

ASUS Mimic

User Manual

Version 3.1

**For models:
CX-200**

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Chapter 1: Introduction

Section 1. Features

ASUS Mimic is a compact stand-alone web-server capable of remote video surveillance. It can be accessed from anywhere in the world via a standard browser by entering the IP Address, account and password. Each system can support an additional USB PC cameras be it regular, infra-red or pan-tilt. With its built-in web-server, ASUS Mimic can stream video images directly to the Internet without have to go through a computer.

ASUS Mimic features a Windows-based software that allows the user to archive streaming video directly to the hard-drive. The same software also allows the user to monitor multiple cameras on one screen.

Features:

- LCD display.
- Built-in Web Server
- Built-in Power over Ethernet (PoE)
- Built-in CMOS Camera
- Extra Mini USB Port for USB PC Camera
- Support Pan/Tilt and Infrared USB PC Camera (sold separately)
- 10/100Mbps Fast Ethernet Network Access
- Support Any Java-Enabled Web Browser
- LCD display shows the IP address, Subnet Mask and Gateway
- 32-Bit RISC CPU
- Support Up to 30 Remote Viewers for each camera
- Allow Up to 8 User Accounts and Passwords
- 5.3VDC 1A Maximum
- Operating Temperature: 0°C ~ 60°C; Operating Humidity: 10% ~ 90%
- Dimensions: 75mm x 170mm
- Weight: 237g
- For Indoor Use. Protective housing required for outdoor use.
- Network Protocol: HTTP, TCP/IP, UDP, SMTP, PPPoE, Dynamic DNS, DNS Client, SNTP, BOOTP, DHCP, FTP, SNMP
- Support USB PC Camera with VIMICRO ZC0301 Plus processor built-in
- Resolution available: 640x480 (VGA), 352x288 (CIF), 320x240 (QVGA), 176x144 (QCIF), 160x120 (QQVGA).
- Frame Rate: Up to 15fps in 640x480, Up to 20fps in 320 x 240.
- Motion JPEG streaming video

Section 2. ASUS Mimic as a Remote Surveillance System

Once ASUS Mimic is installed, the user can check any of the connected PC cameras using a standard web browser. The user can monitor and control these cameras simply by entering the IP address shown on the LCD into a Browser.

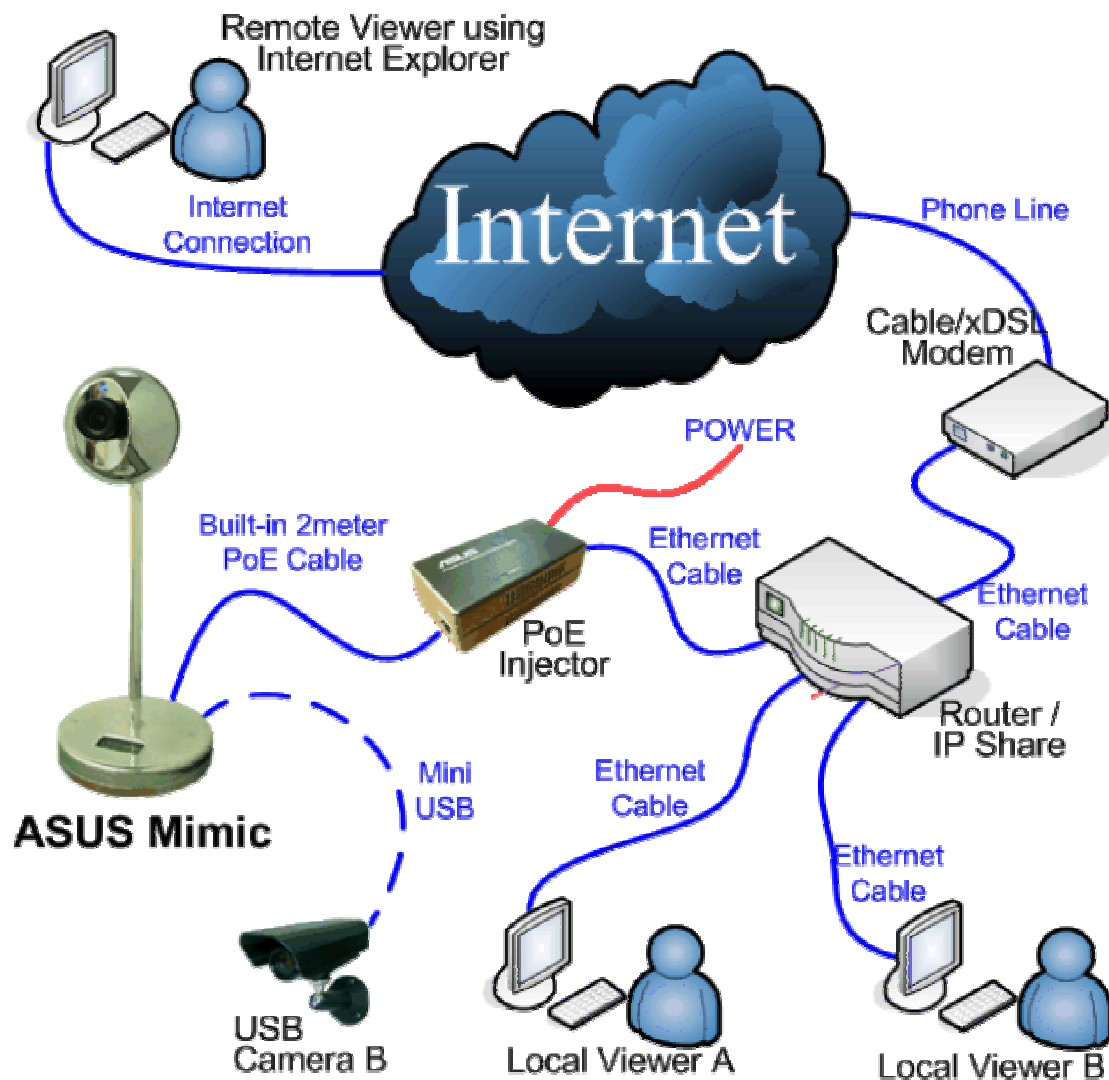


Fig.1. ASUS Mimic Network Diagram

Section 3. Package Contents

ASUS Mimic package contain the following items;

1. ASUS Mimic IP camera,
2. Quick Installation Guide
3. Utility CD containing;
 - a. Utility: to configure IP address, update the firmware, etc.
 - b. MultiMonitor: to monitor multiple ASUS Mimic cameras.
 - c. Time Server: Time adjustment utility.
 - d. Adobe Acrobat 5.0 Reader.
 - e. ASUS Mimic User Manual, and
 - f. Camera Windows Driver
4. Power adaptor

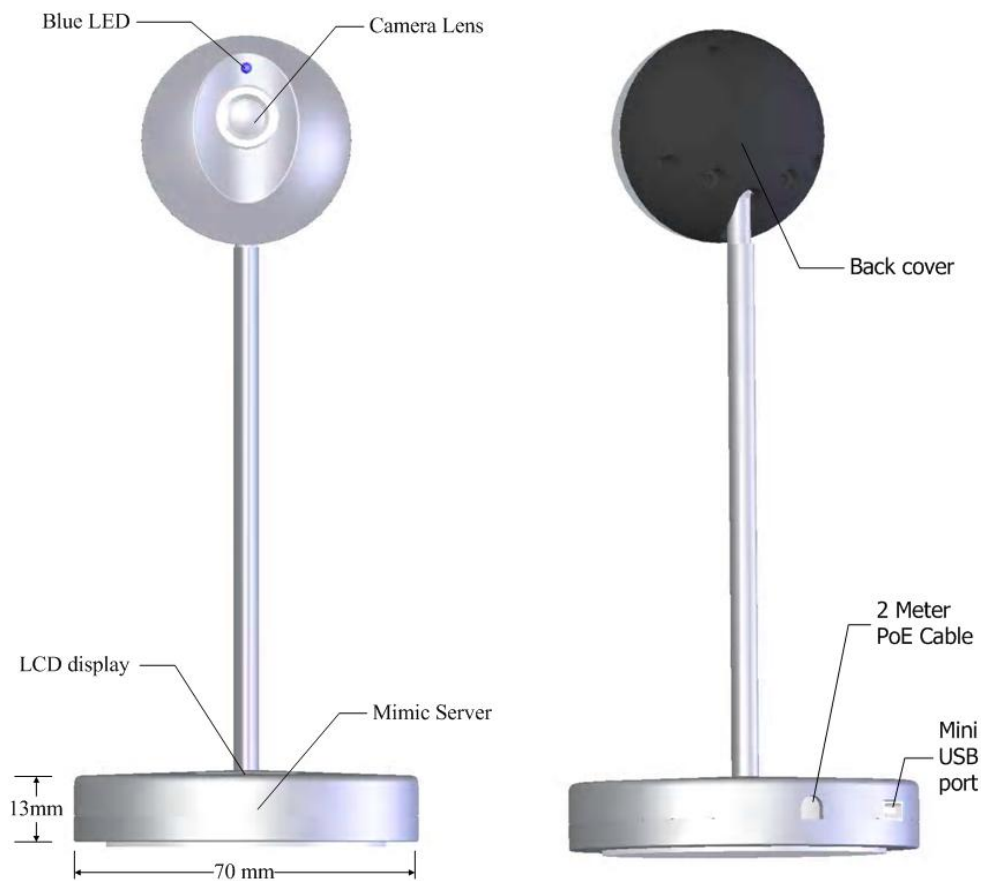


Fig.2. ASUS Mimic Front and Back view

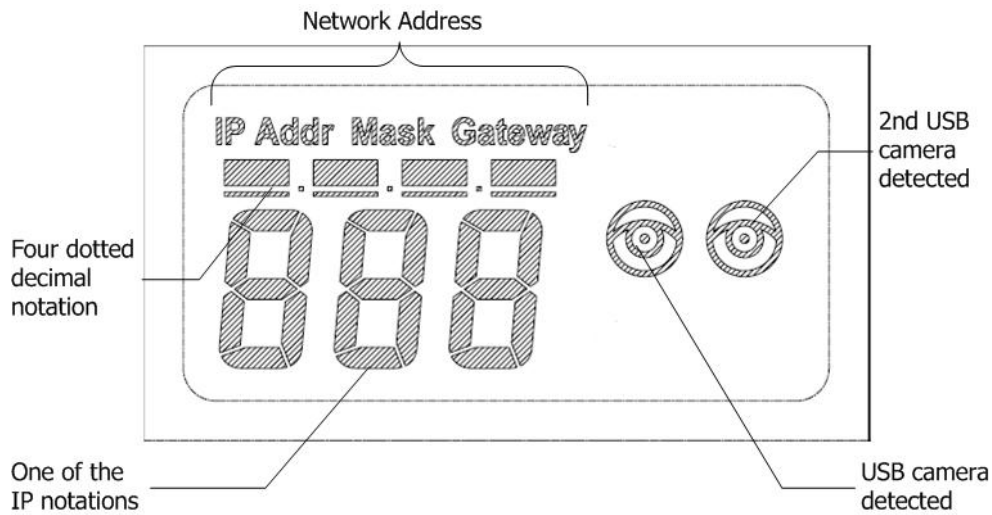


Fig.3. ASUS Mimic LCD displayed info

Chapter 2: Hardware Installation

The following details the hardware installation procedure for ASUS Mimic IP camera.

Section 1. Installation Procedure (Without PoE Injector)

Step 1:

Connect the Power Adaptor to the mini USB port.



Step 2:


Connect the LAN cable to a **router**.



Step 3:

Wait a moment and the LCD will display the IP Address, Subnet and Gateway. Use a Browser to log into ASUS Mimic Web Interface.



The  icon on the LCD shows that a USB camera is connected.

Section 2. Installation Procedure (With PoE Injector)

Step 1:

Connect power and LAN cable into the PoE **Data In** port.




Next connect ASUS Mimic LAN cable to the PoE **Data Out** port.

Step 2:

Wait a moment and the LCD will display the IP Address, Subnet and Gateway. Use a Browser to log into ASUS Mimic Web Interface.



The  icon on the LCD shows that a USB camera is connected.

Chapter 3: Web Interface

Section 1. Introduction

ASUS Mimic is designed to work without having to install any software. All the necessary functions are built-into the unit.

1. Once you have finished the hardware setup shown in Chapter 2, note down the IP address shown on the LCD
2. On a PC (located in the same LAN), open a Web Browser (eg.: Internet Explorer, Netscape, Mozilla Firefox or Opera)
3. Enter the IP Address as shown on the ASUS Mimic LCD display and press **ENTER**

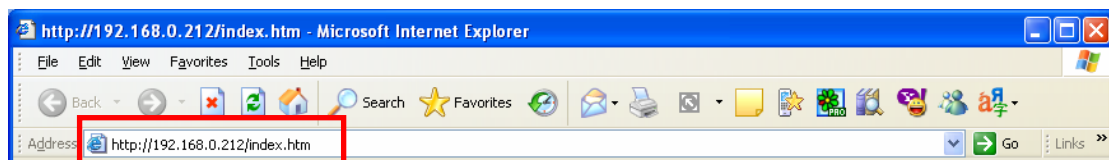


Fig.4. Enter ASUS Mimic IP address

4. A login screen will appear. Enter the default Login. Click **Apply** to login.



Note:

The default Login Name: **admin**

The default Login Password: **admin**

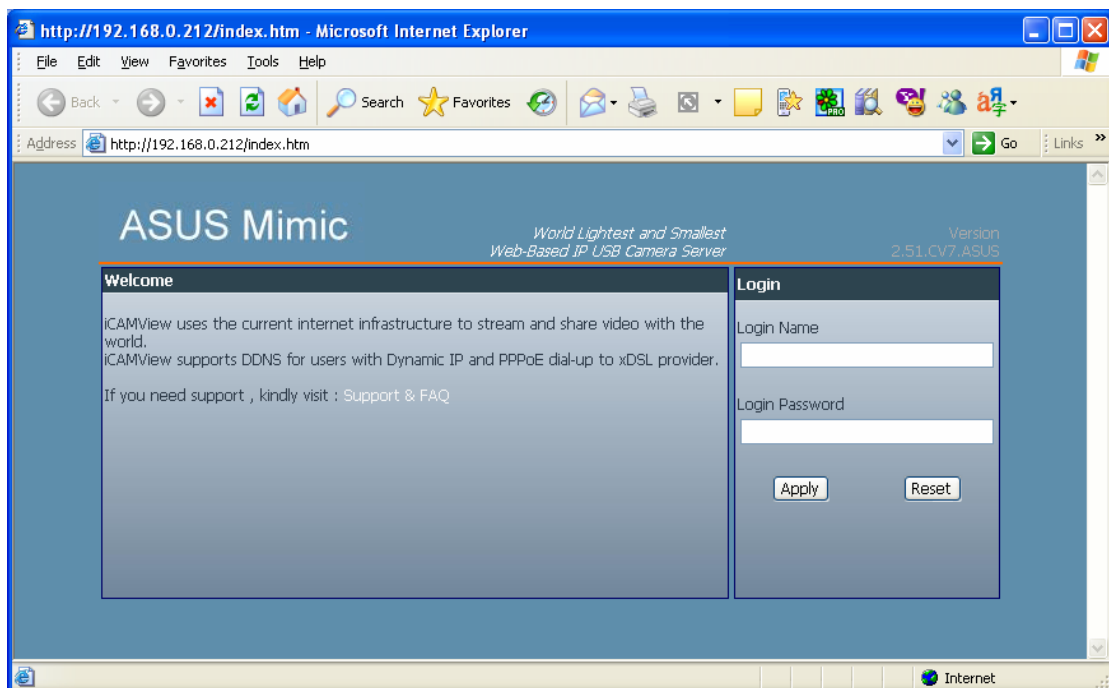


Fig.5. ASUS Mimic Login screen

Section 2. Using the Web Interface

The ASUS Mimic webpage main menu is divided into two sections. The selection menu on the left and display menu on the right. The selection menu consists of the following options:

2.1 View Video

2.2 Information

2.3 Basic Settings

2.4 Advanced Settings

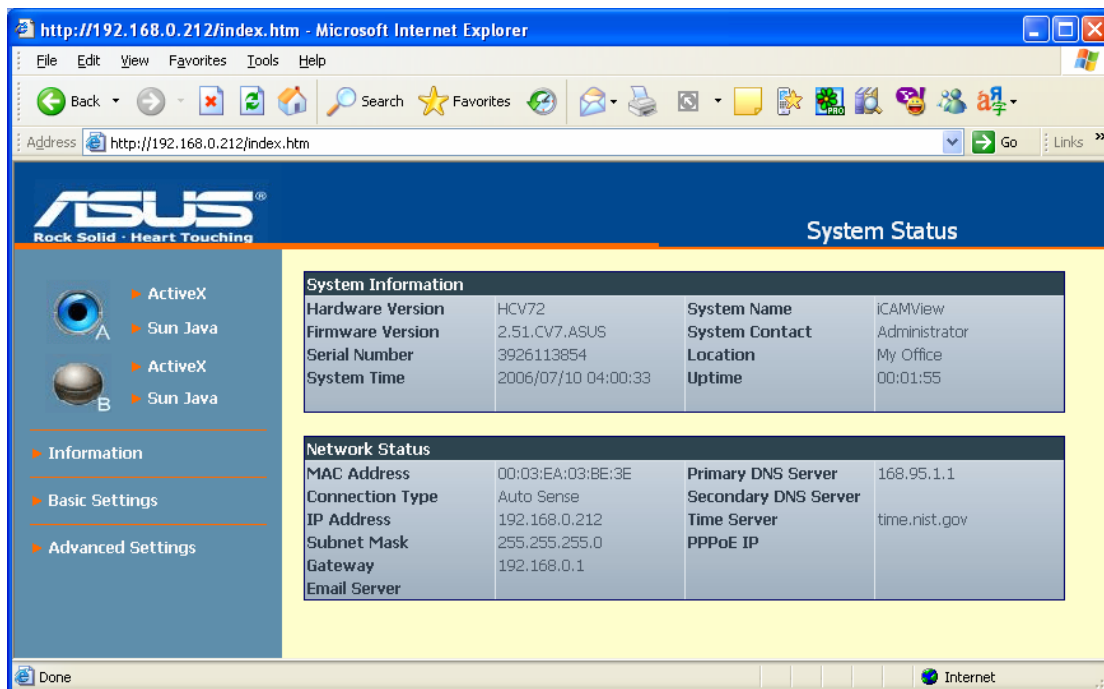


Fig.6. ASUS Mimic Main Menu

When using ASUS Mimic for the first time, check the following settings;

- Basic Settings → Camera Settings → Anti Flicker.** Check that this is set to the correct lighting frequency. Change this to **Outdoor** if you intend to point the camera outside. Click **Apply** to save the configuration.
- Manually adjust the camera lens for best results.

2.1 To View Video

To view video from the connected camera, click on either **ActiveX** or **Sun Java**. Choose either Camera **A** or **B** to view the video.

By default the first USB camera connected to ASUS Mimic will be Camera **A**



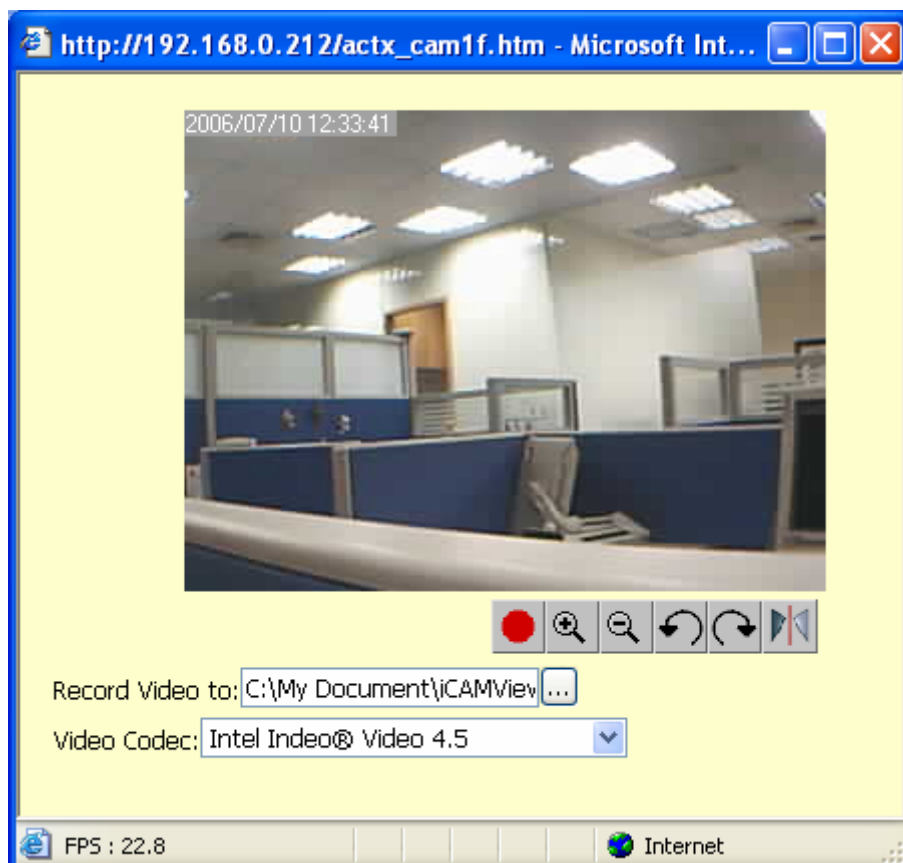
Note:

ActiveX can only function in Windows platform. When using for the first time **ActiveX** plug-in will setup automatically on the client's computer. Click **Install ActiveX Controls...** to install. If this cannot be installed you will have to use **Sun Java** to view the video feed.



Using ActiveX Controls:

Once you click on camera **A** → **ActiveX** the following window will appear.



Note:

Make sure to adjust the USB camera lens for best picture quality.

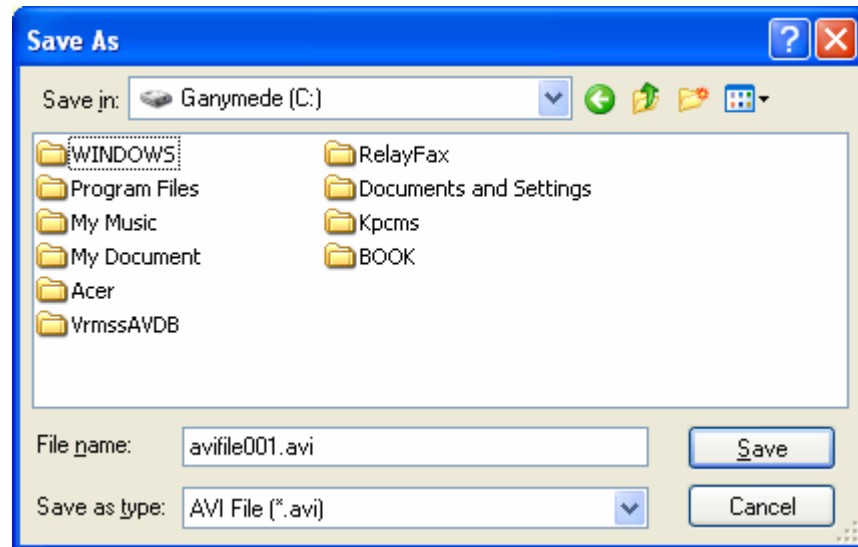


Click the record button to start video recording.

The default directory is; **C:\Windows\Temp**

The video will be saved in the following format;
CMV20060710123058.avi [CMV] [yyyy] [mm] [dd] [tmmss].avi

To change the saved location and filename. Click and the **Save As** window will pop up. Choose an alternate location or filename.



To change Video Codec, click

Click **Save** to confirm changes.

Note: The availability of Codec depends on it has been installed on the individual PC or not. Download and install Windows Media Player 10 to enable MPEG4 codec.



