SONY®

Network Camera

User's Guide

Software Version 1.0

SNC-DF70N/DF70P

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

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

WARNING
A readily accessible disconnect device shall be incorporated in the building installation wiring.

WARNING (For Installers only)
Instructions for installing the equipment on the ceiling: After the installation, ensure the connection is capable of supporting four times the weight of the equipment downwards.

CAUTION
The rating label is located on the bottom.

CAUTION for LAN port
For safety reason, do not connect the LAN port to any network devices that might have excessive voltage. The LAN port of this unit is to be connected only to the devices whose power feeding meets the requirements for SELV (Safety Extra Low Voltage) and complies with Limited Power Source according to IEC 60950.

POWER REQUIREMENTS
The SNC-DF70N/DF70P operates on 24 V AC or 12 V DC.
The SNC-DF70N/DF70P automatically detects the power.

Caution for U.S.A. and Canada

CAUTION
Use a Class 2 power suply which is UL Listed (in the U.S.A.) or CSA-certified (in Canada).

Caution for other countries

CAUTION
Use a power supply rated 24 V AC or 12 V DC which meets the requirements for SEL V (Safety Extra Low Voltage) and complies with Limited Power Source according to IEC 60950.

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.

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.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

ATTENTION

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

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

Trade Name: SONY
Model No: SNC-DF70N
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.

NOTICE TO USERS

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Intel and Pentium are registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

All other company and product names are trademarks or registered trademarks of the respective companies or their respective makers.

Table of Contents

Others

Overview

Features

This is dome-shaped color video camera for which the 1/4 type Super HAD CCD$^®$ is adopted. It has the following features.

Camera section

- Day/Night function automatically switches between color and monochrome modes. You can control this function through an external source also.
- Includes the Vari-focal auto iris lens as the standard equipment. The focal length of the lens is from 3.0 mm to 8.0 mm.
- The best picture quality is available in the lowest light degree (0.9 lux) to the object (in the color mode).
- High quality CCD and the clear dome cover enable to get high sensitivity.
- IP 66 sealed enclosure (sturdy and weatherproof structure) suitable for outdoor installation
- You can manually set the camera direction – panning, tilting and rotating.
- Backlight compensation through the center measurement
- Various exposure modes (Auto Iris lens, CCD Iris, Manual).

Network section, Control section

- Real-time monitoring of the image and sound from the camera is possible using the Web browser on the computer.
- 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.
- The commercially available microphone can be connected to the plug-in power type microphone input (standard voltage 2.5 V) terminal (mini jack, monaural).
- The motion detection function (in MPEG4 mode), one sensor input terminal and two alarm output terminals are equipped. You can send image as an attached file of a mail or send to FTP server. You can also control the peripheral equipments connected to the alarm output terminals.
- The pre-alarm function and the post-alarm function are equipped, by which the image and audio of before/after the moment of alarm detection can be forwarded.
- Multicast streaming is equipped.

Others

- Corresponding to PoE (Power of Ethernet).
- The camera is supplied with the IP Setup Program for easy performance of the network setting.

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•Super HAD CCD$^®$ is a registered trademark of Sony Corporation.
•IP66 is a protection grade provided under JIS and IEC.

How to Use This User's Guide

This User's Guide explains how to operate the SNC-DF70N/DF70P 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.

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.

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 9)
• Using the ARP (Address Resolution Protocol) commands (see page 61)

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 "Connecting this Unit to a Local Network" in the supplied Installation Manual.
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-DF70N/DF70P cameras connected to the local network and lists them on the Network tab window.
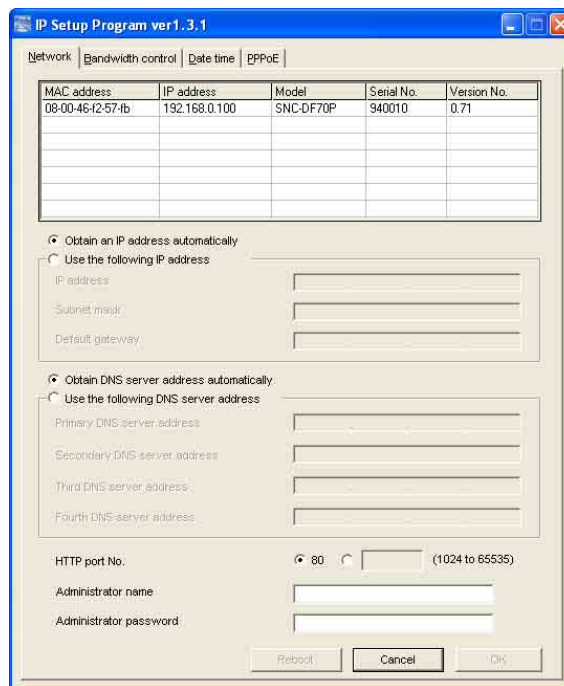
6 Click on the camera to which you want to assign a new IP address in the list.

The network settings for the selected camera are displayed.

7 Set the IP address.

To obtain the IP address automatically from a DHCP server:
Select **Obtain an IP address automatically**.
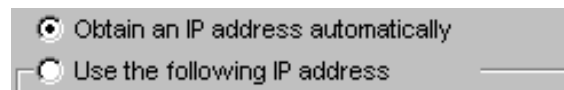
The IP address, Subnet mask and Default gateway are assigned automatically.

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.

<div style="border:1px solid;display:inline-block;padding:2px 8px;background:#000;color:#fff">Note</div>

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."

<div style="border:1px solid;display:inline-block;padding:2px 8px;background:#000;color:#fff">Note</div>

You cannot change the Administrator name and Administrator password in this step. To change these items, See "Setting the User — User setting Menu" on page 36.

11 Confirm that all items are correctly set, then click **OK**.
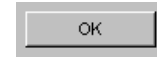
If "Setting OK" is displayed, the IP address is correctly assigned.

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

The welcome page of the network camera SNC-DF70N/DF70P is displayed.

<div style="border:1px solid;display:inline-block;padding:2px 8px;background:#000;color:#fff">Note</div>

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.
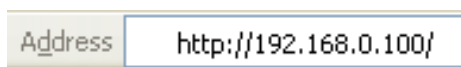
The welcome page of "Network Camera SNC-DF70N" or "Network Camera SNC-DF70P" is displayed.

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 camera function suitable for the installation place.	Exposure mode (page 29)
Set the format of the image sent from the camera (MPEG 4 or JPEG).	Video mode (page 28)
Select the brightness of the image sent from the camera.	Brightness (page 30)
Select the quality of the image sent from the camera.	MPEG4 Tab (page 31) JPEG Tab (page 31)
Select the size of the image sent from the camera.	Image size (page 28)
Select weather the audio from the camera microphone is sent or not.	Microphone (page 29)
Accord date and time of the camera with those of the computer.	Date & time Tab (page 26)
Make the setting for sending the monitor image attached to a mail.	e-Mail (SMTP) setting Menu (page 38)
Set the access right of the user for the camera.	Security setting Menu (page 37)

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 23.

Administrator and User

This network camera classifies the people who log in into the **Administrator** and the **User**.
The **Administrator** can use all functions of this network camera including camera setting. The functions the **User** can use are monitoring the image and audio from the camera, and controlling the camera. The **Viewer mode** setting restricts the user's access right, and the user is classified as the one of three types.

Each type of the user can use the following functions.

Function	Administrator	User		
		Full	Light	View
Monitor a live image	●	●	●	●
Watch date and time	●	●	●	●
Control the frame rate (Usable only when JPEG mode is selected)	●	●	–	–
Control the image view size	●	●	●	–
Zoom a image by the digital zoom	●	●	●	–
Save the still image in the computer	●	●	●	–
Send an image file to the FTP server	●	●	–	–
Send an image attached to a mail	●	●	–	–
Record an image on the inside memory of the camera	●	●	–	–
Control the Alarm out of the I/O port on the camera main unit	●	●	–	–

Function	Administrator	User		
		Full	Light	View
Switch the TCP/UDP transmission mode (Available in MPEG4 mode only)	●	●	–	–
Control the audio	●	●	●	●
Control the setting menu	●	–	–	–

● Usable function
– Not usable function

The access rights of the administrator and the user can be set in "Setting the User — User setting Menu" on the Administrator menu for the administrator on page 36.

Administrator and User | 13

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.

Address | http://192.168.0.100/

The welcome page of **Network Camera SNC-DF70N/DF70P** is displayed.

2 Select the viewer.
The usable viewers differ depending on the video mode (page 28) of the camera.
When the video mode is set to **MPEG4**, you can use **ActiveX viewer** only, and viewer selection is not possible. (MPEG4 is default. See illustration on Step 1 above.)
When the video mode is **JPEG**, you can select **ActiveX viewer** or **Java applet viewer**.
For details, see "About Viewers" on page 15.

Welcome page when the video mode is JPEG

3 Select the viewer language.
Click **English** or **Japanese** at the bottom of the welcome page.

4 Click **Enter**.
The main viewer appears.

With the ActiveX viewer

With the Java applet viewer

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 11 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 36).

The Administrator menu appears.

About Viewers

You can use the following viewer according to the **Video mode** setting in the camera setting menu on the Administrator menu (page 28).

ActiveX viewer

This viewer can monitor the image in both video modes **MPEG4** and **JPEG**.
You have to install it 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 using ActiveX viewer 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.

Java applet viewer

You can select this viewer when the camera video mode is set to **JPEG**. The frame rate is lower than the ActiveX viewer.
The Java applet viewer operates only when Java is installed and Java (Sun) is enabled. If it does not operated correctly, check if the specified Java version has been installed successfully and Java (Sun) is enabled.

To check the Java version

Select **Tool** from the menu bar of Internet Explorer, then select **Internet Option** and the **Advanced mode** tab in sequence, and check the version of Java displayed in **Java (Sun)** is one of the versions specified below. If the item **Java (Sun)** is not displayed, Java is not installed. You need to install Java.

Java Plug-in Ver. 1.4.2_01, Ver. 1.4.2_02, Ver. 1.4.2_03, Ver. 1.4.2_04

To enable Java Plug-in

Check "Use Java2v1.4.2_xx for <applet> (requires restart)" in "Java (Sun)".

To install Java Plug-in

Download Java 2 Runtime Environment, Standard Edition (JRE) from the homepage of Sun Microsystems, Inc., and install it following the instructions on the installer.

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.

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

Camera control section   Monitor image section   Main menu

Main menu

Setting

Click this button to display the Administrator menu. You can operate this function only when logging in as the administrator.

Home

Displays the Welcome page.

Player

Click this button to download the "SNC video player" application program built in the camera. The SNC video player allows you to play video/audio data recorded on the camera with your computer. (See "Using the SNC video player — Playing Video/Audio File Recorded on Camera" on page 58.)
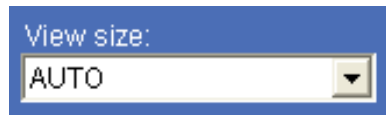
Camera Control Section

Frame rate

(Displayed only when the camera Video mode (page 28) is set to **JPEG**.)

Selects the frame rate to transmit images.

View size

Selects the view size to be displayed. (page 18)

Digital zoom

Click to change the size of the digital zoom. (page 18)

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 18.)

Trigger

(Displayed only when the camera Viewer mode (page 36) is set to **Full** and one or more triggers are enabled on the Trigger Setting menu (page 48).)

Select the function you want to use from the list box and click the icon. Then you can send the monitor image of the camera to an FTP server (page 19), send it attached to a mail (page 19), record the image on the built-in memory (page 20), switch the Alarm output to On/Off (page 20) and switch the day/night function to On/Off (page 21).

Transmission (Switching the TCP/UDP transmission mode)

(Displayed only when the camera Video mode (page 28) is set to **MPEG4** and you are using the ActiveX viewer.)

Each click switches the transmission mode of the video/audio data among TCP mode, UDP (Unicast) mode and UDP (Multicast) mode. (page 21)

The last selected mode is saved in the computer, and it will be selected at the next starting.

▢›》▬▬▬▬▬▬|(Volume)

(Displayed when the Microphone (page 29) 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.

> **Note**
>
> If the volume icon is not displayed in the case you are using Java applet viewer, Audio codec may not be set **G.711(64kbps)** (page 29) or Java may not be installed correctly.
> To check if Java is installed correctly, refer to "Java applet viewer" of "About Viewers" on page 15.

Monitor Image

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

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 14, "Logging in as a User".

2 Select the frame rate (only when the camera Video mode is set to **JPEG**).
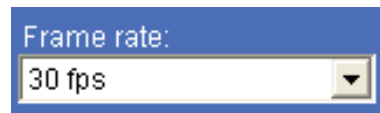
Click the **Frame rate** list box to select the frame rate for transmitting the image. The selectable frame rates are the following:
SNC-DF70N:
1, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30
SNC-DF70P:
1, 2, 3, 4, 5, 6, 8, 12, 16, 20, 25
The numbers indicate "fps" (the number of frames transmitted per second).

> **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.
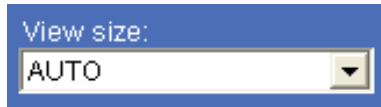
Click **View size** box list box to select the view size from among **Auto**, **640 × 480**, **320 × 240** and **160 × 120**.
Auto is determined by the image size specified with Image size on the Camera setting menu (page 28).

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 1.5 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.

With the ActiveX viewer

With the Java applet viewer
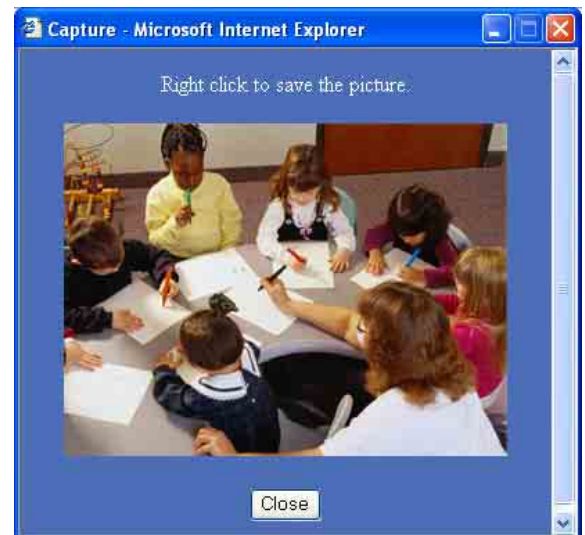
3 To cancel the still image, click **Cancel** or **Close**.

