Panasonic

Network Disk Recorder

Setup Instructions

Model Nos. WJ-ND200K
WJ-ND200K/G

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

The model number is abbreviated in some descriptions in this manual.

CONTENTS

Preface

Features

The Network Disk Recorders WJ-ND200K and WJ-ND200K/G (hereinafter WJ-ND200) are designed for use within a surveillance system, and perform recordings and playbacks pictures/audio from network cameras in the system.
The network disk recorder is a recording device using a hard disk drive to record camera pictures instead of using video tapes so that pictures recorded by repeated overwriting will not experience deterioration of the recorded picture quality.
Up to 16 cameras can be connected via a network and it is possible to record their camera pictures. It is possible to perform the settings or operate the WJ-ND200 (this unit) using a web browser installed on a PC connected to a network. Up to 4 PCs (web browsers) can access this unit concurrently and it is possible to perform the settings and operate this unit.
No hard disk is supplied with this recorder. For purchasing hard disk, contact your dealer.

Recording Functions

Multi-recording
It is possible to perform multiple recordings using a single network disk recorder even if the operating environments are different, for example, recording pictures of cameras in different places at different times.

Schedule recording
It is possible to perform recording automatically at a scheduled time on a designated day of a week. It is also possible to perform recording at a different recording rate according to time range.

Emergency recording
In the case of an emergency, emergency recordings will be given a higher priority than other recording modes by operating an external switch.

External timer recording
It is possible to perform recording automatically using an external timer.

Event recording
At an event occurrence, such as an alarm signal is supplied, the recording mode (recording rate) can be changed to high rate to record pictures.

Audio recording
Audio can be recorded together with images.

2.5 Inch Removable Hard Disk

The optional hard disk can be installed and removed easily and quickly on the front of the recorder.
When using two hard disks, it is possible to replace the hard disks without interrupting recording.

Downloading/Transmitting Images

It is possible to download (save) the currently displayed image in the web browser window onto the hard disk of a PC. By establishing an FTP server, it is possible to transmit images to the designated FTP server periodically. When an event occurs, it is possible to transmit images from the camera installed in the place where the alarm occurred.

Event Notification Function

When an event occurs, it is possible to send e-mails to designated addresses to notify of the event occurrence. It is also possible to send an e-mail with an image recorded when the event occurred.

Security Function and Reliability

- User authentication function (registration of ID and password) allows users access to predetermined selection of the available functions. Up to 32 users can be registered.
- Host authentication function restricts devices from operating this unit if their IP addresses are not registered.
- If a hard disk crashes, the mirroring function prevents any recorded pictures loss by continuing recording on the another hard disk. (when using 2 hard disks)

About these operating instructions

There are 3 sets of operating instructions for the WJ-ND200 as follows.
- Installation Guide (book)
- Operating Instructions (PDF)
- Setup Instructions (PDF, these operating instructions)

These "Setup Instructions" contain descriptions of how to perform the required settings to operate this unit using a PC via a network and descriptions for installations such as how to connect the unit to other devices.
The network settings of the unit will be different depending on the settings of the LAN or the Internet service provider to which the unit is to be connected. Refer to an administrator of each network for further information about the respective network.
Refer to the "Installation Guide" for descriptions about available functions by operating this unit using the buttons on the front panel.
Refer to the "Operating Instructions" on the provided CD-ROM for descriptions of how to operate this unit from a PC.
Adobe® Reader is required to read these operating instructions (PDF) on the provided CD-ROM. When the Adobe® Reader is not installed on the PC, download the latest Adobe® Reader from the Adobe web site and install it.

"ND200" shown in the illustrations used in these operating instructions indicate this unit or the WJ-ND200.
Refer to "Readme.txt" on the provided CD-ROM about supported versions of dedicated software, etc.

System requirements for a PC

It is recommended to operate this unit using a PC that meets the following system requirements. If using a PC that does not meet the following system requirements, it may cause problems such as slow imaging or the browser becomes inoperable.

OS	Microsoft® Windows Vista® 32-bit
	Microsoft® Windows® XP Professional SP2
	Microsoft® Windows® XP Home Edition SP2
OS Language	English, French, Spanish, German, Italian, Russian
CPU	Pentium® 4 3.0 GHz or faster
Memory	1 GB or more (512 MB or more for Windows XP)
Monitor	1 024 x 768 pixels or more, 24-bit True color or better
Audio	Sound card (When using the audio function)
Network Interface	10/100 Mbps Network interface card must be installed
Web Browser	Windows® Internet Explorer® 7.0
	Microsoft® Internet Explorer® 6.0 SP1, 6.0 SP2
	Other web browsers are not compatible with this unit.
Other	CD-ROM Drive: It is necessary to read the operating instructions and use the software on the provided CD-ROM.
	DirectX® 9.0c or later
	Adobe® Reader®: It is necessary to read the operating instructions on the provided CD-ROM.

Trademarks and registered trademarks

- Adobe and Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
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- Other names of companies and products contained in these operating instructions may be trademarks or registered trademarks of their respective owners.
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Abbreviations

The following abbreviations are used in these operating instructions.
Microsoft® Windows Vista® 32-bit edition is described as Windows Vista.
Microsoft® Windows® XP Professional SP2 and Microsoft® Windows® XP Home Edition SP2 are described as Windows XP.

Terms used in these operating instructions

HDD
Refers to a hard disk drive (mass storage medium). The unit records camera pictures on a hard disk rather than on video tape.

Recording rate (ips, I-Flame)
Refers to the unit that determines the smoothness with which the recorded images are played back. "ips" is used to express the number of frames recorded per second. The higher the number, the smoother the movement, but the available recording time becomes shorter. "I-Frame" is used to express the refresh interval of MPEG-4 image display set on the camera.

Resolution
Resolution refers to the degree of fineness and quality of the camera pictures recorded by this unit. This unit displays the resolution in number of dots. For example, if the number of horizontal dots is 640 and the number of vertical dots is 480, the display reads 640 x 480.

M-JPEG
A video codec that compresses video fields from the camera into independent JPEG images sequentially by query from the unit. Network load will be reduced comparing with the method that obtains JPEG images independently from the camera. However, the transmission rate will fluctuate depending on the state of the camera. Some cameras phrase this video codec as just "JPEG".

Manual recording
Function for starting and stopping recording manually by clicking the recording button or recording stop button.

Schedule recording
Function for starting and stopping recording automatically at a preset time.

Event recording
Function for starting recording automatically when an event occurs. Event recordings are divided into pre recordings (pictures before the event occurs) and post recordings (pictures after the event occurs).

Emergency recording
Function for performing priority recording in emergency situations, etc. through an external switch connected to the unit.

External recording mode
Function for changing the timetable using an external switch connected to the unit.
The timetable will be in the external recording mode during the external switch is "ON".

SD memory recording/SD memory data
Function featured in some Panasonic's cameras that saves images on the SD memory card on the camera when communication with the camera failed in the period set for the schedule recording of this unit. Images saved by the SD memory recording are described as "SD memory data" on these operating instructions. The recording time of SD memory data will be displayed based on the clock of the camera.

Event
An event is a phenomenon which triggers a specific operation (event operation) in the unit. Events are divided into terminal alarm, command alarm, and site alarm.

Sequence
Sequence refers to automatically changing the displayed camera picture in a preset sequence. Sequence display is possible while the unit displays live pictures.

Electronic zoom
Function for enlarging live and playback pictures. While the camera uses the camera zoom function to enlarge pictures, the electronic zoom function enlarges the picture electronically in the unit and displays it.

Camera control
Camera control refers to controlling the functions of the combination cameras connected to the unit. These functions include Pan/Tilt, Zoom, Focus, Brightness, Preset Operations (moving the camera to a preset horizontal/vertical position), and Auto (for example, automatic panning).
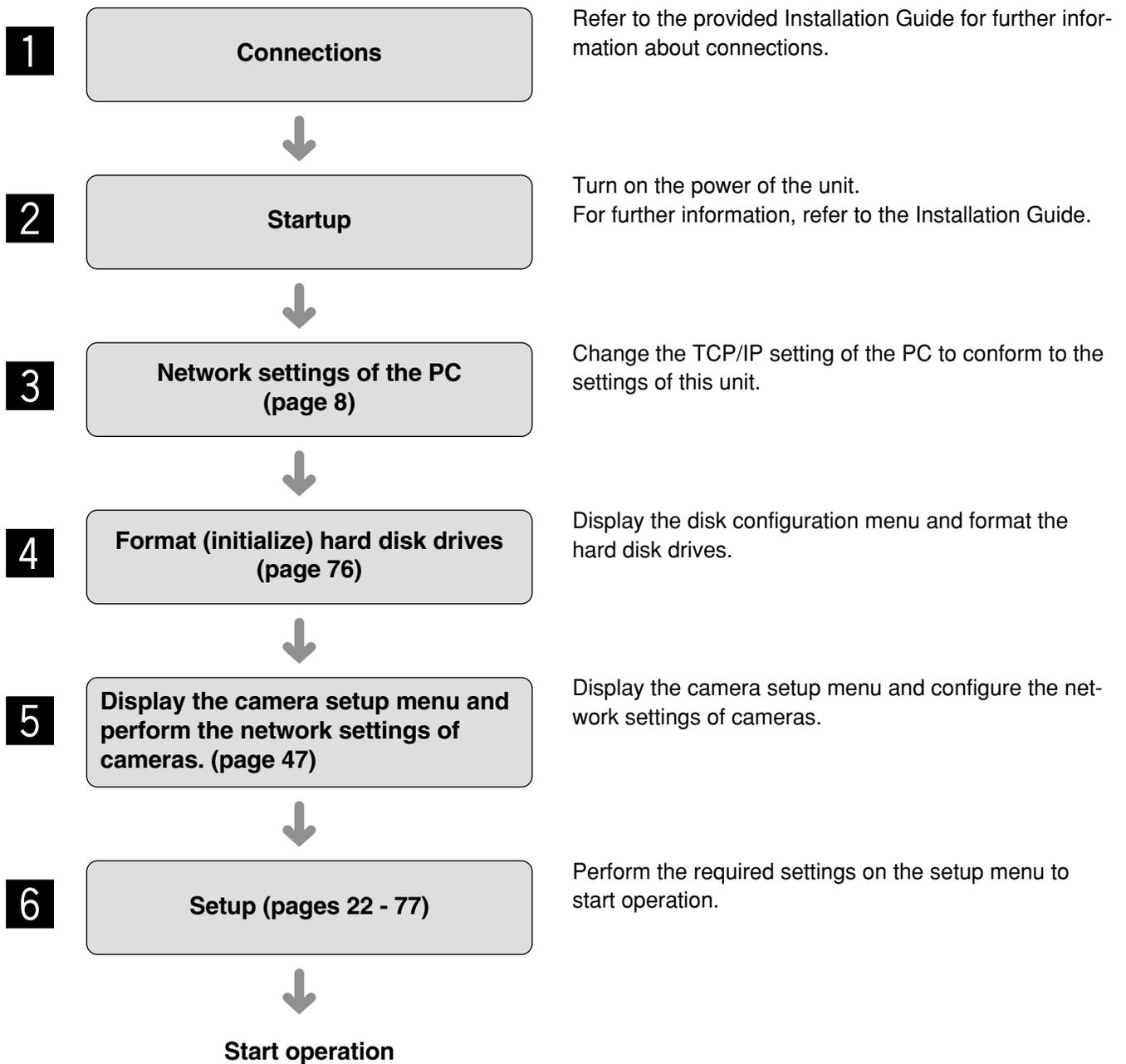
System Administrator
This refers to a person who has the responsibility and authority to operate the unit and perform settings.

Write protection switch
This switch is on the plastic case covering the hard disk drive and is to be used to determine whether or not to protect the hard disk drive from writing.

Operations Flow

1 ┃ Connections

Refer to the provided Installation Guide for further information about connections.

↓

2 ┃ Startup

Turn on the power of the unit.
For further information, refer to the Installation Guide.

↓

3 ┃ Network settings of the PC (page 8)

Change the TCP/IP setting of the PC to conform to the settings of this unit.

↓

4 ┃ Format (initialize) hard disk drives (page 76)

Display the disk configuration menu and format the hard disk drives.

↓

5 ┃ Display the camera setup menu and perform the network settings of cameras. (page 47)

Display the camera setup menu and configure the network settings of cameras.

↓

6 ┃ Setup (pages 22 - 77)

Perform the required settings on the setup menu to start operation.

↓

Start operation

Performing the Network Settings of a PC

Change the TCP/IP setting of the PC to conform to the settings of this unit.
It is required to set the IP address of the PC to "192.168.0.XX (a number from 2 to -254 except 250)" to access this unit.
With the following network environment, it is not necessary to perform the network settings. It is possible to perform the settings or operate this unit using a web browser after completing the connection.
IP Address: 192.168.0.2 - 192.168.0.249, 192.168.0.251 - 192.168.0.254
Subnet mask: 255.255.255.0
Gateway Address: 192.168.0.1
When the network settings are different from the settings above, perform the network settings of the PC.
The network settings of cameras can be configured on the "NW Camera Setup" page ("Camera" – "NW Camera Setup").
In these operating instructions, the settings are performed on Windows XP as examples. Refer to the operating instructions of the respective OS for further information.

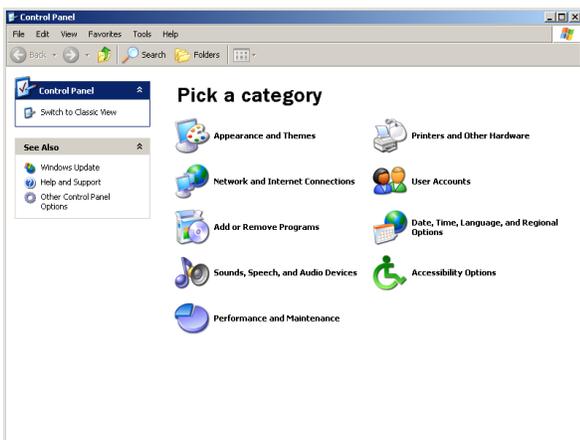### Screenshot 1

Start just after the PC is started up.

Important:
  Log in to the PC as an administrator.

Step 1

On the taskbar, click "Start", and then click the "Control Panel".

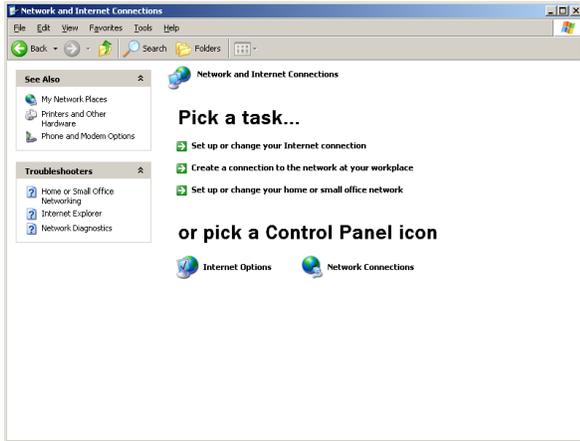### Screenshot 2

The control panel will be displayed.

Step 2

Click the "Network and Internet Connections" icon.

Screenshot 3

The "Network and Internet Connections" window will be displayed.

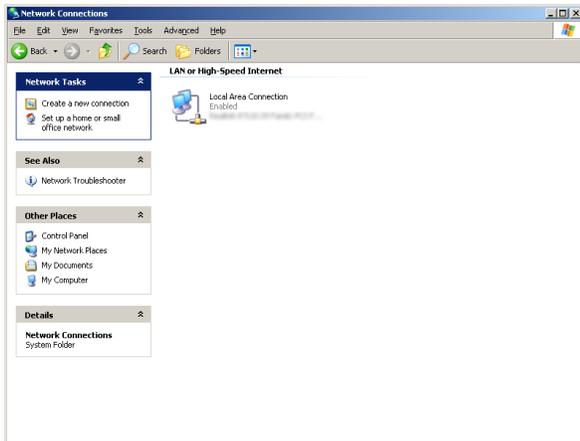**Step 3**

Click "Network Connections".

Screenshot 4

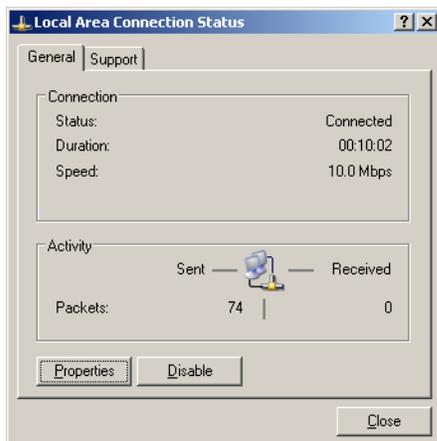The "Network Connections" window will be displayed.

Step 4

Double click "Local Area Connection".

Screenshot 5

The "Local Area Connection Status" window will be displayed.

Step 5

Click "Properties".

The "Local Area Connection Properties" window will be displayed.

The "Properties" window of "Internet Protocol (TCP/IP)" will be displayed.
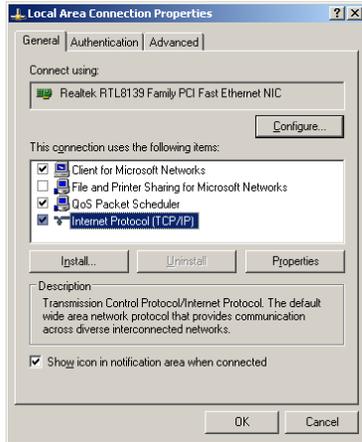
Step 6

Click "Internet Protocol (TCP/IP)", and then click "Properties".
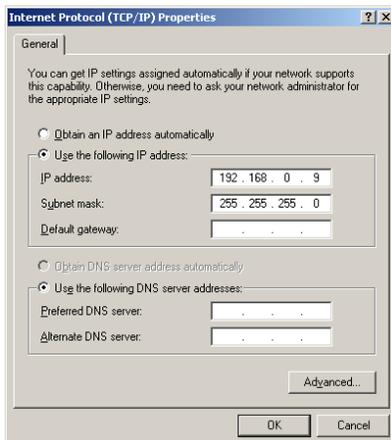
Step 7

Click "Use the following IP address" and enter the IP address and the subnet mask as follows;
• IP address: 192.168.0.100
• Subnet mask: 255.255.255.0
Depending on the network configuration, it may be necessary to set the "Default gateway". Refer to a system administrator for further information.

Step 8

Click the "OK" button and close the window.

10

About the Network Security of This Unit

Equipped security functions

① **Access restrictions by the host authentication and the user authentication**
It is possible to restrict users from accessing this unit by setting the host authentication and/or the user authentication to on. (☞ page 65)

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.
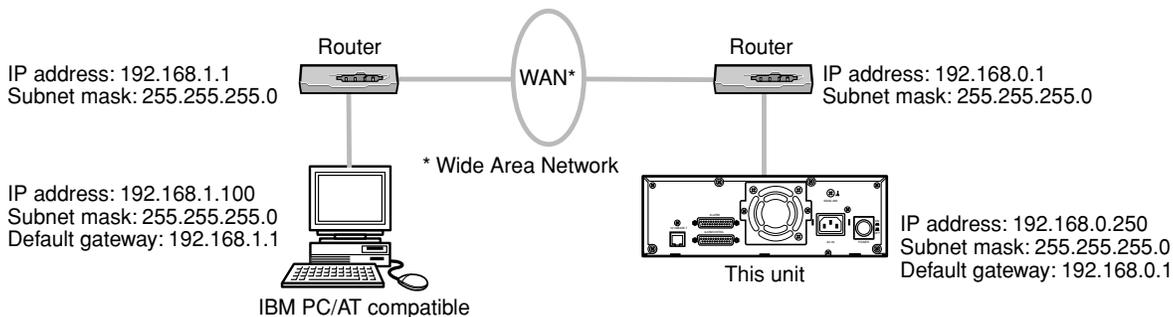(☞ page 55)

For enhanced security

Divide the subnet using a router to enhance the network security by double authentications of IP addresses using this unit and a router. When required to connect this unit with a network without enhanced security, connect the unit after the network security is enhanced, such as by installing a VPN (Virtual Private Network) device, etc.
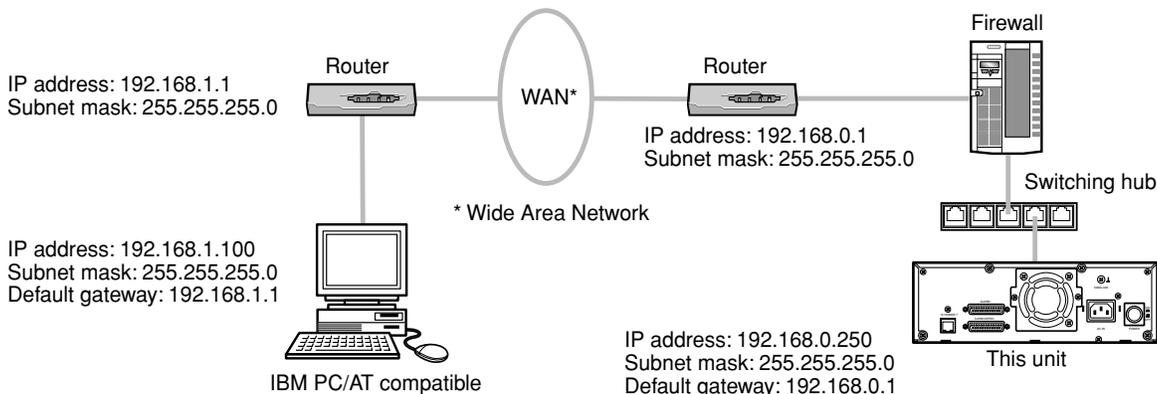

Important:
The settings of the unit will be different depending on the settings of the LAN or the Internet service provider to which the unit is to be connected. Refer to an administrator of each network for further information about the respective network.

