

Network Camera

User's Guide

Software Version 1.1

SNC-M3/M3W



Owner's Record

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____
Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

AC power adaptor

Model No.: 3A-211DA05
(ENG ELECTRIC CO., LTD.)

CAUTION: This unit is for use only with the supplied AC power adaptor. Use with other AC power adaptors may cause hazards such as a fire.

WARNING

This unit has no power switch. Disconnect device of this unit is the mains plug of the AC adaptor.

The mains plug on this equipment must be used to disconnect mains power. Please ensure that the socket outlet is installed near the equipment and shall be easily accessible. In the event of abnormal operations, disconnect the mains plug.

Caution

This installation should be made by a qualified service personnel and should conform to all local codes.

Caution

The apparatus shall not be exposed to dripping or splashing and no objects filled with liquid, such as vases, shall be placed on the apparatus.

For customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If you have any questions about this product, you may call:

*Sony's Business Information Center (BIC) at
1-800-686-SONY (7669)*

*or Write to: Sony Customer Information Services
Center*

*6900-29, Daniels Parkway, PMB 330
Fort Myers, Florida 33912*

Declaration of Conformity (For SNC-M3 only)

Trade Name:	SONY
Model No:	SNC-M3
Responsible Party:	Sony Electronics Inc.
Address:	16450 W. Bernardo Dr., San Diego, CA 92127 U.S.A.
Telephone No:	858-942-2230

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For customers in Canada

This Class B digital apparatus complies with Canadian ICES-003.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

The term "IC:" before the radio certification number only signifies that industry Canada technical specifications were met.

For customers in Europe



Hereby, Sony Corporation, declares that this SNC-M3W is in compliance with the essential requirements and other

relevant provisions of the Directive 1999/5/EC.

For details, please access the following URL:

<http://www.compliance.sony.de/>

ATTENTION

The electromagnetic fields at specific frequencies may influence the picture of the unit.

Voor de klanten in Nederland

- Dit apparaat bevat een vast ingebouwde batterij die niet vervangen hoeft te worden tijdens de levensduur van het apparaat.
- Raadpleeg uw leverancier indien de batterij toch vervangen moet worden. De batterij mag alleen vervangen worden door vakbekwaam servicepersoneel.
- Gooi de batterij niet weg maar lever deze in als klein chemisch afval (KCA).
- Lever het apparaat aan het einde van de levensduur in voor recycling, de batterij zal dan op correcte wijze verwerkt worden.



For Customers in Taiwan only



廢電池請回收

- You should keep in mind that the images or audio you are monitoring may be protected by privacy and other legal rights, and the responsibility for making sure you are complying with applicable laws is yours alone.
- Access to the images and audio is protected only by a user name and the password you set up. No further authentication is provided nor should you presume that any other protective filtering is done by the service. Since the service is Internet-based, there is a risk that the image or audio you are monitoring can be viewed or used by a third-party via the network.

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Features

The SNC-M3/M3W is a network camera equipped with a built-in Web server.

The camera has the following features:

Monitoring using the Web browser

Real-time monitoring of the image and sound from the camera is possible using the Web browser on the computer.

MPEG4 video compression

MPEG4 video compression allows smooth streaming of motion pictures with 30 fps (QVGA size). Motion JPEG video streaming is also possible by selecting the JPEG video compression format.

Offering video streaming in VGA size

The 1/4 type VGA CMOS sensor offers high-quality video streaming in VGA size. (The frame rate in VGA size is less than 30 fps.)

Pan/Tilt camera control

Pan and Tilt functions are equipped, so you can access the desired image frame by remote operation. Up to 8 positions of the camera can be memorized.

Built-in microphone

A microphone (monaural) is built in the camera. Also, the built-in microphone jack (minijack, monaural) accepts a commercially available plug-in-power microphone (rated voltage: 2.4 V DC).

External speaker system can be connected

The line output jack (minijack, monaural) allows connection of a commercially available speaker system with built-in amplifier so that the sound transmitted via the network can be output from the connected speaker system.

Sending the image and controlling peripheral devices by synchronizing with the motion detection function

A mail can be sent to the specified address in MPEG4 mode by synchronizing with the motion detection function, or can be sent periodically to an FTP server in JPEG mode.

Wireless network (SNC-M3W only)

No difficult wiring is required when using the wireless LAN.

Supplied IP Setup Program

The camera is supplied with the IP Setup Program for easy performance of the network setting.

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How to Use This User's Guide

This User's Guide explains how to operate the SNC-M3 or SNC-M3W Network Camera from a computer. The User's Guide is written to be read on the computer display.

As this section gives tips on using the User's Guide, read it before you operate the camera.

Jumping to the related page

When you read the User's Guide on the computer display, click on the sentence to jump to the related page.

Software display examples

Note that the displays shown in the User's Guide are explanatory examples. Some displays may be different from the ones which appear as you operate the application software.

This User's Guide instructs on SNC-M3 and SNC-M3W at the same time. The illustrations of SNC-M3W are mainly used in the instructions.

Printing the User's Guide

Depending on your system, certain displays or illustrations in the User's Guide, when printed out, may differ from those as portrayed on your screen.

Installation Manual (printed matter)

The supplied Installation Manual describes the names and functions of parts and controls of the Network Camera, connecting examples and how to set up the camera. Be sure to read the Installation Manual before operating.

Precautions

This Sony product has been designed with safety in mind. However, if not used properly electrical products can cause fires which may lead to serious body injury. To avoid such accidents, be sure to heed the following.

Heed the safety precautions

Be sure to follow the general safety precautions and the "Operating Precautions."

In case of a breakdown

In case of system breakdown, discontinue use and contact your authorized Sony dealer.

In case of abnormal operation

- If the unit emits smoke or an unusual smell,
- If water or other foreign objects enter the cabinet, or
- If you drop the unit or damage the cabinet:

- 1 Disconnect the camera cable and the connecting cables.
- 2 Contact your authorized Sony dealer or the store where you purchased the product.

Operating Precautions

Operating or storage location

Avoid operating or storing the camera in the following locations:

- Extremely hot or cold places
- Exposed to direct sunlight for a long time, or close to heating equipment (e.g., near heaters)
- Close to sources of strong magnetism
- Close to sources of powerful electromagnetic radiation, such as radios or TV transmitters
- Locations subject to strong vibration or shock

Ventilation

To prevent heat buildup, do not block air circulation around the camera.

Treatment of the lens cover

Take care not to stain, strike or press hard on the lens cover. Such acts may inhibit optimum performance of the camera and may cause a malfunction.

Transportation

When transporting the camera, repack it as originally packed at the factory or in materials of equal quality.

Cleaning

- Use a blower to remove dust from the lens or optical filter.
- Use a soft, dry cloth to clean the external surfaces of the camera. Stubborn stains can be removed using a soft cloth dampened with a small quantity of detergent solution, then wipe dry.
- Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface finishes.

System Requirements

These are the requirements for the computer that displays the image or controls the camera.

Processor

Pentium III, 1 GHz or higher (Pentium 4, 2 GHz or higher recommended)

RAM

256 MB or more

OS

Windows 2000/XP

Web browser

Internet Explorer Ver. 5.5 or Ver.6.0

Preparation

The Preparation section explains what the administrator has to prepare for monitoring the images after installation and connection of the camera.

Assigning the IP Address to the Camera

To connect the camera to a network, you need to assign a new IP address to the camera when you install the camera for the first time.

You can assign an IP address in two ways:

- Using the setup program stored in the supplied CD-ROM (see page 8)
- Using the ARP (Address Resolution Protocol) commands (see page 45)

This section explains how to assign an IP address to the camera using the supplied setup program and how to configure the network.

Before starting, connect the camera to a local network, referring to “Connections” in the supplied Installation Manual.

Use the network cable for connection when you assign a new IP address to the camera (SNC-M3W only).

Consult the administrator of the network about the assigned IP address.

Assigning the IP Address Using the Setup Program

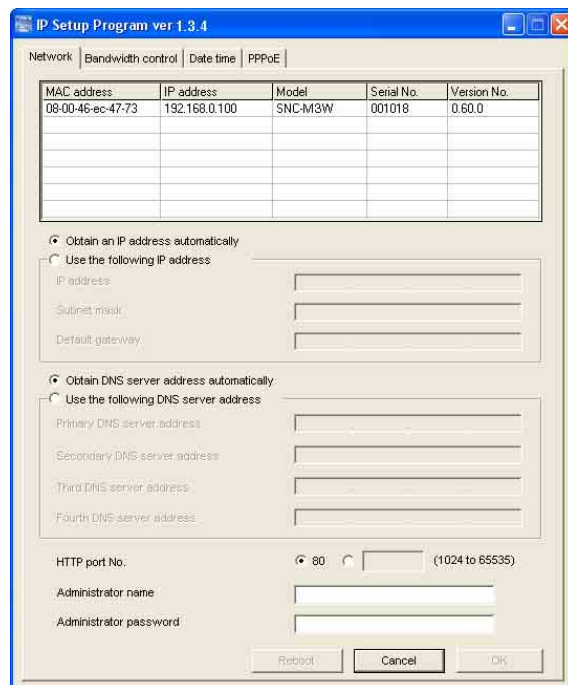
- 1 Insert the supplied CD-ROM disc into your CD-ROM drive.
After a short time a window will open displaying the files on the CD-ROM.
- 2 Click the **Setup** icon of **IP Setup Program**.
The “File Download” dialog opens.
- 3 Click **Open**.

Note

If you click “Save this program to disk” on the “File Download” dialog, you cannot install correctly. Delete the downloaded file, and click Setup icon again.

- 4 Install the IP Setup Program to your computer following the wizard displayed.
If the Software License Agreement is displayed, read it carefully and accept the agreement to continue the installation.

- 5 Start the IP Setup Program.
The program detects the SNC-M3 or SNC-M3W cameras connected to the local network and lists them on the Network tab window.



- 6 Click on the camera to which you want to assign a new IP address in the list.

MAC address	IP address	Model	Serial No.	Version No.
08-00-46-ec-47-73	192.168.0.100	SNC-M3W	001018	0.60.0

The network settings for the selected camera are displayed.

Tip

The factory setting of the camera network is as follows.

IP address: 192.168.0.100
Subnet mask: 255.0.0.0

Wireless LAN setting (SNC-M3W only)

Type: Adhoc
SSID: snc-mw
Channel: 11 ch
WEP: Nothing

7 Set the IP address.

To obtain the IP address automatically from a DHCP server:

Select **Obtain an IP address automatically**.

The IP address, Subnet mask and Default gateway are assigned automatically.

To specify the IP address manually:

Select **Use the following IP address**, and type the IP address, Subnet mask and Default gateway in the relevant boxes.

8 Set the DNS server address.

To obtain the DNS server addresses automatically:

Select **Obtain DNS server address automatically**.

To specify the DNS server addresses manually:

Select **Use the following DNS server address**, and type the Primary DNS server address and Secondary DNS server address in the relevant boxes.

Note

The Third DNS server address and Fourth DNS server address are invalid for this camera.

9 Set the HTTP port No.

Normally select **80** for the HTTP port No. To use another port number, select the text box and type a port number between 1024 and 65535.

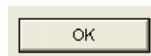
10 Type the Administrator name and Administrator password.

The default settings of both items are “admin.”

Note

You cannot change the Administrator name and Administrator password on this display. To change these items, See “Setting the User — User setting Menu” on page 30.

11 Confirm that all items are correctly set, then click OK.



If “Setting OK” is displayed, the IP address is correctly assigned.

12 To access the camera directly, double-click the camera name on the list.

MAC address	IP address	Model	Serial No.	Version No.
08-00-46-ec-47-73	192.168.0.100	SNC-M3W	001018	0.60.0

The welcome page of the network camera SNC-M3 or SNC-M3W is displayed.



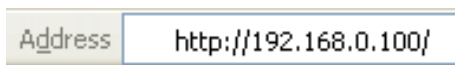
Note

If the IP address is not set correctly, the welcome page does not appear after step 12. In this case, try to set the IP address again.

Accessing the Camera Using the Web Browser

When the IP address has been assigned to the camera, check that you can actually access the camera using the Web browser installed in your computer. Use Internet Explorer as the Web browser.

