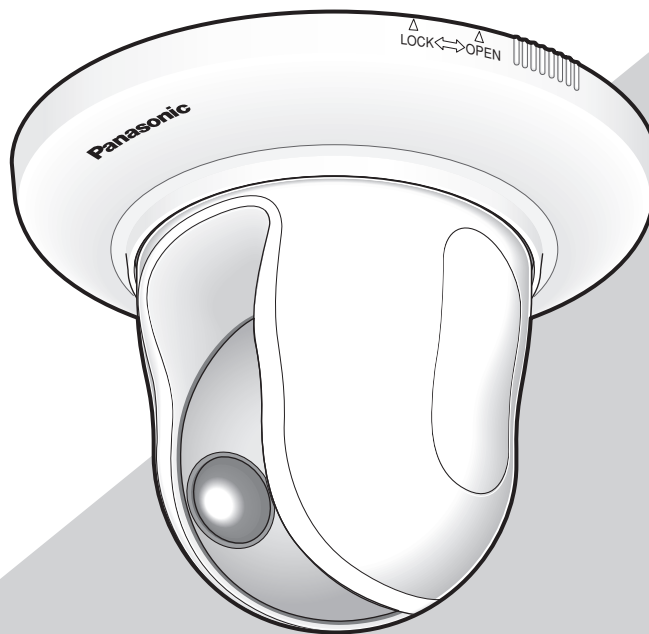


# Panasonic®

## Network Operating Instructions

### Network Camera

Model No. **WV-NS202A**



Before attempting to connect or operate this product,  
please read these instructions carefully and save this manual for future use.

No model number suffix is shown in this manual.

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# Preface

## About these operating instructions

There are 2 sets of operating instructions for the WV-NS202A as follows.

- Installation Guide
- Network operating instructions

These network operating instructions contain descriptions of how to operate this product using a PC via a network and of how to configure the settings.

Refer to the installation guide for descriptions of how to install this product and of how to connect to a network.

Adobe® Reader is required to read PDF. When the Adobe® Reader is not installed on the PC, download the latest Adobe® Reader from the Adobe web site and install it.

## Trademarks and registered trademarks

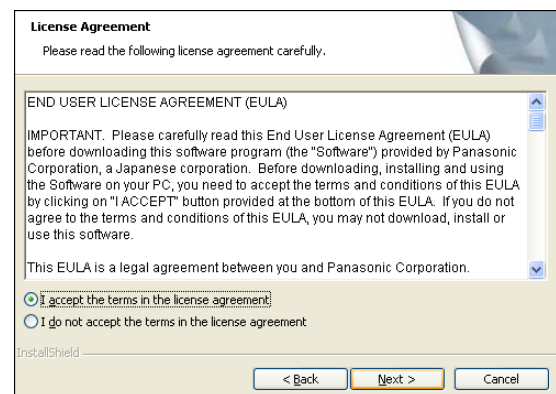
- Microsoft, Windows, Windows Vista, Internet Explorer, ActiveX and DirectX are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Adobe and Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- SD logo is a trademark.
- Other names of companies and product contained in these operating instructions may be trademarks or registered trademarks of their respective owners.

## Viewer software

- Images will not be displayed when the viewer software "Network camera View3" is not installed on the PC. Install the viewer software from this product or from the provided CD-ROM.

### Important:

- The default setting of "Automatic installation of Viewer software" is "ON". Follow the instructions on page 87 when the message is displayed on the information bar of the browser.
- When the "Live" page is displayed for the first time, the install wizard of the ActiveX control required to display images from the camera will be displayed. Follow the instructions of the wizard.
- When the install wizard is displayed again even after completing the installation of the ActiveX, restart the PC.



- The viewer software used on each PC should be licensed individually. The number of installations of the viewer software from the camera can be checked on the [Upgrade] tab of the "Maintenance" page (☞ page 77). Refer to your dealer for the software licensing.

# Monitor images on a PC

The following are descriptions of how to monitor images from the camera on a PC.

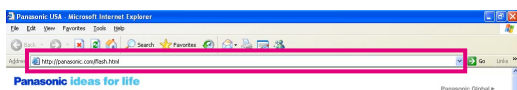
## Monitor images from a single camera

### Step 1

Start up the web browser.

### Step 2

Enter the IP address designated using the Panasonic IP setup software in the address box of the browser. (Example: `http://192.168.0.10`)

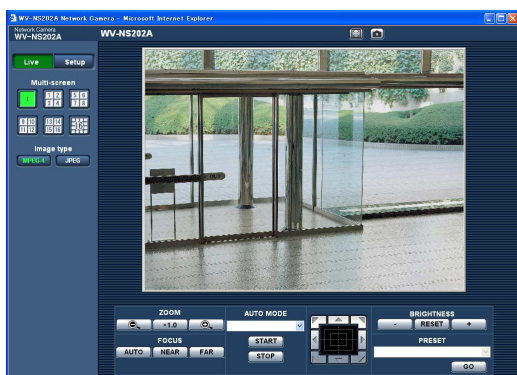


### Important:

- When the HTTP port number is changed from "80", enter "http://IP address of the camera + : (colon) + port number" in the address box of the browser, for example, "http://192.168.0.11:8080".
- When the PC is in a local network, configure the web browser to bypass the proxy server for the local address.

### Step 3

Press the [Enter] key on the keyboard.  
→ The "Live" page will be displayed.



### Important:

- When displaying multiple MPEG-4 images on a PC, images may not be displayed depending on the performance of the PC.
- When "ON" is selected for "VMD alarm" (page 52), the frame rate of MPEG-4 and JPEG (QVGA) images will become 15 fps at a maximum.

### Notes:

- When "ON" is selected for "User Authentication", the authentication window will be displayed before displaying live images for the user name and password entries. The default user name and password are as follows.

User name: admin

Password: 12345

When accessing the camera without changing the default password, the pop-up window saying that it is recommended to change the password will be displayed.

To enhance the security, change the password for the user "admin". It is recommended to change this password periodically.

- When "Unicast port (AUTO)" or "Unicast (MANUAL)" is selected for "Transmission type" of "MPEG-4 setup", up to 8 users can access the camera concurrently regardless of the image type (JPEG/MPEG-4) that the current access users are monitoring. Depending on the set values for "Total bit rate" and "Max bit rate (per 1 client)", the maximum concurrent access number may be less than 8 users. When 8 users are concurrently accessing, the access limit message will be displayed for users who subsequently attempt to access. When "Multicast" is selected for "Transmission type" of "MPEG-4 setup", users who are monitoring MPEG-4 images will not be limited to access.
- When "ON" is selected for "MPEG-4 transmission" (page 36), an MPEG-4 image will be displayed. When "OFF" is selected, a JPEG image will be displayed. It is possible to display a JPEG image even when "ON" is selected for "MPEG-4 transmission". In this case, the refresh interval will be limited.

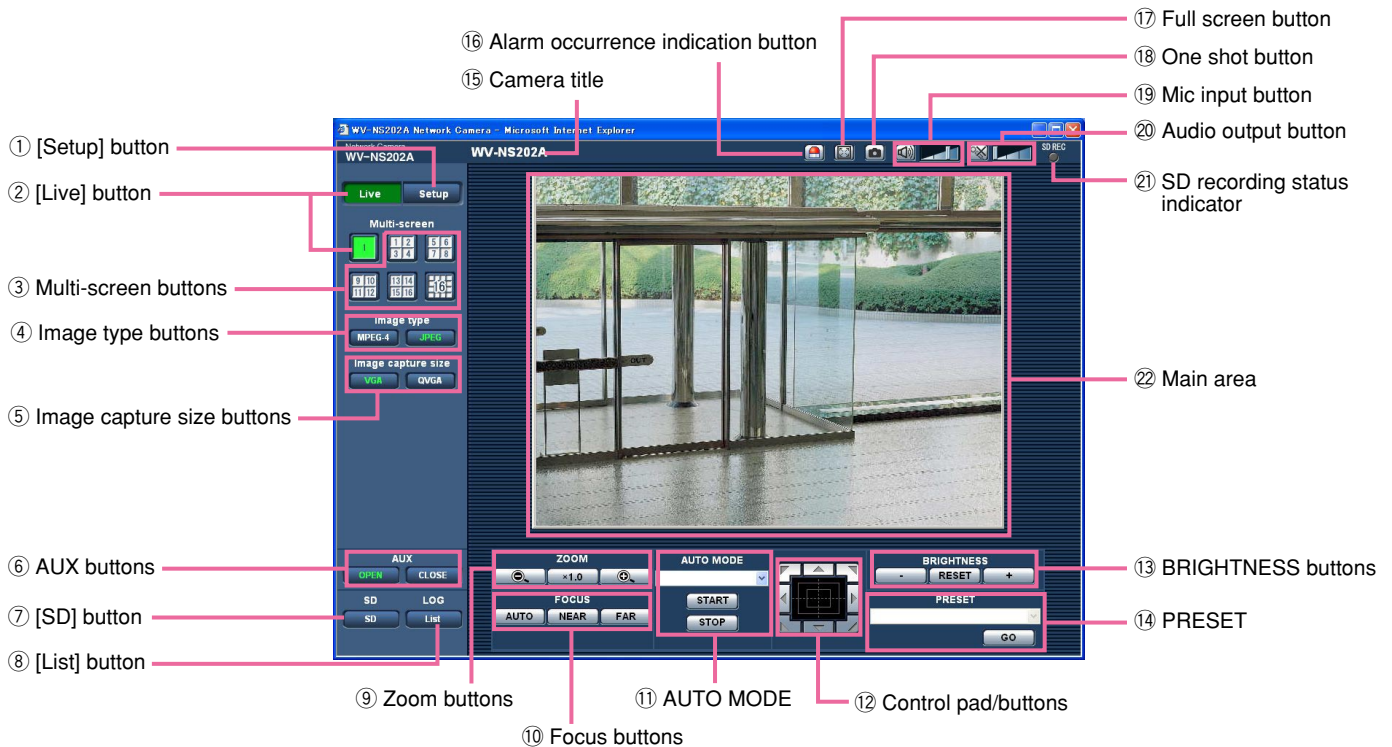
### <Refresh interval (MPEG-4)>

- When "ON" is selected for "MPEG-4 transmission"
  - JPEG (VGA): 5 fps
  - JPEG (QVGA): 10 fps
- When "OFF" is selected for "MPEG-4 transmission"
  - JPEG (VGA or QVGA): 30 fps

The refresh interval may be longer depending on a network environment, PC spec, photographic subject, access traffic, etc.

Refer to the following page for further information about the "Live" page.

## About the "Live" page



### ① **Setup** [Setup] button (\*1)

Click this button to display the setup menu. The button will turn green and the setup menu will be displayed.

### ② **Live** [Live] button

Click this button to display the "Live" page. The button will turn green and the "Live" page will be displayed.

### ③ **Multi-screen buttons**

Images from multiple cameras can be displayed on a multi-screen by registering cameras on the setup menu. (☞ page 9)

### ④ **Image type buttons**

**MPEG-4**: The letters "MPEG-4" on the button will turn green and an MPEG-4 image will be displayed. When "OFF" is selected for "MPEG-4 transmission" on the setup menu, the [MPEG-4] button will not be displayed. (☞ page 36)

**JPEG**: The letters "JPEG" on the button will turn green and JPEG image will be displayed.

### ⑤ **Image capture size buttons**

These buttons will be displayed only when a JPEG image is displayed.

**VGA**: The letters "VGA" will turn green and images in the main area will be displayed in VGA size.


**QVGA**: The letters "QVGA" will turn green and images in the main area will be displayed in QVGA size.

### ⑥ **AUX buttons (\*2)**

These buttons will be displayed only when "Terminal alarm 3" is selected for "AUX output" on the setup menu. (☞ page 52)

**OPEN**: The letters "OPEN" on the button will turn green and the status of AUX connector will be open.

**CLOSE**: The letters "CLOSE" on the button will turn green and the status of the AUX connector will be closed.

⑦  **[SD] button (manual SD recording button) (\*2)**

This button will be displayed only when "Manual" is selected for "Save trigger" on the setup menu. (☞ page 27)

Click this button to manually record images on the SD memory card. Refer to page 10 for descriptions of how to manually record images on the SD memory card.

⑧  **[List] button (\*1)**

This button will become available only when "ON" is selected for "Save logs" on the setup menu (☞ page 31).

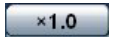
When this button is clicked, the log list will be displayed and images saved on the SD memory card can be played.

Refer to page 17 for further information about the log list and of how to play images on the SD memory card.

⑨ **ZOOM buttons (\*2)**



: Click this button to adjust the zoom ratio to the WIDE side.

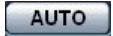


: Click this button to set the zoom ratio to x1.0.

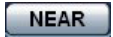


: Click this button to adjust the zoom ratio to the TELE side.

⑩ **Focus buttons (\*2)**



: Click this button to adjust the focus automatically.



: Click this button to adjust the focus to the NEAR side.



: Click this button to adjust the focus to the FAR side.

⑪ **AUTO MODE (\*2)**

Select an operation from the pull-down menu and click the [START] button. The selected operation will start.

Click the [STOP] button to stop the operation.

The selected operation will stop when the camera (panning/tilting/zooming/focusing) is operated or when an action that is to be taken according to the settings for "Self return" (☞ page 38) or for "Camera motion on alarm" (☞ page 53) starts.

**Auto track:** Automatically tracks an object in the shooting area.

---

**Notes:**

- The auto track function works only when the size of the object is larger than 1/48 of the main area and also the contrast ratio between the object and the background is more than 5 %.
- The auto track function of this camera is the simplified function that tracks a moving object in the shooting area. It may be impossible to track a moving object in the following cases:
  - When there are multiple moving objects in the shooting area
  - When the contrast ratio between a moving object and the background is almost none
  - When an object moves quickly
  - When a moving object is too small or too big
  - When the shooting area is dark
  - When there is a flicker in the shooting area
  - When the zoom ratio is set to the TELE side, it may be difficult to obtain accuracy with the auto tracking function. It is recommended to use the auto tracking function with setting the zoom ratio to the WIDE side.

---

**Auto pan:** Automatically pans between the start position and the end position set in advance (☞ page 47).

Even when the camera is operated for zooming or focusing, the camera continues panning. (However, panning will stop when the zoom button (x1.0) is clicked.)

**Preset sequence:** Automatically moves to the preset positions (☞ page 45) orderly (start from the lowest preset position number).

**360 map-shot:** Moves 45° horizontally at a time and repeats 7 times to shoot images of each 45° position (45° x 8 = 360°), and then displays 8 thumbnail images of each 45° position (45° x 8 = 360°) on a newly opened window. When a thumbnail image is clicked, the camera moves to the respective position and live images will be displayed on the "Live" page.

**Preset map-shot:** 8 thumbnail images of the preset position 1-8 (☞ page 45) will be displayed orderly on a newly displayed window. When a thumbnail image is clicked, the camera moves to the respective position and live images will be displayed on the "Live" page.

---

**Notes:**

- Do not operate the browser until all the thumbnail images are displayed and the camera returns to the



original position (where the camera was when "360° map-shot" or "Preset map-shot" was carried out).

- When "360 map-shot" is carried out while the camera is moving (panning/tilting), images captured while panning/tilting may be displayed as the thumbnail display. In this case, stop the current operation and carry out "360 map-shot" again.
- When "Preset map-shot" is carried out with an unregistered preset position (among preset position 1-8), the thumbnail image of the preset position before the unregistered preset position will be displayed.

In this case, the camera will not move when the thumbnail image is clicked. (For example, when preset position 3 is unregistered, the thumbnail image of preset position 2 will be displayed as the thumbnail image of preset position 3. The camera will not move when the thumbnail image of preset position 3 is clicked.)

- The camera will not always return to the exactly same position where it was before "360° map-shot" or "Preset map-shot" was carried out. (It may sometimes be slightly different.)
- The window on which the thumbnail images are displayed will close when clicking the following buttons that can switch the camera channel or reload images.

[Live] button, multi-screen buttons, image type buttons ([MPEG-4]/[JPEG]), image capture size buttons ([VGA]/[QVGA]), full screen button, [Setup] button (☞ pages 5 - 7)

To display the thumbnail images again, carry out "360° map-shot" or "Preset map-shot" again.

## ⑫ Control pad/buttons (\*2)



: Left-click on the control pad to adjust the horizontal/vertical position of the camera (panning/tilting). Panning/tilting speed will be faster if a clicked point gets farther from the center point of the control pad.

It is also possible to pan/tilt the camera by dragging the mouse.

Zoom and focus can be adjusted by right-clicking. When an upper/lower area of the control pad is right-clicked, the displayed image will be zoomed in/out on. When a left/right area is right-clicked, the focus will be adjusted to the NEAR/FAR side.

Zoom can also be adjusted using the mouse wheel.

## ⑬ BRIGHTNESS buttons (\*2)



: The displayed image will be darker.



: The adjusted brightness will return to the default brightness.



: Image will be brighter.

### Note:

When the BRIGHTNESS buttons are clicked while the camera is at the preset position, the adjusted brightness will automatically be registered for the current preset position.

## ⑭ PRESET (\*2)

Select a preset position from the pull-down menu and click the [GO] button. The camera will move to the selected preset position (☞ page 45). "H" next to the preset position number indicates the home position. When "Home position" is selected, the camera will move to the home position.

When the preset ID is registered for a preset position, the registered preset ID will be displayed next to the preset position number.

## ⑮ Camera title

The camera title entered for "Camera title" on the [Basic] tab will be displayed. (☞ page 24)

## ⑯ Alarm occurrence indication button (\*2)

This button will be displayed and will blink when an alarm has occurred. When this button is clicked, the alarm output terminal will be reset and this button will disappear. (☞ page 56)

## ⑰ Full screen button


Images will be displayed on a full screen. To return to the "Live" page, press the [Esc] key. When displaying images on a full screen, the audio transmission button will become unavailable.


## ⑱ One shot button

Click this button to take a picture (a still picture). The picture will be displayed on a newly opened window. When right-clicking on the displayed image, the pop-up menu will be displayed. The displayed image can be saved on the PC by selecting "Save" from the pop-up menu.

19  **Mic input button (\*3)**

Turns on/off the audio reception (hear audio from the camera on a PC). This button will be displayed only when "Mic input" or "Interactive" is selected for "Audio mode" on the setup menu. (☞ page 49)


When this button is clicked, the button will turn into the  button and audio from the camera will not be heard.


Audio volume can be adjusted (Low/Middle/High) by moving the volume cursor .

20  **Audio output button (\*3)**

Turns on/off the audio transmission (play audio from the PC on the camera speaker). This button will be displayed only when "Audio output" or "Interactive" is selected for "Audio mode" on the setup menu. (☞ page 49)

The button blinks while the audio transmission is being carried out.

When this button is clicked, the button will turn into the  button and audio from the PC will not be heard.

Audio volume can be adjusted (Low/Middle/High) by moving the volume cursor .

---

**Notes:**

- When a user is using the audio transmission function, the receiver button and the transmission button will be inoperable for the other users.
- Possible duration of audio transmission is up to 5 minutes per transmission. When 5 minutes have passed, the audio transmission function will be canceled and the audio reception function will automatically be turned on. To turn the audio transmission function on, click the transmission button again.
- When the camera is restarted, the adjusted volume level (for both the audio transmission and reception) will return to the level that had been set on the [Audio] tab on the setup menu. (☞ page 49)
- Actual volume level will change in three steps even though the volume cursor can be adjusted minutely.

21  **SD recording status indicator**

The status of the SD recording can be checked with this indicator.

When the SD recording starts, this indicator will light red. When the SD recording stops, this indicator will go off.

This indicator will be displayed only when "Manual" is selected for "Save trigger" on the setup menu. (☞ page 27)

22 **Main area (\*2)**

Images from the camera will be displayed in this area.

The current time and date will be displayed at the selected position in the time and date format set on the setup menu. (☞ pages 24 and 25).

Click a desired point in the main area on the "Live" page that is to be the center of the angle of view.

The camera moves to adjust the position in order to set the clicked point as the center.

When selecting an area in the main area by dragging the mouse, the selected area will be located at the center of the main area.

In this case, the zoom ratio will be adjusted automatically.

Zoom can be adjusted using the mouse wheel.

---

**Notes:**

- When the displayed image is being zoomed in more than 22x, the clicked point may not always be located at the center of the main area.
- Dragging the mouse to change the shooting direction of the camera will not work when the displayed image is being zoomed in more than 22x.
- When the mouse is dragged, the displayed image will automatically be zoomed in up to 22x.
- When the mouse is dragged to move the camera beyond its operable range, the camera will move to the requested direction and will stop at the end of the operable range. Then, the zoom ratio of the displayed image will automatically be adjusted.
- When MPEG-4 image is being displayed, it may take time to display the frame border indicating an area selected by dragging the mouse.

---

**Important:**

When the camera position is moved inadvertently while the power of the camera is on, restart the camera (restart) or refresh the camera position (position refresh) on the [Initialization] tab of the "Maintenance" page (☞ page 78).

---

\*1 Only operable by users whose access level is "1. Administrator"

\*2 Only operable by users whose access level is "1. Administrator" or "2. Camera control" when "ON" is selected for "User authentication" (☞ page 63).

\*3 Operable by users who belong to the access level selected for "Authentication" on the [Audio] tab of the "Camera setup" page (☞ page 50).



Refer to page 63 for further information about the access level.

---

**Note:**

When operated by a lower access level user, images displayed on the screen may be changed temporarily. This does not affect operation of the camera.

---

## Monitor images from multiple cameras

Images from multiple cameras can be displayed on a multi-screen. Images from 4 cameras (up to 16 cameras) can be displayed simultaneously. To display images on a multi-screen, it is necessary to register cameras in advance. 4 cameras can be registered as a group and up to 4 groups (16 cameras) can be registered. (page 51)

---

**Important:**

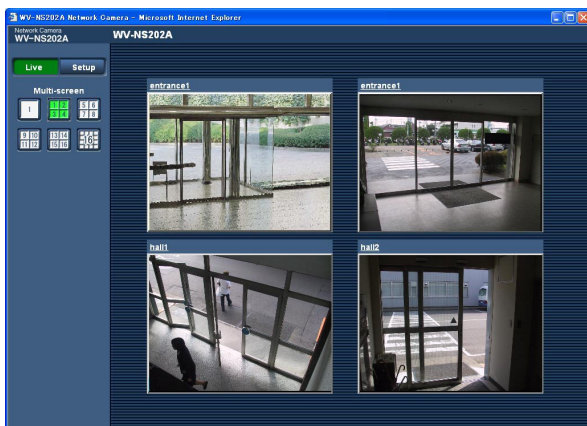
- When simultaneously displaying images from 16 cameras on a multi-screen, panning, tilting and zooming are unavailable.
  - Only JPEG images can be displayed on a multi-screen. Audio will not be heard.
  - When the power is turned off or the LAN cable is disconnected while displaying images, displaying images on a multi-screen from the "Live" page will become unavailable.
  - When displaying images on a multi-screen, panning/tilting/zooming by dragging the mouse are unavailable.
- 

### Step 1

Click the desired [Multi-screen] button.

→ Images from the registered cameras will be displayed on a selected multi-screen (screen can be split up to 16 areas). The following are instructions when displaying on a 4-split screen.

- ① To display images on a single screen, click the [Live] button.
- ② Click a camera title. Live images from the camera corresponding to the clicked camera title will be displayed on the "Live" page of the newly opened window.



# Record images on the SD memory card manually

Images displayed on the "Live" page can be recorded on the SD memory card manually. This button is operable only when "Manual" is selected for "Save trigger" on the setup menu. (☞ page 27)  
Images recorded on the SD memory card can be copied onto the PC. (☞ page 29)

## Step 1

Display the "Live" page. (☞ page 4)



## Step 4

Click the [STOP] button to stop saving images on the SD memory card.

## Step 5

Click the [CLOSE] button to close the window.

## Step 2

Click the [SD] button in the "SD memory card" box.  
→ The SD recording window will open.



## Step 3

Click the [START] button to start recording images on the SD memory card. The SD recording status indicator will light red while images are being recorded on the SD memory card. The save interval (frame rate) can be configured on the [SD memory card] tab of the "Basic setup" page. (☞ page 29)

# Action at an alarm occurrence

The alarm action will be performed when the following alarms occur.

## Alarm type

**Terminal alarm:** When connecting an alarm device such as a sensor to the EXT I/O connector 1-3 on the rear of the camera, the alarm action (camera action at an alarm occurrence) will be performed when the connected alarm device is activated. Alarm action to be performed differs depending on the settings configured in the "Camera motion on alarm" section of the [Alarm] tab. (☞ page 52)

**VMD alarm:** When motion is detected in the set VMD area, the alarm action will be performed.

\* VMD stands for "Video Motion Detection".

**Command alarm:** When a Panasonic alarm protocol (☞ page 52) is received from the connected device via a network, the alarm action will be performed.

## Action at an alarm occurrence

**Display the [Alarm occurrence indication] button on the "Live" page.** (☞ page 7)

The alarm occurrence indication button will be displayed on the "Live" page at an alarm occurrence.

---

### Important:

When "Polling (30 sec)" is selected for "Alarm status update mode" (☞ page 25), the alarm occurrence indication button will be refreshed in 30-second intervals. For this reason, it may take a maximum of 30 seconds until the alarm occurrence indication button is displayed on the "Live" page at an alarm occurrence.

---

### Notify of alarm occurrences to the device connected to the alarm connector

It is possible to output signals from the alarm connector on the rear of the camera and sound the buzzer when an alarm occurs. The settings for the alarm output can be configured in the "Alarm output terminal" section of the [Alarm] tab of the "Alarm setup" page. (☞ page 52)

### Transmit an image onto a server automatically

An alarm image can be transmitted at an alarm occurrence to the server designated in advance. The settings required to transmit an alarm image to a server can be configured in the "Alarm image setup" section of the [Alarm] tab of the "Alarm setup" page (☞ page 55) and the [FTP] tab of the "Server setup" page (☞ page 66).

---

### Important:

Select "FTP error" for "Save trigger" on the [SD memory card] tab when using the SD memory card. When "Alarm input" or "Manual" is selected for "Save trigger", an alarm image will not be transmitted at an alarm occurrence to the FTP server.

