-3 hours. By pressing the LCD button for 2 seconds the camera will completely turn off.
* The LCD screen will shut off automatically 30 seconds after the camera starts recording, and the LCD screen will also shut off automatically 60 seconds when in standby mode if no keys pressed. It allows more time to the user for tuning the camera. But the LCD won’t shut off during Playback mode.

Start / stop Recording Via Wired Remote

Press [O] key (hold for 2 seconds) to power up the camera.
1. Connect wired remote to the DIGITAL interface of camera (Refer to picture 1)
2: Press [REC] key on the wired remote to start recording, recording indicator (red) turns on and flashes when it is recording.
3. During recording, press [REC] key on wired remote again to stop, and recording indicator turns off when camera stops recording.

Picture 1

Start / stop recording automatically by power-on wired remote
1. Connect one end of power-on wired remote to the DIGITAL interface on the camera. (Refer to picture 1)
2: Connect the other end of power-on wired remote to a 5V power source. (Refer to picture 2)

Picture 2

As long as the DC5V input is detected by camera it will start recording automatically. During recording, if DC5V is stopped being detected by camera, then it will stop recording automatically.

Note: 1. You must have a well charged battery inserted into the camera for the auto 5v input auto record function to work correctly.
2. In standby mode or recording mode you can enter into real-time preview images after opening the LCD.
3. In standby mode or recording mode you can enter into real-time preview by connecting the camera to other display devices.
4. In recording mode you can connect an external mic to enhance audio recording, and external mic and internal mic audio recording can be mixed.
### Picture Shooting Instructions

In standby mode, press [a] key to take photos. (Refer to picture1)

**Picture Resolution:** 5 mega pixels

**Picture Size:** 2560 x 1920

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### Playback Instructions

1. Playback on the camera
   a) Press and push the screen cover backwards to open it. (Refer to picture1)
   b) Gently press [LCD] key, and the screen will come on.
   c) Press [MODE] to switch until you see the Play Mode, the screen shows 6 video files per page in grid form.
   d) Press [+][-] to choose which video to play, the video will be highlighted with yellow borders, press [+] to start recording, and press again to pause.
   e) When playing video, user can short press [+][-] to turn up or turn down the volume.
   f) When playing video, user can long press [+][-] to fast forward or reverse at X2/X4/X8.
   g) Press [MODE] to stop playback, and return to the video files listing.
   h) Gently press [LCD] key to turn the LCD screen off.
   i) Push the rear cover back on to protect the screen when not in use.

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### Connect external MIC

Connect MIC device to camera for capturing higher quality audio.

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### Connect to HD TV via HDMI

Connect HDMI cable to HDMI interface on the camera and HDMI interface of TV. The LCD will turn off automatically when connected to TV. (Refer to picture2)

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### Connect to TV via AVOUT

Connect the AV cable to AV-OUT jack of camera and AVIN jack of TV. The LCD will turn off automatically when connect to TV. (Refer to picture3)

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**Picture1**

- Push the screen cover by this way.

**Picture2**

- Connect external MIC
- Connect to HD TV via HDMI

**Picture3**

- Connect to TV via AVOUT
**Connect to PC via USB**
Connect USB to the Digital interface of camera and USB port on the PC. (Refer to picture1)

**Picture1**

**Connect to power source**
1. Connect the power line to DIGITAL interface of camera, power light (Red) is on when it is connected.

**Picture2**

2. When the camera is off, connect the power line to camera, it will supply power for the camera. Power light (Red) is off when fully charged.

**Cradle**
Note: 1) Other mounts require this cradle for installing
2) Tripod thread on device and cradle

**Bar Mount**
3 × Rubber Insert
Bar Mount

Note: please choose the proper rubber insert of different thicknesses.
Mount Installation

Surface Mount

3 × surface Mount

Step 1: push surface mount to cradle
Step 2: peel off the sticker
Step 3: paste the camera to your helmet

Note:
1) Please clean the surface carefully before pasting.
2) Push the stick hard on the helmet.
3) The sticker works good after 10 minutes.
4) To secure the camera, use the lanyard as step 4.

