Infrared Digital Scouting Camera

User Manual

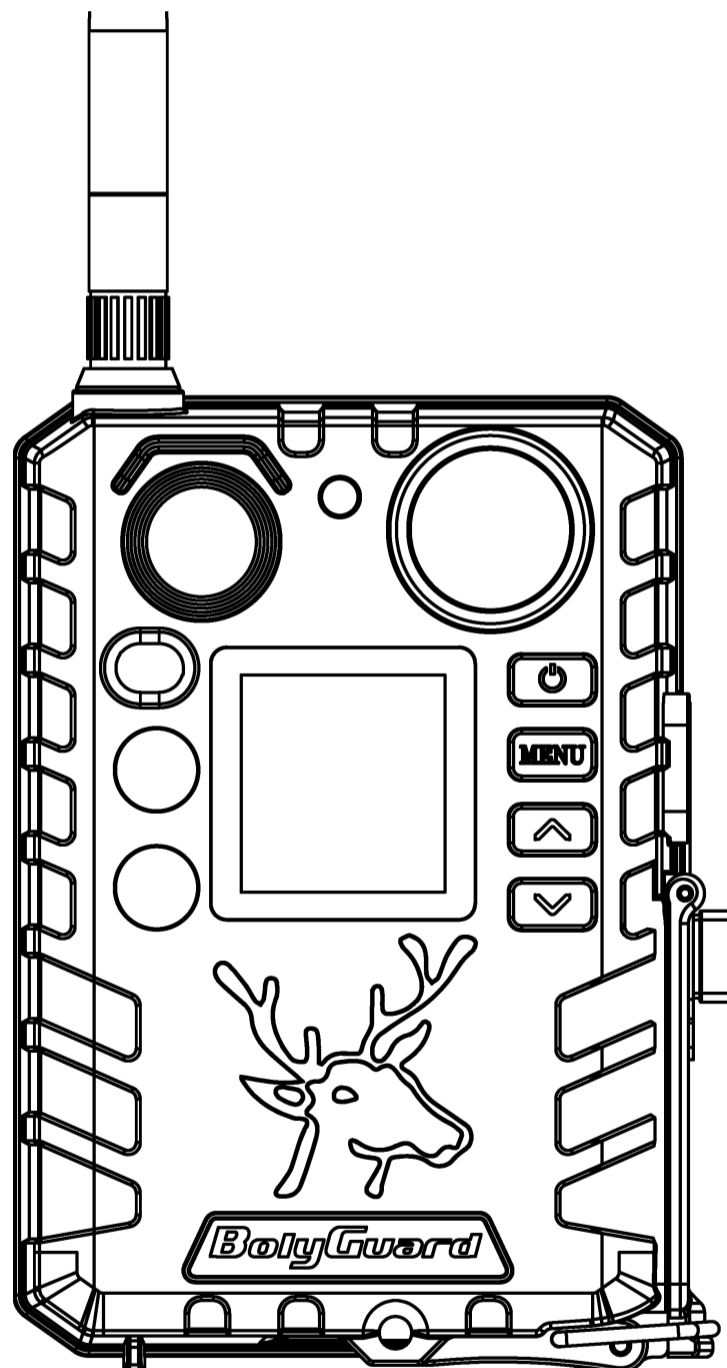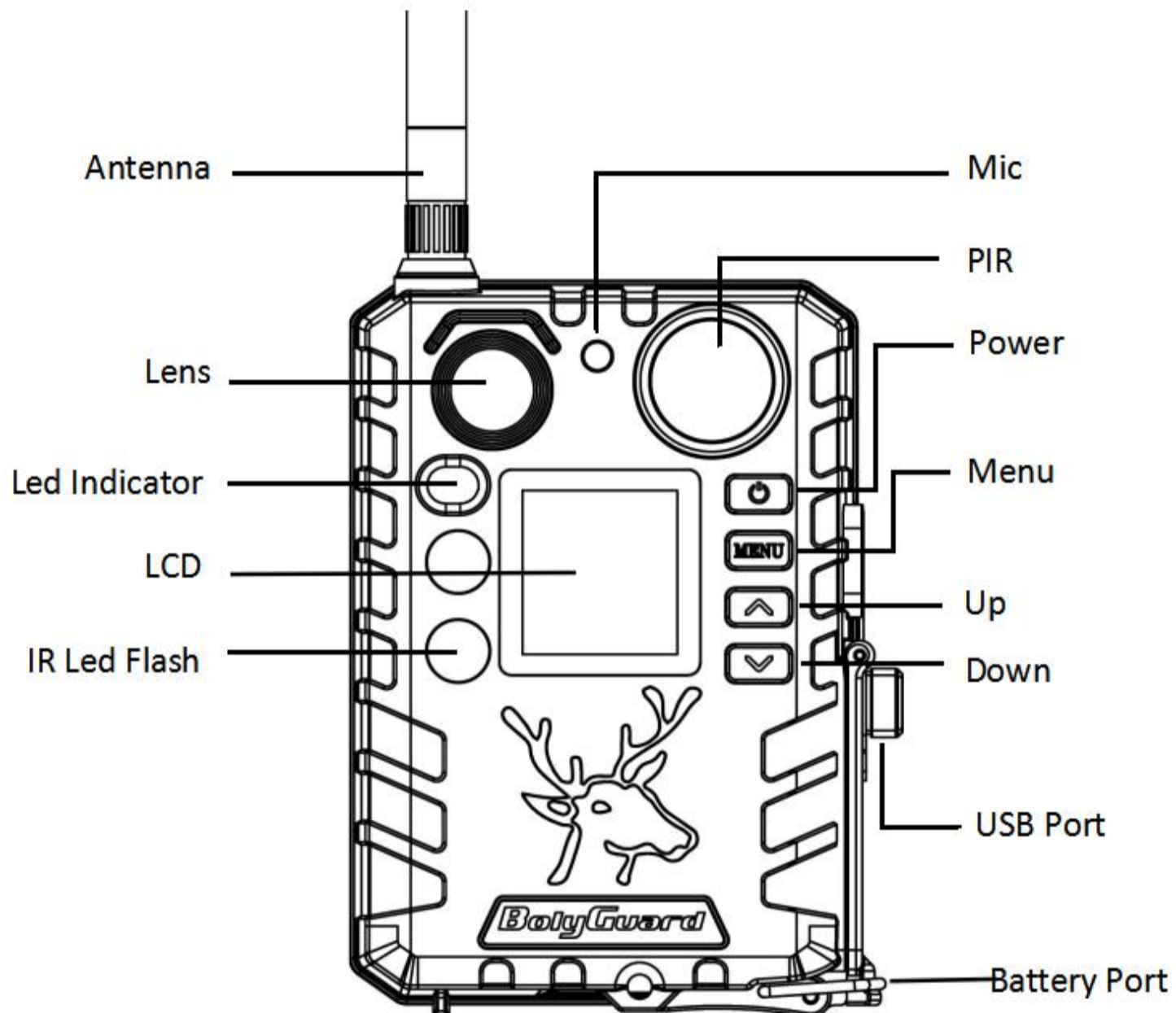# BG410 Series