- 1 Start the Web browser on the computer and type the IP address of the camera in the URL box.



Tip

Input the IP address indicated on the Network tab of IP Setup program.

The welcome page of “Network Camera SNC-M3” or “Network Camera SNC-M3W” is displayed.



- 2 Click **Enter**.
The main viewer is displayed.



When the main viewer is correctly displayed, the IP address assignment is completed.

When the main viewer of the camera is displayed for the first time

When you click **Enter**, “Security warning” is displayed. When you click **OK**, the ActiveX control is installed and the main viewer is displayed.



Notes

- If **Automatic configuration** is enabled in the Local Area Network (LAN) Settings on Internet Explorer, the image may not be displayed. In this case, disable **Automatic configuration** and set the Proxy server manually. For setting the Proxy server, consult your network administrator.
- When you install ActiveX viewer on Windows 2000 or Windows XP, you should have logged in the computer as the Administrator.

Tip

Every page of this software is optimized as display character size **Medium** for Internet Explorer.

To display the Welcome page correctly

To operate the welcome page correctly, set the security level of the Internet Explorer to Medium or lower, as follows:

- 1 Select **Tool** from the menu bar for Internet Explorer, then select **Internet Options** and **Security** tab in sequence.
- 2 Click the **Internet** icon (when using the camera via the Internet) or **Local intranet** icon (when using the camera via a local network).
- 3 Set the slider to **Medium** or lower. (If the slider is not displayed, click **Default Level**.)

When using antivirus software in the computer

- When you use antivirus software in your computer, the camera performance may be reduced, for example, the frame rate for displaying the image may be lower.
- The Web page displayed when you log in the camera uses Java Script. The display of the Web page may be affected if you use antivirus software in your computer.

Basic Configuring by the Administrator

You can monitor the image of the camera only logging in with the initial condition of this network camera. You can also set various functions according to the install position, network condition or purpose of the camera. We recommend you configure the following items before monitoring the image from the camera.

Setting contents	Setting menu
Set the format of the image sent from the camera (MPEG 4 or JPEG).	Video mode (page 24)
Select the quality of the image sent from the camera.	MPEG4 Tab (page 25) JPEG Tab (page 25)
Select the size of the image sent from the camera.	Image size (page 24)
Select whether the audio from the camera microphone is sent or not.	Microphone (page 24)
Accord date and time of the camera with those of the computer.	Date & time Tab (page 22)
Set to send the monitor image attached to a mail.	e-Mail (SMTP) setting Menu (page 31)
Set to send the image to the FTP server	FTP Client setting menu (page 34)
Set the access right of the user for the camera.	Security setting Menu (page 30)

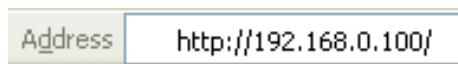
Operating the Camera

The Operating the Camera section explains how to monitor the image from the camera using the Web browser. Use Internet Explorer as the Web browser. The functions of the camera should be set by the Administrator. For setting the camera, see “Administrating the Camera” on page 19.

Logging in to Homepage — Welcome Page

Logging in as a User

- 1 Start the web browser on the computer and type the IP address of the camera you want to monitor.



The welcome page of **Network Camera SNC-M3** or **SNC-M3W** is displayed.



- 2 Click **Enter**.
The main viewer appears.



Control the camera from the main viewer.

Note

If the Welcome page does not activate correctly, the security level of the Internet Explorer may be set to **Medium** or higher. See “To display the Welcome page correctly” on page 10 and check the security level.

Displaying the setting window for the administrator directly

When the administrator sets the camera functions, the setting window can be displayed directly from the welcome page.

- 1 Click **Setting** on the welcome page.
The following dialog appears.



- 2 Enter the user name and password for Administrator, then click **OK**.

The user name “admin” and the password “admin” are set at the factory for the Administrator. You can change them on the User setting menu in the Administrator menu (see page 30).

The Administrator menu appears.



About Viewers

You have to install ActiveX Control when you access to the main viewer at the first time.

When you are going to display the main viewer of the camera for the first time

When you log in the network camera for the first time (clicking **Enter** to enter the main viewer), the Security Warning appears. Click **Yes** and install ActiveX Control. You can use all the functions of the viewer by using ActiveX Control.

Notes

- If **Automatic configuration** is enabled in the Local Area Network (LAN) Settings on Internet Explorer, the image may not be displayed. In this case, disable **Automatic configuration** and set the Proxy server manually. For setting the Proxy server, consult your network administrator.
- When you install ActiveX control on Windows 2000 or Windows XP, you should have logged in the computer as the Administrator.

Tip

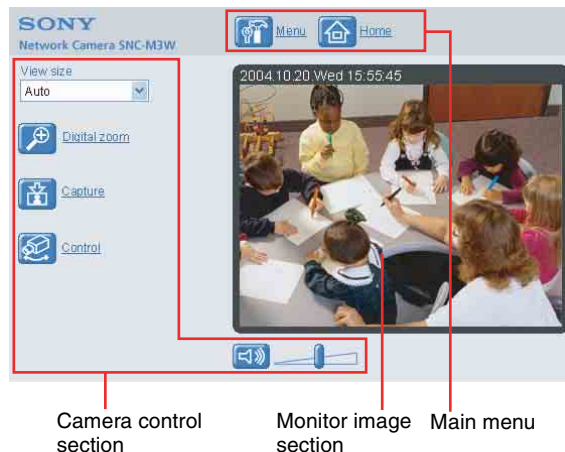
Every page of this software is optimized as display character size **Medium** for Internet Explorer.

Configuration of Main Viewer

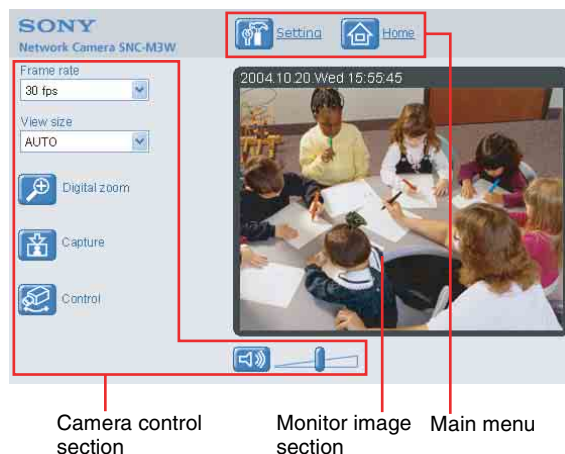
This section explains the functions of the parts and controls of the main viewer. For a detailed explanation on each part or control, see the specified pages.

Main viewer

MPEG4 mode*



JPEG mode*



* Refer to the "Camera setting Menu" about the Video mode (page 24).

Main menu



Setting

Click this button to display the setting menu for Administrator menu. (See “Basic Operations of Administrator Menu” on page 19.)

You can operate this function only when logging in as the administrator.

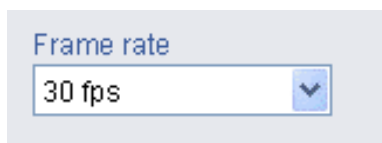


Home

Displays the Welcome page.

Camera Control Section

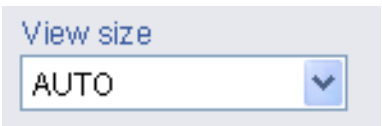
Frame rate



(Displayed only when the camera Video mode (page 24) is set to **JPEG**.)

Selects the frame rate to transmit images.

View size



Selects the view size to be displayed. (page 16)



Digital zoom

Click to change the size of the digital zoom. (page 16)



Capture

Click this button to capture a still image shot by the camera and to store it in the computer. (See “Capturing a monitor image” on page 16.)



Control

Click this icon to operate the camera using the Pan/Tilt function.

When you click it, the  icon appears and you will be able to control Pan/Tilt from the main viewer. (“Panning and tilting from the main viewer” on page 17.)

Preset position



Select the preset position name from the drop-down list. Then, the camera will move to the preset position that you have stored in memory at “Pan/Tilt tab” section (page 26).

Note

The PRESET list box is not displayed when no preset position is memorized.



Pan/Tilt control


Click this icon to display the Pan/Tilt control panel. (page 17)

Pan/Tilt control panel



Click the arrow of the direction that you want to move the camera to.

Keeping the arrow button clicked changes the direction of the camera continuously.




When you click the  button, the camera returns to the direction of the home position of the factory setting.



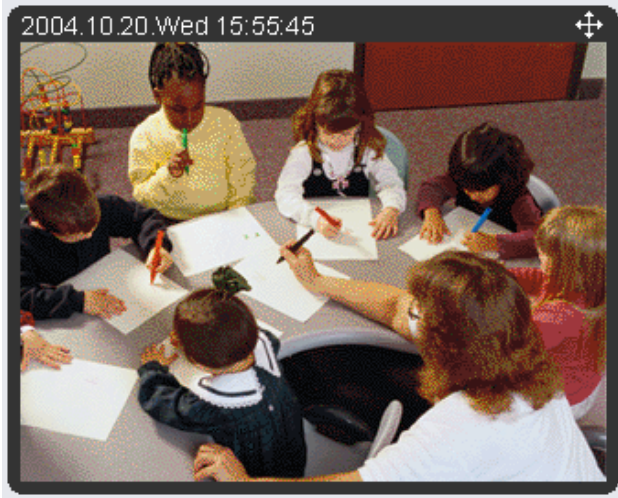
(Volume)

(Displayed when the Microphone (page 24) is set to **On**.)

Drag the bar of  icon to adjust the volume.

When you click  icon, the icon changes to  and the audio output stops. To output the audio, click  again.

Monitor Image



(MPEG4 mode)

The image shot by the camera is shown here. Date and time is displayed at the top of the window.

Tip

When  mark is displayed upper right side of the window, you can use Pan/Tilt control function.

Controlling the Monitor Image

You can monitor the camera image on the monitor window of the main viewer.

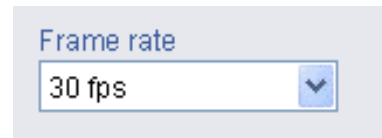
Monitoring the camera image

- 1 Log in to the home page to display the main viewer. You can see how to log in on page 12, “Logging in as a User”.



(MPEG4 mode)

- 2 Select the frame rate (only when the camera Video mode is set to **JPEG** (page 24)).



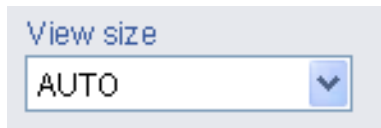
Click the **Frame rate** list box to select the frame rate for transmitting the image. Selectable frame rates are **1, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25** and **30 fps**. The number means the frame number transmitted per 1 second.

If you select **30 fps**, the image is sent at the maximum speed of the connected line (30 fps maximum).

Note

The frame rate options indicate the maximum number of frames that can be transmitted. The number of frames actually transmitted may vary depending on network environments and camera settings (image size and image quality settings).


- 3 Select the view size.




Click **View size** box list box to select the view size from among **Auto**, **640 × 480**, **320 × 240** and **160 × 120**.


Auto is determined by the image size specified with Image size on the Camera setting page (page 24).

Zooming in the monitor image

- 1 Click  Digital zoom icon.
- 2 Click the point you want to zoom in.
The image is expanded by about 2 times with the clicked point at the center.




The digital zoom icon changes to .

- 3 To cancel zooming in, click  icon.

Capturing a monitor image

You can capture a monitoring image as a still image and save it in the computer.

Capturing a monitor image

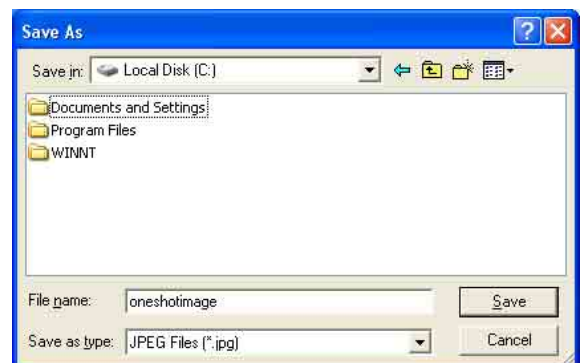
- 1 Monitor the camera image in the monitor window.
- 2 Click  Capture icon.
The still image of the moment when you click is captured, and the still image is displayed in the monitor window.



