



Alerting, Recording and Motion Detection Guide

This document is intended to be used as a general guide to the set up and use of the motion detection and recording features of the cameras offered in the WiFi Baby Home Security Store. We will go through the different storage options and how to set them up, alerts and how to generate them, as well as how to view the results... The majority of the document is used to set up an example scenario. We will start by going through an overview of the features then in the scenario we will configure these features to give use a result we can use.

Overview

The recording feature is used to either record an event or a scheduled continuous recording during the day or in complete darkness using the infrared night vision. The camera uses Motion Detection to create an alert and start a recording, send an email or send a picture to an FTP server. Below is an overview of the storage features of the camera that can be configured. These are all found in the settings page of the camera.

To get things started there are 2 methods or types of recording on the Wifi Baby Home Security Cameras.

1. **Record** - This creates a .MOV video file that you can play back and watch in your quick time media player.
2. **Snapshot** - This method takes a picture of what it sees and saves it as a .jpg picture file.

For each of these two types there are 4 ways configure recording.

1. **Record on alarm** - When an alarm is generated recording can be set to begin for a specified duration of time after the alarm is generated.
2. **Snapshot on Alarm** - This is the same principal as the Record on alarm, when an alarm is generated snapshots can generated at a rate of 5 images per second for up to 20 seconds.
3. **Continuous Record** - If enabled the camera will begin recording (*this is not triggered by an alarm*), a schedule can be set up to only record during specific times.
4. **Snapshot at Interval** - This setting allows a Snapshot to be taken at a specified interval (*this is also not triggered by an alarm*) for example 1 snapshot per minute, creating a .jpg picture file every minute.

Now once we have Recorded video or Snapshots configured we need a place to store these files.

1. The Wifi Baby 3G camera can use a micro SD card (sold separately) that can be inserted into the camera for on-board storage.
2. The other option is NAS device (or Network Attached Storage). A NAS could be a dedicated device on your network or simply a dedicated network shared folder on a Windows or Mac computer. Using this option the camera will send the recorded video or snapshots over the wireless network to be stored on the NAS device.

The Scenario

I have a cookie jar and in that jar are my favorite cookies. These are mine and I want to keep it that way, for some reason they keep disappearing from the jar... No one will admit to doing it so I have decided to watch my jar and find out for myself who the sneaky one is... So when my cookies are being taken I want to record a video of the act and store it on a file share on my windows computer. I also want to be alerted to the event by email with a snapshot of the culprit with a hand in my cookie jar.

Now that we have gone through the features on what kinds of files can be stored and the options to store them, we can start setting things up for our scenario. During the setup we will go through each page and option but focusing on the goals we need to accomplish.

