

Infrared Mobile Digital Scouting Camera  
*User's Manual*  
*MG882K-8M*





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# 1 Instruction

## 1.1 General Description

This camera, a digital scouting camera with black IR and MMS function, is a digital infrared surveillance camera, triggered by any movement of human or animal monitored by a high sensitive Passive Infrared (PIR) motion sensor, and then automatically captures high quality pictures (up to 8M pixels) or records video clips (VGA) according to default settings or preset customer settings. It will then send the pictures instantly to your mobile device or E-mail via GSM/GPRS network. You'll be alerted just when the camera is triggered or per custom settings.

It takes color pictures or videos under sufficient daylight. While at night, the built-in 940nm IR LEDs take clear pictures or videos (monochrome); it's invisible to game. This model has a new design of PIR which is patented. The new patented PIR detection range can reach to 22 M.

There is a 1.5" color LCD display screen on the camera and a sound recorder embedded in the camera. A laser pointer is used to help target the photo area of the camera. It supports MMS/SMS/E-mail via GSM Network.

It is resistant against water and snow. The camera can also be used as a portable digital camera.

## 1.2 Camera Body Interfaces

The camera has the following I/O interfaces: USB connector, SD card slot, TV output, and external DC power connector.

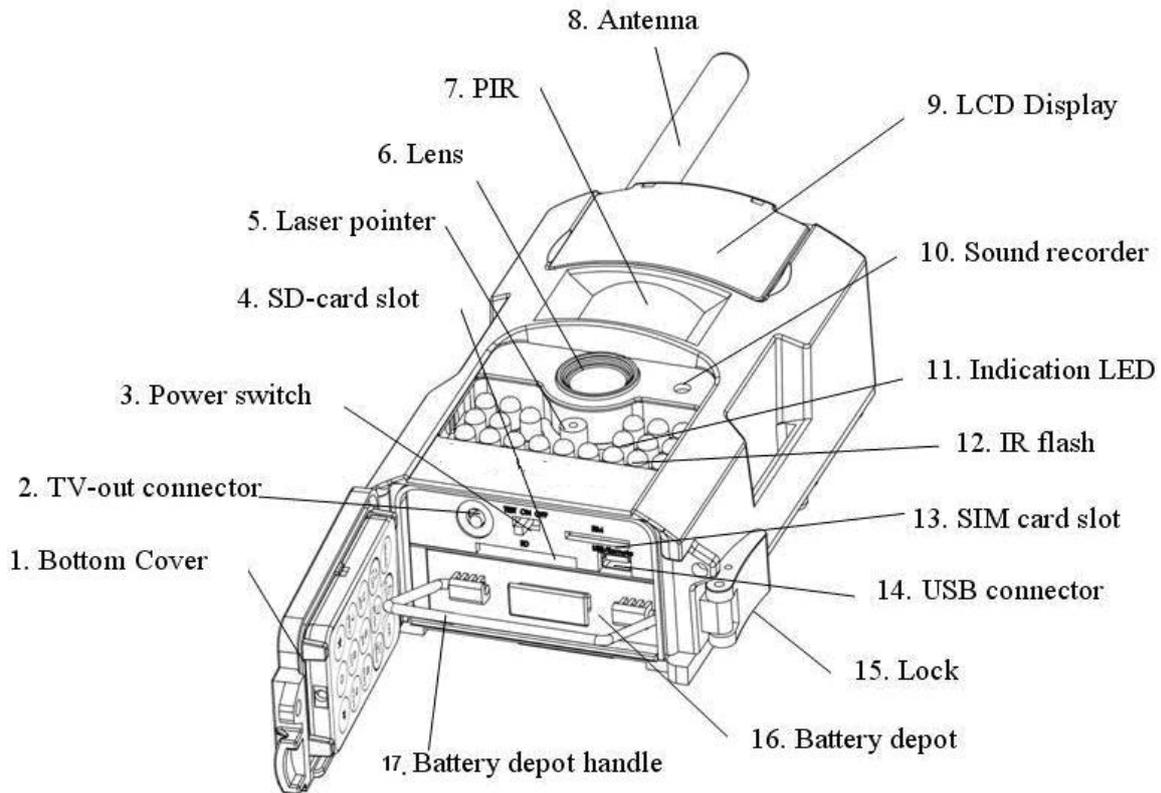


Fig. 1 Diagram of camera functional indicators

### 1.3 Remote Control

The remote control is the input device for the camera and is primarily used for customer settings and password input. This is an infrared type wireless remote control. The maximum remote distance is 30 feet.

