LTL ACORN®

MMS Wireless Scouting Camera
Ltl-6310M HD Video Series
SMS remote control

Trigger time＝0.8 Seconds

USER'S MANUAL

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GENERAL INFORMATION

Introduction
This manual applies to model Ltl-6310MC, Ltl-6310MG, Ltl-6310WMC, Ltl-6310WMG.

Ltl-6310 series camera, with its highly sensitive Passive Infra-Red (PIR) sensor, detects the sudden change of ambient temperature caused by moving game in a region of interest (ROI), triggers to take pictures/videos, and sends the images via 2G GSM network to your cell phone or email account.

With newly developed SMS remote control feature you can change the settings of your camera by sending it text messages in a particular format. Ltl-6310, a step-up version of Ltl-6210, provides better performance through enhanced features. Forty-four LED 940nm makes Ltl-6310 series most outstanding on night picture quality, ideal for security and surveillance purposes. Ltl-6310W with wide lens of 100° takes picture in a view 4 times wider in range than other products of its kind.

1.1 Features:

- Different position of screen to avoid erosion from battery leakage and potential damage from the camera being accidentally dropped during installation.
- 5M/12M/2Mega pixel high-quality resolution.
- Text your camera to change its parameters, made possible by the new SMS RCP (remote control program). Also, instruct your camera to send pictures it has taken to you using SMS order CODE 60 (see the list of order codes in Section 2.7 SMS Remote Control).
- 1440 x 1080 / 1280 x 720 / 640x480 H.264/AVC format HD video with audio.
- Ltl-6310W with wide lens of 100°takes picture in a view 4 times wider in range than oth er products of its kind.
- Ltl-6310 series (non-wide lens) Infrared night vision LEDs 850nm flash range as far as 75feet/ 23m, Low-grow 940nm 59feet/ 18m.
- Ltl-6310W series Infrared night vision LEDs 850nm flash range as far as 59 feet/ 18m, Low-glow 940nm 45 feet / 13.5m.
- "Cam + Video" mode enables camera to take both picture and video every time it triggers.
- Take multiple consecutive pictures with an interval time of about 1.5 seconds.
- Extremely long in-field battery life (in standby mode, up to 6 months with 12 AA batteries)
- Unique side Prep Sensor design provides wider sensing angle and enhances camera's response speed.
- Perform in the most extreme temperatures from -22°F (-30°C) to 158°F (70°C)
- Compact size (5 ½ x 3 ½ x 3 inches). Well designed to deploy covertly.
- Impressively quick trigger time (0.8 seconds).

- Programmable to work as Time-Lapse camera taking pictures/videos in long range day and night.
- When Timer setting is turned on, programmable to only work in specified period every day. This feature can be used together with Time Lapse feature to meet your timetable.
- Built-in 2.0 inch TFT color screen to review images and videos at the back of the camera.
- Date, time, temperature, moon phase and battery level can be stamped on picture
- Lockable and password protected
- Send 640 x 480 resolution MMS image.
- Setup is a snap. Just run the user-friendly software on the enclosed CD on the computer, or do it directly on the built-in TFT screen.
- Multiple languages available by changing the country setting in MMS menu or PC software.
- SD card can be set in "Cycling Save" mode, which automatically deletes the earliest photos or videos and makes room for new ones.
- Advanced Remote Cellular Technology transmits images to your cell phone and/or email account constantly at lower battery consumption and shorter transmission time, compared to similar products on the market.
- Get SMS Text alert when battery power level goes low.
- Check cellular signal reception on the screen.
- Convenient internal antenna design. External antenna available when using security box.
- Operates globally via 2G GSM/GPRS network. Supports four bands: 850 / 900 / 1800 / 1900MHz.

