Advance Security

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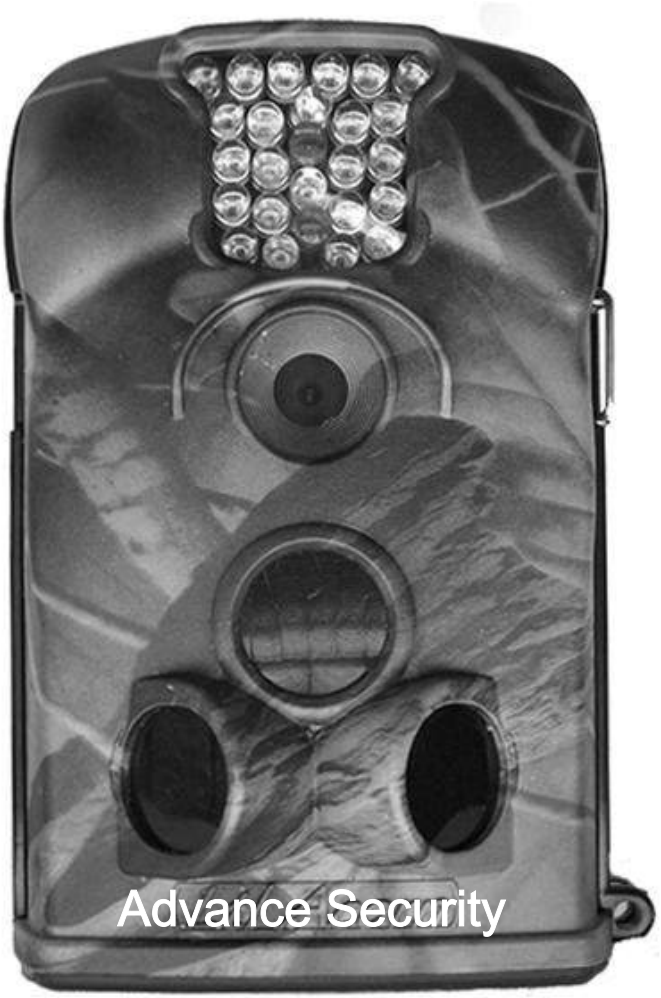
Battery Powered Motion Camera

SSC-400HRC & SSC-400HDA



USER'S MANUAL

TABLE OF CONTENTS

GENERAL INFORMATION

1.1 Introduction

The camera is triggered by a sudden change of ambient temperature caused by moving game in a region of interest (ROI), which is detected by a highly sensitive Passive Infra-Red (PIR) sensor, and then take pictures or video clips automatically.

Features:

- 12 Mega Pixels CMOS sensor
- Sharp and bright color pictures/videos in daytime and clear black/white pictures/videos at night. Take videos immediately after taking pictures under the same Mode Cam+Video
- Built-in 2 ¼" LCD color display
- Ultra low standby power consumption. Extremely long in-field life (in standby mode, up to 3 months with 4 x AA batteries and 6 months with 8 x AA batteries)
- Unique side Prep Sensor design provides wider sensing angle and enhances camera's response speed
- Perform in the most extreme temperatures from -22°F to 158°F
- Compact size (5 ½ x 3 ½ x 2 ½ inches). Well designed to deploy covertly
- Impressively quick trigger time (1 second)
- Under Time Lapse (Periodic Shot) setting, the camera automatically and constantly takes pictures/videos at specified interval. This is very useful when observing plants flowering, birds building nest or insects running around, etc.
- Setting Time Switcher on, the camera can be programmed to only work in specified period of time
- Backpack-looking tree grabber makes mounting and aiming a snap
- Serial Number setting enables you to code locations in the photos. This helps multi-camera users identify the location when reviewing the photos
- Date, time, temperature and moon phase can be stamped in the pictures
- Lockable and password protected

1.2 Application

- Trail camera for hunting
- Animal or event observation
- Motion-triggered security camera, for home, office and community
- All other indoor/outdoor surveillance where invasion evidence needed

1.3 Illustration

- Figure 1.1 shows the front view of the camera
- Figure 1.2 shows the bottom view of the camera
- Figure 1.3 shows the back view of the camera