- 3 To cancel the still image, click **Cancel** or **Close**.

Saving the captured image



- 1 Capture the monitor image.
- 2 Click **Save**.
Save As dialog appears.





- 3 Select **JPEG** or **Bit map** as **Save as type**.
- 4 Type on **File name** and specify **Save in**, then click **Save**.

Operating the camera

You can operate the camera from the main viewer.




When you click the  Control icon in the “Camera” section, the  Pan/Tilt control icon and the PRESET list box are displayed.

Notes

- When  mark is displayed at upper right side of the window, you can use Pan/Tilt control function.
- The PRESET list box is not displayed when no preset position is memorized.
- When **Exclusive control mode** of “Pan/Tilt Tab” (page 26) is set to **On** and when you click the  control icon, the remaining time of operation authority is displayed.


Panning and tilting from the main viewer

You can change the camera direction by using the Pan/Tilt control panel for the monitor image currently displayed.

- 1 Click the  Control icon.
The  Pan/Tilt control icon is displayed.
- 2 Click the  Pan/Tilt control icon.
The Pan/Tilt control panel is displayed.

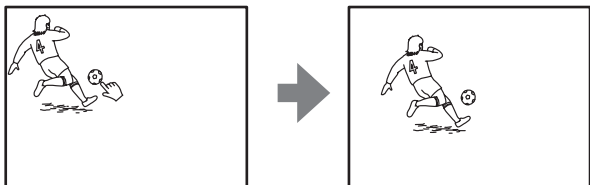


- 3 Click the arrow of the direction that you want to move the camera to.
Keeping the arrow button clicked changes the direction of the camera continuously.

When you click the  button, the camera returns to the direction of the home position of the factory default setting.

Control the camera in the monitor window

Click on the monitor image, and the camera moves so that the clicked portion goes to the center of the display.



Moving the camera to the preset position

PRESET list box

Select the preset position name from the drop-down list. Then, the camera will move to the preset position that you have stored in memory at “Pan/Tilt tab” section (see page 26).

Adminstrating the Camera

The Adminstrating the Camera section explains how to set the functions of the camera by the Administrator. For monitoring the camera image, see “Operating the Camera” on page 12.

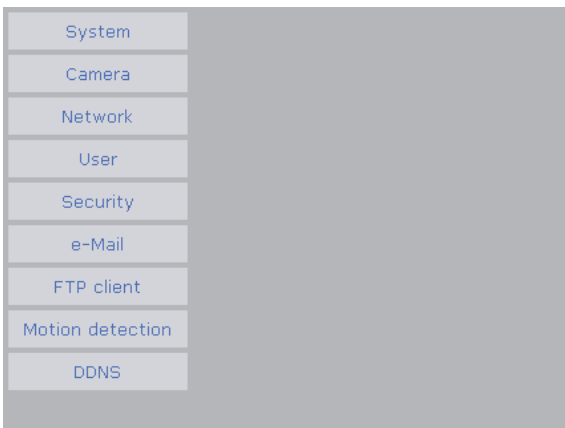
This section explains the basic operations and each option of the Administrator menu.

Basic Operations of Administrator Menu


You can set all functions to suit the user's condition in the Advanced mode menu. Click **Setting** in the welcome page or main viewer page to display the Administrator menu.

How to set Administrator menu

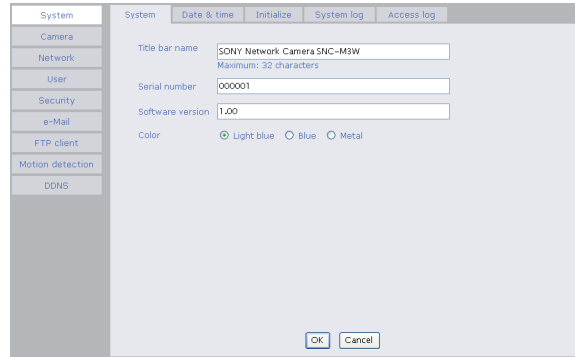
- 1 Log in the home page to display the welcome page. You can see how to log in on page 12 “Logging in as a User”.
- 2 Click **Setting** in the welcome page. The authentication dialog appears. Enter the user name and password for Administrator. Administrator menu appears. The user name “admin” and password “admin” are set at the factory for the Administrator.



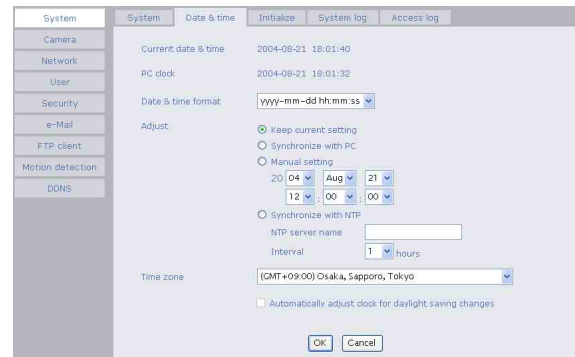
The following steps also display the Administrator menu.

- 1 Click **Enter** in the welcome page to display the main viewer.
- 2 Click  Setting icon in the main viewer.

- 3 Click the menu name (example: System) on the left side of the Administrator menu. The clicked setting menu appears. Example: System setting menu



- 4 Select the tab above the setting menu, and set each setting option in the tab. Example: “System” setting menu “Date & time” tab



See page 20 to 36 for details of setting menu tabs and setting options.

- 5 After setting, click **OK**. The setting contents become active.

Click **Cancel** to invalidate the set values and return to the previous settings.

Buttons common to every setting menu

The following buttons are displayed on the setting menus where they are necessary. The functions of the buttons are the same on every setting page.



Click this button to validate the settings.

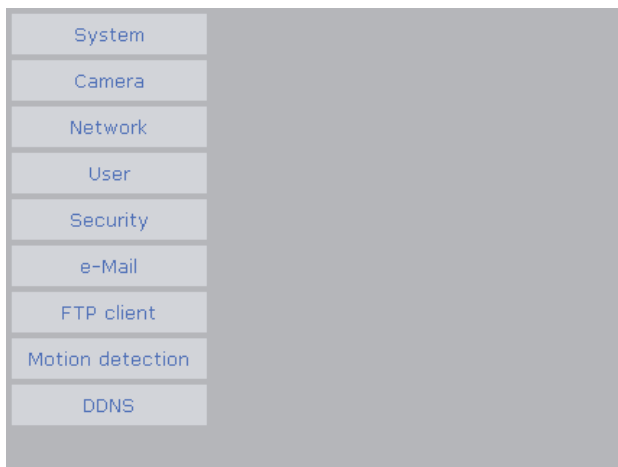
Cancel

Click this button to invalidate the set values and return to the previous settings.

General note on setting menus

After changing a setting on a setting menu, wait at least 10 seconds before turning off the power of the camera. If the power is turned off immediately, the changed setting may not be stored correctly.

Configuration of Administrator Menu



e-Mail (SMTP)

Displays the e-Mail (SMTP) setting menu for sending an e-Mail. (“Sending a mail — e-Mail (SMTP) setting Menu” on page 31)

FTP client

Displays the FTP client setting menu for sending an image file to FTP server. (“Sending Images to FTP Server (JPEG mode only) — FTP Client setting Menu” on page 34)

Motion detection

Displays the Motion detection setting menu for the motion detection function built into the camera. (“Setting the Motion Detection Function — Motion detection setting Menu” on page 36)

DDNS

Displays the *DDNS setting menu for registration and change in DDNS service. (“Using DDNS Service – DDNS Setting Menu” on page 37)

* DDNS: Dynamic Domain Name Service

System

Displays the System setting menu. (“Configuring the System — System setting menu” on page 21).

Camera

Displays Camera setting menu for setting of camera image and audio. (“Setting the Camera Image and Audio — Camera setting Menu” on page 24)

Network

Displays the network setting menu for setting of network connection. (“Configuring the Network — Network setting Menu” on page 27)

User

Displays the user setting menu for setting the user name and the password to log in. (“Setting the User — User setting Menu” on page 30)

Security

Displays the security setting menu for specifying the computer allowed to connect to the camera. (“Setting the Security — Security setting Menu” on page 30)

Configuring the System

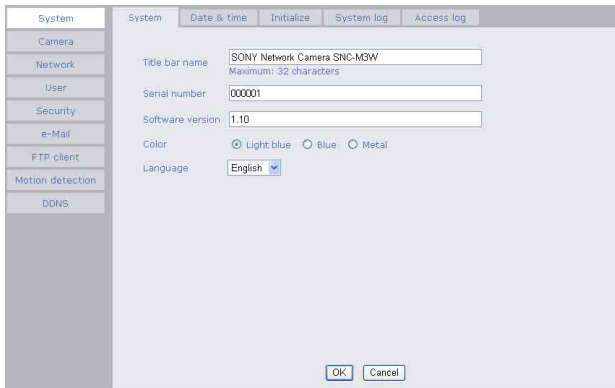
— System setting menu

When you click **System** on the Administrator menu, the System setting menu appears.

Use this menu to perform the principal settings of the software.

The System setting menu is composed of five tabs that are **System**, **Date & time**, **Initialize**, **System Log** and **Access Log**.

System Tab



Title bar name

Type a name to display on the title bar up to 32 characters. The characters typed here are displayed on the title bar of the Web browser.

Serial number

Displays the serial number of the camera.

Software version

The software version of this camera is displayed.

Color

You can select the main viewer color from **Light blue**, **Blue** or **Metal**.

Light blue



Blue



Metal



Notes

- The color of the welcome page and the Administrator setting page cannot be changed.
- To reflect a selected color to the main viewer, log in again after returning to the welcome page.

Language (Only for CE model)

You can set the language of the Administrator setting menu.

Select from among English, French, German, Spanish or Italian.

Note

The language of Welcome page and Main viewer cannot be changed.L

OK/Cancel

See “Buttons common to every setting menu” on page 19.

Date & time Tab

Current date & time

Displays the date and time set on the camera.

Note

After you have purchased the camera, be sure to check the date and time of the camera and set them if necessary.

PC clock

Displays the date and time set on your computer.

Date & time format

Select the format of date and time to be displayed on the main viewer from the drop-down list.

You can select from among **yyyy-mm-dd hh:mm:ss** (year-month-day hour:minute:second), **mm-dd-yyyy hh:mm:ss** (month-day-year hour:minute:second), and **dd-mm-yyyy hh:mm:ss** (day-month-year hour:minute:second).

Adjust

Select to set the day and time.

Keep current setting: Select when you do not need to set the date and time.

Synchronize with PC: Select when synchronizing the camera's date and time with those of the computer.

Manual setting: Select when you want to set the camera's date and time manually.

Select the lower 2-digits of year, month, date, hour, minutes and seconds from each drop-down list.

Synchronize with NTP: Select when synchronizing the camera's date and time with those of the time sever called NTP server (Network Time Protocol). Set the **NTP server name** and the **Interval**.

NTP server name

Type the host name or IP address of the NTP server, up to 64 characters.

Interval

Select the interval at which you want to adjust the camera's time referring to the NTP server's time, between 1 and 24 hours. The set interval is a guide, and does not indicate the exact time.

Note

The setting time may not accord with the exact time according to the network environment.

Time zone

Set the time difference from Greenwich Mean Time in the area where the camera is installed.

Select the time zone where the camera is installed from the drop-down list.

Adjust clock for daylight saving time changes

When you select it, the clock is adjusted according to the daylight saving time of the selected time zone.

Notes

- If the time zone selected on the **Time zone** menu is different from that set on the computer, the time is adjusted using the time zone difference and set on the camera.
- The daylight saving time adjustment works only when **Adjust** is set to **Synchronize with NTP**.

OK/Cancel

See “Buttons common to every setting menu” on page 19.

Initialize Tab

Reboot

Reboots the camera.

Click **Reboot**, and “The SNC-M3 (or SNC-M3W) will be rebooted. Are you sure?” appears. Click **OK** to reboot the camera. It takes about two minutes to start again.

