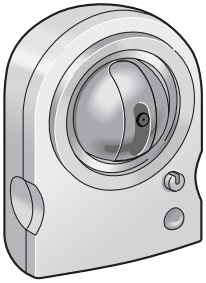
Panasonic



Operating Instructions

Network Camera

Model No. **BL-C10**

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

Main Features

Various remote monitoring features

- Pyroelectric infrared sensor*1 detects temperature differences caused by a human body or animals.
- Detection can let camera transfer images by E-mail or FTP*2.
- Color night view mode (auto-adjusted) enables the camera to display images even in 1 lx illuminance*3.

Monitoring from PC or mobile phone

- The camera images can be monitored over the Internet.
- Pan/tilt operation can move the lens horizontally from -50 ° to +50 ° and vertically from -40 ° to +10 °.

Privacy mode

- Privacy mode hides the lens into the unit to protect privacy.
- Pressing the privacy button on the front of the camera switches privacy mode on or off with a single touch.

	Privacy	Monitoring	Purpose
Privacy mode	On	Disabled	Protecting privacy
Monitoring	Off	Enabled	Remote monitoring

*1 The sensor uses pyroelectric effect. Due to the effects of environment temperature, direct sunlight or air conditioner, it may detect the temperature differences by mistake, or the detection range may be shortened.

*2 It may take some time to transfer images depending on the network condition.

*3 1 lx is the brightness about 2.5 m (8.2 feet) away from auxiliary fluorescent light. Color night view mode slows down the frame rate, and images may blur when viewing a moving object or using the pan/tilt operation.

Easy installation using UPnP™ (Universal Plug and Play)

When connecting the camera with a UPnP™ enabled router, the camera automatically configures its network settings.

* Some UPnP™ enabled routers cannot configure the camera automatically. In this case, the router needs to be configured manually. Ask the router manufacturer how to configure it. See Panasonic Network Camera support website at **http://panasonic.co.jp/pcc/products/en/netwkcam/** for more information.

Supporting Viewnetcam.com service

Viewnetcam.com service allows you to access the camera over the Internet with your favorite domain name (e.g. bob.viewnetcam.com) instead of a global IP address.

* Viewnetcam.com service is the service for Panasonic Network Camera. See Viewnetcam.com website (**http://www.viewnetcam.com**) for more information.

Multi-Language Display

Top page, Single Camera and Multi-Camera page can be displayed in English, French, German, Italian, Spanish, Russian, Simplified Chinese or Japanese. If you select English or Japanese, all pages can be changed. But if you select other language, the Setup, Maintenance and Support pages are displayed only in English.

System Requirements for your PC

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

Item	Description
Operating System	Microsoft® Windows® XP, Microsoft® Windows® 2000 Microsoft® Windows® Me, Microsoft® Windows® 98SE
CPU	Pentium® III (500 MHz or greater is recommended.)
Protocol	TCP/IP protocol (HTTP, TCP, UDP, IP, DNS, ARP, ICMP)
Interface	10/100 Mbps network interface installed
Web Browser	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/netwkcam/** for the latest information about web browser.

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Abbreviations

- UPnP is the abbreviation for Universal Plug and Play.
- "Network Camera" is called "Camera" in this Operating Instructions.

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 dust on the lens, wipe the lens with a cotton bud.
6. Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.
7. Protect the power cord and AC cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the unit.
8. 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.
9. Do not touch the unit or the power cord and AC cord during lightning storms.
10. Unplug the unit when unused for long periods of time.
11. Refer all servicing to qualified service personnel. Servicing is required when the unit has been damaged in any way, such as the power cord, AC cord or plug is damaged, the unit does not operate normally, or has been dropped.
12. The camera is intended for indoor use only. Prolonged exposure to direct sunlight or halogen light may damage CMOS sensor.

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 42)

SAVE THESE INSTRUCTIONS

Table of Contents

1 Camera Monitoring 8
1.1 Accessing the Camera 8
1.2 Viewing Single Camera page 10
1.2.1 Image Auto Centering (Click to Center) 13
1.2.2 Capturing a Still Image 14
1.2.3 Using Operation Bar 15
1.2.4 Setting Home Position/Sensor Position/Preset Button 17
1.3 Viewing Multi-Camera page 21
1.4 Viewing Buffered Image page 23
1.4.1 Deleting Buffered Images 24
1.5 Viewing Still Images on Your Mobile Phone 25

2 Various Camera Features 27
2.1 Using Camera Features 27
2.2 Connecting the Camera to Your Network 29
2.3 Using UPnP™ (Universal Plug and Play) 33
2.4 Registering with the Viewnetcam.com service 34
2.5 Setting Date and Time 36
2.6 Changing Camera Settings 38
2.7 Changing Authentication Setting and Administrator User Name and Password 42
2.8 Logging in to the Camera 45
2.9 Creating, Modifying or Deleting General Users 46
2.10 Changing Initial Settings on the Single Camera page or the Multi-Camera page 48
2.11 Configuring Multiple Cameras 51
2.12 Buffering or Transferring Images by Timer 53
2.13 Buffering or Transferring Images by Sensor 60
2.14 Specifying Operation Time 70
2.15 Changing Indicator Display 72
2.16 Enabling Privacy Mode 73

3 Camera Maintenance 74
3.1 Maintenance page 74
3.1.1 Confirming the Status 75
3.1.2 Restarting the Camera 75
3.1.3 Updating the Camera Firmware 76
3.1.4 Creating Configuration File 79
3.1.5 Loading Settings from a Configuration File 80
3.1.6 Resetting the Camera to Factory Default 81
3.2 Support page 82
3.2.1 Seeing Help page 82
3.2.2 Seeing Product Information 82
3.2.3 Seeing Support Information 83
3.3 FACTORY DEFAULT RESET Button 84
3.4 Default Setting List 85
3.5 Cleaning 93
3.5.1 Cleaning the Main Unit 93
3.5.2 Cleaning the Lens 93
3.6 Setting an IP Address on Your PC 94
3.7 Using Setup Program 95
3.8 Setting Your PC 98
3.8.1 Setting the Proxy Server Settings on Web Browser 98
3.8.2 Setting UPnP™ to Display Camera Shortcut in My Network Places 101
3.8.3 Setting the Internet Temporary File Setting on Web Browser 101
3.9 ASCII Character Table 102
3.10 File Size and Number of Buffered Images 103
3.11 Specifications 104

Index 107

1 Camera Monitoring

1.1 Accessing the Camera

1. Start up the web browser on your PC.
2. Enter "**http://IP Address (or URL):Port Number**" on the address bar, and press [Enter] on the keyboard.

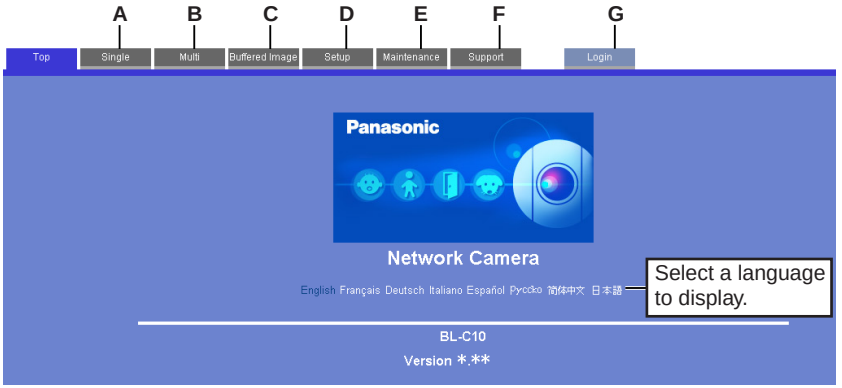
   E.g. http://192.168.0.253
   (or http://XXXXX.viewnetcam.com)

   - When port number is 80 (default), you do not need to enter port number. See page 31 for details about port number, and page 12 in the Installation/ Troubleshooting.
   - If the Internet access to the camera is desired, the port number will be changed in the order of 80 and from 50000 to 50050. It is changed because some ISPs block port 80.

Note

When [Prohibiting unregistered users] is set on the Security: Administrator page, authentication window will be displayed. Enter the administrator's or the general user's user name and password, and the Top page is displayed.

3. Click the following tabs to display each page.



A To Single Camera page (page 10)
B To Multi-Camera page (page 21)
C To Buffered Image page (page 23)
D To Setup page (page 27)
E To Maintenance page (page 74)
F To Support page (page 82)
G To log in to the camera (page 45)

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.

1.2 Viewing Single Camera page

1. Access the camera (see page 8).
- The Top page is displayed.

2. Click the [Single] tab at the top of the page.
- When Security Warning window is displayed, see page 11.

3. Close the web browser.

Notes

- While viewing images under florescent lighting, the image may appear noisy or experience flicker if the incorrect AC power setting was selected. Select the frequency that is used in your area. (see page 38).
- Refresh interval is [Motion] by default. You can change it on the operation bar (see page 15).
- Refresh interval may change depending on the network condition, PC performance and what object you view.
- When displaying video (Motion JPEG), the camera allows up to 20 simultaneous accesses. When trying more than 20 accesses, the 21st user will see a gray screen. (Maximum 20 accesses for a Buffered Image page too.)
- If the video (Motion JPEG) display is limited (see page 48), the video will be changed to refreshing still images.

- To reduce the data traffic, the video can be automatically changed to refreshing still images (see page 48).
- To display the Single Camera page directly, add it to the [Favorites] on the web browser.
- Refresh interval may slow down depending on the network condition or the number of accessing users.
- When viewing a dark image, Color Night View mode automatically starts. The image will be brighter, but the refresh interval may slow down and image quality may decrease.

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 XP or Windows 2000, 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.

Notes

- 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 98).
- 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.

The Banner

When the camera accesses the Internet, the banner displays product information about cameras or announcements about the latest firmware, etc. from Panasonic. Whether or not to display the banner can be set at Banner Display (see page 48).

Notes

- The banner is displayed when [Yes] is checked for Allow Access from the Internet on the Automatic Setup page, or when [Enable] is checked for Auto Port Forwarding on the UPnP page for the Connection Mode of Static or DHCP.
- Even if [Yes] is checked for Allow Access from the Internet on the Automatic Setup page, or [Enable] is checked for Auto Port Forwarding on the UPnP page for the Connection Mode of Static or DHCP, when the camera is not connected to the Internet, ☒ is displayed.

1.2.1 Image Auto Centering (Click to Center)

When you click a certain point on the camera image, the point is centered on the image.

1. Move the cursor to the desired point.

2. Click it.

- The clicked point is centered.
- See page 16 for the pan/tilt operation.

Notes

- When End Display appears on the operation bar, Click to Center does not work beyond the pan/tilt end (see page 15).
- The clicked position may slightly miss the center depending on the lens direction.
- If a user is restricted to level 1 or 2 on the General User page (see page 46), Click to Center does not work.

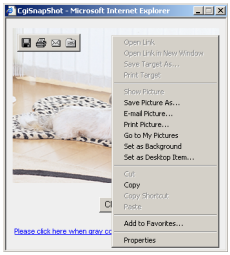
1.2.2 Capturing a Still Image

A still image can be saved on your PC.

1. Operate pan/tilt and select a resolution to display an image.
2. Click the capture image button.

- The camera image opens in another window.

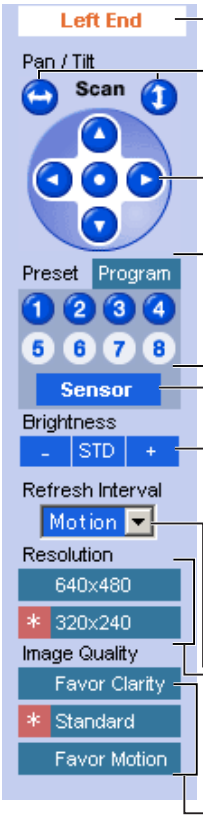
3. Right-click the image, and select [Save Picture As...].



- Save as dialog box is displayed.

4. Specify the location, and click [Save].
   - Camera image is saved at that location.
5. Click [Close].

1.2.3 Using Operation Bar



End Display and Preset Display: When the pan/tilt has reached the end (Left End, Right End, Up End and Down End), End Display appears. When clicking a preset button, the preset name appears.

Pan/Tilt Scan: Moves the lens throughout the horizontal ( ) or vertical ( ) range, and returns to the original position.

Pan/Tilt/ Home Position: Controls lens direction.

Pan (: Left, : Right), Tilt (: Up, : Down) and Home Position (: Center)

Preset Button: Applies the camera direction to a preset position. You can preset 8 positions (see page 17—page 20).

Sensor Position: When the sensor detects a temperature difference, the camera can be set up to turn to this position. Only an administrator can operate it (see page 17).

Brightness: Changes brightness in nine steps including [STD] (Standard). Clicking [-] or [+] changes the image brightness.

Refresh Interval: Sets a refresh interval. (Motion—60-second interval)

Resolution: Selects [640 x 480] or [320 x 240] (default) pixels.

Image Quality: Selects the image quality.

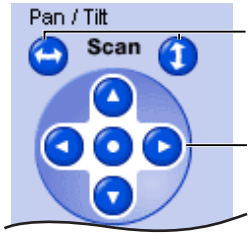
- [Favor Clarity] optimizes the image for good clarity.
- [Standard] keeps the standard quality. (default)
- [Favor Motion] optimizes the image for motion display.

Note

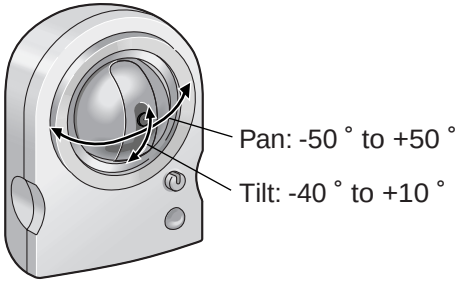
When the camera image is not displayed correctly, click [Refresh] at the tool bar on the web browser. The image will be refreshed.

Pan/Tilt Operation

Pan/tilt scan buttons automatically move the lens horizontally from -50 ° to +50 ° and vertically from -40 ° to +10 ° and return the lens to the original position. Each pan/tilt arrow moves the lens Up, Down, Right or Left, and the home position button moves it to the home position.



Pan/Tilt Range



Note

Do not apply pressure to the pan/tilt portion of the camera. Any forced movement can damage the internal mechanism.

1.2.4 Setting Home Position/Sensor Position/Preset Button

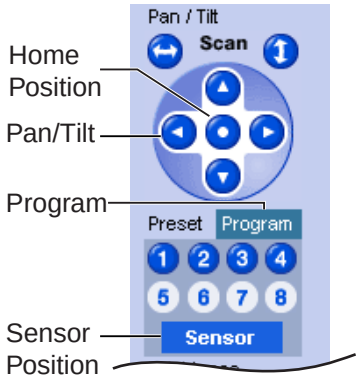
The home position, sensor position and 8 preset buttons can be registered. Preset buttons (1—4) are registered 1: Upper Left, 2: Upper Right, 3: Lower Left and 4: Lower Right. These buttons can be changed (see page 20).

