2G/GSM/ GPRS/MMS/SMS
Digital Infrared Trail Camera
User’s Manual
HC-300M
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1. Instructions

1.1 General Description

This digital trail camera with MMS function can work automatically day and night. It can be triggered by any movement of human (or animals) in a certain region monitored by motion sensor, and then automatically captures pictures (up to 12M pixels) or records 1080p or HD video clips (WVGA or QVGA).

During daytime it begins to take color photos and video till light is not enough, then it begins to take monochrome photos video.

It supports 2G/GSM/MMS/SMTP/SMS. And it is waterproof IP54.

1.2 Camera Body Interface

It has the following interfaces: USB connector, TF-card slot, SIM card slot, TV output and external DC power connector.

1.3 Camera components and features

1) Bottom Cover
2) TF-Card Slot
3) USB Connector
4) TV Out connector
5) PIR
6) Infrared Flash
7) Lens
8) GSM Antenna
9) 2 inch color LCD Display
10) Sound recorder
11) SIM card slot
12) Lock
13) Power witch
14) Battery Depot
15) Portable remote controller

1.4 Remote Control

The remote control is primarily used for menu settings and password input. This is wireless remote control. The maximum remote distance is 9 meters.
Press LEFT or RIGHT to select menu table, press UP or DOWN to select the sub-menu then press OK to finish.
Press the punctuation “*” for laser pointer.

**1.5 Shooting Information Display**
When power switch is turn to TEST position, the shooting information will be displayed in the monitor.

**1.6 Brief Introduction for SIM card and Signal**
There are two SIM card icons. It means the SIM card is inserted and it can work well. It means the network signal in your local place is very good.

**1.7 Supported Format**

<table>
<thead>
<tr>
<th>Item</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo</td>
<td>JPG</td>
</tr>
<tr>
<td>Video</td>
<td>AVI</td>
</tr>
</tbody>
</table>

**2 Easy Operation**

**2.1 Power Supply**
To supply power for the camera, 4 or 8 AA batteries are needed.
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
When in Test Mode, camera will be automatically shut down to save power if without any operation within 3 minutes; it could be waked up by any movement detection.
When in low power state, camera will also automatically shut down. Please change the batteries in time.
2.2 Insert the TF-card and the SIM-card
Insert TF-card and SIM into the card slot.
When use MMS/E-mail function, be sure to insert SIM-card into the SIM-card slot correctly.

2.3 Enter into the TEST Mode
Turn the power switch to the TEST position to enter into the TEST mode. There are some functions in TEST mode: user settings, manually capture, preview.

2.3.1 User Settings
Press the MENU button. The camera can be set(mode,interval, picture resolution, video resolution& length, etc) The detailed operations will be described in following chapter.

2.3.2 Manual Capturing
press OK to manually capture photos or record video.

2.3.3 View Images or Videos
There are two ways to view the captured images or videos:
1. LCD screen on camera
2. TV monitors which connects to camera with TV cable
press right arrow to view captured files, the latest image will be shown in the LCD screen or TV monitor. Press UP to view the last and press DOWN for the next. The detailed operations like deleting images or videos will be described in “Advanced Operations” chapter.
2.4 Power on and Enter into the ON Mode

Before switching on, please pay attention to the following items:
1. Do not face light source directly. These may cause false triggers.
2. The height from ground for placing should be 1-2 meters. For example for deer height is good size appropriately.

After switching on the camera, the red light will blink for about 10s. The 10s is a buffering time before automatic capturing, e.g. for closing and locking the bottom cover, fixing the camera on a tree and walking away.

2.5 Power Off

Slide the power switch to OFF position to turn off the camera. Therefore, please remove the battery if the camera will not be used for a long time.

3. Advanced Operations

This chapter explains that user settings can only be done in TEST mode and the remote control is needed.

3.1 Settings Menu

Press MENU when camera in the TEST mode. The settings menu will be shown on the LCD or the external TV monitor.