[Connection example]

Router
IP address: 192.168.1.1
Subnet mask: 255.255.255.0

WAN*

Router
IP address: 192.168.0.1
Subnet mask: 255.255.255.0

* Wide Area Network

IP address: 192.168.1.100
Subnet mask: 255.255.255.0
Default gateway: 192.168.1.1

IBM PC/AT compatible

This unit
IP address: 192.168.0.250
Subnet mask: 255.255.255.0
Default gateway: 192.168.0.1

Installing a firewall to use the packet filtering and the protocol filtering functions can better enhance the network security.

[Connection example]

Firewall

Router
IP address: 192.168.1.1
Subnet mask: 255.255.255.0

WAN*

Router
IP address: 192.168.0.1
Subnet mask: 255.255.255.0

Switching hub

* Wide Area Network

IP address: 192.168.1.100
Subnet mask: 255.255.255.0
Default gateway: 192.168.1.1

IBM PC/AT compatible

IP address: 192.168.0.250
Subnet mask: 255.255.255.0
Default gateway: 192.168.0.1

This unit

11

Display the Operation Window

To display the operation window to operate the unit from the web browser installed on the PC, proceed as follows.

Screenshot 1

Start just after the PC is started up.

Step 1

After the browser starts, enter the IP address set to this unit in the address box, and press the enter key.

Important:
- Refer to a system administrator for the IP address.
- It is impossible to access this unit from a PC without a registered IP address when "ON" is selected for "Host Authentication" on the "Basic Setup" of "User Mng." menu.
  Refer to a system administrator for further information.
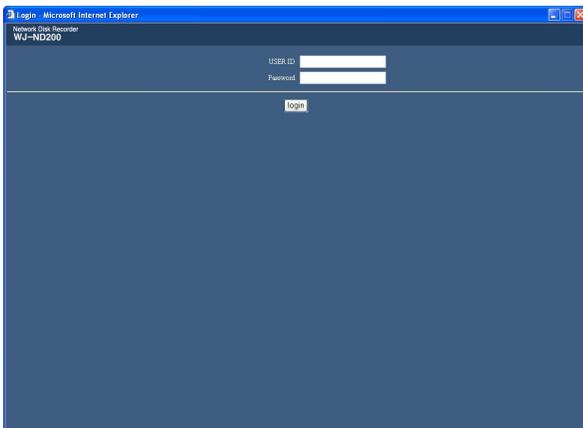- Do not attach "0" before the numbers when entering IP address.
  Example
  Correct: 192.168.0.50
  Wrong: 192.168.0.050
- If a message is displayed on the information bar, see page 83.

Screenshot 2

The user authentication window will be displayed.
This window will not be displayed when "OFF" is selected for "User Authentication" on the "Basic Setup" of "User Mng." menu.

Step 2

Enter the user ID and password registered on this unit.

Important:
- Refer to a system administrator for the set user name and password.
  Refer to page 67 for the descriptions of how to register users.
- The default administrator name and password are as follows.
  USER ID: ADMIN
  Password: 12345
- To enhance the security, change the password for an administrator before running the unit. It is recommended to change the password for the administrator periodically. Refer to page 66 for descriptions of how to change the password.
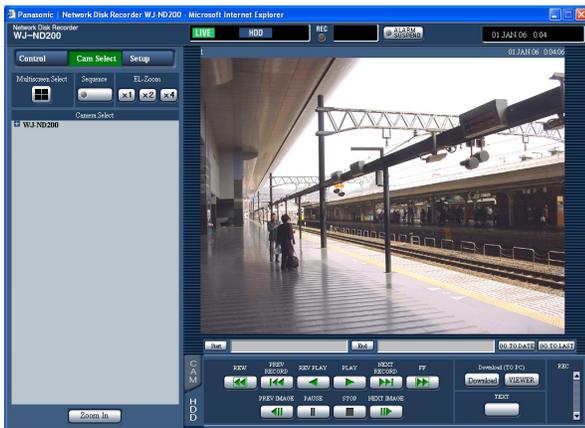
12

Important:

When the unit is being operated without changing the default administrator name and password, the pop-up window saying that it is recommended to change the password will be displayed.

Screenshot 3

The top page will be displayed.

Step 3

Click the buttons or the tabs for operations.

Important:

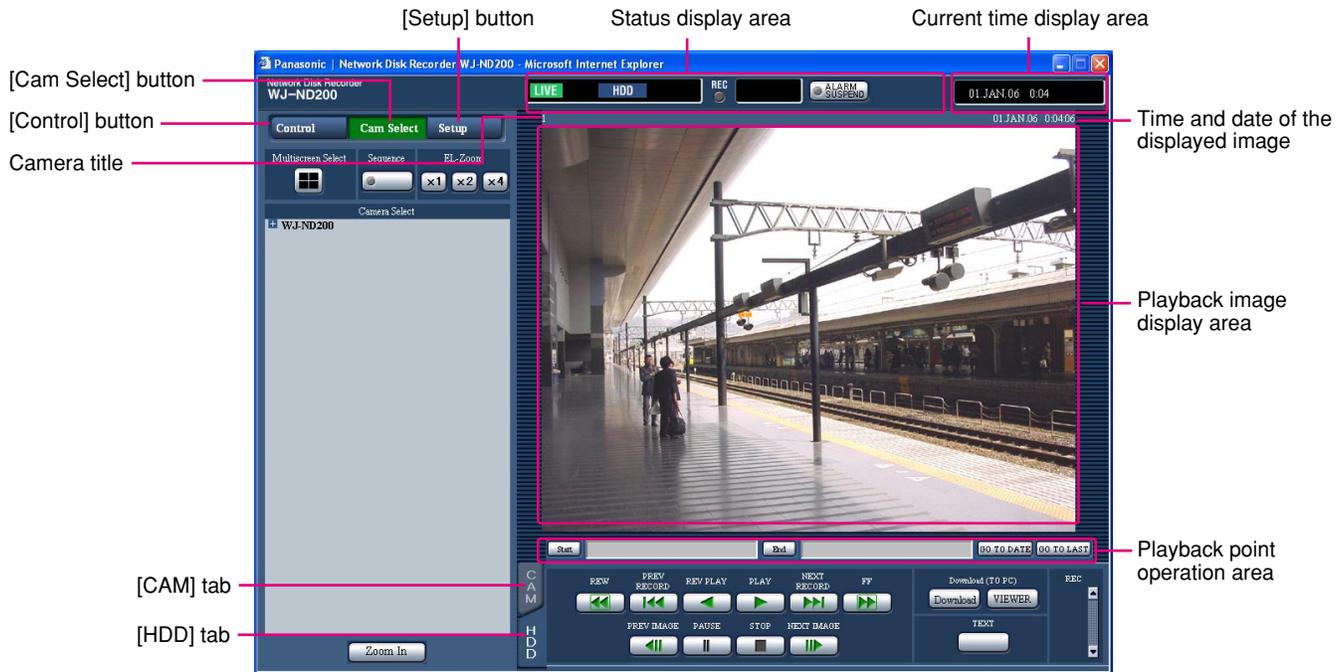If a message is displayed on the information bar, see page 83.

Notes:
• When the top 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.

13

About the Operation Window

Top page

[Setup] button   Status display area   Current time display area

[Cam Select] button

[Control] button

Camera title

Time and date of the displayed image

Playback image display area

[CAM] tab

[HDD] tab

Playback point operation area

[Control] button (☞ page 15)
Clicking this button displays the "Control" panel that is used for performing operations such as searching for recorded pictures on the HDD and playing recorded pictures. From the "Control" panel, you can also perform the functions of the camera picture switcher such as changing the display of camera live pictures to quad or sequence display. Search result and log information also will be displayed on the "Control" panel.

[Cam Select] button (☞ page 16)
Clicking this button displays the "Cam Select" panel that is used for the switcher function such as switching camera channels.

[Setup] button (☞ page 17)
Clicking this button displays the "Setup" panel that is used for the setup operations.

Status display area (☞ page18)
Current status such as playback status or recording status will be displayed.

Current time display area
Current time will be displayed.

Playback image display area
Recorded images and live images will be displayed. The setup menu will be displayed while setting up.
The camera title is displayed at the top left of the picture and the time at the top right. (Time and date when images had been recorded will be displayed when displaying recorded images.) Clicking the camera title during quad display will display the clicked picture on a single screen.

Playback point operations area (☞ page 19)
It is possible to mark playback points or skip to the latest recorded image.

[HDD] tab (☞ page 19)
Operation for recorded images such as playback or downloading (saving) recorded images can be performed on this page.

[CAM] tab (☞ page 21)
Perform the camera operations such as zooming, focusing, auto functions, etc. on this panel.

14

[Control] button

When the [Control] button is clicked, the "Control" panel will be displayed.

"Control" panel

[Multiscreen Select] box
Up to 4 camera images can be displayed simultaneously on a 4-Screen.
Each time the button is clicked, the camera picture is changed to quad display according to the settings made in the "Monitor Display" page ("System" – "Basic Setup" – "Monitor Display").

[Sequence] box
Camera images to be displayed will be switched by clicking this button. Camera images will be displayed sequentially according to the settings performed in advance.
The indicator on the button lights (green) during sequence operation.

[EL-Zoom] box
Camera images will be displayed in the proportion of the clicked zoom ratio button.

×1 : 1x   ×2 : 2x   ×4 : 4x

[Search] box
The recording event search window will be displayed by clicking this button. Use this button to search the recorded images. (Refer to the operating instructions (PDF).)
Search results will be displayed in list form in the log display area. (Refer to the operating instructions (PDF).)

[Log] box
Error Log **[Error Log] button:** The error logs of this unit will be displayed. Logs will be displayed in list form in the log display area.
Access Log **[Access Log] button:** The time when logged in/out for this unit, the user ID, or the IP address will be displayed. Logs will be displayed in list form in the log display area.
Event Log **[Event Log] button:** The event logs (event occurrence times and their details) will be displayed. Logs will be displayed in list form in the log display area.
Network Log **[Network Log] button:** The network error logs will be displayed. Logs will be displayed in list form in the log display area.
Zoom In **[Zoom In]:** Enlarges the live camera image and playback picture.

[Cam Select] button

When the [Cam Select] button is clicked, the "Cam Select" panel will be displayed.
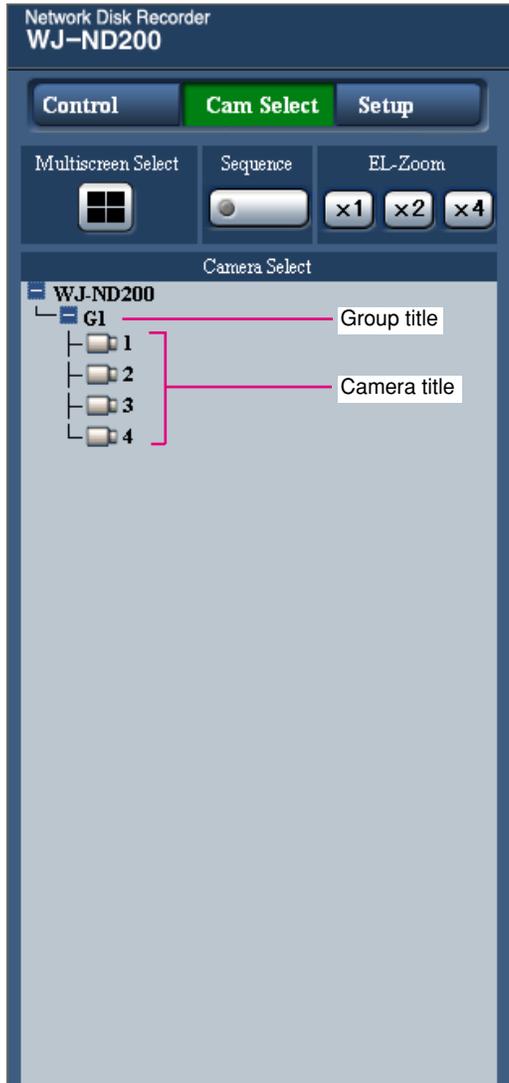
"Cam Select" panel

[Multiscreen Select] box
Multiscreen button:
Up to 4 camera images can be displayed simultaneously on a 4-Screen.
Each time the button is clicked, the camera picture is changed to quad display according to the settings made in the "Monitor Display" page ("System" – "Basic Setup" – "Monitor Display").

[Sequence] box
Sequence button:
Camera images to be displayed will be switched by clicking this button. Camera images will be displayed sequentially according to the settings performed in advance.
The indicator on the button lights (green) during sequence operation.

[EL-Zoom] box
Camera images will be displayed in the proportion of the clicked zoom ratio button.

x1 :   1x   x2 :   2x   x4 :   4x

[Camera Select] box
When the "WJ-ND200" title is clicked, the group title of the cameras will be displayed. Refer to page 52 for the descriptions of how to perform the group settings.
When the group title is clicked, the cameras belong to the group will be displayed in the tree form. When the camera title is clicked, images from the selected camera will be displayed on a single screen in the image display area.

16

[Setup] button

When the [Setup] button is clicked, the "Setup" panel will be displayed.
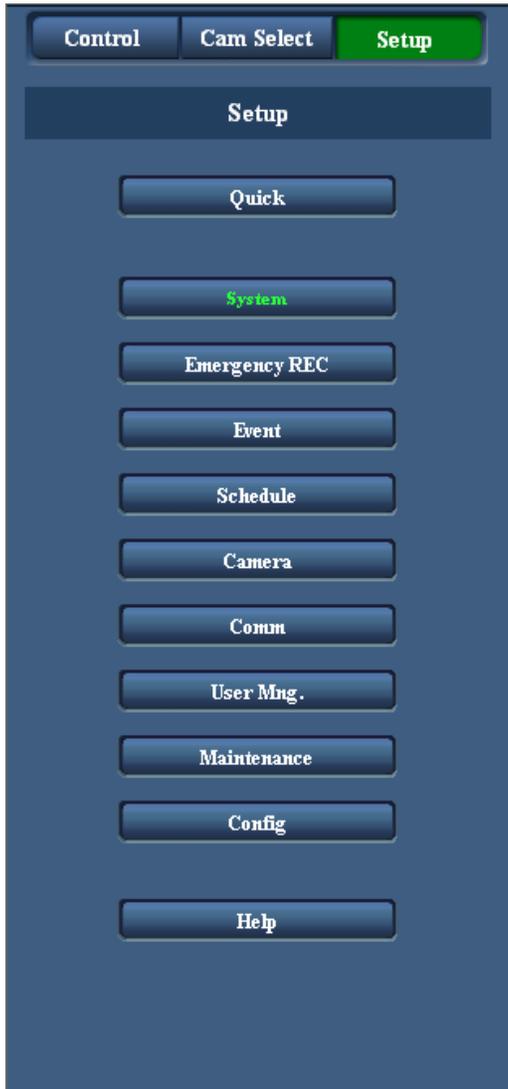
"Setup" panel

[Quick] button
When this button is clicked, the setup menu that contains the minimum required settings to operate this unit will be displayed.
Refer to page 27 for further information.

[System] button
The setup menu that contains the required system settings to activate this unit will be displayed. Refer to page 30 for further information.

[Emergency REC] button
The setup menu for the emergency recording will be displayed. Perform the settings for emergency recording/audio recording. Refer to page 34 for further information.

[Event] button
Displays the setting menu for event actions of each event type (site alarm and terminal alarm). Refer to page 36 for further information.

[Schedule] button
The menu for the settings of the recording schedule (performs recording/audio recording/event action by designating the time and a day of the week) will be displayed.
Refer to page 39 for further information.

[Camera] button
This button is for performing camera network settings, group settings and sequence operation settings.
Refer to page 47 for further information.

[Comm] button
The setup menu for network settings of the WJ-ND200 will be displayed. Refer to page 55 for further information.

[User Mng.] button
The setup menu for user and host authentication will be displayed. Refer to page 65 for further information.

[Maintenance] button
The setup menu for the settings of the hard disk will be displayed. Refer to page 72 for further information.

[Config] button
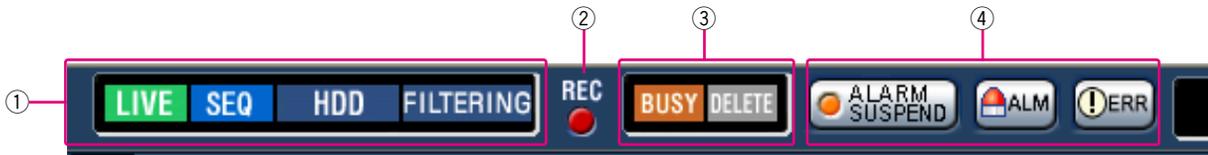The setup menu for formatting of the hard disk will be displayed. Refer to page 76 for further information.

[Help] button
The help window will be displayed.

17

Status display area

① **The status of live/playback image will be displayed.**

LIVE [LIVE]:
Indicates that a live image is being displayed.

▶ [Playback]:
Indicates that a playback image is being displayed.

◀ [Reverse playback]:
Indicates that a reverse playback image is being displayed.

▶▶ [Fast playback]:
Indicates that a fast playback image is being displayed.

◀◀ [Fast reverse playback]:
Indicates that a fast reverse playback image is being displayed.

II [Pause]:
Indicates that a paused image is being displayed.

DL [DL]:
Indicates that the playback images are currently being downloaded.

END [END]:
Indicates that download of the playback images has ended.

Step 1 – Step 7 [Step 1] – [Step 7]:
Indicates the playback speed.
Step1: Normal playback speed
Step2: Approx. 4x playback speed
Step3: Approx. 8x playback speed
Step4: Approx. 16x playback speed
Step5: Approx. 32x playback speed
Step6: Approx. 48x playback speed
Step7: Approx. 96x playback speed

SEQ [SEQ]:
Indicates that the sequence display is currently being performed.

HDD [HDD]:
Indicates that a HDD is currently being mounted in the unit.

RECOVER [RECOVER]:
Indicates that mirroring recovery is currently being performed.

SD▶HDD : Indicates that the SD memory data is currently being obtained.

FILTERING [FILTERING]:
Indicates that the recording event list is filtered. Refer to the operating instructions (PDF) for further information about filtering of the recording event list.

② **REC indicator**
The status of recording will be displayed.
When lit red: Indicates that recording is being performed.
When not lit: Indicates that recording is not being performed.

③ **Indicates the following statuses:**
BUSY [BUSY]:
Indicates that the camera is not operable because a user with higher priority is currently operating that camera.
DELETE [DELETE]:
Indicates that deletion of a recorded image is being performed.

④ **Indicates information about events and errors.**
Clicking this button will temporarily disable alarm detection. (Refer to the operating instructions (PDF).)
[ALARM SUSPEND]:
Clicking this button will temporarily disable alarm detection (alarm suspension). (Refer to the operating instructions (PDF).)
[ALARM SUSPEND]:
This indication will be displayed while an alarm is being suspended.
[ALM]:
Indicates an event occurrence. The alarm display action will be canceled by clicking this button. (Refer to the operating instructions (PDF).)

[ERR]:
Indicates an error occurrence. The error will be reset by clicking this button. (Refer to the operating instructions (PDF).)

Note:
When "CONTINUE" is selected for "Recording Duration" of "Emergency REC", the emergency recording currently being carried out can be stopped by clicking the [ALM] button. When "MANUAL" is selected for "Recording Duration", the emergency recording will not stop by clicking the [ALM] button.

Playback point operation area

① Indicates the start time and the end time of a download. (Refer to the operating instructions (PDF).)
[Start] button
Set the start time for the time and date of the image to be downloaded.
[End] button
Set the end time for the time and date of the image to be downloaded.

② **[GO TO DATE] button**
Indicates the time and date of a marked point. Use this button to designate the desired time and date of a recorded image to be played. (Refer to the operating instructions (PDF).)

③ **[GO TO LAST] button**
Skips to the latest recorded time of a recorded image from the currently displayed camera channel and plays it.

[HDD] tab

[REW] button
Fast reverse playback will be performed. Playback speed for fast reverse playback will be changed in the following order each time this button is clicked:
Step2 (Approx. 4x) → Step3 (Approx. 8x) → Step4 (Approx. 16x) → Step5 (Approx. 32x) → Step6 (Approx. 48x) → Step7 (Approx. 96x)

[PREV RECORD] button
Skips to the previous recorded image and plays it.

[REV PLAY] button
Reverse playback of a recorded image will be performed.

[PLAY] button
Playback of a recorded image will be performed.

[NEXT RECORD] button
Skips to the next recorded image and plays it.

19

[FF] button
Fast playback will be performed. Playback speed for fast playback will be changed in the following order each time this button is clicked: Step2 (Approx. 4x) → Step3 (Approx. 8x) → Step4 (Approx. 16x) → Step5 (Approx. 32x) → Step6 (Approx. 48x) → Step7 (Approx. 96x)

[PREV IMAGE] button
The previous frame will be displayed when this button is clicked during playback/pausing.

[PAUSE] button
Playback will be stopped when this button is clicked during playback. Playback will be resumed when this button is clicked during pausing.

[STOP] button
Stops playback and displays a live image.

[NEXT IMAGE] button
The next frame will be displayed when this button is clicked during playback/pausing.

