

# ***Network Camera***

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## **User's Guide**

Software Version 1.0

**IPELA** *SuperExwave*<sup>™</sup>

**SNC-CS50N/CS50P**

## Owner's Record

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

Model No. \_\_\_\_\_  
Serial No. \_\_\_\_\_

### **WARNING**

**To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.**

**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 at least a force of 50 Newtons (N) 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.

### **Power Supply**

#### **Caution for U.S.A. and Canada**

The SNC-CS50N operates on 24V AC or 12V DC. The SNC-CS50N automatically detects the power. Use a Class 2 power supply which is UL Listed (in the U. S. A.) or CSA-certified (in Canada).

#### **Caution for other countries**

The SNC-CS50N/CS50P operates on 24V AC or 12V DC.

The SNC-CS50N/CS50P automatically detects the power.

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

## For customers in the U.S.A. (SNC-CS50N only)

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.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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 (SNC-CS50N only)

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

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

## For customers in other countries

### **WARNING**

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures. In the case that interference should occur, consult your nearest authorized Sony service facility.

## ATTENTION

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

### For the customers in Netherlands

#### Voor de klanten in Nederland

Gooi de batterij niet weg, maar lever hem in als KCA.



仅适用于台湾的用户



廢電池請回收  
僅適用於台灣

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

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## Features

This product is a network camera adopting the Super Exwave™ CCD sensor 1/3 type CCD. The camera has the following features:

- High sensitivity (minimum illumination: 0.4 lx, F1.0)
- Day/Night function which can switch between black & white mode and color
- Automatic white balance tracking and adjustment (ATW/ATW-PRO) and one-push mode white balance switchable
- 2 video systems (video codecs) available: JPEG or MPEG4
- Single codec mode and dual codec mode switchable
- Up to 20 users can access an image of a camera simultaneously.
- You can monitor a high-quality live image of 30 frames per second maximum (SNC-CS50N) and 25 frames per second maximum (SNC-CS50P).

## How to Use This User's Guide

This User's Guide explains how to operate the SNC-CS50N/CS50P 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.

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# 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 the 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.

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# Operating precautions

## Operating or storage location

Do not shoot an extremely bright object (an illumination, the sun, etc.).

Also, avoid operating or storing the camera in the following locations, as these can be a cause of a malfunction.

- Extremely hot or cold places (Operating temperature: 0°C to +50°C [32°F to 122°F])
- 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
- Humid or dusty locations
- Locations exposed to rain
- Locations under the influence of fluorescent light or reflection of a window
- Under an unsteady light (the image will flicker.)

## 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.

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# System Requirements

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

## Processor

Pentium 4, 1.5 GHz or higher (Pentium 4, 2.4 GHz or higher recommended)

## RAM

256 MB or more

## OS

Microsoft Windows 2000, Windows XP

## Web browser

Internet Explorer Ver.6.0 or later



## Preparation

The Preparation section explains what the administrator has to prepare for monitoring 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 it for the first time.

You can assign an IP address in two ways:

- Using the setup program stored in the supplied CD-ROM (see this page)
- Using the ARP (Address Resolution Protocol) commands (see page 73)

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 the Camera to a Local Network” in the supplied Installation Manual. Consult the administrator of the network about the assigned IP address.

### Note

If you are using Windows XP Service Pack 2, disable the Windows Firewall function. Otherwise the IP Setup Program will not operate correctly. To disable Windows Firewall, operate as follows:

- 1 Open **Windows Firewall** from **Control Panel**. With the category display, you can find **Windows Firewall** in **Security Center**.
- 2 Select **Off**, and click **OK**.

## Assigning an IP address using the Setup Program

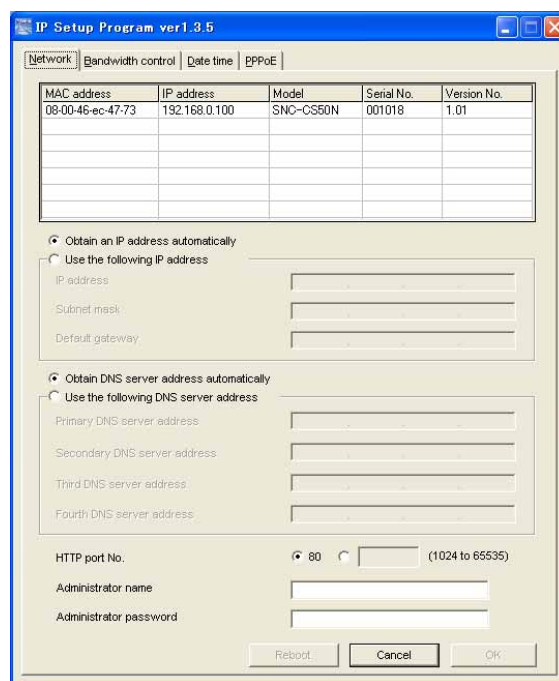
- 1 Insert the supplied CD-ROM disc into your CD-ROM drive. After a short time a window will open displaying the files on the CD-ROM.
- 2 Click the **Setup** icon of **IP Setup Program**. The “File Download” dialog opens.

- 3 Click **Open**.

### Note

If you click “Save this program to disk” on the “File Download” dialog, you will not be able to perform set up correctly. Delete the downloaded file, and click the **Setup** icon again.

- 4 Install the IP Setup Program on your computer using the wizard. If the Software License Agreement is displayed, read it carefully and click **Accept** to continue with the installation.
- 5 Start the IP Setup Program. The program detects the network cameras connected to the local network and lists them on the Network tab window.



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

MAC address	IP address	Model	Serial No.	Version No.
08-00-46-ec-47-73	192.168.0.100	SNC-CS50N	001018	1.01

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**.

Obtain an IP address automatically  
 Use the following IP address

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.

Obtain an IP address automatically  
 Use the following IP address

IP address: 192 . 168 . 0 . 100  
 Subnet mask: 255 . 0 . 0 . 0  
 Default gateway: . . .

#### Note

When you select **Obtain an IP address automatically**, make sure that the DHCP server is operating on the network.

## 8 Set the DNS server address.

### To obtain the DNS server addresses automatically:

Select **Obtain DNS server address automatically**.

Obtain DNS server address automatically  
 Use the following DNS server address

### 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.

Use the following DNS server address

Primary DNS server address: 192 . 168 . 0 . 200  
 Secondary DNS server address: 192 . 168 . 0 . 201  
 Third DNS server address: . . .  
 Fourth DNS server address: . . .

#### Note

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

## 9 Set the HTTP port No.

HTTP port No.  80  [ ] (1024 to 65535)

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

## 10 Type the Administrator name and Administrator password.

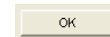
Administrator name: admin  
 Administrator password: \*\*\*\*

The factory settings of both items are “admin.”

#### Note

You cannot change the Administrator name and Administrator password in this step. To change these items, see “Setting the User — User Menu” on page 40.

## 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 in the list.

MAC address	IP address	Model	Serial No.	Version No.
08-00-46-ec-47-73	192.168.0.100	SNC-CS50N	001018	1.01

#### Tip

The factory setting of the camera network is as follows.

IP address: 192.168.0.100

Subnet mask: 255.0.0.0

### Wireless LAN setting

Type: Adhoc

SSID: snc-cs50

Channel: 11 ch

WEP: Nothing

IP address: 10.0.0.100

Subnet mask: 255.0.0.0

The welcome page of the network camera is displayed.



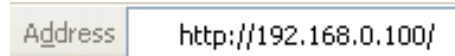
### Note

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

## Accessing the Camera Using the Web Browser

After the IP address has been assigned to the camera, check that you can actually access the camera using the Web browser installed on 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 is displayed.



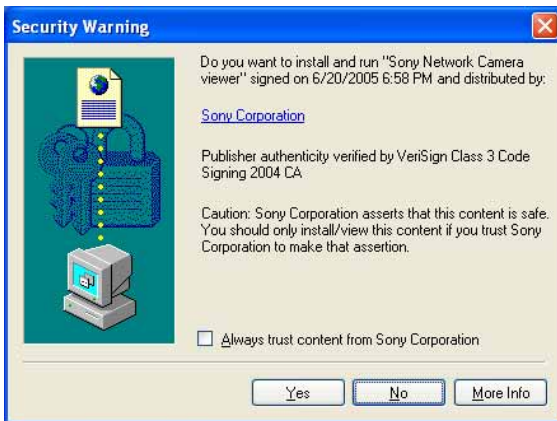
- 2 Click **Enter**.  
The main viewer is displayed.



If the main viewer is displayed correctly, accessing the camera is confirmed.

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

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



### Notes

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

### Tip

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

## To display the welcome page and the main viewer correctly

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

- 1 Select **Tools** from the menu bar for Internet Explorer, then select **Internet Options** and click the **Security** tab.
- 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, etc. on the computer

- When you use antivirus software, security software, personal firewall or pop-up blocker on 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 to the camera uses JavaScript. The display of the Web page may be affected if you use antivirus software or other software described above on your computer.

# Basic Configuration by the Administrator

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

Setting contents	Setting menu
Set the format of the image sent from the camera.	Video codec Tab (page 33)
Select the brightness of the image sent from the camera.	Exposure (page 31)
Select the quality of the image sent from the camera.	Video codec Tab (page 33)
Select the view size of the image.	View size (page 18)
Select whether the audio from the external microphone is sent or not.	Microphone (page 31)
Synchronize the date and time of the camera with those of the computer.	Date & time Tab (page 28)
Make the setting for sending the monitor image attached to an e-mail.	e-Mail (SMTP) Menu (page 42)
Set the user access right for the camera.	User Menu (page 40)

## Operating the Camera

The Operating the Camera section explains how to monitor the image from the camera using your Web browser. Use Internet Explorer as the Web browser. The functions of the camera should be set by the Administrator. For the setting of the camera, see “Adminstrating the Camera” on page 25.

## Administrator and User

This network camera identifies the people who log in as the **Administrator** or **User**.

The **Administrator** can use all the functions of this network camera including camera setting. The **User** can use the functions for monitoring the image and audio from the camera, and controlling the camera. The **Viewer mode** setting is used to restrict the user's access rights. There are three types of users.

Each type of user can use the corresponding functions below.

Function	Administrator	User		
		Full	Light	View
Monitor a live image	●	●	●	●
View the date and time	●	●	●	●
Control the frame rate (Available in JPEG mode only)	●	●	–	–
Control the image view size	●	●	●	–
Zoom an image using the digital zoom	●	●	●	–
Save a still image in the computer	●	●	●	– <sup>1)</sup>
Send an image file to the FTP server	●	●	–	–
Send an image attached to an e-mail	●	●	–	–
Record an image in the memory	●	●	–	–
Control the alarm output of the I/O port on the camera	●	●	–	–
Switch the Day/Night function mode	●	●	–	–
Play an audio file (Voice alert)	●	●	–	–
Switch the TCP/UDP transmission mode (Available in MPEG4 mode only)	● <sup>2)</sup>	● <sup>2)</sup>	–	–
Receive the audio	●	●	●	●
Control the setting menu	●	–	–	–

- Usable function
- Not usable function

1) This function is usable with the Java applet viewer.

2) This function is not usable with the Java applet viewer.

The access rights of the administrator and the user can be set in “Setting the User — User Menu” of the Administrator menu on page 40.

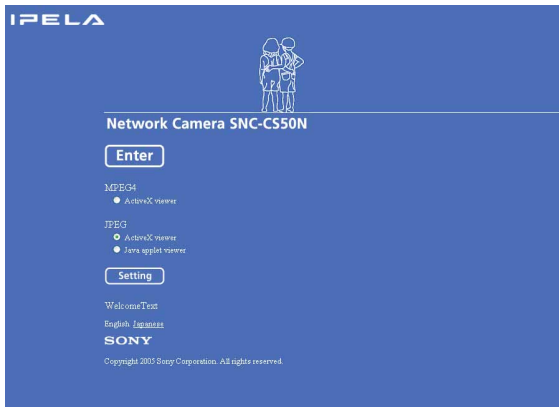
# Logging in to Homepage — Welcome Page

## Logging in as a user

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



The welcome page is displayed.



- 2 Select the viewer.  
The usable codecs and viewers are displayed depending on the **Mode** setting in the **Video Codec** Tab in the Camera menu (page 33).

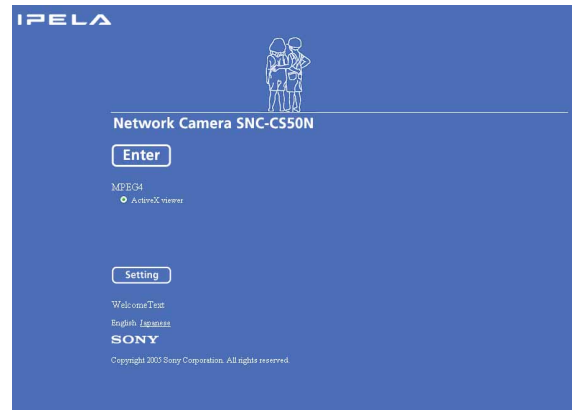
### When Mode is set to Single codec

You can monitor the image of the selected video codec (JPEG or MPEG4). For JPEG images, you can select **Java applet viewer**.

### When JPEG is selected



### When MPEG4 is selected



### When Mode is set to Dual codec

You can monitor JPEG and MPEG4 images. For JPEG images, you can select **Java applet viewer**.



- 3 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 start correctly, the security level of the Internet Explorer may be set to higher than **Medium**. See “To display the welcome page and the main viewer correctly” on page 12 and check the security level.

## Displaying the Administrator menu directly

When the administrator sets the camera functions, the Administrator menu can be opened directly from the welcome page.

- 1 Select the viewer language on the welcome page. Click **English** or **Japanese** at the bottom of the welcome page.

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



- 3 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 using the User menu of the Administrator menu (see page 40).

The Administrator menu appears.



## About viewers

You can use the following viewers.

### ActiveX viewer

This viewer can monitor the camera image in either the **JPEG** or **MPEG4** video codec.

You must install this viewer when you access the main viewer for the first time.

### When you 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 (by 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 with ActiveX Control.



## Java applet viewer

You can select this viewer when the camera image is in **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 operate correctly, check whether the specified Java version has been installed successfully and Java (Sun) is enabled.

### To check the Java version

Select **Tools** from the menu bar of Internet Explorer, then select **Internet Options** and click the **Advanced mode** tab. Check whether the version of Java displayed for **Java (Sun)** is one of the versions specified below. If **Java (Sun)** is not displayed, it means that Java is not installed. You need to install Java.

Java Plug-in Ver. 1.5.0\_01, Ver. 1.5.0\_02

### To enable Java Plug-in

Check “Use Java 2 v1.5.0\_xx for <applet> (requires restart)” in “Java (Sun)”.

### To install Java Plug-in

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

### Notes

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

### Tip

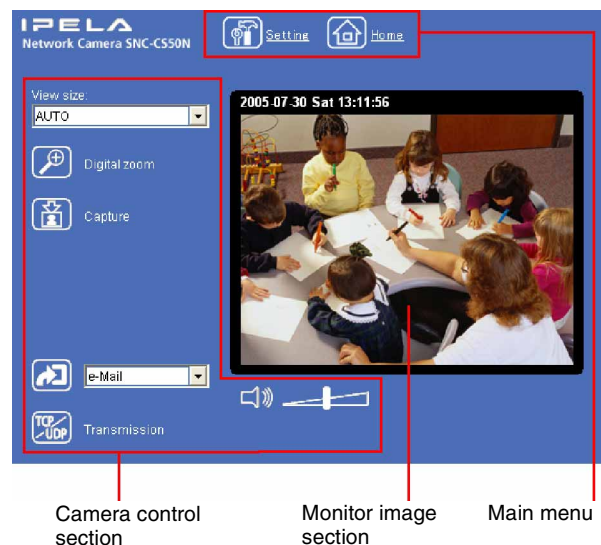
Every page of this software is optimized for display character size **Medium** for Internet Explorer.

# 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

### With the MPEG4 image



### With the JPEG image



## Main menu



### Setting

Click to display the Administrator menu. (page 25)  
You can operate this function only when logging in as the administrator.



### Home

Displays the welcome page.

## Camera control section

### Frame rate



(Displayed only when the camera image is in **JPEG**.)

Selects the frame rate to transmit images. (page 19)

### View size



Selects the view size to be displayed. (page 20)



### Digital zoom

Click to change the size of the digital zoom. (page 20)



### Capture

(Displayed in the main menu when the Java applet viewer is used.)

Click to capture a still image shot by the camera and to store it in the computer. (page 20)

### Trigger



(Displayed only when, the camera **Viewer mode** (page 40) is set to **Full** and one or more triggers are enabled in the Trigger menu (page 53).)

Select the function you want to use from the drop-down list and click . The selected function is activated.

The selectable functions are as follows:

- send the monitor image of the camera to an FTP server (page 21)
- send the monitor image of the camera attached to an e-mail (page 21)
- record the image on an ATA memory card (not supplied) (page 22)
- switch the alarm output on/off (page 22)
- switch the Day/Night function on/off (page 23)
- play the audio file stored in the camera (page 23)



### Transmission (TCP/UDP transmission mode)

(Displayed only when the camera image is in MPEG4 and the ActiveX viewer is used.)

Each click switches the transmission mode of the video/audio data between TCP mode, UDP (Unicast) mode, and UDP (Multicast) mode. (page 24)

The last selected mode is saved in the computer, and will stay selected for the next startup.



### (Volume)

(Displayed when **Microphone** (page 31) is set to **On**.)

Drag the bar to adjust the volume.

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

#### Note

If does not appear when the Java applet viewer is used, **Audio codec** may not be set to **G.711 (64 kbps)** (page 31), **Codec** in the Alarm buffer menu is set to **MPEG4**, or Java may not be installed correctly. To check if Java is installed correctly, refer to “Java applet viewer” of “About viewers” on page 16.

## Monitor Image



The image shot by the camera is shown here. The 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 homepage to display the main viewer. To log in, see “Logging in as a user” on page 15.



- 2 Select the frame rate (only when the camera image is in **JPEG**).



Click the **Frame rate** drop-down list to select the frame rate for transmitting the image. Selectable frame rates are as follows.

#### SNC-CS50N

1, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30 fps

#### SNC-CS50P

1, 2, 3, 4, 5, 6, 8, 12, 16, 20, 25 fps

The number refers to the frame number transmitted per second.

For example, if you select **30 fps** for SNC-CS50N, the image is sent at the maximum speed of the connected line (30 fps maximum).

#### Note

The frame rate options indicate the maximum number of frames that can be transmitted. The number of frames actually transmitted may vary depending on network environments and


camera settings (image size and image quality settings).

- 3 Select the view size.




Click **View size** list box to select the view size from **Auto**, **640 × 480**, **320 × 240**, or **160 × 120**. **Auto** is determined by the image size specified in the Camera menu (page 30)

## Zooming in the monitor image

- 1 Click .
- 2 Click the point you want to zoom in. The image is magnified by about 1.5 times with the clicked point at the center.




The digital zoom icon changes to .

- 3 To cancel zooming in, click .

## Capturing a Monitor Image

You can capture an image being monitored as a still image and save it in the computer.

### Capturing a monitor image

- 1 Display the camera image in the monitor window.
- 2 Click . The still image of the moment you click is captured, and this still image is displayed in the capture window.

