



QI Outdoor



Hidden Eye
AV270

User Guide

Fellow Adventurer,

Congratulations on receiving your new Hidden Eye AV270 trail camera!

You're well on your way to getting those hidden views you've been dreaming of. However, before you get started, pull up a hammock and read this guide to make sure you know how to safely and effectively use your camera.

Safe trails!

The QI Outdoor Team

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Contents of box

Carefully unpack camera and check that all of the following are contained in the box:

- Hidden Eye AV270 Camera
- Mounting strap
- USB cable
- Quick-start guide

Remove the protective film from the camera lens by pulling the protruding tabs.

Note: *Caution! Choking hazard: keep plastic film and bags away children.*

Hazard and Safety Warnings

Use only as intended; incorrect use of the camera and accessories can be dangerous or damage the camera.

Intended use

- This camera is intended for taking digital photos and video clips. It has been designed for private use and is not suitable for commercial purposes.

Note: *Dismantling or modifying the camera in any way will void the warranty.*

Hazards for children and persons with limited ability to operate electronic equipment

- The camera, accessory, and packaging are not toys. Keep out of reach of children to avoid danger of electrocution or suffocation.
- The camera and accessories should only be operated by persons physically and mentally able to operate it safely.

Electrical hazard

- Switch off the camera and remove the batteries if a foreign body or liquid has entered the camera. Let dry thoroughly to prevent harm to self or the camera.
- Switch off the camera and remove the batteries if the camera has been dropped or the housing is damaged to prevent harm to self or the camera.

Fire hazard

Do not leave the camera in places that are susceptible to considerable increases in temperature (e.g. a vehicle). The housing and internal parts may be damaged, which could cause a fire.

Do not wrap camera or place on fabric or other textiles. This could produce a build-up of heat in the camera that can cause deformation of the housing and may represent a fire hazard.

Injuries and material damage

- Place camera on sturdy surfaces to prevent the camera from falling and causing damage or injury.
- Ensure adequate ventilation to avoid overheating.

- Do not place on or near any open sources of flame, such as lit candles.
- Do not subject the LCD monitor to impact or pressure. This could damage the glass of the monitor, allowing the liquid to leak from the inside. In case of contact with eyes or skin, rinse immediately with water. In case of contact with eyes, contact a doctor immediately.
- Damage to the electronics, the monitor, or the lens caused by external influences such as impacts, falls, etc., are not covered by the warranty.
- Do not drop or bump the camera and always handle with care to prevent damage.

Introduction

The Hidden Eye is a wildlife and surveillance camera with a 3-zone infrared sensor. The sensor can detect sudden changes to the ambient temperature within range of the sensor. The signals of the highly sensitive infrared sensor (PIR, passive infrared sensor) switch on the camera, activating picture or video mode.

Key Features:

- 5 Megapixel CMOS sensor
- 20 Megapixel photo and 1080P HD video
- Offers a 120° wider angle of detection and improved camera response time
- Takes sharp, clear color images during the day and black and white images at night
- Has a shutter release time of 0.3 seconds
- Is water resistant according to IP66 standard
- Utilizes password protection and is lockable
- Allows date, time, temperature, and moon phase to be displayed on the images
- Uses a serial number function to encode the location on photos, allowing the user to more easily identify location when using multiple cameras
- Operates between -4° F and 140° F (-20° C and 60° C)
- Lasts up to 6 months with 8 AA batteries