Table of Contents

1. Getting Started

BG410 series camera, this is a digital infrared surveillance camera. Use 1.44" color LCD display and 2*18650 battery (Button top, length: 67~69mm), the USB port connects to the solar panel can charge the 18650 battery.

You can choose different models according to different needs.
BG410-D Non-wireless Camera
BG410-DFP BG410-D Full Package mode, BG410-D with 2 * 18650 battery, 1 * TF card and 1 * TF card adapter
BG410-M 4G Wireless Camera
BG410-MFP BG410-M Full Package mode, BG410-M with 2 * 18650 battery, 1 * TF card and 1 * TF card adapter
BG410-M(S)4G Wireless Camera with only 940nm LED.

2. Camera Operations

2.1 Batteries / Power Supply

● Battery

The camera is powered by 2*18650 batteries.

(Button top,18650 battery, length: 67~69mm)

● External power supply

It is also possible to power the device or charge the 18650 battery in the device via an external USB power supply adapter(5V/2A) or solar panel. (External power supply not included)
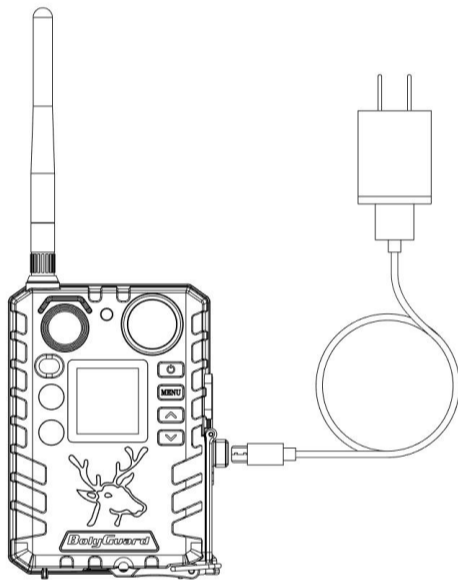
Charging by USB power supply   Charging by solar panel
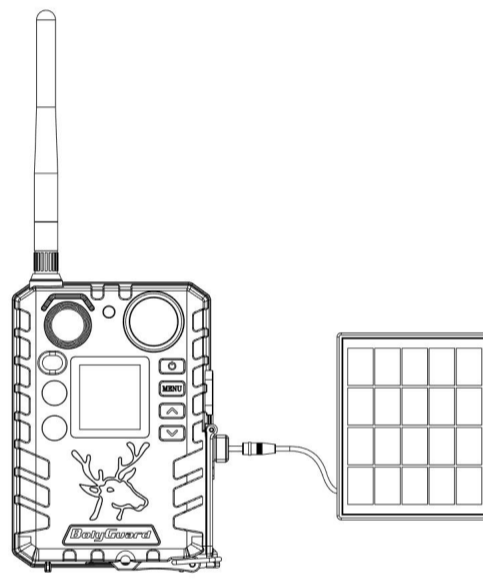
USB port function:（Auto detected by Camera）

► Power charging

In this mode, USB will charge the camera's 18650 battery.

► Mass Storage

In this mode, the camera will act as a storage device. You can read or copy the photos or videos in the TF card.

2.2 TF Card Information

This camera uses a TF card, to take full advantage of the latest technologies, we recommend Class 10 TF cards or better, which have fast transfer speeds and long durability for extensive shooting in the most extreme outdoor conditions.

● **Insert the TF card into the camera before turning on the camera**

This camera supports up to a 32GB capacity TF card and has no built-in internal memory. The camera will not function without the TF card properly inserted into the camera.

● **Do not remove the TF card while the camera is on**

Removing the TF card while the camera is on risks damaging the internal components of the camera.

● **If you experience any problems with an inserted TF card**

Try reformatting the TF card by using the camera's main settings option.

2.3 SIM Card Information

This function is only available with communication function models.
Insert the SIM card into the camera before turning on the camera

The camera SIM card slot is sized for a standard SIM card.   If you have a nano or micro size SIM card, utilizing a SIM card adapter (included with most of our cameras) will be required to connect your camera to the cellular network via SIM card.

Supported Wireless Carrier Bands:
- ✓ **GSM: B3/B8**
- ✓ **WCDMA: B1/B8**
- ✓ **LTE FDD:B1/B3/B7/B8/B20/B28A**

NOTE: The camera will still function without a SIM card. The SIM card is needed only for the wireless/cellular messaging capabilities.

2.4 Camera Modes

The different modes are accessed by pressing the OK button, marked on the camera.

➢ **OFF Mode**

To turn off the camera when the display screen is active, press and hold the OK button until the screen powers off. The camera will still consume a small amount of battery power while in OFF mode. We recommend removing the batteries if the camera will not be used for a long period of time.

➢ **SETUP Mode [Test Mode]**

To turn on the camera, press and hold the OK button until the display screen activates,

In this mode, you can customize the camera settings or playback pictures and videos the camera has taken on the LCD display.