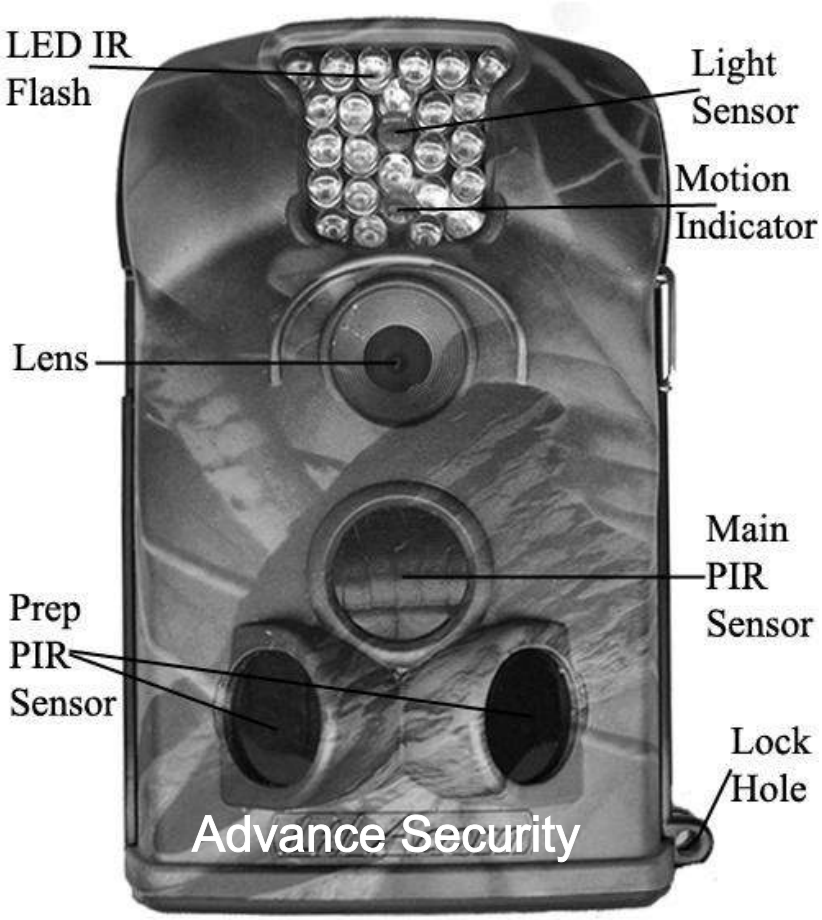


Figure 1.1: Front View

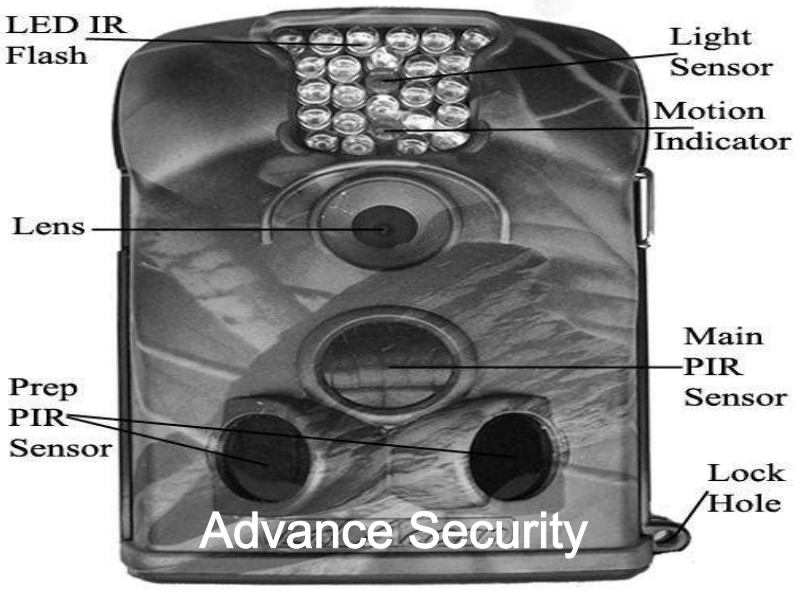


Figure 1.2: Bottom View

The camera provides the following connections for external devices: USB port, SD card slot, TV out jack, and external DC power in jack. The 3-way Power/Mode Switch is used to select the main operation modes: **OFF**, **ON** and **TEST**.

