pCAMit I

Camera with built-in modem

User's Guide

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Revision History

Version	Date	Changes
1.0.0.0	July 09, 2007	First Release of pCAMit I User's Guide
1.0.0.1	July 31, 2007	Add the description of components and modify pictures. Remove the parts of Setup AP, TV Out and Remote Controller
1.0.0.2	August 02, 2007	Modify the arrangement of Adjust Sensor section
1.0.0.3	April 03, 2008	Modify all of the description on Trigger In / Out connector
1.0.0.4	February 04, 2009	Add the description about TV Out and instructions of video replay through the remote controller in Appendix B

Table of Contents:

1. Product Overview

1.1 Introduction

pCAMit I is a color camera with a CMOS image sensor and a PIR (Passive Infrared Detector). This camera is a complete system by itself and works as a stand-alone viewing center.

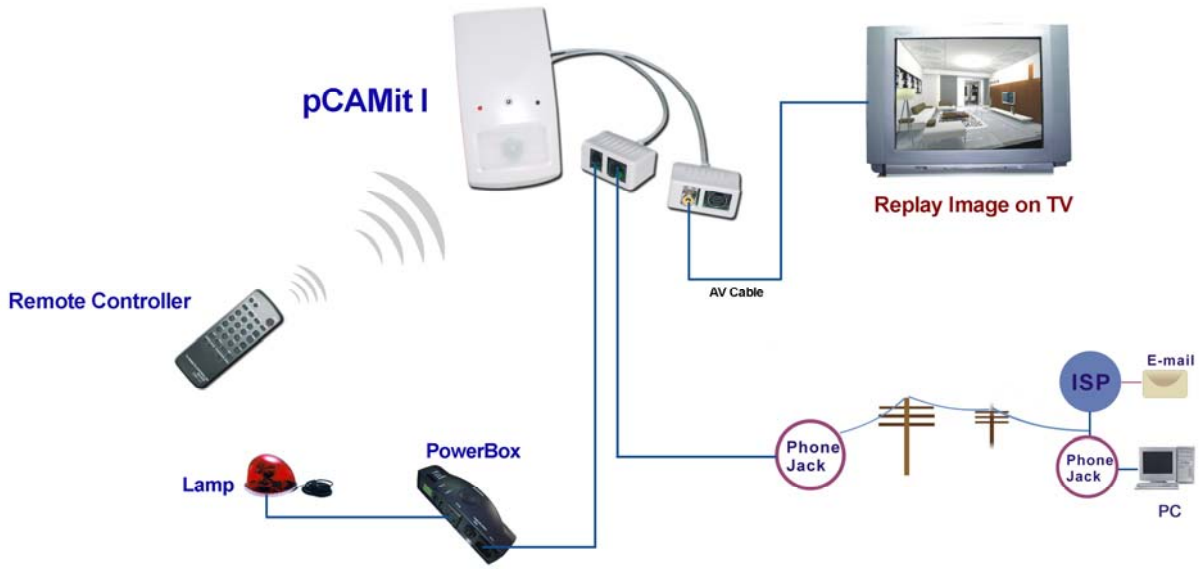
With the built-in modem, it can be connected with any regular residential telephone line, or analog PBX extension line, to transmit live images via phone line. You can dial in the pCAMit I from any remote location using a computer and a modem to monitor in real-time and record images.

pCAMit I can also be triggered by its built-in PIR (Passive Infrared Detector), or external trigger IN / OUT device with TTL level signal if the powerBox (optional accessory) is used. Upon trigger, pCAMit I will automatically dial a designated computer running the software and send images to the computer for recordings.

Together with the built-in real-time clock, you will be able to schedule the camera for security mode. Therefore, pCAMit I will provide you with real 24-hour surveillance system for the achievement of maximum security.

1.2 Framework and Features

After you have set up your modem and installed the software we've provided, simply plug the phone line and the power cord to your camera at the location you wish to install. This will initiate the camera, and should be ready for you to dial in! Below is the complete framework and general features of pCAMit I modem camera:



1) Simple installation
2) Built-in PIR sensor
3) High sensibility CMOS lens
4) External security devices connectable (Trigger IN/OUT) if the powerBox is purchased.
5) Encrypted data
6) Password protection
7) Remote recording or e-mail upon the trigger
8) Built-in V.90 modem with Tiny DVR
9) Point to point, modem to modem, real time remote monitoring
10) Optional 1 set of Trigger In/Out connector for connecting external sensor for monitoring and security purposes
11) Record images onto the computer in JPEG format
12) Low power consumption
13) Automatic/Manual gamma correction
14) Non aging CMOS image capture device
15) Wake-up upon trigger(PIR, external sensor)
16) View / control via PC (using pCAMit I AP)
17) Video replay to TV using the remote controller (Optional)

Special Features for pCAMit I :

1) Built-in flash memory Tiny DVR
2) Built-in real time clock for scheduled dial out and security mode
3) Daisy-chain to powerBox for turn on/off the AC power

1.3 Package Contents

- 1 x pCAMit I camera
- 1 x CD with setup software and user's manual
- 1 x power adapter
- 2 x wall plugs
- 2 x screws
- 1 x RJ11 telephone line cord

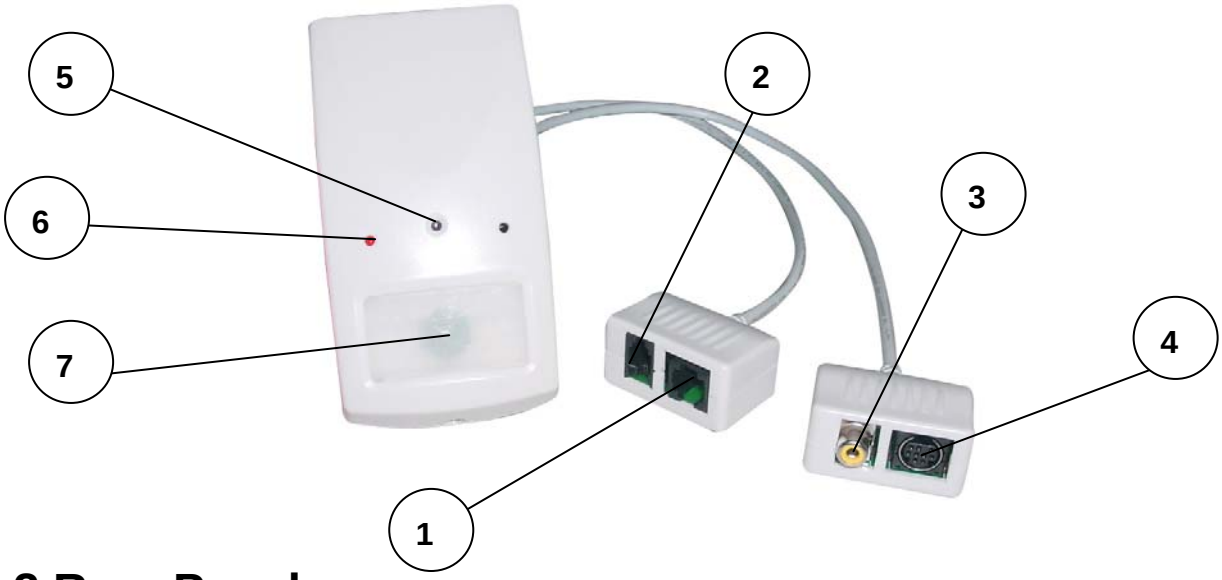
2. Physical Description

The following information contains the physical description of pCAMit I camera. This includes the functions and the locations of each connector, indicator and sensor. The information provides useful reference when installing the product. Please familiarize yourself with pCAMit I cameras.

2.1 Panels

2.1.1 Front Panel

For more related description, please refer to the Section 2.2 and Section 2.2.1.



2.1.2 Rear Panel

For more related description, please refer to the Section 2.2 and Section 2.2.2.

Remark: No. 9 and No. 10 are used for the control of PIR sensitivity and duration time respectively. Please adjust these parameters in the clockwise/counterclockwise direction to increase/decrease the setting values.

2.2 Illustration

No. in Figure	Name on pCAMit I	Description	Remark
1	RJ11 Phone Line Connector	To connect the camera to phone line of service provider via RJ11 telephone cable	Refer to section 2.2.1 for front panel information
2	RJ22 Power Supply Connector	To connect to camera and power adapter via RJ22 interface	Refer to section 2.2.1 for front panel information
3	RCA Video Out Connector (Optional)	Video out for real-time viewing and replay the triggered image	Refer to section 2.2.1 for front panel information
4	RS232 Serial Connector(Optional)	For camera's setting	Refer to section 2.2.1 for front panel information
5	Pin-hole Lens	300k pixels CMOS sensor	Refer to section 2.2.1 for front panel information
6	LED	To display the ON/OFF status of the security mode	Refer to section 2.2.1 for front panel information
7	PIR	Passive Infrared Detector	Refer to section 2.2.1 for front panel information
8	Camera Information	Serial number(or camera ID) and firmware version	Refer to section 2.2.2 for real panel information

2.2.1 Front Panel Information

RJ11 Phone Line Connector

pCAMit I is designed to plug the RJ11 telephone cable for the connection between the phone line and the camera.

RJ22 Power Supply Connector

pCAMit I uses unique RJ22 cable for power supply.

NOTE:

If you have to initiate the camera with the reset of the power cord, it will take around 45 seconds to complete the system reboot.

RCA Video Out Connector (Optional)

With the connection of RCA Video Out to TV or monitor, users can replay the prerecorded images and view the real-time images on a TV or monitor.

RS232 Serial Connector (Optional)

This serial connector provides links between the computer and the camera via RS232 cable. This connector is used for the configuration of the camera via the PC.

Pin-hole Lens

pCAMit I box includes a standard 68° wide angle lens fixed to the camera. Other types of lens are also available upon request. Please note that different prices may apply to different lenses.

LED

Through the display of this indicator, users can judge if pCAMit I is in security mode or not. When the camera is in security mode, the indicator will be OFF; otherwise, it will light if the camera is not in security mode.

PIR

pCAMit I's built-in passive infrared detector. Instead of generating infrared rays automatically by itself, PIR will be triggered by the heat of the moving object.

2.2.2 Real Panel Information

Serial Number(or Camera ID) / Firmware Version

The label sticker located at the bottom of the camera includes the serial number (or camera ID) and the firmware version of the camera.

