4G/3G/2G GPS Cellular Trail Cameras
Model: BL480L-P
Supporting MMS/Email/FTP
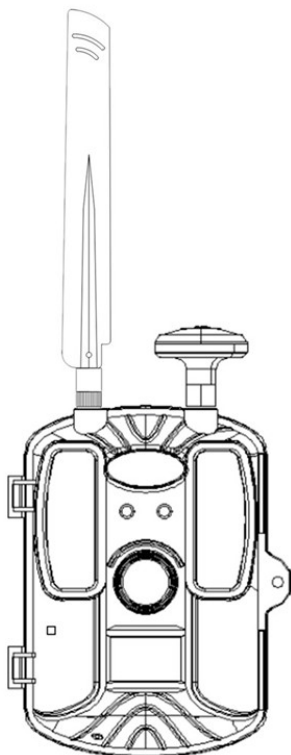
User's Manual

Contents

Introduction

Congratulations on the purchase. Users have selected a high-quality product. The operating instructions are a constituent of this product. They contain important information about safety, use and disposal.

Before using the product, familiarize all operating and safety instructions. Use this product only as described and only for the specified areas of application.

Main Features

♦ 112 degree wide angle lens

♦ 1080P Full HD video resolution

♦ 0.6 seconds trigger time

♦ IP66 waterproof, dustproof

♦ Supporting 4G/3G/2G network

♦ GPS location information

♦ Sending original pictures

♦ Sending 30S video

♦ Supporting FTP

♦ SMS remote control

♦ APP remote control

Illustration

Front & Bottom view:
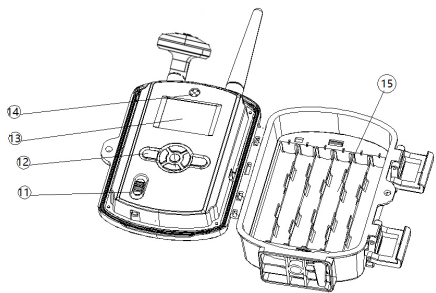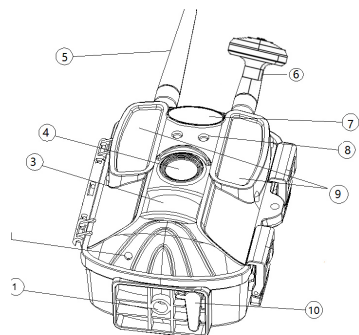
1. Bottom   2. Microphone   3. PIR detection   4. Lens

5. 4G antenna   6. GPS antenna   7. logo space   8. light detection

9. Invisible IR 52pcs Leds   10. DC 12V Jack

11. Powerswitch(TEST/ON/OFF)   12. 7 Operation Buttons

13. color display   14. Built-in speaker

15. 12 AA battery depot

Applications

1. Trail camera for hunting
2. Animal or event observation,Fauna Surveys
3. Warehouse/Storage/Farm Area Surveillance
4. Home/Property Security
5. Farm Gates or Driveways

Accessories

1. Strap	2. USB cable	3. User manual
4. GPS antenna	5. 4G antenna	6.CD

Peel Off

There should be transparent protective films on leds, lens, PIR
and screen. Please peel them off when start to use camera.

Cleaning

Damage to the device!

■ To avoid irreparable damage, ensure that no moisture
penetrates the device during cleaning.

■ Clean the surfaces of the device with a soft, dry cloth. Use a
normal commercial detergent and water to remove stubborn
residue. Ensure that no water gets into the device.

■ Always keep the seal clean so that no moisture gets into the device and damages it. Contamination of the seal can impair the dust and water spray protection.

Power Supply

♦ To insert batteries in the device, first open camera and check battery compartment on +-. When users replace the battery, please replace all batteries. Do not max the old and new batteries and do not mix alkaline, standard, and rechargeable batteries.