Factory default

Resets the camera to the factory settings. Click **Factory default**, and “Set up data will be initialized. Are you sure?” appears. When you click **OK**, the network indicator and the power indicator on the camera start to blink. After adjustments of the default settings have finished, the camera reboots automatically. Do not turn off the camera until the camera reboots.

Tip

The camera can also be reset to the factory settings by pressing the reset switch on the camera. For details, see the supplied Installation Manual.

Note

When the camera is reset to the factory settings, the IP address you set is cleared. After rebooting of the camera, input the IP address again (page 8).

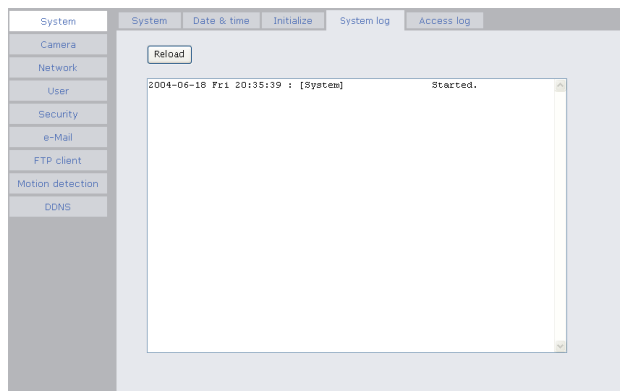
Firmware upgrade

Use this when upgrading the camera software. Click **Browse** and specify the file for upgrading, then click **OK**. “Upgrade firmware? Are you sure?” is displayed. Click **OK** and upgrading starts. After completion, the camera starts again.

Notes

- Use only the upgrade file special to this camera. If you do not, a problem may occur.
- Do not turn off the camera until the upgrading will be completed.

System log Tab



System log

The data of the software activity of the camera are recorded in this. It includes data that are useful when a problem occurs.

Click **Reload** to reload to the latest data.

Access log Tab



Access log

The access record of the camera is displayed. Click **Reload** to reload to the latest data.

Setting the Camera Image and Audio

— Camera setting Menu

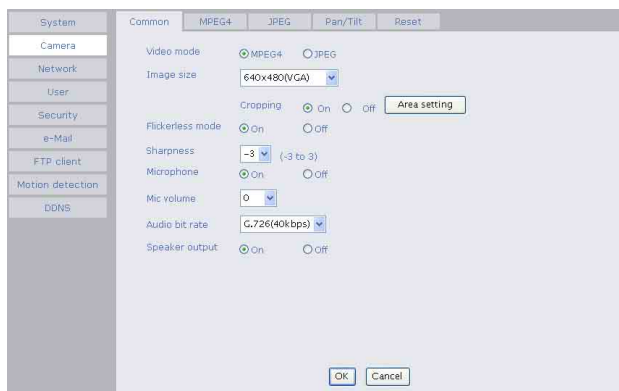
When you click **Camera** on the Administrator menu, the Camera setting menu appears.

Use this menu to set the functions of the camera.

The Camera setting menu consists of five tabs:

Common, MPEG4, JPEG, Pan/Tilt and Reset.

Common Tab



Video mode

Select the output format of the camera image.

MPEG4 or **JPEG** can be selected.

Image size

You can select the image size sent from the network camera.

640 × 480 (VGA), **320 × 240 (QVGA)**, or **160 × 120 (QQVGA)** can be selected.

Cropping

When the image size is set to **640 × 480 (VGA)**, you can crop a portion of the image and display the cropped image on the computer. With the cropping, the transmitting data size, and thus, the network load is reduced and a higher frame rate is obtained.

Select **On** for cropping the image, or **Off** for no cropping.

Note

When Cropping is set to **On**, Motion detection function does not work.

To crop an image

- 1** Set the **Image size** to **640 × 480(VGA)**. The **Cropping** is displayed.
- 2** Set the **Cropping** to **On** and click the **Area setting** button. The cropping area frame in the “Area setting” display appears.
- 3** Specify the cropping area. Click and drag the cropping area frame to move it or change the size of it. The frame indicates the cropping area.

Cropping area frame



- 4** Click **OK** at the bottom of the window. The cropped image is displayed on the main viewer.
- 5** To close the image, click **✖** in the upper-right corner.

Flickerless mode

If the image is flickering by the fluorescent light, select **On** to reduce it.


Note

This mode is available only for CE model.


Sharpness

Select the sharpness in 7 steps, from **-3** to **3**. Selecting **3** gives the image with the highest sharpness.


Microphone

Select whether you send the audio from the built-in microphone or from the  microphone input connector. Select **On** to send the audio from this network camera.

Mic volume

Set the volume level of the audio input from the built-in microphone or the  microphone input connectors. It is adjustable from **-10** to **+10**.

Audio bit rate

Select the bit rate when you send the audio from the built-in microphone or from the  microphone input connectors. **40, 32, 24** or **16** kbps can be selected.

Note

When you have changed the initial audio setting, noise may occur in the audio on rare occasions. In this case, the new setting may not be active, so press **OK** button again to make it active.

Speaker output

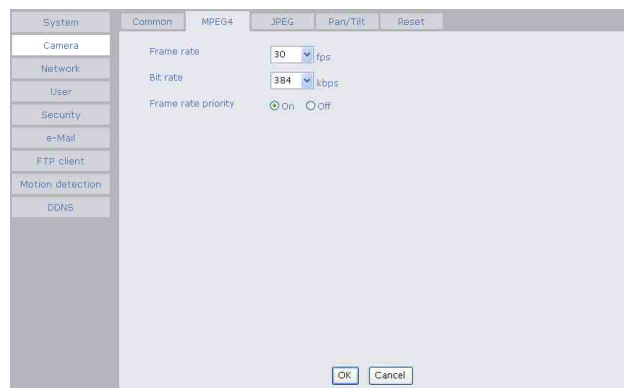
Set whether you output the audio which is input to the audio input connectors of your computer to the speaker (active speaker for example) connected to the camera line output connectors by using SNC audio upload tool included in the supplied CD-ROM.

Select **On** to accept the audio data transmission from SNC audio upload tool.

OK/Cancel

See “Buttons common to every setting menu” on page 19.

MPEG4 Tab



Frame rate

Set the frame rate of the MPEG image. Selectable values are 1, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25 and 30 fps. The unit is “fps” (frame number sent per a second).

Bit rate

Set the bit rate of MPEG image transmission for a line. Selectable values are 64, 128, 256, 384, 512, 768, 1024, 1536 and 2048 kbps.

Notes

- The selected frame rate and bit rate are a tentative value. The actual frame rate and bit rate may be

different according to the image size, the shooting scene or the network condition.

- During wireless connection or low band network connection, noise may occur in the audio on rare occasions according to the camera image and audio settings. Set them to the effective values to suit the network band in use.

Frame rate priority

The frame rate of an image may fall depending on the network situation. If **On** is selected, the bit rate will be adjusted so that the frame rate does not drop.

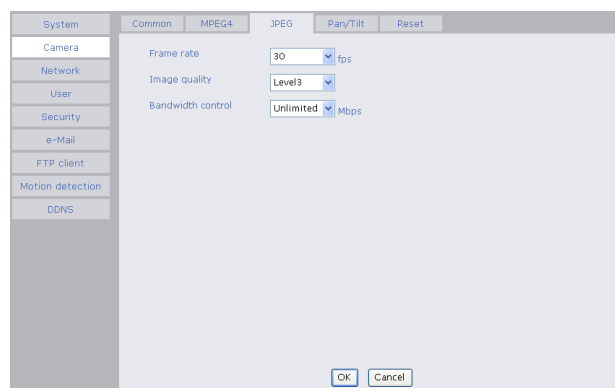
Note

The maximum frame rate is the value which is set in **Frame rate**.

OK/Cancel

See “Buttons common to every setting menu” on page 19.

JPEG Tab



Frame rate

Set the maximum frame rate of JPEG image that can be monitored on the computer. Selectable frame rates are 5, 6, 8, 10, 15, 20, 25 and 30 fps.

Image quality

Set the quality of JPEG image. Selectable values are from **Level 1** to **Level 5**. Selecting level 5 gives the image with the highest quality.

Note

During low band network connection such as a wireless, noise may occur in the audio on rare occasions according to the camera image and audio settings. Set **Frame rate** or **Image quality** to suit the network band in use.

Bandwidth control

When the video mode is set to JPEG, the network bandwidth can be limited. Selectable bandwidths are 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 2.0, 3.0, 4.0, and Unlimited Mbps. When you do not wish to limit the bandwidth, select **Unlimited**.

OK/Cancel

See “Buttons common to every setting menu” on page 19.

Pan/Tilt Tab

Preset number

Select a preset number 1 to 8 from the list box.

Preset position name

Type a preset position name for the selected preset number up to 32 characters.

Call

When you click this button, the camera moves to the Pan/Tilt position of the selected preset number.

Add

When you click this button, the current camera position is stored in the preset number.

Delete

When you click this button, the information for the camera position of the currently selected preset number is deleted.

Preset position list (Preset No. / Name)

Displays the preset position names of all the preset numbers.

Exclusive control mode

Limits the pan/tilt operation of the camera.

If you select **Off**, multiple users can pan/tilt the camera at the same time. The operation by the user accessed later has priority.

If you select **On**, only one user can pan/tilt the camera. The period of operation allowed to one user is determined by the Operation time setting. If a user tries to operate the camera while another user is operating it, the control right is limited according to the Operation time and Maximum wait number settings.

Operation time

Sets the period that one user can operate the camera exclusively, between 10 and 600 sec.

This setting is valid when the Exclusive control mode menu is set to **On**.

Max access user

Sets the maximum number of users that can wait to control the camera while another user is operating the camera. The selectable number is between 0 and 10. This setting is valid when the Exclusive control mode menu is set to **On**.

Note

After you have changed a setting of the Exclusive control mode menu, click **Refresh** of the browser to update for the changed setting.

Reset Tab

Reset

Click **Reset**, and “Camera menu setting is reset to default. Are you sure?” is displayed. To reset to default, click **OK**.

Configuring the Network

— Network setting Menu

When you click **Network** on the Administrator menu, the Network setting menu appears.

Use this menu to configure the network to connect the camera and the computer.

The Network setting menu consists of 3 tabs: **Network**, **Wireless network** and **Dynamic IP address notification**.

Network Tab

This section provides the menus for connecting the camera through the network cable.

The screenshot shows the Network Tab configuration interface. On the left is a sidebar with menu items: System, Camera, Network, User, Security, e-Mail, FTP client, Motion detection, and DDNS. The main area has three tabs: Network, Wireless network, and Dynamic IP address notification. Under the Network tab, the MAC address is 00-00-00-00-00-00. There are two radio buttons for IP address assignment: 'Obtain an IP address automatically (DHCP)' (selected) and 'Use the following IP address'. Below these are input fields for IP address (192.168.0.100), Subnet mask (255.255.255.0), and Default gateway. There are two radio buttons for DNS server address assignment: 'Obtain DNS server address automatically' (selected) and 'Use the following DNS server address'. Below these are input fields for Primary DNS and Secondary DNS. At the bottom, there are radio buttons for HTTP port number: '80' (selected) and a text box for a custom port number (1024 to 65535). 'OK' and 'Cancel' buttons are at the bottom right.

MAC address

Displays the MAC address of the camera.

Obtain an IP address automatically (DHCP)

DHCP server is installed on the network. Select it when the IP address is assigned by DHCP server. IP address is assigned automatically.

Note

When you set **Obtain an IP address automatically (DHCP)**, make sure that DHCP server is working on the internet.

Use the following IP address

Select this when a fixed IP address is set.

IP address

Type the IP address of the camera.

Subnet mask

Type the subnet mask.

Default gateway

Type the default gateway.

Obtain DNS server address automatically

Select this to obtain the address of DNS server automatically. It can be set only when **Obtain an IP address automatically (DHCP)** is selected.

Note

When you select “Obtain DNS server address automatically”, make sure that DHCP server is active on the network.

Use the following DNS server address

Select this when you set the fixed address as the IP address of DNS server.

Primary DNS server

Type the IP address of the primary DNS server.

Secondary DNS server

Type the IP address of the secondary DNS server, if necessary.