1.2 Application

- Trail camera for hunting
- Animal or event observation
- Motion-triggered security camera, for home, office and community
- All other indoor/outdoor surveillance where intrusion evidence and live alerts are needed

1.3 Illustration

- Figure 1.1 shows the front view of the camera (Part # Ltl-6310M)
- Figure 1.2 shows the bottom view of the camera (Part # Ltl-6310M)
- Figure 1.3 shows the back view of the camera (Part # Ltl-6310M)

Light
Sonsor

LED IR
Flash

Motion
Indicator

Lens

Main
PIR
Sensor

Mic

Prep
PIR
Sensor

Lock
Hole
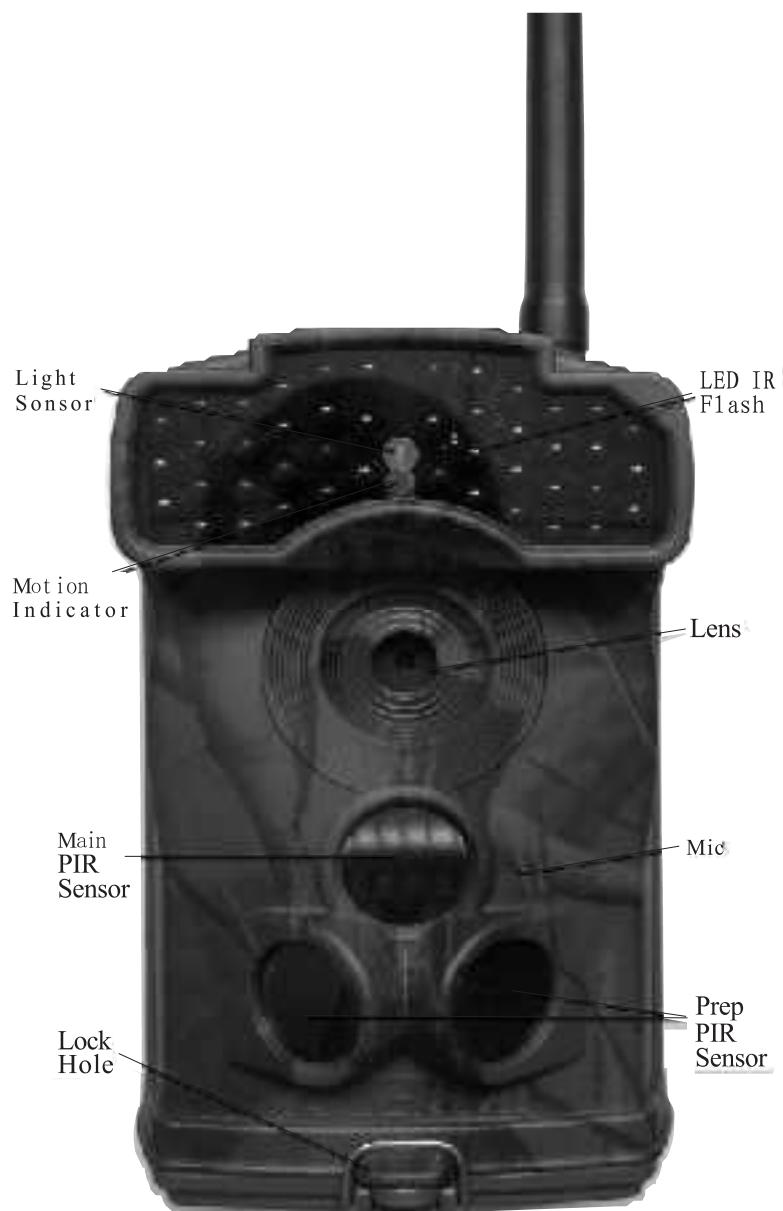
Figure 1.1: Front View of Ltl-6310M

Push Open/
Close the
Cover

Power/Mode
Switch

A Cell   SD Card   STM Car   B Cell

Figure 1.2: Bottom View of Ltl-6310M

The camera provides the following connections for external devices: USB 2.0 port, SD card slot, TV out jack, and external DC power in jack. The 3-way Power/Mode Switch is used to select the main operation modes: **OFF**, **ON** and **TEST**.

To power up the camera, install four **NEW** high-performance alkaline or lithium AA batteries in the camera. FOR BETTER PERFORMANCE, WE RECOMMEND USING **ENERGIZER LITHIUM AA BATTERIES.** To achieve longer in-field life, always install 12 AA batteries.

Figure 1.3: Back View of Ltl-6310M

CAUTION: If you are not using the camera for an extended period of time, it is highly recommended that you remove the batteries from the camera to avoid possible acid leak that may damage the camera and void the warranty.