Digital Zoom In, Digital Zoom Out



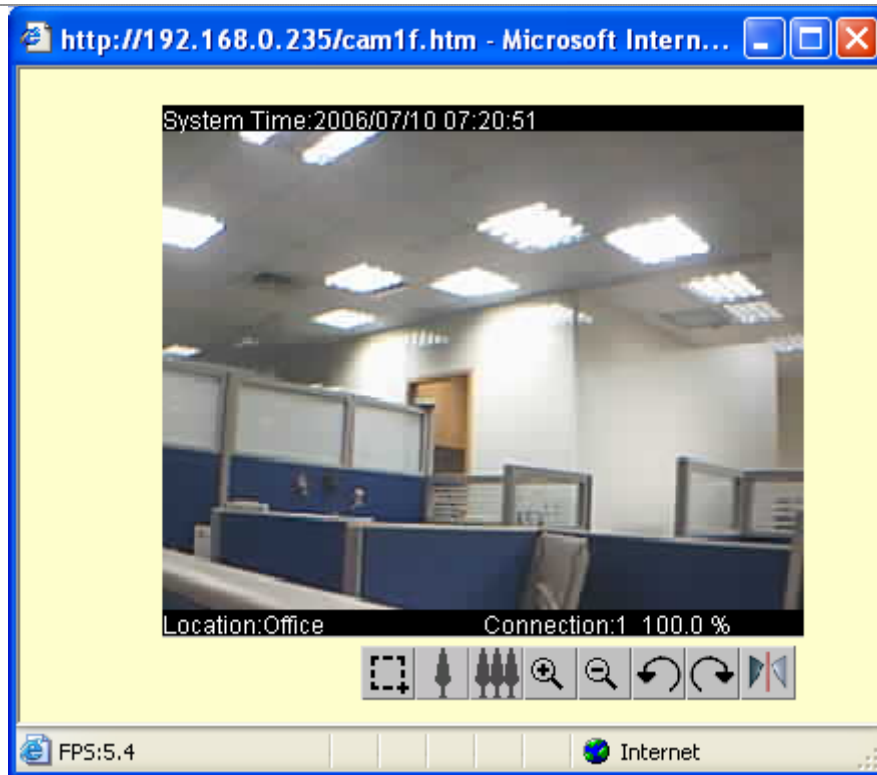
Rotate Left, Rotate Right









Flip the image vertically.

Using Sun Java Controls:

Once you click on camera **A** → **Sun Java** the following window will appear.



	Click this to Marquee an area and zoom into that area.
	Click this to reduce the image resolution.
	Click this to increase the image's resolution.
	Click to digitally zoom in or out.
	Click to rotate the image.
	Flip the image vertically.

2.2 Information

The **Information** tab contains the following subsections;

- 2.2.1 System Status,
- 2.2.2 Current Connections, and
- 2.2.3 Event Log.

2.2.1 System Status

This webpage displays all the information relating to ASUS Mimic.

i. System Information

This section shows general hardware information such as the Hardware and Firmware Version, the serial number, current / local System Time, the system name, contact, location and uptime.

ii. System Information

This section shows the network information. The MAC Address is unique to each ASUS Mimic system.

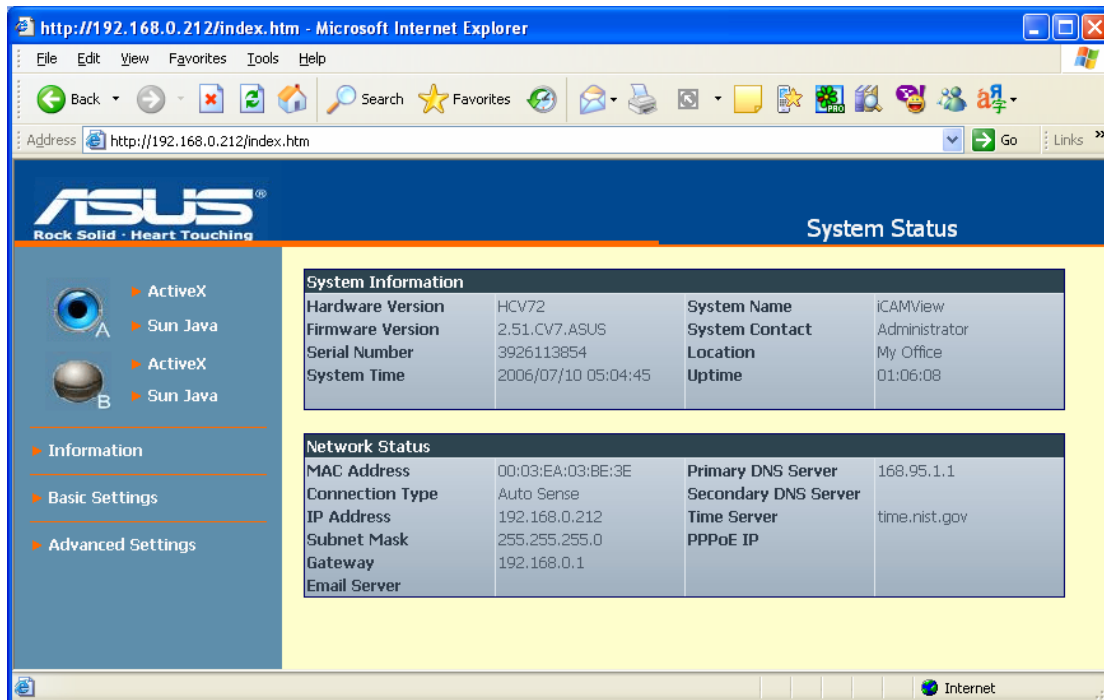


Fig.7. ASUS Mimic System Status page

2.2.2 Current Connections

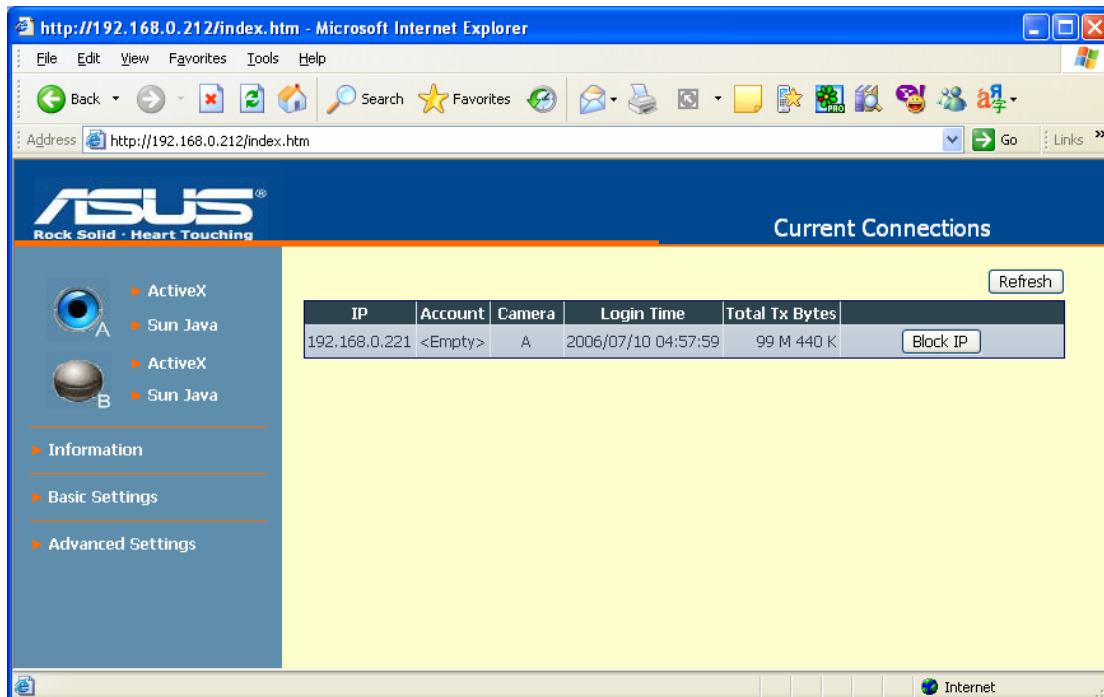


Fig.8. ASUS Mimic Current Connections

The **Current Connections** page shows all the users currently viewing either Camera **A** or Camera **B**. It also lists the login time and total bytes received. The user has

an option to block the IP or even disable the account of any errant viewer (An administrator privilege will be required for this feature).



Note: If you do not have Administrator's privilege, the IP and Account details will be hidden.

IP	Account	Camera	Login Time	Total Tx Bytes	
* * * *	*****	A	2006/08/18 03:55:32	17 M 369 K	Block IP

Fig.9. Current Connections: When logged in with Operator Permission

Click **Block IP** to block or disable the account of any errant viewer.

To unblock the IP goto **Basic Settings** → **Account Settings** → **Blocked IP List** and delete the blocked IP Address from the **Blocked IP List**.

2.2.3 Event Log

This section will keep a record of all events that occurred in ASUS Mimic. The user can Refresh, Clear or Save the log file. There is also an option to sort the logs according to "Level" or "Type". ASUS Mimic can log up to 2,000 events



Note: If you do not have Administrator privilege, the **User Name** and **IP Address** will be hidden. *Example:* Camera A: user ***** connected from IP: * * * *

No.	Date/Time	Type	Event
17	2005/12/29 10:03:23	Camera	Camera A: user (Empty) disconnect from IP: 192.168.0.8 total Tx bytes: 9 M 154 K
16	2005/12/29 10:03:08	System	User account: (Empty) From IP: 192.168.0.8 user login.
15	2005/12/29 09:59:39	Camera	Camera A: user (Empty) connected from IP: 192.168.0.8
14	2005/12/29 09:59:33	System	User account: (Empty) From IP: 192.168.0.8 user login.
13	2005/12/29 09:50:18	Camera	Camera A: user (Empty) disconnect from IP: 192.168.0.8 total Tx bytes: 2 M 471 K
12	2005/12/29 09:49:04	Camera	Camera A: user (Empty) connected from IP: 192.168.0.8
11	2005/12/29 09:43:53	System	User account: (Empty) From IP: 192.168.0.8 user login.
10	2005/12/29 09:43:06	System	User account: (Empty) From IP: 192.168.0.8 user login.
9	2005/12/29 09:42:58	System	Start Up!
8	2001/01/01 00:00:06	System	Start Up!
7	2001/01/01 00:00:06	System	Start Up!
6	2005/12/29 09:39:15	System	User account: admin From IP: 192.168.0.8 user login.
5	2005/12/29 09:38:45	System	Start Up!
4	2001/01/01 00:00:06	System	Start Up!
3	2001/01/01 00:00:34	System	User account: (Empty) From IP: 192.168.0.8 user login.
2	2001/01/01 00:00:06	System	Start Up!
1	2001/01/01 00:00:06	System	Start Up!

Fig.10. ASUS Mimic Event Log

2.3 Basic Settings

The following option allows the user to customize their unit.

2.3.1 Camera Settings

2.3.2 Network

2.3.3 Account Settings

2.3.1 Camera Settings

Use this section to set up the USB camera.

i. Setting up Camera A (or Camera B)

Camera A	
Image Size	QVGA (320*240) ▼
Anti Flicker	Indoor 60 Hz ▼
Maximum Number of Connections (1-30)	10
Location	Office
Light Compensation	No ▼
Color	Yes ▼
Camera position	0° (upright) ▼
Pan Control	Normal ▼
Tilt Control	Normal ▼

Fig.11. Individual Camera Configuration

Image Size

User can select the following image size;

- QQVGA (160*120),
- QCIF (176*144),
- QVGA (320*240),
- CIF (352*288),
- VGA (640*480).

Anti Flicker

Choose between Indoors 50Hz, 60Hz or Outdoors. For best results when directing the camera to bright sources / windows, select **Outdoors**.



Note:

If you do not choose the right frequency, the image will flicker or lines will appear on the images.

Maximum Number of Connections (1-30)

Use this to limit the total number of users that can view this camera at the same time.

Location

Enter a suitable location / name for the camera.

Light Compensation

Choose **Yes** and ASUS Mimic will increase the lighting of the image. This is useful when monitoring indoors.

Choose **No** if you do not want ASUS Mimic to compensate for bright indoor lighting and view the images as is.

Color

Choose **Yes** for color and **No** for black and white display. Black and White display results in slightly faster FPS (Frames Per Second) video.

Camera Position

Use this option to right the image when ASUS Mimic is installed on the ceiling or wall. Select either; 0 degree (upright), 90, 180 (upside down), or 270 degree.

Pan Control

Use this function to reverse the Pan direction.

Tilt Control

Use this function to reverse the Tilt controls, if necessary.



Note:

Always click **Apply** to save any changes made. Otherwise, the changes will be lost.

2.3.2 Network

This option determines ASUS Mimic **Network** settings.

i. IP Address

By default, the IP address acquisition is set to **using DHCP**.

IP Address	
IP Address	192.168.50.6
Subnet Mask	255.255.255.0
Gateway	192.168.50.1
Obtain an IP address*	Using DHCP ▼

Fig.12. ASUS Mimic IP Address Settings

IP Address

This determines ASUS Mimic LAN IP address.

Subnet Mask

Enter ASUS Mimic **Subnet Mask**. The value is normally 255.255.255.0

Gateway

This item is to set ASUS Mimic Gateway.



To learn more about the above, see **Appendix C: IP address, Subnet and Gateway**

Obtain an IP address

This allows the user to choose either to set ASUS Mimic LAN IP address; manually, using DHCP (default) or using Bootp protocol.



Note:

Click **Apply** to confirm. ASUS Mimic will reboot. You **MUST** manually enter the NEW IP address in your Browser in order to open the Web Interface.

ii. DNS Server IP

DNS Server IP	
Primary DNS Server IP	168.95.1.1
Secondary DNS Server IP	

Fig.13. ASUS Mimic DNS Server IP

Primary DNS Server IP

This item sets ASUS Mimic primary DNS Server IP address. This is the default DNS and cannot be edited.

Secondary DNS Server IP

Use this to set ASUS Mimic **Secondary DNS Server IP** address. ASUS Mimic will use the **Secondary DNS Server IP** address if the **Primary DNS Server IP** address is not working.

iii. Port Number

Port Number	
Http Port number*	80
Communication to Camera Port number*	9001

Fig.14. ASUS Mimic Port Settings

HTTP Port Number

This determines the LAN port from which the webpage is accessible thru your Router. By default the LAN port number is **80**.

If this port is changed, say to 82, then `http://xxx.xxx.xxx.xxx:82` (where xxx.xxx.xxx.xxx is iCAMView LAN IP address as shown on the LCD) must be used in order to access ASUS Mimic web interface in LAN.

Communication to Camera Port Number

This determines the LAN port from which the video image is streamed thru your Router. By default the LAN port number is **9001**.

iv. Ethernet

Ethernet	
Connection Type*	Auto Sense

Fig.15. ASUS Mimic Ethernet Settings

Connection Type

This sets ASUS Mimic communication speed. By default, it is set to **Auto Sense**. ASUS Mimic will reboot, if this setting is changed.

v. Dynamic DNS

Dynamic DNS	
Services Provider	None <input type="button" value="Update"/>
Domain Name	<input type="text"/>
Login Name	<input type="text"/>
Login Password	<input type="text"/>
Use Public IP to register	Yes <input type="button" value="Update"/>

Fig.16. ASUS Mimic Dynamic DNS Settings

Service Provider

ASUS Mimic can be configured to register its current Dynamic IP with a Dynamic DNS provider. This allows the user to locate ASUS Mimic using a Domain Name. ASUS Mimic supports the following free DDNS service providers;

- dhs.org
- dyndns.org
- myddns.com
- zive.org

Click **Update** to get latest list of Service Providers.

In general, to register a Domain Name;

- a. Go to the DDNS provider website listed above.
- b. Register a new user account and password with the DDNS provider.
- c. Choose a Domain Name to point to your current Dynamic IP
- d. Enter information obtained in (b) and (c) into ASUS Mimic DDNS fields.

Domain Name

This is the Domain Name you have created from the above selected DDNS provider.

Login Name

This is the Login / Account name that you have created with the selected DDNS provider.

Login Password

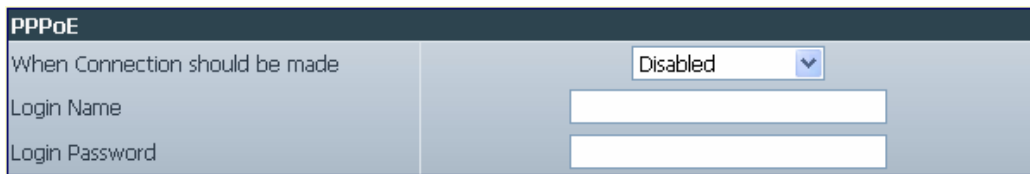
Enter the Password you have assigned to your DDNS Account.

Use Public IP to register

Choose **Yes** to ensure that ASUS Mimic uses the WAN / Public IP to register with the selected DDNS server.

vi. PPPoE

Use this option to allow ASUS Mimic to connect to the internet directly using your xDSL modem. Once set-up, ASUS Mimic will connect directly to the Internet without going through a router. The LCD will display the current WAN / Public IP instead of the LAN IP address.



The screenshot shows the PPPoE configuration page. It has a title bar 'PPPoE'. Below it, there are three fields: 'When Connection should be made' with a dropdown menu set to 'Disabled', 'Login Name' with an empty text box, and 'Login Password' with an empty text box.

Fig.17. ASUS Mimic PPPoE setting

When Connection should be made

- Disabled : Default setting.
 Connect always : ASUS Mimic will automatically dial up and maintain continuous connection.

Login Name

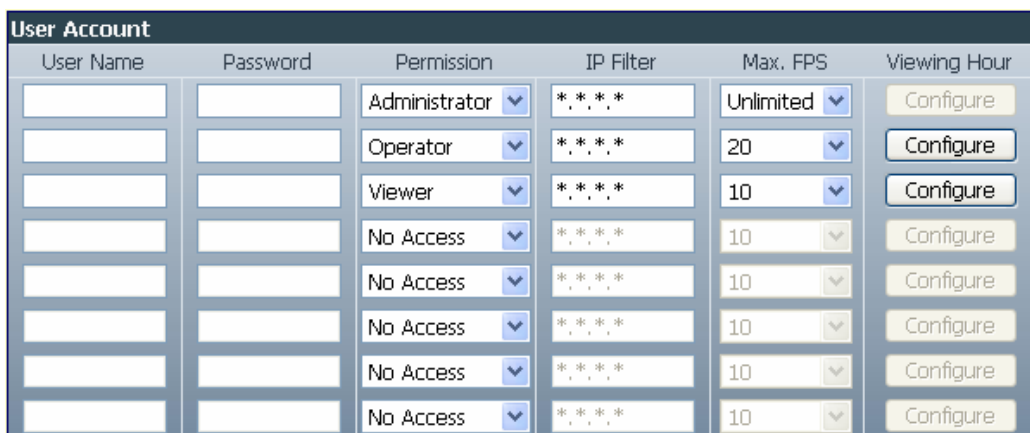
Enter the login name assigned by your ISP.

Login Password

Enter the password assigned by your ISP.

2.3.3 Account Settings

This webpage allow you to set up to Eight (8) different user accounts with different access permission level to ASUS Mimic.

i. User Account


User Name	Password	Permission	IP Filter	Max. FPS	Viewing Hour
<input type="text"/>	<input type="password"/>	Administrator	*,*,*,*	Unlimited	Configure
<input type="text"/>	<input type="password"/>	Operator	*,*,*,*	20	Configure
<input type="text"/>	<input type="password"/>	Viewer	*,*,*,*	10	Configure
<input type="text"/>	<input type="password"/>	No Access	*,*,*,*	10	Configure
<input type="text"/>	<input type="password"/>	No Access	*,*,*,*	10	Configure
<input type="text"/>	<input type="password"/>	No Access	*,*,*,*	10	Configure
<input type="text"/>	<input type="password"/>	No Access	*,*,*,*	10	Configure
<input type="text"/>	<input type="password"/>	No Access	*,*,*,*	10	Configure

Fig.18. User Account Settings

User Name

Assign a **User Name** / Account. The administrator can set up to 32 case sensitive character names.

Password

Assign a password to the account. The administrator can set up to 32 case sensitive passwords.

Permission

This sets the access level to individual user accounts.

Administrator: An Administrator has full access including write

permission to all menus and sub-sections. Only an Administrator can see the **User Name** and **IP address** fields or set the camera access **Permit Hours** to Operator or Viewer accounts.

Operator: The user can access all menus, but does not have permission to amend the data fields.

Viewer: The user can only view camera within the time specified in **Permit Hours**. The user does not have write permission, can only view **Camera A/B** and read the **Information** section.

No Access: This disables either of the above two permission levels given to a user.



Note:

An **Administrator** account must be set before setting up either an **Operator** or **Viewer** account.

IP Filter

Use this feature to ensure that the user only login from the IP address specified here. Leave it as *.*.* to allow the user to login from any place.



Example:

Entering **192.168.1.*** will only allow User to access from **192.168.1.xxx** IP addresses.

Max FPS

This allows the Administrator to limit the bandwidth allocated to each account. The Administrator can set a figure of **1** to **Unlimited** FPS ("frames per second").

Viewing Hours

When the Permission level is set to either **Operator** or **Viewer**, the Administrator can set the time to which the camera can be viewed.

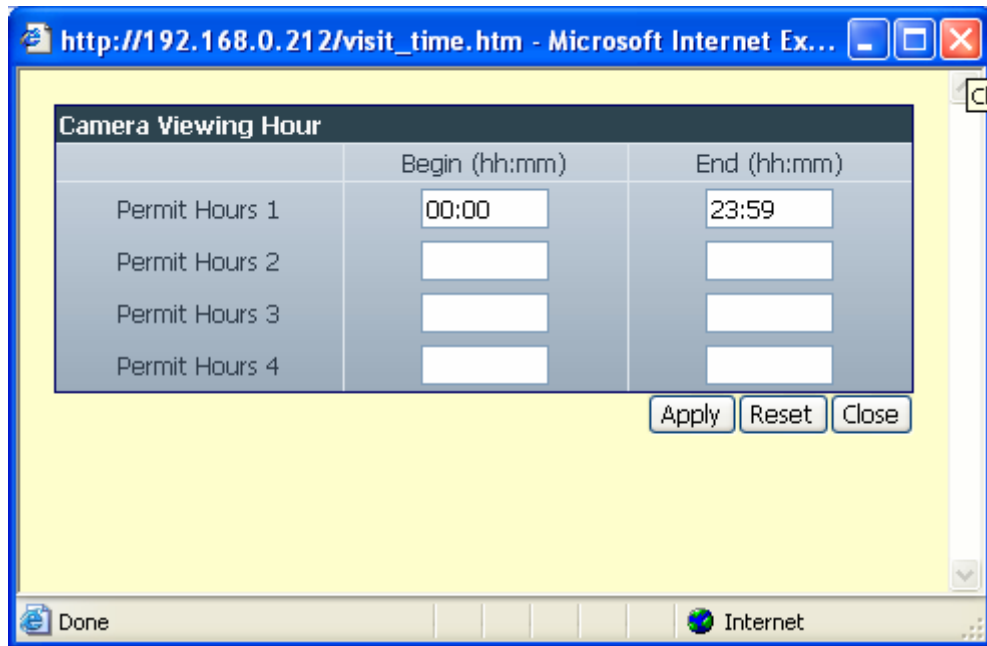


Fig.19. ASUS Mimic Permit Hours Configuration

Click **Configure** to set the hours. The Administrator can set up to 4 different **Permit Hours** (in 24hr format). Click **Apply** to save. Click **Close** to exit without saving.

**Note:**

The **Reset** button only revert the fields to initial values prior to any changes being made. If **Apply** has been clicked, it will not undo the changes.

ii. Block IP address

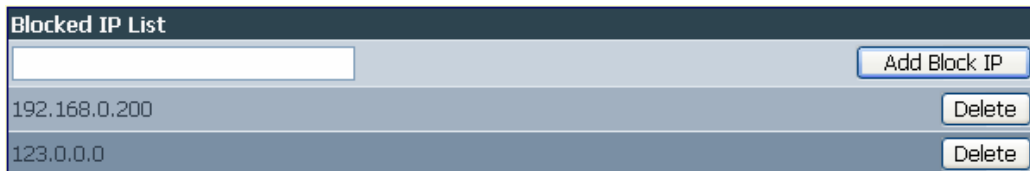


Fig.20. Blocking LAN IP address

Blocked IP List

This allows the Administrator to block specific LAN IP address from accessing ASUS Mimic. Enter the IP address in dotted decimal notation and click **Add Block IP**. The blocked LAN IP address will be listed at the bottom.

Click **Delete** to remove it from the list.

2.4 Advanced Settings

This section allows the Administrator to set up some of the features available in the server.

2.4.1 Event Notification

2.4.2 Motion Detection

2.4.3 Image Recording**2.4.4 Email / FTP****2.4.5 System Settings****2.4.6 About****2.4.1 Event Notification**

This section determines the type of event that will be included if an email notification is sent by ASUS Mimic.

**Note:**

Administrator privilege is required to configure this section.

i. Event Notification

A total of 8 email recipients can be assigned to receive notification.

Fig.21. ASUS Mimic Event Notification Page

Send Email

Select **Yes** to activate this feature. Default is **No**.

Email Server

A valid **Email Server**, User name and password must be setup for this feature to work. If this has not been setup, click **Edit** and to go to **Email / FTP** setup page. (see Section 2.4.4)

**Note:**

Email function can only work using standard Email Server and not Web based Email Server, such as yahoo.com

Email Address Book

The available Email addresses are listed here. See Section 2.4.4 on how to enter an Email address to the **Address Book**.

