User Manual

HC-300A

Contents

1. Instructions

1.1 General Description

This digital trail camera is a surveillance camera working automatically. It can be triggered at once by any movement of human (or animals) in a certain region of interested (ROI) monitored by a high sensitive Passive Infrared (PIR) motion sensor, and then automatically captures high quality pictures (up to 12M pixels) or records 1080p HD video clips .

At sunrise the unit begins to take color photos and video until there is insufficient light (dusk) when it begins to take infrared (monochrome) photos and video.

It is easy to use; there is a 2.0 inch colorful LCD display on camera. It is resistant against water and snow for outside uses.

1.2 Camera Body Interface

The camera has the following I/O interfaces: USB connector, SD-card slot, TV output. Take a few moments to familiarize yourself following the camera controls and displays. It is helpful to bookmark this section and refer to it as you read through the rest of the manual.

1.3 Camera components and features

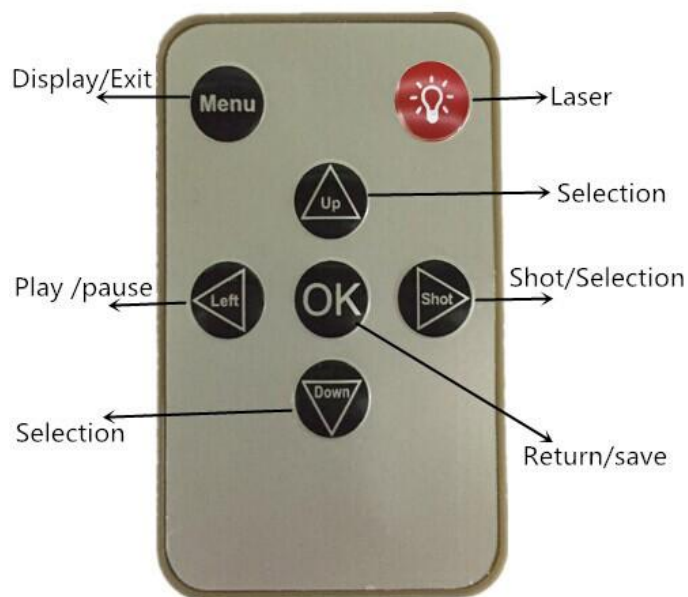|	
1. 9V Input Power Jack	5. Infrared Lamp
2. LCD Screen	6. Light Sensor
3. Microphone Hole	7. PIR Sensor
4. Lens	8. Lock Latch

9. USB Jack
10. SD Card Jack
11. Power Off / Config / ON
12. Battery Case

1.4 Remote Control

Note: Press the punctuation " " for laser light.

Note (Under CONFIG mode):

1. Press directly; the camera will take picture or video directly.

2. Press directly; the picture or video recorded can be viewed.

3. Viewing picture, press or .

4. Viewing video, press to play, press again to stop, press to return.

1.5 Shooting Information Display

When the camera is turned on (the power switch is slid to CONFIG position), the shooting information will be displayed in the monitor.

