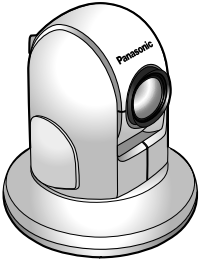


# Panasonic®

## Installation/Troubleshooting

### Network Camera

Model No. **KX-HCM280A**



**Please read this manual before using and save this manual for future reference.**

**Panasonic Network Camera Website: <http://www.panasonic.com/netcam>**

**for customers in the USA or Puerto Rico**

# Introduction

## How to Use This Documentation

The camera includes the following 2 manual types.

- **Installation/Troubleshooting (This manual)**  
Installation/Troubleshooting provides explanations for accessories included with the camera, the initial configuration, and troubleshooting tips. The Installation/Troubleshooting helps you to easily configure the camera.
- **Operating Instructions (Included on the Setup CD-ROM)**  
Operating Instructions explains about operations, settings, features and the cleaning method when using the camera.

## Abbreviations

- UPnP is the abbreviation for "Universal Plug and Play".
- "Network Camera" is called "Camera" in this Installation/Troubleshooting.

## Trademarks

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## System Requirements for your PC

Your PC (Personal Computer) and network must meet the following technical specifications for the camera to work properly.

### For IPv4 Connection

Item	Description
<b>Operating System</b>	Microsoft® Windows® XP, Microsoft® Windows® 2000 Microsoft® Windows® Me, Microsoft® Windows® 98SE
<b>CPU</b>	<ul style="list-style-type: none"> <li>• <b>For viewing single camera</b> Pentium® III (800 MHz or greater is recommended.)</li> <li>• <b>For viewing multiple cameras</b> Pentium 4 (1.8 GHz or greater is recommended.)</li> </ul>
<b>Protocol</b>	TCP/IP protocol (HTTP, TCP, UDP, IP, DNS, ARP, ICMP)
<b>Interface</b>	10/100 Mbps network card installed
<b>Web Browser</b>	Internet Explorer 6.0 or later (Not included on the Setup CD-ROM)

**For IPv6 Connection**

<b>Item</b>	<b>Description</b>
<b>Operating System</b>	Microsoft® Windows® XP Service Pack 1 or later
<b>CPU</b>	<ul style="list-style-type: none"><li>• <b>For viewing single camera</b> Pentium III (800 MHz or greater is recommended.)</li><li>• <b>For viewing multiple cameras</b> Pentium 4 (1.8 GHz or greater is recommended.)</li></ul>
<b>Protocol</b>	TCP/IP protocol (HTTP, TCP, UDP, IP, DNS, ICMPv6, NDP)
<b>Interface</b>	10/100 Mbps network card installed
<b>Web Browser</b>	Internet Explorer 6.0 or later (Not included on the Setup CD-ROM)

**Note**

See Panasonic Network Camera support website at <http://panasonic.co.jp/pcc/products/en/netwkcaml/> for details about network environment.

**What is IPv6?**

- IPv6 is short for "Internet Protocol Version 6".
- IPv6 was created to address the additional IP addresses that will be needed as the Internet continues to expand.
- IPv6 is expected to gradually replace IPv4, with the 2 coexisting for a number of years during a transition period.
- Though most ISPs (Internet Service Providers) do not yet support IPv6, many local networks already use it. When your ISP supports IPv6, your Panasonic Network Camera will be ready!
- For more information you wish to visit <http://www.ipv6.org/>.

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# 1 Before Using

## 1.1 IMPORTANT SAFETY INSTRUCTIONS

When using this unit, basic safety precautions should always be followed to reduce the risk of fire, electric shock, or personal injury.

1. Read and understand all instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. After taking away the sand or the dust on the lens, wipe the lens with lens cleaning paper.
6. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.
8. Protect the AC adaptor cord and AC cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the unit.
9. The AC cord is used as the main disconnect device, ensure that the socket-outlet is located/installed near the equipment and is easily accessible.
10. Only use attachments/accessories such as stand specified by the manufacturer.
11. Do not touch the unit, AC adaptor, AC adaptor cord or AC cord during lightning storms.
12. Unplug the unit when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the unit has been damaged in any way, such as when the AC adaptor, AC cord or plug is damaged, the unit does not operate normally, or after the unit has been dropped.
14. Prolonged exposure to direct sunlight or halogen light may damage CCD sensor.
15. The camera is intended for indoor use only.
16. Unplug this unit from power outlets if it emits smoke, an abnormal smell or makes unusual noise. These conditions can cause fire or electric shock. Confirm that smoke has stopped and contact an authorized service center.

**SAVE THESE INSTRUCTIONS**

## 1.1.1 FCC and Other Information

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

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

### **Environment:**

Do not install the camera where the temperature is less than 0 °C (+32 °F) or greater than +40 °C (+104 °F). Allow 10 cm (4 inches) clearance around the unit for proper ventilation. Avoid excessive smoke, dust, mechanical vibration, shock, or direct sunlight.

### **Routine care:**

Wipe the unit with a soft cloth. Do not use benzine, thinner, or any abrasive powder. When you leave the unit unused for a long period of time, disconnect the power cord from the outlet.

### **If you have any problems:**

Consult an authorized Panasonic Factory Service Center.

### **CAUTION:**

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

No responsibility will be taken by our company with respect to consequences resulting from the use, damage or both of the camera.
---

## **Video Recording Notice**

PLEASE NOTE that under certain circumstances, video recording may be PROHIBITED by law. This device should be used only in compliance with all applicable federal, state and local statutes.

## 1.1.2 Security Cautions

When using this product, take appropriate measures to avoid the following security breaches.

- Leaks of private information via this product
- Illegal use of this product by a third party
- Interference or suspension of the use of this product by a third party

Take the following measures to avoid security breaches:

- To prevent illegal access, keep the update firmware (If you do not have the latest version of firmware, this can lead to blocked access or information leaks).
- You are responsible for the security settings, such as user name and password, to access this product. This information should not be made available to any third parties outside the user group.
- Mount the camera where the camera will not be stolen.
- You are responsible for this product's user information, such as videos, still images and internet contents etc. This information should not be made available to any third parties outside the user group.
- When sending this product to be repaired with a company not related to Panasonic, make back-up copies of files, if necessary, and reset this product to factory default.
- When transferring this product to another party, make back-up copies of files, if necessary, and reset this product to factory default.
- When disposing of this product, reset this product to factory default, or erase information by means of electrical deletion or physical dismantlement.

**Panasonic Communications Co., Ltd.**





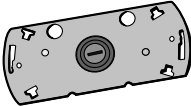
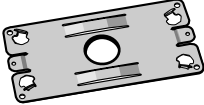


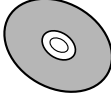
## 1.1.3 User Name and Password Protection

**The use of a unique User Name and secret Password is an important tool that will help limit unauthorized individuals from accessing the camera. If you choose to disable this tool, and choose not to limit access by use of a User Name and Password, this may result in access to the camera by unauthorized individuals. (see page 71 of the Operating Instructions in the Setup CD-ROM)**



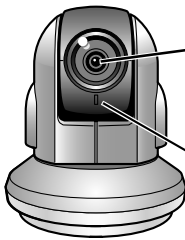
## 1.2 Included Items

The following items are included in the Network Camera box. Additional pieces can be ordered by calling **1-800-332-5368**.

<p><b>Main Unit</b>—1 pc.</p> 	<p><b>AC Adaptor</b>—1 pc. Order No. PSLP1242Y Length: 3 m (10 ft.)</p> 	<p><b>AC Cord</b>—1 pc. Order No. PSJA1069Z Length: 1.8 m (6 ft.)</p> 
<p><b>Ceiling Mounting Cover</b>—1 pc. Order No. PSKL1023Z1</p> 	<p><b>Ceiling Plate A</b>—1 pc. Order No. PSZMHCM381A</p> 	<p><b>Ceiling Plate B</b>—1 pc. Order No. PSMD1045Y</p> 
<p><b>Screws A</b>—2 pcs. Order No. XYN3+J6FJ</p> 	<p><b>Screws B</b>—4 pcs. Order No. XTB4+20AFJ</p> 	<p><b>Setup CD-ROM</b>—1 pc. Order No. PSQX3620ZCD</p> 
<p><b>Installation/Troubleshooting (This Manual)</b>—1 pc.</p>		

## 1.3 Camera Feature Locations

### 1.3.1 Front View



**Auto Focus/Zoom Lens**

Wide: 5 mm (0.2 inches)—Infinity

Tele: 1 m (39.4 inches)—Infinity

**Indicator**

The indicator color shows camera status.

### Indicator Display

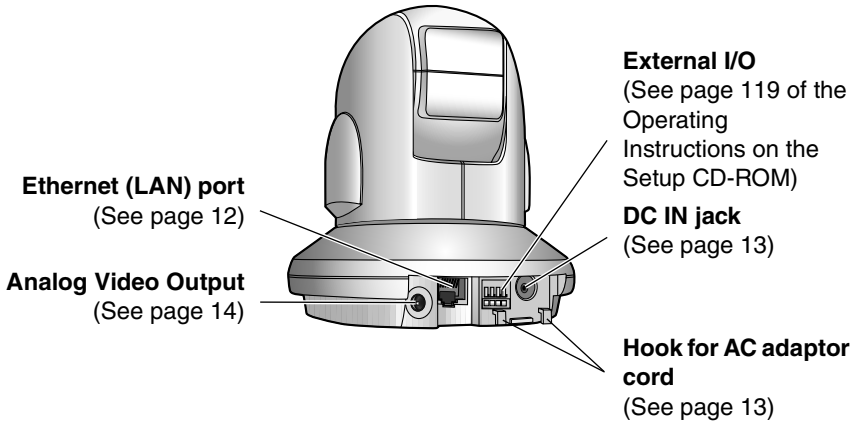
Power on	Not on the LAN	Orange blinking
	On the LAN	Orange blinking → Green blinking → Green
Normal Operation* <sup>1</sup>		Green
Automatic Setup	Setting	Green blinking
	Finished setting	Green blinking → Green
Using DHCP	Getting IP address* <sup>2</sup>	Green blinking
	Got IP address	Green
Updating Firmware		Orange blinking
Pressing FACTORY DEFAULT RESET button		Orange blinking → Turning off (The camera restarts after that.)
UPnP™ Failure		Orange blinking (About a 2-second interval)
Internal Failure		Red blinking* <sup>3</sup>

\*<sup>1</sup> The indicator turns orange if the camera is not connected to the LAN.