---

### Notify of alarm occurrences by e-mail

Alarm mail (alarm occurrence notification) can be sent at an alarm occurrence to the e-mail addresses registered in advance. Up to 4 addresses can be registered as recipients of the alarm mail. An alarm image (still picture) can be sent with the alarm mail as an attached file. The settings for alarm mail can be configured in the "E-mail notification setup" section of the [Notification] tab of the "Alarm setup" page (☞ page 61) and the [Mail] tab of the "Server setup" page (☞ page 65).

### Notify of alarm occurrences to the designated IP addresses (Panasonic alarm protocol)

This function is available only when a Panasonic device, such as the network disk recorder, is connected to the system. When "ON" is selected for "Panasonic alarm protocol", the connected Panasonic device will be notified that the camera is in the alarm state. The settings for Panasonic alarm protocol can be configured in the "Panasonic alarm protocol" section of the [Notification] tab of the "Alarm setup" page. (☞ page 62)

# Transmit images onto an FTP server

Images can be transmitted to an FTP server. By configuring the following settings, transmission of images captured at an alarm occurrence or captured at a designated interval to an FTP server will become available.

---

**Important:**

- When using this function, set the user name and the password to access the FTP server to restrict users who can log into the FTP server.
  - To transmit images to the FTP server, select "Not use" for "SD memory card", or select "FTP error" for "Save trigger" on the [SD memory card] tab of the "Basic setup" page.
- 

## Transmit an alarm image at an alarm occurrence (Alarm image transmission)

An alarm image can be transmitted at an alarm occurrence to the FTP server. To transmit alarm images to an FTP server, it is necessary to configure the settings in advance.

The settings for the FTP server can be configured on the [FTP] tab of the "Server setup" page. (☞ page 66)

The alarm image transmission function can be turned on/off in the "Alarm image setup" section of the [Alarm] tab of the "Alarm setup" page. (☞ page 55)

---

**Note:**

Depending on the network traffic, the number of the transmitted images may not reach the set number of images to be transmitted.

---

## Transmit images at a designated interval or period (FTP periodic transmission)

Images can be transmitted at a designated interval or period. To transmit images at a designated interval or period, it is necessary to configure the settings in advance.

The settings for the FTP server to which images are to be transmitted can be configured on the [FTP] tab of the "Server setup" page. (☞ page 66)

On the [FTP] tab of the "Network setup" page (☞ page 72), the FTP periodic transmission function can be turned on/off, and the settings relating to images to be transmitted and the settings relating to schedules (periods) can be configured.

---

**Notes:**

- Depending on the network line speed or the network traffic, images may not be transmitted at the exact designated interval or period.
  - When "ON" is selected for both the alarm image transmission function and the FTP periodic transmission function, the alarm image transmission function will be given priority over the FTP periodic transmission function. For this reason, images may not be transmitted at the exact designated interval or period if alarms occur frequently.
-

---

## Save images on the SD memory card when images fail to transmit using the FTP periodic transmission function

Images that have failed to transmit using the FTP periodic transmission can be saved automatically on the SD memory card. Images saved on the SD memory card can be obtained from the [SD memory card] tab of the "Basic setup" page. (page 27)

To use the SD memory recording function featured in Panasonic's network disk recorder, select "OFF" for "FTP periodic transmission" (page 72) and "FTP error" for "Save trigger" (page 27).

We make no guarantee for any damages of files on the SD memory card incurred by malfunction or error occurrence in files saved in the SD memory card regardless of what the cause may be.

### Save images on the SD memory card

By configuring the following settings, saving images that have failed to transmit to the FTP server using the FTP periodic transmission function will become available.

**SD memory card:** Use (page 27)

**Save trigger:** FTP error (page 27)

# Display the log list

The following logs can be displayed in list form.

- Alarm log: Logs of the alarm occurrences such as time and date of the alarm occurrences and the alarm type will be displayed.
- Manual log: Logs filed when images have been recorded on the SD memory card will be displayed.
- FTP error log: Logs filed when the FTP periodic transmission function has failed will be displayed.

Each log list can be displayed only when "ON" is selected for "Save logs" on the [LOG] tab of the "Basic setup" page (☞ page 31) respectively.

## Step 1

Display the "Live" page. (☞ page 4)



## Step 2

Click the [List] button.

→ The log list will be displayed in a newly opened window (log list window).



## Important:

Only a single user can operate the log list window.  
Other users cannot access the log list window.

## Step 3

Click the desired log type listed below "LOG" to display the log list.

→ The log list of the selected log type will be displayed.

## Note:

When saved images are on the SD memory card, clicking the time and date of the alarm occurrence will display the respective images. (☞ page 17)



---

## Log list displayed in the log list window

### [Number of the listed logs]

Total number of the logs of the selected log type and a number of the log being displayed on the top of the log list will be displayed.

---

#### Note:

Enter the desired log number and press the [Enter] key on the keyboard. The log of the designated number will be displayed on the top of the log list.

---

### [TOP] button

Click this button to display the log listed on the top of the currently displayed log list.

### [Prev Page] button

Click this button to display the previous page of the log list.

---

#### Note:

When the mouse button is held down while placing the mouse pointer on the [Prev Page] button, the displayed log number will be decremented.

When the mouse button is released, the decrement of the log number will stop and the log number displayed at the moment when the mouse button is released will be the top of the currently displayed page.

---

### [Next Page] button

Click this button to display the next page of the log list.

---

#### Note:

When the mouse button is held down while placing the mouse pointer on the [Next Page] button, the displayed log number will be incremented.

When the mouse button is released, the increment of the log number will stop and the log number displayed at the moment when the mouse button is released will be the top of the currently displayed page.

---

### [LAST] button

Click this button to display the last log of the currently displayed log list.

### [Time & date]

Time and date when each log has been filed will be displayed.

---

#### Notes:

- When "OFF" is selected for "Time display" (☞ page 24), time and date of alarm occurrence will be displayed in 24-hour format.

- **Alarm log:** Alarm occurrence time and date will be filed as a log.

**Manual log:** Time and date when recording of images onto the SD memory card started will be filed as a log. When recording are performed sequentially, logs will be filed every one hour.

**FTP error log:** Logs will be filed every one hour.

---

### [EVENT]

The event type will be displayed.

The event types will be displayed only when displaying the alarm log list.

**TRM1:** Alarm by terminal alarm 1

**TRM2:** Alarm by terminal alarm 2

**TRM3:** Alarm by terminal alarm 3

**VMD:** Alarm by VMD alarm

**COM:** Alarm by command alarm

### [SD memory card]

Total capacity and remaining space of the SD memory card will be displayed.

There is no difference between this item and "SD card memory" on the [SD memory card] tab. (The same contents will be displayed.) (☞ page 28)

### [Delete] button

Click this button to delete the currently displayed log list. When using the SD memory card, images associated with the log list will also be deleted.

---

#### Important:

- When many images are saved on the SD memory card, it will take some time to complete the deletion.
- In the process of the deletion, only logs will be saved, and it is impossible to save images newly.
- Do not turn off the power of the camera until the deletion is complete.

When the power of the camera is turned off in the process of the deletion, some images may remain on the SD memory card.

In this case, click the [Delete] button on the same log list window used to delete the logs.

---

---

**[Download] button**

Click this button to download all logs of the selected log list as a file onto the PC.

**[CLOSE] button**

Click this button to close the log list window.

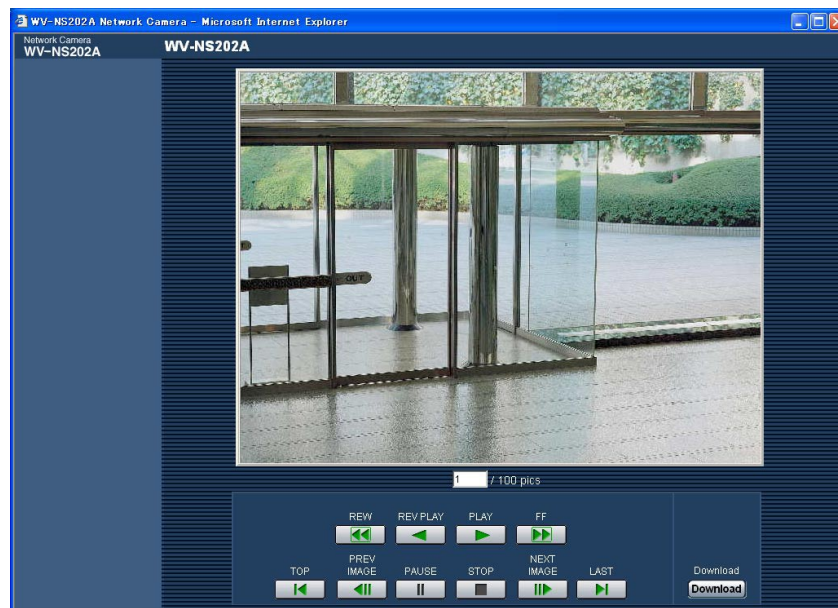
# Playback of images saved on the SD memory card

When clicking a time and date listed on the log list window, the "live" page will turn to the "playback" page. When images associated with the clicked time and date are on the SD memory card, the first image of them will be displayed.

---

## Important:

- Refresh interval of images may become slow during playback or download.
  - When many images are saved on the SD memory card, it may take time to display images on the "playback" page.
  - Even when the size of the images saved on the SD memory card is QVGA size, the images will be played in VGA size on the "playback" page. Therefore, images may look coarse on the "playback" window.
  - When playing images by selecting an FTP error log on the log list, images may not be played in order of images recorded on the SD memory card if they have been recorded on the SD memory card with selected value for the "Interval" setting on the [FTP] tab (page 73) is "1 min" or less.
  - Before removing the SD memory card, make sure that "Not use" is selected for "SD memory card" (page 27).
  - Playback/reverse playback will be performed without being affected by the "Frame rate" settings of images recorded on the SD memory card.
- 



## About the "playback" page

### [Number of the listed images]

When clicking a time and date listed on the log list window, total number of images associated with the clicked time and date, and the number of the currently displayed image will be displayed.

---

### Note:

Enter the desired number of image and press the [Enter] key on the keyboard. The image of the designated number will be displayed.

---

### [PLAY] button

When this button is clicked, images will be played in sequential order.

### [REV PLAY] button

Images will be played in reverse sequential order.

### [PAUSE] button

Playback will be paused when this button is clicked during playback. Playback will resume when this button is clicked during pausing.

### [STOP] button

Playback will stop and the "playback" window will turn to the "live" page.

### [NEXT IMAGE] button

The next frame will be displayed and paused when this button is clicked during playback.

Each time this button is clicked during pausing, the frame next to the currently displayed frame will be displayed.

---

#### Note:

When the mouse button is being held while placing the mouse pointer on this button, the displayed image number will be incremented.

When the mouse button is released, the increment of the image number will stop and the image number displayed at the moment when the mouse button is released will be displayed.

---

### [PREV IMAGE] button

The previous frame will be displayed and paused when this button is clicked during playback.

Each time this button is clicked during pausing, the frame previous to the currently displayed frame will be displayed.

---

#### Note:

When the mouse button is held down while the mouse pointer is on this button, the image number will be decremented.

When the mouse button is released, the decrement of the image number will stop and the image number displayed at the moment when the mouse button is released will be displayed.

---

### [FF]/[REW] buttons

Fast playback/fast reverse playback will be performed. Each time the button is clicked, the playback speed will change.

When the [PLAY]/[REV PLAY] button is clicked during fast playback/fast reverse playback, the playback speed will be x1.

### [TOP] button

The first image will be displayed.

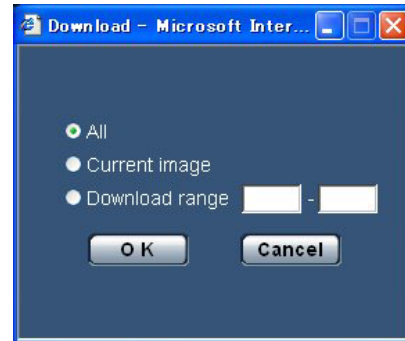
### [LAST] button

The last image will be displayed.

### [Download] button

The selected image will be downloaded onto the PC. Before downloading images, designate the destination directory in advance. (☞ page 31)

The following window will be displayed when the [Download] button is clicked.



**All:** All images saved at the selected time and date will be downloaded.

**Current image:** Only the currently displayed image will be downloaded.

**Download range:** Images in the designated range of number of images will be downloaded.

---

#### Notes:

- When the [Cancel] button is clicked in the process of the download, the download will be canceled. In this case, images already downloaded before clicking the [Cancel] button will be saved on the destination directory.
  - Even when lower-case letters are used for "File name" (☞ page 27) that is used for the name of the image to be saved on the SD memory card manually or by an alarm input, the file name of downloaded images will be capitalized in uppercase when they are downloaded onto the PC.
-

# About the network security of the camera

---

## Equipped security functions

The following security functions are featured in this camera.

① **Access restrictions by the host authentication and the user authentication**

It is possible to restrict users from accessing the camera by setting the host authentication and/or the user authentication to "ON". (☞ pages 63 and 64)

② **Access restrictions by changing the HTTP port**

It is possible to prevent illegal access such as port scanning, etc. by changing the HTTP port number. (☞ page 68)

---

**Note:**

When user authentication (authentication error) has failed to pass 8 times within 30 seconds using the same IP address (PC), access to the camera will be denied for a while.

---

**Important:**

Design and enhance security countermeasures to prevent leakage of information such as image data, authentication information (user name and password), alarm mail information, FTP server information, DDNS server information, etc.

---

# Display the setup menu and configure the settings of the camera using a PC

The settings of the camera can be configured on the setup menu.  
The setup menu is only operable by users whose access level is "1. Administrator".

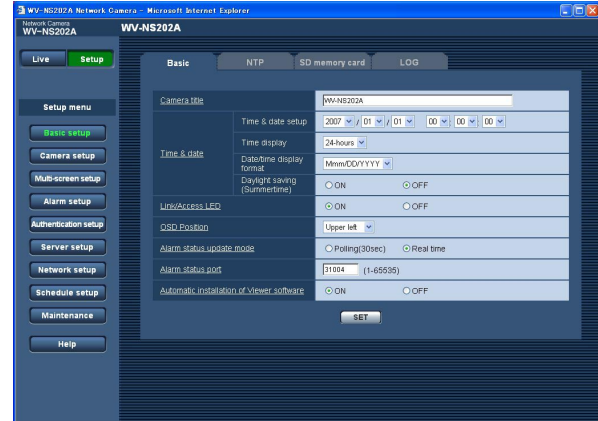
## How to display the setup menu

### Step 1

Display the "Live" page. (→ page 4)

### Step 2

Click the [Setup] button on the "Live" page.  
→ The window with the user name and password entry fields will be displayed.



### Step 3

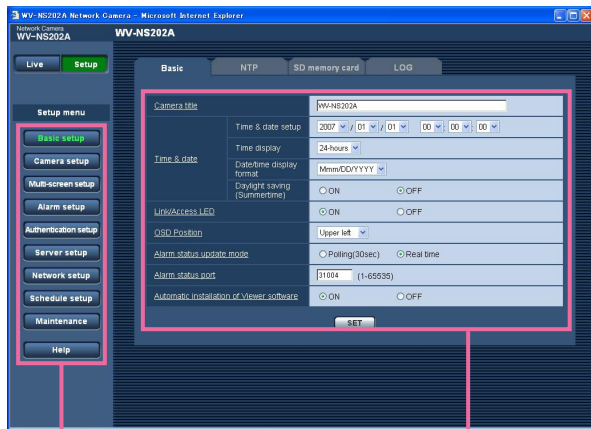
Click the [OK] button after entering the user name and the password.



→ The setup menu will be displayed.  
Refer to the next page for further information about this menu.



# How to operate the setup menu



Menu buttons

Setup page

## Step 1

Click the desired button in the frame on the left of the window to display the respective setup menu. When there are tabs at the top of the setup page displayed in the frame on the right of the window, click the desired tab to display and configure the setting items relating to the name of the tab.

## Step 2

Complete each setting item displayed in the frame on the right of the window.

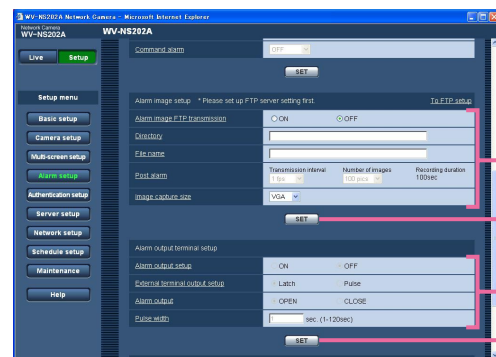
## Step 3

After completing each setting item, click the [SET] button to apply them.

## Important:

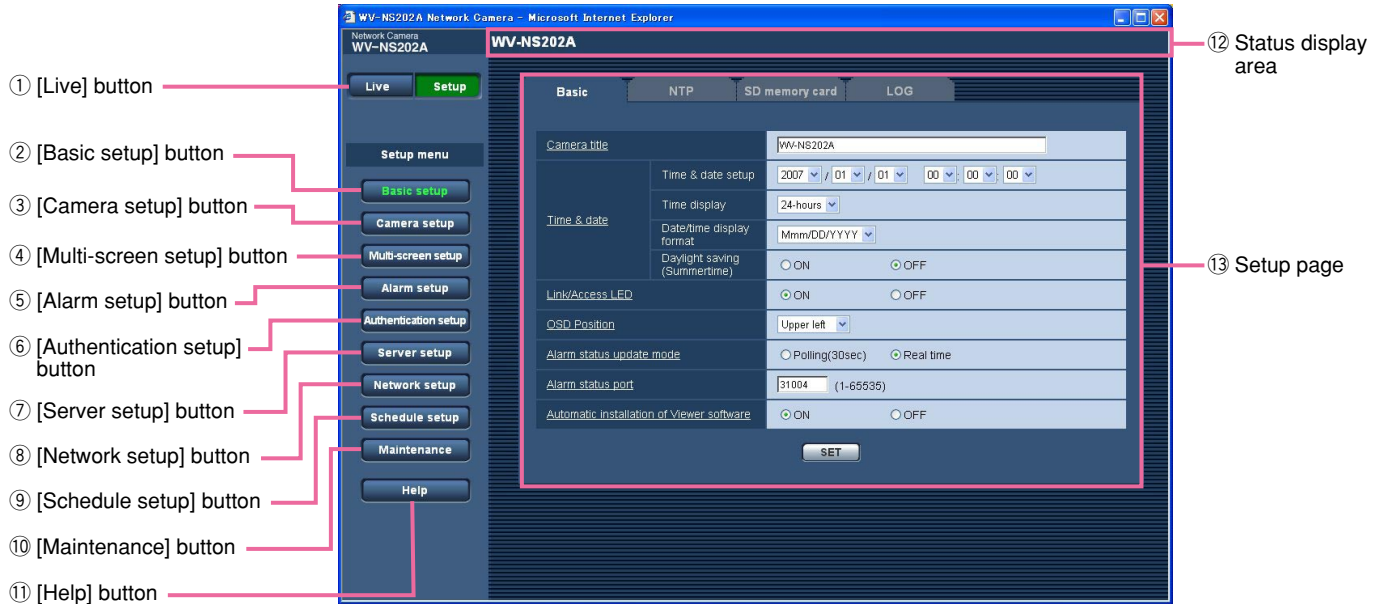
When there are two or more [SET] buttons on the page, click the respective button to the edited setting item.

<Example>



When completing the setting items in field A, click the [SET] button below field A (A-1). The edited setting items in field A will not be applied unless the [SET] button below field A (A-1) is clicked. In the same manner as above, click the [SET] button below field B (B-1) when completing the setting items in field B.

## About the setup menu window



① **Live** [Live] button

Click this button to display the "Live" page.

② **Basic setup** [Basic setup] button

Click this button to display the "Basic setup" page. The basic settings such as time and date and camera title, and the settings relating to the NTP server and the SD memory card can be configured on the "Basic setup" page. Refer to page 24 for further information.

③ **Camera setup** [Camera setup] button

Click this button to display the "Camera setup" page. The settings relating to JPEG/MPEG-4 images and camera operation can be configured on the "Camera setup" page. Refer to page 35 for further information.

④ **Multi-screen setup** [Multi-screen setup] button

Click this button to display the "Multi-screen setup" page. The cameras to be used for the multi-screen display can be registered on the "Multi-screen setup" page. Refer to page 51 for further information.

⑤ **Alarm setup** [Alarm setup] button

Click this button to display the "Alarm setup" page. The settings relating to alarm occurrences such as settings for the alarm action at an alarm occurrence, the alarm occurrence notification, and the VMD area settings can be configured on the "Alarm setup" page. Refer to page 52 for further information.

⑥ **Authentication setup** [Authentication setup] button

Click this button to display the "Authentication setup" page. The settings relating to the authentication such as users and PCs restrictions for accessing the camera can be configured on the "Authentication setup" page. Refer to page 63 for further information.

⑦ **Server setup** [Server setup] button

Click this button to display the "Server setup" page. The settings relating to the mail server and the FTP server to which the camera accesses can be configured on the "Server setup" page. Refer to page 65 for further information.

- 
- ⑧ **Network setup** **[Network setup] button**  
Click this button to display the "Network setup" page. The network settings and the settings relating to DDNS (Dynamic DNS), SNMP (Simple Network Management Protocol) and the FTP (File Transfer Protocol) periodic transmission function can be configured on the "Network setup" page. Refer to page 67 for further information.
- ⑨ **Schedule setup** **[Schedule setup] button**  
The "Schedule" page will be displayed. On the "Schedule" page, it is possible to designate time zones to allow to receive alarm input or to allow to activate the video motion detection (VMD) function. Refer to page 75 for further information.
- ⑩ **Maintenance** **[Maintenance] button**  
Click this button to display the "Maintenance" page. System log check, firmware upgrade and initialization of the setup menu can be carried out on the "Maintenance" page. Refer to page 76 for further information.
- ⑪ **Help** **[Help] button**  
Click this button to display the "Help" page.
- ⑫ **Status display area**  
The title of the camera whose settings are currently being configured will be displayed.
- ⑬ **Setup page**  
Pages of each setup menu will be displayed. There are tabs for some setup menus. When the underlined item is clicked, the corresponding help page will be displayed.

# Configure the basic settings of the camera [Basic setup]

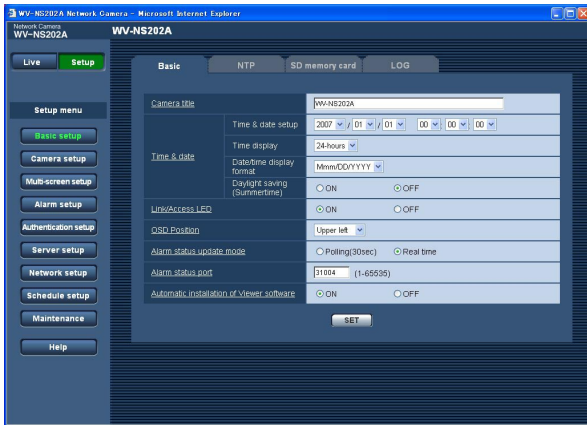
The basic settings such as time and date and camera name, and the settings relating to the NTP server and the SD memory card can be configured on the "Basic setup" page.

The "Basic setup" page has 4 tabs; the [Basic] tab, the [NTP] tab, the [SD memory card] tab and the [LOG] tab.

## Configure the basic settings [Basic]

Click the [Basic] tab on the "Basic setup" page. (See pages 20 and 21: How to display/operate the setup menu)

The settings such as the camera name, time and date, etc. can be configured on this page.



### [Camera title]

Enter the title of the camera. Click the [SET] button after entering the title of the camera. The entered title will be displayed in the status display area.

**Number of characters for the camera title:** 0 - 20 characters

**Default:** WV-NS202A

### [Time & date setup]

Enter the current time and date. When "12-hours" is selected for "Time display", "AM" or "PM" can be selected.

**Available range:** 01/01/2007 0:00:00 – 12/31/2035 23:59:59

### [Time display]

Select the time display format from "12-hours", "24-hours" and "OFF". Enter the current hour reflecting this setting when entering the current time and date for "Time & date setup". To hide time and date, select "OFF".

**Default:** 24-hours

### [Date/time display format]

Select a date/time display format.

When "2007/04/01 13:10:00" is set for "Time & date setup" after selecting "24-hours" for "Time display", time and date will be respectively displayed as follows.

**DD/MM/YYYY:** 01/04/2007 13:10

**MM/DD/YYYY:** 04/01/2007 13:10

**DD/Mmm/YYYY:** 01/Apr/2007 13:10

**YYYY/MM/DD:** 2007/04/01 13:10

**Mmm/DD/YYYY:** Apr/01/2007 13:10

**Default:** DD/MM/YYYY

### [Daylight saving (Summertime)]

Select "ON" or "OFF" to determine whether or not to apply daylight saving time. Select "ON" or "OFF" to determine whether or not to apply daylight saving time.

**ON:** Applies summer time. An asterisk (\*) will be displayed on the left side of the displayed time and date.

**OFF:** Does not apply summer time.

**Default:** OFF

### [Link/Access LED]

Select "ON" or "OFF" to determine whether or not to light the link LED, the access LED, the SD memory card error LED and the power LED.

Select "ON" to check the operational status by lighting the LEDs. Select "OFF" to turn off the LEDs at all times.

**Default:** ON

### Notes:

- **Link LED:** This LED will light when communication with the connected device is available.
- **Access LED:** This LED will light when accessing a network.

- **SD memory card error LED:** This LED will light when the SD memory card is unavailable to save images.
  - **Power LED:** This LED will light when the power is on.
- 

#### [OSD Position]

Select a position where time and date, camera title, pre-set ID, panning/tilting angle, zoom ratio are to be displayed on the "Live" page.

**Upper left:** The above information will be displayed at the upper left corner of the main area on the "Live" page.

**Lower left:** The above information will be displayed at the lower left corner of the main area on the "Live" page.

**Upper right:** The above information will be displayed at the upper right corner of the main area on the "Live" page.

**Lower right:** The above information will be displayed at the lower right corner of the main area on the "Live" page.

**Default:** Upper left

#### [Alarm status update mode]

Select an interval of the camera status notification from the following.

When the status of the camera changes, the alarm occurrence indication button, the receiver button, the transmission button, the AUX button or the SD saving status indication button will be displayed to notify of the camera status.