- Registered buttons are shown in blue.
- Unregistered buttons are shown in white.

When clicking each button, the image switches to the home/sensor/preset position. When restarted, the camera takes a home position. If the Lens Position When Triggered setting is set (see page 61), the camera takes a sensor position after the pyroelectric infrared sensor detects temperature differences.

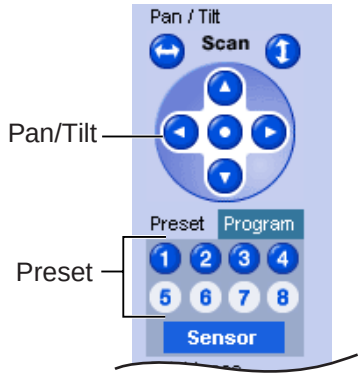
Registering Home Position/Sensor Position

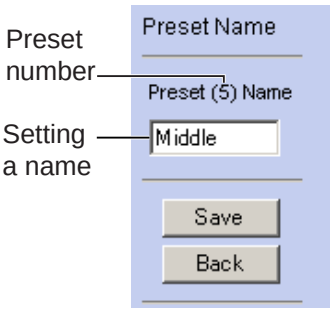
1. Click [Program].
   - [Program] switches to [Cancel]. Click [Cancel] to quit without saving changes.
2. Pan and tilt the camera to a desired position.
3. Click the home position button or the sensor position button.
4. Click [Save].
   - When finished, "Success!" is displayed.
   - Clicking [Back] takes you back to the previous page without changing the settings.
5. Click [Back].
   - The bar switches to the operation bar.

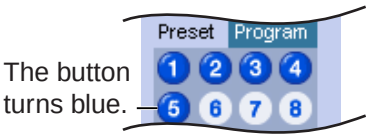


Registering a Preset Button

1. Click [Program].
   - [Program] switches to [Cancel]. Click [Cancel] to quit without saving changes.
2. Pan and tilt the camera to a desired position.
3. Click a preset button (1—8) to register.
   E.g.:
   Setting "Middle" for the preset 5.
4. Enter the preset name.
   - Maximum 15 characters.
   - Enter ASCII characters (see page 102) or characters in each language. But [Space], ["], ['], [&], [<] and [>] are not available.
5. Click [Save].
   - When finished, "Success!" is displayed.
   - Clicking [Back] takes you back to the previous page without changing the settings.
6. Click [Back].
   - The bar switches to the operation bar.







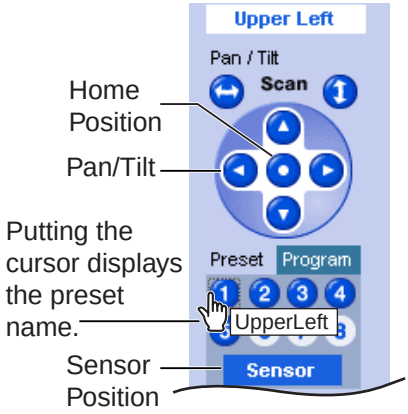
Notes

- When registering preset buttons, the camera also saves brightness and white balance settings.
- Only an administrator can register preset buttons.

Viewing the Image

1. Click the home position, sensor position or registered preset button.

- The camera takes each position, and the image is displayed.

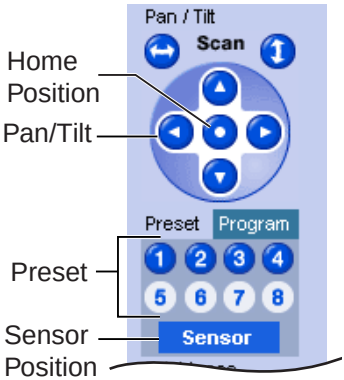


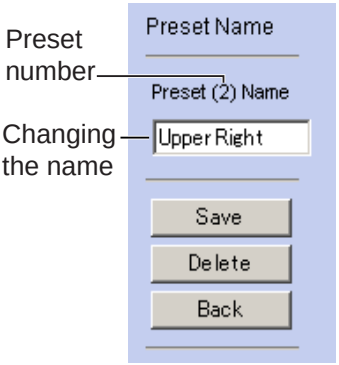
Changing or Deleting the Settings

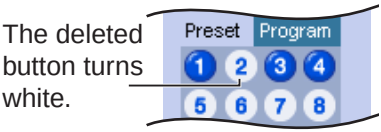
1. Click [Program].
   - [Program] switches to [Cancel]. Click [Cancel] to quit without saving changes.
2. Pan and tilt the camera to a desired position.
3. Click the home position, sensor position or a preset button (1—8).
4. Click [Save] after setting the preset name or click [Delete].
   - "Success!" is displayed.
   - Clicking [Back] takes you back to the previous page.
5. Click [Back].
   - The bar switches to the operation bar.

Note

The home position or the sensor position cannot be deleted, and these position names cannot be changed either.







1.3 Viewing Multi-Camera page

To view multiple cameras on the Multi-Camera page, you need to configure each camera on the Multi-Camera Setup page (see page 51).

1. Access the camera (see page 8).

- The Top page is displayed.

2. Click the [Multi] tab at the top of the page.

- Multi-Camera page can display up to 12 camera images.

Capture Image Button (see page 14)

Switches cameras to display.

Selects [320 x 240] (default) or [160 x 120] pixels resolution.

Selects a refresh interval (Motion—60-second interval). If you select [All] at the View Type, video (Motion JPEG) cannot be displayed.

When clicking the camera name, the Single Camera page is displayed on another window.

3. Close the web browser.

Notes

- When selecting [All] at the View Type, all images are displayed in 160 x 120 pixels resolution.
- 640 x 480 pixels image cannot be displayed on the Multi-Camera page.

- When viewing video (Motion JPEG), we recommend using an Ethernet® switching hub instead of the repeater hub to prevent degradation in video display.
- Due to the network congestion or the number of accesses, the refresh interval may slow down.
- When the refresh interval is slow, restrict the bandwidth on the Network page (see page 32). The refresh interval may be improved.
- If the video (Motion JPEG) display is limited (see page 48), the video will be changed to refreshing still images.
- To reduce the data traffic, the video (Motion JPEG) can be automatically changed to refreshing still images (see page 48).
- When viewing 4 cameras on the Multi-Camera page, you may need 3 to 4 Mbps bandwidth. If the bandwidth is not enough, the refresh interval may slow down.

When the image is not displayed on the Multi-Camera page

- Confirm that the Internet IP address is specified for each camera and that each camera is connected to the Internet. For Internet access, local IP addresses (192.168.xxx.xxx) cannot be used.
- Confirm the settings on the Multi-Camera Setup page (see page 51).
- Confirm that the web browser is not accessing the proxy server (see page 98).

How to save a still image to your PC

On the Single Camera or Multi-Camera page

- A still image can be saved using the capture image button (see page 14).

On the Buffered Image page

- A still image can be saved on the Buffered Image page, if you are not playing images on it. Put the cursor on the image, and right-click it. Then select [Save Picture As...].

When setting [Do not permit access from guest users] on the Security: Administrator page

- An authentication window is displayed in camera access. Enter the administrator's or the general user's user name and password.
- When you view the images on the Multi-Camera page, all authentication windows of the configured cameras are displayed. Enter the administrator's or the general user's user name and password registered for each camera.

1.4 Viewing Buffered Image page

To buffer the images on the internal memory, you need to set up image transfer settings (see page 53 or page 60). You can view buffered images on this Buffered Image page.

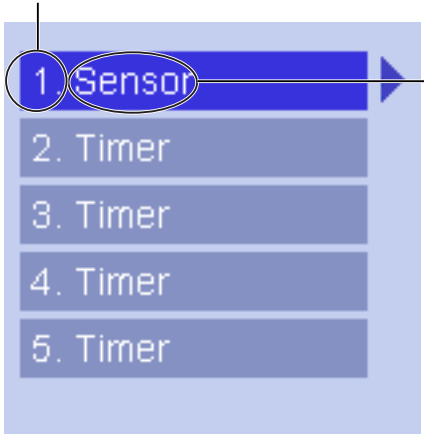
1. Access the camera (see page 8).

- The Top page is displayed.

2. Click the [Buffered Image] tab at the top of the page.

3. Click the trigger number.

The trigger number is displayed (see page 53 or page 60).



The trigger is displayed (see page 53 or page 60).

4. Display images clicking buttons below.

Date and time of the day when the images were buffered are displayed.

Date, time and frame number are displayed.

[Play]:

The buffered images are displayed continuously.

[<Prev] or [Next>]:

The previous or next image is displayed.

[<10] or [10>]:

The 10th image before or after the current image is displayed.

[<100] or [100>]:

The 100th image before or after the current image is displayed.

Notes

- Date, Time and frame number are not displayed in play mode.
- Maximum number of buffered images change depending on resolution, image quality and what object the camera buffers. At the 320 x 240 pixels resolution and the standard quality, the camera buffers about 250 frames (see page 103). (If 3 trigger settings are enabled, the internal memory capacity is divided into 3 sections. In this case, each trigger can buffer about 80 frames.)

1.4.1 Deleting Buffered Images

If you intend to delete images for each transfer condition, click [Delete Buffered Images] on the Image Buffer/Transfer page (see page 53 or page 60).

Notes

- When you change settings (except for Enable/Disable settings) on the Image Buffer/Transfer page, the buffered images only for that trigger will be deleted.
- The following operations also delete all buffered images.
  - Turning off the camera.
  - Saving the Date and Time page.
  - Restarting, updating firmware or resetting the camera to factory default.
  - Changing the Enable/Disable settings of Image Buffer/Transfer (see page 53 or page 60).

1.5 Viewing Still Images on Your Mobile Phone

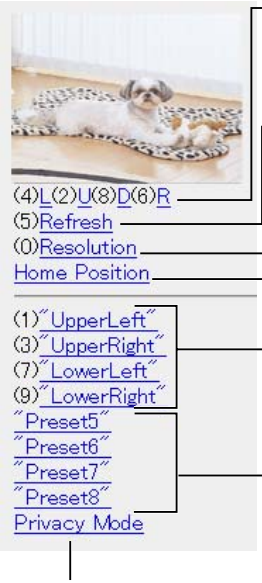
You can view still images over the Internet from a compatible mobile phone.

Enter "**http://IP address (or URL):Port Number/mobile**" on a mobile phone and press [OK].

- When the port number is set to 80 (default), it is not required.

E.g. http://XXX.XXX.XXX.XXX:50000/mobile
(or XXXXX.viewnetcam.com:50000/mobile)

- When an authentication window is displayed, enter the administrator's or the general user's user name and password.
- A still image is displayed. (Video [Motion JPEG] cannot be displayed.)



Pressing 2, 4, 6 or 8 on the mobile phones allows you to pan or tilt the camera in four directions: Left, Up, Down or Right.

Pressing 5 will refresh the image.

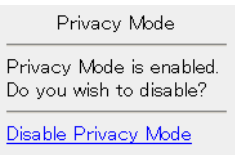
160 x 120 resolution is displayed at the first access. Pressing 0 switches the resolution to 320 x 240.

Executing [Home Position] moves the lens to the home position.

Pressing 1, 3, 7 or 9 on the keypad allows you to use the first four registered preset buttons.

Registered presets 5—8 are available by activating the link on the mobile phone page.

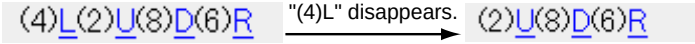
If you execute [Privacy Mode] here, the camera switches to privacy mode. To disable it, access the camera again and execute [Disable Privacy Mode] (see page 73).



Notes

- If the image is not displayed properly, try the following 2 URLs.
  1. **http:// IP address(or URL):Port Number/mobileh** for HTML.
     (or XXXXX.viewnetcam.com:50000/mobileh)
  2. **http:// IP address(or URL):Port Number/mobilex** for XHTML.
     (or XXXXX.viewnetcam.com:50000/mobilex)

- Only an administrator can control privacy mode.
- In privacy mode, sensor and timer image buffer/transfer features also are stopped.
- When executing [Privacy Mode] while setting [Allowing unregistered users] on the Security: Administrator page (see page 42), an authentication window is displayed. Log in to the camera as an administrator.
- If the users are restricted to level 1 or 2 on the General User page (see page 46), the users do not see some kinds of buttons.
- When pan/tilt reaches the end, the keypad number and character disappear.
  E.g.: The pan reaches the left end.



- Some mobile phones are not compatible with Panasonic Network Cameras. Some phones may allow viewing only on port 80, and some may not support password authentication.
- Some mobile phones display images not at the specified resolution but at a decreased size.
- Compatible mobile phones must be able to display JPEG images and HTML or XHTML web pages. Additional fee based mobile phone services may be required to access web pages.

Stopping E-mail Transfer by the Mobile Phone Operation

Executing privacy mode on a mobile phone operation can stop E-mail transfer.

1. Access the camera from a mobile phone (see page 25) and log in to the camera as an administrator.
2. Execute [Privacy Mode] (see page 25).
   - The camera switches to privacy mode and stops E-mail transfer (Image Buffer/Transfer).

2 Various Camera Features

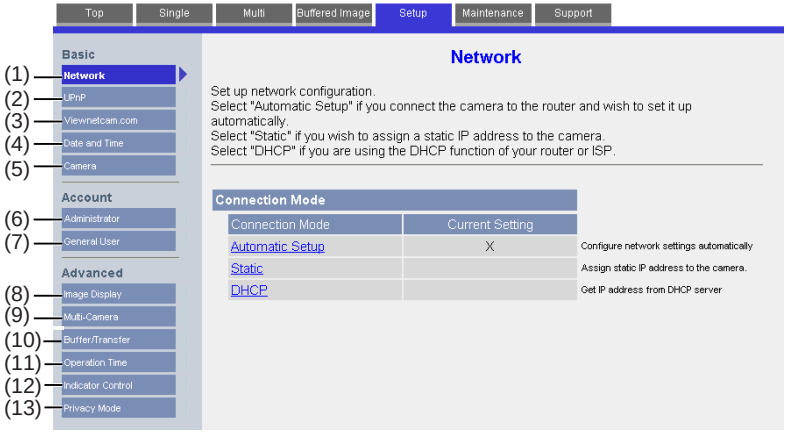
2.1 Using Camera Features

1. Access the camera (see page 8).

Notes

- When [Permit access from guest users] is set on the Security: Administrator page, click [login] tab and log in as an administrator.
- When users other than an administrator are accessing the camera, the [Setup] and [Maintenance] tabs are not displayed.
- The Top page is displayed.