After switching the camera to the ON position and if the camera is left alone for more than 20 seconds, the camera will automatically switch to *Hunting Mode*, as described below.

➢ **On [Hunting Mode]**

In order to enter the on mode, first enter the setup mode, in the setup mode, automatically enter the on mode after 20 seconds(BG310-M 180 seconds) without any operation.

Before entering Hunting Mode, the front (red) LED light will continuously blink for approximately 10 seconds and then turn off. This preset time allows you to adjust the camera's position if needed before the camera becomes active. The camera will take pictures or videos when motion is detected and/or at specific time intervals, according to the programmed settings.

2.5 Manage Images and/or Videos

Place the camera in TEST/SETUP mode and press the POWER button to view images or videos, the latest image or video will be shown on the LCD screen. Press the ▲/Up or ▼/Down buttons to cycle through the pictures and videos were taken.

NOTE: Video cannot be viewed directly on the camera.

2.6 Sending via MMS/GPRS/Molnus/FTP

This function is only available with communication function models.

Images can be sent directly to your wireless device/email/Molnus, based on the Send Mode settings.

   1) Insert the TF & SIM card into the camera before turning on the camera.

   2) Turn on the camera in TEST/SETUP mode. Make sure the SIM card is recognized, and signal strength is adequate.

     ⬆ Indicates the camera recognizes the SIM card.

     ☒ Indicates the camera or the SIM card do not recognize the

SIM card is not working due to connection/activation issues.

   3) Select the send mode setting and fill in the correct parameters. You have the options of Molnus (default setting), MMS, Email , or FTP. Videos will be sent in less than 20M.

   4) Press "Power" to view the photos stored on the camera.

   5) Find the picture you want to send manually.

   6) Press the MENU button to pull up the Send To option.

   7) Press "OK" to send the picture via the messaging option chosen

in your camera settings.

2.7 Password Setup

For encryption settings, enter your four-digit pre-set password to enter the camera. This function helps protect your privacy.

This function is off by default. To use this function:

2.7.1 Press ▲/▼ to adjust the number from 0~9, and ◀/▶ to change the password

2.7.2 The same password must be entered twice to take effect.

2.7.3 After the password is set up, you will be required to enter the same password on the next boot to enter the camera.

If you forgot your password, please contact us for assistance.

3. Camera Setup Settings & Display

3.1 Settings Interface & Display

To update the camera settings, turn the camera on to activate the display screen.

OK/Power: Switch on and off, save parameter settings, enter or exit playback mode
Menu: Enter or exit Menu
▲/Up: Setting items switching
▼/Down: options parameter switching, manually take a photo or record a video

When the camera is in the ON Mode, the screen will activate and display the following:
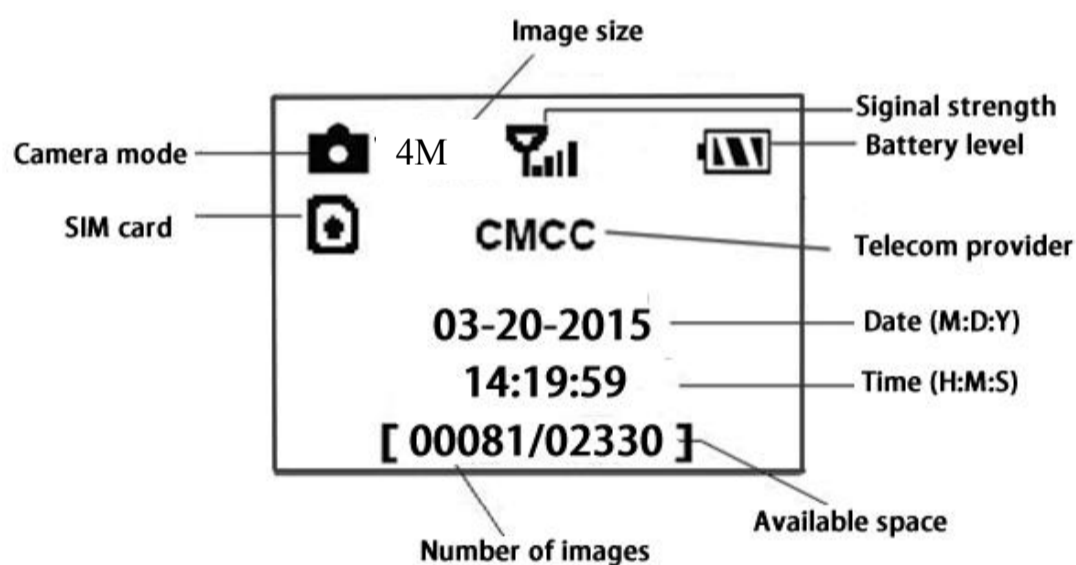
⬆ Indicates the camera recognizes the SIM card.
✖ Indicates the camera or the SIM card do not recognize the SIM card is not working due to connection/activation issues.

Note: SIM card/Signal strength/Telecom provider only appear in models with a communication function.

3.2 Wireless Model Setup

The features described in this section only support communication models.

3.2.1 Mobile Communication

The camera can receive and respond to commands sent via SMS, Molnus and the Apple or Android application, as long as the camera is correctly connected to a wireless carrier.
To enable the SMS functionality using the mobile application, you must complete the following steps:
● Place the camera in Test/Setup Mode and go into the menu Setup options
● Set SMS control to ON

For MMS/Email/Molnus/FTP functionality, the following menu Setup options will need to be set:
• MMS network settings (varies depending on carrier)
• Email network settings (varies depending on carrier)
• FTP network settings (varies depending on carrier)
• Molnus (varies depending on carrier)

3.2.2 Setup Software of PC

Download the camera setup application (BMC_config.zip), from our website: www.bolymedia.com/index/Support,connect Camera to Computer with the USB cable, open the software and select camera model.

STEP 1> Select your country and carrier.

STEP 2> Check WAP/Internet Parameters.