#### With the ActiveX viewer



#### With the Java applet viewer



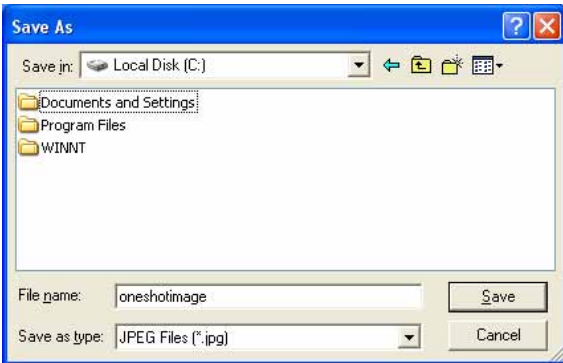
- 3 To close the capture window, click **Cancel** or **Close**.

---

## Saving the captured image

### With the ActiveX viewer

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



- 3 Select **JPEG** or **Bit map** as **Save as type**.
- 4 Type the **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**.  
The **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 by attaching it to an e-mail, or to the FTP server.

To use this function, you need to make **e-Mail (SMTP)** or **FTP client** active and set the address properly in the Trigger menu of the Administrator menu (page 54).

---

### Sending a monitor image via e-mail

- 1 Display the image on the monitor window.
- 2 Select **e-Mail** from the trigger drop-down list.



- 3 Click .  
The still image of the moment you click is captured, and your e-mail with the image file attached is sent to the specified mail address.

---

### Sending a monitor image to an FTP server

- 1 Display the image on the monitor window.
- 2 Select **FTP** from the trigger drop-down list.




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

## Recording a Still Image in the Memory

You can capture a camera image as a still picture and record on in an ATA memory card (not supplied). To use this function, you need to insert the ATA memory card into the camera, make **Image memory** active and set the details in the Trigger menu of the Administrator menu (page 54).

- 1 Display the image on the monitor window.
- 2 Select **Image memory** from the trigger drop-down list.



- 3 Click . The still image of the moment you click is captured, and the image file is recorded on the ATA memory card.


## Controlling Alarm Output 1, 2

You can control On (short-circuit) and Off (open) of Alarm output 1, 2.

To use this function, you need to make **Alarm output 1** or **Alarm output 2** active in the Trigger menu of the Administrator menu (page 54).

- 1 Display the image on the monitor window.
- 2 Select **Alarm output1** or **Alarm output2** from the trigger drop-down list.



- 3 Click . Each click switches the alarm output alternately between On (short-circuit) and Off (open).

### 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 function On (night mode) and Off (day mode).


To use this function, you need to make **Day/Night** active in the Trigger menu of the Administrator menu (page 54).

- 1 Display the image on the monitor window.
- 2 Select **Day/Night** from the trigger drop-down list.



- 3 Click . Each click switches the Day/Night function alternately between On (night mode) and Off (day mode).

### Note

If **Day/Night mode** in the Trigger-Day/Night menu (page 54) is set to **Disable** or **Auto**, you cannot control the Day/Night function by clicking .


## Playing the Audio File Stored in the Camera

You can play the audio file stored in the camera using the SNC audio upload tool.

To use this function, you need to make **Voice alert** active in the Trigger menu of the Administrator menu (page 55).

- 1 Display the image on the monitor window.
- 2 Select **Voice alert** from the trigger drop-down list.



- 3 Click . Playback of the audio file starts and the playback sound is output from the speaker connected to the camera.


# Switching TCP/UDP Transmission Mode

You can select TCP or UDP as the communication port for the video/audio data.

This function can be used when **Mode** (video codec mode) (page 33) is set to **MPEG4** and the ActiveX viewer is used.

## Notes

- The function may not operate correctly when you use personal firewall software or antivirus software on your computer. In that case, disable the software or select the TCP mode.
- If you are using Windows XP Service Pack 2, disable "Windows Firewall" (see page 9).

- 1 Open the main viewer.
- 2 Click  **TCP/UDP Transmission**. The **Select TCP/UDP** dialog appears.



- 3 Click one of the buttons **TCP**, **UDP (Unicast)** or **UDP (Multicast)**.

**TCP:** This is normally selected.

When **TCP** is selected as the communication port, HTTP communication is adopted for video/audio communications.

HTTP is the protocol used for reading the usual Web page.

In an environment capable of reading Web pages, you can watch or listen to the video/audio by selecting the TCP port.

**UDP (Unicast):** When **UDP (Unicast)** is selected as the communication port, RTP (Real-time Transport Protocol) is adopted for video/audio communications. Since RTP is the protocol for running video/audio data, the video/audio playback is smoother than when TCP (HTTP) is selected. If a firewall is installed between the camera and the computer, or depending on the network environment, the video/audio may not play back

properly when **UDP (Unicast)** is selected. In that case, select **TCP**.

**UDP (Multicast):** This protocol is selectable when **Multicast streaming** (page 35) 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 that does not correspond to the multicast or a firewall is installed between the camera and the computer, the video/audio may not play back properly. In that case, select **TCP** or **UDP (Unicast)**.

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

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



## Adminstrating the Camera

The Adminstrating the Camera section explains how to set the functions of the camera by the Administrator. For the monitoring of the camera image, see “Operating the Camera” on page 14.


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

### Note on the display of menu options

The setting menus of this unit will clearly display only the setting options that you can currently select. The grayed out options cannot be selected.

## Basic Operations of Administrator Menu

You can use the Administrator menu to set all functions to suit the user's needs.

Click **Setting** in the welcome page or  in the main viewer to display the Administrator menu.


### How to setup the Administrator menu

- 1 Log in the homepage to display the welcome page. You can learn how to log in on page 15 “Logging in as a user”.
- 2 Select the viewer language on the welcome page. Click **English** or **Japanese** at the bottom of the welcome page.
- 3 Click **Setting** on 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.

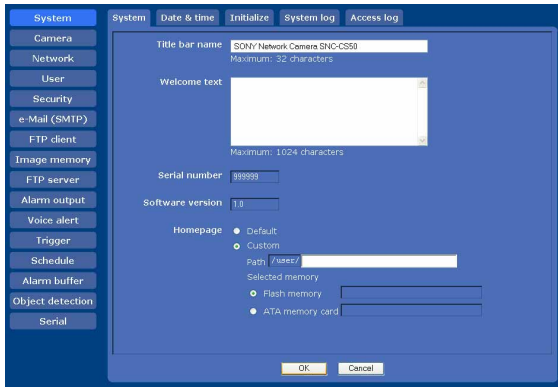
Administrator menu appears.



The following steps also display the Administrator menu.

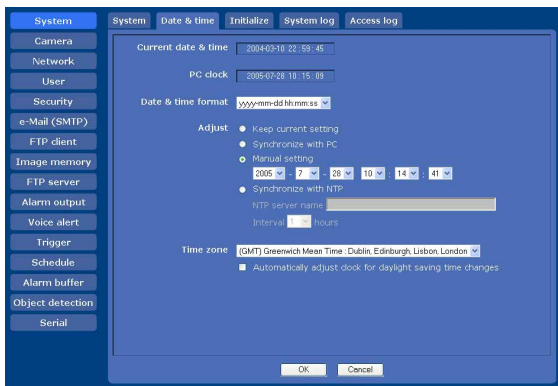
- ① Click **Enter** in the welcome page to display the main viewer.
- ② Click  in the main viewer.
- ③ Enter the user name and password for Administrator.
- 4 Click the menu name (example: System) on the left side of the Administrator menu. The clicked menu appears.

## Example: System menu



- 5** Select the required tab above the menu, and set each setting option in the tab.

Example: “System” menu “Date & time” tab



See pages 27 to 63 for details of the menu tabs and setting options.

- 6** After setting, click **OK**.  
The settings you have made become active.

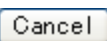
Click **Cancel** to invalidate the set values and return to the previous settings.

## Buttons common to every menu

The following buttons are displayed on all the menus. The functions of the buttons are the same on every menu.



Click this button to validate the settings.



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

## General note on menus

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

## Configuration of Administrator menu



### System

Displays the System menu.

(“Configuring the System — System Menu” on page 27)

### Camera

Displays the Camera menu for setting the camera image and audio. (“Setting the Camera Image and Audio — Camera Menu” on page 30)

### Network

Displays the Network menu for setting the network connection. (“Configuring the Network — Network Menu” on page 36)

### User

Displays the User menu for setting the log in user name and password. (“Setting the User — User Menu” on page 40)

### Security

Displays the Security menu for specifying a computer that is allowed to connect to the camera. (“Setting the Security — Security Menu” on page 41)

### e-Mail (SMTP)

Displays the e-Mail (SMTP) menu for sending an e-mail. (“Sending an Image via E-mail — e-Mail (SMTP) Menu” on page 42)

### FTP client

Displays the FTP client menu for sending an image/audio file, etc. to an FTP server. (“Sending Images to FTP Server — FTP client Menu” on page 45)

### Image memory

Displays the Image memory menu for recording an image/audio file, etc. on an ATA memory card (not supplied) inserted into the camera. (“Recording Images in Memory — Image memory Menu” on page 47)

### FTP server

Displays the FTP server menu for setting the FTP server function of the camera. (“Downloading Images from the Camera — FTP server Menu” on page 51)

### Alarm output

Displays the Alarm output menu for setting the alarm out terminal of the camera. (“Setting the Alarm Output — Alarm output Menu” on page 51)

### Voice alert

Displays the Voice alert menu for playing the audio file stored in the camera in synchronization with alarm detection by the sensor input or the object detection function. (“Outputting Audio Linked to Alarm Detection— Voice alert Menu” on page 52)

### Trigger

Displays the Trigger menu for operations when you click the trigger button in the main viewer. (“Setting the Operations from the Viewer — Trigger Menu” on page 53)

### Schedule

Displays the Schedule menu for the Day/Night function, e-Mail (SMTP) function, FTP client function, Image memory function and Alarm out function, Voice alert function and so on. (“Setting the Schedule — Schedule Menu” on page 55)

### Alarm buffer

Displays the Alarm buffer menu for the buffer that records the image and audio related to alarm detection. (“Setting the Alarm Buffer — Alarm buffer Menu” on page 56)

### Object detection

Displays the Object detection menu for the object detection function built into the camera. (“Setting the Object Detection Function — Object detection Menu” on page 57)

### Serial

Displays the Serial menu for communications with external equipment through the external serial terminal. (“Transmitting with External Equipment Using the External Serial Terminal — Serial Menu” on page 62)

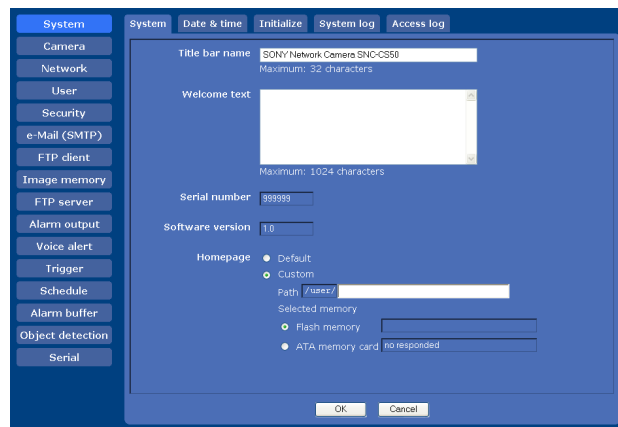
## Configuring the System — System Menu

When you click **System** in the Administrator menu, the System menu appears.

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

The System menu has five tabs: **System**, **Date & time**, **Initialize**, **System log** and **Access log**.

### System Tab



#### Title bar name

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

#### Welcome text

Type any text of up to 1024 characters in HTML format to show on the welcome page. Use the <BR> tag for a line break. (A line break is equivalent to 2 characters.)

#### Serial number

The serial number of the camera is displayed.

#### Software version

The software version of this camera is displayed.

## Homepage

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

**Default:** Displays the homepage stored in the camera.

**Custom:** Displays your individual homepage.

You can display your favorite homepage stored in the built-in flash memory or an ATA memory card (not supplied).

To store the HTML file of the homepage in the built-in flash memory, use the Custom Homepage Installer included in the supplied CD-ROM.

To learn how to use of the Custom Homepage Installer, see page 71.

To display your individual homepage, perform the following operation:

- 1** Select **Custom**.
- 2** Type the path of the HTML file using up to 64 characters in the text box on the right of **Path**.
- 3** In **Selected memory**, select the memory in which the homepage is stored.  
You can select **Flash memory** or **ATA memory card**.  
The directory displayed in the text box on the right of **Path** changes according to the selected memory.

### Tip

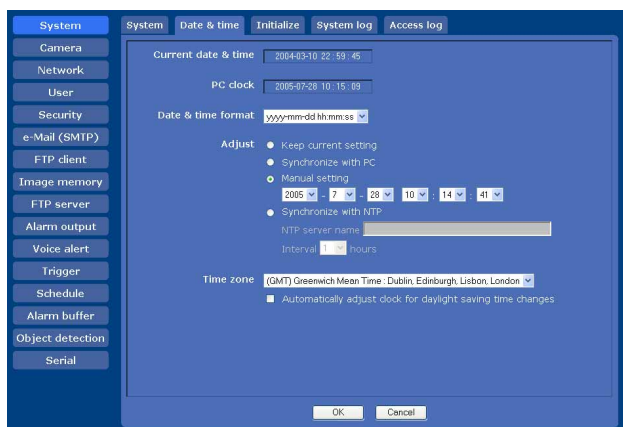
Even when you select **Custom**, the homepage inside the camera can be displayed by typing the following URL in the address box of your browser.

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 menu" on page 26.

## 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 in the main viewer from the drop-down list.

You can select the format between **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 how to set the day and time.

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

**Synchronize with PC:** Select if you want to synchronize the camera's date and time with those of the computer.

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

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

**Synchronize with NTP:** Select if you want to synchronize the camera's date and time with those of the time server 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, using up to 64 characters.

## Interval

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

### Note

The setting time may not match 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 in the area 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 in **Time zone** 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 menu” on page 26.

## Initialize Tab



## Reboot

Reboots the camera.

Click **Reboot**, and the message “The Camera 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 the message “Setup data will be initialized. Are you sure?” appears. When you click **OK**, the network indicator on the camera starts 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 turning on the power of this unit while 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-cs50.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 menu (page 36) cannot be restored.

## Format ATA memory card

Click **Format** to format the ATA memory card (not supplied) inserted into the PC card slot of the camera.

The files and folders stored in the ATA memory card are deleted while formatting.

### Notes

- Before formatting, disable the image memory function and the FTP server function to protect the ATA memory card against writing.
- Do not activate the **Format ATA memory card** function when no card is inserted into the PC card slot.

## Delete custom homepage

By pressing **Delete**, you can delete the homepage recorded in the flash memory of the camera with Custom Homepage Installer (page 71).

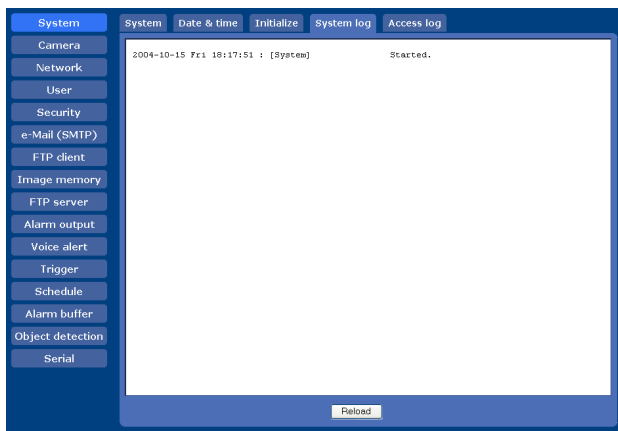
## Delete voice alert file

Click **Delete** to delete the audio file stored in the camera using SNC audio upload tool (page 66).

### Note

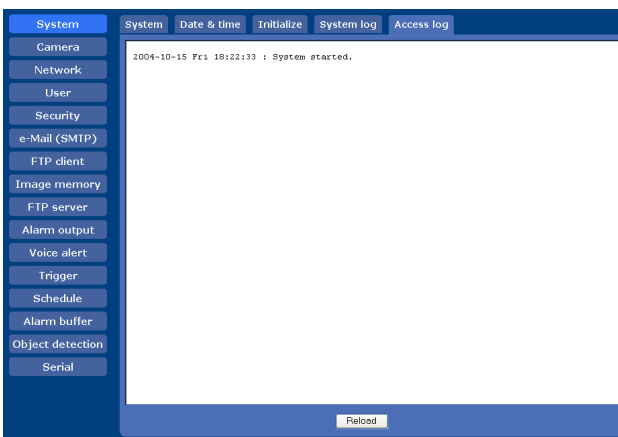
Before deleting the audio file, set **Voice alert** to **Off** in the Voice alert menu (page 52).

## System log Tab



The data of the software activity of the camera is recorded in this log. It includes data that is useful when a problem occurs. Click **Reload** to reload the latest data.

## Access log tab



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

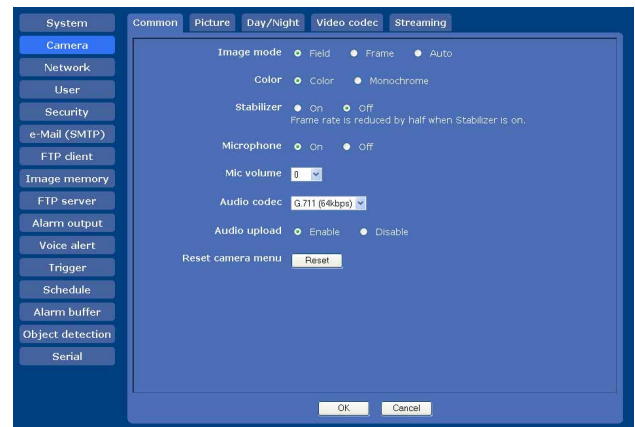
## Setting the Camera Image and Audio

### — Camera Menu

When you click **Camera** in the Administrator menu, the Camera menu appears.

Use this menu to set the functions of the camera. The Camera menu consists of five tabs: **Common**, **Picture**, **Day/Night**, **Video codec** and **Streaming**.

### Common Tab



### Image mode

Selects the mode of the image output from the camera.

**Field:** Select this option when shooting a moving image.

**Frame:** Select this option when shooting a still image.

With this setting, the vertical resolution increases but the edge of a moving object may be jagged.

**Auto:** The **Frame** or **Field** mode process is automatically performed depending on movement in the image. **Frame** is performed for an area without movement, and **Field** is performed for an area with movement.

### Color

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

### Stabilizer

Select the stabilizer to compensate for oscillation. Select **On** to activate the stabilizer when the camera is affected by oscillation.

### Notes

- The view angle of the camera is reduced by approximately 10 % when **Stabilizer** is set to **On**.

- The frame rate lowers half when **Stabilizer** is set to **On**.
- The stabilizer may not be effective depending on the degree of oscillation.

## Microphone

Select whether you are going to 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** on the browser to reflect the change when opening the 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.

### Notes

- If the bit rate is set to other than **G.711(64kbps)**, no audio is output when you use the Java applet viewer.
- When **MPEG4** is selected for **Codec** in the Alarm buffer menu, no audio is output when you use Java applet viewer.

## Audio upload

Using the SNC audio upload tool stored in the supplied CD-ROM, you can output the audio that is input to the computer's audio input terminal from the speaker connected to the line output jack of the camera. Select **Enable** to output the audio from the speaker.