♦ To increase the operating time, users can use 12 x 1.5 V LR6/AA batteries in the battery compartment.
Please pay close attention to the polarity, which is marked on the battery compartment. Otherwise the device will not work and can be damaged.

♦ If users operate the device using a mains adapter (not supplied), open the round rubber seal at button of camera then connect the external mains adapter. The mains adapter must supply a direct-current voltage of 12 V. Operation via a mains adapter is possible with batteries inserted. If one power source fails, operation will be maintained using the other.

Warning

1. Slide the power switch to OFF position to turn 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 long time

2. Always have the camera in the OFF position when installing or removing batteries and memory card. Removing batteries or memory card while the camera is ON may damage the camera.

Inserting SD/Micro SIM cards

► Since the camera has no built-in memory, it can only work when an SD/SDHC memory card is inserted. After inserting,

via camera sub-menu 'format', so that to improve the battery life and shutter speed.

► The device supports SD/SDHC memory cards with a capacity of up to 32 GB.

►When the SD memory card is full, it will automatically stop take picture and record video. And the light will be closed.

► To remove an SD/SDHC memory card, press the protruding edge of the memory card in a little way until it pops out. Then remove the card.

► To insert an SD/SDHC memory card into the memory card slot of the device, push it into the slot until it clicks into place. The contact surfaces of the memory card must be facing towards the front of the camera.

► SD/SDHC memory cards have a locking system to prevent accidental erasure. However, the camera can only save data onto the card when SD card is not locked.

Quick Start(NO sending pictures out)

A. Switch camera to ON mode

Note: Camera comes default setting, so for testing purpose, users only need to insert a SD card and batteries to let camera work by turning camera to ON Mode. The red light will work for 3 times and screen is off, then work on PIR and when working during nighttime, there is no any visible light.

B. Switch camera from TEST to ON mode

When user need customized setting, please turn camera to TEST mode, then the display will be on, please press button "MENU" to enter camera setting menu.

Using navigation buttons to obtain favored setting, press ''OK'' for confirmation and save the preferred change, press "MENU" to exit current page.

Then turn camera from TEST to ON mode, The red light will work for 3 times and display will be off, then work on PIR and when working during nighttime, there is no any visible light.

Screen display when in TEST mode

Shoot Picture Information

Picture information strip: logo, serial number, temperature, longitude and latitude, moon phrase and date/time

Specification

GPS function	Supporting, camera will read when camera is on test mode
MMS Function	1-3 mobile ID（only sending VGA and QVGA image）
SMTP function	1-3 Email ID（NO SSL/SSL/TSL support, original image and video can be sent，if camera is on camera+video mode, all can be sent out）
FTP function	Original picture or video can be sent out via FTP function
APP	Available on Android and Apple mobile
Image Sensor	5 Mega Pixels Color CMOS
Effective Pixels	2592*1944
Day/Night Mode	Auto
IR range	20m
IR Led	52pcs
SD Capacity	SD Card (8MB – 32 GB)
Operating buttons	7 buttons
Wide lens	F=1.8; FOV=112°; NO IR-Cut-Remove (at night)
Regular lens	F=1.8; FOV=73.6°; NO IR-Cut-Remove (at night)
LCD Screen	2.0" TFT, RGB, 262k
PIR Sensitivity	3 sensitive levels: High / Normal / Low
PIR distance	20m
PIR Angle	120°/90°

Picture size	1.3MP:1280*960 5MP:2592x1944
	12MP:4032x3024
Picture Format	JPG
Video resolution	1080P (1920x1080): 30FPS
	720P (1280x720):30FPS
	640x480:30FPS
Video Format	MOV H.264
Video Length	5-30sec. programmable
Shooting Numbers	1-3
Trigger Time	0.6s
Trigger Interval	3s-60min
Camera + Video	Yes
Time lapse	supporting
Timer Setting	2 Timers
Device Serial No.	Yes
Built-in Speaker	Yes
Recording Voice	ON/OFF
SD cycle	Yes
Operation Power	Internal power:4-6V; External power: 6-12V
Battery Type	12 AA
Stand-by Current	0.025mA
Stand-by Time	4-8months (4×AA~12×AA)
Auto Power Off	auto switch to mode "OFF" in
	360s without any operations