Saving the captured image

With the ActiveX viewer

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**.

With the Java applet viewer

1 Capture the monitor image.

2 Right-click the mouse to display the menu and select **Save with a new name**.
Save Picture dialog appears.
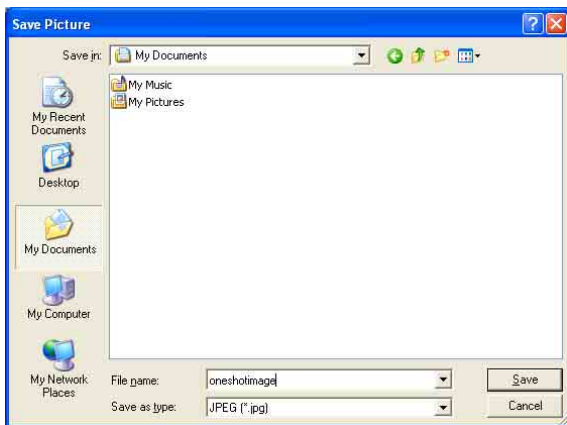
3 Select **JPEG** or **Bit map** as **Save as type**.

4 Type in **File name** and specify **Save in**, then click **Save**.

Sending an Image File

You can send a captured still image with an attached mail or to the FTP server.
To use this function, you need to make the **e-Mail(SMTP)** and **FTP client** active, and set the address properly in the Trigger setting menu on the Administrator menu (page 48).

Sending a Monitor Image via e-Mail

1 Monitor the image on the monitor window.

2 Select **e-Mail** from the Trigger list box.

3 Click 🔁 Trigger icon.
The still image of the moment when you click is captured, and the mail attached with the image file is sent to the mail address you have set.

Sending a Monitor Image to an FTP Server

1 Monitor the image on the monitor window.

2 Select **FTP** from the Trigger list box.

3 Click 🔁 Trigger icon.
The still image of the moment when you click is captured, and the image file is sent to the FTP server.

Recording a Still Image in the Built-in Memory of the Camera

You can capture a camera image as a still image and record it in the built-in memory of the camera.
To use this function, you need to make **Image memory** active and to set details of the image memory in the trigger setting menu on the Administrator menu (page 48).

1 Monitor the image on the monitor window.

2 Select **Image memory** from the Trigger list box.

3 Click [icon] Trigger icon.
The still image of the moment when you click is captured, and the image file is recorded in the built-in memory of the camera.

Controlling Alarm output

You can control the Alarm output On (short-circuit) and Off (open).
To use this function, you need to make **Alarm output** active in the Trigger setting menu on the Administrator menu (page 48).

1 Monitor the image on the monitor window.

2 Select **Alarm output 1** or **Alarm output 2** from the Trigger list box.

3 Click [icon] Trigger icon.
Each click switches the Alarm output between On (short-circuit) and Off (open) alternately.

> **Tip**
>
> For the connection of peripheral devices to the Alarm output of the I/O port, see the supplied Installation Manual.

Controlling Day/Night Function

You can control the Day/Night On (night mode) and Off (day mode). To use this function, you need to make **Day/Night** active in the Trigger setting menu on the Administrator menu (page 48).

1 Monitor the image on the monitor window.

2 Select **Day/Night** from the Trigger list box.

3 Click ![Trigger icon] Trigger icon.
Each click switches the Day/Night between On (night mode) and Off (day mode) alternately.

Switching TCP/UDP Transmission Mode

You can select the communication port of the video/audio data as TCP or UDP.
This function can be used when the Video mode (page 28) is set to **MPEG4** and the ActiveX viewer is used.

1 Display the main viewer.

2 Click ![TCP/UDP icon] TCP/UDP transmission selector icon. Transmission mode selector dialog appears.
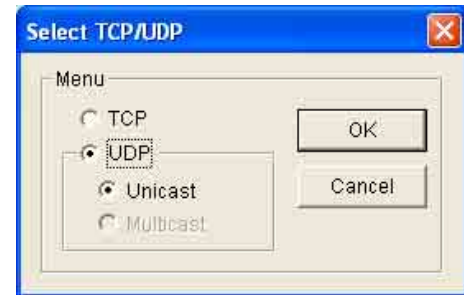
3 Click one of the buttons **TCP, UDP (Unicast)** or **UDP (Multicast)**.

TCP: Usually select this.
When **TCP** is selected as the communication port, HTTP communication is adopted for video/audio communication.
HTTP is the protocol used for reading a usual Web page.
In an environment capable of reading Web page, you can watch or listen to the video/audio by selecting TCP port.

UDP (Unicast): When **UDP (Unicast)** is selected as the communication port, RTP (Real-time Transport Protocol) is adopted for video/audio communication. As RTP is the protocol for running video/audio data, video/audio can be played smoother than when TCP (HTTP) is selected. If the fire-wall is installed between the camera and the computer, or depending on the network environment, the video/audio may not played properly when **UDP (Unicast)** is selected. In this case, select **TCP**.

UDP (Multicast): You can select this when the multicast streaming (page 28) is **On**. When **UDP (Multicast)** is selected as the transmission port, RTP (Real-time Transport Protocol) and UDP multicast techniques are adopted for video/audio transmission. By selecting it, the network transmission load of the camera can be reduced. If

a router which does not correspond to the multicast or the fire-wall is installed between the camera and the computer, the video/audio may not played properly. In this case, select **TCP** or **UDP (Unicast)**.

4 Click **OK** to close the dialog.

If you do not change the transmission setting, click **Cancel**.
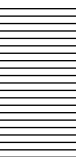
Administrating the Camera

The Administrating 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 13.

This section explains the basic operations and each option.

Basic Operations of Administrator Menu

You can set all functions to suit the user's condition in the Administrator menu.
Click **Setting** in the welcome 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 14 "Logging in as a User".

2 Click **Setting** in the welcome page.
The authentication dialog appears. Enter the user name and password for Administrator.
The user name "admin" and password "admin" are set at the factory for the Administrator.

Administrator menu appears.

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 to display the Administrator menu.

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

Administrating the Camera

Example: System setting menu
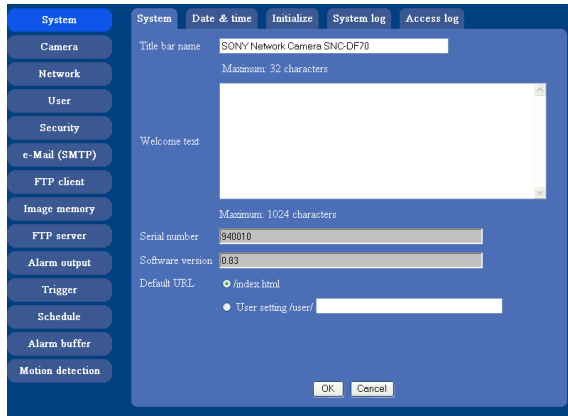
4 Select the tab above the setting menu, and set each setting option in the tab.

Example: "System" setting menu "Date & time" tab
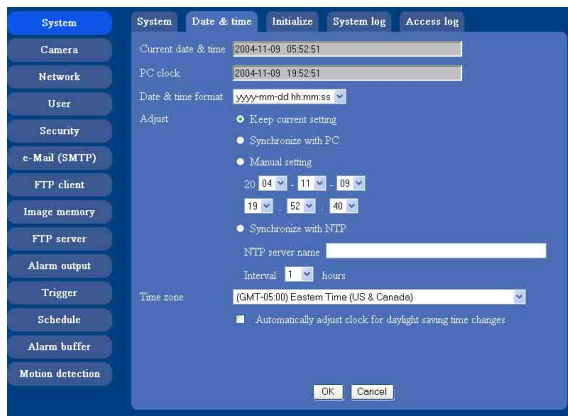
See page 25 to 52 for details of setting menu tabs and setting options.

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.

OK

Click this button to validate the settings.

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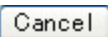
Click this button to invalidate the set values and return to the previous settings.

General note on setting menus

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

Configuration of Administrator Menu
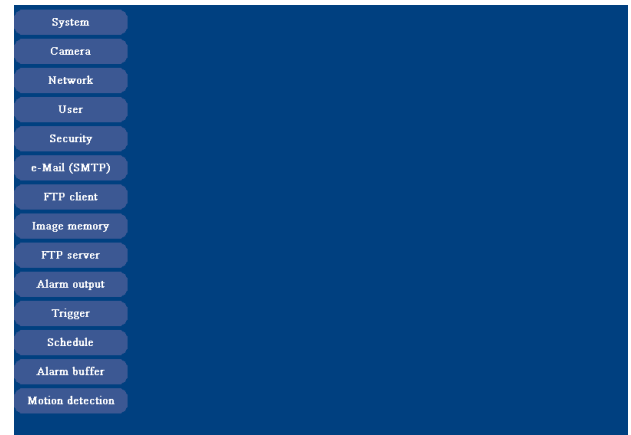
System
Displays the System setting menu.
("Configuring the System — System setting menu" on page 25).

Camera
Displays Camera setting menu for setting of camera image and audio. ("Setting the Camera Image and Audio — Camera setting Menu" on page 28)

Network
Displays the network setting menu for setting of network connection. ("Configuring the Network — Network setting Menu" on page 32)

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 36)

Security
Displays the security setting menu for specifying the computer allowed to connect to the camera. ("Setting the Security — Security setting Menu" on page 37)

e-Mail (SMTP)
Displays the e-Mail (SMTP) setting menu for sending an e-Mail. ("Sending an Image via mail — e-Mail (SMTP) setting Menu" on page 38)

FTP client

Displays the FTP client setting menu for sending an image file to FTP server. ("Sending Images to FTP Server — FTP client setting Menu" on page 41)

Image memory

Displays the image memory setting menu for recording a video/audio file in the built-in memory of the camera. ("Recording Images in Memory — Image memory setting Menu" on page 43)

FTP server

Displays the FTP Server menu for setting the FTP server function of the camera. ("Downloading Images from the Camera — FTP server setting Menu" on page 47)

Alarm output

Displays the alarm out setting menu for the alarm out terminal of the camera. ("Setting the Alarm Output — Alarm output setting Menu" on page 47)

Trigger

Displays the trigger setting menu for the operations when you click the trigger button in the main viewer. ("Setting the Operations from the Viewer Page — Trigger setting Menu" on page 48)

Schedule

Displays the schedule setting menu for FTP client function, e-Mail (SMTP) function, Image memory function and Alarm out function and so on. ("Setting the Schedule — Schedule setting Menu" on page 50)

Alarm buffer

Displays the alarm buffer setting menu for the buffer which records the image and audio on the alarm detection. ("Setting the Alarm Buffer — Alarm buffer setting Menu" on page 51)

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 52)

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**, **Initialization**, **System Log** and **Access Log**.

System Tab
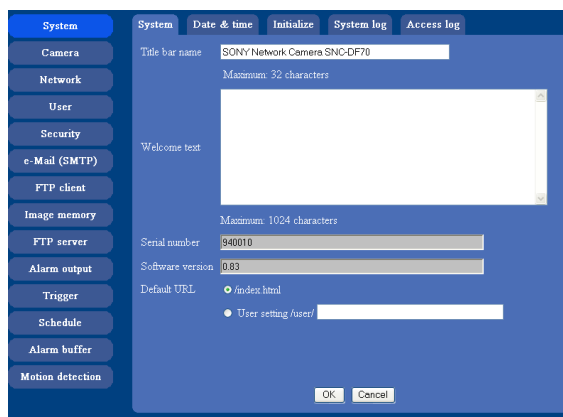
Title bar name

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.

Welcome text

Type a text to show on the welcome page, in HTML format, up to 1,024 characters. Use the <BR> tag for a line break. (A line break is equivalent to 2 characters.)

Serial number

Displays the serial number of the camera.

Software version

The software version of this camera is displayed.

Default URL

Select the homepage to be displayed when you enter the IP address of the camera in the web address box of the browser.

To display the homepage built in the camera
Select **/index.html**.

To display your individual homepage
You can display your favorite homepage. Store the HTML file in the built-in flash memory using the

Custom Homepage Installer included in the supplied CD-ROM.
For use of the Custom Homepage Installer, see page 59.

1 Select **User Setting/user/**.

2 Type the path of the HTML file in the text box up to 64 characters.

Tip

Even when you select **User Setting/user/**, the home page inside the camera can be displayed by typing the following URL in the address box of the browser.
Example: When the IP address of the camera is set to 192.168.0.100
http://192.168.0.100/en/index.html

OK/Cancel

See "Buttons common to every setting menu" on page 24.

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 time

Select the interval at which you want to adjust the camera's time referring to the NTP server' 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.

Automatically adjust clock for daylight saving time changes

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

Note

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.

OK/Cancel

See "Buttons common to every setting menu" on page 24.

Initialize Tab
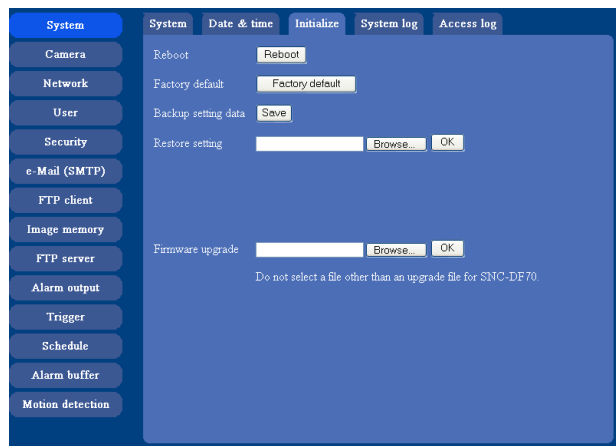
Reboot

Reboots the camera.
Click **Reboot**, and "The SNC-DF70 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.