HTTP port number

Normally select **80**. If you want to use a port number other than 80, select the text box and type a port number between 1024 and 65535.

Note

When you have set the HTTP port number to a number other than 80 on the Network setting page or in the Setup Program, access the camera by typing the IP address of the camera on the web browser, as follows:

Example: when HTTP port number is set to 8000

Address

OK/Cancel

See “Buttons common to every setting menu” on page 19.

Wireless network Tab (SNC-M3W only)

Use this to set connection for the wireless network.

SSID

Type the ID to identify the wireless network you want to access using up to 32 ASCII characters (alphanumeric). For your security, be sure to change the factory setting.

Type

Select the network connection type **Adhoc mode** or **Infrastructure mode**. Select **Adhoc mode** when connecting to the computer directly, or select **Infrastructure mode** when connecting to the computer via an access point or a radio router. When you select **Adhoc mode**, specify the wireless channel.

Channel

Set the channel when making adhoc connection is set up.

Tip

Set the channel of the computer and a camera at the same value.

Note

For better wireless communication, check for the channel used by the operating network and select the channel that is used less.

WEP

Select **On** when you use the WEP (Wired Equivalent Privacy) keys, or **Off** when you do not use it. The WEP key data settings are valid only when the WEP menu is set to **On**.

WEP key data

Specify up to 4 WEP keys. The length of a WEP key is 40 or 104 bit. A 104-bit WEP key has a higher security level than a 40-bit key. You can type the WEP key either

in hexadecimal numbers (0 to 9 and A to F) or ASCII characters (alphanumeric).

When the Type menu is set to **Infrastructure mode**, the WEP key should be the same as that of the access point. When the Type menu is set to **Ad hoc mode**, the WEP key should be the same as that of the communication client.

Notes

- To activate the wireless connection, unplug the network cable and turn on the camera.
- The wireless connection and the wired connection using the network cable cannot be used simultaneously.

Dynamic IP address notification Tab — Notifying the IP Address

When the DHCP setting is set to **On** on the Network tab, you can send notification of the completion of the network settings using the SMTP or HTTP protocol.

e-mail (SMTP) notification

Select **On** to send an E-mail when the DHCP setting is completed.

SMTP server name

Type the name or IP address of the SMTP server you want to use for sending an E-mail, up to 64 characters.

Authentication

Select the authentication required when you send an e-Mail.

None: Select when no authentication is necessary when an e-mail is sent.

SMTP authentication: Select when authentication is necessary when an e-mail is sent.

POP before SMTP: Select when **POP before SMTP** is necessary when an e-mail is sent.

POP server name

It is necessary when the **POP before SMTP** is selected in **Authentication**.

Type the POP (receiving mail) server name up to 64 characters. Or type the IP address of the POP server. This setting is necessary when the SMTP server which sends e-mails performs authentication using the POP user account.

User name, Password

Type the user name and Password of the user who has the mail account. This setting is necessary when the SMTP server which sends e-Mails performs authentication.

Recipient e-Mail address

Type the recipient e-Mail address up to 64 characters. You can specify only one recipient e-Mail address.

Administrator e-Mail address

Type the e-Mail address of the camera administrator, up to 64 characters. This is used as the reply address or the address for a system mail from the mail server.

Subject

Type the subject/title of the e-Mail up to 64 characters.

Message

Type the text of the e-Mail up to 384 characters. You can describe the information of the acquired IP address, etc. using the special tags mentioned below.

HTTP notification

Select **On** to output a command to the HTTP server when the DHCP setting is completed. Using this function, you can configure a useful system, for example, to view the access log stored in the HTTP server or start an external CGI program.

URL

Specify the URL to send HTTP commands, up to 256 characters. The URL is normally composed as follows:

```
http://ip_address[:port]/path?parameter
```

ip_address: Type the IP address or host name of the host to which you want to connect.

:port: Specify the port number to which you want to connect. If you want to use the well-known port number 80, you do not need to input this value.

path: Type the command name.

parameter: Type the command parameter if necessary. You can use the special tags mentioned below for the parameters.

Proxy server name

When you send HTTP commands via a proxy server, type the name or IP address of the proxy server, up to 64 characters.

Proxy port number

Specify the port number when you send HTTP commands via the proxy server. Set a port number between 1024 and 65535.

Method

Select the HTTP method **GET** or **POST**.

OK/Cancel

See “Buttons common to every setting menu” on page 19.

About the special tags

You can use the following five special tags to allow the notification of the settings acquired by the DHCP, such as an IP address. Type the tags in the parameter section of the URL that you describe in the Message field of the HTTP.

<IP>

Use this tag to embed the IP address acquired by the DHCP in the text or parameter.

<HTTPPORT>

Use this tag to embed the port number of the specified camera in the text or parameters.

<MACADDRESS>

Use this tag to embed the MAC address of the interface whose IP address you have acquired by the DHCP, in the text or parameter.

<MODELNAME>

Use this tag to embed the camera's model name (SNC-M3 or SNC-M3W) in the text or parameter.

<SERIAL>

Use this tag to embed the camera's serial number in the text or parameter.

Setting the User — User setting Menu

When you click **User** on the Administrator menu, the User setting menu appears.
Use this menu to set the user names and passwords of Administrator and up to 9 kinds of users (User 1 to User 9), and the access right of each user.

Administrator, User 1 to 9

Specify **User name**, **Password**, **Re-type password** and **Pan/Tilt** for each user ID.

User name

Type a user name between 5 and 16 characters.

Password

Type a password between 5 and 16 characters.

Re-type password

To confirm the password, type the same characters as you typed in the Password box.

Pan/Tilt

Set whether or not to permit use of the Pan/Tilt function of the camera. Check it to permit it.

Viewer authentication

Set whether the user is authenticated or not when the main viewer is displayed.
When you select **On**, the main viewer is displayed to suit the authenticated user. When you select **Off**, the main viewer page can be displayed without authentication.

OK/Cancel

See “Buttons common to every setting menu” on page 19.

Setting the Security — Security setting Menu

When you click **Security** on the Advanced mode menu, the Security setting menu appears.
Use this menu to limit the computers that can access the camera.

Security function

To activate the security function, select **On**.
If you do not wish to use the security function, select **Off**.

Default policy

Select the basic policy of the limit from Allow and Deny for the computers specified on the Network address/Subnet 1 to Network address/Subnet 10 menus below.

Network address/Subnet 1 to Network address/Subnet 10

Type the IP addresses and subnet mask values you want to allow or deny access to the camera.
You can specify up to 10 IP addresses and subnet mask values. For a subnet mask, type 8 to 32.
Select **Allow** or **Deny** from the drop-down list on the right for each IP address/subnet mask .

Tip

The subnet mask value represents the bit number from the left of the network address.
For example, the subnet mask value for “255.255.255.0” is 24.
If you set “192.168.0.0/24” and “Allow,” you can allow access from the computers having an IP address between “192.168.0.0” and “192.168.0.255”.

Note

You can access the camera even from a computer having an IP address whose access right is set to **Deny**, if you enter the user name and password set for the Administrator boxes in the User setting menu.

OK/Cancel

See “Buttons common to every setting menu” on page 19.

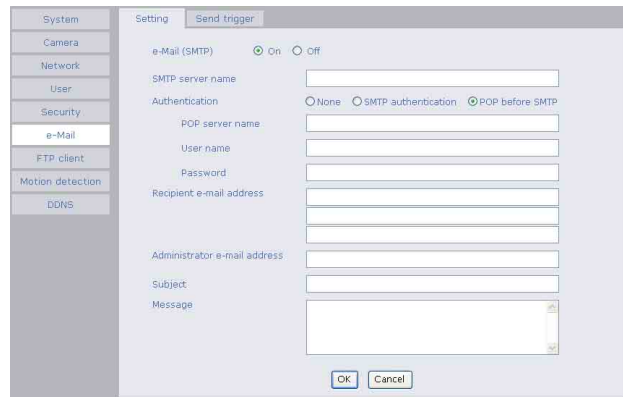
Sending a mail — e-Mail (SMTP) setting Menu

When you click **SMTP** on the Administrator menu, the SMTP setting menu appears.

By using Mail (SMTP) function, you can send a mail of an alarm message by synchronizing with the built-in motion detection function. The image file can also be sent periodically.

e-Mail (SMTP) setting menu is composed of two tabs: **Setting** and **Send trigger**.

Setting Tab — Setting the SMTP Function



e-Mail (SMTP)

Select **On** when you use the e-Mail (SMTP) function. The common setting options are displayed below. If you do not wish to use the e-Mail (SMTP) function, select **Off** and click **OK**.

Notes

- During transmission of an image file via mail, the frame rate and operation performance of the monitor image of the main viewer decline.
- You cannot send an audio file by using the mail sending function.

SMTP server name

Type the SMTP server name up to 64 characters, or the IP address of the SMTP server.

Authentication

Select the authentication required when you send an e-mail.

None: Select if no authentication is necessary when an e-mail is sent.

SMTP authentication: Select if authentication is necessary when an e-Mail is sent.

POP before SMTP: Select if POP before SMTP authentication is necessary when an e-mail is sent.

POP server name

It is necessary when the **POP before SMTP** is selected in **Authentication**.

Type the POP (receiving mail) server name up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server which sends e-mails performs authentication using the POP user account.

User name, Password

Type the user name and Password of the user who has the mail account. This setting is necessary when the SMTP server which sends e-Mails performs authentication.

Recipient e-Mail address

Type the recipient e-Mail address up to 64 characters. You can specify up to three recipient E-mail addresses.

Administrator e-Mail address

Type the Administrator e-Mail address up to 64 characters. This address is used for reply mail and sending system messages from the SMTP server.

Subject

Type the subject/title of the e-Mail up to 64 characters.

Message

Type the text of the e-Mail up to 384 characters. (A line break is equivalent to 2 characters.)

OK/Cancel

See “Buttons common to every setting menu” on page 19.

Send trigger Tab — Setting mail sending mode

You can set to send mails periodically or to send mails ry synchronizing with the built-in motion detection function.

Video mode	MPEG4	JPEG
Periodical sending	You can send a message only.	You can send a message with an image attached.
Motion detection sending	You can send a message only.	—

Periodical sending (JPEG mode only)

Select **On** when you want to send mails periodically. If you select **Off**, Periodical sending is not executed.

Interval

Type the interval at which you want to send a mail periodically. You can set the hour (H) and minutes (M) between 30 minutes and 24 hours (one day).

File attachment

Set whether an image file is attached to the mail sent or not.

When **On** is selected, the image file made by the settings below is attached. When **Off** is selected, only the message is sent.

Note

This is displayed when the Video mode is set to **JPEG**.

Synchronize preset position

An image of the specified preset position can be sent at periodical sending.

When you select **On**, an image of the specified preset position will be sent. When you select **Off**, the image file of the position the camera currently faces will be sent.

Note

If the user control the camera with the Pan/Tilt function while the Synchronize preset position is active, the Synchronize preset position will be stopped.

Preset number

Selects the preset number of the image you want to send by synchronizing with the preset position from among the preset positions you have already set (page 26).

Resume time

Sets the interval period from stopping to recommencement of synchronizing with the preset position by user control in the range from 5 to 600 seconds.

Image file name

Type the file name of the image attached to the mail up to 10 alphanumeric, - (hyphen) and _ (under score).

Suffix

Select a suffix added to the file name used when the mail is sent.

None: The name of the sent file will be the Image file name.

Date & time: The date & time suffix is added to the Image file name.

The date & time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits) and 00 (2 fixed digits), thus 14-digit number is added to the file name.

Sequence number: A consecutive number of 10 digits between 0000000001 and 4294967295 is added to the Image file name.

Sequence number clear

Click **Clear** and the suffix of the sequence number returns to 1.

Motion detection sending (MPEG4 mode only)

Select **On** to activate mail sending by synchronized with the motion detection function. When you select **Off**, the motion detection sending function is not activated.

Click **Motion detection** button, and the Motion detection setting menu is displayed. You can set the motion detection sending function (page 36).

Notes

- **Motion detection** works only when the camera Video mode is set to **MPEG4** and the **Cropping** is set **Off**.
- In the motion detection sending, you cannot attach an image file to the mail.