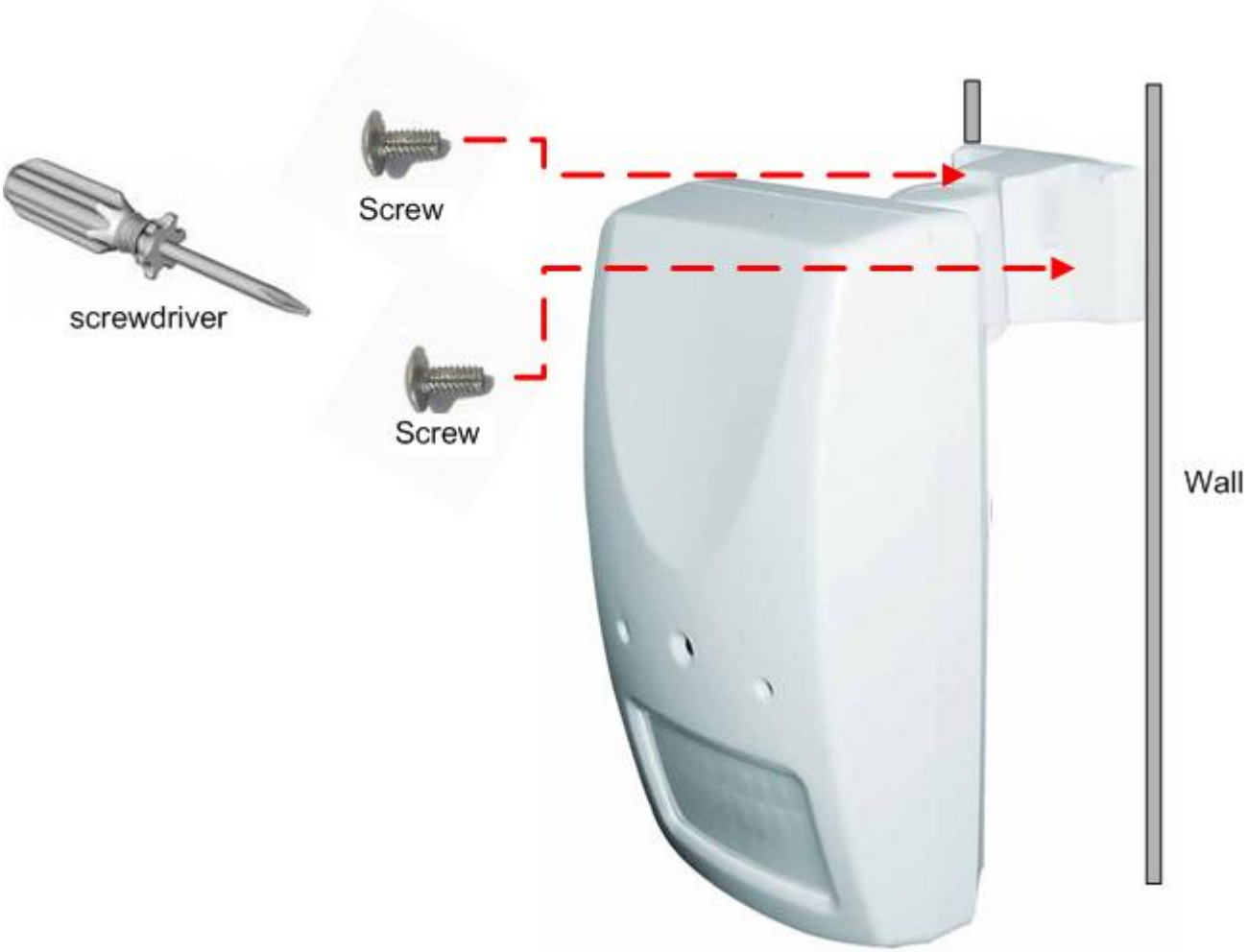
NOTE:

If you have updated the camera firmware version, the firmware version information may no longer be valid.

3. Assembling Camera

3.1 Mounting Methods

pCAMit I is designed for users to install on the wall. Please drill holes in the wall first and fasten the camera to the desired position.



4. Software Installation

pCAMit I software is a powerful program provided by 3JTech for you to browse your pCAMit I modem camera. Before getting started with the pCAMit I, you should install this application software, including **pCAMit I AP** and **ImagePlayer** as well as the download of this **User's Manual** from the CD contained in the package.

The pCAMit I AP is the software to communicate with the pCAMit I camera remotely via the phone line. Please read this user's manual thoroughly to understand the functions and capabilities of the pCAMit I camera.

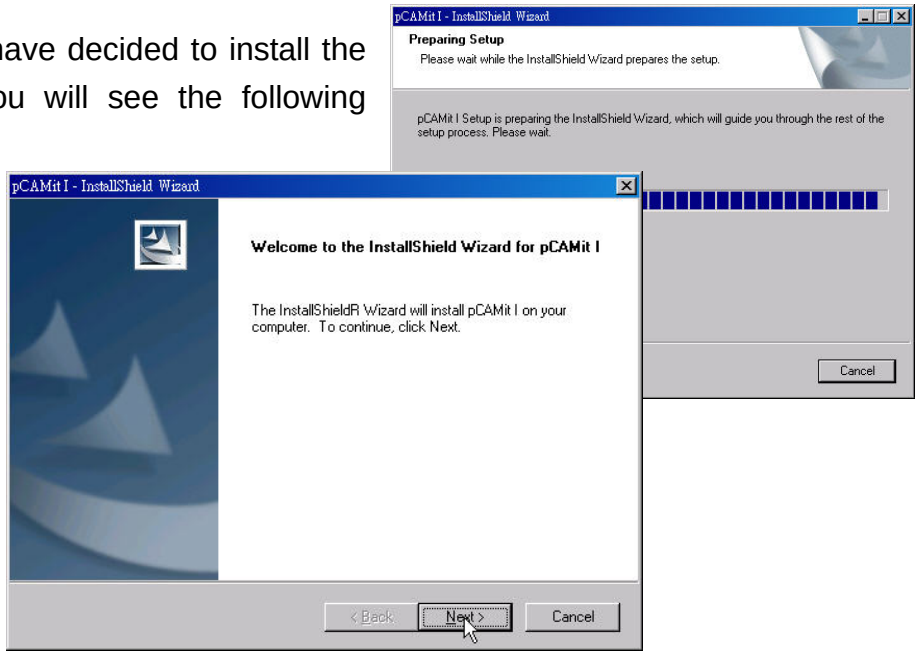
As for the Image Player, it acts as the same function of Replay Manager in pCAMit I AP, please refer to the section 4.2.6 of "Replay Images".

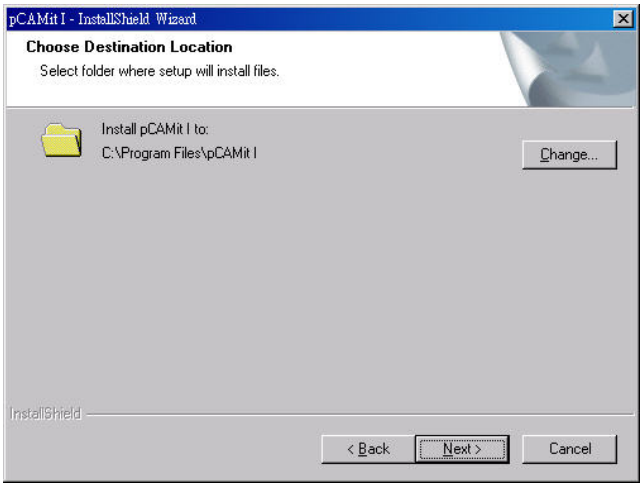
This chapter will teach you how to set up the camera step by step, including the installation of pCAMit I application and using the software to configure the camera.

4.1 Installing the Software

Installing the software is very simple. Simply follow the instruction provided by the installation wizard, and the installation should be complete. The steps are as follows:

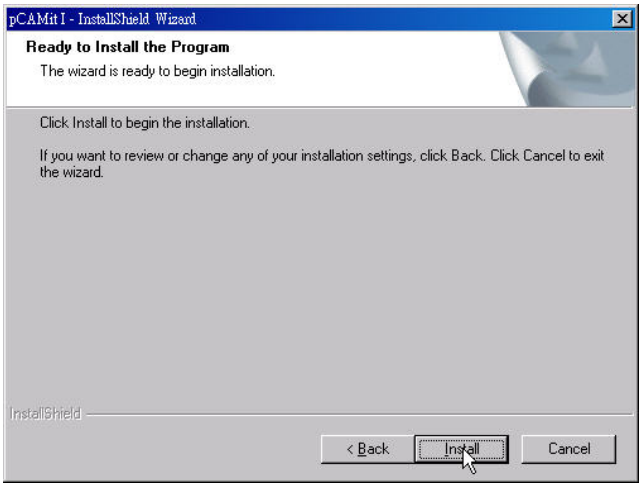
Please select **Next** when you have decided to install the software on your PC. And you will see the following screens.

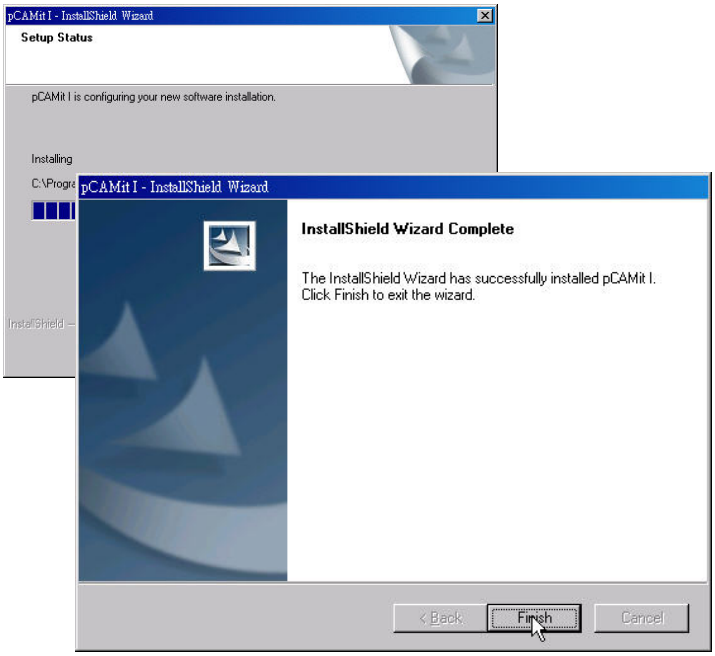




Please click **Change** if you would like to change the directory in which the pCAMit I AP will be located. Press **Next** when you complete.

When all the necessary items are selected, press **Install** to initiate installation.





Click **Finish** when the installation is complete.

Once the installation is complete, you can start the program from your Start Menu or the shortcut on the Desktop.

4.2 Setting Up Your Camera

Before doing camera settings, the modem connected to PC must dial to the pCAMit I camera successfully. Through the dialing, the Camera Setup Manager in pCAMit I AP will be enabled, and then the user will be permitted to change camera settings after inputting the password that has been set up.

NOTE:

To avoid the user forgetting the password, the system will not request you to input the password within 5 minutes while you reset the power cord.

4.2.1 pCAMit I Application Software

When the pCAMit I modem camera is connected to a phone line, you can run the pCAMit I AP and add a camera site to dial in and connect the camera from a remote PC.

The system will ask you to select the modem. It is the modem that you will adopt to dial your camera site. You **MUST** have a modem set up in advance for the dialing before running this AP.

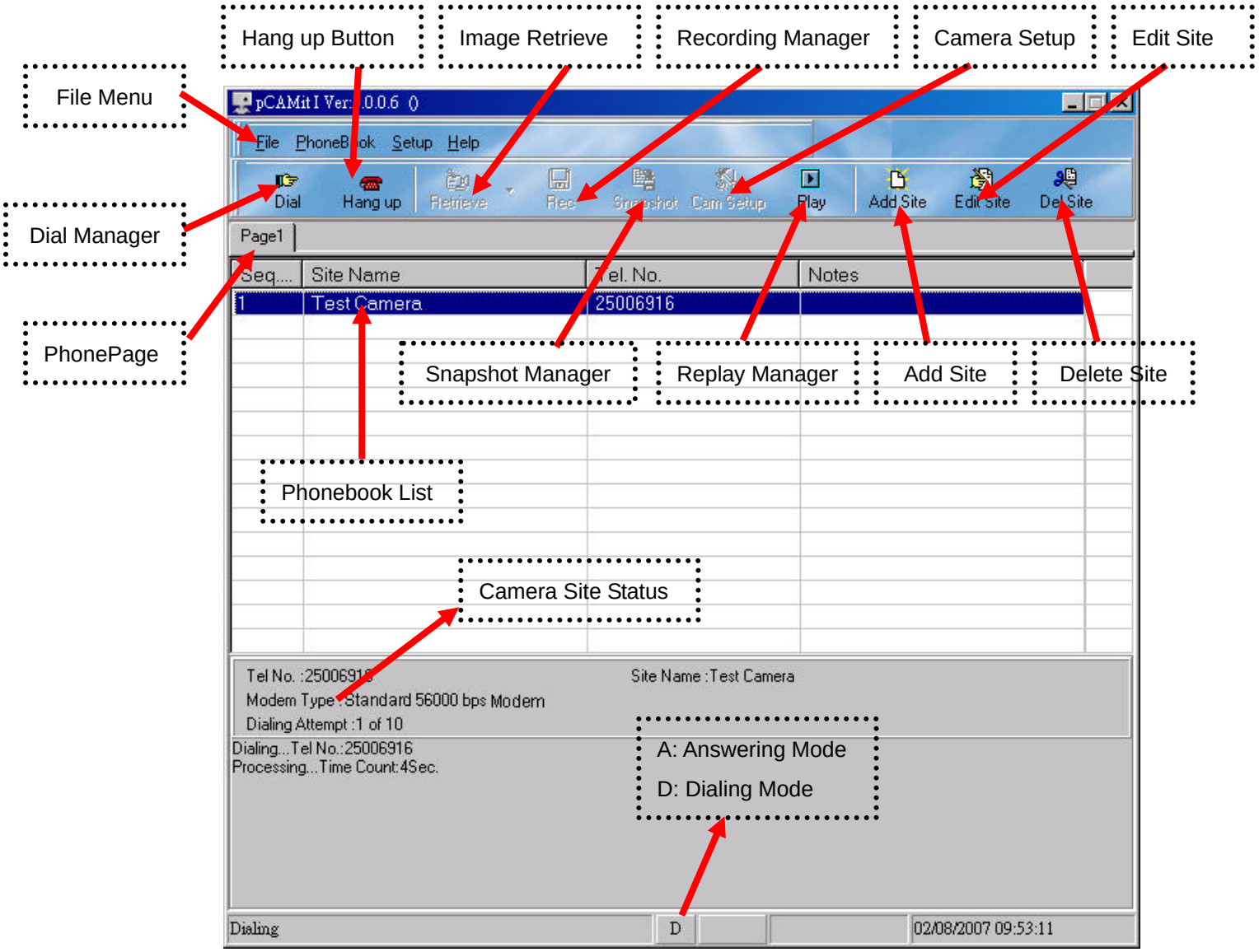
Pull down the device selection list, and choose the modem you wish to use. Then, click **OK** button when completed.

