

MG983G Cellular Trail Camera
starter kit

Sensegram service

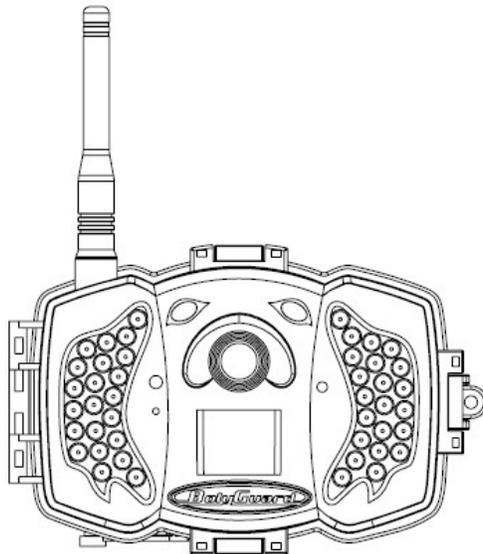
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Scout Guard

MG983G-30M

User Manual



Thank you for purchasing our starter kit! Package includes all you need.

- 1. Cellular trail camera with required accessories*
- 2. Quick guide to start*
- 3. Sensegram service*

System is powered with Sensegram service. Service offers you a. fully guided setup b. the most reliable way of receiving pictures and video clips and also c. to monthly paying customers, the most advanced trail camera features on the market.

To start, jump to the instructions in the separate Quick Guide.

When having need for more specific information, keep reading this manual.

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1. Basic use

This camera is a cellular trail camera capable to send pictures and video clips over the cellular network. Camera is extensively used for security, wild life surveillance and different research purposes. Camera is a perfect tool to **have your eyes on everywhere you need**. It takes color pictures or videos under sufficient daylight, while at night, the built-in infrared LEDs can help to take pictures or videos.

How do Sensegram cloud service and trail camera operate?

Firstly camera captures burst of very high quality 30 mega pixels pictures (default) or video clips on SD memory card when camera is triggered by

- a. Camera's infrared motion sensor, when it is on (default)

Infrared motion sensor triggers pictures or video clip, when warm object like human, animal or vehicle moves in the front of the camera.

- b. You, when you command camera by using SMS from your mobile phone (see [3.1](#))
- c. You, when you activate time lapse in your camera.

Then pictures or video clips are automatically taken after set period of time.

Secondly, after capturing pictures or video clip, camera instantly connects and sends picture or video clip into Sensegram cloud service, where you can view it with your preferred device – desktop, laptop, tablet or cellular phone. Service also notifies into your email about arrived picture or video clip. Lowered resolution picture or video clip is attached to email (default).

You can view your pictures in your email for free. We courage you to become paying customer of Sensegram cloud service. Service never blocks content from your camera contrary to email services.

You can also enjoy the most advanced trail camera features in the market; easily manage your cameras, pictures, video clips, create sophisticated galleries, add keywords to your content or even share your camera with others, if you like.

As complementary service for you, MG983G starter kit includes **limited time Sensegram Super plan** to take the best out of your new trail camera

2. To start

You need a computer or a laptop with a SD memory card slot and internet connection.

When available, **follow the instructions on separate Quick Guide**. You will be fully guided through the setup in a couple of minutes.

After Quick Guide setup, your system is ready to use.

3. Practical instructions

3.1. How to SMS trigger from your mobile phone?

Conditions:

- You have given your mobile phone number during the quick guide setup
- Your camera is ON (power switch in ON position)

Send SMS from your mobile to mobile number used in your camera.

Send text: **#t#e#**

Camera will take a picture or a video clip and deliver it to cloud service. You will be notified to your email, if notifications are ON (default). You can turn notifications ON and OFF in Sensegram cloud service.

3.2. How to manually shoot and send picture?

1. Slip the power switch to SETUP position.
2. Wait until the camera acquires signal and the SIM card icon  appears
3. Target an object and press “SHOT” as many time as you need
4. To select right picture: Press “OK” to playback the pictures, press “▲” and “▼” to switch to previous or

next picture.