Power Consumption (when connect 12V input)	IR LEDs Off	Photo: 200mA; Video: 200mA
	IR LEDs On	Photo: 1 Video: 1A
Interface	Micro SIM Card slot/HDMI/USB/SD Card/DC Port	
Mounting	Strap; Tripod	
Storage temperature	-30 °C to 60°C	
Operation Humidity	5%-90%	
Waterproof spec	IP66	
Dimensions	13(length)*9.5(width)*16(higth)cm	
Gross Weight	800g	
Certification	CE FCC RoHs	

MMS/Data(SMTP/FTP) Setup

Part 1.

	Picture mode	Video mode	Picture+Video Mode
Only MMS Option (VGA, QVGA, OFF)	User can choose VGA or QVGA. Compressed pictures will be sent out	No work	User can choose VGA or QVGA, Compressed pictures will be sent out
Only Data Option (SMTP, FTP,	User can choose SMTP or FTP. Original pictures will	Please set video (<=30s length), and choose SMTP or FTP	User can choose SMTP or FTP, Original picture and

OFF)	be sent out	Original video will be sent out	video will be sent out
MMS Option + Data Option	MMS(User can choose VGA or QVGA), Compressed pictures w be sent out . Data(User can choose SMTP or FTP), Original pictures will be sent out.	MMS function will no work. Data function will work via SMTP or FTP. Original video will be sent out.	MMS(User can choose VGA or QVGA), Compressed pictures wil be sent out . Data(User can only choose SMTP or FTP), Original pictures and video will be sent out

Note:

1. In camera mode, if user choose 5MP image resolution and Data method to send images, the taken original image will be email out。

2. In video mode, original video will be sent out via SMTP or FTP.

3. In camera+video mode, Both images and video can be sent out via data. If user choose MMS method, QVGA or VGA image will be sent, it depends on user choice when select MMS Option. If user choose Data Option, the original images and video will be sent out.

For example, if user choose 5MP image size, Data Option: SMTP, the taken 5mp image will be email out.

4. when turn on multi-shoot function, the last taken image will be sent out

5. after setting up via PC firmware, and camera will read menu.cfg. If user want to change mobile ID or email ID or others, please format SD first then input via remote control

Part 2

4G, 3G and 2G network can be supported, when camera start to search signal, the best and stable signal will be selected. This camera will detect operator name and current network from 4G, 3G then 2G automatically. During this process, it costs several minutes. ==Please make sure that there is at least 3 bars on camera scream, then begin to use cellular function.==

If it is 2g, please use MMS function.

If it is 3g, please use MMS function or SMTP function at 1.3mp image resolution.

If it is 4G, please use MMS function or SMTP function at 5mp image resolution.

If 4 bar with 4G network on camera scream, 30s video can be sent out via SMTP or FTP function.

Transferring Files between PC and Camera

No matter camera is with power or not, user can transfer files between computer and camera. Please connect them with USB cable. And turn camera to Test mode. Computer will recognize the camera as"Mass Storage". And mass storage will appear on camera display. Now user can transfer the required file.
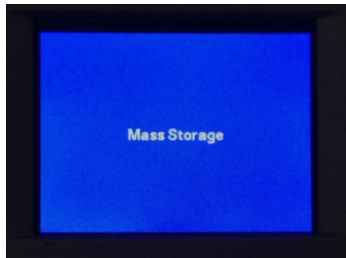
Check Menu via Buttons

Note: user can not setup cellular function via camera buttons.
After connecting a power supply, switch camera to the "TEST" position, then screen will be on, please enter MENU to confirm the settings described on the following pages using the buttons (photo as follows). In test mode, the infrared leds are off. and display will work. After finishing or checking all setting, please turn to ON mode, the red light will work for a while.