Backup setting data

Saves the setting data of the camera in a file.
Click **Save**, and follow the instructions on the browser to specify the folder and save the setting data of the camera. The file name preset at the factory is "snc-df70.cfg."

Restore setting

Loads the stored setting data of the camera.
Click **Browse** and select the file in which the setting data is stored. Then, click **OK**, and the camera is adjusted according to the loaded data and restarted.

Note

With Restore setting, some items in the Network setting menu (page 32) cannot be restored.

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
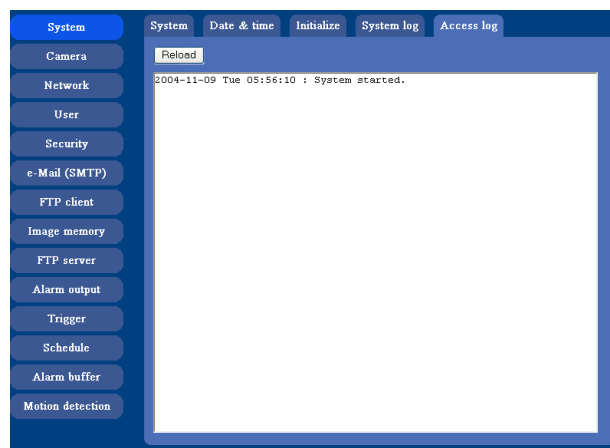
System log

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
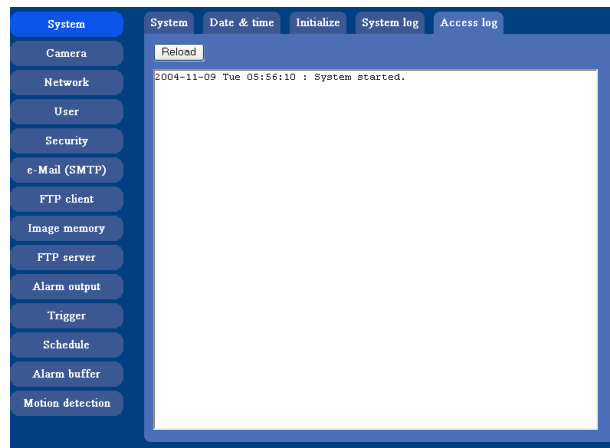
Access log

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 6 tabs: **Common**, **Picture**, **Day/Night**, **MPEG4**, **JPEG** and **Reset**.

Common Tab
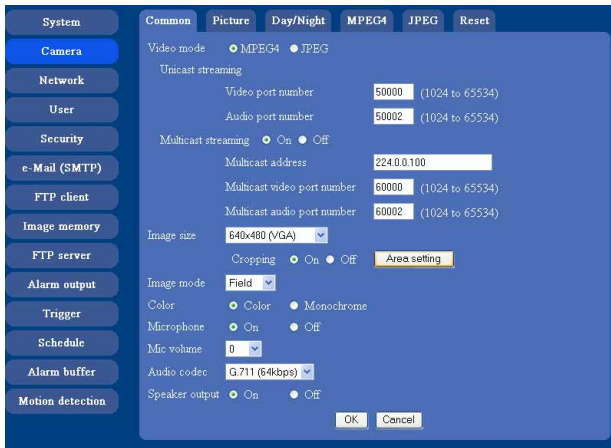
Video mode

Select the output format of the camera image.
MPEG4 or **JPEG** can be selected.

Unicast streaming

Specify the transmission port number of the video data and audio data used when **UDP (Unicast)** is selected with the TCP/UDP transmission switching icon in the main viewer
Video port number: Specify the transmission port number of the video data. It is initially set to 50000. Specify an even number from 1024 to 65534.
Audio port number: Specify the transmission port number of the audio data. It is initially set to 50002. Specify an even number from 1024 to 65534.

Multicast streaming

Set whether the camera uses the Multicast streaming or not. It reduces sending load on the camera by making the computer of the same segment network (not above the router) receive the same transmitting data.
Select **On** to allow the multicast sending and **Off** not to allow.

When you select **On**, set **Multicast address**, **Multicast video port number** and **Multicast audio port number** properly.
Multicast address: Type the multicast address used on the Multicast streaming.
Multicast video port number: Specify the video transmission port number used on the Multicast streaming.
Multicast audio port number: Specify the audio transmission port number used on the Multicast streaming.

Image size

You can select the image size sent from the network camera.
**640 × 480 (VGA)**, **480 × 360**, **384 × 288**, **320 × 240 (QVGA)**, **256 × 192** or **160 × 120 (QQVGA)** can be selected.

Image mode

The image output from the camera can be selected from **Field** mode or **Frame** mode. When **Frame** mode is selected, level resolution goes up. However, an edge portion will become notched if what is taken is moving.

> **Notes**
>
> If you set the **Image size** to **320 × 240 (QVGA)**, **256 × 192** or **160 × 120 (QQVGA)**, the **Image mode** is fixed in the **Field** mode.

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.

> **Notes**
>
> • When Cropping is set to **On**, Motion detection function does not work.
> • While Cropping is set to **On**, the image of the composite video signal output from the video output connector of the camera may be distorted.

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 "Area setting" display appears.

3 Specify the cropping area.
Click the left button of the mouse on the still image and drag it diagonally. The red frame that appears as you drag indicates the cropping area.

Still image

Red trimming frame   Click the left button of the mouse on the still image and drag it.
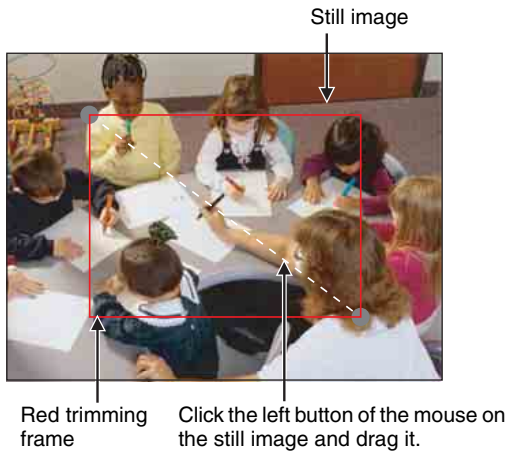
4 Click **OK** at the bottom of the window.
The cropped image is displayed on the main viewer.

5 To close the image, click ✖ in the upper-right corner.

Color

Select **Color** or **Monochrome** for the image.

Microphone

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

> **Note**

When you change the Microphone setting, click **Refresh** of the browser to reflect the change in the opening main viewer page.

Mic volume

Set the volume level of the audio input from the microphone input connector. It is adjustable from **–10** to **+10**.

Audio codec

Select the bit rate when you send the audio from the microphone input connector. **G.711 (64kbps)**, **G.726 (40kbps)**, **G.726 (32kbps)**, **G.726 (24kbps)** or **G.726 (16kbps)** can be selected.

> **Note**

When the bit rate is set to other than G.711(64bps), the audio is not output in the case you are using Java applet viewer.

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 24.

Picture Tab

You can set the color condition, exposure, etc. of the camera.

Exposure mode

Select the exposure adjustment mode from among **Auto Iris lens, CCD Iris**, and **Manual**.
The setting items required for each setting appear.
Auto Iris lens: Select this option when you use an autoiris lens.
CCD Iris: Select this option when you use a fixed-iris lens to adjust the exposure using the electronic shutter and AGC (Automatic Gain Control).
Manual: Adjust the electronic shutter and gain manually.

AGC (Automatic Gain Control)
Adjusts the gain automatically according to the lighting conditions of the subject.

Back light compensation
Select **On** to activate the backlight compensation, or **Off** to deactivate it.

Lens adjust
Select the iris convergence level for the auto-iris lens from **0** to **255**.

Shutter mode
Select the electronic shutter mode, **Auto** or **Manual**. The setting items required for each setting appear.

Shutter speed
Select the electronic shutter speed from among the following:
SNC-DF70N:
1/10000, 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/100, 1/60 (seconds).
SNC-DF70P:
1/10000, 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/120, 1/50 (seconds).

Tip

Flicker from fluorescent lamps or similar can be reduced by setting the **Shutter mode** to **Manual** and **Shutter speed** to **1/100**.

Gain
Select the gain (dB) from among the following:
0 dB, 6 dB, 12 dB, 18 dB

Brightness

Tweaks the exposure set in the exposure mode. It is brighter when a large value is selected, and it is darker when a small value is selected. The value among **–5** to **5** can be set.

Saturation

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

Sharpness

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

Contrast

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

OK/Cancel
See "Buttons common to every setting menu" on page 24.

User preset
You can save the present settings in the camera as the custom, or you can load the settings saved in the camera.
Save: Click to save the present settings of the **Picture** tab.
Load: Click to load the saved settings. To use them, click **OK**.

Day/Night Tab

Use this tab to set the day/night function of the camera.
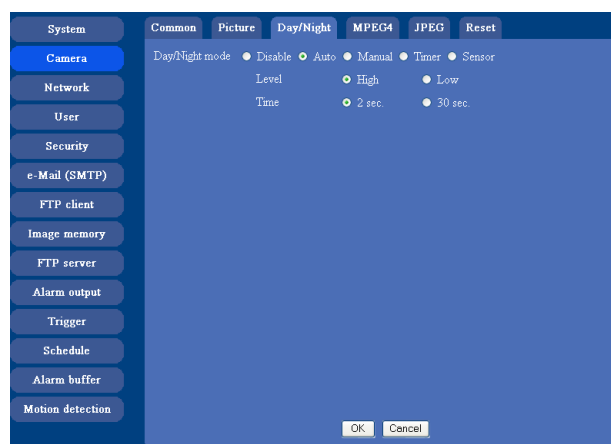
The day/night function consists of five tabs.

Disable
Always works in day mode.

Auto
Normally works in day mode. It switches automatically to night mode in a dark place.
The switching timing can be adjusted by the following parameters. When the auto gain control is set to **Off**, the camera does not switch to the night mode.
Level: High or **Low** indicates a brightness level.
Time: Select invalid time so that the camera does not react to changes in light and darkness.

Manual
Switch the day/night mode manually. When you select **Manual**, **On** and **Off** are displayed. When you select **On**, the camera works in night mode. When you select **Off**, it works in day mode.

Timer
Normally works in day mode. It switches to night mode at the time you set in the Schedule setting menu. The day/night function normally works in day mode.

Sensor

Controls day/night mode by synchronizing with the sensor input.

The camera works in night mode while the sensor input is being detected.

Note

When a signal is input from the 1 pin (sensor input +) and 2 pin (sensor input - (GND)) of the I/O cable, the camera works in night mode regardless of the set mode.
For pin assignment, see the supplied Installation Manual.
When you select the day/night function in Trigger setting menu after selecting Auto, Timer or Sensor in the Day/ Night tab, you can switch the day/night mode from the Trigger on the main viewer.

OK/Cancel

See "Buttons common to every setting menu" on page 24.

MPEG4 Tab

Frame rate

Set the frame rate of the MPEG image.
The selectable frame rates are the following:
SNC-DF70N:
1, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30
SNC-DF70P:
1, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25
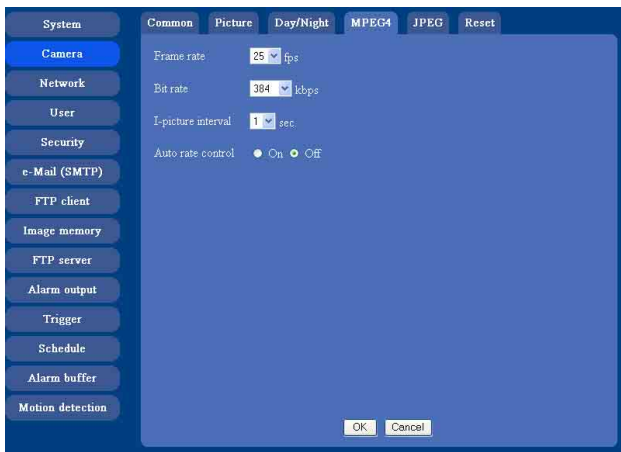The numbers indicate "fps" (the number of frames transmitted per second).

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.

Note

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.

I-picture interval

Set the I-picture inserting interval of MPEG4. I-picture is the compression data serving the basic point when the data compressed by MPEG4 is depressed. In the condition that errors tends to happen, such as the network environment variation, the distortion of the image is reduced by selecting a small value. The selectable values are 1, 2, 3, 4 and 5 seconds.

Auto rate control

This function adjusts the frame rate and the bit rate automatically so that the camera plays a smooth image to suit the connected computer environment. If **On** is selected, the rate of MPEG4 image is automatically adjusted.
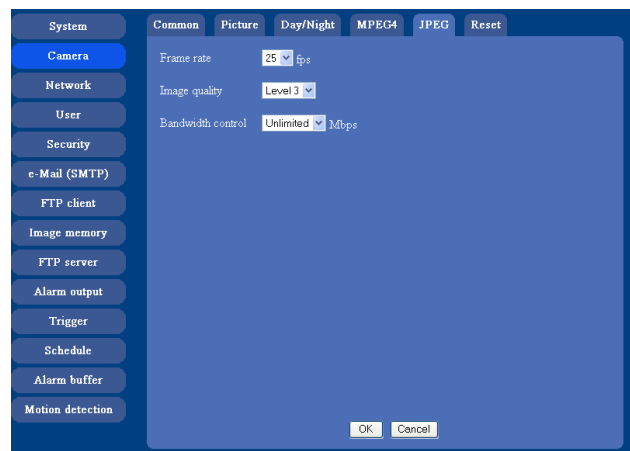
Note

The maximum transmission rate will be the values set in **Frame rate** and **Bit rate**.

OK/Cancel

See "Buttons common to every setting menu" on page 24.