Applications

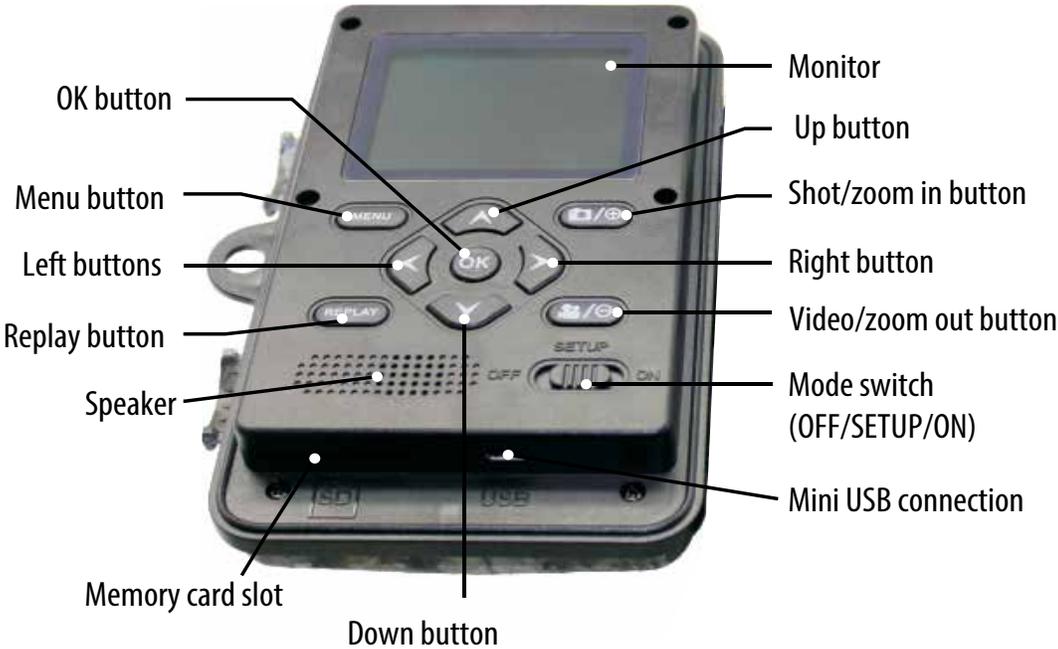
- Wildlife observation
- Animal or incident observation
- Any private internal or external surveillance (not intended for commercial use)

Camera: Diagrams and Call-outs

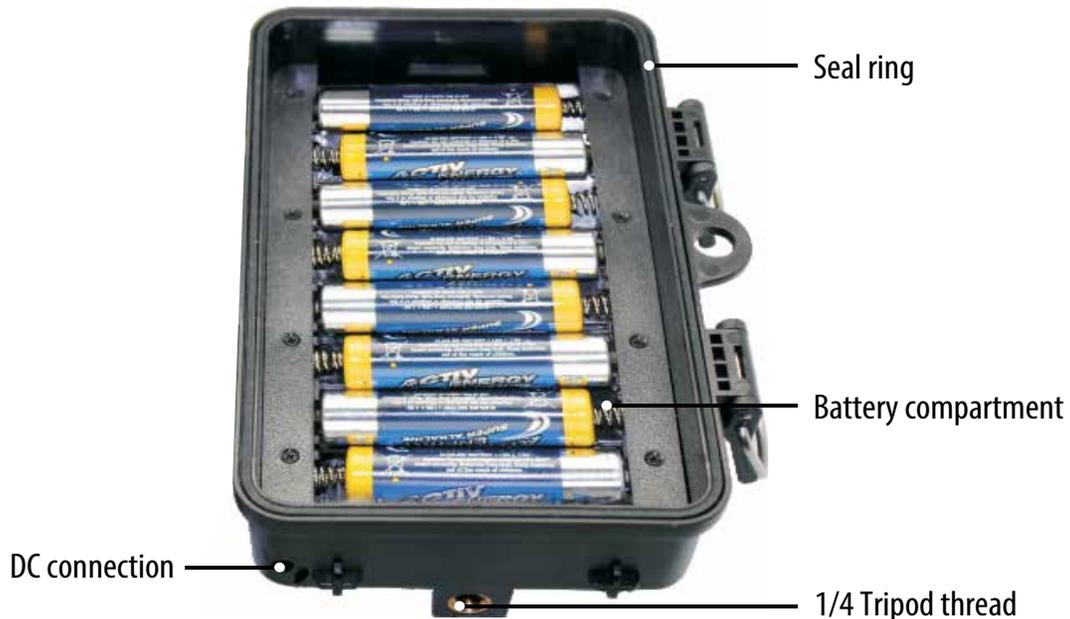
Front View



Inside View



- The monitor is only switched on in the SETUP mode for changing menu settings or viewing photos.
- An SD or SDHC memory card must be inserted into the memory card slot in order to save photos.
- Using the mini USB connection (USB 2.0), the camera can be connected to a computer. Using the mode switch, the three operating modes OFF, SETUP, and ON can be chosen.