## Reset camera menu

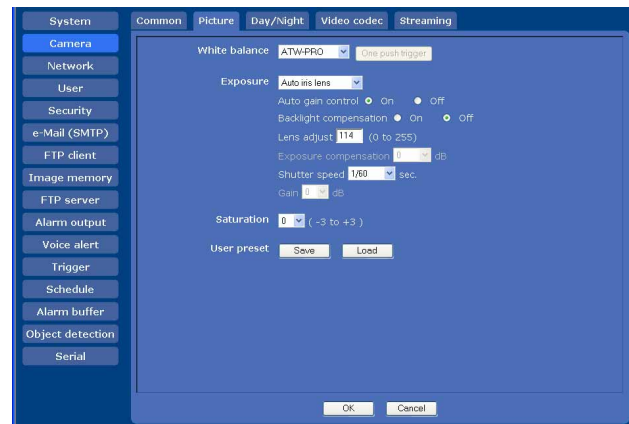
Click **Reset**, and the message "Camera menu setting is reset to default. Are you sure?" is displayed. To reset to default, click **OK**.

## OK/Cancel

See "Buttons common to every menu" on page 26.

## Picture Tab

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



## White balance

Select the white balance mode.

**ATW-PRO:** Automatically adjusts the color to be closest to the image you are viewing. (approximately 3000 K to 7500 K)

**One push WB:** The **One push trigger** button becomes active. Click the button to adjust the white balance instantly.

**ATW:** Makes the subject lighter and automatically adjusts to re-create the original color. (approximately 2200 K to 10000 K)

## Exposure

Select the exposure of the camera.

The setting items required for the selected mode become active.

**Auto-iris lens:** Select when an auto-iris lens is used.

When this option is selected, **Auto gain control**, **Backlight compensation**, **Lens adjustment** and **Shutter speed** become active.

**Manual-iris lens 1:** Select when a manual-iris lens or a fixed-iris lens is used and the exposure is adjusted with the electron shutter and AGC (Auto Gain Control). When this option is selected, **Auto gain control**, **Backlight compensation**, **Shutter mode** and **Exposure compensation** become active.

**Manual-iris lens 2:** Select when a manual-iris lens or a fixed-iris lens is used and the electron shutter and sensitivity are adjusted manually. When this option is selected, **Shutter speed** and **Gain** become active.

## Auto gain control

When you select **ON**, the sensitivity is automatically adjusted according to the brightness of the object.

## Backlight compensation

When you select **On**, the backlight compensation function starts to work.

### Note

When Backlight compensation is set to **On**, a hunting may be generated due to a picture. In this case, set Backlight compensation to **Off**.

## Lens adjust

Adjusts the aperture of auto-iris lens. It can be set in the range from 0 to 255.

## Exposure compensation

The exposure compensation function adjusts the brightness for AE. You can select the exposure compensation values from the drop-down list. Selectable values are as follows:

+1.25, +1.00, +0.75, +0.50, +0.25, 0, -0.25, -0.50, -0.75, -1.00, -1.25 (dB)

## Shutter speed

Select the shutter speed of the camera from the drop-down list.

Selectable values of the shutter speed are as follows:

**SNC-CS50N:** 1/10000, 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/100, 1/60 (sec.)

**SNC-CS50P:** 1/10000, 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/120, 1/50 (sec.)

### Tip

Flickers of fluorescent light can be reduced when **Shutter speed** is set to **1/100** (for NTSC) or **1/120** (for PAL).

## Gain

Select the gain from the drop-down list. Selectable values of the gain are as follows:  
0, 6, 12, 18, 24 (dB)

## Saturation

Select the saturation in 7 steps, from **-3** to **+3**. Selecting **+3** provides the image with the highest saturation.

## User preset

You can save the present settings in the camera as custom settings, or you can load the settings saved in the camera.

This function is useful when you temporarily change the settings for the image or reset them to the previous settings.

**Save:** Click to save the present settings of the **Picture** tab.

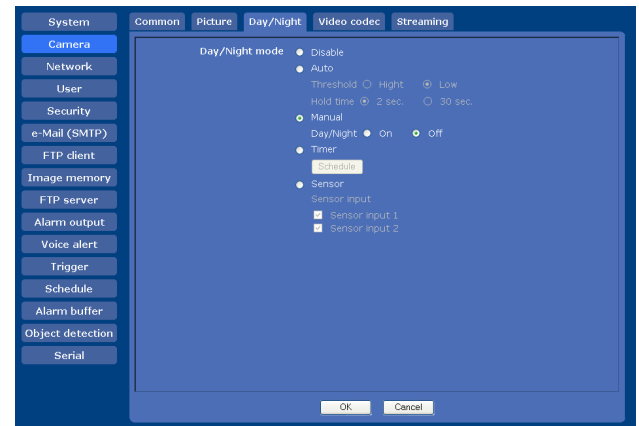
**Load:** Click to load the saved settings. To use them, click **OK**.

## OK/Cancel

See “Buttons common to every menu” on page 26.

## Day/Night Tab

Use this tab to set the Day/Night function of the camera.



## Day/Night mode

Select the Day/Night mode from among five modes.

**Disable:** Always works in Day mode.

**Auto:** Normally works in Day mode. It switches automatically to Night mode in a dark place.

**Threshold:** Select **High** or **Low** for the brightness level of the Night mode.

**Hold time:** Select **2 sec.** or **30 sec.** for the time to respond to the change of brightness.

### Notes

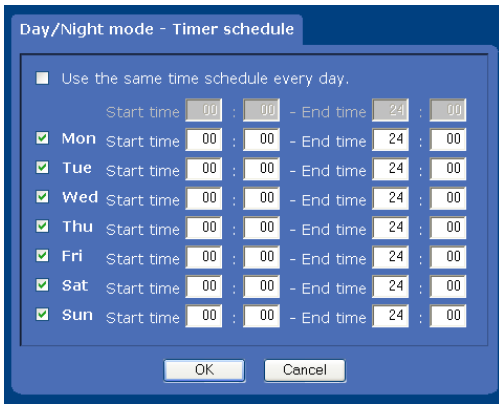
- When Auto gain control is **Off**, it is not switched to Night mode.
- If a light with strong energy shines on the camera when Night mode is selected, hunting may be generated. In this case, select **Sensor** mode so that Day/Night mode will be switched according to light, or select **Manual** and switch Day/Night mode.

**Manual:** Switch the Day/Night mode manually. When you select **Manual**, **On** and **Off** become active. When you select **On**, the camera works in Night mode. When you select **Off**, it works in Day mode.

**Timer:** Normally the camera works in Day mode. It switches to Night mode at the time that you have you set in the Schedule menu.



Click **Schedule** and the setting menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 55)



**Sensor:** Controls the Day/Night mode by synchronizing it with the sensor input. Select the sensor input with which you want to synchronize the mode: **Sensor input 1** or **Sensor input 2**.

While a sensor input is detected, the camera works in Night mode.

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Video codec Tab

Use this tab to set the items for the video codec.



### Mode

Select the operation mode of the camera.

**Single codec:** Select the video codec **JPEG** or **MPEG4**. The camera supports the selected video codec.

**Dual codec:** The camera supports both JPEG and MPEG4 video codecs simultaneously. When you select this option, select the priority codec **JPEG** or **MPEG4**.

### JPEG setting/MPEG4 setting

Set the details of the video codecs.

Selectable items become active according to the **Mode** setting. Set the active items in **JPEG setting** or **MPEG4 setting** as required.

### Image size

You can select the image size to be sent from the camera. **640 × 480 (VGA)**, **320 × 240 (QVGA)** or **160 × 120 (QQVGA)** can be selected.

When **640 × 480 (VGA)** is selected and **Cropping** is set to **On**, you can crop a portion of the image and display the cropped image on the computer.

### 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. Cropping reduces the transmitting data size and thus the network load, and a higher frame rate is achieved.

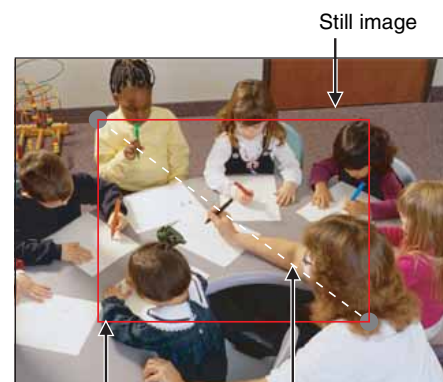
Select **On** to crop the image, or **Off**.

### Note

Object detection (page 57) operates for an image in the image size that is not cropped even if **Cropping** is set to **On**.


### To crop an image

- 1 Set the **Image size** to **640 × 480 (VGA)**. **Cropping** becomes active.
- 2 Set **Cropping** to **On** and click the **Area setting** button. The area setting window 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.



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.

### Frame rate

Set the frame rate of the image.  
Selectable values of the frame rates are as follows.

**SNC-CS50N:** 1, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30 (fps)

**SNC-CS50P:** 1, 2, 3, 4, 5, 6, 8, 12, 16, 20, 25 (fps)

The number refers to the frame number transmitted per second.

### Image quality (for JPEG only)

Set the quality of JPEG image.  
Selectable values are from **Level 1** to **Level 10**.  
When **Level 10** is selected, the best image quality is achieved.

### Bandwidth control (for JPEG only)

Limits the network bandwidth for the JPEG image data output from the camera. Selectable bandwidths are as follows:

0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 2.0, 3.0, 4.0 (Mbps), and  
**Unlimited**

#### Note

Audio may be interrupted depending on the selected bandwidth. In that case, select a wider bandwidth.

### Bit rate (for MPEG4 only)

Set the bit rate of MPEG4 image transmission for a line.  
Selectable values are as follows:

64, 128, 256, 384, 512, 768, 1024, 1536, 2048 (kbps)

#### Notes

- The actual frame rate and bit rate may be different according to the image size, the shooting scene, or the network condition.
- When **MPEG4** is selected, the image size is set to **640 × 480 (VGA)** and the frame rate is set to **30 fps**.  
The frame rate may be decreased when the bit rate is more than 512 kbps or while the object detection function is operating.
- When the camera operation mode is set to **Dual codec** and the image size is set to **640 × 480 (VGA)** in **MPEG4 setting**, the maximum frame rate at which the camera can transmit data will be 20 fps.
- When the camera operation mode is set to **Dual codec**, the actual values set in **MPEG4 setting** and **JPEG setting** may not be obtained, due to the limitation in the capacity to manage two video codecs

simultaneously. Use the following table as a guide for the settings.

### Capacity to manage two video codecs simultaneously

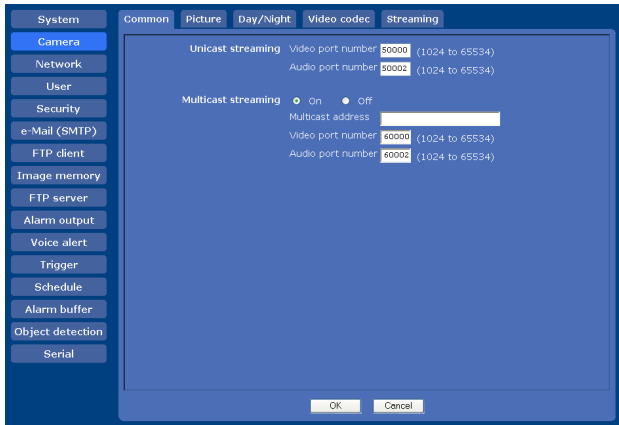
JPEG			MPEG4		
	SNC-CS50N	SNC-CS50P		SNC-CS50N	SNC-CS50P
VGA	15 fps	12 fps	VGA	15 fps	12 fps
VGA	20 fps	16 fps	VGA	10 fps	8 fps
VGA	10 fps	8 fps	QVGA	30 fps	25 fps
VGA	15 fps	12 fps	QVGA	20 fps	16 fps
QVGA	30 fps	25 fps	QVGA	30 fps	25 fps

### OK/Cancel


See “Buttons common to every menu” on page 26.

## Streaming Tab

Use this tab to set the items for the transmission by UDP or multicast.



### Unicast streaming

Specify the transmission port numbers of the video data and audio data to be used when **UDP (Unicast)** is selected with  in the main viewer.

#### Video port number

Specify the transmission port number of the MPEG4 video data. It is initially set to 50000. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for video data communication and control.

#### 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. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for audio data communication and control.

#### Note

Specify different numbers for the video port number and the audio port number.

### Multicast streaming

Set whether the camera uses multicast streaming for MPEG4 images or not. It reduces the transmission load on the camera by making the computer of the same segment network receive the same transmitting data. Select **On** to allow and **Off** not to allow multicast sending.

When you select **On**, set **Multicast address**, **Video port number** and **Audio port number** properly.

#### Multicast address

Type the multicast address used on the Multicast streaming.

#### Video port number

Specify the MPEG4 video transmission port number used for the Multicast streaming. It is initially set to 60000. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for video data communication and control.

#### Audio port number

Specify the audio transmission port number used for the Multicast streaming. It is initially set to 60002. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for audio data communication and control.

#### Note

Specify different numbers for the video port number and the audio port number.

#### OK/Cancel

See “Buttons common to every menu” on page 26.

# Configuring the Network

## — Network Menu

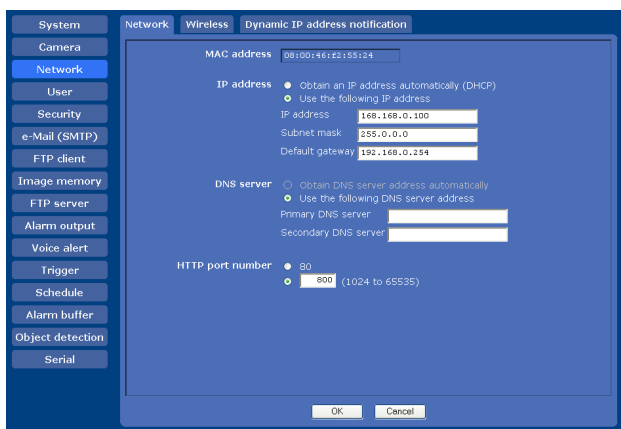
When you click **Network** in the Administrator menu, the Network menu appears.

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

The Network menu consists of three tabs: **Network**, **Wireless** 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.

### IP address

Configure the IP address.

**Obtain an IP address automatically (DHCP):** Select this option when a DHCP server is installed on the network to allow IP address assignment. With this setting, the IP address is assigned automatically.

**Use the following IP address:** Select this option when you set a fixed IP address. With this setting, specify the **IP address**, **Subnet mask** and **Default gateway** manually.

#### Note

When you select **Obtain an IP address automatically (DHCP)**, make sure that a DHCP server is operating on the network.

### IP address

Type the IP address of the camera.

### Subnet mask

Type the subnet mask.

### Default gateway

Type the default gateway.

### DNS server

Configure the DNS server address.

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

**Use the following DNS server address:** Select this when you set a fixed address as the IP address of the DNS server. With this setting, specify the addresses on **Primary DNS server** and **Secondary DNS server** manually.

#### Note

When you select **Obtain DNS server address automatically**, make sure that a DHCP server is operating on the network.

### 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 in the Network menu or in the Setup Program, access the camera by typing the IP address of the camera on your web browser as follows:

Example: when the HTTP port number is set to 8000



### OK/Cancel

See "Buttons common to every menu" on page 26.

## Wireless Tab — Setting of wireless connection

Insert the specified wireless card into the PC card slot of the camera, and set the items for connecting to the wireless network.

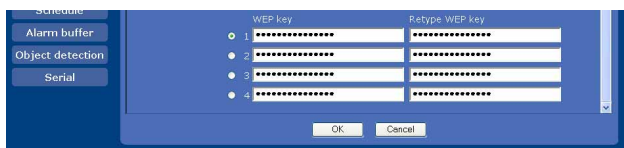
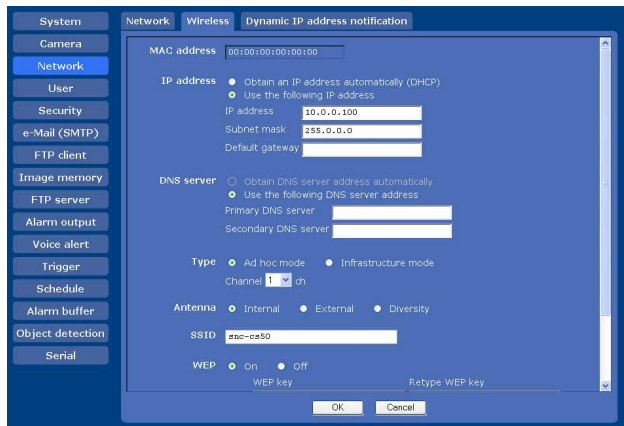
Before setting, read the operation manual and installation manual supplied with the wireless card together with this guide.

### Verified wireless cards

Sony Wireless Card SNCA-CFW1 (not supplied) with a commercially available CompactFlash type II-PCMCIA adapter

#### Notes

- Before removing the wireless card from the camera, turn off the power of the camera.
- The throughput of the data transmission/reception via the network cable may decrease when the wireless card is in use.



### MAC address

Displays the MAC address of the wireless card inserted to the PC card slot.

If a wireless card is not inserted, “00:00:00:00:00:00” is displayed.

### IP address

Configure the IP address for a wireless network.

**Obtain an IP address automatically (DHCP):** Select this option when a DHCP server is installed on the network to allow IP address assignment. With this setting, the IP address is assigned automatically.

**Use the following IP address:** Select this option when you set a fixed IP address. With this setting, specify the **IP address**, **Subnet mask** and **Default gateway** manually.

#### Note

When you select **Obtain an IP address automatically (DHCP)**, make sure that a DHCP server is operating on the network.

### IP address

Type the IP address of the camera.

### Subnet mask

Type the subnet mask.

### Default gateway

Type the default gateway.

### DNS server

Configure the DNS server address.

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

**Use the following DNS server address:** Select this option when you set a fixed address as the IP address of DNS server. With this setting, specify the addresses on **Primary DNS server** and **Secondary DNS server** manually.

#### Note

When you select **Obtain DNS server address automatically**, make sure that a DHCP server is operating on the network.

### Primary DNS server

Type the IP address of the primary DNS server.

### Secondary DNS server

Type the IP address of the secondary DNS server.

### Type

Select the network connection type.

**Ad hoc mode:** Select this when connecting to a computer directly. With this setting, specify a wireless channel.

**Infrastructure mode:** Select this when connecting to a computer via an access point or a wireless router.

#### Note

The setting of the HTTP port number is common to the setting in the Network tab.

## Antenna

Select one of the following antenna settings when you use the SNCA-CFW1 wireless card (optional) or the SNCA-AN1 wireless LAN antenna (optional) connected to the SNCA-CFW1.

**Internal:** Select this when you perform communications using the antenna built in the SNCA-CFW1. This setting is suitable for a short-range and omnidirectional antenna.

**External:** Select this when you perform long-range communications using the SNCA-AN1 antenna connected to the SNCA-CFW1.

**Diversity:** Select this when you perform both short-range and long-range communications using the SNCA-AN1 antenna connected to the SNCA-CFW1. The antenna that has higher sensitivity is selected automatically.

## SSID

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

## WEP

Select **On** when you use the WEP (Wired Equivalent Privacy) keys, or **Off** when you do not use them. When **On** is selected, the WEP key setting boxes become active. Up to 4 WEP keys can be set in the following manner.