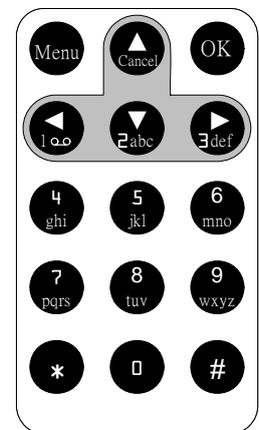


Fig.2 Remote control

**Note:**

**The remote will not work properly without the antenna attached.**

**When power on the camera, allow approximately 10-20 seconds for the camera to acquire a signal. The remote will not function properly until the camera has acquired a signal. You can determine that the camera has acquired a signal by locating the signal icon on the LCD screen.**

### 1.3.1 Navigating

Press UP or DOWN to select or highlight the menu item. Press LEFT or RIGHT to select the option of each item and press OK to make a selection.

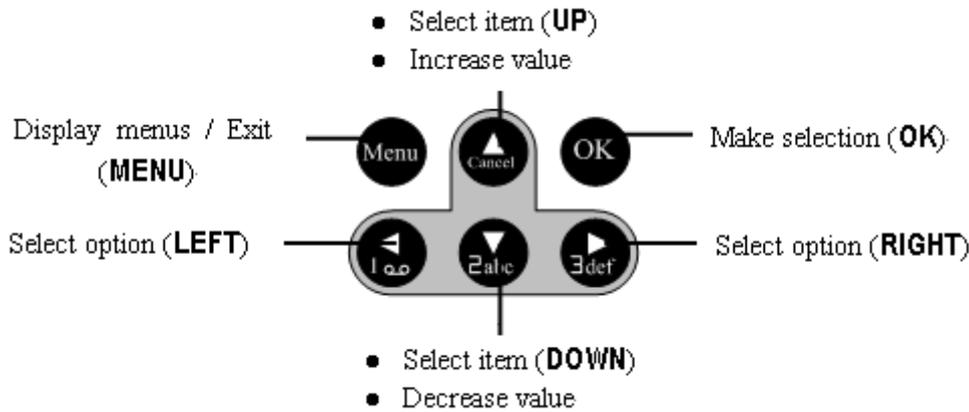


Fig. 3 Key description of the remote control

### 1.3.2 Characters

When entering digits, letters or punctuations into an input column, there are some useful characters that can be used by pressing the button continuously:

: 1 . / : @ \_

: 0 + -

Press the punctuation “\*” for laser pointer.