To supply power, use four **NEW** high-performance alkaline or lithium AA batteries. FOR BETTER PERFORMANCE, WE RECOMMEND USING **ENERGIZER LITHIUM AA BATTERIES.** To achieve longer in-field life, always install the additional battery box which contains four more AA batteries. (Please reference Appendix III: Instruction on Installing Additional Battery Box)

Figure 1.3: Back View

QUICK START

2.1 Load Batteries

Let us begin with loading the batteries. Please follow the instructions below.

- Open the bottom cover by pulling down the lock hole.
- Push the cover of the battery compartment and release. It will pop out.
- Install 4 AA batteries. Make sure the polarity matches the sign on the cover.
- Replace the cover.

Alternatively the camera can run on an external 6V DC power source (optional, user provided). When both external power and batteries are connected, the camera will be powered by the external one.

2.2 Insert SD Card

The camera does not come with internal memory. So it will not work without a SD (Secure Digital) memory card or SDHC (High Capacity) card. Before inserting the SD card into the card slot, please make sure the write-protect switch on the side of the SD card is "off" (NOT in the "Lock" position). The supported memory capacity is up to 32GB. If you use a card capable of above 32GB, make sure you test it before putting the camera in use.

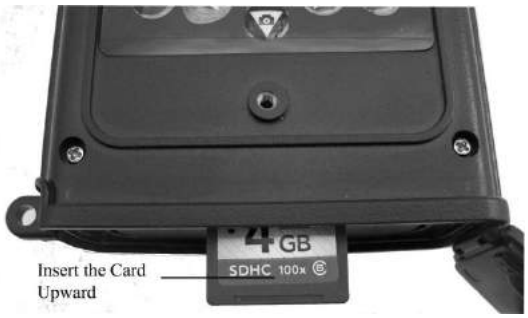


Figure 2.1

CAUTION: ALWAYS SWITCH THE CAMERA TO OFF MODE BEFORE YOU INSTALL OR REMOVE THE BATTERIES OR THE SD CARD.

2.3 Enter Test Mode

Switch to the **TEST** position to enter the Test mode. In this mode you can take pictures or video clips like a regular digital camera, or enter the Menu to set up parameters. On the keypad there are four "shortcut" functional keys (see Figure 2-1) working as below:

Figure 2.2

- Press the ▲ key to set the camera to shoot video clips.
- Press the ▼ key to set the camera to take still pictures.
- Press the ▲ **SHOT** key to manually trigger the shutter. A photo or video (depending on the camera setting) will be taken and saved to the SD card. If the display shows "CARD PROTECTED" when you press the **SHOT** key, switch the power OFF, remove the SD card and slide its write-protect switch to off.
- Press the **REPLAY** key to review/playback photos/videos on the LCD screen, or a connected TV monitor. Use ▲ and ▼ key to navigate.

There is another key, **MENU**, on the keypad that allows you to program the camera to work the way you want. Please make reference to 3.1 Parameter Settings in the Advanced Operation section.

Under the test mode, one useful function you would like is testing the work area of the PIR (Passive Infrared) sensor, specifically the sensing angle and monitoring distance. To perform the test:

- First strap the camera on a tree aiming the region of interest (ROI).
- Walk slowly from one side of the ROI to the other parallel to the camera. Try different distances and angles from the camera.
- If the Motion Indicator flashes blue, it indicates the position from where you were detected by one of the side Prep PIR sensors. If the Motion Indicator flashes red, it indicates the position from where you were captured by the main PIR sensor.

By doing this test, you can find the best placement when mounting and aiming the unit's camera. In general, you are recommended to place the camera 3 to 6 feet (1 to 2 meters) above the ground.

To avoid potential false triggers due to temperature and motion disturbances, please do not aim the camera at a heat source (i.e. the sun) or nearby tree branches and limbs. The ideal direction to aim at is North or South. Also, remove any limbs close to the front of the camera.

2.4 Enter Live Mode

Switch to the ON position to enter the live mode. The Motion Indicator will flash red for about 10 seconds and the camera starts working by itself without any manual handling. It will at once shoot pictures or record videos when game or other objects enter the PIR area of the main sensor

directly. If the game enters the PIR area of the prep sensors from the side, the prep sensors detect the movement and activate the camera. While the game keeps moving into the PIR area of the main sensor, the camera takes photos/videos immediately. If the game roams away after entering the PIR area of the prep sensors, the camera will power off and enter standby mode.