GETTING STARTED

2.1 Insert SIM Card (Only for Model Ltl-6310MG)

A SIM card is needed from a Mobile Phone Network Operator (MPNO). Make sure they provide Multimedia Messaging Service (MMS).

Insert the SIM card into the slot at the bottom of the camera. Push once to insert, twice to remove.
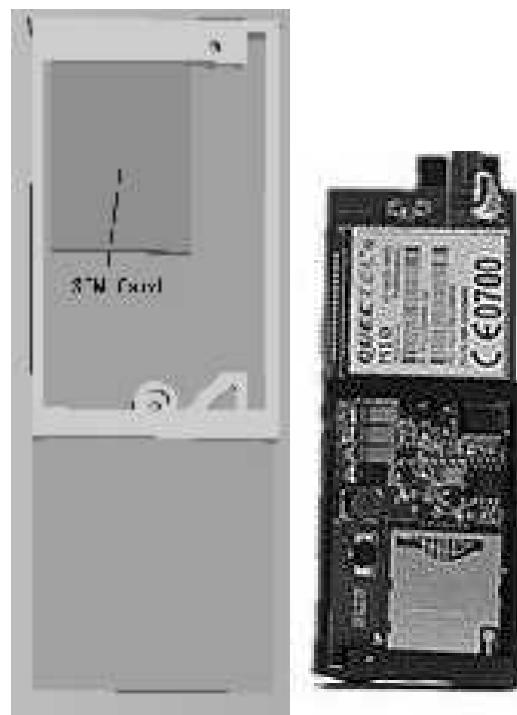

Figure 2-1 MMS-module

2.2 Load Batteries

- Open the bottom cover by pulling down the lock hole.
- Push or dig the two battery boxes and release the battery door.
- Install 4 AA batteries in the front of camera and 8 AA batteries in the back of camera. Make sure the polarity matches the sign on the cover.
- Push to close the door.

Alternatively the camera can run on an external 6V~12V DC power source (optional). When both external power and batteries are connected, the camera will be powered by the external one, choosing it as its preferred power source. Connected to Ltl-SUN Solar Power Panel (purchased separately), the camera can work in the field over one year without changing batteries.

When battery level gets low, the Motion Indicator in the LED array will flash blue. The MMS Wireless camera will automatically send a "Low battery" text alert to your cell phone. Meanwhile, the battery level will be shown as Code **B1/B2/B3** on the received MMS pictures. **B3** stands for high level and **B1** indicates the level is low and you may need to change the batteries soon.

2.3 Insert SD Card and Format It

The camera does not come with internal memory. It will not work without a SD (Secure Digital) memory card or SDHC (High Capacity) card. Before inserting the SD card into the card slot, please make sure the write-protect switch on the side of the SD card is "off" (NOT in the "Lock" position). The supported memory capacity is up to 32GB. If you use a card capable of above 32GB, make sure you test it before putting the camera to use.

Figure 2-2

Always format the SD card on the CAMERA when using it for the first time. Switch to the **TEST** position to enter the Test mode. Press **MENU** button to access the main menu. Scroll down to **Format.** Press **OK** to format the SD card.

2.4 Set up Camera on PC

After formatting the SD card on the camera pop the SD card out and insert it into your computer. (If your computer cannot read SD cards on its own, you would need to purchase a SD card reader) Of course, you can also directly connect the camera with your PC using a USB cable.

Find the enclosed compact CD from the packaging box and put it on the CD tray. (If your PC does not have a disc drive then you would need an external disc drive.) Run the Setup.exe file.

You can also access the same setup file by visiting the LTL ACORN national distributor's website to download and following the link http://www.ltlacorn.cn/about/downloaden.html (download→classification→software→PC Setup→Setup.exe)

The following window prompt would show up once you double-click the **Setup.exe** file:

Select your language and model. Click on **Camera Setup**, and you will see the following menu:
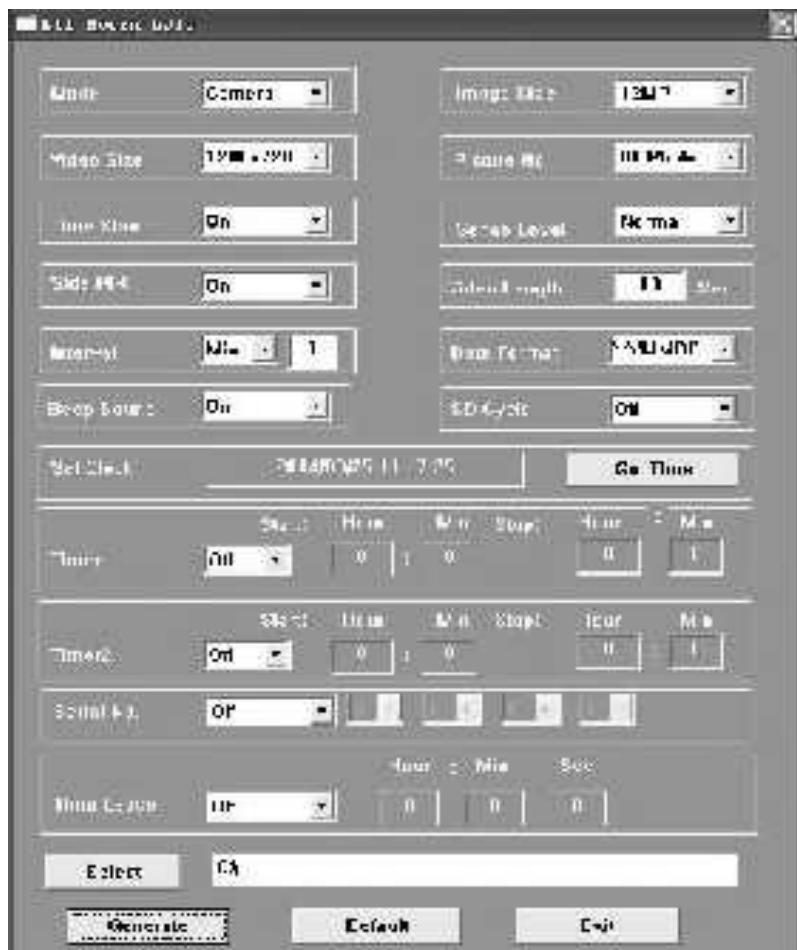
Set up the camera based on your own need. Please reference **Section 3.1 Parameter Settings in Advanced Settings** to find detailed explanations for each setting.

Click on to retrieve the computer time. Click on to find and choose the drive where the SD card is placed, usually denoted by a letter after E (F drive or G drive). For example, if the SD card is inserted into the F drive, then you should click on "F:\". **DO NOT choose any folder under F:\.**

Click on . A message window will pop out as below. Click **OK**. A file named **menu.dat** will be created and saved in the root directory of the SD card.


If you like, you can use the manufacturer default settings by clicking on

ATTENTION: THE PASSWORD CAN ONLY BE SET UP ON THE CAMERA, NOT ON THE PC.

Click [Exit] and go back to the main menu.