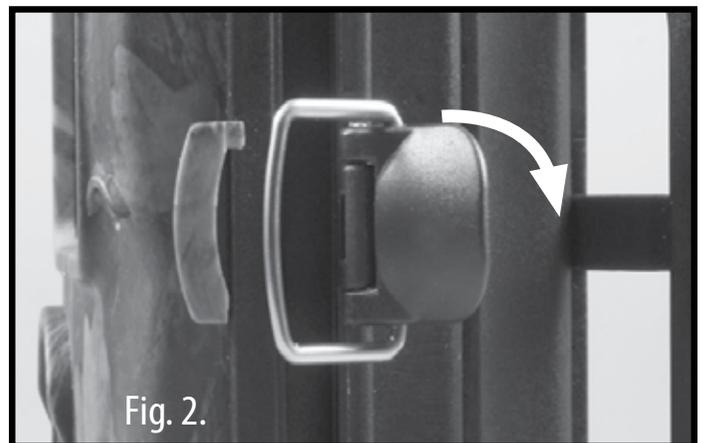
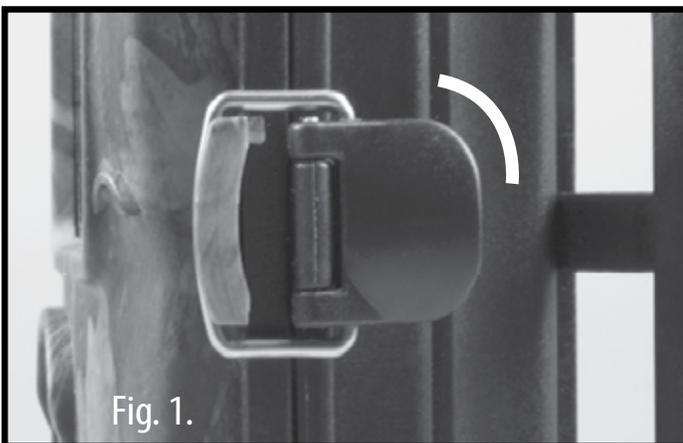


Preparing the camera

Opening and closing the camera

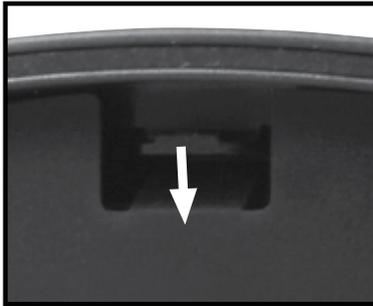
Operating buttons, connections, and battery housing are located inside the case. To open, release the two clasps on the right side of the box, as shown in the figures below.

A fixing for a padlock is provided between the two locking brackets, allowing the camera to be securely locked.



Inserting the batteries

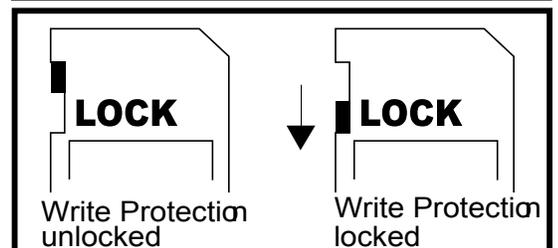
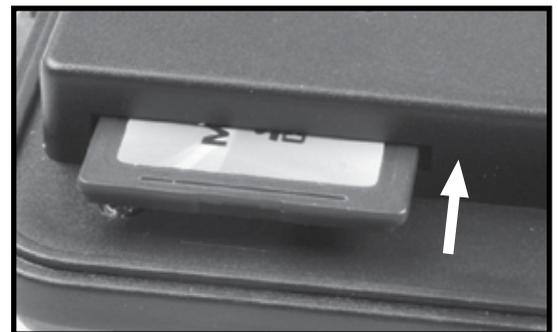
1. Open the camera. The battery compartment is housed in the right, back part of the housing. Open the protective cover of the battery compartment by pulling the clamping closure at the top inwards before lifting off the cover.
2. Insert 8 fully-charged batteries as shown in the figure below. When inserting the batteries, ensure each battery is correctly oriented.