### 1.4 Shooting Information Display

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

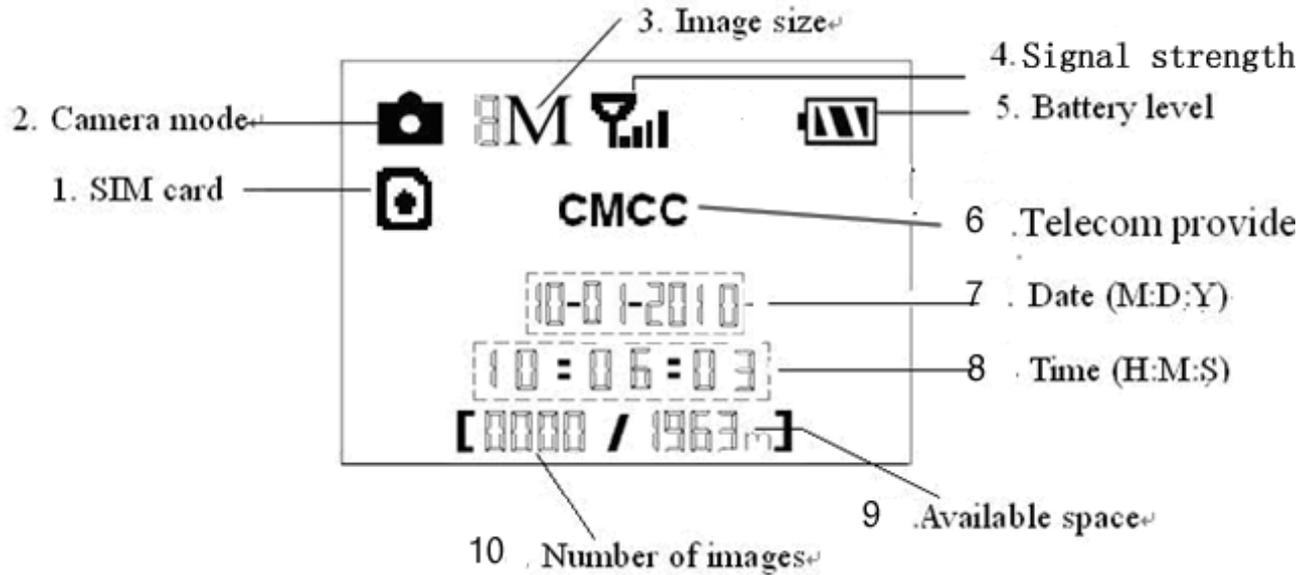


Fig. 4 Shooting information display

### 1.5 MMS/GPRS function

This camera can send pictures instantly to your mobile device via GSM/GPRS network. You'll be alerted just when a picture or video has been taken. The camera sends MMS message through GPRS network, so before using this function, you need to open GPRS service from your service provider. It supports four bands: 850MHz, 900MHz, 1800MHz, and 1900MHz.

**SIM card Icon:** There are two SIM card icons which stand for different installation situations.  means the SIM card is inserted and it works well.  means the MMS function can't work correctly because of loss of signal or other communication issues. If the SIM card is not inserted, no SIM card icon would be displayed.

## 1.6 Supported Format

<b>Item</b>	<b>Format</b>
Photo	JPG
Video	AVI
File format	FAT32

Here are some important notices. The file system format is not a concern of the camera unless you have problems with reading the SD card with other devices. If this happens, please format the SD card in the camera or in a computer and then reinsert the card into your camera.

## 2 Cautions

- ★ The working voltage of the camera is 6V. The camera is supplied by four or eight AA batteries.
- ★ Please install batteries according to shown polarity.
- ★ Please unlock the write-protect before inserting the SD card.
- ★ Please insert the SD card when the power switch is in the **OFF** position before testing the camera. The camera has no internal memory for saving images or videos. If no SD card is inserted, the camera will shut down automatically after a continuous indication sound.
- ★ Please do not insert or take out the SD card when the power switch is in the **ON** position.
- ★ It is recommended to format the SD card by the camera when used for 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.
- ★ In the **TEST** 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 remote.
- ★ Please ensure there is sufficient power when having a firmware upgrade, otherwise the upgrade process could be interrupted. If any fault occurs after an improper upgrading process, the camera may stop functioning properly.

## 3 Quick Start Guide

### 3.1 Power Supply

To supply power for the camera, 4 or 8 size AA batteries are needed.

Open the bottom cover. Confirm that the power switch is in the **OFF** position and pull out the battery pack by pulling the silver handle. Load the fully charged batteries into the pack according to the polarities signs shown below. Push the battery pack back into the battery chamber. The following batteries with 1.5V output can be used:

1. High-density and high-performance alkaline batteries (recommended)
2. Rechargeable alkaline batteries
3. Rechargeable NiMH batteries

There are four battery slots. Slot 1 and 2 form one group and is marked “1” while slot 3 and 4 form the other group and is marked “2”. Only one “group” of batteries is needed to supply power to the camera, but both can be used and is recommended.