To add an email address click **Edit**. ASUS Mimic will ask you to save your configuration prior to leaving this page.

Recipients

Up to 8 valid email accounts can receive **Email Notification**. To add an email address to the recipient list, click <. To remove, click >.


**Note:**

Only Email addresses that are listed in the **Email Address Book** can be added.

Events

This section determines the events that the selected recipient/s will receive by email. There are three types of events; Information, Warning and Error. Click **Select** to select the list of events the recipients will be notified.

By default, all the events are selected but not confirmed. Click **Apply** to activate and confirm selection.

Click  to close the window and return to the **Event Notification** page.

Information	Yes	No
Start up	<input checked="" type="radio"/>	<input type="radio"/>
PPPoE connection successful	<input checked="" type="radio"/>	<input type="radio"/>
Registration with DDNS server completed	<input checked="" type="radio"/>	<input type="radio"/>
User logged in to view camera	<input checked="" type="radio"/>	<input type="radio"/>
User logged out from camera	<input checked="" type="radio"/>	<input type="radio"/>
Image recording of camera A	<input checked="" type="radio"/>	<input type="radio"/>
Image recording of camera B	<input checked="" type="radio"/>	<input type="radio"/>

Warning	Yes	No
Server address can not be resolved	<input checked="" type="radio"/>	<input type="radio"/>
Connection with Email server failed	<input checked="" type="radio"/>	<input type="radio"/>
Connection with FTP server failed	<input checked="" type="radio"/>	<input type="radio"/>
FTP server has no response	<input checked="" type="radio"/>	<input type="radio"/>
FTP server connection closed abnormally	<input checked="" type="radio"/>	<input type="radio"/>
Connection with DDNS server failed	<input checked="" type="radio"/>	<input type="radio"/>
DDNS server has no response	<input checked="" type="radio"/>	<input type="radio"/>
DDNS server connection closed abnormally	<input checked="" type="radio"/>	<input type="radio"/>
Connection with time server failed	<input checked="" type="radio"/>	<input type="radio"/>
Motion detect camera A	<input checked="" type="radio"/>	<input type="radio"/>
Motion detect camera B	<input checked="" type="radio"/>	<input type="radio"/>

Error	Yes	No
Server address was not specified	<input checked="" type="radio"/>	<input type="radio"/>
Authorization failed, cannot login to Email server	<input checked="" type="radio"/>	<input type="radio"/>
Invalid username or password entered for FTP server	<input checked="" type="radio"/>	<input type="radio"/>
FTP server no such file or directory	<input checked="" type="radio"/>	<input type="radio"/>
Invalid username or password entered for DDNS server	<input checked="" type="radio"/>	<input type="radio"/>
Registration with DDNS server failed	<input checked="" type="radio"/>	<input type="radio"/>
DDNS domain name does not exist	<input checked="" type="radio"/>	<input type="radio"/>

Fig.22. Event Selection List

**Note:**

The Image Recording and Motion Detection notification function here will only send an email notification WITHOUT any picture attached. For email notification with images, the Administrator has to setup the **Motion Detection** page (see Section 2.4.2) and **Image Recording** page (see Section 2.4.3)

ASUS Mimic will email the following notification depending on which event was selected.

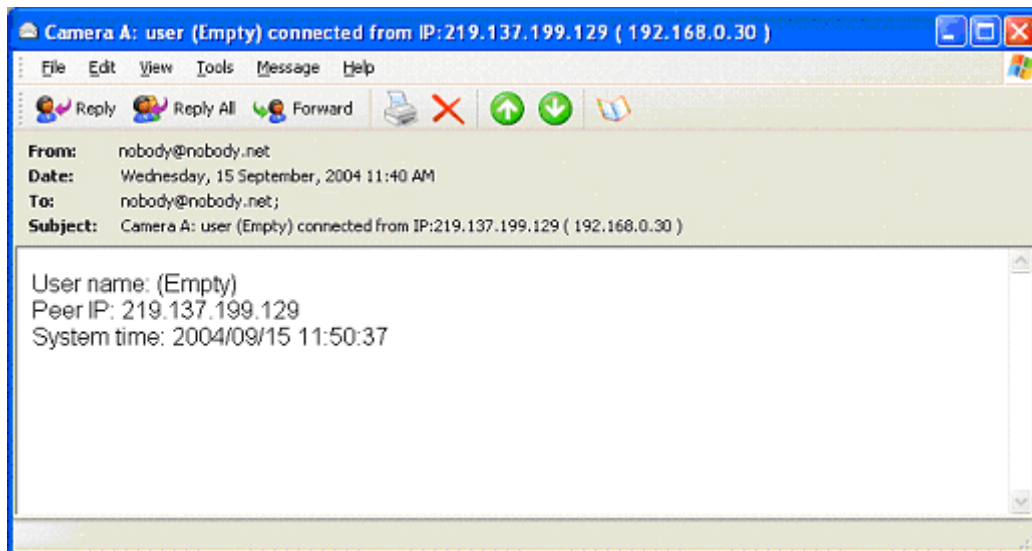


Fig.23. Event Notification: User Login Details (Date, Time, Camera & IP)

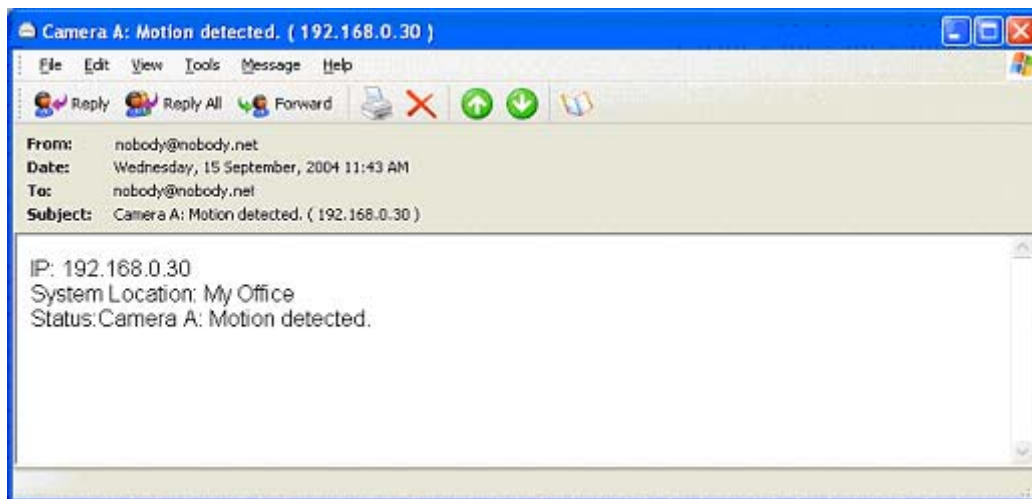


Fig.24. Event Notification: Camera A Motion Detected

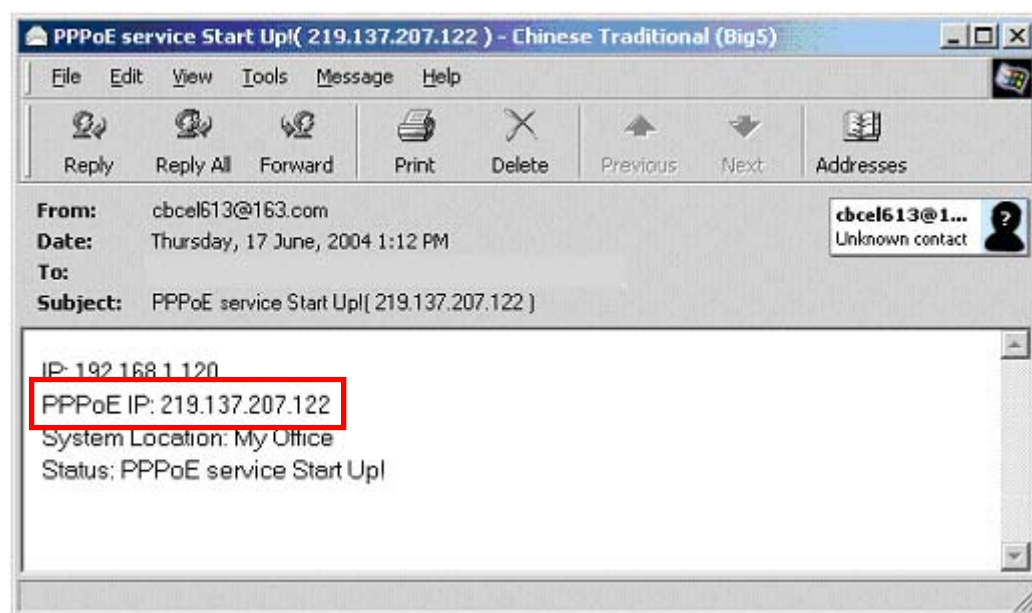


Fig.25. Event Notification: PPPoE Connect Successful with Public IP shown

2.4.2 Motion Detection

This page allows the Administrator to set Motion Detection functions for the cameras.

i. Camera A (or Camera B)

The screenshot shows the 'Camera A' configuration page for Motion Detection. It includes the following fields and controls:

- Enable:** A dropdown menu set to 'No'.
- Detection Sensitivity:** A text input field with '60' and a '%' symbol.
- Send image every:** A dropdown menu set to '0.5' and a text input field with 'second(s)'.
- Stop sending after:** A text input field with '5' and a dropdown menu set to 'second(s)'.
- Schedule (hh:mm):** Two time slot selectors, each with a start and end time (e.g., 00:00 - 23:59).
- Send to FTP Server:** A dropdown menu set to 'No', a text input field for the FTP path (ftp:// <Empty> /), and an 'Edit' button.
- System defined:** A dropdown menu set to 'System defined', a text input field for the filename (image_ (*).jpg), a text input field for the loop from (0) to (9), a text input field for the number of digits (2), and a help icon.
- Send Email:** A dropdown menu set to 'No', a text input field for the Email Server (<Empty>), and an 'Edit' button.
- Recipients:** A large empty text area for listing email recipients.
- Email Address Book:** A large empty text area for managing the email address book.
- Navigation buttons:** Four buttons labeled '<<', '<', '>', and '>>' are positioned between the Recipients and Email Address Book areas.

Fig.26. Motion Detection page

Enable

The Administrator has two options for Motion Detection;

- Always On** or
- On Schedule**, the Administrator can set up to 4 different time slots for motion detection.



Note:

Check that you have setup valid **Email / FTP** accounts first before proceeding with the rest of the configuration.

To setup **Email / FTP**, see Section 2.4.4

Detection Sensitivity

This will determines the level of change before motion capture is triggered. A high percentage means a small change will trigger motion capture.

Send image every ... second(s)

Select either; 0.5, 1, 2, 3, 4 or 5 seconds.

Stop sending after ... email(s) or image idle for ... second(s)

ASUS Mimic will stop sending emails on the lower of the two conditions. The Administrator can set between 1, 3, 5, 7 and 10 seconds. Emails can be set from 1 to 99999 pieces or 0 for stop sending email only when image idle occurred.

Schedule

When the unit is set to **On Schedule**, the Administrator can configure the four preferred schedule time slots for motion detection. Time must be entered in 24hr format.

Send to FTP Server

Click **Yes** to activate. This option allows the administrator to send and store the motion detected images on a FTP site. This is useful for future reference and recording purpose.

ftp://<empty>/<folder>

This allows the Administrator to determine the folder where the Motion Detected files are stored. Enter a folder name in **<folder>**. Click **Apply** when done.



Note:

The folder name must be valid and has appropriate upload permissions.

You must first enter a valid FTP address in **Email / FTP** page. Otherwise the ftp address field will be left **<empty>**.

To setup the FTP server, see Section 2.4.4

System Defined / User Defined

The administrator can also determine to either have the system automatically assign the filenames for the pictures saved. Or manually assign the filename.

Filename ...


Specify a prefix filename for the motion detected JPG images. The default prefix is **image_**

Loop from ... to ...

This will determine the number of files in the sequence. Once the last file number is reached, it'll loop and replace the first file in the sequence with the most current image.

Digits ...

This will determine the number of digits assignable for the above sequence. The Administrator can choose to assign between **1** to **6** digits.

Click  for an example.

Send Email

Select **Yes** to send an email when motion is detected.



Note:

The image size received by email / FTP depends on the resolution set in **Basic Settings → Camera Settings → Image Size**

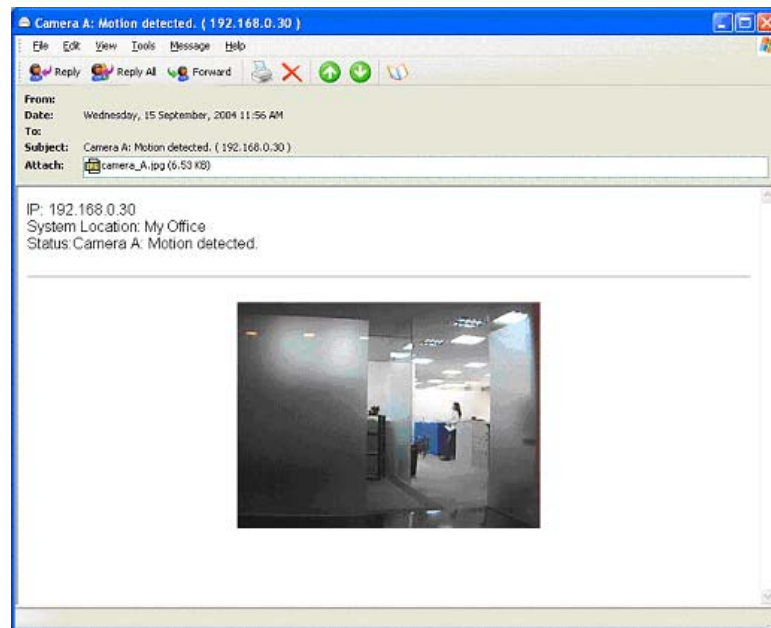


Fig.27. Motion Detect Email Notification

Email Server: ...

The Email server will be shown here. If not, click **Edit** to go to the **Email / FTP** configuration page. Click on **Motion Detection** to return here. (See Section 2.4.4 on Email / FTP configuration)

Email Address Book

The available Email addresses are listed here. See Section 2.4.4 on how to add an Email address to the **Address Book**.

Recipient

The Administrator can determine who will receive email notification.

To add a recipient to the list, click <

To add all the recipients to the list, click <<

To remove a recipient from the list, click >

To remove all the recipients from the list, click >>

Click **Apply** to confirm and save the settings.

2.4.3 Image Recording

Image recording allows the user to receive a string of JPG images to either their email account or FTP account. The images will be sent over a predetermined interval.

i. Camera A (or Camera B)

Camera A

Enable

Begin - End (hh:mm) — —

Send image every minute(s)

Send to FTP Server ftp:// <Empty> /

filename (*) .jpg loop from to digits

Send Email Email Server : <Empty>

Recipients Email Address Book

Navigation buttons: <<, <, >, >>

Fig.28. Image Recording webpage

Enable

Click **Yes** to activate this feature.

Begin – End (hh:mm)

The Administrator can determine up to 2 different time slots for Image Recording. The time is in 24hrs format.

Send image every ... minute(s)

The Administrator can determine the interval (between 1 to 99 minutes) at which ASUS Mimic capture and send an image.

Send to FTP Server & Send Email

This is similar to the function available in **Motion Detection** page. Please refer to section 2.4.2 above for details.

**Note:**

The image size received by email / FTP from depends on the resolution set in **Basic Settings → Camera Settings → Image Size**

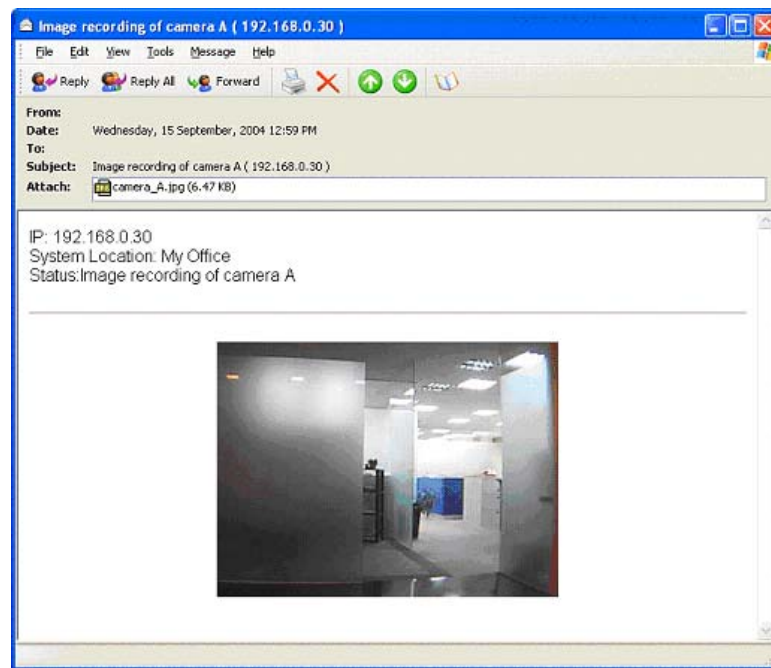


Fig.29. Email of Image Recorded

2.4.4 E-mail / FTP

This webpage sets up the necessary Email and FTP server information. The Administrator will have to enter a valid Account Name and Password to the Email server and/or FTP server. These information has to be setup in order for Event Notification, Motion Detection and Image Recording function to work.

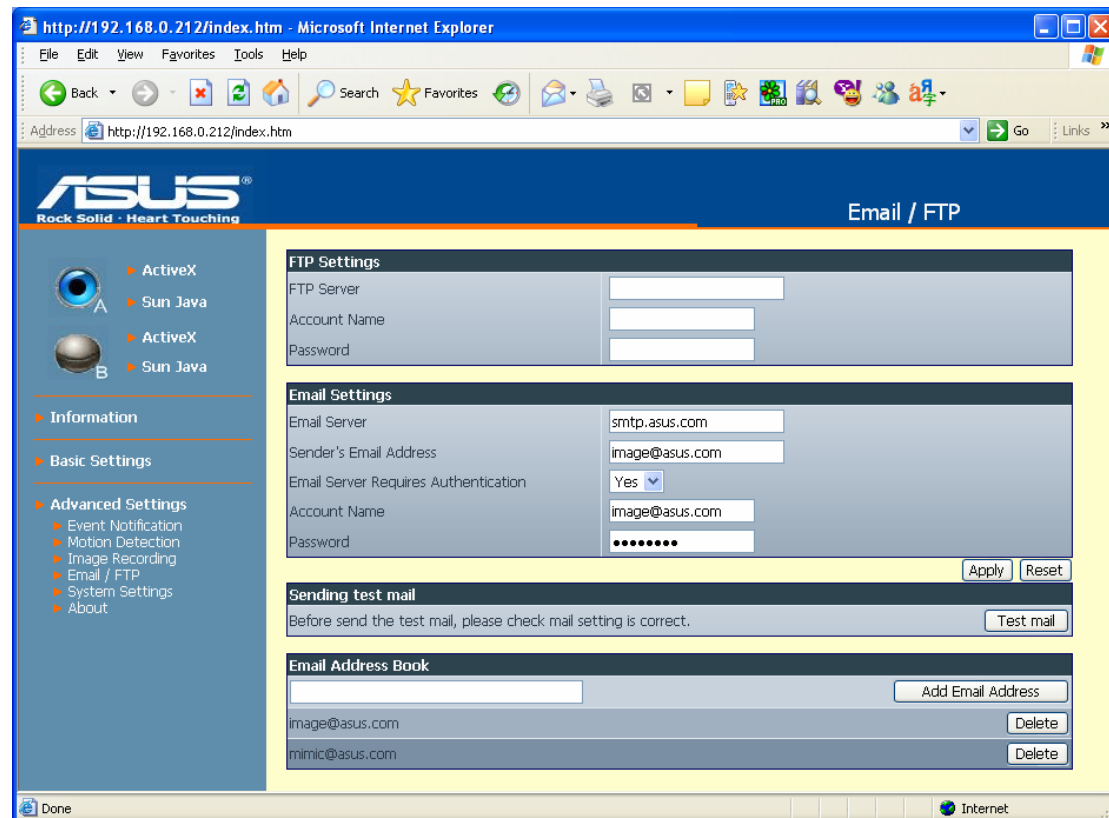
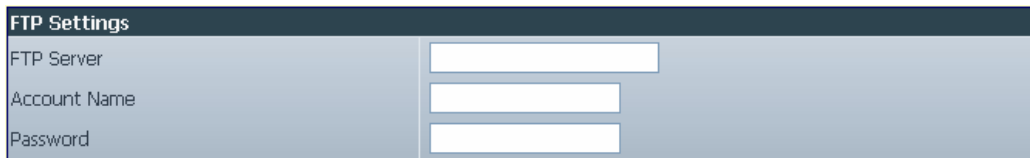


Fig.30. Email / FTP settings page

i. FTP Settings



FTP Settings	
FTP Server	<input type="text"/>
Account Name	<input type="text"/>
Password	<input type="text"/>

Fig.31. FTP settings

FTP Server

The Administrator will have to enter the full FTP server address here.

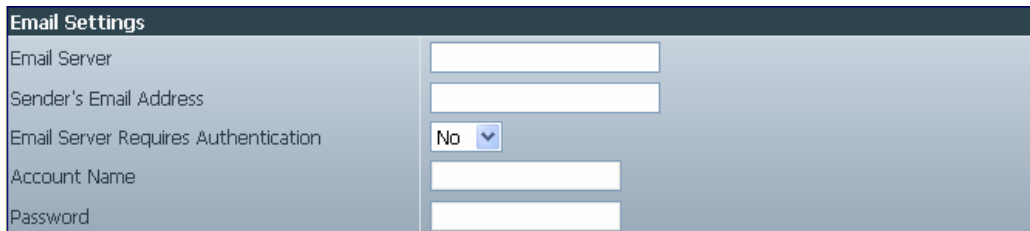
Account Name

Enter the FTP login account name here.

Password

Enter the account password. Click **Apply** to save the above settings.

ii. Email Settings



Email Settings	
Email Server	<input type="text"/>
Sender's Email Address	<input type="text"/>
Email Server Requires Authentication	No <input type="button" value="v"/>
Account Name	<input type="text"/>
Password	<input type="text"/>

Fig.32. Email settings

E-mail Server

The Administrator will have to enter the Email server address here.



Note:

Email function can only work using standard Email Server and not Web based Email Server, such as yahoo.com

Sender's Email Address

Enter a valid email address where the Email will be sent from. Enter the full email address, example: image@asus.com

Email Server Requires Authentication

Select **Yes** to enter the Account name and Password field below.

Account Name

Enter the full account name, example; image@asus.com.



Note:

In most cases, **Sender's Email Address** and **Account Name** field is the same.

Password

Enter the password for the above account name. Click **Apply** to save the changes.

iii. Sending Test Mail

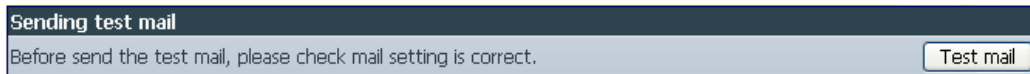


Fig.33. Sending a test mail

- a. Click **Test Mail** to check that the **Email Setting** has been correctly configured.

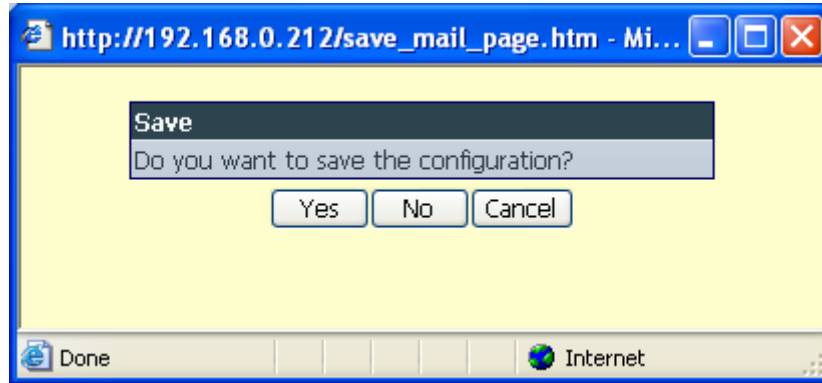


Fig.34. Saving configuration before sending a test mail

- b. Click **Yes** to save configurations and proceed to the following window.