Inserting the memory card

A memory card must be inserted in order to save photos and videos. Insert a SD/SDHC memory card into the memory card compartment before switching on the camera.

1. Switch off the camera and open.
2. Prior to inserting the memory card, ensure that the lateral write protection on the memory card has not been activated. If the camera displays "Card protected", remove the memory card and change the position of the memory protection.
3. Insert the memory card as shown in the image below. Push the memory card into the compartment until it clicks into place.
4. To remove the memory card, push card in again and release to eject.



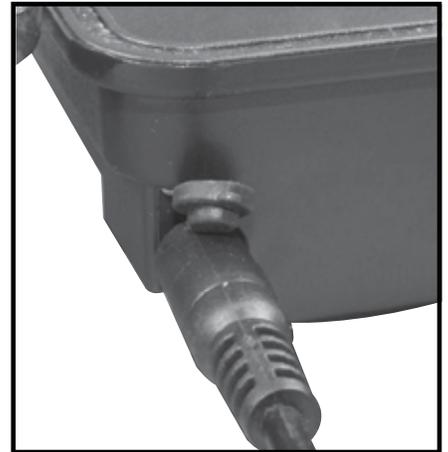
Note: SD/SDHC memory cards with a capacity of up to 32 GB are supported.

External power supply

The camera can optionally be operated using power from an external power supply (not included).

It requires a 12 volt power supply with at least 1.0 amp and a 3.5 mm external and 1.35 mm internal diameter (internal plus pole, external minus pole) connector.

Rechargeable batteries cannot be recharged in the camera using an external power supply.

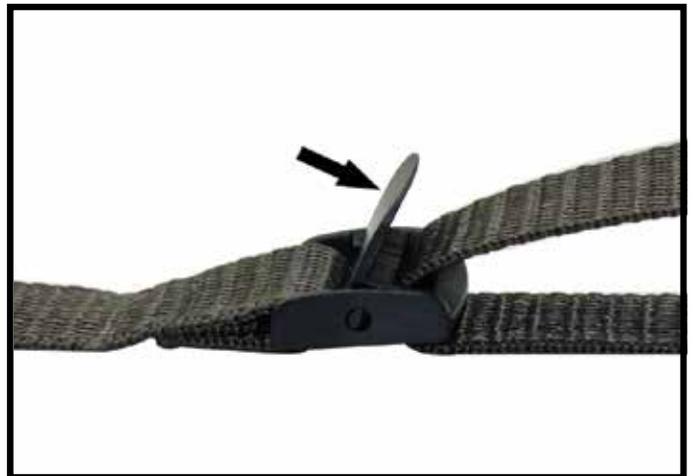


Assembly with strap

Use the securing strap supplied to attach the Hidden Eye to a tree (or other object). The images below demonstrate how to fasten the securing strap.

Position the Hidden Eye as desired and pull the loose end of the securing strap tight until the camera is firmly secured.

To release the securing strap again, pull the tab of the securing strap.



Using the camera

The camera must be set up before use. In addition to changing settings in this mode, photos, and videos can be taken and existing photos can be viewed in this mode.

Mode switch

Open the camera. The mode switch is located at the bottom edge on the left inside. There are 3 operating modes that can be selected:

- OFF: The camera is completely switched off.
- SETUP: Adjust settings and take or play back photos/videos.
- ON: The camera is activated to take photos automatically.



Operating buttons

Set the mode switch to SETUP and the camera and monitor are switched on.

Using the operating buttons, you can now use the various functions and change settings.



Recording mode

While in recording mode with a non-activated menu, the operating buttons function as follows:

- **MENU** : Open the Settings menu.
- **REPLAY** : Enter the replay mode.
-  : Change to the manual recording mode and record a video.
-  : Change to the manual recording mode and take a photo.
-  : No function in recording mode.

Replay mode, non-activated menu

While in replay mode with a non-activated menu, the operating buttons function as follows:

- **MENU** : Select the Replay menu using the MENU button.
- **REPLAY** : Press the button to return to recording mode.