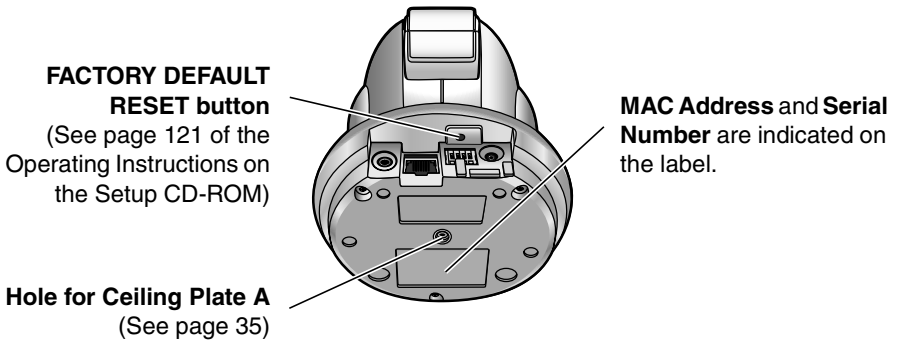
\*<sup>2</sup> The indicator blinks orange if the camera is not connected to the LAN.

\*<sup>3</sup> See page 40.

### 1.3.2 Rear View



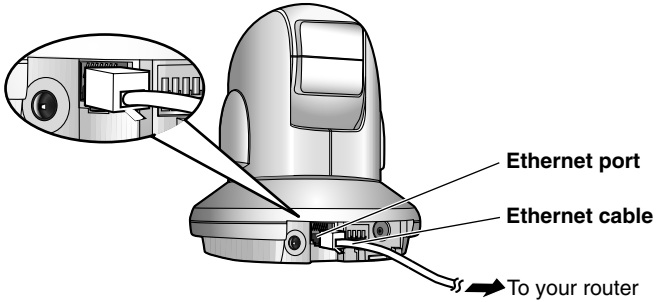
### 1.3.3 Bottom View



## 1.4 Connecting the Camera to Your Router

Connect the camera to your router with an Ethernet cable to set up the camera.

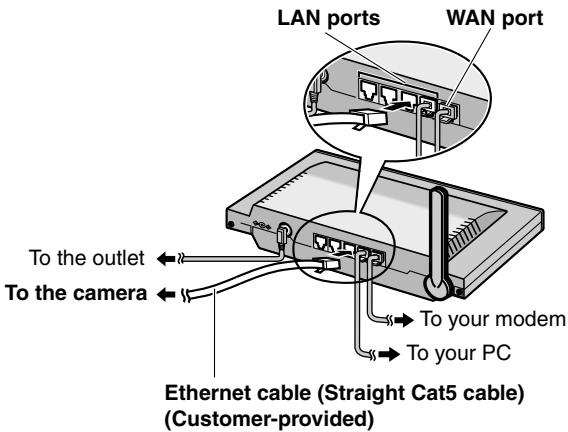
1. Connect the Ethernet cable (customer-provided) to the camera.



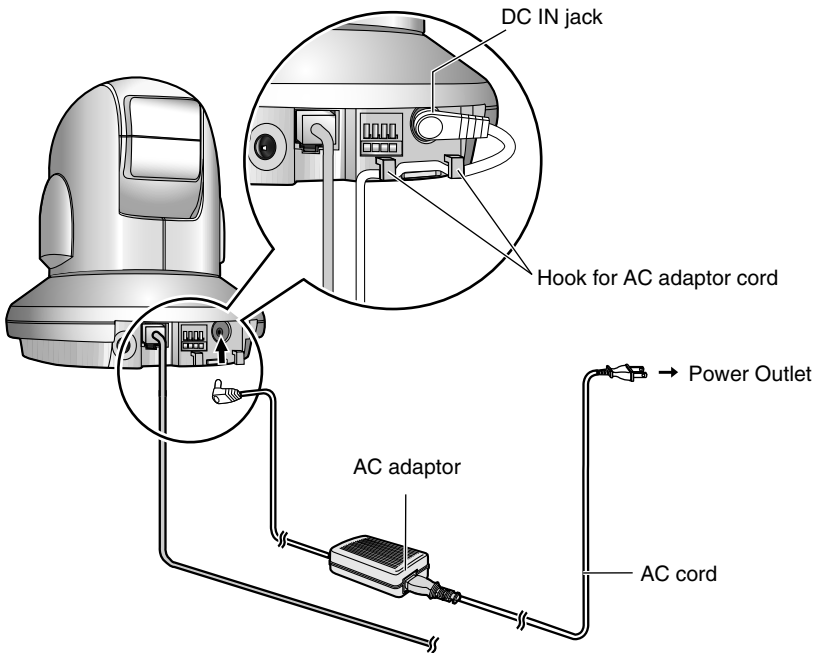
### **Note**

These instructions assume your PC is already connected to the Internet and your network includes a router.

2. Connect the Ethernet cable to your router.

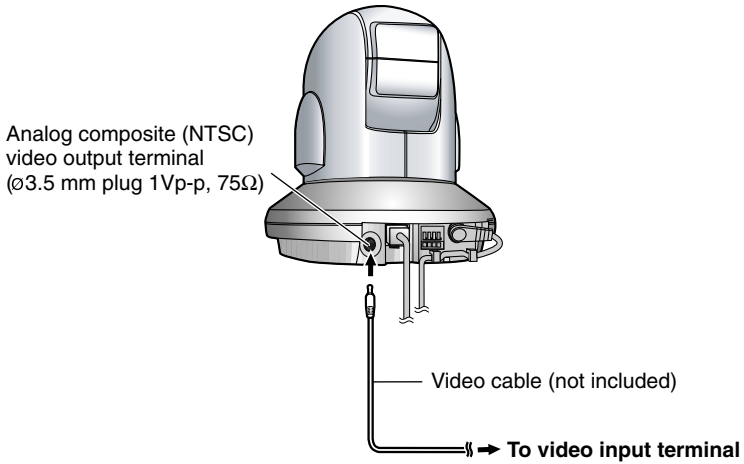


3. Connect the AC adaptor cord to the DC In jack, and plug the AC cord into the outlet.
  - The AC cord is used as the main disconnect device, ensure that the socket-outlet is located/installed near the equipment and is easily accessible.
  - Use only specified Panasonic AC adaptor PSLP1242 (Order No. PSLP1242Y).
  - If the indicator does not light green, see page 39.
  - A noise can be heard during pan/tilt operation. This is normal.
4. Hook the AC adaptor cord to the Hook for AC adaptor cord.



## 1.5 Connecting the Camera to Your TV

You can view camera images on a TV or record them using a video recording device (VCR, DVD recorder, etc.).



### **Note**

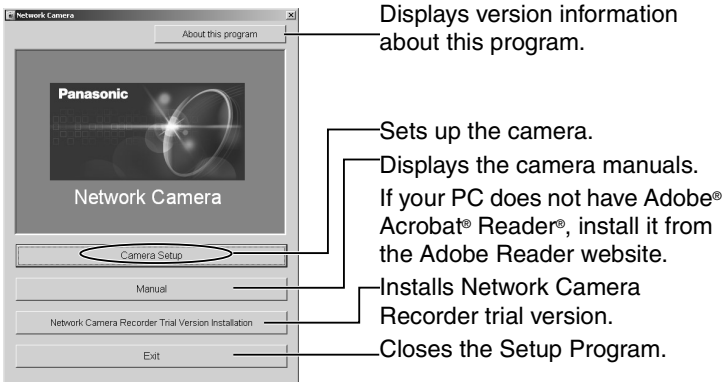
- When the camera is in color night view mode, images may not be displayed correctly on the TV.

## 1.6 Setting up the Camera to View on the LAN

Setup CD-ROM allows you to easily set up the camera.

### Note

- To avoid any possible problems, temporarily disable any firewall or antivirus software.
  - This procedure explains installation of the camera on the same network that your PC is part of.
  - Before proceeding, close your web browser.
  - See page 132 of the Operating Instructions on the Setup CD-ROM for details.
1. Insert the Setup CD-ROM into the CD-ROM drive of the PC.
    - The window is automatically displayed.  
(If the Network Camera Setup window is not displayed automatically, double-click "Setup.exe" file on the Setup CD-ROM.)
  2. Click [Camera Setup].



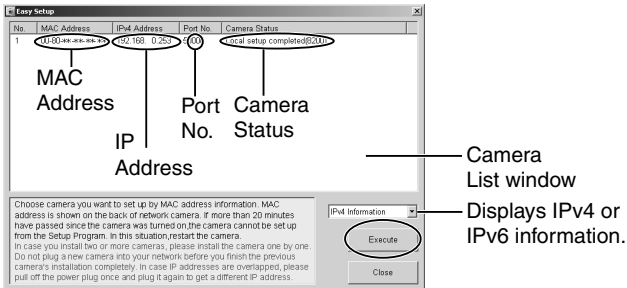
- When the following dialog is displayed, click [Unblock].



[For assistance, please call: 1-800-272-7033]

**3. Select the camera to set up and click [Execute].**

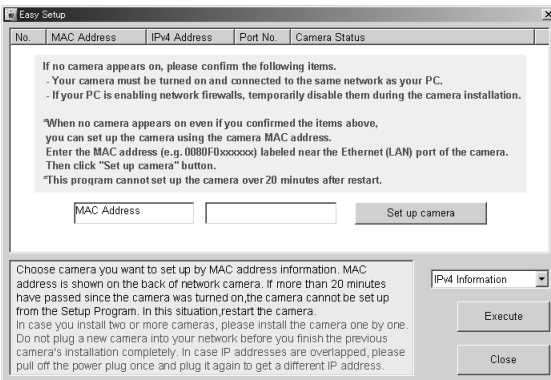
- This program searches for the cameras that are connected to the router and displays the MAC Addresses, IP addresses and Port Numbers.



- The MAC Address (see page 11) on the bottom of the camera shows which camera you select on the Camera List window.

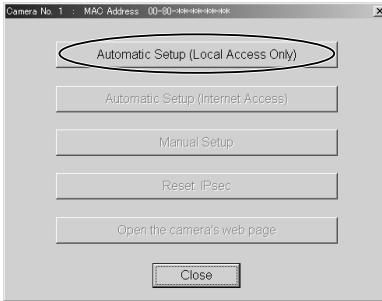
**Note**

- If more than 20 minutes have passed since the camera was turned on, the camera cannot be set up from the Setup Program. In this situation, disconnect the AC cord from the outlet, and reconnect it again.
- The Setup Program may not list any cameras due to your firewall or antivirus software settings on your PC. If you cannot disable your firewall or antivirus software, you can set up the camera entering the camera MAC address on the following window. The camera's MAC address can be found on the label affixed to each camera. See page 27 for details.





