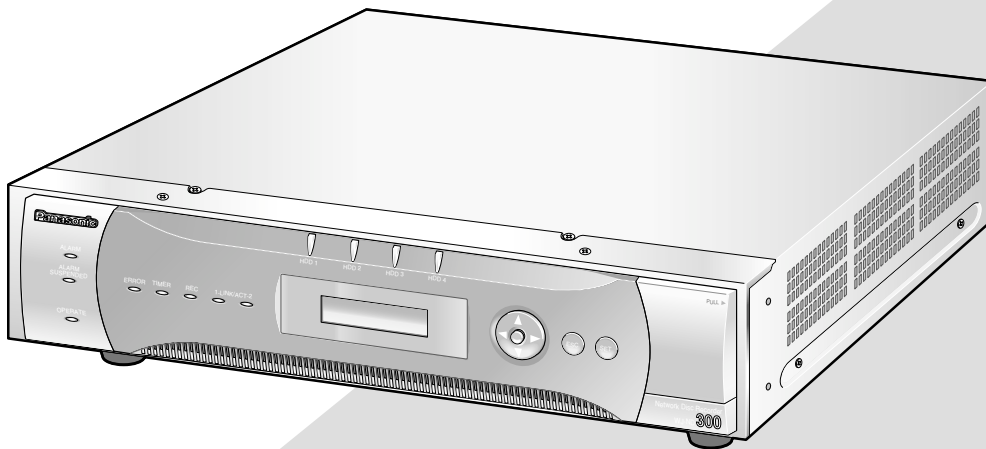# Panasonic®

Network Disk Recorder

Setup Instructions

Model No. WJ-ND300

PRELIMINARY

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

CONTENTS

Preface

Features

The Network Disk Recorders WJ-ND300 series are designed for use within a surveillance system, and perform recordings and playbacks pictures 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 videotapes so that pictures recorded by repeated overwriting will not experience deterioration of the recorded picture quality.
Up to 32 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-ND300 (this unit) using a web browser installed on a PC connected to a network. Up to 8 PCs (web browsers) can access this unit concurrently and it is possible to perform the settings and operate this unit.
"WJ-ND300" is the generic name of the network disk recorders WJ-ND300 series.

Various 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 (quality and recording rate) can be changed to high quality to record pictures.

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 RAID 5 function prevents any recorded pictures loss.

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About these Operating Instructions

There are 3 sets of operating instructions for the WJ-ND300 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.
"WJ-ND300" or "ND300" shown in the illustrations used in these operating instructions indicate this unit or the WJ-ND300 series.

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® 2000 Professional SP4, Microsoft® Windows® XP Professional SP1a, SP2, Microsoft® Windows® XP Home Edition SP1a, SP2
OS Language:	English, French, Spanish, German, Italian
Computer:	IBM PC/AT Compatible
CPU:	Pentium® 4 1.4GHz or faster
Memory:	512 MB or more
Monitor:	1024 x 768 pixels or more, 16-bit HIGH color or better
Network Interface:	10/100Mbps Network interface card must be installed
Web Browser:	Microsoft® Internet Explorer 5.5 SP2, 6.0 SP1, 6.0 SP2
	Other web browsers are not compatible with this unit.

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 • Microsoft, Windows and Windows XP are registered trademarks of Microsoft Corporation in the U.S. and/or other countries.
 • Other names of companies and products contained in these operating instructions may be trademarks or registered trademarks of their respective owners.

Abbreviations

The following abbreviations are used in these operating instructions.
Microsoft® Windows® 2000 Professional Service Pack 4 is described as Windows 2000.
Microsoft® Windows® XP Professional SP1a or SP2 and Microsoft® Windows® XP Home Edition SP1a or 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)
Refers to the unit that determines the smootheness with which the recorded images are played back. It expresses the number of frames recorded per second. The higher the number, the smoother the movement, but the available recording time becomes shorter.

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 720 and the number of vertical dots is 480, the display reads 720 x 480.

Manual recording
Function for starting and stopping recording manually by clicking the [REC] button or [REC 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 programmed time schedule through an external switch connected to the unit.

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 camera site alarm.

Event Action
Event action refers to a specific operation performed when an event occurs. Event operations are divided into ALM (Alarm Mode), ADM (Activity Detection Mode), and are selectable. In ALM, the occurrence of an event is announced by screen display, LED, or buzzer (Alarm Operation). In ADM, the occurrence of an event is not announced, but the unit starts event recording, performs the preset operations, and enters the event into the event log. In OFF mode, the unit only enters the event into the event log.

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, Iris, Preset Operations (moving the camera to a preset horizontal/vertical position)), and Auto (for example, automatic panning).

A-B repeat playback
Function for playing back repeatedly between a set start point (A) and an end point (B) in playback mode.

HDD safety mode
Function for turning off the power supply to the HDD to prevent damage of the HDD due to vibration and shock if the unit is mounted in or dismounted from the rack with the power turned on.

Disk config
When an HDD is replaced, removed, or added, the HDDs need to be newly configured. Disk config refers to the menu for performing these HDD settings.

RAID (RAID5)
This stands for Redundant Arrays of Inexpensive Disks. It refers to a technology to implement a high-speed large-capacity and high-reliability disk unit by distributing access to multiple HDDs. If trouble occurs in one of the HDDs, the data on the faulty HDD can be recovered based on the error correction data recorded on the other HDDs. (RAID5 is used when 3 or more HDDs are connected. If trouble occurs simultaneously in 2 or more HDDs, the data of the faulty HDD cannot be recovered.)

System Administrator
This refers to a person who has the responsibility and authority to operate the unit and perform settings.

Operations Flow

The operation flow of this unit is as follows.