-  : View existing pictures backwards and drag up wards to view photo and increase the video play volume.
-  : View existing pictures forwards and drag down wards to view photo and decrease the video play volume.
-  : Drag right to view and skip ahead the video.
-  : Drag left to view and skip back the video.
-  : Start and end replay of videos /image cut save after zoom.
-  : Zoom out the photos and decrease the video play volume.
-  : Zoom in the photos and increase the video play volume.

Replay mode, activated menu

While in replay mode with an activated menu, the operating buttons function as follows:

-  : Close the Main menu or any sub menu by pressing the MENU button.
-  : Move up one line on the menu or increment value by 1.
-  : Move down one line on the menu or decrease value by 1.
-  : Move forward to the data setting.
-  : Move back to the data setting.
-  : Open selected options or accept selected settings.

Confirm each change to a setting by pressing OK. If the change is not confirmed by pressing the OK button, the new settings are lost when leaving the menu.

-    : No function in MENU mode.

Settings

Slide the mode switch to the SETUP position to enter setup mode. Press the MENU button to go to the menu.

All menu options and possible setting values for the recording mode are listed below. The standard setting is written in bold.

- Mode : **Photo**, Video, Photo + Video

Select whether photos or videos should be taken when motion is detected. When in the "Photo + Video" mode, the camera will take a set number of photos prior to recording a video.

- Photo size: 20M(5248 x 3936), 12M (4000 x 3000), 8M (3264 x 2448), **5M (2592 x 1944)**, 2M (1600 x 1200), 0.3M (640 x 480)

A higher resolution produces a somewhat better photo quality, but results in larger files that require more space on the memory card. 20M, 12M and 8M resolutions are generated by interpolation, which can also affect quality.

- Video size : 1080P (1920 x 1080, 24 fps), **1080P (1920 x 1080, 15 fps)**, 720P (1080 x 720, 30 fps), WVGA (848 x 480, 30 fps), D1(720 x 480, 30 fps)

A higher resolution produces higher quality videos, but results in larger files that require more space on the memory card. Videos are recorded in AVI format, which can be played back on most video equipment.

- Picture NO : **1P**, 2P, 3P, 4P, 5P, 6P, 7P, 8P, 9P.

Select the number of photos to be taken in succession when the camera is activated.

Note: *If you select a large picture size, the available options will decrease.*

- Video Length: Default of **10 seconds**, but the duration can be specified between 10 and 180 seconds.
- Interval: Default of **30 seconds**, but it can be specified between 5 seconds and 60 minutes.

This indicates the period for the camera to wait before it reacts to the triggering of the main sensor after an animal has first been detected. The camera does not record any images or videos during the selected interval. This prevents the memory card from being filled with unnecessary shots.

Note: *If the camera is taking pictures with a short interval, the battery won't last as long.*

- Time lapse (periodic shot) : Off /On

When "on" has been selected, the camera will automatically take photos at the selected time interval, regardless of whether the sensor has detected motion. This is useful for observing cold blooded animals such as snakes, watching plants, etc.

As soon as the "On" setting has been confirmed by pressing the OK button, you can enter the interval at which photos will be taken.

Note: *In this mode, the PIR no longer triggers the camera. Photos will be taken only at the specified intervals.*

- Side PIR: Off/**On**

The two side PIR sensor zones provide a wide detection angle to detect more potential triggers. However, in some situations the wider angle of detection can cause the camera to switch on and off unnecessarily, considerably affecting battery life. In these situations, it is recommended that the side sensors be switched off.

- Recording volume : Off/**On**
- Auto power off : 3 min/**5 min**/10 min/off
- Backlight timer: **1 Minute**, 3 minutes, 5 minutes, or OFF. The LCD monitor will automatically turn off after the setting time.
- Flash light: **Auto**, High, Low. Set the infrared LED brightness.
- Timer: **Off**/On

Set timer to "On" if the camera should only be active within a certain time frame. Once "On" has been confirmed with the OK button, the start and end time can be set. The camera will not take any photos or videos outside of this period.