Fill out the required fields (marked with an asterisk), enter an Email server such as "smtp.gmail.com" or "smtp.bolymedia.com."
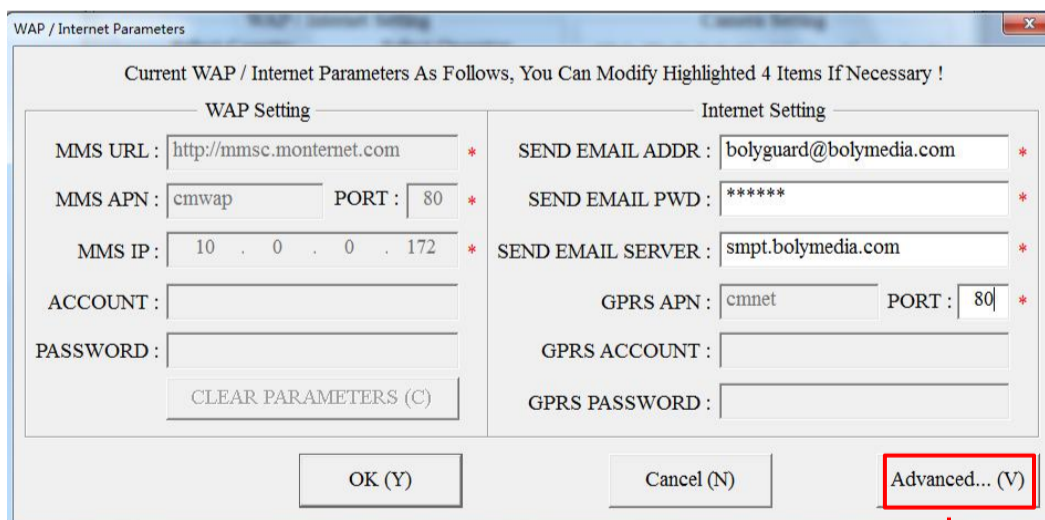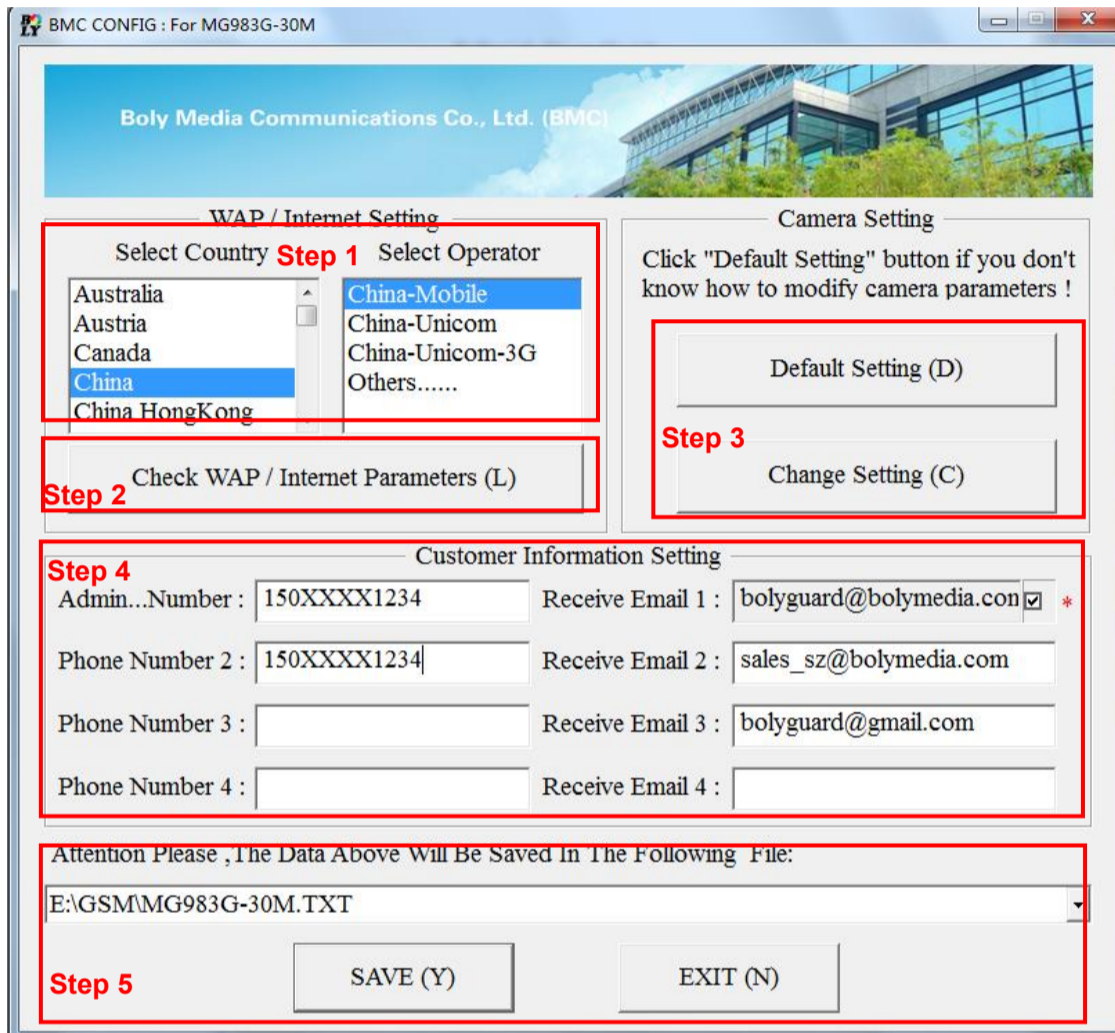
STEP 3> Choose between default or manual settings. For first time users, we suggest using the default settings.

STEP 4> Enter the phone number of the phone to receive/send the remote commands and images in the "administrator number" field and email address in the "Receive Email 1" field (This is NOT the phone number of the inserted SIM card that resides in the camera).

STEP 5> Save the .txt file in the GSM folder of the TF card after all settings are complete. The program names the .txt file. The txt file must be loaded into the specific camera's GSM folder.