5. To send: Press “MENU”, select Email GPRS and press “OK”

After a few seconds (Usually less than 1Min), you will receive picture into your Sensegram account.

3.3. Camera interface

Take a few moments to familiarize with the camera controls and displays. There is a 3” color LCD display screen on the camera and a sound recorder embedded in the camera.

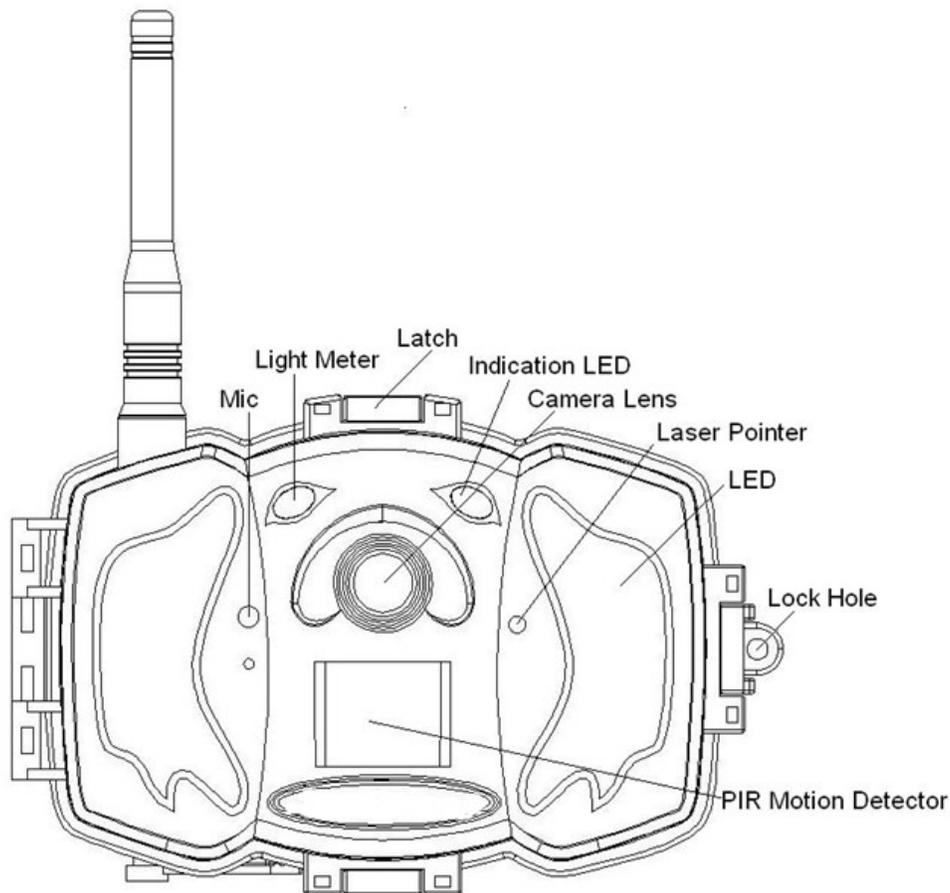


Figure 1 Diagram of camera functional indicators

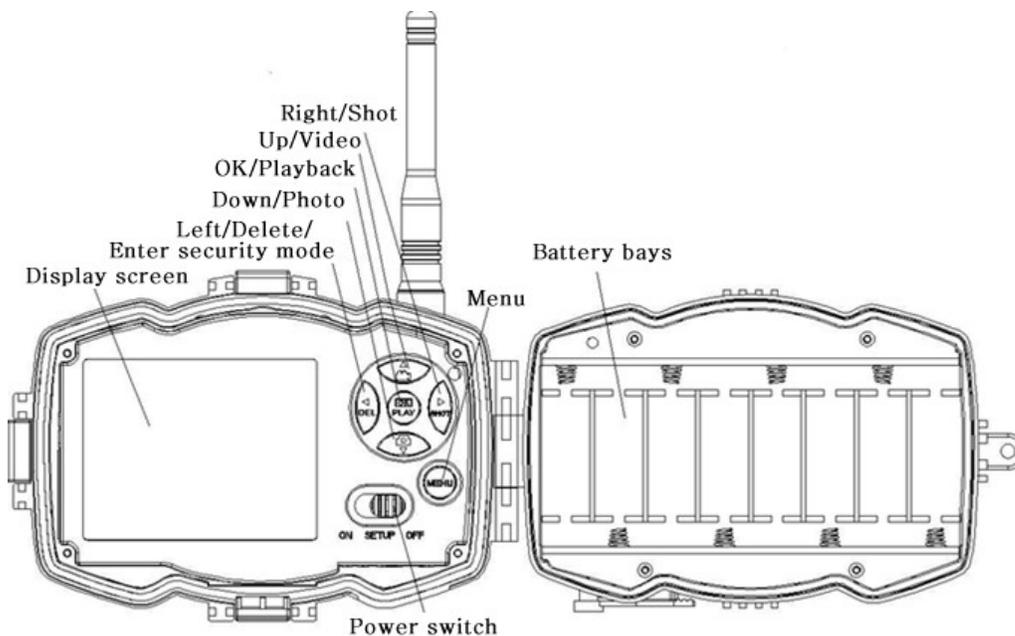