**Polling (30 sec):** Updates the status each 30 seconds and provide notification of the camera status.

**Real time:** Provide notification of the camera status when the status has changed.

**Default:** Real time

---

#### Important:

When using Windows® 2000 Professional SP4, even when "Real time" is selected, the actual interval will be 30 seconds. This is a normal operation.

---

#### Note:

Depending on the network environment, notification may not be provided in real time.

---

#### [Alarm status port]

When selecting "real time" for "Alarm status update mode", designate a port number to which the status change notification is to be sent.

**Available port number:** 1 - 65535

**Default:** 31004

#### [Automatic installation of Viewer software]

Determine whether or not to install the viewer software from this camera.

**ON:** Installs the viewer software from the camera automatically.

**OFF:** The viewer software cannot be installed from the camera.

**Default:** ON

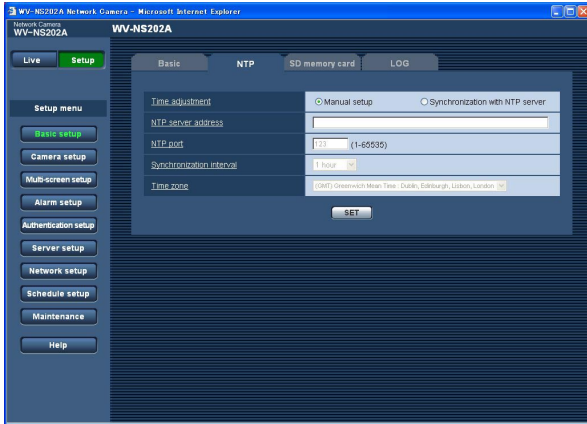
---

#### Important:

- It is impossible to display images and to receive/transmit audio between the camera and the PC when the viewer software "Network Camera View3" is not installed on the PC.
  - The number of the viewer software installations can be checked on the [Upgrade] tab of the "Maintenance" page.
-

## Configure the settings relating to the NTP server [NTP]

Click the [NTP] tab on the "Basic setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)  
The settings relating to the NTP server such as the NTP server address, port number, etc. can be configured on this page.



### [Time adjustment]

Select the time adjustment method from the following.  
Time adjusted by the selected method will be used as the standard time of the camera.

**Manual setup:** Time set on the [Basic] tab on the "Basic setup" page will be used as the standard time of the camera.

**Synchronization with NTP server:** Time automatically adjusted by synchronizing with the NTP server will be used as the standard time of the camera.

**Default:** Manual setup

### [NTP server address]

Enter the IP address or the host name of the NTP server.

**Number of characters for the NTP server address:**

1 - 128 characters

**Default:** None (blank)

---

### Important:

When entering the host name for "NTP server address", it is necessary to configure the DNS settings on the [Network] tab of the "Network setup" page. (☞ page 68)

---

### [NTP port]

Enter a port number to be used for the NTP server.

**Available port number:** 1 - 65535

**Default:** 123

### [Synchronization interval]

Select an interval (1 - 24 hours: in 1 hour intervals) of synchronization with the NTP server.

**Default:** 1 hour

### [Time zone]

Select a time zone corresponding to the location where the camera is in use.

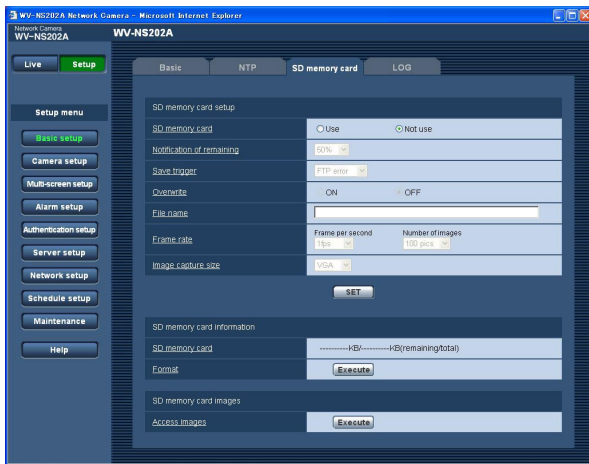
**Default:** (GMT) Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London



## Configure the settings relating to the SD memory card [SD memory card]

Click the [SD memory card] tab on the "Basic setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

The settings relating to the SD memory card can be configured on this page.



### ■ SD memory card setup

#### [SD memory card]

Select "Use" or "Not use" to determine whether or not to use the SD memory card.

**Default:** Not use

#### Important:

- Before removing the SD memory card from the camera, it is necessary to select "Not use" first.
- After inserting the SD memory card, it is necessary to select "Use" to use the SD memory card.
- When playing or downloading images saved on the SD memory card, it is necessary to select "ON" for "Save logs" on the [LOG] tab (☞ page 31) in advance.

#### [Notification of remaining]

When the "E-mail notification" function or the "Panasonic alarm protocol" function is used to provide notification of the remaining space of the SD memory card, select a level to be notified at from the following.  
50 %/20 %/10 %/5 %/2 %

**Default:** 50 %

#### Note:

Notification will be provided each time the remaining space of the SD memory card reached the values above.

For example, notification will be provided each time the remaining space reaches 50%, 20%, 10%, 5%

and 2% when "50%" is selected. Notification may not always be made at the very moment when the remaining space of the SD memory card has reached each value.

#### [Save trigger]

Select a trigger to save images on the SD memory card from the following.

**FTP error:** Saves images when images have failed to transmit to the FTP server by the FTP periodic transmission function.

**Alarm input:** Saves images at an alarm occurrence.

**Manual:** Saves images manually. (☞ page 10)

**Default:** FTP error

#### Notes:

- Select "FTP error" when images are to be transmitted to the FTP server at an alarm occurrence.
- When using the DHCP function (☞ page 67), images will not be saved on the SD memory card until an IP address is assigned regardless of the "Save trigger" setting.

#### [Overwrite]

Determine whether or not to overwrite when the SD memory card becomes full.

This setting is available only when "Manual" is selected for "Save trigger".

**ON:** Overwrites when the SD memory card becomes full. (The oldest image is the first to be overwritten.)

**OFF:** Stops saving images on the SD memory card when the SD memory card becomes full.

**Default:** OFF

#### Note:

The overwrite setting will be as follows according to the "Save trigger" setting.

**FTP error:** Will not be overwritten

**Alarm input:** Will be overwritten

**Manual:** Can be determined by selecting "ON" or "OFF" for "Overwrite"

#### [File name]

Enter the file name used for the image to be saved on the SD memory card. The file name will be as follow.

**File name:** ["Entered file name" + "Time and date (year/month/day/hour/minute/second)"] + "Serial number"

**Number of characters that can be entered for the file name:** 1 - 8 characters

**Note:**

When "FTP error" is selected for "Save trigger", the file name entered for "File name" on the [FTP] tab of the "Network setup" page will be used for the file name of the image saved on the SD memory card.

**[Frame rate]**

• **Frame per second**

Select an image save interval from the following.

0.1 fps/0.2 fps/0.33 fps/0.5 fps/1 fps

**Default:** 1 fps

• **Number of images**

Select a number of alarm images to be saved on the SD memory card from the following.

10 pics/20 pics/ 30 pics/50 pics/100 pics/200 pics/

300 pics/500 pics/1000 pics/2000 pics/3000 pics/

5000 pics

**Default:** 100 pics

**Note:**

"Frame rate" can be configured only when "Alarm input" is selected for "Save trigger".

**[Image capture size]**

Select "QVGA" or "VGA" for the size of the images to be saved on the SD memory card.

**Default:** VGA

**Notes:**

- When "FTP error" is selected for "Save trigger", images will be saved with the image capture size selected on the [FTP] tab of the "Network setup" page.
- When "Alarm input" is selected for "Save trigger", images will be saved with the image capture size selected on the [Alarm] tab of the "Alarm setup" page.

■ **SD memory card information**

**[SD memory card]**

Available size and the total size of the SD memory card will be displayed.

Depending on the status of the SD memory card, the size indications will differ as follows.

Indication	Description
-----KB/-----KB	No SD memory card is inserted. Failed to obtain available size due to error, etc.
*****KB/*****KB	The SD card memory is unformatted, or locked, etc.

**Note:**

When "OFF" is selected for "Overwrite" (page 27) and the available size of the SD memory card has reached "0 KB", images will not be saved on the SD memory card. When the notification function is on, a notification mail will be sent to the registered addresses when the SD memory card becomes full. (pages 61 and 62)

**[Format]**

To format the SD memory card, click the [Execute] button.

**Important:**

- Before formatting the SD memory card, it is necessary to select "Use" for "SD memory card" on the [SD memory card] tab of the "Basic setup" page (page 27) and "OFF" for "FTP periodic transmission" on the [FTP] tab of the "Network setup" page (page 72).
- Only format the SD memory card by clicking the [Execute] button on the setup menu. Otherwise, the following functions using the SD memory card may not work properly with this camera.
  - Save/obtain images that failed to transmit to the FTP server using the FTP periodic transmission function
  - Save/obtain alarm images
  - Save/obtain images saved manually
  - Save/obtain the alarm logs, the manual logs, the FTP error logs and the system logs
  - Save/obtain images recorded using the SD memory recording function of Panasonic's network disk recorder.
  - Play/download images on the SD memory card
- It is impossible to access the SD memory card during the process of formatting.
- All data saved on the SD memory card will be deleted when the SD memory card is formatted.

- Do not turn off the power of the camera during the process of formatting.
- After formatting the SD memory card, the available size may be smaller than the total size since the default directory is automatically created in the SD memory card.

- Compatible SD memory card is as follows.  
SD memory card manufactured by Panasonic (64 MB, 128 MB, 256 MB, 512 MB, 1 GB, 2GB)
- Use the SD memory card without changing the default condition, or use it after formatting in conformity with the SD specification.

## Copy images saved on the SD memory card onto the PC [SD memory card images]

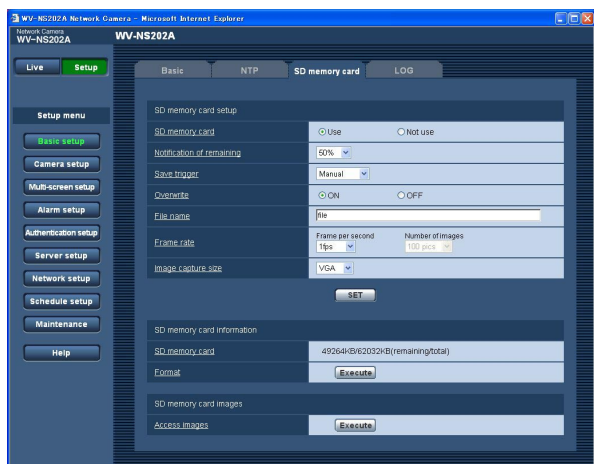
Click the [SD memory card] tab on the "Basic setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

The following are descriptions of how to copy images saved on the SD memory card onto the PC.

It is necessary in advance to select "Allow" for "FTP access" on the [Network] tab of the "Network setup" page (☞ page 68).

### Important:

- It is impossible to copy images saved on the SD memory card when another user is simultaneously obtaining images from the SD memory card.
- Depending on the settings of a proxy server or a firewall, images may not be obtained via a network. In this case, refer to the network administrator.



### Step 1

Click the [Execute] button of "Access images".

→ The user authentication window will be displayed.



### Step 2

Click the [OK] button after entering the user name and the password.

→ The folder in which images are to be saved will be displayed.

### Step 3

Copy the desired images or the folder onto the PC.

It is impossible to display the image to be saved on this window. Display the image after saving it on the PC.

### Note:

When logging in the camera to obtain images, drive B will be displayed first.

Images are saved in different directories according to "Save trigger" ("Save trigger" - "Basic setup"-"SD memory card").

Move to the directory corresponding to the desired images and obtain them.

Refer to page 88 for further information about the directory structure.

## Possible number of images that can be saved on the SD memory card (as indications)

### Important:

The numbers on the following table are just indications. They are not actual numbers of images that can be saved on the SD memory card. Numbers will differ according to photographic subject, settings relating to the SD memory card, etc.

### Image capture size: VGA

Size of SD memory card	Image quality				
	0 (Super fine)	1 (Fine)	2	3	4
2 GB	Approx. 10 000 pics	Approx. 14 000 pics	Approx. 16 000 pics	Approx. 18 000 pics	Approx. 20 000 pics
1 GB	Approx. 5 000 pics	Approx. 7 000 pics	Approx. 8 000 pics	Approx. 9 000 pics	Approx. 10 000 pics
512 MB	Approx. 2 500 pics	Approx. 3 500 pics	Approx. 4 000 pics	Approx. 4 500 pics	Approx. 5 000 pics
256 MB	Approx. 1 250 pics	Approx. 1 750 pics	Approx. 2 000 pics	Approx. 2 250 pics	Approx. 2 500 pics
128 MB	Approx. 625 pics	Approx. 875 pics	Approx. 1 000 pics	Approx. 1 125 pics	Approx. 1 250 pics
64 MB	Approx. 312 pics	Approx. 437 pics	Approx. 500 pics	Approx. 562 pics	Approx. 625 pics
Size of SD memory card	Image quality				
	5 (Normal)	6	7	8	9 (Low)
2 GB	Approx. 22 000 pics	Approx. 26 000 pics	Approx. 28 000 pics	Approx. 30 000 pics	Approx. 32 000 pics
1 GB	Approx. 11 000 pics	Approx. 13 000 pics	Approx. 14 000 pics	Approx. 15 000 pics	Approx. 16 000 pics
512 MB	Approx. 5 500 pics	Approx. 6 500 pics	Approx. 7 000 pics	Approx. 7 500 pics	Approx. 8 000 pics
256 MB	Approx. 2 750 pics	Approx. 3 250 pics	Approx. 3 500 pics	Approx. 3 750 pics	Approx. 4 000 pics
128 MB	Approx. 1 375 pics	Approx. 1 625 pics	Approx. 1 750 pics	Approx. 1 875 pics	Approx. 2 000 pics
64 MB	Approx. 687 pics	Approx. 812 pics	Approx. 875 pics	Approx. 937 pics	Approx. 1 000 pics

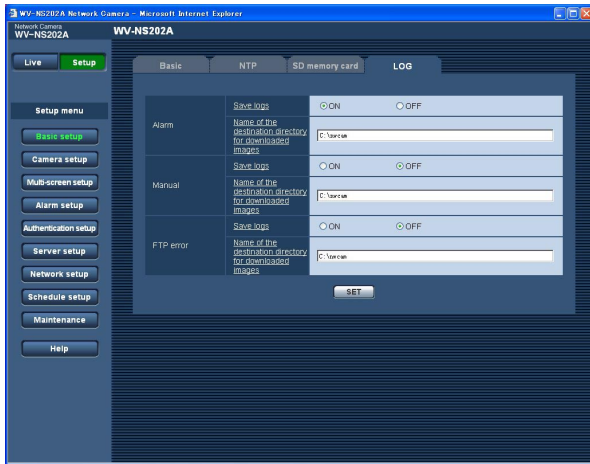
Refer to the following for the possible numbers of images whose image capture size is QVGA.

### Image capture size: QVGA

Size of SD memory card	Image quality				
	0 (Super fine)	1 (Fine)	2	3	4
2 GB	Approx. 24 000 pics	Approx. 26 000 pics	Approx. 27 000 pics	Approx. 28 000 pics	Approx. 30 000 pics
1 GB	Approx. 12 000 pics	Approx. 13 000 pics	Approx. 13 500 pics	Approx. 14 000 pics	Approx. 15 000 pics
512 MB	Approx. 6 000 pics	Approx. 6 500 pics	Approx. 6 750 pics	Approx. 7 000 pics	Approx. 7 500 pics
256 MB	Approx. 3 000 pics	Approx. 3 250 pics	Approx. 3 375 pics	Approx. 3 500 pics	Approx. 3 750 pics
128 MB	Approx. 1 500 pics	Approx. 1 625 pics	Approx. 1 687 pics	Approx. 1 750 pics	Approx. 1 875 pics
64 MB	Approx. 750 pics	Approx. 812 pics	Approx. 843 pics	Approx. 875 pics	Approx. 937 pics
Size of SD memory card	Image quality				
	5 (Normal)	6	7	8	9 (Low)
2 GB	Approx. 32 000 pics	Approx. 36 000 pics	Approx. 38 000 pics	Approx. 40 000 pics	Approx. 42 000 pics
1 GB	Approx. 16 000 pics	Approx. 18 000 pics	Approx. 19 000 pics	Approx. 20 000 pics	Approx. 21 000 pics
512 MB	Approx. 8 000 pics	Approx. 9 000 pics	Approx. 9 500 pics	Approx. 10 000 pics	Approx. 10 500 pics
256 MB	Approx. 4 000 pics	Approx. 4 500 pics	Approx. 4 750 pics	Approx. 5 000 pics	Approx. 5 250 pics
128 MB	Approx. 2 000 pics	Approx. 2 250 pics	Approx. 2 375 pics	Approx. 2 500 pics	Approx. 2 625 pics
64 MB	Approx. 1 000 pics	Approx. 1 125 pics	Approx. 1 187 pics	Approx. 1 250 pics	Approx. 1 312 pics

## Configure the settings relating to the logs [LOG]

Click the [LOG] tab on the "Basic setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)



### Important:

When "Without time and date" is selected for "File name" on the [FTP] tab on the "Network setup" page (☞ page 72), FTP error log and associated images will not be saved.

To save them, select "With time and date".

### ■ Alarm

#### [Save logs]

Select "ON" or "OFF" to determine whether to save the alarm logs.

**ON:** Saves the alarm logs

**OFF:** Does not save the alarm logs

**Default:** ON

#### [Name of the destination directory for downloaded images]

Enter the name of the destination directory to which images associated with the logs are to be downloaded.

For example, enter "C:\alarm" to designate the folder "alarm" under drive C.

Enter 3 to 128 characters.

**Enter alphanumeric characters except the following:**

\ : / \_

### ■ Manual

Select "ON" or "OFF" and designate the destination folder in the same manner as for "Alarm".

### ■ FTP error

Select "ON" or "OFF" and designate the destination folder in the same manner as for "Alarm".

## How the logs and images are saved depending on the settings for "Alarm"

[LOG] tab	[SD memory card] tab		Logs and associated images
Alarm: Save logs	SD memory card	Save trigger	
ON	Use	Alarm input	<p>Logs: Up to 5 000 logs will be kept. When more than 5 000 logs are filed, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten.</p> <p>Images: Images associated with the logs will be saved. When available capacity of the SD memory card ran out, the older images will be overwritten by the newer images. Even when available capacity of the SD memory card is enough, the older images will be overwritten by the newer images when more than 5 000 logs are filed since associated images are to be deleted when the logs are deleted.</p>
		Other than "Alarm input"	<p>Logs: Up to 5 000 logs will be kept. When more than 5 000 logs are filed, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten.</p> <p>Images: Images will not be saved.</p>
	Not use	–	<p>Logs: Up to 1 000 logs will be kept. When more than 1 000 logs are filed, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten. When the power of the camera is turned off, logs will be deleted.</p> <p>Images: Images will not be saved.  <b>Note:</b> To display images on the SD memory card, it is necessary to copy them onto the PC first. (☞ page 29)</p>
OFF	Use	Alarm input	<p>Logs: Logs will not be saved.</p> <p>Images: Images will be saved.</p>
		Other than "Alarm input"	<p>Logs: Logs will not be saved.</p> <p>Images: Images will not be saved.</p>
	Not use	–	<p>Logs: Logs will not be saved.</p> <p>Images: Images will not be saved.</p>

## How the logs and images are saved depending on the settings for "Manual"

[LOG] tab	[SD memory card] tab			Logs and associated images
Manual: Save logs	SD memory card	Save trigger	Overwrite	
ON	Use	Manual	ON	<p>Logs: Up to 5 000 logs will be kept. When more than 5 000 logs are filed, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten.</p> <p>Images: Images associated with the logs will be saved. When available capacity of the SD memory card ran out, the older images will be overwritten by the newer images. Even when available capacity of the SD memory card is enough, the older images will be overwritten by the newer images when more than 5 000 logs are filed since associated images are to be deleted when the logs are deleted.</p>
			OFF	<p>Logs: Up to 5 000 logs will be kept. When more than 5 000 logs are filed, no log will be filed newly anymore. Even when available capacity of the SD memory card ran out and it is not enough to save images, logs will be kept on being filed until it reaches 5 000 logs.</p> <p>Images: Images associated with the logs will be saved. When available capacity of the SD memory card ran out, saving of images will become impossible. Even when available capacity of the SD memory card is enough, images associated with logs will be kept on being saved until number of filed logs reaches 5 000.</p>
	Other than "Manual"	–	<p>Logs: Logs will not be saved.</p> <p>Images: Images will not be saved.</p>	
	Not use	–	–	<p>Logs: Logs will not be saved.</p> <p>Images: Images will not be saved.</p>
OFF	Use	Manual	ON	<p>Logs: Logs will not be saved.</p> <p>Images: Images will be saved. When available capacity of the SD memory card ran out, the older images will be overwritten by the newer images. In this case, the oldest image is the first to be overwritten.</p> <p><b>Note:</b> To display images on the SD memory card, it is necessary to copy them onto the PC first. (☞ page 29)</p>
			OFF	<p>Logs: Logs will not be saved.</p> <p>Images: Images will be saved. When available capacity of the SD memory card ran out, saving of images will become impossible.</p> <p><b>Note:</b> To display images on the SD memory card, it is necessary to copy them onto the PC first. (☞ page 29)</p>
	Other than "Manual"	–	<p>Logs: Logs will not be saved.</p> <p>Images: Images will not be saved.</p>	

[LOG] tab	[SD memory card] tab			Logs and associated images
Manual: Save logs	SD memory card	Save trigger	Overwrite	
OFF	Not use	–	–	Logs: Logs will not be saved. Images: Images will not be saved.

### How the logs and images are saved depending on the settings for "FTP error"

[LOG] tab	[SD memory card] tab		Logs and associated images
FTP error: Save logs	SD memory card	Save trigger	
ON	Use	FTP error	Logs: Up to 5 000 logs will be kept. When more than 5 000 logs are filed, no log will be filed newly anymore. Even when available capacity of the SD memory card ran out and it is not enough to save images, logs will be kept on being filed until it reaches 5 000 logs. Images: Images will be saved. When available capacity of the SD memory card ran out, saving of images will become impossible. Even when available capacity of the SD memory card is enough, images associated with logs will be kept on being saved until number of filed logs reaches 5 000.
		Other than "FTP error"	Logs: Logs will not be saved. Images: Images will not be saved.
	Not use	–	Logs: Logs will not be saved. Images: Images will not be saved.
OFF	Use	FTP error	Logs: Logs will not be saved. Images: Images will be saved. When available capacity of the SD memory card ran out, saving of images will become impossible. <b>Note:</b> To display images on the SD memory card, it is necessary to copy them onto the PC first. (☞ page 29)
		Other than "FTP error"	Logs: Logs will not be saved. Images: Images will not be saved.
	Not use	–	Logs: Logs will not be saved. Images: Images will not be saved.



## Configure the settings relating to images and audio [Camera setup]

The settings relating to JPEG/MPEG-4 images and camera operations such as the settings of image quality, preset positions, audio, etc. can be configured on this page.

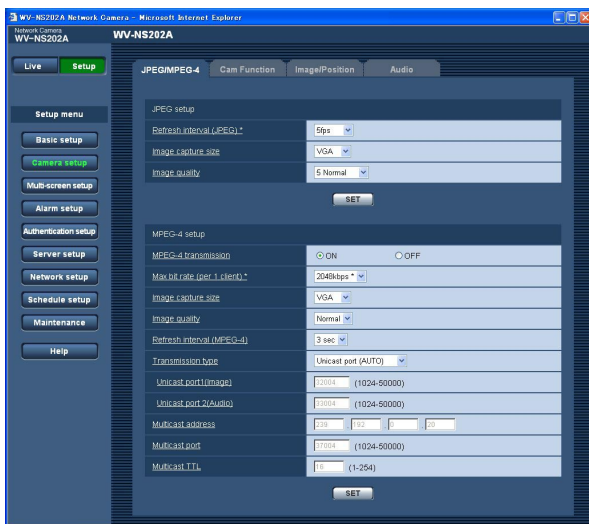
The "Camera setup" page has 4 tabs; the [JPEG/MPEG-4] tab, the [Cam Function] tab, the [Image/Position] tab and the [Audio] tab.

### Configure the settings relating to JPEG/MPEG-4 images [JPEG/MPEG-4]

Click the [JPEG/MPEG-4] tab on the "Camera setup" page. (See pages 20 and 21: How to display/operate the setup menu)

#### ■ JPEG setup

Configure the settings such as "Refresh interval (JPEG)\*", "Image capture size" and "Image quality" on this section. Refer to page 36 for further information about the settings relating to MPEG-4 images.



#### [Image capture size]

Select "QVGA" or "VGA" for the image capture size of JPEG images.

**Default: VGA**

#### [Image quality]

Select image quality of JPEG images from the following.  
0 Super fine/1 Fine/2/3/4/5 Normal/6/7/8/9 Low

**Default: 5 Normal**

#### [Refresh interval (JPEG)\*]

Select an interval to refresh the displayed JPEG image from the following.

0.1 fps/0.2 fps/0.33 fps/0.5 fps/1 fps/2 fps/3 fps/5 fps/  
6 fps \*/10 fps \*/15 fps \*/30 fps \*

**Default: 5 fps**

#### Note:

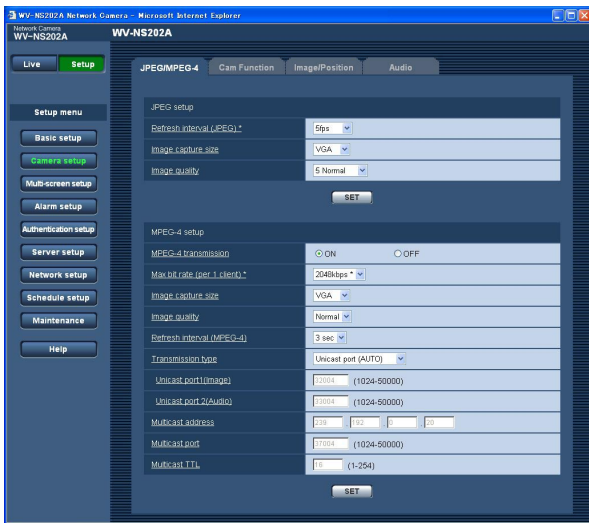
When "ON" is selected for "MPEG-4 transmission", the refresh interval may be longer than the set value when any value with an asterisk (\*) on the right is selected.