1 | **Rack Mounting** — Install the unit in the rack.
Refer to the Installation Guide for further information about rack mounting.

↓

2 | **Connections** — Connect PCs, cameras and extension units.
Start connections in the following order: PC → Cameras → Extension units
Refer to the provided Installation Guide for further information about connections.

↓

3 | **Startup** — Turn on the power of the unit.
For further information, refer to the Installation Guide.

↓

4 | **Network settings of this unit (page 9)** — Operate the buttons on the front panel of the unit to perform the network settings of the unit.

↓

5 | **Network settings of the PC (page 11)** — Change the TCP/IP setting of the PC to conform to the settings of this unit.

↓

6 | **Format (initialize) hard disk drives (page 90)** — Display the disk configuration menu and format the hard disk drives.

↓

7 | **Display the camera setup menu and perform the network settings of cameras.** — Refer to the Setup Instructions (PDF) for descriptions of how to display the camera setup menu.

↓

8 | **Setup (pages 26 - 86)** — Perform the required settings on the setup menu to start operation.

↓

Start operation

Performing the Network Settings

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: 192.168.1.2 - 192.168.1.249, 192.168.1.251 - 192.168.1.254
Subnet mask: 255.255.255.0
Gateway Address: 192.168.1.1
When the network settings are different from the settings above, perform the network settings of this unit and the PC.
It is necessary to display the camera setup menu to perform the network settings of cameras. It is possible to display the camera setup menu on the "NW Camera Setup" menu of the setup menu ("Camera" – "NW Camera Setup").

Performing the Network Settings of this Unit

Perform the following settings relating to network.
Operate the buttons on the front panel of the unit to perform the network settings of the unit. The settings items will be displayed on the LCD.
  • DHCP
  • IP Address
  • Subnet mask
  • Gateway
  • HTTP port
The default network settings of each port are as follows.

	Camera port	Client PC port	Maintenance port
DHCP	OFF	OFF	–
IP Address	192.168.0.250	192.168.1.250	192.168.2.250
Subnet mask	255.255.255.0	255.255.255.0	255.255.255.0
Gateway	–	192.168.1.1	–
HTTP port	–	80	–

Important:
Network settings for each port (IP address, etc.) should be on a different subnet. Otherwise, network communication may be failed.

Screenshot 1

Start operation when the standby display is displayed on the LCD.

```
┌─────────────────────┐
│  ＪＡＮ／０１／２００５      │
│      １：００：００         │
│                     │
└─────────────────────┘
```
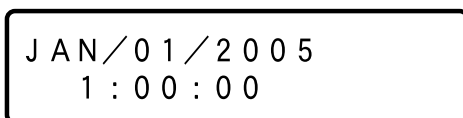
Step 1

Display the IP address setup display by pressing the arrows button (▼ or ▲).

The IP address setup display will be displayed.

```
┌─────────────────────────────┐
│ I P  A d d r e s s   S e t u p │
│                      [ S E T ] │
└─────────────────────────────┘
```

The DHCP Setup window will be displayed.

```
┌─────────────────────────────┐
│ P T # 2              D H C P │
│                        O F F │
└─────────────────────────────┘
```

The setup item display for each item will be displayed.

```
┌─────────────────────────────┐
│ P T # 2              D H C P │
│                        O F F │
└─────────────────────────────┘
```

```
┌─────────────────────────────┐
│ P T # 2         I P   A D D R │
│  1 9 2 . 1 6 8 . 0 0 0 . 2 5 0 │
└─────────────────────────────┘
```

```
┌─────────────────────────────┐
│ P T # 2  S u b n e t   M a s k │
│  2 5 5 . 2 5 5 . 2 5 5 . 0 0 0 │
└─────────────────────────────┘
```

```
┌─────────────────────────────┐
│ P T # 2          G a t e w a y │
│  1 9 2 . 1 6 8 . 0 0 0 . 0 0 1 │
└─────────────────────────────┘
```

```
┌─────────────────────────────┐
│ P T # 2      H T T P   P o r t │
│                  0 0 0 8 0 │
└─────────────────────────────┘
```

Step 2
Click the [SET] button.

Step 3
Select the desired network port by pressing the arrows button (◄ or ►).
PT#1: Camera port
PT#2: Client PC port
PT#3: Maintenance port

Step 4
Display the desired settings item by pressing the arrows button (▼ or ▲).

Step 5
After confirming that the cursor is positioned on "＞", press the [Set] button, and move the cursor to the number area.

Step 6
Set the value as follows. The cursor appears as a "_" (underscore).
To move the cursor: Press the arrows button (◄) or (►).
To input values: Press the arrows button (▼) or (▲).

Step 7
After setting the value, press the "ESC" button to move the cursor on "＞" and finalize the setting.

Step 8
To set the next item, press the arrows button (▼) or (▲) to change the menu screen.

Step 9
Repeat steps 5 – 7 to set other items.

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 "192.168.1.XX (a number from 2 to 254 except 250)" to access this unit.
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.

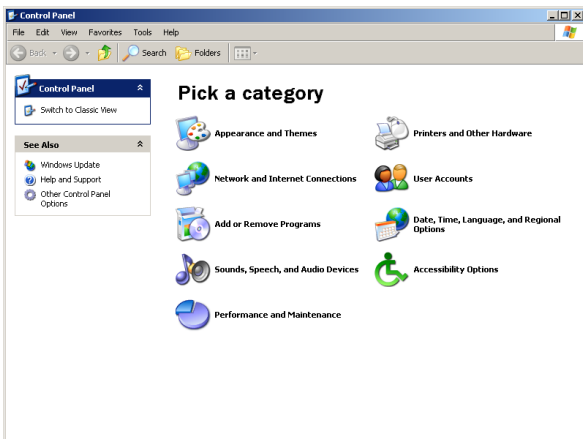### Screenshot 1
Start just after the PC is started up.