Figure 2 Inner panel view

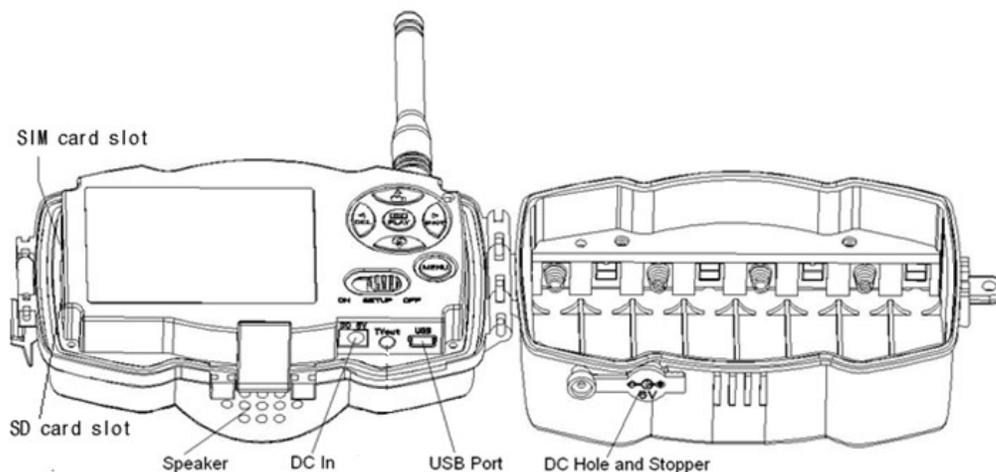


Figure 3 Diagram of camera interfaces

3.4. Two Way Communication

You can set SMS control submenu as ON to open the two way communication function. Under this setting, the camera can receive and respond to your SMS command.

3.5. Shooting Information Display

When the camera is turned on (the power switch is slid to SETUP position), the current settings will be displayed on the screen.