When in a low-battery state, the camera will be automatically shut down after two indication sounds. Please change the batteries at this time. If you have set the MMS function, it will send you a MMS/SMS or E-mail to indicate the low battery situation.

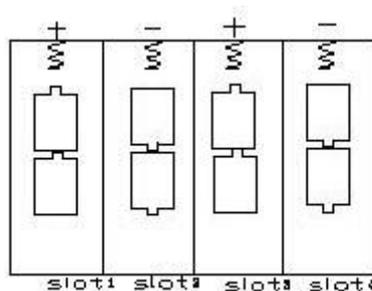


Fig. 5 Battery install

### 3.2 Insert the SD card and the SIM card

Open the bottom cover. Insert an SD card into the card slot with unmarked side upwards. Please note that the SD card is on the “write” (not locked) position otherwise the camera will not function correctly. When using MMS/SMS/E-mail functions, be sure to insert a SIM card into the SIM card slot with angle in the upper left.

### 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 in front of the camera such as a big leaf, curtain, air-conditioner, air outlet of the chimney, and other heat sources to prevent from false triggering.
2. The height from the ground for placing the camera should vary with the object size appropriately. In general, three to six feet is preferred.

Slide the power switch to the **ON** position to power on the camera and enter into the **ON** mode. Before entering into the **ON** mode, you can adjust the camera towards the target monitoring area by laser pointer.

After switching on the camera, the motion indication LED (red) light will blink for about 10 seconds. The 10 seconds is a buffering time before automatically capturing photos or videos, e.g. for closing and locking the bottom cover, fixing the camera on a tree, and walking away.

In **ON** mode, it is unnecessary to use the remote control. 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 **TEST** Mode

Slide the power switch to the **TEST** position and enter into the **TEST** mode. The remote control is needed in this mode. The detailed operations will be described in the “Advanced Operations” chapter.

#### 3.4.1 Manual Capturing

You can press **RIGHT** to manually capture photos or record a video. Also **RIGHT** to stop a video.

#### 3.4.2 View Images or Videos

It can only be done in **TEST** mode. Press **OK** to view images, the latest image will be shown in the LCD screen of the camera. Press **UP** to view the previous image and press **DOWN** for the next image. Please note that a video cannot be played back on the LCD screen and only the thumbnail of the video is showed.

#### 3.4.3 Delete Images or Videos

Please find the image (or video) which to delete and press **MENU** to delete one image (or video). Also you can press **LEFT** or **RIGHT** to delete all. Press **MENU** to cancel and return to playback.

Please note that after deleting a picture or a video file, the deleted files can't be restored! Furthermore, in order to delete all images and

video clips in the SD card, it is suggested to format the SD card.

#### 3.4.4 Send MMS Manually

When the **MMS Mode** is set as “Manual” you can send the selected image to preset address in **TEST** mode.

- a) View the images and select one to send.
- b) Press **MENU** to display the playback menu.
- c) Press **UP** or **DOWN** to select **Send Message**. **Send** is highlighted
- d) Press **OK** to send MMS according to the setting in setting menu.

Press **MENU** to cancel and return to playback.

Please note that the images can only be sent and video cannot be sent. If the SIM card is not inserted, the image cannot be sent as well. “Daily Report” and “Instant” mode are used in the ON mode.

### 3.5 Power Off

Slide the power switch to the **OFF** position to power off the camera. Please note that even in the **OFF** mode, the camera still consumes a small amount of battery power. Therefore, please remove the batteries if the camera is not in use for a length of time.

## 4 Advanced Operations

The camera has three basic operation modes:

1. **OFF** mode: power switch is in **OFF** position.
2. **ON** mode: power switch is in **ON** position.
3. **TEST** mode: power switch is in **TEST** position.

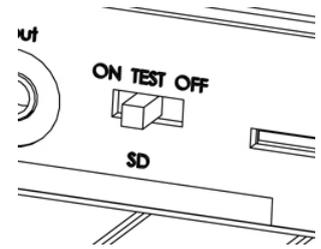


Fig.6 Operation mode

This chapter explains the advanced operations for customizing the camera settings. The settings can only be customized in **TEST** mode and the wireless remote is needed.