[Download (TO PC)] box
Downloads the image currently playing to a PC.
[Download] button
Displays the download setting window for downloading images.
Date and time of the download start/end points will be displayed in the playback position operations area.
[VIEWER] button
Clicking this button will start downloading the viewer software that can play downloaded images.

[TEXT] button
The attached text information will be displayed when this button is clicked during pausing.

[REC] box
The recording button, the recording stop button and the SD memory data obtain button will be displayed when the ▲ button is clicked.
The recording button, the recording stop button and the SD memory data obtain button will be hidden when the ▼ button is clicked.

SD memory data obtain button
Obtains recorded images on the SD memory card on the camera. The letters "SD" on this button will be displayed in red when the SD memory data is currently being obtained.
The letters "SD" on this button will be displayed in blue when there is no recorded image on the SD memory card. When this button is clicked while the letters "SD" are displayed in blue, the unit will check if there is any recorded image on the SD memory card or not. When a recorded image is found, the letters "SD" on the SD memory data obtain button will turn red and obtainment of SD memory data will start.

Recording button: Starts manual recording.
Recording stop button: Stops manual recording.

Important:
To display the recording button and the recording stop button, hold down the ▲ button until they are displayed.

Note:
When played image is in MPEG-4 format, results from operating the some buttons will be as follows.
[GO TO DATE] button: Playback sometimes may start from a point several seconds after the designated time and date.
[REV PLAY] button: Some frames of recorded images will not be displayed. Reverse playback will be performed with the set refresh interval of the camera.
[PLAY] button (during playback): When the [PLAY] button is clicked during playback, images will be skipped for several seconds. (Playback will starts from a point several seconds after the current point.)
**[PREV IMAGE] button:** Some frames of recorded images will not be displayed. Reverse frame play will be performed with the set refresh interval of the camera.
[FF]/[REW] button: Some frames of recorded images will not be displayed. Fast playback/fast reverse playback will be performed with the set refresh interval of the camera.
[Download] button (during playback): Download may start from a point several seconds later than the designated start time and may end at a point several seconds after the designated end time when downloading MPEG-4 images.

[CAM] Tab

Control pad/buttons
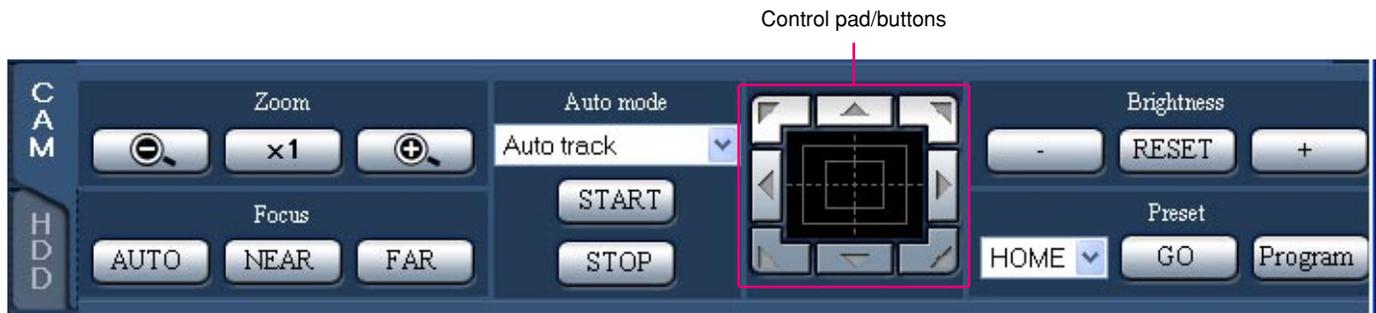
[Zoom] box
Zooming can be adjusted by clicking the [⊖] [WIDE] button or the [⊕] [TELE] button.
When the [×1] [x1] button is clicked, the adjusted zoom will be reset.

[Focus] box
Focusing can be adjusted by clicking the [NEAR] [NEAR] button or the [FAR] [FAR] button.
The auto focus function can be performed by clicking the [AUTO] [AUTO] button.

[Auto mode] box
This box allows users to select the auto mode function and operate the camera.
Click the ˅ button to select the auto mode function (Auto Track, Auto Pan, Preset Sequence, Sort, or Patrol) of the camera, and click the [START] [START] button.
Click the [STOP] [STOP] button to stop the auto mode function.

Control pad/buttons
Clicking the buttons around the control pad can move (pan/tilt) a camera in the clicked direction. Clicking inside the control pad also can adjust the vertical/horizontal position (pan/tilt) of the displayed image.
Panning/tilting speed will be faster if a clicked point gets farther from the center point of the control pad.

[Brightness] box
The brightness can be adjusted by clicking the [-] [–] button or the [+] [+] button. It is possible to reset the set brightness by clicking the [RESET] [RESET] button.

[Preset] box
This box allows users to register the current camera direction on a specified preset position. Aim the camera at a direction to be registered, click the ˅ button to select a preset number (1-256), and click the [Program] [Program] button.
Move the camera to the preset position registered in advance. Click the ˅ button to select the preset number and click the [GO] [GO] button.

Setup Menu

Performing each setting item on the setup menu should be completed in advance to operate this unit.
The setup menu operations are performed from the "Setup" panel.

Setup menu chart

| Setup items	Description	Page
Quick		
Setup	Perform the minimum required settings to operate this unit.	27
System		
Basic Setup	Perform the settings for the basic operations of this unit.	30
Time & Date	Perform the settings for the current time and for displaying the time and date.	31
Emergency recording		
Emergency REC	Perform the settings for emergency recording such as the recording time, recording rate and audio recording.	34
Event Action		
Basic Setup	Perform the basic settings for an event action.	36
Terminal Setup	Set event actions to be performed at a terminal alarm occurrence.	37
Site Alarm Setup	Set event actions to be performed at a site alarm occurrence.	38
Schedule		
Time Table	Create timetables for each day of the week, and assign a program to each timetable.	44
Program	Create recording programs on this menu. Up to 4 programs can be created. Perform the settings for recording actions such as the recording rate for each camera channel.	39
Special Days	Assign timetables to special days aside from other days of the week.	46
Camera		
NW Camera Setup	Perform the network camera settings such as the camera address and the port number.	47
Group Setup	Set the group title of the camera.	52
Sequence Setup	Perform the settings for the sequential display of live images.	53

Setup items	Description	Page
Comm		
Basic Setup	Perform the settings for a network. Settings for a network connection such as settings of the IP address and gateway address can be performed.	55
DDNS Setup	Perform the basic settings of network DDNS. Determine to enable or disable DDNS, or perform the settings of the user IDs.	57
Proxy Setup	Perform the basic network proxy settings. Determine whether or not to use the proxy server, and perform the settings such as the server address settings, etc.	58
SNMP Setup	Perform the settings for the SNMP. By connecting to the SNMP manager, the status check of the unit can be checked.	59
NTP Setup	Perform the settings when adjustment of the time is required to be set with the NTP server such as when setting the NTP server address.	60
FTP Setup	Perform the settings for the FTP server. Settings for transmitting images from a camera connected to this unit to a designated FTP server periodically can be performed with the "FTP Setup" menu.	61
Mail Setup	Perform the settings to send e-mails to addresses registered in advance at an event or error occurrence.	63
Panasonic Alarm protocol	It is possible to send a message to addresses registered in advance using "Panasonic Alarm Protocol" when an event or a problem occurs.	64
User Mng.		
Basic Setup	Determine whether to enable or disable the user authentication and the host authentication.	65
Administrator Setup	Edit information of the registered administrators such as the administrator name, password, the default screen, etc.	66
User Setup	Register users who can operate the unit and edit/delete the registered user information. User name, password and operational level can be set.	67
Host Setup	Register hosts (PCs) that can access the unit via a network and edit/delete the registered host information. Operational levels and IP addresses of PCs can be set.	68
User Level	Functions operable in each user level can be set.	70

Setup items	Description	Page
Maintenance		
Product Information	Versions of the software, hardware (this unit), MAC address, the internal temperature and the number of times the USE button is pressed will be displayed.	72
Disk Information	Hard disk information such as available capacity of the built-in hard disk will be displayed.	73
Network Information	Network information such as IP addresses of the connected cameras and network line speed of the WJ-ND200 will be displayed.	73
Disk Setup	Perform the settings relating to the remaining disk size and the settings relating to image data. Data recorded on the HDD can be deleted and actions to be taken when the remaining disk size runs out can be configured.	74
Save/Load	Contents of settings for this unit will be saved/loaded or initialized.	75
Config	Enable/disable setting of the FORMAT button inside the front cover can be set, and the hard disk drives can be formatted.	77

Basic operation with the setup menu

Screenshot 1
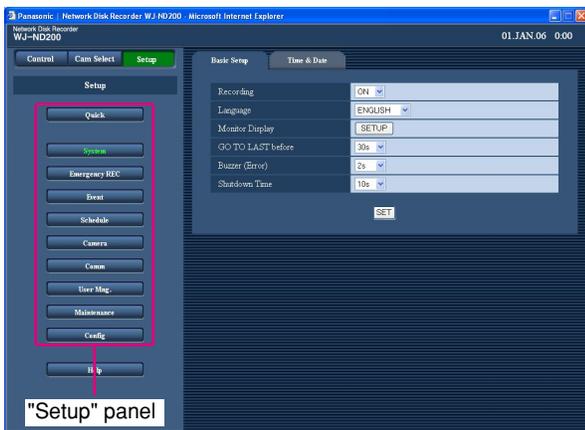
Start operation from the top page.
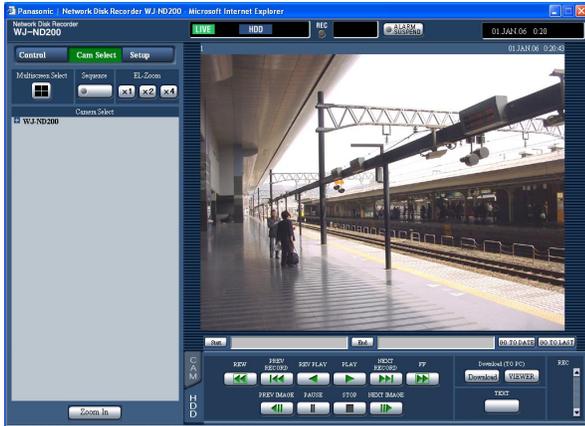
Step 1

Click the [Setup] button.

Screenshot 2

The "Setup" panel will be displayed.
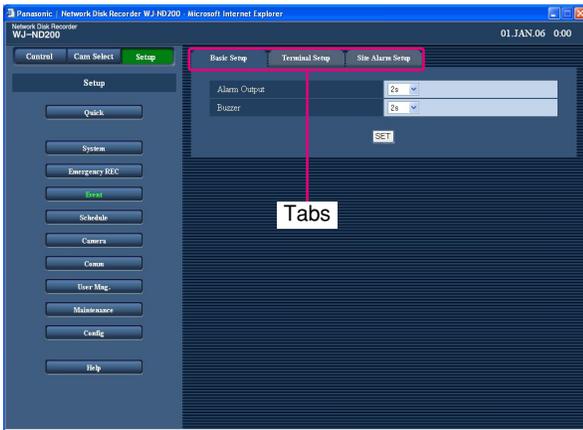

"Setup" panel

Step 2

Click the desired button relating to the settings to be configured.

Screenshot 3

The setup menu respective to the clicked button on the "Setup" panel will be displayed.
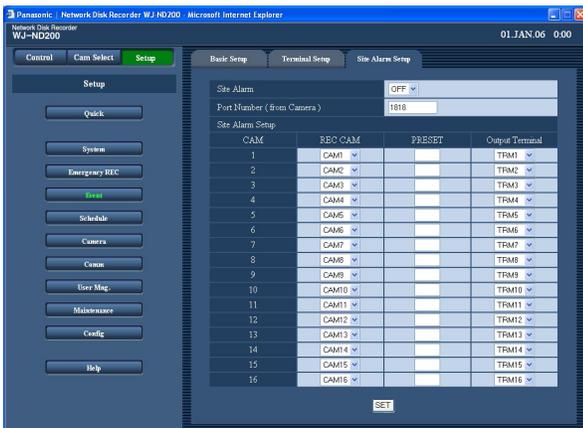

Tabs

Screenshot 4

The setup menu corresponding to the selected tab will be displayed in the image display area.

Step 3

Click the tab relating to the settings to be configured.

Step 4

Perform the settings for each item.
Click the [SET] button after completing the settings.
→ The settings will be applied.
   When moving to other setup menu without clicking the [SET] button, the edited settings will not be applied.

Important:
 • When the settings are applied, all users except for the user who edited and applied the settings will be forcibly logged out.
 • When any setting of "User Mng." is changed, all login users will be forcibly logged out.
 • Recording will not be performed for around 4 seconds just after saving the settings.
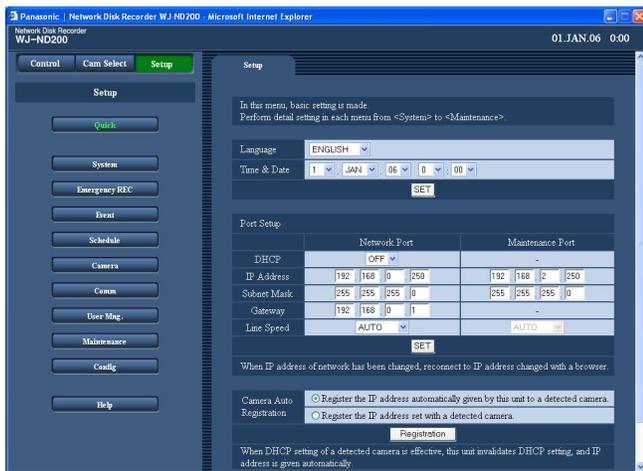
26

Perform the minimum required settings [Quick]

Perform the minimum required settings to operate this unit.
Before perform the settings on each setup menu, check the settings on the "Quick" menu first.

Screenshot 1

Click the [Quick] button to display the "Quick" menu.

Step 1

Perform the settings for each item.
Refer to the following for further information about the settings for each item.
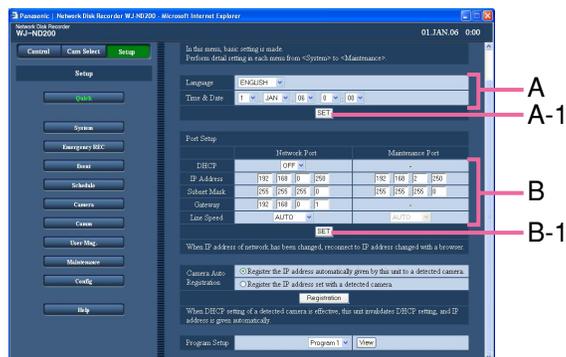
Step 2

Click the [SET] button after completing the settings.

Note:
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 above, click the [SET] button below field B (B-1) when completing the setting items in field B.

Setup items

■ Language
Select the display language for the web browser from the following.
JAPANESE/ENGLISH/FRANÇAIS/ESPAÑOL/
DEUTSCH/ITALIANO/RUSSIAN/CHINESE

■ Time & Date
Adjust the current time and date.
Select numbers for year, month, day, hour and minute, and click the [SET] button.

Important:
- Recording will not be performed for around 4 seconds just after applying the time and date settings.
- Live images will turn to black screen and recording will not be performed for around 4 seconds just after applying the time and date settings even by shifting to/from summertime (daylight savings).

■ Port Setup
Perform the settings for the following items for each port.

[DHCP]
Select ON or OFF to determine whether or not to use the DHCP server. Select "ON" to obtain an IP address, a subnet mask and a gateway from the DHCP server. Set to "OFF" when entering the addresses above manually.
ON: Uses the DHCP server.
OFF: Does not use the DHCP server.

Important:
- A different subnet should be set for each port.
- When ON is selected and the recording rate setting for "SD MEMORY REC" is configured, an error may occur in the process of startup of the unit when a request to write onto the SD memory card is made. This will happen when response from the DHCP server takes time. However, this error will be corrected once an address is provided to the unit.

[IP Address]
When "OFF" is selected for "DHCP", enter an IP address. For this unit, enter 4 units from the decimal numbers (0-255) according to the network configuration.

[Subnet Mask]
Enter a subnet mask according to the network configuration when OFF is selected for "DHCP".

[Gateway]
Enter the IP address of the gateway according to the network environment when "OFF" is selected for "DHCP".

[Line Speed]
The following are available for "Line Speed".
AUTO: Line speed will be applied automatically.
10-HALF: 10 Mbps semi duplex
10-FULL: 10 Mbps full duplex
100-HALF: 100 Mbps semi duplex
100-FULL: 100 Mbps full duplex

Important:
The line speed settings should be the same between the unit and the hub.
(Recommended line speed: 100Mbps-FULL)
For example, when 100Mbps-FULL and 100Mbps-HALF are set for the recorder and the hub respectively, display/recording/playback of images may not be performed correctly.

Note:
When the setup menu is closed after changing the line speed, the unit will automatically restart.

■ Camera Auto Registration
The unit will search cameras and register the detected cameras automatically. Determine how to register IP addresses of cameras.
Register the IP address automatically given by this unit to a detected camera: When a camera is detected, the unit will give an IP address to the detected camera and register it.
Register the IP address set with a detected camera: When a camera is detected, the unit will register the IP address of the detected camera.

Notes:
- When "Camera Auto Registration" is carried out, the other login users will be forcibly logged out.
- Recordings currently being carried out on this unit will stop in the process of "Camera Auto Registration".

• "Camera Auto Registration" is unavailable for cameras on a different subnet.
• Depending on the camera model, the unit cannot detect them for their security when 20 minutes have passed after the power of the camera is turned on. Refer to the operating instructions of the camera for further information.
• The image compression method of the registered camera will automatically be set to "JPEG" or "M-JPEG".
• When selecting "Register the IP address automatically given by this unit to a detected camera", the unit will automatically find an unused IP address and set it to the detected camera. However, depending on the network environment, the set IP address may be already used for the other network device such as when using the firewall function of Windows®. In this case, check the IP address setting and register the other IP address for the camera manually.
• When "Register the IP address set with a detected camera" is selected and the DHCP setting of the detected camera is "ON", the unit will automatically set the DHCP setting of the camera to "OFF" and give a new IP address to the camera.
• "Register the IP address automatically given by this unit to a detected camera" is available only when "OFF" is set for the DHCP settings of the unit.
• Before selecting "Register the IP address automatically given by this unit to a detected camera", set the subnet of the network port to "255.255.255.0".
• When the IP address is registered to the camera, the HTTP port of the camera will automatically set to "80", and the same subnet and the gateway of the unit will be set to the camera.
• When the same IP address is used for the other camera, the IP address and the MAC address will be displayed in red on the "Camera Search Result" window (☞ page 48). Make sure that the same IP address is used for two cameras or more.

Important:
When selecting "Register the IP address automatically given by this unit to a detected camera", the unit will give IP addresses to all of the detected cameras. Before selecting "Register the IP address automatically given by this unit to a detected camera", make sure that there is no camera that is to be used with the unique IP address.

■ **Program Setup**
The program setting window will be displayed when the [View] button is clicked after selecting a program from the pull-down.
Refer to page 40 for further information about the "Program Setup" window.

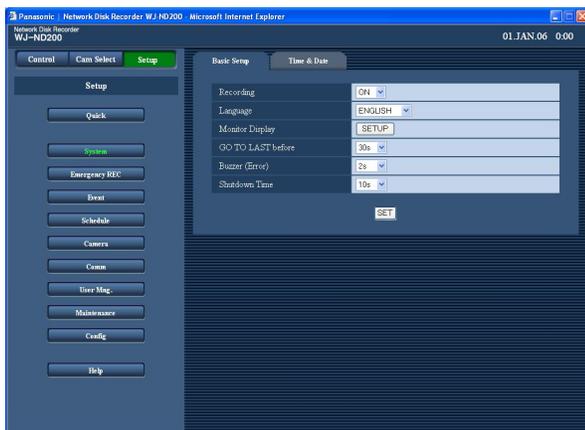# Perform the settings for the system [System]

Perform the settings for the system of this unit.

Perform the basic settings for the system [Basic Setup]

Perform the settings for the basic operations of this unit.

Screenshot 1

Click the [System] button in the "Setup" panel then click the "Basic Setup" tab. The "Basic Setup" page will be displayed.


Step 1

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Step 2

Click the [SET] button after completing the settings.

Setup items

■ Recording

Select "ON" or "OFF" to record or not record.
OFF: No recording will be performed.
ON: Recording will be performed.
Default: ON

■ Language

Select the display language for the web browser from the following.
JAPANESE/ENGLISH
Default: ENGLISH

■ Monitor Display

It is possible to allocate camera channels to each section of a 4-Screen when displaying images on a 4-Screen. It is necessary to perform the settings of the camera group for the sequential display on a 4-Screen (4A - 4D).

The following window will be displayed when the [SETUP] button is clicked. It is possible to allocate 4 camera channels to each section (4A - 4D). Images from the selected camera channel will be displayed in the respective section of a 4-Screen in the image display area.
Click the [SET] button after completing the settings, and close the window by clicking the [×] button at the top right of the window.
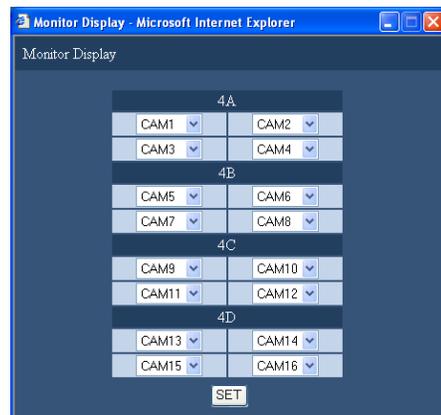
■ GO TO LAST before

Select a time to be skipped to when the [GO TO LAST] button is clicked from the following.
5 s/10 s/30 s/1 min/5 min

■ Buzzer (Error)

Perform the settings for sounding a buzzer at an error occurrence.