- Date & time: Set date and time

- Time format: **12 hour**/24 hour
- Time stamp: **On**/Off

Select "On" to print the date, time, temperature, and moon phase on each photo or video. Otherwise, select "Off."

- Camera name: Default name is **Trail Camera** (only used on photos, not videos). You can use a combination of 13 digits and letters to document the location on the photos and videos. When using more than one camera, this is an easy way to identify the location when viewing photos and videos.
- Password: **Off**/On

After selecting "On" enter a four digit password to protect your camera against unauthorized access. This password must be entered each time the camera is switched on in the SETUP mode before the camera can be used.

Note: *If you forget your password, unlock the camera with the back-up password "OPEN"*

- Language: Select the language for the menu. The following languages are available: English, German, Danish, French, Polish, Dutch, Spanish, Italian, Magyar, Slovenian, Japanese, Simple Chinese and Traditional Chinese.
- TV out: **PAL** & NTSC
- Format: **No**/Yes

By choosing "Yes" you are choosing to format the memory card. All files will be deleted. Press OK and confirm by selecting "Yes."

We recommend formatting the memory card if it has already been used in other devices or if it is a new card.

Note: *Ensure that files have been backed up prior to formatting!*

- Default settings (reset to factory): **No**/Yes

Press "Yes" to reset the camera settings to the default values and confirm by pressing OK.

- System: There are two available options:

FW Update: If the memory card contains new firmware, this can be installed by pressing OK. During the update the respective status is shown on the display.

FW Version: Shows the firmware version installed on the camera.

- In replay mode, the Delete option is available in the menu.

Single: Delete individual photos and videos. After pressing the OK button, the photo or video to be deleted is shown. Confirm deletion by selecting "Yes" and confirm by pressing OK. To end the deletion process, select "No" and confirm by pressing OK.

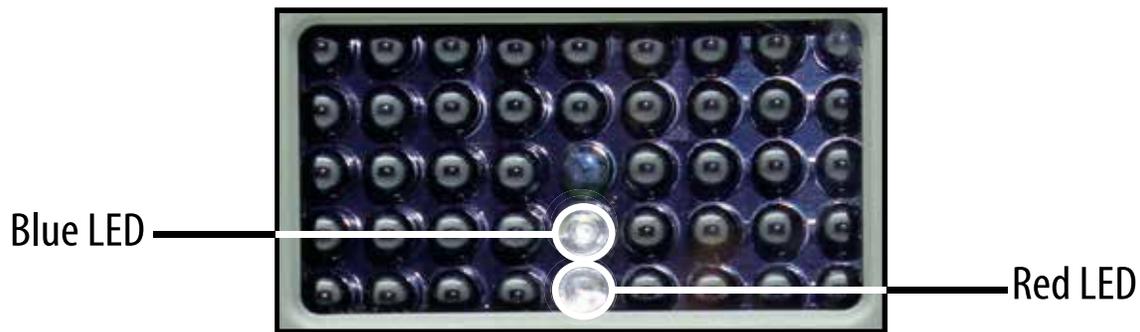
All: Delete all photos and videos on your memory card. To confirm deletion of all your photos and videos, select "Yes" and press OK. Select "No" to cancel.

Aligning the camera

Use the SETUP mode to determine the best possible detection angle and range of the movement sensor. Attach the camera to a tree at approximately 3-9 feet high and point the camera in the desired direction.

Move slowly from one side of the observed area to the other. Move parallel to the camera. Try out different angles and distances.

- The blue LED on the front of the camera indicates that you were detected in a side sensor zone.
- The red LED on the front of the camera indicates that you were detected in the central sensor zone.



Use this method to determine the best position for aligning the camera.

Note: *The LEDs only light up when motion is detected in SETUP mode. The LEDs do not light up when in Live mode.*

To prevent unnecessary photos and battery drainage, we recommend not using the camera at sunny points and check that there are no branches in the active area of the sensor.

In order to reduce sun glare, we recommend aiming the camera either North or South. The detection range of the sensors is approximately 100° to 120°, the detection range of the lens is approximately 40°.