NOTE:

The modem connected to PC should be set up in advance of using the pCAMit I AP. For more details on modem settings, please refer to the user's guide of the modem you have purchased.

4.2.1.1 pCAMit I Camera Site Menu

The main menu would then appear and its user interface is as follows:

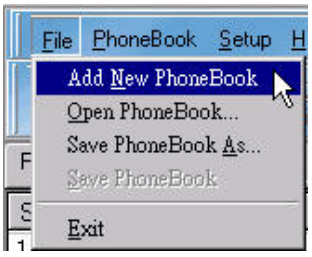


4.2.1.1.1 Phonebook List

You will be able to save site details to a phonebook, this way you will be able to distinguish the users, or the category of the sites. Each phonebook will have its own phone pages and lists of the camera site. This way, all sites created can be clearly distinguished.

Create New Phonebook:

To add a new phonebook, please select **File** from the file menu and choose **Add New PhoneBook** function. The new phonebook will then be created. If you have a phonebook open already, the system will ask you whether to save the old phonebook before you create the new one.

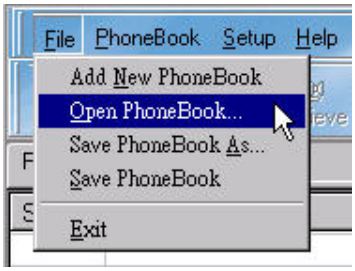


Save Phonebook As / Save Phonebook/:

To save a new phonebook you created, please select **File** from the file menu and choose **Save PhoneBook As** function. Then, please give the file a name and save it. As to the **Save PhoneBook** function, it will be enabled when saving an existed phonebook. If you have not yet saved the new phonebook, the system will ask again before you exit the program.

Open Phonebook:

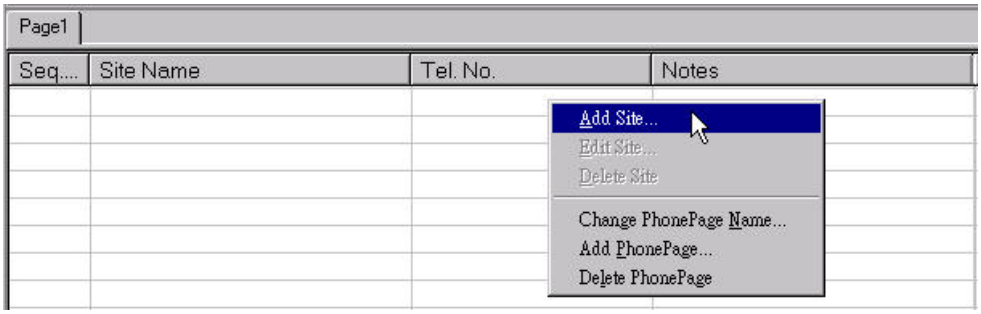
To open a saved phonebook, please select **File** from the file menu and choose **Open PhoneBook** function, and select the phonebook you wish to open. Click **Open** when selected.



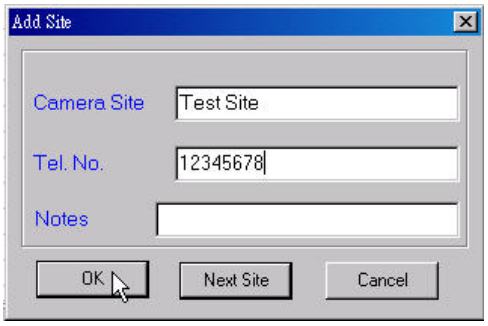
4.2.1.1.2 Site Management

Add New Camera Site:

You will be able to customize your own camera sites. To add a new site to the list, please click on the **Add Site** icon located at the top of the software or right click on the list and select **Add Site** function in the pull-down list.

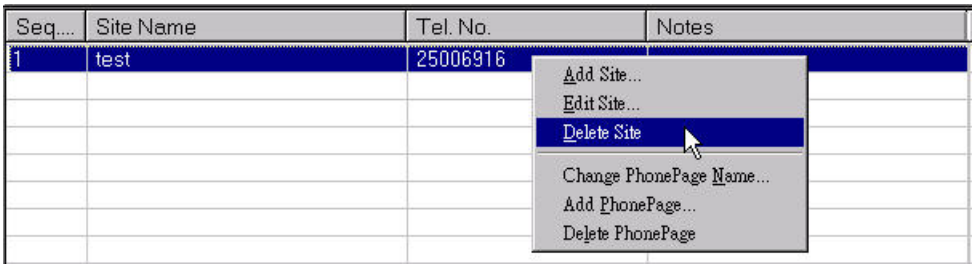


Upon selection, a window of adding site should appear. Please input the desired camera site name and the phone number belonging to the phone line connected to the pCAMit I modem camera accordingly. You can also add remarks to the **Notes** field if there are special points have to be made for the camera. When you have multiple camera sites to be created at once, you can click on **Next Site** button to continue adding other sites. Then, click **OK** and the new site(s) will be added to the phonebook list when completed.



Delete Camera Site:

To remove an unused camera site from your phonebook list, please select the camera site you wish to delete, and click on the **Del Site** icon located at the top of the software or right click on the list and select **Delete Site** function in the pull-down list. Press **OK** button to confirm the process, the camera site should be removed from the list immediately.



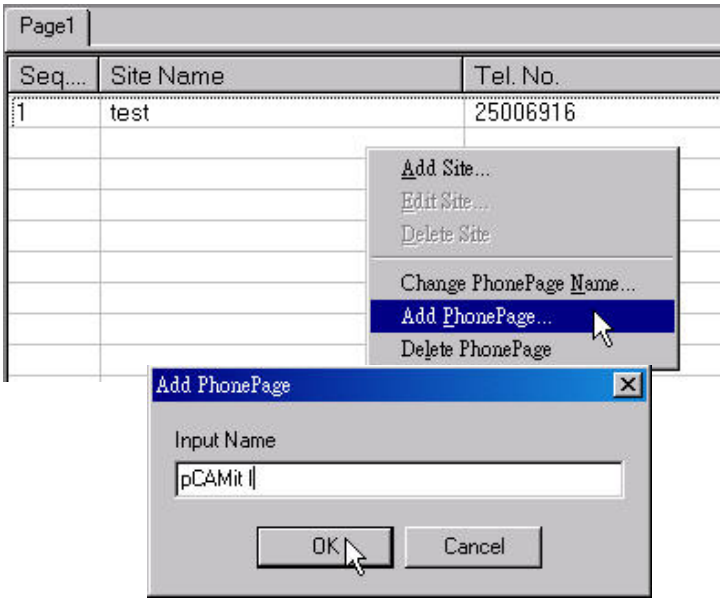
Edit Camera Site:

To edit the existed camera site on the phonebook list, please select the camera site you wish to edit, and click on the **Edit Site** icon located at the top of the software or right click on the list and select **Edit Site** function in the pull-down list.

Then, an edit site window should appear, please enter the new information and press **OK** when done.

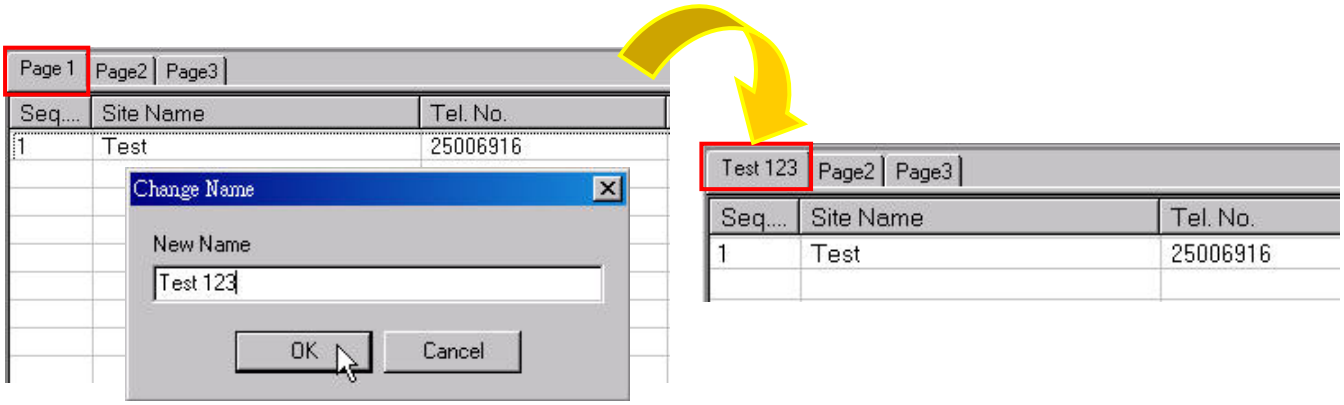
Add New PhonePage to the PhoneBook:

You will be able to add a new phonepage to categorize you camera sites. To add a new phonepage for your phonebook, please select **PhoneBook** from the file menu or right click on the list, and choose **Add PhonePage** function. Input your desired name of phonepage and press **OK** when done. The new phonepage will then be created.



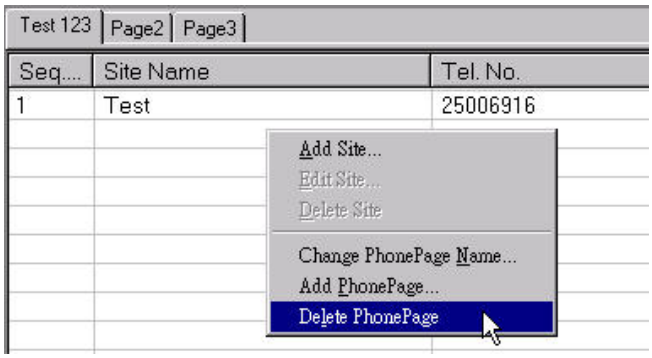
Change PhonePage Name:

To edit the page name for an existed phonepage, please pick the phonepage you wish to modify first. Then, select **PhoneBook** from the file menu or right click on the list, and choose **Change PhonePage Name** function. Please input the new name for the phonepage, and click **OK** when done.



Delete PhonePage:

Please also pick the phonepage you wish to delete first. Then, select **PhoneBook** from the file menu or right click on the list, and choose **Delete PhonePage** function. Press **OK** button to confirm the process, the phonepage should be removed immediately.



NOTE:

All the sites on the list will be removed, therefore, it is recommended to check all the sites are no longer valid before deleting the phonepage.