Step 1
On the taskbar, click "Start", and then click the "Control Panel".

Important:
 Log in to the PC as an administrator.

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.
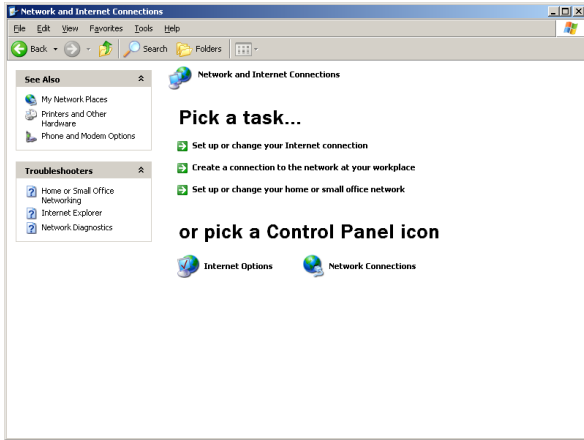
Step 3

Click "Network Connections".

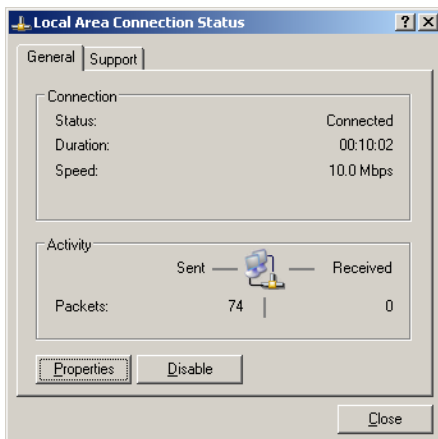**Screenshot 4**

The "Network Connections" window will be displayed.
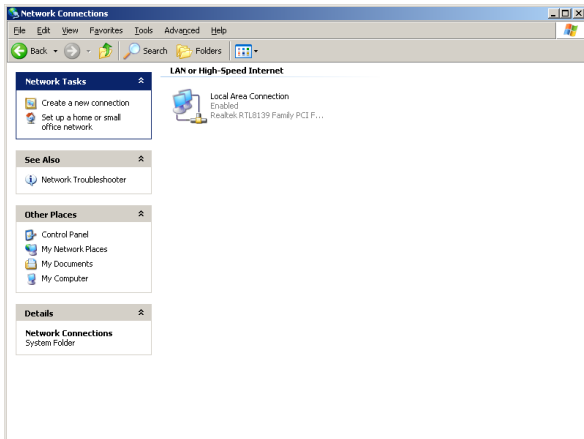
Step 4

Double click "Local Area Connection".

Screenshot 5

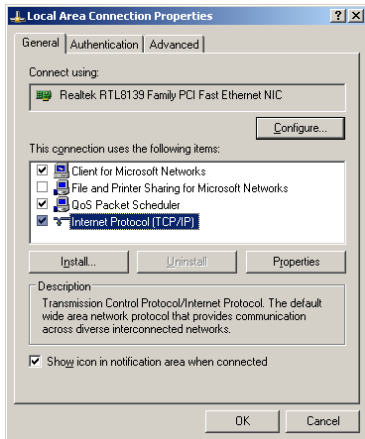The "Local Area Connection Status" window will be displayed.

Step 5

Click "Properties".

Screenshot 6
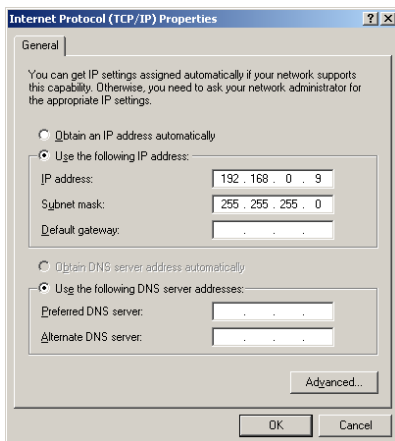
The "Local Area Connection Properties" window will be displayed.

Step 6

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

Screenshot 7

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

Step 7

Click "Use the following IP address" and enter the IP address and the subnet mask as follows;
  • IP address: 192.168.1.100
  • 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.

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 73)

② **Access restrictions by changing the HTTP port**
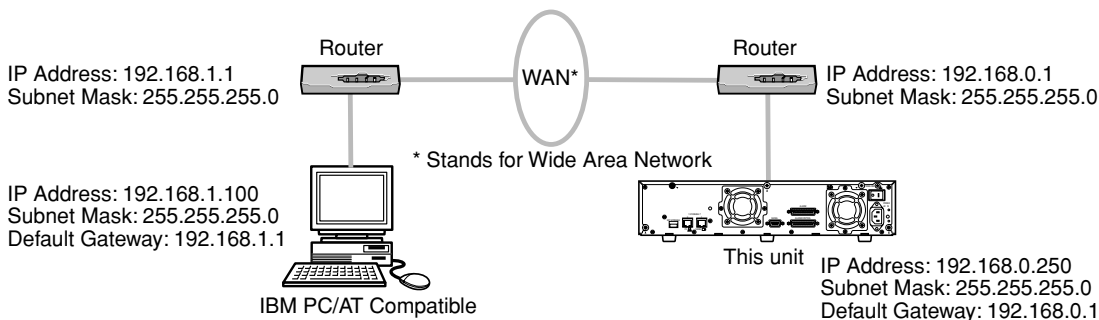It is possible to prevent illegal access such as port scanning, etc. by changing the HTTP port number. (page 63)