JPEG Tab

Frame rate

Set the maximum frame rate of JPEG image that can be monitored on the computer.
The selectable frame rates are the following:
SNC-DF70N:
5, 6, 8, 10, 15, 20, 25, 30

SNC-DF70P:
5, 6, 8, 10, 15, 20, 25
The numbers indicate "fps" (the number of frames transmitted per second).

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.

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 24.

Reset Tab
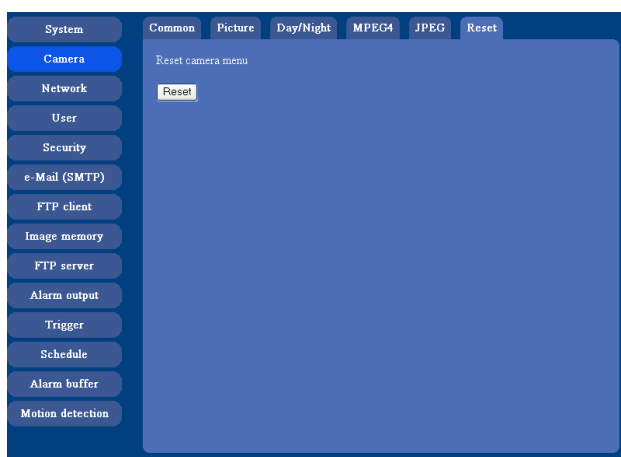
Reset

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**, **PPPoE** and **Dynamic IP address notification**.

Network Tab

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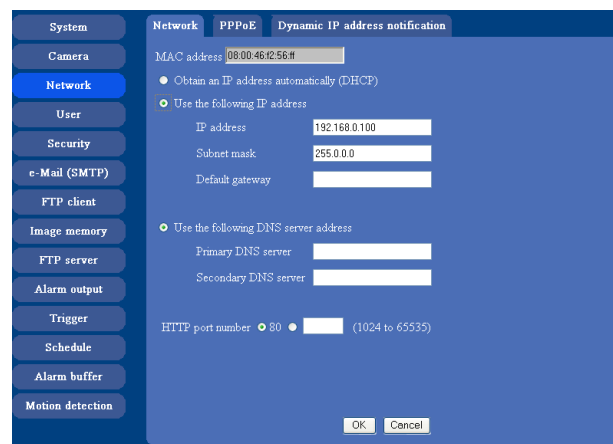
MAC address

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

OK/Cancel

See "Buttons common to every setting menu" on page 24.

PPPoE Tab - Setting of PPPoE Connection

Use it when you connect the camera with PPPoE (Point-to-Point Protocol over Ethernet). PPPoE connection is the protocol that is widely used in xDSL (digital affiliate line such as ADSL, VDSL or SDSL) as the authentication and connection system.
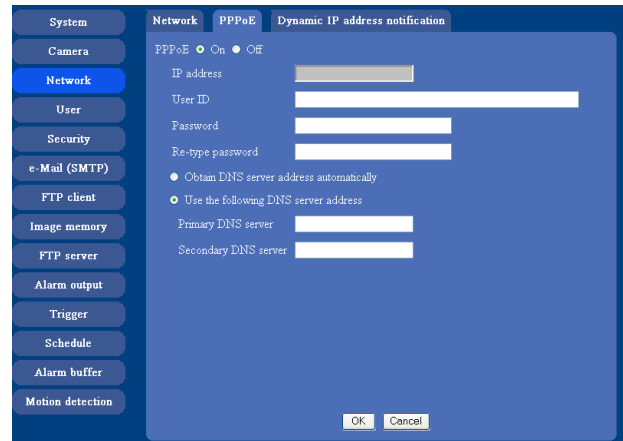
PPPoE

Set whether you connect the camera using PPPoE function or not. When **On** is selected, PPPoE connection is used.

IP address

When you connect to the network by PPPoE function, IP address obtained at PPPoE connection is displayed.

User ID

Type the user ID for the authentication necessary for PPPoE connection. Type it up to 64 characters.

Password

Type the password for the authentication necessary for PPPoE connection. Type it from 1 to 32 characters.

Re-type password

To certain the password, re-type the characters as them typed in the password box.

Obtain DNS server address automatically

Select it to obtain the address of DNS server automatically.

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.

OK/Cancel

See "Buttons common to every setting menu" on page 24.

Dynamic IP address notification Tab — Notifying the IP Address

When the DHCP setting is set to **On** or PPPoE 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.
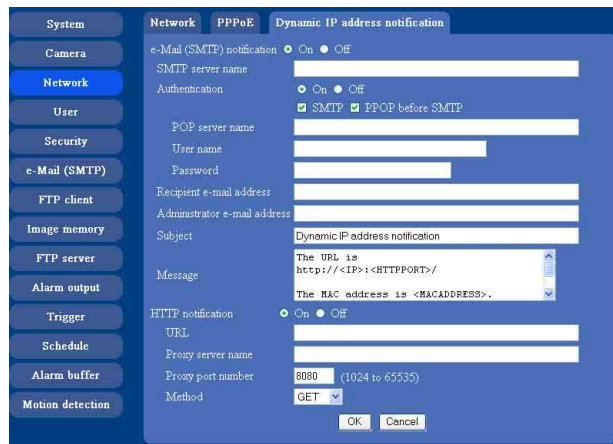
e-Mail (SMTP) notification

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.

Off: Select if no authentication is necessary when an e-Mail is sent.

On: When authentication is necessary an e-Mail is sent, select one of the authentication methods from the followings..

    SMTP: Select if 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.

Note

When you set to **On**, make sure to select either or both **SMTP** or/and **POP before SMTP**.

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. (A line break is equivalent to 2 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 24.

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 specified HTTP server port number 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-DF70) in the text or parameter.
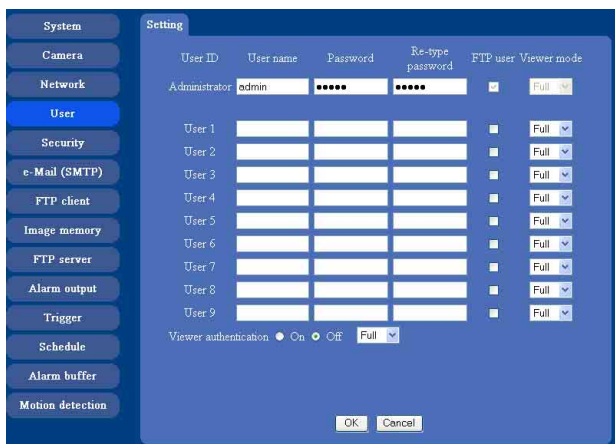
<SERIAL>

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**, **FTP user** and **Viewer mode** 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.

FTP user
Set whether logging in to FTP server is allowed or not. When you need to log in to FTP server, check it.

Viewer mode
If the user is authenticated when the main viewer is displayed, you can select the viewer mode displayed after authentication.
Full: You can operate all functions in this mode.
Light: You can operate the functions other than the trigger button on the main viewer, TCP/UDP switching button on the main viewer, and the frame rate setting.
View: You can monitor only the camera image.

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**, select the view mode of the main viewer page which is displayed without authentication from among **Full**, **Light** or **View**.
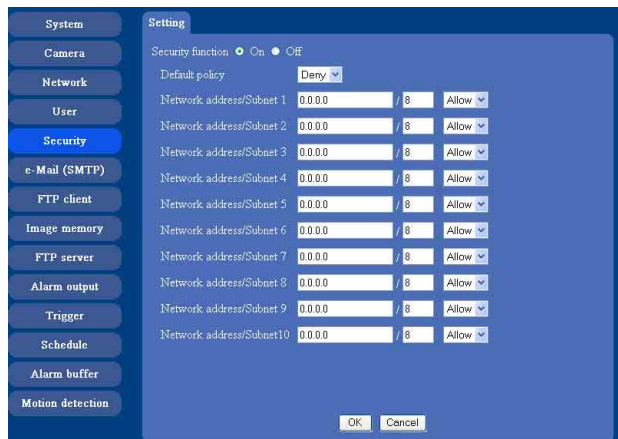
OK/Cancel
See "Buttons common to every setting menu" on page 24.

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 24.

Administrating the Camera

Sending an Image via 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 with attached image which has been shot linked with the external sensor input or with the built-in motion detection function. The image file can also be sent periodically.

e-Mail (SMTP) setting menu is composed of three tabs: **Common**, **Alarm sending** and **Periodical sending**.

Common Tab — Setting the SMTP Function
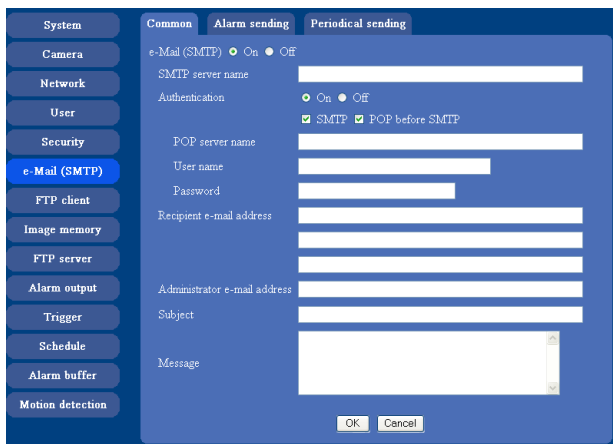
e-Mail (SMTP)

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.
- While the camera video mode is set to **MPEG4**, the image of the composite video signal output from the video output connector of the camera may be distorted during mail transmission.
- 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.
Off: Select if no authentication is necessary when an e-Mail is sent.
On: When authentication is necessary an e-Mail is sent, select one of the authentication methods from the followings..
  SMTP: Select if 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.

Note

When you set to **On**, make sure to select either or both **SMTP** or/and **POP before SMTP**.

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. With respect to mail which is sent according to the alarm detection when **Alarm sending** of the alarm tab is set to **On**, the characters standing for the sensor type added to the subject. **SI** is added for sensor input detection, and **MD** is added for motion detection.

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 24.

Alarm sending Tab — Setting the mail sending mode when detecting the alarm

Set to send the mail with connection to the alarm detection by the external sensor input or by the built-in motion detection function.
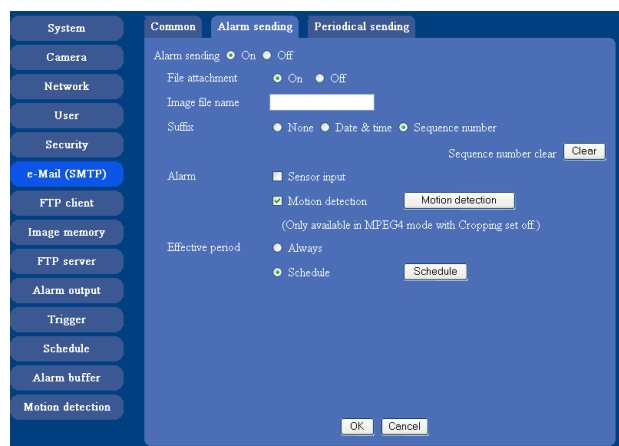
Alarm sending

Select **On** to set to send mail with connection to the alarm detection.

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.

Image file name

Type the file name you want to assign to the image to attach a mail. You can use up to 10 alphanumeric, - (hyphen) and _ (underscore) for naming.

Suffix

Select a suffix to add to the file name.
None: No suffix is added. The Image file name is assigned to the image to be sent via an e-Mail.
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 consecutive number (2 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.

> **Tip**
>
> A consecutive number added to **Date & time** and **Sequence number** is used to identify each of multiple files created with one alarm event.

Sequence number clear

Click **Clear** to reset the Sequence number suffix to 1.

Alarm

Select the connected alarm.
Sensor input: The external sensor which is connected to the sensor input of the camera I/O port.
Motion detection: Click **Motion detection** button, and the Motion detection setting menu is displayed. You can set the motion detection function (page 52).

> **Note**
>
> **Motion detection** works only when the camera Video mode is set to **MPEG4** and the **Cropping** is set **Off**.

Effective period

Set the period when the alarm detection is effective.
Always: The alarm detection is always effective.
Schedule: You can specify the period when the alarm detection is effective in the schedule setting in the other section.
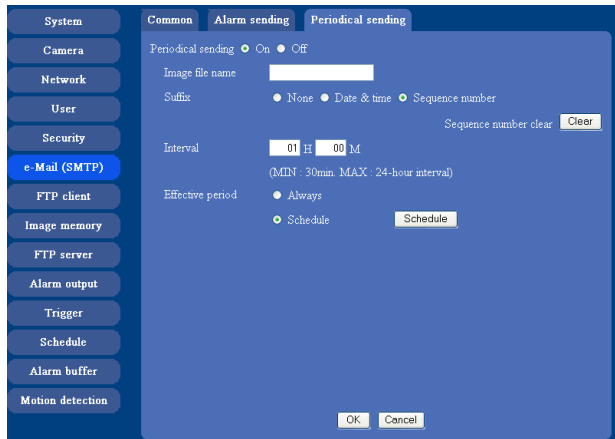Click **Schedule** and the setting menu for the Effective period is displayed. ("Setting the Schedule — Schedule setting Menu" on page 50)

OK/Cancel

See "Buttons common to every setting menu" on page 24.

Periodical sending Tab — Setting the periodical mail sending mode

You can set to send mails periodically.

Periodical sending

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

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) and second (2 digits), and consecutive number (2 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.

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).

Effective period

Set the period when the periodical sending is effective.

Always: The periodical sending is always effective.

Schedule: You can specify the period when the periodical sending is effective in the schedule setting in the other section.

Click **Schedule** and the setting menu for the effective period is displayed. ("Setting the Schedule — Schedule setting Menu" on page 50)

OK/Cancel

See "Buttons common to every setting menu" on page 24.

Sending Images to FTP Server
— 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 and audio file which has been shot and recorded linked with the external sensor input or with the built-in motion detection function to FTP server. The image file can also be sent periodically. FTP client setting menu is composed of three tabs **Common**, **Alarm sending** and **Periodical sending**.