OK/Cancel

See “Buttons common to every setting menu” on page 19.

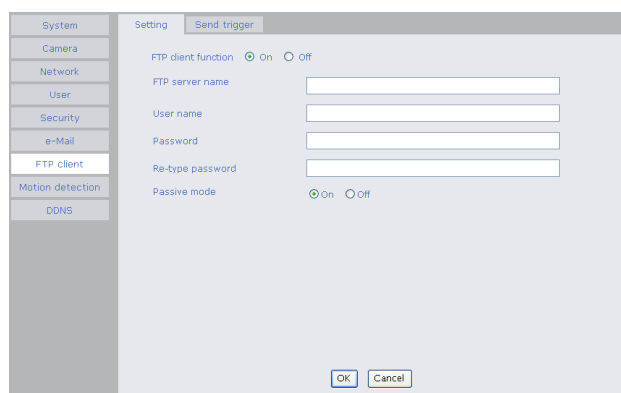
Sending Images to FTP Server (JPEG mode only)

— FTP Client setting Menu

When you click **FTP client** on the Administrator menu, the FTP client setting menu appears.

Use this menu to set up for capturing and sending still images to an FTP server. By using FTP client function, you can send the image file periodically.

Setting Tab — Setting the FTP Client Function



FTP client function

To activate the FTP client function, select **On**. The FTP client setting page appears.

When you do not wish to use the FTP client function, select **Off**.

Notes

- The FTP client function works when the Video mode is set to **JPEG** mode
- The frame rate and operability on the main viewer may decrease while a file is being transmitted by the FTP client function.

FTP server name

Type the FTP server name to upload still images up to 64 characters, or the IP address of the FTP server.

User name

Type the user name for the FTP server.

Password

Type the password for the FTP server.

Re-type password

To confirm the password, type the same characters as you typed in the Password box.

Passive mode

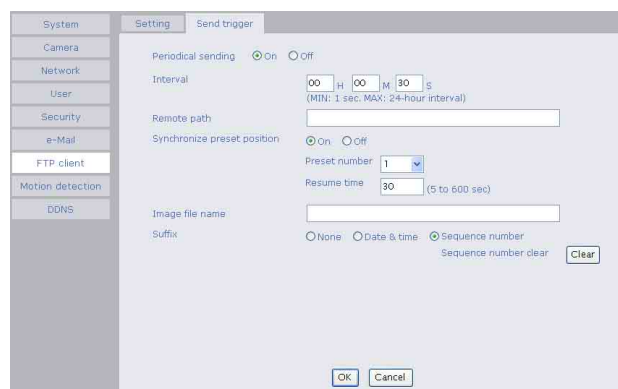
Set whether you use the passive mode of FTP server or not when connecting to FTP server. Select **On** to connect to FTP server using the passive mode.

OK/Cancel

See “Buttons common to every setting menu” on page 19.

Send trigger Tab — Setting the Periodical FTP sending mode

You can set to send an image file to FTP server periodically.



Periodical sending

Select **On** when you want to use periodical sending. If you select **Off**, Periodical sending is not executed.

Note

The Periodical sending function works when the Video mode is set to JPEG mode.

Interval

Type the interval at which you want to send images to the FTP server periodically. You can set the hour (H), minutes (M) and seconds (S) between 1 second and 24 hours (one day).

Note

The actual interval may be longer than the set value, depending on the image size, image quality setting, bit rate and the network environments.

Remote path

Type the remote path up to 64 characters.

Synchronize preset position

An image of the specified preset position can be sent at periodical sending.

When you select **On**, an image of the specified preset position will be sent. When you select **Off**, the image file of the position the camera currently faces will be sent.

Notes

- If the user control the camera with the Pan/Tilt function while the Synchronize preset position is active, the Synchronize preset position will be stopped.
- The Periodical sending function works when the Video mode is set to JPEG mode.

Preset number

Selects the preset number of the image you want to send by synchronizing with the preset position from among the preset positions you have already set (page 26).

Resume time

Sets the interval period from stopping to recommencement of synchronizing with the preset position by user control in the range from 5 to 600 seconds.

Image file name

Type the file name of the image sent to FTP server up to 10 alphanumeric characters, - (hyphen) and _ (under score).

Note

You cannot send the audio file by using the periodical sending function of FTP.

Suffix

Select a suffix to be added to the file name sent to FTP server.

None: The name of the sent file will be the Image file name.

Date & time: The date & time suffix is added to the Image file name.

The date & time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits) and 00 (2 fixed digits), thus 14-digit number is added to the file name.

Sequence number: A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 is added to the Image file name.

Sequence number clear

Click **Clear** and the suffix of the sequence number returns to 1.

OK/Cancel

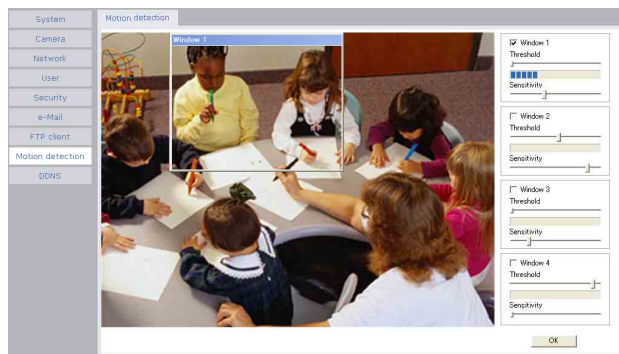
See “Buttons common to every setting menu” on page 19.

Setting the Motion Detection Function — Motion detection setting Menu

When you click **Motion detection** on the Administrator menu, the Motion detection setting menu appears. You can set the conditions to activate the built-in motion detection function in this menu. This is the same menu with the setting menu which is displayed when you click **Motion detection** in Send trigger of e-Mail (SMTP) setting menu.

Note

The motion detection function can activate or be set only when the Video mode of the camera is set to **MPEG4** and the **Cropping** is set **Off**.



The Motion detection setting menu is composed of the following five parts.

Monitor display

You can monitor the moving image and sets the detection window.

Window 1 to 4 check box

When you check it, the specified Window is displayed on the monitor display.

Threshold slider bar

Set the Threshold level so as to judge whether there has been any motion in the camera image or not.

Motion detection indicator

The moving level of the present shooting image inside the specified Window is shown.

Sensitivity slider bar

Use it to set the detection sensitivity of the monitoring image.

When the slider bar is moved to the left end, the sensitivity will be 0 and any motion will not be detected. The right end is the maximum sensitivity.

Setting the Motion Detection Area, Sensitivity and Threshold level

Set the motion detection working area, the sensitivity and the threshold level as follows:

- 1** Check Window 1 check box. Window 1 is shown on the monitor display.
- 2** Settle Window 1 in the area you want to set Motion detection. Click and drag Window 1 to move it or change the size of it.
- 3** Set the Sensitivity of Motion detection. Adjust it referring to the level indicator of Motion detection. To increase the sensitivity, move the Sensitivity slider bar to the right. To decrease, move it to the left.
- 4** Set the Threshold level of Motion detection. Adjust the Threshold slider bar in the same way of step **3** to set the level the camera executes motion detection.
- 5** If necessary, set the Motion detection working areas, the sensitivities and the Threshold level of the other Windows 2, 3, 4 by following steps **1** to **4**.

Notes

- Each setting is inactive until **OK** button is clicked.
- Before using the Motion detection, perform the operation test to confirm correct operation.
- The Motion detection may not operate correctly in the following cases:
 - while changing a setting on the Camera setting menu
 - when the object is dark
 - when the camera is installed in an unstable place that causes vibration to the camera
 - when a small bit rate (64 kbps, 128kbps) is selected in **Bit rate** setting of MPEG4
 - when **Frame rate priority** of MPEG 4 is set to **ON**
 - while moving Pan/Tilt

Using DDNS Service – DDNS Setting Menu

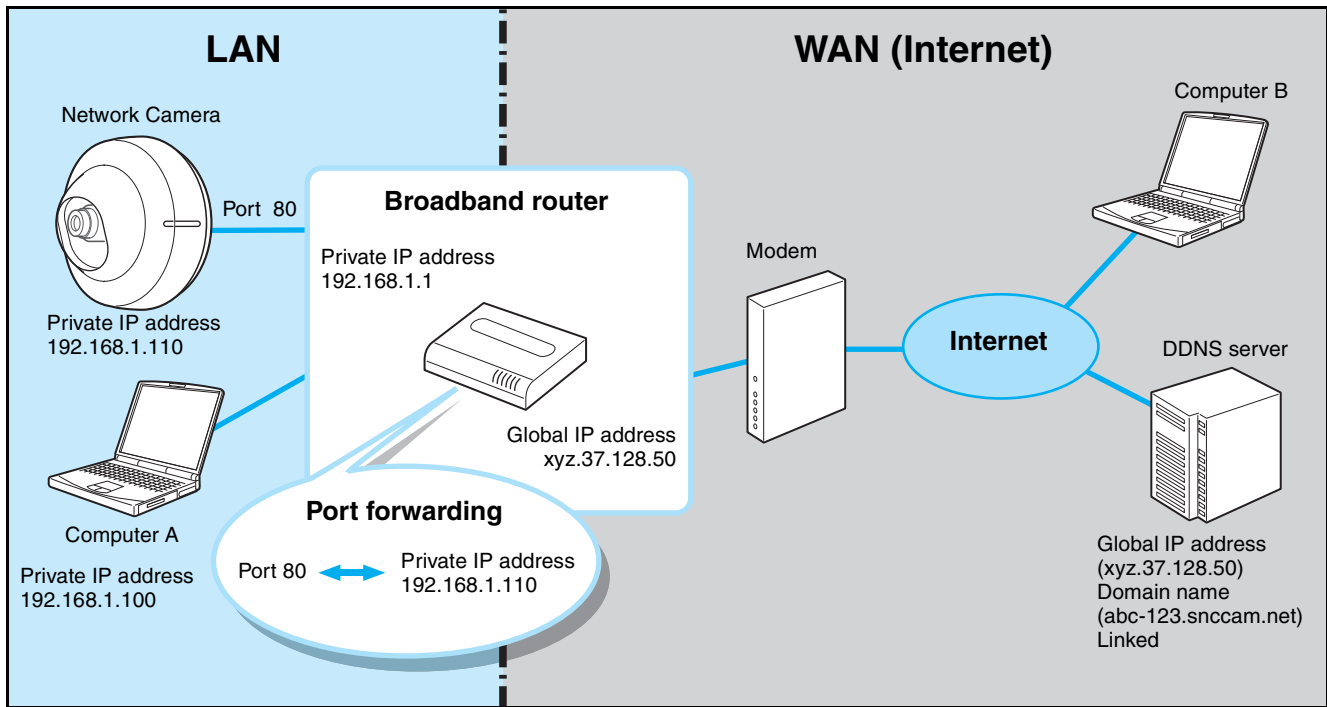
Click **DDNS** of Administrator Menu to display the DDNS setting menu. In this menu you can use the Network Camera DDNS Service and link the camera host name to the domain name. If you use this service, you can access the camera using an URL such as “http://(your host name).snccam.net”. For details of DDNS service, access the following URL.

URL: <http://www.register-snccam.net/>

Note

To use this function, the camera must be connected to the Internet.

To use this function, you need knowledge of broadband router and port forwarding. The following shows an example of the most basic system configuration for using the network camera in the Internet.



Set up the camera and broadband router (hereinafter called router) as follows in the DDNS setting menu page before registering for DDNS service.

- 1 Connect the camera to the router, and set up the network.
Refer to “Assigning the IP Address to the Camera” (page 8) of “Preparation” or “Configuring the Network — Network setting Menu” (page 27).

Note

Be sure to perform DNS setting for the camera. Type the IP address assigned by the Internet Service Provider in the Primary/Secondary DNS server.