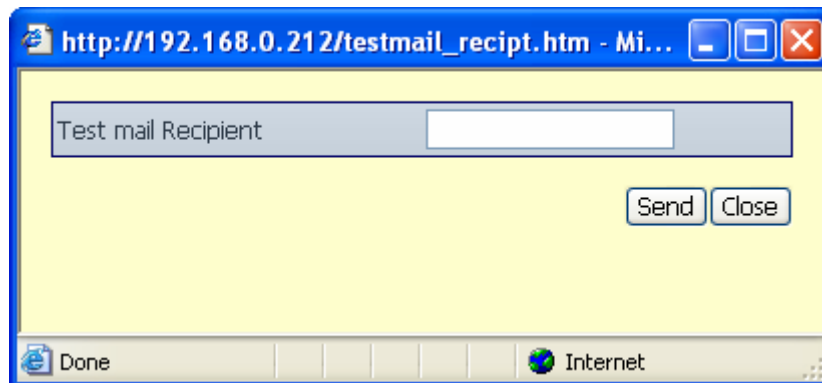


Fig.35. Test mail recipient email address

- c. Enter the Test mail Recipient email address and click Send.
- d. If the **Test Mail** is successful, the Recipient will receive the following email message.

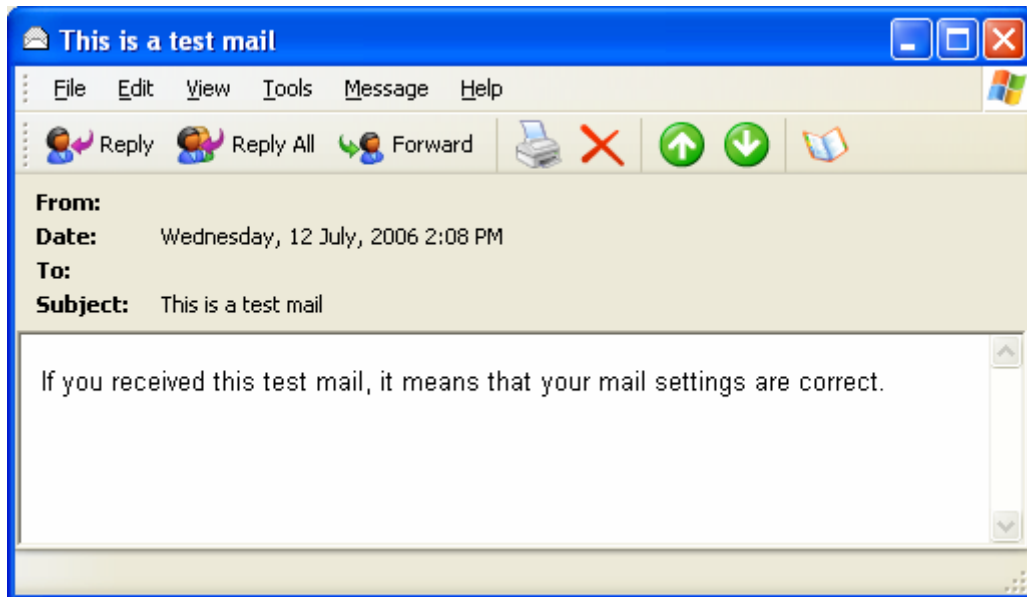


Fig.36. Confirmation email

The administrator can also check **Information → Event Log** for confirmation or failure.

No.	Date/Time	Type	Event
50	2006/07/12 06:13:09	Email	Test Mail has been sent.

Fig.37. Event Log: Test mail successful

No.	Date/Time	Type	Event
51	2006/07/12 06:16:41	Email	Failed to send test mail.

Fig.38. Event Log: Test mail failed

iv. Email Address Book

Fig.39. E-mail Address Book Entry

Enter an Email address in the box provided and click **Add Email Address**. The listed emails will be available for use in Event Notification, Motion Detection and Image Recording webpage.

Up to 20 email addresses can be stored.

Click **Delete** to remove an Email address.

2.4.5 System Settings

This page allows the Administrator to set ASUS Mimic SNMP settings so it can be used by a NMS (Network Management System).

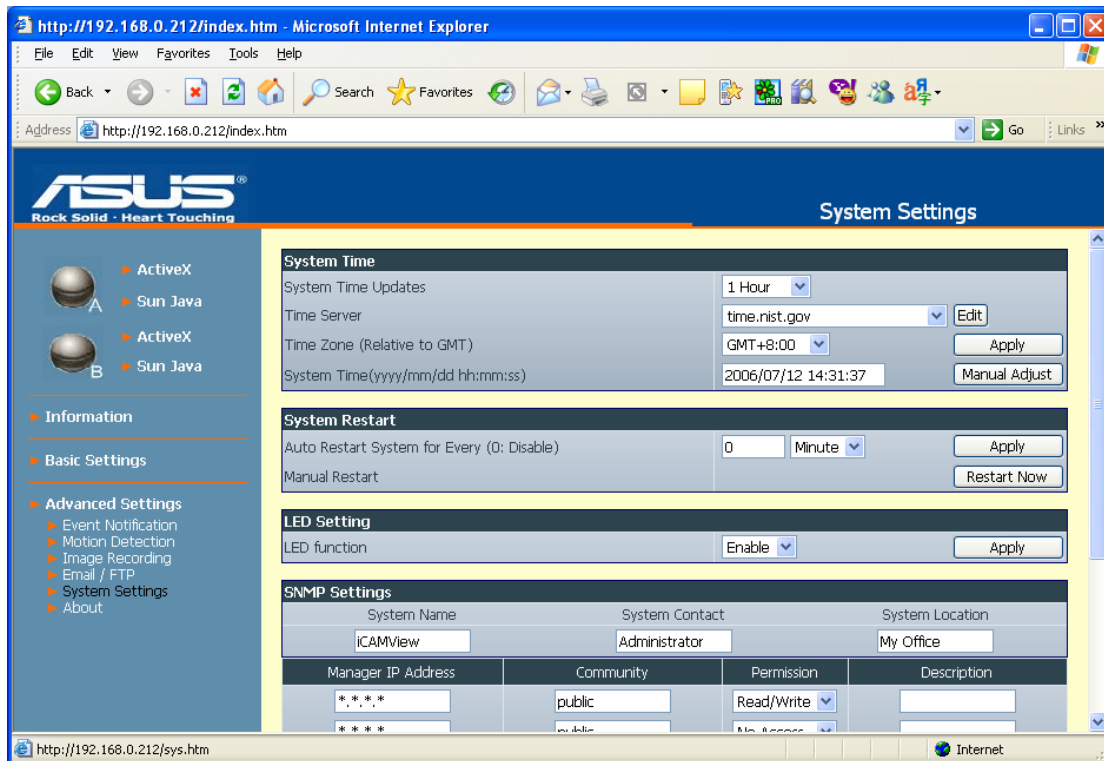


Fig.40. System Settings page

i. System Time

System Time	
System Time Updates	1 Hour
Time Server	time.nist.gov
Time Zone (Relative to GMT)	GMT+8:00
System Time(yyyy/mm/dd hh:mm:ss)	2006/07/12 14:31:37

Fig.41. System Time

System Time Updates

The administrator can set an interval for time synchronization. Select either; 1, 3, 12 hours or 1, 10 & 30 days.

Time Server

Choose the nearest **Time Server** to your ASUS Mimic location. The Administrator can choose from the list of a maximum of 30 Time Servers.

To add a new **Time Server** the Administrator must first make space by deleting existing **Time Servers** from the list. Once this is done, the **Add** dialog box will appear as below. Click **Back** to return to the System Settings webpage.

Time Server	
time.windows.com	Delete
ntp0.cs.mu.OZ.AU	Delete
ntp1.cs.mu.OZ.AU	Delete
ntp1.rnp.br	Delete

Fig.42. Add Time Server dialog box

Time Zone (Relative to GMT)

Select the appropriate time zone. Click **Apply** to save changes.

System Time (yyyy/mm/dd hh:mm:ss)

This section is to manually set ASUS Mimic **System Time**. The format is pre-determined to: yyyy/mm/dd hh:mm:ss (in 24hr format). Click **Manual Adjust** to save the changes.

ii. System Restart

Fig.43. Auto Restart setting

Auto Restart System Every ...

The Administrator can choose to restart ASUS Mimic at certain intervals (choose between minutes and hours only). Click **Apply** to save any changes.

Manual Restart

Click **Restart Now** to restart the system immediately.

iii. LED Settings

Fig.44. LED Settings

LED function

This function is not applicable.

iv. SNMP Settings

System Name	System Contact	System Location	Manager IP Address	Community	Permission	Description
iCAMView	Administrator	My Office	****	public	Read/Write	
			****	public	No Access	
			****	public	No Access	
			****	public	No Access	
			****	public	No Access	
			****	public	No Access	
			****	public	No Access	
			****	public	No Access	

Fig.45. SNMP Settings

System Name

This is to give ASUS Mimic a name identifiable in a SNMP network.

System Contact

This is to give the Administrator an identity in the SNMP network.

System Location

This is to set ASUS Mimic SNMP location.

Manager IP Address

This set the LAN IP address where the administrator can manage ASUS Mimic from. It is valid for up to 8 different LAN IP addresses. To manage ASUS Mimic from any LAN IP addresses leave the field as *.*.*.*

Community

This is to set a Community name for NMS. The community name has to be the same as that set in NMS.

Permission

This is to set the Administrator's authority. Options are Read, Read/Write, and No Access.

Description

This is for an Administrator to make notes.

2.4.8 About

The administrator can use this section to check firmware information, save/restore settings, upgrade firmware and see manufacturer's details.

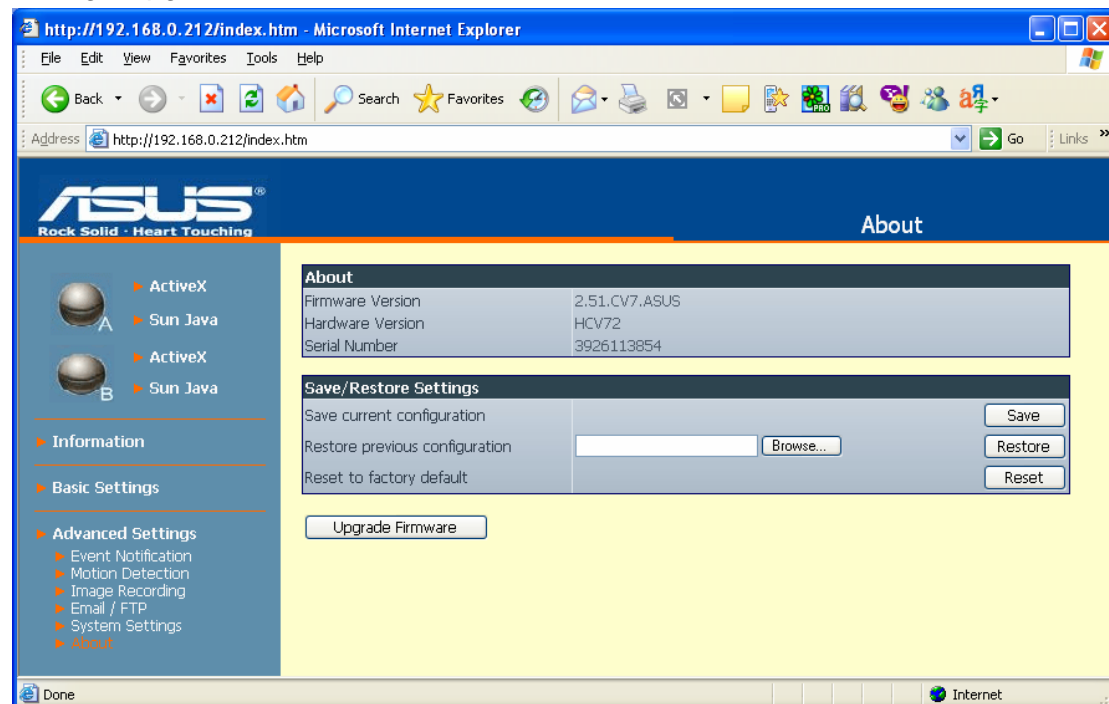
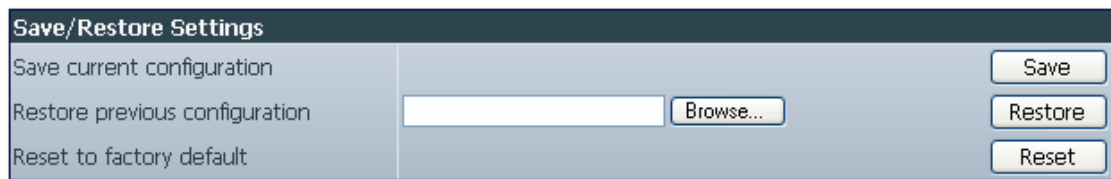


Fig.46. About page

i. About

This section gives crucial information about ASUS Mimic **Firmware Version**, **Hardware Version** and **Serial Number**.

ii. Save / Restore Settings



Save/Restore Settings	
Save current configuration	<input type="button" value="Save"/>
Restore previous configuration	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Restore"/>
Reset to factory default	<input type="button" value="Reset"/>

Fig.47. About page

Save Current Configuration

Click **Save** to save the configuration to your PC. The text file will have a default format of YYYY_MMDD_####.cfg. The Administrator can change this, if necessary.

Restore Previous Configuration

This function is only available if a *.cfg configuration file has been saved earlier. Click **Browse...** to the location the file and click **Restore**.

Reset to factory default

This function will reset all settings to its default value.



Note: ASUS Mimic will request for the master login and password. This is printed at the back of the unit.

Chapter 4: View Images Using PDA / PPC / mobile

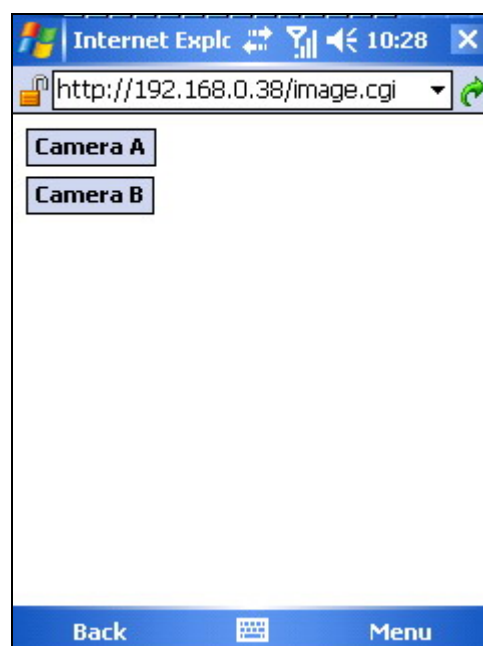
ASUS Mimic supports image viewing from a GRPS / WiFi enabled PDA / PPC / Symbian mobile device. To view the images;

- a. Make sure that the PDA / PPC / Mobile unit is connected to LAN or Internet.
- b. Enter **http://xxx.xxx.xxx.xxx/image.cgi** in the web address (where **xxx** is either the LAN IP, WAN IP address or Domain Name of ASUS Mimic)
- c. The following login page will appear. Enter the **Login Name** and **Login Password** if applicable. Otherwise, click **Apply** to proceed.



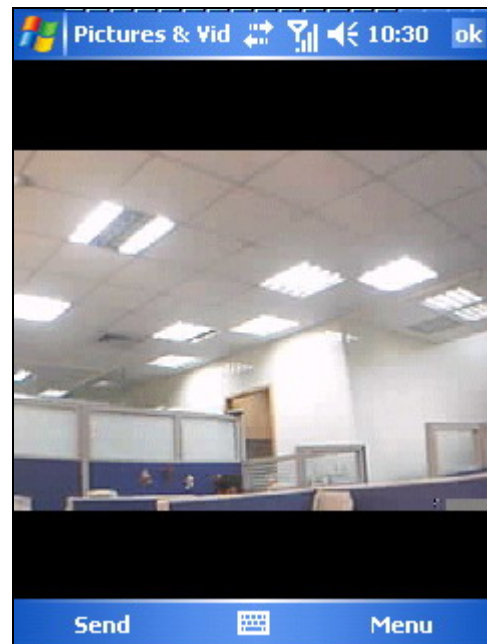
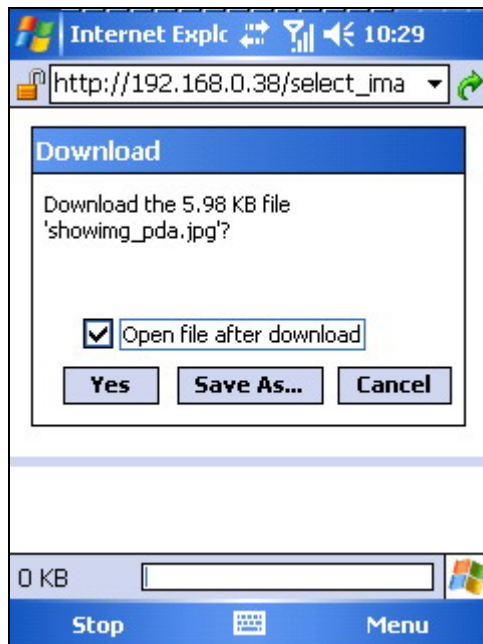
The screenshot shows a mobile web browser window titled 'Internet Explc' with a status bar at the top showing signal strength, battery, and time 10:27. The address bar contains 'http://192.168.0.38/image.cgi'. The main content area has two text input fields labeled 'Login Name' and 'Login Password'. Below these fields are two buttons: 'Apply' and 'Reset'. At the bottom of the browser window is a blue navigation bar with 'Back' and 'Menu' buttons.

- d. The following Camera Selection will appear. Click on either **Camera A** or **Camera B**.



The screenshot shows the same mobile web browser window. The address bar still contains 'http://192.168.0.38/image.cgi'. The main content area now displays two buttons: 'Camera A' and 'Camera B'. The bottom navigation bar remains the same with 'Back' and 'Menu' buttons.

- e. The default file name is **showing_pda.jpg**, click **Save As...** to change the file name or save location.



Note:

The downloaded image size depends on the resolution set in **Basic Settings → Camera Settings → Image Size**.

Approximately, 6KB @ 320x240 vs. 17KB @ 640x480 resolution.

- f. The images are downloaded and displayed one at a time. Click **Refresh** to download the next image. Click **Back** to go to the camera page to select a different camera.



Chapter 5: Using the Utility

Section 1. Installation

1. Insert the enclosed Utility CD into the CD-ROM drive. The following menu will show up. Click on the buttons on the left to install the programs you want.



- ☑ **Utility** - This is a program that helps the user perform quick installation. It will detect the current configuration and take the user through the necessary network setup.
 - a. Click the **Utility** button to commence installation.
 - b. After the installation is completed, the Utility program will appear in Windows **Start → Utility**. Click this to start the program.



- ☑ **MultiMonitor** - This is a windows based program designed to allow user to control a large number of ASUS Mimic IP camera located either in a LAN or WAN.
 - a. Click the **MultiMonitor** button to commence installation.
 - b. After the installation is completed, iMultiView program will appear in Windows **Start → All Programs → ASUS → MultiMonitor**.



- ☒ **Read User's Manual** - Click to read ASUS Mimic's User Manual. You will need Adobe Acrobat Reader v5.0 or higher.
- ☒ **Adobe Acrobat Reader v5.0** - This will install Acrobat Reader v5.0 on your local hard drive.
- ☒ **Sun Java / ActiveX** - Install Sun Java for viewing the video image by Java, or install the OCX for viewing by ActiveX

Section 2. Using the Utility Program

The Utility main menu is shown below. The selection menu is located on the left. The Serial Number, current Firmware and IP Address of every ASUS Mimic connected to the LAN will be displayed on the table to the right.



Fig.48. Utility Main Menu

2.1 Setup Wizard

Click **Setup Wizard** to take you through the setup process.

1. Click to select the ASUS Mimic you want to configure on the right.

2. Click on **Setup Wizard**.
3. Enter the necessary camera configurations. Choose the appropriate frequency (Indoor 60 Hz, Indoor 50 Hz or Outdoor) to prevent flickering on the video feed. Enter a name for the camera in the **Location** box to identify the camera.

ASUS Mimic Server Step Wizard

Setup Wizard will take you thru the necessary configuration for ASUS Mimic Server. Please enter the location information of the camera connected.

Camera A
 Anti Flicker: Indoor 50 Hz
 Location: Office

Camera B
 Anti Flicker: Indoor 50 Hz
 Location: Office

Click Next button to proceed, or press Cancel to abort.

< Back Next > Cancel

4. Click **Next >** to configure the Network Connection.

ASUS Mimic Server Step Wizard

Please select the network connection type for ASUS Mimic Server.

☒ Obtain an IP address by DHCP

☐ Use the following IP address:

IP Address: 192 . 168 . 50 . 6
 Subnet Mask: 255 . 255 . 255 . 0
 Gateway: 192 . 168 . 50 . 1

☐ Obtain an IP address by Bootp

Click Next button to proceed, or press Cancel to abort.

< Back Next > Cancel

Obtain an IP address by DHCP

Choose this if you want your Router to assign an IP address to ASUS Mimic.

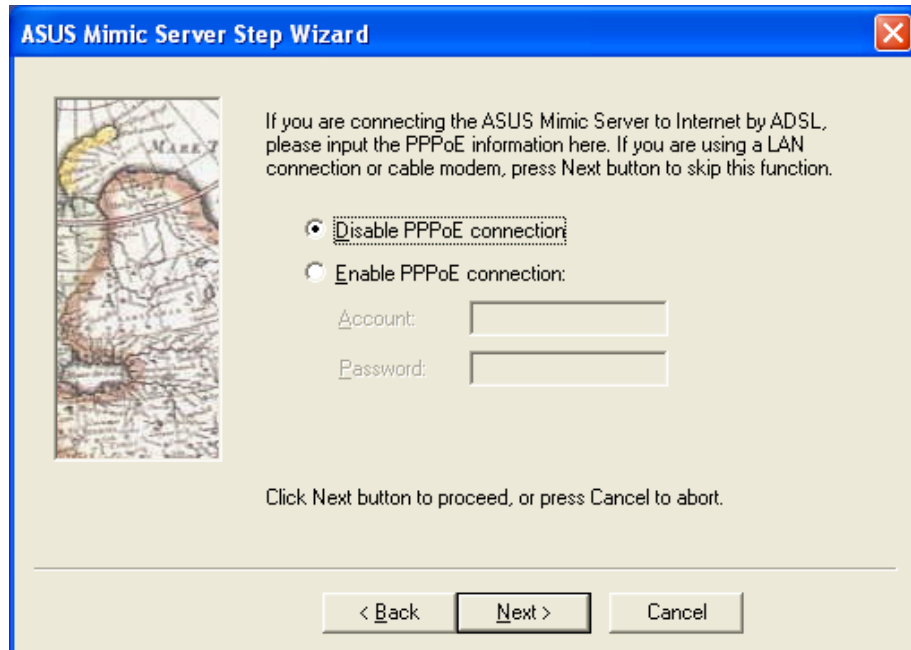
Use the following IP Address

Choose this if you want to enter a fix IP address, Subnet Mask and Gateway for ASUS Mimic. (Refer to Appendix C for explanation on IP Addresses)

Obtain an IP address by Bootp

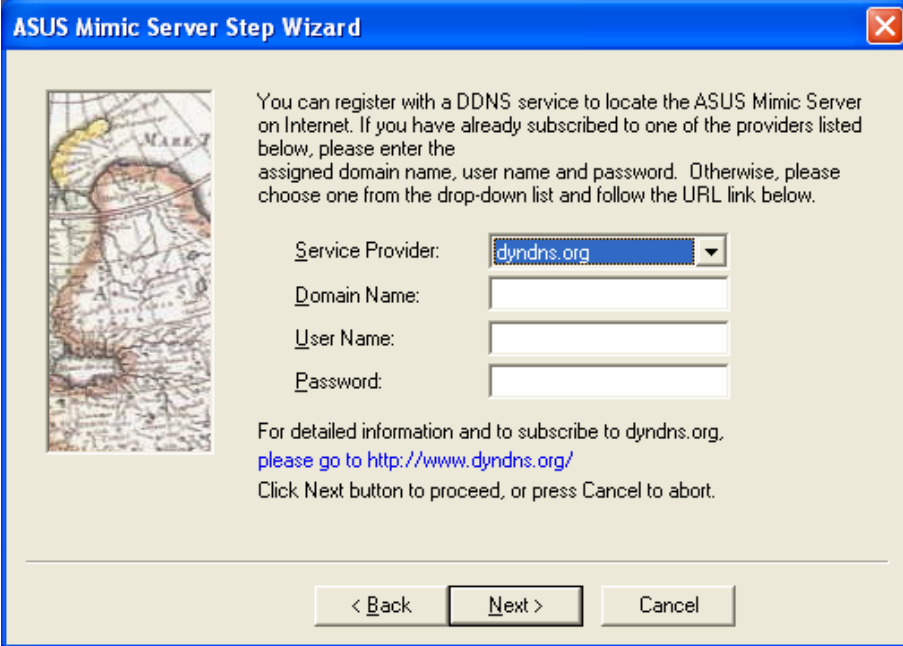
Choose this if you want to allow ASUS Mimic to obtain an IP address using Bootp protocol.