ADVANTAGES OF PREP SENSORS

In general, to save battery power, an Infra-Red camera is in "sleep" mode, with only the PIR sensor working. When game is detected by the PIR sensor, the camera is powered on and starts shooting pictures. The time period from being activated to starting firing is called trigger time. The trigger time varies among different scouting camera brands in the market, generally from 1 to 5 plus seconds. Our SSC-400HRC camera has an impressive 1 second trigger time. However, when game passes across very quickly, the picture may only capture the rear part of the body, and possibly nothing at all.

With the unique side prep PIR sensors design, our SSC-400HRC solves this issue. The combination of the two side prep sensors and the main sensor comes up with a 100 to 120° angle of induction, a very wide scope far outweighing the 50 ° angle of the camera lens. When game first crosses the PIR area of the prep sensor, the camera is activated and ready to shoot after 1 second. If the game continually enters into the PIR area of the main sensor, the camera takes pictures immediately, therefore catching the whole body of the game. This split-second process could be as short as 0.2 seconds.

In the case the game browses only in the PIR area of the prep sensors, to avoid the camera being powered on constantly, the system is designed to work in the following way: If the game does not enter the PIR area of the main sensor and therefore not trigger the main sensor, the camera will power off after 3 seconds. If the trigger events consecutively happened twice only in the PIR area of the prep sensors, the camera will not be activated by the side prep sensors, but only by the main sensor. So later on when the game enters the PIR area of the main sensor eventually, since it is not in fast movement, the picture will by all means capture the whole body of the game based on our standard 1 second response time.

ADVANCED SETTINGS

The camera comes with preset manufacturer settings. You can change the settings to meet your requirements. Please make sure the camera is in the test mode.

3.1 Parameter Settings

Press "MENU" key to enter/exit the menu. Press ▲, ▼ to move the marker, ◀, ▶ to change the setting, and OK to confirm the change. Always remember to press OK to save the change. Otherwise you will lose your new setting.

Parameter	Settings (**Bold** = default)	Description
Mode	**Camera**, Video, Cam+Video	Select whether still photos or video clips are taken. In **Camera+Video** mode, unit will first take photos and then shoot videos immediately.
Format	**Enter**	All files will be deleted after formatting the SD card. Highly recommend you format the SD card if it has been used previously in other devices. ***Caution: make sure wanted files on the SD card have been backed up first!***
Photo Size (affects still photos only)	**12MP**	Select desired resolution for still photos from 3 to 12 megapixels. Higher resolution produces better quality photos, but creates larger files that take more of the SD card capacity.
Video Size (affects video clips only)	**1280x720**	Select video resolution (pixels per frame). Higher resolution produces better quality videos, but creates larger files that take more of the SD card
Set Clock	**Enter**	Press **Enter** to set up date and time.
Picture No. (affects still photos only)	**01 Photo**, 02 Photos, 03 Photos	Select the number of photos taken in sequence per trigger in Camera mode. ***Please also refer to the* Interval *parameter.***

Video Length (affects video clips only)	**Avi 10 s**, optional from 1s to 60s	Videos are in AVI format that can be played back on most video players.
Interval	**1 Min**, optional from 1S to 60M	Select the shortest length of time that the camera will wait from when the last picture was taken and written in the SD card, until it responds to any new triggers from the PIR sensor. During the selected interval, the camera will not take pictures/videos. This prevents the SD card from filling up with too many redundant images.
Sense Level	**Normal**, High, Low	Select the sensitivity of the PIR sensor. The High setting suits indoors and environments with little interference, while the Normal/Low suits outdoors and environments with more interference. Temperature also affects the sensitivity. The High setting is suitable when the ambient temperature is warm, and the Low setting is helpful in cold weather.
Time Stamp (affects still photos only)	**On**, Off	Select **On** if you want the date & time imprinted in every photo.
Timer Switch	**Off**, On	Select **On** if you only want the camera to work within a specified time period every day. For instance, if the starting time is set at 18:35 and the ending time at 8:25, the camera will function from 18:35 the current day to 8:25 the next day. Outside the time period the camera will not be triggered or take photos/videos.
Password Set	**Off**, On	Set up a password to protect your camera from unauthorized users.
Serial No.	**Off**, On	Select **On** to assign a serial number to each camera you have. You can use the combination of 4 digits and/or alphabets to record the location in the photos (e.g. YSP1 for Yellow Stone Park). This helps multi-camera users identify the location when reviewing the photos.
Periodic Shot	**Off**, On	If set **On**, the camera will automatically take photos/videos according to the set interval, regardless of whether the PIR