OFF: A buzzer will not sound at an error occurrence.

2 s/5 s/10 s/20 s/30 s/1 min: The buzzer that started sounding at an error occurrence will sound for the selected period.

EXT: The buzzer will start sounding when a trouble occurs and it will keep on sounding until the [ERR] button is clicked or the [BUZZER STOP] button on the front panel is pressed.

■ Shutdown Time

Determine when the safe shutdown starts after a power outage alert signal is supplied to this unit.
10 s/20 s/30 s/1 min/2 min/3 min/4 min/5 min

Perform the settings for the time and date [Time & Date]

Perform the settings for the time and date.

Screenshot 1

Click the [System] button on the "Setup" panel and then click the "Time & Date" tab. The "Time & Date" page will be displayed.

Step 1

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Step 2

Click the [SET] button after completing the settings.

31
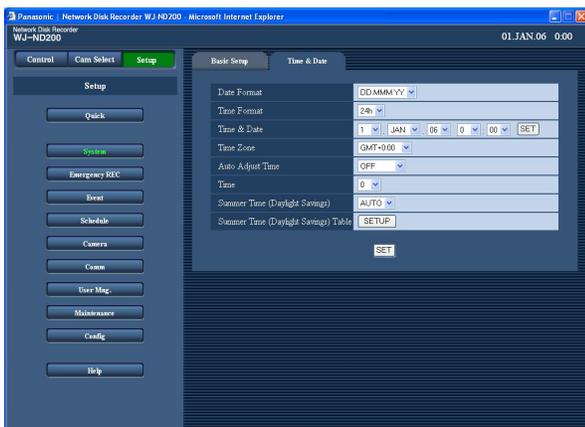
Setup items

■ Date Format

Select a date format to be displayed from the following.
Example: (Ex. 01.APR.06)
YY.MM.DD: 06.04.01
MMM.DD.YY: APR.01.06
DD.MMM.YY: 01.APR.06

■ Time Format

Select a time format to be displayed from the following.
(Example for 3 o'clock in the afternoon)
12h: 3:00:00PM
24h: 15:00:00

■ Time & Date

Adjust the current time and date.
Select numbers for year, month, day, hour and minute,
and click the [SET] button on the right.

Important:
  • Recording will not be performed for around 4 sec-
    onds just after applying the time and date settings.
  • Live images will turn to black screen and recording
    will not be performed for around 4 seconds just after
    applying the time and date settings even by shifting
    to/from summertime (daylight savings).

■ Time Zone

Perform the settings for the time zone of the unit.

■ Auto Adjust Time

Select a method of auto clock adjustment from the fol-
lowing.
OFF: Does not adjust time automatically.
SLAVE: Receives a signal from the MASTER unit and
    adjusts the clock.
MASTER: Supplies a from the ALARM/CONTROL con-
    nector on the rear panel signal to the other connect-
    ed devices and the other devices will adjust their
    clocks with reference to the clock of this unit.

■ Time

When "MASTER" is selected for "Auto Adjust Time", set
the clock for a signal to be supplied from the ALARM/
CONTROL connector (time adjustment I/O, pin. no. 20)
of the ALARM/CONTROL connector on the rear panel
of the unit. When "SLAVE" is selected, set the time
when the unit receives a signal from the MASTER unit
and adjust the clock.

Important:
  • Recording will not be performed for around 4 sec-
    onds when changing the present time (accurate
    within ±5 seconds) using the time adjustment input
    (pin no.20).
  • When "SLAVE" is selected, this function works dif-
    ferently depending on the recording status. For fur-
    ther information, refer to the installation guide
    (book).

■ Summer Time (Daylight Savings)

Perform the settings for summer time from the following.
During summertime, the time will be displayed with an
asterisk (*).
OUT: Does not function.
AUTO: Applies summer time automatically in accor-
    dance with the settings for switching to summer
    time.

■ Summer Time (Daylight Savings) Table

Set the start (IN)/end (OUT) date and time for summer time.

The following window will be displayed when the [SETUP] button is clicked. Click the [SET] button after completing the settings, and close the window by clicking the [×] button at the top right of the window.

Enter the start time and date and the end time and date of summer time. Enter the last 2 digits of the year.

Up to 10 times and dates for switching to summer time can be set.

Summer Time(Daylight Savings)Table - Microsoft Internet Explorer

Summer Time (Daylight Savings) Table

		DAYS	MONTH	Year	Hour	Minute
1	IN	26	MAR	06	2	00
	OUT	29	OCT	06	2	00
2	IN	25	MAR	07	2	00
	OUT	28	OCT	07	2	00
3	IN	30	MAR	08	2	00
	OUT	26	OCT	08	2	00
4	IN	29	MAR	09	2	00
	OUT	25	OCT	09	2	00
5	IN	28	MAR	10	2	00
	OUT	31	OCT	10	2	00
6	IN	27	MAR	11	2	00
	OUT	30	OCT	11	2	00
7	IN	25	MAR	12	2	00
	OUT	28	OCT	12	2	00
8	IN	31	MAR	13	2	00
	OUT	27	OCT	13	2	00
9	IN	30	MAR	14	2	00
	OUT	26	OCT	14	2	00
10	IN	29	MAR	15	2	00
	OUT	25	OCT	15	2	00

SET

Functions for the emergency recording [Emergency REC]

Perform the settings for the emergency recording.

Settings for emergency recording [Emergency REC]

Perform the settings for emergency recording such as the recording time, recording rate and audio recording. Refer to the provided installation guide (book) for further information about emergency recording.

Click the [Emergency REC] button to display the "Emergency REC" page.
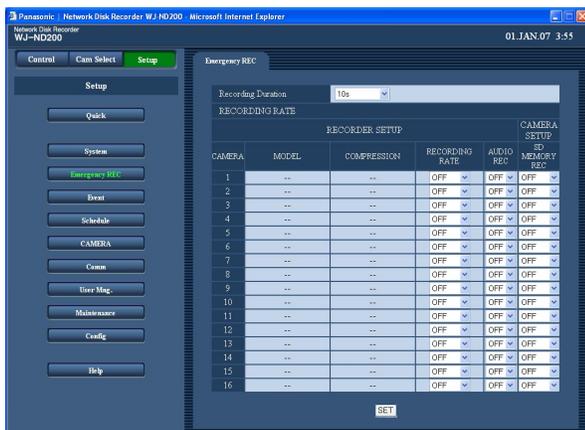
Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Click the [SET] button after completing the settings.

Important:

Recording will not be performed for around 4 seconds just after the emergency recording.

Setup items

■ Recording Duration

Perform the settings for emergency recording such as the recording duration or recording operations.
The following are available for the recording duration.
2 s/5 s/10 s/20 s/30 s/1 min/3 min/5 min/10 min/30 min
MANUAL: Recording will continue during the emergency recording input is being supplied.
CONTINUE: Recording will not stop until the [ALM] button is clicked.

Note:

When "MANUAL" is selected, recording will be performed for at least 8 seconds.

■ RECORDER SETUP
RECORDING RATE

Perform the settings for emergency recording for each camera channel such as the recording rate.
The following are available for "Recording Rate". When "OFF" is selected for a specified camera channel, images from a camera channel set to "OFF" will not be recorded.
OFF/1 ips/2 ips/3 ips/5 ips/10 ips/15 ips/ALL/I-Frame

Note:

The available value differs depending on the selected image compression method. The compression method can be set on the "MODEL/COMPRESSION" setting of the setup menu ("Camera" – "NW Camera Setup" – "MODEL/COMPRESSION").

AUDIO REC

Select ON or OFF to determine whether or not to record audio together with images for each channel when performing the emergency recording.
OFF: Audio will not be recorded.
ON: Audio will be recorded.
Default: OFF

Notes:
- Audio will be recorded together with images. It is impossible to record only audio.
- Only CH1 is available for audio recording for the WJ-NT304/WJ-NT314.
  CH2 - 4 are always unavailable for audio recording.
- It is impossible to record audio while performing the SD memory recording.
  When a recording rate except for OFF is selected for "SD MEMORY REC", audio recording for the respective camera channel will automatically be set to OFF.

Important:
- When selecting ON for audio recording, make sure that the audio capturing function of the respective camera is enabled.
  In this case, select "32kbps" for the audio bit rate setting of the camera.
- To record audio, select "Mic input" or "Interactive (Full-duplex)" for "Audio mode" on the setup menu of the camera.
  (Depending on the model or the version of the camera, "Interactive (Full-duplex)" is not available.)
- Audio will be recorded regardless of the display pattern (single screen or 4-screen).

■ CAMERA SETUP

Set the recording rate for the SD memory recording for each channel. Refer to page 40 for further information about the SD memory recording.
The following recording rates are available for "SD MEMORY REC". When "OFF" is selected, the SD memory recording will not be performed for the respective channel.
OFF/0.1 ips/0.5 ips/1 ips

Notes:
- The recording rate setting for "SD MEMORY REC" is available only for cameras with the SD memory recording function and their image compression method is set to "M-JPEG".
- The recording rate for "SD MEMORY REC" should be less than the recording rate set for the emergency recording.
  When the camera in use is WJ-NT304/WJ-NT314, recording will be performed at 0.2 ips even when "0.5 ips" or "1 ips" is selected for the recording rate for "SD MEMORY REC".
- When setting the recording rate for "SD MEMORY REC", make sure that "Use" is selected for the "SD memory card" setting of the camera.
  When "Use" is not selected or when no SD memory card is mounted on the camera, error messages may be displayed several times a day, and recording may be interrupted for around 20 seconds each time the error message is displayed.
  This may also occur when the firmware of the camera is older. In this case, upgrade the firmware of the camera.
  When the firmware version of the camera in use is not the version listed below, upgrade the firmware.
- It is impossible to record audio while performing the SD memory recording.
  When selecting OFF for audio recording, the recording rate for "SD MEMORY REC" of the respective camera channel will automatically be set to OFF.

Important:
When the emergency recording is triggered while communication with the camera is not established, the SD memory recording will not be performed.

35

# Functions for events [Event]

Perform the settings for event actions of each event type (site alarm and terminal alarm). Refer to the provided operating instructions for further information about each event type.

Basic settings for event actions [Basic Setup]

Perform the settings relating to event actions such as the alarm output duration and the buzzer sound duration of each camera channel at an event occurrence (site alarm and terminal alarm).

Screenshot 1

Click the [Event] button in the "Setup" panel and then click "Basic Setup" tab. The "Basic Setup" page will be displayed.
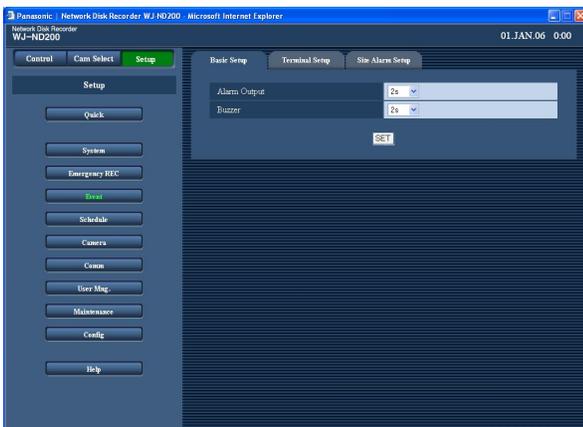
Step 1

Perform the settings for each item.

■ Alarm Output

Select the alarm output duration.
The following are available for alarm output duration.
OFF: No alarm output is supplied.
2 s/5 s/10 s/20 s/30 s/1 min
EXT: The alarm output will continue until the [ALM] button is clicked.
REC: The alarm output will be supplied during the event recording is being performed.

■ Buzzer

Select "OFF", "EXT", "REC" or a buzzer sounding duration at an event occurrence. The following are available for buzzer sound duration.
OFF: The buzzer will not sound.
2 s/5 s/10 s/20 s/30 s/1 min
EXT: The buzzer will continue until the [ALM] button is clicked or the [BUZZER STOP] button on the front panel is pressed.
REC: The buzzer will sound only during the event recording is being performed.

Step 2

Click the [SET] button after completing the settings.

Settings relating to the terminal alarm [Terminal Setup]

Set event actions at a terminal alarm occurrence.

Screenshot 1

Click the [Event] button in the "Setup" panel then click the "Terminal Setup" tab. The "Terminal Setup" page will be displayed.
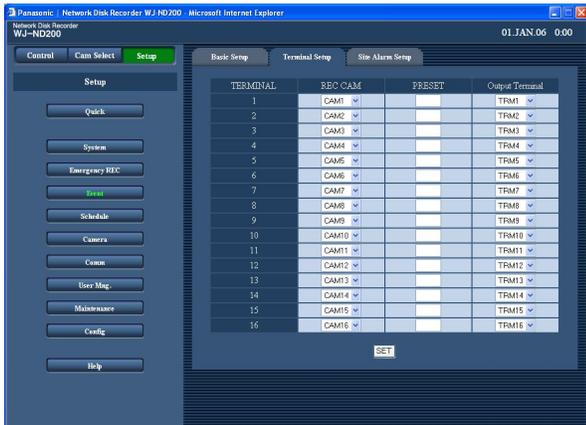
Note:

Action to be taken at a command alarm occurrence will be affected by this setting.

Step 1

Perform the settings for the following items for each terminal alarm channel.

[REC CAM]

Performs the settings for a camera channel used for recording.

[PRESET]

Enter the preset position (1 - 256) to which the camera will move at a terminal alarm occurrence for each terminal.

When no position is selected (blank), the camera does not move to any preset position.

[Output Terminal]

Select the output terminal (--, TRM1 - TRM16) that outputs alarm signals at a terminal alarm occurrence.

When "--" is selected, alarm signals will not be output.

Step 2

Click the [SET] button after completing the settings.

Perform the settings for site alarm [Site Alarm Setup]

Perform the settings relating to the site alarm such as the setting to validate or invalidate the alarm from cameras, the port number used for receiving the alarm, and the event actions for each camera channel at an alarm occurrence.

Screenshot 1

Click the [Event] button in the "Setup" panel and then click the "Site Alarm Setup" tab. The "Site Alarm Setup" page will be displayed.
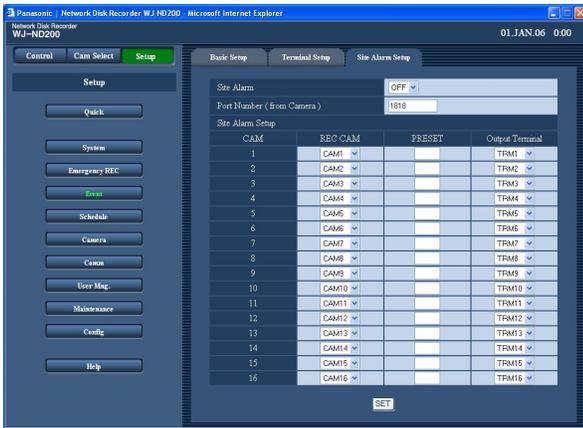
Step 1

Perform the settings for each item.

■ **Site Alarm**

Select "ON" or "OFF" whether to validate or invalidate the site alarm.
ON: Validates the site alarm.
OFF: Invalidates the site alarm.

■ **Port Number (from Camera)**

Designate the port number to be used for receiving the site alarm.

■ **Site Alarm Setup**

Perform the settings for the following items for each camera channel.

[REC CAM]

Performs the settings for a camera channel used for recording.

[PRESET]

Enter the preset position (1 - 256) to which the camera will move at a terminal alarm occurrence for each camera.
When no position is selected (blank), the camera does not move to any preset position.

[Output Terminal]

Select the output terminal (--, TRM1 - TRM16) that outputs alarm signals at an alarm occurrence. When "--" is selected, alarm signals will not be output.

Step 2

Click the [SET] button after completing the settings.

Settings for the recording/event schedule [Schedule]

Perform the settings for the recording schedules by designating a day of the week and time.
It is possible to divide a day into 6 time zones and create a schedule by assigning programs to each time zone. Up to 4 programs can be created. Perform the settings for programs such as recording rate, recording duration, audio recording etc.
It is possible to create special days apart from the normal schedule, and a program of another day of the week can be switched to a special day's program automatically.

Flowchart on how to create a schedule

Follow the procedures below to create schedules.

Creating a program	(page 39)

↓

Create a timetable.	(page 44)

↓

Assign a program to a timetable.	(page 44)
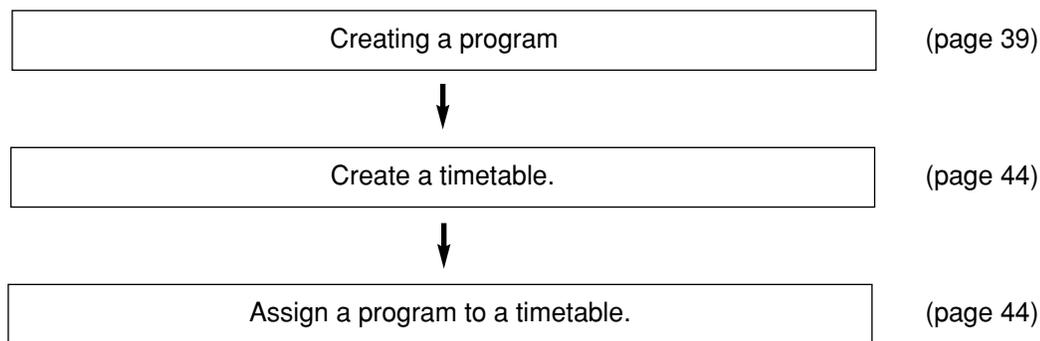
Creating a program [Program]

Up to 4 programs can be created by performing the settings for each camera such as resolution, image quality, bandwidth control, etc.

Screenshot 1

Click the [Schedule] button in the "Setup" panel and then click the "Program" tab. The "Program" page will be displayed.

Step 1

Click the respective [SETUP] button for the desired program to create a program.
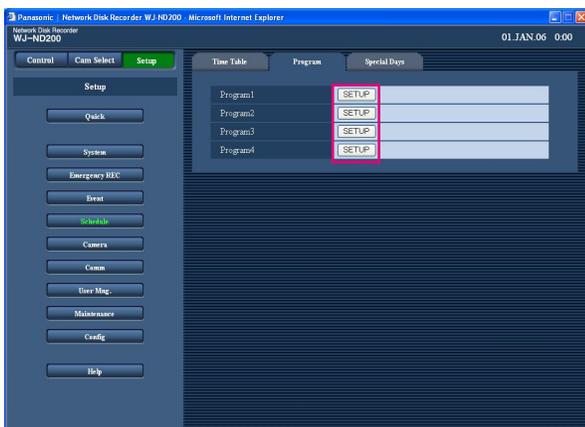
The "Program Setup" window will be displayed.

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Click the [SET] button after completing the settings, and close the window by clicking the [×] button at the top right of the window.
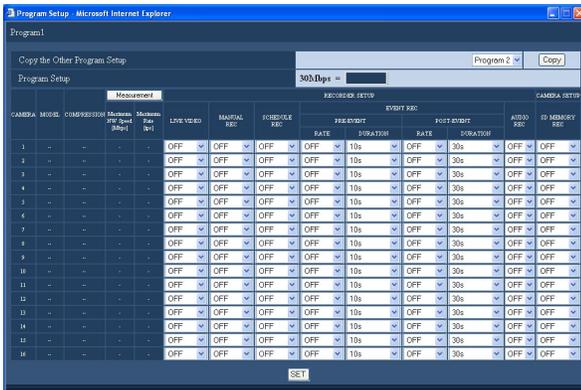
Setup items

■ Copy the Other Program Setup

When it is necessary to copy the settings of the other program, select the desired program (source of the settings) and click the [Copy] button.

■ RECORDER SETUP

Perform the settings such transmission rate of "LIVE VIDEO" for each camera channel, and recording rate of each recording type, etc.

[LIVE VIDEO]

Select the transmission rate of live images.
OFF/1 ips/2 ips/3 ips/5 ips/10 ips/15 ips/ALL/I-Frame
When "OFF" is selected, live image transmission will not be performed.

[MANUAL REC]

Select the recording rate for manual recording.
OFF/0.1 ips/0.2 ips/0.3 ips/0.5 ips/1 ips/2 ips/3 ips/ 5 ips/10 ips/15 ips/ALL/I-Frame
OFF: Manual recording will not be performed.

[SCHEDULE REC]

Select the recording rate for schedule recording from the following.
OFF/0.1 ips/0.2 ips/0.3 ips/0.5 ips/1 ips/2 ips/3 ips/ 5 ips/10 ips/15 ips/ALL/I-Frame
OFF: Schedule recording will not be performed.

[EVENT REC]

Performs the settings for the recording rate and recording duration for pre-event recording and post-event recording.
The following are available for "Recording Rate".
OFF/1 ips/2 ips/3 ips/5 ips/10 ips/15 ips/ALL/I-Frame
OFF: No recording will be performed.

Important:

Depending on the timing of an event occurrence, the recording duration of the recorded data may not be exactly same as set recording duration for the post-event recording.