- 2 Open the setup window of the router, and set the port forwarding to the IP address set in the camera. (**For example:** For the settings in the diagram above, set as follows.
Port 80 ↔ Private IP address 192.168.1.110)

Notes

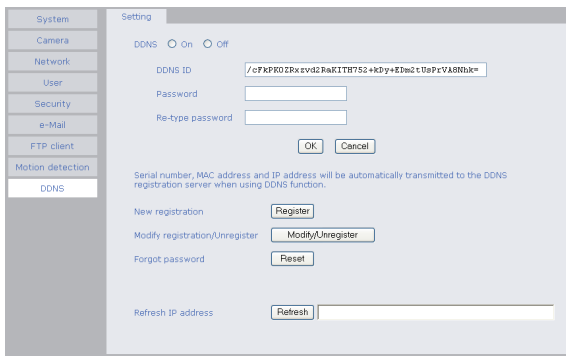
- Refer to the User’s Guide provided with the router for details of port forwarding setup. Port forwarding may not be supported on some routers, or may be called by a different name. If necessary, contact the router manufacturer for details.
- If using a port other than 80, set the same port number (in the range 1024 to 65535) in the camera’s setting menu and for port forwarding on the router.

3 On the router's setup menus, check the global IP address (for example, xyz.37.128.50 in the above diagram) on the WAN side currently assigned by the provider. Type the global IP address in the PC browser and check if you can access the camera.

Notes

- To specify a port number other than 80 for port forwarding, type a colon (:) after the global IP address and then type the port number. (For example: http://xyz.37.128.50:1024)
- On some routers, you cannot access the WAN side global IP address via a network on the LAN side of the router. In this case, check it using another Internet access.
- After the above setup, the camera can be accessed from any computer connected to the Internet. If you want to restrict access to the camera, perform the user setting and security setting procedures in the camera setting menus.
- If you cannot access the camera after performing the above setup, consider the following possibilities.
 - Ⓐ The IP address that the provider assigns may not be a global IP address.
 - Ⓑ The port number (for example, Port 80) set for port forwarding may be blocked by the Internet Service Provider.
 - Check with the provider.
 - Ⓒ The port number set for port forwarding may be blocked by security software or a firewall installed in the computer.
 - Check the settings of the security software or firewall.

4 Click **DDNS** of the Administrator setting menu to display the DDNS setting menu.



The followings are explanations for the setting menu item.

[DDNS]

Select whether to use the dynamic DNS function or not by on or off. Even after you have registered for the dynamic DNS service, set it to off when you are not using it.

[DDNS ID]

This is the ID special for the equipment which is used for the dynamic DNS service. It is used when you proceed with New registration, Modify/Unregister, Forgot password and so on in the registration site.

When you access the registration site through the DDNS setting menu page, the DDNS ID will have already been input.

[Password]

[Re-type password]

Type the password set for dynamic DNS access. It must consist of 4 to 16 alphabetic or numeric characters.

[New registration]

It is used when you proceed with New registration for the dynamic DNS service. For details, refer to the instructions below.

[Modify registration/Unregister]

This is used to jump to the Modify/Unregister page of the registration site. For details, refer to "Modify Registration/Unregister Process" given in the registration site (<http://www.register-snccam.net>).

[Forgot password]

This is used to jump to the Forgot password page of the registration site.

[Refresh IP address]

This is used when you proceed with manual updating of the IP address for the DDNS server. The camera routinely proceeds with updating of the IP address at about hourly intervals, so you do not need to use this button.

When you have pressed the reset button or proceeded with Factory default after registration for dynamic DNS, you can restart the dynamic DNS service by this button.

- 5** In the DDNS setting window of the camera, select **On** of **DDNS**, type password, and then click **OK**.

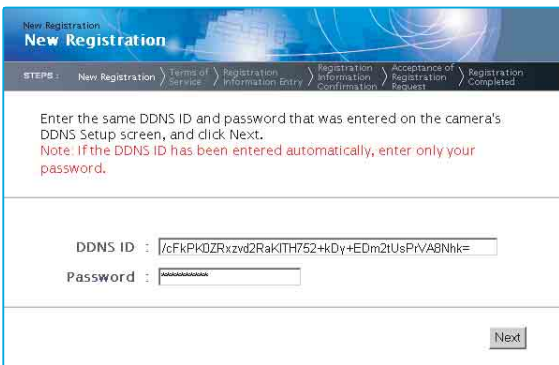
The password for the DDNS service is saved in the camera, and it prepares for DDNS service registration.

Note

When using the DDNS function, the serial number of camera, MAC address and IP address will be sent to the server. You should agree it before you go to the next step.

- 6** Click the **Register** button to proceed with new registration for the DDNS service. The camera proceeds with “Product information registration” for the registration server to prepare for your registration for DDNS service.

When “Product information registration” is done properly, the new window of the browser is displayed and a “New registration” display of the registration site opens. Type the same DDNS ID and password as in the DDNS setting menu of the camera, then click **Next**.



Note

A DDNS ID has been already input when the window is displayed. You do not have to input it.

- 7** Read the “Terms of Service”, and click **I agree** after agreement.

- 8** Type all items in the registration form, then click **Next**.



[Host name]

Type the host name you want to apply to. Usable characters are alphabets, numbers and hyphens (-). 3 to 16 characters can be used. The last character cannot be a hyphen.

[E-Mail address]

[E-Mail address (for confirmation)]

Type the e-Mail address of the person registered. Take care to type it correctly because a confirmation e-Mail will be sent to it for actual registration of the dynamic DNS service.

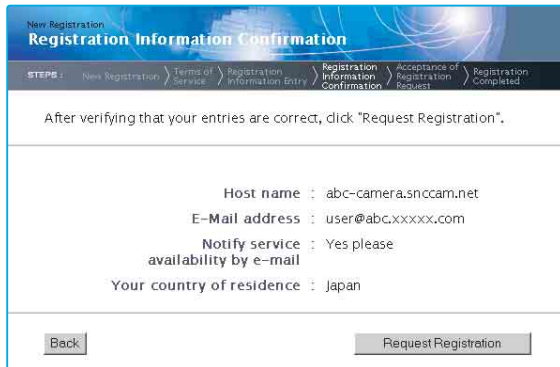
[Notify service availability by e-mail]

Set whether you wish to receive e-Mails which give information on the management condition of the service (stopping of the service by interference, and so on) or not.

[Your country of residence]

Select your country or region.

- 9** Verify the entered registration information, then click **Request Registration**.
A message appears, advising that your registration request has been accepted and that a confirmation e-Mail has been set.



The screenshot shows a web interface titled "New Registration" with a sub-header "Registration Information Confirmation". A breadcrumb trail at the top indicates the current step: "STEPS: New Registration / Terms of Service / Registration Information Entry / Registration Information Confirmation / Acceptance of Registration Request / Registration Completed". The main content area contains the instruction: "After verifying that your entries are correct, click 'Request Registration'." Below this, the following registration details are displayed:

- Host name : abc-camera.snccam.net
- E-Mail address : user@abc.xxxxx.com
- Notify service : Yes please
availability by e-mail
- Your country of residence : Japan

At the bottom of the form, there are two buttons: "Back" and "Request Registration".

- 10** The confirmation e-Mail should arrive at the e-Mail address you specified for your registration. Within one hour of clicking the **Request Registration** button, access the URL provided in the e-Mail.
- 11** Registration is now complete.
It takes a few minutes until the host name is reflected to the system. You can then access and check.

This section explains how to use the application software and commands, including the supplied CD-ROM.

Using the Supplied Setup Program

Explains the functions except the Network tab in the Setup Program.

To install the Setup Program, to assign the IP address and to set the network, see “Assigning the IP address to the Camera” on page 8 in “Preparations”.

Starting the Setup Program

Select **Program** from Start menu of Windows, then select **Program, IP Setup Program** and **IP Setup Program** in sequence.

The IP Setup Program starts.

Network tab appears. The IP Setup Program detects cameras connected to the local network and lists them on the Network tab window.

Bandwidth Control Tab

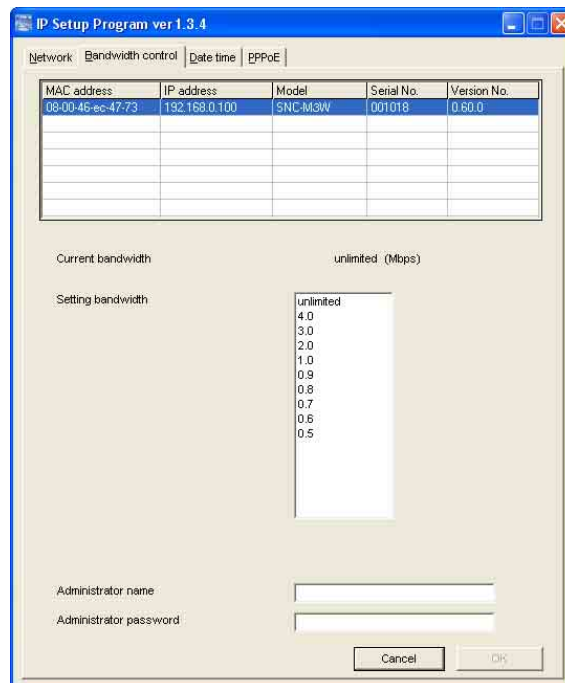
The communication bandwidth can be set when the Video mode of the camera is set to **JPEG**.

Note

When the Video mode of the camera is set to **MPEG4**, the bandwidth cannot be changed.

- 1 Click the Bandwidth control tab to display the bandwidth setting window.

The current bandwidth is displayed in **Current bandwidth**.

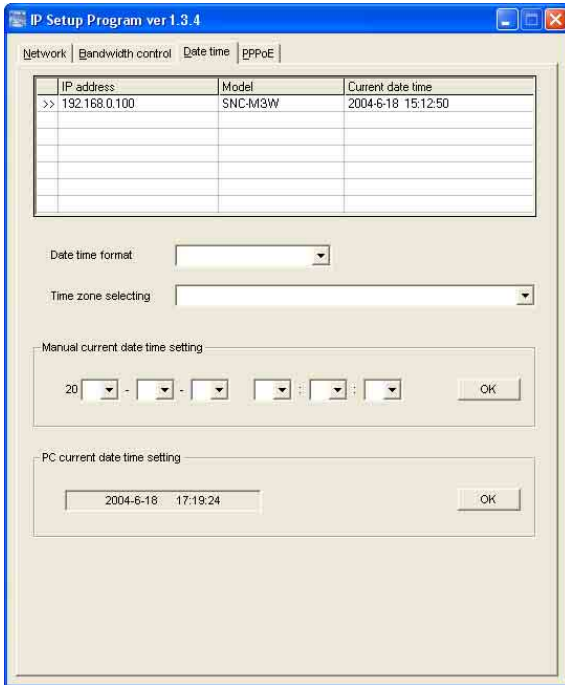


- 2 Click to select the camera to set the bandwidth from the list box.
- 3 Click to select the desired bandwidth from the **Setting bandwidth** list box.
- 4 Type the **Administrator name** and **Administrator password** in each box.
- 5 Click **OK**.
If “Setting OK” is displayed, the bandwidth setting is completed.

Date time Tab

You can set the date and time on the camera.

- 1 Click the Date time tab to display the date/time setting window.



- 2 Click to select the camera you want to set the date and time for.

You can select multiple cameras and set the date and time simultaneously.

- 3 Select the date/time format from the **Date time format** drop-down list.
- 4 Select the area where the camera is installed from the **Time zone selecting** drop-down list.
- 5 Set the date and time.

You can set the date and time in two ways.

Manual current date time setting

Set the current date and time on the **Manual current date time** setting boxes, and click **OK**. The setting boxes are for the year (last two digits), month, date, hour, minutes and seconds from left to right.

PC current date time setting

The date and time set on the computer is displayed in the **PC current date time** setting box. Click **OK** on the right to set the camera's date and time to the displayed computer's date and time.

Notes

- Due to network properties, there may be a slight difference between the displayed computer's date and time and those set on the camera.
- The PPPoE cannot be set in this unit.

Rebooting the Camera

Click **Reboot** on the Network tab to reboot the camera. It will take about two minutes to start again.

Using the SNC audio upload tool — Transmitting Audio to Camera

The supplied SNC audio upload tool allows you to transmit sound from the computer to the camera. This section explains the setup and operations of the SNC audio upload tool.

The SNC audio upload tool supports the following audio data to be transmitted.