2.5 Set up MMS Function on PC

On the main menu, Select Ltl 6310MG and press **MMS Setup.**
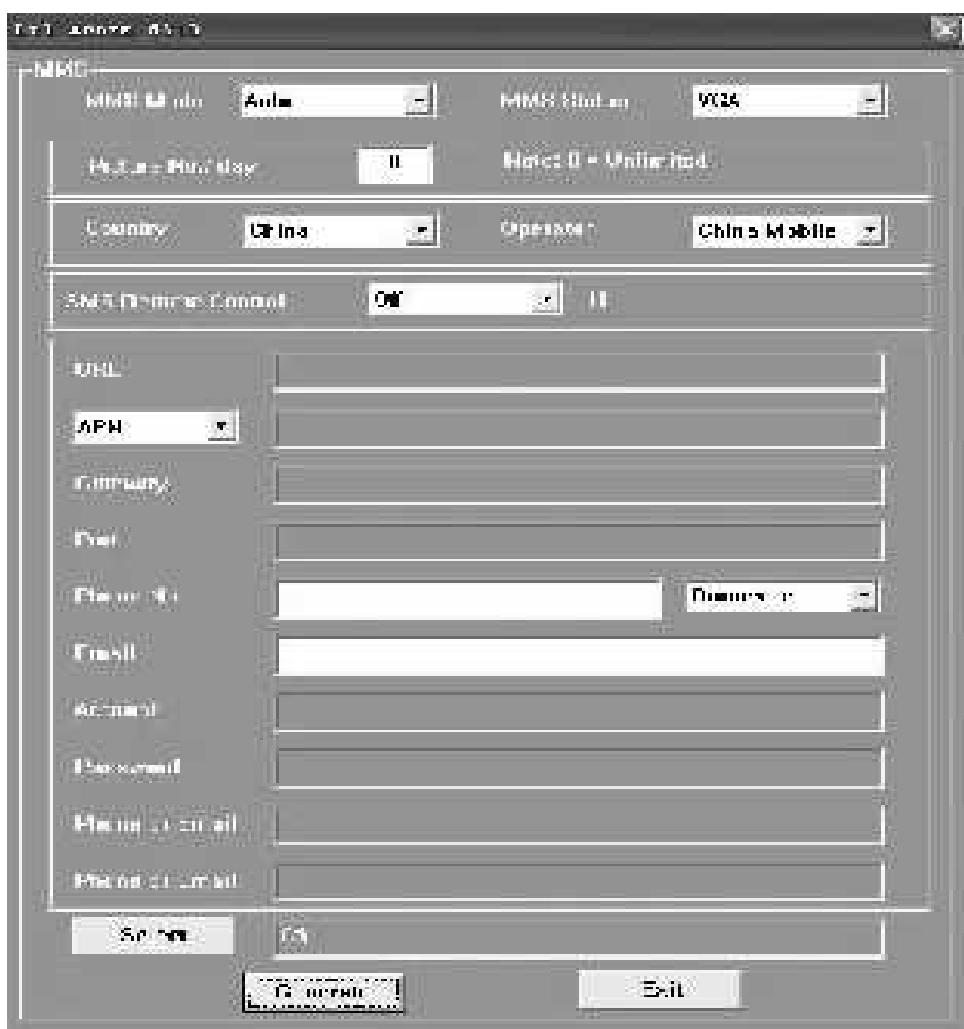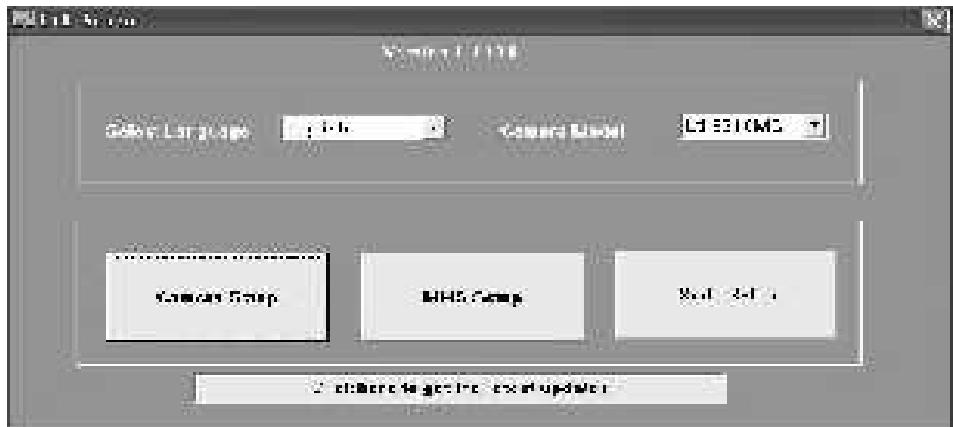
An important first step is to determine the format of the files that the camera will send you. On the right of the first row where it says MMS Status, choose among three options: "VGA", "SMS", and "OFF".

- VGA: the camera will send 640X480 pictures to your phone or e-mail account
- SMS: the camera will send only texts to you

OFF: the camera will not send anything

Then you need to choose how you like to set up the MMS Mode

--**Auto** or **Manual**. Choose **Auto** (recommended), then select the

country and the Mobile Phone Network Operator (MPNO). With **Auto** setup, the URL, APN, Gateway, and Port sections will be in gray. You would only need to input the **phone number and/or email address** you'd like to receive MMS pictures. You can enter up to three different **phone numbers and/or email accounts**.