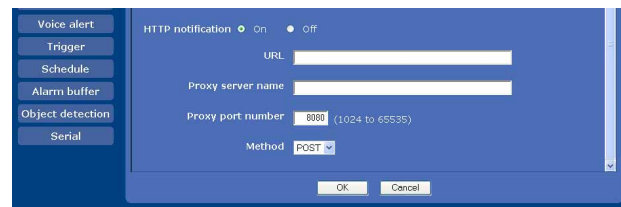
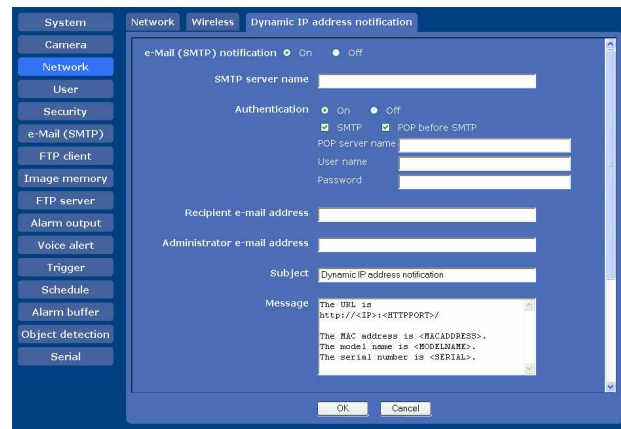
- 1 Select one of the WEP key numbers.
- 2 Type the same information in the **WEP key** and **Retype WEP key** text boxes.  
The length of a WEP key is 40 or 104 bit. A 104-bit WEP key has a higher security level than a 40-bit key. You can type the WEP key either in hexadecimal numbers (0 to 9 and A to F) or ASCII characters (alphanumeric).  
When **Type** is set to **Infrastructure mode**, the WEP key should be the same as that of the access point. When **Type** is set to **Ad hoc mode**, the WEP key should be the same as that of the communication client.

## OK/Cancel

See “Buttons common to every menu” on page 26.

## Dynamic IP address notification Tab — Notifying the IP Address

When **Obtain an IP address automatically (DHCP)** is selected in the Network tab or Wireless tab, you can send notification of 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 for sending an e-mail, using up to 64 characters.

### Authentication

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

**Off:** Select if no authentication is required when an e-mail is sent.

**On:** Select if authentication is required when an e-mail is sent. Select one of the authentication methods from the following and specify the **POP server name**, **User name** and **Password** as required.

**SMTP:** Select when SMTP authentication is required.

**POP before SMTP:** Select when POP before SMTP authentication is required.

### Note

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

### POP server name

It is necessary when **POP before SMTP** is selected for **Authentication**.

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

### User name, Password

Type the user name and password of the user who owns the mail account using up to 64 characters. This setting is necessary when the SMTP server that sends e-mails performs authentication.

### Recipient e-mail address

Type the recipient e-mail address using 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 using 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 using up to 64 characters.

### Message

Type the text of the e-mail using 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, using up to 256 characters. The URL is normally written 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 established 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, using 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 menu” on page 26.

### About the special tags

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

#### <IP>

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

#### <MODELNAME>

Use this tag to embed the camera's model name 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 Menu

When you click **User** in the Administrator menu, the User 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

Specify **User name**, **Password** and **Re-type password**.

### User 1 to 9

Specify **User name**, **Password**, **Re-type password**, **FTP**, **Audio** 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, retype the password that you typed in the **Password** box.

### FTP

Set whether this user is allowed to log in to an FTP server or not. Check the box if the user is allowed to log in to an FTP server.

### Audio

Select audio output to a speaker connected to the line output jack of the camera by using the SNC audio upload tool stored in the supplied CD-ROM. Check this box to output the audio.

### Note

To output audio using the SNC audio upload tool, set **Audio upload** to **Enable** in the Common tab of the Camera menu (page 31).

### Viewer mode

When the user is authenticated for logging in the main viewer, select the viewer mode to be displayed after authentication.

**Full:** The user can operate all functions in this mode.

**Light:** In addition to the **View** mode, the user can select the image size of the main viewer, control digital zoom, and capture a still image.

**View:** The user can only monitor the camera image.

For the functions available for each viewer mode, see “Administrator and User” on page 14.

### Viewer authentication

Set whether the user is authenticated or not when the main viewer is displayed.

**On:** The main viewer is displayed in accordance with the viewer mode of the authenticated user.

**Off:** Select the viewer mode of the main viewer which is displayed without authentication from **Full**, **Light** or **View**.

### OK/Cancel

See “Buttons common to every menu” on page 26.

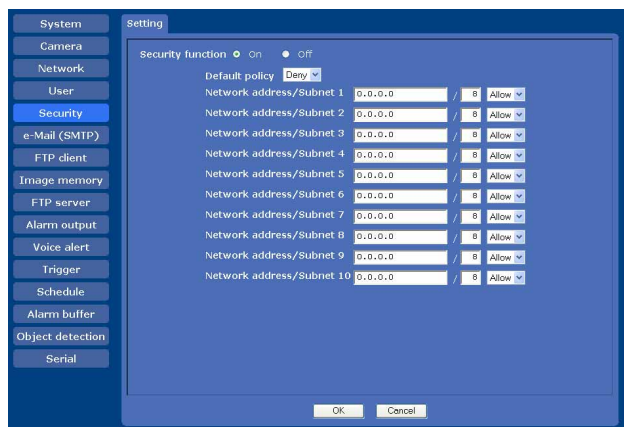


# Setting the Security

## — Security Menu

When you click **Security** in the Administrator menu, the Security menu appears.

Use this menu to limit the computers that can access the camera.



OK/Cancel

See “Buttons common to every menu” on page 26.

### Security function

To activate the security function, select **On**.

### Default policy

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

### Network address/Subnet 1 to Network address/Subnet 10

Type the network addresses and subnet mask values that you want to allow or deny access to the camera.

You can specify up to 10 network 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 network 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 computers having an IP address between “192.168.0.0” and “192.168.0.255”.

#### Note

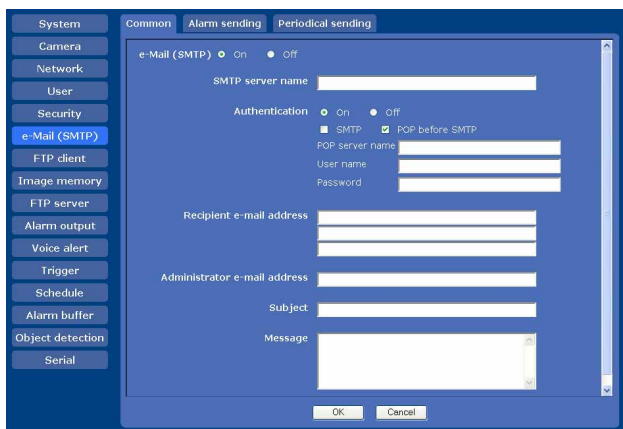
You can access the camera even from a computer having an IP address whose access right is set to **Deny**, if you enter the user name and password set for the **Administrator** boxes in the User menu.

# Sending an Image via E-mail — e-Mail (SMTP) Menu

When you click **SMTP** in the Administrator menu, the e-Mail (SMTP) menu appears.

Using e-Mail (SMTP) function, you can send an e-mail with attached image that has been shot linked with an external sensor input or with the built-in object detection function. The image file can also be sent periodically. The e-Mail (SMTP) menu consists of three tabs: **Common**, **Alarm sending** and **Periodical sending**.

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



### e-Mail (SMTP)

Select **On** when you use the e-Mail (SMTP) function.

#### Notes

- You cannot send an audio file by using the e-mail sending function.
- The frame rate and operability on the main viewer may be reduced while a file is being transmitted by the e-Mail (SMTP) function.

### SMTP server name

Type the SMTP server name using 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 required when an e-mail is sent.

**On:** Select if authentication is required when an e-mail is sent. Select one of the authentication methods

from the following and specify the **POP server name**, **User name** and **Password** as required.

**SMTP:** Select when SMTP authentication is required.

**POP before SMTP:** Select when POP before SMTP authentication is required.

#### Note

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

### POP server name

It is necessary when **POP before SMTP** is selected for **Authentication**.

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

### User name, Password

Type the user name and password of the user who owns the mail account using up to 64 characters. This setting is necessary when the SMTP server that sends e-mails performs authentication.

### Recipient e-mail address

Type the recipient e-mail address using up to 64 characters.

You can specify up to three recipient e-mail addresses.

### Administrator e-mail address

Type the Administrator e-mail address using up to 64 characters.

This address is used for reply e-mails and sending system messages from the mail server.

### Subject

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

When **Alarm sending** of the Alarm sending tab is set to **On**, an e-mail sent in response to the alarm detection will indicate the type of alarm in the subject. **S1** is added for sensor input 1 detection, **S2** is added for sensor input 2 detection, **MD** is added for moving object detection and **UD** is added for unattended object detection.

### Message

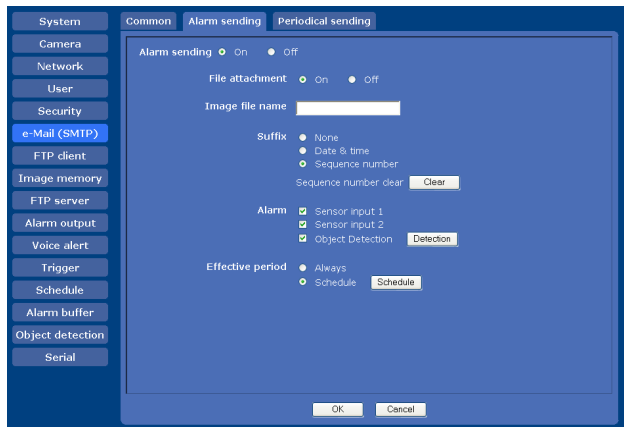
Type the text of the e-mail using up to 384 characters. (A line break is equivalent to 2 characters.)

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Alarm sending Tab — Setting the e-mail sending mode when detecting the alarm

Set to send an e-mail linked with alarm detection by the external sensor input or by the built-in object detection function.



### Alarm sending

Select **On** to set sending an e-mail linked with alarm detection.

### File attachment

Set whether an image file (JPEG file) is to be attached to the e-mail or not.

When **On** is selected, the image file made using 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 be attached to an e-mail. You can use up to 10 alphanumeric characters, - (hyphen) and \_ (underscore) for naming.

### Suffix

Select a suffix to be added to the file name.

**None:** No suffix is added. The image file name is assigned to the image to be sent via 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 the year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and consecutive number (2 digits), thus adding 14-digit number to the image file name.

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

### Sequence number clear

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

### Alarm

Select the alarm to be linked with e-mail notification.

**Sensor input 1:** The external sensor that is connected to sensor input1 of the camera I/O port.

**Sensor input 2:** The external sensor that is connected to sensor input 2 of the camera I/O port.

**Object detection:** The alarm detected by the object detection function.

Click **Detection**, and the Object detection menu is displayed to allow you to set the object detection function (page 57).

### Effective period

Set the period during which the alarm detection is effective.

**Always:** The alarm detection is always effective.

**Schedule:** You can specify the period during which the alarm detection is effective.

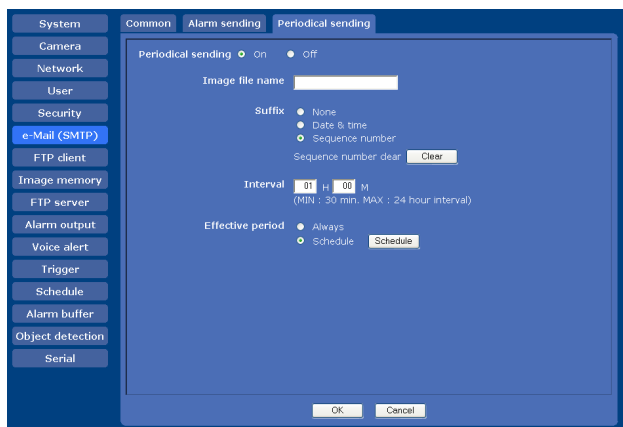
Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 55)

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Periodical sending Tab — Setting the periodical e-mail sending mode

You can set to send e-mails periodically.



### Periodical sending

Select **On** when you want to use periodical e-mail sending.

### Image file name

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

The actual image file name will be the specified image file name with a suffix and the extension .jpg.

### Suffix

Select a suffix to be added to the file name used when the e-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 the 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 adding a 14-digit number to the image file name.

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

### Sequence number clear

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

### Interval

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

### Effective period

Set the period during which periodical sending will be effective.

**Always:** Periodical sending is always effective.

**Schedule:** You can specify the period during which periodical sending is effective.

Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 55)

### OK/Cancel

See “Buttons common to every menu” on page 26.

# Sending Images to FTP Server

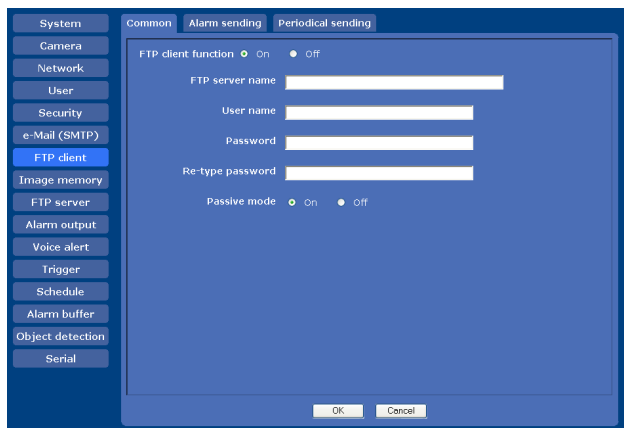
## — FTP client Menu

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

Use this menu to set up for capturing and sending still images to an FTP server. Using FTP client function, you can send an image and audio file that has been shot and recorded linked with the external sensor input or with the built-in object detection function to an FTP server. The image file can also be sent periodically.

The FTP client menu consists 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**.

#### Note

The frame rate and operability on the main viewer may be reduced while a file is being transmitted by the FTP client function.

### FTP server name

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

### User name

Type the user name for the FTP server using up to 64 characters.

### Password

Type the password for the FTP server using up to 64 characters.

### 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 the FTP server. Select **On** to connect to the FTP server using the passive mode.

### OK/Cancel

See “Buttons common to every menu” on page 26.

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

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



### Alarm sending

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

### Remote path

Type the path to the destination using 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 be added 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 the 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 adding a 14-digit number to the image file name.

**Sequence number:** A consecutive number of 10 digits between 0000000001 and 4294967295 and an consecutive 2 digits number are 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 alarm to be linked with file forwarding to the FTP server.

**Sensor input 1:** The external sensor that is connected to sensor input 1 of the camera I/O port.

**Sensor input 2:** The external sensor that is connected to sensor input 2 of the camera I/O port.

**Object detection:** The alarm detected by the object detection function.

Click **Detection**, and the Object detection menu is displayed to allow you to set the object detection function (page 57).

## Effective period

Set the period during which the alarm detection is effective.

**Always:** The alarm detection is always effective.

**Schedule:** You can specify the period during which the alarm detection is effective.

Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 55)

## Alarm buffer

Select **Use alarm buffer** when you are going to forward the image/audio of before and after alarm detection (pre-alarm, post-alarm).

If you do not select the alarm buffer, only the image at the moment of the alarm detection is forwarded.

Click **Alarm buffer** to display the Alarm buffer menu.

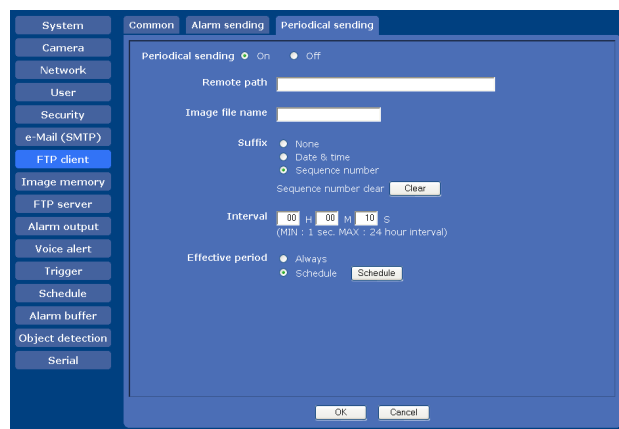
For details, see “Setting the Alarm Buffer — Alarm buffer Menu” on page 56.

## OK/Cancel

See “Buttons common to every menu” on page 26.

## Periodical sending Tab — Setting the periodical FTP client activity

You can set to send image files (JPEG files) to an FTP server periodically.



## Periodical sending

Select **On** when you want to use periodical sending.

## Remote path

Type the remote path using up to 64 characters.

## Image file name

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

The actual image file name will be the specified image file name with a suffix and the extension .jpg.

### Note

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

## Suffix

Select a suffix to be added to the file name sent to the 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 adding a 14-digit number to the image file name.

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

### Sequence number clear

Click **Clear** to reset the **Sequence number** suffix 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 during which the periodical sending is effective.

**Always:** The periodical sending is always effective.

**Schedule:** You can specify the period during which the periodical sending is effective.

Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 55)

### OK/Cancel

See “Buttons common to every menu” on page 26.

# Recording Images in Memory

## — Image memory Menu

When you click **Image memory** in the Administrator menu, the Image memory 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 object detection function, to an ATA memory card (not supplied) inserted into the camera. The image file can also be recorded periodically.

The recorded image and audio files can be found or downloaded to the computer using the FTP server function. (See “Downloading Images from the Camera — FTP server Menu” on page 51.)

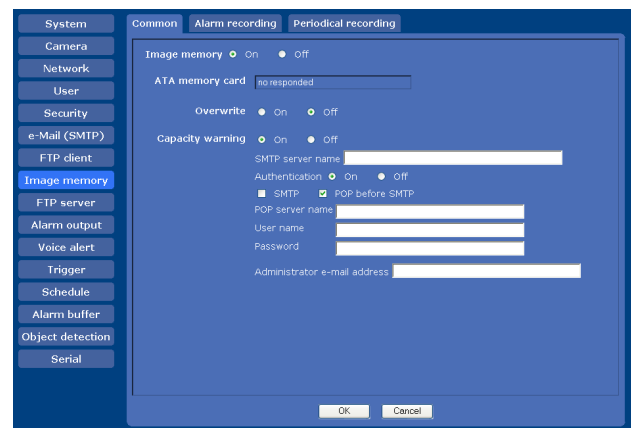
The Image memory menu consists of three tabs:

**Common**, **Alarm recording** and **Periodical recording**.

#### Notes

- The frame rate and operability on the main viewer may be reduced during image storage.
- Set **Image memory** to **Off** when you remove the ATA memory card from the camera or turn off the power of the camera with the ATA memory card inserted.
- Before using an ATA memory card, format it using the computer or using **Format ATA memory card** in the Initialize tab of the System menu (page 29).

## Common Tab — Setting the image memory function



### Image memory

To use the image memory function, select **On**.

### ATA memory card

The current memory space of the ATA memory card inserted into the PC card slot of the camera is displayed on the right.

## Note

Use the ATA memory card when you record images using periodical recording with a short interval or record them frequently.

## Overwrite

Select **On** to overwrite the file or not when there is insufficient memory space to record the image on the ATA memory card.

**On:** Overwrite is enabled and old files will be overwritten in the order of date.

**Off:** Overwrite is prohibited. No recording will be performed.

## Capacity warning

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

## Note

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

## SMTP server name

Type the name of the SMTP server for sending an e-mail, using up to 64 characters.

Otherwise type the IP address of the SMTP mail server.

## Authentication

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

**Off:** Select if no authentication is required when an e-mail is sent.

**On:** Select if authentication is required when an e-mail is sent.

Select one of the authentication methods from the following and specify the **POP server name**, **User name** and **Password** as required.

**SMTP:** Select when SMTP authentication is required.

**POP before SMTP:** Select when POP before SMTP authentication is required.

## Note

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

## POP server name

This is necessary when **POP before SMTP** is selected for **Authentication**.

Type a POP (receiving mail) server name using up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server that sends e-

mails performs authentication using the POP user account.

## User name, Password

Type the user name and the password of the user who owns the e-mail account. This setting is necessary when the SMTP server that sends e-mails performs authentication.