### 4.1 Settings Menu

To view the camera settings menu, press **MENU** in the **TEST** mode (called settings menu in this chapter). The settings menu will be shown on the LCD.

Setting Items	Description
Camera Mode	Choose capturing images or recording videos.
Format	Format the SD card. All images and videos in the SD card will be deleted.
Photo Size	Choose the image size, 8 mega pixels or 5 mega pixels.
Video Size	Choose the video size, e.g. 640×480 (VGA) or 320×240(QVGA ).
Set Clock	Set date and time.
Photo Burst	Choose the continuous shooting numbers after each triggering.

<b>Video Length</b>	Choose duration of recording video.
<b>Video Sound</b>	Choose if the sound recorder will be used.
<b>PIR Interval</b>	Choose how long the camera will stop functioning after each triggering. The camera’s PIR will be disabled during this interval.
<b>PIR Sensitivity</b>	<p>Choose sensitivity of the PIR or off the PIR detection.</p> <p>There are four parameters: <b>High, Normal, Low</b> and <b>PIR Off</b>. The default value is “Normal”. The higher degree indicates that the camera is more easily triggered by motion, taking more pictures or recording more videos. It is recommended to use high sensitivity degree in a 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. Furthermore, the sensitivity of the PIR is strongly related to the temperature. Higher temperature leads to lower sensitivity. Therefore it is suggested to set a higher sensitivity for high temperature environment.</p> <p><b>Note the PIR can’t be set to off if Time Lapse is off.</b></p>
<b>Timer Switch</b>	The camera can be set to only record/capture at a certain time of the day when set to <b>On</b> . The rest of the time the camera will be shut off and will not

	<p>record any triggers set off by movement. This function can be set to <b>Off</b> and will function to the interval settings.</p>
<p><b>MMS Set</b></p>	<p>The camera sends MMS message through GPRS network, so before using this function, you need to open GPRS service from your service provider. You should set the right MMS setting parameters. The settings of MMS: <b>URL, APN, IP and Port</b>. Please contact the network service provider if you are not familiar with the settings.</p>
<p><b>GPRS Set</b></p>	<p>The camera sends image through GPRS network with SMTP protocol to an E-mail address. This communication cost will be much cheaper in many countries. You should set the right GPRS setting parameters. The settings of GPRS: E-mail server port, APN and so on. Please contact the network service provider if you are not familiar with the settings.</p>
<p><b>Send Mode</b></p>	<p>There are 3 MMS modes: “Manual” works in TEST mode, “Daily report” and “Instant” work in ON mode.</p> <p>1) <b>“Manual”:</b></p> <p>Choose “Manual” in Test mode. Please ensure a SIM card is inserted properly. Please note that only photos can be sent in TEST mode. Video</p>

information can't be sent in TEST mode.

**2) "Daily Report":**

The camera will report the summarized information at the preset time (if the preset time is, eg.20:00PM) on how many pictures it had taken per day. So, you will get a summarized text message with the last picture taken until 20:00PM.

If it is on Camera mode, the camera will send a 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 at the preset time. The SMS will show you how many video clips the camera has taken within 24 hours.

**3) "Instant":**

The camera will send a MMS instantly after it captures a photo. You can choose the number of pictures you want it to send out per day.