NOTE: At least one valid phone number needs to be put in. Otherwise the camera would not be able to send data. The phone number cannot start with 0. If used locally, the country code needs not be included; if absolutely necessary, please replace the initial zero(s) with "+". For example："001" would become "+1".

If you choose **Manual** to manually input all the parameters, you need to contact your Mobile Phone Network Operator (MPNO) to have them provide you all the required information such as URL, APN, Gateway, and Port.

NOTE: The MMS parameters of the major MPNO's in each country have been pre-stored in the setup program. You're recommended to choose **Auto** to let the system to set up the MMS. However, because each local MPNO has their own settings for their MMS service, and those settings can change over time, you may need to acquire the settings from your MPNO if the **Auto**-selected settings fail to work. If you find out those settings have changed according to the information provided by your MPNO, or you have settings from your MPNO that is not on our Operators list, please notify us so we can update our program.

Click on to find and choose the drive where the SD card is placed. For example, the SD card is inserted on Drive F:\. Then you select only F:\. **DO NOT choose any folder under F:\.**

Click on . A message window pops out as below. Click **OK**. A file named **setup.dat** has been created and saved in the root directory of the SD card.

Click on [Exit] and back to main menu. Retrieve the SD card and insert it in the camera.\Switch to the **TEST** position to enter the TEST mode. Two lines in red show up consecutively on the TFT display, indicating the setup files have been successfully installed on the camera. If you don't see the two lines, the **menu.dat** and **setup.dat** are not installed successfully. You need to start over from **Step 2.1**, strictly follow the instruction and repeat each step..

2.6 Set up GPRS Function on PC

On the main menu, Select Ltl 6310MG and press **Smtp Setup**.

Display below:
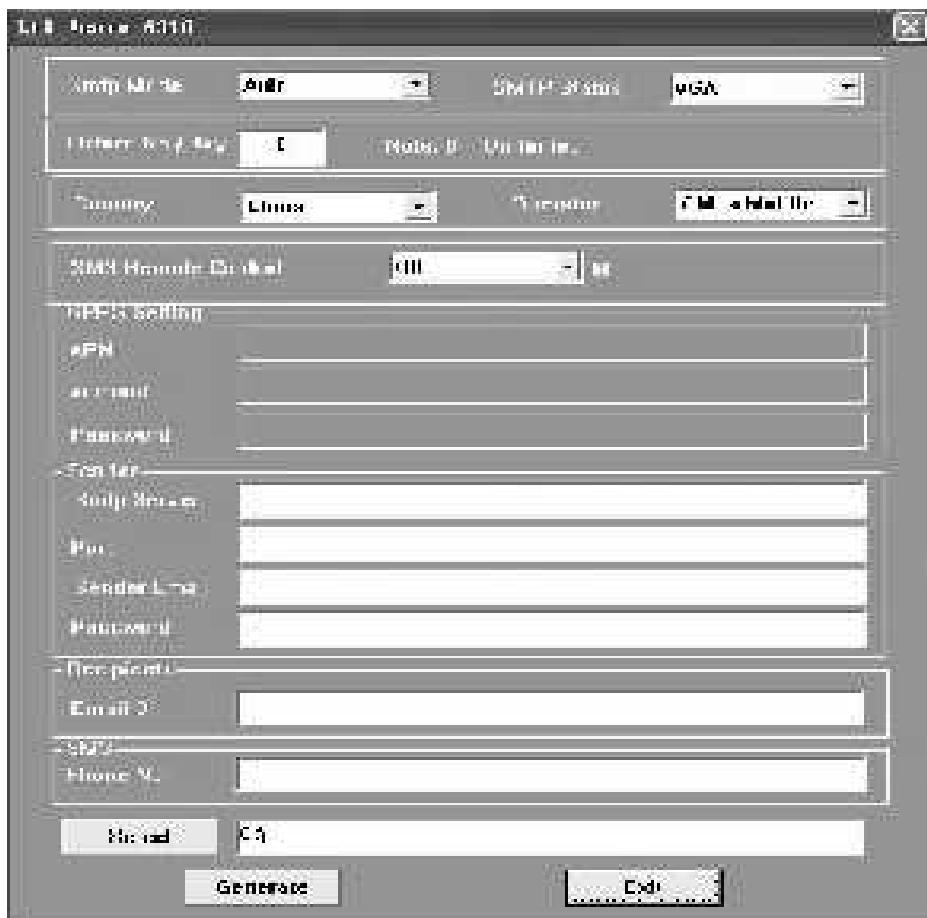
For the camera to send pictures, SMTP status must be set to "VGA".
"SMS" indicates sending texts and "OFF" means nothing will be sent.