## ■ MPEG-4 setup

Click the [JPEG/MPEG-4] tab on the "Camera setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

Configure the settings relating to MPEG-4 image such as "Max bit rate (per 1 client)", "Image capture size", "Image quality", etc. in this section. Refer to page 35 for further information about the settings relating to JPEG images.

Refer to page 89 for how to configure settings to transmit MPEG-4 images via the Internet.



### [MPEG-4 transmission]

Select "ON" or "OFF" to determine whether or not to transmit MPEG-4 images.

**ON:** Transmits MPEG-4 images.

**OFF:** Does not transmit MPEG-4 images.

**Default:** ON

### Note:

When "ON" is selected for "MPEG-4" transmission, displaying of MPEG-4 images or JPEG images will be available. However, the refresh interval (JPEG) may be longer than the set value when displaying JPEG images.

### [Max bit rate (per 1 client)\*]

Select a MPEG-4 bit rate per a client from the following.  
64 kbps/128 kbps \*/256 kbps \*/512 kbps \*/1024 kbps \*/  
1536 kbps \*/2048 kbps \*/3072 kbps \*/4096 kbps \*

**Default:** 2048 kbps\*

### Note:

The MPEG-4 bit rate is synchronized with "Total bit rate" on the [Network] tab of "Network setup" page (☞ page 68). For this reason, the bit rate may be lower than the value when any value with an asterisk (\*) on the right is selected.

### [Image capture size]

Select "QVGA" or "VGA" for the image capture size of MPEG-4 images.

**Default:** VGA

### [Image quality]

Select the image quality of MPEG-4 images from the following.

Fine/Normal/Low

**Default:** Normal

### [Refresh interval (MPEG-4)]

Select an interval (I-frame interval; 1 - 5 seconds) to refresh the displayed MPEG-4 images.

If using under a network environment with frequent error occurrences, shorten the refresh interval for MPEG-4 to diminish image distortions. However, the refresh interval may be longer than the set value.

**Default:** 3 sec

### [Transmission type]

Select a MPEG-4 transmission type from the following.

**Unicast port (AUTO):** Up to 8 users can access a single camera concurrently. "Unicast port1 (Image)" and "Unicast port2 (Audio)" will automatically be selected when transmitting images and audio from the camera.

When it is unnecessary to fix the port number for MPEG-4 image transmission such as when using in a particular LAN environment, it is recommended to select "Unicast port (AUTO)".

**Unicast port (MANUAL):** Up to 8 users can access a single camera concurrently. It is necessary to select "Unicast port1 (Image)" and "Unicast port2 (Audio)" manually to transmit images and audio from the camera.

It is possible to fix the port number of the router used for MPEG-4 image transmission via the Internet by setting "Unicast port (MANUAL)". (☞ page 89) Refer to the operating instructions of the router in use.

**Multicast:** No concurrent access limitation for a camera.

Refer to page 4 for further information about the maximum concurrent access number.

**Default:** Unicast port (AUTO)

**[Unicast port1 (Image)]**

Enter the unicast port number (used to transmit images from the camera).

**Available port number:** 1024 - 50000 (Only even numbers are available.)

**Default:** 32004

**[Unicast port2 (Audio)]**

Enter the unicast port number (used to transmit audio from the camera).

**Available port number:** 1024 - 50000 (Only even numbers are available.)

**Default:** 33004

**[Multicast address]**

Enter the multicast IP address.

Images and audio will be transmitted to the designated IP address.

**Available IP address:** 224.0.0.0 - 239.255.255.255

**Default:** 239.192.0.20

**[Multicast port]**

Enter the multicast port number (used to transmit images from the camera).

**Available port number:** 1024 - 50000 (Only even numbers are available.)

**Default:** 37004

**[Multicast TTL]**

Enter the multicast TTL value.

**Available value:** 1 - 254

**Default:** 16

---

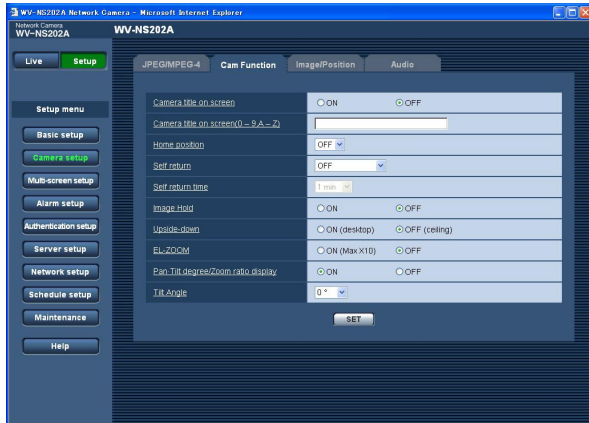
**Important:**

- Depending on the PC in use for monitoring, the multicast port number may be already in use. In this case, it may be impossible to monitor images. Change the multicast port number.
  - When transmitting an MPEG-4 image via a network, the transmitted image sometimes may not be displayed. In this case, refer to the network administrator.
  - When two or more network interface cards are installed on the PC in use, the network interface card(s) not used for receiving images should be invalidated when displaying images using the multicast port.
-

## Configure the settings relating to the camera title and the camera operations [Cam Function]

Click the [Cam Function] tab on the "Camera setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

Configure the settings relating to camera title and the camera operations on this page.



### [Camera title on screen]

Select "ON" or "OFF" to determine whether or not to display the camera title on images.

**Default:** OFF

### [Camera title on screen (0-9, A-Z)]

Enter the camera title to be displayed on images.

**Number of characters for the camera title:** 0 - 16 characters

**Available characters:** 0-9, A-Z and the following marks.

! " # \$ % & ' ( ) \* + , - . / : ; = ?

**Default:** None (blank)

#### Note:

When "ON" is selected, the entered camera title will be displayed at the position selected for "OSD Position" on the [Basic] tab of the "Basic setup" page. (☞ page 25)

### [Home position]

A preset position (☞ page 45) can be set as the home position.

When a preset position is set as the home position, "H" will be displayed next to the preset position number.

### [Self return]

When the time set for "Self return" has passed after manual operations of the camera, the camera will automatically be in the selected mode. This function is also useful to automatically set the camera in a specific mode when the power of the camera is turned on.

**OFF:** The camera will not be in any mode.

**Home position:** When the set time has passed, the camera will move to the home position automatically.

**Auto track:** When the set time has passed, the camera will move to the home position and will start the auto track function. The camera will repeat this action (moves to the home position and starts the auto track function) afterward.

**Auto pan:** When the set time has passed, the camera will start the auto pan function.

**Preset sequence:** When the set time has passed, the camera will start the sequence function.

**Default:** OFF

#### Note:

The self return function works even when the setup menu is displayed.

### [Self return time]

Select a waiting time (amount of time until the camera starts the selected operation after the end of the manual operations) from the following.

10 sec/20 sec/30 sec/1 min/ 2 min/3 min/5 min/10 min/20 min/30 min/60 min

**Default:** 1 min

### [Image Hold]

Select "ON" or "OFF" to determine whether or not to hold the still image on the screen (that is displayed at the last moment before the camera started to move to a preset position) until the camera has moved to the preset position.

**ON:** A still image will be held on the screen until the camera has moved to the preset position.

**OFF:** Images from the camera will be displayed even when the camera is moving to the preset position.

**Default:** OFF

---

**[Upside-down]**

Select "ON (desktop)" or "OFF (ceiling)" to determine how the camera is to be installed.

**ON (desktop):** Select this when the camera is to be installed with the dome side up.

**OFF (ceiling):** Select this when the camera is to be installed with the dome side down.

**Default:** OFF (ceiling)

**[EL-ZOOM]**

Select "ON" or "OFF" to determine whether or not to use the electronic zoom.

**ON (Max X10):** Images can be zoomed in on with the optical zoom (1x - 22 x) and the electronic zoom (23x – 220x).

**OFF:** Does not use the electronic zoom.

**Default:** OFF

---

**Notes:**

- When "ON" is selected, zooming will stop when the zoom factor has reached 22x.
- When the zoom factor is increased to 22x (EL-zoom) or more, the image resolution will be lower.
- When the zoom factor is 22x or more, the setting of the preset positions will become unavailable.

---

**[Pan-Tilt degree/Zoom ratio display]**

Select "ON" or "OFF" to determine whether or not to display the current panning/tilting degree and the zoom factor on images when the camera is being operated manually.

**ON:** Displays the current panning/tilting degree and the zoom factor.

**OFF:** Does not display the current panning/tilting degree and the zoom factor.

**Default:** ON

---

**Note:**

When "ON" is selected, the panning/tilting degree and the zoom factor will be displayed at the position selected for "OSD Position" on the [Basic] tab of the "Basic setup" page. (☞ page 25)

---

**[Tilt Angle]**

Select the maximum degree for tilting from the following.  
(Level = 0°)

0°/-5°/-10°/-15°/-20°/-25°/-30°

**Default:** 0°

---

**Note:**

When using an optional inner cover WV-Q153, upper side of images will be hidden (become black) when the tilt angle of the camera is almost level. (When "-5°" is selected for "Tilt Angle" on the setup menu, upper half of images will be hidden.) In this case, images will also be washed out depending on the object when "ON" is selected for "AGC" on the setup menu.

Refer to the network operating instructions (PDF) for further information about the setup menu.

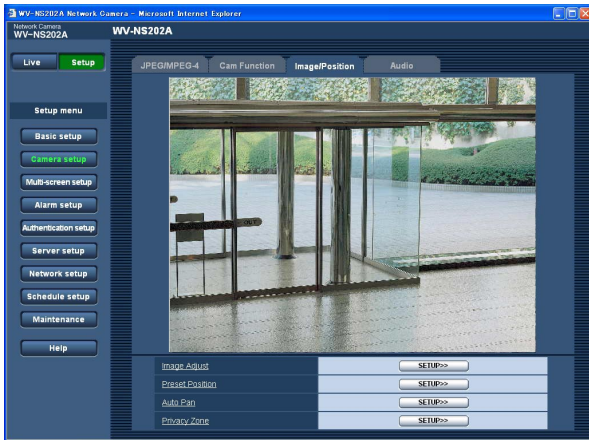
---

## Configure the settings relating to images and the preset positions [Image/Position]

Click the [Image/Position] tab on the "Camera setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

When the [SETUP>>] button of each setting item is clicked, the detailed settings menu will be displayed in a newly opened window. The detailed settings can be configured while monitoring images displayed on the [Image/Position] tab.

The following are descriptions of how to configure the settings relating to image quality, preset positions, auto pan function, privacy zone, etc.



### [Image Adjust]

Click the [SETUP>>] button to display the setup menu that can configure the settings relating to image quality. The setup menu will be displayed in a newly opened window. (☞ page 41)

### [Preset Position]

Click the [SETUP>>] button to display the setup menu that can configure the settings relating to the preset positions. The setup menu will be displayed in a newly opened window. (☞ page 45)

### [Auto Pan]

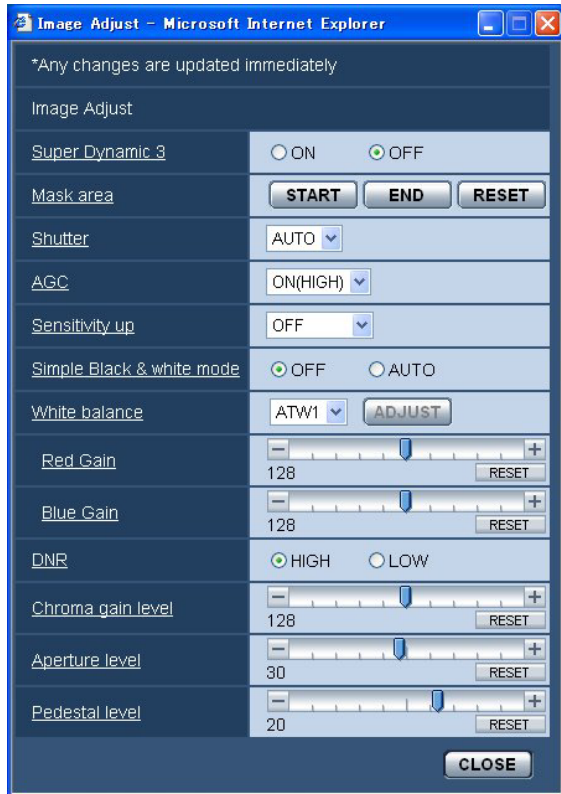
Click the [SETUP>>] button to display the setup menu that can configure the settings relating to the auto pan function. The setup menu will be displayed in a newly opened window. (☞ page 47)

### [Privacy Zone]

Click the [SETUP>>] button to display the setup menu that can configure the settings relating to the privacy zone. The setup menu will be displayed in a newly opened window. (☞ page 48)

## Configure the settings relating to image quality ("Image Adjust" setup menu)

Click the [SETUP>>] button of "Image Adjust" on the [Image/Position] tab of the "Camera setup" page. (☞ page 40)  
The settings relating to image quality can be configured with the setup menu displayed in a newly displayed window.  
When the values are changed, the changed values will be applied immediately to the currently displayed image on the [Image/Position] tab.



### [Super Dynamic 3]

Select "ON" or "OFF" to determine whether to turn on or off super dynamic 3 (SUPER-D 3).

Refer to the next page for further information about SUPER-D 3.

**ON:** Turn on SUPER-D 3

**OFF:** Turn off SUPER-D 3

**Default:** OFF

---

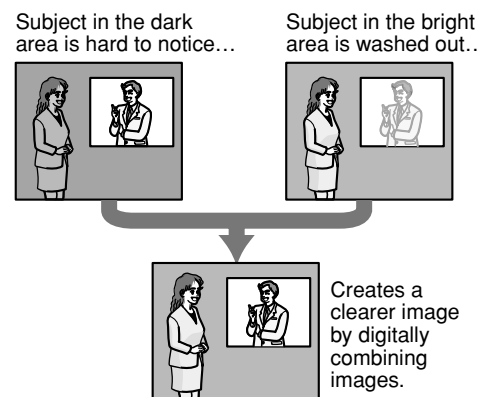
### Note:

In the following cases, turn off SUPER-D 3.

- When flickering appears or the color changes on the screen
  - When noise appears in the brighter area on the screen
- 

### About SUPER-D 3 (Super Dynamic function)

When there is wide variation between the illumination of light and dark areas of the location being monitored, the camera adjusts the lens iris in accordance with the brighter areas. This causes loss of detail in darker areas. Conversely, adjusting the lens brightness for the darker areas causes the brighter areas to become washed out. SUPER-D 3 digitally combines an image that is set up for a clear view of the brighter areas with an image that is set up for a clear view of the darker areas, creating a final image that preserves overall detail.



### [Mask area]

When "OFF" is selected for "Super Dynamic 3", it is possible to compensate for backlight by masking the brighter area.

Refer to page 44 for descriptions of how to mask.

### [Shutter]

Select the shutter speed from the following.

**AUTO:** Provides clearer images of bright objects outdoors since the shutter speed is adjusted automatically. Flickering caused by fluorescent lamps can also be compensated.

**OFF:** Fixed at 1/60 sec

**1/100:** Recommended when flickering caused by fluorescent lamp appears frequently.

**Default:** AUTO

Depending on the environment, flickering may not be compensated even when selecting "AUTO". When flickers appear frequently, set the shutter speed to "1/100".

### [AGC]

Select a method of gain adjustment from the following.

**ON (HIGH)/ON (MID)/ON (LOW):** When the luminance of the subject becomes darker, gain will be automatically incremented and screen will become brighter. "HIGH", "MID" and "LOW" are indications of gain level.

**OFF:** Images will be captured with the fixed gain level.

**Default:** ON (HIGH)

### [Sensitivity up]

The electronic sensitivity enhancement (sensitivity up) can be carried out by adjusting the storage time of CCD. The following are available for the sensitivity up.

OFF/x2 AUTO/x4 AUTO/x6 AUTO/x10 AUTO/  
x16 AUTO/x32 AUTO

**Default:** OFF

---

#### Note:

When "x32 AUTO" is selected, for example, sensitivity will automatically be increased up to x32.

---

#### Important:

When the sensitivity up function is active, frame rate may become lower. Noise or white dots (blemishes) may sometimes appear.

---

### [Simple Black & white mode]

Select "AUTO" or "OFF" for the simple black and white mode.

**OFF:** The camera will always be in the color mode.

**AUTO:** The camera will automatically be in the color mode or in the black and white mode depending on brightness (intensity of illumination).

When taking images under dark illumination, the camera will automatically become in the black and white mode.

When taking images under bright illumination, the camera will automatically become in the color mode.

**Default:** OFF

- Approximate indication of brightness (intensity of illumination) that makes the camera to switch from the color mode to the black and white mode: Approx. 3 lx (When "ON" is selected for "AGC")
- Time to be taken to switch from the color mode to the black and white mode: Approx. 5 seconds

### [White balance]

Select a method of white balance adjustment from the following.

White color can be adjusted by "Red Gain" and "Blue Gain".

**ATW1:** Auto tracing white balance mode

The camera will constantly check the color temperature of the light source and adjust the white balance automatically.

Operating color temperature range is approx.  
2 700 K – 6 000 K.

**ATW2:** Auto tracing white balance under a sodium lamp. The camera will adjust the white balance automatically under a sodium lamp.

Operating color temperature range is approx.  
2 000 K – 6 000 K.

**AWC:** Auto white balance control mode

Suitable for shooting where the light source is fixed and the light intensity is constant. Operating color temperature range is approx. 2 000 K – 10 000 K.

**Default:** ATW1

---

#### Notes:

- Under the following conditions, color may not be faithfully processed. In these cases, select "AWC".
  - When shooting a subject whose major part is a thick color
  - When shooting blue sky or sun at sunset
  - When shooting a subject whose luminance is too low



- After selecting "AWC", click the [ADJUST] button. It will take for around 7 seconds to complete the white balance adjustment.
- 

**[CLOSE] button**

Click this button to close the "Image Adjust" setup menu.

**[Red Gain]**

Adjust the red color of images.

When the cursor is moved in the "+" direction, the red color will become thicker. When the cursor is moved in the "-" direction, the red color will be thinner. Click the [RESET] button to reset the color to the default.

**[Blue Gain]**

Adjust the blue color of images.

When the cursor is moved in the "+" direction, the blue color will become thicker. When the cursor is moved in the "-" direction, the blue color will be thinner. Click the [RESET] button to reset the color to the default.

**[DNR (Digital Noise Reduction)]**

When this function (digital noise reduction) is active, noise may be automatically reduced under a low luminance. Select an effect level "LOW" or "HIGH" for the digital noise reduction.

**HIGH:** High DNR, afterimage remains

**LOW:** Low DNR, reduces afterimage

**Default:** HIGH

**[Chroma gain level]**

Adjust the chroma level (color density).

When the cursor is moved in the "+" direction, the colors will become thicker. When the cursor is moved in the "-" direction, the colors will be thinner.

Click the [RESET] button to reset the color to the default.

**[Aperture level]**

Adjust the aperture level (outline compensation).

Images will be sharper when the cursor is moved in the "+" direction, and will be softer when the cursor is moved in the "-" direction.

Click the [RESET] button to reset the level to the default.

**[Pedestal level]**

Adjust the black level of images by moving the cursor.

When the cursor is moved to the "+" direction, images will become brighter. When the cursor is moved to the "-" direction, images will be darker.

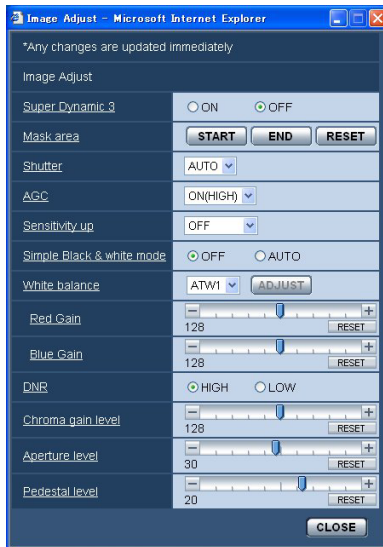
Click the [RESET] button to reset the level to the default.

## Set mask areas

When "OFF" is selected for "Super Dynamic 3", it is possible to compensate for backlight by masking brighter areas.

### Step 1

Display the setup menu of "Image Adjust". (page 41)

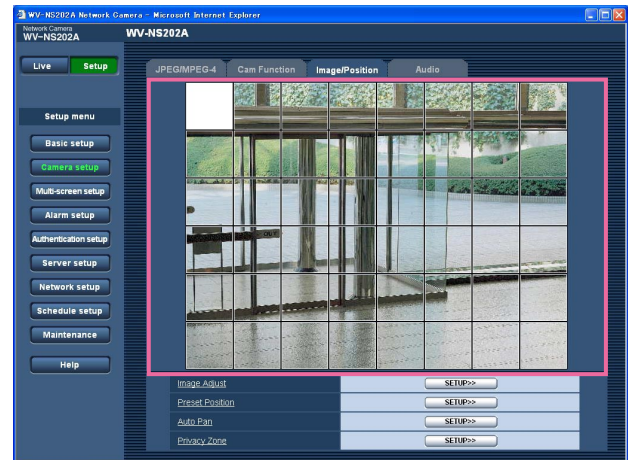


### Step 3

Click the divided areas to be masked.

→ The clicked areas will be masked and will become white.

To cancel masking, click the area again.



### Step 2

Click the [START] button of "Mask area".

→ Borders will appear and the image displayed on the [Image/Position] tab will be divided into 48 (6x8).

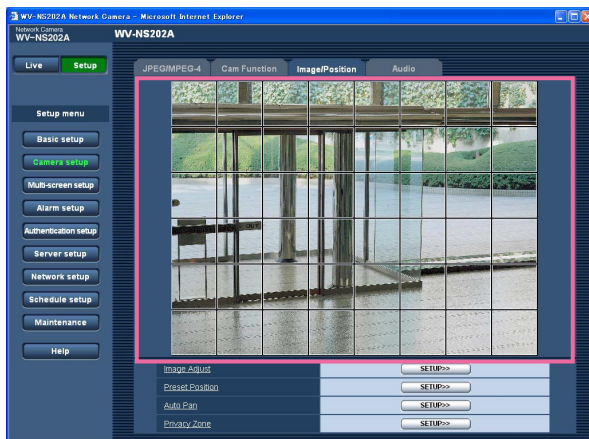
### Step 4

Click the [END] button after completing masking areas.

→ The borders on the image displayed on the [Image/Position] tab will disappear.

### Note:

When the [RESET] button is clicked, masking for all the masked areas will be canceled.



## Configure the settings relating to the preset positions ("Preset No." setup menu)

Click the [SETUP>>] button of "Preset Position" on the [Image/Position] tab of the "Camera setup" page.  
(☞ page 40)

It is possible to register, edit and delete the preset positions on this page.

When the focus, brightness, zoom factor are adjusted, the adjustment will be applied immediately to the currently displayed image on the [Image/Position] tab.

### Important:

When the zoom factor is 22x or more, the setting of the preset positions will become unavailable.

Depending on the environment (such as when the temperature is below 5 °C (41 °F), for example), the moving speed of the camera to the preset position may become slower.



## Register the preset position

### Step 1

Move the camera to the position to be registered as a preset position, and then select the desired preset position number.

### Step 2

Click the [SET] button.

→ The selected preset position number will be displayed next to "Position No.".

### Step 3

To display the preset ID on the "Live" page, select "ON" for "Preset ID" and enter the desired preset ID to be displayed. Then, click the [SET] button to apply the settings.

### Step 4

The settings of "Auto focus", "Dwell time", "Super Dynamic 3" and "Mask area" can be configured for each position independently.

## Edit the settings of the registered preset position

### Step 1

Select the preset position number whose settings are to be edited.

### Step 2

Click the [GO] button.

### Step 3

When the camera reached the preset position, do steps 3-4 of "Register the preset position".

## [Preset No.]

**[SET] button:** When the position of the camera is determined using the [ZOOM] buttons, the [FOCUS] buttons, the [BRIGHTNESS] buttons and the control pad/buttons, click this button after selecting the desired preset position number (1 - 64) from the pull-down menu.

The determined position will be newly registered as the preset position.

**[DEL] button:** When this button is clicked after selecting the preset position number to be deleted from the pull-down menu, the preset position will be deleted.

**[GO] button:** When this button is clicked after selecting the preset position number from the pull-down menu, the camera will move to the selected preset position and the registration information will be displayed on the "Preset No." setup menu. Images from the camera will be displayed on the [Image/Position] tab.

---

### Note:

When registering the preset position, the camera may move slightly in the direction that the camera moved last. This is a normal operation.

---

## ■ Position No.

### [Preset ID]

Select "ON" or "OFF" to determine whether to enable or disable the preset ID display. The preset ID display can be applied to each preset position.


**ON:** Displays the preset ID.

**OFF:** Does not display the preset ID.

**Default:** OFF

---

### Note:

When "ON" is selected, the entered preset ID will be displayed at the position selected for "OSD Position" on the [Basic] tab of the "Basic setup" page.  
( page 25)

---

### Important:

When "Preset ID (0-9, A-Z)" or "Preset ID" is edited, it is necessary to click the [SET] button to apply them.

---

### [Preset ID (0-9, A-Z)]

Enter the preset ID to be displayed on images. The preset IDs can be applied to each preset position.

**Available characters:** 0-9, A-Z and the following marks.

! "# \$ % & ' ( ) \* + , - . / : ; = ?

**Number of characters for the preset ID:** 0 - 16 characters

**Default:** None (blank)

---

### Note:

The entered preset ID will be displayed next to the preset position number on the pull-down menu. When "ON" is selected for "Preset ID", the preset ID will be displayed on images.

---

### [Auto focus]

Select "AUTO" or "OFF" to determine whether to enable or disable the auto focus function after the camera has moved to a preset position. This function can be applied to each preset position.

**AUTO:** The auto focus function will be activated after moving to a preset position.

**OFF:** Does not activate the auto focus function after moving to a preset position.

**Default:** OFF

---

### Note:

When the preset position is set to shoot the following objects, it is recommended to select "OFF" since the camera can focus on them quickly.