4.2.2 Connect to a Site

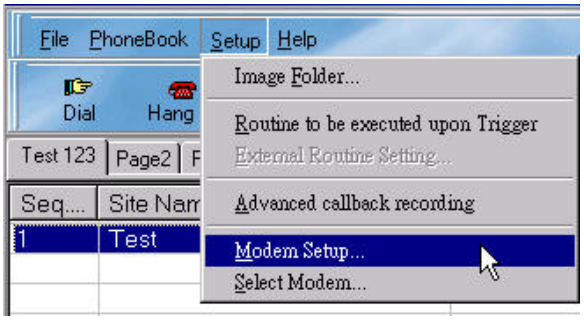
Dial to a site:

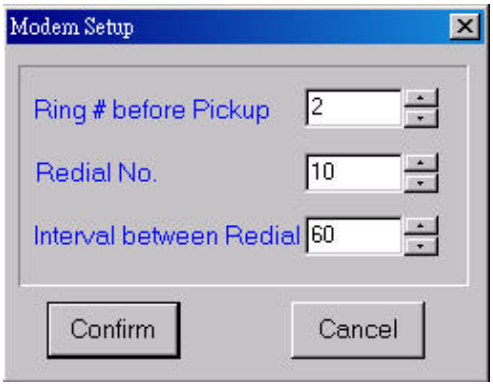
To establish connections with the camera, select one camera site which you wish to dial on the phonebook list and click on the **Dial** icon located at the top of the software. Or you may simply double click on the camera site, and the program will start to dial for you.

If you have set the password for your camera, you will have to type in the password before the system allows you to browse the images.

Modem Setup:

To set up the PSTN modem on your local computer, please select **Setup** from the file menu and choose **Modem Setup** function. You will be able to set your favorite answering and dialing ways of PSTN modem to the camera. The following is the description of the related parameters:





- **Ring # before Pickup:**

To set the maximum times of rings before the PSTN modem picks the incoming calls from the camera.

- **Redial No.:**

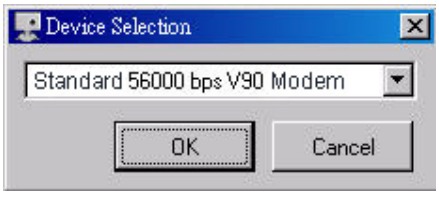
To set the times that PSTN modem will redial to the camera.

- **Interval between Redial:**

To set the duration of redialing of PSTN modem to the camera in the unit of seconds.

Select Modem:

If you have more than 2 modems installed on your computer, you will be able to decide which one is used to connect to the camera. To select the modem, please select **Setup** from the file menu and choose **Select Modem** function. Then, the device selection window will appear. Simply select a modem that you would like to assign it to perform the dialing task and click **OK** when done.



Hang Up:

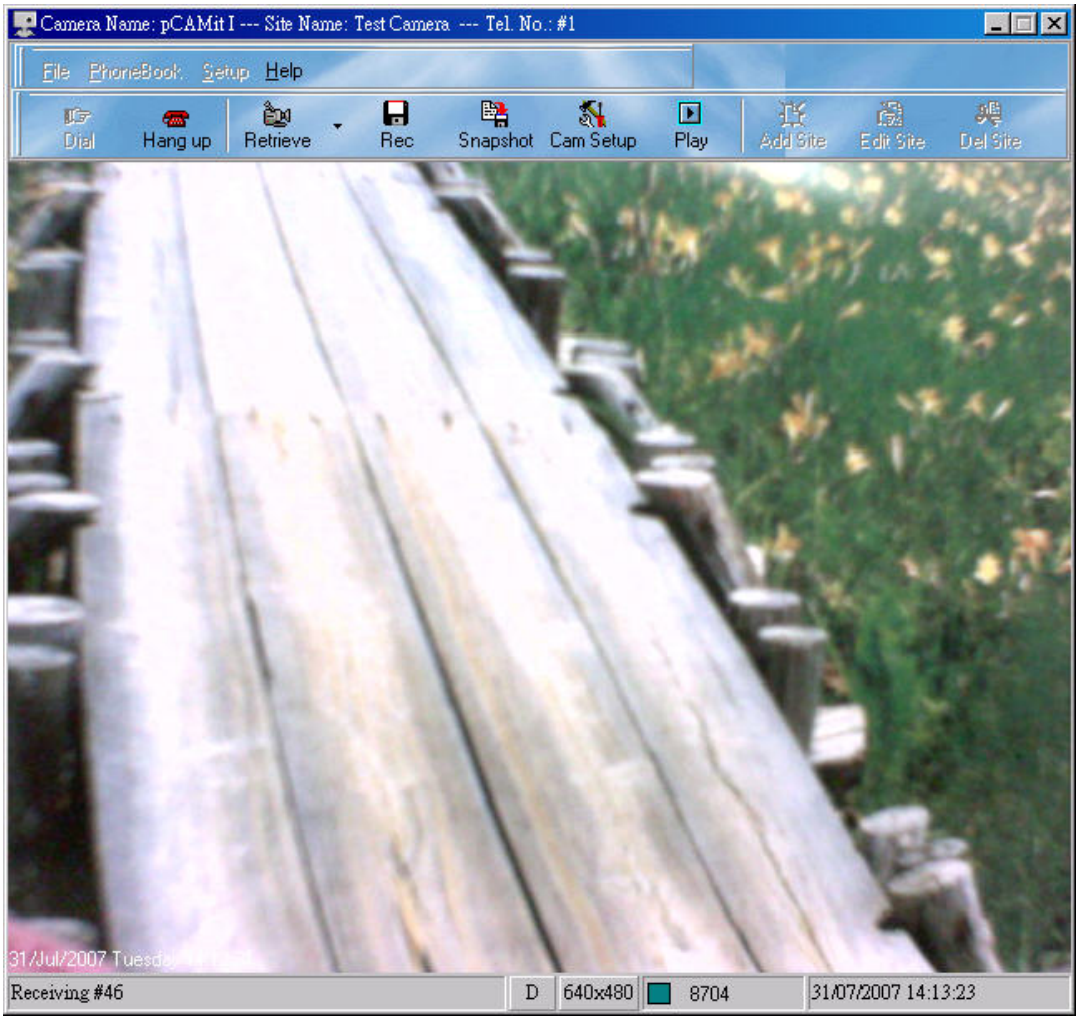
If you have made a wrong call to the camera site, just click on the **Hang Up** icon located at the top of the software anytime to terminate the dialing.

4.2.3 Browsing the Camera

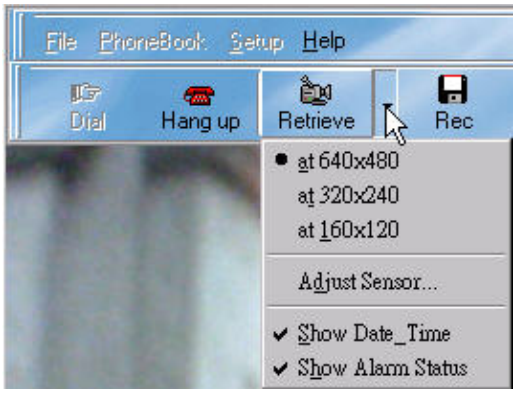
This section will show you how to utilize the pCAMit I AP to browse your camera.

4.2.3.1 Browsing Window

When you have established the connection between your camera and your computer, the images will start to be loaded. The status bar located at the bottom of the screen will show the progress of the image receiving, the resolution you set up as well as the time of your browsing.



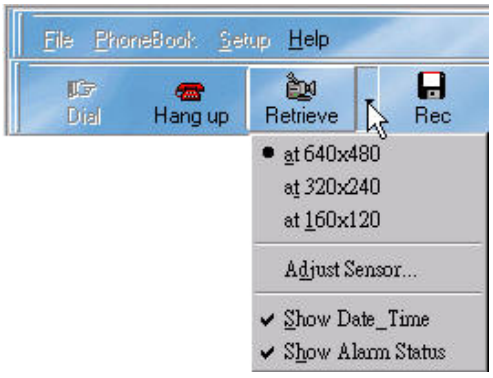
4.2.3.2 Image Information Display



The image displayed will have other information such as date, time or alarm status on it. You will be able to decide whether to display them or not while browsing. To enable/disable them, please pull down the arrow symbol beside the **Retrieve** icon located at the top of the software and check or uncheck the function of **Show Date_Time** and **Show Alarm Status** based on your needs.

NOTE:
Alarm status information such as “PIR” or “Pre-Alarm Image” will only be displayed when the camera calls back from the remote site.

4.2.3.3 Changing Image Size



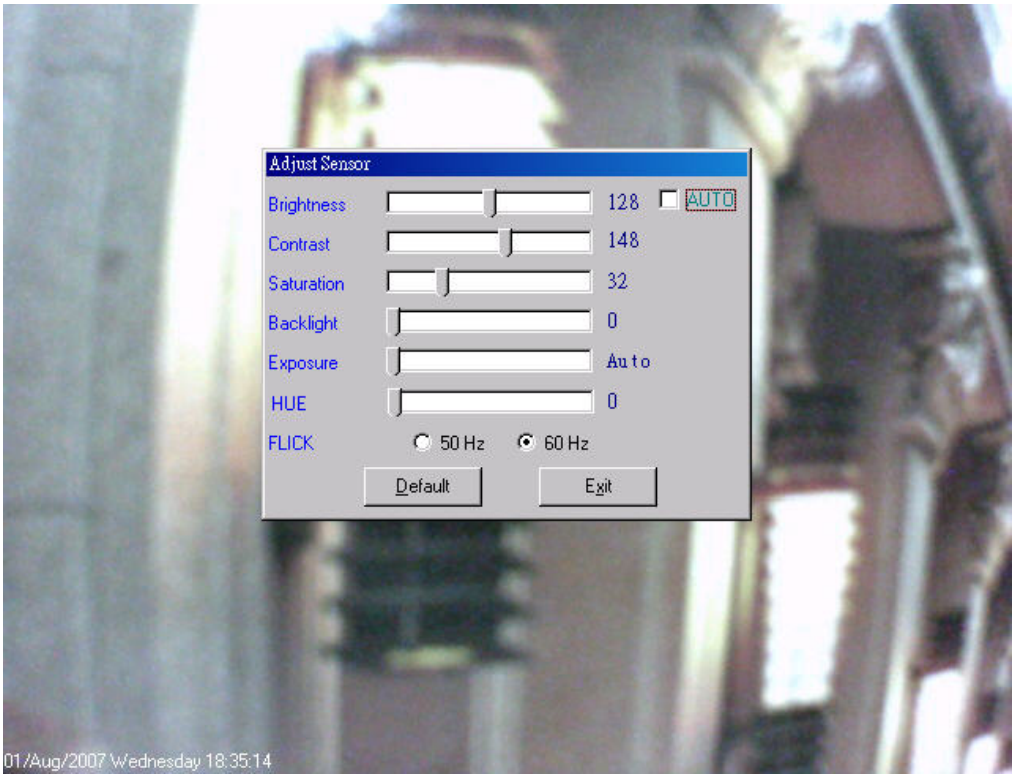
You will be able to adopt different the image sizes, including **640x480**, **320x240** and **160x120** for the camera to suit the connection condition. Default resolution for the image is 320*240.

To change the image size, simply pull down the arrow symbol beside the **Retrieve** icon located at the top of the software and select the desired image size. The new image size will be effective while receiving the next coming image.

4.2.3.4 Adjust Sensor

You will be able to adjust the image according to the environment of camera site. To modify, please pull down the arrow symbol beside the **Retrieve** icon located at the top of the software and choose the **Adjust Sensor…** function to enter the adjusting image menu. Parameters such as brightness, contrast, saturation, backlight, exposure, hue and flick can be adjusted accordingly. Simply move the scroll bar until your desired image quality. The browsing screen in back of the adjusting image menu will be changed immediately upon your settings. Press **Exit** button when done.

Or you may click on the checkbox of **AUTO** to have the CMOS sensor adjust these parameters automatically. To return to the default value, please click on the **Default** button.