Common Tab — Setting the FTP Client Function
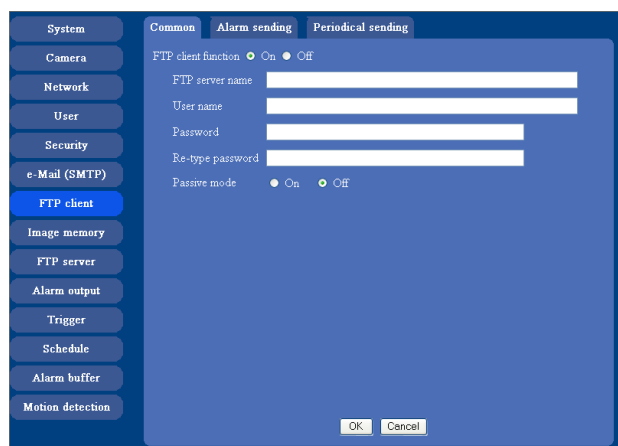
FTP client function

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**.

> **Note**

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 24.

Alarm sending Tab — Setting the FTP client action when detecting the alarm

Set to forward the image and audio file to the specified FTP server linked with the alarm detection by the external sensor input or by the built-in motion detection function.
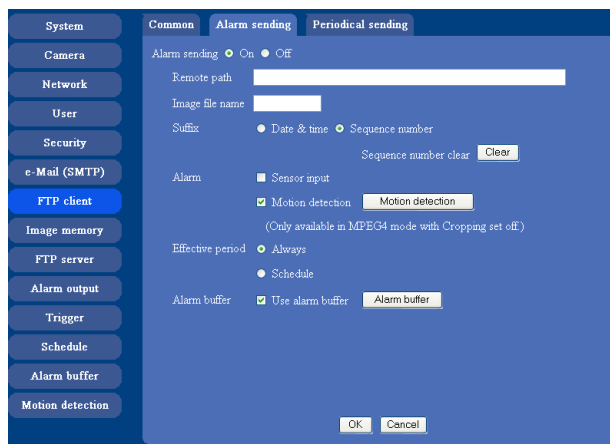
Alarm sending

Select **On** to send the image and audio file to FTP server linked with the alarm detection.

Remote path

Type the path to the destination up to 64 characters.

Image file name

Type the file name you want to assign to the images when sending to the FTP server. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.

Suffix

Select a suffix to add to the 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) and second (2 digits), and
consecutive number (2 digits), thus 14-digit number
is added to the file name.

Sequence number: A consecutive number of 10 digits
between 0000000001 and 4294967295 and an
consecutive 2 digits number is added to the Image
file name.

Tip

A consecutive number added to **Date & time** and
Sequence number is used to identify each of multiple
files created with one alarm event.

Sequence number clear

Click **Clear** to reset the Sequence number suffix to 1.

Alarm

Select the connected alarm.
Sensor input: The external sensor which is connected to
the sensor input of the camera I/O port.
Motion detection: Click **Motion detection** button, and
the Motion detection setting menu is displayed. You
can set the motion detection function (page 52).

Note

Motion detection works only when the Video mode is
set to **MPEG4** and the **Cropping** is set to **Off**.

Effective period

Set the period when the alarm detection is effective.
Always: The alarm detection is always effective.
Schedule: You can specify the period when the alarm
detection is effective in the schedule setting in the
other section.
Click **Schedule** and the setting menu for the
Effective period is displayed. ("Setting the Schedule
— Schedule setting Menu" on page 50)

Alarm buffer

Select **Use alarm buffer** when you forward the image/
audio of before and after the alarm detection (pre-alarm,
post-alarm).
If you do not select it, only the image of the moment of
the alarm detection is forwarded.

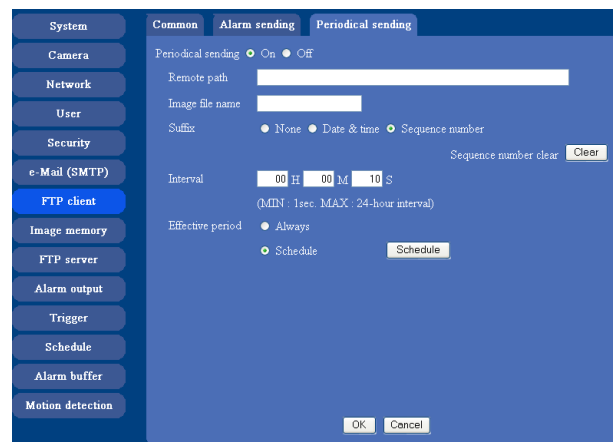Click **Alarm buffer** to display the Alarm buffer setting
menu.
For details, see "Setting the Alarm Buffer — Alarm
buffer setting Menu" on page 51.

OK/Cancel

See "Buttons common to every setting menu" on page
24.

Periodical sending Tab — Setting the Periodical FTP Client Activity

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.

Remote path

Type the remote path up to 64 characters.

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) and second (2 digits), and
consecutive number (2 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.

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.

Effective period

Set the period when the periodical sending is effective.
Always: The periodical sending is always effective.
Schedule: You can specify the period when the periodical sending is effective in the schedule setting in the other section.
Click **Schedule** and the setting menu for the effective period is displayed. ("Setting the Schedule — Schedule setting Menu" on page 50)

OK/Cancel

See "Buttons common to every setting menu" on page 24.

Recording Images in Memory
— Image memory setting Menu

When you click **Image memory** on the Advanced mode menu, the Image memory setting menu appears.
By using the image memory function, you can record the image and audio file, which has been shot being linked with the external sensor input or with the built-in motion detection function, to the built-in memory (about 8 MB) of the camera. The image file can also be recorded periodically.
You can also record a still image periodically.
The recorded image and audio files can be found or downloaded to the computer using the FTP server function. (See "Sending an Image via mail — e-Mail (SMTP) setting Menu" on page 38.)
Image memory setting menu is composed of three tabs **Common**, **Alarm recording** and **Periodical recording**.

Notes

• The image and audio files recorded in the built-in memory will be erased when the power of the camera is turned off.
• The frame rate and operability on the main viewer may decrease during image storage in the built-in memory.
• When the Overwrite is set to **On**, a warning mail is not sent to the Administrator.

Common Tab — Setting the Image memory Function

Image memory

Set whether you use the Image memory function or not. When you select **On**, the Common setting options are displays in the below. If you do not use it, select **Off** and click **OK**.

Free space

Shows the current free space of the builtin memory.

Overwrite

Select to overwrite the file or not when there is insufficient memory space to record the image.
Select **On** to allow overwriting. The oldest file or folder is overwritten first.
Select **Off** to prohibit overwriting. In this case, a new file cannot be stored.

Capacity warning

Select **On** to send a warning mail to the Administrator when the built-in memory space is low or the memory is full. Select **Off** if you do not want to send a warning mail.

Note

When the Overwrite is set to **On**, a warning mail is not sent to the Administrator.

SMTP server name

Type the name of the SMTP server you want to use for sending the warning mail, up to 64 characters.
Otherwise type the IP address of SMTP mail server.

Authentication

Select the authentication required when you send an e-Mail.
Off: Select if no authentication is necessary when an e-Mail is sent.
On: When authentication is necessary an e-Mail is sent, select one of the authentication methods from the followings..
    SMTP: Select if 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.

Note

When you set to **On**, make sure to select either or both **SMTP** or/and **POP before SMTP**.

POP server name

This is necessary when **POP before SMTP** is selected in **Authentication**.
Type POP (receiving mail) server name up to 64 characters. Otherwise type the IP address of POP server. This setting is necessary when SMTP server that sends a mail authenticates using the account of POP user.

User name, password

Type the user name and the password of the user who has the mail account. This setting is necessary when SMTP server that sends a mail authenticates.

Administrator e-Mail address

Type the e-Mail address of the recipient of the warning mail (e-Mail address of the camera Administrator), up to 64 characters.

OK/Cancel

See "Buttons common to every setting menu" on page 24.

Alarm recording Tab — Setting the Image Memory Function when Detecting the Alarm

You can set to record the image and audio file to the built-in memory linked with the external sensor input or with the built-in motion detection function.
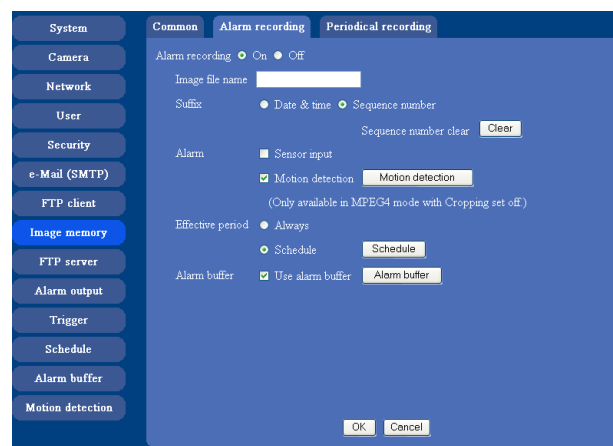
Alarm recording

Select **On** to set to record the image and audio file to the built-in memory linked with the external sensor input or with the built-in motion detection function.

Image file name

Type the file name you want to assign to the images when saving in the built-in memory. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.

Suffix

Select a suffix to add to the 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 consecutive number (2 digits), thus 14-digit number is added to the file name.
Sequence number: A consecutive number of 10 digits between 0000000001 and 4294967295 and an

consecutive 2 digits number is added to the Image file name.

> **Tip**
>
> A consecutive number added to **Date & time** and **Sequence number** is used to identify each of multiple files created with one alarm event.

Sequence number clear

Click **Clear** to reset the Sequence number suffix to 1.

Alarm

Select the connected alarm.
Sensor input: The external sensor which is connected to the sensor input of the camera I/O port.
Motion detection: Click **Motion detection** button, and the Motion detection setting page is displayed. You can set the motion detection function (page 52).

> **Note**
>
> **Motion detection** works only when the Video mode is set to **MPEG4** and the **Cropping** is set to **Off**.

Effective period

Set the period when the alarm detection is effective.
Always: The alarm detection is always effective.
Schedule: You can specify the period when the alarm detection is effective in the schedule setting in the other section.
Click **Schedule** and the setting menu for the effective period is displayed. ("Setting the Schedule — Schedule setting Menu" on page 50)

Alarm buffer

Select **Use alarm buffer** when you forward the image/audio of before and after the alarm detection (pre-alarm, post-alarm).
If you do not select it, only the image of the moment of the alarm detection is forwarded.

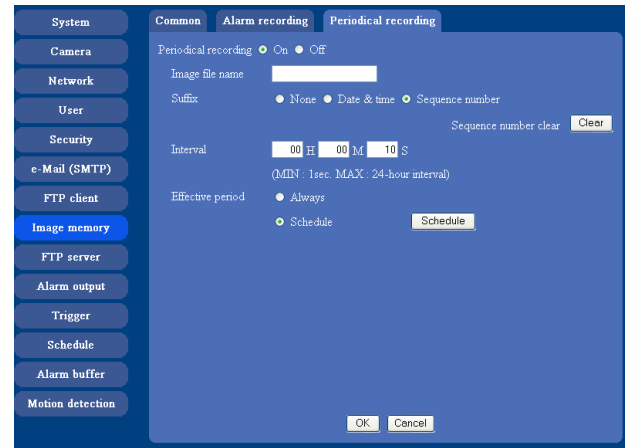Click **Alarm buffer** to display the Alarm buffer setting menu.
For details, see "Setting the Alarm Buffer — Alarm buffer setting Menu" on page 51.

OK/Cancel

See "Buttons common to every setting menu" on page 24.

Periodical recording Tab — Setting the Periodical recording mode

You can set to record the image file to the built-in memory periodically.

Periodical recording

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

Image file name

Type the file name of the image recorded to the built-in memory up to 10 alphanumeric, - (hyphen) and _ (under score).

> **Note**
>
> You cannot send the audio file by using the periodical recording function.

Suffix

Select a suffix to add to the file name.
None: The recording file name 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 consecutive number (2 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.

Interval

Type the interval at which you want to record an image in the built-in memory 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 or the network environments.

Efective period

Set the period when the periodical recording is effective.
Always: The periodical recording is always effective.
Schedule: You can specify the period when the periodical recording is effective in the schedule setting in the other section.
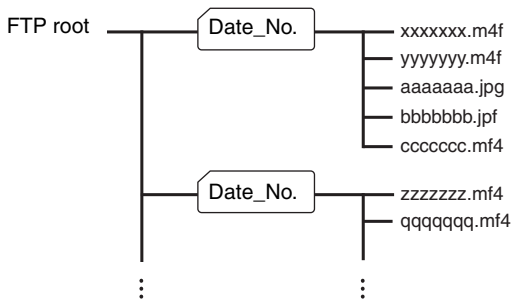
Click **Schedule** and the setting menu for the effective period is displayed. ("Setting the Schedule — Schedule setting Menu" on page 50)

OK/Cancel

See "Buttons common to every setting menu" on page 24.

Directory Structure of Image Memory

The images are recorded in the memory with the following directory structure.

A ⬚ represents a directory created automatically. The Date_No. directory has a 7-digit name consisting of the last two digits of year (2 digits), month (2 digits), underscore and sequence number (2 digits).
A directory can contain video files of up to approximately 1 MB, and a new directory will be created automatically if the size of the video files in the current directory exceeds the maximum size, and recording will continue.

About the extension of a file

A file to be recorded/sent using the image memory function or the FTP client function has one of the following three extensions depending on the video mode setting and the recording/sending settings of the camera.

**.m4f:** Represents the **MPEG4** video mode.
.jpf: Represents the **JPEG** video mode when **Use alarm buffer** is checked in the alarm recording/alarm sending menu. This file includes audio data.
.jpg: Represents the **JPEG** video mode when **Use alarm buffer** is not checked in the alarm recording/ alarm sending menu. This file can be viewed with a normal image viewer.

The SNC video player (page 58) allows playing of ".m4f" and ".jpf" files.