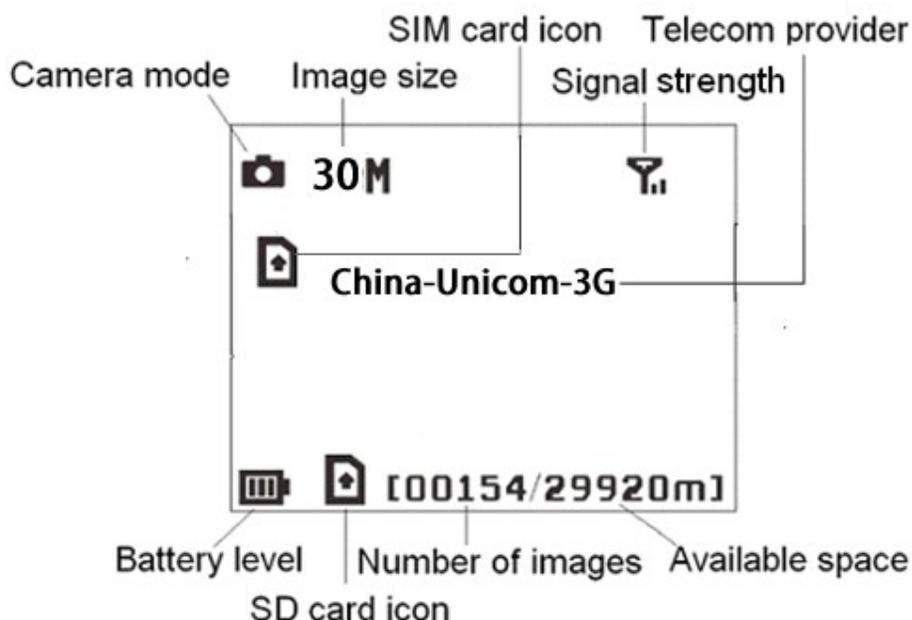


Figure 4 Shooting information display

 is the correct SIM card status and the available space of SD card should be a none zero value.

3.6. Default camera settings

Note: **If you change any RED setting below**, the connection between your camera and cloud service may break and you fail to receive pictures and videos.

Setting Items	Default	Options	Description
Camera Mode	Photo	Video Pic+Video	
Security Mode	Off	On	
Photo Size	30MP	20MP 14MP	
Video Size	1920x1080	1280x720 640x480	
Photo Burst	1 Photo	2-3 Photos	
Video Length	10 Sec.	5-180 Sec.	
Set Clock	Enter		Adjust Clock
Time Lapse	OFF	5Min-8H	
PIR Trigger	Normal	High Low Off	

PIR Interval	5 Sec	0-55 Sec 1-60 Min	
Work Day	Enter		
Work Hour	Off	00:00-23:59	
Send to	Phone MMS	Email MMS Email GPRS	
Send Mode	Manual	Daily Instant Off	
SMS Control	On	Off	Two way communicati on
Game Call	Off	On	Set the time and frequency of audio playback
Study Code	Enter		

Language	English	Suomi Deutsch Svenskt Dansk Norsk čeština Italiano Русский	
Beep Sound	On	Off	
Camera Posit	Off	A to Z Position	
Format SD	Enter		Yes, No
Default Set	Save		
Version	Enter		

Note: If you change any RED setting above, the connection between your camera and cloud service may break and you fail to receive pictures and videos.

3.7. How to change camera settings

Press MENU on the keyboard to enter into the menu setting. The settings menu will be shown on the LCD.

Use “▲” or “▼” key to select the menu item, use “▶” or “◀” to change different item pages or select the different options. Press “OK” to save the settings.

Note: If you change any following RED setting, the connection between your camera and cloud service may break and you fail to receive pictures and videos!

3.7.1. Setting Items

Setting Items	Description
Camera Mode	There are three camera modes: Photo, Video and Pic+Video. You can enter the main menu to set the camera mode. If you choose Pic+Video mode, the camera takes a picture with a video clip.
Security Mode	To set if you will use security mode. Security mode is suitable for indoor use. You need to use the power adapter to power supply. The battery can be just a backup for emergency use. Otherwise, the battery will be quickly consumed. The remote control is available only when Security Mode is ON. Note keep the switch at SETUP position to enter into security mode.
Photo Size	Choose the image size: 14MP, 20MP or 30MP.