5. Click **Next >** to proceed to xDSL/Cable modem setup.



Choose this if you want ASUS Mimic to connect directly to your xDSL line.

- a. Select **Enable PPPoE connection**
 - b. Enter your account and password details as provided by your internet service provider ("ISP").
 - c. ASUS Mimic will be able to dial-up automatically once setup is completed.
6. Click **Next >** to proceed with DDNS setup



ASUS Mimic Server Step Wizard

You can register with a DDNS service to locate the ASUS Mimic Server on Internet. If you have already subscribed to one of the providers listed below, please enter the assigned domain name, user name and password. Otherwise, please choose one from the drop-down list and follow the URL link below.

Service Provider:

Domain Name:

User Name:

Password:

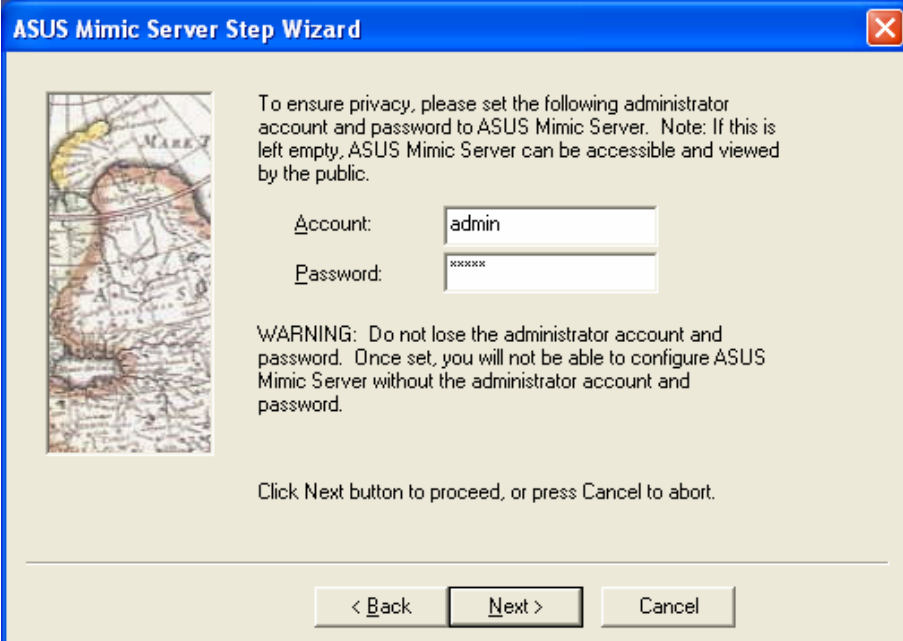
For detailed information and to subscribe to dyndns.org, please go to <http://www.dyndns.org/>

Click Next button to proceed, or press Cancel to abort.

< Back Next > Cancel

DDNS service allows you to assign a Domain Name to your Dynamic IP. This way, you will always be able to locate your device over the internet. (For more details see Chapter 4, Section 2.3.2, part v)

- Click **Next >** to change your administrator account and password information.



ASUS Mimic Server Step Wizard

To ensure privacy, please set the following administrator account and password to ASUS Mimic Server. Note: If this is left empty, ASUS Mimic Server can be accessible and viewed by the public.

Account:

Password:

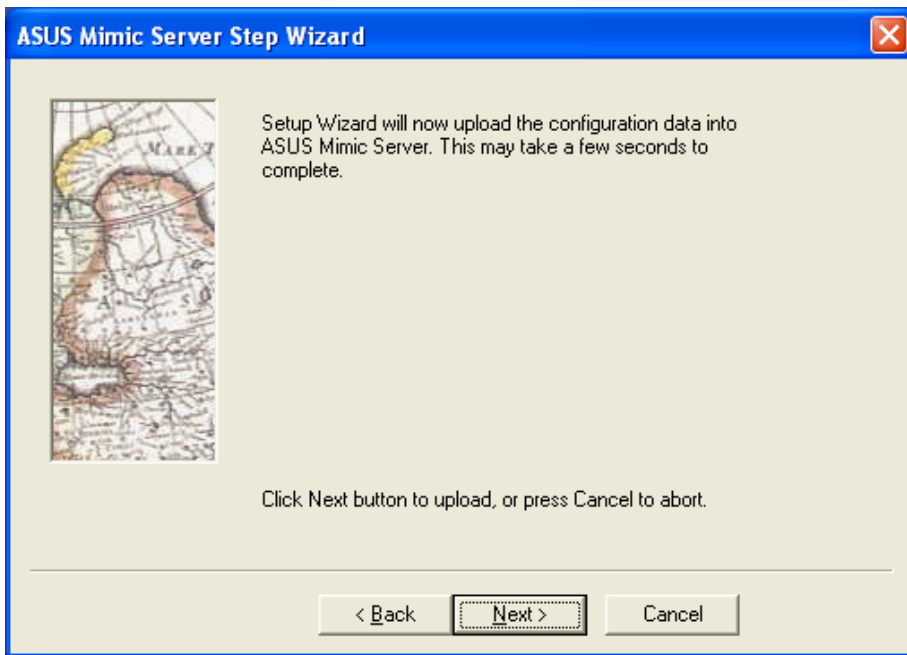
WARNING: Do not lose the administrator account and password. Once set, you will not be able to configure ASUS Mimic Server without the administrator account and password.

Click Next button to proceed, or press Cancel to abort.

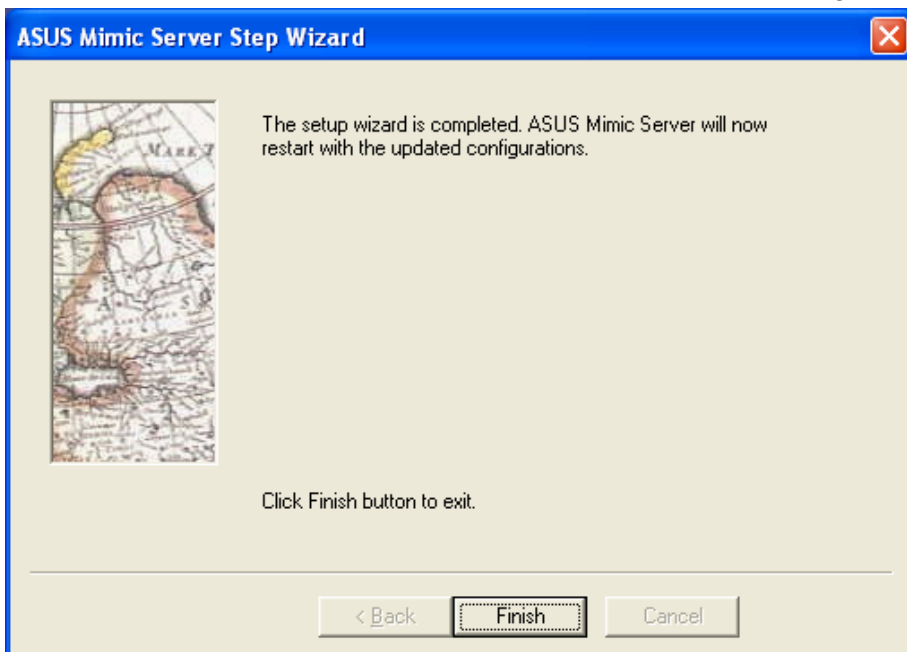
< Back Next > Cancel

An administrator account is necessary to ensure privacy. If you do not want to set one, clear the data in both fields. The fields are case sensitive.

- Click **Next >** to confirm these configuration.

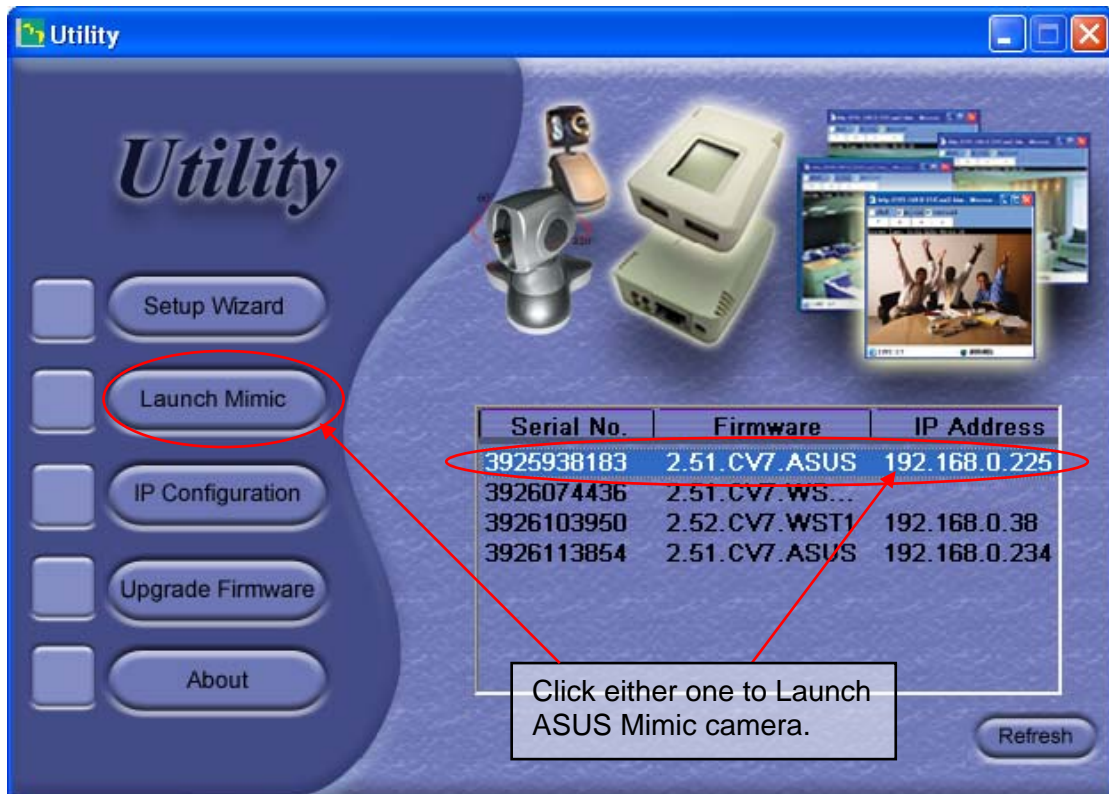


9. Click **Next >** to save and restart ASUS Mimic with the new configurations.

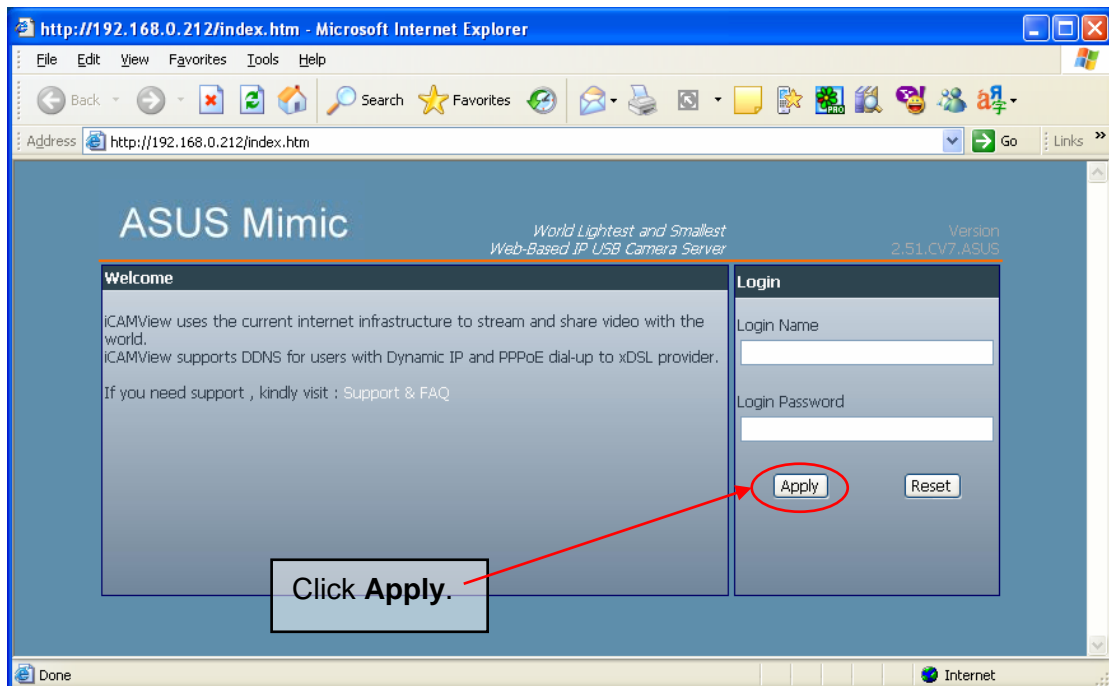


2.2 Launch Mimic

Click **Launch Mimic** or double click the ASUS Mimic listed in the table to launch it.

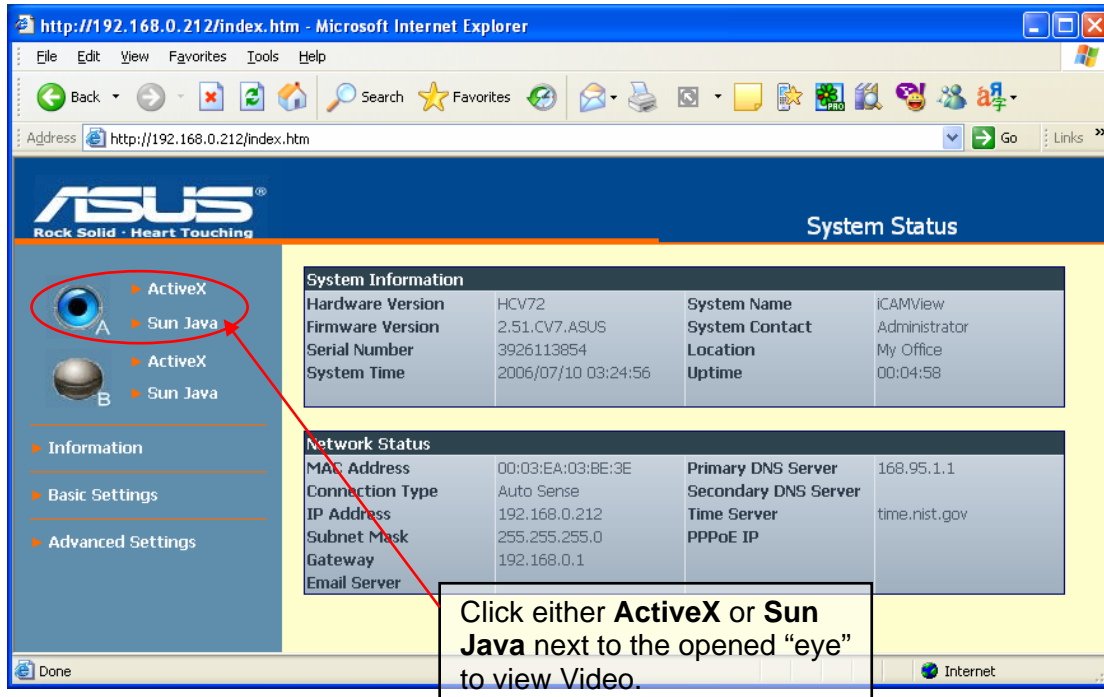


ASUS Mimic login screen will appear.



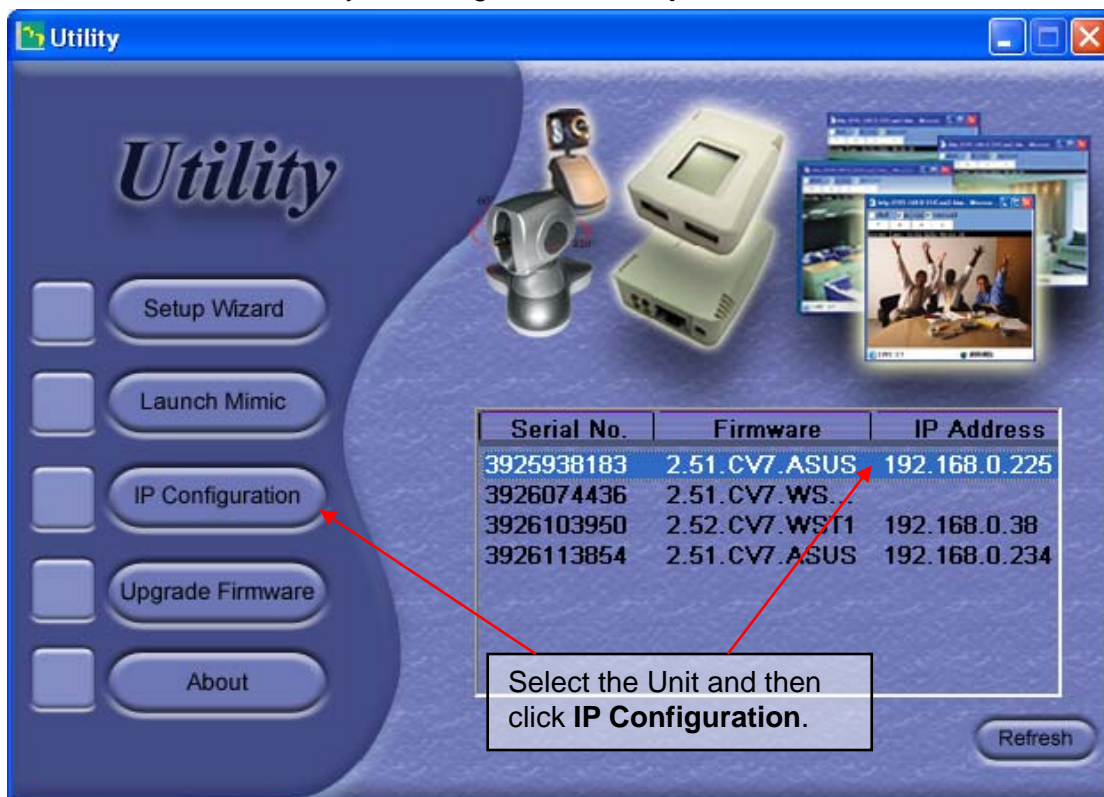
Key in the account name and password entered earlier. If you did not configure one, then just click **Apply** to login.

The ASUS Mimic webpage will appear. Click **ActiveX** beside Camera A to view the video images.



2.3 IP Configuration

This section allows you to configure the IP address for ASUS Mimic. You do not have to edit this section if you have gone thru **Setup Wizard** earlier.



Select the ASUS Mimic unit on the right display screen, and click **IP Configuration**. This will bring up the following configuration window.

2.3.1 IP Address

Use this section to configure the IP Address of ASUS Mimic.

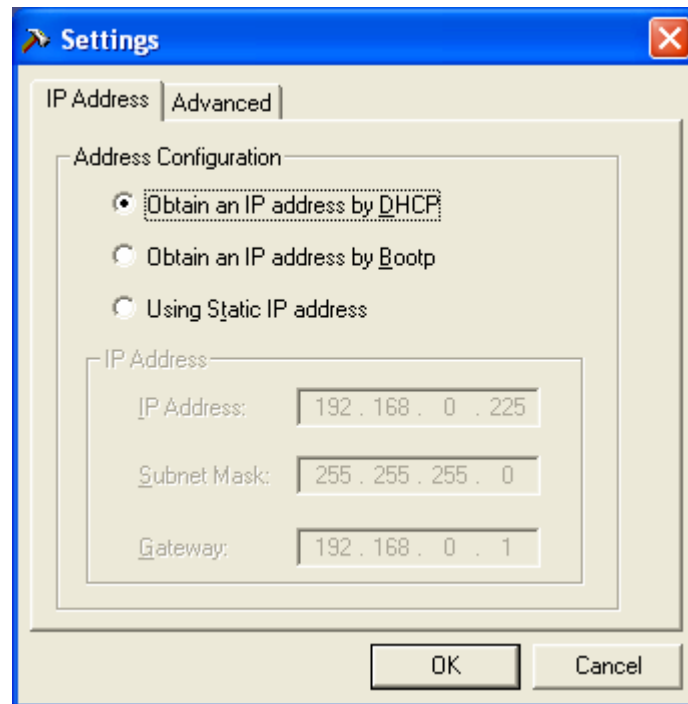


Fig.49. IP Configuration: IP Address

Obtain an IP address by DHCP

Choose this if you want your Router to assign an IP address to ASUS Mimic. This is the default setting.

Obtain an IP address by Bootp

Choose this if you want to allow ASUS Mimic to obtain an IP address using Bootp protocol.

Use the following IP Address

Choose this if you want to assign a fix IP address, Subnet Mask and Gateway for ASUS Mimic. (Refer to Appendix C for explanation on IP Addresses)

2.3.2 Advanced (for password and HTTP configuration)

This section sets the Utility password. This security password prevents unauthorised access to devices through this Utility.



Note:

Device Password can only be set for ASUS Mimic from within the same LAN.

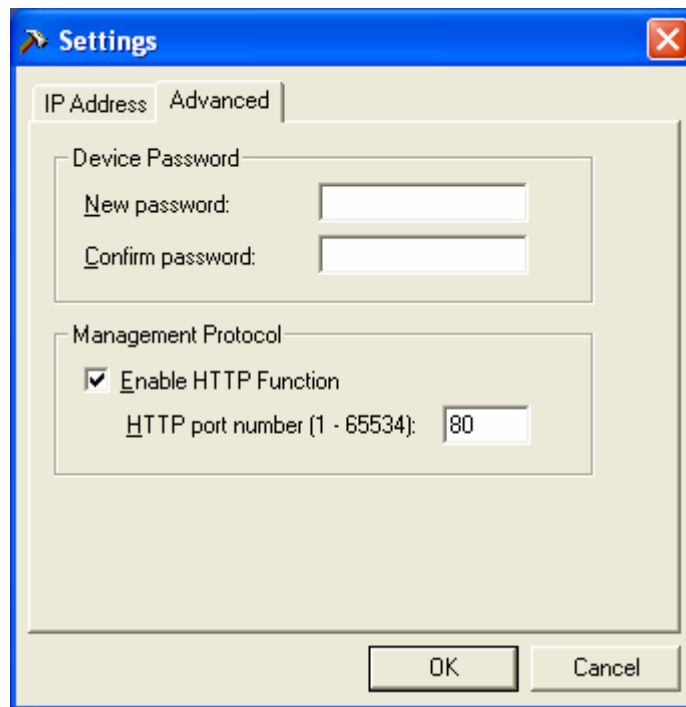
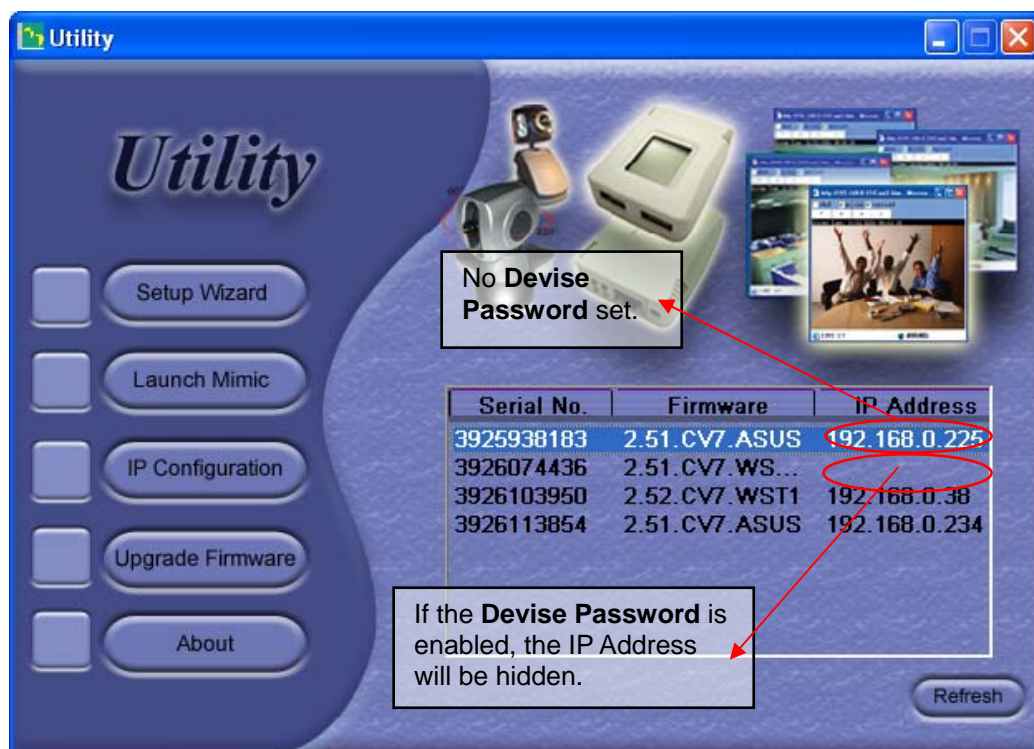


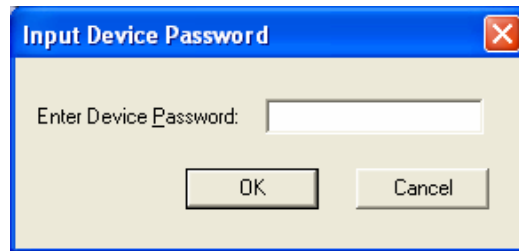
Fig.50. IP Configuration: Advanced settings

i. **Device Password (when accessing from Utility)**

Use this to set an access password when accessing ASUS Mimic from this Utility. Once set, the IP Address will not be shown on the right display panel (see below).