Downloading Images from the Camera — FTP server setting Menu

When you click **FTP server** on the Administrator menu, the FTP server setting menu appears. Use this menu to set up for the FTP server function which finds a specified image and audio file stored in the built-in memory of the camera (about 8 MB) or download the still image file from the camera.
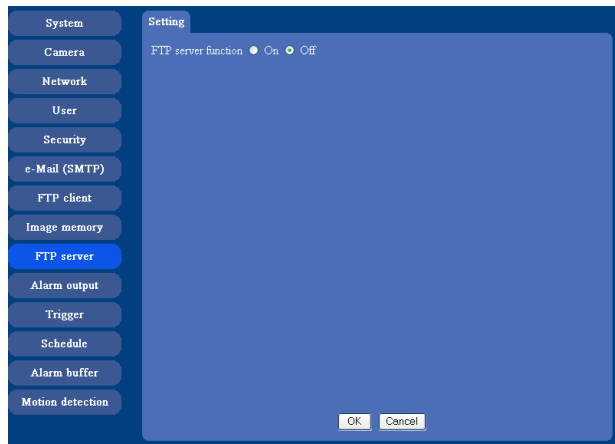
FTP server function

To activate the FTP server function, select **On** and click **OK**.
When you do not use the FTP server function, select **Off** and click **OK**.

OK/Cancel

See "Buttons common to every setting menu" on page 24.

> **Note**

Note the followings when you log in the FTP server of the camera using the FTP client software of the computer.

- The frame rate and the operativity of the monitor window in the main viewer will degrade.
- While recording the image using the Image memory function, you cannot delete the recording directory.
- When the recorded image or audio file is deleted, the camera counts the free space of the built-in memory again at logging off.

Setting the Alarm Output — Alarm output setting Menu

When you click **Alarm output** on the Administrator menu, the Alarm output setting menu appears.
You can set in this menu to control the alarm out of I/O port on the rear of the camera linked to the alarm detection, the timer and day/night.

Alarm out 1, 2 Tab
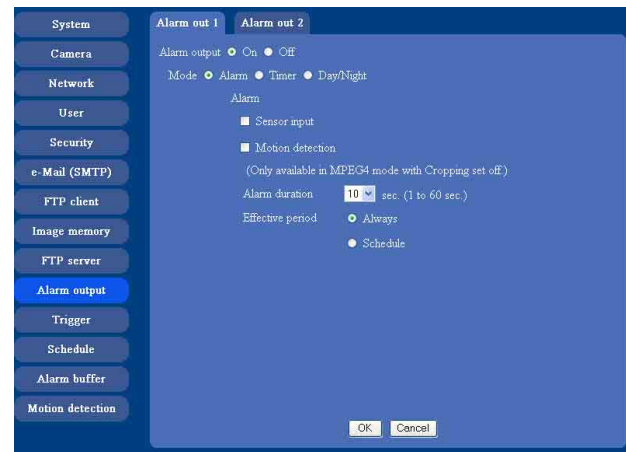
Alarm output

To activate the Alarm output function, select **On**. The basic setting options are displayed below.
When you do not use the Alarm output function, select **Off**.

Mode

Select the mode of the Alarm output function.

Alarm: Controls alarm output by synchronizing with an external sensor input or the built-in activity detection function.
Timer: Controls alarm output by the timer.
Day/Night: Controls the alarm output linked to the day/night function.

Alarm

This item is displayed when **Mode** is set to **Alarm**.
Select the alarm to link the alarm output function. If the selected alarm is detected, the alarm output status changes.
Sensor input: External sensor connected to sensor input of the camera I/O port
Motion detection: To set the motion detection function, click **Motion detection**. The Motion detection setting menu appears (see page 52).

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**.

Alarm duration

Select the duration for which the alarm output is short-circuited between 1 and 60 sec.

Effective period

This item is displayed when **Mode** is set to **Alarm**.
Set the period while the alarm detection is effective.
Always: The alarm detection is always effective.
Schedule: You can specify the period when the alarm detection is effective in the schedule setting in the other section.

Click **Schedule** and the setting menu for the effective period is displayed. ("Setting the Schedule — Schedule setting Menu" on page 50)

Schedule

This item is displayed when **Mode** is set to **Timer**.
Click **Schedule** and the setting menu for the effective period is displayed. ("Setting the Schedule — Schedule setting Menu" on page 50)
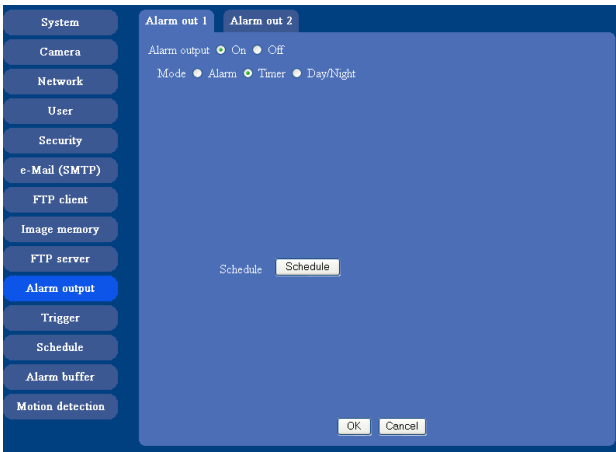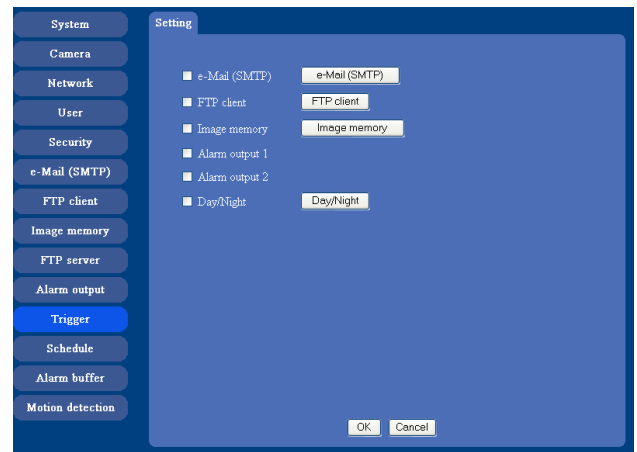

OK/Cancel

See "Buttons common to every setting menu" on page 24.

Setting the Operations from the Viewer Page — Trigger setting Menu

Click **Trigger** on the Administrator menu to display the Trigger Setting menu.
You can set the activities of when you click [icon] Trigger icon of the main viewer in this menu.

e-Mail (SMTP)

After checking it, you will be able to select **e-Mail** in the Trigger setting menu. You can send mail with attached image file by selecting **e-Mail** and clicking the Trigger icon.

When you click **e-Mail (SMTP)** button, the **Trigger (e-Mail) setting** menu is displayed. You can set necessary options here. The setting options and setting procedures are the same as those of the e-Mail (SMTP) setting menu (page 38).

While the Video mode is set to **MPEG4**, the image of the composite video signal output from the video output connector of the camera may be distorted during mail transmission.
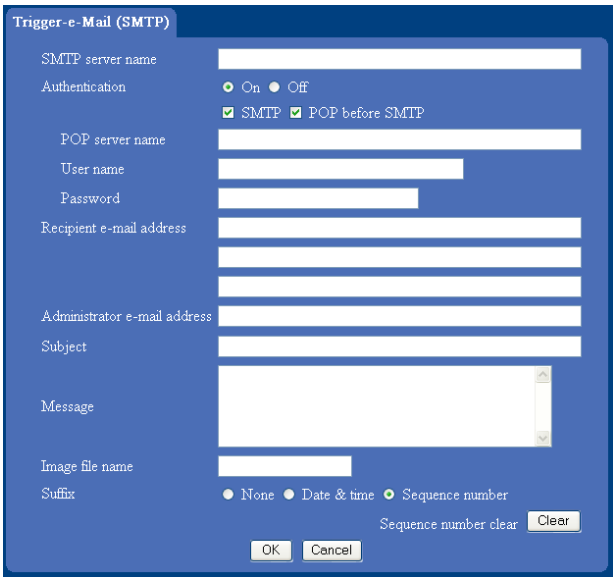
FTP client

After checking this, you will be able to select **FTP client** in the Trigger setting menu. You can send an image file to FTP server by selecting **FTP** and clicking the Trigger icon.

When you click **FTP client** button, the **Trigger (setting) FTP client** menu is displayed. You can set necessary options here. The setting options and setting procedures are the same as those of the FTP client setting menu (page 41).
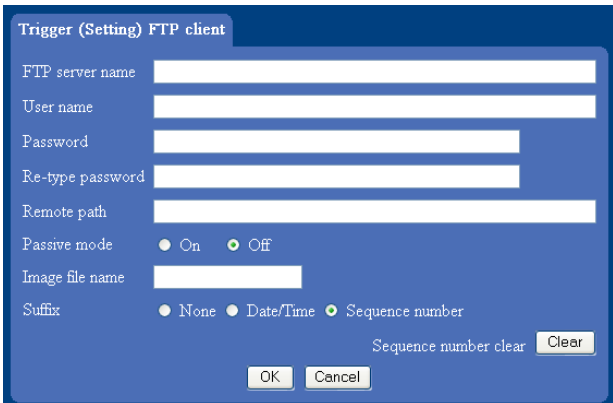
Image memory

After checking this, you will be able to select **Image memory** in the Trigger setting menu. You can record an image file to the built-in memory by selecting **Image memory** and clicking the Trigger icon.

When you click **Image memory** button, the **Trigger (setting) Image memory** menu is displayed. You can set necessary options here. The setting options and setting procedures are the same as those of the Image Memory setting menu (page 43).
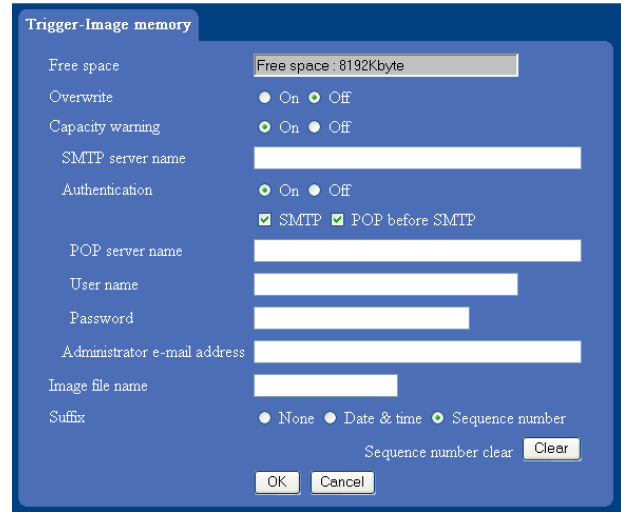
Alarm output 1, 2

After checking this, you will be able to select **Alarm output 1** or **Alarm output 2** in the Trigger setting menu. You can control On (short circuit) or Off (open) by selecting **Alarm output** and clicking the Trigger icon.

Day/Night

After checking it, you will be able to select day/night in the Trigger setting menu. You can control **On** (night mode) or **Off** (day mode) of the day/night function by clicking the Trigger icon.

When you click the day/night button, the day/night setting (Trigger) menu is displayed. You can set the necessary options here. The setting options and setting

procedures are the same as those of the Camera setting menu (page 28).
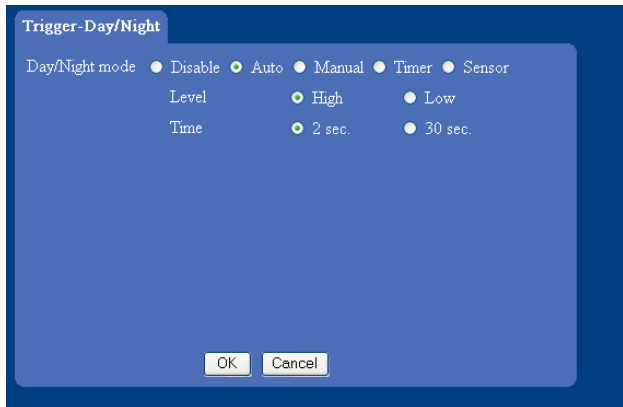
Note

The day/night function is invalid when its mode is set to **Disable** or **Auto** in the day/night tab even when you select day/night in the Trigger setting menu.

OK/Cancel

See "Buttons common to every setting menu" on page 24.

Setting the Schedule
— Schedule setting Menu

When you click **Schedule** on the Administrator menu, the Schedule setting menu appears.
This is the same menu as the setting menu which is displayed when you click **Schedule** to set Effective period and Schedule in FTP client setting menu, e-Mail (SMTP) setting menu, Image memory setting menu, Alarm output 1, 2 setting menu and so on.

Example: When setting e-Mail (SMTP) (the alarm sending) in the Schedule setting menu
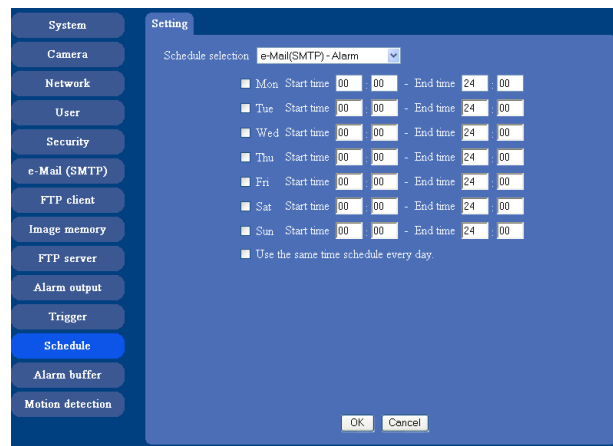
Schedule selection

Select the list box to specify the schedule you want to set. **e-Mail (SMTP) – Alarm**, **e-Mail (SMTP) – Periodical**, **FTP – Alarm**, **FTP – Periodical**, **Image memory – Alarm**, **Image memory – Periodical**, **Alarm output 1 – Alarm, Alarm output 1 – Timer, Alarm output 2 – Alarm** or **Alarm output 2 – Timer** can be selected.
The time period on the right of the checked day is the effective period of the schedule.