## Administrator e-mail address

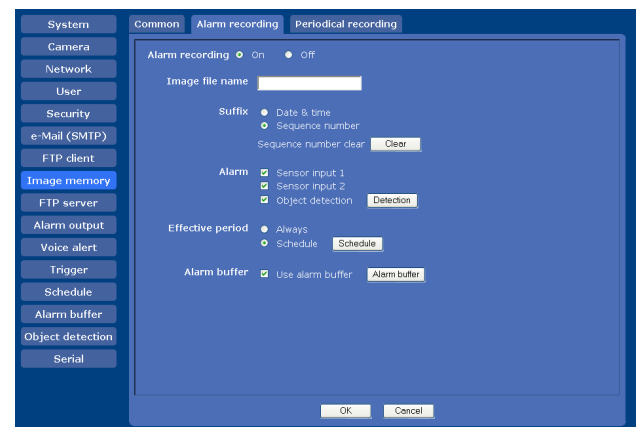
Type the e-mail address of the recipient of a warning mail (e-mail address of the camera Administrator), using up to 64 characters.

## OK/Cancel

See “Buttons common to every menu” on page 26.

## Alarm recording Tab — Setting the Image memory function when detecting the alarm

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



## Alarm recording

Select **On** to set recording of the image and audio file to an ATA memory card linked with alarm detection.

## Image file name

Type the file name you want to assign to the images to be recorded. You can use up to 10 alphanumeric characters, - (hyphen) and \_ (underscore) for naming.

## Suffix

Select a suffix to be added 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 the year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits) and consecutive number (2 digits), thus adding a 14-digit number to the image 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 the multiple files created with one alarm event.

**Sequence number clear**

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

**Alarm**

Select the alarm to be linked with the recording of image and audio files.

**Sensor input 1:** The external sensor that is connected to sensor input 1 of the camera I/O port.

**Sensor input 2:** The external sensor that is connected to sensor input 2 of the camera I/O port.

**Object detection:** The alarm by the object detection function.

Click **Detection**, and the Object detection menu is displayed to allow you to set the object detection function (page 57).

**Effective period**

Set the period during which alarm detection is effective.

**Always:** The alarm detection is always effective.

**Schedule:** You can specify the period during which alarm detection is effective.

Click **Schedule** and the setting menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 55)

**Alarm buffer**

Select **Use alarm buffer** when you record the image/ audio of before and after alarm detection (pre-alarm, post-alarm).

If you do not select the alarm buffer, only the image at the moment of the alarm detection is recorded.

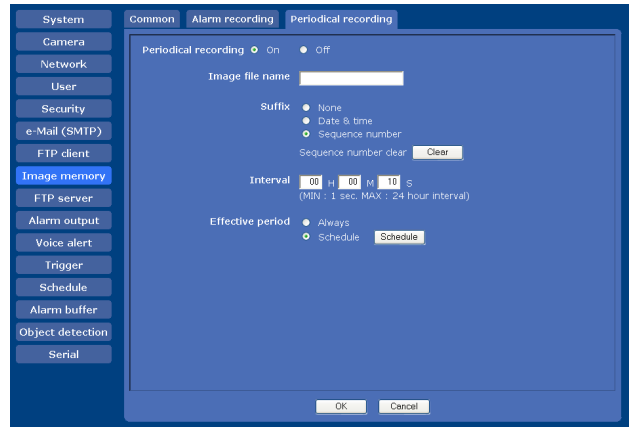
Click **Alarm buffer** to display the Alarm buffer menu. For details, see “Setting the Alarm Buffer — Alarm buffer Menu” on page 56.

**OK/Cancel**

See “Buttons common to every menu” on page 26.

**Periodical recording Tab — Setting the periodical recording mode**

You can set to record the image file (JPEG file) to an ATA memory card periodically.



**Periodical recording**

Select **On** when you want to use periodical recording.

**Image file name**

Type the file name of the image to be recorded to the memory using up to 10 alphanumeric characters, - (hyphen) and \_ (under score).

The actual image file name will be the specified image file name with the a suffix and the extension .jpg.

**Note**

You cannot record the audio file using the periodical recording function.

**Suffix**

Select a suffix to be added 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 the year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and consecutive number (2 digits), thus adding a 14-digit number to the image file name.

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

**Sequence number clear**

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

## Interval

Type the interval at which you want to record an image in the 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, image quality, bit rate, or reordering media.

## Effective period

Set the period during which the periodical recording is effective.

**Always:** The periodical recording is always effective.

**Schedule:** You can specify the period during which the periodical recording is effective.

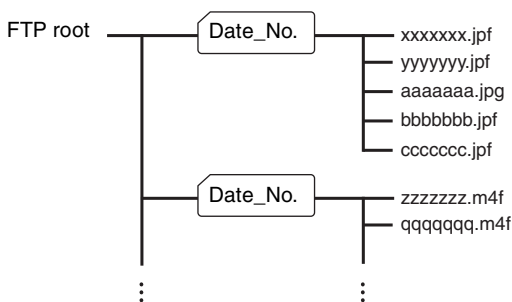
Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 55)

## OK/Cancel

See “Buttons common to every menu” on page 26.

## Directory structure of image memory

When the image memory function is used, the images are recorded with the following directory structure.



A  represents a directory created automatically. The Date\_No. directory has a 11-digit name consisting of the last two digits of the year (2 digits), month (2 digits), day (2 digits), underscore and sequence number (4 digits).

### Note

The directory size varies depending on the capacity of the ATA memory card.

## 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:** A file of this type is created when **Use alarm buffer** is selected in the Alarm recording or Alarm sending tab and **MPEG4** is selected on **Codec** in the Alarm buffer menu. The file may include audio data depending on the microphone setting of the camera.

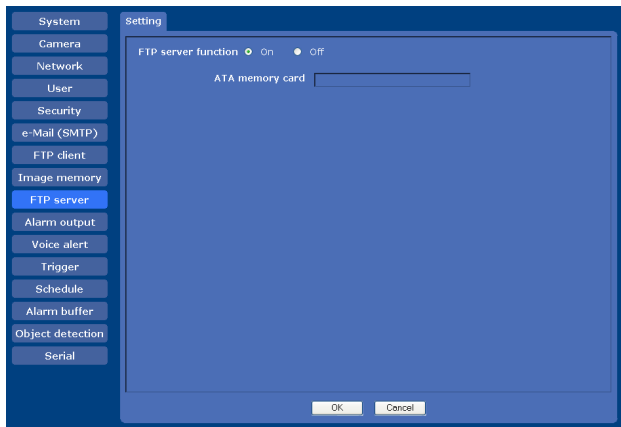
**.jpf:** A file of this type is created when **Use alarm buffer** is selected in the Alarm recording or Alarm sending tab and **JPEG** is selected on **Codec** in the Alarm buffer menu. The file may include audio data depending on the microphone setting of the camera.

**.jpg:** The file of this type is created when **Use alarm buffer** is not selected in the Alarm recording or Alarm sending tab or when a periodical sending or periodical recording is performed.

The SNC video player (page 69) allows playing of “.m4f” and “.jpf” files.

## Downloading Images from the Camera — FTP server Menu

When you click **FTP server** in the Administrator menu, the FTP server menu appears. Use this menu to set up for the FTP server function that finds a specified image and audio file stored in an ATA memory card (not supplied) or downloads a file from the camera.



### FTP server function

To activate the FTP server function, select **On**.

### ATA memory card

The current memory space of the ATA memory card inserted into the PC card slot of the camera is displayed on the right.

### OK/Cancel

See “Buttons common to every menu” on page 26.

### Note

The frame rate and operability on the main viewer may be reduced when you logged in to the FTP server of this unit using the FTP client software installed in the computer.

## Setting the Alarm Output — Alarm output Menu

When you click **Alarm output** in the Administrator menu, the Alarm output menu appears.

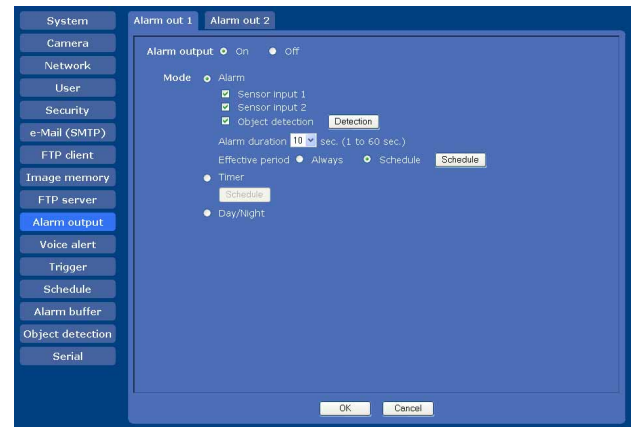
You can perform setting in this menu to control the alarm output of the I/O port on the rear of the camera linked to the alarm detection, the timer and the Day/Night function.

The Alarm output menu consists of two tabs: **Alarm out 1** and **Alarm out 2**.

### Tip

For the connection of peripheral devices to the alarm output of the I/O port, see the supplied Installation Manual.

## Alarm out 1, 2 Tab



### Alarm output

To activate the alarm output function, select **On**.

### Mode

Select the mode of the alarm output function.

**Alarm:** Controls alarm output by synchronizing it with an external sensor input or the built-in object detection function.

When **Alarm** is selected, the items **Sensor input 1**, **Sensor input 2**, **Object detection**, **Alarm duration** and **Effective period** become active.

**Timer:** Controls alarm output using the timer.

Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 55)

**Day/Night:** Controls the alarm output linked to the day/night function.

### Sensor input 1

Select this option when you link the alarm output to an external sensor that is connected to sensor input 1 of the camera I/O port.

### Sensor input 2

Select this option when you link the alarm output to an external sensor that is connected to sensor input 2 of the camera I/O port.

### Object detection

Select this option when you link the alarm output to the object detection function.

Click **Detection**, and the Object detection menu is displayed to allow you to set the object detection function (page 57).

### Alarm duration

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

### Effective period

This item becomes active when **Mode** is set to **Alarm**. Set the period during which the alarm detection is effective.

**Always:** The alarm detection is always effective.

**Schedule:** You can specify the period during which alarm detection is effective.

Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 55)

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Outputting Audio Linked to Alarm Detection— Voice alert Menu

Click **Voice alert** in the Administrator menu to display the Voice alert menu.

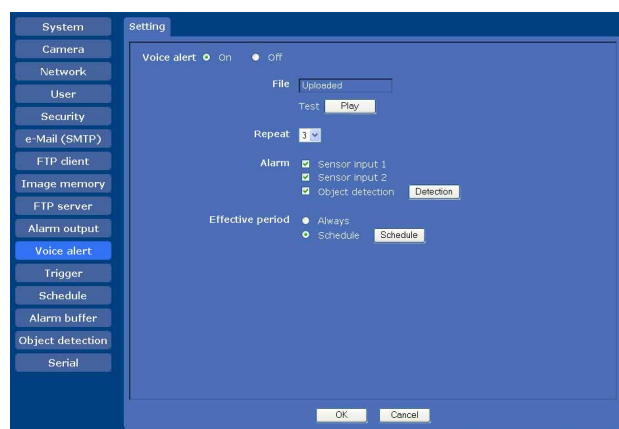
Use this menu to set the voice alert function to output audio from the line output jack of the camera when an alarm is detected by the sensor input or object detection function.

You can output the audio from the speaker connected to the camera in synchronization with an alarm event triggered by the sensor input or the object detection function.

### Note

Before using the voice alert function, you need to save the audio file to the camera using the SNC audio upload tool stored in the supplied CD-ROM.

For the use of the SNC audio upload tool, see page 66.



### Voice alert

To use the voice alert function linked with the sensor input or the object detection function, select **On**.

### File

Displays whether an audio file is saved in the camera or not.

**Uploaded:** The audio file is saved in the camera.

**Not uploaded:** The audio file is not saved in the camera.

### Test

When the audio file is saved in the camera, you can check it by playing it back.

Click **Play** to play back the audio file once.

## Repeat

Select playback repeat time from 1 to 3.

## Alarm

Select the alarm to be linked with the voice alert function.

**Sensor input 1:** The external sensor that is connected to sensor input 1 of camera I/O port.

**Sensor input 2:** The external sensor that is connected to sensor input 2 of camera I/O port.

**Object detection:** The alarm detected by the object detection function.

Click **Detection**, and the Object detection menu is displayed to allow you to set the object detection function (page 57).

## Effective period

Set the period during which the alarm detection is effective.

**Always:** The alarm detection is always effective.

**Schedule:** You can specify the period during which the alarm detection is effective.


Click **Schedule**, and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 55)

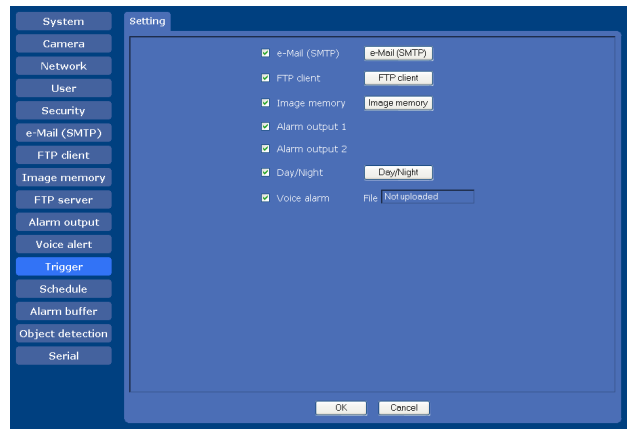
## OK/Cancel

See “Buttons common to every menu” on page 26.

# Setting the Operations from the Viewer — Trigger Menu


Click **Trigger** in the Administrator menu to display the Trigger menu.

In this menu, you will select the activities that can be performed when  is clicked on the main viewer.

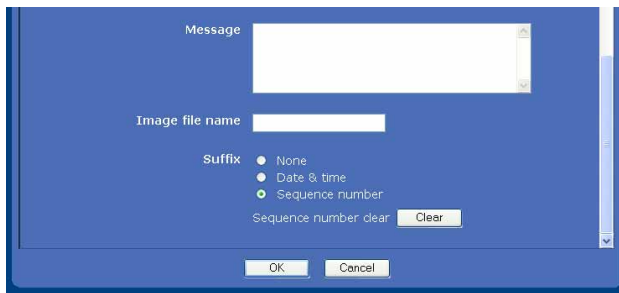
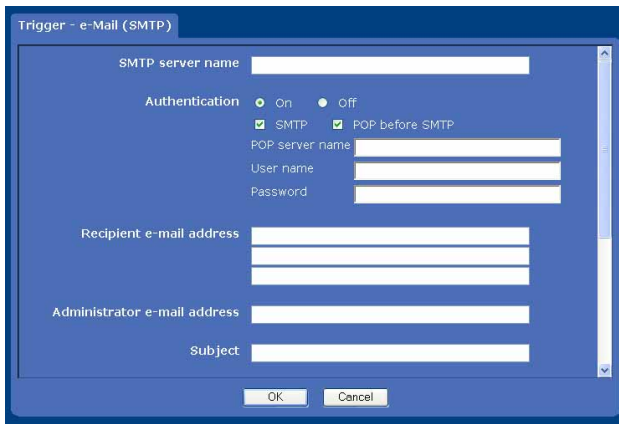


## e-Mail (SMTP)


Checking this box allows you to select **e-Mail** from the trigger drop-down list in the main viewer.

You can send an e-mail with attached image file by selecting **e-Mail** and clicking .

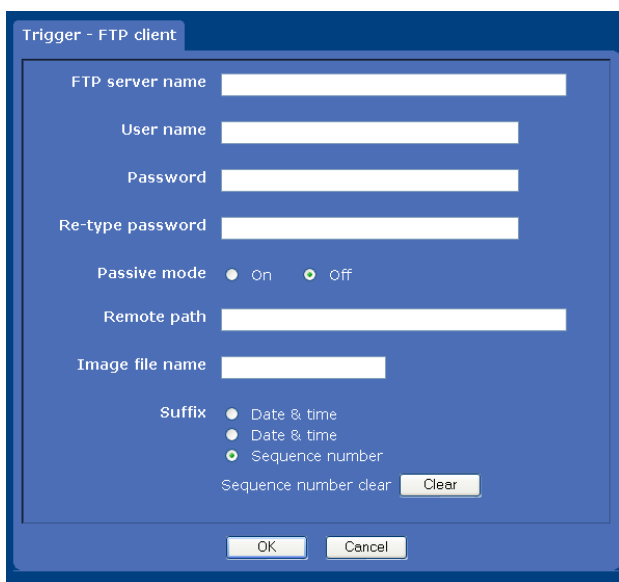
When you click **e-Mail (SMTP)**, the **Trigger-e-Mail (SMTP)** menu is displayed. You can set the necessary options here. The setting options and setting procedures are the same as those of the e-Mail (SMTP) menu (page 42).




## FTP client

Checking this box allows you to select **FTP** from the trigger drop-down list in the main viewer. You can send an image file to FTP server by selecting **FTP** and clicking .

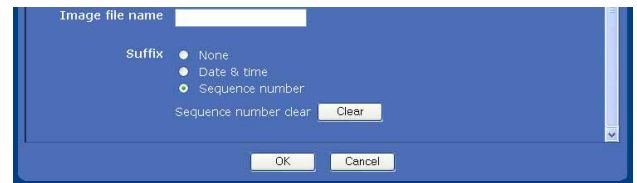
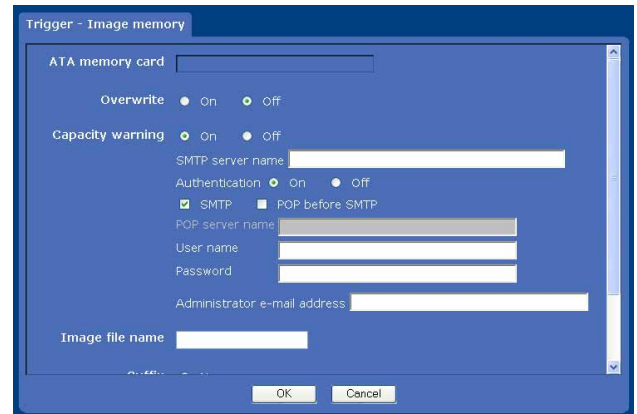
When you click **FTP client**, the **Trigger-FTP client** menu is displayed. You can set the necessary options here. The setting options and setting procedures are the same as those of the FTP client menu (page 45).




## Image memory

Checking this box allows you to select **Image memory** from the trigger drop-down list in the main viewer. You can record an image file to an ATA memory card (not supplied) by selecting **Image memory** and clicking .


When you click **Image memory**, the **Trigger-Image memory** menu is displayed. You can set the necessary options here. The setting options and setting procedures are the same as those of the Image memory menu (page 47).



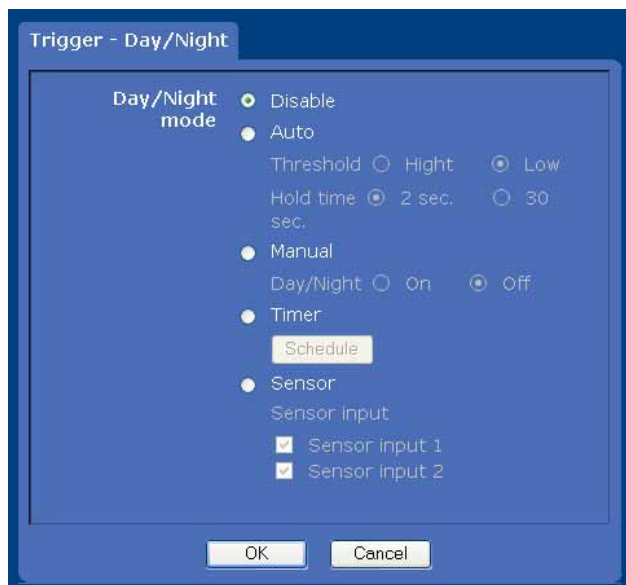
## Alarm output 1, 2

Checking this box allows you to select **Alarm output 1** or **Alarm output 2** from the trigger drop-down list in the main viewer. You can control On (short circuit) or Off (open) by selecting **Alarm output 1** or **Alarm output 2** and clicking .