Note:

"ALL" is unavailable for the recording rate of pre-event recording when the compression method of the camera is M-JPEG.

The following recording duration can be set.
 • Pre-event recording (PRE-EVENT)
  2 s/5 s/10 s/20 s/30 s
 • Post-event recording (POST-EVENT)
  2 s/5 s/10 s/20 s/30 s/1 min/2 min/3 min/5 min/ 10 min
  MANUAL: Recording will be performed while alarm signals (site alarm, terminal alarm, command alarm) are being supplied.
  CONTINUE: Recording will not stop until the [ALM] button is clicked.

40

[AUDIO REC]
Select ON or OFF to determine whether or not to record audio together with images for each channel.
OFF: Audio will not be recorded.
ON: Audio will be recorded.
Default: OFF

(Depending on the model or the version of the camera, "Interactive (Full-duplex)" is not available.)
• Audio will be recorded regardless of the display pattern (single screen or 4-screen).

■ **CAMERA SETUP**
Set the recording rate for the SD memory recording for each channel.
The following recording rates are available for "SD MEMORY REC".
OFF/0.1 ips/0.5 ips/1 ips
When "OFF" is selected, the SD memory recording will not be performed for the respective channel.

Recording rate for pre-event recording	JPEG resolution/quality Equivalent to VGA/24 KB	JPEG resolution/quality Equivalent to VGA/48 KB	JPEG resolution/quality Equivalent to VGA/128 KB
3 ips	30 s	20 s	10 s
5 ips	20 s	10 s	5 s
10 ips	10 s	5 s	2 s

Condition: Operation using 2 PCs with web browser, 9 cameras are connected

About the SD memory recording

The SD memory recording is the function of some Panasonic's cameras that saves images on the SD memory card on the camera when communication with the camera failed in the period set for the schedule recording of this unit.

For example, when "0.1 ips" is selected, the camera will start the SD memory recording when no request for image obtainment from the unit is made for 10 seconds or more (equivalent to 0.1 ips*) in the time range of the set schedule.
* The wait time to start the SD memory recording of the camera differs depending on the set recording rate.

This unit can obtain images recorded on the SD memory card (SD memory data) and record them onto the hard disk drive.
Obtainment of the SD memory data will be carried out in the following intervals.
It is possible to check in the status display area if obtainment of the SD memory data is being carried out or not.
  • At 15 minutes after every hour (0:15, 1:15, … 23:15)
  • When there is 30 minutes or more between the last schedule recording and the next schedule recording
(In this case, all users will forcibly be logged out.)
When obtaining the SD memory data after the schedule recording, all users will be forcibly logged out.
It is also possible to obtain the SD memory data manually by clicking the SD memory data obtain button.

Refer to the operating instructions (PDF) for how to obtain images manually.

Important:
• The emergency recording will be performed at the recording rate set for "SD MEMORY REC" on the "Emergency REC" page (☞ page 34) when communication with the camera failed during the emergency recording.
• The SD memory recording will not be performed if communication with the camera is not established even when it reached the start time of the schedule or when the emergency recording is triggered.
• Do not set the recording rate of the SD memory recording for the same camera with multiple recorders.
• Synchronize the clock of the recorder and the cameras using the NTP function, etc. When they are not synchronized and have different time clocks, the SD memory recording may not work.
• The recording time of SD memory data will be displayed based on the clock of the camera.

Notes:
• All images recorded on the SD memory card may not always be obtained at a time depending on the time length between the schedules or the total size of the images. Images failed to obtain can be obtained automatically next time.
• SD memory data cannot be obtained when the following is being performed:
    • Playback
    • HTTP download
    • Emergency recording
    • External recording

• SD memory data obtainment will be interrupted when the following operation is performed:
  • Login
  • Emergency recording
  • External recording
  • Shifting to/from summertime (daylight savings)

[Measurement] button
It is possible to check if the set recording rate and transmission rate are available for the network in use by clicking the [Measurement] button. It will take around 90 seconds to check. In the process of the measurement, recording will stop. When the set rate is displayed red, recording/transmission may be failed with the set rate. Check if the result value (total value of the maximum network speed of each camera) is below the maximum network speed of the unit (30 Mbps as indication).

When the result value is beyond the maximum network speed of the unit
(Example: 30 Mbps < 50 Mbps (result value))
When the result value is beyond the maximum network speed of the unit (30 Mbps as indication), refer each rate for "LIVE VIDEO", "MANUAL REC", "SCHEDULE REC" and "EVENT REC". Then, lower the higher rate among them or lower image quality to diminish the network traffic from the camera. Click the [Measurement] button to check if the result value is below the maximum network speed. Repeat this procedure until the result value becomes less than 30 Mbps (as indication).

Important:
• When the result value is beyond the maximum network speed of the unit, the following may occur due to the heavy network traffic:
  • Some images to be recorded may not be done.
  • Some live images to be displayed may not be done.
  • Some alarms to be issued may not be done.
  • Operational response may become slow.
• Even when the result value is below the network speed (30 Mbps as indication), the above problems may occur depending on number of the connected cameras and PCs. The following table shows the reference values.
• Network traffic changes every moment. In any circumstances, the result value should be less than the maximum network speed of the unit (30 Mbps).

JPEG resolution/image quality	Number of the connected cameras	Transmission rate (LIVE VIDEO)	Recording rate (*1)	Number of the connected PCs
Equivalent to VGA/40 KB	9	10 ips*2	10 ips	2
Equivalent to VGA/40 KB	16	10 ips*2	5 ips	2

*1: Each recording rate for "MANUAL REC", "SCHEDULE REC" and "EVENT REC"
*2: When images from 5 camera channels or more are simultaneously displayed on the currently accessing PCs, transmission rate of "LIVE VIDEO" will be controlled in order to put a high priority on recording.

Notes:
• Click the [Measurement] button after setting the recording rate/transmission rate by clicking the [SET] button.
• Do not change the settings in the process of the measurement.
• In the process of the measurement, recording, playback and live image display will stop. Other users currently accessing the unit will forcibly be logged out.
• They need to log in the unit after the measurement. The result value is the reference value.
• Depending on the network traffic, different result value may be displayed even when the [Measurement] button is clicked without changing the settings. Depending on the network traffic or other causes, the following may occur.
  • Live images are not transmitted as configured
  • Images are not recorded as configured
  • Response of the web browser becomes slow
  • The web browser is disconnected
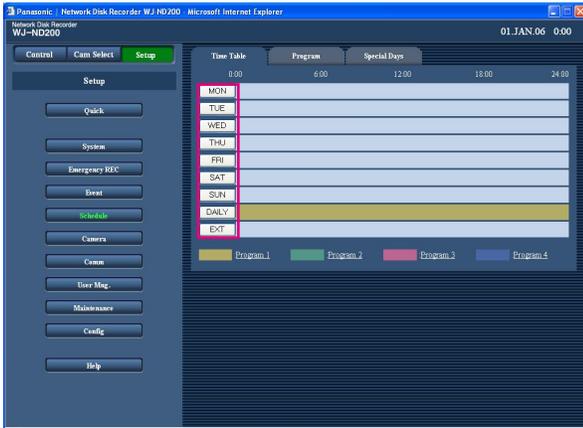 • Recording is not carried out
We make no guarantee for any damages incurred by recording malfunction or error occurrence regardless of what the cause may be.

Set the time zone and assign programs [Time Table]

Create timetables for each day of the week, and assign a program to each timetable. Up to 6 recording programs can be created for each day of the week.

Screenshot 1

Click the [Schedule] button in the "Setup" panel and then click the "Time Table" tab. The "Time Table" page will be displayed.
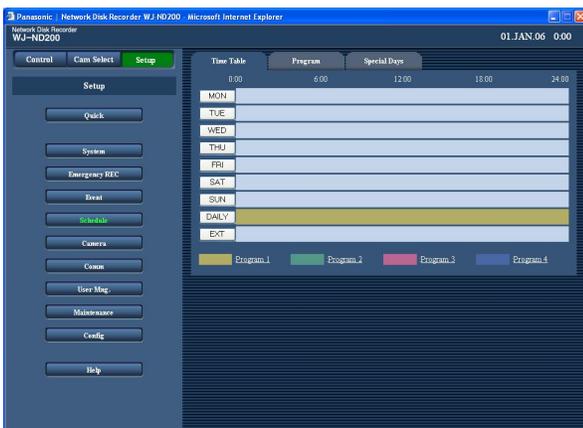

Step 1

Click the button of the desired day of the week.

Notes:

• During a signal is being supplied from the ALARM/CONTROL connector on the rear panel (the external recording mode changeover terminal (pin no. 24)) of the unit, the unit will work with the timetable "EXT".
• It is possible to display the "Program" window (☞ page 39) by clicking the program title displayed at the bottom of the table.

Screenshot 2

The timetable of the selected day of the week will be displayed.

Step 2

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Step 3

Click the [SET] button after completing the settings, and close the window by clicking the [×] button at the top right of the window.

Screenshot 3

The "Time Table" page will be displayed again.

Step 4

The set timetables and programs will be applied.
Programs will be displayed with different colors.
Program 1: Yellow
Program 2: Green
Program 3: Pale purple
Program 4: Dark blue

44

Setup items

■ Copy the other Time Table

When it is necessary to copy the timetable of another day of the week, select the desired day of the week and click the [Copy] button.

■ Program Setup

The program can be edited on the program setting window displayed by clicking the [View] button after selecting a program from the pull-down.

■ PERIOD

Perform the following settings for each time zone.

[START]
Set the start time for the selected time zone.

[END]
Set the end time for the selected time zone.

[Program]
Select a program to be activated for the selected time zone.

[FTP SEND BY PERIODIC TIMER]
Perform the "FTP Send by Periodic Timer" settings of the setup menu ("Comm" – "FTP Setup") first (☞ page 61), and select "ON" or "OFF" to determine whether or not to send images to the FTP server periodically.

[FTP ALARM SENDING]
Select "ON" or "OFF" to determine whether or not to send images to the FTP server at an event occurrence. (☞ page 62)

[ALARM MESSAGE]
Select "ON" or "OFF" to determine whether or not to display the pop-up window that notify of an alarm occurrence with a message when an alarm occurs.

[Panasonic Alarm Protocol]
Select "ON" or "OFF" to determine whether or not to notify of an alarm occurrence to a PC according to the "Panasonic Alarm protocol" of the setup menu ("Comm" – "Panasonic Alarm protocol") (☞ page 64).
To receive a notification and display the contents of the notification, the optional software is necessary.

[ALARM MAIL]
Select "ON" or "OFF" to determine whether or not to send an alarm mail at an event occurrence.
Refer to page 63 for descriptions of how to use the mail function such as the settings of the mail server address and the mail address of the recipient. Refer to the operating instructions (PDF) for further information about the contents of the alarm mail.

Notes:
- The start time and end time can be set in 1 minute intervals. (The end time should be at least 15 minutes later than the start time.)
- Time from "23:46" to "23:59" are unavailable for the start time.
- To copy a timetable that is set for a different day of the week, select "Copy the Other Time Table" and select a day of the week in step 2.
- Repeat steps 1-4 to set programs of another day of the week.


Perform the settings of timetable for special days [Special Days]

Assign timetables to special days aside from other days of the week. Timetables for special days can be set for up to 30 days.
Perform the settings to specify dates as special days and apply the timetable of the day of the week to the specified special days.

Click the [Schedule] button in the "Setup" panel and then click the "Special Days" tab. The "Special Days" page will be displayed.
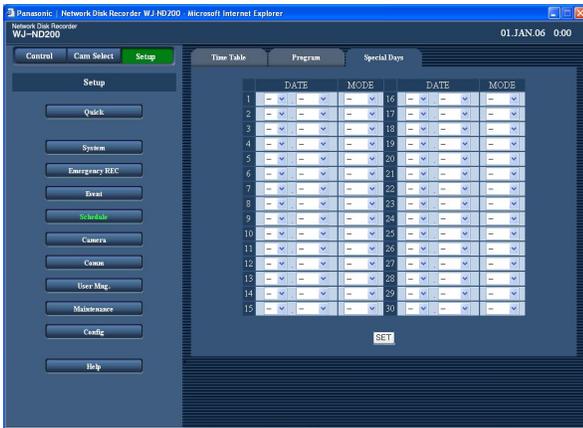
Click the [∨] button and select date to be set as special day and the day of the week of the timetable to be assigned to the special day.

Click the [SET] button after completing the settings.

Notes:

• When two or more created timetable (timetable for each day of the week, daily and special day) are set in the same time range, the recording priority will be as follows: External recording mode (EXT) → Special days → Day of the week (MON-SUN) → Daily (DAILY).

• The day of the week for which "PERIOD" is not specified on the timetable will not be displayed for the setting of day of the week for special days.

Settings relating to cameras [Camera]

Perform the setting relating to the network such as the IP address of the cameras, port numbers, etc., the settings of the group and the settings of the sequential display.

Perform the settings for network connection [NW Camera Setup]

Perform the network camera settings such as the camera IP address and the port number.
The settings are configured differently between when automatically detecting and registering the IP addresses of the cameras and when registering the IP addresses of the cameras manually.

Automatically detect and register the IP addresses of the cameras

Screenshot 1

Click the [Camera] button in the "Setup" panel and then click the "NW Camera Setup" tab. The "NW Camera Setup" page will be displayed.
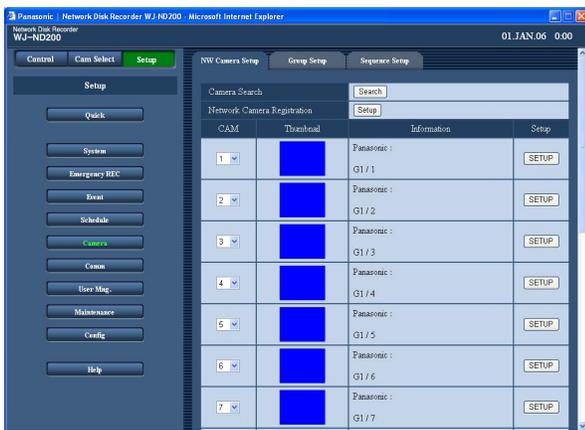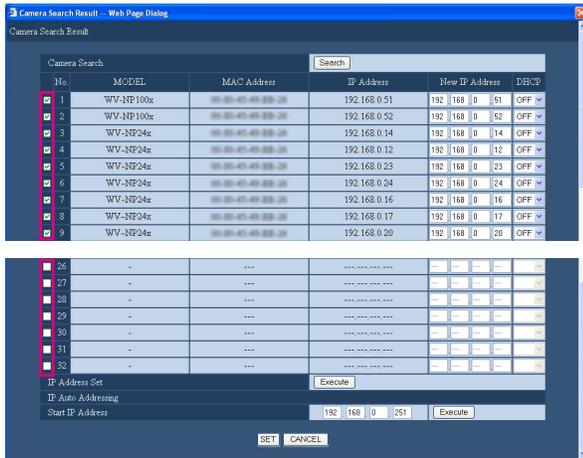

Step 1

Click the [Search] button of "Camera Search" to detect the cameras.

Notes:

- When "Camera Search" is carried out, the other login users will be forcibly logged out.
- Recordings currently being carried out on this unit will stop in the process of "Camera Search".
- "Camera Search" is unavailable for cameras on a different subnet.
- Depending on the camera model, the unit cannot detect them for their security when 20 minutes have passed after the power of the camera is turned on. Refer to the operating instructions of the camera for further information.

The detected cameras will be displayed in the "Camera Search Result" window.

Setup items

■ Camera Search
Click the [Search] button to search cameras again.

[MODEL]
The model number of the detected camera will be displayed.

[MAC Address]
The MAC address of the detected camera will be displayed.

[IP Address]
The IP address of the detected camera will be displayed.

[New IP Address]
Enter an IP address to be given to the detected camera.

[DHCP]
The DHCP setting of the detected camera will be displayed. (The displayed DHCP setting can be edited.)

■ IP Address Set
Check the checkbox of the detected camera to which the entered IP address is given, and then click the [Execute] button.

Step 2

Perform the network settings of the detected cameras. Check the checkbox of the detected camera to be registered and perform the settings. Refer to the following for further information about the settings for each item.

Note:
When the same IP address is used for two cameras or more, the IP address and the MAC address will be displayed in red on the "Camera Search Result" window. In this case, change the IP address set for two cameras or more and make sure that no same IP address is set for two cameras or more.

Step 3

Click the [SET] button.

■ Start IP Address
When automatically giving IP addresses to the detected cameras, enter the IP address to be given to the camera as the first address. Check the checkboxes of the detected cameras to which the IP addresses are automatically given, and then click the [Execute] button. When the [Execute] button is clicked, serial IP addresses starting from the IP address entered for "Starting IP Address" will be given to the detected cameras whose checkbox is checked.

Notes:
• Before giving IP addresses automatically, set the subnet of the network port to "255.255.255.0".
• The image compression method of the registered camera will automatically be set to "JPEG" or "M-JPEG".
• When the IP address is registered to the camera, the HTTP port of the camera will automatically set to "80", and the same subnet and the gateway of the unit will be set to the camera.
• When the [Execute] button is clicked and the IP addresses of the cameras are changed, the checkboxes of the detected cameras (1-16) on the "Camera Search Result" window will be checked.

• When the [Execute] button of "Start IP Address" is clicked, the unit will automatically find an unused IP address and set it to the detected camera. However, depending on the network environment, the set IP address may be already used for the other network device such as when using the firewall function of Windows®.
In this case, check the IP address setting and register the other IP address for the camera manually. When a message saying there is no available IP address is displayed, check and arrange the IP address settings to manually register an unused IP address to the camera.
• "Start IP Address" is available only when "OFF" is set for the DHCP settings of the unit.

Register the IP addresses of the cameras manually

Screenshot 1

Click the [Camera] button in the "Setup" panel and then click the "NW Camera Setup" tab. The "NW Camera Setup" page will be displayed.
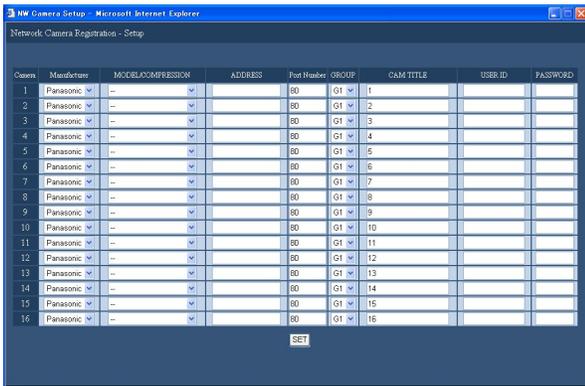
Step 1

Click the [Setup] button of "Network Camera Registration".
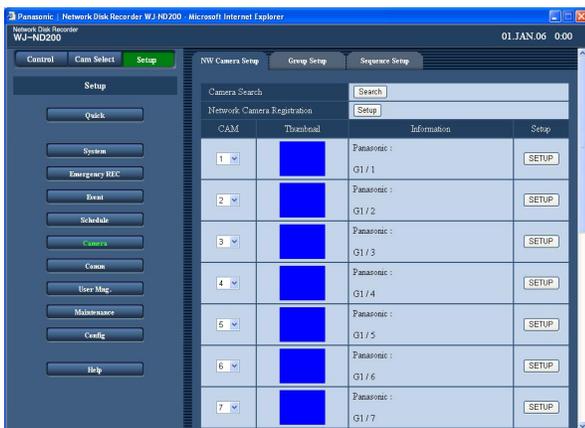
The "Network Camera Registration" window will be displayed.

Setup items

[Manufacturer]
Select the manufacturer of the camera.

[MODEL/COMPRESSION]
Select a camera number and image compression method.

***

Note:

When the [SET] button is clicked after changing only the compression method, the set recording rate/transmission rate will be automatically changed as follows.
When changed from "MPEG-4" to "JPEG" or "M-JPEG", they will be "1 ips".
When changed from "JPEG" or "M-JPEG" to "MPEG-4", they will be "I-Frame".

***

[ADDRESS]
Enter the IP address to be given to the camera. Enter up to 255 alphanumeric characters.

[Port Number]
Set the http port number used by the camera. A number from 1 - 65535 is available.

[GROUP]
Select the group to which the camera is assigned (G1 - G4).

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Click the [SET] button after completing the settings, and close the window by clicking the [×] button at the top right of the window.

[CAM TITLE]
Set the camera title displayed on the "Camera Select" panel, etc. Enter up to 16 alphanumeric characters except the following: ! $ % ' < = > @ [\ ] ^ _ ` { | } ~

[USER ID]
Set the user ID for accessing the cameras and logging in. Enter up to 32 alphanumeric characters.

[PASSWORD]
Set the password for accessing the cameras and logging in. Enter up to 32 alphanumeric characters.

Perform the settings of the registered cameras independently

Screenshot 1
Click the [Camera] button in the "Setup" panel and then click the "NW Camera Setup" tab. The "NW Camera Setup" page will be displayed.
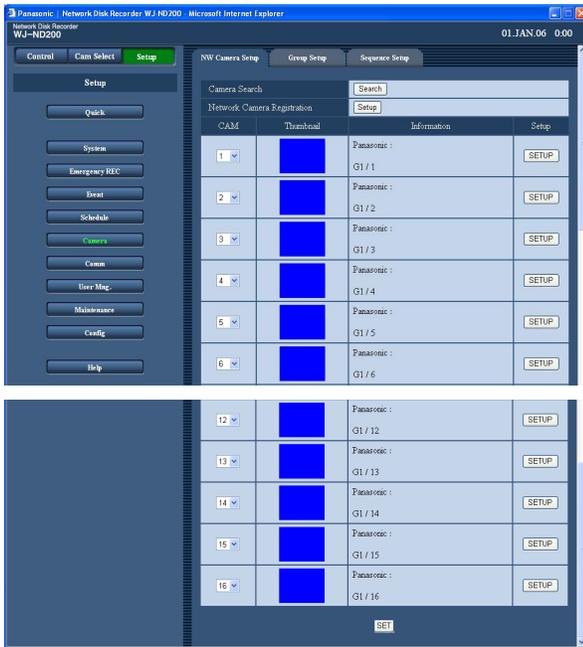
Step 1
The following settings of the registered cameras will be displayed.