Goggle Strap Mount

Step 1: install mount to goggle
Step 2: push the device with main mount to the mount
Step 3: to secure the camera, use the lanyard as step 3

Suction Cup

Choice A
Screw the suction cup to the tripod thread in the device.
Choice B
Screw the suction cup to the tripod thread in the main mount.

Lanyard

Then when you are recording, the screen cover will not be lost.

Vented Helmet Mount

1 × Elastic strap

1 × Vented helmet mount

Mount

Step 1

Step 2

Step 3:

Vented helmet mount

Cradle

Flat Mount

Lanyard

Helmet

Main Mount

Goggle

Lanyard

Goggle Strap Mount

Goggle Strap Mount

Lanyard

Main Mount

Vented Helmet Mount

Mount

Vented helmet

Vented helmet mount
Setting Operational Approach
Press [MODE] to switch into system function settings mode.
1. Press [▲][▼] key to shift the yellow cursor, choose the setting function, press [OK] key to set up.
3. After pressing [OK] key it will automatically return to the main menu.

Resolution Setting
Set up the required recording resolution:
- 1920x1080P30  1920x1080P25
- 1440x1080P30  1440x1080P25
- 1280x720P30  1280x720P25  (1280x720P50)  (1280x720P60)
- 848x480P60  848x480P50
The higher resolution you choose the less video you can fit on your micro SD card.
Note: 720P50/60 are only available on some devices.

Quality Setting
- H: High
- M: Medium
- L: Low

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Display</th>
<th>Bit rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920x1080</td>
<td>H</td>
<td>12Mbps</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>10Mbps</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>8Mbps</td>
</tr>
<tr>
<td>1440x1080</td>
<td>H</td>
<td>12Mbps</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>10Mbps</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>8Mbps</td>
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<tr>
<td>848x480</td>
<td>H</td>
<td>8Mbps</td>
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<tr>
<td></td>
<td>M</td>
<td>6Mbps</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>4Mbps</td>
</tr>
<tr>
<td>1280x720</td>
<td>H</td>
<td>8Mbps</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>6Mbps</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>4Mbps</td>
</tr>
</tbody>
</table>
White Balance Setup
Choose different white balance value under different conditions. Default is AUTO.
- AUTO
- D4000
- D5000
- Sunny
- Cloudy
- Fluorescent
- Incandescent

AE Meter Mode
Choose different light metering mode. Default is Average.
- Average
- Center
- Spot

Record Mode Setting
- NTSC
- PAL
When using in different countries, choose the TV system according to local standard. The image will be flickering if the TV system is set incorrectly.

Split Mode Setup
System will save files every set [time] below.
- Default Setting
  System will save file only when stop recording
  2MIN
  5MIN
  15MIN
  30MIN
Please note: if the card is full system will stop recording.

Record Overwrite Setting
When set as the RECORD OVERWRITE mode, the video will default to 5 minute per file. When the card is full it will start overwriting the earliest recorded files.

Car Mode
When it is ON, the camcorder will start recording automatically when the car is started (with optional enhanced wired control)
- ON
- OFF

Stop Recording Delay Setup
System will stop recording after [delay time]. It will be triggered when you turn off the car.
(With the optional enhanced wired control)
- 10 SEC
- 30 SEC
- 1 MIN

Motion Detection Setting
Start MOTION DETECTION function, it will delay [TIME] to stop recording after the object leaves the shooting range.
- OFF
- 30SEC
- 1 MIN
- 3 MIN
- 5 MIN
When set in the MOTION DETECTION mode, the camera will automatically start recording when it detects any kind of movement in its filming range. When the motion stops, the camera will automatically stop recording again.

External MIC VOL Setting
The volume of external MIC or audio equipment can be set, and there are 7 grades that can be selected. It will be stereo when it is used with the external MIC.

Internal MIC VOL Setting
The volume of internal MIC can be set and there are 7 grades to be selected, there will be stereo when it is used with the external MIC, defaults to right channel.

Beep Sound Setting
When you operate the camera, the key tone can be set to ON or OFF.

Laser
To set Laser ON or OFF, when the camcorder is powered on.

Time/Date Setup Setting
There is month / day / year / hour / minute to set up on the camera.