Mon (Monday) to Sun (Sunday)

The time period on the right of the checked day is the effective period of the schedule.

Start time, Stop time

Specify the Start time and the Stop time.

Use the same time schedule every day

When this is checked, the Start time and Stop time set to **Mon** (Monday) are applied to all days. In this case, the Start time and Stop time of the other days than **Mon** (Monday) cannot be input.
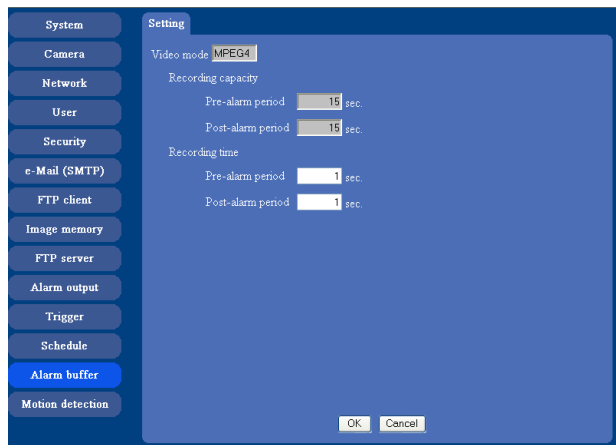
OK/Cancel

See "Buttons common to every setting menu" on page 24.

Setting the Alarm Buffer
— Alarm buffer setting Menu

When you click **Alarm buffer** on the Administrator menu, the Alarm buffer Setting menu appears.
You can set the Pre-alarm image and audio (the image and audio before the alarm detection) and the Post - alarm image and audio. These can be set when **Alarm sending** or **Alarm recording** of FTP client setting menu or Image memory setting menu is set to **On**, and besides when **Use alarm buffer** is selected.

Video mode

The Video mode set in the Common tab of the Camera setting menu is displayed.

MPEG4: Shows the present output format of the camera is MPEG4.

JPEG: Shows the present output format of the camera is JPEG.

Recording capacity

Displays the maximum recording capacity of alarm buffer in the present camera setting of the video mode, image size, bit rate and frame rate.

Pre-alarm period: Displays the maximum recording capacity of image/audio before the alarm detection.

Post-alarm period: Displays the maximum recording capacity of image/audio after the alarm detection.

Recording time

Set the recording time for the Pre-alarm image/audio and Post alarm image/audio.

Pre alarm period: Type the recording time of the image/audio before the alarm detection.

Post alarm period: Type the recording time of the image/audio after the alarm detection.

Note

The value of Recording capacity differs depending on Image size, Bit rate (for MPEG4) and Image quality (for JPEG) in the camera setting menu.

OK/Cancel

See "Buttons common to every setting menu" on page 24.

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 Alarm sending of e-Mail (SMTP) setting menu, Alarm sending of FTP client setting menu, Alarm recording of Image memory setting menu and so on.

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. You can change the Threshold level displayed in the Motion detection indicator.

Motion detection indicator

The moving level of the present shooting image inside the specified Window is shown in the graph. The even line shows the threshold level for Motion detection which will be a guide to set the sensitivity properly.

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.
When you release the mouse, the new setting is applied to the level of motion detection indicator.

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**.

6 After all settings, click **OK**.

Notes

- While motion detection setting menu is displayed, motion detection e-Mail (SMTP) notification, FTP client, Image memory and Alarm output function will not work. Make sure to close Motion detection setting menu after setting.
- 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
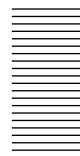
This section explains how to use the application software and commands, including the supplied CD-ROM.

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 9 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.
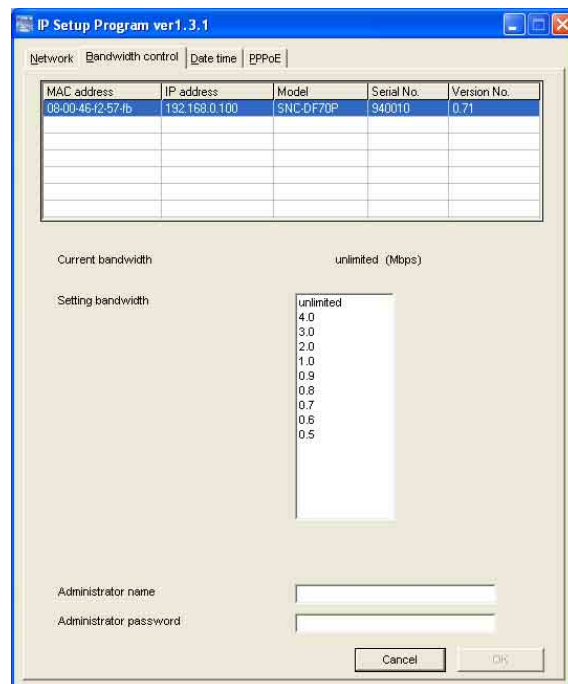
Bandwidth Control Tab

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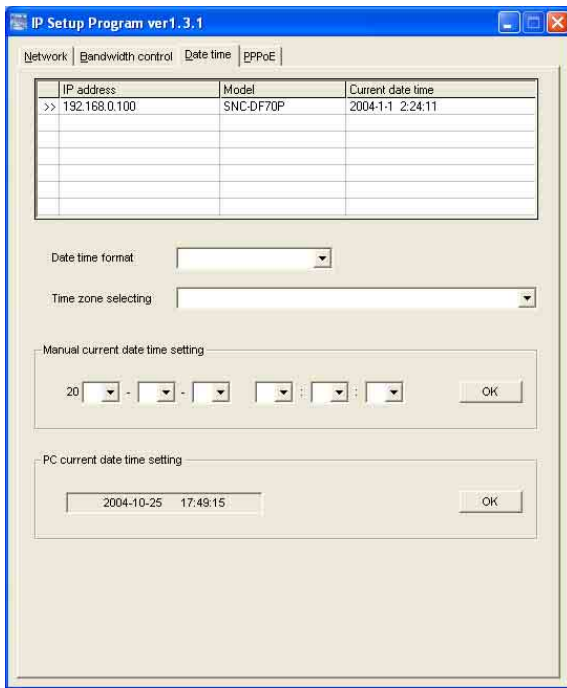
2 Click to select the camera you want to set the date and time for.

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.

PPPoE Tab

PPPoE is used to connect to an ISP (Internet Service Provider) via the Internet. Using PPPoE, you can automatically obtain an IP address to connect to the Internet from the ISP.

The following PPPoE setting items are provided for the SNC-DF70N/DF70P.
• User ID assigned by your ISP
• Password for the user ID
• DNS setting (automatic/manual setting)

1 Click the PPPoE tab to display the PPPoE setting window.
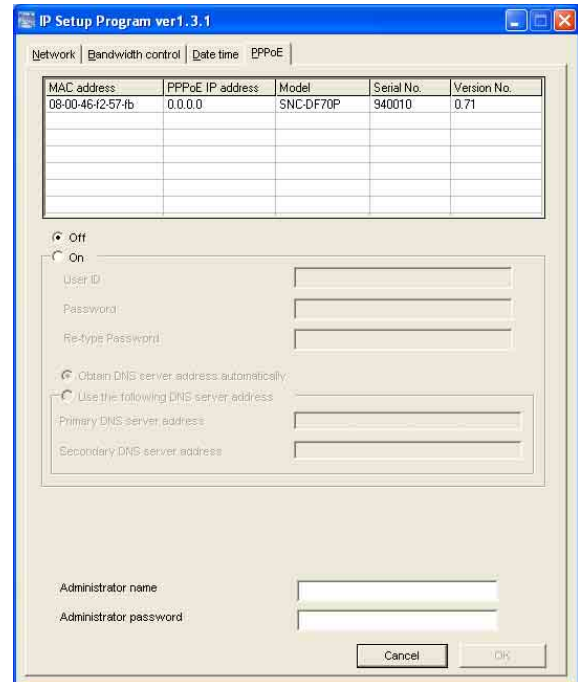
2 Click to select the camera you want to make the PPPoE settings for.

3 Select **On** below the list to enable the PPPoE setting.
To disable the PPPoE setting, select **Off**.

4 Type the user ID assigned by the ISP in the **User ID** box.

5 Type the password for the user ID in the **Password** box.

Others

6 Retype the password for the user ID in the **Re-type password** box.

7 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 each box.

8 Type the **Administrator name** and **Administrator password** in each box.

9 Click **OK**.
If "Setting OK" is displayed, the PPPoE setting is completed.

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
G711 (μ-LAW)	64 kbps
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
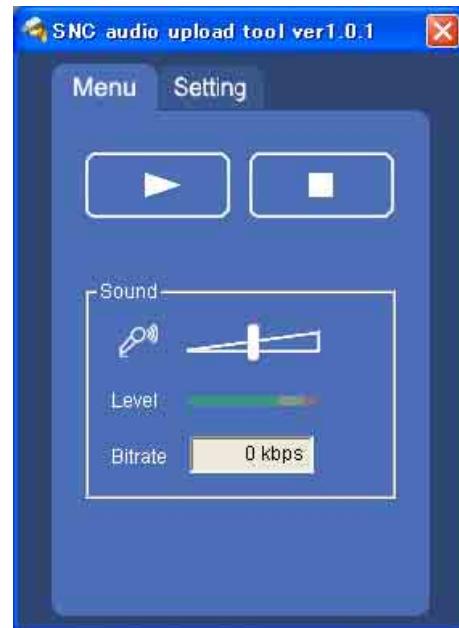
3 Check **Select** in the **Microphone** section.

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, Proxy 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/disenable the sound muting.
The transmission rate is displayed in the Bitrate box.
The microphone input volume is displayed at the Level.

Others

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.

Using the SNC video player — Playing Video/ Audio File Recorded on Camera

The supplied SNC video player allows you to play
video/audio data recorded on the camera with your
computer.
This section explains the setup and operations of the
SNC video player.

Downloading the SNC video player

To download the SNC video player, click the 🔽 Player
icon located on the upper part of the main viewer of the
camera.
Input the Administrator name and Administrator
password on the download dialog.

Note

To operate the SNC video player, a special DLL file is
necessary. This file is automatically installed in the
computer when you view camera images with the
ActiveX viewer.

Using the SNC video player

1 Double-click the SNC video player downloaded
from the camera to start this application.

2 Click the 📂 icon.
The Select File dialog opens.

3 Select the file you want to play.

Others

Information boxes on the selected file are displayed on the left side of the window as follows:
Each click on the ⊡i (information) icon switches between "display" and "Not to display" of the file information.

Model name: Model name of the camera with which the file is recorded.

IP address: IP address of the camera with which the file is recorded.

Serial number: Serial number of the camera with which the file is recorded.

Record event: Type of event used for the recording: **Sensor input, Periodical, Motion detection** or **Manual**.

Date&time: Recording date and time

Movie: Video CODEC

Audio: Audio CODEC

Playing a video/audio file

Click ▶ (start) to start playing from the beginning of the selected file.
To freeze the movie temporarily, click ⏸ (pause).
Click ▶ again to restart playing.
To stop playing, click ■ (stop).
To restart playing, click ▶ (start) again.
Play stops when the file is played to the end.

To play from a specified point

Move the slider bar below the image display, and playing starts according to the slider bar position.

Adjusting the sound

Adjust the playing sound volume by moving the ◁═══▷ slider bar. Move it to the left end for the minimum volume, and to the right end for the maximum volume.
Click the speaker icon to enable/disable the sound muting.
When the sound muting is on, no sound is heard even if you move the slider bar to the right.

Saving an image

Click 📷 (capture) icon during playing or pause and the captured image is displayed on a pop-up dialog. To save the image, click **Save** on the dialog. You can specify the destination to which the image is to be stored and select the JPEG or Bitmap format.

Using the Custom Homepage Installer

You can store the homepage that you have created in the camera and watch it.

Notes on creating the homepage

When you creating the homepage, note the following points.
• The file name should be typed up to 24 characters including the extension.
• The file size of the homepage should be 2.4 MB or less.
• To watch the created homepage, set the **Default URL** in the System setting menu.

Uploading the Custom Homepage Installer to the Camera

1 After a short time a window will open displaying the files on the CD-ROM.

2 Click the **Setup** icon of **Custom Homepage Installer**.
The "File Download" dialog opens.

3 Click **Open**.
The installer starts and notes are displayed.
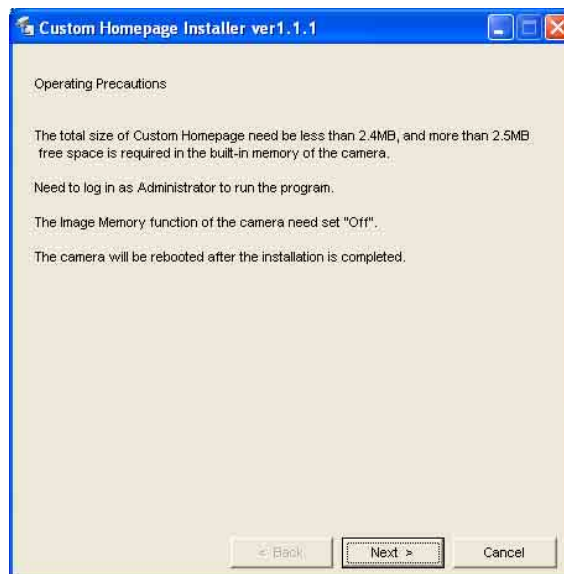
Note

If you click "Save this program to disk" on the "File Download" dialog, the CustomHomepageInstaller.exe file will be saved on the computer. Double-click the saved file to start it.