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.
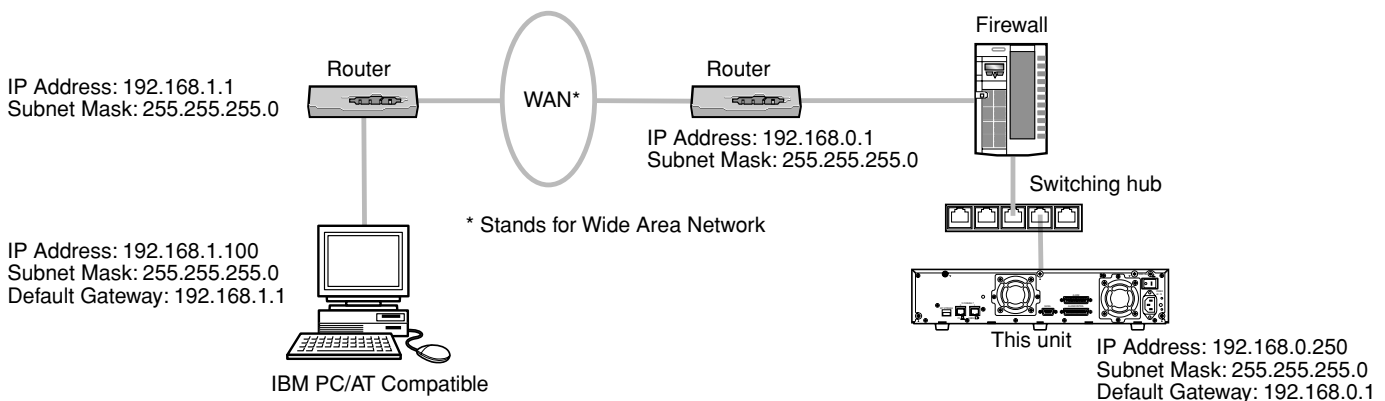

Important:
The settings of the unit will be different depending on the settings of the LAN or the Internet service provider to which the unit is to be connected. Refer to an administrator of each network for further information about the respective network.

[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

* Stands for Wide Area Network

IP Address: 192.168.1.100
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.1.1

This unit   IP Address: 192.168.0.250
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.0.1

IBM PC/AT Compatible

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

* Stands for Wide Area Network

IP Address: 192.168.1.100
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.1.1

This unit   IP Address: 192.168.0.250
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.0.1

IBM PC/AT Compatible

Display the Operation Window

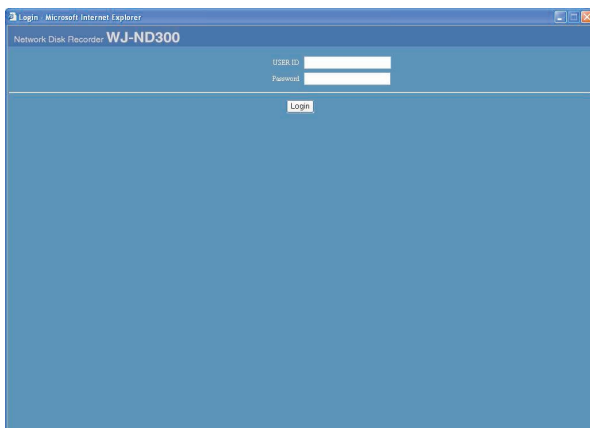To display the operation window to operate the unit from the web browser installed on the PC, proceed as follows.

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 set IP address of this unit.
- 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 97.

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 name and password registered on this unit.

Important:
- Refer to a system administrator for the set user name and password.
  Refer to page 75 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 74 for descriptions of how to change the password.
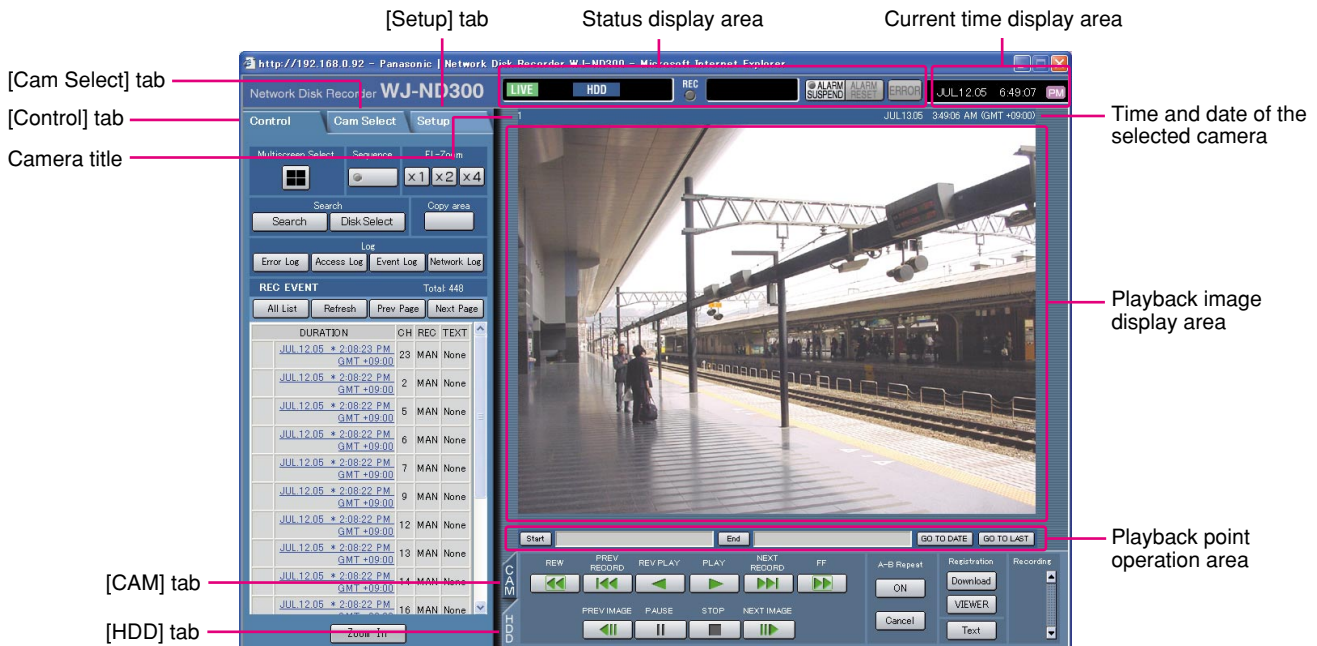
The top page will be displayed.