2. Click [Setup] tab at the top of the page.



Basic		
(1)	**Network**	Configures the network settings such as connection mode to connect the camera to the network (see page 29).
(2)	**UPnP**	Enables automatic port forwarding or shortcut to the camera (see page 33).
(3)	**Viewnetcam.com**	Registers with the Viewnetcam.com service (see page 34).
(4)	**Date and Time**	Sets the date and time, automatic time adjustment and adjust clock for daylight saving time settings (see page 36).
(5)	**Camera**	Sets camera name, white balance, AC power source frequency and pan/tilt range (see page 38).
Account		
(6)	**Administrator**[*1]	Sets authentication setting and administrator security (user name and password) (see page 42).
(7)	**General User**[*1]	Sets general user security (user name and password) and general user's feature restriction (see page 46).
Advanced		
(8)	**Image Display**	Sets resolution, image quality and refresh interval of Single Camera and Multi-Camera page, limit continuous motion JPEG[*1], and language (see page 48).
(9)	**Multi-Camera**[*1]	Sets the camera IP address or host name, camera name on the Multi-Camera page (maximum 12 cameras) (see page 51).
(10)	**Buffer/Transfer**	Sets image buffer or transfer by timer or sensor. (see page 53 or page 60).
(11)	**Operation Time**	Sets time period to display camera images (see page 70).
(12)	**Indicator Control**	Sets indicator display (see page 72).
(13)	**Privacy Mode**	Enables privacy mode (see page 73).

[*1] If you change [Administrator], [General User], [Limit Continuous Motion JPEG] or [Multi-Camera Setup page] settings, changes will not be applied to the video (Motion JPEG) viewers. Restart the camera to make changes applied to all video viewers.

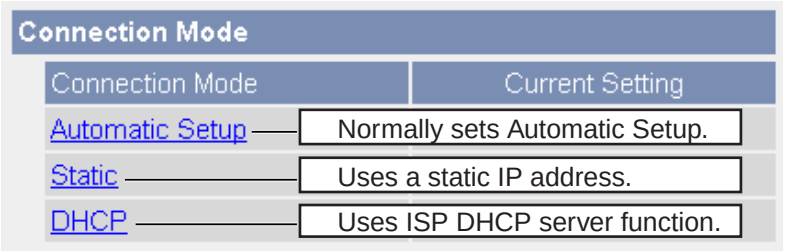
2.2 Connecting the Camera to Your Network

The Network page offers three options to configure the camera.

- [Automatic Setup] automatically assigns an unused IP address to the camera, and uses UPnP™ to configure your router.
- [Static] allows the user to use a specific IP address.
- [DHCP] is offered for ISPs who require this option.

1. Click [Network] on the Setup page.

2. Select a connection mode.

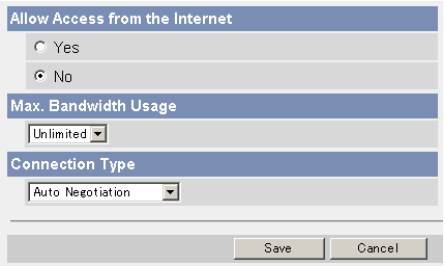


- Each page is displayed (see page 29—page 30).

3. Enter each parameter in the proper data field.

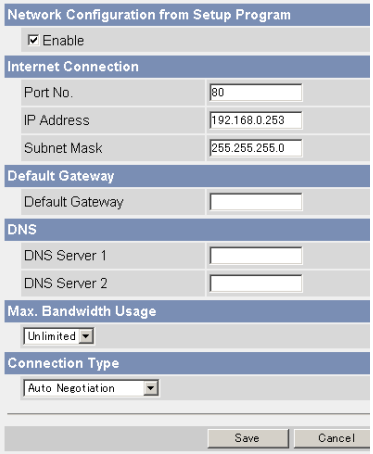
Automatic Setup

The camera automatically obtains the network settings (subnet mask, default gateway and DNS server address) utilizing a DHCP feature on the router. The camera also automatically searches the unused IP address on your network. If you select [Yes] at the Allow Access from the Internet, the camera automatically enables port forwarding by using UPnP™. In this case, the camera automatically searches the unused port number on your network in the order of 80 and from 50000 to 50050.

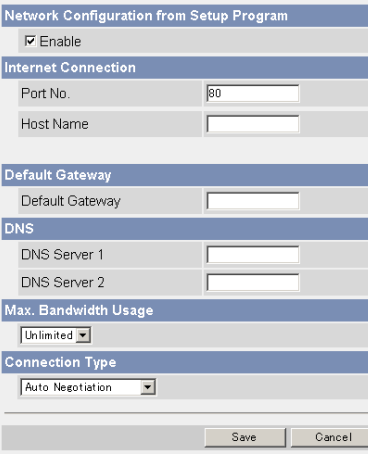


- Clicking [Cancel] takes you back to the previous page without saving changes.

Static Setup



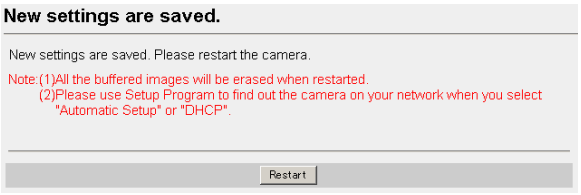
DHCP Setup



- Clicking [Cancel] takes you back to the previous page without saving changes.

4. Click [Save] when finished.

- New settings are saved.
- When finished, the following page is displayed.



Note

The current network settings are shown on the Status page in the Maintenance section (see page 75).

5. Click [Restart].

- The camera restarts, and the Top page is displayed.

Note

When you do not know the camera IP address while setting [Automatic Setup] or [DHCP Setup], you can search the camera IP address by using the Setup Program (see page 95).

Setting	Description
Allow Access from the Internet (Automatic Setup Only)	• Allow Access from the Internet setting automatically configures the router's Port Forwarding setting (some routers call it "Address Translation", "Static IP Masquerade", "Virtual Server" or "Port Mapping"). To enable Internet access to the camera, check [Yes]. In this case, the camera automatically searches the unused port number on your network in the order of 80 and from 50000 to 50050. To disable Internet access to the camera, check [No].
Network Configuration from Setup Program (Static/DHCP Only)	• If you prohibit the Setup Program from changing the network settings, clear the check box.
Port Number (Static/DHCP Only)	• You can set the camera port number (80 by default). When you use multiple cameras with a router on your network, each camera must be assigned its own port number (see page 12 "1.5 Connecting the Camera to a Router Not Supporting UPnP™" in the Installation/Troubleshooting). • Do not set the following port numbers. E.g., FTP: 20 and 21, Telnet: 23, SMTP: 25, DNS: 53, POP3: 110, HTTPS:443, ICQ: 4000 and IRC: 6661—6667. • Enter only the number (1—65535). • Some ISPs do not allow you to use port 80. Ask your ISP or network administrator about the accessible port number over the Internet.
• IP address • Subnet Mask (Static Only)	• If your ISP or network administrator specifies the IP address and subnet mask, enter them in each data field. • If you use the camera on the LAN, set the IP address in the same class as your PC (see page 94). • Set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available.
Host Name (DHCP Only)	• If your ISP uses the DHCP function which automatically assigns the IP address to the camera, enter the ISP-assigned host name. (Host name may be used as an authentication.) • Enter ASCII characters for the host name (see page 102). But [Space], ["], ['], [&], [<] and [>] are not available.

Setting	Description
Default Gateway*1 (Static/DHCP Only)	• If you have the assigned Default Gateway address by your ISP or network administrator, enter it in this data field. • Set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available.

DNS Server Address*1 (Static/DHCP Only)	• DNS server address is required in the following conditions.
	  • Transferring camera images by E-mail or FTP
	  • Setting cameras by their host names on the Multi-Camera Setup page
	  • Using the Viewnetcam.com service
	• If you have the assigned DNS server addresses by your ISP or network administrator, enter them in this data field. They usually have two addresses.
	• Set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available.

Max. Bandwidth Usage	• The bandwidth can be restricted. • Select the maximum bandwidth usage from [Unlimited] to [0.1 Mbps]. **Note** Set the maximum bandwidth usage seeing the following file sizes. These are examples for a JPEG file with a standard image quality. File sizes may change depending on the image quality or how bright the object is. 160 x 120 pixels: About 3 KB (24 Kbit) 320 x 240 pixels: About 10 KB (80 Kbit) 640 x 480 pixels: About 18 KB (144 Kbit)
Connection Type	• Normally, Select [Auto Negotiation]. If you cannot access the camera, see page 20 "The Top page is not displayed." in the Installation/Troubleshooting.

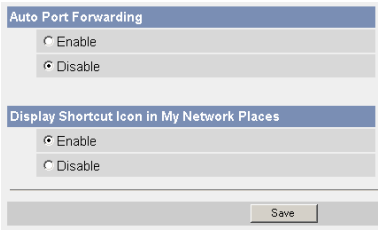
*1 If you automatically obtain the IP address from the DHCP server, you do not need to set it.

2.3 Using UPnP™ (Universal Plug and Play)

UPnP™ can automatically configure your router to be accessed from the Internet. In order to use this feature, your router needs to support this feature and it must be enabled. Most router manufacturers disable this feature as the default setting. See **http://panasonic.co.jp/pcc/products/en/netwkcam/** for details and see your router manual for how to enable UPnP™. After the UPnP™ is enabled on the router, set [Enable] for auto port forwarding.

1. Click [UPnP] on the Setup page.

2. Set up UPnP.



Setting	Description
Auto Port Forwarding	• If the network setting is [Static] or [DHCP], enabling auto port forwarding allows you to access the camera from the Internet. **Note** If the network setting is [Automatic Setup], enable [Allow Access from the Internet] on the Network page (see page 31).
Display Shortcut Icon in My Network Places	• Enabling it displays a shortcut to the camera in the My Network Places folder. **Note** If you use Windows XP or Windows Me, this feature is available. Enable UPnP Windows component before using this feature (see page 101).

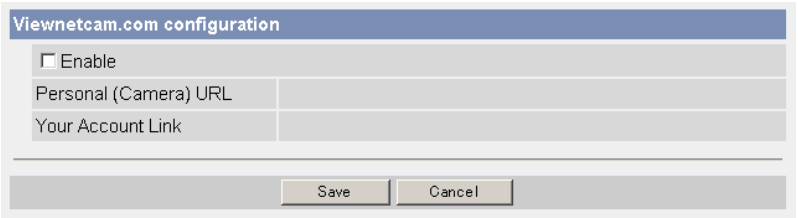
3. Click [Save] when finished.
- New settings are saved.
- When finished, "Success!" is displayed.

4. Click [Go to UPnP page].
- The UPnP page is displayed.

2.4 Registering with the Viewnetcam.com service

Viewnetcam.com is a free service (dynamic DNS service) that allows you to assign an easy to remember name to the camera, similar to your favorite web site. Viewnetcam.com also allows you to easily access the camera, even when your ISP changes the IP address. Panasonic Communications recommends you to register with it for the Internet access to the camera. See **http://www.viewnetcam.com** for details about the Viewnetcam.com service.

1. Click [Viewnetcam.com] on the Setup page.
2. Check [Enable].



- Clicking [Cancel] cancels your settings without saving changes.

Setting	Description
Enable	• Check [Enable] to register with the Viewnetcam.com service. If you clear the box, the Viewnetcam.com service stops.
Personal (Camera) URL	• The camera's personal URL will be displayed after you register with the Viewnetcam.com service.
Your Account Link	• The URL is displayed to register with the Viewnetcam.com service. Clicking [Your Account Link] item name displays the Viewnetcam.com registration website.

3. Click [Save] when finished.
   - New settings are saved.
   - When finished, "Success!" is displayed.
4. Click [Go to Viewnetcam.com page].
   - The Viewnetcam.com page is displayed.
5. Click [Your Account Link].
   - The Viewnetcam.com registration website is displayed.

Notes

- When the Viewnetcam.com registration website is not displayed, confirm that the URL is displayed in the right column of the Your Account Link. If the URL is not displayed, follow the procedures below.

  1. Wait for a while, and click [Refresh] on the web browser.
  2. Confirm that your network (your PC and camera) is connected to the Internet.

- Personal (Camera) URL is available after you registered with the Viewnetcam.com service.
- If port forwarding is not enabled or your network is not connected to the Internet, the Viewnetcam.com service is not available.

6. Register with the Viewnetcam.com service following the website.

- The Viewnetcam.com page is displayed.

7. Access the camera with a registered URL from the Internet (see page 8).

- When the Top page is displayed, the Viewnetcam.com registration is complete.

Notes

- It may take a maximum of 30 minutes for the registered URL to work.
- If "Expired" is displayed at the Personal (Camera) URL on the Viewnetcam.com page or at the Camera URL in the DDNS on the Status page, restart the camera. After that, confirm that your registered URL is displayed on their pages.

Confirming the Internet access

Due to the router specifications, the image may not be displayed even if you access the camera from your PC on the same LAN as the camera. In this case, access the camera following procedures.

- Accessing from the PC on another network (see page 8)
- Accessing from your mobile phone (see page 25)

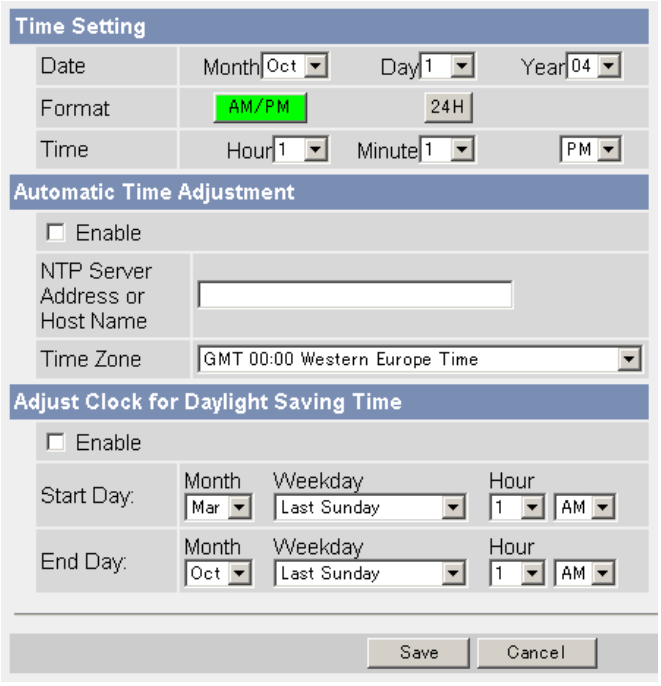
2.5 Setting Date and Time

The Date and Time page allows you to set date and time. Date and time are used for image buffer/transfer, operation time and time stamps on the buffered image.

Note

Saving the date and time settings deletes all buffered images.

1. Click [Date and Time] on the Setup page.
2. Set each parameter.



- Clicking [Cancel] cancels your settings without saving changes.

Setting	Description
Time Setting	• Select date and format (AM/PM or 24 H). These settings are used for image buffer/transfer, operation time and time stamps on the buffered image. But E-mail subject and file name by E-mail or FTP transfer uses only 24 h format.
Automatic Time Adjustment	• NTP (Network Time Protocol) server synchronizes the camera's internal clock. It adjusts automatically every day. Check the box to enable it. • Set the NTP server IP address, set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available. Or set a host name (1—255 characters). • Select your time zone. **Note** If the time is incorrect by more than one hour, Automatic Time Adjustment stops working to prevent malfunctions caused by a disguised NTP server.
Adjust Clock for Daylight Saving Time	• During the daylight saving time, the internal clock is turned forward an hour. The clock will shift one hour forward at the set time on the Start Day, and move back one hour at the set time on the End Day. Check the box to enable it. **Note** An "s" is put between date and time of time stamp when enabling this feature. The time stamp will be attached to the transferred images by the Image Transfer feature.