Please note: The camera will be power off automatically if without any operating for 6mins.

Press the ▲ key to choose the upper option.

Press the ▼ key to choose the next option.

Press the ▶ (SHOT key) to manually trigger camera. A photo or video will be taken and saved to the SD card.

Press **OK** key to save the menu setting

Press **MODE** key to swift photo mode, video mode and reviewing the photo or video; swift the number, letter, symbol when re-setting up mobile ID and Email.

The **MENU** on the keypad allows users to program the camera to work the way users want.

1. Mode

To select whether photos or videos are to be recorded in motion detection mode or timelapse mode. In Photo + Video mode, the camera first takes a photo and then starts filming video.

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2. Language

Here users can set English / French / Spanish / Portuguese / Deutch/ Italian / T Chinese / S Chinese/Japanese as the menu language. Contact the manufacturer if users want to add any new language.

3. Image size

Select a photo size: 1.3 MP, 5 MP (preset)or 12 MP.The larger the file size, the more detailed the image. However, the maximum number of high-resolution images that can be stored before the memory card is much fewer.

4. Video resolution

Select the screen resolution: 1920 × 1080, 1280 × 720, 640 × 480. The higher the resolution, the sooner the capacity limit of the memory card will be reached.

5. Date & time

Camera will read time/date after choosing time zone. They will be displayed on the photos and video that the camera takes.

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6. Shooting No.

Select the number of photos that are to be taken in one
succession when the camera is activated in photo or
camera+video mode. In addition to single shot mode 1 photo,
users can take "2 photos" or "3 photos".

7. Video Length

Use the up/down buttons to select the length of the video
recording (between 5–30 seconds) that is to be made when
video recording is activated. The longer the recording time
selected, the shorter the operating time.

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8. Interval

Use the up/down buttons to select the minimum time period(between 3second and 60mins).During the selected interval, the camera will not record any images or videos. This prevents the memory card from being filled up with too many recordings of the same event. Users can select from 3 seconds to 60 minutes.

9. PIR Sensitivity

For interior areas and environments with little interference, such as branches blowing in the wind, select "High". Select "Medium" for exterior areas and environments with a normal amount of interference, and select "Low" for environments

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with a high level of interference, too hot and too cold weather
are included.

10. Date Stamp

Here users can choose whether save photos/video with a time
stamp or not.Users can choose whether the stamp consists of
time and date or just date.
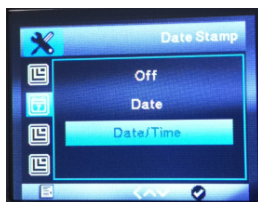
11. Timer 1 and Timer 2

Select"On" if the camera should only be active during a certain
time period. In the sub- menu, users can set the start and end
time for PIR mode and timelapse mode

Press the up/down buttons to set the hour for the start of the active phase. Then switch to the next field using the right button. Press the up /down buttons to set the minutes for the start of the active phase.

The settings made here apply every day. The camera will not record any images outside of the active phase.

Confirm user selection with the OK button. Afterwards, press the MENU button to close this sub-menu.

12. Password Setting

Select "On" if users want to use a password to protect the camera from unwanted access. In the following screen menu, users can set a 4-digit combination:

Press the up /down buttons to select the first digit between 0–9.

Then switch to the next field using the right button. Press the up /down buttons to select the second digit between 0–9.

Confirm user selection with the OK button. Afterwards, press the MENU button to close this sub-menu.The set number

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combination must now be entered each time when the
camera is switched to TEST mode.

If users forget the number combination, please ask the
supplier for firmware to reset it to its factory default settings.

13. Serial NO.

Select "On" if users want to use a serial number to rank the
camera. In the following screen menu, users can set a 4-digit
combination:

Press the up /down buttons to select the first digit between
0–9.