Click the buttons or the tabs for operations.

Important:
If a message is displayed on the information bar, see page 97.

About the Operation Window

Top Page

[Setup] tab Status display area Current time display area

[Cam Select] tab

[Control] tab

Camera title

Time and date of the selected camera

Playback image display area

Playback point operation area

[CAM] tab

[HDD] tab

[Control] tab (page 18)
This tab is for performing operations such as searching for recorded pictures on an HDD and copying recorded pictures into the copy area of the HDD. From this tab, 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 results or log information will also be displayed on this page.

[Cam Select] tab (page 19)
The switcher functions such as switching camera channels are operable on this page.

[Setup] tab (pages 20 and 21)
Operations for setup of this unit can be performed on this tab. Using the setup menu (Quick) and the setup menu (Advanced)

Status display area (Page 22)
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 (current camera time for live pictures and recorded time for recorded pictures) at the top right. Clicking the camera title during quad display will display the clicked picture on a single screen.

Playback point operations area (page 24)
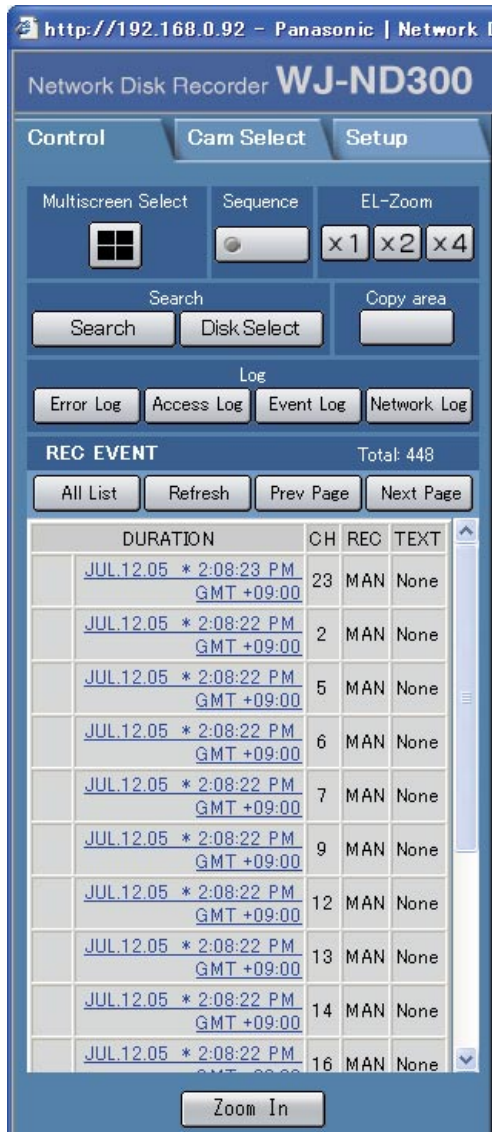It is possible to mark playback points or skip to the latest recorded image.

[HDD] tab (page 24)
Operation for recorded images such as playback or downloading (saving) recorded images can be performed on this page.

[CAM] tab (page 25)
Perform the camera operations such as zooming, focusing, auto functions, etc. on this panel.

[Control] Tab

[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 [Advanced] – [System] – [Basic Setup] – [Monitor Display Setup] of the setup menu.

[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 lamp 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
| Search | **[Search] button:** The recording event search will be displayed. 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).)
| Disk Select | **[Disk Select] button:** The disk select window will be displayed. Use this button to select a disk to be played/searched. (Refer to the Operating Instructions (PDF).)

[Copy] box
The copy window will be displayed by clicking this button. This window is used to copy recorded images into the copy area of the HDD.

[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 name, and 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] Tab
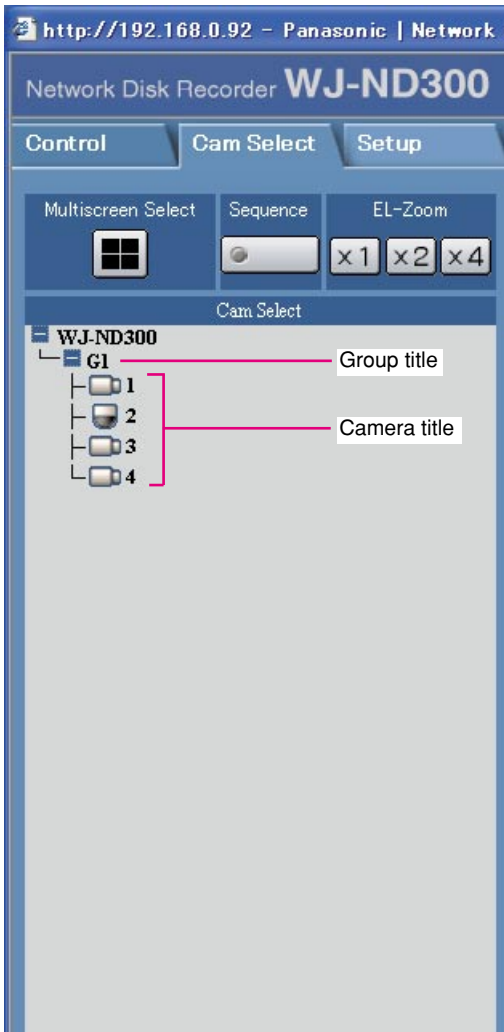
[Multiscreen Select] box
▦ [Multiscreen] button:
Up to 4 camera images can be displayed simultaneously on a multi-screen.
Each time the button is clicked, the camera picture is changed to quad display according to the settings made in [Advanced] – [System] – [Basic Setup] – [Monitor Display Setup] of the setup menu.