## Day/Night

Checking this box allows you to select **Day/Night** from the trigger drop-down list in the main viewer. You can control On (night mode) or Off (day mode) of the day/night function by selecting **Day/Night** and clicking .


When you click the **Day/Night** button, the **Trigger-Day/Night** menu is displayed. You can set the necessary options here. The setting options and setting procedures are the same as those in the Day/Night tab of the Camera menu (page 30).



**Note**

The day/night function is invalid when **Day/Night mode** is set to **Disable** or **Auto** in the **Trigger-Day/Night** menu, even if you click .

**Voice alert**

Checking this box allows you to select **Voice alert** from the trigger drop-down list in the main viewer. You can output audio from the audio file saved in the camera by selecting **Voice alert** and clicking .

**File**

Displays whether an audio file is saved in the camera or not.

**Uploaded:** The audio file is saved in the camera.

**Not uploaded:** The audio file is not saved in the camera.

**OK/Cancel**

See “Buttons common to every menu” on page 26.

# Setting the Schedule

## — Schedule Menu

When you click **Schedule** in the Administrator menu, the Schedule menu appears.

The Schedule menu consists of six tabs.

This is the same menu as the Schedule menu that is displayed when you click **Schedule** to set the **Effective period** in the following menus.

**Day/Night: Schedule** in the Day/Night tab of the Camera menu

**e-Mail: Schedule** in the Alarm sending or Periodical sending tab of the e-Mail (SMTP) menu

**FTP: Schedule** in the Alarm sending or Periodical sending tab of the FTP client menu

**Image memory: Schedule** in the Alarm recording or Periodical recording tab of the Image memory menu

**Alarm out: Schedule** in the Alarm out 1 or Alarm out 2 tab of the Alarm output menu

**Voice alert: Schedule** in the Voice alert menu

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



**Use the same time schedule every day**

When this item is checked, the same **Start time** and **End time** are applied to all days. In that case, the **Start time** and **End time** of the day from **Mon** (Monday) to **Sun** (Sunday) cannot be input.

**Mon (Monday) to Sun (Sunday)**

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

**Start time, End time**

Specify the start time and the end time.

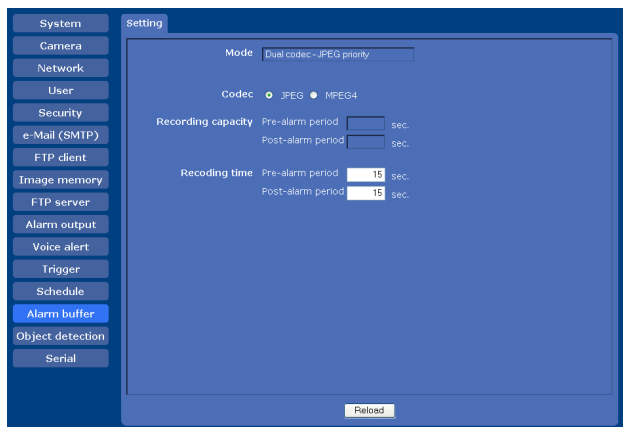
**OK/Cancel**

See “Buttons common to every menu” on page 26.

# Setting the Alarm Buffer

## — Alarm buffer Menu

When you click **Alarm buffer** in the Administrator menu, the Alarm buffer 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** of FTP client menu or **Alarm recording** of Image memory menu is set to **On**, besides when **Use alarm buffer** is selected.



### Mode

Displays the video codec selected in the Video codec tab of the Camera menu.

### Codec

Only the currently available codec(s) are active. Select the video codec to be used for the alarm buffer.

#### Note

When **Dual codec** is selected in the Video codec tab of the Camera menu and if you select here a video codec different from the priority video codec specified for **Dual codec**, the bit rate and frame rate for sending/recording via the alarm buffer may be lower than the set values.

### Recording capacity

Displays the maximum recording capacity of the 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 alarm detection.

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

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

#### Notes

- The value of **Recording capacity** differs depending on the image size and image quality settings in the Camera menu.
- When the Java applet viewer is used and **Codec** is set to **MPEG4** in the Alarm buffer menu, audio cannot be output.

### OK/Cancel

See “Buttons common to every menu” on page 26.



# Setting the Object Detection Function

## — Object detection Menu

When you click **Object detection** in the Administrator menu, the Object detection menu appears.

Using this menu, you can set the conditions for activating the built-in “Moving object detection” and the “Unattended object detection” functions. Moving object detection detects moving objects in the camera image and outputs an alarm. Unattended object detection detects difference between the previously shot background image and the image being shot currently and outputs an alarm when the difference continues recognized for more than the specified period. The Object detection menu consists of two tabs: **Common** and **Unattended object setting**.

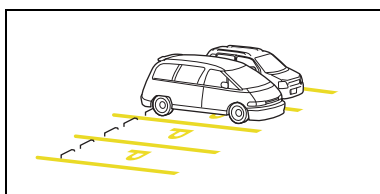
### What is unattended object detection ?

The unattended object detection function of this unit compares the reference background image with the current image to detect an unattended object. The unit can perform “Abandoned object detection” of an object that did not exist and appears now as an unattended object. The unit can also perform “Removed object detection” of an object that existed before and now has disappeared as an unattended object.

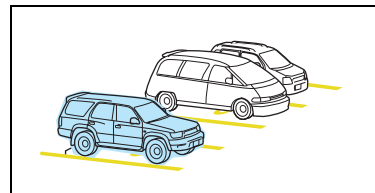
### Abandoned object detection

The camera first stores in memory the background image for reference. If an object that did not exist before appears on the background and stops, the camera detects the object as an unattended object. If the unattended object stays in camera image for more than the specified time, it is marked with a red frame and an alarm linked to unattended object detection is output. you can activate alarm sending of the FTP client function, alarm recording of the image memory function and playback of an audio file in synchronization with the alarm.

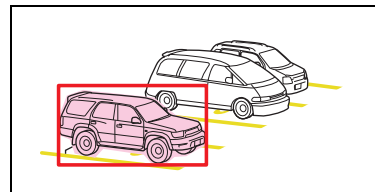
**Background image**



**A car appears in the foreground.**



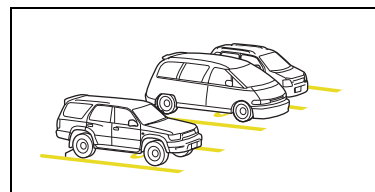
**After the detection time, the car in the foreground is detected as an unattended object.**



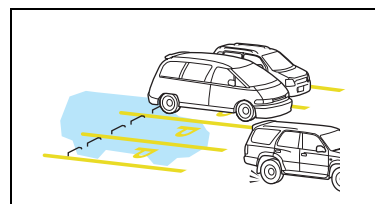
### Removed object detection

The camera first stores in memory the background image for reference. If an object that existed before moves and disappears, the camera detects the location where the object existed as an unattended object. If there are no changes in the unattended object (location) for more than the specified time, that location is marked with a red frame and an alarm linked to unattended object detection is output. You can activate alarm sending of the FTP client function, alarm recording of the image memory function and playback of an audio file in synchronization with the alarm.

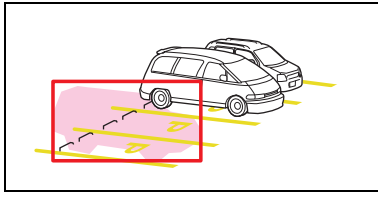
**Background image**



**The car in the foreground moves out.**



After the detection time, the location where the car was parked is detected as an unattended object.

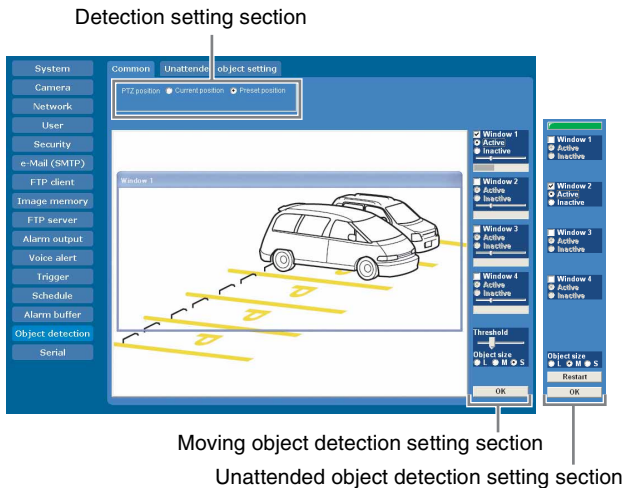


**Notes**

- The colors and red frames shown in the monitor display to indicate prospective unattended objects are not displayed on the image files that are sent or recorded linked to the unattended object detection function.
- You can view an image in the main viewer during the setting of the object detection function only when **MPEG4** is selected for **Dual codec** in the Video codec tab.
- The unattended object detection may not work correctly if the brightness of a scene changes significantly, for example, when you shoot an outdoor scene continuously from day to night.
- Before actual use, perform an operation test and confirm that the object detection function works correctly.

**Common Tab**

Use this tab to select moving object detection or unattended object detection, and set the conditions for detection while observing a camera image. This is the same menu as that displayed when you click **Detection** on Alarm sending of the e-Mail (SMTP) menu, or on Alarm recording of the Image memory menu.



**Detection setting section**

Select either moving object detection or unattended object detection.

**Moving object:** Select when you want to perform moving object detection. When this option is selected, the moving object setting menu appears. See “Setting items for moving object detection” on page 58.

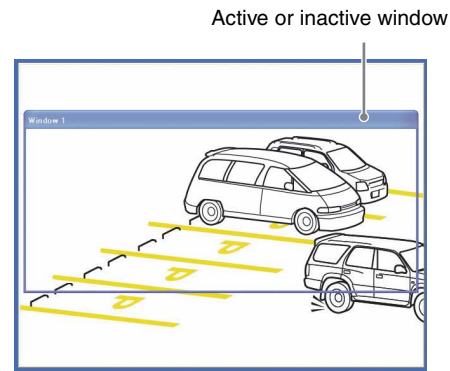
**Unattended object:** Select when you want to perform unattended object detection. When this option is selected, the unattended object setting menu appears. See “Setting items for unattended object detection” on page 60.

**Setting items for moving object detection**

The following setting items appear when **Detection** is set to **Moving object**.

**Monitor display**

Set the active/inactive window while monitoring a moving image.



**Note**

The image displayed on the monitor display has low resolution.

**Window1 to Window4 check boxes**



When you check a check box, the corresponding window (active or inactive window) appears on the monitor display. You can change the position and size of the window.

**Active:** To use the window as an active area in which moving object detection is performed.

**Inactive:** To use the window as an inactive area in which any moving object is ignored. Select **Inactive** to set an inactive area inside an active window.

**Note**

You cannot set all four windows as **Inactive** windows. Be sure to set one or more windows as **Active** window(s).

**Moving object detection indicator**



This indicator shows the threshold level for outputting an alarm and a graph of the motion level in the window. An alarm is output when motion that exceeds the threshold level is detected in the window.

**Note**

You can change the threshold level using the **Threshold** setting slider bar at the bottom of the display, but you cannot set the threshold level individually for each window.

**Threshold setting slider bar**



Set the threshold level of moving object detection that is common to all the windows. The threshold level is used to judge whether or not there has been any motion in the camera image. When the level shown in the moving object detection indicator has exceeded the threshold level, the camera judges that there has been a motion. An alarm is output when there is a motion exceeding the set threshold level in one of the active windows.

**Object size**



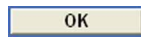
Select the minimum size of a detectable object from **L** (Large), **M** (Medium) and **S** (Small). Each option represents the corresponding size below:

- L:** 64 × 64 dots
- M:** 32 × 32 dots
- S:** 8 × 8 dots

**Tip**

The monitor display is 640 × 480 dots. Size **L** is 1/10 the width of the monitor display.

**OK button**



Click to confirm the settings and send the set values for the selected position to the camera.

**Note**

Although the indicator quickly responds to the setting being performed as you change the size of a window or a parameter, you need to click the **OK** button to confirm the setting. The setting will be cancelled if you do not click the **OK** button.

**To set the moving object detection function**

Set the moving object detection function as follows:

- 1** Select **Moving object** for **Detection**. The setting items for moving object detection appear.
- 2** Check the **Window 1** check box. The **Window 1** frame appears on the monitor display.
- 3** Adjust the position and size of **Window 1**. Drag **Window 1** to move it and change its size.
- 4** Set the active or inactive windows. Select **Active** to set **Window 1** as an active area, or **Inactive** to set it as an inactive area.

**Note**

If an active window and inactive window overlap, the overlapped portion will be regarded as an inactive area.

- 5** Set the function for **Windows 2** to **Windows 4**. Repeat steps 2 to 4 for each window.
- 6** Select the object size for **Object size**. Select a larger size if a small noise may be detected as a motion by mistake.
- 7** Adjust the **Threshold** setting slider bar to set the threshold level at which the camera executes detection. Adjust the detection level while observing the moving object detection indicator and actually shooting a moving object.
- 8** Click **OK**. The moving object detection settings for the selected position are confirmed.

### Note

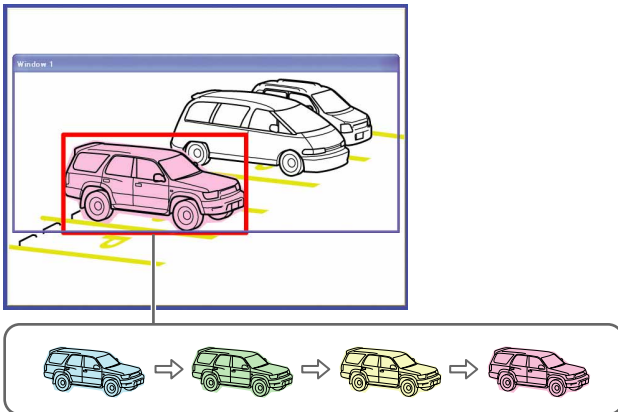
Be sure to click the **OK** button to confirm the settings. The setting will be cancelled if you do not click the **OK** button.

## Setting items for unattended object detection

The following setting items appear when **Detection** is set to **Unattended object**.

### Monitor display

Set the active/inactive window while monitoring a moving image.



When a prospective unattended object is detected on the monitor display, it will be colored. The object's color will be changed from blue to green, yellow, and red in sequence, as the possibility of it being an unattended object increases. This change of color shows that unattended object detection is in progress. When the camera finally regards the object as an unattended object, a red frame is displayed.

### Notes

- The colors and red frames shown in the monitor display to indicate prospective unattended objects are not displayed on the image files that are sent or recorded linked to the object detection function.
- The image displayed on the monitor display has low resolution.

### Status lamp



Displays whether or not unattended object detection is operating.

**Gray:** Unattended object detection is not operating because it is in the process of acquiring the background image. When unattended object detection starts, it acquires the background image.

Unattended objects are not detected during this period.

**Green:** Unattended object detection is operating because the background image has been acquired.

### Window1 to Window4 check boxes



When you check the check box, the corresponding window (active or inactive window) appears on the monitor display. You can change the position and size of the window.

**Active:** To use the window as an active window in which unattended object detection is performed.

**Inactive:** To use the window as an inactive window in which any unattended object is ignored. Select **Inactive** to set an inactive area inside an active window.

### Note

You cannot set all four windows as **Inactive** windows. Be sure to set one or more windows as **Active** window(s).

### Object size



Select the minimum size of the detectable unattended object from **L** (Large), **M** (Medium) and **S** (Small). Each option represents the corresponding size below:

**L:** 64 × 64 dots

**M:** 32 × 32 dots

**S:** 8 × 8 dots

### Tip

The monitor display is 640 × 480 dots. Size **L** is 1/10 the width of the monitor display.

### Note

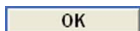
When you change the **Object size** setting, the camera starts acquiring a background image and the status lamp turns gray. Therefore, unattended object detection does not work for a while.

### Restart button



Click this button to initialize the unattended object detection function. A new background image will be acquired from the current image.

## OK button



Click to confirm the settings and send the set values for the selected position to the camera.

### Notes

- Unattended object detection does not operate until the status lamp turns green.
- Although the indicator quickly responds to the setting being performed as you change the size of a window or a parameter, you need to click the **OK** button to confirm the setting. The setting will be cancelled if you do not click the **OK** button.

## To set the unattended object detection function

Set the unattended object detection function as follows:

- 1** Select **Unattended object** on **Detection**.  
The setting items for unattended object detection appear.
- 2** Wait until the status lamp turns green.  
When the status lamp is gray, the camera is in the process of acquiring a background image. Unattended object detection does not work during this period.  
The status lamp turns green when the background image has been acquired.
- 3** Check the **Window 1** check box.  
The **Window 1** frame appears on the monitor display.
- 4** Adjust the position and size of **Window 1**.  
Drag **Window 1** to move it and change its size.
- 5** Set the active or inactive windows.  
Select **Active** to set **Window 1** as an active area, or **Inactive** to set it as an inactive area.

### Note

If an active window and inactive window overlap, the overlapped portion will be regarded as an inactive area.

- 6** Set the function for **Windows 2** to **Windows 4**.

Repeat steps 3 to 5 for each window.

- 7** Select the object size for **Object size**.  
Select a larger size if a small noise may be detected as an object by mistake.
- 8** Check whether an unattended object is detected properly.  
Place an object in the window and confirm that unattended object detection works correctly.  
The object regarded as an unattended object is marked with a red frame.
- 9** Click **OK**.  
The unattended object detection settings for the selected position are confirmed.

### Note

It may take a long time until an unattended object is detected, depending on the image being shot.

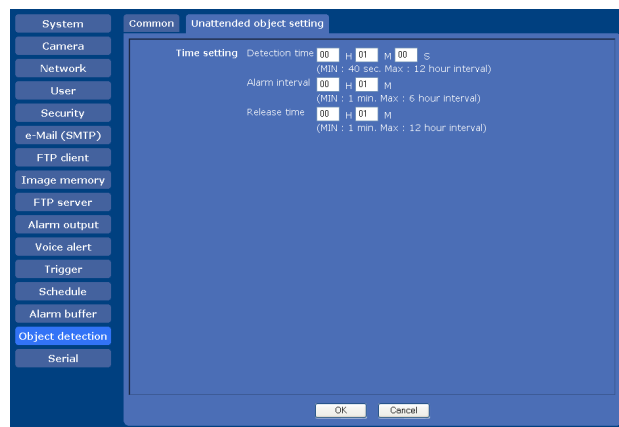
### Note

Be sure to click the **OK** button to confirm the settings. The setting will be cancelled if you do not click the **OK** button.

- 10** Set **Detection time**, **Alarm interval** and **Release time** in the Unattended object setting tab.

## Unattended object setting Tab

Use this tab to set the alarm time for unattended object detection.



### Time setting

Unattended object detection requires the following three kinds of time settings.

### Detection time

Set the period of time from when an object enters a detection window (active window) and stops until when

it is regarded as an unattended object. An alarm will be output if the specified period has elapsed. You can set the time between 40 seconds and 12 hours.

### Alarm interval

You can repeat the alarm output in an interval of the preset time after an object has been regarded as an unattended object.

If you set **Alarm interval** to 5 minutes, for example, so that an alarm will be output every 5 minutes repeatedly after an unattended object is detected.