Video Size	Choose the video size: 1920x1080, 1280x720 or 640x480.
Photo Burst	This parameter affects the number of pictures taken for each triggering in camera mode. It's from "1 Photo" to "3 Photos".
Video Length	Choose duration of recording a video. It's from 5 seconds to 180 seconds.
Set Clock	Set camera date and time. You can change the date and time by setting this parameter when necessary, e.g., after every battery change. The date format can be changed, the time format is hour: minute: second.
Time Lapse	Time lapse means the camera can capture images or videos at a preset time interval regardless of whether motions are detected. The default parameter is Off, which means the time lapse function is disabled. Changing this parameter to a non-zero value turns on the Time Lapse mode, and camera will take photos at given time interval. <i>Please note that if the PIR Trigger is set to Off, then Time Lapse can't be set to Off.</i>
PIR Trigger	Choose sensitivity of the PIR. The higher sensitivity indicates that the camera is more easily triggered by motion and takes more pictures or records more videos. It is recommended to use high sensitivity in room or environment with little interference, and to use lower sensitivity for outdoor or environment with lots of interference like hot wind, smoke, near window, etc. For normal use of the camera, the Normal mode is recommended and is the default setting.

PIR Interval	<p>This parameter indicates 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 animal). The minimum interval is 0 second. It means the PIR can work all the time.</p>
Work Day	<p>Choose the days of the week to let the camera work. This item is available only in Security Mode.</p>
Work Hour	<p>Choose a time period of a day to let the camera work. The camera will awake at the setting time duration in a day. In the rest of the time the camera is sleeping. Set Work Hour as off means the camera works all day.</p>
Send to	<p>There are 3 Send to modes:</p> <ul style="list-style-type: none"> 1 Phone MMS: send images to mobile phone. 2 Email MMS: send the image to Email address via WAP. 3 Email GPRS: send images to an e-mail address via GPRS use SMTP. <p>You should set your receiving phone number and your receiving e-mail address in the APP program to function it.</p>
	<p>There are 4 Send modes: “Manual” works in SETUP mode, “Daily” and “Instant” work in ON mode. “OFF” means to close the communication function.</p> <p>1. “Manual”: Choose “Manual” in SETUP mode. Please ensure a SIM card is inserted properly. Video</p>

<p>Send Mode</p>	<p>information can't be sent in SETUP mode when you choose Phone MMS; but you can send photos or videos(less than 10M) when you choose Email GPRS.</p> <p>2. "Daily":</p> <p>Daily means the camera will report the summarized information at a preset time (if the preset time is, eg. 20:00 PM) on how many pictures it had taken per day. So, you will get a summarized text message until 20:00 PM.</p> <p>If it is on Photo or Pic+Video mode, the camera will send an MMS at the preset time. The MMS will show you the latest photo and the total quantity of the pictures taken. If it is on Video mode, the camera will send a SMS or video at the preset time. The SMS will show you how many video clips the camera has taken within 24 hours.</p> <p>If you choose "Daily", you need to set the daily report time: xxH, xxM.</p> <p>3. "Instant":</p> <p>Instant, just works in ON mode, which means the camera will send an MMS to your phone instantly after it captures a photo or to your email with a Video(less than 10M). You can choose the number of pictures you want it to send out per day.</p> <p>If it is on Photo mode and you choose the Instant mode, and set the MAX number as 10, the camera will send 10 MMS within 24 hours. It then continues to capture photos and save them on the SD card. After 24 hours, the camera will send MMS again when it captures</p>
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	<p>photos. If it is on Video mode, the Camera will send only SMS instead of MMS when send to is set as Phone MMS.</p> <p>If you choose “Instant”, you need to set how many MMS you want to send for economic consideration.</p> <p>4. “Off”: to disable communication function.</p>
SMS Control	<p>SMS Control can enable two way communication functions. It means if you choose SMS Control as ON, this camera can receive and respond to your SMS command. Also you can retrieve live pictures any time. But the power consumption will be a little more than normal hunting status.</p>
Game Call	<p>It means this camera can play audio file at a preset time clock for preset times. The audio file must be saved in the directory of \DCIM\100BMCIM\ with a name of AUDIxxxx(from 0000 to 9999).WAV after format the SD card and setting the game call as on mode, or choose the audio file(format of WAV, AVI,MP3) in Windows APP. Note that Game Call will not function if the SD card is full or there is a trigger when it is time to playback the audio.</p>
Study Code	<p>It means to pair the camera with a specified 433MHz wireless device, such as PIR sensor, wireless door magnet, wireless smoke detector, etc. The specified wireless sensor can be set as part of the alarm system. All device should be paired with this camera first. Please see following chapters to find the method to connect or remove a wireless</p>