If it is on Camera mode and you choose the Instant MMS mode, and set the MAX number to 10, the camera will send 10 MMS within 24 hours. Then it continues to capture photos and save them on the SD card. After 24 hours, the camera will send MMS again when it captures

	<p>photos. If it is on Video mode, the Camera will send only SMS instead of MMS.</p> <p>4) “OFF”: to disable MMS function.</p>
<b>Send To</b>	<p>Choose send the image to your Phone or E-mail.</p> <p>1&gt; <b>Phone: [MMS]</b>: send the image to cell phone via WAP.</p> <p>2&gt; <b>Email[MMS]</b>: send the image to E-mail address via WAP.</p> <p>3&gt; <b>Email[GPRS]</b>: send the image to E-mail address via SMTP. Used this way the communication cost will be much cheaper in many countries.</p>
<b>Password</b>	<p>For safety purposes, enter a password each time when entering into <b>Test</b> mode. The default password is 0000. You could choose OFF to stop this function.</p>
<b>Default Set</b>	<p>Restore all customer settings to default values.</p>

#### 4.1.1 Default Setting

Default settings are listed below:

Setting Items	Default	Options	Submenu
Camera Mode	Photo	Video	
Format	Enter	Yes, No	
Photo Size	5M Pixel	8M Pixel	

Video Size	640x480	320x240	
Set Clock	Enter		Adjust Clock
Photo Burst	1 Photo	2 Photos, 3 Photos	
Video Length	10 sec	5–60 secs	
Video Sound	On	Off	
PIR Interval	5 sec	0–55 sec, 1-60 min	
PIR Sensitivity	Normal	High, Low	
Timer Switch	Off	On	00:00-23:59
MMS Set	Enter		URL, APN, IP, Port
GPRS Set	Enter		Server, APN, Port
Send Mode	Manual	Daily Report, Instant, Off	
Send To	Phone[MMS]	Email[MMS], Email[GPRS]	
Password	Off	On	
Default Set	Save		

#### 4.1.2 MMS Settings

Enter the MMS setting which provided by the network service provider. There are **only** four setting to be entered, the steps are as follows:

- a) Press **MENU** to display the setting menu and select **MMS Set**.

- b) Press **OK** to **Enter** into submenu.
  - c) There are four inputs for key in **URL**, **APN**, **IP** and **Port**, press **#** to switch between each inputs. Press number buttons to key in the digits, letters or punctuations. Press **UP(Cancel)** to delete.
  - d) Press **OK** to save all current setting and return to info display. Press **MENU** to cancel setting and to return to previous menu.
- 

### Easy Access to MMS setting (edit in the computer)



1. Load the fully charged batteries, insert SD card, insert SIM card.
2. Power on and entering into the **TEST** Mode.
3. Enter a phone number or an E-mail address into the **Send To** submenu.
4. A new file named '**PROFILE.INI**' will be created automatically in a new folder named '**GSM**' in the SD card.

Reedit the file '**PROFILE.INI**' in the computer to set the MMS parameters. For more details please contact your network service provider.

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#### 4.1.3 GPRS Settings

You can edit the GPRS settings in profile.ini file. Below are the details about GPRS parameters.

[GPRS Setting]

**Server:** E-mail server name, for example: smtp.163.cn

**Port:** E-mail server port, for example: 25

**APN:** Internet APN, for example: cmnet

**Account and Password :** (some telecom operators need to set account and password to launch GPRS).

**E-mail user:** sending e-mail address, for example: abc@163.com

**E-mail password:** sending e-mail password, for example: 1111;

#### 4.1.4 Format SD Card

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

#### 4.2 Laser Pointer

The laser light pointer can be turned on as an additional function for pointing at an object or a certain region of interested (ROI).

Press \* to turn on the laser light in **TEST** mode and use the tilt adjuster on the back of camera to adjust the angle of capturing direction.

#### **NOTE:**



Please note that the laser could be harmful to the eyes if pointed at another person.

#### 4.3 File Numbering

Images and videos are saved in the pre-named folder. File numbering continues by adding one to the last number for each new image or video. Saving names are IMAG0001.JPG or IMAG0001.AVI.

Through the suffix you can distinguish whether the file is an image (with suffix .jpg) or a video (with suffix .avi).