- An object whose depth never changes
  - An object whose contrast is low
  - An object with high luminance such as a spotlight
- 

### [Dwell time]

Select a dwell time (duration the camera stops for at each preset position) for the preset sequence operation. The selected dwell time will be applied to all preset positions.

5 sec/10 sec/20 sec/30 sec

**Default:** 10 sec

### [Super Dynamic 3]

Select "ON" or "OFF" to determine whether to turn on or off super dynamic 3 (SUPER-D 3). This function can be applied to each preset position.

**ON:** Turn on SUPER-D 3

**OFF:** Turn off SUPER-D 3

**Default:** OFF

### [Mask area]

When "OFF" is selected for "Super Dynamic 3", it is possible to compensate for backlight by masking brighter areas.

Refer to page 44 for descriptions of how to mask.

**ZOOM buttons**

## FOCUS buttons

## BRIGHTNESS buttons

## Control pad/buttons

Refer to pages 6 and 7 for descriptions of how to operate these buttons/pad.

Panning, tilting and zooming operations can also be carried out on the [Image/Position] tab.

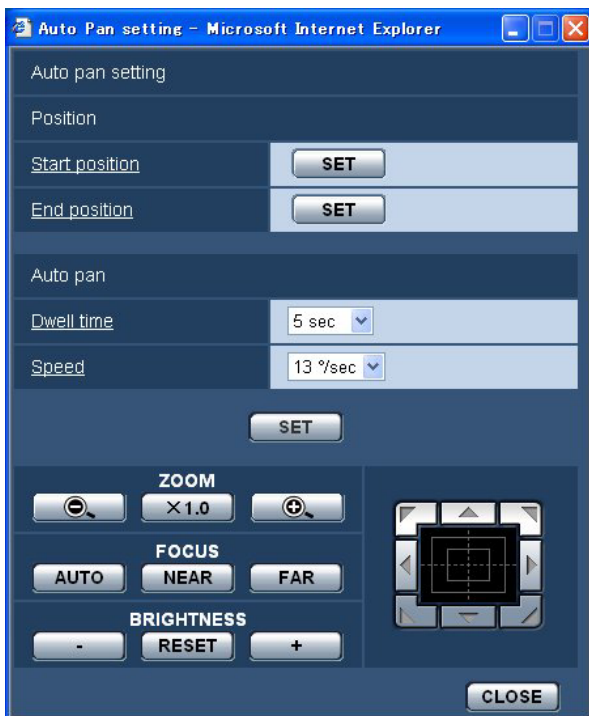
## [CLOSE] button

Click this button to close the "Preset No." setup menu.

## Configure the settings relating to the auto pan function ("Auto Pan" setup menu)

Click the [SETUP>>] button of "Auto Pan" on the [Image/Position] tab of the "Camera setup" page. (page 40)

The settings relating to the auto pan function can be configured with the setup menu displayed in a newly displayed window.



- Adjusted zoom and focus position for the auto pan function will be applied when [SET] button of "Start position" is clicked. These adjustments will not be applied by clicking the [SET] button of "End position".

## ■ Auto pan

### [Dwell time]

Select a dwell time at the start point and the end point from the following.

5 sec/10 sec/20 sec/30 sec

**Default:** 5 sec

### [Speed]

Select a speed for the auto panning from the following.

3° /sec, 4° /sec, 5° /sec, 7° /sec, 10° /sec, 13° /sec, 18° /sec, 24° /sec

**Default:** 13° /sec

### Note:

Even when the selected zoom factor is higher than 22x, the camera will start panning with 22x zoom factor.

### Important:

When "Dwell time" or "Speed" is edited, it is necessary to click the [SET] button to apply them.

## ■ Position

### [Start position]

Move the camera to the desired point to be set as the start point of the auto panning using the control pad/buttons and adjust the image using the [ZOOM] buttons and the [FOCUS] buttons.

Then click the [SET] button to register the position as the start position.

### [End position]

Move the camera to the desired point to be set as the end point of the auto panning using the control pad/buttons, and then click the [SET] button to register the position as the end position.

### Notes:

- Panning, tilting and zooming operations can also be carried out on the [Image/Position] tab.

## [CLOSE] button

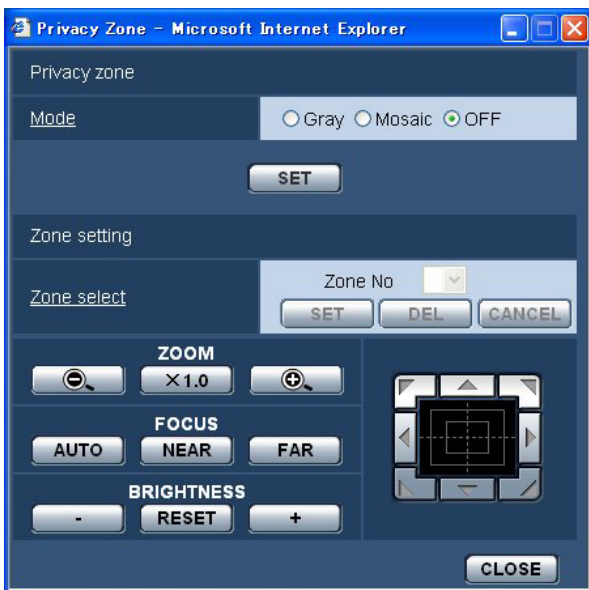
Click this button to close the "Auto pan" setup menu.

## Configure the settings relating to the privacy zone ("Privacy Zone" setup menu)

Click the [SETUP>>] button of "Privacy Zone" on the [Image/Position] tab of the "Camera setup" page. (page 40)  
When there is a zone that is not to be displayed, set the zone as a privacy zone to not to display. Up to 8 privacy zones can be set.

### Notes:

- Depending on the panning/tilting direction (especially when the tilting degree is 45° - 90°) and the zooming factor, the area set as the privacy zone may become visible. Make sure that each of the set privacy zone is not visible after setting it.
- The privacy zone function does not work when the camera is in the process of warming-up just after turning on the power, or in the process of refreshing the position.



### ■ Privacy zone

#### [Mode]

Select a display mode of the privacy zone from the following.

**Gray:** The privacy zones will be displayed in gray.

**Mosaic:** The privacy zones will be displayed with a mosaic effect.

**OFF:** Does not display the privacy zones.

**Default:** OFF

### ■ Zone setting

#### [Zone select]

Click [√] of "Zone No" and select a zone number (1-8) from the pull-down menu.

An asterisk (\*) next to the zone number indicates that the privacy zone has already been set for the number.

A blinking mask will be displayed at the center of the image displayed on the [Image/Position] tab.

Operate the camera with the panning/tilting/zooming operations to cover the area to be covered by the blinking mask.

Click the [SET] button after determining the position of the camera.

To delete the registered zone, click the [DEL] button after designating the desired zone number to be deleted.

Click the [CANCEL] button to cancel the application or to delete the setting.

### Notes:

- Set the privacy zone larger than the size of an object to be hidden. To raise the precision of the privacy zone placement especially when the zoom is on the WIDE side, it is recommended to set the privacy zone with the zoom range between 1x and 3x.
- Panning, tilting and zooming operations can also be carried out on the [Image/Position] tab.
- When selecting "Zone No" after selecting "Gray" for "Mode", a mask will be displayed at the center of the image display area and will start blinking while changing its color as follows.  
Dark gray → Light gray → Clear  
When the other mask that had already been set is on the same zone, the mask that had previously been set will blink as follows.  
Dark gray → Light gray
- When selecting "Zone No" after selecting "Mosaic" for "Mode", a mask will be displayed at the center of the image display area with a mosaic effect.  
When the other mask that had already been set is on the same zone, the mask that had previously been set will be displayed in dark gray.



**ZOOM buttons**  
**FOCUS buttons**  
**BRIGHTNESS buttons**  
**Control pad/buttons**

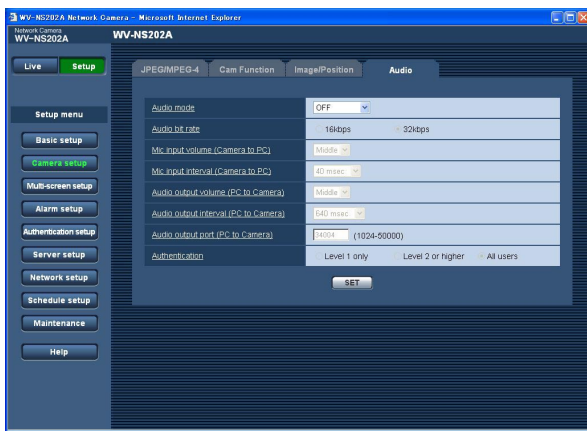
Refer to pages 6 and 7 for descriptions of how to operate these buttons/pad.

**[CLOSE] button**

Click this button to close the "Privacy zone" setup menu.

**Configure the settings relating to audio [Audio]**

Click the [Audio] tab on the "Camera setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)  
 The settings relating to audio can be configured on this page.



**[Audio mode]**

Select the communication mode used for audio data transmission/reception between the camera and the PC from the following.

**OFF:** Does not receive/transmit audio between the camera and the PC. Therefore, the settings and controls relating to audio will be invalidated.

**Mic input:** The PC receives audio data from the camera. Audio can be heard with images on the PC. Images and audio will not be synchronized.

**Audio output:** Audio data from the PC will be transmitted to the camera. Audio can be heard from the speaker connected to the camera.

**Interactive:** The PC receives audio data from the camera. Audio can be heard with images on the PC. Audio transmitted from the PC to the camera can also be heard from the speaker connected to the camera (Transceiver type). However, audio data cannot simultaneously be transmitted and received.

**Default:** OFF

**Note:**

When "Multicast" is selected for "Transmission type" of "MPEG-4 setup" in the "MPEG-4 setup" section of the [JPEG/MPEG-4] tab of the "Camera setup" page (☞ page 36), it is impossible to carry out the "Audio output" operation while monitoring MPEG-4 image. To carry out the "Audio output" operation, click the [JPEG] button.

**[Audio bit rate]**

Select "16 kbps" or "32 kbps" for the audio bit rate used to transmit/receive audio data.

**Default:** 32 kbps

**Note:**

When selecting a smaller value for "Total bit rate" (☞ page 68) while putting a priority on the JPEG/MPEG-4 image transmission, select "16 kbps" for "Audio bit rate".

**[Mic input volume (Camera to PC)]**

Select a volume level on the PC to hear audio transmitted from the camera.

Low/Middle/High

**Default:** Middle

**[Mic input interval (Camera to PC)]**

Select an interval for audio reception from the following.  
 20 msec/40 msec/80 msec/160 msec

**Default:** 40 msec

**Note:**

When a shorter interval is selected, the delay time will be shorter. When a longer interval is selected, audio interruption may be diminished even though the delay time will be longer.

Select the interval according to the network environment.

---

**[Audio output volume (PC to Camera)]**

Select a volume level on the camera to hear audio transmitted from the PC.

Low/Middle/High

**Default:** Middle

**[Audio output interval (PC to Camera)]**

Select an interval for audio transmission from the following.

160 msec/320 msec/640 msec/1280 msec

**Default:** 640 msec

---

**Notes:**

- When a shorter interval is selected, the delay time will be shorter. When a longer interval is selected, audio interruption may be diminished even though the delay time will be longer.  
Select the interval according to the network environment.
- Audio may temporarily be interrupted or noise may be heard when panning, tilting or zooming the camera, or when multiple users are accessing concurrently. It may be possible to diminish the interruption or noise by setting a longer interval for "Audio output interval (PC to Camera)".

---

**[Audio output port (PC to Camera)]**

Enter the transmission port number (the port number on the camera used to receive audio data transmitted from the PC).

**Available port number:** 1024 - 50000 (Only even numbers are available.)

**Default:** 34004

---

**Note:**

The transmission port number entered for "Audio output port (PC to Camera)" will be used only when "Unicast (MANUAL)" is selected for "Transmission type" (☞ page 36).

When "OFF" is selected for "MPEG-4 transmission" (☞ page 36) or when "Unicast (AUTO)" or "Multicast" is selected for "Transmission type", it is not necessary to enter the transmission port number.

---

**[Authentication]**

Select an access level for audio transmission/reception from the following. Refer to page 63 for further information about the access level.

Level 1 only/Level 2 or higher/All users

**Default:** All users

---

**Notes:**

- Images and audio will not be synchronized.  
Therefore, images and audio may not always match.
  - Audio may be interrupted depending on the network environment.
-



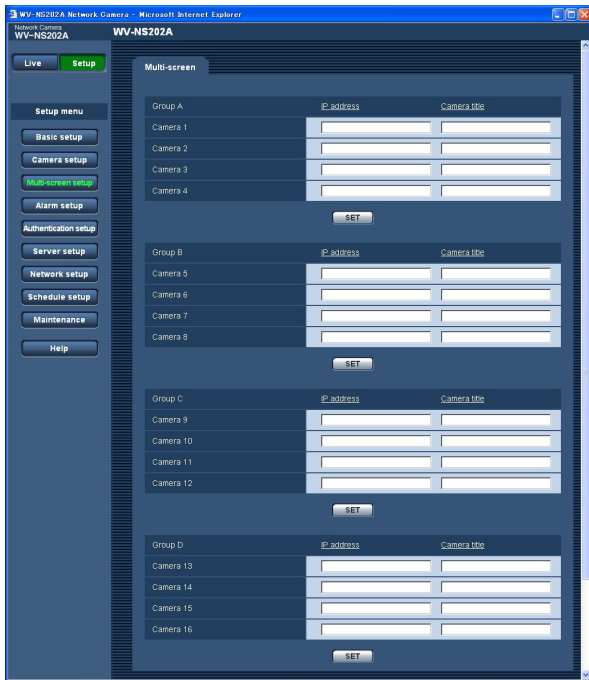
## Configures the multi-screen settings [Multi-screen setup]

The cameras to be used for the multi-screen display can be registered on this page.

Refer to page 9 for descriptions of how to display images on a multi-screen.

The following cameras are applicable for the multi-screen display. (as of May 2007)

WV-NF284 series, WV-NS202 series, WV-NP240 series, WV-NP1000 series, WV-NW470S series, WV-NP472, WV-NS320 series, WV-NW484S series, WV-NS202A series



### [Camera title]

Enter the title of the camera. The entered camera title will be displayed on a multi-screen.

**Number of characters for the camera title:** 0 - 20 characters

---

### Note:

When selecting a 16 split-screen, some characters of the camera title to be displayed may not be displayed.

---

### [IP address]

Enter the IP address or the host name of the camera to be used for the multi-screen. 4 cameras can be registered as a group and up to 4 groups (16 cameras) can be registered.

**When the HTTP port number for the camera had been changed, enter as follows:** "IP address of the camera:port number", for example "192.168.0.10:8080".

**Number of characters for the IP address:** 1 - 128 characters

---

### Note:

When using the host name, it is necessary to configure the DNS settings of the PC to be used for the multi-screen display. (page 68)

---

## Configure the alarm settings [Alarm setup]

The settings relating to alarm occurrences such as settings for the alarm action at an alarm occurrence, the alarm occurrence notification, and the VMD area settings can be configured on this page.

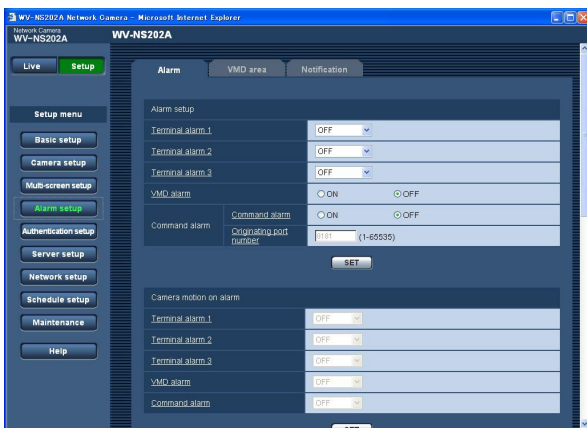
The "Alarm setup" page has 3 tabs; the [Alarm] tab, the [VMD area] tab and the [Notification] tab.

### Configure the settings relating to the alarm [Alarm]

Click the [Alarm] tab on the "Alarm setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

#### ■ Alarm setup

The settings relating to the alarm can be configured in this section. Refer to pages 53, 55 and 56 for further information about the settings relating to the camera action at an alarm occurrence, the alarm image and the alarm output terminal.



#### [Terminal alarm 1]

Select "OFF" or "Alarm input" to determine whether or not to receive a terminal alarm 1.

**OFF:** Does not receive alarms.

**Alarm input:** Receives alarms.

**Default:** OFF

#### [Terminal alarm 2]

Determine whether or not to receive a terminal alarm 2 by selecting "OFF", "Alarm input" or "Alarm output".

**OFF:** Does not receive alarms.

**Alarm input:** Receives alarms.

**Alarm output:** Alarm output will be carried out according to the settings for "Alarm output terminal setup" (☞ page 56).

**Default:** OFF

#### [Terminal alarm 3]

Determine whether or not to receive a terminal alarm 3 by selecting "OFF", "Alarm input" or "AUX output".

**OFF:** Does not receive.

**Alarm input:** Receives alarms.

**AUX output:** The AUX buttons will be displayed on the "Live" page.

**Default:** OFF

#### [VMD alarm]

Select "ON" or "OFF" to determine whether or not to perform the alarm action using the VMD function. Refer to page 57 for descriptions of how to set the VMD areas.

**Default:** OFF

#### [Command alarm]

Select "ON" or "OFF" to determine whether or not to receive the command alarm.

The command alarm is the function that provides notification of a Panasonic protocol alarm from the other cameras. When "ON" is selected, alarm actions will be performed between multiple cameras.

**Default:** OFF

#### [Originating port number]

Select a port number to be used to receive the command alarm.

**Available port number:** 1 - 65535

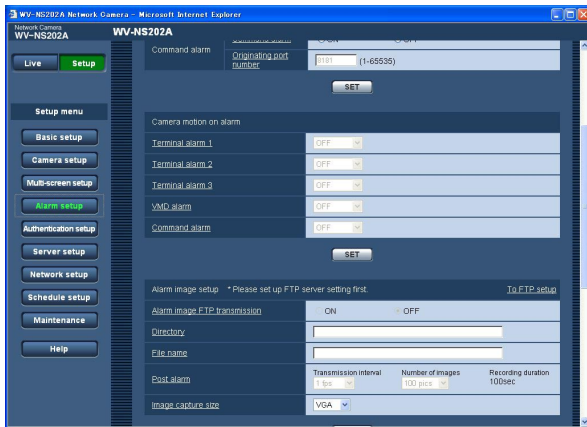
**Default:** 8181

## Configure the settings relating to the camera action at an alarm occurrence

Click the [Alarm] tab on the "Alarm setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

### ■ Camera motion on alarm

The settings relating to the camera action at an alarm occurrence can be configured in this section. Refer to pages 52, 55 and 56 for further information about the settings relating to the alarm, the alarm image and the alarm output terminal.



#### [Terminal alarm 1]

Select an action to be taken when a terminal alarm 1 is detected from the following.

**OFF:** Does not take any action even when a terminal alarm 1 is detected.

**1-64:** When the registered preset position is selected, the camera will move to the selected preset position when a terminal alarm 1 is detected.

**Auto track:** When a terminal alarm 1 is detected, the camera will start the auto tracking.  
When the home position is set, the camera will start auto tracking after moving to the home position once.

**Default:** OFF

#### [Terminal alarm 2]

Select an action to be taken when a terminal alarm 2 is detected from the following.

**OFF:** Does not take any action even when a terminal alarm 2 is detected.

**1-64:** When the registered preset position is selected, the camera will move to the selected preset position when a terminal alarm 2 is detected.

**Auto track:** When a terminal alarm 2 is detected, the camera will start the auto tracking.  
When the home position is set, the camera will start auto tracking after moving to the home position once.

**Default:** OFF

#### [Terminal alarm 3]

Select an action to be taken when a terminal alarm 3 is detected from the following.

**OFF:** Does not take any action even when a terminal alarm 3 is detected.

**1-64:** When the registered preset position is selected, the camera will move to the selected preset position when a terminal alarm 3 is detected.

**Auto track:** When a terminal alarm 3 is detected, the camera will start the auto tracking.  
When the home position is set, the camera will start auto tracking after moving to the home position once.

**Default:** OFF

"AUX" is the terminal that can be switched between "OPEN" and "CLOSE" from the "Live" page. It is useful when controlling the connected external device. For example, when it is necessary to control lighting at the camera location, connect a lighting control device to the terminal (AUX OUT) of the camera to remotely control lighting at the camera location.

#### [VMD alarm]

Select an action to be taken when a VMD alarm is detected from the following.

**OFF:** Does not take any action even when a VMD alarm is detected.

**1-64:** When the registered preset position is selected, the camera will move to the selected preset position when a VMD alarm is detected.

**Auto track:** When a VMD alarm is detected, the camera will start the auto tracking.  
When the home position is set, the camera will start auto tracking after moving to the home position once.

**Default:** OFF

---

**[Command alarm]**

Select an action to be taken when a command alarm is detected from the following.

**OFF:** Does not take any action even when a command alarm is detected.

**1-64:** When the registered preset position is selected, the camera will move to the selected preset position when a command alarm is detected.

**Auto track:** When a command alarm is detected, the camera will start the auto tracking.

When the home position is set, the camera will start auto tracking after moving to the home position once.

**Default:** OFF

## Configure the settings relating to the alarm image

Click the [Alarm] tab on the "Alarm setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

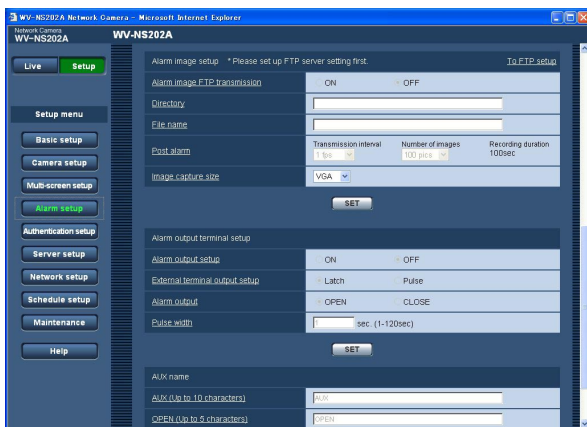
### ■ Alarm image setup

The settings relating to the alarm image to be transmitted to an FTP server can be configured in this section. The alarm image will be transmitted to an FTP server. To transmit alarm images to an FTP server, it is necessary to configure the settings in advance. (☞ page 66)

Refer to pages 52, 53 and 56 for further information about the settings relating to the alarm, the camera action at an alarm occurrence and the alarm output terminal.

#### Important:

- Depending on the network line speed or the network traffic, images may not be transmitted at the exact designated interval or period.
- When "Alarm input" or "Manual" is selected for "Save trigger" on the [SD memory card] tab, images will not be transmitted to the FTP server even when an alarm is detected. (☞ page 27)



**File name:** ["Entered file name" + "Time and date (year/month/day/hour/minute/second)"] + "Serial number"

**Number of characters for the file name:** 1 - 32 characters

#### [Post alarm]

##### • Transmission interval

Select the transmission interval for the alarm image transmission to the FTP server from the following.

0.1 fps/0.2 fps/0.33 fps/0.5 fps/1 fps

**Default:** 1 fps

##### • Number of images

Select the number of images to be transmitted from the following.

1 pic/2 pics/3 pics/4 pics/5 pics/6 pics/7 pics/8 pics/  
9 pics/10 pics/20 pics/ 30 pics/50 pics/100 pics/  
200 pics/300 pics/500 pics/1000 pics/2000 pics/  
3000 pics/5000 pics

**Default:** 100 pics

##### • Recording duration

Approximate time to be taken to save the set "number of images" with the set "transmission interval" will be displayed.

#### [Image capture size]

Select "QVGA" or "VGA" for the image capture size of images to be transmitted to the FTP server or of an image to be attached to the alarm mail.

**Default:** VGA

#### [To FTP setup]

When "To FTP setup" is clicked, the [FTP] tab of the "Server setup" page will be displayed. (☞ page 66)

#### [Alarm image FTP transmission]

Select "ON" or "OFF" to determine whether or not to transmit the alarm image to the FTP server.

**Default:** OFF

#### [Directory]

Enter the directory name where the alarm images are to be saved.

For example, enter "/ALARM" to designate the directory "ALARM" under the root directory of the FTP server.

**Number of characters for the directory name:** 1 - 256 characters

#### [File name]

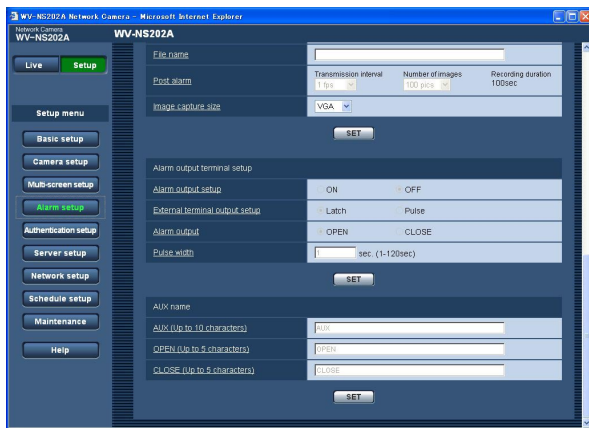
Enter the file name used for the alarm image to be transmitted to an FTP server. The file name will be as follows.

## Configure the settings relating to the alarm out terminal

Click the [Alarm] tab on the "Alarm setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

### ■ Alarm output terminal setup

The settings relating to the alarm out terminal can be configured in this section. The settings for the alarm output terminal can be configured only when "Alarm output" is selected for "Terminal alarm 2" of "Alarm setup". Refer to pages 52, 53 and 55 for further information about the settings relating to the alarm, the camera action at an alarm occurrence and the alarm image.



#### [Alarm output setup]

Select "ON" or "OFF" to determine whether or not to output the alarm signals to the alarm output terminal when an alarm is detected.

**Default:** OFF

#### [External terminal output setup]

Select "Latch" or "Pulse" for the alarm output terminal at an alarm occurrence.

**Latch:** When an alarm is detected, the alarm output terminal will be in the state selected for "Alarm output" until the alarm occurrence indication button is clicked.

**Pulse:** When an alarm is detected, the alarm output terminal will be in the state to the "Alarm output" setting for the period set for "Pulse width".