3. Image Size

2. Camera Mode ⸺ 📷12M   🔋 ⸺ *4. Battery Level*
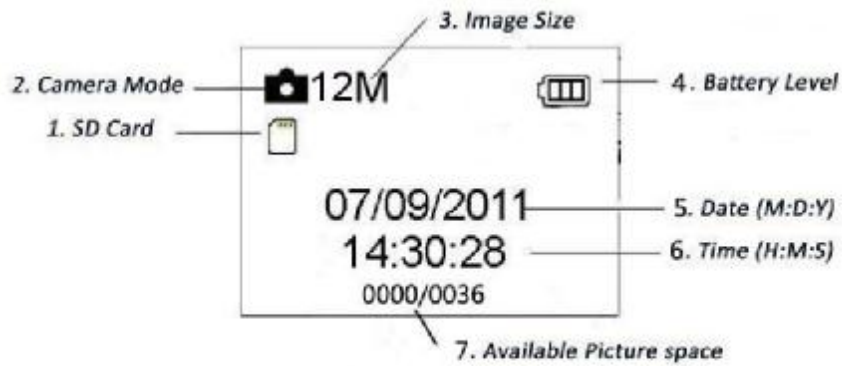
1. SD Card ⸺ 🗋

07/09/2011 ⸺ *5. Date (M:D:Y)*
14:30:28 ⸺ *6. Time (H:M:S)*
0000/0036

7. Available Picture space

1.6   Supported Format

Item	Format
Photo	JPG
Video	AVI
File Format	FAT32

Here are some important notices. You don't need to concern about the file system format of the camera unless you have problems with reading the SD-card by your other equipment. If this happened, please format the SD-card in the camera or in a computer at first and then reinsert the card into your camera to make a try.

2.Cautions

> The working voltage of the camera is 9.0V. The camera is supplied by four or 8X AA batteries.

> Please unlock the write-protect before inserting the SD-card.

Please insert the SD-card when the power switch is at OFF position before Config the camera.

> Please do not insert or take out the SD-card when the power switch is at ON position. It is recommended to format the SD-card by the camera when used at the first time.

> The camera will be in USB mode when connected to a USB port of a computer. In this case, the SD-card functions as a removable disk.

> Please ensure sufficient power when having firmware upgrade, otherwise the upgrade process could be interrupted incorrectly. If any fault occurs after improper upgrading process, the camera may stop function properly.

3. Easy Operations

3.1 Power Supply

To supply power for the camera, 8X AA size batteries are needed.

Open the bottom cover. Confirm that the power switch is at the OFF (Right) position, pull out the battery depot. Load the fully charged batteries into the depot according the polarities sign shown below. Push back the battery compartment to the battery chamber.
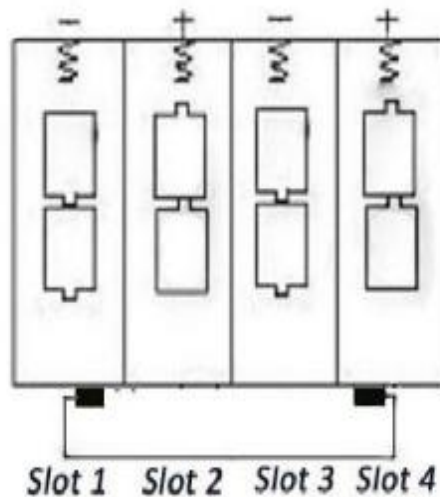
The following batteries with 1.5V output can be used:

1. High-density and high-performance alkaline batteries (Recommended)
2. Rechargeable batteries

There are 4 battery slots. Slot 1 and 2 form one group ("1" will mark on depot), while slot 3 and 4 form the other group ("2" will mark on depot) where each group can supply the power individually.

When in Config Mode, camera will be automatically shut down to save power if without any operation within 3 minutes; it could be waked up by any movement detection. When in low-battery state, camera will be also automatically shut down. Please change the batteries in time.

Slot 1   Slot 2   Slot 3   Slot 4

3.2 Insert the SD-card

Insert SD-card into the card slot with marked side upwards.

Please note that the SD-card can only be plugged in one direction. Make sure that the write-protect switch of the SD-card is on the "write" position.

3.3 Power on and Enter into the ON Mode

Before switching on, please pay attention to the following:

1. Avoid temperature and motion disturbances that could be construed as animals or humans such as trees that are exposed to direct sunlight for much of the day or any other heat source. These may cause false triggers.
2. The height from ground for placing the camera should 1 meter with the object. For example for deer waste height is good size appropriately. In general, one to two meters are preferred.

Slide the power switch to the ON position to power on the camera. After switching on the camera, the motion indication LED (red) will blink for about 15 seconds. The 15s is a buffering time before automatic capturing photos or videos, e.g. for closing and locking the bottom cover, fixing the camera on a tree and walk away.