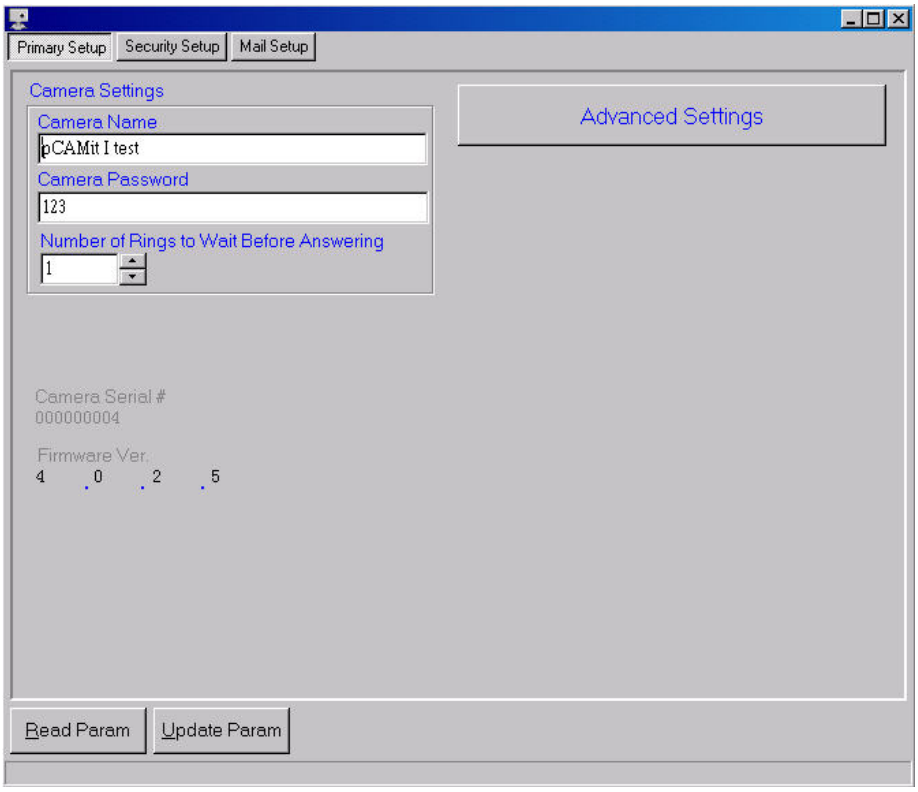
4.2.4 Remotely Set Up the Camera

After your PC has connected to the camera via the modem, the setup function will then be enabled. Thus, you will be able to set the parameters for your pCAMit I remotely. To initiate the setup page of you camera, simple click on the **Cam Setup** icon located at the top of the software.

The setup is divided into 3 main sections; Primary Setup, Security Setup and Mail Setup. Primary Setup contains all the basic attributes of the camera, whereas Security Setup owns the parameters which enable the camera to utilize its security functions. As to the parameters in Mail Setup, they are offered for the built-in e-mail function of pCAMit I camera. Once the camera is triggered, it will send the JPEG files to a pre-set e-mail address if you activate the e-mail sending function as you triggered way.

4.2.4.1 Primary Setup

Camera Name:
The name you gave to pCAMit I camera. This information will be useful when you record the images. With this information, it will be easy for the user to identify the saved images coming from which camera.

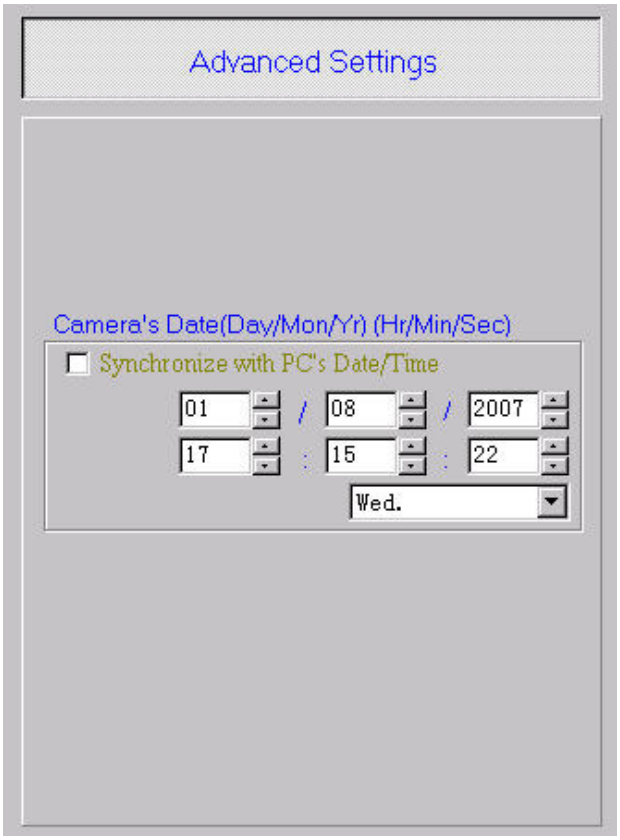


Camera Password:
You can enter the password here. If the camera is password protected, the system will request you to input the password before your can view the image. This is a security function to prevent the invasion of privacy.

Number of Rings to Wait before Answering: Please enter the number of rings before the camera would respond to your calls. Valid range: 1~9.

Advanced Settings:

After completing the above settings, to enable the advanced settings for your camera, please click on the **Advanced Settings** for further settings. Then, the related setting page will be unfolded as follows:

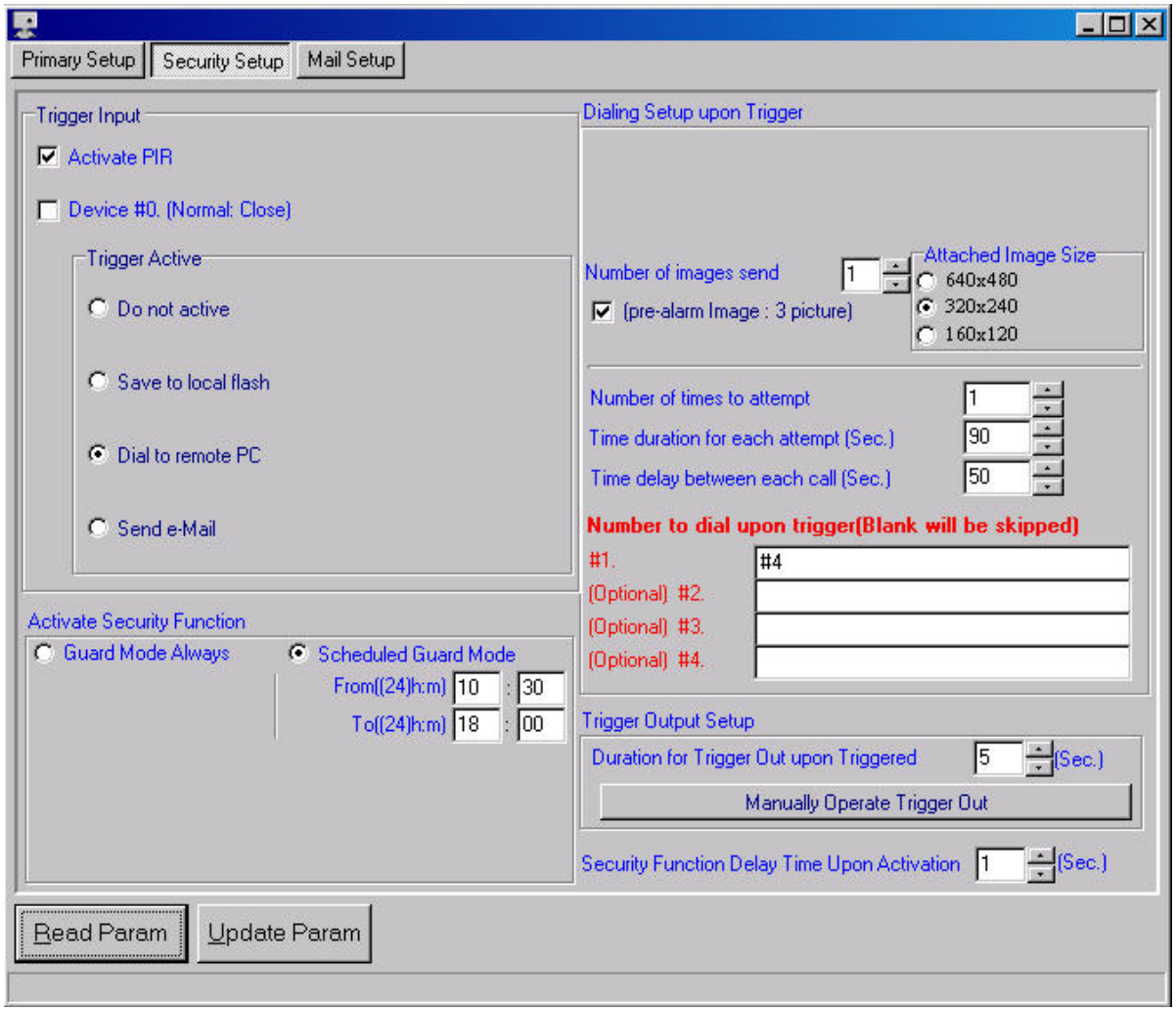


Camera's Date:

You will be able to set up the camera internal real time. Please insert the time you wish to set the camera to be, or you can also click on the checkbox of **Synchronize with PC's Date/Time** function to synchronize the timer in the camera with your computer when you click on **Update Param** button to complete this setup.

4.2.4.2 Security Setup

The security setup will allow you to set up the PIR (Passive Infrared Detector) and Device #0 (Optional Trigger-in device).



Trigger Input:

To enable the trigger input function, simply click on the checkbox in front of **Activate PIR** and/or **Device #0**. Device #0 is the optional trigger-in device that came with the powerBox, and the wiring for it is set to be normal close. With the Trigger In / Out connector provided on the powerBox, trigger-in function will enable the user to connect external detection devices, for example, smoke detector or Infra-red sensor for motion detection. (For more details on the powerBox, please refer to 3J Tech's powerBox user's manual.)

NOTE:

PIR or Device #0 will not accept the trigger from the camera while viewing.

Trigger Active:

Four kinds of triggered ways are offered for pCAMit I camera once it is triggered. The user can choose **Do not active**, **Save to local flash**, **Dial to remote PC** or **Send e-Mail** option as the camera's triggered reaction to notify triggered events that had happened. Just click on the item to activate your desired triggered way.

When **"Do not active"** item is selected, the camera will do nothing once the camera is triggered; otherwise, the triggered images will be saved into the flash memory of pCAMit I camera directly in case you choose **"Save to local flash"** item.

The camera will also be allowed to dial back to the remote PC connected to the modem by calling the phone number you assign in the field of **Number to dial upon trigger** if you choose **"Dial to remote PC"** item. In this case, the triggered images will be displayed on your PC and saved into the flash memory of pCAMit I camera as well. For details on the download of these triggered images from the flash memory to your local PC, please refer to the section 4.2.5.3. As to the **"Send e-Mail"** item, the triggered images will be sent to the pre-set e-mail account in Mail Setup if it is chosen.

NOTE:

The trigger active functions will only be effective when either PIR or Device #0 is enabled.

4.2.4.3 Activate Security Functions

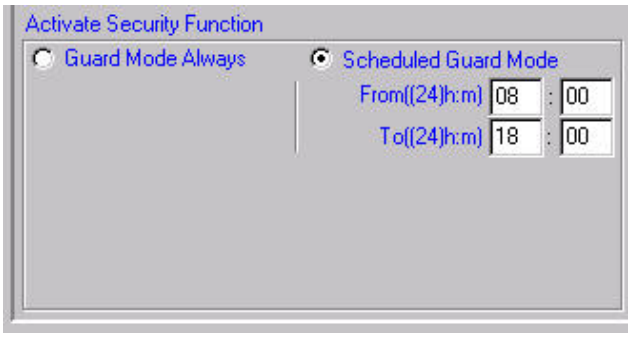
You will be able to choose one of 2 different types, including **Guard Mode Always** and **Scheduled Guard Mode** to activate your camera security function. It is necessary for the user to enable PIR or Device #0 function before doing this setting.

Guard Mode Always:

If you choose **"Guard Mode Always"**, the security function such as PIR or Device #0 will be ON at all times.