#### 4. Click [Automatic Setup (Local Access Only)].



- For the first time installation or after pressing the FACTORY DEFAULT RESET button, only [Automatic Setup (Local Access Only)] can be selected. To set up the camera with Static or DHCP settings, after performing the [Automatic Setup (Local Access Only)], run the Setup Program again and select [Manual Setup].

#### 5. Enter the user name and password you wish to use, and click [Save].

**Security: Administrator**

New User Name (6 to 15 characters)

New Password (6 to 15 characters)

Retype new password

Note : (1) You'll be asked for User name and password to open camera's web page.  
 Please keep your User Name and Password securely.  
 (2) Alphabet and number only. [Space], [ ], [ & ], [ . ], [ < ] or [ > ] are not allowed.  
 (3) A capital letter/small letter is distinguished.  
 (4) User Name and Password must be different from each other.  
 (5) It is strongly recommended to change password regularly for security.

#### 6. Enter the name and password that were entered above, and click [OK].

**Enter Network Password**

Please type your user name and password.

Site: \*\*\*\*.\*\*\*\*.\*\*\*\*.\*\*\*\*

Realm: \*\*\*\*

User Name

Password

Save this password in your password list

7. When the Single Camera page is displayed, the setup is completed.
- When Security Warning window is displayed, click [Yes]. (See page 32)
  - See page 33 for Security Warning window when using Microsoft Windows XP Service Pack 2.



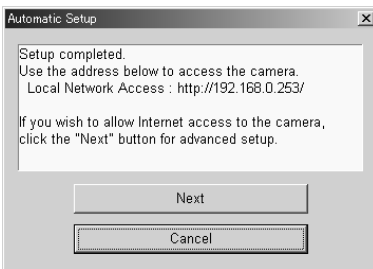
**Note**

To insure that the most current image is displayed, Internet Explorer should be configured as follows. This will not have any negative result on normal use.

1. While viewing any website, Click [Tools]→[Internet Options].
2. In the section "Temporary Internet Files", click [Settings] and check [Every visit to the page].

**To enable Internet access to the camera**

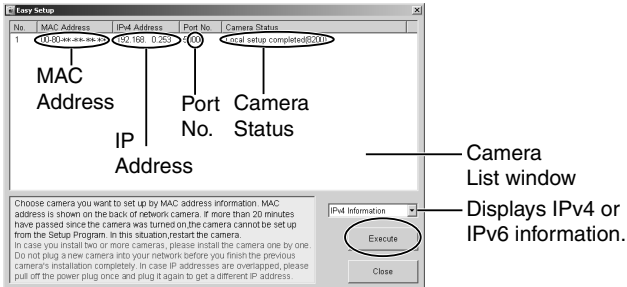
Click [Next] to set up the Internet access to the camera and go to step 3 on page 20.



- If you do not allow the Internet access, click [Cancel], and go to page 30 to confirm the camera image.

## 1.7 Setting up Internet Access to the Camera

1. Display the Camera List window (see page 15).
2. Select the camera to set up and click [Execute].
  - This program searches for the cameras that are connected to the router and displays the MAC Addresses, IP addresses and Port Numbers.

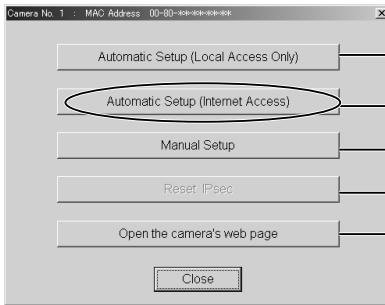


- The MAC Address (see page 11) on the bottom of the camera shows which camera you select on the Camera List window.

### Note

If more than 20 minutes have passed since the camera was turned on, the camera cannot be set up from the Setup Program. In this situation, restart the camera.

3. Click [Automatic Setup (Internet Access)].



- Sets up the camera to view on the LAN.
- Sets up the Internet access to the camera.
- Manually sets up the camera.
- Disables IPsec. If disabled, the button is displayed gray.
- Displays the Setup page (see page 37 of the Operating Instructions on the Setup CD-ROM).

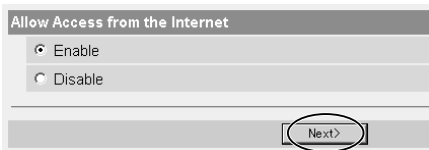
**Note**

In order for Internet access to be properly enabled, your routers UPnP™ feature should be enabled. Most router manufacturers disable this feature. See <http://panasonic.co.jp/pcc/products/en/netwkcaml/> for more information.

4. Enter the user name and password that were set, and click [OK].

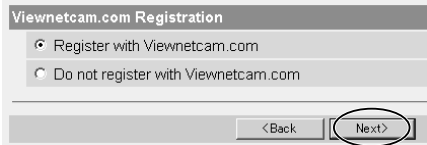


5. If your router supports UPnP™, select [Enable], otherwise select [Disable]. Then click [Next].



- If you select [Disable], skip to step 9.

6. To register with the "Viewnetcam.com FREE DDNS service", check [Register with Viewnetcam.com] and click [Next].



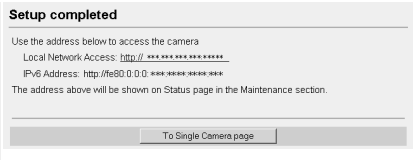
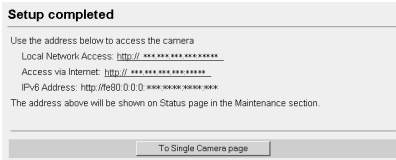
### Viewnetcam.com FREE DDNS service

See page 23 for Viewnetcam.com information. For detailed information, access at <http://www.viewnetcam.com>.

- If you have multiple cameras, you can use Viewnetcam.com service registering it only for a camera.
  - If you select [Disable], skip to step 9.
7. The Enter Network Password window is displayed, and enter the user name and password that were set, and click [OK].
8. After a while, the "Viewnetcam.com FREE DDNS service" website is displayed. Follow the displayed instructions for registration.
- If the message "Failed to configure the router's Port Forwarding by UPnP" is displayed, your router may not support UPnP™ or UPnP™ is not enabled. Enable your router's UPnP™ or set Port Forwarding manually following the router's manual and try Automatic Setup again. For more information about setting up a router, refer to the Panasonic Network Camera support website at <http://panasonic.co.jp/pcc/products/en/netwcam/>.
  - If the message "Failed to register with Viewnetcam.com." is displayed, confirm that the router is connected to the Internet.

9. When "Setup complete" is displayed, and click [To Single Camera page].

- **When [Enable] was selected at step 5**
- **When [Disable] was selected at step 5**



- The port number must be specified at the end of camera URL.

**Using port 80:**

**http://(Cameraname).viewnetcam.com  
or http://IP Address**

**Using any other port:**

**http://(Cameraname).viewnetcam.com:Port Number  
or http://IP Address:Port Number**

10. When the Single Camera page is displayed, the setup is completed.



**Note**

- The banner is displayed only when Internet access is allowed on the camera.
- To insure that the most current image is displayed, Internet Explorer should be configured as follows. This will not have any negative result on normal use.
  1. While viewing any website, Click [Tools]→[Internet Options].
  2. In the section "Temporary Internet Files", click [Settings] and check [Every visit to the page].

## 1.8 Viewnetcam.com Service (IPv4/IPv6)

Viewnetcam.com is a free dynamic DNS (DDNS) service provided by Panasonic. It allows you to choose an easy-to-remember address (such as "bob.viewnetcam.com") that you can use to view images from your camera over the Internet. This service is compatible with both IPv4 and IPv6 addresses.

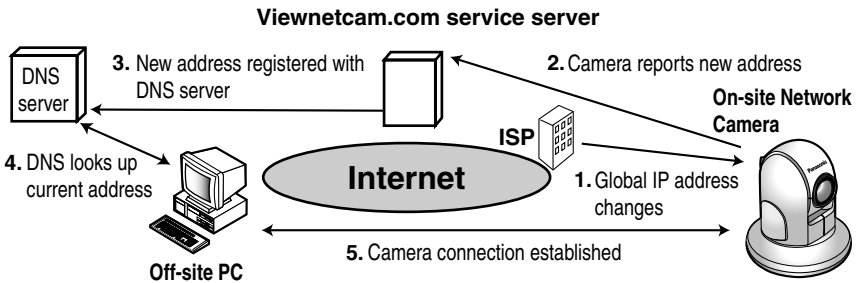
### What is the advantage of Viewnetcam.com service?

In order to view camera images over the Internet, you need to know your camera's global IP address. However, many Internet Service Providers (ISPs) assign their customers a "dynamic" IP address that changes monthly, weekly, or each time they log on. Unless you have been assigned a static IP address (an IP address that does not change periodically) by your ISP, you may find it difficult to access your camera over the Internet because your IP address changes periodically.

Viewnetcam.com service allows you to access your camera even if your assigned global IP address changes.

See <http://www.viewnetcam.com> for details.

### How the Viewnetcam.com service works



1. Your ISP assigns a global IP address to your Internet access account that changes periodically. This is the address needed to access the camera over the Internet.
2. When your ISP assigned global IP address changes, your camera automatically notifies the Viewnetcam.com service server of the new address.
3. The Viewnetcam.com server contacts a Domain Name Server (DNS) and registers your new global IP address to your chosen Viewnetcam.com address (such as "bob.viewnetcam.com").
4. When you enter your Viewnetcam.com address in your web browser while away from home or the office, the DNS server looks up the global IP address assigned to your Viewnetcam.com address.
5. The DNS server finds your current global IP address and allows you to connect to your camera.

**Note**

- Ask your ISP about what type of IP address you are using.
- Some ISPs assign you a local IP address. In this case, you cannot use the Viewnetcam.com service. Ask you ISP about what type of IP address you are using.
- If the camera is using a port number other than 80, the port number must be specified at the end of the Viewnetcam URL. For example:  
Using port 80: **http://(Cameraname).viewnetcam.com**  
Using any other port: **http://(Cameraname).viewnetcam.com:Port Number**



## 1.9 Connecting the Camera to a Router Supporting UPnP™ (IPv4 Only)

To allow access from the Internet with a router supporting UPnP™, follow the procedures shown on page 19.