**Default:** Latch

#### [Alarm output]

Select "Open" or "Close" to determine whether to open or close the alarm output terminal when outputting the alarm signals.

**OPEN:** The alarm output terminal will open when outputting the alarm signals. (Normally close)

**CLOSE:** The alarm output terminal will close when outputting the alarm signals. (Normally open)

**Default:** OPEN

#### Note:

When "OPEN" is selected, the alarm signal will be output for around 20 seconds when the power of the camera is turned on.

#### [Pulse width]

When "Pulse" is selected for "Alarm output", select an alarm output terminal duration from the following.

**Available pulse width:** 1 - 120 sec

**Default:** 1 sec

### ■ AUX name

The names of "AUX", "OPEN" and "CLOSE" on the "Live" page can be changed.

#### [AUX (Up to 10 characters)]

Enter the name for "AUX" on the "Live" page.

#### [OPEN (Up to 5 characters)]

Enter the name for "OPEN" of "AUX" on the "Live" page.

#### [CLOSE (Up to 5 characters)]

Enter the name for "CLOSE" of "AUX" on the "Live" page.

## Set the VMD areas [VMD area]

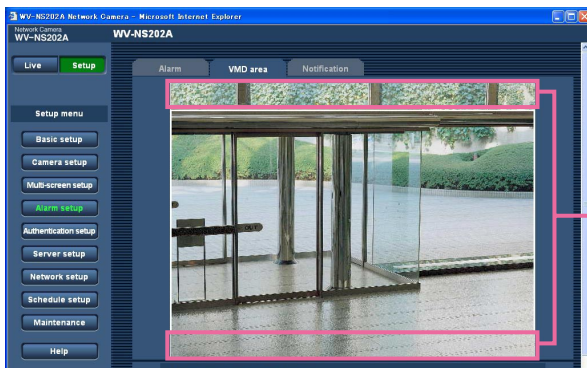
Click the [VMD area] tab on the "Alarm setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)  
The video motion detection areas can be set on this page.

The VMD areas can be set for each preset position (up to 64 areas). When motion is detected in the set area, the alarm action will be performed. The camera can be configured to take an alarm action even when the camera is not at the preset position.

---

### Important:

- Areas used for the time and date display of "OSD position" (☞ page 25) cannot be used for the VMD areas.



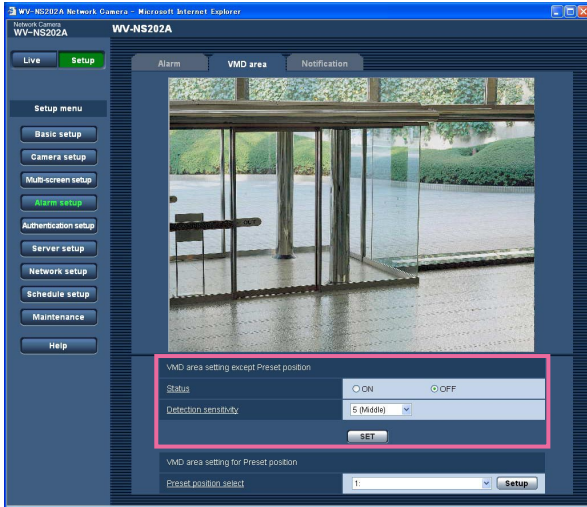
Areas used for the time and date display of "OSD position"

- It is possible to display the alarm occurrence indication button on the [VMD area] tab when motion is detected by the VMD function. Select "ON" for "VMD alarm" on the [Alarm] tab when the alarm occurrence indication button is to be displayed.
  - The alarm occurrence indication button will be displayed when receiving an alarm input of a terminal alarm or a command alarm.
  - Depending on the network environment, notification may be delayed even when "Real time" is selected for "Alarm status update mode" on the [Basic] tab of the "Basic setup" page (☞ page 25).
-



## Configure to detect motion in areas without the preset positions

Configure whether or not to detect motion when the camera is not at the preset position by setting the detection sensitivity. The sensitivity can be set by configuring "VMD area setting except Preset position". When determining whether to detect motion even when the camera is not at the preset position, all areas except areas used for the time and date display of "OSD position" will be subject to the detection. The VMD area setting is unavailable.



### [Status]

Select "ON" or "OFF" to determine whether or not to carry out the VMD function.

**ON:** Carries out the VMD function

**OFF:** Does not carry out the VMD function

**Default:** OFF

### [Detection sensitivity]

Select a sensitivity level in the detection area from the following.

1 (Super high)/2/3/4 (High)/5 (Middle)/6 (Low)

**Default:** Middle

---

### Important:

Click the [SET] button after completing the settings.  
The setting will not be applied unless the [SET] button is clicked.

---



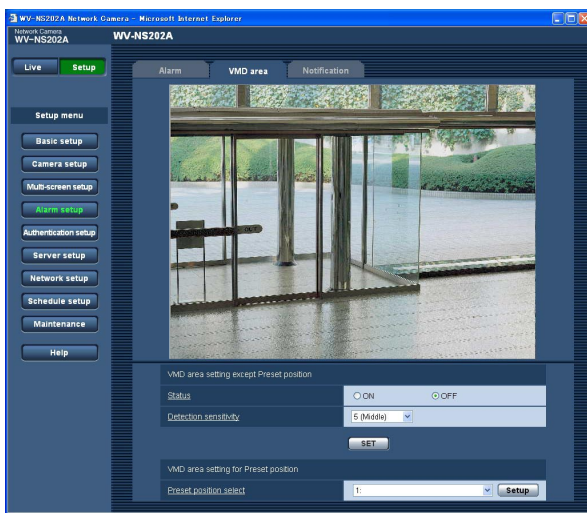
## Set the VMD areas for each preset position

### Important:

- The VMD function will be carried out only when the camera is at the preset position.
- When the settings are being configured on the setup menu, sometimes the VMD function may not work correctly.

### Step 1

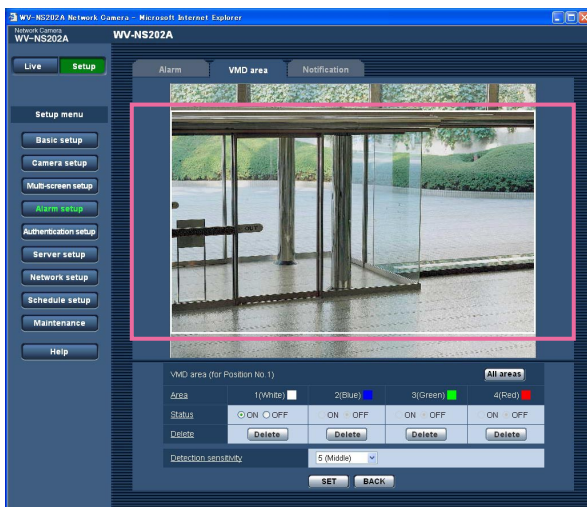
Select a preset position number to which the VMD area is to be set from "Preset position select" of "VMD area setting for Preset position".



### Step 2

Click the [Setup] button.

→ The VMD area setup window for the selected preset position number will be displayed.

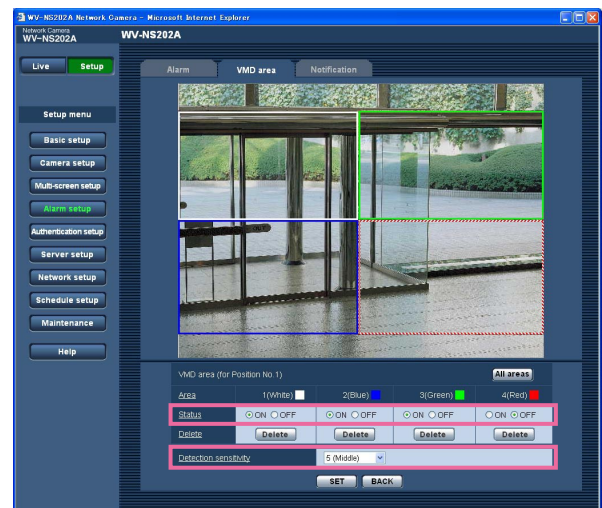


### Step 3

Set the video motion detection area by dragging the mouse on the screen.

When the [All areas] button is clicked, the whole area will become the VMD area and set as area 1 (white).

→ The designated area will become the VMD area and the outline will be displayed. When 2 - 4 VMD areas are set, each area will be numbered in order. The areas will be identified by the respective outline colors.



### Important:

The position selected for "OSD position" will not be applied to the VMD area.

### Step 4

Select "ON" or "OFF" for "Status" of each VMD area. When the [SET] button is clicked after selecting "OFF", the outline will become a broken line and no alarm action will be performed even when motion is detected in the area.

### Step 5

Select the detection sensitivity from the following. The selected detection sensitivity will be applied to all the VMD areas.

1 (Super high)/2/3/4 (High)/5 (Middle)/6 (Low)

**Default:** Middle

### Step 6

Click the [SET] button after completing the settings.

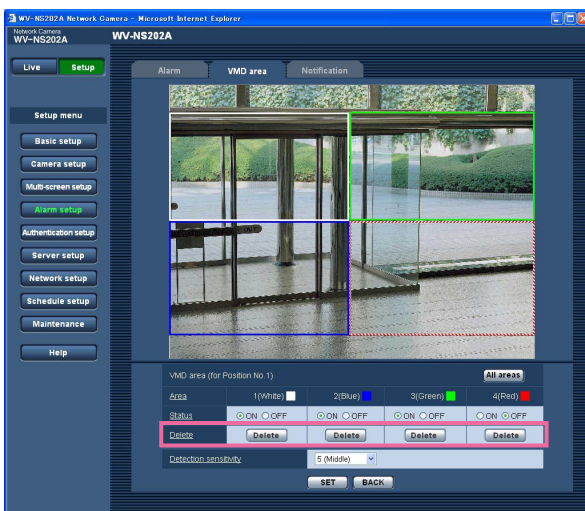
---

**Important:**

The setting will not be applied unless the [SET] button is clicked.

---

## Delete the VMD area set for the designated preset position



### Step 1

Display the VMD area setup window of the preset position number whose VMD area is to be deleted. (☞ page 59)

### Step 2

Click the [Delete] button respective to the area to be deleted.

→ The outline of the area will disappear.

### Step 3

Click the [SET] button.

→ The deletion will be completed.

---

**Important:**

The deletion will not be completed unless the [SET] button is clicked.

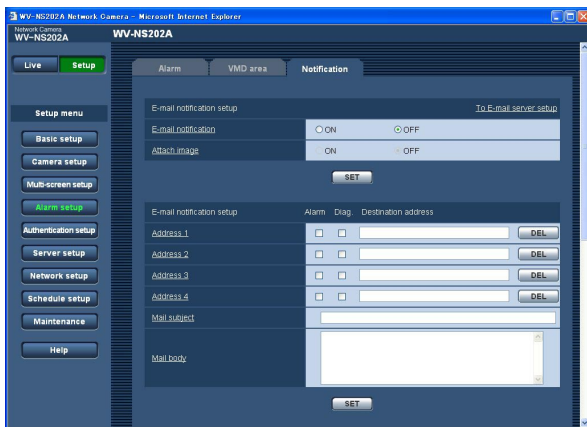
---

## Configure the settings relating to the mail notification [Notification]

Click the [Notification] tab on the "Alarm setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

### ■ E-mail notification setup

The settings relating to the alarm mail can be configured in this section. To provide notification of an alarm occurrence by e-mail, it is necessary to configure the settings of the mail server. (☞ page 65)



#### [To E-mail server setup]

When "To E-mail server setup" is clicked, the [Mail] tab of the "Server setup" page will be displayed. (☞ page 65)

#### [E-mail notification]

Select "ON" or "OFF" to determine whether or not to provide notification of an alarm occurrence by e-mail at an alarm occurrence.

**Default:** OFF

#### [Attach image]

Select "ON" or "OFF" to determine whether or not to attach an image to the mail to be sent.

**Default:** OFF

---

#### Note:

The settings for "Image capture size" of the "Alarm image setup" section on the [Alarm] tab (☞ page 55) will be applied to the size of the image to be attached.

---

### ■ E-mail notification setup

#### [Destination address]

Enter the destination mail address. Up to 4 destination addresses can be registered.

To provide notification by e-mail when an alarm has occurred, check the "Alarm" checkbox respective to the desired address.

To provide notification by e-mail when any of the following has occurred, check the "Diag." checkbox respective to the desired address.

- When notification of the remaining space of the SD memory card has been provided (☞ page 27)
- When the SD memory card has become full
- When mounting of the SD memory card failed

To delete the registered address, click the [DEL] button respective to the desired address.

**Number of characters for the destination mail address:** 3 - 128 characters

#### [Mail subject]

Enter the mail subject.

**Number of characters for the mail subject:** 0 - 50 characters

#### [Mail body]

Enter the mail body.

**Number of characters for the mail body:** 0 - 200 characters

---

#### Note:

Notification mail will be sent with the following message. (The message to be sent differs depending on the status of the SD memory card.)

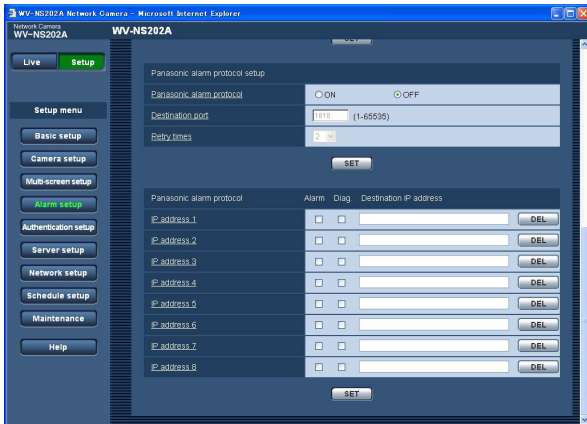
- "The SD memory card is full." (This message will be sent when the SD memory card becomes full.)
  - "The SD memory card cannot be recognized." (This message will be sent when the SD memory card has failed to mount.)
-

## Configure the settings relating to Panasonic alarm protocol

Click the [Notification] tab on the "Alarm setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

### ■ Panasonic alarm protocol setup

The settings relating to Panasonic alarm protocol can be configured in this section.



#### [Panasonic alarm protocol]

Select "ON" or "OFF" to determine whether or not to provide notification of an alarm occurrence by Panasonic alarm protocol when an alarm is detected.

**Default:** OFF

#### Note:

When "ON" is selected, notification of the alarm occurrence will be provided to the registered destination addresses in order (to IP address 1 first, to IP address 8 last).

#### [Destination port]

Select a destination port for the Panasonic alarm protocol from the following.

**Available port number:** 1 - 65535

**Default:** 1818

#### [Retry times]

Select a retry time for the Panasonic alarm protocol.

**Available retry times:** 1 - 30

**Default:** 2

### ■ Panasonic alarm protocol

#### [Destination IP address]

Enter the destination IP address of the Panasonic alarm protocol from the following. Host name is unavailable for the destination IP address. Up to 8 destination addresses can be registered.

To provide notification at an alarm occurrence to the desired IP address using Panasonic alarm protocol, check the "Alarm" checkbox respective to the desired IP address.

To provide notification using Panasonic alarm protocol when any of the following has occurred, check the "Diag." checkbox respective to the desired address.

- When notification of the remaining space of the SD memory card has been provided (☞ page 27)
- When the SD memory card has become full
- When mounting of the SD memory card has failed

To delete the registered IP address, click the [DEL] button respective to the desired IP address.

#### Important:

Confirm that the destination IP addresses are registered correctly. When a registered IP address does not exist, notification may be delayed.

## Configure the settings relating to the authentication [Authentication setup]

The settings relating to the authentication such as users and PCs restrictions for accessing the camera can be configured on this page.

The "Authentication setup" page has 2 tabs of the [User] tab and the [Host] tab.

### Configure the settings relating to the user authentication [User]

Click the [User] tab on the "Authentication setup" page. (See pages 20 and 21: How to display/operate the setup menu)

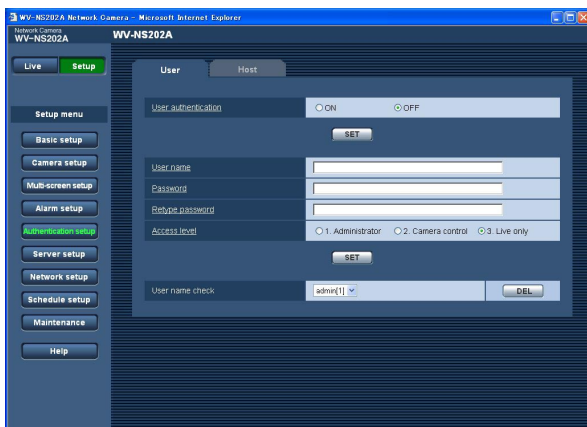
The settings relating to the user authentication can be configured on this page. Up to 16 users can be registered.

---

#### Note:

When user authentication (authentication error) has failed to pass 8 times within 30 seconds using the same IP address (PC), access to the camera will be denied for a while.

---



#### [User authentication]

Select "ON" or "OFF" to determine whether or not to authenticate the users.

**Default:** OFF

#### [User name]

Enter a user name.

**Number of characters for the user name:** 1 - 32 characters

**Default:** None (blank)

#### [Password] [Retype password]

Enter the password.

**Number of characters for the password:** 4 - 32 characters

**Default:** None (blank)

---

#### Note:

When the user name already in use is entered and the [SET] button is clicked, the respective user information will be overwritten.

---

#### [Access level]

Select the access level of the user from the following.

- 1. Administrator:** Allowed all available operations of the camera.
- 2. Camera control:** Allowed to display images from the camera and to control the camera. The camera setting configuration is unavailable.
- 3. Live only:** Only displaying live images is available. The camera setting configuration and camera control are unavailable.

**Default:** 3. Live only

---

#### Note:

By clicking [✓] of "User name check", the registered user can be selected and the selected user's information can be checked.

The registered user will be displayed with the access level. (Example: admin [1])

To delete the registered user, click the [DEL] button after selecting the user to be deleted.

---

#### Important:

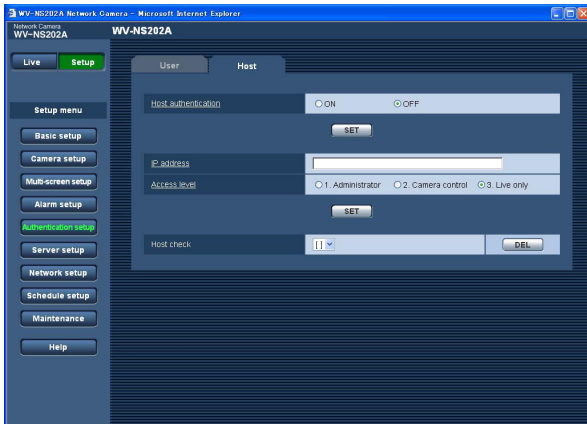
If all users whose access level is "1. Administrator" are deleted, it will be impossible to configure the settings.

---

## Configure the settings relating to the host authentication [Host]

Click the [Host] tab on the "Authentication setup" page. (Refer to pages 20 and 21: How to display/operate the setup menu)

The settings to restrict PCs (IP address) from accessing the camera can be configured on this page.



### [Host authentication]

Select "ON" or "OFF" to determine whether or not to authenticate the host.

**Default:** OFF

### Important:

Before configuring the host authentication, it is necessary to register IP addresses of the PCs to be allowed to access the camera and determine their access levels. If "ON" is selected for "Host authentication" before registering the hosts (IP addresses), it will be impossible to access the camera.

### [IP address]

Enter the IP address of the PC to be allowed to access the camera.

Host name is unavailable for the IP address.

### Notes:

- When "IP address/subnet mask" is entered, it is possible to restrict PCs in each subnet. For example, when "192.168.0.1/24" is entered and "2. Camera control" is selected for the access level, the PCs whose IP address is between "192.168.0.0" - "192.168.0.255" can access the camera with the access level "2. Camera control".
- When the IP address already in use is entered and the [SET] button is clicked, the respective host information will be overwritten.

### [Access level]

Select the access level of the host from the following.

1. Administrator/2. Camera control/3. Live only

Refer to page 63 for further information about the access level.

**Default:** 3. Live only

### Note:

By clicking [✓] of "Host check", the registered host can be selected and the selected host's IP address can be checked.

The registered IP address will be displayed with the access level. (Example: 192.168.0.21 [1])

To delete the registered host, click the [DEL] button after selecting the IP address to be deleted.

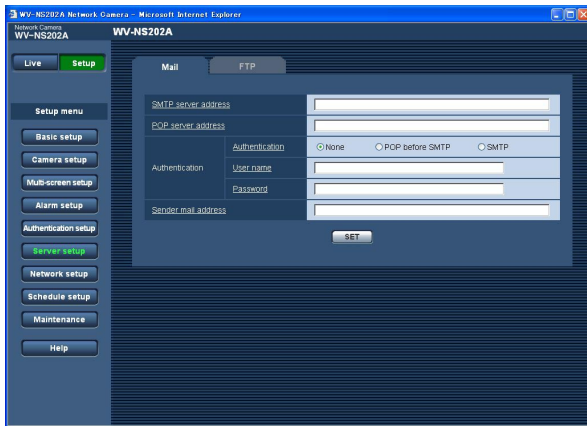


## Configure the settings of the servers [Server setup]

The settings relating to the mail server and the FTP server can be configured on this page.  
The "Server setup" page has 2 tabs; the [Mail] tab and the [FTP] tab.

### Configure the settings relating to the mail server [Mail]

Click the [Mail] tab on the "Server setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)  
The settings relating to the mail server used to send the alarm mail can be configured on this page.



#### [SMTP server address]\*

Enter the IP address or the host name of the SMTP server used to send e-mails.

**Number of characters for the SMTP server address:**  
1 - 128 characters

#### [POP server address]\*

When "POP before SMTP" is selected for "Authentication", enter the IP address or the host name of the POP server.

**Number of characters for the POP server address:**  
1 - 128 characters

#### \* Important:

When entering the host name for "SMTP server address/POP server address", it is necessary to configure the DNS settings on the [Network] tab of the "Network setup" page. (☞ page 68)

#### [Authentication]

Select the authentication method to send e-mails from the following.

**None:** It is not necessary to clear any authentication to send e-mails.

**POP before SMTP:** It is necessary to first clear the POP server authentication to use the SMTP server to send e-mails.

**SMTP:** It is necessary to clear the SMTP server authentication to send e-mails.

**Default:** None

---

#### Note:

When you don't know the authentication method to send e-mails, refer to the network administrator.

#### [User name]

Enter the user name to access the server.

**Number of characters for the user name:** 1 - 32 characters

#### [Password]

Enter the password to access the server.

**Number of characters for the password:** 0 - 32 characters

#### [Sender mail address]

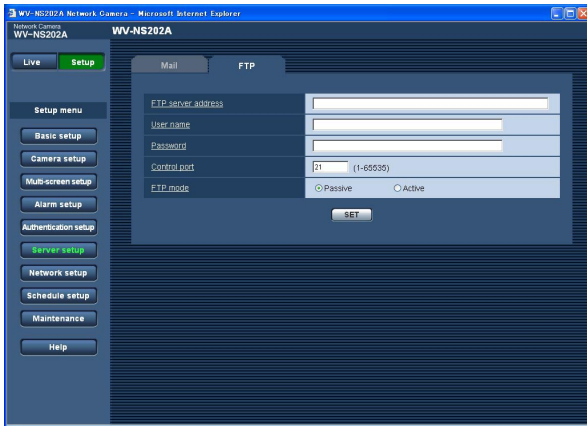
Enter the mail address of a sender.

The entered mail address will be displayed in the "From" (sender) line of the sent mails.

**Number of characters for the sender mail address:**  
3 - 128 characters

## Configure the settings relating to the FTP server [FTP]

Click the [FTP] tab on the "Server setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)  
The settings relating to the FTP server used to transmit the alarm images can be configured on this page.



### [FTP mode]

Select "Passive" or "Active" for the FTP mode.  
Normally, select "Passive". When failure to establish the connection occurs, select "Active".

**Default:** Passive

### [FTP server address]

Enter the IP address or the host name of the FTP server.

**Number of characters for the FTP server address:**

1 - 128 characters

---

### Important:

When entering the host name for "FTP server address", it is necessary to configure the DNS settings on the [Network] tab of the "Network setup" page. (☞ page 68)

---

### [User name]

Enter the user name (login name) to access the FTP server.

**Number of characters for the user name:** 1 - 32 characters

### [Password]

Enter the password to access the FTP server.

**Number of characters for the password:** 0 - 32 characters

### [Control port]

Enter a control port number to be used for the FTP server.

**Available port number:** 1 - 65535

**Default:** 21



# Configuring the network settings [Network setup]

The network settings and the settings relating to DDNS (Dynamic DNS) and SNMP (Simple Network management Protocol) can be configured on this page.

The "Network setup" page has 4 tabs; the [Network] tab, the [DDNS] tab, the [SNMP] tab and the [FTP] tab.

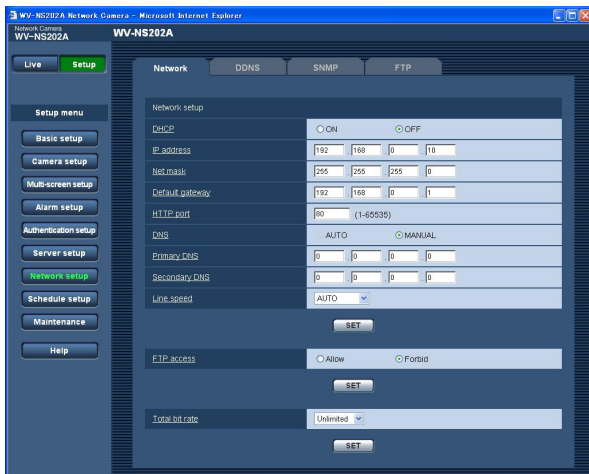
## Configure the network settings [Network]

Click the [Network] tab on the "Network setup" page. (See pages 20 and 21: How to display/operate the setup menu)

The following information is required to configure the network settings.

Contact the network administrator or your Internet service provider.

- IP address
- Net mask
- Default gateway (when using the gateway server/router)
- HTTP port
- Primary DNS, Secondary DNS (when using DNS)



### ■ Network setup

#### [DHCP]

Select "ON" or "OFF" to determine whether or not to use the DHCP function.