## 5 Trouble Shooting

1 There is something in front of the camera lens. Is the camera broken?

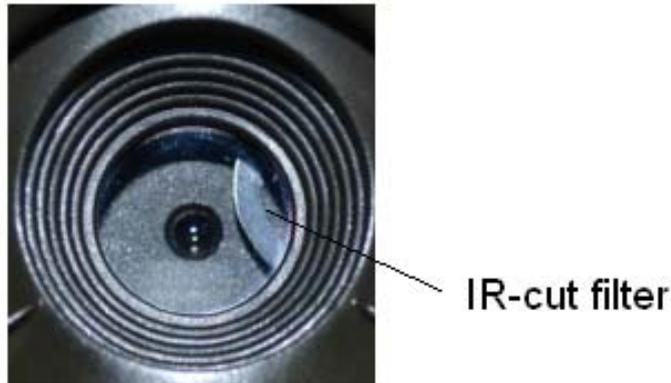


Fig. 7 IR-cut filter

A: The camera is not broken. It's an IR-cut filter. When the camera is powered on, the IR-cut will be reset and cover the lens. Only when the camera is powered off, the IR-cut will be at a random place.

2 The camera controller is not working anymore.

A: Most likely, no SD card has been inserted in the camera when it is turned on. Please make sure a working SD card has been inserted in the camera before it is turned on.

3 The display screen is suddenly black.

A: To reduce power consumption, 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.

4 Why my phone can't receive MMS?

A: MMS/GPRS function needs the SIM cards in both your camera and phone to have enough balance and to be opened to data business.

## Appendix I: PIR Detection Zone

The figure 8 shows the detection range in different detection angle. When the detection angle is  $35^\circ$ , the detection range is 50 ft(15m). When the detection angle is  $52^\circ$ , the detection range is 30 ft (9m).

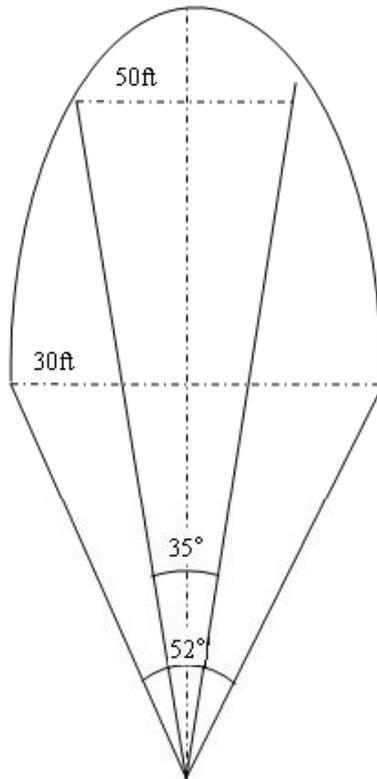


Fig. 8 Different detection range

The PIR detection angle ( $\alpha$ ) is just barely larger than the field of view angle ( $\beta$ ). The advantage of this design is to avoid empty pictures and get available pictures.

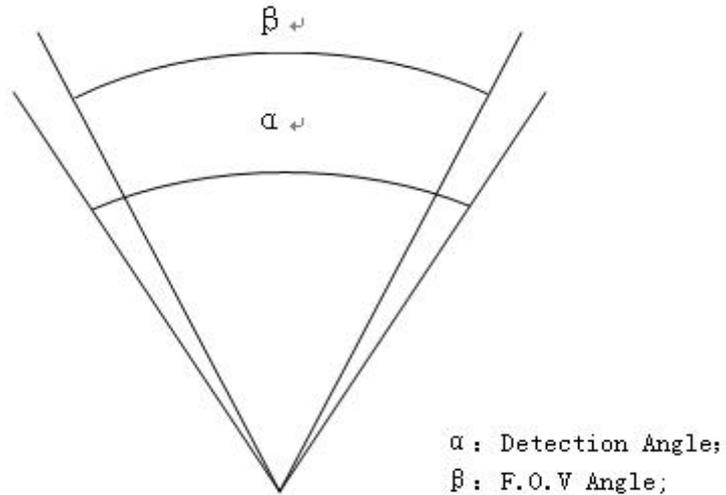


Fig. 9 Detection angle VS F.O.V angle

MG882K-8M has a new design of PIR which is patented. The new patented PIR’s detection range can reach to 72 ft (22m). Figure 10 shows the compared detection zone between normal PIR and the new patented PIR.