	sensor. Please note this item is available only in Security Mode.
Language	Choose the language you need.
Beep Sound	Enable or disable the beep sound.
Camera Posit	You can set A-Z position for your camera, so that you can distinguish which photo is taken by which camera.
Format SD	Format the SD card. All images and videos in the SD card will be deleted.
Default Set	Restore all customer settings to default values.
Version	Version information

4. Advanced Operations

This chapter explains the advanced operations for customizing the camera settings.

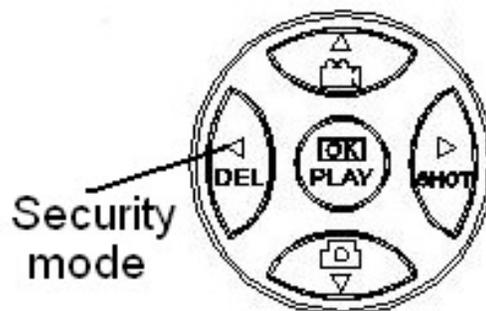
4.1. Work Mode

Setup mode: to program camera or to playback the photos or video clips.

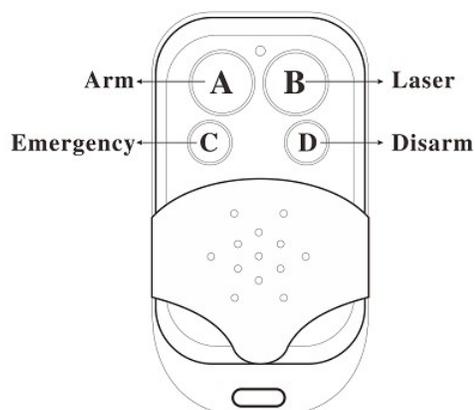
Hunting mode: when warm object like human, animal or car intrudes into the monitoring region, the camera will take pictures or videos automatically according to settings. After switching the camera to ON position, the motion indication LED (red) will blink for about 10 seconds. This time interval is for you to position the camera for automatic surveillance operation.



Security mode: similar to hunting mode, but needs more power to supply. Suitable only, when connected to mains with charger. Only in security mode you can use the remote control to easily arm or disarm.



4.2. Use the Remote Control



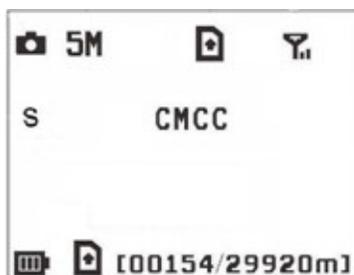
When camera is in **Security Mode**, you can use the remote control to easily arm (button A) or disarm (button D). Also you can dial the emergency numbers via button C in case of emergency. Press button B to open or close the laser (you can easily mount the camera with the help of the laser pointer).