Configure the DHCP server not to assign the same IP addresses used for the other network cameras and PCs whose IP address is unique. Refer to the network administrator for further information about the settings of the server.

**Default:** OFF

#### [IP address]

When not using the DHCP function, enter the IP address of the camera. Do not enter an IP address already in use (for the PCs and the other network cameras).

**Default:** 192.168.0.10

#### <Unavailable IP addresses>

0.\*.\*.\*

\*.\*.\*.0

255.\*.\*.\*

\*.\*.\*.255

127.0.0.1

Class D addresses (224.0.0.0 - 239.255.255.255)

Class E addresses (240.0.0.0 - 255.255.255.255)

#### Note:

These IP addresses are unavailable even when using the DHCP function. Refer to the network administrator for further information about the settings of the DHCP server.

#### [Net mask]

When not using the DHCP function, enter the net mask of the camera.

**Default:** 255.255.255.0

### [Default gateway]

When not using the DHCP function, enter the default gateway of the camera.

**Default:** 192.168.0.1

---

### <Unavailable IP addresses for the default gateway>

0.\*.\*

\*.\*.\*0

255.\*.\*

\*.\*.\*255

127.0.0.1

Class D addresses (224.0.0.0 - 239.255.255.255)

Class E addresses (240.0.0.0 - 255.255.255.255)

---

### Note:

These IP addresses for the default gateway are unavailable even when using the DHCP function. Refer to the network administrator for further information about the settings of the DHCP server.

---

### [HTTP port]

Assign the port numbers independently.

The following port numbers are unavailable since they are already in use.

**Available port number:** 1 - 65535

**Default:** 80

---

### <Port numbers already in use>

20, 21, 23, 25, 42, 53, 67, 68, 69, 110, 123, 161, 162, 995, 10669, 10670

---

### [DNS]

Select "AUTO" or "MANUAL" to determine whether or not to use the DNS. When "MANUAL" is selected, it is necessary to configure the settings for the DNS.

When using the DHCP function, it is possible to obtain the DNS address automatically by selecting "AUTO". Refer to the network administrator for further information about the settings.

**Default:** MANUAL

### [Primary DNS], [Secondary DNS]

When "MANUAL" is selected for "DNS", enter the IP address of the DNS. Refer to the network administrator about the IP address of the DNS.

### [Line speed]

Select the line speed for data transmission from the following. It is recommended to use the default setting "AUTO".

**AUTO:** Line speed will be applied automatically.

**100M-FULL:** 100 Mbps full-duplex

**100M-HALF:** 100 Mbps half-duplex

**10M-FULL:** 10 Mbps full-duplex

**10M-HALF:** 10 Mbps half-duplex

**Default:** AUTO

### [FTP access]

Select "Allow" or "Forbid" to determine whether to allow or forbid the FTP access.

**Default:** Forbid

### [Total bit rate]

Select the total bit rate for data transmission from the following.

Unlimited/64 kbps/128 kbps/256 kbps/512 kbps/

1024 kbps/2048 kbps/4096 kbps

**Default:** Unlimited

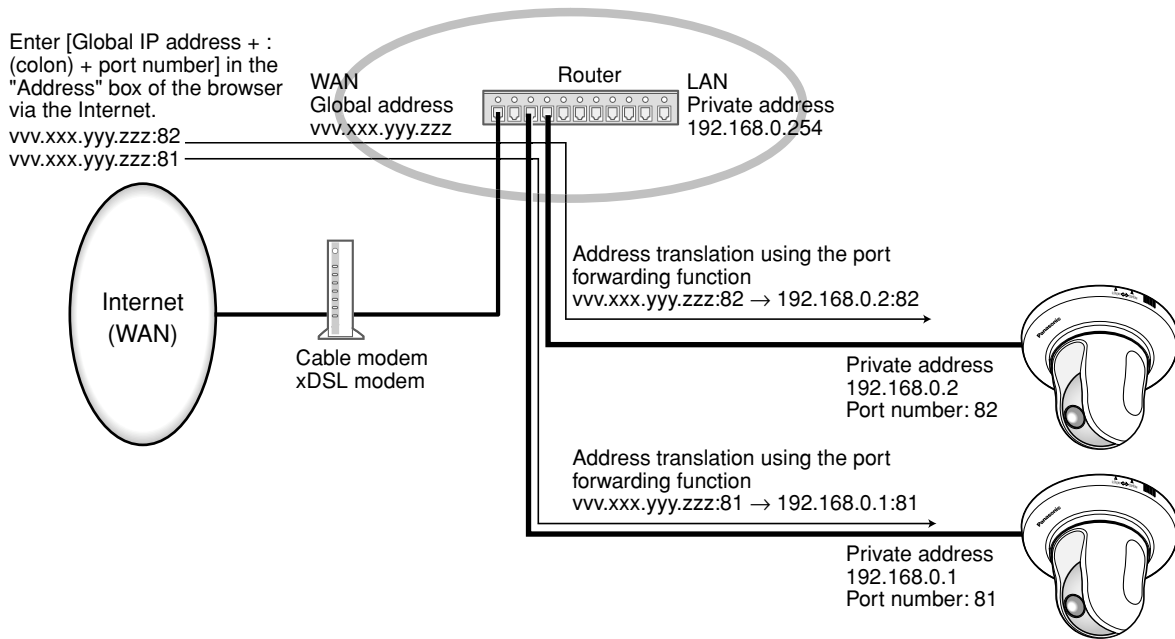
---

### Notes:

- When selecting "64 kbps", select "OFF" for "Audio mode" on the "Audio" tab. (☞ page 49)
- When "64 kbps" is selected, it is impossible to carry out the live transmission of JPEG images and the FTP periodic transmission simultaneously.
- When "Total bit rate" (☞ page 68) is set low, taking a picture using the one shot button may not function depending on the use environment. In this case, select "QVGA" for "Image capture size" of "JPEG setup" on the [JPEG/MPEG-4] tab (☞ page 35) or set "Image quality" of "JPEG setup" lower.

**Notes:**

- The port forwarding function changes a global IP address to a private IP address, and "Static IP masquerade" and "Network Address Translation (NAT)" have this function. This function is to be set in a router.
- To access the camera via the Internet by connecting the camera to a router, it is necessary to assign a respective port number for each camera and address translation by using the port forwarding function. For further information, refer to the operating instructions of the router in use.



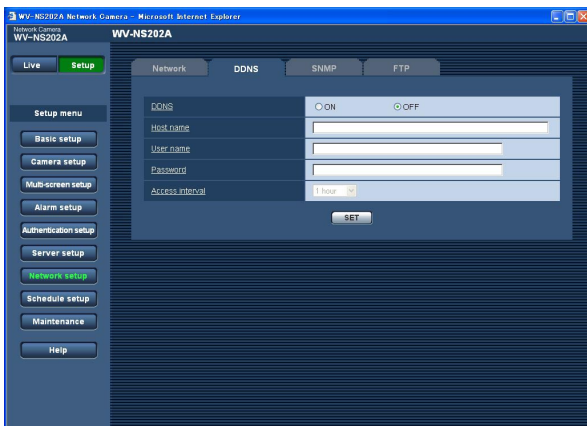
## Configure the settings relating to DDNS [DDNS]

Click the [DDNS] tab on the "Network setup" page. (pages 20 and 21: How to display/operate the setup menu)  
The settings relating to DDNS can be configured on this page.

When accessing the camera via the Internet from the network environment of which the global IP address is obtained using DHCP, the DDNS function is necessary.

When using the DDNS function, it is possible to access with "Host name registered in the DDNS server.nmdns.net".  
To use the DDNS function, it is necessary to connect to the dedicated DDNS server. Refer to the web site for further information about the DDNS. Refer to the "Readme" file about the web site.

It is necessary to configure the host name, user name and password registered in the DDNS server.



### [Access interval]

Select the interval to access the DDNS server to check the IP address and the host name from the following.

1 min/10 min/30 min/1 hour/6 hours/24 hours

**Default:** 1 hour

### [DDNS]

Select "ON" or "OFF" to determine whether or not to use the DDNS function.

**Default:** OFF

### [Host name]

Enter the host name to be used.

**Number of characters for the host name:** 1 - 64 characters

### [User name]

Enter the user name (login name) to access the DDNS server.

**Number of characters for the user name:** 1 - 32 characters

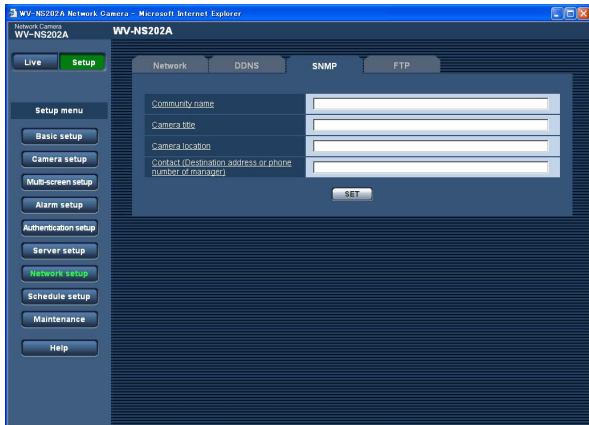
### [Password]

Enter the password to access the DDNS server.

**Number of characters for the password:** 0 - 32 characters

## Configure the settings relating to SNMP [SNMP]

Click the [SNMP] tab on the "Network setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)  
The settings relating to SNMP can be configured on this page. It is possible to check the status of the camera by connecting to the SNMP manager. When using the SNMP function, contact the network administrator.



### [Contact (Destination address or phone number of manager)]

Enter the mail address or the phone number of the SNMP manager.

**Number of characters for "Contact":** 0 - 255 characters

**Default:** None (blank)

### [Community name]

Enter the community name to be monitored.

**Number of characters for the community name:**

0 - 32 characters

**Default:** None (blank)

---

### Important:

When using the SNMP function, it is necessary to enter the community name. When no community name is entered, the SNMP function will not work.

### [Camera title]

Enter a camera title to be used to manage the camera with the SNMP function.

**Number of characters for the camera title:** 0 - 32 characters

**Default:** None (blank)

### [Camera location]

Enter the name of the location where the camera is installed.

**Number of characters for the camera location:** 0 - 32 characters

**Default:** None (blank)

## Configure the settings relating to the FTP periodic transmission [FTP]

Click the [FTP] tab on the "Network setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

### ■ FTP periodic transmission

The settings relating to the periodic transmission of images to an FTP server can be configured in this section. To transmit images to an FTP server periodically, it is necessary to configure the settings of the FTP server in advance. (☞ page 66)

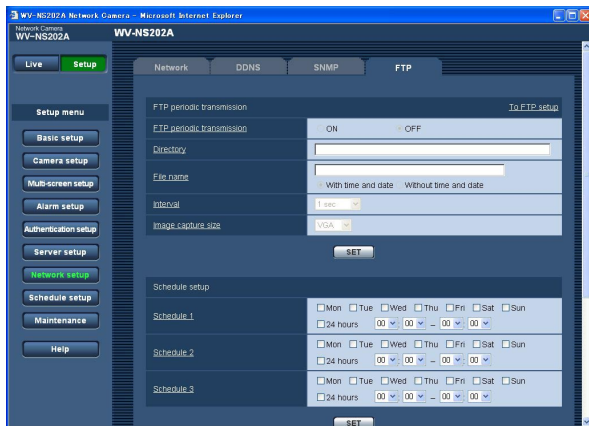
Refer to page 73 for descriptions of how to configure schedules of image transmission.

#### Important:

- Depending on the network line speed or the network traffic, images may not be transmitted at the exact designated interval or period.
- When "Alarm input" or "Manual" is selected for "Save trigger" on the [SD memory card] tab, the FTP periodic transmission function will become unavailable.
- When "ON" is selected for both the alarm image transmission function and the FTP periodic transmission function, the alarm image transmission function will be given priority over the FTP periodic transmission function. For this reason, images may not be transmitted at the exact designated interval or period if alarms occur frequently.

#### Note:

When "FTP error" is selected for "Save trigger" on the [SD memory card] tab, images that have failed to transmit using the FTP periodic transmission can be saved automatically on the SD memory card. (☞ page 27)



#### [To FTP setup]

When "To FTP setup" is clicked, the [FTP] tab of the "Server setup" page will be displayed. (☞ page 66)

#### [FTP periodic transmission]

Select "ON" or "OFF" to determine whether or not to transmit images using the FTP periodic transmission function.

When "ON" is selected, it is necessary to configure the settings of the FTP server. (☞ page 66)

**Default:** OFF

#### [Directory]

Enter the directory name where the images are to be saved.

For example, enter "/img" to designate the directory "img" under the root directory of the FTP server.

**Number of characters for the directory name:** 1 - 256 characters

**Default:** None (blank)

#### [File name]

Enter the file name (name of the image file to be transmitted) and select the naming option from the following.

**With time and date:** File name will be ["Entered file name" + "Time and date (year/month/day/hour/minute/second)" + "Serial number (starting from 00)"].

**Without time and date:** File name will be the characters entered for "File name" only. When "Without time and date" is selected, the file will be overwritten each time a file is newly transmitted.

**Number of characters for the file name:** 1 - 32 characters

**Default:** None (blank)

### [Interval]

Select the interval for the FTP periodic transmission from the following.

1 sec/2 sec/3 sec/4 sec/5 sec/6 sec/10 sec/15 sec/  
20 sec/30 sec/1 min/2 min/3 min/4 min/5 min/6 min/  
10 min/15 min/20 min/30 min/1 hour/1.5 hours/2 hours/  
3 hours/4 hours/6 hours/12 hours/24 hours

**Default:** 1 sec

### [Image capture size]

Select "QVGA" or "VGA" for the image capture size of the images to be transmitted using the FTP periodic transmission.

**Default:** VGA

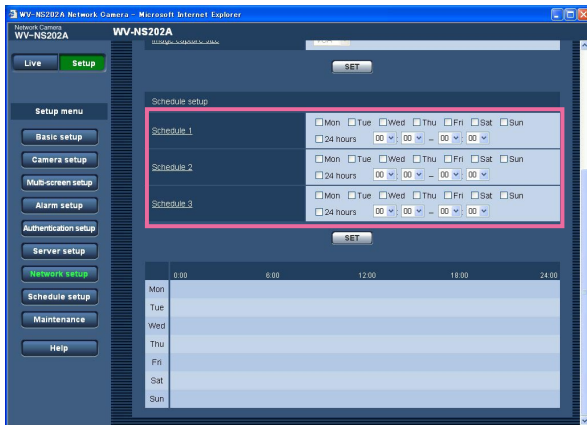
## Configure the schedule settings of the FTP periodic transmission

Click the [FTP] tab on the "Server setup" page. (☞ pages 20 and 21: How to display/operate the setup menu)

### ■ Schedule setup

The schedule settings of the FTP periodic transmission can be configured in this section. Refer to page 72 for further information about the settings relating to the FTP periodic transmission.

### How to configure the schedule settings



#### Step 1

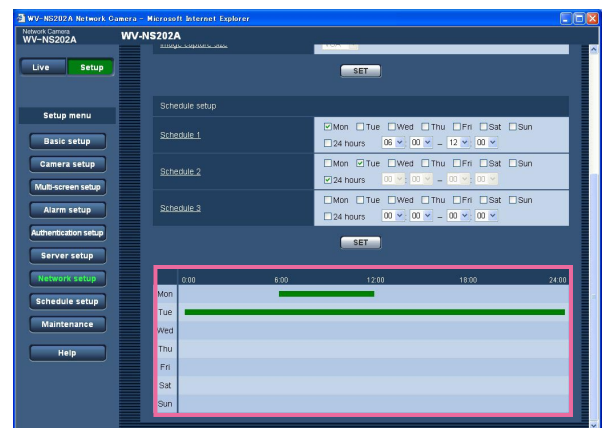
Check the check box of the desired day of the week.  
→ The selected day of the week will be validated for the schedule.

#### Step 2

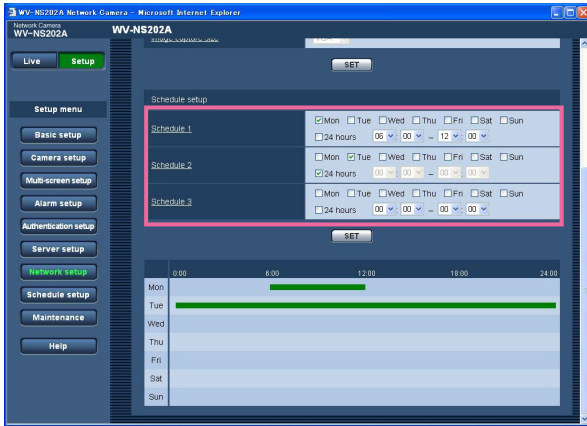
To designate time, click [✓] and select the desired "hour" and "minute".  
When not designating time, check the checkbox of "24 hours".

#### Step 3

Click the [SET] button after completing the settings.  
→ The result will be displayed at the bottom of the window.



## How to delete the set schedule

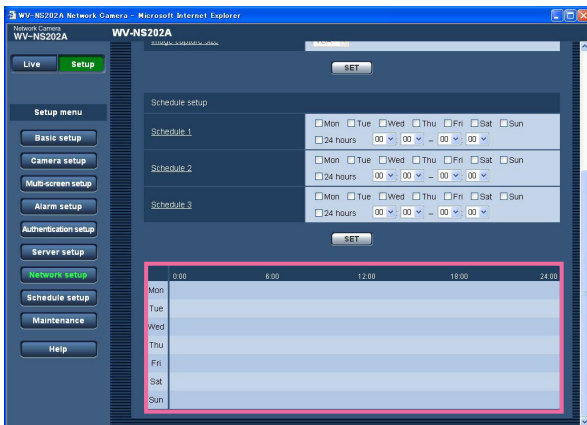


### Step 1

Uncheck the check box of the set day of the week.

### Step 2

Click the [SET] button after completing the settings.  
→ The result will be displayed at the bottom of the window.





# Configure the settings relating to the schedules [Schedule setup]

On the "Schedule" page, it is possible to determine time zones for when the following are available.

- Alarm permission (Alarm input will be received only in the specified time zone.)
- VMD permission (Video motion detection will be active only in the specified time zone.)
- Access permission (Access to the camera will be allowed only in the specified time zone.)
- Position refresh (Performing the position refresh will be allowed only in the specified time zone.)
- 1 - 64 (Moving the camera to the designated preset position will be allowed only in the specified time zone.)

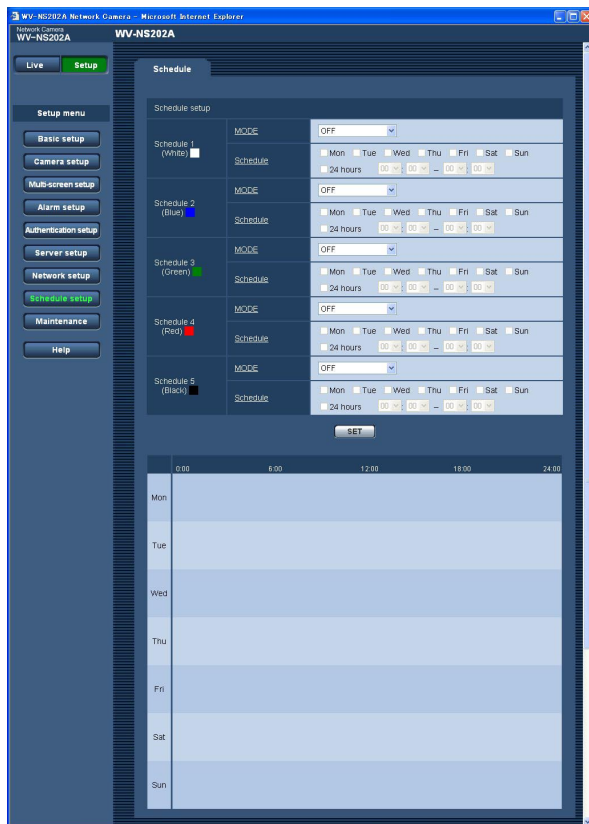
"Alarm permission" can be configured only when "ON" is selected for any of "Terminal alarm 1", "Terminal alarm 2" and "Terminal alarm 3" (☞ page 53), and "VMD permission" can be configured only when "ON" is selected for "VMD alarm" (☞ page 53).

Up to 5 schedules can be set.

## How to set the schedules

### Step 1

Select an action to be assigned to the schedule from "MODE".



**OFF:** No action will be taken for the respective schedule.

**Alarm permission:** Alarm input (terminal alarm 1, 2 and 3) will be received during the period of the schedule.

**VMD permission:** The Video motion detection (VMD) function will be active during the period of the schedule.

**Access permission:** Users whose access level is set to 2 and 3 on the "User" page of "Authentication setup" (☞ page 63) can access the camera only in the period of schedule.

**Position refresh:** The camera position will be refreshed at the designated time in the schedule.

**1 - 64:** The camera will move to the designated preset position at the designated time in the schedule.

**Default:** OFF

### Notes:

- Select "ON" for "User authentication" on the "User" page of "Authentication setup" (☞ page 63) and "OFF" for "Host authentication" on the "Host" page (☞ page 64) to validate "Access permission".
- When selecting "Position refresh", it is recommended to use together with the self return function (☞ page 38).

### Step 2

Select days of a week by checking the respective checkboxes.

→ Time selection will become available.

### Step 3

Click [√] to select the start time and the end time of the schedule.

When unnecessary to specify the time zone in the selected day of the week, select "24 hours".

### Step 4

Click the [SET] button after completing the settings.

→ The result will be displayed at the bottom of the window.

### Note:

The schedules displayed at the bottom of the window can be identified by colors assigned to each schedule.

## Maintenance of the camera [Maintenance]

System log check, firmware upgrade, and initialization of the setup menu can be performed on this page. The "Maintenance" page has 3 tabs; the [System log] tab, the [Upgrade] tab and the [Initialization] tab.

### Check the system log [System log]

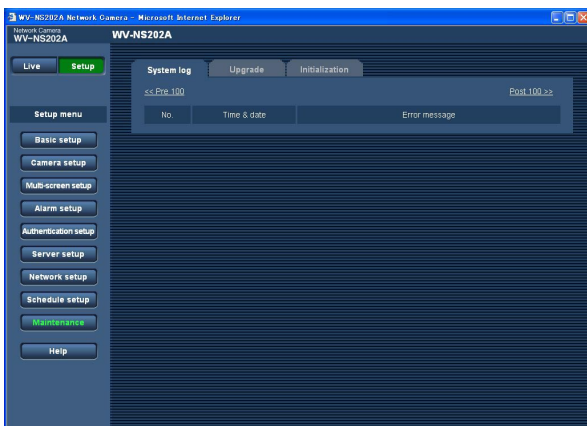
Click the [System log] tab of the "Maintenance" page. (☞ pages 20 and 21: How to display/operate the setup menu) Up to 4 000 system logs can be saved on the SD memory card when the SD memory card is inserted after selecting "Use" for "SD memory card" on the [SD memory card] tab (☞ page 27).

When "Not use" is selected for "SD memory card", up to 100 system logs can be saved on the built-in memory of the camera.

When the saved system logs have reached the maximum number, the newer logs will overwrite the older system logs. In this case, the oldest log is the first to be overwritten.

The system logs will be displayed in group of 100 logs each.

When using the SD memory card, the logs will be saved even when the power of the camera is turned off. When not using the SD memory card, the logs will be deleted when the power of the camera is turned off.



### [Time & date]

Time and date at the error occurrence will be displayed.

### Note:

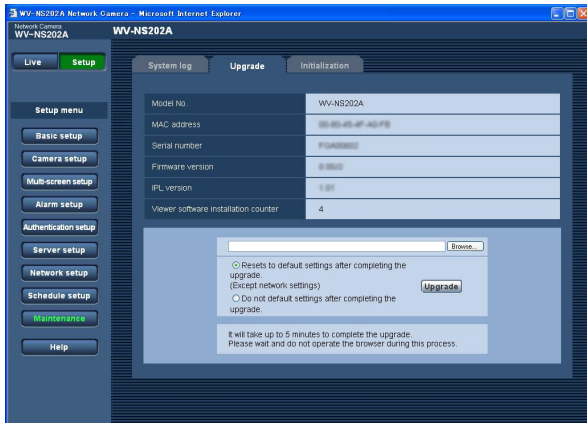
When "OFF" is selected for "Time display" on the [Basic] tab (☞ page 24), time & date of logs will be displayed in 24-hour format.

### [Error message]

The descriptions about the error will be displayed. Refer to page 79 for further information about the system logs.

## Upgrade the firmware [Upgrade]

Click the [Upgrade] tab of the "Maintenance" page. (☞ pages 20 and 21: How to display/operate the setup menu)  
The current firmware can be checked and upgraded to the latest version on this page. Contact the dealer for further information about the firmware upgrade.



[Model No.], [MAC address], [Serial number], [Firmware version], [IPL version], [Viewer software installation counter]

Information of each item will be displayed.

## How to upgrade the firmware

### Step 1

Contact the dealer and download the latest firmware onto a PC.

### Important:

A blank (space) cannot be used for the name of the directory where the downloaded firmware to be saved.

### Step 2

Click the [Browse...] button and designate the downloaded firmware.

### Step 3

Click the radio button respective to the desired option to determine whether or not to initialize the settings after completing the firmware upgrade.

### Note:

Read the "Readme" file provided with the firmware first and determine whether or not to initialize the settings after the firmware upgrade.

### Step 4

Click the [Upgrade] button.

→ The confirmation window will be displayed. When "Do not default settings after completing the upgrade." is selected, the confirmation window will not be displayed.