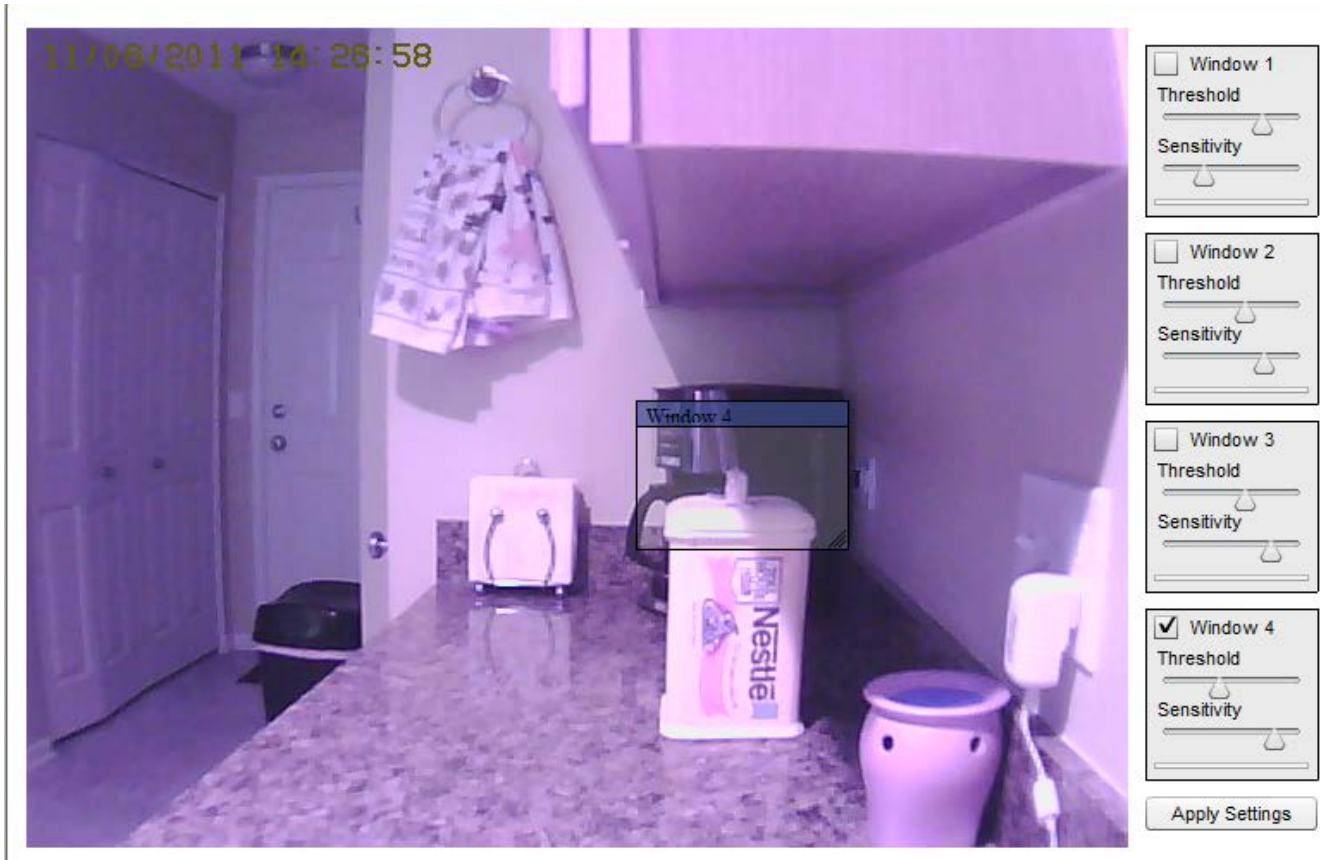
1. First off we will set up Motion detection to detect movement by my jar...

- Go to the settings page of the camera and expand “Alarm” and select “Motion Detection”.

Below we can see the video of the jar, the video is divided into 4 sections or “Windows”. On the right there are 4 boxes that correspond with each “Window”. In each are the adjustments for motion detection within that Window. When the “Window” check-box is checked this enables motion detection within that window on the video. The “Threshold” and “Sensitivity” sliders tune how sensitive motion the camera is to motion and how much motion needs to occur to trigger an alert.



For our scenario we only want to detect motion around the cookie jar so we will only enable “Window 4” and then move that window by dragging it into position. Then we will resize it by clicking on the lower right hand corner of the window. So when our culprit opens the cookie jar the motion will be detected and an alert will be generated. Below are our results...



Now that we have defined the area that we are going to use to detect motion (“Window 4” in this case) we need to set how much motion we will need to trigger an alert. This is set by using the “Threshold” and “Sensitivity” adjustment sliders in Window 4. Under the “Sensitivity” adjustment slider there is the “Motion Indicator bar”. When movement is detected within “Window 4” green line begins to appear in the “Motion Indicator bar”. The more movement, the further to the right the green indicator will go. To successfully generate an alert the green indicator must go beyond to the location of the “Threshold” slide indicator.

- **Threshold** - Sets the level that must be reached by the “Motion Indicator Bar” to generate an alert.
- **Sensitivity** - This setting sets how reactive the Motion Indicator is to movement. If this is set to the left it will take more movement to get activity from the Motion Indicator , if this is set far to the right it the Motion Indicator will be much more reactive to motion.

2. Next is to enable the alarm and configure it to send an email with an attachment snapshot image. This is a 2 step process as we need to set up the email server that we will be sending to then we will enable the alarm.