3.1.1 Photo Setting

<table>
<thead>
<tr>
<th>Resolution</th>
<th>12MP</th>
<th>8MP</th>
<th>5MP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval</td>
<td>1Sec</td>
<td>5Secs</td>
<td>10Secs</td>
</tr>
<tr>
<td>Multi</td>
<td>Single</td>
<td>3Pictures</td>
<td>6Pictures</td>
</tr>
<tr>
<td>ISO</td>
<td>100</td>
<td>200</td>
<td>400</td>
</tr>
</tbody>
</table>

3.1.2 Video Setting

<table>
<thead>
<tr>
<th>Resolution</th>
<th>1080P</th>
<th>720P</th>
<th>WVGA</th>
<th>QVGA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Length</td>
<td>10s</td>
<td>30s</td>
<td>60s</td>
<td>90s</td>
</tr>
<tr>
<td>Voice</td>
<td>OFF</td>
<td>ON</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This camera can send pictures instantly to user’s mobile via MMS method. So before using this function user needs to finish the settings mms in MMSCONFIG.
3.2 MMS/SMTP Settings

3.2.1 Preparation
1. 2G/GSM Mobile Operator Service
2. format 2GB+ TF or SD card
3. computer (Vista, Windows 7, windows 8 system)
4. One SIM card [without PIN lock]
5. The SIM card should be able to send images via 2G/GSM/ GPRS/MMS network
6. 6V power (4 or 8 AA Batteries, or 6V input power supply)
7. MMSCONFIG Program in CD
8. Users need to ask the provider 2G MMS data (APN+Account+Password, MMSC+IP+PORT), or find this info on providers homepage.
9. 2G GPRS data for SMTP setting from provider (APN+Account+Password)
10. Sender Email server info (server+port+email+password)

3.2.2 MMS setting:
1. Insert card and SIM to camera, put batteries in cam, screw antenna to it then turn camera to test mode, check there are signal bar and "SIM" on the camera screen. Then connect the camera to the PC with the included USB cable insert CD to computer, open and then double click
2. Choose Mode Camera or Mode Camera & Video in
   Menu, Go to MMS table, select MMS MODE Manual
3. Insert Gprs Setting and Server Setting
4. Fill in Phone Setting and or Email Setting
5. Go to SMTP, choose Smtp Setting
6. Click Save button and save as Parameter.dat to TF card
7. Plug USB cable from camera
8. Go to in camera menu, check the subsetting is the same with above setting
9. Turn camera to on mode
3.2.3 SMTP setting

1. Insert card and SIM to camera, put batteries in cam, screw antenna to it then turn camera to test mode, check there are signal bar and “SIM” on the camera screen. Then connect the camera to the PC with the included USB cable. Insert CD to computer, open and then double click [MMSCONFIG].

2. Choose \textit{Choose Mode} and \textit{Camera Mode} or \textit{Camera & Video Mode}. Go to \textit{SMTP table}, select \textit{SMTP Mode Manual}. Go to \textit{Gprs Setting}, \textit{APN Account Password}.  

3. Insert all

4. Fill in sender email info in Email Setting. Fill in Email and Password.

5. Go to \textit{MMS table}, choose \textit{MMS ON/OFF OFF}. Click \textit{Save} button and save as Parameter.dat to TF card.

6. Plug USB cable from camera.

7. Go to \textit{SMTP ON/OFF} in cam menu, check the subsetting is the same with above setting.

8. Turn camera to on mode.
3.3 SMS Command Code

**mms/smtp need to be set ‘on’ mode well before using theses sms command**

*500*  take picture
(can work in both mms and smtp mode)
sim in camera will send **Capture** when receive *500* command

*505*  take picture and send to the mobile who sends sms
sim in camera will send **Start capturing...** and still send picture to mms Mobile or smtp email when got* 505* Command, no matter MMS or smtp mode.
But sim will send mms to the mobile who sends sms when camera **only in mms mode**

*520*  check the picture quantity and battery status
(can work in both mms and smtp mode)
sim will send **Total Jpg: Free Space: Battery Level:** when receive *520* command

*530*  turn on camera
(can work in both mms and smtp mode)
sim will send **Start OK** when receive *530* command

*531*  turn camera to sleeping mode
(can work in both mms and smtp mode)
Sim will send **Stop OK** when receive *531* command

4. Cautions

The working voltage of the camera is 6.0V.
Please unlock and format the TF-card.
Please insert the TF-card when the power switch is at OFF position.
Please do not insert or take out the TF-card when the power switch is at ON position.
Please ensure full power when having firmware upgrade, otherwise the upgrade process could be stopped.