If your country or SIM card provider is not listed, select "Others." You will need to ask the SIM card provider for their specific MMS URL, MMS APN, Port, MMS IP, Account, Password, GPRS APN, GPRS account, GPRS password. For sending emails, your email service provider will be able to provide the send email server and port settings.

3.2.3 Setup for Mobile applications

When the camera is switched to the ON mode, you can change some of the basic camera settings on the mobile application. There are currently apps supported by Android and Apple devices.   Charges or fees may apply when sending text messages to the camera depending on your cellular provider.
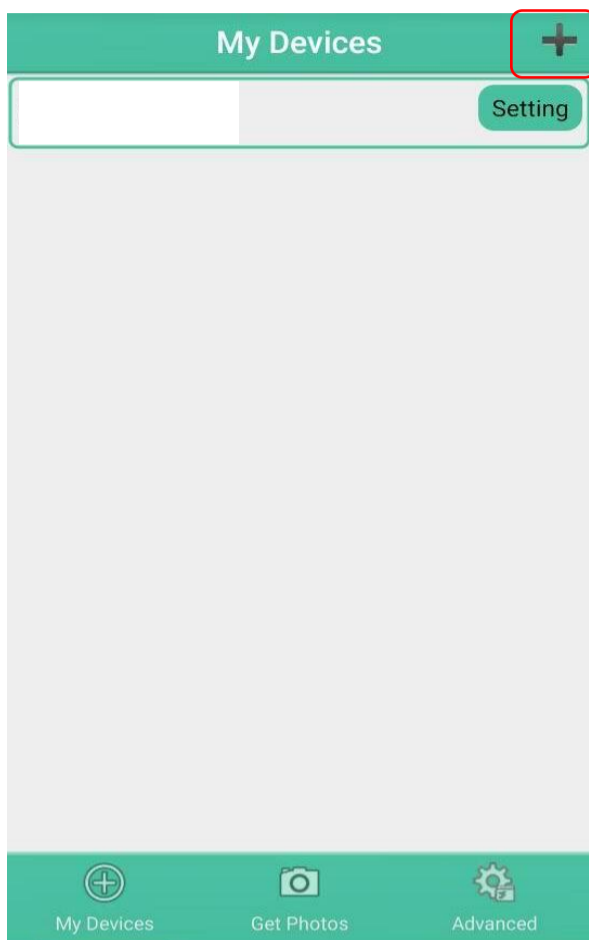
- For Android, you can search BGTools from the Google store or download the application directly from our website, under the Downloads section: http://www.bolymedia.com/index/Support

- For Apple, search BGTools in the official Apple Apps store.

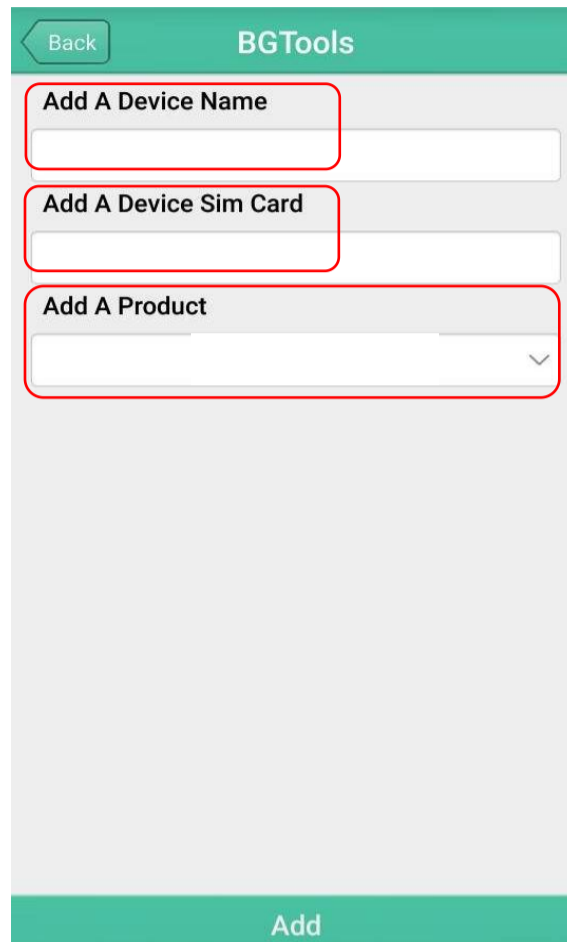### BG Tools Usage Instructions for Android App

The Android APP makes it easy to communicate with the camera, so you don't need to edit the SMS.

STEP 1: Open the BG Tools app and click on the icon⊕ to add a new device.
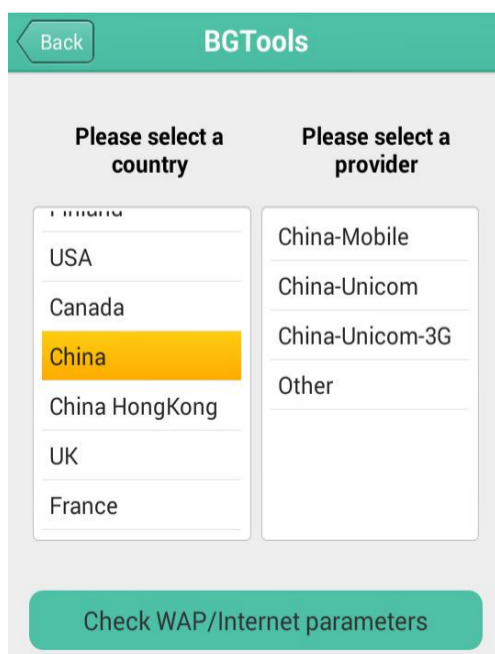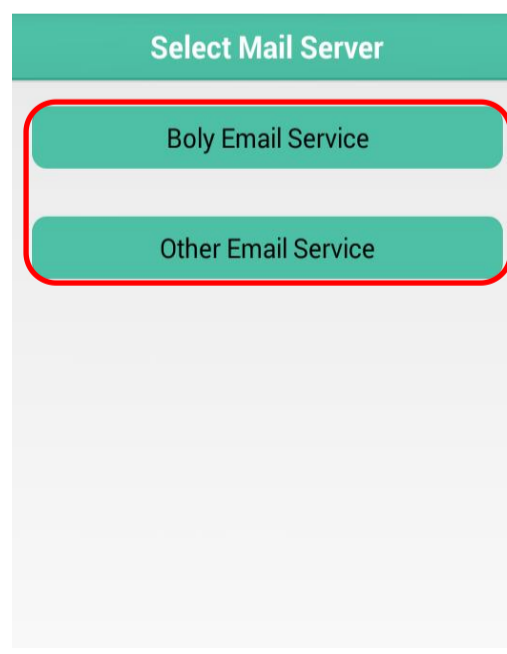
STEP 4: In the Select Mail Server: you can decide on using a Boly Email or Other Email service. Select "my device" to add or delete a device.