### **Note**

- In some routers, the UPnP™ feature is disabled by default. Enable your router's UPnP™ feature following the router manual before you set up the camera. See the Panasonic Network Camera support website at <http://panasonic.co.jp/pcc/products/en/netwcam/> for details.
- If the maximum idle time is set in PPPoE or PPTP connection with your ISP, disable it on the router. See the router manual for details.

## 1.10 Connecting the Camera to a Router Not Supporting UPnP™ (IPv4 Only)

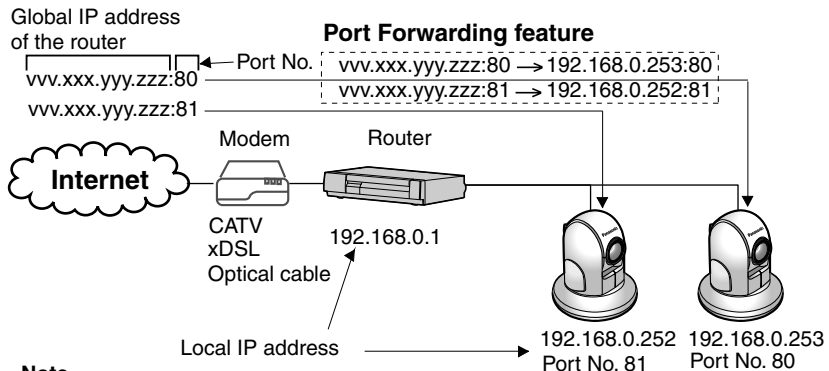
To allow access from the Internet with a router not supporting UPnP™, follow the procedures below.

1. Select [Static] on the Network (IPv4) page.
  - (1) Access the camera (see page 11 of the Operating Instructions on the Setup CD-ROM).
  - (2) Click [Setup] tab at the top of the page.
  - (3) Select [Static] on the Network page.
    - The Static IP Address Configuration page is displayed. Make a note of the IP address and port number, since they are required to enable port forwarding on the router.
  - (4) Click [Save] without changing the settings.
  - (5) Click [Restart].
  
2. Enable port forwarding on the router.
 

Using the IP address and port number note written on step 1-(3), enable port forwarding on the router. See the router manual for how to enable port forwarding.
  
3. Register with the Viewnetcam.com service.

### Port Forwarding feature<sup>\*1</sup> (IPv4 Only)

The port forwarding feature is required to allow access from the Internet with a router not supporting UPnP™. It exchanges a local IP address to a global one. Each camera must be assigned a unique port number.



**Note**

The IP addresses shown above may differ from those offered on your home network.

\*1 "Port forwarding" may be called "Address translation", "Static IP Masquerade", "Virtual server" or "Port mapping" in other products.

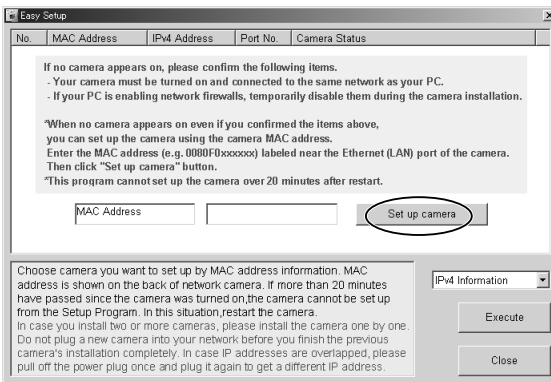
## 1.11 Setting up the Camera Using the MAC Address on the Setup Program

The Setup Program may not list any cameras due to your firewall or antivirus software settings on your PC. If you cannot disable your firewall or antivirus software, you can set up the camera using the camera MAC address as shown below.

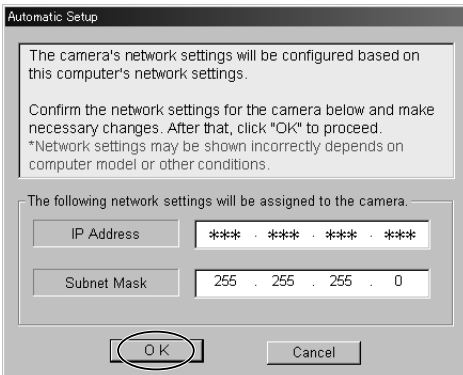
1. Enter the camera MAC address in the data field, and click [Set up camera].

### Note

The camera's MAC address can be found on the sticker affixed to the bottom of the camera (see page 11).



2. After confirming the network settings, click [OK].



- After about a minute, the Security: Administrator page is displayed.

**3. Enter the user name and password, and click [Save].**

The screenshot shows a window titled "Security: Administrator". It contains three input fields: "New User Name (6 to 15 characters)", "New Password (6 to 15 characters)", and "Retype new password". Below these fields is a "Note" section with five numbered instructions: (1) You'll be asked for User name and password to open camera's web page. Please keep your User Name and Password securely. (2) Alphabet and number only. [Space],['],[&],[,],[<] or [>] are not allowed. (3) A capital letter/small letter is distinguished. (4) User Name and Password must be different from each other. (5) It is strongly recommended to change password regularly for security. At the bottom of the window is a "Save" button, which is circled in red.

**4. The Enter Network Password window is displayed. Enter the user name and password that were set, and click [OK].**

The screenshot shows a dialog box titled "Enter Network Password". It contains a key icon and the text "Please type your user name and password." Below this are labels for "Site:", "Realm:", "User Name", and "Password". The "Site:" and "Realm:" labels are followed by asterisks representing masked input. The "User Name" and "Password" labels are followed by text input fields. At the bottom, there is a checkbox labeled "Save this password in your password list" and two buttons: "OK" and "Cancel". The "OK" button is circled in red.

5. When the Single Camera page is displayed, the setup is completed.
- If Security Warning window is displayed, click [Yes] (see page 32).
  - See page 33 for Security Warning window when using Microsoft Windows XP Service Pack 2.



### Note

- See page 15 of the Operating Instructions on the Setup CD-ROM for the Single Camera page.
- If you enable the Internet access to the camera, follow the procedures below.
  - **When you are using a router supporting UPnP™**
    1. Enable the Auto Port Forwarding feature on the UPnP page (see page 59 of the Operating Instructions on the Setup CD-ROM).
    2. Register with the Viewnetcam.com service on the Viewnetcam.com page (see page 61 of the Operating Instructions on the Setup CD-ROM).
    3. Confirm the Internet access to the camera (see page 30). If you cannot access the camera, see page 45.
  - **When you are using a router not supporting UPnP™**  
Follow the procedures shown on page 26.

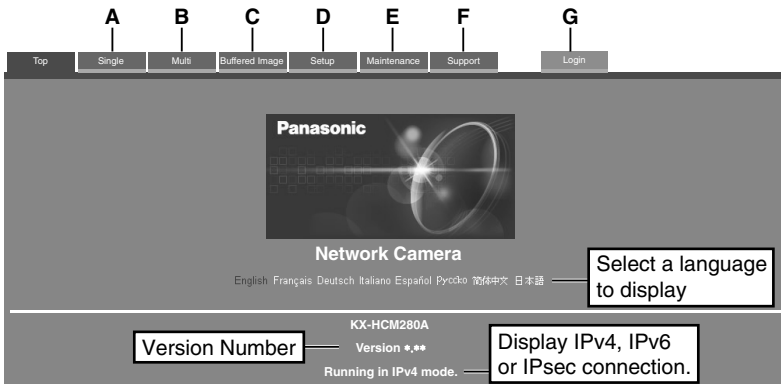
## 1.12 Confirming the Camera Image

1. Start up the web browser on your PC.
2. Enter "**http://IPv4 Address (or URL):Port Number**" on the address bar, and press [Enter] on the keyboard.
  - When port number is 80 (default), you do not need to enter port number. See page 42 of the Operating Instructions on the Setup CD-ROM for details about port number.
  - For IPv6 connection, see page 13 and page 14 of the Operating Instructions on the Setup CD-ROM and prepare the requirements. Enter the "**http://(IPv6-registered URL):Port Number**" on the address bar.
  - If the camera image is not displayed, see page 44.
3. The Enter Network Password window is displayed, and enter the user name and password that were set, and click [OK].

### Note

When [Permit access from guest users] is set on the Security: Administrator page, authentication window will not be displayed.

4. Click the following tabs to display each page.



- |   |   |
|---|---|
| <p><b>A</b> To Single Camera page<br/>(page 15 of Operating Instructions)</p> <p><b>C</b> To Buffered Image page<br/>(page 32 of Operating Instructions)</p> <p><b>E</b> To Maintenance page<br/>(page 108 of Operating Instructions)</p> <p><b>G</b> To log in to the camera<br/>(page 74 of Operating Instructions)</p> | <p><b>B</b> To Multi-Camera page<br/>(page 30 of Operating Instructions)</p> <p><b>D</b> To Setup page<br/>(page 37 of Operating Instructions)</p> <p><b>F</b> To Support page<br/>(page 117 of Operating Instructions)</p> |
|---|---|

**Note**

- When users other than an administrator are accessing the camera, [Setup] and [Maintenance] tab will not be displayed. Additionally, When [Do not permit access from guest users] is set on the Security: Administrator page, [Login] tab will not be displayed.
  - If [View Multi-Camera page] or [View Buffered Image page] is not permitted on the General User page, [Multi-Camera] or [Buffered Image] tab will not be displayed.
5. Click [Single] tab on the above.
- When Security Warning window is displayed, click [Yes]. (See page 32)
  - See page 33 for Security Warning window when using Microsoft Windows XP Service Pack 2.

The screenshot shows the Panasonic Network Camera web interface. On the left is a control panel with buttons for Pan/Tilt, Scan, Zoom, Focus, AF, Preset (1-8), Program (1-8), Alarm, Brightness, Output (Open/Short), Refresh Interval (Motion), Resolution (640x480, 800x240), Image Quality (Favor Clarity, Standard, Favor Motion), and a banner for 'Panasonic Network Camera'. The main area shows a camera image of a dog on a rug. A text box below the image says 'Please click here when gray color screen displayed' and 'Running in IPv4 mode.' Callouts point to the 'Capture Image Button', 'Operation Bar', 'Refresh Interval', 'Click to Center', 'Camera Image', and 'The banner is displayed'.