3. Click [Save] when finished.
- New settings are saved.
- When finished, "Success!" is displayed.

4. Click [Go to Date and Time page].
- The Date and Time page is displayed.

Note

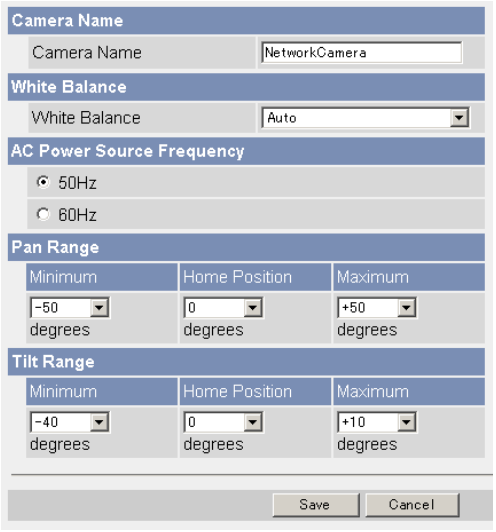
Date and time settings become incorrect depending on the length of power-on time or the internal temperature. Using the Automatic Time Adjustment is recommended.

2.6 Changing Camera Settings

The Camera page allows you to set the camera name, white balance, AC power source frequency and pan/tilt range.

1. Click [Camera] on the Setup page.

2. Set each parameter.



- Clicking [Cancel] cancels your settings without saving changes.

Setting	Description
Camera Name	• The camera name is displayed on the Single Camera page. • Enter ASCII characters (see page 102) or characters in each language (1—15 characters for a 1-byte character and 1—7 characters for a 2-byte character). But [Space], ["], ['], [&], [<], and [>] are not available.
White Balance	Select from the following options. • Auto (default) — Automatic adjustment • Fixed Indoor — Electric bulb (2800 K) • Fixed Fluorescent (White) — White (3600 K) • Fixed Fluorescent (Daylight) — Daylight (4000 K) • Fixed Outdoor — Solar light (6000 K) • Hold — Setting [Hold] keeps the current white balance. **Note** White balance is also saved in the home position, sensor position and preset buttons.

AC Power Source Frequency	• In some cases, the image may have noise due to fluorescent light. Select the frequency that is used in your area.
	  • 50 Hz (default)
	  • 60 Hz

Pan Range*1	Select from the following options. • Minimum — Current settings, -50—+50 • Home Position*2 — Current settings, -50—+50 • Maximum — Current settings, -50—+50 • The values must be selected as minimum≦home position≦maximum.

Setting	Description
Tilt Range[*1]	Select from the following options. • Minimum — Current settings, -40—+10 • Home Position[*2] — Current settings, -40—+10 • Maximum — Current settings, -40—+10 • The values must be selected as minimum≦home position≦maximum.

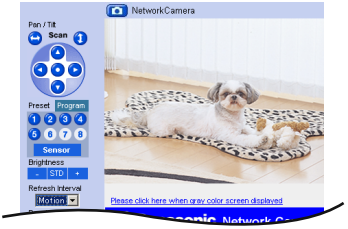
[*1] See page 41 for details about pan/tilt range settings.
[*2] These home position settings are displayed as you set on page 17.

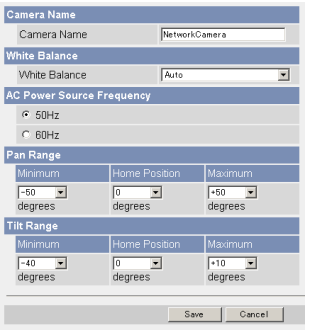
3. Click [Save] when finished.
- New settings are saved. If the home position is changed, the camera turns to the home position.
- When finished, "Success!" is displayed.

4. Click [Go to Camera page].
- The Camera page is displayed.

Specifying Pan/Tilt Range

1. Access the camera (see page 8), and click [Single] at the top of the Top page.
2. Open another web browser, and display the Camera page (see page 38).
3. Align the Single Camera page and the Camera page side to side.

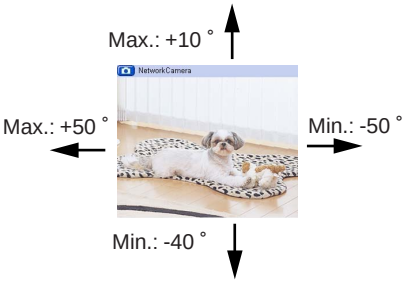




4. Set the pan/tilt range.
   - Selecting [Current] displays the current angle of the camera. Select each value while adjusting the pan/tilt on the Single Camera page.

Note

The values must be selected as minimum ≦ home position ≦ maximum.



5. Click [Save] on the Camera page.
   - New settings are saved. The camera turns to the home position.

2.7 Changing Authentication Setting and Administrator User Name and Password

The Security: Administrator page allows you to change authentication, administrator user name and password. The authentication window is displayed, and allows the registered users to access the camera.

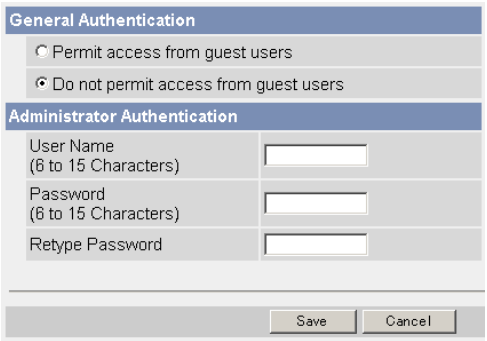
Notes

- If you access the camera for the first time, the window to set administrator user name and password is displayed. Make a note of the user name and password so that you will not forget them.
- The user name and password should be secured at your own responsibility. Pay attention to the following points.
  - Set the user name and password as many characters as possible.
  - Change the password regularly.
- Setting [Permit access from guest users] (permitting access without a User Name or Password) at General Authentication risks the images being viewed by third parties. Control the contents of the images accordingly.

IMPORTANT

- It is important to limit access to the camera by use of a unique User Name and a secret Password. Because the camera is accessed through the Internet it is possible that the camera could be accessed by unknown individuals, including those who are commonly known as "hackers," to whom you do not want to allow access. The use of a unique User Name and a Password known only to you will help insure that only authorized individuals are given access to the camera. You have the option of proceeding without a User Name and Password, but it is strongly recommended that you utilize these protections.

1. Click [Administrator] on the Setup page.
2. Set each parameter.



- Clicking [Cancel] cancels your settings without saving changes.

Setting	Description
General Authentication	Authentication has 2 phases. • If you set [Permit access from guest users], the camera does not display the authentication window in camera access. All guest users can view the image without user name and password. **Note** If you set [Permit access from guest users], [Login] is displayed at the top of the page. After you log in as an administrator (see page 45), you can access the Setup page and the Maintenance page. • If you set [Do not permit access from guest users], the camera displays authentication window in camera access. Users must enter the user name and password.
User Name/ Password	• User Name (6 to 15 characters): Enter the user name. • Password (6 to 15 characters): Enter the password. **Notes** • The password must be different from the user name. • User name and password are case sensitive. • Retype Password: Reenter the password. • Enter ASCII characters (see page 102). But [Space], ["], ['], [&], [<], [>] and [:] are not available.

Note

When users other than an administrator are accessing the camera, [Setup] and [Maintenance] tab will not be displayed.

3. Click [Save] when finished.

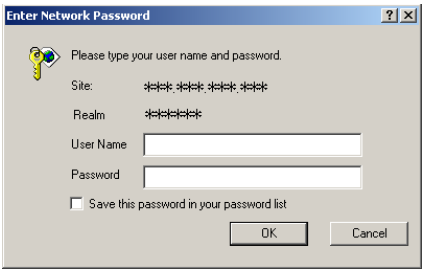
- New settings are saved.
- When finished, "Success!" is displayed.

4. Click [Go to Security: Administrator page].

- The Security: Administrator page is displayed.

Notes

- When the user name and password have been changed, the camera displays an authentication window. Enter the user name and password, and click [OK].



Administrator/General Users/Guest Users

The camera has 3 user levels (administrator, general users and guest users).

Items	Administrator	General Users	Guest Users
User Name and Password	Required	Required	Not Required
Number of Users	1	50	—
Accessible Pages	All Pages	Pages Except For Setup and Maintenance page	Pages Except For Setup and Maintenance page
Access Level 1—3	All Operations	Access level can be set for each general user (see page 46).	Access level can be set for guest users (see page 46).

Note

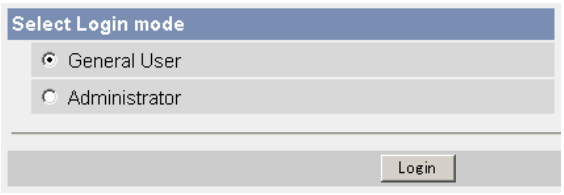
Guest users mean unregistered users. Set [Permit access from guest users] on the Security: Administrator page (see page 42).

2.8 Logging in to the Camera

If you set [Permit access from guest users] on the Security: Administrator page, [Login] is displayed at the top of the page. After you log in as an administrator, you can access the Setup page and the Maintenance page.

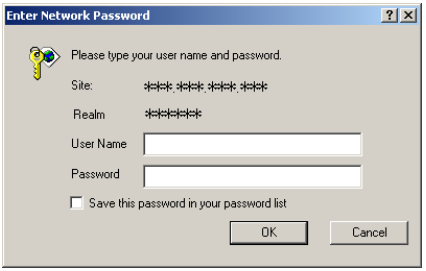
1. Click [Login] at the top of the page.

2. Check the login mode, and click [Login].



Note

The authentication window is displayed. Enter the user name and password.



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

- You can log in to the camera.

2.9 Creating, Modifying or Deleting General Users

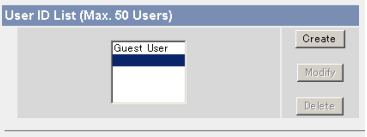
The General User page allows you to create, modify or delete general users. Up to 50 general users can be registered. The access level is set for each general user. If you set [Permit access from guest users] on the Security: Administrator page, the access level can be set for guest users.

1. Click [General Users] on the Setup page.

2. If you create a general user, click [Create].

- When setting [Do not permit access from guest users]

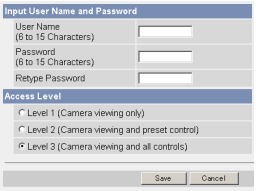
- When setting [Permit access from guest users]



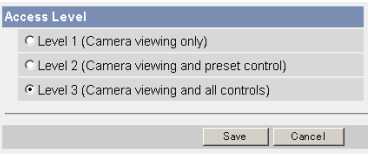
- If you change the settings of general users or guest users, select their name and click [Modify]. The modification page is displayed.
- If you delete a general user, select the name and click [Delete]. The confirmation page is displayed.

3. Set each parameter.

- Settings for a general user



- Settings for guest users



- Clicking [Cancel] takes you back to the previous page without saving changes.

Setting	Description
User ID List	• Up to 50 general users can be registered. • The list is used to modify or delete general user settings.
User Name/ Password	• User Name (6 to 15 characters): Enter the user name. • Password (6 to 15 characters): Enter the password. **Note** The password must be different from the user name. • Retype Password: Reenter the password. • Enter ASCII characters (see page 102). But [Space], ["], ['], [&], [<], [>] and [:] are not available.
Access Level	Access level is set for each general user. Each level offers different operations. • Level 1 users view only image. • Level 2 users view the image and operate only preset buttons. • Level 3 users view the image and control all operations.

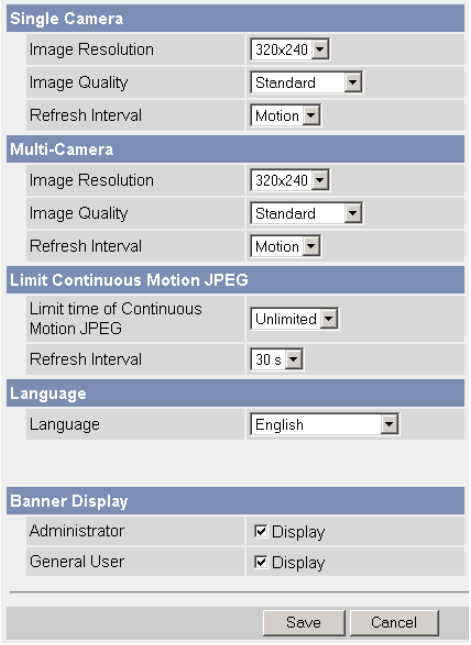
4. Click [Save] when finished.
- New settings are saved.
- When finished, "Success!" is displayed.

5. Click [Go to General User page].
- The General User page is displayed.

2.10 Changing Initial Settings on the Single Camera page or the Multi-Camera page

The Image Display page allows you to change initial settings (display settings when a user accesses the camera) of image resolution, image quality and refresh interval. Motion JPEG display time can be set here.

1. Click [Image Display] at the top of the page.
2. Set each parameter.



- Clicking [Cancel] cancels your settings without saving changes.

Setting	Description
Image Resolution	• Select the image resolution. 640 x 480 pixels (Only for the Single Camera page) 320 x 240 pixels (default) 160 x 120 pixels (Only for the Multi-Camera page)
Image Quality	• Select the image quality. [Favor Clarity] optimizes for good quality. [Standard] offers standard quality. [Favor Motion] optimizes for enhanced motion.
Refresh Interval	• Select a refresh interval. (Motion—60-second interval)
Limit Continuous Motion JPEG • Limit time of Continuous Motion JPEG • Refresh Interval	 • Set the time to change the video (Motion JPEG) to still images. (10 seconds—Unlimited) • Set a refresh interval after the image is changed to still images. (3-second interval—60-second interval)
Language	• Select the initial language from English, French, German, Italian, Spanish, Russian, Simplified Chinese or Japanese. The selected language is displayed as the initial language on the Top, Single Camera and Multi-Camera page. If you select English or Japanese, all pages can be changed. But if you select other language, the Setup, Maintenance and Support pages are displayed only in English.
Banner Display	• When the camera accesses the Internet, the banner displays product information about cameras or announcements about the latest firmware, etc. from Panasonic. Checking [Display] for Administrator is particularly recommended. • When checked, the banner is displayed for administrator or general users or both. • The banner is displayed only on the Single Camera page (see page 10).

3. Click [Save] when finished.
   - New settings are saved.
   - When finished, "Success!" is displayed.
4. Click [Go to Image Display page].
   - The Image Display page is displayed.

2.11 Configuring Multiple Cameras

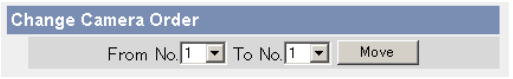
The Multi-Camera Setup page allows you to configure the camera IP addresses and camera names to view multiple images on the Multi-Camera page (maximum 12 cameras). These configurations are required to use the Multi-Camera page.