Make sure the camera is set to the correct height in-line with the point to be observed. Where necessary, point the camera down for optimal alignment.

Note: *The Hidden Eye corresponds to protection class IP 66. The camera is protected against dust and spray water and can be used in any weather condition.*

Setting up the Live mode

The standard application of the Hidden Eye is the Live mode. When in this mode, photos are either triggered by PIR sensors or at intervals, according to the respective setting.

To set up the Live mode, put mode switch to ON position.

The red status LED flashes for approximately 5 seconds, after which the camera operates automatically and enters the Standby mode.

As soon as animals or other objects directly enter the detection area of the central sensor zone, the camera starts to record photos or videos.

When animals enter the detection range of the side sensors, the sensors detect the movement and activate the camera. As soon as the animals move further into the detection range of the central sensor zone, the camera starts to take photos/videos.

After movement has been detected by the side sensors and no further movement is detected for five minutes, the camera returns to Standby mode.

Advantages of PIR sensors (Passive Infrared Sensors)

In order to save on battery power, most trail cameras are normally in Standby mode, in which only the main sensor is active. As soon as the central sensor zone detects motion, the camera is switched on and starts taking photos. The time between the activation and the start of shooting is referred to as triggering time.

When animals move past the camera swiftly, it is possible that the photo will only show the rear part of the body or possibly nothing at all. The Hidden Eye solves this problem due with the unique design of the lateral PIR sensor zone. The combination of the two lateral sensor zones and central sensor zone produces a 100°-120° induction angle, by far exceeding the angle of an individual sensor.

When animals first pass through the detection range of the side PIR sensor zone, the camera is activated and is ready to start shooting after 0.3 seconds. When the animal then slowly enters the detection range of the central sensor, the camera starts shooting and thus records the entire body of the animal. This process takes approximately 0.2 seconds.

When the animal remains only within the detection range of the side sensor zones, the system is designed to prevent the permanent supply of power to the camera. When the animal does not enter the detection range of the central sensor zone and thus does not trigger the sensor, the camera returns to the Standby mode after 5 minutes. Where triggering incidents occur twice in succession only within the detection range of the side sensor zone, the camera is not activated by the side sensor zone but only by the central sensor zone. At a later stage when the animal finally enters the detection range of the central sensor zone and does not move rapidly, the photo (based on the standard reaction time of one second) will likely capture the entire body of the animal.

Night recording

During night recording, the infrared LEDs (IR LEDs) at the front of the Hidden Eye provide the light required for taking photos.

IR LEDs with a long wavelength are used to keep red light to a minimum. The provided number of IR LEDs generates a high deflection angle, thus allowing night recording at a distance of 10 ft to 65 ft without overexposing the object. Reflective objects can, however, cause overexposure within this range (e.g. road signs).

Note: *night recording using IR LEDs produces black and white images.*

File format

The Hidden Eye stores photos and videos on the memory card in the folder “\DCIM\100MEDIA”.

Photos are given a file name with extension “JPG”(Example: “SUN001.JPG”) and videos are given the extension “.AVI” (Example: “SUN002.AVI”).

When in SETUP and OFF mode, use the enclosed USB cable to transfer files onto the computer. Alternatively, you can insert the memory card in a card reader on the computer.

The video file can be played with most standard programs, such as Windows Media Player, QuickTime, etc.

Connecting to a Computer

The Hidden Eye can be connected to a computer using the supplied USB cables to view existing photos/videos.

System requirements

Windows	Macintosh
Pentium® III or higher	PowerPC G3/G4/G5
Windows® XP/Vista/7/8	OS 10.3.9 or newer system
512 MB RAM	512 MB RAM
1GB available hard disk space	1GB available hard disk space
Screen resolution 1.024 x 768 or higher	Screen resolution 1.024 x 768 or higher
Available USB connection	Available USB connection

1. Connect the camera to your computer using the USB cable.
2. The camera switches automatically to USB mode, regardless of the selection on the mode switch.
3. The camera installs on the computer as an additional drive under the name "Removable storage device."
4. Double click on the device to see storage.
5. The photos and videos are located in the sub folders of the "DCIM" folder.
6. You can copy or move photo and video files on the computer.