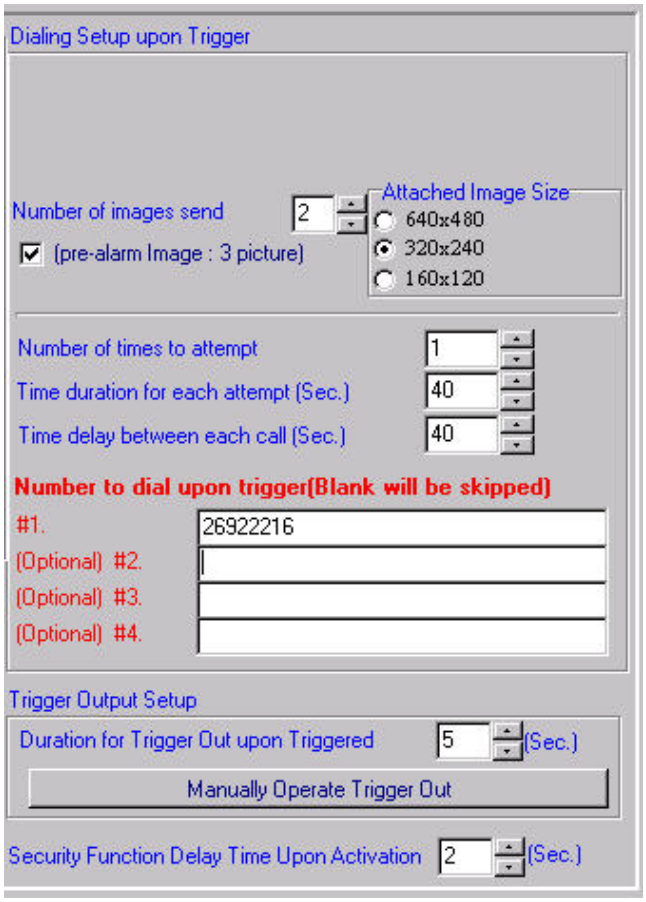
Scheduled Guard Mode:

While this mode is chosen, the camera will automatically activate its PIR or Device #0 at given time. Please fill in the desired security time in the format of the 24-hour time standard (e.g. from 08:30 to 18:30). The camera will enter the security mode during the time you set up based on the internal camera clock.



4.2.4.4 Dialing Setup upon Trigger

Number of images send :
The number of triggered images that will be captured **AFTER** the camera is triggered. You can input a numeral in this field to set up your desired number of captured images for each triggered event. Valid range: 1~30.



Pre-alarm Image : 3 picture
If you click on the checkbox of this function, the camera will automatically capture 3 images **BEFORE** the camera is triggered. This is the fixed number, so that the user is not able to change this setting.

Attached Image Size :
pCAMit I camera also supports 3 different sizes for triggered images, including 640x480, 320x240 and 160x120. To switch among these image sizes, simply click on the button in front of the image size you would like.

Call Back Functions :
The following includes the necessary parameters for the call back setup while you activate **"Dial to remote PC"** function as your triggered reaction.

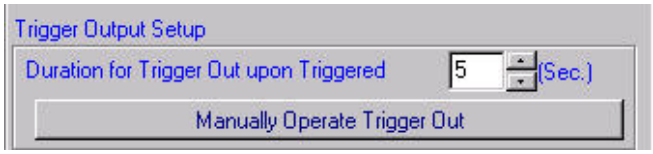
- **Number of Times to Attempt :**
  This is the number of times that the camera will retry to call back to the remote PC when it is triggered.
- **Time Duration for Each Attempt (Sec.) :**
  This parameter is to set the time duration that the camera will kept ringing until the pick up. The unit of time is second.
- **Time Delay between Each Call (Sec.) :**
  The time interval between each of the call back. This delay is the buffer time in case of your PC attempts to call the camera remotely. The unit of time is second.

- **Number to dial upon trigger :**
  Up to 4 sets of multiple phone numbers are offered for the camera to call back to the remote PC. In order of priority (#1>#2>#3>#4), the #1 phone number will be adopted first to call back by the camera. If the camera does not get any replies, it will continue to call the remote PC via the #2 phone number, then is the #3 phone number, and the #4 phone number will be used until all phone numbers fail to connect.

  If the field is left blank, the camera will ignore it. Simply input the number you wish the camera to dial in the fields of #1~#4 accordingly. The camera would only dial the fields with phone number inputted.

NOTE:
Please be aware of the area code for the call back number. You might have to place the area code in order for the number to be valid. Please make sure that if you are dialing off state, the area code is added.

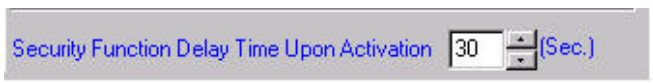
Duration for Trigger Out upon Triggered :



Duration for Trigger Out upon Triggered is the time duration that the camera will send the trigger output signal. You may connect AC devices such as lights or alarms. When detecting the moving objects, the lights will automatically switch on for certain period of time. Simply fill in the desired output time, and the camera shall keep triggering the device until the time you set is reached.

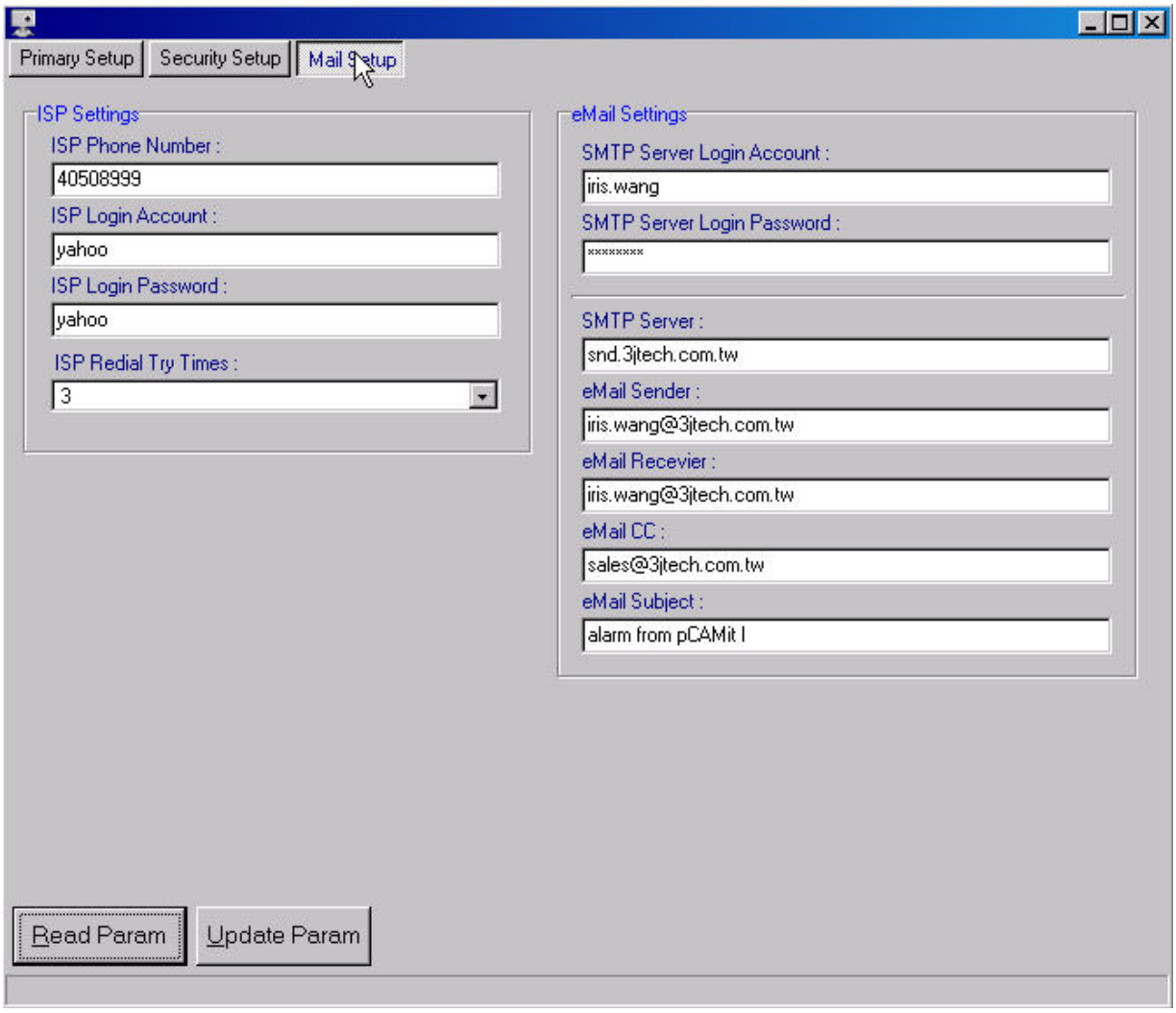
Manually Operate Trigger Out :
Clicking on the button of **Manually Operate Trigger Out** will activate the trigger-out device. The device will constantly be triggered until the output signal is disarmed.

Security Function Delay Time upon Activation:
This function is to set the delay time for your camera to initiate its security device. Enter the time in seconds for the desired security delay time.



4.2.4.5 Mail Setup

In this section, the following includes the necessary parameters for the e-mail sending setup while you activate **"Send e-Mail"** function as your triggered reaction. Simply input the ISP information and e-mail settings in Mail Setup and you will have the function enabled.



ISP Information :

- **ISP Phone Number :**
  The phone number provided by Information Service Provider for you to dial up connecting the Internet.

- **ISP Login Account / Password :**
  The information provided by Information Service Provider for you to authenticate your identity to decide whether you have the right to access the Internet or not.

- **ISP ReDial Try Times :**
  The time that the pCAMit I camera will retry to dial to ISP if it fails to dial to connect the Internet. Valid range: 1~10.

E-Mail Settings :

- **SMTP Server Login Account / Password :**
  If your ISP requires to log into their system before sending an e-mail, please enter your account name and account password into the field provided. For example,

  Account Name: peter
  Account Password: 12345

- **SMTP Server :**
  Input the domain SMTP server of the e-mail ISP you wish the camera to use. You **must** have a SMTP server inserted here else you will not be able to send e-mail. If you do not know the mail server domain name, please contact your ISP for details regarding to the domain server. For example, smtp.3jtech.com.tw.

- **eMail Sender :**
  This is the e-mail address where the camera shall send the triggered image from. You can input any valid e-mail address to be your sender's e-mail address. Up to 23 characters and numbers can be set up. For example, peter@3jtech.com.tw.

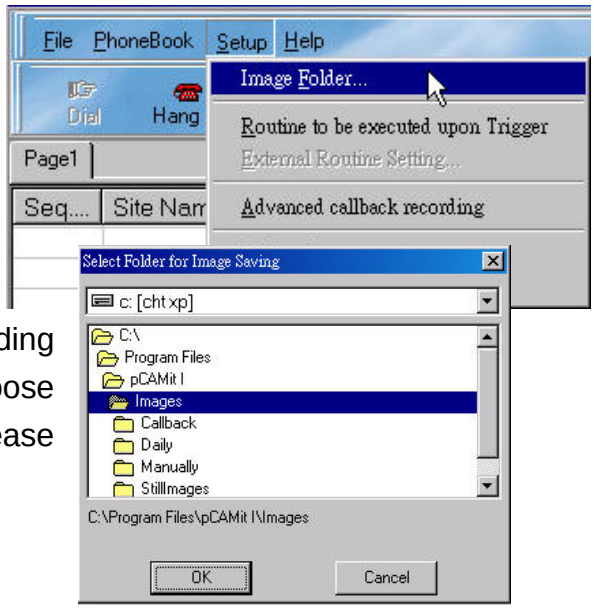
  Note: Some SMTP server will check if the e-mail is valid for ISP's system. In that case you must input a valid e-mail in order to pass the authentication of ISP system.

- **eMail Receiver :**
  This is the e-mail address where the camera shall send the triggered image to. Please input an e-mail address in which the triggered JPEG files sent by the camera will be received. For example, you@yahoo.com.tw.

- **eMail CC :**
  If you need to send a carbon copy of the e-mail to someone else, you may input his or her e-mail address here.

- **eMail Subject :**
  You will be able to set up the subject of the e-mail sent by the camera. For example, Living Room or Kitchen.