Audio CODEC	Transmission rate
G.726	40 kbps
G.726	32 kbps
G.726	24 kbps
G.726	16 kbps

Note

Only one administrator can transmit sound to the camera. Meanwhile, other users with administrator ID and a password will not be able to transmit sound to the camera.

Installing the SNC audio upload tool


- 1 Insert the supplied CD-ROM disc into your computer CD-ROM drive. After a short time a window will open displaying the files on the CD-ROM.
- 2 Click the **Setup** icon of **SNC audio upload tool**. The “File Download” dialog opens.
- 3 Click **Open**.

Note

If you click “Save this program to disk” on the “File Download” dialog, you cannot install correctly. Delete the downloaded file, and click Setup icon again.

- 4 Install the SNC audio upload tool following the wizard displayed. If the Software License Agreement is displayed, read it carefully and accept the agreement to continue the installation.

Connecting the Camera to the Computer

- 1 Connect a speaker to the  (line output) jack on the camera.
- 2 Connect a microphone to the microphone input jack on the computer.

Note

If the microphone input jack of the computer is not set correctly, no sound is transmitted from the computer and nothing is output from the speaker connected to the camera.

Set the microphone input jack from the control panel of Windows.

On Windows 2000

- 1 Select **Sounds and Multimedia** from Control Panel.
- 2 Click **Volume** in the **Sound Recording** section on the Audio tab. The Recording Control window opens.
- 3 Check **Select** in the **Microphone** section.

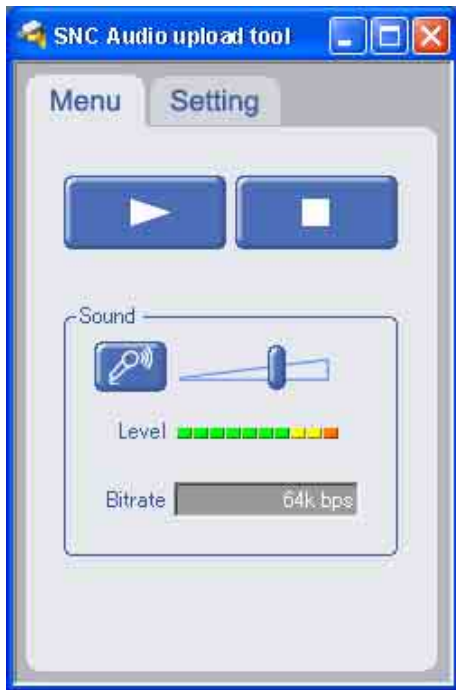
On Windows XP

- 1 Select **Sounds and Audio Device** from Control Panel.
- 2 Click **Volume** in the **Sound Recording** section on the Audio tab. The Recording Control window opens.
- 3 Check **Select** in the **Microphone** section.

Using the SNC audio upload tool

When you start the SNC audio upload tool, the following window is displayed.

Menu tab




▶ (start)/■(stop)


Click ▶ (start) to start sound transmission. The transmission speed is displayed in the Bitrate box during transmission. You can adjust the microphone volume and enable/disable the muting, if necessary. To stop the sound transmission, click ■(stop).

Note

If you change **IP Address**, **Port**, **CODEC** on the Setting tab during the sound transmission, the changed settings will be effective after the transmission.

Sound adjustment and indicators

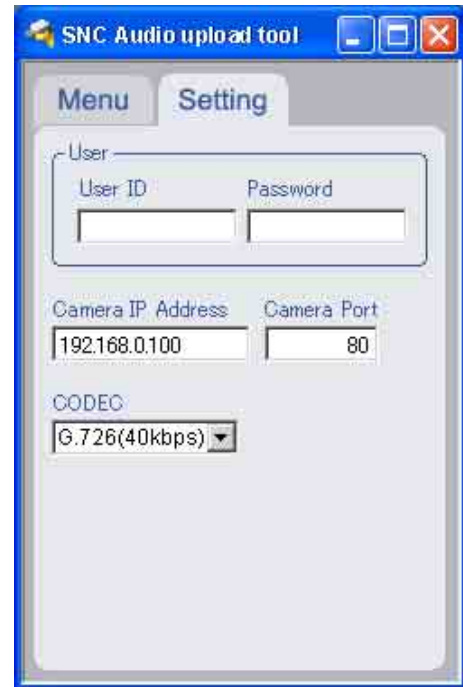
Adjust the microphone input volume by moving the  slider bar. You can adjust the volume even during the transmission.

Click the  microphone icon to enable/disable the sound muting.

The transmission rate is displayed in the Bitrate box.

The microphone input volume is displayed at the Level.

Setting tab



User

Set the **User ID** and **Password** for the administrator. The default setting of the User ID for the Administrator is “admin,” and the Password is “admin.”

Camera address

Type the IP address or host name of the camera you want to transmit sound.

Camera port

Set the port of the camera you want to transmit sound. The default port is “HTTP” (80).

CODEC

Select the audio mode (CODEC) from the drop-down list.

Assigning the IP Address to the Camera Using ARP Commands

This section explains how to assign an IP address to the camera using ARP (Address Resolution Protocol) commands without using the supplied setup program.

Note

Enter the ARP commands within 5 minutes of the power of the camera being turned on.

- 1 Open the Command Prompt on the computer.
- 2 Enter the IP address and the MAC address of the camera to assign a new IP address, using the following ARP commands.

```
arp -s <Camera's IP address> <Camera's MAC address>  
ping -t <Camera's IP address>
```

Example:

```
arp -s 192.168.0.100 08-00-46-21-00-00  
ping -t 192.168.0.100
```

- 3 When the following line is displayed on the DOS window, hold down **Ctrl** and press **C**.

```
Reply from 192.168.0.100:bytes=32 time...
```

Note

If you do not receive a reply, check the following:

- Did you enter the ARP commands within 5 minutes of the camera being turned on?
If not, turn off the camera and restart the operation.
- Is the NETWORK indicator on the camera flashing?
If the indicator goes off, the network connection has a problem. Connect the network correctly.
- Did you enter the IP address previously used for another device?
Assign a new IP address to the camera.
- Do the computer and the camera have the same network address?
If not, set the same network address on the computer and the camera.

Specifications

Web browser	Internet Explorer Ver5.5 or 6.0(Available OS: Windows 2000/XP)
Image device	1/4 type CMOS
Effective picture elements	310 K pixels CMOS sensor
Built-in lens	Focal length: f = 3.7 mm, Maximum F number: F2.0 View angle: 51.0° (horizontal), 38.9° (vertical) Shooting distance: 0.8 m to ∞
Video compression format	MPEG4/JPEG (selectable)
Pan/tilt action	±60° (horizontal), +10°/-60° (vertical), maximum speed 100°/s
Maximum frame rate	MPEG4: 30 fps (QVGA) JPEG: 30 fps (QVGA)
Audio compression format	G.726 (40, 32, 24, and 16 kbps)
Protocol	TCP/IP, ARP, ICMP, DHCP, DNS, HTTP, FTP, SMTP, NTP
Network port	10BASE-T/100BASE-TX (RJ-45)
Wireless Lan (SNC-M3W only)	Utilization: IEEE802.11b Frequency band: 2.4 GHz Transfer speed: 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps (switchable automatically) Security: WEP (64/128 bits)
Built-in microphone	Electret condenser microphone (omnidirectional)
Mic input	Minijack (monaural) Plug-in-power supported (rated voltage: 2.4 V DC) Recommended load impedance 2.2 kΩ
Line output	Minijack (monaural), Maximum output level: 1 Vrms
Horizontal resolution	400 TV lines
Minimum illumination	4.5 lux (AGC ON, 30 IRE)
Power supply	5 V DC
Power consumption	SNC-M3: 5.5 W SNC-M3W: 8.2 W
Operating temperature	0 °C to +40 °C (32 °F to 104 °F)
Operating humidity	20 to 80 %

Storage temperature	-20 °C to +60 °C (-4 °F to 140 °F)
Storage humidity	20 to 95 %
Mass	Camera: Approx. SNC-M3: Approx. 350 g (12.3 oz) SNC-M3W: Approx. 380 g (13.4 oz)
Dimensions	Stand: Approx. 80 g (2.8 oz) Camera: $\phi 110 \times 104$ mm (d/h) ($\phi 4 \frac{3}{8} \times 4 \frac{1}{8}$ inches) not including the projecting parts Stand: $142 \times 94.2 \times 102$ mm (w/h/d) ($5 \frac{5}{8} \times 3 \frac{3}{4} \times 4 \frac{1}{8}$ inches)

Supplied accessories

AC power adaptor (1), Power cord (1), Stand (1), Wall-mounting holder (1), Wall-mounting bracket (1), Rubber foot (4), Drop prevention strap (1), Tapping screws (4 × 20) (4), + PSW screws (3 × 8) (2), CD-ROM (User's Guide and supplied programs) (1), Installation manual (1)

Design and specifications are subject to change without notice.

Regular parts replacement

Some of the parts that make up this product (electrolytic condenser, for example) need replacing regularly depending on their life expectancies. The lives of parts differ according to the environment or condition in which this product is used and the length of time it is used, so we recommend regular checks. Consult the dealer from whom you bought it for details.

Glossary

Capture

To display the audio and video digital data from the video equipment on a computer.

Subnet mask

32-bit stream used to distinguish the subnet address from the IP address.

Sharpness

The degree to which the boundary of two portions is clearly distinguished.

Secondary DNS Server

Subsidiary DNS server used when a primary DNS server cannot be used.

Bandwidth control

To limit the amount of transmitted data.

Digital zoom

Zooming in/out function of an image without using an optical zooming function.

Default gateway

Device that can be used to access the other network.

Network address

The portion that identifies the local network (subnet) in an IP address.

Network bandwidth

Bit rate that can be used for networking.

Passive mode

The mode whereby a client FTP allows TCP connection for data transmission to the FTP server.

Bit rate

The rate at which data bits are transmitted.

Primary DNS server

One of the DNS servers that can first reply to a request by connected devices or other DNS servers.

Frame rate

The number of frames of a moving image that can be transmitted per a second.

Proxy server

A server or software that acts as an intermediary between a local network and the Internet so that it can connect to the Internet in place of a computer on a local network

ActiveX control

A component program object that can be used with web pages or other application programs. The technology for creating ActiveX control is part of software developed by Microsoft.

ARP commands

The commands for checking the entry of the IP address and MAC address in a host computer, or for updating them.

CODEC

Software/hardware for coding/decoding video and audio data.

DHCP server

Abbreviation for Dynamic Host Configuration Protocol server. The IP address of a terminal without an individual IP address can be automatically distributed by the Dynamic Host Configuration Protocol (DHCP). The DHCP server assigns the IP addresses to the terminals.

DNS server

Abbreviation for Domain Name System server. As an IP address required for connecting to the device on an IP network is numerical and difficult to remember, the Domain Name System was established. A domain name is alphabetic and is easier to remember. When a client computer uses a domain name to connect to another computer, it asks a DNS server to translate the name into the corresponding IP address. Then the client computer can obtain the IP address of the computer to be connected.

FTP client

Software to be used for accessing the FTP server.

FTP server

A server to be used to transfer files via a network.

HTTP port

A port used to communicate between the web server and the web client such as a web browser.

IP address

Abbreviation for Internet Protocol Address. An individual IP address is basically assigned to each piece of equipment connected to the Internet.

JPEG

Abbreviation for Joint Photographic Expert Group. The still image compression technology or standards of the ISO (International Organization for Standardization) and ITU-T. Popularly used as image compression format on the Internet, etc.

MAC address

A network address that uniquely identifies each LAN card.

MPEG4

Abbreviation for Moving Picture Experts Group4. One of the MPEG standards for image compression format aiming to transmit images at a high compression rate with lower picture quality.

NTP server

Network time server that transmits and receives time information over the networks.

POP server

A server for storing incoming e-mail until you have read it.

PPPoE

A protocol to enable use of the point-to-point protocol (PPP) via the Ethernet.

SNMP

A protocol for monitoring and managing network devices.

TCP

Abbreviation for Transmission Control Protocol. A standard protocol used for the Internet connection. Compared with the other protocol, UDP, TCP provides reliable communication but the communication speed is slower.

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