Then switch to the next field using the right button. Press the
up /down buttons to select the second digit between 0–9.
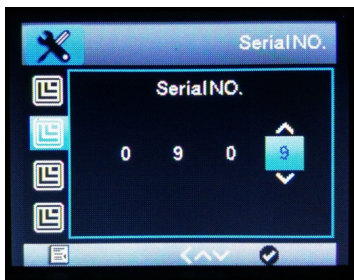
14. Time lapse

With this function the camera automatically takes pictures at adjustable intervals. This is useful if users want to observe the blooming of plants or the others, for example. When users confirm"On"with the OK button, users can then set the desired time interval using the menu that now appears. Please note time lapse function can not work with PIR mode so far.
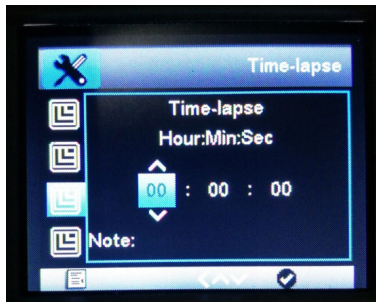
Press the up/ down buttons to set the hour of the desired time interval.Then switch to the next field,"Min", using the right button. Press the up/down buttons to set the minutes of the desired time interval. Then switch to the next field,"Sec", using the right button. Press the up/down buttons to set the seconds of the desired time interval. Confirm user selection with the OK button. Afterwards, press the MENU button to close this sub-menu.

15. Organization Name

The default setting is Off. User can set up the logo or label on the photo that the camera takes.

16. SD Cycle

Default setting is OFF, when user turns on this function, the pictures or videos which are taken at beginning will be deleted .

For example, picture 1st, picture 2cd, picture 3rd, video 4th, picture 5th, picture 6th, picture 7th, video 8th, ······full card picture 1st will be deleted, then picture 2cd, then picture 3rd. Please note, when user locks some files, the locked ones will not be deleted automatically.
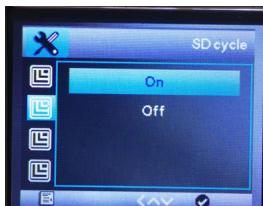
17. MMS Option

Choose either VGA=640x480 or QVGA=320x240, which defines the resolution size of the picture which to be sent to user.
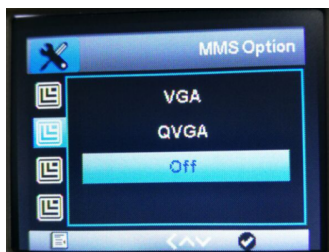
When using MMS function, and users do not know which MMS option is suitable, please let user mobile to get MMS from mobile, then check the MMS picture size via computer.

18. Phone Number
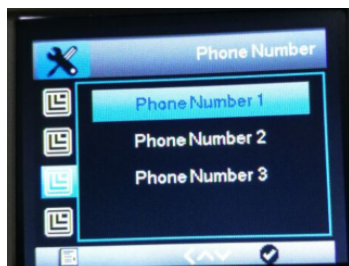
19. Data Option

Enter the sub-menu(Data Option) there will be SMTP/FTP Server/OFF

1) SMTP (Email): Choose the SMTP. The Picture/Video will be sent to users email box. User can be input 3 email box in the GPRS Setup sub-menu.

2) FTP (File Transfer Protocol): Choose the FTP picture/Video will be sent to the network storage. User can browse the

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picture/video via users FTP account. User need to register a
FTP account at local before using this function.
3) OFF both SMTP and FTP are closed.
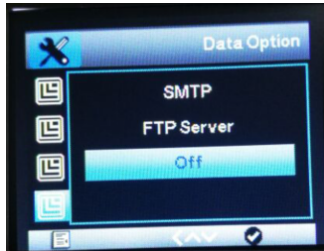
20. Recipient Email

There have three email ID available. That's mean the cameras
will send picture/video to the 3 email box at the same time.

21. FTP Server

User need to register a FTP account at local and can enjoy
better service. In normal the FTP account is rechargeable. The
picture and video will be sent to users FTP once it captures
wildlife. User can browse in users FTP account. The FTP can be
login by both smart phone and computer.