**Capture Image Button**  
(see page 20 of the Operating Instructions)

**Operation Bar**  
(see page 21 of the Operating Instructions)

**Refresh Interval**  
(see page 21 of the Operating Instructions)

**Click to Center**  
(see page 19 of the Operating Instructions)

**Camera Image**

**The banner is displayed.**  
(see page 18 of the Operating Instructions)

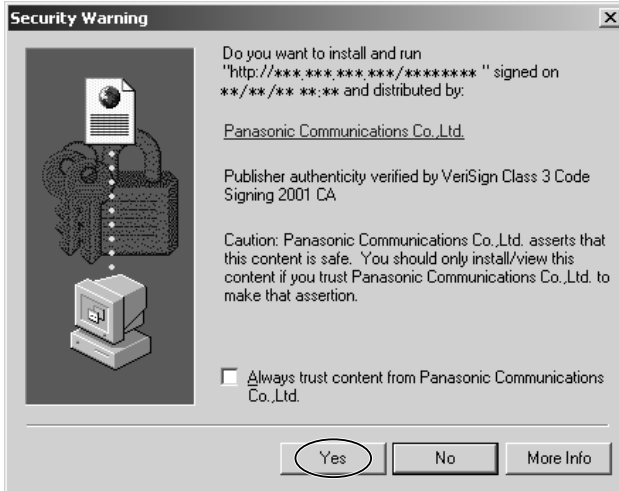
**Note**

For IPv6 connection, see page 13 of the Operating Instructions on the Setup CD-ROM.

6. Close the web browser.

## Security Warning window

To view a video (Motion JPEG), ActiveX® Controls must be installed. When trying to display a video for the first time, Security Warning window will be displayed. When using Windows 2000 or Windows XP, log in as an administrator to install it.



## If you cannot install ActiveX Controls or you cannot see the video in the Internet Explorer

- Click [Tools]→[Internet Options]→[Security] tab and click [Custom level] on the web browser.
  - (1) Check "Prompt" in "Download signed ActiveX Controls".
  - (2) Check "Enable" in "Run ActiveX Controls and plug-ins".
- ActiveX Controls can be installed from the file on the Setup CD-ROM.
  - (1) Restart the PC.
  - (2) Confirm that Internet Explorer is closed.
  - (3) Double-click"ocx\ActiveXInst.exe" on the Setup CD-ROM.

### Note

- Video may not be displayed quickly. Wait for a while.
- If you use a proxy server, set the web browser not to access the proxy server (see page 136 of the Operating Instructions on the Setup CD-ROM).
- In some corporate network environments a firewall may be used for security purposes. It is possible that this may prevent motion video from being displayed. In this situation we suggest:
  - Contact your network administrator.
  - Try using regularly refreshed images.

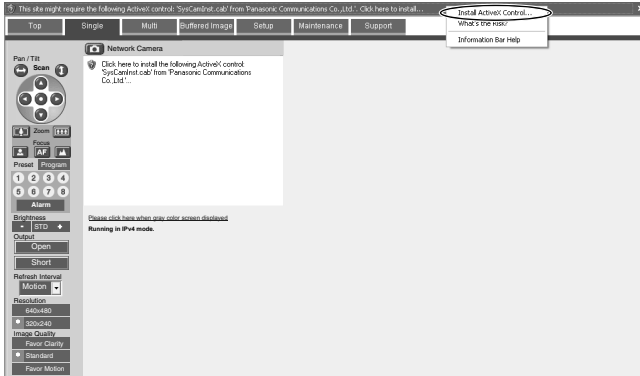


## Security Warning window on Microsoft Windows XP Service Pack 2

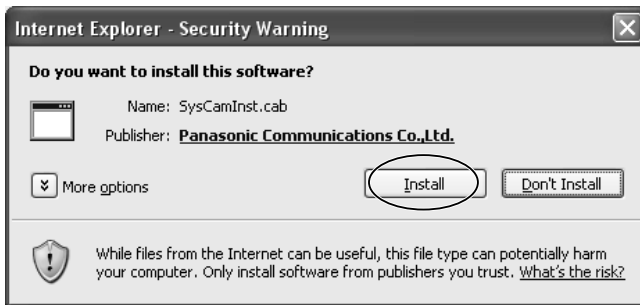
To view a video (Motion JPEG), ActiveX Controls must be installed.

Follow the steps shown below to install ActiveX Controls.

1. Click the warning displayed above the tabs, and click [Install ActiveX Control...].



2. Click [Install].



## 1.13 Mounting

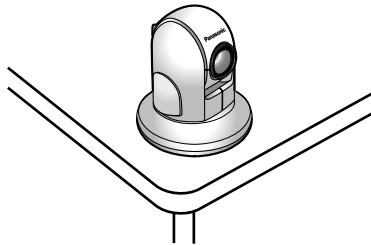
Two ways of mounting are shown in this section. MAC Address and Serial Number are indicated on the bottom of the camera. Record both of them for future reference. They are indispensable for setting network parameters after mounting the camera and for future customer servicing

### **Note**

- Mounting and cabling instructions described in this Operating Instructions follow generally accepted guidelines suitable for residential installations. In some areas, commercial and industrial installations are regulated by local or state ordinances. For such installations, contact your local building department or building inspector for more details.
- The camera is intended for indoor use only. Prolonged exposure to direct sunlight or halogen light may damage CCD.
- The camera is available between  $\pm 15^\circ$  based on level line for mounting both on the table and on the ceiling.

### 1.13.1 Mounting on the Table

Mount the camera at an even place where vibrations etc. are few.

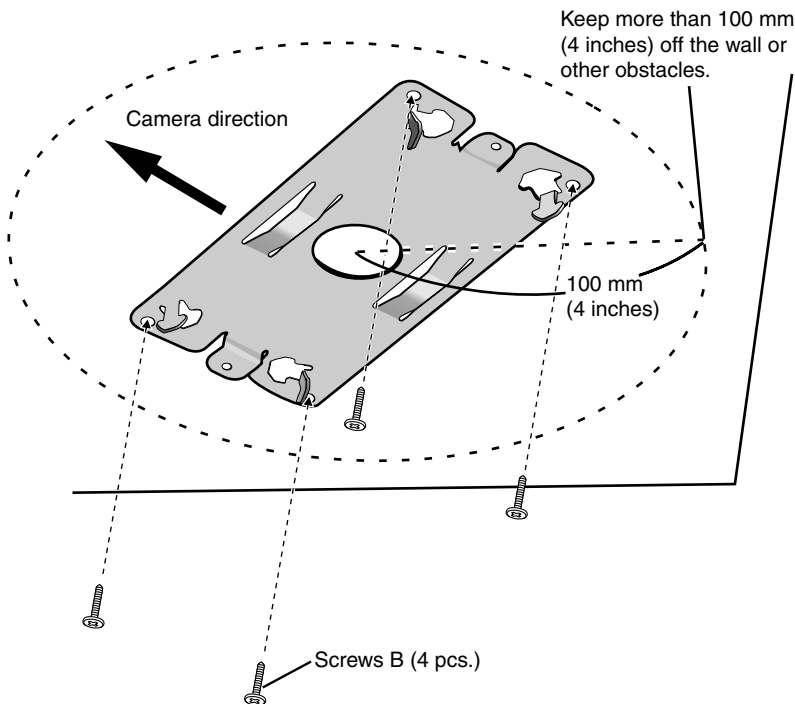


## 1.13.2 Mounting on the Ceiling

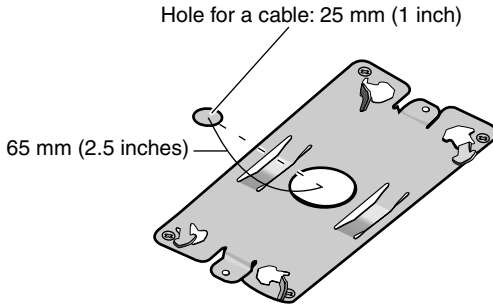
Mount the camera at an even place where vibrations etc. are few. Set the Tilt range to **[On the ceiling]** on Camera Setup window (see page 65 of the Operating Instructions on the Setup CD-ROM). Two ways of wiring can be considered; wiring through a hole made in the ceiling or wiring without making a hole for a cable in the ceiling. Select either one of the two.

### Wiring through a hole made in the ceiling

1. Fix the Ceiling Plate B on the ceiling with Screws B.
  - Fix the Ceiling Plate B more than 100 mm (4 inches) off the wall or other obstacles from its center.
  - Make sure the camera is firmly mounted on a beam of wood etc. When there is no beam, apply a board on the other side of the ceiling to make sure the camera does not drop.

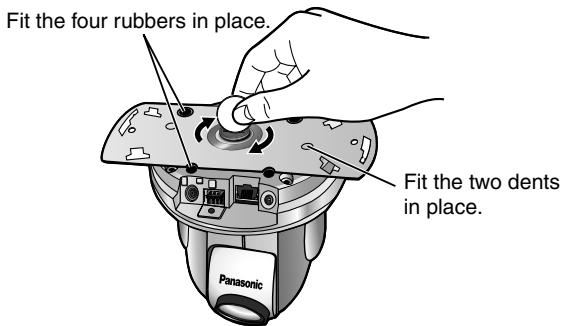


**2. Make a hole for a cable.**

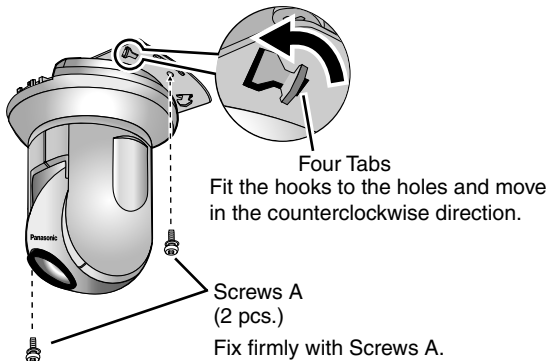


**3. Fix the rubbers and dents on the camera to the Ceiling Plate A and fix them firmly**

- Tighten the plate using a coin or similar object until the camera is secure.



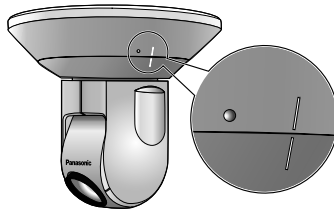
**4. Fix the Ceiling Plate A to the Ceiling Plate B and fix them firmly with Screws A.**



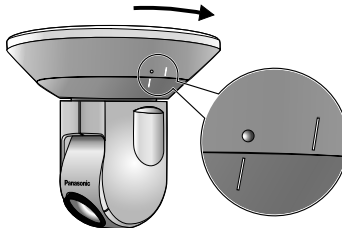
**Note**

Install the camera so that the connecting part comes to the front.