		sensor has detected any game. This is helpful when observing cold-blooded animals like snakes, or the process of flowering, etc.
Side PIR	**On**, Off	The default setting is **On**. The two side prep PIR sensors provide wider sensing angle and detect more potential triggers. In some situations, you only want to monitor a narrow spot. Too many irrelevant triggers by the side sensors outside of that spot will keep the camera on and off, which wastes the battery power. Or in some other situations you have difficulty removing the interfering branches, or avoiding the sunlight. If so, you have the option to turn off the side sensors.
Default Set		Press **OK Enter** to return all your previous settings back to the manufacturer default.

3.2 File format

The camera stores photos and videos in the folder \DCIM\100IMAGE in the SD card. Photos are saved with filenames like IMAG0001.JPG and videos like IMAG0001.AVI.

In the **OFF** mode, you can use the provided USB cable to download the files to a computer. Or you can put the SD card to a SD card reader, plug in a computer, and browse the files on the computer without downloading.

The AVI video files can be played back on most popular media players, such as Windows Media Player, QuickTime, etc.

Appendix I: TECHNICAL SPECIFICATION

Model		SSC-400HDA
Image Sensor	12 Mega Pixels Color CMOS	Yes
Max. Pixel Size	4000 x 3000	Yes
Lens	F=3.1; FOV=52°; Auto IR-Cut	Yes
IR Flash	65 Feet/20 Meters	Yes
LCD Screen	48x35.69mm(2.36"); 480(RGB)*234DOT; 16.7M Color	Yes
Operation Keypad	6 Keys	Yes
Memory	SD Card (8MB ~32GB)	Yes
Picture Size	12MP	Yes
Video Size	1280x720 720p HD Video	Yes
PIR Sensitivity	High/Normal/Low	Yes
PIR Sensing Distance	65ft/20m（Below 77°F/25°C at the Normal Level）	Yes
Prep PIR Sensing Angle	Left and right light beams form an angle of 100°; Each lens covers 10°	Yes
Main PIR Sensing Angle	35°	Yes
Operation Mode	Day/Night	Yes
Trigger Time	1 Second (When using the 2G SD card)	Yes
Trigger Interval	0sec. - 60min; Programmable	Yes
Shooting Numbers	1~3	Yes
Video Length	1-60sec.; Programmable	Yes
Camera + Video	First take Picture then Video	Yes
Playback Zoom In	1~16 Times	Yes
Time Stamp	On /Off; Include serial no., temperature and moon phase	Yes
Timer	On /Off; Time Lapse Programmable	Yes
Password	4-Digit Numbers	Yes
Device Serial No.	4 digits and 26 alphabets set by yourself	Yes
Periodic Shot	1 Second ~ 24 Hours	Yes
Power Supply	4xAA; Expandable to 8xAA (With additional battery box)	Yes
Stand-by Current	0.4mA	Yes
Stand-by Time	3～6 Months（4xAA～8xAA）	Yes
Auto Power Off	Auto power off in 2 minutes while no keypad controlling	Yes
Power Consumption	150mA (+500mA when IR LED lights up)	Yes

Low Battery Alarm	4.2~4.3V	Yes
Interface	TV out (NTSC); USB; SD Card Slot; 6V DC External	Yes
Mounting	Strap; Tripod Nail	Yes
Waterproof	IP54	Yes
Operation Temperature	-22~+158°F/-30 ~+70°C	Yes
Operation Humidity	5% ~ 95%	Yes
Certificate	FCC & CE & ROHS	Yes

Appendix II: PACKAGE CONTENTS

Part Name	Quantity
Digital Camera	1
Additional Battery Box	1
TV AV IN Cable	1
USB Cable	1
Strap	1
External DC Cable (optional)	1
Instruction Manual	1
Warranty Card	1

Appendix III: INSTRUCTION ON INSTALLING ADDITIONAL BATTERY BOX