22. SMS Control Interval

Inter the On sub-menu, input the interval time. The camera will wake up each interval time and receive SMS Command. The instruction can be made via APP. After camera is waked up by SMS, it will be awaken for 6mins. The shortest SMS Control Interval is 10min. ==If user want to turn it on, please delete menu.cfg from SD card first==

For example: SMS control interval 30mins. The camera will receive SMS instruction at each 30mins interval. Please note the camera not always wake up, so that it can save power.
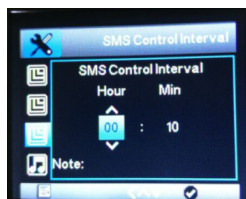
23. Record audio

Turning on this function, user can record sound while recording video.

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24. GPS Switch

Turn on/off the GPS function.
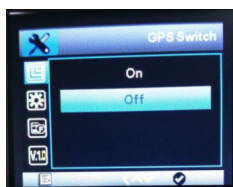
25. Default Settings

If user select"Yes"the menu item and press the OK button, all
previously made camera settings including any password will
be deleted and the factory settings will be restored.
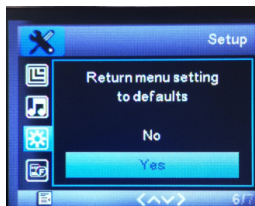
26. Format

Formatting the memory card will permanently delete all data
on it including the locked images. Users should first format the
memory card. Select"Yes"with the OK button and confirm the

following prompt with the OK button. The formatting process
starts. While the card is being formatted, the message "Please
wait"appears.
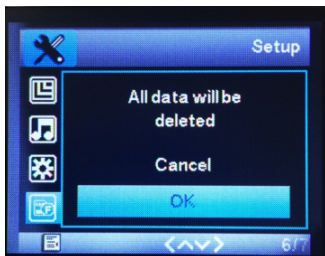
27. Version

Checking camera version number. That will help manufacturer
to find out the reason when there is problem with camera.

How to set up sending image function via PC

Load CD into Windows computer first and check.

MenuConfigPlus.exe lus 4.14v.exe , which is mainly for setting camera to send picture out. Please copy it to computer. Double-Click it to open. Home Page will occur as below, please go to 'MMS/4G' as highlight as below. And the rest options are the same with sub-menu as above. Home page is mainly for basic function setup, MMS/4G page is for sending image setup.

MenuConfigPlus V4.12v						— ☐ ✕
Mode	Picture ∨	Shot Number	1 Photo ∨	Password	○ On ◉ Off
Language	English ∨	PIR Sensitivity	Medium ∨	Serial No.	○ On ◉ Off
Image Size	5M 2592x1944 ∨	Date Stamp	Date/Time ∨	Time-lapse	○ On ◉ Off
Video Size	FHD 1920x1080 ∨	Record Audio	On ∨	Org. Name	○ On ◉ Off
Video Length (5s-30s)	30	SD Cycle	Off ∨	SMS Ctrl	○ On ◉ Off
Interval (3sec-60min)	10 sec ∨	GPS Switch	Off ∨	MMS / 4G	
		Local Time Zone	UTC+8 ∨	Timer	
Default Config		Load Config File		Save Config File	

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MMS SETUP

Mode:Auto, there is default country and operator information for selection.

1. MMS option: VGA; Data Option: OFF
2. Choose country and micro SIM card operator
3. Fill in Mobile ID as user sends out MMS image via mobile
4. Click 'OK' button to save setting and back to home page as above picture
5. Choose local time zone and others setting.
6. Click 'Save Config File' and Save as menu.cfg to SD card.
7. Insert SD card to camera, turn camera from OFF to Test, camera will read setting auto.

Note:

If there is no relate default country and operator for selection. Please Mode:Manual, contact Micro SIM card operator to get MMS APN, Account, Password, MMSC, IP and Port info. Then fill in mobile ID. Click OK to save setting.