[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.

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

[×1] : 1x   [×2] : 2x   [×4] : 4x

[Cam Select] box
Clicking the camera title will display a list of cameras connected to the unit.
Images from the selected camera channel will be displayed on the image display area by clicking one of camera names.

[Setup] Tab (Quick Setup Menu)
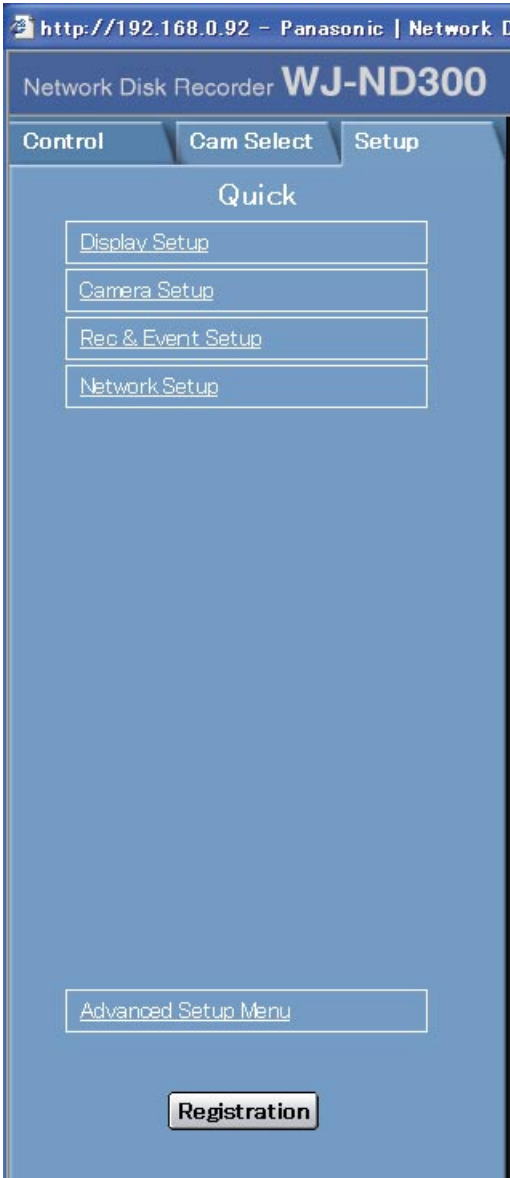
Display Setup
This button is for performing basic settings such as date, time, and language display. Refer to page 28 for further information.

Camera Setup
This button is for performing camera network settings and group settings. Refer to page 30 for further information.

Rec & Event Setup
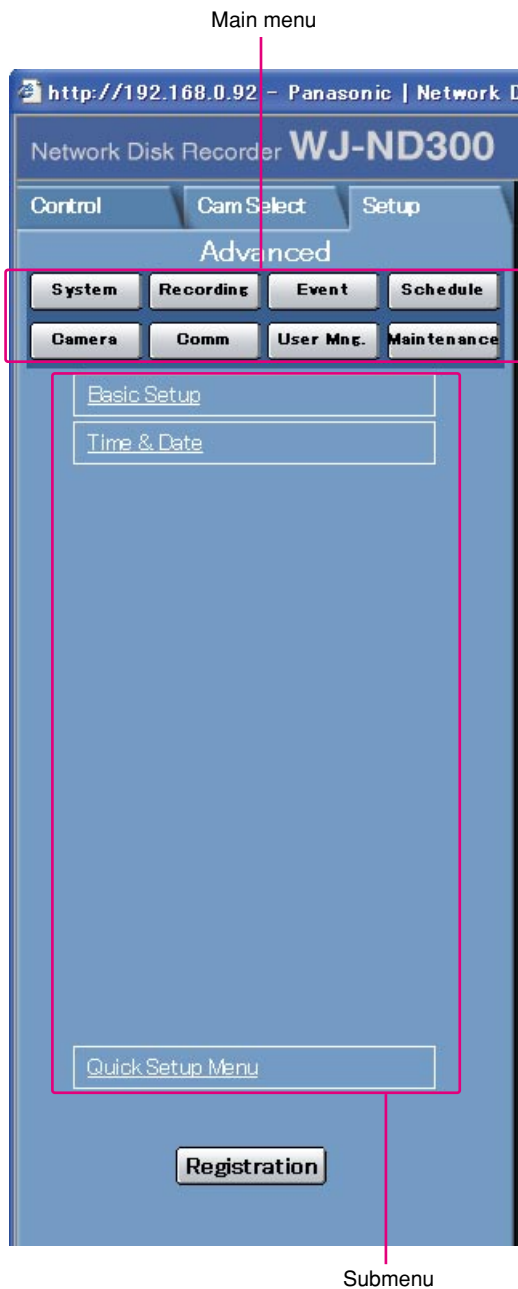Performs the basic settings for recording operation and for event action. Refer to page 31 for further information.