As communications networks may vary we can’t guarantee 100% MMS and GPRS can work fine
Appendix I : Technical Specifications

<table>
<thead>
<tr>
<th>Image Sensor Type (True Megapixels)</th>
<th>5 Mega Pixels Color CMOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>TF Card 8MB–32GB</td>
</tr>
<tr>
<td>Lens</td>
<td>F=3.1; FOV=60 °</td>
</tr>
<tr>
<td>Size</td>
<td>145mm * 80mm * 55 mm</td>
</tr>
<tr>
<td>IR Filter:</td>
<td>Full Automatic IR Filter</td>
</tr>
<tr>
<td>TFT Display Screen:</td>
<td>2.0 inch</td>
</tr>
<tr>
<td>PIR Sensor Sight Angle</td>
<td>60 Degrees</td>
</tr>
<tr>
<td>PIR Sensing Distance</td>
<td>65ft/20m</td>
</tr>
<tr>
<td>Number of IR LED</td>
<td>36 LEDs Black or White</td>
</tr>
<tr>
<td>Max Night Vision Lighting Distance</td>
<td>65ft/20 meters</td>
</tr>
<tr>
<td>Trigger Speed</td>
<td>1.1 second</td>
</tr>
<tr>
<td>Triggering Interval</td>
<td>1 second ~ 30mins (default 1 sec)</td>
</tr>
<tr>
<td>Selectable Image Resolution:</td>
<td>12MP/8MP/5MP</td>
</tr>
<tr>
<td>Multiple Frame</td>
<td>1/3/6/9</td>
</tr>
<tr>
<td>Video Resolution</td>
<td>1080P/720P/VGA</td>
</tr>
<tr>
<td>File Format</td>
<td>JPEG/AVI</td>
</tr>
<tr>
<td>Date Time Imprint</td>
<td>Yes</td>
</tr>
<tr>
<td>Moon Phase Imprint</td>
<td>Yes</td>
</tr>
<tr>
<td>Exposure:</td>
<td>Auto</td>
</tr>
<tr>
<td>MMS/EMAIL/Support</td>
<td>Support</td>
</tr>
<tr>
<td>SMS Control</td>
<td>Support</td>
</tr>
<tr>
<td>Password Security</td>
<td>4 Digits set by yourself</td>
</tr>
<tr>
<td>Periodic shot</td>
<td>1Second~24Hours</td>
</tr>
<tr>
<td>Stand-by current</td>
<td>0.2mA</td>
</tr>
<tr>
<td>Stand-by time</td>
<td>3 Months (8 AA Battery)</td>
</tr>
<tr>
<td>Interface</td>
<td>TV out (NTSC/PAL); USB; TF Card Holder; 6V DC External</td>
</tr>
<tr>
<td>Fix Method</td>
<td>Belt, Tripod Nail</td>
</tr>
<tr>
<td>Operation Temperature</td>
<td>-30 °C～+70 °C / -22 °F～+158 °F</td>
</tr>
<tr>
<td>Power Supply</td>
<td>8×AA or 4×AA battery</td>
</tr>
<tr>
<td>Camera Socket</td>
<td>Yes</td>
</tr>
<tr>
<td>Water proof</td>
<td>IP54</td>
</tr>
<tr>
<td>Security authentication</td>
<td>FCC, CE, RoHS</td>
</tr>
</tbody>
</table>

Appendix II : Parts List

<table>
<thead>
<tr>
<th>Part Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Camera</td>
<td>1</td>
</tr>
<tr>
<td>Wireless controller</td>
<td>1</td>
</tr>
<tr>
<td>Antenna</td>
<td>1</td>
</tr>
<tr>
<td>USB Cable</td>
<td>1</td>
</tr>
<tr>
<td>TV cable</td>
<td>1</td>
</tr>
<tr>
<td>User’s Manual</td>
<td>1</td>
</tr>
<tr>
<td>Solar power supply</td>
<td>Optional</td>
</tr>
</tbody>
</table>