In ON mode, the camera will take pictures or videos automatically according to the default settings or previous custom settings. The camera has the sound recording function, so the sound will be embedded in the video clip while capturing a video.

3.4 Enter into the Config Mode

Slide the power switch to the Config position to enter into the Config mode. There are some functions in Config mode: Custom settings, manual capture, preview.

3.4.1 Customer Settings

Press the MENU switch to enter into menu setting. The camera can be taken over control to manually customize the camera settings which display on the camera or external TV monitor. The detailed operations will be described in "Advanced Operations" chapter.

3.4.2 Manual Capturing

You can press OK to manually capture photos or recording video.

3.4.3 View Images or Videos

There are two ways to view the captured images or videos:
1. LCD screen on camera.
2. TV monitors which connects to camera with TV cable.

Turn right the select switch to view images, the image will be shown in the LCD screen on camera or TV monitor. Press UP to view the previous image and press DOWN for the next. The detailed operations like deleting images or videos will be described in "Advanced Operations" chapter.

3.5 Power Off

Slide the power switch to OFF position to power off the camera. Please note that even in the OFF mode, the camera still consumes certain power at μA level.
Therefore, please remove the battery if the camera will not be used for a long time.

4.Advanced Operations

From the basic operations of the camera in previous chapter, we know that the camera has three basic operation modes:
1. OFF mode: Power switch is at OFF position (Right).
2. ON mode: Power switch is at ON position (Left).
3. Config mode: Power switch is at Config position (Middle).

In the above three modes, the OFF mode is the specified safe mode when replacing the SD-card or batteries and transporting the camera.
This chapter explains the advanced operations for customizing the camera settings. The settings can only be customized in CONFIG mode and the remote control is needed.

4.1 Settings Menu

To view the camera settings menu, press MENU in the CONFIG mode (called settings menu in this chapter).The settings menu will be shown on the LCD on camera or the external TV monitor.

4.1.1Photo Setting

Camera		
Resolution	⟹	12MP 8MP 5MP
Interval	⟹	1 Second 5 Seconds 10 Seconds 30 Seconds 1 Minute 5 Minutes 10 Minutes 30 Minutes
Multi	⟹	Single 3 Pictures 6 Pictures 9 Pictures
ISO	⟹	100 200 400
ID		CAM000

4.1.2Video Setting

Video		
Resolution	⟹	1080P 720P WVGA QVGA
Video Length	⟹	10S 30S 60S 90S
Voice	⟹	OFF ON

4.1.3 System Setting

4.1.4 Default

Default Settings are listed as below:

Setting	Default	Items
Mode	Camera	Camera, Video, Camera & Video
Resolution (Camera)	12MP	12MP, 8MP ,5MP
Interval	1 Second	1-30 Seconds,1-30 Minutes
Multi-shot	1	1,3,6,9 Pictures
ISO	Auto	Auto,100,200,400
Resolution (Video)	1080P	1080P, 720P, WVGA ,QVGA
Video Length	10s	10s,30s,60s,90s
Date/Time	Same as last time	YY/MM/DD,MM/DD/YY,DD/MM/YY Adjust
Distance	High	Low, Medium, High
Language	English	English, French, Germany, Spanish , Russian, Danish, Dutch, Poland, Portuguese, Swedish, Italian, Finnish
Timer	0 0 0 to 23 59 59	Adjust
Format	Internal Memory	Internal Memory, SD Card
Password	Off	Off, On

4.1.4 General Settings

The operating steps are suitable for following menu items: Camera Mode, Photo Size, Video Size, Multi, Video Length, Interval, and Timer.

4.1.5 Set Camera Mode

There are 3 camera modes: Camera, Video and Camera + Video.

a) Press to display the setting menu.

b) Press to select Mode.

c) Press to select Video.

d) Press the select switch to save the current setting.

Press to cancel setting and return to info display.