In **Auto** mode, first select country and operator. In **Manual** mode, you fill in **APN / Account / Password.** This parameter you can find from your mobile operator.
Fill in your **E-mail server / port / sender E-mail / Password /Recipients E-mail** and **SMS Phone NO**.
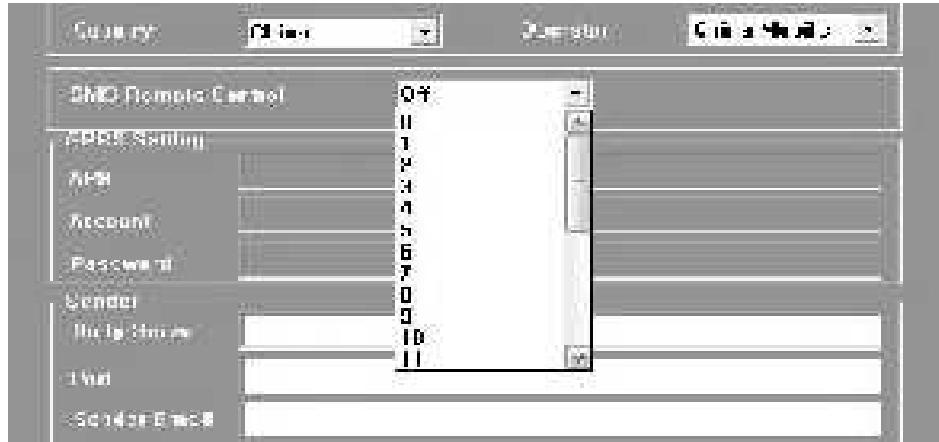
Under SMS remote control, the value ranges from "0"to "off" and denotes the frequency the

camera wakes up to either receive or execute the commands. "0" indicates that the camera will wake up and search for commands automatically every 10 minutes, and send feedback once it receives them. "1~24" indicates search intervals of 1~24 hours.. "off", on the other hand, means SMS remote control is turned off. This design with the waking intervals helps conserve battery. Select value based on your own need. To learn more about SMS remote control please refer to **2.7.** Setup in need only when SMS remote control in use, you can set it up by MMS or Smtp Setup)

Click on [Select] to find and choose the drive where the SD card is under. (For example, F:/)

Click on [Generate] . A message window pops out as below. Click **OK**. A file named **smtp.dat** will be created and saved in the root directory of the SD card.

Finally, insert SD card into camera and power on the camera. The camera will be ready to go..

2.7 SMS Remote Control & Table of Command Code

In order to communicate with your camera via text message/SMS, you need to format your texts in a certain way, essentially speaking the same language as the camera.

● All the SMS commands should start with "LTL(ltl)" and end with "AA(aa)".
● Between "ltl" and "aa", insert the specific instructions you want the camera to follow. You can choose to give one instruction at a time, but it saves time to combine them together.
● A specific instruction is made up with four parts in the following sequence: a two-digit order code, an asterisk (*), a code value (a number or a combination of numbers and letters), and lastly a pound/hash sign (#). See the "Example" column for illustrations.
● Both capitalized and non-capitalized letters can be used in a command.
● Do NOT leave any spaces between any of the letters and symbols.
● Do NOT put a comma or a period at the end of the text. Again, a command starts with "ltl" and ends with "aa". Do NOT include any quotation marks in a command; they are used here just for explanation purposes.
● A text can only include one command. If you want to send multiple commands, please do so in separate texts.

An example of a command would be LTL01*0#02*2#06*S30#07*10A3Z#60*1#AA Which asks the camera to 1) be in camera mode and take only pictures, 2) set image size to 2MP, 3) take pictures with an interval of 30 seconds, 4) turn on serial number and set it to "0A3Z", and 5) immediately take a picture and send it to you.