4.2.5 Image Recording/Snapshot

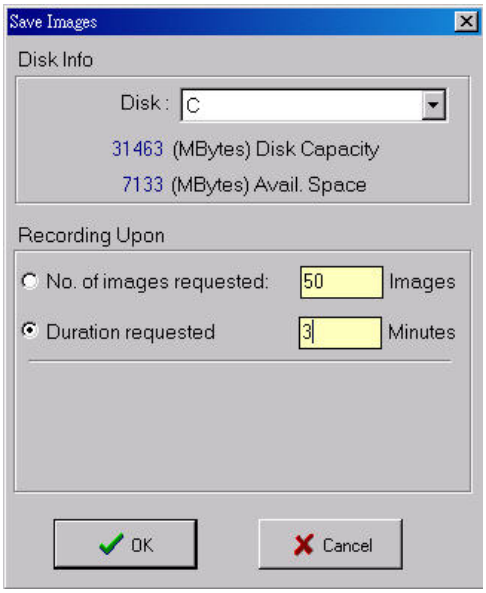


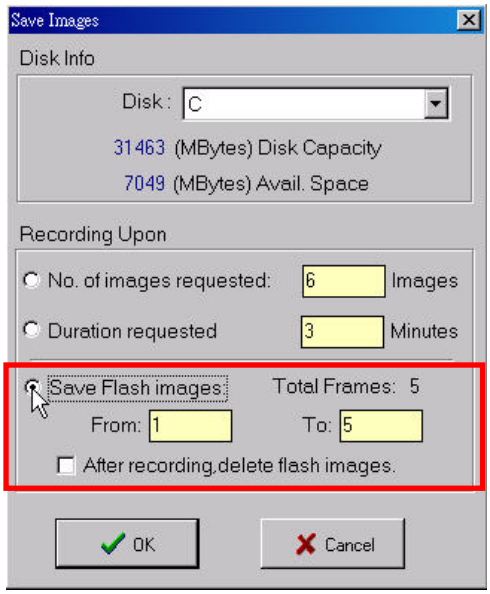
4.2.5.1 Setup Images Directory

You will be able to set your own directory for the recorded images. The default recording directory is under the **Images** folder of pCAMit I. To change the directory of recording folder, please select **Setup** from the file menu and choose **Image Folder** function. Then, a sub menu will show up, please select the desired directory and click **OK** when done.

4.2.5.2 Recording

For the future reference, you will be able to record the images while you are browsing. To do so, simple click on the **Rec** icon located at the top of the software, and then a sub menu will appear. Just enter the number of pictures or the time you wish to record. When you enter the information and click **OK**, the program will start recording until the number of frames or the time has reached. And all images you recorded will be saved into the **Manually** folder generated by the pCAMit I AP automatically.



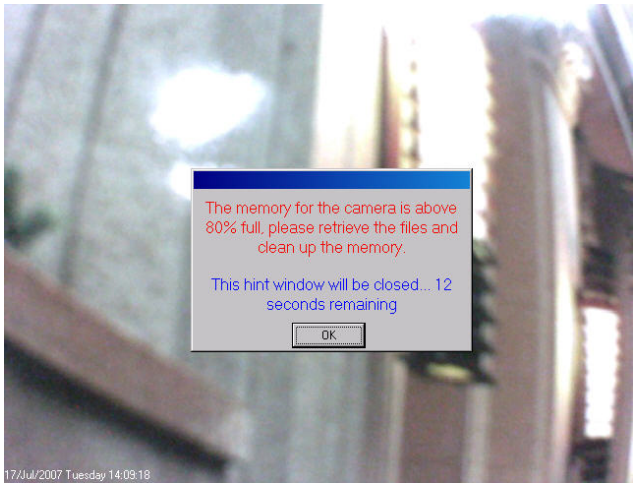


4.2.5.3 Download the Triggered Images

By clicking on the **Rec** icon, the user not only can do the recording setup, but the triggered images also can be downloaded from the flash memory of pCAMit I to the **Callback** folder generated by the pCAMit I AP automatically in the directory you set up on PC.

If the information about total frames of triggered image appears at the bottom of the Save Images window, it stands that there are triggered images existing in the flash memory; otherwise, this section in this window will keep blank. Click **Save Flash images** and press **OK**, then all the triggered images will begin to download to your local PC. Or you may assign the specific frames if you would not like to download the entire triggered images.

To avoid the flash memory of the camera is out of space and overwritten by new triggered images, you may click on the checkbox of **After recording, delete flash images** function to clear up the images stored in the flash memory. The system will also alert the user with a message once over 80% space of the flash memory is occupied by triggered images.



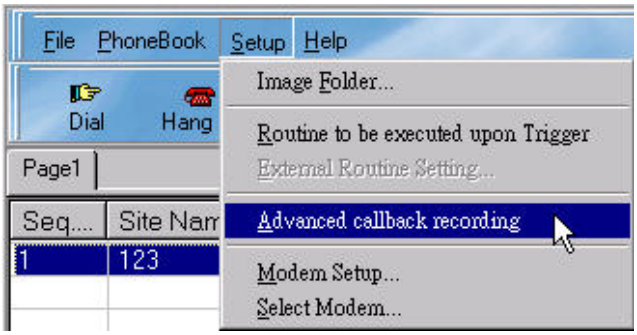
4.2.5.4 SnapShot

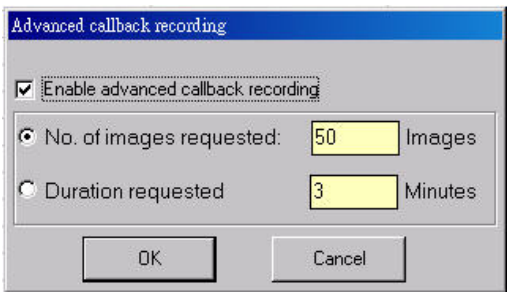
Other than recording chains of images, you will also be able to capture a single image. To do so, simple click on the **Snapshot** icon

located at the top of the software, and the current image you snapshot will be saved into the **StillImage** folder generated by the pCAMit I AP automatically in the format of JPEG.

4.2.5.5 Call Back Recording

If the user would like the camera to keep on recording after the camera finished the call back recordings for your future reference. To enable this function, please select **Setup** from the file menu and choose **Advanced callback recording** function, then a sub window will show up. Click on the checkbox of **Enable advanced callback recording** in advance before entering the number of pictures or the time you wish to record. Then, click **OK** when done. The program will start recording automatically until the number of frames or the time has reached. All images like the ones recorded in manual way will be saved into the **Manually** folder generated by the pCAMit I AP.

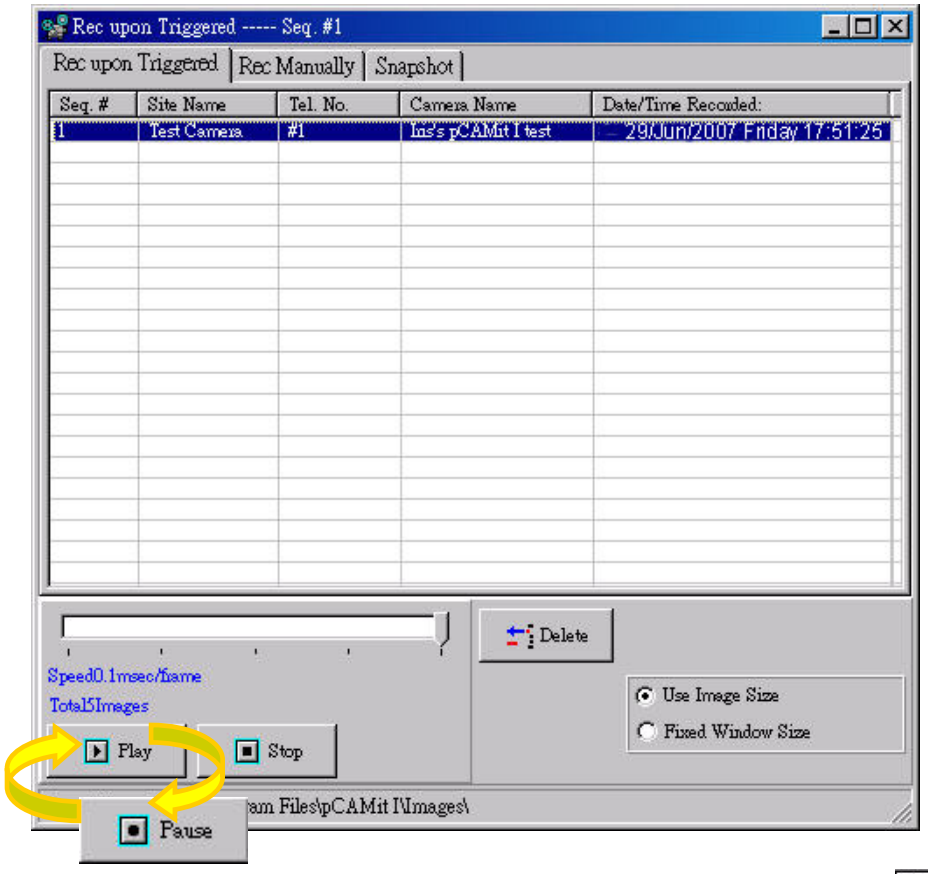




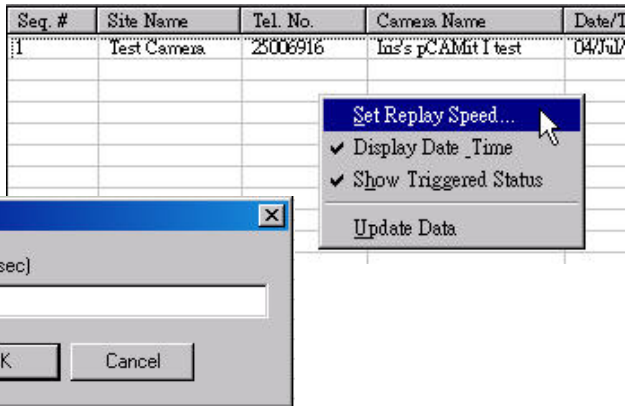
4.2.6 Replay Images

To replay the recorded images, you may use the Image Player contained in pCAMit I application or click on the **Play** icon located at the top of the software. The Image Player is a separate program which will automatically divide all of the recorded files into 3 different categories, including **Rec upon Triggered**, **Rec Manually** and **Snapshot**. Due to this simple sorting, the user just needs to click the category in which your desired image files are located to choose the image type. This way, you will save more time without going though the whole image list as you only would like to view a recorded image.

You may just click the image file you would like to view or press **Play** button at the bottom of the window, and then the image window will pop up immediately. To pause/stop the image replaying at anytime, simply press **Pause/Stop** button.



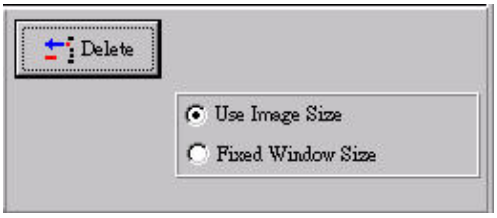
You will also be able to control the replaying speed of the image. Please right click on the image list and select **Set Replay Speed** function. When the sub window appears, please enter the speed for each frame per millisecond.



In addition, you will be able to decide whether to display the image information such as Date_Time and the status of triggered device. To enable or disable the display of these information, please also right click on the list, and select/deselect **Display Date_Time** and **Show Triggered Status** these functions accordingly.

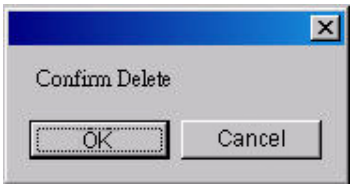
To update the latest image list, the user also can do this by right clicking on the image list and choose the function of **Update Data** from the menu to refresh the image list.

In images replaying, you may choose to play images in a fixed size or different sizes based on the images themselves. Please click on the button in front of **Fixed Window Size** or **Use Image Size** respectively to decide the size displayed.