Button A: Arm the camera

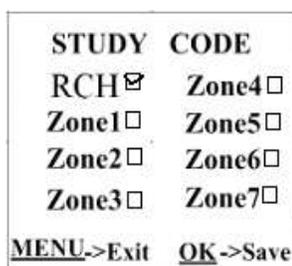
Button D: Disarm the camera

Button C: Emergency call button

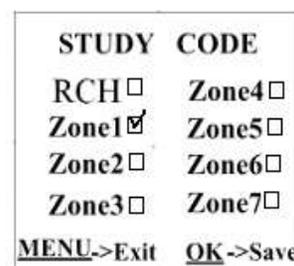
Button B: Laser pointer



Setup status



Study Code Menu



Study Code Menu

Method to add remote control(s) to the camera:

Set Security Mode as On, Enter the Setup status, press **Menu** and enter the **Study Code** submenu. Choose

“**RCH**,” press **OK** button, then press button **A** of the remote control . When it's successful, there will be a "√" before **RCH**.

Note, it has not entered Security mode even you set security mode as on, you need to press the left key to enter security mode quickly or wait for about two minutes till there is an “A” instead of “S” on the display screen.

4.3. Load or Remove a Wireless Sensor

We support three customized kinds of 433MHZ sensors, infrared body sensor, wireless door magnet and wireless smoke detector that can be set as an alarm sensor of the camera.

Method to load or remove a wireless sensor:

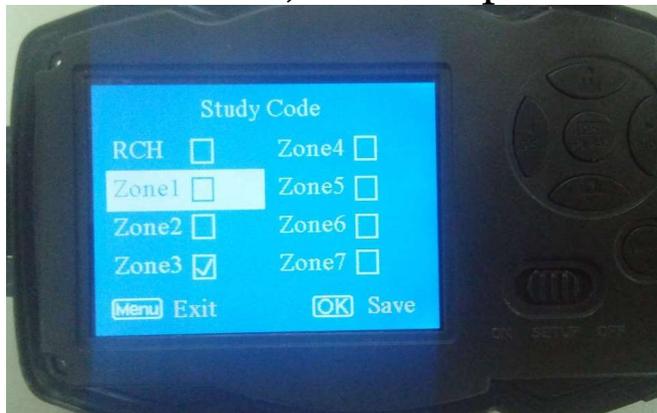
1. Power on the wireless sensor



2. Switch the Setup
3. Press Menu
4. Browse to Study Code submenu



5. Choose a zone, for example Zone1



6. Press OK button

7. Test: trigger the wireless sensor to check if the sensor is loaded successfully. When it's successful, there will be a "√" after the zone number.



Example: load an infrared body sensor :

1. Choose a zone to start study code;
2. Power on and trigger the wireless sensor;

When you want to remove the wireless sensor, please enter the study code menu, press “◀” or “▶” button to cancel the “√.”

Please note that the wireless sensors just can be used in **Security Mode**. In Hunting Mode, the wireless sensors will not function.

4.4. Change the Settings via SMS

When you are far away from your house, you can get spot photos or change camera settings via SMS.

4.5. User Level

There are two user levels: administrator and normal users. Each user has a different authorization level:

Functions	User Level
Set administrator phone number	Only administrator's password
Set administrator's password	administrator
Set camera parameters	administrator
Set normal user	administrator
Receive emergency calling	administrator, normal user
Send SMS for on spot	administrator

picture	
Receive MMS when triggered	administrator, normal user
Check camera status	administrator, normal user
Get help information	administrator, normal user

5. **Cautions**

- The working voltage of the camera is 6V. The camera is supplied by the power adapter or 8 AA batteries.
- Please install batteries according to shown polarity.
- Please insert the SD card before power on camera. The camera has no internal memory for saving images or videos. The camera will not work if there is no SD card.
- Please unlock the write-protect switch before inserting the SD card.
- Please do not insert or take out the SD card when the power switch is at ON position.
- Please make sure that your SIM card supports the MMS and GPRS data business.
- When going into the SETUP mode, allow approximately 10-20 seconds for the camera to acquire a signal.
- It is recommended to format the SD card by the camera when used for the first time. Many other SD cards formatted by other cameras have poor compatibility with different brands of cameras. So it is best to format the SD card with this camera or on a computer.
- In the SETUP mode, the camera will shut down automatically after 3 minutes if no operation is done. Please turn on the power again if you want to continue to work with the control.