4 Read the notes carefully, and click **Next>**.
The Software License Agreement is displayed.
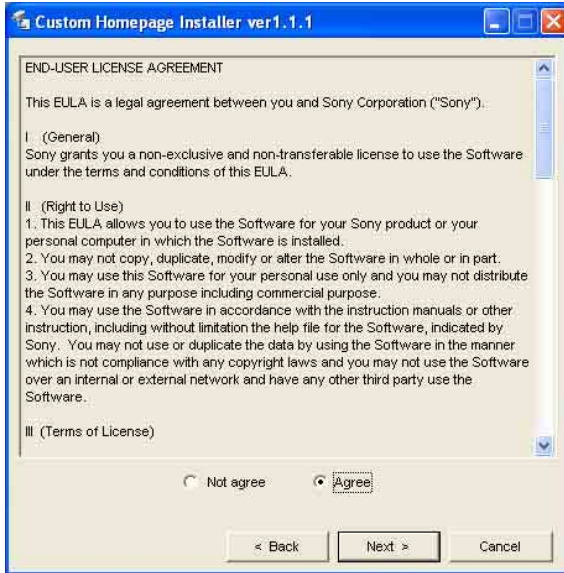
5 Read the agreement carefully, select **Agree** if you accept it, then click **Next**.
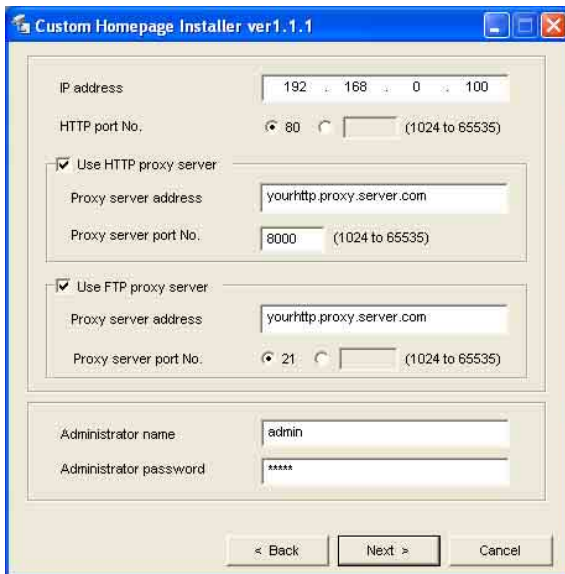
6 Type the IP address of the camera to be uploaded in the IP address box.

7 Specify the HTTP port No. of the camera.
Initial HTTP port No is set to 80.

8 When you use a proxy server, set the following:
For the proxy server of your environments, consult your network administrator.

When using an HTTP proxy server:
Select **Use HTTP proxy server**, and type your settings in the Proxy server address and Proxy server port No. boxes.

When using an FTP proxy server:
Select **Use FTP proxy server**, and type your settings in the Proxy server address and Proxy server port No. boxes.

Note

If you cannot establish communication with the camera with the proxy server being used, connect the camera to the local network and run the installer without using the proxy server.

9 Type the Administrator name and Administrator password of the camera to be uploaded.

10 Confirm that all items are correct, then click **Next**.

11 Type the path for the folder in which your homepage is stored in the Source folder box, then click **Next**.
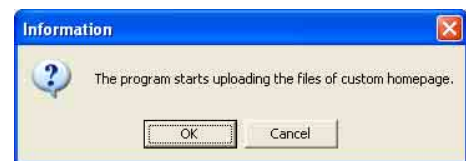
12 Click **OK**.
Uploading of the homepage file starts.

Others

Do not turn off the camera until the camera is rebooted after uploading the homepage file.

The following page will appear after a while.

After displaying this page, the camera will be adjusted and rebooted automatically in two minutes.
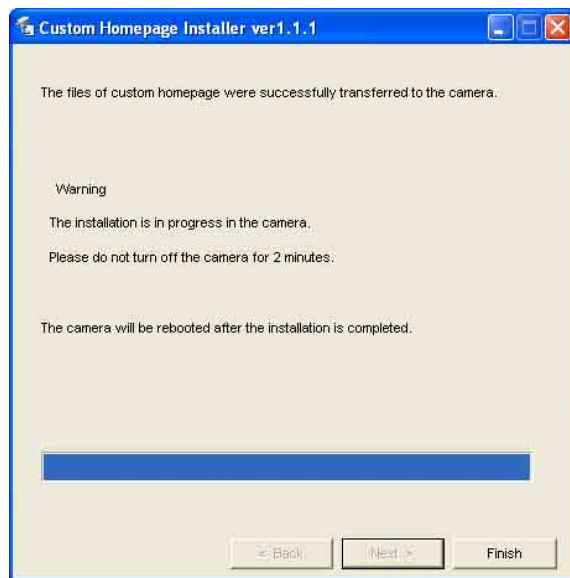
13 Click **Finish** to exit the program.

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 DOS window 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...
```

You will normally receive a reply after about 5 repetitions of "Request time out."

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.

Others

Using the SNMP

This unit supports SNMP (Simple Network Management Protocol). You can read MIB-2 objects and write some MIB-2 objects using software such as SNMP manager software. This unit also supports the coldStart trap which occurs when the power is turned on or the unit restarts, and the Authentication failure trap which informs of an illegal access using SNMP. Using CGI commands, you can set community name and access limitation, reading/writing right, host to send traps, and some MIB-2 objects. To allow these settings, you need authentication by the camera administrator.

1. Inquiry Commands

You can check the SNMP Agent settings using the following CGI commands.

```
<Method>
    GET, POST
<Command>
    http://ip_adr/snmpdconf/inquiry.cgi?inqjs=snmp
    (JavaScript parameter format)
    http://ip_adr/snmpdconf/inquiry.cgi?inq=snmp
    (standard format)
```

With the above inquiry, you can obtain the following setting information. The following explains the setting information using the inqjs=snmp (JavaScript parameter) format.

```
var sysDescr="\"SONY Network Camera SNC-
DF70\""                                          ...①
var sysObjectID="1.3.6.1.4.1.122.8501"            ...②
var sysLocation="\"\""                            ...③
var sysContact="\"\""                             ...④
var sysName="\"\""                                ...⑤
var snmpEnableAuthenTraps="1"                     ...⑥
var community="public,0.0.0.0,read,1"             ...⑦
var community="private,192.168.0.101,write,2"     ...⑧
var trap="public,192.168.0.101.1"                 ...⑨
```

① describes the case of "mib-2.system. sysDescr.0". You cannot change this parameter.

② describes the case of "mib-2.system. sysObjectID.0". You cannot change this parameter.

③ describes the case of "mib-2.system. sysLocation.0". This field is used to describe information on the location of this camera. Nothing is set at the factory.

④ describes the case of "mib-2.system. sysContact.0". This field is used to describe the information on administrator of this camera. Nothing is set at the factory.

⑤ describes the case of "mib-2.system. sysName.0". This field is used to describe administration mode of this camera. Nothing is set at the factory.

⑥ describes the case of "mib-2.snmpEnable AuthenTraps.0". This example shows when "1" (enable) is set. With this setting, a trap occurs when there is an Authentication failure. When "2" (disable) is set, no Authentication failure trap occurs.

⑦ describes the community name and the reading/ writing attributes. This example shows the identification number "ID=1", the community name public, and enables read from any IP address (0.0.0.0).

⑧ describes the community name and the reading/ writing attributes, similarly to ⑦. This example shows the identification number ID=2, the community name "private", and enables "read/ write" by the SNMP request packet from the host "192.168.0.101".

⑨ describes the host name to send a trap. This example shows the identification number "ID=1", the community name "public", and enables sending of traps to the host having the IP address "192.168.0.101".

2. Setting Commands

The unit supports the following setting commands of SNMP.

```
<Method>
    GET, POST
<Command>
    http://ip_adr/snmpdconf/snmpdconf.cgi?
    <parameter>=<value>&<parameter>=...&...
```

First, perform the settings of the following parameters.

1) sysLocation=<string>
   Set the case of "mib-2.system.sysLocation.0" in the <string> position. The maximum length of <string> is 255 characters.

2) sysContact=<string>
   Set the case of "mib-2.system.sysContact.0" in the <string> position. The maximum length of <string> is 255 characters.

3) sysName=<string>
   Set the case of "mib-2.system.sysName.0" in the <string> position. The maximum length of <string> is 255 characters.

4) enaAuthTraps=<value>
   Set the case value of "mib-2.snmp.snmp EnableAuthenTraps.0". Type "1" (enable) or "2" (disable) in the <value> position.

5) community=<ID>,<rwAttr>, <communityName>,<IpAddressString>
   Set the community name and the reading/writing attributes. <ID> describes the setting identification number (1 to 8), <rwAttr> describes a character representing the reading/writing attribute ("r", "R", "w or "W"), <communityName> describes the community name to be set, and <IpAddressString> describes the IP address of the host you allow access (0.0.0.0 for any host).

Example: To allow reading/writing by any host in the "private" community and having the ID number "2".
community=2,w,private,0.0.0.0

6) trap=<ID>,<communityName>, <IpAddressString>
   Set the host you want to send traps to. <ID> describes the setting identification number (1 to 8), <communityName> describes the community name to send traps to, and <IpAddressString> describes the IP address of the host to send traps to.

Example: To specify the destination of traps as the private community and the ID number "1".
rap=1,public,196.168.0.101

7) delcommunity=<ID>
   This parameter is used to delete the previous community setting. <ID> describes the community setting identification number (1 to 8).

8) deltrap=<ID>
   This parameter is used to delete the previous setting of the host to send traps to. <ID> describes the trap setting identification number (1 to 8).

When you have finished changing the SNMP setting information using the above parameters 1) to 8), check the changed settings using an inquiry commands. If the changed settings are OK, restart the SNMP using the following CGI command.

SNMP restart command
<Method>
   GET, POST
<Command>
   http://ip_adr/snmpdconf/snmpdconf.cgi?
   snmpd=restart

Others

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Specifications

System/network

Protocol   TCP/IP, ARP, ICMP, HTTP, FTP
                  (server/client), SMTP (client),
                  DHCP (client), DNS (client), NTP
                  (client), SNMP (MIB-2), RTP/
                  RTCP, PPPoE

Compression

Video compression format
                  MPEG4/JPEG
Audio compression format
                  G.711/G.726 (40, 32, 24, 16 kbps)
Image size   640 × 480, 480 × 360, 384 × 288, 320
                  × 240, 256 × 192, 160 × 120
Maximum frame rate
                  MPEG4:30 fps (QVGA)
                  JPEG:30 fps (QVGA)
Web browser   Internet Explorer Ver. 5.5 or 6.0
                  (Available OS: Windows 2000/ XP)
Computer environments
                  CPU: Pentium III, 1GHz or higher
                      (Pentium 4, 2 GHz or higher
                      recommended)
                  RAM: 256 MB or more
                  Display size: 1024 × 768
Maximum user access
                  MPEG4 mode: 10 users
                  JPEG mode: 20 users
Network security
                  Password (basic authentication), IP
                      filtering
Other functions
                  Activity detection, image trimming,
                      built-in clock, etc.

Camera

Image device   NTSC
                      1/4 type interline transfer (Super
                      HAD CCD), 380,000 picture
                      elements
                  PAL
                      1/4 type interline transfer (Super
                      HAD CCD), 440,000 picture
                      elements
Effective picture elements
                  NTSC
                      768 (horizontal) × 494 (vertical)
                  PAL
                      752 (horizontal) × 582 (vertical)
Lens mount   CS mount
Signal format   NTSC/PAL
                  VBS: within 1.0 Vp-p ±5%, 75 ohms,
                      sync negative
Scanning   NTSC
                      525 lines, 2:1 interlace
                  PAL
                      625 lines, 2:1 interlace
Synchronization
                  INT only
Horizontal resolution
                  480 TV lines (analog video)
Signal-to-noise ratio
                  50 dB (AGC OFF, Weight On) (analog
                      video)
Minimum illumination
                  0.9 lux (AGC ON, F1.0)
AGC   On/Off switchable
Exposure control
                  AUTO iris
Electronic shutter
                  CCD Iris
White balance   ATW
BLC   On/Off switchable

Interface

Network port   10BASE-T/100BASE-TX (RJ-45)
I/O port   9 pin Mini DIN connector
                  Sensor input : make contact
                  Alarm output 1 and 2: 24 V AC/DC,
                      max., 1 A
                      (mechanical relay outputs
                      electrically isolated from the
                      camera)
                  Day/Night control input: ×1, 5 V DC
                      input
                  Day/Night control output: ×1, 5 V DC
                      output
Auto iris lens connector
                  DC servo

Video output   BNC connector, 1.0 Vp-p,
                   75 ohms, unbalanced, sync negative
Monitor output
                   2 Pin connector, 1.0 Vp-p, 75 ohms,
                      unbalanced, sync negative
Microphone input
                   Sensitivity: -40 ±3.5dB
                   Frequency range: 50-15,000Hz
                   Plug: ϕ3.5mm (^{5}/32 inches), Mini-plug,
                      plug-in power system
Line output   Type: Active speaker
                   Input impedence: 4.7 kohms or more
                   Plug: ϕ3.5mm (^{5}/32 inches), Mini-plug

Others

Power supply   24 V AC ±10% 50/60 Hz, 12 V DC
                      ±10%, PoE
Power consumption
                   8 W max.
Operating temperature
                   –10 °C to 50 °C (14 °F to 122 °F)
Storage temperature
                   –20 °C to 60 °C (–4 °F to 140 °F)
Operating humidity
                   20 to 80 %
Storage humidity
                   20 to 95 %
Dimensions   135 × 164.5 × 166.1 mm
                   (5 ^{3}/8 × 6 ^{1}/2 × 6 ^{5}/8 inches)
Mass   Approx. 1.8 kg (3 lb 11 oz)
Supplied accessories
                   CD-ROM (setup program and User's
                      Guide) (1)
                   Monitor cables (1)
                   Screws (4)
                   Wrench (1)
                   I/O extension cable (1)
                   Wire rope (1)
                   Installation Manual (this document)
                      (1)
                   B&P Warranty Booklet (for SNC-
                      DF70N only) (1)

Design and specifications are subject to change without
notice.

Others

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Others

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