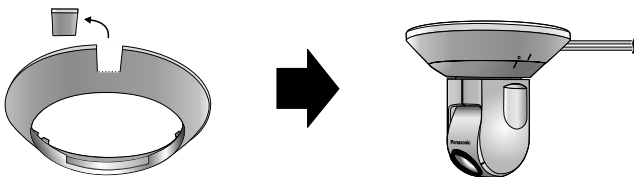
5. Connect all necessary cables (AC adaptor cord, Ethernet cable, video cable, etc.) and fix the Ceiling Mounting Cover. Adjust the "I" of the main unit to the "I" of the Ceiling Mounting Cover.
  - Be careful not to nip the cable etc.



6. Move the Ceiling Mounting Cover in the clockwise direction until the "•" of it fits to the "I" of the main unit.
  - When removing the Ceiling Mounting Cover, move it in the counterclockwise direction. Adjust both "I" and let down the main unit.

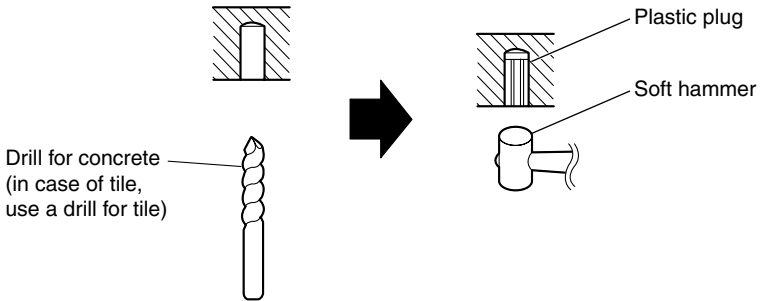
**Wiring without making a hole for a cable in the ceiling**

- Follow the steps 1), 3), 4), 5) and 6). Making a hole is not necessary.
- Remove the tab of Ceiling Mounting Cover and wire through the notch.



## A Ceiling Mounting example (making holes in mortar or concrete ceilings)

1. Fit the Ceiling Plate B to the mounting position and put marks.
2. Make holes at the marks and put plastic plugs (customer provided) into them.



### Note

When drilling into mortar, be careful of pieces of mortar which may become loose and fall.

3. Mount the camera.

## 2 Troubleshooting

The Panasonic Network Camera support website "<http://panasonic.co.jp/pcc/products/en/netwkcama/>" includes various technical information other than the contents in this troubleshooting section. Access it if problems occur.

### 2.1 Indicator Error Codes

Problem	Cause and Remedy
Indicator lights or blinks orange.	<ul style="list-style-type: none"> <li>• Ethernet cable is not connected properly. → Connect the Ethernet cable properly.</li> <li>• PC, Ethernet hub or router is not working. → Confirm that PC, Ethernet hub and router is working.</li> </ul>
Indicator continues blinking orange.	<ul style="list-style-type: none"> <li>• Indicator blinks orange when updating firmware. → If you access the camera on the web browser, Update Firmware page will be displayed. Update the firmware following the procedure (see page 111 of the Operating Instructions on the Setup CD-ROM). If you fail to update the firmware, see page 55.</li> </ul>
Indicator continues blinking orange (2-second interval).	<ul style="list-style-type: none"> <li>• The router on your network is turned off. → Turn the router on, and wait for a while until the ADSL line is connected.</li> <li>• An error occurs in UPnP™ port forwarding. → Set up the camera again in [Automatic Setup] by the Setup Program following the procedures shown on page 19.</li> </ul>
Indicator continues blinking green.	<ul style="list-style-type: none"> <li>• Automatic setup is not complete. → Complete the setup following this Installation/Troubleshooting.</li> <li>• The camera did not get its IP address from the DHCP server. → When setting [Automatic Setup] or [DHCP Setup], the camera may not get its IP address due to network failures. Ask your ISP or network administrator for more information.</li> </ul>

<b>Problem</b>	<b>Cause and Remedy</b>
Indicator does not light up.	<ul style="list-style-type: none"> <li>• Indicator display is disabled. → Check if the indicator control is disabled (see page 107 of the Operating Instructions on the Setup CD-ROM).</li> <li>• Confirm that the standard AC adaptor PSLP1242 (Order No. PSLP1242Y) is being used.</li> </ul>
Indicator continues blinking red.	<ul style="list-style-type: none"> <li>• The camera may be malfunctioning. → If you cannot access the camera, the camera may be malfunctioning. Call our customer call center.</li> </ul>



## 2.2 Camera Setup Difficulties

### Note

If you are experiencing any problems, it is recommended that you temporarily disable all firewall, pop-up killer, and virus detection software. Once the problem is identified and corrected, you can restart the Setup Program.

Problem	Cause and Remedy
Automatic Setup fails using Setup Program.	<ul style="list-style-type: none"> <li>• More than 20 minutes have passed, after turning the camera on. → Disconnect the plug of the AC cord from the outlet, and reconnect it again. Set up the camera again.</li> <li>• Multiple camera IP addresses are overlapping. → If you install multiple cameras, turn the camera on one by one.</li> </ul>
Viewnetcam.com registration fails using Setup Program.	<ul style="list-style-type: none"> <li>• Your PC is not connected to the Internet through the router. → Configure the router for the Internet connection from your PC following the router manual. And register with the Viewnetcam.com service.</li> <li>• If you do not receive an E-mail from the Viewnetcam.com service, your registered E-mail address may be incorrect. → Register your correct E-mail address again at the Viewnetcam.com website at <a href="http://www.viewnetcam.com">http://www.viewnetcam.com</a>.</li> </ul>

Problem	Cause and Remedy
<p>Setup Program does not list any cameras.</p>	<ul style="list-style-type: none"> <li>• Your firewall or antivirus software is blocking the connection.                             <ul style="list-style-type: none"> <li>→ To avoid any possible problems, temporarily disable any firewall or antivirus software, and set up the camera again. If you cannot disable your firewall or antivirus software, you can set up the camera using the MAC address (see page 27).</li> </ul> </li> <li>• The camera is connected over a different network.                             <ul style="list-style-type: none"> <li>→ Set up the camera from a PC under the same router.</li> </ul> </li> <li>• Confirm that an IP address is assigned to your PC.                             <ul style="list-style-type: none"> <li>→ If the IP address is not assigned to your PC, assign it to your PC (see page 131 of the Operating Instructions on the Setup CD-ROM).</li> </ul> </li> </ul>
<p>Setup Program fails to complete successfully.</p>	<ul style="list-style-type: none"> <li>• Network problems may occur during setup.                             <ul style="list-style-type: none"> <li>→ Confirm that your network is working. Disconnect the plug of the AC cord from the outlet, and reconnect it again. Then set up the camera again.</li> </ul> </li> <li>• More than 20 minutes have passed, after turning the camera on.                             <ul style="list-style-type: none"> <li>→ Disconnect the plug of the AC cord from the outlet, and reconnect it again. Set up the camera again.</li> </ul> </li> </ul>
<p>UPnP™ port forwarding setup fails.</p>	<ul style="list-style-type: none"> <li>• UPnP™ is disabled on the router.                             <ul style="list-style-type: none"> <li>→ Enable UPnP™ on the router following the router manual.</li> </ul> </li> <li>• The camera is turned on before the router is turned on.                             <ul style="list-style-type: none"> <li>→ Turn the router on first, and then turn the camera on.</li> </ul> </li> <li>• The default gateway is not set, or the settings are wrong.                             <ul style="list-style-type: none"> <li>→ Set the default gateway correctly (see page 40 of the Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• The router does not support UPnP™.                             <ul style="list-style-type: none"> <li>→ Enable port forwarding on your router following the router manual.</li> </ul> </li> </ul>

<b>Problem</b>	<b>Cause and Remedy</b>
The camera IP address and port number have been forgotten.	<ul style="list-style-type: none"> <li>• Clicking [Camera Setup] on the Setup Program displays the camera list. The camera list shows the MAC address labeled beside the Ethernet (LAN) port. The camera IP address and port number are shown next to the MAC address.</li> </ul>
The password has been forgotten.	<ul style="list-style-type: none"> <li>• Press the FACTORY DEFAULT RESET button to reset the camera to default. Set up the camera again.</li> </ul>
Error is displayed on the camera status by the Setup Program.	<ul style="list-style-type: none"> <li>• The Setup Program causes the error message. <ul style="list-style-type: none"> <li>→ Disconnect the plug of the AC cord from the outlet, and reconnect it again.</li> </ul> </li> </ul>