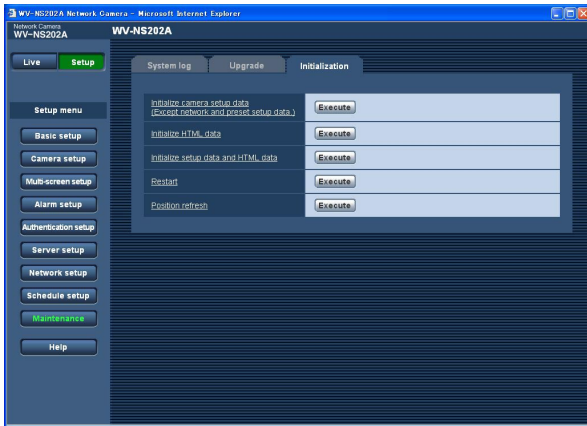
After completing the upgrade, delete temporary internet files. (☞ page 87)

### Important:

- Upgrade the firmware using a PC in the same subnet as the camera.
- Follow the instructions from the dealer when upgrading the firmware.
- Use the designated file (extension:img) for the firmware upgrade.
- The name of the firmware to be used for the upgrade should be "ns202a\_XXXXX.img". ("XXXXX" indicates the version of the firmware.)
- Do not turn off the power of the camera during the upgrade process.
- Do not operate the web browser (including adjusting the window size) during the upgrade process.
- The following network settings will not be initialized when upgrading the firmware after selecting "Resets to default setting after completing the upgrade. (Except network settings)".  
ON/OFF for DHCP, IP address, net mask, default gateway, HTTP port, line speed, total bit rate, time & date
- The viewer software used on each PC should be licensed individually. Refer to your dealer for the software licensing.

## Initialize/restart the camera [Initialization]

Click the [Initialization] tab of the "Maintenance" page. (☞ pages 20 and 21: How to display/operate the setup menu) Initialization of the settings and data of the camera and restarting of the camera can be performed on this page.



### [Initialize camera setup data (Except network and preset setup data)]

Click the [Execute] button to reset the settings to the default. Note that the network settings and the preset position setting will not be reset.

It is impossible to operate the camera for around 2 minute after the initialization.

### [Initialize HTML data]

Click the [Execute] button to reset the HTML files to the default. It is impossible to operate the camera for around 2 minute after the initialization.

### [Initialize setup data and HTML data]

Click the [Execute] button to reset the settings of the camera and the HTML files to the default. Note that the network settings and the preset position setting will not be reset. It is impossible to operate the camera for around 2 minute after the initialization.

### [Restart]

Click the [Execute] button to restart the camera. It is impossible to operate the camera for around 2 minute after restarting the camera.

---

#### Notes:

- To initialize the network settings (☞ page 67), do the following.
  1. Turn off the power of the camera.
  2. Turn on the power of the camera while holding down the [INITIAL SET] button of the camera, and wait around 5 seconds without releasing the [INITIAL SET] button.
  3. Wait around 1 minute after releasing the button. The camera will start up and the settings including the network settings will be initialized.
- When the notification function is on, notification will be provided to the registered addresses (mail address or IP address) when the SD memory card has failed to mount after the restart or when the inserted SD memory card is locked. (☞ pages 61 and 62)

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### [Position refresh]

The camera position can be refreshed. When the camera has moved from the correct home/preset position during normal use, or when it has been inadvertently moved while turning on the power of the camera, use this function to correct the camera position.

It is impossible to operate the camera during the position refresh process (for around 2 minute).

---

#### Important:

The camera position may inadvertently be changed when installing the camera. It is recommended to carry out the position refresh when registering the preset positions after the installation.

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# About the displayed system log

## Error indications relating to SMTP

Category	Indication	Description
POP3 server error	Authentication error	Entered user name or password may be incorrect. Check if the mail settings are configured correctly.
	Failed to find POP3 server	<ul style="list-style-type: none"><li>• The IP address of the server may be incorrect. Check if the IP address of the server is configured correctly.</li><li>• The POP3 server may be down. Ask the network administrator.</li></ul>
SMTP server error	SMTP authentication error	Entered user name or password may be incorrect. Check if the mail settings are configured correctly.
	Failed to resolve mail server address from DNS	<ul style="list-style-type: none"><li>• The designated IP address of the DNS may be incorrect. Check if the DNS settings are configured correctly.</li><li>• The DNS server may be down. Ask the network administrator.</li></ul>
	Failed to find SMTP server	<ul style="list-style-type: none"><li>• The IP address of the server may be incorrect. Check if the IP address of the server is configured correctly.</li><li>• The SMTP server may be down. Ask the network administrator.</li></ul>
Internal error	Other error	An error occurred in the mail function. Check if the mail settings are configured correctly.

## Error indications relating to FTP

Category	Indication	Description
FTP server error	Failed to resolve FTP server address from DNS	<ul style="list-style-type: none"><li>• The FTP server may be down. Ask the network administrator.</li></ul>
	Failed to find FTP server	<ul style="list-style-type: none"><li>• The IP address of the server may be incorrect. Check if the IP address of the server is configured correctly.</li></ul>
Connection error	Transmission error	<ul style="list-style-type: none"><li>• The FTP server settings may be incorrect. Check if the FTP settings are configured correctly.</li></ul>
	Passive mode error	<ul style="list-style-type: none"><li>• The settings relating to the indicated item may be incorrect. Check if the FTP settings are configured correctly.</li></ul>
	Failed to log out	
	Failed to change the directory	
	Password error for the entered user name	
Internal error	Other error	An error occurred in the FTP function. Check if the FTP settings are configured correctly.

## Error indications relating to DDNS

Category	Indication	Description
Connection error	No response from the server	<ul style="list-style-type: none"><li>• The designated IP address of the DDNS may be incorrect. Check if the DDNS settings are configured correctly.</li><li>• The DDNS server may be down. Ask the network administrator.</li></ul>
	Password error for the entered user name	Entered user name or password may be incorrect. Check if the DDNS settings are configured correctly.
	IP address updated error	IP address update error occurred in the DDNS server. Ask the network administrator.
Internal error	Other error	An error occurred in the DDNS function. Check if the DDNS settings are configured correctly.

## Error indications relating to NTP

Category	Indication	Description
Connection error	No response from the server	<ul style="list-style-type: none"><li>• The IP address of the server may be incorrect. Check if the IP address of the server is configured correctly.</li><li>• The NTP server may be down. Ask the network administrator.</li></ul>
Internal error	Other error	<ul style="list-style-type: none"><li>• The designated IP address of the DNS may be incorrect. Check if the DNS settings are configured correctly.</li><li>• The DNS server may be down. Ask the network administrator.</li></ul>
Time adjustment synchronizing with NTP succeeded.	Auto time adjustment succeeded.	Time correction succeeded.

## Error indications relating to login

Category	Indication	Description
Login	User name or IP address	<ul style="list-style-type: none"><li>• The login user name will be displayed when "ON" is selected for "User authentication".</li><li>• The IP address of the PC currently accessing to the camera will be displayed when "ON" is selected for "Host authentication".</li></ul>

# Troubleshooting

Before asking for repairs, check the symptoms on the following table.

Contact your dealer if a problem cannot be solved even after checking and trying the solution or if the problem is not described below.

Symptom	Cause/solution	Reference pages
<p>Cannot access from the browser.</p>	<ul style="list-style-type: none"> <li>• Is the LAN cable (category 5) firmly connected to the network connector on the rear of the camera?</li> </ul>	<p>Installation Guide</p>
	<ul style="list-style-type: none"> <li>• Is the link LED right by the network connector lit? When it is not lit, connection to a LAN may not be established or a network may be not working correctly. Check if the cables have any contact failure or if the wiring is correct or not.</li> </ul>	<p>Installation Guide</p>
	<ul style="list-style-type: none"> <li>• Is the power of the camera on? Check if the power of the camera is turned on.</li> </ul>	<p>Installation Guide</p>
	<ul style="list-style-type: none"> <li>• Are the set IP addresses valid?</li> </ul>	<p>67</p>
	<ul style="list-style-type: none"> <li>• Are you accessing the wrong IP address? Check the connection as follows: With the Windows command prompt, &gt; ping "IP address of the camera" When the WV-NS202A replies, the camera is functioning normally. If not, proceed either of the following.               <ul style="list-style-type: none"> <li>• Restart the camera and change the IP address by using the Panasonic IP setup software within 20 minutes after the restart.</li> <li>• Restart the camera while holding the [INITIAL SET] button on the rear of the camera. The camera will be initialized and the IP address will return to the default setting "192.168.0.10". After the camera is initialized, access the camera and set the IP address again. (When the camera is initialized, all the settings of the camera previously configured on the setup menus will be initialized.)</li> </ul> </li> </ul>	<p>—</p> <p>78</p>

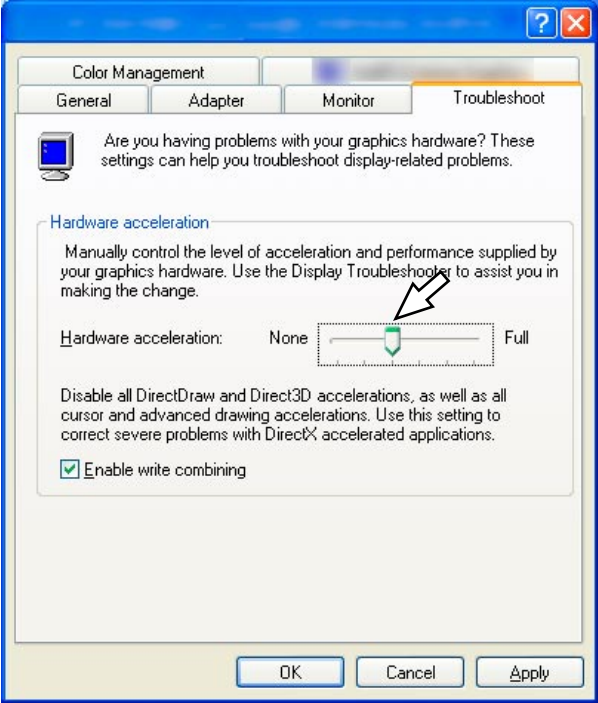
Symptom	Cause/solution	Reference pages
Cannot access from the browser.	<ul style="list-style-type: none"> <li>• Is the same IP address provided to other devices? Are there contradictions between the address and the network subnet to be accessed? &lt;When the camera and the PC are connected in the same subnet&gt; Are the IP addresses of the camera and the PC set in a common subnet? Or is "Use Proxy Server" for the settings of the browser checked? When accessing the camera in the same subnet, it is recommended to enter the address of the camera in the "Don't Use Proxy For These Addresses" box. &lt;When the camera and the PC are connected in the different subnet&gt; Is the IP address of the default gateway set for the camera correct?</li> </ul>	-
Cannot obtain images on the SD memory card.	<ul style="list-style-type: none"> <li>• Is "Allow" selected for "FTP access" on the [Network] tab of "Network setup" page? If not, select "Allow".</li> </ul>	68
	<ul style="list-style-type: none"> <li>• Is the entered password correct? Restart the web browser and enter the password again.</li> </ul>	29
	<ul style="list-style-type: none"> <li>• Access to the SD memory card may be failed. Restart the browser and retry to obtain images.</li> </ul>	29
No image is displayed.	<ul style="list-style-type: none"> <li>• Is the viewer software installed on a PC? Install the viewer software on a PC.</li> </ul>	3, 25 Installation Guide
	<ul style="list-style-type: none"> <li>• Is the version of DirectX 9.0c or later? Check the version of DirectX as follows. 1. Select "Run..." from the start menu of Windows®. 2. Enter "dxdiag" in the displayed dialog box and click the [OK] button.  If the version of DirectX is older than 9.0c, upgrade it.</li> </ul>	-
Images are displayed blurry.	<ul style="list-style-type: none"> <li>• Is there dust or dirt on the lens? Check if there is dust or dirt on the lens.</li> </ul>	-
	<ul style="list-style-type: none"> <li>• Is the focus adjusted correctly? Adjust the focus correctly by clicking the focus buttons.</li> </ul>	6



Symptom	Cause/solution	Reference pages
Images are displayed blurry.	<ul style="list-style-type: none"> <li>When defocusing is caused by the camera position being moved, carry out the position refresh to correct the focus.</li> </ul>	78
When using an optional inner cover, upper side of images are hidden (become black) when the tilt angle of the camera is almost level.	<ul style="list-style-type: none"> <li>This is not malfunction. (This is caused by the shape of the inner cover WV-Q153 or an inner cover provided to an optional bracket.) In this case, images may also be washed out when "ON" is selected for "AGC".</li> </ul>	42, Installation Guide
The image is not being refreshed.	<ul style="list-style-type: none"> <li>Depending on the version of your browser, there might be difficulties refreshing the picture and operating the camera. It is recommended to use Internet Explorer® 6.0 SP2. When using Windows® 2000, it is recommended to use Internet Explorer® 6.0 SP1.</li> </ul>	Installation Guide
	<ul style="list-style-type: none"> <li>Depending on the traffic of the network or the concentration of access to the camera, there might be difficulties displaying the camera picture. Request the camera picture using the browser such as by pressing the [F5] key, etc.</li> </ul>	—
The camera does not move onto the preset position exactly.	<ul style="list-style-type: none"> <li>When the camera position is moved from the preset position after turning on the power of the camera, execute the refresh position function from the [Initialization] tab of the "Maintenance" page. When "Position refresh" is set for the created schedule, the camera position will be corrected periodically.</li> </ul>	75, 78
	<ul style="list-style-type: none"> <li>Is any part of the camera worn out? When the camera does not move to the exact position frequently, the driving parts may be worn out. Contact the dealer for assistance.</li> </ul>	Installation Guide
The camera does not automatically move to the previous position when turning on the power of the camera.	<ul style="list-style-type: none"> <li>If the camera always moves to a specific position after turning on the power of the camera, register that position as the home position when convenient. The camera will automatically move to the registered position using the self return function when turning on the power of the camera.</li> </ul>	38
No image is displayed (or too dark).	<ul style="list-style-type: none"> <li>Is the brightness setting set at an appropriate level? Click the [RESET] button of "BRIGHTNESS".</li> </ul>	7

Symptom	Cause/solution	Reference pages
Images are displayed washed out.	<ul style="list-style-type: none"> <li>Is the brightness setting set at an appropriate level? Click the [RESET] button of "BRIGHTNESS".</li> </ul>	7
Cannot adjust the focus correctly.	<ul style="list-style-type: none"> <li>Is there dust or dirt on the transparent part (over the lens) of the dome cover (camera shell)? Clean the transparent part of the dome cover.</li> </ul>	Installation Guide
	<ul style="list-style-type: none"> <li>Are objects hard to focus on with the auto focus function? Adjust the focus manually.</li> </ul>	6
Flicker appears on the screen.	<ul style="list-style-type: none"> <li>When flickers appear frequently, set the shutter speed to "AUTO" or "1/100".</li> </ul>	42
	<ul style="list-style-type: none"> <li>Is "ON" selected for "Super Dynamic 3" ? Set to "OFF".</li> </ul>	41
Images cannot be saved on the SD memory card.	<ul style="list-style-type: none"> <li>Is the SD memory card inserted correctly?</li> </ul>	Installation Guide
	<ul style="list-style-type: none"> <li>Is the SD memory card formatted?</li> </ul>	28
	<ul style="list-style-type: none"> <li>Isn't the write protect switch set to "LOCK"? When the write protect switch is set to "LOCK", available size/total size indication of the SD memory card will be "*****KB/*****KB".</li> </ul>	-
	<ul style="list-style-type: none"> <li>Isn't the SD memory card out of order? There are limited times to overwrite on an SD memory card. When frequently overwritten, it may be at the end of product life. It is recommended to replace the SD memory card.</li> </ul>	-
The AUTO MODE (OFF, home position, auto track, auto pan, preset sequence) of the camera changes.	<ul style="list-style-type: none"> <li>Check the settings for the self return function.</li> </ul>	38
Cannot transmit audio to the camera.	<ul style="list-style-type: none"> <li>Are the microphone and the speaker connected correctly and firmly? Confirm that they are connected correctly and firmly.</li> </ul>	Installation Guide

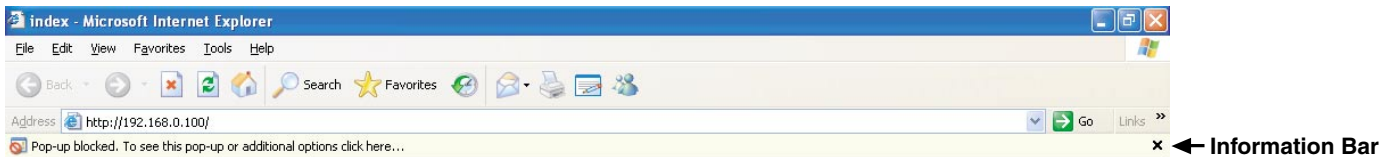
Symptom	Cause/solution	Reference pages
Cannot transmit audio to the camera.	<ul style="list-style-type: none"> <li>Is the viewer software installed on the PC? Confirm that the viewer software "Network Camera View3" is installed.</li> </ul>	3, 25 Installation Guide
	<ul style="list-style-type: none"> <li>Are images displayed on a full screen? Audio will not be transmitted when displaying images on a full screen.</li> </ul>	7
The alarm occurrence indication button, the receiver button, the transmission button, the AUX buttons and the SD recording status indicator on the "Live" page do not display the current status in real time.	<ul style="list-style-type: none"> <li>Is the viewer software installed on the PC? Confirm that the viewer software "Network Camera View3" is installed.</li> </ul>	3, 25 Installation Guide
	<ul style="list-style-type: none"> <li>Is the OS in use Windows® 2000 Professional SP4? This occurs when using Windows® 2000 Professional SP4. When it is inconvenient, it is recommended to operate on Windows® XP Professional SP2 or Windows® XP Home Edition SP2.</li> </ul>	25
No image is displayed on the "Live" page.	<ul style="list-style-type: none"> <li>Press the [F5] key on the keyboard of the PC or click the [Live] button.</li> </ul>	5
Images are not displayed or not refreshed smoothly.	<ul style="list-style-type: none"> <li>Delete temporary internet files as follows.               <ol style="list-style-type: none"> <li>Select "Internet Options..." from "Tools" on the menu bar of Internet Explorer®. The "Internet Options" window will be displayed.</li> <li>Click the [Delete Files...] button in the "Temporary Internet files" section on the [General] tab.</li> </ol> </li> </ul>	—
	<ul style="list-style-type: none"> <li>The firewall function of the anti-virus software may be filtering the port of the camera. Exclude the port number of the camera from the list of the port numbers to be filtered by the anti-virus software.</li> </ul>	—

Symptom	Cause/solution	Reference pages
<p>When displaying MPEG-4 images on two or more browser windows, images from two or more cameras are displayed in sequence on a single browser window.</p>	<ul style="list-style-type: none"> <li>This may occur due to the display adapter and driver combination.</li> </ul> <p>When this has occurred, first update the driver of the display adapter to the latest version.</p> <p>If updating the driver does not solve the problem, adjust the hardware acceleration as follows.</p> <p>The following are descriptions for when Microsoft XP Professional SP2 is installed on the PC in use.</p> <ol style="list-style-type: none"> <li>Right-click on the desktop and select "Properties" from the displayed pop-up menu.</li> <li>Select "Settings" from "Display Properties", and then click the [Advanced] button.</li> <li>Click the [Troubleshoot] tab and disable the DirectDraw acceleration by adjusting the level of "Hardware acceleration".</li> </ol> 	<p>—</p>
<p>When MPEG-4 image is being displayed, no frame border is displayed to indicate the selected area.</p>	<ul style="list-style-type: none"> <li>When the DirectDraw acceleration is disabled by adjusting the level of "Hardware acceleration", no frame border will be displayed to indicate the selected area.</li> </ul>	<p>—</p>

## When using a PC on which Windows® XP Service Pack2 (SP2) is installed

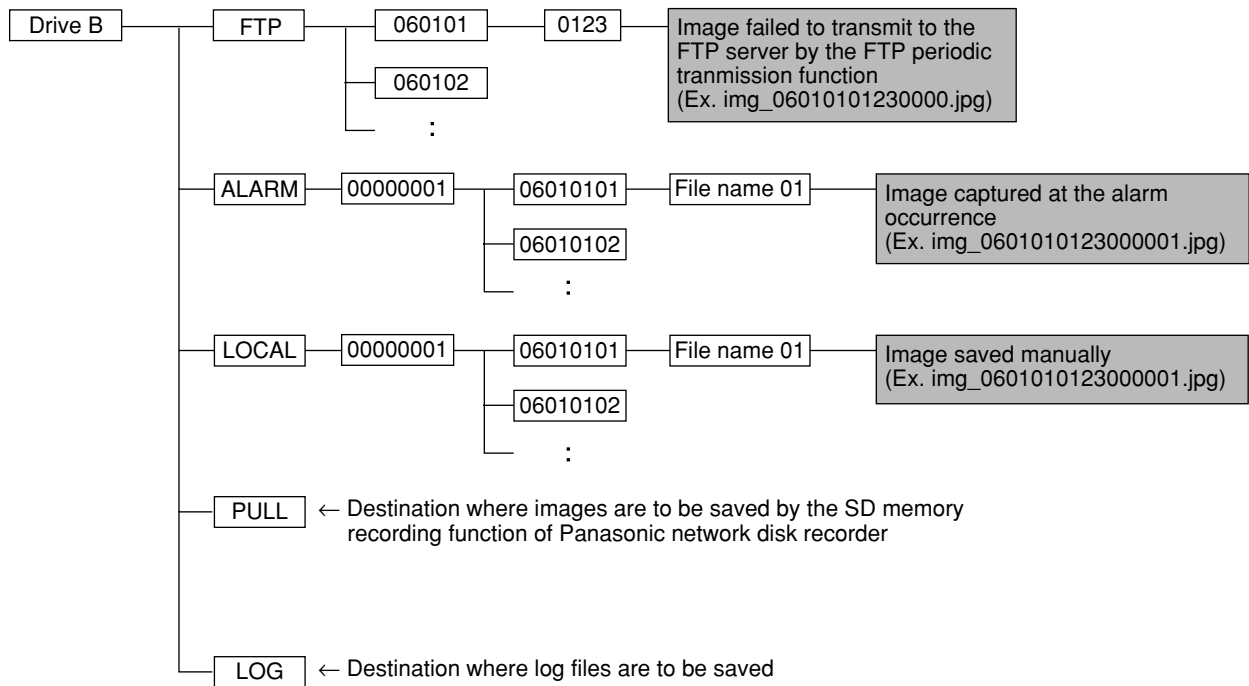
The following may occur during operation when using a PC on which Windows® XP Service Pack2 (SP2) is installed. Follow the instructions below when the following has occurred. By performing the following solutions, other applications and the security level may not be affected.

The "Information Bar" expressed in the following symptom and solutions will be displayed just below the address bar only when there is information to communicate.



Symptom	Solutions	Reference pages
<p>The following message is displayed on the information bar. "Pop-up blocked. To see this pop-up or additional options, click here..."</p>	<ul style="list-style-type: none"> <li>Click the information bar and select "Always Allow Pop-ups from This Site...". The dialog window saying "Allow pop-ups from this site?" will be displayed. Click the [Yes] button.</li> </ul>	<p>—</p>
<p>The following message is displayed on the information bar. "This site might require the following Active X control: 'nwc3setup.exe' from 'Panasonic Corporation'. Click here to install..."</p>	<ul style="list-style-type: none"> <li>Click the information bar and select "Install Active X Control". The "Security Warning" window will be displayed. Click the "Install" button on the displayed "Security Warning" window.</li> </ul>	<p>—</p>
<p>An unnecessary status bar or scroll bar is displayed on the pop-up window.</p>	<ul style="list-style-type: none"> <li>Click "Internet Options" on the Tools menu of Internet Explorer, and then click the [Security] tab. Then, click the [Custom Level...] button to open the "Security Setting" window. Under "Miscellaneous", select "Enable" for "Allow script-initiated windows without size or position constraints". Click the [OK] button. The "Warning" window will be displayed. Click the [Yes] button.</li> </ul>	<p>—</p>

# Directory structure of drive B



# Setting example of the router

This camera transmits MPEG-4 images using UDP protocol.

To display MPEG-4 images using a router, it is necessary to configure the settings (UDP port setup) of both the camera and the router as below.

## Step 1

Configure "MPEG-4 setup" of the camera as follows.

- ① Transmission type: Unicast port (MANUAL)
- ② Unicast port1 (Image): 32004
- ③ Unicast port2 (Audio): 33004

## Step 2

Configure the router ① to which the camera is connected as follows.

Address mapping table

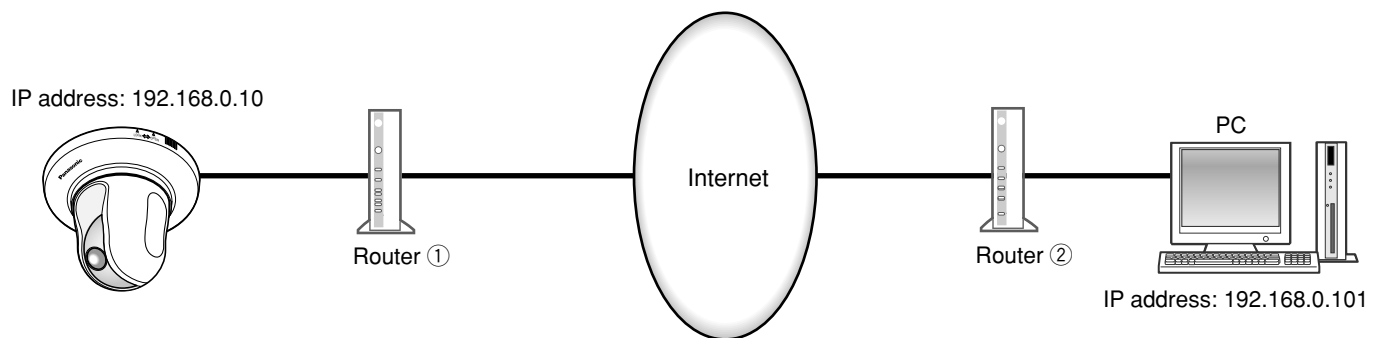
Group	LAN IP address	LAN port		WAN IP address	Protocol
Camera	192.168.0.10	TCP port: 80	<--->	WAN IP address of the router	HTTP (TCP port: 80)
	192.168.0.10	UDP port: 32004	<--->	WAN IP address of the router	UDP port: 32004
	192.168.0.10	UDP port: 33004	<--->	WAN IP address of the router	UDP port: 33004

## Step 3

Configure the router ② to which the PC is connected as follows.

Address mapping table\*

Group	WAN IP address	Protocol		LAN IP address	LAN port
PC	WAN IP address of the router	UDP port: 33004	<--->	192.168.0.101	UDP port: 33004
	WAN IP address of the router	UDP port: 32004	<--->	192.168.0.101	UDP port: 32004



\* The address mapping table is the example for when using a typical router.  
Depending on the manufacturer of the router, it may be described as "static IP masquerade".

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