• In the settings page of the camera expand “ Alarm Server” and then “e-Mail Server”
Setting up the email settings can be a bit challenging as each email provider, Gmail, yahoo, hotmail, @me have different settings. Below are a couple of screens shots of Gmail and yahoo. *Please note to consult your mail providers documentation to find the correct settings for your service as they may be different that the screen shots below.*

e-Mail Server setup

e-Mail server ID:	1 ▼
SMTP server name:	smtp.gmail.com
SMTP server port:	465
Secure SSL connection:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Authentication:	<input checked="" type="radio"/> Yes <input type="radio"/> No
User name:	wifitech@gmail.com
Password:
Re-type password:
Sender mail address:	wifitech@gmail.com
Receiver mail address:	wifitech@gmail.com me@myemailaddress.com
Subject:	Motion detected!!!!
Message:	Your Home Security Camera has detected movement... /

Apply

e-Mail Server setup

e-Mail server ID:	2 ▼
SMTP server name:	smtp.mail.yahoo.com
SMTP server port:	465
Secure SSL connection:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Authentication:	<input checked="" type="radio"/> Yes <input type="radio"/> No
User name:	wifitech@yahoo.com
Password:
Re-type password:
Sender mail address:	wifitech@yahoo.com
Receiver mail address:	wifitech@yahoo.com me@myemailaddress.com
Subject:	Motion detected!!!!
Message:	Your Home Security Camera has detected movement...
<input type="button" value="Apply"/>	

- You can configure up to 4 email servers if needed each is noted by the “e-Mail server ID”
- **SMTP server name:** This is the SMTP server that your mail account uses
- **SMTP server port:** This is the port number that is used by the SMTP server for SMTP communication.
- **Secure SSL connection:** Yes/No
- **Authentication:** Yes/No
- **Username:** The user name needed to access your email account
- **Password:** The password needed to access your email account
- **Sender mail address:** This should be the same as your username or the email address assigned to the username that was listed in the Username field.
- **Receiver mail Address:** e-Mail address that will receive the alerts.
- **Subject:** This is text that will show up in the Subject field of the alarm email.
- **Message:** This is text that will show up in the body of the alarm email.

- Next we can turn on or arm the alarm and enable e-Mail for the alarms. In the camera Settings, expand “Alarm” and select Alarm Management.

Alarm Management setup

Alarm mode:	<input checked="" type="radio"/> Arm <input type="radio"/> Disarm
FTP alarm management:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
e-Mail alarm management:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Trigger time:	<input type="text" value="1"/> seconds (1-20)
Trigger FPS:	<input type="text" value="1"/> Images/sec (1-5)
e-Mail server ID:	<input type="text" value="1"/> <input type="button" value="Setting"/>
File attachment:	<input checked="" type="radio"/> On <input type="radio"/> Off
Snapshot from:	<input type="text" value="Primary stream"/>
Image file name:	<input type="text" value="WifiCam1"/>
Suffix of file name:	<input checked="" type="radio"/> Date time <input type="radio"/> Sequence number
Effective period:	<input checked="" type="radio"/> Always <input type="radio"/> Schedule <input type="text" value="1"/> <input type="button" value="Setting"/>
Alarm interval time:	<input type="text" value="0"/> Seconds (0-86400 0:Continuous)

- **Alarm mode:** Set to “Arm”
- **FTP alarm management:** Used to send snapshot images to an FTP server (not using here)
- **e-Mail alarm management:** Set to Enable
- **Trigger time:** This sets a delay from when the alert is generated to when recording takes place the default is 1 sec. So the recording of images happens 1 second after the alert is generated.
- **Trigger FPS:** How many images per second are generated, default is 1 per second.
- **E-Mail server id:** This is the email id of the email server that was configured in the previous step.
- **E-Mail server ID:** This is the email id of the email server that was configured in the previous step.
- **Snapshot from:** Here you can choose the stream from the camera that the snapshot is generated from.
- **Image file name:** Name of the snapshot file that will be include in the attachment.
- **Suffix of file name:** This puts either the date and time notation or a sequence number at the end of the file in the attachment.
- **Effective period:** A schedule can be set up to have this alert only be active during a set time.
- **Alarm interval time:** How long after an alert is generated the camera should stop sending images.