4.1.6 Format SD-Card

The system will delete all images or videos stored in the SD-card after formatting, make sure that you have made a backup of important data.

a) Press to display the setting menu.

b) Press to select System setting.

c) Press to select Format.

d) Press to select SD Card.

e) Press the select switch to choose Enter to enter into submenu.

f) Press to select OK. OK will be highlighted.

g) Press to start formatting the SD-card. During formatting, the display screen will show a message "Please Wait" as below.

Press MENU to cancel setting and return to info display.

<div style="border:1px solid black; padding:10px; text-align:center;">

Please Wait!

</div>

4.1.7 Set Photo Size

This parameter has three values: 12MP, 8MP and 5MP. The default value is 12 Mega pixels. The following shows how to set pixel size as 5Mega Pixels:

a) Press to display the setting menu.

b) Press ▼ to select Resolution.

e) Press ▷ to select 12Mega Pixels.

c) Press ▼ the select switch to save the current setting, then press menu to return to info display.

Press ● to cancel setting and return to info display.

4.1.8 Set Video Size

Video also has 4 values: 1080P, WVGA, QVGA.
The default value is 1080P; the following shows how to set 720P video size as provided that the previous option is at WVGA:

a) Press ● to display the setting menu.

b) Press ▼ to select Resolution.

c) Press ▷ to select WVGA.

d) Press ▼ the select switch to save the current setting, then press menu to return to info display.

Press ● to cancel setting and return to info display.

4.1.9 Set Date and Time

You can change the date and time of the device by setting this parameter when necessary, e.g., after every battery change. The date format is day/month/year, the time format is hour: minute: second. The valid value for year is between 2010 and 2050. Provided that the date and time are needed to be set to November 15th, 2011 and half past ten, the steps are as following:

a) Press ● to display the setting menu.

b) Press ▷ enter into "system".

c) Press ▼ to select Date/Time.

d) Press ▷ to Display Date/Time Interface, Press UP and DOWN to change the Value.

e) Press ▷ the select switch to save all current setting, then press MENU to

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return to info display.

Press to cancel setting and return to info display.

4.1.10 Set Multi

This parameter affects the number of pictures taken for each triggering in the camera mode. It has four values: "1 Photo", "3 Photos" "6 Photos" and "9 photos". Its default value is "1 Photo". The following shows how to set photo burst to 3 Photos, provided that the previous option is 1 Photo:

a) Press to display the setting menu.

b) Press to select Multi.

c) Press to submenu.

d) Press the select switch and press to save the setting.

4.1.11 Set ISO

This menu could only help you get a better photo at night, there are 4 values: Auto, 100,200,400.

a) Press to display the setting menu (under CAMERA column).

b) Press to select ISO(100/200/400 selectable)

c) Press to save the current setting.

4.1.12 Set Video Length

The following shows how to set video length to 30 Seconds, provided that the previous value is 10 Seconds:

a) Press to display the setting menu (under VIDEO column).

b) Press to select Video Length.

c) Press to save the current setting.

4.1.13 Set Video Sound

The following shows how to turn off the sound of the video:

a) Press to display the setting menu.

b) Press to select Video and find Voice.

c) Press ![OK] to display the VOICE setting and choose off and Press ![OK].

4.1.14 Set Interval

This parameter means that how long the PIR (Passive Infrared motion sensor) will be disabled after each triggering in ON mode. During this time the PIR of the device will not react to the motion of human (or animals). The minimum interval is 5 seconds, it means the PIR works all the time and media is taken almost continuously. The maximum interval is 30 minutes; it means the PIR will be disabled for 30 minutes after each triggering. The default value is 5 seconds.

The following shows how to set PIR Triggering Interval Time as 1 minute provided that previous option is 5 seconds.

a) Press ![Menu] to display the setting menu.

b) Press ![Down] to select Interval.

c) Press ![Shot] to enter in to the interval setting.

d) Press ![Down] to select 1 minute.

e) Press ![OK] to save the current setting, and then press ![Menu] to return to info display.