STEP 5: Select "Setting" to set the user's parameters or set to default.
STEP 6: Select "Get Photos" means you can get a photo from your camera device. There are two ways to send an image via:
Cellphone: Send MMS to the phone.
Email: Send an email by GPRS.
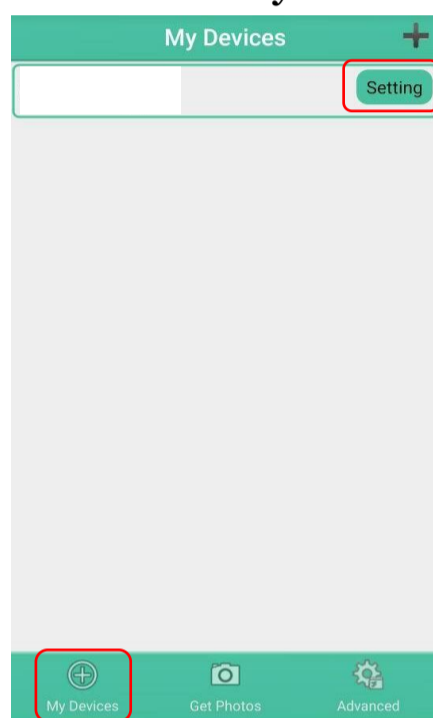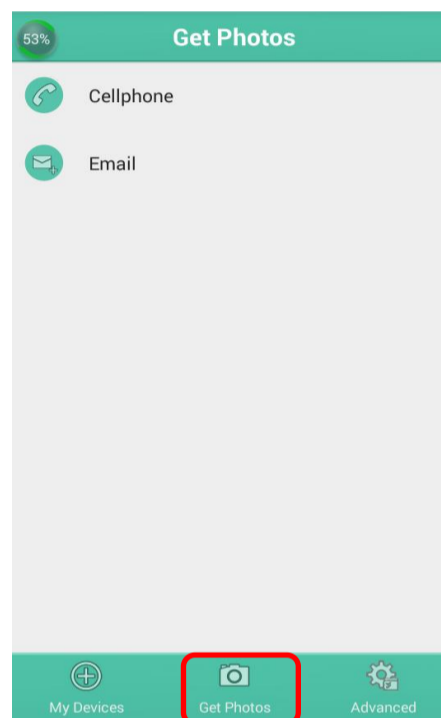
STEP 5   STEP 6

Set password:
If you forget your password, you can get a new one.

Add or Delete a device:
Android
Select "My Device" to add a device, a long click on the device to select the delete option.
IOS
Click " ⊕ " to add a device and choose your device, or slide to the left to delete it.

3.3 Cloud Service - Molnus

Molnus is a cloud service that allows users to access to transfer and store images taken through the cameras with the use of compatible devices or a computer.

To get started, you need to supply the camera with batteries and a SIM-card that has internet access.

You also need to have the phone number and the APN name to the SIM-card you will use for the camera.

The operator of the SIM card provides **the APN name.** Each operator has its own APN name. If not present in any documents sent along with the SIM-card, then please check the operator's homepage for APN settings.

IMEI, Control Code can be found on your camera. You will need a SIM-card that has internet access. Start the camera in SETUP mode, look for the operator's name in camera display, then check the Version.
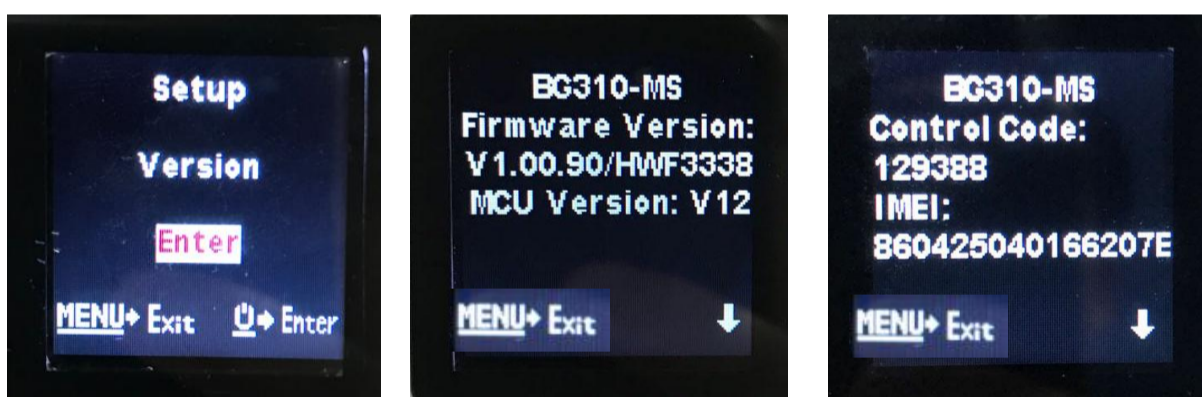
Step1 Register your Molnus account. (In Molnus)

Step2 Log in to your Molnus account and go to the My Cameras page. (In Molnus)

Step3 Power on the camera, into SETUP Mode, and set Send mode is "Molnus."(On camera)

Step4 Press the Register camera button to register your camera. (In Molnus)

Step5 Press the Register button in Molnus, and wait for about 5 minutes. (In Molnus)

The registration should now be done, and the camera should now be able to upload images to Molnus.