3. Next we want to set up a place to store our video, we will be using a Windows file share on a PC to store the recordings. This can also be done on a MAC or to a NAS device from the cameras perspective the setup is very similar. If a SD card is selected there is no additional configuration needed.

Before setting up NAS storage a share will need to be created on the Windows, Mac or NAS device being used. That process is not documented in detail here, please consult your operating system or NAS device's documentation on the steps needed to create a shared folder.

A few notes on setting up a shared folder on Windows and Mac

- *When setting up a shared folder on Windows, Mac or NAS appliance create a user account on the system and assign read/write access to the folder that will be shared. This user account will be used by the camera to access the shared folder and write the images to the folder.*
- *If a firewall is in use on the system that will host the shared folder be sure that file sharing ports are allowed in the firewall.*
- *For MacOS X a good description on how to set up file sharing is described here, the camera will be using the SMB sharing protocol: <http://support.apple.com/kb/ht1549>*
- *For Windows 7 the basics on sharing a folder*
 - *Right click the folder you wish to share*
 - *Click "Share with" and select "Specific People"*
 - *Add the user that was created for the camera and assign read/write permissions.*

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- In the camera settings expand "Storage" and select "Storage Setup"

Storage setup

Storage:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Store to:	<input checked="" type="radio"/> NAS <input type="radio"/> SD card
NAS remote path:	<input type="text" value="//192.168.123.55/Video"/> (Example: //192.168.168.50/ipcam_files)
Authorization:	<input checked="" type="radio"/> Yes <input type="radio"/> No
User name:	<input type="text" value="videouser"/>
Password:	<input type="password" value="*****"/>
Re-type password:	<input type="password" value="*****"/>

- **Storage:** Select “Enable”
- **Store to:** The device to set up storage either a “NAS” or “SD card” can be selected here, for our purposes we will select NAS.
- **NAS remote path:** This is the UNC path to the shared folder we created on the windows PC. The format for this is “//<ip address of computer>/<share name>”
- **Authorization:** Used if security was applied to the shared folder, we will select “Yes”
- **Username:** If Authorization was selected Yes, then this is the username of the user that has write access to the shared folder.
- **Password:** This is the password for the above user.

4. Now that we have the storage location set up we need to enable the “Record on Alarm” feature so that a recording is made to our NAS when an alert is generated.

- In the camera settings expand “Storage” and select “Record on Alarm”

Record on alarm setup

Alarm mode:	<input checked="" type="radio"/> Arm <input type="radio"/> Disarm
Record on alarm:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable <input style="float: right;" type="button" value="Browse..."/>
Record time:	<input type="text" value="5"/> Seconds (5-86400)
Record from:	<input type="text" value="Primary stream"/> ▼
Record file name:	<input type="text" value="Busted"/>
Suffix of file name:	<input type="radio"/> Date time <input type="radio"/> Sequence number <input checked="" type="radio"/> Date time & record time length
Split time of record file:	<input type="text" value="10"/> Seconds (10-600)
Effective period:	<input checked="" type="radio"/> Always <input type="radio"/> Schedule <input type="text" value="1"/> ▼ <input style="float: right;" type="button" value="Setting"/>