## 2.3 Camera Image/Page Display

Problem	Cause and Remedy																																															
<p>The Top page is not displayed.</p>	<ul style="list-style-type: none"> <li>• The camera IP address has changed.                             <ul style="list-style-type: none"> <li>→ Enter the new IP address in the address bar of the web browser.</li> </ul> </li> <li>• Wrong IP address class is assigned to the camera.                             <ul style="list-style-type: none"> <li>→ IP addresses of the PC and the camera must be in the same local IP address class. Set the IP address correctly (see page 131 of the Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• Router does not have a loopback feature.                             <ul style="list-style-type: none"> <li>→ Access the camera with the local network IP address.</li> </ul> </li> <li>• You entered IPv6 address in the Internet Explorer.                             <ul style="list-style-type: none"> <li>→ Internet Explorer does not support IPv6 address access. Use DDNS services like Viewnetcam.com service.</li> </ul> </li> <li>• The network is congested.                             <ul style="list-style-type: none"> <li>→ Pages may not be displayed immediately. Wait for a while.</li> </ul> </li> <li>• The web browser is accessing the proxy server.                             <ul style="list-style-type: none"> <li>→ Set the web browser to access the Internet directly (see page 136 of the Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• The connection type is wrong (see page 44 of the Operating Instructions on the Setup CD-ROM).                             <ul style="list-style-type: none"> <li>→ If the camera is not connected to the network in the [Auto Negotiation] setting, set up the camera and the router seeing the following table.</li> </ul> </li> </ul> <table border="1" data-bbox="338 1182 976 1401" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" data-bbox="338 1182 551 1214">Network Camera</th> <th data-bbox="551 1182 657 1214">Auto Negotiation</th> <th colspan="2" data-bbox="657 1182 817 1214">100Base-TX</th> <th colspan="2" data-bbox="817 1182 976 1214">10Base-TX</th> </tr> <tr> <th colspan="2" data-bbox="338 1214 551 1255">Router or hub</th> <th data-bbox="551 1214 657 1255"></th> <th data-bbox="657 1214 737 1255">Full Duplex</th> <th data-bbox="737 1214 817 1255">Half Duplex</th> <th data-bbox="817 1214 896 1255">Full Duplex</th> <th data-bbox="896 1214 976 1255">Half Duplex</th> </tr> </thead> <tbody> <tr> <td colspan="2" data-bbox="338 1255 551 1287">Auto Negotiation</td> <td data-bbox="551 1255 657 1287">✓</td> <td data-bbox="657 1255 737 1287">—</td> <td data-bbox="737 1255 817 1287">✓</td> <td data-bbox="817 1255 896 1287">—</td> <td data-bbox="896 1255 976 1287">✓</td> </tr> <tr> <td data-bbox="338 1287 439 1320" rowspan="2">100Base-TX</td> <td data-bbox="439 1287 551 1320">Full Duplex</td> <td data-bbox="551 1287 657 1320">—</td> <td data-bbox="657 1287 737 1320">✓</td> <td data-bbox="737 1287 817 1320">—</td> <td data-bbox="817 1287 896 1320">—</td> <td data-bbox="896 1287 976 1320">—</td> </tr> <tr> <td data-bbox="439 1320 551 1352">Half Duplex</td> <td data-bbox="551 1320 657 1352">✓</td> <td data-bbox="657 1320 737 1352">—</td> <td data-bbox="737 1320 817 1352">✓</td> <td data-bbox="817 1320 896 1352">—</td> <td data-bbox="896 1320 976 1352">—</td> </tr> <tr> <td data-bbox="338 1352 439 1385" rowspan="2">10Base-T</td> <td data-bbox="439 1352 551 1385">Full Duplex</td> <td data-bbox="551 1352 657 1385">—</td> <td data-bbox="657 1352 737 1385">—</td> <td data-bbox="737 1352 817 1385">—</td> <td data-bbox="817 1352 896 1385">✓</td> <td data-bbox="896 1352 976 1385">—</td> </tr> <tr> <td data-bbox="439 1385 551 1401">Half Duplex</td> <td data-bbox="551 1385 657 1401">✓</td> <td data-bbox="657 1385 737 1401">—</td> <td data-bbox="737 1385 817 1401">—</td> <td data-bbox="817 1385 896 1401">—</td> <td data-bbox="896 1385 976 1401">✓</td> </tr> </tbody> </table>	Network Camera		Auto Negotiation	100Base-TX		10Base-TX		Router or hub			Full Duplex	Half Duplex	Full Duplex	Half Duplex	Auto Negotiation		✓	—	✓	—	✓	100Base-TX	Full Duplex	—	✓	—	—	—	Half Duplex	✓	—	✓	—	—	10Base-T	Full Duplex	—	—	—	✓	—	Half Duplex	✓	—	—	—	✓
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	Half Duplex	✓	—	—	—	✓																																										

Problem	Cause and Remedy
The Top page is not displayed.	<ul style="list-style-type: none"> <li>• The default gateway or DNS server addresses may be wrong. The correct IP addresses are required especially when you are using the Viewnetcam.com service.               <ul style="list-style-type: none"> <li>→ Assign the correct default gateway and DNS server addresses (see page 40 of the Operating Instructions on the Setup CD-ROM).</li> </ul> </li> </ul>
The Top page is displayed on the LAN, but not displayed from the Internet.	<ul style="list-style-type: none"> <li>• The default gateway address may be wrong.               <ul style="list-style-type: none"> <li>→ Assign the correct default gateway address (see page 40 of the Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• UPnP™ is disabled on the router.               <ul style="list-style-type: none"> <li>→ Enable UPnP™ on the router following the router manual.</li> </ul> </li> <li>• Port forwarding is not enabled on the router (see page 26).               <ul style="list-style-type: none"> <li>→ Enable port forwarding seeing the router manual for details.</li> </ul> </li> <li>• Firewalls such as packet filtering on the router is blocking camera access.               <ul style="list-style-type: none"> <li>→ Set the router to allow access to the camera seeing the router manual for details.</li> </ul> </li> <li>• You are accessing the camera with an IP address for local camera access.               <ul style="list-style-type: none"> <li>→ Access the camera with the global IP address of the router and port number of the camera.</li> </ul> </li> <li>• The router does not allow access to the camera under the router with the global IP address.               <ul style="list-style-type: none"> <li>→ If you access the camera on the LAN, access with the address for local camera access.</li> </ul> </li> </ul>
Authentication windows are consequently displayed.	<ul style="list-style-type: none"> <li>• User name and password for the administrator or general users are changed.               <ul style="list-style-type: none"> <li>→ Close the web browser, and access the camera again.</li> </ul> </li> </ul>
Only half of the image is displayed.	<ul style="list-style-type: none"> <li>• You are using Internet Explorer 4.xx or lower.               <ul style="list-style-type: none"> <li>→ Upgrade Internet Explorer to version 6.0 or greater.</li> </ul> </li> </ul>

<b>Problem</b>	<b>Cause and Remedy</b>
<p>Camera image is not displayed.</p>	<ul style="list-style-type: none"> <li>• ActiveX Controls are not installed in Internet Explorer. → ActiveX Controls should be installed to display video (Motion JPEG). For the ActiveX Controls installation method, see page 33 when using Microsoft Windows XP Service Pack 2, or see page 32 when using other operating systems.</li> <li>• The network is congested. → Pages may not be displayed immediately. Wait for a while.</li> <li>• The web browser is accessing the proxy server. → Set the web browser to access the Internet directly (see page 136 of the Operating Instructions on the Setup CD-ROM).</li> </ul>
<p>A gray screen is displayed.</p>	<ul style="list-style-type: none"> <li>• There are currently more than 30 simultaneous accesses to the video (Motion JPEG). → Reduce the number of access to below 30, or change the video to still images.</li> <li>• Operation time has been specified. → A gray screen is displayed outside the operation time. This is normal.</li> </ul>
<p>A blue screen is displayed.</p>	<ul style="list-style-type: none"> <li>• There was an error while updating the camera's firmware. → Try updating the firmware again (see page 111 of the Operating Instructions on the Setup CD-ROM).</li> </ul>
<p>Video suddenly changes to still images.</p>	<ul style="list-style-type: none"> <li>• The video (Motion JPEG) display period is set on the General User page. → When you view video continuously, set [Unlimited] for the limit continuous motion JPEG (see page 75 of the Operating Instructions on the Setup CD-ROM).</li> </ul>

Problem	Cause and Remedy
Image is out of focus.	<ul style="list-style-type: none"> <li>• The lens is dirty or dust is attached. Fingerprints, dust, stains, etc. on the lens can degrade the performance of the Automatic Focusing feature. <ul style="list-style-type: none"> <li>→ Wipe the lens with lens cleaning paper.</li> </ul> </li> <li>• Manual focusing may be set. <ul style="list-style-type: none"> <li>→ Press appropriate one of the Focus buttons at the operation bar (see page 24 of the Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• Blurred images may have been registered when registering or modifying the preset button or home position button. <ul style="list-style-type: none"> <li>→ Adjust the focus in manual focusing again, or press the AF button.</li> </ul> </li> <li>• The object is too close to the camera. <ul style="list-style-type: none"> <li>→ Move the object away from the camera or adjust the zoom.</li> </ul> </li> <li>• Some objects are difficult to focus on by AF button. <ul style="list-style-type: none"> <li>→ Press the AF button and put it into operation again. When the objects are still out of focus, adjust the focus using manual focusing, or change the objects using Pan/Tilt operation or Zooming features.</li> </ul> </li> <li>• The Automatic Focus Range is set incorrectly for the type of image you are viewing. <ul style="list-style-type: none"> <li>→ Confirm the Automatic Focus Range setting (see page 65 of the Operating Instructions on the Setup CD-ROM). When viewing images within 1 m (39.4 inches) of the camera, set to "Macro". When viewing images further than 1 m (39.4 inches) from the camera, set to "Normal".</li> </ul> </li> </ul>
The color on the image is strange.	<ul style="list-style-type: none"> <li>• White balance does not work well. <ul style="list-style-type: none"> <li>→ Adjust the white balance on the Camera page (see page 65 of the Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• The color display setting on your PC is set lower than 16 bits. <ul style="list-style-type: none"> <li>→ Set the color display 16 bits or higher.</li> </ul> </li> </ul>

Problem	Cause and Remedy
Image has noise.	<ul style="list-style-type: none"> <li>• The object is dark. → Make the area around the camera brighter.</li> <li>• The color display setting on your PC is set lower than 16 bits. → Set the color display 16 bits or higher.</li> </ul>
Image flickers.	<ul style="list-style-type: none"> <li>• AC Power Source Frequency setting is incorrect. → Confirm the AC Power Source Frequency setting (see page 65 of the Operating Instructions on the Setup CD-ROM). Normally this parameter should be set to "60 Hz" in the United States.</li> </ul>
An old image is displayed.	<ul style="list-style-type: none"> <li>• The old image is temporarily stored on the web browser. → Set [Every visit to the page] on the web browser to check for temporary Internet files (see page 139 of the Operating Instructions on the Setup CD-ROM).</li> </ul>
The image refreshes very slowly.	<ul style="list-style-type: none"> <li>• Multiple users are accessing the camera. → If multiple users are accessing the camera, the image refreshes slowly.</li> <li>• You are not using an Ethernet switching hub. → If you view multiple cameras on the Multi-Camera page, the image refreshes slowly. Use an Ethernet switching hub.</li> <li>• The image may refresh slowly, depending on image resolution, image quality, network traffic, PC performance, enabling IPsec, or what object you view.</li> <li>• The Max. bandwidth usage is limited. → Increase the max. bandwidth usage on your network (see page 40 of the Operating Instructions on the Setup CD-ROM).</li> <li>• The camera is in color night view mode. → The image refreshes slowly in color night view when the image subject is dark. Make the area around the camera brighter.</li> </ul>



<b>Problem</b>	<b>Cause and Remedy</b>
Scan lines deviate on the screen.	<ul style="list-style-type: none"><li>• Scan lines may deviate when viewing moving objects with resolution at 640 x 480 because of the interlace-type CCD. → Set "Vertical Resolution (for 640 x 480 mode)" to "240 (Better for motion images)" on the Camera page.</li></ul>