Once set, Utility will request for the **Device Password** when you try to click on either, **Setup Wizard**, **Launch Mimic** or **IP Configuration** button.



To remove the password,

- a. Select the ASUS Mimic unit from the Utility list.
- b. Click **IP Configuration**.
- c. Enter the unit's **Device Password**
- d. Go to **Advanced** → **Device Password** and delete both the entries.
- e. Click **OK** to confirm.



NOTE:

If the password is lost, you must use the Master Password to reset the Password field

ii. Management Protocol

This setting allows the administrator to determine the LAN HTTP access (web) to ASUS Mimic IP camera. For added security, the administrator can choose to use either the default open port 80 or other ports (between 1 to 65534).

Once the HTTP port number is set to another port (other than 80), the full LAN IP address must be entered in order to access the ASUS Mimic web interface.



Example:

If a value of say, 8080 is set as the **HTTP port number**, then enter `http://192.168.0.177:8080` in order to access ASUS Mimic web interface.

Uncheck to disable this function.

2.4 Upgrade Firmware

Click this to bring up the upgrade firmware dialog box.

To check the internet for the latest firmware, click **Next**

Otherwise, check **Upgrade the firmware with file saved on the local hard drive**.

Click **Browse** to choose the location where the *.bin file is located.

2.5 About

Click this button to show the software and version details.

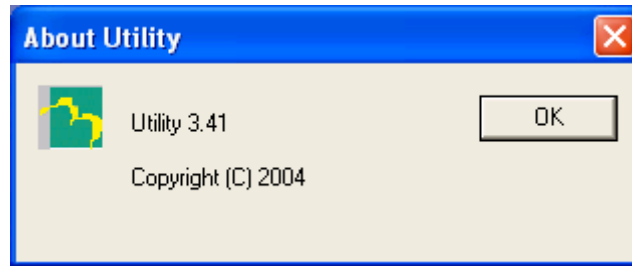


Fig.51. About Utility

2.6 Refresh

Utility will automatically search for any ASUS Mimic IP cameras that are connected in the same LAN. It will periodically refresh this list to show the latest status. The user can do a manual search by clicking the **Refresh**.



Chapter 6: MultiMonitor

MultiMonitor is a program to manage multiple ASUS Mimic. It is able to detect the IP address of all ASUS Mimic installed in LAN and list them for easy management. For units that are located on WAN, the administrator will have to manually add these in.

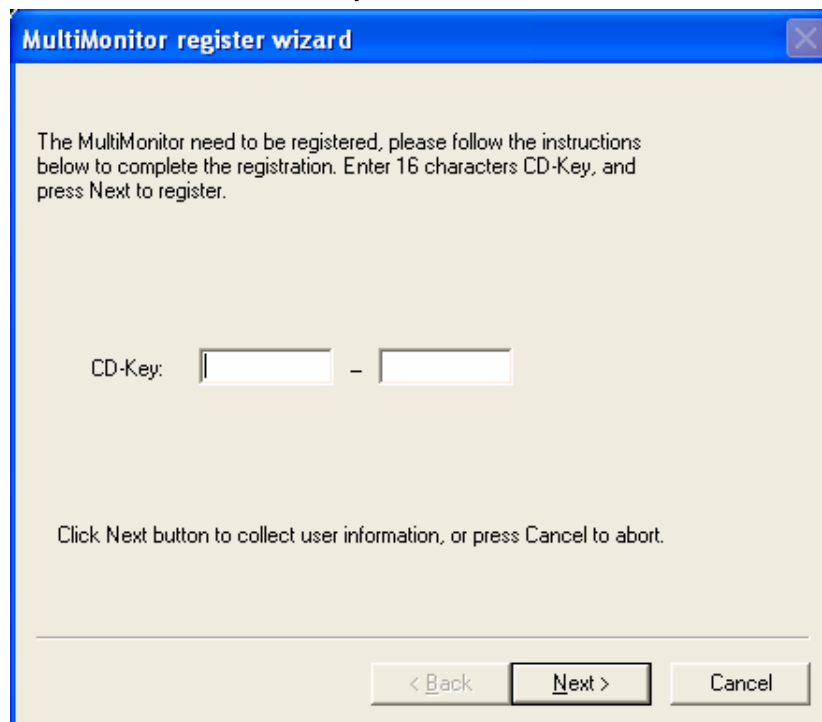
Section 1. Installing MultiMonitor

- ❶ Click on setup.exe and follow the installation wizard
- ❷ After installation, there will be a **ASUS** group in the Windows Start group
- ❸ Click "MultiMonitor" → "MultiMonitor for Windows" to start using MultiMonitor.



Section 2. Using MultiMonitor

When using MultiMonitor for the first time, it will ask you to enter the CD-Key. This can be found on the cover of the Utility CD.



Fill out the necessary information shown below and click **Next >**.

MultiMonitor register wizard

Please provide the following information for registration:

1. Your Name/Company:	\\\\abc factory
2. Country:	select from list
3. Email Address:	
4. Product Name:	MultiMonitor
5. Serial Number:	XXXXXXXX-XXXXXXXX
6. Firmware version:	3.20
7. Comment:	

Click Back to return to CD-Key page, click Next button to send registration, or press Cancel to abort.

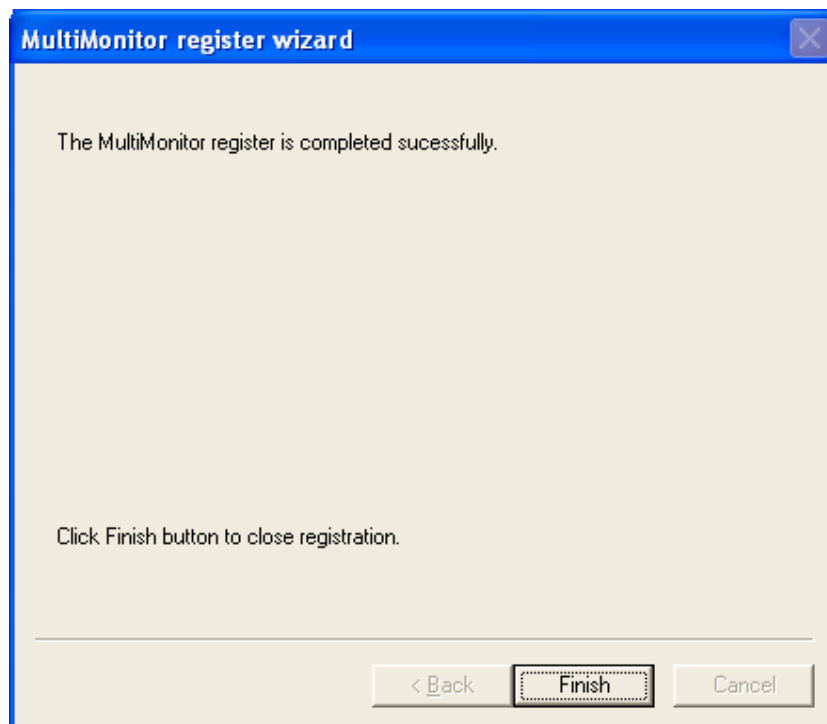
< Back Next > Cancel

MultiMonitor register wizard

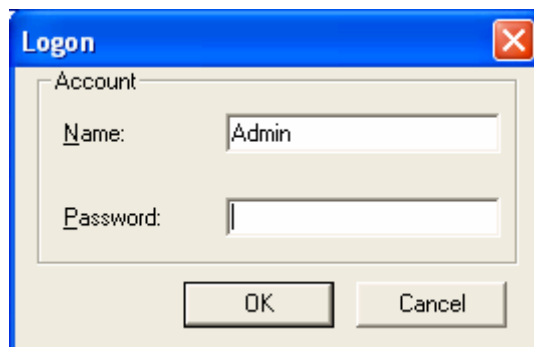
Connecting to register server, it might take a few minutes to complete.
Please wait...

Click Finish button to close registration.

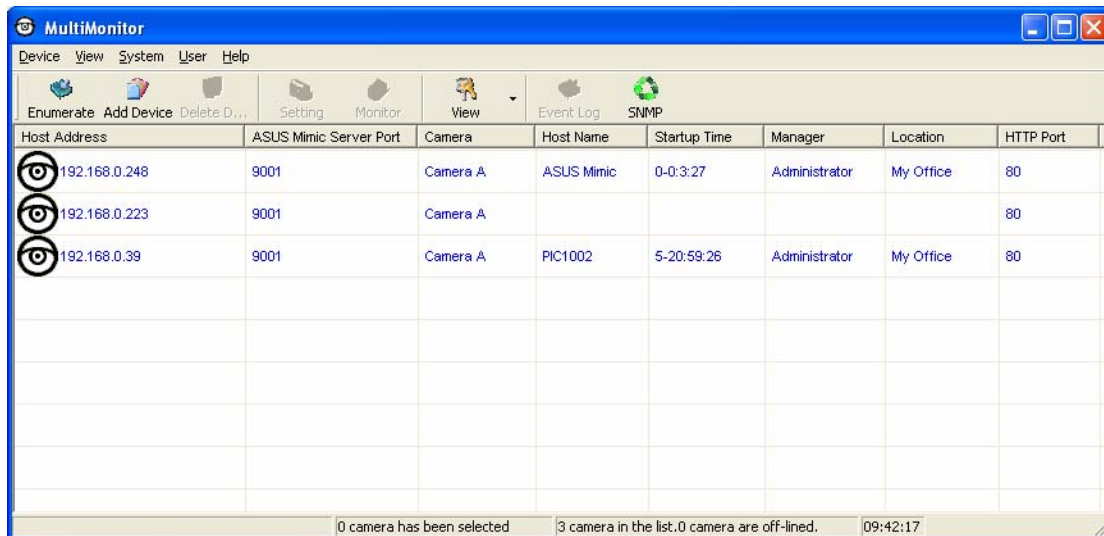
< Back Finish Cancel



Click **Finish** and the MultiMonitor **Logon** window below will pop up. Just click **OK** to start using MultiMonitor



Note: The default security Logon name is **Admin**, no password is set. To set a password, click **User → Change Password ... → New Password**



2.1 Device



: Start MultiMonitor and press the “Enumerate” button, MultiMonitor will start a search for all the ASUS Mimic units on the network and list them in the main window.

Once detected, the following will show in the main window:

Host Address	ASUS Mimic Server Port	Camera	Host Name	Startup Time	Manager	Location	HTTP Port
192.168.0.248	9001	Camera A	ASUS Mimic	0-0:3:27	Administrator	My Office	80

This shows that the camera is online and active.

Host Address	ASUS Mimic Server Port	Camera	Host Name	Startup Time	Manager	Location	HTTP Port
192.168.0.248	9001	Camera A	ASUS Mimic	0-0:3:27	Administrator	My Office	80

This shows that ASUS Mimic is online but image can not be transmitted. Check and see if the UDP port setting is correct.

Host Address	ASUS Mimic Server Port	Camera	Host Name	Startup Time	Manager	Location	HTTP Port
192.168.0.248	9001	Camera A	ASUS Mimic	0-0:6:28	Administrator	My Office	80

This shows that the camera is off-line and ASUS Mimic is not powered on.



 A dialog box titled "Add ASUS Mimic Server" with a blue header and a red close button. It contains two tabs: "General" and "Camera". The "General" tab is active. It has two radio buttons: "Access by ASUS Mimic Server Address" (selected) and "Access by Image Server". Under the first radio button, there are fields for "Host Address:" and "Remote Port:" (with "9001" entered). Under the second radio button, there are fields for "Image Server Address:", "Image Server port:" (with "9001" entered), "ASUS Mimic Server Name:", "User Account:", and "User Password:". At the bottom right are "OK" and "Cancel" buttons.

Manually adds the ASUS Mimic camera to be monitored.

a. Access by ASUS Mimic Server Address

Host Address:

Enter either the LAN IP (eg: 192.168.0.30) or Domain Name (eg: webcam.myddns.com) of ASUS Mimic.

Remote Port:

This is ASUS Mimic UDP port.

b. Access by Image Server

Image Server Address:

Enter the Image Server Address if available.

Image Server Port:

Enter the Image Server UDP port, if available.

ASUS Mimic Server Name:

Enter a unique name for the server.

User Account

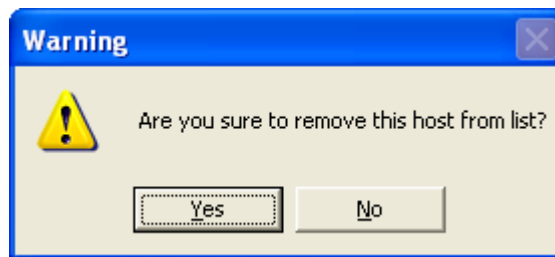
Enter the Image Server User account.

User Password

Enter the Image Server account password.



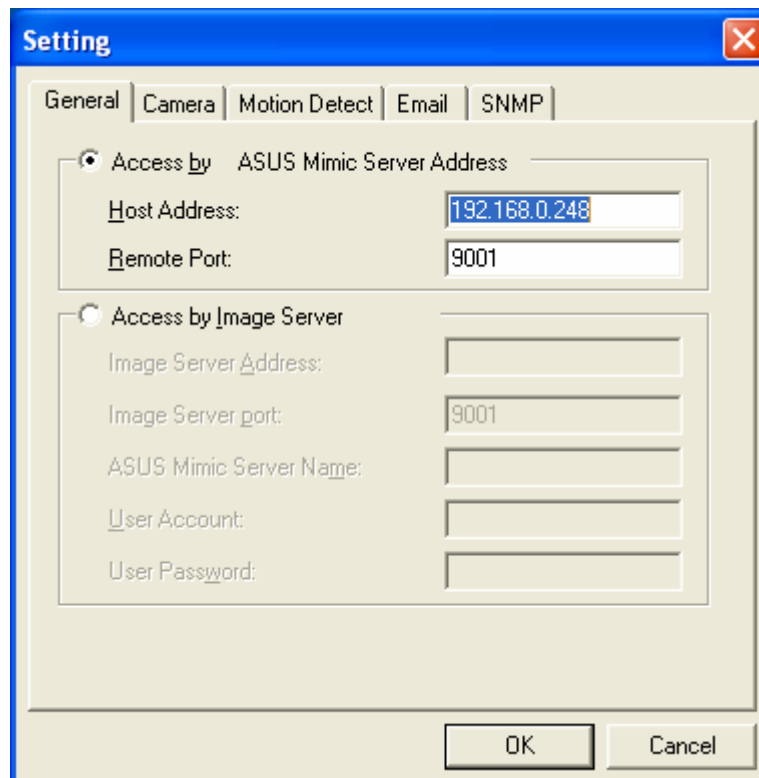
:



Highlight the ASUS Mimic to be deleted from MultiMonitor's list.
Click **Yes** to confirm deletion.

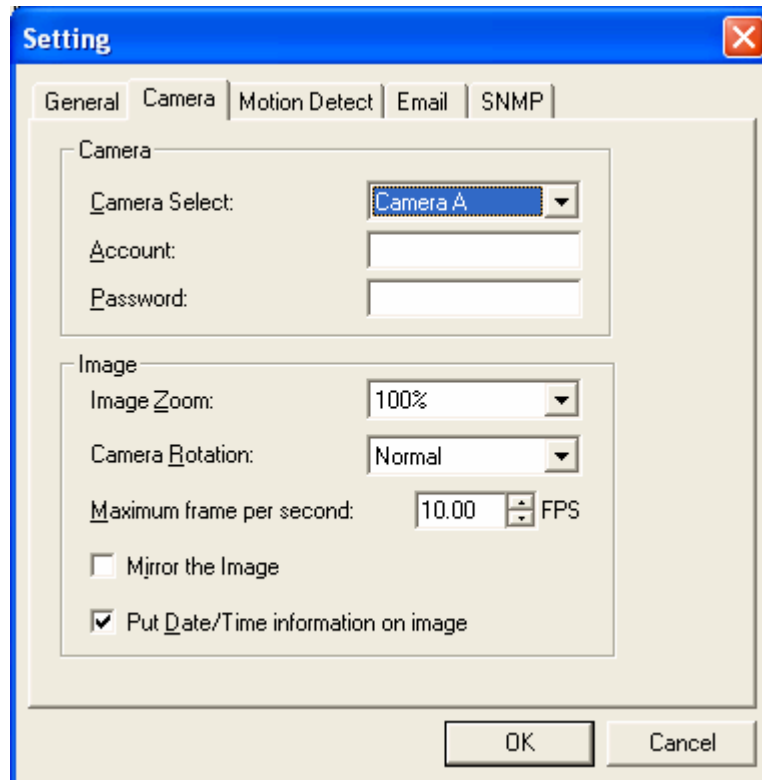


:



Use this function to change ASUS Mimic IP Address & Port Number.

Display the current Camera settings.



Camera Select: Select either camera A or B

Account: If you have setup user account, the information must be entered here. Otherwise access will be denied.

Password: Enter the above account password.

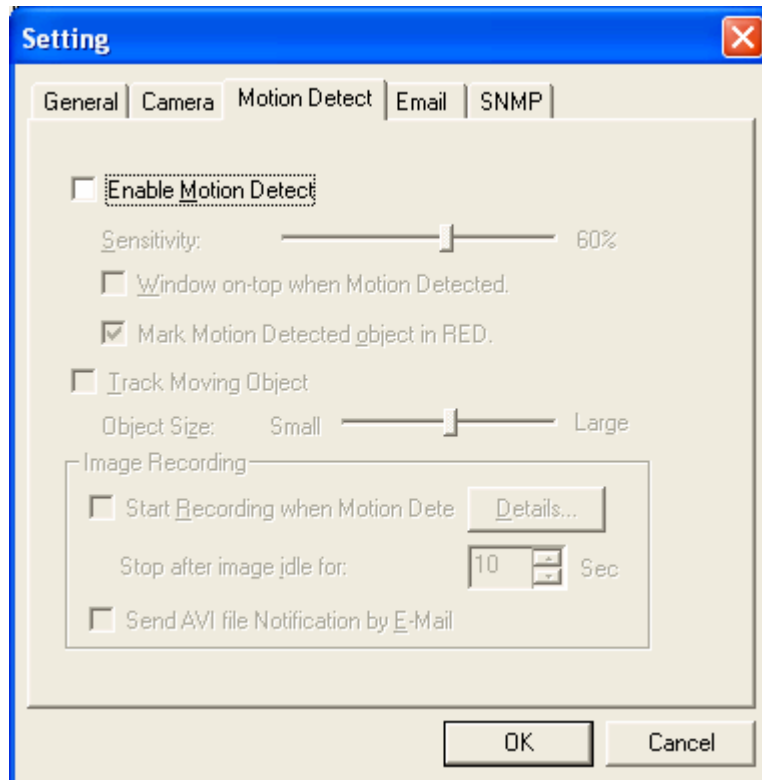
Image Zoom: Resize the window to between 25% and 200%

Camera Rotation: Use this function to keep the camera up-right.

Mirror the Image: To mirror the image.

Maximum frame per second: Select from 0.01 fps to a maximum of 30.00 fps. Default is set to 10.00 FPS.

Put Date/Time information on image To have the date and time displayed on captured images.

Display the Motion Detection Settings.**Enable Motion Detect:**

Click the checkbox to enable Motion Detection.

Note: This feature requires the Camera Window be active to work. Click “Monitor” to activate the Window.

Sensitivity:

Choose from 0% to 100% (very sensitive)

Window on-top when Motion Detected

Automatically displays camera window on top of all other windows/applications once motion is detected.

Mark Motion Detected object in RED

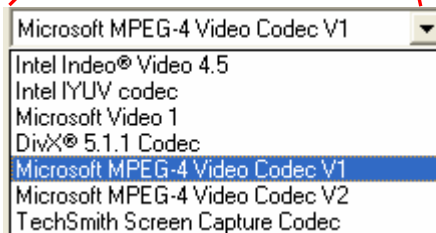
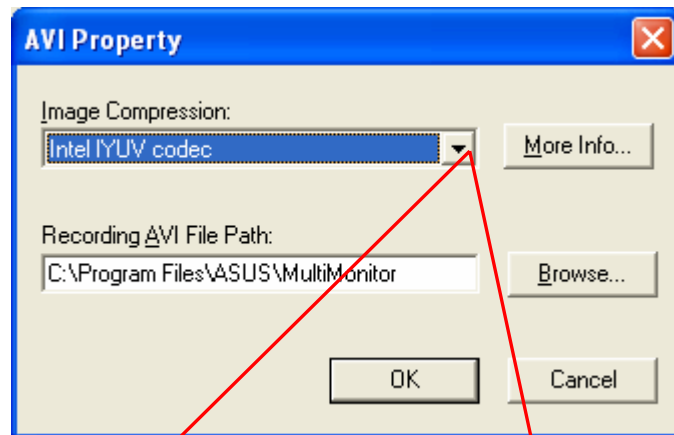
Choose this option to highlight in RED which object is being tracked.

Track Moving Object

Choose this option to calibrate approximate size of object to be tracked.

Image Recording

Click “Start Recording when Motion Detected” to enable the feature. Click the “Details..” button for the following options;



**Image
Compression:**

Choose from the list of available compressions.

Note: This list is dependent on the Codec that is available or already installed on the local PC. To record in MPEC-4, make sure you install or upgrade to Windows Media Player v10.

**Recording AVI
File Path**

Location where the file will be recorded to. By default, it is recorded to C:\Program Files\ASUS\MultiMonitor.

Click **Browse** to change the file location.

Note:

Recorded files are save using the following file extension;
avifile[three digit numerical sequence].

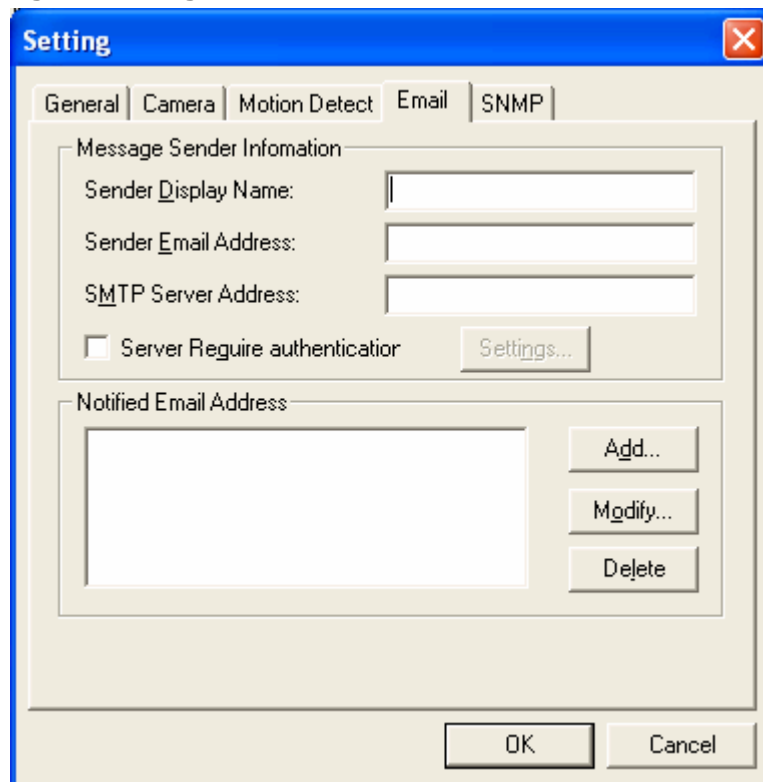
Use the **Detail View** to check the stop time. You can change the display view or add a new folder here.