1. Click [Multi-Camera] on the Setup page.

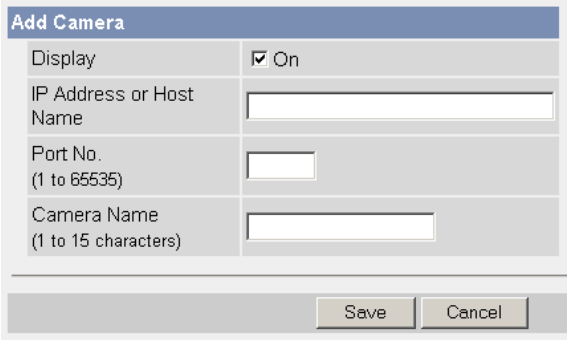
2. Click [Add].

Notes

- If you click the camera number, the modification page is displayed. The camera setting can be modified or deleted on it.
- If you configured multiple cameras, you can change the camera number. Select the number, and click [Move].



3. Set each parameter.



- Clicking [Cancel] cancels your settings without saving changes.

Setting	Description
Display	• Check the box to enable the camera.
IP Address*1 or Host Name*2	• Set the IP address or the host name to enable the camera.
Port No.	• Set the port number (1—65535).
Camera Name*3	• This camera name is displayed only on the Multi-Camera page.

*1 Set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available.

*2 Enter ASCII characters for the host name (see page 102). But [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<] and [>] are not available.
Enter 1—255 characters.

*3 Enter ASCII characters (see page 102) or characters in each language (1—15 characters for a 1-byte character and 1—7 characters for a 2-byte character). But [Space], ["], ['], [#], [&], [%], [=], [+], [?], [:], [<], and [>] are not available.

Notes

- If your camera will only be accessed on your local network, use each camera's local IP address and port number.
- If you intend to access your camera from the Internet, you must use each cameras global IP address and respective port number.

4. Click [Save] when finished.
- New settings are saved.
- The Multi-Camera Setup page is displayed.

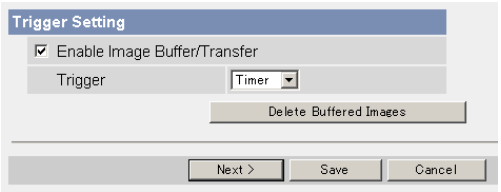
2.12 Buffering or Transferring Images by Timer

The Image Buffer/Transfer page allows you to enable image buffer/transfer by E-mail or FTP.

1. Click [Buffer/Transfer] on the Setup page.

2. Click [No.] to enable buffer/transfer.

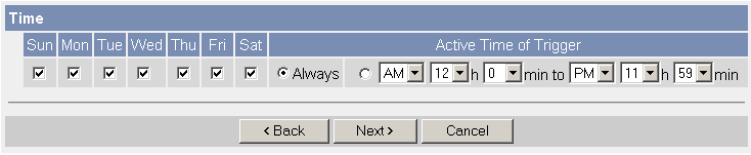
3. Check [Enable Image Buffer/Transfer], select [Timer] for trigger, and click [Next>].



- Click [Delete Buffered Images] to delete this buffered images.
- Click [Save] to save the settings. The buffered images are deleted.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
Enable Image Buffer/Transfer	• Check the box to enable the buffer/transfer. Clear the box to disable it.
Trigger	• Selecting [Timer] enables the camera to buffer/transfer the image by timer. • Selecting [Sensor] enables the camera to buffer/transfer the image by sensor.

4. Set the time, and click [Next>].



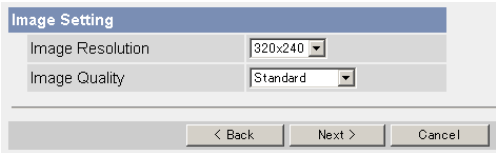
Note

The timer works by an internal clock. Set the date and time before using timer buffer/transfer (see page 36).

- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
A day of the week	• Check the box to enable the day. Clear the box to disable it.
Active Time of Trigger	• Select the [Always] option when you do not specify the time period. If you specify the time period, select the time period option and set the time period.

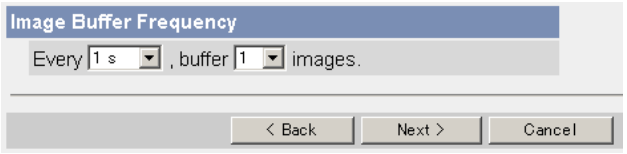
5. Set the image settings, and click [Next>].



- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
Image Resolution	• Select image resolution (640 x 480, 320 x 240 (default) or 160 x 120 pixels) to buffer or transfer.
Image Quality	• Select the image quality. [Favor Clarity] optimizes for good quality. [Standard] offers standard quality. [Favor Motion] optimizes for enhanced motion. [Mobile Phone] is for a transfer to a mobile phone. **Note** 640 x 480 pixels cannot be set for a transfer to a mobile phone.

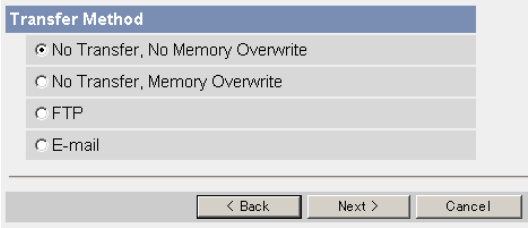
6. Set the image buffer frequencies, and click [Next>].



- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
Image Buffer Frequency	• Select the image buffer frequency to buffer or transfer the image. (1 image per hour—15 images per second)

7. Select the transfer method, and click [Next>].



- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

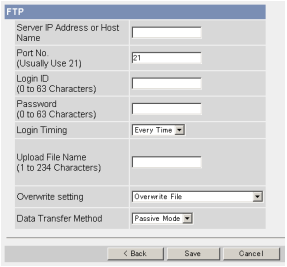
Note

If you transfer image by E-mail or FTP, confirm that the default gateway and DNS server addresses are assigned correctly (see page 29).

Setting	Description
No Transfer, No Memory Overwrite	• If the internal memory is full, the camera stops the buffer.
No Transfer, Memory Overwrite	• If the internal memory is full, the camera deletes the old images, and continues to buffer the image.
FTP	• The camera transfers the image to an FTP server (see page 57).
E-mail	• The camera transfers the image by E-mail (see page 58).

When you set [FTP] for Transfer Method

Select [FTP], and click [Next>]. The following page is displayed.



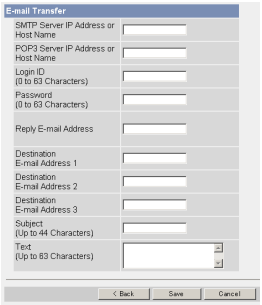
- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
Server IP Address or Host Name*1	• If you set the server IP address, set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available. Or set a host name (1—255 characters).
Port No.	• Enter the number (1—65535). Usually set to 21.
Login ID*1	• If your ISP requires a login ID, set it (0—63 characters).
Password*1	• If your ISP requires a password, set it (0—63 characters).
Login Timing	• Select the login timing to an FTP server. If you set [One Time] during 1-minute transfer, the camera logs in to the server only once, and can reduce the time to log in or log out.
Upload File Name*1	• Set the file name to save on an FTP server. Enter 1—234 characters. Entering "\" creates directories for a file. (E.g. NetworkCamera\image.jpg)
Overwrite setting	• Selecting [Overwrite File] saves and overwrites the image on the server. Selecting [Save as New File with Time Stamp] saves the image attaching time stamps on the file name, and the images are not overwritten.
Data Transfer Method	• Select [Passive Mode] normally. If FTP does not work, select [Active Mode] and check the operation.

*1 But [Space], ["], ['], [&], [<] and [>] are not available.

When you set [E-mail] for Transfer Method

Select [E-mail], and click [Next>]. The following page is displayed.



- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Note

The camera works only with an SMTP (Simple Mail Transfer Protocol) server. It does not work with mail servers like "Hotmail®" using a web browser.

Setting	Description
SMTP Server IP Address or Host Name	• If you set the server IP address, set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available. Or set a host name (1—255 characters).
POP3 Server IP Address or Host Name	• If you set the server IP address, set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available. Or set a host name (1—255 characters).
Login ID*1	• If your ISP requires a login ID to log in to a POP3 server, set it (0—63 characters).
Password*1	• If your ISP requires a password to log in to a POP3 server, set it (0—63 characters).
Reply E-mail Address*1	• Set the sender's E-mail address. We recommend you to set the administrator's E-mail address.
Destination E-mail Address*1 1—3	• Set the destination E-mail address (up to 3).

Setting	Description
Subject	• Enter a subject with ASCII characters (see page 102) or characters in each language (0—44 characters for a 1-byte character and 0—22 characters for a 2-byte character). But ["] is not available.
Text	• Enter text with ASCII characters (see page 102) or characters in each language (0—63 characters for a 1-byte character and 0—31 characters for a 2-byte character). But ["] and [end-of-line] key are not available.

*1 But [Space], ["], ['], [&], [<] and [>] are not available.

8. Confirm the settings, and click [Save].
- New settings are saved. The buffered images are deleted.
- When finished, "Success!" is displayed.

9. Click [Go to Image Buffer/Transfer page].
- The Image Buffer/Transfer page is displayed.

Notes
- If you set a short interval to transfer image to a mobile phone, many E-mails may be sent to it leading to a large phone bill. Therefore, we recommend you to set a long interval. In an emergency situation, the E-mail transfer can be stopped by enabling privacy mode using a mobile phone (see page 26).
- Buffered images will be deleted by doing the following.
  - Turning off the camera.
  - Saving the settings of Image Buffer/Transfer or Date and Time.
  - Executing [Restart], [Update Firmware] or [Reset to Factory Default].
  - Clicking [Delete Buffered Images] on the Image Buffer/Transfer page (see page 53).

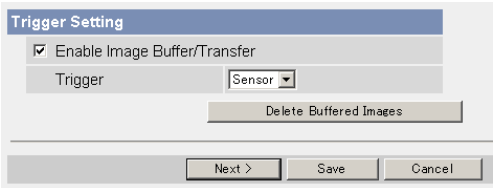
2.13 Buffering or Transferring Images by Sensor

The Image Buffer/Transfer page allows you to enable image buffer/transfer by E-mail or FTP.

1. Click [Buffer/Transfer] on the Setup page.

2. Click [No.] to enable buffer/transfer.

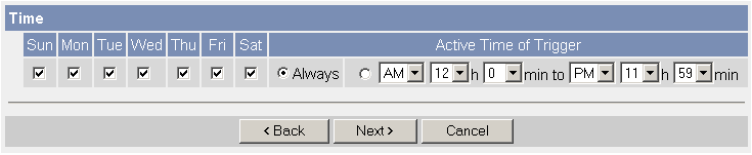
3. Check [Enable Image Buffer/Transfer], select [Sensor] for trigger, and click [Next>].



- Click [Delete Buffered Images] to delete this buffered images.
- Click [Save] to save the settings. The buffered images are deleted.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
Enable Image Buffer/Transfer	• Check the box to enable the buffer/transfer. Clear the box to disable it.
Trigger	• Selecting [Timer] enables the camera to buffer/transfer the image by timer. • Selecting [Sensor] enables the camera to buffer/transfer the image by sensor.

4. Set the time, and click [Next>].



Note

The timer works by an internal clock. Set the date and time before using timer buffer/transfer (see page 36).

- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
A day of the week	• Check the box to enable the day. Clear the box to disable it.
Active Time of Trigger	• Select the [Always] option when you do not specify the time period. If you specify the time period, select the time period option and set the time period.

5. Set the Lens Position When Triggered setting, and click [Next>].

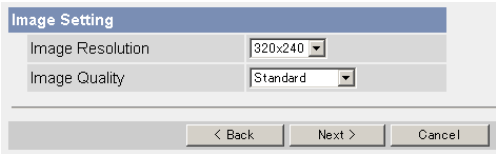
Note

If you enable the Lens Position When Triggered setting, buffer/transfer starts after the camera turns to the sensor position.

- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
Lens Position When Triggered	• Set [Move to sensor position] to move the lens to the sensor position (see page 17) when the pyroelectric infrared sensor detects temperature differences.

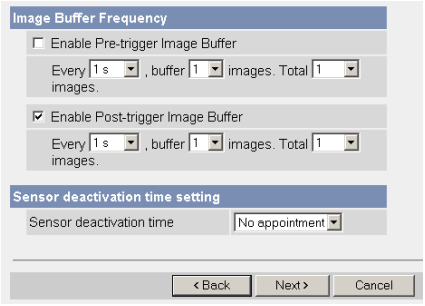
6. Set the image settings, and click [Next>].



- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
Image Resolution	• Select image resolution (640 x 480, 320 x 240 (default) or 160 x 120 pixels) to buffer or transfer.
Image Quality	• Select the image quality. [Favor Clarity] optimizes for good quality. [Standard] offers standard quality. [Favor Motion] optimizes for enhanced motion. [Mobile Phone] is for a transfer to a mobile phone. **Note** 640 x 480 pixels cannot be set for a transfer to a mobile phone.

7. Set the image buffer frequencies and sensor deactivation time, and click [Next>].

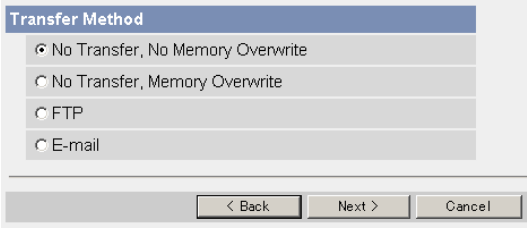


- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
Enable Pre-trigger Image Buffer	• Check the box to enable the setting. The camera buffers or transfers the image right before the pyroelectric infrared sensor detects temperature differences. • Set an interval, number of images to buffer and total number. The buffered images may not match the total number due to memory capacity, image resolution, image quality or what object you view.
Enable Post-trigger Image Buffer	• Check the box to enable the setting. The camera buffers or transfers the image right after the pyroelectric infrared sensor detects temperature differences. • Set an interval, number of images to buffer and total number. The buffered images may not match the total number due to memory capacity, image resolution, image quality or what object you view.

Setting	Description
Sensor deactivation time	• Set the length of time during which the sensor cannot be triggered after saving images temporarily or transmitting them. This function is recommended to use not to send too many E-mails to a mobile phone. **Note** The internal memory cannot buffer images during Sensor deactivation time. Because of this, images taken before detection are not saved in internal memory, and so cannot be received. Depending on the settings for image buffer/ transfer, even if it is set to, for example, take "1 image per second, and store 10 images, before detection", because the images are not stored in internal memory, if the sensor detects something directly after the end of Sensor deactivation time, the images may not be saved. Ten seconds after the end of Sensor deactivation time, images can be received as specified in the settings.

8. Select the transfer method, and click [Next>].



- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

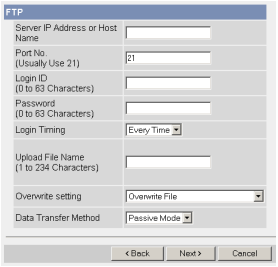
Note

If you transfer image by E-mail or FTP, confirm that the default gateway and DNS server addresses are assigned correctly (see page 29).