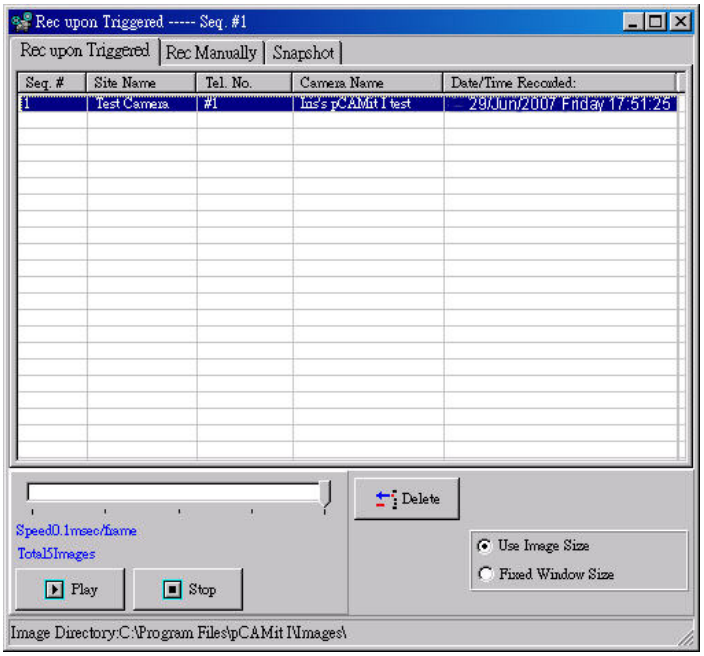
4.2.6.1 Delete Recorded Images

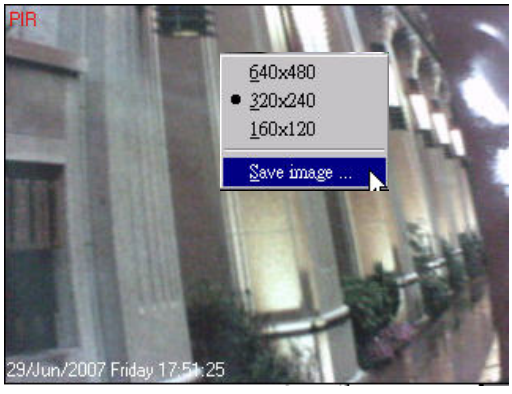
To delete a recorded image, simply select the file on the image list that you wish to delete, and press the **Delete** button. After your confirmation of deletion, the file will be removed immediately.



4.2.6.2 Convert Recordings into JPG files

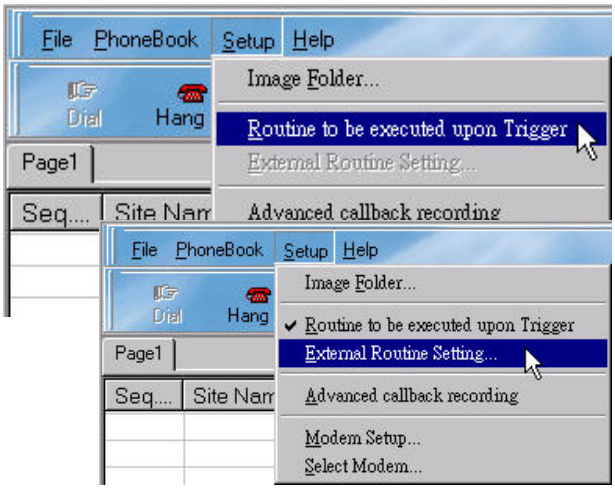
From the recorded images, you will be able to extract individual frames into *.JPG file so that the image may be used as other reference. To do so, please pause on the frame you wish to extract and right click the mouse on the image. Then, select the **Save image…** function from the menu and choose the destination folder and input the file name to save the file.

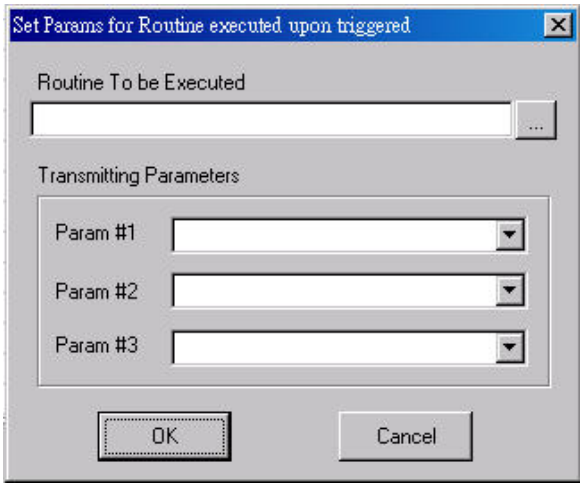




4.2.7 External Routine

When the camera is triggered and calls back to alert the computer, you will be able to set other software to execute when the call back is detected. This can be used to integrate the camera together with your system. To enable the external routine, please select **Setup** from the file menu and choose **Routine to be executed upon Trigger** function to have this function enabled in advance.

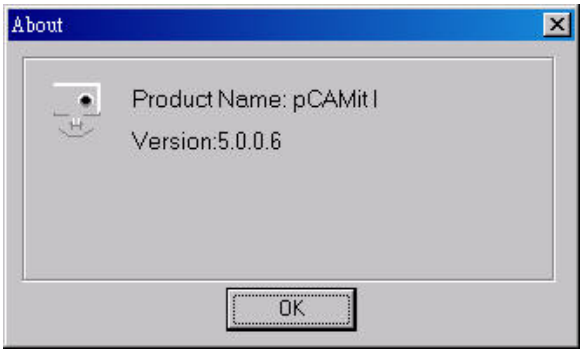




Then, the sub window will appear once the **External Routine Setting** function located below is enabled as well. Please select the *.exe file to be executed when detecting a call back. You can choose up to 3 parameters, including camera name, camera ID and trigger status to be sent to the execution program for other application.

4.2.8 Help

Under the **About** function of **Help** menu, you will be able to know what version of the software you are using currently. You can always download the latest version from our web site at http://www.3jtech.com.tw.



Appendix A Technical Specifications

- System & Interfaces:
  - Built-in 56 Kbps modem module, 8032 uP, and Internet protocol chips
  - 512K x 8bit Program memory, 8M x 8bit NAND flash memory for Chapter data
  - RJ11 for phone line
  - RJ22 connector for 5V DC/90~240V AC adapter
- Image Sensor Specification:
  - 300K pixels CMOS Sensor(VGA)
  - S/N Ratio: > 48dB
  - Gamma Correction: 0.45
  - Min. Illumination: <2.5 lux @ f2.0
- Trigger input: Normal Close to Open or Low to High TTL level (if the powerBox is purchased.)
- PIR:
  - Detectable distance: 4~8m(upon environment temperature)
  - Fressel lens angle: ~90 degrees
- Pin-hole Lens:
  - Focal Length:3.6 mm
  - Aperture F 2.0
  - Angle of View (DIA): ~68 degrees
- Internet Protocol & Feature
  - TCP/IP for Internet Communication
  - PPP for Dialup Network Logon and Handshaking
  - SMTP for Sending Email
  - DNS for Resolving IP Address From URL
  - Send E-mail with JPEG triggered images as file attachment
- Embedded Modem
  - ITU-T V.90/V.34/V.32bis/V.22 for Data Mode
  - V.42 Error Correction (LAPM and MNP)
  - V.42 bis and MNP Class 5 Data Decompression
- Optional Trigger In/Out connector on the powerBox to connect external sensor for monitoring and security
  - One external trigger in & trigger out
  - Built-in PIR motion detection
- Built-in real time clock for scheduled security and hardware watchdog
- Record triggered images onto NAND Flash memory, JPEG format available
  - 8M byte NAND Flash memory
  - Support maximum 125 images saved

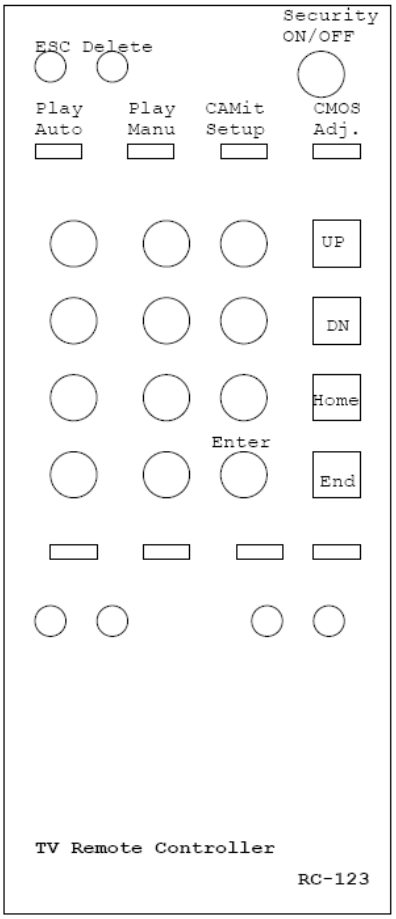
- Modem to modem:
  - Dial-in to pCAMit I, modem-to-modem connection, view triggered images via PC with pCAMit I application software installed
  - Dial to pre-assigned number upon triggered
  - Transmission rate (at the speed of 33.6Kbps modem transmission):
    - QQVGA(160x120): 1~2 sec/per image
    - QVGA(320x240): 5~6 sec/per image
    - VGA(640x480): 10~20 sec/per image
- CMOS sensor specification:
  - 1/4.5 inch 640 X 480 active pixel array
  - VGA(640x480) / QVGA(320x240) / QQVGA(160x120) image size
  - 50Hz, 60Hz flicker cancellation
  - Automatic/Manual gamma correction
- Operation environment:
  - Temperature: 0°C ~ 55°C
  - Humidity: 85% relative at 25°C
  - Dimension of Main Body: 11cm x 6cm x 4.5 cm
- Weight: 110g

Note: Any specification is subject to change without any notice.

Appendix B Video Replay through the Remote Controller (Optional)

Please refer to the figure of the remote controller and instructions below to replay the triggered image from the modem camera (Skip this section if your pCAMit I does not support video out function.)

▪ CAMit Setup Key



1) Trigger Out - :

- Save: Save the triggered image file into the built-in flash memory.
- Modem: Send the triggered image to PC connected to modem.
- Email: Send the triggered image to the e-mail address you assigned.
- Disable: Do nothing when the trigger events occurred.

Please press **UP/DN** (Down) key to choose your desired item among these 4 selections, and press **Enter** key when completing.

2) PIR: Enable or disable the function of PIR. Press **Enter** key to switch this function.

3) Delete Files: Remove all files from the NAND Flash. Please press **Enter** key to confirm the deletion **(Y)** or **ESC** key to cancel the deletion **(N)**.

4) Delete Mails: Remove errors of the setup or mails that fail to send out successfully. Please press **Enter** key to confirm the deletion **(Y)** or **ESC** key to cancel the deletion **(N)**.

5) Image Rotation:

- Flip: Turn the image vertically.
- Mirror: Turn the image horizontally.

▪ CMOS Adjust Key

1) Auto Exposure: Set up the brightness, contrast, saturation, flicker and hue automatically by the system.

2) Brightness: Press **UP/DN** (Down) key to adjust, and **Enter/ESC** key to save/cancel the settings.

3) Contrast: Press **UP/DN** (Down) key to adjust, and **Enter/ESC** key to save/cancel the settings.

4) Saturation: Press **UP/DN** (Down) key to adjust, and **Enter/ESC** key to save/cancel the settings.

5) Flicker - :

- Flicker off: Cancel the function of flicker.
- Flicker Auto: Have the system set up the function of flicker automatically.
- Flicker 60Hz: Set the flicker as 60 Hz.
- Flicker 50 Hz: Set the flicker as 50 Hz.

6) Hue Adjust: Press **UP/DN** (Down) key to adjust, and **Enter/ESC** key to save/cancel the settings.

7) Load Default: Adjust the settings of brightness, contrast, saturation, flicker and hue as factory default.

▪ Security ON/OFF Key

- Suspend the function of security.
- Restart the function of security.

NOTE: This button will be invalid if pCAMit I modem camera is not in the mode of security.

▪ Play Auto Key

Display the triggered image file in automatic way.

▪ Play Manu Key

Display the triggered image file in manual way. Support **UP** key to be back to the previous image, **DN**(Down) key to go to the next image, **Home** key to go to the first image and **End** key to go to the last image. Press **Delete** key if you would like to delete all image.