Email SETUP

Email sends out original images via data transmission, the pictures are sent out from SMTP server to recipient email.

Mode: Auto, there is default operator information for selection for selection.

1. MMS option: OFF   Data Option: SMTP

2. Choose country and micro SIM card operator.

3. Choose default SMTP server or fill in them manually.

4. Fill in recipient email ID.

5. Click 'OK' button to save setting and back to home page.

6. Choose local time zone and others settings.

7. Click 'Save Config File' and Save as menu.cfg to SD card.

8. Insert SD card to camera, turn camera from OFF to Test, camera will read setting auto.

PS. If choose Gmail SMTP server, please generate APP password, then fill in with Gmail APP password.
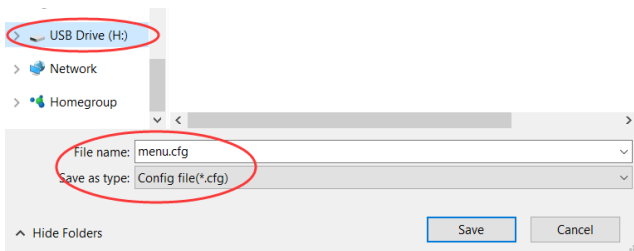
Note:

1. If there is no relate default country and operator for selection. Please Mode:Manual, contact Micro SIM card operator to get internet APN, Account and Password info. Then choose default SMTP server and fill in mobile ID. Click OK to save setting.

2. If you use Gmail or hotmail or other SMTP server, please check below points

1. Please note users email SMTP server must be turn on.

2. When sending email, it should not need to input verification code.

3. Please take the recipient emails to white list

4. It allows less-secure sign-in method.

5.Some emails have third-party(such as APP) log password, please input it in email password.

FTP SETUP

FTP account is to recieve and store files. Camera FTP function works like a FTP user, log in FTP account and upload files via

data service. It is faster way to send out files than SMTP. User can check file via FTP APP as well.

Mode: Auto, there is default country and operator information for selection.

1. MMS option: OFF; Data Option: FTP
2. Choose country and micro SIM card operator
3. Fill in user FTP account info(server, port, account and password)
4. Click 'OK' button to save setting and back to home page
5. choose local time zone and others setting.
6. Click 'Save Config File' and Save as menu.cfg to SD card.
7. Insert SD card to camera, turn camera from OFF to Test, camera will read setting auto.

Note:

1. If there is no relate default country and operator for selection. Please Mode:Manual, contact Micro SIM card operator to get internet APN, Account and Password info. Then fill in FTP account info. Click OK to save setting.
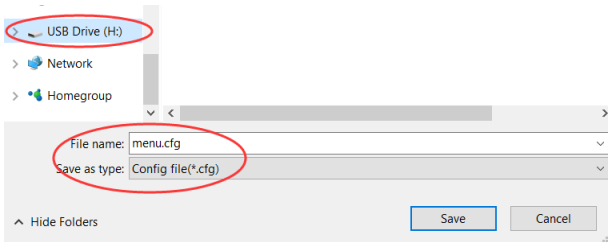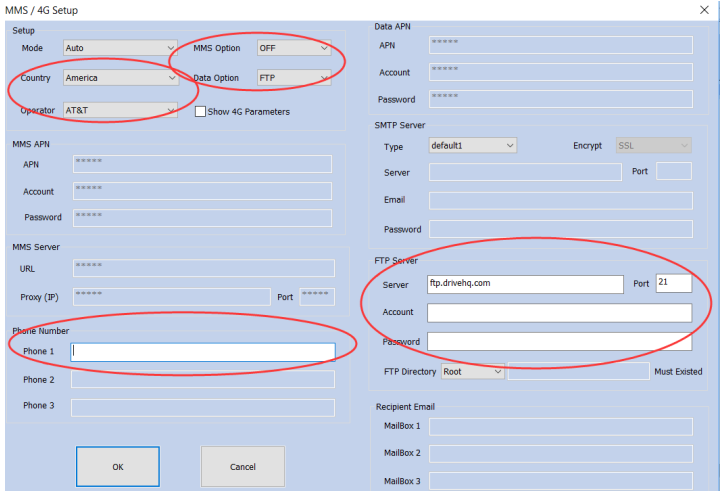
Note: user can fill in Phone 1 to get FTP sms notice. It will work as below:

sent ftp file
170101-001514-100ME
DIA-IMG_0028.JPG

There is free FTP service, user can apply for a free account(1G),

please check this link

https://www.drivehq.com/secure/freeSignup.aspx

Server：ftp.drivehq.com   IP: 66.220.9.51   Port：21

User can also check DriveHQ APP to check pictures/video.

How to send picture in TEST mode

After camera read SD card and SIM card, signal and image space will occur on display, please set up via MenuConfigPlus, and store menu.cfg to SD card root. After camera read menu.cfg, the relate setup will be shown via menu. Pressing Mode button, there are three mode(picture/video/review), please make sure display show it is picture then press ▶ (SHOT key) to manually make shoot, it will enter sending process auto.
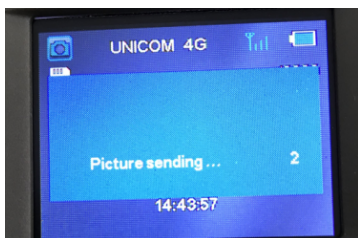
Change setup after reading menu.cfg

Please format SD card via sub-menu first. If user want to change image resolution from 5mp to 12mp, Please use sub-menu(turn 5mp and 12mp) then press 'OK' to save change.

If user want to change recipient mobile ID or email ID, please use 'MODE' button, which is for swifting the number, letter, symbol when re-setting up mobile ID and Email. Press press 'OK' to save change. The Key important thing is to delete

menu.cfg. When menu.cfg is in card, whatever user change, the camera will not read new setting.

FAQ List

A. Camera can not detect small animal.

Solution: Please use High PIR sensitivity.

A. It seems that camera has much slower trigger speed.

Solution: when using default setting to test trigger speed or make comparison with other cameras, please use High PIR sensitivity.

C. Camera can not recognize SIM card.

Solution: Please check there is any PIN lock on SIM card. If so, please delete the lock. When power is low, SIM card can not be detected either.

D. After inserting SIM card, there is no signal bar.

Solution: Please check battery power is enough or not, when searching signal, camera need higher power. And please check 4G antenna placing.

E. After menu.cfg setup, and turn camera from OFF to ON mode, there is no picture arrives.

Solution: Please turn camera from OFF to TEST mode first, then camera will read menu.cfg, after camera recognizes SIM

card and get 3 or 4 signal bar and operator, then please turn to
ON mode.

F.   In too cold weather, please use LOW PIR sensitivity, if
     temperature is close to 37℃,please use HIGH PIR
     sensitivity.

G.   When testing sending picture out on Test mode, please
     make sure the signal is 3 bars or 4 bars.

H.   when connecting with power, test mode, red LED blinks,
     and screen can not be on, please let camera be charged
     for about 2min, then replace AA batteries or plug OFF and
     plus in DC power. Capacitor needs to be charged before
     working, when it is with no power.

I.   If using MMS function, display said '' send OK'' pressing
     ▶button, but mobile can not get MMS picture, please
     check mobile space is enough to get pictures, and check
     anti-virus software block it or not.

J.   If using Email function, display said ''send ok'' after
     pressing ▶button, but receipt Email can not got Email,
     please check spam on web email server.

K.   Turning camera form ON to TEST, display can not be on.
     When camera is being in sending process, the display will
     be on after finishing this process. Or user can turn camera

from ON to OFF then Test, the sending process will be stopped.

After-sales Support

If you meet any difficulty during usage, please email support@balever.com. And please offer which country you are in? Which operator you use? You need MMS or Email function? How many signal bars on camera display?

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