■ CAM
It is possible to rearrange the order of the cameras. When it is necessary to rearrange the displayed order of the cameras after registering the detected cameras using the [Search] button of "Camera Search", select a number of the camera to rearrange the order.
Click the [SET] button after completing the camera order arrangement.

Important:
When the order of the cameras is rearranged, the order of the cameras (CAM) for the following setup items will automatically be rearranged.
- "Emergency REC" – "Emergency REC"
- "Schedule" – "Program Setup"
- "Maintenance" – "Network Information"

■ Thumbnail
Thumbnail image from each camera will be displayed.

Note:
When failed to connect to the camera, the reason why the connection failed will be displayed such as the following.

CONNECT ERROR: Communication with the camera cannot be established
ATTEST ERROR: User authentication of the camera failed
DNS ERROR: DNS server cannot resolve the camera address
CAMERA ERROR: Illegal response from the camera
PROXY (CONNECT) ERROR: Cannot connect to the proxy server
PROXY (DNS) ERROR: Cannot resolve the proxy server address
PROXY (CAMERA) ERROR: Illegal response from the proxy server

■ Information
Manufacturer, model/ compression method, address, group title and camera title will be displayed.

Step 2
Click the [SETUP] button of the camera whose settings are to be edited.

Note:
When a registered camera is disconnected, the message "CONNECT ERROR" will be displayed in the thumbnail image. When the disconnected camera is not supposed to be connected again, select "--" for "MODEL/COMPRESSION" of the setup menu ("Camera" – "NW Camera Setup" – "MODEL/ COMPRESSION") for the disconnected camera.

The "Network Camera Registration" window of the selected camera will be displayed.

The same setup items displayed on the "Network Camera Registration (list)" window will be displayed. Edit the settings for each item. Refer to page 50 for further information about each setup item.

Click the [SET] button after completing the settings.

Settings of the title of the camera group [Group Setup]

Set the title of the camera group.

Click the [Camera] button in the "Setup" panel and then click the "Group Setup" tab. The "Group Setup" page will be displayed.

Enter the title of the camera group. Enter up to 16 alphanumeric characters except the following: ! $ % ' < = > @ [\ ] ^ _ ` { | } ~
Available characters are the same as for the camera title.

Click the [SET] button after completing the settings.

52

Settings of the sequential display of images from cameras [Sequence Setup]

Perform the settings for the sequential display of live images.

Click the [Camera] button in the "Setup" panel and then click the "Sequence Setup" tab. The "Sequence Setup" page will be displayed.
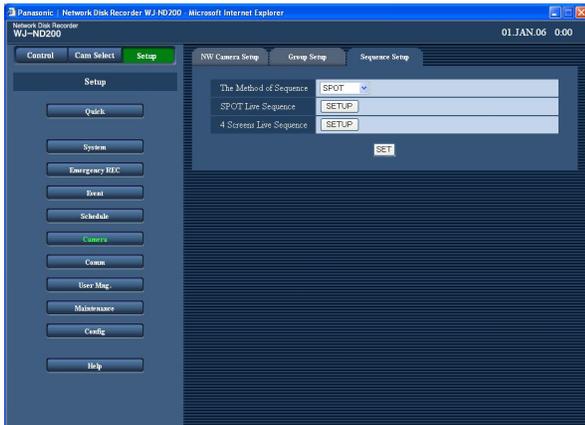

Setup items

[The Method of Sequence]
Select "SPOT" (single screen) or "4 Screens" for "The Method of Sequence".
Default: SPOT

[SPOT Live Sequence]/[4 Screens Sequence]
When the [SETUP] button for the selected method is clicked the following window will be displayed. Perform the settings on this window. Click the [SET] button after completing the settings, and close the window by clicking the [×] button at the top right of the window.

Edit the settings for each item.
Refer to the following for further information about the settings for each item.

Click the [SET] button after completing the settings.
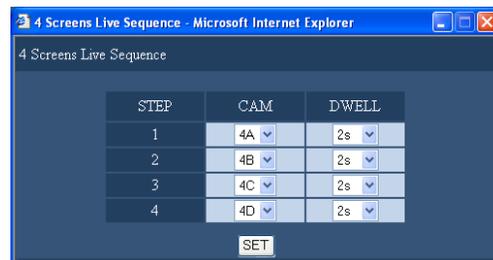
Note:
When the image compression method of the camera selected for a camera channel is "MPEG-4", the respective sequence step will be skipped.
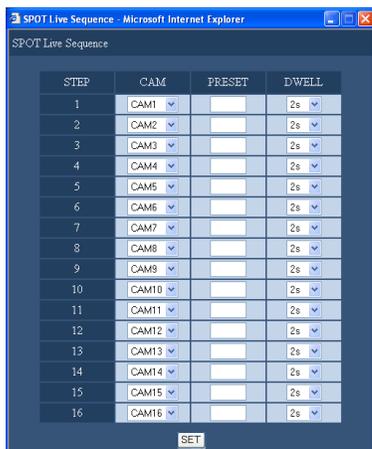
[CAM]
Select a camera whose images are to be displayed at each step from the following.
- -: Skips the selected step.
CAM1 - 16 (when "SPOT" is selected): Switches images from the selected camera channel on a single screen (SPOT), starting from "STEP1".
4A - 4D (when "4 Screens" is selected): Switches images of the preset camera groups (4A - 4D) of 4 channels in sequence on a 4-Screen, starting from "STEP1".

Camera groups can be set on the "Monitor Display" page ("System" – "Basic Setup" – "Monitor Display" (☞ page 30).

[PRESET]
Enter the preset position to where the camera is to be moved at each step. (Only for SPOT Live Sequence) Enter 1 – 256 for "PRESET".
When no number is entered (blank), the camera will not move at the respective step.

[DWELL]
Select a dwell time to go to the next sequential step from the following.
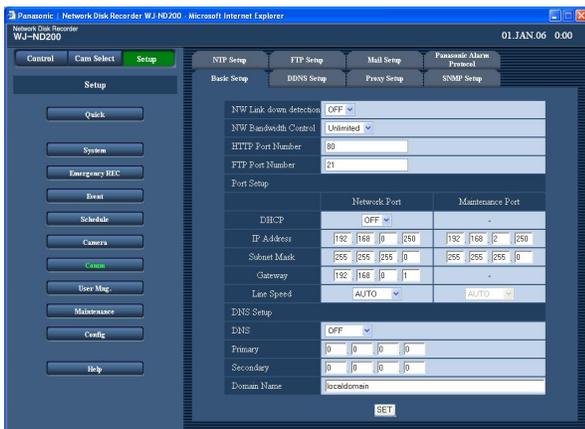2 s/3 s/5 s/10 s/20 s

Settings relating to network [Comm]

Perform the settings for a network connection such as settings of the IP address and gateway address.

Basic settings for a network [Basic Setup]

Basic network settings can be configured with this menu.

Click the [Comm] button in the "Setup" panel and then click the "Basic Setup" tab. The "Basic Setup" page will be displayed.

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Click the [SET] button after completing the settings.

Setup items

■ NW Link down detection

Select "ON" or "OFF" to enable or disable the network line disconnection detection for the network port on the rear of the unit.
ON: Detects if the disconnection of the network line connected to the network port occurs.
OFF: Does not detect the network line disconnection.

■ NW Bandwidth Control

Select a rate for transmission from the following.
Unlimited/32 kbps/64 kbps/128 kbps/256 kbps/ 512 kbps/1 024 kbps/2 Mbps/5 Mbps/10 Mbps

Important:
The bandwidth will not be controlled when live images are transmitted in MPEG-4 format.

■ HTTP Port Number

Specify the HTTP port number to be used to send images from the unit. A number from 1 - 65535 is available.It is unnecessary to change it for normal use.

Notes:
- Depending on the network settings of the LAN or Internet service provider, network communication may not be established if the http port number has been changed. In this case, refer to the administrator of the network.
- The following port numbers and the port numbers used for the FTP port and for the site alarm setting are unavailable for the HTTP port number.
  20, 21, 23, 25, 42, 53, 67, 68, 69, 79, 105, 110, 123, 161, 162, 546, 547, 995, 10001, 10002, 10003, 10004, 10005, 10006, 10007

■ FTP Port Number

Specify the FTP port number to be used.

Note:

The following port numbers and the port numbers used for the HTTP port and for the site alarm setting are unavailable for the FTP port number.
20, 23, 25, 42, 53, 67, 68, 69, 79, 80, 105, 110, 123, 161, 162, 546, 547, 995, 10001, 10002, 10003, 10004, 10005, 10006, 10007

■ Port Setup

Perform the settings for the following items for each port.

[DHCP]

Select "ON" or "OFF" to determine whether or not to use the DHCP server. Select "ON" to obtain an IP address, a subnet mask and a gateway from the DHCP server. Set to "OFF" when entering the addresses above manually.
ON: Uses the DHCP server.
OFF: Does not use the DHCP server.
Default: OFF

Important:

• A different subnet should be set for each port.
• When "ON" is selected for "DHCP" and the recording rate setting for "SD MEMORY REC" is configured, an error may occur in the process of the start-up of the unit when a request to write onto the SD memory card is made.
This will happen when response from the DHCP server takes time. However, this error will be corrected once an address is provided to the unit.

[IP Address]

When "OFF" is selected for "DHCP", enter an IP address.
For this unit, enter 4 units from the decimal numbers (0-255) according to the network configuration.

[Subnet Mask]

Enter a subnet mask according to the network configuration when "OFF" is selected for "DHCP".

[Gateway]

Enter the IP address of the gateway according to the network environment when "OFF" is selected for "DHCP".

[Line Speed]

The following are available for "Line Speed".
AUTO: Line speed will be applied automatically.
10-HALF: 10 Mbps semi duplex
10-FULL: 10 Mbps full duplex
100-HALF: 100 Mbps semi duplex
100-FULL: 100 Mbps full duplex

Important:

The line speed settings should be the same between the unit and the hub.
(Recommended line speed: 100Mbps-FULL)
For example, when 100Mbps-FULL and 100Mbps-HALF are set for the recorder and the hub respectively, display/recording/playback of images may not be performed correctly.

Note:

When the setup menu is closed after changing the line speed, the unit will automatically restart.

Important:

A different subnet should be set for each port.

■ DNS Setup

Select "MANUAL" or "AUTO" to enable IP address searching by the host name using the DNS. Select "OFF" when not using the DNS.
Selecting "AUTO" is available only when "ON" is selected for "DHCP" (using the DHCP server).
Selecting "MANUAL" is available regardless of the setting for "DHCP" (with or without using the DHCP server).
When "MANUAL" is selected for the DNS, enter the DNS server addresses in "Primary" and "Secondary". Enter 4 units from the decimal numbers (0-254).

[Domain Name]

Enter the domain name of this unit. Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

Note:

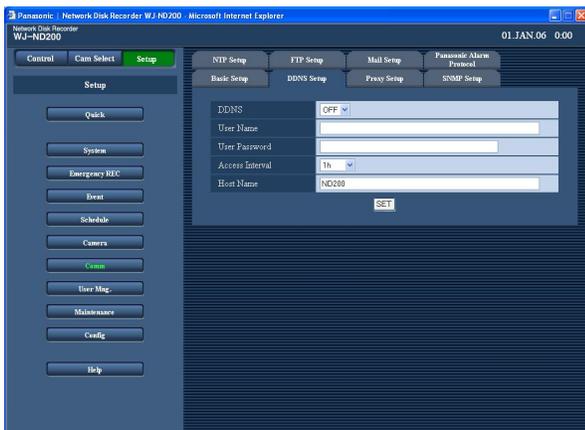The first character of the domain name should be an alphabetical character.

Basic network settings relating to DDNS [DDNS Setup]

Perform the basic settings of network DDNS.

Click the [Comm] button in the "Setup" panel and then click the "DDNS Setup" tab. The "DDNS Setup" page will be displayed.

Perform the following setup items.

■ DDNS

Select "ON" or "OFF" to determine whether or not to use the DDNS (Dynamic Domain Name Server).
When "ON" is selected, perform the following settings.
Default: OFF

■ User Name

Enter a user name registered in the DDNS.
Enter up to 32 characters using alphanumeric characters and the following marks.

■ User Password

Enter a password respective to the entered user name.
Enter up to 32 characters using alphanumeric characters and the following marks.

Note:
The following alphanumeric characters and marks can be entered.
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 ! " # $ % ' ( ) * + , - . /: ; < = > ? @ [\ ] ^ _ ` { | } ~

■ Access Interval

Select an interval to update the DNS from the following.
10 min/30 min/1 h/6 h/24 h
Default: 1 h

■ Host Name

Enter a host name registered in the DDNS. Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).
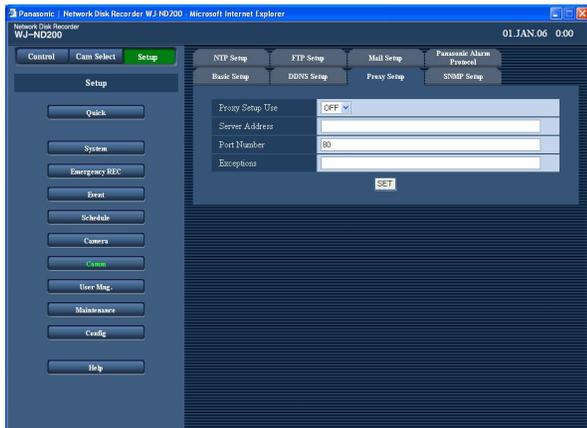
Click the [SET] button after completing the settings.

Basic settings relating to the proxy server [Proxy Setup]

Basic network proxy settings can be performed with this menu.

Click the [Comm] button in the "Setup" panel and then click the "Proxy Setup" tab. The "Proxy Setup" page will be displayed.

Step 1

Perform the following setup items.

■ Proxy Setup Use

Select "ON" or "OFF" to determine whether or not to use the proxy server.

When "ON" is selected, perform the following settings.

■ Server Address

Enter a proxy server address. Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

■ Port Number

Enter a port number of a proxy server.

■ Exceptions

Perform the settings for cameras who does not use the proxy server.

Enter the set address of the network camera. Enter up to 128 alphanumeric characters including asterisks (*), semicolons (;) and periods (.).

Notes:
- To exclude two cameras or more, use a semicolon (;) to divide the addresses.
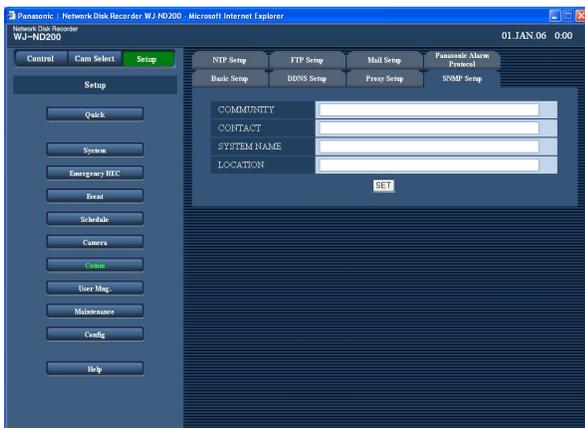- Entering "*" validates all numbers.

Step 2

Click the [SET] button after completing the settings.

Settings for SNMP network [SNMP Setup]

Perform the settings for the SNMP. Perform the settings for the status check of the unit, etc. by connecting the SNMP manager.

Click the [Comm] button in the "Setup" panel and then click the "SNMP Setup" tab. The "SNMP Setup" page will be displayed.

Step 1

Perform the following setup items.

■ COMMUNITY

Enter a name used for SNMP authentication in alphanumeric characters. Enter up to 32 characters using alphanumeric characters and the following marks.

■ CONTACT

Enter the mail address of an administrator of this unit. Enter up to 255 characters using alphanumeric characters and the following marks.

■ SYSTEM NAME

Enter a system name in alphanumeric characters to manage this unit by the SNMP system, for example, No1. Enter up to 255 characters using alphanumeric characters and the following marks.

■ LOCATION

Enter a location name (location where this unit is installed) in alphanumeric characters, for example, 2F. Enter up to 255 characters using alphanumeric characters and the following marks.

Step 2

Click the [SET] button after completing the settings.

Note:

The following alphanumeric characters and marks can be entered.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 ! " # $ % ' ( ) * + , - . /: ; < = > ? @ [\ ] ^ _ ` { | } ~

Settings for the time adjustment of a network [NTP Setup]

Screenshot 1

Click the [Comm] button in the "Setup" panel and then click the "NTP Setup" tab. The "NTP Setup" page will be displayed.
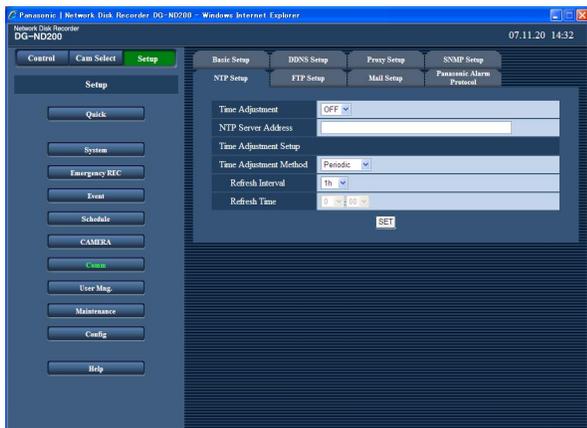
Step 1

Perform the following setup items.

■ Time Adjustment

Select "ON" or "OFF" to determine whether or not to adjust the time according to the NTP server.
Default: OFF

■ NTP Server Address

Enter the NTP server address when adjusting the time using the NTP server. Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

■ Time Adjustment Method

Select the update method from the following.
Periodic: The recorder will update the clock periodically by inquiring to the NTP server.
Scheduled: The recorder will update the clock at the designated time.

■ Refresh Interval

Select an interval of time inquiry to the NTP server from the following.
1h/2h/6h/12h/24h/
Default: 1h

■ Refresh Time

When selecting "Periodic" for "Time Adjustment Method", determine the time for the time inquiry.

Step 2

Click the [SET] button after completing the settings.

Notes:
- The clock will be adjusted using the NTP server when the clock of the unit becomes inaccurate beyond ±5 seconds.
- The clock will not be adjusted when event recording is being performed on any camera channel or when emergency recording is being performed.
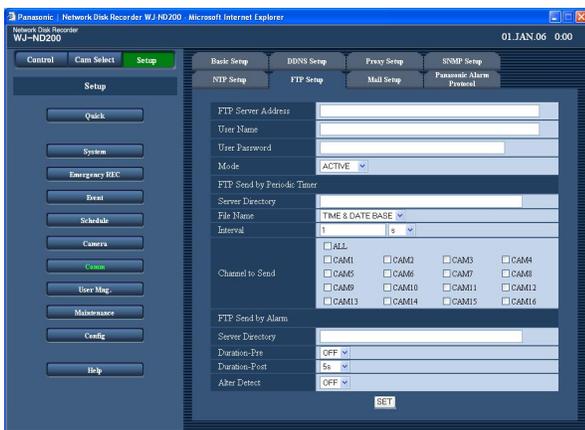

About the NTP server function
- This unit can be used as the NTP server for the connected cameras. Set "123" for the port number on the camera. Refer to the operating instructions of the camera for how to perform the settings of the camera.
- Time adjustment using the NTP server is unavailable for cameras with different subnet.

Settings for the FTP server [FTP Setup]

Settings for transmitting images from a camera connected to this unit to a designated FTP server periodically can be performed with the "FTP Setup" menu.

Screenshot 1

Click the [Comm] button in the "Setup" panel and then click the "FTP Setup" tab. The "FTP Setup" page will be displayed.

Step 1

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Step 2

Click the [SET] button after completing the settings.

Setup items

■ FTP Server Address

Enter an address or name of the FTP server as a destination of images. To enter an FTP server name, it is necessary to select "MANUAL" or "AUTO" for "DNS".
Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

■ User Name

Enter a user name (login name) to access the FTP server. Enter up to 32 alphanumeric characters. The available characters are the characters listed below except (&) and blank (space).

■ User Password

It is necessary to register a password when sending images to the FTP server. Enter up to 32 alphanumeric characters listed on the next page.
An entered character for the password will be displayed as "*" or "•".

■ Mode

Select a mode for sending images to the FTP server.
Change to "PASSIVE" when sending images is difficult with "ACTIVE".
Default: ACTIVE

[FTP Send by Periodic Timer]
Perform the following settings to periodically transmit live images. Perform the settings to determine whether or not to transmit live images to the FTP server using the timetable (☞ page 45).

■ **Server Directory**
Enter a directory of the server. Enter up to 255 alphanumeric characters. The available characters are the characters listed on the next page except (&*:<>?\ | ~ blank (space)).