You can set the time between 1 and 6 hours.

### Release time

Set the period of time required when the object once regarded as an unattended object is regarded as a background.

An alarm will no longer be output if the specified period has elapsed as the object once regarded as an unattended object is regarded as a background.

You can set the time between 1 and 12 hours.

#### Note

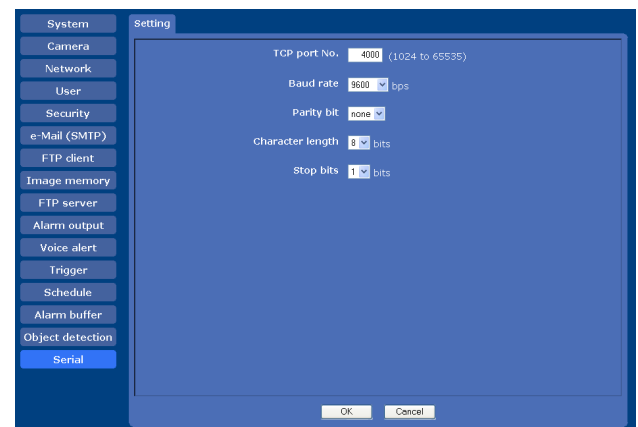
Set **Release time** to a larger value than **Detection time**.

## Transmitting with External Equipment Using the External Serial Terminal — Serial Menu

When you click **Serial** in the Administrator menu, the Serial menu is displayed.

Using this menu, you can input data into the camera from the computer via a network and output them to the external serial interface to control a peripheral device.

You can also input data from a peripheral device via an external serial interface and output them to the computer via a network.



### TCP port number

Type the port number corresponding to the TCP port. Specify a port number (1024 to 65535) other than Well-Known port numbers.

You can input and output data through the external interface by using the TCP port of this port number. And you can easily check data communications through the serial port by DOS command “telnet [**host name**] [**port number**].”

### Baud rate

Select a baud rate that corresponds to the peripheral device of serial interface. Selectable baud rates are shown below.

38400, 19200, 9600, 4800, 2400, 1200 (bps)

### Parity bit

Select a parity that corresponds to the peripheral device of serial interface from among **none**, **odd** or **even**.

## Character length

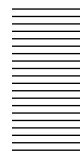
Select the character length that corresponds to the peripheral device connected to the serial interface from **7** or **8** (bits).

## Stop bit

Select the stop bit that corresponds to the peripheral device connected to the serial interface from **1** or **2** (bits).

## OK/Cancel

See “Buttons common to every menu” on page 26.



## Others

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 those of the Network tab in the IP Setup Program.

To install the Setup Program, to assign an IP address and to set the network, see “Assigning the IP Address to the Camera” on page 9 in “Preparation”.

### Notes

- The Setup Program may not operate correctly if you use a personal firewall or antivirus software in your computer. In that case, disable the software or assign an IP address to the camera using another method. For example, see “Assigning the IP Address to the Camera Using ARP Commands” on page 73.
- If you are using Windows XP Service Pack 2, disable the Windows Firewall function. Otherwise the IP Setup Program will not operate correctly. To disable Windows Firewall, operate as follows:

- 1 Open **Windows Firewall** from **Control Panel**. With the category display, you can find **Windows Firewall** in **Security Center**.
- 2 Select **Off**, and click **OK**.

## Starting the Setup Program

Select **Program** from the 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.

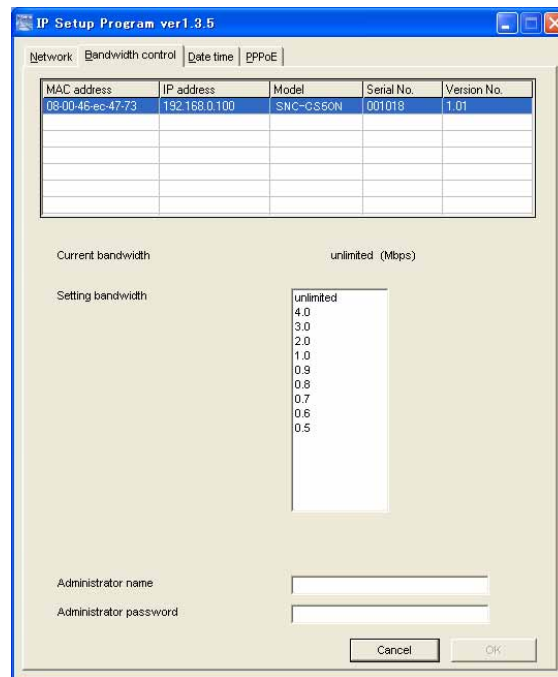
## Bandwidth control Tab

You can set the communication bandwidth for the JPEG image.

### Note

The bandwidth cannot be controlled for the **MPEG4** image.

- 1 Click the Bandwidth control tab to display the bandwidth setting window. The current bandwidth is displayed in **Current bandwidth**.



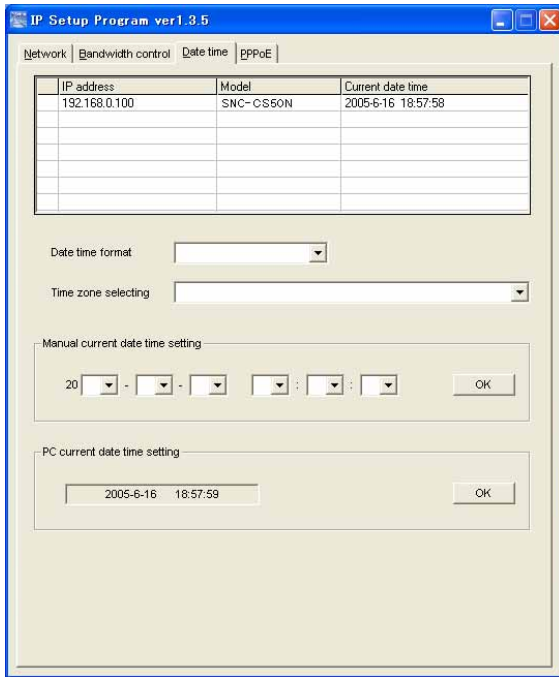
- 2 Click to select the camera to set the bandwidth from the list box.
- 3 Click to select the desired bandwidth from the **Setting bandwidth** list box.
- 4 Type the **Administrator name** and **Administrator password** in each box.
- 5 Click **OK**. If “Setting OK” is displayed, the bandwidth setting 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 that 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 coincide with the displayed computer's date and time.

## Note

Due to network properties, there may be a slight difference between the displayed computer's date and time and those set on the camera.

## 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 ( $\mu$ -LAW)	64 kbps
G.726	40 kbps
G.726	32 kbps
G.726	24 kbps
G.726	16 kbps

## Note

Only one user can transmit sound to the camera. Meanwhile, another user 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 the tool correctly. Delete the downloaded file, and click the **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 with the installation.

## Connecting the Camera to the Computer

- 1 Connect a speaker to the  $\sphericalangle$  (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.

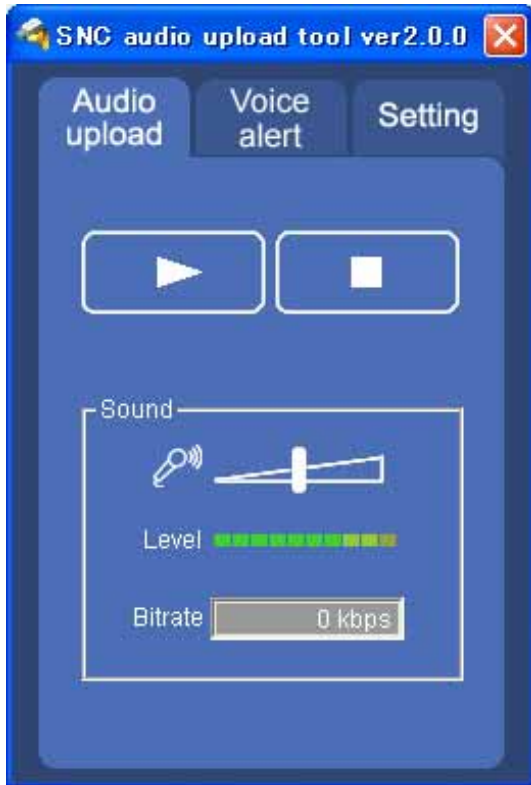
## Using the SNC audio upload tool

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

### Audio upload tab

Use this menu to transmit audio from the computer to the camera.

Before transmitting, set **Audio upload** to **Enable** on the Common tab of the Camera menu.



#### ▶ (start)/■(stop)


Click ▶ (start) to start audio 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 audio transmission, click ■(stop).

#### Note

If you change **Proxy Address**, **Proxy Port**, **Codec** on the Setting tab during an audio transmission, the changed settings will become 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 transmission.

Click  to enable/disable sound muting. The microphone input volume is displayed at the Level. The transmission rate is displayed in the Bitrate box.

### Voice alert tab

Use this menu to record the sound through the microphone connected to the computer and upload the recorded audio file to the camera.



### Recording/playback progress bar

You can check recording or playback progress with this bar.

During recording, the right end of the bar represents 30 seconds and the remaining recording time is displayed below the bar.

During playback, the maximum time of the bar depends on the recorded time.

#### (playback)

To start playback, open the recorded file or another audio file and click this icon.

You can check the recorded sound or the contents of the selected audio file. During playback, the progress bar shows playback progress.



**(stop)**

Click to stop recording or playback.

When you click it during recording, recording stops, and you can review the recorded sound or upload the recording to the camera.

When you click it during playback, playback stops and the progress bar display returns to the start position.



**(recording)**

Click to start recording of the sound input to the computer microphone. The maximum recording time is 30 seconds.

The codec specified in the Setting tab is used for the recording.

**Note**

You cannot upload an audio file to the camera during recording.



**(file open)**

Click to select a previously saved audio file. You can play the selected audio file or upload it to the camera.



**(save)**

Click to save the recorded audio file to the computer.






**(upload)**

Click to upload the recorded or selected audio file to the camera specified in the Setting tab. Only one audio file can be uploaded to the camera.



## Uploading the recorded audio file to the camera

**Tip**

Before operating, create an audio file and set the camera for audio uploading. Set the camera using the Setting tab.

- 1 Click  (recording) to start recording.
- 2 Click  (stop) to stop recording. Recording will stop automatically in 30 seconds.
- 3 Click  (upload) to transmit the audio file to the camera.

## Saving the recorded audio file to the computer



- 1 Click  (recording) to start recording.
- 2 Click  (stop) to stop recording. Recording will stop automatically in 30 seconds.

**3**

Click  (save).

The **Save as** dialog appears. Type the file name and save it.

## Uploading the saved audio file to the camera

- 1 Click  (file open) and select the audio file to be uploaded.
- 2 Click  (upload) to transmit the audio file to the camera.

## Setting tab

Use this menu to set the camera for audio uploading.



### User

Set the **User ID** and **Password** for the administrator. The factory 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 audio to.

### Camera port

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

### Codec

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

### Proxy

Check this item when you use a proxy server for communications. When it is not checked, direct communications with the camera is performed.

### Auto detect

The proxy setting is obtained automatically from Internet Explorer.

### Proxy address

Type the proxy server address.

### Proxy port

Type the port number used for communications with the proxy server.

---

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

The supplied SNC video player allows you to play video/audio data recorded with the camera on your computer.

This section explains the setup and operations of the SNC video player.

---

### Installing the SNC video player

- 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 video player**.  
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 the player correctly.



Delete the downloaded file, and click the **Setup** icon again.

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

## Using the SNC video player

- 1 Start the SNC video player.



- 2 Click the  (browse) icon. The Select File dialog opens.
- 3 Select the file you want to play. Information boxes on the selected file are displayed on the left side of the window as follows: Each click on the  (information) icon switches between “display” and “Not to display” of the file information.

### 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, Moving object detection, Unattended object 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 from the frozen point.

To stop playing, click  (stop).


To restart playing from the beginning, click  (start) again.


Play stops when the file is played to the end.

### Playing from a specified point

Move the slider bar below the image display, and playback will start from the position of the slider bar.


### 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  (speaker) to enable/disable the sound muting.

When 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 in 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

The supplied Custom Homepage Installer allows you to store the homepage that you have created in the camera and watch it.

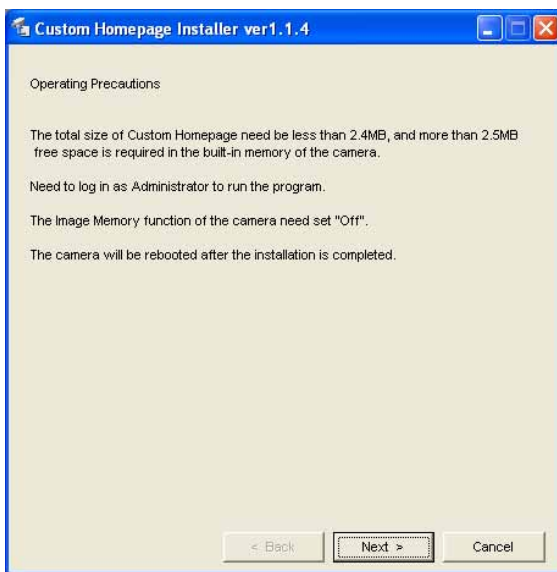
## Notes on creating the homepage

When you are creating the homepage, note the following points.

- The file name should be typed using up to 24 characters including the extension.
- The file size of the homepage should be 2.4 MB or less.
- To see the created homepage, set the **Homepage** in the System menu.

## Uploading the homepage to the camera using the Custom Homepage Installer

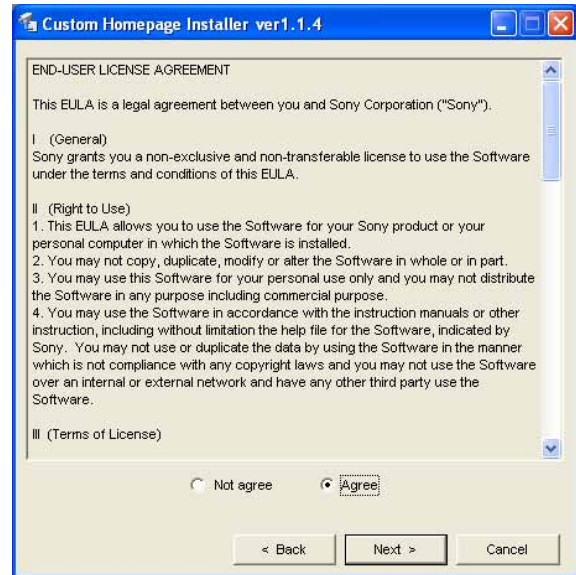
- 1** Insert the supplied CD-ROM disc into your computer CD-ROM drive.  
After a short time a window will open displaying the files on the CD-ROM.
- 2** Click the **Setup** icon of **Custom Homepage Installer**.  
The “File Download” dialog opens.
- 3** Click **Open**.  
The installer starts and notes are displayed.



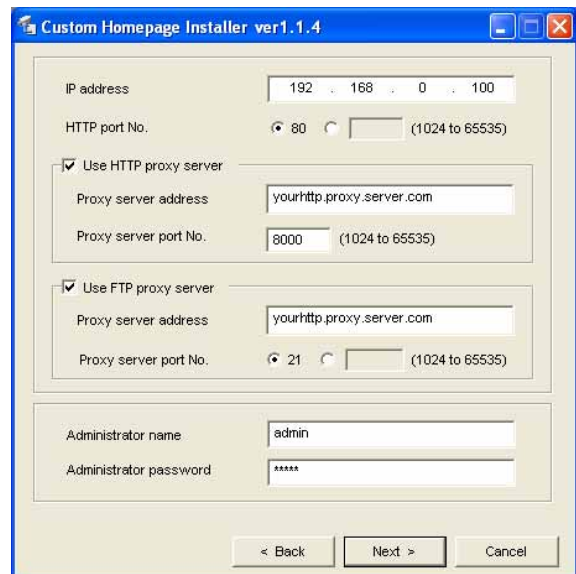
## Note

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.

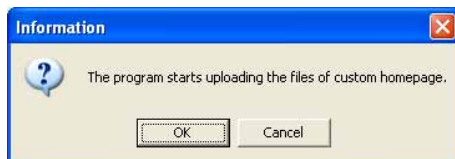
**Note**

If you cannot establish communications with the camera using 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.  
The factory settings of both items are “admin.”
- 10 Confirm that all items are correct, then click **Next**.



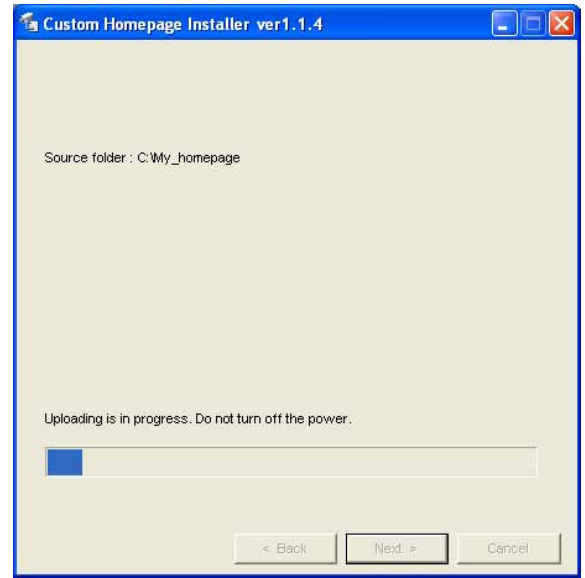
- 11 Type the path for the folder in which your homepage is stored in the Source folder box, then click **Next**.



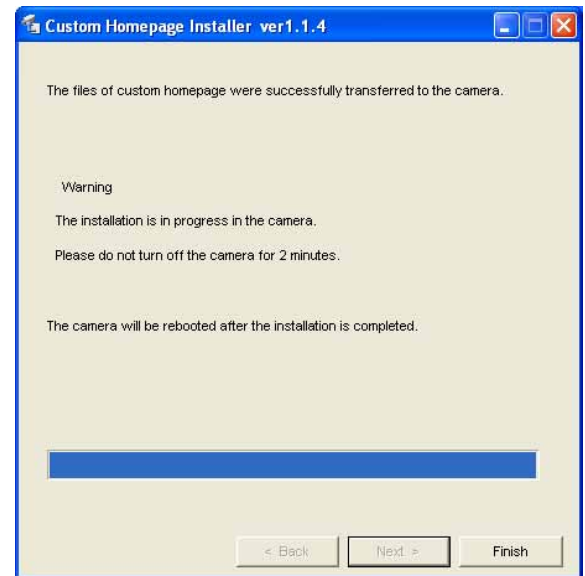
- 12 Click **OK**.  
Uploading of the homepage file starts.

**Note**

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

When you turn on the camera, enter the ARP commands within 5 minutes.