Setting	Description
No Transfer, No Memory Overwrite	• If the internal memory is full, the camera stops the buffer.
No Transfer, Memory Overwrite	• If the internal memory is full, the camera deletes the old images, and continues to buffer the image.
FTP	• The camera transfers the image to an FTP server (see page 66).
E-mail	• The camera transfers the image by E-mail (see page 67).

When you set [FTP] for Transfer Method

Select [FTP], and click [Next>]. The following page is displayed.



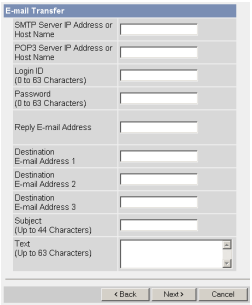
- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Setting	Description
Server IP Address or Host Name*1	• If you set the server IP address, set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available. Or set a host name (1—255 characters).
Port No.	• Enter the number (1—65535). Usually set to 21.
Login ID*1	• If your ISP requires a login ID, set it (0—63 characters).
Password*1	• If your ISP requires a password, set it (0—63 characters).
Login Timing	• Select the login timing to an FTP server. If you set [One Time] during 1-minute transfer, the camera logs in to the server only once, and can reduce the time to log in or log out.
Upload File Name*1	• Set the file name to save on an FTP server. Enter 1—234 characters. Entering "\" creates directories for a file. (E.g. NetworkCamera\image.jpg)
Overwrite setting	• Selecting [Overwrite File] saves and overwrites the image on the server. Selecting [Save as New File with Time Stamp] saves the image attaching time stamps on the file name, and the images are not overwritten.
Data Transfer Method	• Select [Passive Mode] normally. If FTP does not work, select [Active Mode] and check the operation.

*1 But [Space], ["], ['], [&], [<] and [>] are not available.

When you set [E-mail] for Transfer Method

Select [E-mail], and click [Next>]. The following page is displayed.



- Clicking [<Back] takes you back to the previous page.
- Clicking [Cancel] takes you back to the Image Buffer/Transfer page without saving changes.

Note

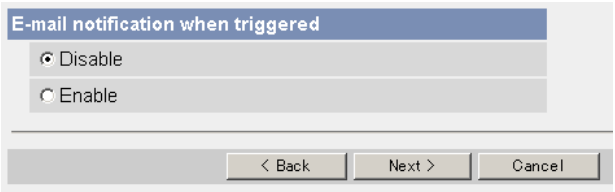
The camera works only with an SMTP (Simple Mail Transfer Protocol) server. It does not work with mail servers like "Hotmail" using a web browser.

Setting	Description
SMTP Server IP Address or Host Name	• If you set the server IP address, set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available. Or set a host name (1—255 characters).
POP3 Server IP Address or Host Name	• If you set the server IP address, set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available. Or set a host name (1—255 characters).
Login ID*1	• If your ISP requires a login ID to log in to a POP3 server, set it (0—63 characters).
Password*1	• If your ISP requires a password to log in to a POP3 server, set it (0—63 characters).
Reply E-mail Address*1	• Set the sender's E-mail address. We recommend you to set the administrator's E-mail address.
Destination E-mail Address*1 1—3	• Set the destination E-mail address (up to 3).

Setting	Description
Subject	• Enter a subject with ASCII characters (see page 102) or characters in each language (0—44 characters for a 1-byte character and 0—22 characters for a 2-byte character). But ["] is not available.
Text	• Enter text with ASCII characters (see page 102) or characters in each language (0—63 characters for a 1-byte character and 0—31 characters for a 2-byte character). But ["] and [end-of-line] key are not available.

*1 But [Space], ["], ['], [&], [<] and [>] are not available.

9. After you confirm the settings and click [Next>], set E-mail notification and click [Next>].



- If you select [Enable], the E-mail Notification When Triggered page is displayed. Enter the settings seeing page 67 and page 68. When finished, click [Next>] and go to step 10.

Setting	Description
Disable	• The camera does not send an E-mail notification when buffering or transferring image.
Enable	• The camera sends an E-mail notification (up to 3 destinations) when buffering or transferring image.

10. Click [Save] after confirming the settings.

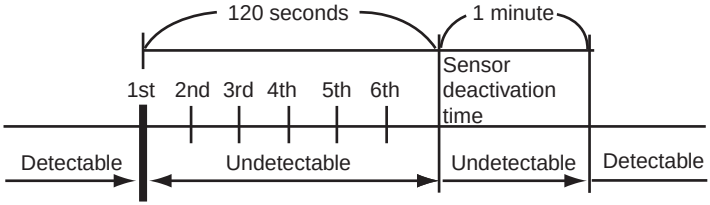
- New settings are saved. The buffered images are deleted.
- When finished, "Success!" is displayed.

11. Click [Go to Image Buffer/Transfer page].

- The Image Buffer/Transfer page is displayed.

Notes

- If you set a short interval to transfer image to a mobile phone, many E-mails may be sent to it leading to a large phone bill. Therefore, we recommend you to set a long interval. In an emergency situation, the E-mail transfer can be stopped by enabling privacy mode using a mobile phone (see page 26).
- Sensor transfer stops its operations until the camera finishes all transfers. For example, if the camera transfers 3 images per minute and 6 images in total with setting 1 minute of sensor deactivation time, the sensor will be in the following operation.



A heat change occurs.

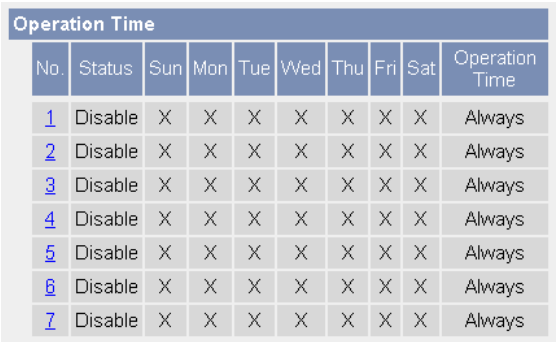
- Buffered images will be deleted by doing the following.
  - Turning off the camera.
  - Saving the settings of Image Buffer/Transfer or Date and Time.
  - Executing [Restart], [Update Firmware] or [Reset to Factory Default].
  - Clicking [Delete Buffered Images] on the Image Buffer/Transfer page (see page 60).

2.14 Specifying Operation Time

The Operation Time page allows you to limit the operation time. The camera image turns to a gray screen outside the operation time.

1. Click [Operation Time] on the Setup page.

2. Click [No.] to set the operation time.



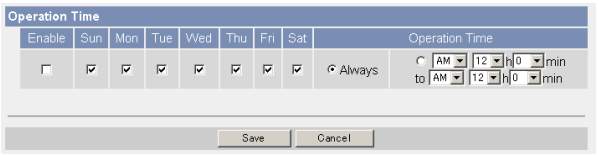
Operation Time

No.	Status	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Operation Time
1	Disable	X	X	X	X	X	X	X	Always
2	Disable	X	X	X	X	X	X	X	Always
3	Disable	X	X	X	X	X	X	X	Always
4	Disable	X	X	X	X	X	X	X	Always
5	Disable	X	X	X	X	X	X	X	Always
6	Disable	X	X	X	X	X	X	X	Always
7	Disable	X	X	X	X	X	X	X	Always

Note

If No. 1—7 are disabled, the camera can always be operated.

3. Check [Enable], set the time, and click [Save]



- Clicking [Cancel] takes you back to the previous page without saving changes.

Setting	Description
Enable	• Check the box to enable the setting. Clear the box to disable it.
A day of the week	• Check the box to enable the day. Clear the box to disable it.
Operation Time	• Select the [Always] option when you do not specify the time period. If you specify the time period, select the time period option and set the time period.

4. Click [Save] when finished.
   - New settings are saved.
   - The Operation Time page is displayed.

About Operation Time

In the operation time settings, the enabled settings take priority over the disabled settings. Therefore, if Monday or Tuesday is disabled in a setting but enabled in other settings, the camera can be operated on both Monday and Tuesday.

No.	Status	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Operation Time
1	Enable	X	X		X	X	X	X	Always
2	Enable	X		X	X	X	X	X	Always

Note

An administrator can view images anytime regardless of the setting for the operation time.

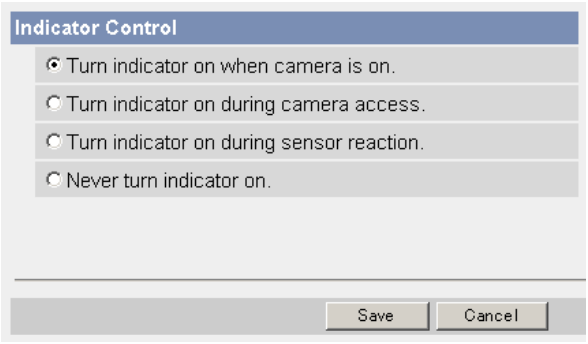
2.15 Changing Indicator Display

The Indicator Control page allows you to select Indicator operation. Indicator has four options.

- Always on
- Turn the indicator on when the camera is accessed.
- Turn the indicator on during sensor reaction.
  If the sensor detects temperature changes, the indicator lights orange despite the image buffer/transfer feature. You can recognize the sensor detection range while seeing the indicator.
- Always off

1. Click [Indicator Control] on the Setup page.

2. Select indicator option.



- Clicking [Cancel] cancels your settings without saving changes.

Notes

- See page 7 in the Installation/Troubleshooting for indicator display.
- Selecting [Never turn indicator on] keeps indicator always off.

3. Click [Save] when finished.

- New settings are saved.
- When finished, "Success!" is displayed.

4. Click [Go to Indicator Control page].

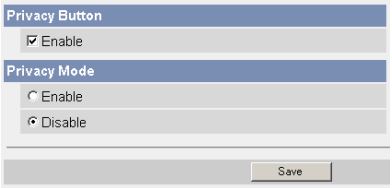
- The Indicator Control page is displayed.

2.16 Enabling Privacy Mode

Pressing the privacy button turns the camera into privacy mode. You can keep your privacy in privacy mode. In this case, the camera operation stops, and the image transfer by timer or sensor (see page 53 or page 60) is also stopped. The indicator turns red, and viewers see a gray screen. Privacy mode can be controlled from a mobile phone (see page 25) or a PC.

1. Click [Privacy Mode] on the Setup page.

2. Click [Save] when finished.

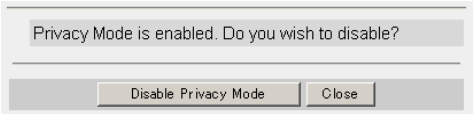


- Selecting [Enable] and clicking [Save] turn the camera into privacy mode.

Setting	Description
Privacy Button	• Clearing the Enable box disables the privacy button on the front of the camera.
Privacy Mode	• Selecting [Enable] and clicking [Save] turn the camera into privacy mode.

Notes

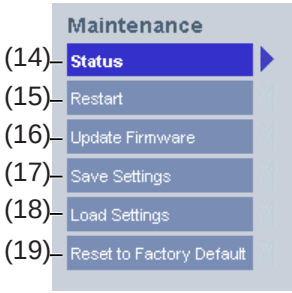
- To turn the camera into normal operation, press the privacy button on the front of the camera (see page 7 in the Installation/Troubleshooting) during privacy mode. Or click [Disable Privacy Mode] after you log in as an administrator.



- If you log in as an administrator, you can disable privacy mode from your mobile phone (see page 25).

3 Camera Maintenance

3.1 Maintenance page

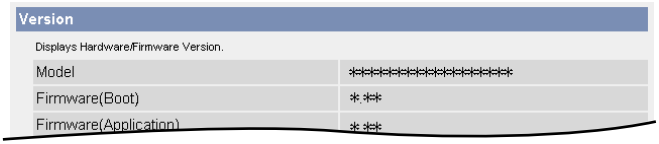


Maintenance		
(14)	**Status**	Displays the camera settings and status (see page 75).
(15)	**Restart**	Restarts the camera (see page 75).
(16)	**Update Firmware**	Updates the camera firmware (see page 76).
(17)	**Save Settings**	Creates a configuration file (see page 79).
(18)	**Load Settings**	Loads settings from a configuration file (see page 80).
(19)	**Reset to Factory Default**	Resets the camera to its default settings (see page 81).

3.1.1 Confirming the Status

The Status page allows you to check the status of the camera. The status information provides support for troubleshooting.

Clicking [Status] displays the following page.



Note

See Panasonic Network Camera support website at **http://panasonic.co.jp/pcc/products/en/netwkcam/** for details about status information.

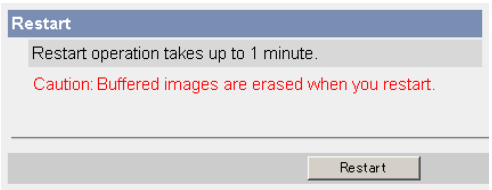
3.1.2 Restarting the Camera

The camera restarts by disconnecting the plug of the AC cord from the outlet and reconnecting it again. The camera can also be restarted on the Restart page.

Note

When the camera restarts, the buffered images will be deleted.

1. Click [Restart] on the Maintenance page.
2. Click [Restart].



- Restarting takes about 1 minute. The Top page is displayed when finished.

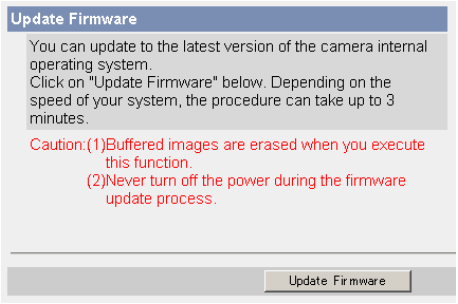
3.1.3 Updating the Camera Firmware

The Update Firmware page allows you to update the camera firmware. If the new firmware is available, install it into the camera.

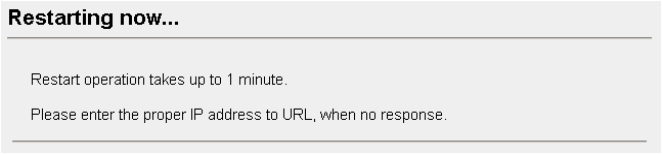
Notes

- Do not turn off the power during firmware update.
- All buffered images will be deleted after the firmware update.
- The firmware version is displayed on the Top page and the Status page.

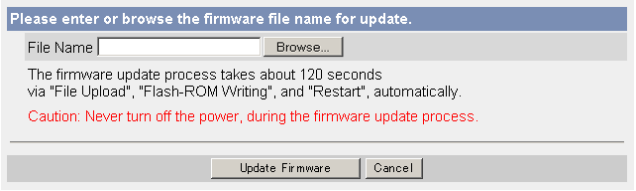
1. Download the new firmware on the Panasonic Network Camera support website at **http://panasonic.co.jp/pcc/products/en/netwkcam/**, and save it on your PC.
2. Click [Update Firmware] on the Maintenance page.
3. Click [Update Firmware].