■ **File Name**
Perform the settings for the rules about the file name to be sent.
Select whether to "TIME & DATE BASE" or "SERIAL NUMBER".
Default: TIME & DATE BASE

■ **Interval**
Enter a number for transmission interval. Enter a number (1 - 1440) for transmission interval, and select whether it will be "s" (seconds) or "m" (minutes) for the interval unit.
Default: 1 s

■ **Channel to Send**
Select a camera channel from which images will be sent periodically. Images from the checked camera channel will be sent to the FTP server.

Note:
When the image compression method of the camera selected for a camera channel is "MPEG-4", the image will not be sent.

[FTP Send by Alarm]
Perform the following settings to send images recorded in the location where an alarm occurred. Perform the settings to determine whether or not to send images recorded in the location where an alarm occurred to the FTP server using the timetable (☞ page 45).

■ **Server Directory**
Enter a directory of the server. Enter up to 255 alphanumeric characters. The available characters are the characters listed below except (&*:<>?\ | ~ blank (space)).

Note:
The following alphanumeric characters and marks can be entered.
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 ! " # $ % ' ( ) + , - . / ; = @ [ ] ^ _ ` { }

■ **Duration-Pre***
Select the duration of the images recorded by pre-event recording to be transmitted from the following.
OFF/1 s - 10 s (in 1-second interval)

Important:
Images recorded by pre-event recording will not be transmitted when pre-event recording is not to be performed. Perform pre-event recording to transmit images recorded by pre-event recording. Refer to page 40 for further information about pre-event recording settings.

■ **Duration-Post***
Select the duration of the images recorded by post-event recording to be transmitted from the following.
OFF/1 s - 10 s (in 1-second interval)

Note:
It is possible to transmit images recorded by an emergency recording to an FTP server. Recorded images to be transmitted are as follows.
Camera channel: Camera channel from which images were recorded by an emergency recording
Recording duration: For the duration selected for "Duration-Post" on the "FTP Setup" menu from the time when the emergency recording started
Directory where recorded images are to be transmitted: The directory designated for "Server Directory" of "Ftp send by alarm" on the "FTP Setup" window.

*: When the image compression method of the camera for a camera channel is "MPEG-4", the recording duration of the recorded data may not be exactly same as set recording durations for both the pre-event recording and the post-event recording.

■ **Alter Detect**
Select "ON" or "OFF" to determine whether or not to attach an alteration detection code to recorded images to be transmitted using the viewer software when an alarm occurs.

Settings for mail notification [Mail Setup]

Perform the settings relating to the alarm mail function and the warning report mail function (refer to the Operating Instructions (PDF)).

Screenshot 1

Click the [Comm] button in the "Setup" panel and then click the "Mail Setup" tab. The "Mail Setup" page will be displayed.
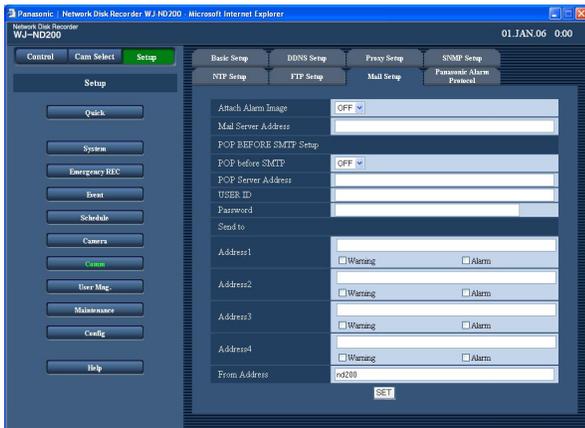
Step 1

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Step 2

Click the [SET] button after completing the settings.

Setup items

■ Attach Alarm Image

Select "ON" or "OFF" to determine whether or not to attach an image to an e-mail to be sent at an event occurrence.
Default: OFF

Notes:
- When the image compression method of the camera used for a camera channel where an event occurred is "MPEG-4", the image will not be attached.
- Even "ON" is selected, the image will not be attached when "OFF" is selected for the recording rate of the event recording.

■ Mail Server Address

Enter an IP address or a name of the SMTP server to send e-mails to. To enter an SMTP server name, it is necessary to select "MANUAL" or "AUTO" for "DNS". Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

■ POP before SMTP

Select "ON" or "OFF" to determine whether to enable or disable the POP server authentication before sending e-mails using the SMTP server. When "ON" is selected, perform the following settings.

■ POP Server Address

Enter the IP address of the POP server or the POP server name. Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

■ USER ID

Enter a user ID (login name) to access the POP server. Enter up to 32 alphanumeric characters. The available characters are the characters listed below except (&) and blank (space).

■ Password

Register a password to access the POP server. Enter up to 32 alphanumeric characters. The available characters are the characters listed below except (&) and blank (space). An entered character for the password will be displayed as "*" or "•".

63

■ Send to

Enter the mail addresses of the recipient of the alarm mail and the warning report mail. Enter the mail addresses of the recipients for "Address1" - "Address4". Enter up to 255 alphanumeric characters including hyphens (-), periods (.) and at mark (@).
Up to 4 destinations can be registered.
Check the desired mail type (warning/alarm) to be sent.

■ From Address

Enter the mail address of a sender. Entered mail addresses will be displayed in the "From" (sender) line. Enter up to 127 alphanumeric characters including hyphens (-), periods (.), at mark (@) and underscores (_).

Note:

The following alphanumeric characters and marks can be entered.
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 ! " # $ % ' ( ) * + , - . /: ; < = > ? @ [\ ] ^ _ ` { | } ~

Settings relating to Panasonic Protocol [Panasonic Alarm Protocol]

Perform the settings to notify a PC of event/error occurrence.

Screenshot 1

Click the [Comm] button in the "Setup" panel and then click the "Panasonic Alarm protocol" tab to display the "Panasonic Alarm protocol" page.
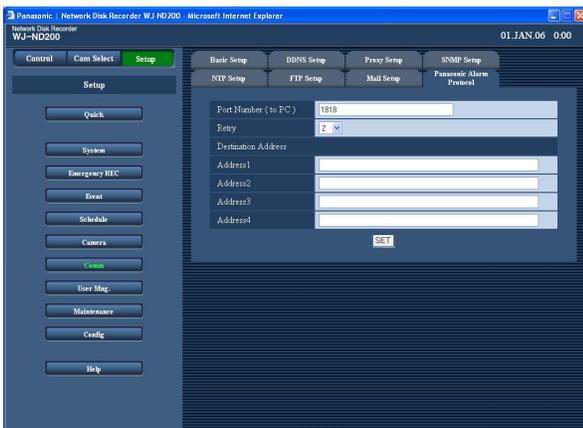
Step 1

Perform the following setup items.

■ Port Number (to PC)

Enter a port number to be used to transmit a Panasonic alarm protocol to the PC.

■ Retry

Set the retry number of the Panasonic alarm protocol transmission to the PC in case that the PC failed to receive the Panasonic alarm protocol.

■ Destination Address

Enter the address of the recipient. Enter the IP address or host name for "Address1" - "Address4".
Up to 4 destinations can be registered.
Enter up to 255 alphanumeric characters including hyphens (-), periods (.) and underscores (_).

Step 2

Click the [SET] button after completing the settings.

# Settings relating to the authentication [User Mng.]

Perform the settings for the user authentication/host authentication to restrict access this unit from PCs. It is possible to restrict access this unit from users/hosts (PCs) by registering users and hosts (PCs) who can access this unit in advance when "ON" is selected for the user authentication and the host authentication.

Settings to enable/disable the user authentication/host authentication [Basic Setup]

Select "ON" or "OFF" to determine whether or not to authenticate the user/host (PCs).

Screenshot 1

Click the [User Mng.] button in the "Setup" panel and then click the "Basic Setup" tab. The "Basic Setup" page will be displayed.
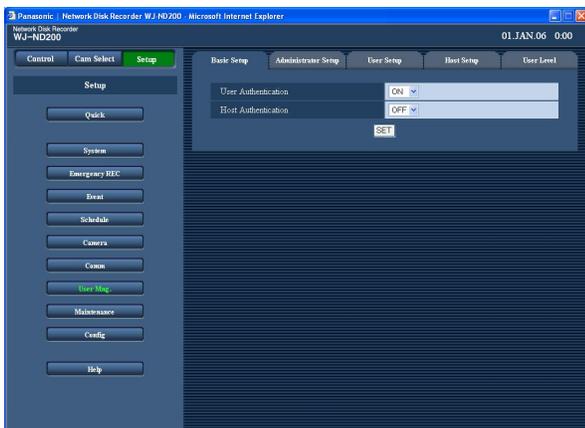
Step 1

Perform the following setup items.

■ **User Authentication**
Select "ON" or "OFF" to determine whether or not to authenticate the user.

■ **Host Authentication**
Select "ON" or "OFF" to determine whether or not to authenticate the host.

Step 2

Click the [SET] button after completing the settings.

Important:

It is impossible to select "ON" for the host authentication when no host is registered.

65

Edit information of the registered administrator [Administrator Setup]

It is possible to edit the registered administrator information such as the password, default screen, etc.

Screenshot 1

Click the [User Mng.] button in the "Setup" panel and then click the "Administrator Setup" tab. The "Administrator Setup" page will be displayed.
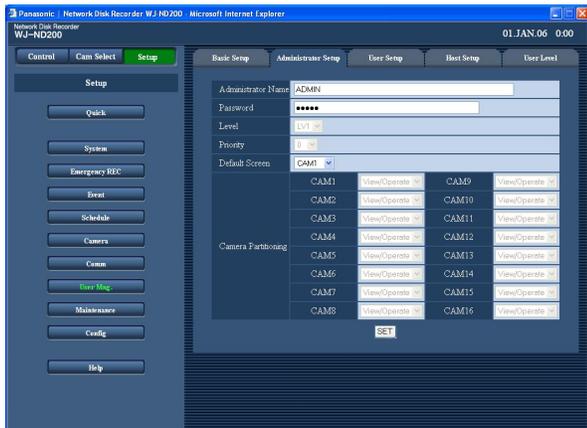
Step 1

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Step 2

Click the [SET] button after completing the settings.

Important:
- The administrator information can be edited only when logging in as the administrator.
- When the unit is being operated without changing the default administrator name and password, the pop-up window saying that it is recommended to change the password will be displayed.

Setup items

■ Administrator Name

It is possible to edit the name of the administrator. Enter 4 to 14 alphanumeric characters for administrator name.

■ Password

Enter a password. Enter 4 to 8 alphanumeric characters for administrator name.

Note:
> To enhance the security, change the password for an administrator periodically.

■ Level

Displays the operational level of the user. The user level of the administrators is "LV1" and it is impossible to change it.

■ Priority

Display the settings to assign priorities to operate this unit in case two or more users access this unit simultaneously.
The priority of the administrators is "0" and it is impossible to change it.

■ Default Screen

Select a startup display to be displayed after login from the following.
CAM1 - 16: Displays live images from the selected camera channel on a single screen.
4A - 4D: Images of the camera group (4A - 4D) consisted in advance from 4 camera channels will be displayed on a 4-Screen.
 The settings for 4-Screen can be configured on the "Monitor Display" page ("System" – "Basic Setup" – "Monitor Display" (☞ page 30).
SEQ: Images will be displayed in the sequential display. The operational settings of the sequential display can be performed on the "Sequence Setup" window ("Camera" - "Sequence Setup").

■ Camera Partitioning

Display a controllable range for each camera channel. The camera partitioning setting of the administrators is "View/Operate" and it is impossible to change it.
**View/Operate:** Both displaying live/recorded images and controlling cameras are possible.

Registration of users who operates this unit and edit/delete the registered user information [User Setup]

Register user information such as a user name and password.

Click the [User Mng.] button in the "Setup" panel and then click the "User Setup" tab. The "User Setup" page will be displayed.
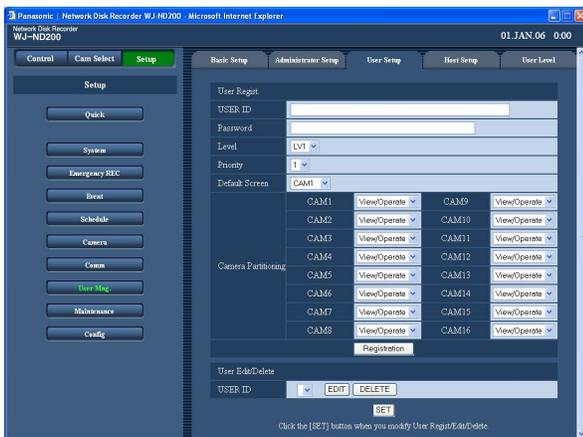
Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Click the [Registration] button after completing the settings.

Click the [SET] button to apply the settings.

Important:

It is necessary to click the [SET] button to apply the settings after registering a user or after editing/deleting the user information.

Note:

Even when the [Registration] button is clicked, other users will not forcibly be logged out.

Setup items

■ USER ID

Enter a user ID. Enter 4 to 14 alphanumeric characters for user ID. Up to 32 users can be registered.

■ Password

Enter a password. Enter 4 to 8 alphanumeric characters for a password.

Note:

Set a unique password, not something that would be easily guessed by a third person. The password also should be memorable.

■ Level

Select a user level from the following. Operable functions for each level can be set in the "User Level" menu (☞ page 70).
LV1/LV2/LV3/LV4

■ Priority

Perform the settings to assign priorities (1: highest, 16: lowest) to operate this unit in case two or more users access this unit simultaneously.

■ Default Screen

Select a startup display to be displayed after login from the following.
CAM1 - 16: Displays live images from the selected camera channel on a single screen.
4A - 4D: Images of the camera group (4A - 4D) consisted in advance from 4 camera channels will be displayed on a 4-Screen.
The settings for 4-Screen can be configured on the "Monitor Display" page ("System" – "Basic Setup" – "Monitor Display" (☞ page 30).

SEQ: Images will be displayed in the sequential display. The operational settings of the sequential display can be performed on the "Sequence Setup" window ("Camera" - "Sequence Setup").

■ Camera Partitioning

Select a controllable range for each camera channel from the following.
View/Operate: Both displaying live/recorded images and controlling cameras are possible.
View: Displaying live/recorded images is possible. Controlling cameras is impossible.
--: Neither displaying live/recorded images nor controlling cameras are possible.

■ User Edit/Delete

Edit or delete registered user information.
Click the [∨] button to select the desired user information to be edited or deleted. It is necessary to click the [SET] button after editing/deleting the selected user information.

• To edit the selected user information
  Click the [EDIT] button to edit the selected user information. The editing window will be displayed with information of the registered user. Edit user information in the same way as the user registration. (☞ page 67)
• To delete the selected user
  Click the [DELETE] button to delete the selected user.

Registration of a PC (host) accessible to this unit and edit/delete the registered host information [Host Setup]

Register information of a PC (host) that accesses this unit via a network such as a LAN.
Up to 32 hosts can be registered.

Screenshot 1

Click the [User Mng.] button in the "Setup" panel and then click the "Host Setup" tab. The "Host Setup" page will be displayed.
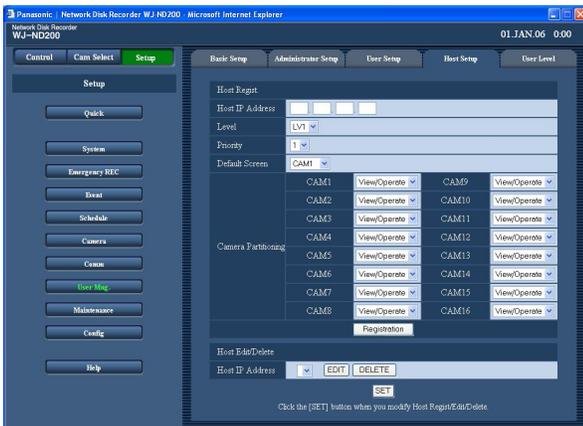
Step 1

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Step 2

Click the [Registration] button after completing the settings.

Step 3

Click the [SET] button to apply the settings.

Setup items

■ Host IP Address

Enter an IP address. Enter 4 units from the decimal numbers (0-254).

Notes:
- Entering "*" validates all numbers.
- It is impossible to register "0.0.0.0" or "*.*.*.*".

■ Level

Select a user level from the following. Operable functions for each level can be set in the "User Level" menu (☞ page 70).
LV1/LV2/LV3/LV4

■ Priority

Assign a priority from 1 (lowest priority) to 16 (highest priority) to every host.

■ Default Screen

Select a startup display to be displayed after login from the following.

CAM1 - 16: Displays live images from the selected camera channel on a single screen.

4A - 4D: Images of the camera group (4A - 4D) consisted in advance from 4 camera channels will be displayed on a 4-Screen.
The settings for 4-Screen can be configured on the "Monitor Display" page ("System" – "Basic Setup" – "Monitor Display" (☞ page 30).

SEQ: Images will be displayed in the sequential display. The operational settings of the sequential display can be performed on the "Sequence Setup" window ("Camera" - "Sequence Setup").

■ Camera Partitioning

Select a controllable range for each camera channel from the following.

View/Operate: Both displaying live/recorded images and controlling cameras are possible.

View: Displaying live/recorded images is possible. Controlling cameras is impossible.

--: Neither displaying live/recorded images nor controlling cameras are possible.

■ Host Edit/Delete

Edit or delete registered host information.
Click the [∨] button to select the desired host information to be edited or deleted.
It is necessary to click the [SET] button after editing/ deleting the selected host information.

- To edit the selected host information
  Click the [EDIT] button to edit the selected host information. The editing window will be displayed with information of the registered host. Edit host information in the same way as the host registration. (☞ page 68)
- To delete the registered host IP address
  Click the [DELETE] button to delete the selected host IP address.

Important:

It is necessary to click the [SET] button to apply the settings after registering a host or after editing/deleting the host information.

Note:

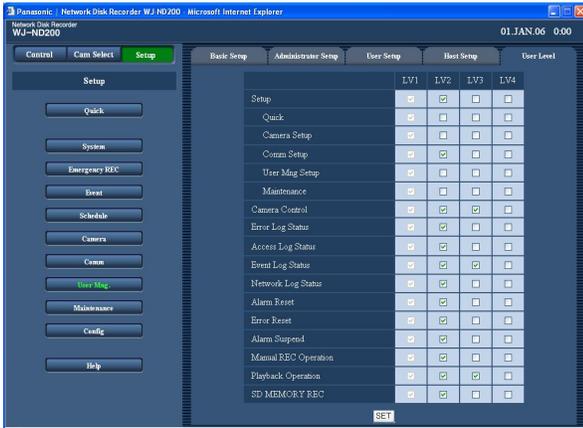Even when the [Registration] button is clicked, other hosts will not forcibly be logged out.

Setting of operation level [User Level]

Assign a level (LV1/LV2/LV3/LV4) to every user to restrict operable functions.

Screenshot 1

Click the [User Mng.] button in the "Setup" panel and then click the "User Level" tab. The "User Level" page will be displayed.

Step 1

Check the desired functions that a user may operate. To stop a user from operating certain functions, do not check the respective function.
Refer to page 71 for further information about each function.

Step 2

Click the [SET] button after completing the settings.

Note:
Each parameter of user level is as follows:
LV1: Possible to perform all the operations (Administrators)
LV2: Possible to refer to the settings of the unit and the access log, and to perform the alarm reset (Head of operators)
LV3: Possible to monitor or play the images (Operators)
LV4: Possible to monitor live images (Operators)

Functions that can be restricted

The following functions can be restricted according to the user levels.

Function	Description
Setup	It is possible to edit some settings on the setup window. (It is impossible to edit the settings of "Quick", "Camera", "Comm", "User Mng." and "Maintenance".)
Quick	It is possible to edit the settings of the "Quick" menu.
Camera Setup	It is possible to edit the settings of the "Camera" menu.
Comm Setup	It is possible to edit the settings of the "Comm" menu.
User Mng. Setup	It is possible to edit the settings of the "User Mng." menu.
Maintenance	It is possible to edit the settings of the "Maintenance" menu.
Camera Control	It is possible to control the camera.
Error Log Status	It is possible to browse error logs. Refer to the operating instructions (PDF).
Access Log Status	It is possible to browse access logs. Refer to the operating instructions (PDF).
Event Log Status	It is possible to browse event logs. Refer to the operating instructions (PDF).
Network Log Status	It is possible to browse network logs. Refer to the operating instructions (PDF).
Alarm Reset	An event action can be canceled. (Refer to the operating instructions (PDF).)
Error Reset	An error action can be canceled. (Refer to the operating instructions (PDF).)
Alarm Suspend	An alarm action can be suspended. (Refer to the operating instructions (PDF).)
Manual REC Operation	Manual recording can be started and stopped.
Playback Operation	A recorded image can be played.
SD MEMORY REC	It is possible to obtain recorded images from the SD memory card.

Note:
When checking the checkboxes of "Quick", "Camera Setup", "Comm Setup", "User Mng. Setup" and "Maintenance", the checkbox of "Setup" will be checked automatically. On the contrary, even when the checkbox of "Setup" is checked, "Quick", "Camera Setup", "Comm Setup", "User Mng. Setup" and "Maintenance" will not be checked.

Settings for maintenance [Maintenance]

It is possible to check the statuses of the HDDs of this unit and the network, and perform the settings relating to the HDDs.
The available capacity of the HDDs and the network status can be checked.