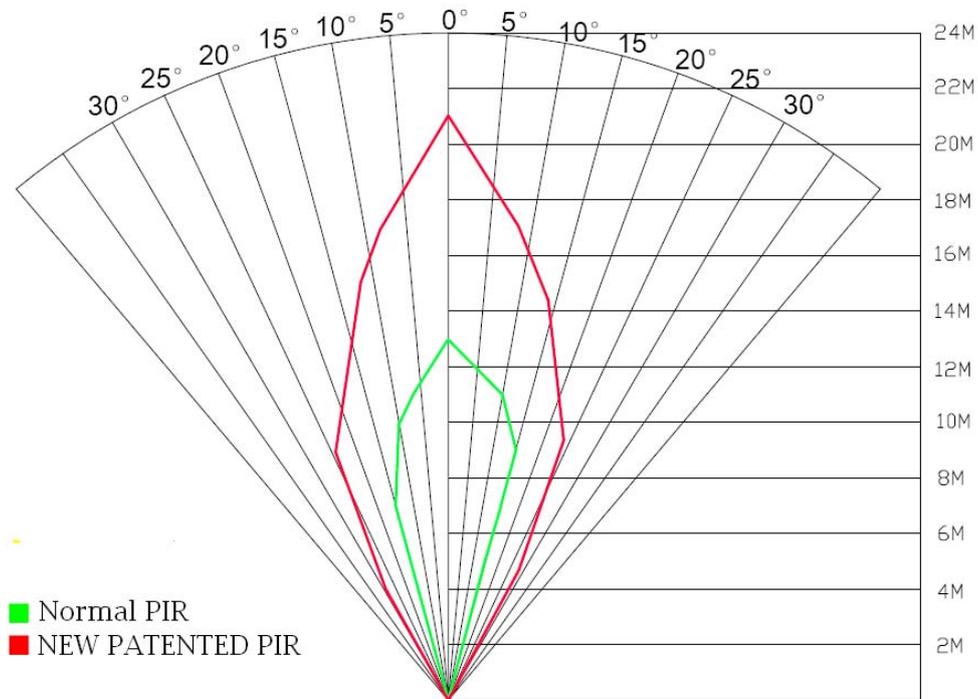


Fig. 10 PIR Detection Range

## Appendix II : Technical Specifications

<b>Image Sensor</b>	5MP Color CMOS, 8MP Interpolation
<b>Lens</b>	F/NO=3.0 FOV (Field of View)=52°
<b>PIR Detection Range</b>	22M/73F
<b>Display Screen</b>	1.5" LCD
<b>Memory Card</b>	From 8 MB to 32 GB
<b>Picture Resolution</b>	8MP = 3264 × 2448; 5MP = 2560 × 1920
<b>Video Resolution</b>	640 × 480 (16fps)
<b>PIR Sensor</b>	Multi Zone
<b>Trigger Time</b>	1.2 second
<b>Weight</b>	0.30 kg
<b>Operation/Storage Temp</b>	-20 - +60°C / -30 - +70°C
<b>Power Supply</b>	8×AA or 4×AA
<b>Stand-by Current</b>	< 0.25 mA (<6mAh/Day)
<b>Power Consumption</b>	400 videos (interval=5min, video length=10s) ; >500 MMS (use 8*AA batteries)
<b>Low Battery Alert</b>	LED Indicator
<b>Sound Recording</b>	Available
<b>Mounting</b>	Rope/Belt/Python lock
<b>Dimensions</b>	140 x 87 x 55 mm
<b>Operation Humidity</b>	5% - 90%
<b>Security Authentication</b>	FCC, CE, RoHS

\*without battery

## Appendix III: Parts List

<b>Part Name</b>	<b>Quantity</b>
Digital Camera	One
Wireless Remote Control	One
USB Cable	One
Belt	One
User's Manual	One
Enhanced Antenna	One
Warranty Card	One