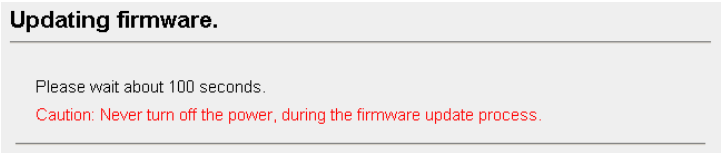
- The camera restarts.



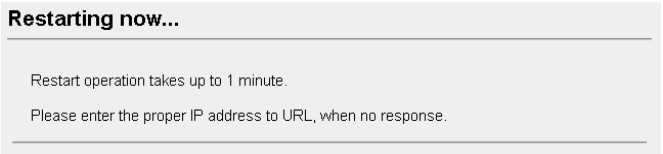
- The Update page is displayed in about 1 minute.



4. Click [Browse...].
   - A dialog box is displayed to select the firmware.
5. Select the firmware (including directory information) and click [Open].
   - The firmware file name is displayed.
6. Confirm the firmware file name, and click [Update Firmware].
   - Clicking [Cancel] takes you back to the Top page without firmware update.
   - The next message is displayed during update.



   - The camera restarts automatically after update.



   - The Top page is displayed in about 1 minute.

7. Confirm that the version number on the Top page is updated.

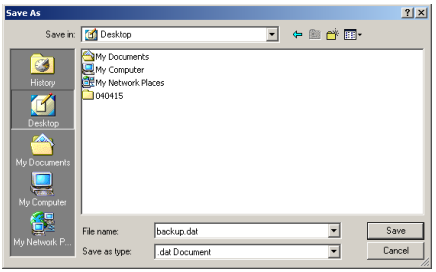
- If the version number is updated, the firmware update is complete.

3.1.4 Creating Configuration File

A configuration file can be saved on your PC. You can load the camera settings from the configuration file on the Load Settings page (see page 80).

1. Click [Save Settings] on the Maintenance page.
2. Click [Save].

3. Click [Save] on the File Download dialog box.
4. Specify the location, and click [Save] on the Save As dialog box.



- The configuration file is saved in the location.

Notes

- The file extension (.dat) cannot be changed. If you change it, the settings cannot be loaded.
- If you try to updating the camera, create a configuration file after updating the firmware. If there is a firmware version difference between the camera that you create a configuration file from and the camera that you try to load settings to, the settings may not be loaded to the camera.

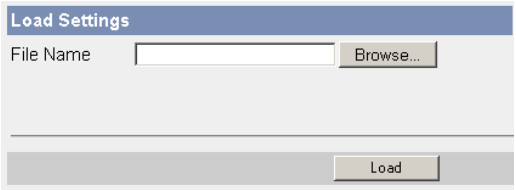
3.1.5 Loading Settings from a Configuration File

The settings can be loaded from a configuration file. If you reset the camera to factory default, the camera can load its settings from the configuration file.

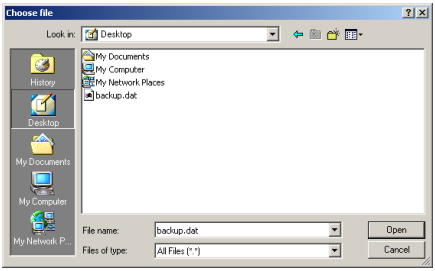
Notes

- The configuration file has network settings. When the settings are loaded, the network settings are also loaded as they were saved.
- If there is a firmware version difference between the camera that you create a configuration file from and the camera that you try to load settings to, the settings may not be loaded to the camera. Save settings after updating the firmware.

1. Click [Load Settings] on the Maintenance page.
2. Click [Browse...].



3. Select the configuration file on the Choose file dialog box, and click [Open].



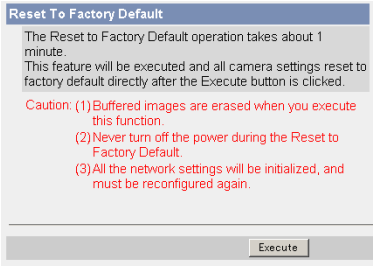
- The file name is displayed in the data field.

4. Confirm the file name, and click [Load].
5. Click [Restart].
   - The camera restarts, and the Top page is displayed.

3.1.6 Resetting the Camera to Factory Default

All camera settings are reset to factory default directly after the Execute button is clicked.

1. Click [Reset to Factory Default] on the Maintenance page.
2. Click [Execute].



- The indicator blinks orange, and then turns off for 10 seconds.
- All camera settings (user name, password, IP address, subnet mask etc.) are reset to factory default.
- If the camera is reset to factory default, the network connection mode changes to [Automatic Setup]. Reconfigure the camera seeing the Getting Started.

Notes

- The internal clock will not be reset, but the time format will return to AM/PM mode (see page 36). Set it again.
- See page 85—page 92 for default settings.
- Pressing the FACTORY DEFAULT RESET button resets the camera to the factory default (see page 84).
- All buffered images are deleted when resetting the camera to factory default.
- The reset operation takes about 1 minute.
- Do not turn off the camera during the reset operation.

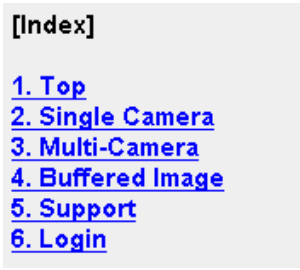
3.2 Support page

Support		
(20)	**Help**	Displays the Help page (see page 82).
(21)	**Product Information**	Displays product information website (see page 82).
(22)	**Support Information**	Displays support information website (see page 83).

3.2.1 Seeing Help page

The Help page displays explanations for each feature about the following 1. to 6. items.

Clicking [Help] on the Support page displays the next page.



3.2.2 Seeing Product Information

You can see product information on the Panasonic Network Camera support website.

Clicking [Product Information] on the Support page displays the URL, click it.

Note

If the camera is not connected to the Internet, the website cannot be displayed.

3.2.3 Seeing Support Information

You can see support information on the Panasonic Network Camera support website.

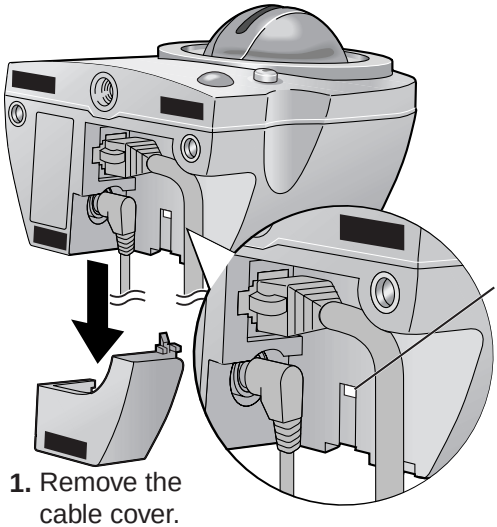
Clicking [Support Information] on the Support page displays the URL, click it.

Note

If the camera is not connected to the Internet, the website cannot be displayed.

3.3 FACTORY DEFAULT RESET Button

The camera has a FACTORY DEFAULT RESET button on the bottom.



Pressing the FACTORY DEFAULT RESET button resets the camera to factory default. If you lose your user name and password, use this button to reset the camera.

- Press the FACTORY DEFAULT RESET button for 1 second when the camera is on.
- The indicator blinks orange, and then turns off for 10 seconds.
- Do not turn off the camera until the indicator lights green.

Notes

- The internal clock will not be reset, but the time format will return to AM/PM mode (see page 36). Set it again.
- See page 85—page 92 for default settings.
- All buffered images are deleted when resetting the camera to factory default.
- The reset operation takes about 1 minute.

3.4 Default Setting List

Basic

Items		Default	Required	Notes
Network	Connection Mode	Automatic Setup	-	Automatic Setup/ Static/DHCP
	Allow Access from the Internet (Automatic Setup only)	No	-	-
	Network Configuration from Setup Program (Static/DHCP only)	Enable	-	-
	Port No. (Static/DHCP only)	80	-	20, 21, 25 and 110 is not available. *2
	IP address (Static only)	192.168.0. 253	When setting Static	*1
	Subnet Mask (Static only)	255.255. 255.0	When setting Static	*1
	Host Name (DHCP only)	[Blank]	When setting DHCP (Not always required)	0—63 characters *4
	Default Gateway (Static/DHCP only)	[Blank]	When using Gateway	*1
	DNS Server 1 DNS Server 2 (Static/DHCP only)	[Blank]	When using DNS	*1
	Max. Bandwidth Usage (Mbps)	Unlimited	-	0.1, 0.2, 0.3, 0.5, 1 or Unlimited
	Connection Type	Auto Negotiation	-	-
UPnP	Auto Port Forwarding	Disable	-	-
	Display Shortcut Icon in My Network Places	Enable	-	-

Items		Default	Required	Notes
Viewnet cam.com	Enable	No check	-	-
Date and Time	Time Setting	AM/PM	-	-
	Automatic Time Adjustment	No check	When using NTP	-
	NTP Server Address or Host Name	[Blank]	When enabling Automatic Time Adjustment	*1, *4
	Time Zone	GMT 00:00	-	-
	Adjust Clock for Daylight Saving Time	No check	-	-
	Start Day	Mar, Last Sunday, 1 AM	-	-
	End Day	Oct, Last Sunday, 1 AM	-	-

Items		Default	Required	Notes
Camera	Camera Name	Network Camera	Required	1—15 characters *6
	White Balance	Auto	-	Auto/Fixed Indoor/ Fixed Fluorescent (White)/Fixed Fluorescent (Daylight)/Fixed Outdoor/Hold
	AC Power Source Frequency	50 Hz	-	50 Hz, 60 Hz
	Pan Range (Minimum)	-50 degrees	-	-50—+50 degrees
	(Home Position)	0 degrees	-	-50—+50 degrees
	(Maximum)	+50 degrees	-	-50—+50 degrees
	Tilt Range (Minimum)	-40 degrees	-	-40—+10 degrees
	(Home Position)	0 degrees	-	-40—+10 degrees
	(Maximum)	+10 degrees	-	-40—+10 degrees

Account

Items		Default	Required	Notes
Security: Administrator	General Authentication	Do not permit access from guest users	-	-
	User Name	[Blank]	When setting administrator	6—15 characters *3
	Password	[Blank]	When setting administrator	6—15 characters *3
	Retype Password	[Blank]	When setting administrator	6—15 characters *3
General User	User ID List	[Blank]	-	-
	User Name	[Blank]	When setting general user	6—15 characters *3
	Password	[Blank]	When setting general user	6—15 characters *3
	Retype Password	[Blank]	When setting general user	6—15 characters *3
	Access Level	Level 3	-	-

Advanced

Items		Default	Required	Notes
Image Display	Single Camera Image Resolution	320 x 240	-	320 x 240 or 640 x 480
	Single Camera Image Quality	Standard	-	Favor Clarity, Standard or Favor Motion
	Single Camera Refresh Interval	Motion	-	3, 5, 10, 30, 60 (s) or Motion
	Multi-Camera Image Resolution	320 x 240	-	160 x 120 or 320 x 240
	Multi-Camera Image Quality	Standard	-	Favor Clarity, Standard or Favor Motion
	Multi-Camera Refresh Interval	Motion	When reducing traffic	3, 5, 10, 30, 60 (s) or Motion
	Limit Continuous Motion JPEG	Unlimited	When reducing traffic	10, 30 (s), 1, 5, 10, 30, 60 (min) or Unlimited
	Still Image Refresh Interval	30 s	-	3, 5, 10, 30 or 60 (s)
	Language	English	-	English/ Japanese/ French/German/ Italian/Spanish/ Simplified Chinese/Russian
	Banner Display Administrator	Checked	When displaying the Banner for Administrator	-
	Banner Display General User	Checked	When displaying the Banner for General User	-

Items		Default	Required	Notes
Multi-Camera	Multi-Camera	[Blank]	-	-
	Display	Checked	When setting Multi-Camera	-
	IP Address or Host Name	[Blank]	When setting Multi-Camera	IP address*1 Host name*5 is 1—255 characters.
	Port No.	[Blank]	When setting Multi-Camera	20, 21, 25 and 110 are not available. *2
	Camera Name	[Blank]	When setting Multi-Camera	1—15 characters *7
	Change Camera Order	From No.1 to No.1	When changing camera order	From No.1—12 to No.1—12

Items		Default	Required	Notes
Buffer/ Transfer	Status	Off	-	-
	Trigger	Timer	-	Timer, Sensor
	Active Time of Trigger	Always	-	-
	Lens Position When Triggered	Do not move	-	Do not move, Move to sensor position
	Image Resolution	320 x 240	-	160 x 120, 320 x 240, 640 x 480
	Image Quality	Standard	-	Favor Clarity, Standard, Favor Motion
	Image Buffer Frequency	Every 1 s, buffer 1 image	-	Every 1 (s/min/ h), buffer 1—15 images
	Sensor deactivation time	No appointment	When selecting sensor	No appointment, 10, 30 (s), 1, 3, 5, 10 (min)
	Transfer Method	No Transfer, No Memory Overwrite	-	-
	Notify	Disable	-	-
Operation Time	Operation Time	Always	-	-
Indicator Control	Indicator Control	Turn indicator on when camera is on	-	-
Privacy Mode	Privacy Button	Checked	-	-
	Privacy Mode	Disable	-	-

Preset Buttons

Items		Default	Required	Notes
Preset Buttons	Preset 1	UpperLeft	-	-
	Preset 2	UpperRight	-	-
	Preset 3	LowerLeft	-	-
	Preset 4	LowerRight	-	-

*1 Set 4 digits (0—255) and 3 periods such as "192.168.0.253". But "0.0.0.0" and "255.255.255.255" are not available.

*2 Set the number of 1—65535.

*3 Enter ASCII characters for the host name (see page 102). But [Space], ["], ['], [&], [<], [>] and [:] are not available.

*4 Enter ASCII characters for the host name (see page 102). But [Space], ["], ['], [&], [<], and [>] are not available.

*5 Enter ASCII characters for the host name (see page 102). But [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], and [>] are not available.

*6 Enter ASCII characters (see page 102) or characters in each language (1—15 characters for a 1-byte character and 1—7 characters for a 2-byte character). But [Space], ["], ['], [&], [<], and [>] are not available.

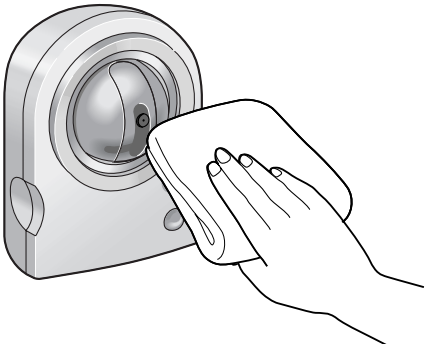
*7 Enter ASCII characters (see page 102) or characters in each language (1—15 characters for a 1-byte character and 1—7 characters for a 2-byte character). But [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], and [>] are not available.

3.5 Cleaning

Clean the camera after the camera is turned off.

3.5.1 Cleaning the Main Unit

Clean the unit with a dry and soft cloth.