Stop after idle for: Set the value between 1 to 100 seconds

**Send AVI file
Notification by
Email:**

Send an AVI file via email in the event any motion is detected.

Configure Settings for Email Notification



The 'Setting' dialog box has a blue title bar with a close button. It contains five tabs: 'General', 'Camera', 'Motion Detect', 'Email' (selected), and 'SNMP'. The 'Email' tab is active, showing two sections. The 'Message Sender Information' section has three text input fields: 'Sender Display Name:', 'Sender Email Address:', and 'SMTP Server Address:'. Below these is a checkbox labeled 'Server Require authentication' and a 'Settings...' button. The 'Notified Email Address' section features a large empty list box on the left and three buttons ('Add...', 'Modify...', 'Delete') on the right. At the bottom are 'OK' and 'Cancel' buttons.

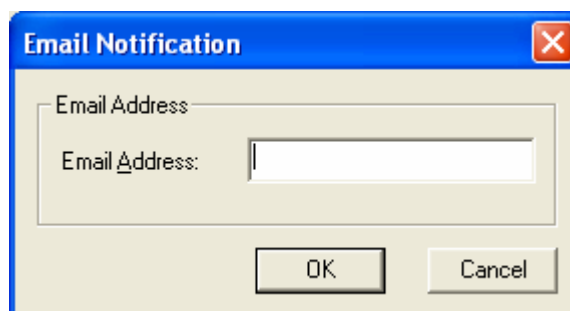
You will need to enter the correct **Message Sender Information** in order for ASUS Mimic to send emails.

Server Require Authentication

Click **Settings...** then enter your **Account Name** and **Account Password**.

Notified Email Address

Click **Add...** and enter a new Email address below

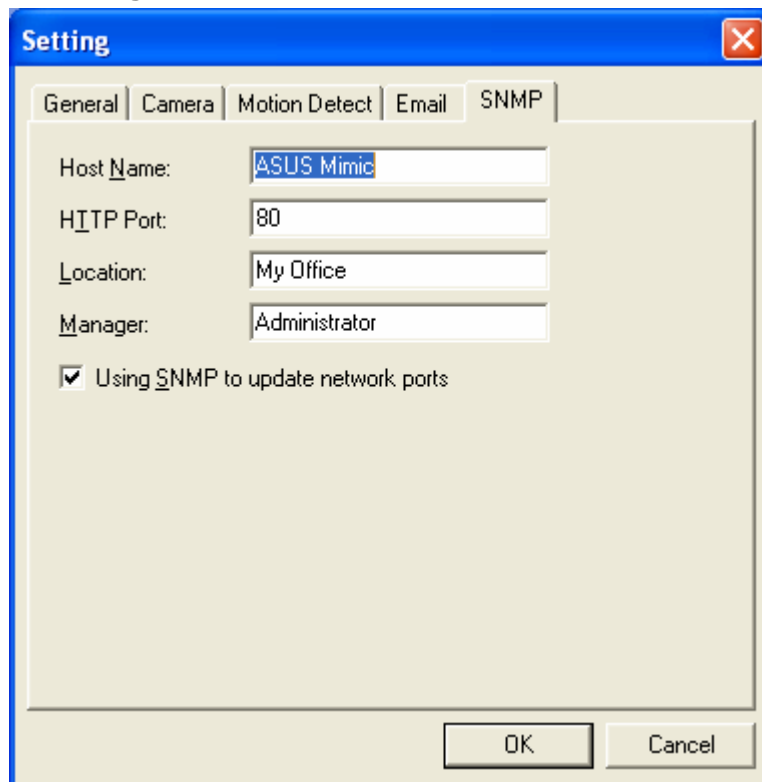


The 'Email Notification' dialog box has a blue title bar with a close button. It contains a single text input field labeled 'Email Address:'. At the bottom are 'OK' and 'Cancel' buttons.

Click **Modify...** to modify the entered Email Address

Click **Delete** to remove an email address from the notification list.

SNMP Settings



Host Name: Provide a Name to identify this device.

HTTP Port: Enter the HTTP port assigned for ASUS Mimic. Default is **80**, or check **Basic Settings → Networks → Port Number**.

Location: Provide a location for SNMP manager to track device.

Manager: Enter a manager's name for identification.

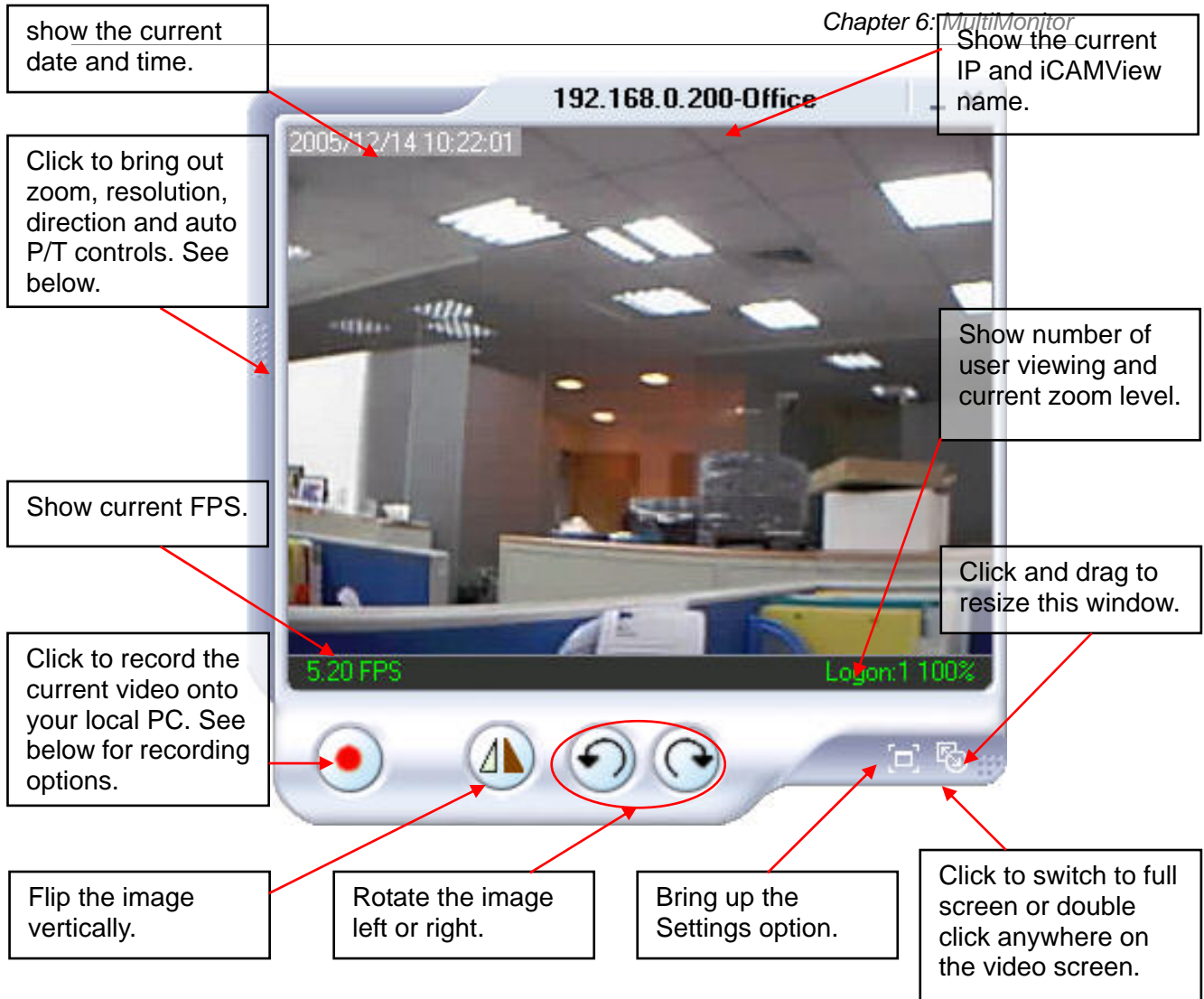
Using SNMP to update network ports

Check this box if you want MultiMonitor to automatically update the HTTP port as set in;

- Web Interface, **Basic Settings → Network → Port Number → HTTP port number** or in
- Utility, **IP Configuration → Advanced → Management Protocol**



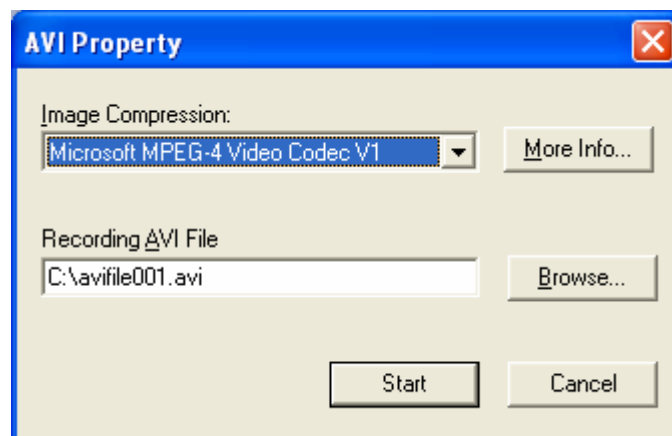
: Highlight the ASUS Mimic unit in the main windows display, and click **Monitor** to view the video stream.



Move the cursor over the edges of the picture and it will turn into an arrow. Click and hold to pan / tilt the camera (if the camera supports this function)



Click this button to record the current image on screen. A window will come up, click **Start** to start recording to the default file and location.





Click the left side of the viewing window to bring out more control features.



Click on this icon to active two functions;


a. Custom window zoom – use this to zoom to your chosen window size.

On the video window, **LEFT** click, hold and drag to the desired window zoom size. A thin line will outline the chosen window zoom size.



Release and the program will zoom to the marquee area. Increase the resolution for a better image quality.




Click the depressed  button to go back to the original window size.

b. Custom update Window -- use this if you want to monitor only a specific area within the viewing window.

On the video window, **RIGHT** click, hold and drag to the desired window zoom size. A thin line will outline the chosen window size.



Release and a smaller window is shown. Video in this smaller window will be updated while those outside are 'frozen'.

Click the depressed  button to go back to the original window size. Or use the horizontal zoom bar (see below).



Click and drag the green knob along the horizontal bar to zoom in or out. Zoom range from 1 time to 16 times.

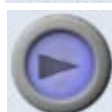


Click and drag the green knob along the horizontal bar to change the current image resolution. Resolution range from 320x240 low/mid/high quality, to 640x480 low/mid/high quality.



Clicking once will cause the camera to pan left by 1 deg.

Click and hold and the camera will pan increasingly faster to the left.



Clicking once will cause the camera to pan right by 1 deg.

Click and hold and the camera will pan increasingly faster to the right.



Click once to tilt the camera up by 1 deg.

Click and hold and the camera will tilt increasingly faster upwards.



Click once to tilt the camera down by 1 deg.

Click and hold and the camera will tilt increasingly faster downwards.

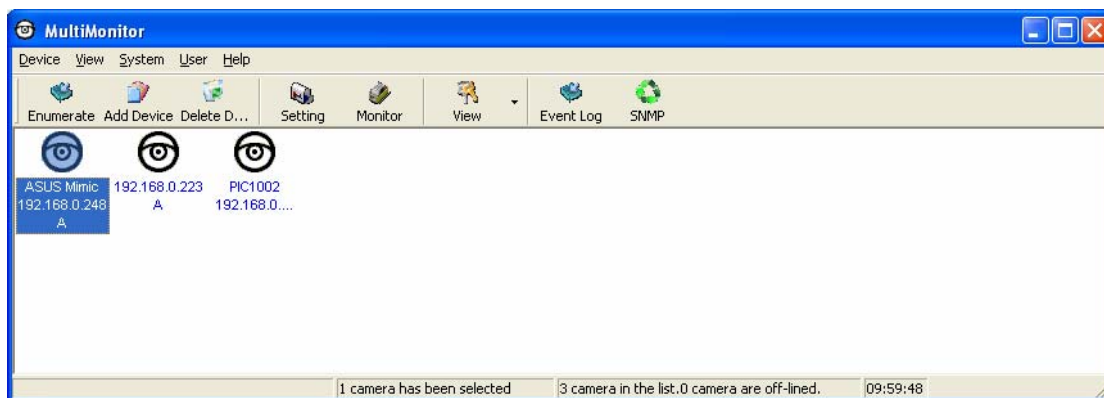


Auto Pan (if camera which support this function)

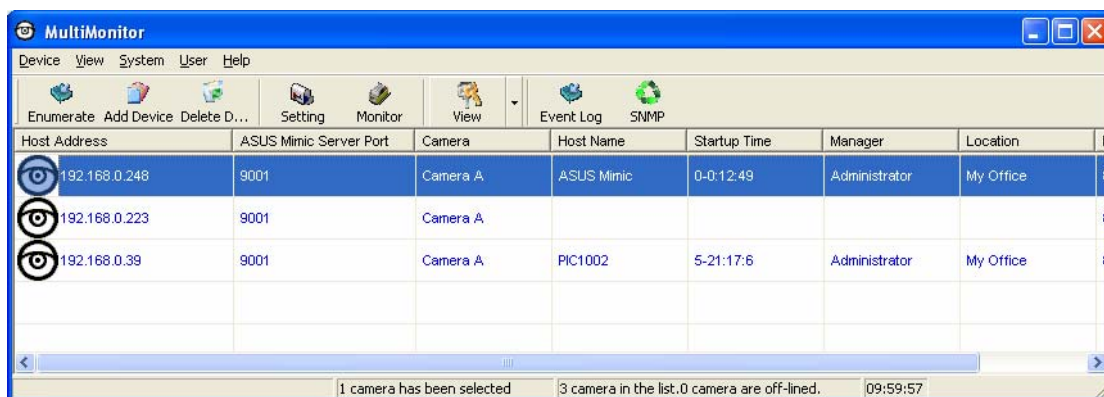
2.2 View



: Switch between Large or Small icon view

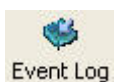


Large icon display

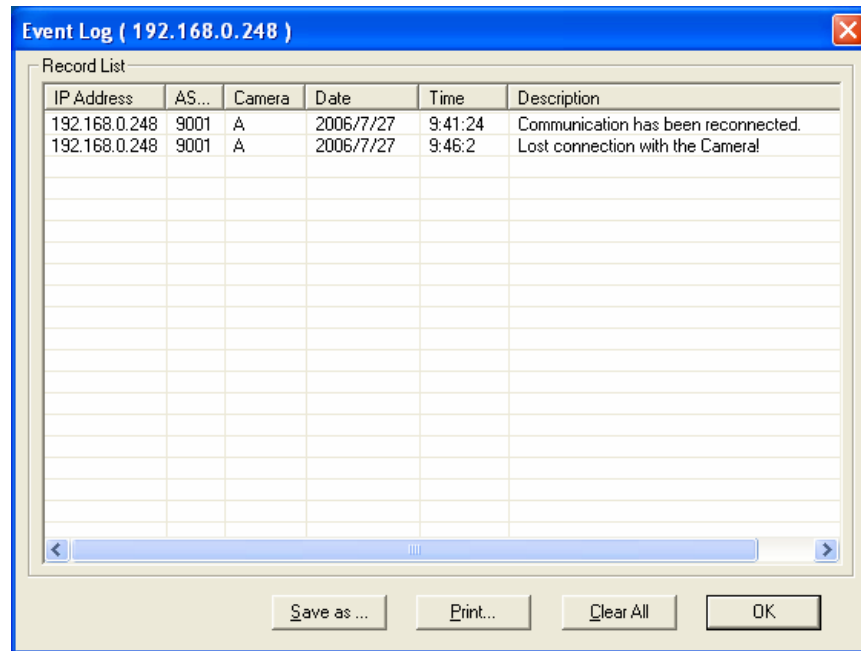


Small icon display

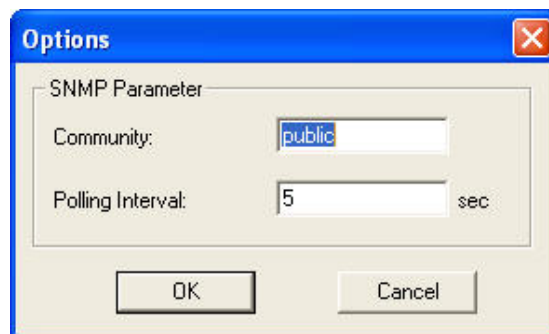
2.3 System



: Display the Event Log (IP address, Port, date, Time, description of event) of the selected ASUS Mimic unit.

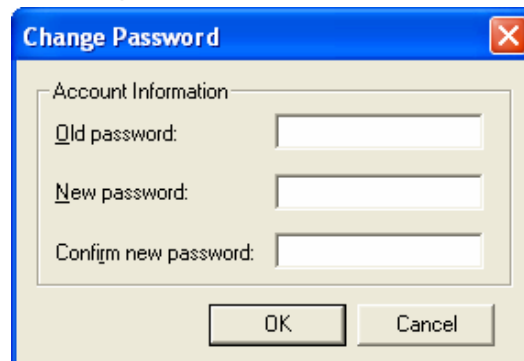


: Set the SNMP Parameter.

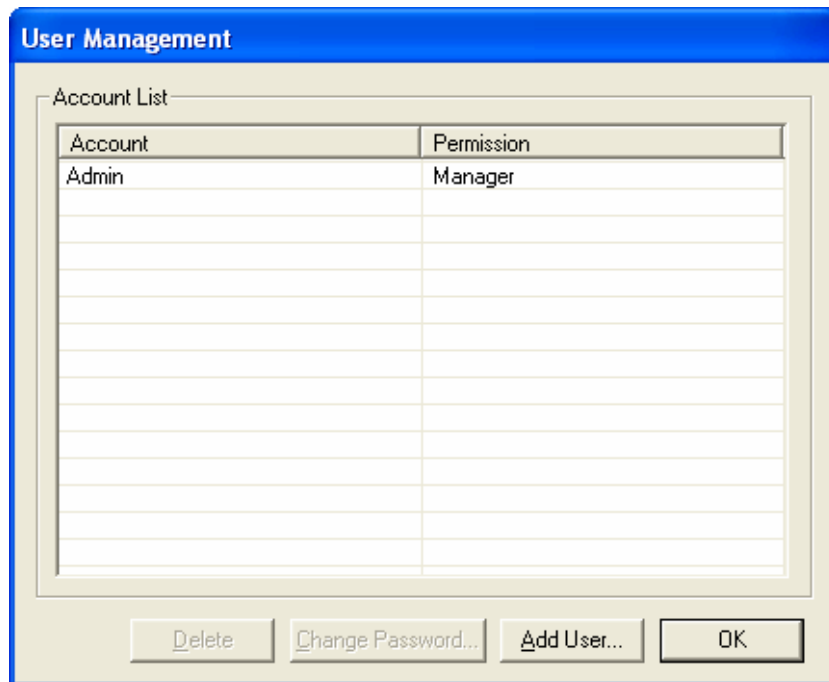


2.4 User

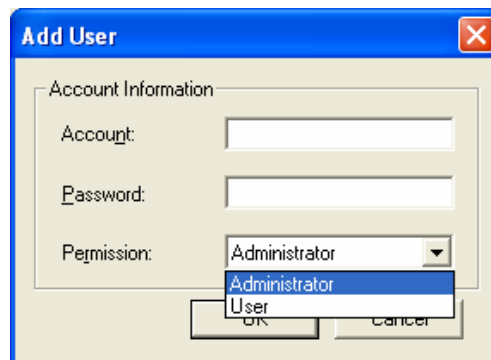
Change Password : “Change Password...” Use this feature to change the User’s login password to MultiMonitor. Either **Administrator** or **User** can change their Account passwords.



“Account Management...” Use this section to Add, Delete or Change the Password of an Account.



Click “Add User...” There is no limit to the number of Account that can be added.



Note: The first account is set to **Administrator** permission. This cannot be changed or deleted.

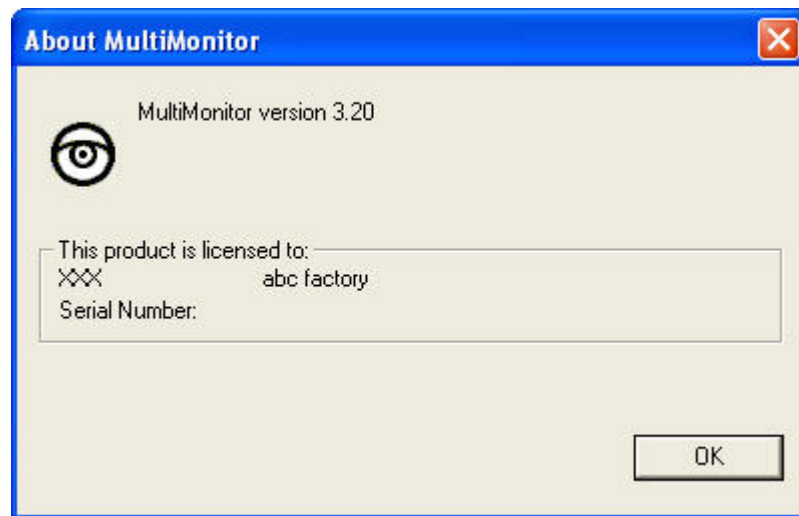
Account: Enter the preferred account name (max of 10 characters). The Account name cannot be edited.

Password: Enter a password (max of 10 characters).
The password is case sensitive and can be left blank.

Permission: Choose **Manager** or **User**.
A **Manager** can change, see, add or delete any of the information in MultiMonitor.
A **User** is not able to Add, Delete or Change Settings of a camera.

2.5 Help

Help : Display MultiMonitor version, Copyright information and product service contact.



2.6 Drag-and-Drop Feature

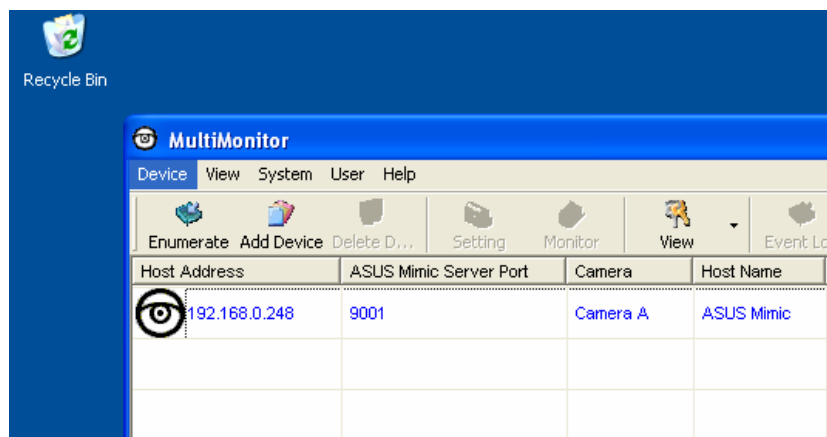
MultiMonitor feature a “Drag-and-Drop to Desktop” function. Double click the icon on your desktop to immediately view the video. Useful when monitoring multiple cameras at a time.

Step 1:

Select the camera location of your choice.

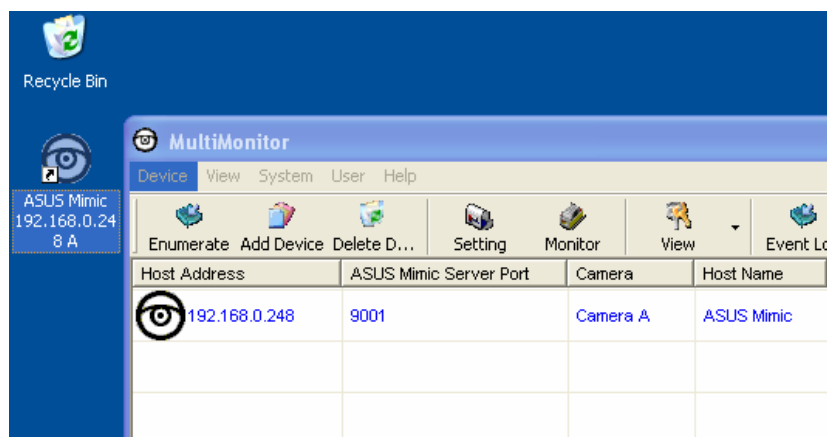
Step 2:

Left click, hold and drag it onto the desktop.