## 2.4 Operation Bar

Problem	Cause and Remedy
Pan/tilt, zoom, focus, click to center and preset features do not work.	<ul style="list-style-type: none"> <li>• Your PC is not connected to the camera. → Click [Refresh] on the web browser. Confirm that the image refreshes, then try again.</li> <li>• The camera is not turned on. → Confirm that the camera is turned on.</li> <li>• Multiple users are operating the camera simultaneously. → Wait for a while, and access the camera again.</li> <li>• The pan/tilt, zoom, or focus reaches its end. → Confirm that the end display is displayed on the operation bar.</li> <li>• The pan/tilt is restricted. → Adjust the pan/tilt settings (see page 65 of the Operating Instructions on the Setup CD-ROM).</li> <li>• The Automatic Focus Range is set incorrectly for the type of image you are viewing. → Confirm the Automatic Focus Range setting (see page 65 of the Operating Instructions on the Setup CD-ROM). When viewing images within 1 m (39.4 inches) of the camera, set to "Macro". When viewing images further than 1 m (39.4 inches) from the camera, set to "Normal".</li> </ul>
Part of the buttons on the operation bar are not displayed.	<ul style="list-style-type: none"> <li>• The feature is not permitted on the General User page. → Permit the feature to be used (see page 75 of the Operating Instructions on the Setup CD-ROM). Or log in to the camera as an administrator.</li> </ul>

## 2.5 Image Buffer/Image Transfer

Problem	Cause and Remedy
<p>The camera does not transfer the image by E-mail or FTP.</p>	<ul style="list-style-type: none"> <li>• Errors have occurred on the way to the E-mail or FTP server.               <ul style="list-style-type: none"> <li>→ See the Protocol column on the Status page (see page 109 of the Operating Instructions on the Setup CD-ROM), and check if the error is displayed.</li> </ul> </li> <li>• The default gateway and DNS server addresses are not assigned correctly.               <ul style="list-style-type: none"> <li>→ Assign them correctly (see page 40 of the Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• Login ID and password for E-mail or FTP are invalid.               <ul style="list-style-type: none"> <li>→ Make sure that you enter your correct login ID and password.</li> </ul> </li> </ul>
<p>The camera does not transfer the image to a cell phone.</p>	<ul style="list-style-type: none"> <li>• The image quality is not set to [Mobile Phone] on the Image Buffer/Transfer page.               <ul style="list-style-type: none"> <li>→ Set the resolution to [160 x 120] and the image quality to [Mobile Phone]. Some cell phones do not support 320 x 240 resolution.</li> </ul> </li> </ul>
<p>The image is slowed down on the Buffered Image page. Or the camera transfers the old image.</p>	<ul style="list-style-type: none"> <li>• The transfer interval is too short.               <ul style="list-style-type: none"> <li>→ Set the transfer interval longer than the current setting (see page 84 or page 94 of the Operating Instructions on the Setup CD-ROM).</li> </ul> </li> </ul>

## 2.6 IPv6

Problem	Cause and Remedy
The Top page is not displayed with the IPv6 address.	<ul style="list-style-type: none"><li data-bbox="267 272 988 503">• The IPv6 address is not set on the camera.<ul style="list-style-type: none"><li data-bbox="297 324 988 503">→ Check if the IP address and default gateway are displayed in the network (IPv6) column of the status page (see page 109 of Operating Instructions on the Setup CD-ROM). If neither or only one is displayed, it is possible that the connection is incorrect or that the IPv6 router is not set properly. Set them correctly.</li></ul></li><li data-bbox="267 503 988 649">• The IPv6 has not been set up on your PC.<ul style="list-style-type: none"><li data-bbox="297 552 988 649">→ IPv6 is not set up in Windows XP when purchased. Change the settings to enable it. (see page 14 of Operating Instructions on the Setup CD-ROM)</li></ul></li><li data-bbox="267 649 988 747">• Router filtering is enabled.<ul style="list-style-type: none"><li data-bbox="297 698 988 747">→ Permit camera access from the WAN side in router settings.</li></ul></li><li data-bbox="267 747 988 794">• Your network or ISP may not support IPv6 at this time.</li></ul>

## 2.7 IPsec

Problem	Cause and Remedy
The camera cannot be accessed in transport mode.	<ul style="list-style-type: none"> <li>• IPsec policy settings are restricted.               <ul style="list-style-type: none"> <li>→ Decrease the number of computers connected simultaneously, and wait for a while, or shorten the lifetime in the PC's IPsec settings.</li> </ul> </li> <li>• IPsec settings have not been set on your PC.               <ul style="list-style-type: none"> <li>→ Set IPsec settings on your PC. See the Panasonic Network Camera support website (<a href="http://panasonic.co.jp/pcc/products/en/netwkcaml/">http://panasonic.co.jp/pcc/products/en/netwkcaml/</a>) for how to do this.</li> </ul> </li> <li>• The pre-shared key is not set correctly.               <ul style="list-style-type: none"> <li>→ Set the same pre-shared key for the camera and your PC (see page 52 of Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• On the VPN router within the network, tunnel mode has been set.               <ul style="list-style-type: none"> <li>→ Transport mode and tunnel mode can not be used at the same time. Cancel the PC's IPsec settings, and communicate using tunnel mode.</li> </ul> </li> <li>• Either PC's SA<sup>*1</sup> or Camera's SA is not established.               <ul style="list-style-type: none"> <li>→ Disable the PC's IPsec settings, and enable it again.</li> </ul> </li> </ul>
The camera cannot be accessed on tunnel mode.	<ul style="list-style-type: none"> <li>• The pre-shared key is not set correctly.               <ul style="list-style-type: none"> <li>→ Set the same pre-shared key for the camera and the VPN router (see page 55 of Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• The VPN router is not set correctly.               <ul style="list-style-type: none"> <li>→ Set the IKE and IPsec policy on the VPN router correctly (see page 55 of Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• Either VPN router's SA or camera's SA is not established.               <ul style="list-style-type: none"> <li>→ Restart the VPN router and the camera.</li> </ul> </li> </ul>

\*1 SA (Security Association) refers to establishing a secure connection for an encrypted communication that uses IPsec or IPv6 by exchanging and sharing information such as the encryption scheme and key before communicating, or refers to an established virtual encrypted communication pathway.

Problem	Cause and Remedy
<p>E-mail or FTP transfer cannot be sent in transport mode.</p>	<ul style="list-style-type: none"> <li>• The network settings are not set correctly.                             <ul style="list-style-type: none"> <li>→ Cancel the IPsec settings on the server, PC and camera, and check that the camera images can be transferred. If they can be transferred, the IPsec settings were not set correctly. Set them correctly (see page 52 of Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• The pre-shared key is not set correctly.                             <ul style="list-style-type: none"> <li>→ Set the same pre-shared key for the camera, and server (see page 52 of Operating Instructions on the Setup CD-ROM).</li> </ul> </li> <li>• There is a E-mail server or FTP server within the tunnel mode network.                             <ul style="list-style-type: none"> <li>→ Transport mode and tunnel mode cannot be used at the same time. Cancel the E-mail server or FTP server's IPsec settings, and communicate using tunnel mode.</li> </ul> </li> <li>• Either server's SA or camera's SA is not established.                             <ul style="list-style-type: none"> <li>→ Restart the camera.</li> </ul> </li> </ul>

## 2.8 Miscellaneous

Problem	Cause and Remedy
ActiveX cannot be installed.	<ul style="list-style-type: none"> <li>Security software disables the ActiveX installation. → Close the security software, and install the ActiveX again.</li> </ul>
The firmware is not updated.	<ul style="list-style-type: none"> <li>The firmware updating is not completed due to power off, network failure or other causes. → Update the firmware again following the next procedures.</li> </ul> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Disconnect the plug of the AC cord of the camera from the outlet, and reconnect it again.</div> <p style="text-align: center;">↓</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Enter the IP address on the web browser to access the camera.</div> <p style="text-align: center;">↓</p> <div style="display: flex; justify-content: center; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">Is the Top page displayed?</div> <div style="font-weight: bold;">No</div> </div> <p style="text-align: center;">↓</p> <div style="display: flex; justify-content: center; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">Access the Setup page and click [Status]. Check the firmware version on the Status page.</div> <div style="font-weight: bold;">Yes</div> </div> <p style="text-align: center;">↓</p> <div style="display: flex; justify-content: center; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">Is the version updated?</div> <div style="font-weight: bold;">No</div> </div> <p style="text-align: center;">↓</p> <div style="display: flex; justify-content: center; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">Update the firmware*<sup>1</sup>.</div> <div style="font-weight: bold;">Yes</div> </div> <p style="text-align: center;">↓</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">The firmware update is completed.</div> </div> <p style="text-align: center;">*<sup>1</sup> See page 111 of the Operating Instructions on the Setup CD-ROM about updating firmware.</p>
Shortcut icon is not displayed in the My Network Places folder.	<ul style="list-style-type: none"> <li>UPnP™ Windows component is not installed in Windows XP or Windows Me. → Install UPnP™ Windows component in Windows XP or Windows Me (see page 139 of the Operating Instructions on the Setup CD-ROM).</li> </ul>
You cannot solve problems.	<ul style="list-style-type: none"> <li>Call our customer call center at 1-800-272-7033.</li> </ul>

### For product service

- Panasonic Servicenters are listed in the servicenter directory.
- Call 1-800-272-7033 for the location of an authorized servicenter.
- This Network Camera is designed for use in the United States of America.  
Sale or use of this product in other countries/areas may violate local laws.

### When you ship the product

- Carefully pack your unit, preferably in the original carton.
- Attach a letter, detailing the symptom, to the outside of the carton.

Symptom \_\_\_\_\_  
\_\_\_\_\_

- Send the unit to an authorized servicenter, prepaid and adequately insured.
- Do not send your unit to the Panasonic Consumer Electronics Company listed below or to executive or regional sales offices. These locations do not repair consumer products.

The information in this document is subject to change without notice.

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#### **Panasonic Consumer Electronics Company, Division of Panasonic Corporation of North America**

One Panasonic Way, Secaucus, New Jersey 07094

#### **Panasonic Puerto Rico, Inc.**

San Gabriel Industrial Park, Ave. 65 de Infantería, Km. 9.5,  
Carolina, Puerto Rico 00985

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