Test the function by moving in front of the camera. Within a few seconds to a minute, the images will show up in the gallery in Molnus.

If you would like to use Molnus on your smartphone, please download the app on Google Play or Apple App Store. For more details please check on the website: https://www.molnus.com/

3.4 Camera Setup Options

To view the camera settings menu, press OK to power on the camera. When the screen is active, press MENU to enter into the menu settings. Use the ▲/Up key to select the different items, use ▼/Down key to select the different options. Press OK to save the setting and press MENU to exit the camera settings menu.

Note: After changing EACH setting in the Setup menu, you must press OK, or the camera will not save new settings.

Main Options	Descriptions
Language	Language options include: English, Czech, German, French, Spanish, Swedish, Finnish, Norsk,Dansk,Italian,Russian. **Default: English**
Camera Mode	There are three camera modes: **Photo:** to take a photo **Video:** to record a video **Picture + Video:** to take a picture with a video clip. This mode disables the photo burst function. **Default: Photo**

|	
Set Clock	Set the date and time of the camera. The date format is day/month/year and the time format is hour: minute: second.
Photo Size	Choose the image size: **Default: 4 MP**
Photo Burst	Choose the number of photos taken after the camera is triggered: 1 Photo, 2 Photo, or 3 Photo. *If Pic+Video is selected, Photo burst defaults to 1 photo regardless of the entered value.* **Default: 1 Photo**
Video Size	Choose the video size: **Default: 1080P**
Video Length	Choose the duration of the video recording. Valid values extend from 5-60 seconds in 5 second increments. **Default: 10 seconds**
Time Lapse	The camera can capture images or videos at a preset time interval regardless of motion detection. Changing this setting to a non-zero value turns on Time Lapse mode, and the camera will take photos at the set interval time. *If PIR Trigger/Sensitivity and Time Lapse options are BOTH OFF, the camera will not capture any photos or videos.* **Default: Off**
PIR Trigger/Sensitivity	This setting is for the sensitivity of the PIR sensor. There are four sensitivity parameters: High, Normal, Low, and Off. It is recommended to use HIGH sensitivity in areas with little environmental interference and warmer, humid climates. Use LOW sensitivity for areas that have a lot of interference. The sensitivity of the PIR is affected by temperature. Higher temperatures lead to lower sensitivity. *If PIR Trigger/Sensitivity and Time Lapse options are BOTH OFF, the camera will not capture any photos or videos.* **Default: Normal**
Picture Type	Choose the type of LED for night photography: Black&White means select 940nm led, Colour is selected white led. **Default: Black&White**
PIR Interval	This setting indicates how long the PIR sensor will be disabled after each camera triggering. During this time the PIR sensor will not react to any detected motion. The PIR Interval can be set between zero seconds to a maximum of 1 hour.

	Default: 10 seconds
Work Day	Choose the days of the week you want the camera to work. This setting is only available in Hunting Mode. **Default: All**
Work Hour	This parameter defines a certain time in a day when the camera can be triggered, while the device will shut off during non-working hours. The effective value ranges from 00:00 to 23:59. When this parameter is set to Off, the camera works at all times. When the timer switch is ON, the camera works only during the time according to the preset settings. **Default**: **Off**
Camera Position	Used for multiple cameras in an area. You can set an A-Z indicator for each of your cameras to distinguish between which photos are from a specific camera. **Default: Off**
Recycle Storage	In hunting mode, if the TF card is full, the oldest images or videos will be overwritten by new pictures or videos. This keeps you from having to retrieve your memory card manually. In SETUP mode, this option is disabled. **Default: Off**
Send To	Send the image to your phone or email options. ● MMS: Send the image to the cellular device via WAP. ● Email: Send the image to an email address via SMTP. ● Molnus: Send the image/video to Molnus via network. ● FTP: Send the image to FTP address via network. **Default: Molnus**
Send Mode	There are 3 options for this setting. • **Daily:** Only works in ON mode. **Photo Mode:** This setting will send summarized information, and the last picture was taken at the end of the time you had set. **Video Mode:** The summarized information will include how many videos were taken and the last video taken at the end of the time you had set (less than 10M). **Pic+Video Mode:** The summarized information will include how many videos and pictures were taken and the last picture taken at the end of the time you have set. ● **Instant:** Only works in ON mode. The camera will send a

	message instantly after it captures a photo or video. ● **OFF:** Disables all communication functions. *NOTE: Some cellular carriers limit the size of files being sent.* *Some images and video files may be too large to send.* **Default: Instant**
SMS Control	SMS Control enables mobile communication functionality. When SMS Control to ON, the camera can receive and respond to your SMS commands. **Default: Off**
SIM Set	When this function is turned auto, the camera automatically recognizes the carrier after booting and automatically configures communication parameters, such as MMS_URL, MMS_APN, MMS_IP, MMS_PORT, MMS_ACCOUNT, MMS_PASSWORD, GPRS_APN, GPRS_ACCOUNT, GPRS_PASSWORD. When you select manual option, you can input parameters by manual. **Default: Auto** Note: When this function is turned auto, the first boot time will be about 2min or later.
Select network	You can lock network, there are 2G,3G,4G option. If you select 2G, camera will send picture through 2G network. **Default: Auto**
Attachment Size	Setting the picture size which will be sent to your phone or email. There are 3 options for this setting. **Low:** Sends a severely compressed picture. **Normal:** Sends a slightly compressed picture. ***High:** Sends the original pictures. **Default: Low**
Password Set	Enter your four digits password to enter your camera when powering it on. **Default: Off**
Time Stamp	When this function is turned on,the camera can print time and Logo on video. **Default: ON**
Format SD	All information on the TF card will be deleted. Make sure to make a backup of important data already on the TF card.

Default Settings	Restores all settings back to default values.
Version	Shows firmware Version.
Register Camera	Used only for the Molnus app to register the camera.