Time Stamp Setting
- OFF: No time stamp
- DATE: DATE only
- TIME: TIME only
- DATE/TIME: both DATE/TIME
With this setting, the current time will be stamped on the video and the recording time can be seen during playback.
System Settings

TV Type Setting
- PAL
- NTSC
Choose the correct video output system when connecting AVOUT to TV. The image on the TV will be flickering if the TV system is incorrect.

Video Rotation Setting
- STANDARD
  Choose this setting when the camera is installed in the normal position.
- INVERTED
  Choose this setting when the camera is installed in the inverted position. Using this setting you can invert the image being recorded. This is useful if you wish to film with the camera on the left side of your camera. The image will be flipped the right way up using this setting.

LCD Auto Turn OFF Setup
The LCD will enter into power-save mode after the set [time] below.
- OFF
- 30SEC
- 1MIN
- 5MIN

Format Setting
Format the micro SD Card.
Note: All files in the micro SD will be deleted and will be unrecoverable after formatting. We suggest you format your memory card on a regular basis. Should you have a problem with your camera, formatting the memory card will quite often solve the issue.

Default Setting Setup
Choose Yes, to restore the factory settings

Firmware
To check the firmware version

- Appearance and all specifications are subject to change without prior notice.
- Color of product shown in the user manual maybe different from that included in the package. The Pictures are for your reference only.
<table>
<thead>
<tr>
<th><strong>Hardware</strong></th>
<th><strong>Software</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Screen</td>
<td>Loop Recording</td>
</tr>
<tr>
<td>Recording Format</td>
<td>Motion Detection</td>
</tr>
<tr>
<td>Codec</td>
<td>Real time stamp</td>
</tr>
<tr>
<td>Recording Resolution</td>
<td>Record Type: PAL/NTSC</td>
</tr>
<tr>
<td></td>
<td>Internal Mic volume setting</td>
</tr>
<tr>
<td></td>
<td>External Mic volume setting</td>
</tr>
<tr>
<td></td>
<td>Snap Shot Function in Preview/Record/Playback mode</td>
</tr>
<tr>
<td>Photo Resolution</td>
<td>Movie Recovery from sudden accident</td>
</tr>
<tr>
<td>Battery</td>
<td>delete all function</td>
</tr>
<tr>
<td>Storage</td>
<td>Video Rotation Setup</td>
</tr>
<tr>
<td>Support Max: Micro HCSD 32G</td>
<td>(30mins for 4GB card @ Full HD)</td>
</tr>
<tr>
<td>AV Output Jack</td>
<td>USB Port</td>
</tr>
<tr>
<td></td>
<td>8x fast forward/fast backward function</td>
</tr>
<tr>
<td></td>
<td>HDMI Port</td>
</tr>
<tr>
<td></td>
<td>Photo Slide show function</td>
</tr>
<tr>
<td>1/4&quot; tripod thread</td>
<td>Yes</td>
</tr>
<tr>
<td>USB Jack</td>
<td>Recording Quality Setting</td>
</tr>
<tr>
<td>DC Input</td>
<td>LCD Auto Turn Off Function</td>
</tr>
<tr>
<td>External Microphone</td>
<td></td>
</tr>
<tr>
<td>Dimension</td>
<td></td>
</tr>
<tr>
<td>Product Weight</td>
<td>122 grams</td>
</tr>
</tbody>
</table>

**With Laser Beam**

**Camera Spec**

<table>
<thead>
<tr>
<th>Camera Degree</th>
<th>Rotatable 200°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full HD/1080P:110°</td>
<td>Sensor</td>
</tr>
<tr>
<td>720P/WVGA: 135°</td>
<td>Pixels 1/2.5&quot; CMOS</td>
</tr>
<tr>
<td>Low light Sensitivity</td>
<td>3LUX</td>
</tr>
</tbody>
</table>
Package content

- 1 x HD96 camera
- 1 x Cradle
- 1 x Goggle strap mount
- 3 x Surface mount
- 1 x Bar mount
- 1 x Vented helmet mount
- 1 x Wired control
- 1 x AC charger

- 1 x AV cable
- 1 x USB cable
- 1 x Battery
- 1 x External microphone
- 1 x Carry pouch
- 1 x Quick installation guide
- 1 x User manual
- 1 x Lanyard

*Note: Product contents may change without notice.

Note: All contents above are subject to change without prior notice.