Appendix I: SMS commands

You can control your camera via SMS.

No	Function	SMS Command
1	Get picture or video clip	#T#E#(Send to email by GPRS)
No	Function	SMS Command
2	Change Camera Mode	#e#cp# (photo mode) or #e#cv# (video mode) or #e#ct#(pic+video)
3	Change Photo Size	#e#s5# (5mp) or #e#s10# (10mp)
4	Change Photo Burst	#e#b1# (1~6 photos)
5	Change Video Length	#e#v5# or #E#v30# (the number after V is seconds)
6	Change Date Time	#e#t# (adjustment the time)
7	Change Time Lapse	#e#l1h# (1 hour) or #e#l5m# (5 min)
8	Change PIR Trigger	#e#po# (Off) or #e#ph# (High) or #e#pn# (Normal) or #e#pl# (Low)
9	Change Send To	#e#mp# (phone) or #e#me# (email) or #e#mc# (call) or #e#mg# (e-mail gprs)
10	Change Game Call	#e#gon18:00[5]# or #e#goff#

Appendix II: PIR Detection Zone

The PIR detection angle (α) is just smaller than the field of view (FOV) angle (β). The advantage of this design is to reduce empty picture rate and capture most, if not all, motions.

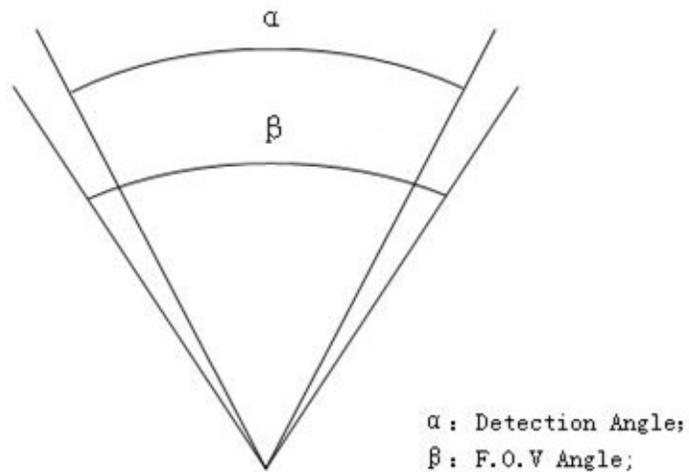


Figure 6 Detection angle vs. FOV angle

Appendix III: Technical Specifications

Image Sensor	14MP Color CMOS, 20MP , 30MP Interpolation
Lens	F/NO=2.4; FOV (Field of View)=57°
PIR Detection Range	30m/100ft
Display Screen	3" LCD
Memory Card	From 8 MB to 32 GB
Picture Resolution	30MP=6400×4800 20MP = 5184×3888 14MP = 4320×3240
Video Resolution	1080FHD(1920×1080) 720P HD (1280×720) VGA (640×480)
PIR Sensitivity	Adjustable (High / Normal / Low/Off)
Trigger Time	1 sec.
Weight	0.30 kg
Operation/Storage Temperature	-20 - +60°C / -30 - +70°C
PIR Interval	0 sec. – 60 min.
Video Length	5–180 sec.
Power Supply	8×AA or 4×AA
Stand-by Current	< 0.25 mA (<6mAh / Day)
Power Consumption	400 videos (interval=5 min, video length=10 sec) >500 MMS (use 8*AA batteries)
Sound Recording	Available
Mounting	Rope / Belt / Python lock
Dimensions	147 x96 x79 mm
Operation Humidity	5 % - 90 %
Security Authentication	FCC, CE, RoHS

*without battery

Appendix IV: Parts List

Part Name	Quantity
Digital Camera	1
Wireless Remote Control	1
USB Cable	1
Mounting belt	1
Antenna	1
8 AA batteries	8
SD memory card	1
Quick Guide	1
Prepaid/PAYG sim card (not available in every country)	1