- 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**. The display stops.

```
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 after it was 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.

# 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-CS50"
...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 node of this camera. Nothing is set at the factory.
- ⑥ describes the case of “mib-2.snmpEnableAuthenTraps.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”.
- 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.snmpEnableAuthenTraps.0” in the <string> position. 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 public community and the ID number “1”.  
trap=1,public,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.

- 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\_addr/snmpdconf/snmpdconf.cgi?  
snmpd=restart

---

# Specifications

## Network

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

## Compression

Video compression format  
JPEG/MPEG4

Audio compression format  
G.711/G.726 (40,32,24,16 kbps)

Image size 640 × 480 (VGA), 320 × 240 (QVGA),  
160 × 120 (QQVGA)

Maximum frame rate  
SNC-CS50N: 30 fps  
SNC-CS50P: 25 fps

Web browser Internet Explorer Ver. 6.0 or later  
(Available OS: Microsoft Windows  
2000, Windows XP)

Computer environments  
CPU: Pentium 4, 1.5 GHz or higher  
(Pentium 4, 2.4 GHz or higher  
recommended)  
RAM: 256 MB or more  
Display size: 1024 × 768

Maximum user access  
20 users

Network security  
Password (basic authentication), IP  
filtering

Homepage customization  
Starting from a homepage in the built-  
in flash memory or an ATA memory  
card possible.

Other functions  
Detection, image trimming, built-in  
clock, etc.

## Camera

Signal system SNC-CS50N: NTSC color system  
SNC-CS50P: PAL color system

Image device 1/3 type interline transfer (Super  
Exwave™) CCD  
Total picture elements:  
SNC-CS50N: Approx. 410,000  
SNC-CS50P: Approx. 470,000  
Effective picture elements:  
SNC-CS50N: Approx. 380,000  
SNC-CS50P: Approx. 440,000

Lens mount CS mount

Synchronization  
Internal synchronization

Others

Horizontal resolution	540 TV line (analog video)
Video S/N	50 dB
Minimum illumination	0.4 lx (F1.0)
AGC	Auto/Manual (0-24 dB)
Shutter speed	Auto/Manual
	SNC-CS50N: 1/60-1/10000
	SNC-CS50P: 1/50-1/10000
White balance	ATW, ATW-PRO, One Push

### Lens (standard equipment)

Focal length	2.9 to 8.0 mm
F number	F0.9 to F1.6
View angle	Vertical 69° to 26° Horizontal 94° to 35°
Minimum object distance	300 mm

### Interface

Network port	10BASE-T/100BASE-TX (RJ-45)
I/O port	Sensor input : × 2, make contact Alarm output : × 2, 24 V AC/DC, 1 A (mechanical relay outputs electrically isolated from the camera) Serial interface RS-232C: ×1
Auto iris lens connector	DC servo
Video output	VIDEO OUT: BNC, 1.0 Vp-p, 75 ohms, unbalanced, sync negative
PC card slot	PCMCIA Type II
Microphone input	Minijack (monaural) Plug-in-power supported (rated voltage: 2.5 V DC) Recommended load impedance 2.2 khms
Line output	Minijack (monaural), Maximum output level: 1 Vrms

### Others

Power supply	12 V DC ± 10% 24 V AC ± 10%, 50/60 Hz PoE
Power consumption	9 W max.
Operating temperature	0 °C to +50 °C (32 °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 (h/w/d)

Without supplied covers: 84 × 69 × 196 mm (3<sup>3</sup>/<sub>8</sub> × 2<sup>3</sup>/<sub>4</sub> × 7<sup>3</sup>/<sub>4</sub> inches)  
With supplied covers: 96.7 × 69 × 265 mm (3<sup>7</sup>/<sub>8</sub> × 2<sup>3</sup>/<sub>4</sub> × 10<sup>1</sup>/<sub>2</sub> inches)  
not including the projecting parts and tripod adapter

### Mass

Without supplied covers:  
Approx. 750 g (1 lb 11 oz)  
With supplied covers:  
Approx. 880 g (1 lb 15 oz)

### Supplied accessories

CD-ROM (User's Guide and supplied programs) (1)  
Fall-prevention wire rope (1)  
Shoulder screw M4 (1)  
Cable cover (1)  
Front cover (1)  
Lens cable cover (1)  
Front cover screw (1)  
Installation Manual (1)  
B&P Warranty Booklet (1)  
(SNC-CS50N only)

### Optional accessories

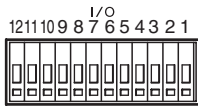
"Memory Stick" MSX-2GN (2GB)  
MSX-1GS (1GB)  
MSX-512S (512MB)  
MSH-128 (128MB)  
"Memory Stick" PC card adapter  
MSAC-PC4  
Wireless card SNCA-CFW1  
Wireless LAN antenna  
SNCA-AN1

Design and specifications are subject to change without notice.

### Regular parts replacement

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

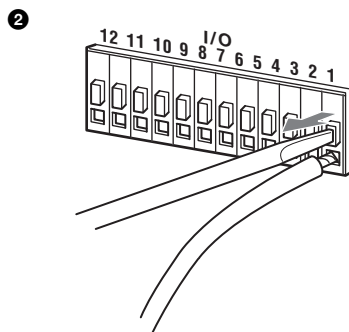
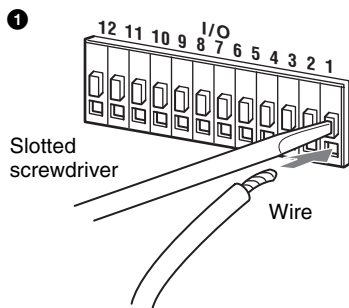
## Pin assignment of I/O port



Pin No.	Pin name
1	Sensor In 1 +
2	Sensor In 1- (GND)
3	Sensor In 2 +
4	Sensor In 2 - (GND)
5	Alarm Out 1 +
6	Alarm Out 1 -
7	Alarm Out 2 +
8	Alarm Out 2 -
9	GND
10	GND
11	RS232C · RX
12	RS232C · TX

### Using the I/O receptacle

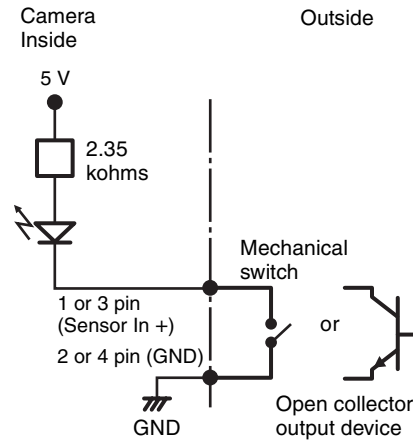
While holding down the button on the slot to which you want to connect the wire (AWG No. 28 to 22) with a small slotted screwdriver, insert the wire into the slot. Then release the screwdriver from the button.



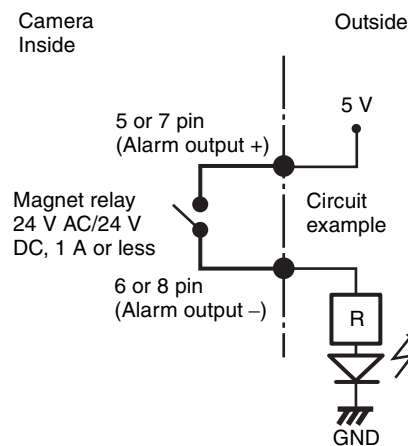
Repeat this procedure to connect all required wires.

## Wiring diagram for sensor input

### Mechanical switch/open collector output device



### Wiring diagram for alarm output



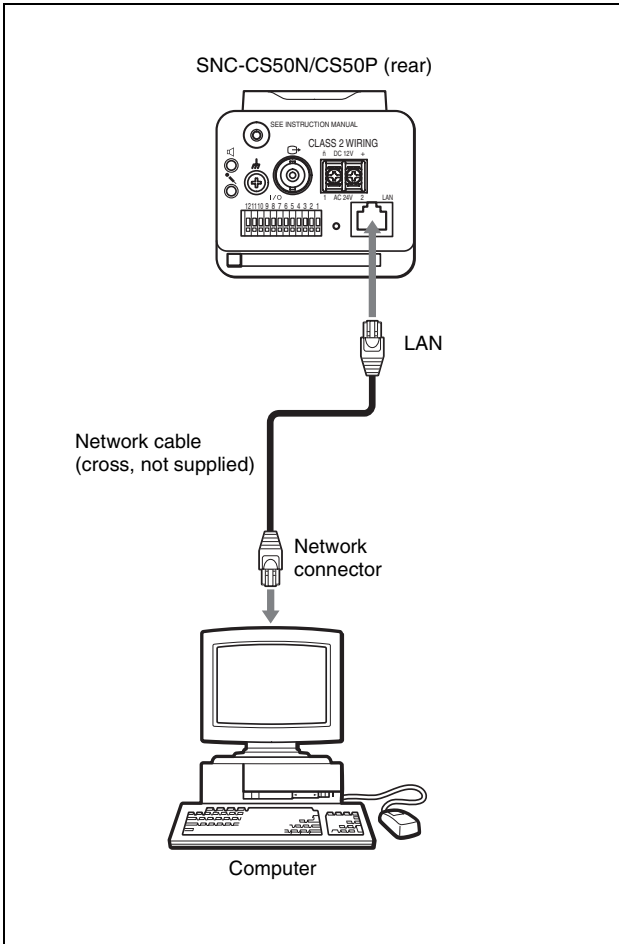
Others

# Connecting to a Computer or a Network

To connect to the computer, use a commercially available network cable (cross cable).  
To connect to the network, use a commercially available network cable (straight cable).

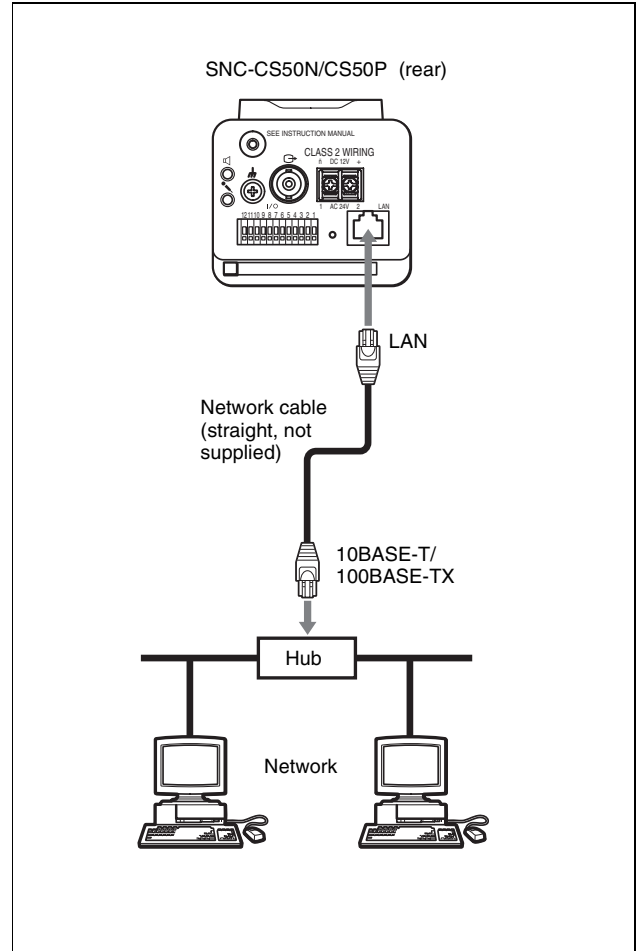
## Connecting the Camera to a Computer

Using a commercially available network cable (cross), connect the LAN port on the camera to the network connector of a computer.



## Connecting the Camera to a Local Network

Using a commercially available network cable, connect the LAN port on the camera to a hub in the network.

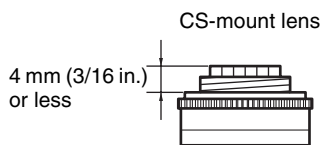


# Attaching a CS-mount Lens

You can use a CS mount lens other than the supplied lens with this camera.

## Suitable lens

The lens must be a CS-mount type of less than 1 kg (2 lb 4 oz). The protrusion behind the mounting surface must be 4 mm (3/16 in.) or less.

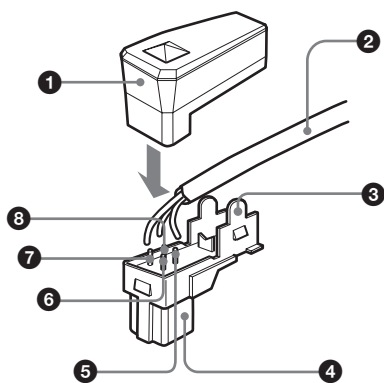


## About the auto-iris lens

You can use a DC-servo type auto iris lens with this camera.

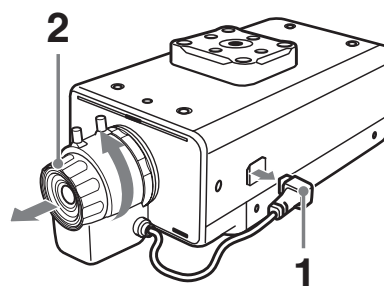
To connect the auto iris lens, first replace the plug on the lens cable with a plug that fits the LENS connector (not supplied).

- 1 Detach the old plug from the lens cable.
- 2 Solder the wires of the lens cable to the pins of the plug.  
For cable pin assignment, refer to the instruction manual of the lens.



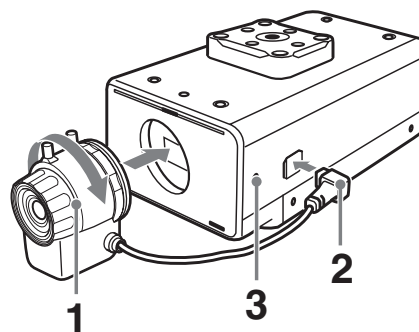
1	Cover
2	Lens cable
3	Rib (If the cable is thick, cut this off.)
4	Plug (not supplied)
5	Pin 4: Drive - (Ground)
6	Pin 2: Control +
7	Pin 1: Control -
8	Pin 3: Drive +

## Detaching the Lens



- 1 Disconnect the lens cable from the auto iris lens connector.
- 2 Turn the lens counterclockwise to detach it from the camera.

## Attaching the Lens



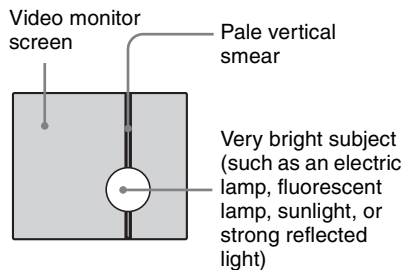
- 1 Align the lens with the lens mount of the camera, and turn it clockwise until it is secured.
- 2 Insert the plug of the lens cable into the auto iris lens connector.  
When fitting a manual-iris lens, omit step 2.
- 3 If the focus cannot be adjusted correctly at  $\infty$  (infinite), adjust the focal length by turning the ADJUST screw with a Phillips-head screwdriver.

## Typical CCD Phenomena

The following phenomena may appear on the monitor screen while you are using a CCD\* color video camera. These phenomena stem from the high sensitivity of the CCD image sensors, and do not indicate a fault within the camera.

### Vertical smear

A “smear” may appear to extend vertically from very bright subjects, as shown below.



This phenomenon is common to CCD imaging elements using an interline transfer system, and is caused when electric charge induced by infrared radiation deep within the photo sensor is transferred to the resistors.

### Aliasing

When shooting fine stripes, straight lines or similar patterns, the lines may become slightly jagged.

### Blemishes

A CCD image sensor consists of an array of individual picture elements (pixels). A malfunctioning sensor element will show up as a single pixel blemish in the image. This is generally not a problem.

### White speckles

When you shoot a poorly illuminated object at a high temperature, small white dots may appear all over the entire screen image.

\* CCD: Charge-Coupled Device

## About a “Memory Stick”

### Available types of “Memory Stick” for the unit

You can use “Memory Stick,” “MagicGate Memory Stick” and “Memory Stick PRO” with the unit. However, because the unit does not support the MagicGate standards, data recorded with the unit is not subject to MagicGate copyright protection.

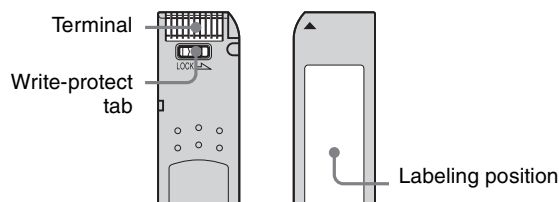
#### Note

The data recorded with this unit is not compatible with the other units, even if they support “Memory Stick.”

### What is MagicGate ?

MagicGate is copyright protection technology that uses encryption technology.

### Before using a “Memory Stick”



- When you set the “Memory Stick” write-protect tab to “LOCK,” data cannot be recorded, edited, or erased.
- Data may be damaged if:
  - You remove the “Memory Stick” or turn off the unit while it is reading or writing data.
  - You use the “Memory Stick” in a location subject to the effects of static electricity or electric noise.

#### Note

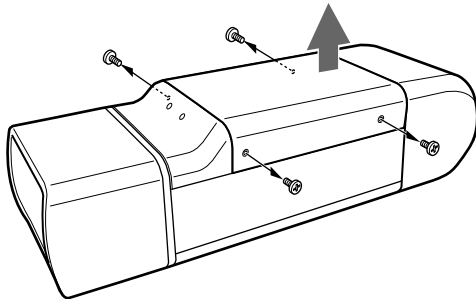
- Do not attach any other material than the supplied label onto the label space.
- Attach the label so that it does not stick out beyond the labeling position.
- Carry and store the “Memory Stick” in its case.
- Prevent metallic objects or your finger from coming into contact with the metal parts of the connecting section.
- Do not strike, bend, or drop the “Memory Stick.”
- Do not disassemble or modify the “Memory Stick.”
- Do not allow the “Memory Stick” to get wet.
- Do not use or store the “Memory Stick” in a location that is:
  - extremely hot, such as in a car parked in the sun.
  - under direct sunlight.
  - very humid or subject to corrosive substances.



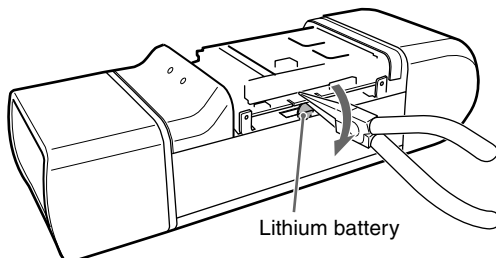
## When You Discard the Camera

For environmental reasons, take out the lithium battery from the camera and discard it appropriately.

- 1 Remove the four screws illustrated below and detach the bottom panel.



- 2 Hold the board on which the lithium battery is attached using long-nose pliers. Then, bend it in the direction of the arrow illustrated below to detach the battery.



## Glossary

### ActiveX control

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

### ARP commands

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

### Bandwidth control

To limit the amount of transmitted data.

### Bit rate

The rate at which data bits are transmitted.

### Capture

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

### Codec

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

### Default gateway

Device that can be used to access the other network.

### DHCP server

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

### Digital zoom

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

**DNS server**

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

**Frame rate**

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

**FTP client**

Software to be used for accessing the FTP server.

**FTP server**

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

**HTTP port**

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

**IP address**

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

**Java applet**

A program written in Java language that can be used in the web browser.

**Java Virtual Machine**

Software that transfers the Java applet's byte code to the native code of your system to execute it.

**JPEG**

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

**MAC address**

A network address that uniquely identifies each LAN card.

**MPEG4**

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

**Multicast**

The class D IP address assigned between 224.0.0.0 and 239.255.255.255. Using this IP address enables you to transmit the same data to multiple equipment.

**Network address**

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

**Network bandwidth**

Bit rate that can be used for networking.

**NTP server**

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

**Passive mode**

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

**PoE**

Technology to supply the electric power with LAN cable.

**POP server**

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

**Primary DNS server**

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

**Proxy server**

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

**Saturation**

The degree to which the color is pure.

**Secondary DNS Server**

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

## **SMTP server**

A server for sending or relaying e-mail messages between servers.

## **SNMP**

A protocol for monitoring and managing network devices.

## **Subnet mask**

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

## **TCP**

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

## **UDP**

Abbreviation for User Datagram Protocol. A standard protocol used for the Internet connection. Compared with the other protocol, TCP, UDP can transmit data faster, but reliable communication is not guaranteed.

## **Unicast**

Transmission of the data to the specified equipment on a network by specifying a single address.

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