4.1.15 Set Timer

This parameter defines a certain time lapse in a day when The Camera can be triggered. In the rest of the time the device is shut off. The effective value of the hour ranges from 0 to 23 while the minute ranges from 0 to 59.

Provided that the camera should work from eight a.m. to five p.m., the steps are as follows:

a) Press ![Menu] to display the setting menu.

b) Press ![Down] to select Timer.

c) Press ![Shot] to select item, press UP or DOWN to change the value until the start time changes to 8 and the stop time changes to 17.

d) Press ![OK] to save all current setting.

4.1.16 Enter Password

If the password setting is selected as On, after switching on the camera, the LCD screen on camera will prompt to enter password. The default password is off. It can be changed where the steps are as following:

a) Press ![Menu] to display the setting menu.

b) Press to select Password.

c) Press to select ON, and then press Right to select 4 numbers as password.

d) Press to save the current setting, and then press to return to info display.

e) The LCD screen will prompt to enter password next time you switch on the camera.

4.2 Delete Photo or Video

The operations are as following:

a) Press to display Photos and Videos.

b) Press to select Delete.

c) Choose to delete or protect photo or video.

d) Press to save the setting.

Please note that after deleting a picture or a video file, the deleted files can't be restored! Furthermore, in order to delete all the images and video clips in the SD-card, it is suggested to format the SD-card

4.3 File Numbering

Images and videos are separately saved in the pre-named folder. File numbering continues by adding one to the last number for each new image or video. The saving name is like PTDC0001.JPB or PTDC0001.AVI. Through the suffix you can distinguish whether the file is an image (with suffix.jpg) or a video (with suffix.avi).

4.4 Firmware Upgrade

This camera is equipped with an automatic upgrade function for you. Upgrading is needed only when an improved firmware is available. The operations are as following:

1. Unzip the update file.
2. Copy the FWXXX.bin to SD card.
3. Insert the SD card into the camera.
4. Power on the camera (Config Mode).
5. The camera will read it and update itself automatically. During the updating, the camera screen is black.
6. The screen will light on after being finished.
7. Plug out the SD card, then insert it into pc, delete the FWXXX.bin in the SD card (If you don't do this, the camera will enter update mode when power on again).
8. Insert the SD card into the camera for its working.

Appendix I: Technical Specifications

Image Sensor Type(True Megapixels)	5 Mega Pixels Color CMOS
Memory	SD Card 8MB~32GB
Lens	F=3.1; FOV=60 °
Size	145mm * 80mm * 55 mm
IR Filter:	Full Automatic IR Filter
TFT Display Screen:	2.0 inch
PIR Sensitivity	3 sensitivity levels: High/Normal/Low
PIR Sensor Sight Angle	60 Degrees
PIR Sensing Distance	65ft/20meters
Number of IR LED	36 Black LEDs
Max Night Vision Lighting Distance	65ft/20 meters
Trigger Speed	0.8 second
Default camera password	1314
Triggering Interval :	1 second ~ 30mins (default 1 sec)
Selectable Image Resolution:	12MP/8MP/5MP
Multiple Frame	1/3/6/9
Video Resolution	1080P/720P/VGA
File Format	JPEG/AVI
Date Time Imprint	Yes
Moon Phase Imprint	Yes
Exposure:	Auto
Device Serial No	4 Digits and 26 alphabet set by yourself
Default camera ID	CAM000
Periodic shot	1Second~24Hours
Stand-by current	0.2mA
Stand-by time	3Months(8 AA batteries)
Interface	USB Jack; SD Card Jack
Fix Method	Belt
Operation Temperature	-30 ~+70℃/-22~+158℉
Power Supply	8×AA or 4×AA battery
Camera Socket	Yes
Water proof	IP54

Appendix Ⅱ : Parts List

Part Name	Quantity
Digital Camera	1
Remote Control	1
USB Cable	1
Quick Start Guide	1
Tilt Adjust	1