Check version info, etc. [Product Information]

Versions of the software, the hardware (this unit), MAC address, serial number, internal temperature and number of times when the [USE] button on the front panel is pressed will be displayed.
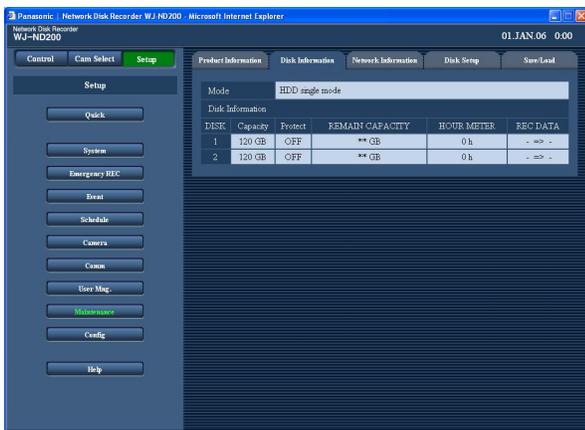
Screenshot 1

Click the [Maintenance] button on the "Setup" panel and then click the "Product Information" tab. The "Product Information" page will be displayed.
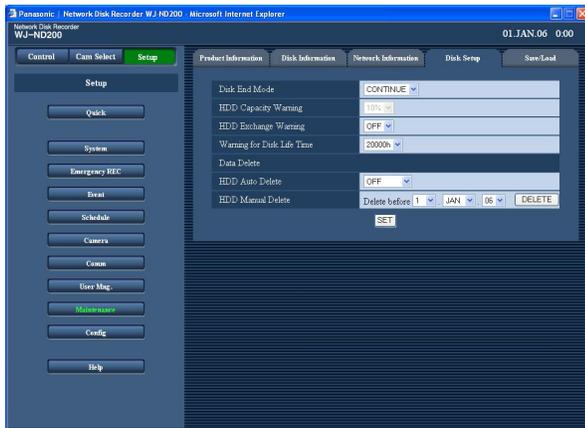

Step 1

Versions of the software, the hardware (this unit), MAC address, serial number, internal temperature and number of times when the [USE] button on the front panel is pressed will be displayed.
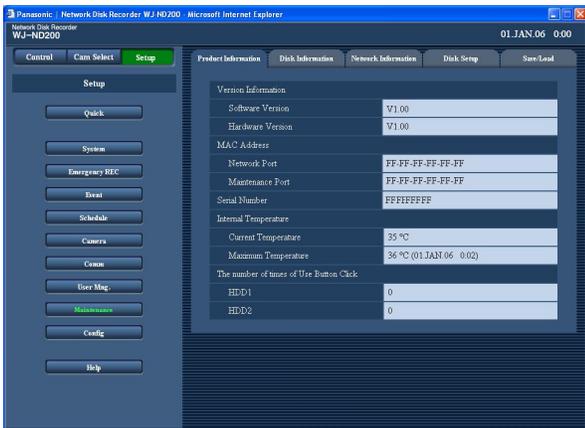
Confirmation of the available hard disk space [Disk Information]

The disk size of the HDDs, status of write protection, the available capacity of the HDDs, and the hour meter will be displayed. It is also possible to check the time range of the images recorded on the HDDs. Refer to the operating instructions (PDF) for further information about the built-in hard disks of this unit.

Screenshot 1

Click the [Maintenance] button on the "Setup" panel and then click the "Disk Information" tab. The "Disk Information" page will be displayed.

Step 1

The disk size of the HDDs, status of write protection, the available capacity of the HDDs, the hour meter, the time range of the images recorded on the HDDs will be displayed.

Note:

A smaller size than the actual size of the HDDs will be displayed since the disk space used for data management is excluded.

Check the network status of the devices connecting to this unit [Network Information]

It is possible to check the IP addresses of the cameras connecting to this unit, line speed of this unit and users currently being logged in this unit.

Screenshot 1

Click the [Maintenance] button on the "Setup" panel and then click the "Network Information" tab. The "Network Information" page will be displayed.
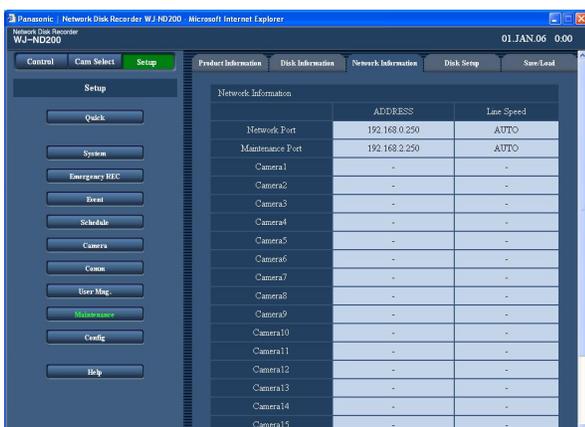
Step 1

The IP addresses of the cameras connecting to this unit, line speed of this unit and users currently being logged in this unit will be displayed.

Settings relating to the available disk space and images on the disk [Disk Setup]

Perform the setting whether or not to write data when the available disk capacity is running out and the settings relating to images on the disk.

Click the [Maintenance] button on the "Setup" panel and then click the "Disk Setup" tab. The "Disk Setup" page will be displayed.

Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Click the [SET] button after completing the settings.

Setup items

■ Disk End Mode

Select an action by clicking the [∨] button from the following to be taken when the available disk space of the built-in hard disk is running out.

CONTINUE: The oldest data will be overwritten and saved as new data when the available space has run out.

STOP: Stops recording when the available space has run out.

■ HDD Capacity Warning

Select a level of the available disk space by clicking the [∨] button to issue a warning when the available disk space of the built-in hard disk reaches a specified level. 1 % to 10 % can be set for this item in 1 % intervals. When "OFF" is selected, the warning action will not be performed.
When "CONTINUE" is selected for "Disk End Mode", this setup item will be displayed in gray and become unavailable.
Default: 10 %

■ HDD Exchange Warning

Perform the setting to take a warning action for the HDD replacement when the available disk space of the built-in hard disk reaches a specified level. 1 %, 3 %, 5 % and 10 % can be set for this item. When "OFF" is selected, the warning action will not be performed.

■ Warning for Disk Life Time

Select the hard disk warning for disk lifetime from the following.
10000 h/20000 h/30000 h

■ HDD Auto Delete

Perform the settings to delete image data automatically when the set days have passed from the day the images were recorded.
The following days can be set. When "OFF" is selected, auto deletion will not be performed.
OFF/1 DAY/2 DAYS/3 DAYS/4 DAYS/5 DAYS/
6 DAYS/7 DAYS/8 DAYS/9 DAYS/10 DAYS/
14 DAYS/30 DAYS/1 MONTH/45 DAYS/60 DAYS/
90 DAYS/120 DAYS/150 DAYS/180 DAYS

■ HDD Manual Delete

By setting the date, images on the hard disk that were recorded up until a day before the set date will be deleted. Click the [DELETE] button after setting the time and date by clicking the [∨] button.

Saving and loading of settings of the setup menu or reset the settings to the default [Save/Load]

It is possible to save the settings of the setup menu in this unit. It is also possible to call up saved settings (load). It is also possible to reset the settings to the default with this setup menu.

Screenshot 1

Click the [Maintenance] button on the "Setup" panel and then click the "Save/Load" tab. The "Save/Load" page will be displayed.
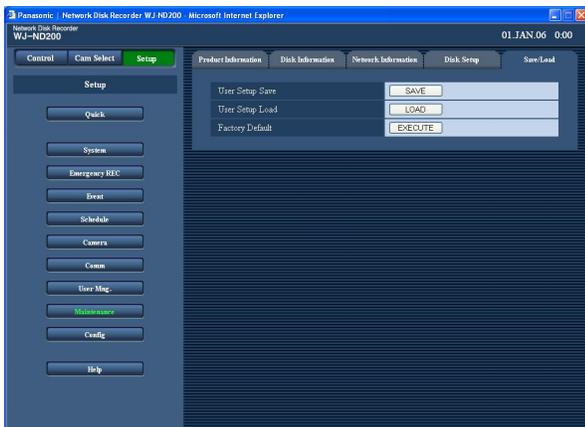
Step 1

■ User Setup Save

Click the [SAVE] button to save the settings of setup menu in this unit.

■ User Setup Load

Click the [LOAD] button to load the saved settings to the unit.

■ Factory Default

Click the [EXECUTE] button to reset the settings to the default settings.

Important:
- The settings of the menus under "Basic Setup" of "Comm" will not be reset even when the [LOAD]/ [EXECUTE] button is clicked.
  - "NW Link down detection"
  - "NW Bandwidth Control"
  - "HTTP Port Number"
  - "FTP Port Number"
  - "Port Setup"
  - "DNS Setup"
- When the loading starts, the host authentication will be set to "OFF" automatically.

Settings relating to the disk configuration [Config]

The FORMAT button inside the front cover can be enabled/disabled and the hard disk drives can be formatted on this page.

Important:
- When the "Config" page is displayed, all operations (recording, playback, etc.) except operations on this page will stop.
- When exiting from the "Config" page, click the [Main] button. When the window is closed by clicking the [×] button at the top right of the window, operation of the unit may become unstable.

Determine whether to enable or disable the FORMAT button inside the front cover

Screenshot 1

When the [Config] button is clicked, the authentication window will be displayed.
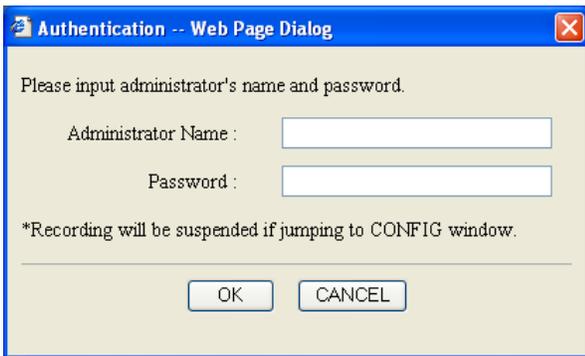
Step 1

Enter the administrator name and the password, and then click the [OK] button.

Screenshot 2

The "Config" page will be displayed.
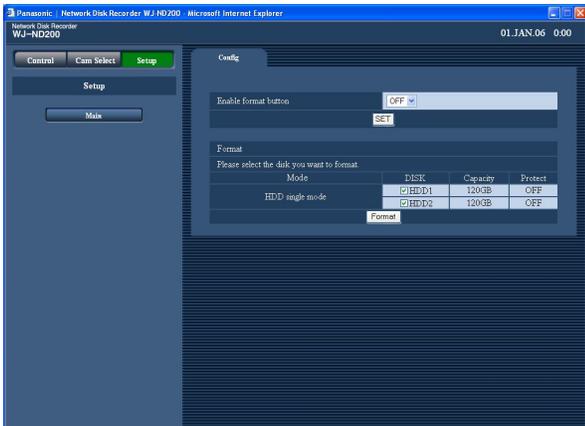
Step 2

Select "ON" or "OFF" to determine whether to enable or disable the FORMAT button inside the front cover. When "ON" is selected, the FORMAT button will be enabled.

Note:
Even when the "Enable format button" setting is changed, the setting will not be applied until the [SET] button is clicked.

Step 3

Click the [Main] button to exit from the "Config" page.

Format the hard disk drives

Display the "Config" page (☞ page 76).

Screenshot 2
The confirmation window will be displayed.

Screenshot 3
When completing the format, the "Format Result" will be displayed.
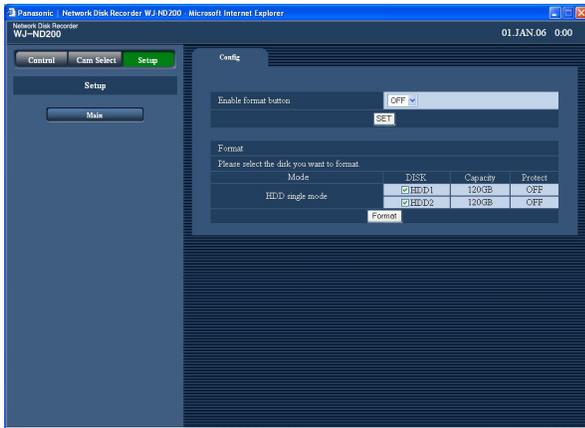
Step 1
Check the checkbox of the hard disk drive to be formatted.

Step 2
Click the [Format] button.

Notes:
- The [Format] button changes its name according to the operational mode of the unit.
  Refer to the operating instructions (PDF) for further information about the operational mode of the unit.
- All images recorded on the selected hard disk drive will be erased when formatted.

Step 3
Click the [OK] button.

Step 4
Click the [OK] button.

Step 5
Click the [Main] button to exit from the "Config" page.

Troubleshooting

Before asking for repairs, check the symptoms with the following table.

Contact your dealer if a problem cannot be solved even after checking and trying the solution or a problem is not described below, and when having a problem with installations.

Symptom	Cause/solution	Reference pages
Cannot access from the browser.	• Is the Ethernet cable firmly connected to the 10BASE-T/100BASE-TX port? Confirm the cable is firmly connected.	–
	• Is the connection indicator of the 10BASE-T/-100BASE-TX port lit? When it is not lit, connection to a LAN is not established or a network is not working correctly. Confirm that the connection indicator of the 10BASE-T/100BASE-TX port is lit. Refer to a system administrator if it is not lit.	–
	• Is the valid IP address set? Refer to a system administrator for further information.	28
	• Are you accessing the wrong IP address? Check the connection as follows: >ping "IP address of this unit" If there is reply from this unit, the connection is normal. If not, check the settings of the IP address and the subnet mask.	–
	• Is the same IP address provided to other devices? Refer to a system administrator for further information.	28
	• Are there contradictions between the address and the network subnet to be accessed? When this unit and the client PC are in the same subnet, are the IP addresses of this unit and the client PC set in same subnet? Or is "Use Proxy Server" for the settings of the browser checked? When accessing this unit in the same subnet, entering the address of this unit in the "Don't Use Proxy For These Addresses" box is recommended.	28

Symptom		Cause/solution	Reference pages
The buttons on the browser are displayed out of alignment.	▶	• The buttons may not be displayed orderly if the font setting of Windows has been changed from the default setting. Use with the default font setting.	–
Some contents are not displayed on the browser.	▶	• Reload the contents by pressing the [F5] key.	–
The image is not being refreshed.	▶	• Depending on the traffic of the network, there might be difficulties in displaying images. Press the [F5] button on the keyboard to request images.	–
	▶	• Images recorded at low recording rate (less than 1 ips) may sometimes not be refreshed.	–
Live/recorded images in MPEG-4 format are not displayed in a normal manner.	▶	• When turning on the power of this unit or when connecting the LAN cable to the network port when the camera is active, images may not be displayed/ recorded in a normal manner for around a minute (at a maximum) just after turning on the power of this unit or after connecting the LAN cable to the network port.	–
Audio is not recorded Audio is not be played correctly	▶	• Is "Mic input" selected for "Audio mode" on the setup menu of the network camera? • Is "32 kbps" selected for "Audio bit rate" on the setup menu of the network camera? Check the settings of the camera.	–
No SD memory data is displayed in the recording event list.	▶	• It is impossible to play SD memory data from the recording event list or time and date search result. After filtering by "SD memory" in the recording event list, select an event to play it.	–
	▶	• The recording time of SD memory data will be displayed based on the clock of the camera. Check the clock of the camera.	–
Cannot play SD memory data.	▶	• When the SD memory data contains not many frames, playback sometimes may not be performed in a normal manner. In this case, display the image with frame playback/ reverse frame playback.	–

Symptom	Cause/solution	Reference pages
When displaying MPEG-4 images on a multi-screen or when enlarging the displayed image using the zoom function, images from two or more cameras are displayed in sequence on a single area.	• This may occur due to the display adapter and driver combination. When this occurred, update the driver of the display adapter to the latest version first. If updating the driver does not solve the problem, adjust the hardware acceleration as follows. The following instructions are for Windows XP. (1) After closing all browser windows, right-click on the desktop and select "Properties" from the displayed pop-up menu. (2) Select "Settings" from "Display Properties", and then click the [Advanced] button. (3) Click the [Troubleshoot] tab and disable the DirectDraw acceleration by adjusting the level of "Hardware acceleration".	–
Cannot close the authentication window displayed when displaying the basic operation window.	• Are the correct user name and password entered? Confirm the correct user name and password.	67
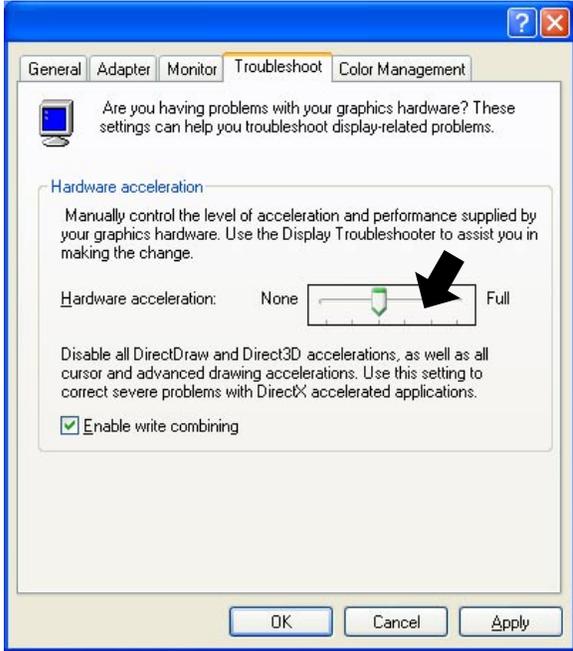
Symptom		Cause/solution	Reference pages
Cannot play audio using the Viewer software.	▶	• Are an image data (extension: n3r) and an audio data (extension: n3a) in the same folder? Check the directory designated as the destination folder.	Refer to page 49 on the operating instructions (PDF).
The message "Please Wait." remains on the screen.	▶	• The "ActiveX control" is not installed in the PC. Install the "ActiveX control" by referring to the following page.	83
No live image is displayed.	▶	• Are the connected network cameras configured correctly? Check the settings of the setup menu ("Camera" - "NW Camera Setup").	47
	▶	• Are the settings of the setup menu ("Schedule" - "Program" - "LIVE VIDEO") configured correctly? Check the settings.	40
	▶	• Are the network settings of the cameras and the unit configured correctly? Check the settings of IP address, subnet mask and default gateway for them.	48, 56
	▶	• When M-JPEG is selected for the image compression method of the camera, live images may not be displayed in the image display area and black screen will be displayed for a few minutes in the following cases. • When frequently checked if the appropriate values are set for the recording settings (by clicking the [Measurement] button on the "Program Setup" page ("Schedule" - "Program")). • When the settings of the unit are saved repeatedly. Wait around 10 minutes without any operations. The unit will function normally.	–
Live/recording images are not displayed.	▶	• When logged in with "Limited" user account of Windows operating system, images will not be displayed since the ActiveX control may not be installed correctly. Log in with "Computer administrator" user account.	–

Symptom		Cause/solution	Reference pages
Refresh of live images is unstable. Browser disconnection sometimes occurs. Network performance is poor. Image file downloaded from the FTP server is faulty.	▶	• When the image compression method of all cameras in use is not the same, performance may become lower. (Refresh of images will be unstable.)	–
	▶	• The configured settings for transmission rate/recording rate may be beyond the maximum network performance. Lower the value/rate of the settings relating to the network such as the transmission rate, recording rate, etc.	43
	▶	• The line speed settings may be not the same between the unit and the hub, for example, 100M BASE-TX Full for the unit and 100M BASE-TX half, etc. Some hubs change the line speed automatically depending on the network traffic and it may cause configuration errors. Check the line speed settings of both the unit and the hub, and configure the line speed settings of both to conform them.	–
Cannot operate the camera.	▶	• Are the settings of the network camera set correctly? Check the model of the set camera on the setup menu ("Camera" - "NW Camera Setup").	47
	▶	• Are the user ID and the password for the network camera set correctly? Check if the user ID and password are set correctly on the setup menu ("Camera" - "NW Camera Setup").	50
The setup menu of the camera is not displayed even though the [SETUP] button on the "NW Camera Setup" page is clicked.	▶	• Change the port number for the camera, and then click the [SETUP] button again.	50
Cannot format the hard disk using the FORMAT button inside the front cover.	▶	• Is "ON" selected for "Enable format button" on the "Config" page? When "OFF" is selected, it is impossible to format the hard disk using the FORMAT button. Check the "Enable format button" setting on the "Config" page.	76

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 occurred. By performing the following solutions, other applications 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.

← **Information Bar**

Symptom		Solutions	Reference pages
The following message is displayed on the information bar. "Pop-up blocked. To see this pop-up or additional options, click here…"	▶	• 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.	–
The following message is displayed on the information bar. "This site might require the following Active X control: 'wvasetup.exe' from 'Panasonic Corporation'. Click here to install..."	▶	• Click the information bar and select "Install ActiveX Control…". The "Security Warning" window will be displayed. Click the [Install] button on the displayed "Security Warning" window.	–

Symptom		Solutions	Reference pages
An unnecessary status bar or scroll bar is displayed on the pop-up window.	▶	• Click "Internet Options" on the Tool menu of Internet Explorer, and [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.	–
When trying to download audio files using a web browser, a pop-up window is displayed and cannot download audio files.	▶	• Click "Internet Options" on the Tool menu of Internet Explorer, and [Security] tab. Then, click the [Custom Level…] button to open the "Security Setting" window. Under "Download", select "Enable" for "Automatic prompting for file downloads". Click the [OK] button. The "Warning" window will be displayed. Click the [Yes] button.	–

Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)
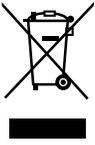
This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.

Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

N0109-1010   3TR005963CZB   Printed in China