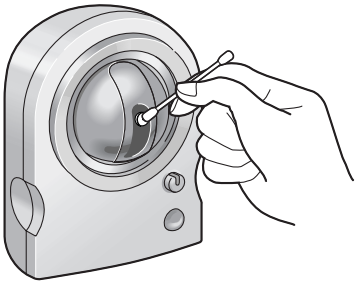


Notes

- Do not use alcohol, polishing powder, cleanser, benzine, thinner, wax, petroleum products or hot water to wipe the camera. Also avoid pesticide, glass cleaner or hair spray. They may cause change in the shape or color.
- Do not apply pressure to the pan/tilt portion of the camera. Any forced movement can damage the internal mechanism.
- If the pyroelectric infrared sensor has dust on it, it may not detect temperature differences. Keep the pyroelectric infrared sensor clean.

3.5.2 Cleaning the Lens

If the lens has dust on it, the image may be unclear or out of focus.



Note

Do not touch the lens directly. Fingerprints may cause an unclear image.

3.6 Setting an IP Address on Your PC

Your PC's IP address can be assigned by the following procedures.

1. Display the TCP/IP Properties window.

- The steps are different depending on your OS. The steps are shown below.

OS	Steps
Windows XP	[Start] (→[Settings])→[Control Panel]→[Network and Internet Connections]→[Network Connections]→[Local Area Connection] in use→[Properties]→Select Internet Protocol [TCP/IP]→[Properties]→[Use the following IP address]
Windows 2000	[Start]→[Settings]→[Control Panel]→[Network and Dial-up Connections]→[Local Area Connection] in use →[Properties]→Select Internet Protocol [TCP/IP] →[Properties]→[Use the following IP address]
Windows Me, Windows 98SE	[Start]→[Settings]→[Control Panel]→[Network]→Select [TCP/IP] with adaptor in use→[Properties]→[IP Address] →[Specify an IP address]

- When using Windows XP and Windows 2000, log in as an administrator to access the TCP/IP Properties window.

2. Enter IP address and subnet mask.

3. Click [OK].

- In Windows Me or Windows 98SE, the PC needs to be restarted to enable the settings.

Local IP Address

Local IP address is the network ID that is not used on the Internet. They are classified into Class A, Class B and Class C, as shown below. Set the IP address in the range of the number specified in the class corresponding to your local network scale.

Class	Subnet Mask	Local IP Address		
Class A	255. 0. 0. 0	10. 0. 0. 1	—	10. 255. 255. 254
Class B	255. 255. 0. 0	172. 16. 0. 1	—	172. 31. 255. 254
Class C	255. 255. 255. 0	192. 168. 0. 1	—	192. 168. 0. 254

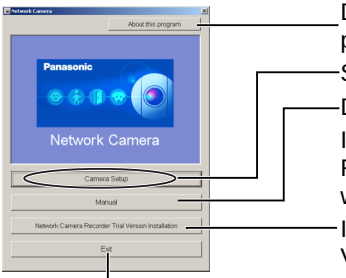
3.7 Using Setup Program

The Setup Program can be used for the following purposes.

- Finding the IP address and port number of the camera connected to your network.
- Setting up the camera automatically.
- Setting up the camera manually to a Static or a DHCP setting.
- Displaying the Setup page.

Finding the camera

1. Connect the Ethernet cable to the camera following the Getting Started.
2. Insert the Setup CD-ROM into the CD-ROM drive of your PC.
   - If the Network Camera Setup window does not appear, click "setup.exe" on the Setup CD-ROM.
3. Click [Camera Setup].



Displays version information about this program.

Sets up the camera.

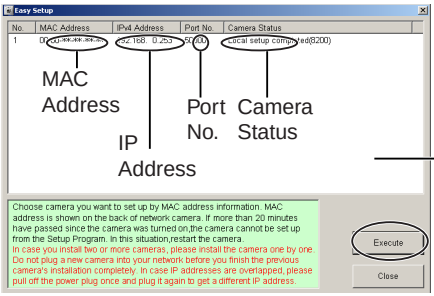
Displays the camera manuals.

If your PC does not have Adobe® Acrobat® Reader, install it from the Adobe Reader website.

Installs Network Camera Recorder Trial Version.

Closes the Setup Program.

- You can find the camera IP address and port number by looking up the MAC address of your camera.

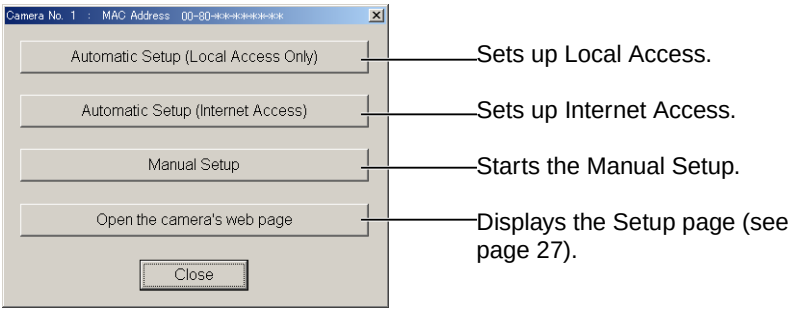


Notes

- If you try to find multiple cameras, each MAC address beside the Ethernet (LAN) port verifies which camera you are setting up.
- See page 13 in the Installation/Troubleshooting for the setup from the MAC address.

Automatic Setup (Local or Internet Access) or Manual Setup

1. Click [Execute] on the Camera List window shown on page 95.
2. Click each button to execute the program.



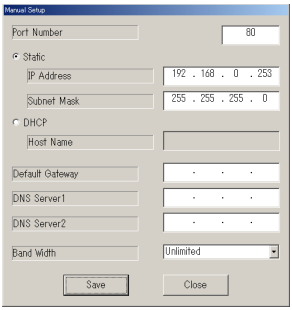
Notes

- For the first time installation or after pressing the Factory Default Reset button, you must select [Automatic Setup (Local Access Only)]. To start the Manual Setup, execute Automatic Setup (Local Access Only) first, and then start the Setup Program to execute the Manual Setup.
- See the Getting Started for the local and Internet access setup.

Manual Setup window

Set up each parameter seeing page 31—page 32.

When more than 20 minutes passes after turning on the camera, it cannot be set up. If it cannot be set up, restart the camera.



- If "Camera setup complete" is displayed, click [Close] to finish the Manual Setup.

3. Close all Setup windows.

3.8 Setting Your PC

3.8.1 Setting the Proxy Server Settings on Web Browser

If the proxy server is not used, the settings are not required. If you are using the proxy server, the following settings are required.

- A proxy server may prevent access to the camera depending in a corporate environment. In this case, your web browser must be set to use the proxy server to access the camera. Consult your ISP or network administrator.

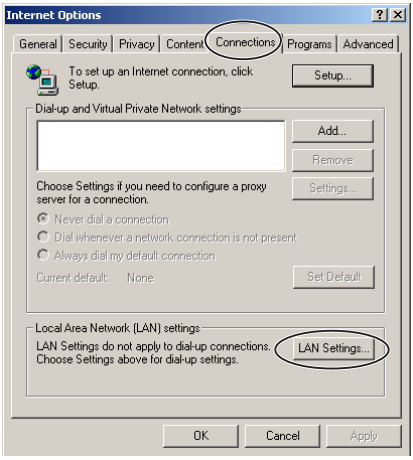
Notes

- A proxy server is used to protect your network connected to the Internet.
- If the camera is accessed via a proxy server, problems may occur. Consult your network administrator before installing the camera.
- If the camera is accessed via a proxy server, the refresh interval may be slow.

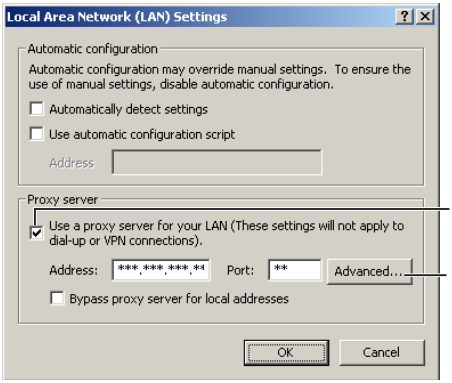
How to Set the Proxy Server Settings

1. Start up Internet Explorer. (The example is Internet Explorer 6.0.)
2. Click [Tools]→[Internet Options...].

3. Click the [Connections] tab, and click [LAN Settings].



4. See if the Use a proxy server check box is checked or not. If checked, click [Advanced...].

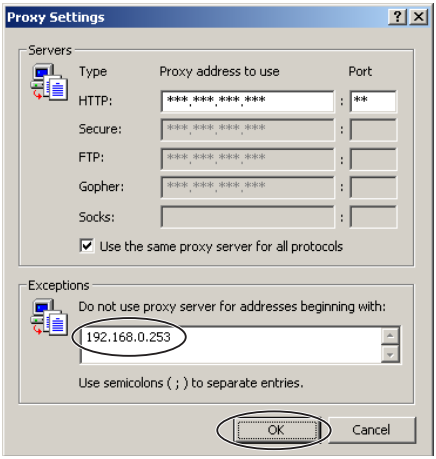


See if the check box is checked or not.

If checked, click [Advanced...].

- If not checked, click [Cancel]. Proxy settings are not required.

5. Enter the camera IP address into the Do not use proxy server for addresses beginning with data field. (Example: 192.168.0.253)



6. Click [OK].

3.8.2 Setting UPnP™ to Display Camera Shortcut in My Network Places

To display the camera shortcut in the My Network Places folder, Windows component should be added. Enable UPnP™ (Universal Plug and Play) following the steps below.

OS	Steps
Windows XP	[Start] (→[Settings])→[Control Panel]→[Add or Remove Programs]→[Add/Remove Windows Components]→Select [Networking Services]→Check [Universal Plug and Play] →[OK]→[Next]→Complete
Windows Me	[Start]→[Settings]→[Control Panel]→[Add/Remove Programs]→[Windows Setup] tab→Select [Communication] →[Detail]→Check [Universal Plug and Play]→[OK]→[OK] →[Restart]→Complete

3.8.3 Setting the Internet Temporary File Setting on Web Browser

The old image may be displayed. In this case, set the web browser following the steps below.

[Tools]→[Internet Options]→[General] tab→[Settings] in the Temporary Internet files→Check [Every visit to the page] in the Check for newer versions of stored pages→[OK]→[OK]→Complete

3.9 ASCII Character Table

ASCII Character Table					

(space)
!
"
#
$
%
&
'
(
)
*
+
,
-
.
/
	0
	1
	2
	3
	4
	5
	6
	7
	8
	9
	:
	;
	<
	=
	>
	?
		@
		A
		B
		C
		D
		E
		F
		G
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3.10 File Size and Number of Buffered Images

The following table shows the relationship between the file size of the image and the maximum number of buffered images.

Note

The following file sizes were shown at the largest value.

Resolution	Items	Capture	Favor Clarity	Standard	Favor Motion	Mobile Phone
640 x 480	File Size	About 60 KB	About 50 KB	About 33 KB	About 20 KB	-
	Buffered Images	-	About 80	About 120	About 200	-
320 x 240	File Size	About 30 KB	About 25 KB	About 16 KB	About 8 KB	About 8 KB
	Buffered Images	-	About 160	About 250	About 500	About 500
160 x 120	File Size	About 10 KB	About 7 KB	About 5 KB	About 3 KB	About 3 KB
	Buffered Images	-	About 570	About 800	About 1330	About 1330

3.11 Specifications

Network Camera

Items	Specifications
Pan/Tilt Angle	Pan: -50 ° to +50 °, Tilt: -40 ° to +10 °
Number of Pixels	1/4-inch CMOS Sensor 320,000 pixels
Illuminance	1—10,000 lx (Color Night View mode auto switching)
White Balance	Auto/Manual/Hold
Focus	Fixed 0.5 m (20 inches)—Infinity
Caliber Ratio (F No.)	F2.8
Horizontal Viewing Angle	43 °
Exposure	Auto

Other Specifications

Items	Specifications
Video Compression	JPEG (3 Levels)
Video Resolution	640 x 480, 320 x 240 (default), 160 x 120
Buffered Image*1	About 250 frames (320 x 240) with time display
Frame rate*2	Max. 7.5 frames/second (640 x 480) Max. 15 frames/second (320 x 240 or 160 x 120)
Supported Protocols	TCP, UDP, IP, HTTP, FTP, SMTP, DHCP, DNS, DDNS, ARP, ICMP, POP3, NTP
Message Transfer Condition	Pyroelectric Infrared Sensor or Timer
Image Transfer Method	SMTP, FTP

*1 The maximum number of frames changes depending on the image quality and what object you buffer.

*2 Frame rate changes depending on the network environment, the PC performance, the image quality and what object you view.

Other Specifications

Items	Specifications
Interface	10Base-T/100Base-TX Ethernet RJ-45 connector x 1
Sensor Detection Method	Pyroelectric Infrared Sensor
Sensor Range	Horizontally About 30 °, Vertically About 85 °, Distance About 5 m (16.4 feet) (When the temperature is 20 °C [68 °F])
Indicator Display	Power/Network Communication/Camera operation/ Ethernet link
Dimension (WHD)	About 74 mm (2.91 inches) x About 98 mm (3.86 inches) x About 61 mm (2.40 inches)
Weight	170 g (0.37 lb.) (Only the unit)
Power Supply	AC adaptor: Input 100—240 V AC, 50/60 Hz Output 12 V DC, 750 mA Consumption: About 2.5 W (3.5 W during pan/tilt scan)
Temperature	Operation: +5 °C (+41 °F) to +40 °C (+104 °F) Storage: +0 °C (+32 °F) to +50 °C (+122 °F)
Humidity	Operation: 20 %—80 % (No Condensation) Storage: 20 %—90 % (No Condensation)

Index

A

ActiveX Controls 11
Administrator/General Users/Guest Users 44
ASCII Character Table 102

B

Buffered Image page 23

C

Camera Access 8
Camera page 38
Capture Image Button 14
Cleaning 93
Click to Center 13
CPU 4

D

Date and Time page 36
Default Setting List 85

F

FACTORY DEFAULT RESET Button 84

G

General User page 46

H

Help page 82
Home Position 17

I

Image Display page 48
Indicator Control page 72

L

Load Settings page 80
Login 45

M

Maintenance page 74
Mobile Phone 25
Multi-Camera page 21
Multi-Camera Setup page 51

N

Network page 29

O

Operating System 4
Operation Bar 15
Operation Time page 70

P

Pan/Tilt Range 16, 41
Preset Button 17
Privacy Mode page 73
Product Information page 82
Protocol 4

R

Reset to Factory Default page 81
Restart page 75

S

Save Settings page 79
Security: Administrator page 42
Sensor Image Buffer/Transfer 60
Sensor Position 17
Setup page 27
Setup Program 95
Single Camera page 10
Specifications 104
Status page 75
Support Information page 83
Support page 82
System Requirements for your PC 4

T

Timer Image Buffer/Transfer 53

Top page 9

U

Update Firmware page 76
UPnP page 33

V

Viewnetcam.com Service 34

W

Web Browser 4

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PSQX3329ZB KK0904JT1035 (CE)