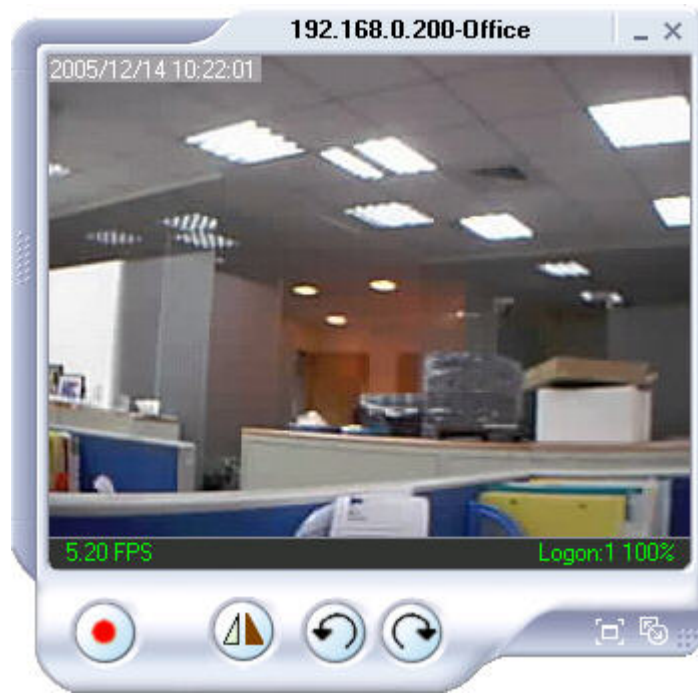
Step 3:

Release the mouse button anywhere on the desktop and a new desktop icon is created there.



Step 4:

Double click on the icon on the desktop, to view the images.



Appendix A: Router Configuration

The following section describes the initial configuration of the router and port forwarding for your router. If your router is not listed here, please refer to the manufacturer's website for assistance with configuring your router to work with ASUS Mimic.

Port Forwarding for ASUS Mimic

ASUS Mimic requires certain ports to be open on your router to allow other computers on the Internet to "see" it on your internal network. Normally, your router will have the less common ports disabled or blocked by the router's built-in firewall. In order for the ASUS Mimic applications to work properly and not be blocked, the firewall settings need to be configured. In each instance there will be a trigger port and incoming port(s), where traffic on the trigger port tells the Firewall to open the incoming ports. The ASUS Mimic require that TCP Port 80 and UDP 9001 (default settings) be opened to the Internet. TCP Port 80 is used for accessing the camera's homepage and UDP Port 9001 is used for authentication and video streaming.

If your Internet service Provider blocks port 80/9001, you'll need to reconfigure your camera and router to other ports such as 81/9002, 82/9003, etc. To change the port settings on the camera, you'll need to use Utility.

Follow the steps below to configure your router, depending on the router manufacturer and model. If your particular router manufacturer or model is not listed below, please contact your router manufacturer for further assistance in configuring the router.

The Following Router manufacturers and models are included in this document:

Brand	Model	Description
3Com	3C857-US	OfficeConnect Cable/DSL Gateway
	3CRWE52196	OfficeConnect Wireless Cable/DSL Gateway
Belkin	F5D6230-3	Wireless Cable/DSL Gateway Router
	F5D7230-4– 54g	Wireless DSL/Cable gateway Router
D-Link	DI-604/DI-614+/DI-624	-
	DI-704/704P	-
	DI714	-
	DI-714P+	-
Dell	TrueMobile 2300	-
	Wireless Broadband Router	
Linksys	BEFSR41	EtherFast Cable/DSL Router
	BEFSX41	Instant Broadband EtherFast Cable/DSL Firewall Router with 4-Port Switch/VPN EndPoint
	BEFW11S4	Wireless Access Point Router with 4-Port Switch – Version 2
Microsoft	MN-100	Wired Base Station

NETGEAR	MN-500	Wireless Base Station
	RP614	Web Safe Router
	MR814	Wireless Router
	MR314	Cable/DSL Wireless Router
	FVS318	ProSafe VPN Firewall
Proxim	ORiNOCO BG-2000	-
Siemens	Broadband Gateway	
	SpeedStream 2602	2-Port DSL/Cable Router
	SpeedStream 2623	Wireless DSL/Cable Router
	SpeedStream 2604	4-port DSL/Cable Router
SMC	SpeedStream 2624	Wireless DSL/Cable Router
	SMC2404WBR	Barricada Turbo 11/22 Mbps Wireless Cable/DSL Broadband Router
	SMC7004VBR	Barricada Cable/DSL Broadband Router
	SMC7004CWBR	Barricada Wireless Cable/DSL Broadband Router
	SMC7004AWBR	Barricade 4-port 11Mbps Wireless Broadband Router

3Com (<http://www.3com.com>)

3C857-US – OfficeConnect Cable/DSL Gateway

3CRWE52196 – OfficeConnect Wireless Cable/DSL Gateway

1. Log into your router using your router IP.
2. On the main page, select **Firewalls** on the left side of the page.
3. Select the **Virtual Servers** tab at the top of the page.
4. Click **New** on the right side of the page to open the Virtual Server Settings dialog box.
5. Type in the camera's IP address in the Server IP address text box. (Look on the ASUS Mimic IP address LCD display for the last 3 digits of the camera's IP address.)
6. Under Local Service, select **Custom**.
7. Under Custom Service Name, type in: **ASUS Mimic**.
8. Under Specify Custom Service Ports, type in: **80, 9001**.
9. Click **Add** to save the settings. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

Belkin (<http://www.belkin.com>)

F5D6230-3 – Wireless Cable/DSL Gateway Router

1. Log into your router using your router IP.
2. On the main page, select **Virtual Server** on the left side of the page under the Securit section.

3. Enter the following information on the page:

Line #1:

Private IP:	Type in the camera's IP address . (Look at ASUS Mimic IP Address LCD display for the last 3 digits of the camera's IP address)
Private Port:	80
Type:	TCP
Public Port:	80

Line #2

Private IP:	Type in the camera's IP address . (Look at ASUS Mimic IP Address LCD display for the last 3 digits of the camera's IP address)
Private Port:	9001
Type:	UDP
Public Port:	9001

4. Click **Enter** to save the settings. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

F5D7230-4 – 54g Wireless DSL/Cable gateway Router

1. Log into your router using your router IP.
2. On the main page, select **Firewall** on the left side of the page.
3. Under Firewall, select **Virtual Servers**.

4. Enter the following information on the page:

Line #1

Enable:	Checked in
Description:	ASUS Mimic - Webpage
Internet Port:	80 to 80
Type:	TCP
Private IP address:	Type in the camera's IP address . (Look on the ASUS Mimic Address LCD display for the last 3 digits of the camera's IP address)

Private Port 80 to 80

Line #2

Enable: Checked in

Description: ASUS Mimic – Camera

Internet Port: 9001 to 9001

Type: UDP

Private IP address: Type in the **camera's IP address**. (Look on the ASUS Mimic Address LCD display for the last 3 digits of the camera's IP address)

Private Port 9001 to 9001

5. Click **Apply Changes** to save the settings. The ASUS Mimic should now be configured o work with your router and be accessible from the internet.

D-Link (<http://www.dlink.com>)

DI-604/DI – 614+/DI-624

1. Log into your router using your router IP.
2. On the main page, click on **Advanced** at the top of the page.
3. On the left side of the page, click on **Virtual Server**. Note: Make sure DMZ host is disabled. If DMZ is enabled, it will disable all Virtual Server entries.

4. Enter the following information on the page:

Enable/Disable:	Enabled
Name:	ASUS Mimic - Webpage
Private IP:	Type in the camera's IP address , for example: 192.168.0.5
Protocol Type:	TCP
Private Port:	80
Public Port:	80
Schedule:	Always

5. Click **Apply** to save the settings.

6. Enter the following information on the page:

Enable/Disable:	Enabled
Name:	ASUS Mimic - Webpage
Private IP:	Type in the camera's IP address , for example: 192.168.0.5
Protocol Type:	UDP
Private Port:	9001
Public Port:	9001
Schedule:	Always

7. Click **Apply** o save the settings. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

DI-704/704P

1. Log into your router using your router IP.
2. On the main page, click on **Advanced** at the top of the page.
3. On the **Virtual Server** page, enter the following information;

For ID#1:

Service Port:	80
Service IP:	Type in the camera's IP address , for example: 192.168.0.5

Enabled/Disabled: Enabled

For ID#2

Service Port: 9001

Service IP: Type in the **camera's IP address**, for example: 192.168.0.5

Enabled/Disabled: Enabled

4. Save your settings. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

DI714

1. Log into your router using your router IP.
2. On the main page, click on **Advanced** at the top of the page.
3. Click on **Virtual Server Settings** on the left side of the page.
4. Enter the camera's IP address into the Internal IP field. Under Service, select **All** and then click **Submit** to save your settings. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

DI-714P+

1. Log into your router using your router IP.
2. On the main page, click on **Advanced** at the top of the page.
3. On the left side of the page, click **Virtual Server**.
4. Enter the following information on the page:

For ID#1:

Service Port: 80

Service IP: Type in the **camera's IP address**, for example: 192.168.0.5

Enabled/Disabled: Enabled

For ID#2

Service Port: 9001

Service IP: Type in the **camera's IP address**, for example: 192.168.0.5

Enabled/Disabled: Enabled

5. Click **Apply** to save your settings. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

Dell (<http://www.dell.com>)

TrueMobile 2300 Wireless Broadband Router

1. Log into your router using your router IP.
2. On the main page, click on **Advanced Settings** at the top of the page.
3. Go to the Port Forwarding section and select Custom Port Forwarding Settings.
4. Check the **Enable** box.
5. Enter the desired name or description in the **Service Name** field such as **ASUS Mimic Web**.
6. In the **Incoming Ports** field, specify port **80** in both boxes.
7. In the **Destination IP Address** field, enter the IP address of ASUS Mimic
8. In the **Destination MAC Address** field, enter the MAC address of ASUS Mimic. You can find the camera's MAC address by either looking at the MAC address sticker on the bottom of the camera or by utilizing setup utility to display the MAC address.

Linksys (<http://www.linksys.com>)

BEFSR41 – EtherFast Cable/DSL Router

BEFSX41 – Instant Broadband EtherFast Cable/DSL Firewall Router with 4-Port Switch/VPN EndPoint

BEFW11S4 – Wireless Access Point Router with 4-Port Switch – Version 2

1. Log into your router using your router IP.
2. On the router's main page, click on **Advanced** at the top of the page.
3. On the next page, click on **Forwarding**.
4. Enter the following information on the page:
Line #1:
Customized Applications: ASUS Mimic – Webpage
Ext. Port: 80 to 80
Protocol: TCP
IP Address: Type in the **camera's IP address**, for example:
192.168.0.5
Enable: Checked in

Line #2:
Customized Applications: ASUS Mimic – Camera
Ext. Port: 9001 to 9001
Protocol: UDP
IP Address: Type in the **camera's IP address**, for example:
192.168.0.5
Enable: Checked in
5. Click on **Apply** to save the settings. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

Microsoft (<http://www.microsoft.com/hardware/broadbandnetworking>)

MN-100 – Wired Base Station

MN-500 – Wireless Base Station

1. Log into your router using your router IP.
2. Open the Bass Station Management Tool, and then click **Security**.
3. On the Security menu, click **Port Forwarding**, and then click **Set up persistent port forwarding**.
4. In the Enable checkbox, check in the checkbox.
5. In the Description box, type a description of the server field such as: **ASUS Mimic Web**.
6. In the Inbound port boxes, type in: **80 – 80**. (i.e. from Port 80 to Port 80)
7. In the Type box, select the protocol as **TCP**.
8. In the Private IP address box, type in the **IP Address** of the ASUS Mimic network camera. For example, type in: 192.168.0.5.
9. In the Private port boxes, these values are automatically filled in from Step 6 and should already show **80 – 80**.
10. On the next empty line, repeat steps 4-9, except this time the Description should be **ASUS Mimic Cam** and the Inbound/Private port boxes should be **9001 – 9001** (UDP). The protocol and private IP address should be the same.
11. Click **Apply** to save the changes you have made. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

NETGEAR (<http://www.netgear.com>)

RP614 – Web Safe Router

MR814 – Wireless Router

1. Log into your router using your router IP.
2. Click **Advanced -> Port Forwarding** on the left side of the page.
3. Click Add Customer Service.
4. Enter the following information on the page:
Service Name: ASUS Mimic – Web
Starting Port: 80
Ending Port: 80
Server IP Address: Type in the **camera's IP address**, for example:
192.168.0.5
5. Click **Apply** to save the settings.
6. Enter the following information on the page:
Service Name: ASUS Mimic – Cam
Starting Port: 9001
Ending Port: 9001
Server IP Address: Type in the **camera's IP address**, for example:
192.168.0.5
7. Click **Apply** to save the settings. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

MR314 – Cable/DSL Wireless Router

1. Log into your router using your router IP.
2. Click **Advanced** on the left side of the page.
3. Click **Ports**.
4. Enter the following information on the page:
Line #1:
Starting Port: 80
Ending Port: 80
Server IP Address: Type in the **camera's IP address**, for example:
192.168.0.5

Line #2:

Starting Port: 9001

Ending Port: 9001

Server IP Address: Type in the **camera's IP address**, for example:
192.168.0.5

5. Click **Apply** to save the settings. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

FVS318 – ProSafe VPN Firewall

1. Log into your router using your router IP.

2. On the main page, click on **Add Service** on the left side of the screen.

3. Click Add Customer Service.

4. In the **Name** field enter a name for the camera, for example: **ASUS Mimic Web**:

Type: TCP

Start Port: 81

Finish Port: 81

5. Click **Apply** to save the settings.

6. There is a bug in the NETGEAR FVS318 1.4 firmware that does not record any entry that uses port 80. If you intend to use port 80, you will initially need to enter 81 for the Start and Finish port, and then edit the entry to port back to 80. Click on **Add Service** on the left side of the screen.

7. In the **Service Table** window select ASUS Mimic Web and click **Edit Service**.

8. Change the **Start** and **Finish** port to **80**. Click **Apply**.

9. On the main page, click on **Add Service** on the left side of the screen and then click **Add Custom Service**. In the **Name** field enter a name for the camera, for example: **ASUS Mimic Cam**.

Type: UDP

Start Port: 9001

Finish Port: 9001

10. Click **Apply** to save the settings.

11. On the main page, click on **Ports** at the side of the screen.

A. Click **Add**.

B. For Service Name select: ASUS Mimic Web

C. Action: **ALLOW always**

- D. Local Server Address: Enter the IP address of the camera
- E. WAN Users Address: **Any**
- F. Click **Apply**.

12. Click Add again.

- A. For Service name select: **ASUS Mimic Cam**
- B. Action: ALLOW always
- C. Local Server Address: Enter the IP address of the camera
- D. WAN Users Address: **Any**
- E. Click **Apply**.

13. Exit the router setup program. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

Proxim (<http://www.proxim.com>)

ORiNOCO BG-2000 Broadband Gateway

1. Log into your router using your router IP.
2. On the router's main page, click on **Setup** at the top of the page.
3. On the left side of the page, click on **Advanced settings -> Port Forwarding**.
4. Check in the checkbox for **Enable Port Forwarding**.
5. Click **New** on the right side of the page.
6. Enter the following information on the page:

Global Port:	80
Local Address:	Type in the camera's IP address , for example: 192.168.0.5
Local Port:	80
Type:	TCP
7. Click **Save** to save the settings.
8. Click **New** on the right side of the page.
9. Enter the following information on the page.

Global Port:	9001
Local Address:	Type in the camera's IP address , for example: 192.168.0.5
Local Port:	9001
Type:	UDP
10. Click **Save** to save the settings.
11. Click **Restart** on the left side of the page to restart your router. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

Siemens (<http://www.speedstream.com>)

SpeedStream 2602 – 2-Port DSL/Cable Router

SpeedStream 2623 – Wireless DSL/Cable Router

SpeedStream 2624 – Wireless DSL/Cable Router

1. Log into your router using your router IP.
2. After you are logged in, click on **Advanced Setup -> Virtual Servers**.
3. Enter the following information on the page:

Line #1:

Private IP:	Type in the camera's IP address , for example: 192.168.0.5 (Look at ASUS Mimic's IP Address LCD display for the last 3 digits of the camera's IP address)
Private Port:	80
Type:	TCP
Public Port:	80

Line #2

Private IP:	Type in the camera's IP address , for example: 192.168.0.5 (Look at ASUS Mimic's IP Address LCD display for the last 3 digits of the camera's IP address)
Private Port:	9001
Type:	UDP
Public Port:	9001

4. Click **Enter** to save the settings. ASUS Mimic should now be configured to work with your router and be accessible from the internet.

SpeedStream 2604 – 4-port DSL/Cable Router

1. Log into your router using your router IP.
2. After you are logged in, click on **Advanced Setup -> Virtual Servers**.
3. Under the Properties section, there are a few entries you'll need to add. Check in the checkbox for **Enable**.
4. Under the first box, next to the Enable checkbox, type in: **ASUS Mimic Web**.
5. Under PC (Server), select your camera or the camera's IP address from the list. If the camera is not listed, select the link titled "My PC is not listed."
6. Leave Protocol as **TCP**.

7. Under Internal Port No type in: **80**
8. Under External Port No type in: **80**
9. Click on **Add** to save these settings.
10. Under the first box, next to the Enable checkbox, type in: **ASUS Mimic Cam**.
11. Under PC (Server), select your camera or the camera's IP address from the list. If the camera is not listed, select the link titled "My PC is not listed."
12. Leave Protocol as **TCP**.
13. Under Internal Port No type in: **9001**
14. Under External Port No type in: **9001**
15. Click on **Add** to save these settings. ASUS Mimic should now be configured to work with your router and be accessible from the Internet.

SMC (<http://www.smc.com>)

SMC2404WBR – Barricada Turbo 11/22 Mbps Wireless Cable/DSL Broadband Router

SMC7004VBR – Barricada Cable/DSL Broadband Router

SMC7004CWBR – Barricada Wireless Cable/DSL Broadband Router

1. Log into your router using your router IP.
2. After you are logged in, click **NAT** on the left side of the page.
3. Click on **Virtual Server** on the left side of the page.

4. Enter the following information on the page:

Line #1:

Private IP: Type in the **camera's IP address**, for example:
192.168.0.5 (Look at ASUS Mimic's IP Address LCD
display for the last 3 digits of the camera's IP address)

Private Port: 80

Type: TCP

Public Port: 80

Line #2

Private IP: Type in the **camera's IP address**, for example:
192.168.0.5 (Look at ASUS Mimic's IP Address LCD
display for the last 3 digits of the camera's IP address)

Private Port: 9001

Type: UDP

Public Port: 9001

5. Click **Apply** to save the settings. ASUS Mimic should now be configured to work with your router and be accessible from the Internet.

SMC7004AWBR – Barricade 4-port 11Mbps Wireless Broadband Router

1. Log into your router using your router IP.
2. Click on **Virtual Server** on the left side of the page.
3. Enter the following information on the page:

For ID #1:

Service Port: 80

Private IP: Type in the **camera's IP address**, for example:
192.168.0.5 (Look at ASUS Mimic's IP Address LCD
display for the last 3 digits of the camera's IP address)

Enable: Checked in

For ID #2:

Service Port: 9001

Private IP: Type in the **camera's IP address**, for example:
192.168.0.5 (Look at ASUS Mimic's IP Address LCD
display for the last 3 digits of the camera's IP address)

Enable: Checked in

4. Click **Save** to save the settings. ASUS Mimic should now be configured to work with your router and be accessible from the Internet.

Appendix B: Methods to Update ASUS Mimic Firmware

You can update ASUS Mimic firmware using any of the following methods.

Method 1: Through ASUS Mimic Web Page

- (1) Enter the ASUS Mimic Web Page
- (2) Go to “About”, click “update software” and you will be automatically linked for update.

Method 2: Using the Utility software

Appendix C: IP Address, Subnet and Gateway

This section discusses Communities, Gateways, IP Addresses and Subnet masking

Communities

A community is a string of printable ASCII characters that identifies a user group with the same access privileges. For example, a common community name is "public". For security purposes, the SNMP agent validates requests before responding. The agent can be configured so that only trap managers that are members of a community can send requests and receive responses from a particular community. This prevents unauthorized managers from viewing or changing the configuration of a device.

Gateways

Gateway, also referred to as a router, is any computer with two or more network adapters connecting to different physical networks. Gateways allow for transmission of IP packets among networks on an Internet.

IP Addresses

Every device on an Internet must be assigned a unique IP (Internet Protocol) address. An IP address is a 32-bit value comprised of a network ID and a host ID. The network ID identifies the logical network to which a particular device belongs. The host ID identifies the particular device within the logical network. IP addresses distinguish devices on an Internet from one another so that IP packets are properly transmitted.

IP addresses appear in dotted decimal (rather than in binary) notation. Dotted decimal notation divides the 32-bit value into four 8-bit groups, or octets, and separates each octet with a period. For example, 199.217.132.1 is an IP address in dotted decimal notation.

To accommodate networks of different sizes, the IP address has three divisions – Classes A for large, B for medium and C for small. The difference among the network classes is the number of octets reserved for the network ID and the number of octets reserved for the host ID.

Class	Value of First Octet	Network ID	Host ID	Number of Hosts
A	1-126	First octet	Last three octets	16,387,064
B	128-191	First two octets	Last two octets	64,516
C	192-223	First tree octets	Last octet	254

Any value between 0 and 255 is valid as a host ID octet except for those values the InterNIC reserves for other purposes

Value	Purpose
0, 255	Subnet masking
127	Loopback testing and interprocess communication on local devices
224-254	IGMP multicast and other special protocols.

Subnetting and Subnet Masks

Subnetting divides a network address into sub-network addresses to accommodate more than one physical network on a logical network.

For example:

A Class B company has 100 LANs (Local Area Networks) with 100 to 200 nodes on each LAN. To classify the nodes by its LANs on one main network, this company segments the network address into 100 sub-network addresses. If the Class B network address is 150.1.x.x, the address can be segmented further from 150.1.1.x through 150.1.100.x

A subnet mask is a 32-bit value that distinguishes the network ID from the host ID for different sub-networks on the same logical network. Like IP addresses, subnet masks consist of four octets in dotted decimal notation. You can use subnet masks to route and filter the transmission of IP packets among your sub-networks. The value "255" is assigned to octets that belong to the network ID, and the value "0" is assigned to octets that belong to the host ID.

For the example above, if you want all the devices on the sub-networks to receive each other's IP packets, set the subnet mask to 255.255.0.0. If you want the devices on a single sub-network only to receive IP packets from other devices on its own sub-network, set the subnet mask to 255.255.255.0 for the devices on the sub-network.

Subnet Mask	Routing and Filtering
0.0.0.0	IP packets are transmitted to all devices.
255.0.0.0	IP packets are only transmitted to devices that are IP that's first octet matches the sender's IP address's first octet.
255.255.0.0	IP packets are only transmitted to devices that are IP that's first two octets match the sender's IP address's first two octets.
255.255.255.0	IP packets are only transmitted to devices that are IP that's first three octets match the sender's IP address's first three octets.

Appendix D: Glossary

The Glossary section defines the terms used in this User Manual

Term	Definition
Ethernet	Local Area Network technology, originally developed by Xerox Corporation, can link up to 1,024 nodes in a bus network. Ethernet provides raw data transfer in a rate of 10 megabits/sec. with actual throughputs in 2 to 3 megabits/sec. using a baseband (single-channel) communication technique. Ethernet uses carrier sense multiple access collision detection (CSMA/CD) that prevents network failures when two devices attempt to access the network at the same time. LAN hardware manufacturers use Ethernet protocol; their products may not be compatible.
Gateway	A computer that attaches to a number of networks and routes packets between them. The packets can be different protocols at the higher levels.
IP	Internet Protocol – The TCP/IP standard protocol defines the IP datagram as the unit of information passed across a network.
IP Address	Internet Protocol Address – A 32-bit address assigned to hosts participating in a TCP/IP network. The IP address consists of network and host portions. It is assigned to an interconnection of a host to a physical network.
MAC	Medium Access Control - The network layer between the physical and the data link layers. Specifically, the physical (hardware) address exists in this layer.
MIB	Management Information Base – The database, i.e. set of variables maintained by a gateway running SNMP
NMS	Network Management Station
OID	Object Identifier – The variables defined in a MIB
Router	A computer that manages traffic between different network segments or different network topologies. It directs the destination IP address. The network media can be different, but the higher-level protocols must be the same.
SNMP	Simple Network Management Protocol – A standard protocol used to monitor IP hosts, networks, and gateways. SNMP defines a set of simple operations that can be performed on the OIDs of the MIBs managed by the monitored Agents. It employs the UDP/IP transport layer to move its object between the Agents and the NMS
TCP/IP	Transmission Control Protocol/ Internet Protocol – A protocol suite used by more than 15 million users with a UNIX association and widely used to link computers of different kinds.