Network Setup
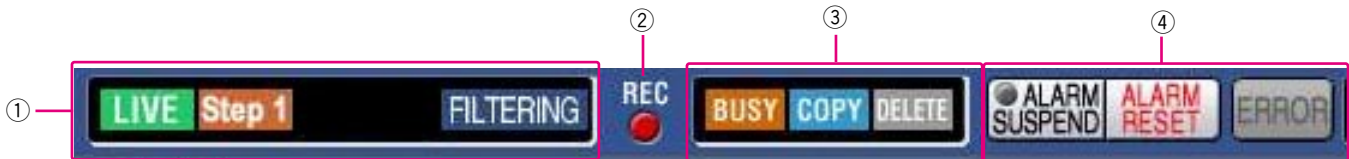Settings for a network can be performed. Refer to page 34 for further information.

Registration **[Registration] button**
Applies the settings to this unit. Click this button to complete the setting after editing on the Setup menu.

[Setup] Tab (Advanced Setup Menu)

Main menu

Submenu

Important:
When the settings are applied, all users who have logged in to this unit will be forcibly logged out.

[System] button
The menu for the required system settings to activate this unit will be displayed. Refer to page 41 for further information.

[Recording] button
The menu for the recording settings will be displayed. Perform the basic settings for recording and the settings for emergency recording. Refer to page 45 for further information.

[Event] button
Displays the setting menu for event actions of each event type (camera site alarm, terminal alarm and command alarm). Refer to page 48 for further information.

[Schedule] button
The menu for the settings of the recording schedule (performs recording/event action by designating the time and a day of the week) will be displayed. Refer to page 52 for further information.

[Camera]
This button is for performing camera network settings, group settings and sequence operation settings.
Refer to page 58 for further information.

[Comm] button
The menu for basic network settings will be displayed. Refer to page 62 for further information.

[User Mng.] button
Displays a menu for registering user information. Refer to page 73 for further information.

[Maintenance] button
The menu for the settings of the hard disk will be displayed. Refer to page 80 for further information.

[Registration] button
Applies the settings to this unit. Click this button to complete the setting after editing on the Setup menu.

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.

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

   A·B ▶ :
   Indicates that the A-B repeat playback mode is active.

   A·B ◀ :
   Indicates that the A-B repeat reverse playback mode is active.

   A·B ▶▶ :
   Indicates that the A-B repeat fast playback mode is active.

   A·B ◀◀ :
   Indicates that the A-B repeat fast reverse playback mode is active.

   A·B ❚❚ :
   Indicates that the A-B repeat pause mode is active.

   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 [STEP1] – [STEP7]:
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 playback of a recorded image stored in the normal recording area or the event recording area of the built-in hard disk of this unit is currently being selected.

   HDD COPY [HDD COPY]:
   Indicates that the HDD copy area is currently being selected.

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

   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 **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.

COPY **[COPY]:**
Indicates that copying is being performed.

DELETE **[DELETE]:**
Indicates that deletion of a recorded image is being performed.

④ **Indicates information about events and errors.**

ALARM SUSPEND **[ALARM SUSPEND]:**
Clicking this button will temporarily disable alarm detection. (Refer to the Operating Instructions (PDF).)

ALARM SUSPEND **[ALARM SUSPEND]:**
This indication will be displayed while an alarm is being suspended.

ALARM RESET **[ALARM RESET]:**
Indicates an event occurrence. The alarm display action will be canceled by clicking this button. (Refer to the Operating Instructions (PDF).)

ALARM RESET **[ALARM RESET]:**
Indicates no event occurrence.

ERROR **[ERROR]:**
Indicates an error occurrence.
Refer to the Operating Instructions (PDF) for further information about error.

ERROR **[ERROR]:**
Indicates no error occurrence.

Playback Point Operation Area

① Indicates the start time and the end time of a down-load or a A-B repeat. (Refer to the Operating Instructions (PDF).)

[Start] **[Start Time]:**
Indicates the start time for the time and date of the image to be downloaded.

[End] **[End Time]:**
Indicates the end time for the time and date of the image to be downloaded.

② [GO TO DATE] **[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] **[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 per-formed.

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

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

[FF] button
Fast playback will be performed. Playback speed 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 pausing.

[PAUSE] button
Playback will be stopped when this button is clicked dur-ing playback. Playback will be resumed when this but-ton 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 pausing.

[A-B Repeat] box
The A-B repeat playback will be performed.
　[ON] **[Start Time]:**
　　Starts repeated playback of images between the A-B repeat start/end points.
　　Date and time of the A-B start/end points will be displayed in the playback position operations area.
　[Cancel] **[Cancel]:**
　　The A-B repeat playback will be canceled.

[Registration] box
Downloads the image currently playing to a PC.
　[Download] **[Download]:**
　　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] **[VIewer]:**
　Clicking this button will start downloading the viewer software that can play downloaded images.

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

[Recording] box
The recording button and the recording stop button will be displayed when the ▲ button is clicked.
Displaying the recording button and the recording stop button will be unavailable when the ▼ button is clicked.
　[●] **[Recording] button:** Starts manual recording.
　[□] **[Stop recording] button:** Stops manual recording.

Important:
• To display the [Recording] button and the [Stop recording] button, hold down the ▲ button until they are displayed.