Alternatively, you can insert the memory card into a card reader on the computer.

Note: Mac computers show an "Unknown" drive on the desktop. When clicking on this drive, the program "iPhoto" is automatically started.

Technical Specifications

Element	Description
Image sensor	5.0 mega pixels, 1/2.5" CMOS sensor
Photo resolution	20M: 5248 x 3936 12M: 4000 x 3000 8M: 3264 x 2448 5M: 2592 x 1944 2M: 1600 x 1200 0.3M: 640 x 480
Screen	2.4 inch (6.1 cm) color TFT LCD; 480 x 234 pixels
Recording medium	Supports SD/SDHC memory cards up to 32 GB (optional)
Video resolutions	1080P 1920 x 1080 (24 fps), 1920 x 1080 (15 fps), 1280 x 720 (30 fps), 848 x 480 (30 fps), 720 x 480 (30 fps)
Lens	F=7.45; F/NO=2.4; FOV=55°; Auto IR filter
Effectiveness	Daytime: 3 feet - infinite Night time: 9 feet - 65 feet
Triggering distance	Up to 65 feet
Triggering time	Approximately 0.3 second; Pre boot 0.2 second
IR flash	42 pcs infrared LEDs, range 65 feet
Detection angle of sensors	Central sensor zone: 40° Side sensor zone: each 30° Total sensor angle zone: 120°
Spray water protected	Yes (IP protection class66)
Storage formats	Photo: JPEG Video: AVI Motion JPEG
Connections	Mini USB 2.0
Power supply	8x batteries type LR6 (AA) 8x NiMH batteries type AA with low self discharge External 12V power supply, at least 1A (not supplied)
Standby time	Approximately 6 months (with 8 batteries)
Dimensions	Approximately 15.3 x 3.8 x 3.0 inches

Troubleshooting

Issue	Solution
The camera will not turn on	<ul style="list-style-type: none"> • Ensure the batteries are installed correctly. • Check if the batteries are dead. If so, replace with new batteries.
The camera turns off automatically	<ul style="list-style-type: none"> • Ensure batteries are charged. • Check if SD card is full. If so, transfer images and videos to your computer or delete files in the Replay Mode.
Screen shows "SD card Error"	<ul style="list-style-type: none"> • Ensure the SD card is class 10 standard or higher. • Use the camera to format the SD card.
Videos are choppy or jumpy when played on a computer	<ul style="list-style-type: none"> • Ensure that the computer system requirements are met. • Ensure AVI format Video clip can be played on your computer.
The image is not clear	<ul style="list-style-type: none"> • Make sure the protective films on IR LEDs and lens have been removed. • Ensure the lens is not dirty.
The camera does not take images or record videos	<ul style="list-style-type: none"> • If the SD card is full, transfer images or videos to your computer or delete files in the Replay Mode. • The memory card may not be formatted properly. Format the SD card or use a new card.
Camera can not turn off	Remove all the batteries to reset the camera.
Forget the password	Enter the back-up password "OPEN".

System information, Maintenance, and Disposal

Trademark information

Microsoft® and Windows® are trademarks of Microsoft Corporation registered in the US.

Pentium® is a registered trademark of Intel Corporation.

Macintosh is a trademark of Apple Computer Inc.

SD™ is a trademark.

Other names and products can be trademarks or registered trademarks of the respective owners.

Care

Do not use any corrosive cleaners, such as methylated spirits, thinners, etc. to clean the camera housing and supplied accessories. When required, clean system components with a soft dry cloth.

Storage

Always remove the batteries from the housing if the camera is not being used and store the batteries separately, out of the reach of children.

Disposal

For disposal, separate packaging into different types and dispose of in-line with environmental regulations in supplied collection containers. Batteries and storage batteries may not be disposed of in domestic waste in the EU. Consumers are obliged by law to return used batteries to communal collection points or dealers selling batteries. Storage batteries and batteries do therefore contain the adjacent symbol, indicating that electrical and electronic equipment may not be disposed of in domestic waste in the EU. This prevents potentially harmful effects on the environment and health as a result of incorrect disposal. For further information, contact the respective department of your local council.