4. Troubleshooting

1. There is something in front of the camera lens. Is the camera broken?
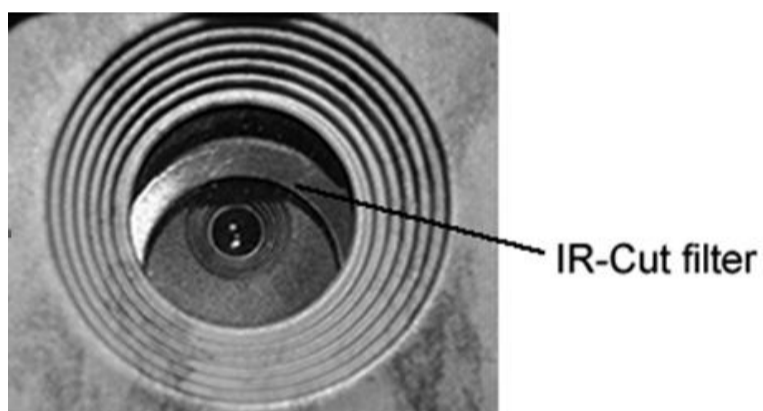
IR-Cut filter

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

2. The display screen is suddenly black.
A: The camera may be in "Hunting mode." Press MENU to wake it up.　If there is no response, the camera may be powered off. Please check if the batteries are still good and in place.　Once battery power and placement is verified, press and hold down the OK/POWER button until the display turns on, indicating the camera powering up.

3 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 exchange.

5. PIR Detection Zone

This camera has a new patented PIR, the following picture shows the compared detection zone between normal PIR and the new patented PIR.
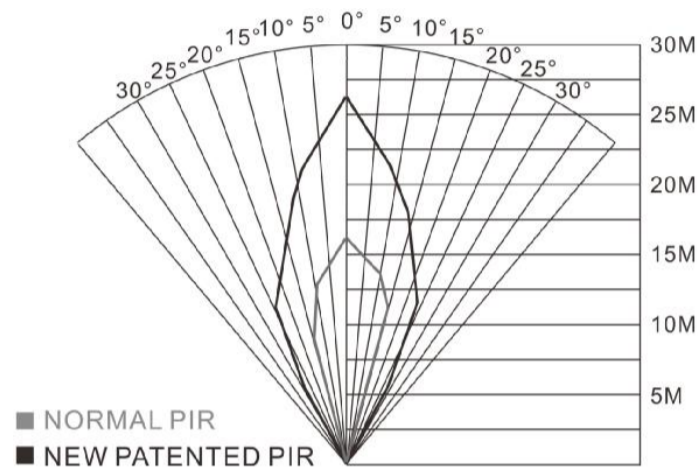
The PIR detection angle (α) is smaller than the field of view (FOV) angle (β). The advantage of this design is to reduce empty an empty picture's rate and capture most, if not all, objects in motion.
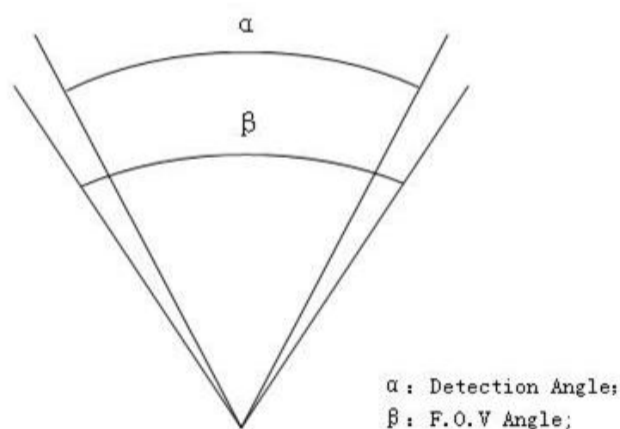
6. Technical Specifications

Image Sensor	4MP CMOS Sensor
Lens	F/NO=2.4 FOV(Field of View)=57°
LED Type	940nm and white led
LED Number	2pcs
PIR Detection Range	100ft
Illumination Distance	100ft
Display Screen of Remote Control	1.44" Color LCD
Memory Card	Up to 32 GB
PIR Sensitivity	Adjustable (High/Normal/Low/OFF)
Trigger Time	0.7s
Weight	BG410-D without battery:174g
Operation/Storage Temperature	-20 to +60°C / -30 to +70°C
Power Supply	2*18650 batteries or Solar Panel
Sound Recording	Available
Mounting	Rope/Belt/Python lock
Dimensions	BG410:115*81*45 mm Solar Panel:74*89*30mm or 179*126*13mm
Operation Humidity	5% - 90%
Security Authentication	FCC,CE,RoHS

The static electricity test prototype is restarted and needs to be restored manually. According to the static electricity level, it is judged to be level C.

7. Parts List

BG410-D/BG410-DFP

Part Name	Quantity
Camera	One
Belt	One
User Manual	One
18650 Battery (BG410-DFP with)	Two
TF Card (BG410-DFP with)	One
TF Card Adapter (BG410-DFP with)	One
Iron Sheets	One

BG410-M/BG410-MFP

Part Name	Quantity
Camera	One
Belt	One
USB Cable	One
User Manual	One
4G Antenna	One
18650 Battery (BG410-MFP with)	Two
TF Card (BG410-MFP with)	One
TF Card Adapter (BG410-MFP with)	One
Iron Sheets	One

Version 1.1

WARRANTY CARD

Customer Name:_____

Contact Address:_____

_____

Date of Purchase:_____

Contact Tel:_____

Model No.:_____

Series No.:_____

Retailer:_____

The camera manufacturer provides 12 months warranty for this product against manufacturing defects or malfunctions. If your camera fails to function under regular use within one year, the camera manufacturer will repair or replace the camera free of charge. This warranty does not cover improper use of the camera resulting in damage. The camera manufacturer can provide extra service for your camera after the warranty expiration, but the customer has to be responsible for additional charges on parts, labor and shipping costs therefore brought.

Please contact your reseller for warranty service