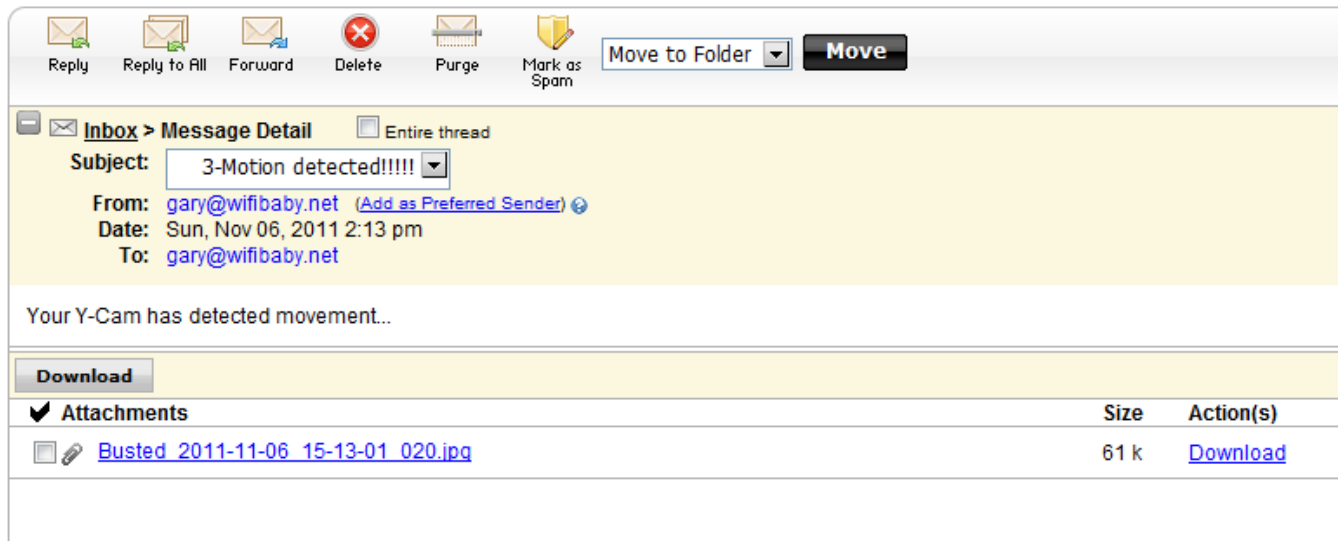
- **Alarm mode:** Set to “Arm” to enable alarms.
- **Record on alarm:** Select enable recording when an alarm is received.
- **Record time:** Time in seconds that the camera should continue recording after the motion stops.
- **Record from:** The stream that should generate the video recording.
- **Record file name:** The name of the .MOV file that will be generated.
- **Suffix of the file name:** Appends the options listed to the end of the file name.
- **Split time of recorded file:** This is the time in second that will contain 1 file if video is longer than what is listed here a second file will be created.
- **Effective period:** This allows setting a schedule in which this feature is enable

We should be all set up and ready to see who or what is taking my favorite cookies. All we need to do is wait for the alarm to be triggered.

Viewing the snapshots and video after the event has taken place.

Finally we need to view the video and find out where my cookies are going. I received some incriminating e-Mail messages with pictures of the cookie thief...

- The emails sent are simple emails with pictures sent as an attachment in the email... Below is an example of one of the emails I received from the alert.



- Now we want to see the video of the event. There are a couple of ways to access the video file. You could access the shared folder directly by accessing the shared network folder, or by using the “Browse Storage” of the camera to access the movie files which we will show here.
 - In the settings of the camera expand “Storage” and select “Browse Storage”

Folder

- Record on Alarm
- Snapshot on Alarm
- Continuous record
- Snapshot at interval

- Here you will see 4 menus on the right. Each of these correspond with the storage actions options that are available under the “Storage” menu in settings. In our scenario we used the “Record on Alarm” feature so that’s what we will look for.
 - We will select “Record on alarm” and click on the links shown that contains our video. Notice that there are 2 .mov files this is because we configured the camera to split the video files up after so many seconds so that the files do not get too large in size.

Alarm record

<input type="checkbox"/> File name	Size(bytes)
<input type="checkbox"/> Busted 2011-11-06 15-12-43 6.mov	373465
<input type="checkbox"/> Busted 2011-11-06 15-12-59 8.mov	505851

Folder

- Record on Alarm
- Snapshot on Alarm
- Continuous record
- Snapshot at interval

- That’s really it just click on the file and open the video…

That concludes this guide to setting up alarms, recording and storage on the Wifi Baby Home Security Store cameras. Just so I don’t leave anyone hanging, I caught the little rascal with his hand in the cookie jar.