[CAM] Tab

Control pad/buttons
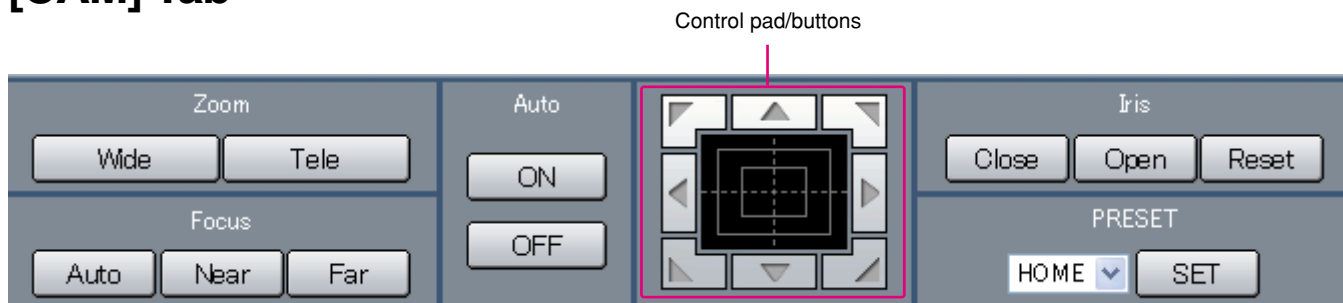
[Zoom] box
Zooming can be adjusted by clicking the [Wide] [Wide] button or the [Tele] [Tele] button.

[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] box
The auto function of the camera will start by clicking the [ON] [ON] button. The auto function can be stopped by clicking the [OFF] [OFF] button.

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.

[Iris] box
The iris can be adjusted by clicking the [Close] [Close] button or the [Open] [Open] button. It is possible to reset the set iris by clicking the [Reset] [Reset] button.

[PRESET] box
Moves a camera to the preset position registered in advance. Click the [SET] [SET] button after selecting a preset number by clicking the ▼ button.
Registering preset positions is required to perform the preset function. (Refer to the operating instructions of the camera in use for descriptions of how to register the preset positions.)

Setup Menu (Quick)

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] tab.
Using the setup menu (Quick) and the setup menu (Advanced) First, check the settings items of the setup menu (Quick) and perform the settings. When more detailed settings are required, perform the settings on the setup menu (Advanced). Refer to page 36 for further information about the setup menu (Advanced).
The following are available on the setup menu (Quick).

Setup Menu (Quick) Chart

Setup items	Description	Page
Display Setup	Perform the display settings such as the display position of the camera title and time, and the settings for other basic operations of this unit.	28
Camera Setup	For performing camera network settings and group settings.	30
Rec & Event Setup	Perform the basic settings for recording operation and for event action.	31
Network Setup	Settings for a network can be performed.	34

Basic Operation with the Setup Menu (Quick)

Screenshot 1

Start operation from the top page.

Step 1

Click the [Setup] tab.
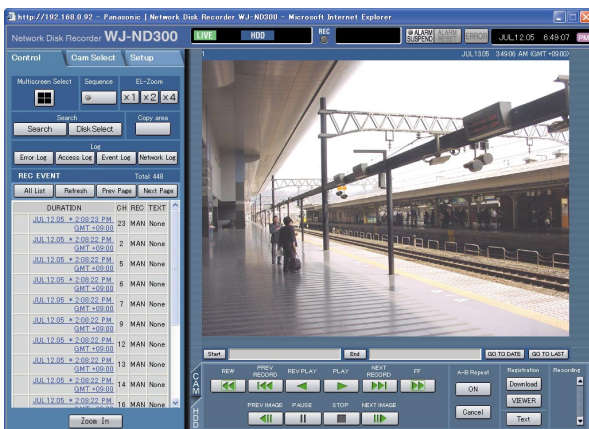
Screenshot 2

The setup menu (Quick) will be displayed.
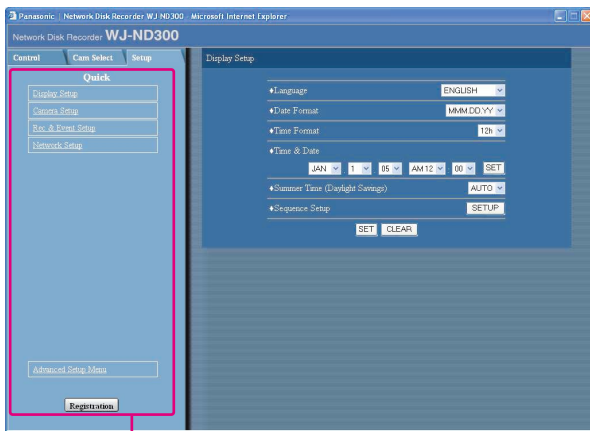
Menu

Screenshot 3

The settings page of the selected menu will be displayed in the image display area.
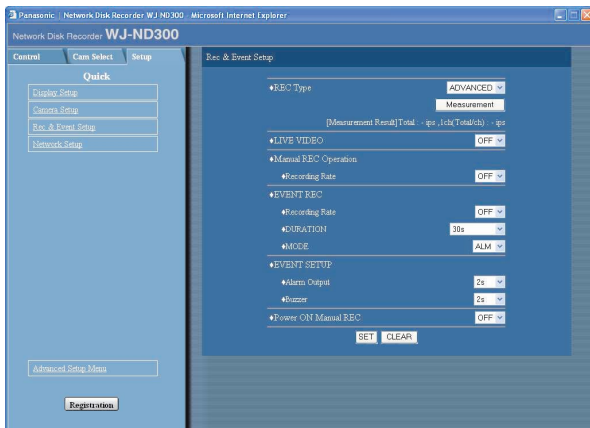
Step 2

Click an item on the setup menu (Quick).

Note:

When "ADVANCED" is selected for "REC Type" of "Rec & Event Setup" on the setup menu "Quick" (page 32), the setup menu (Advanced) will be displayed when the setup tab is clicked. In this case, click "Quick Setup Menu". The top setup menu (Quick) will be displayed.

Step 3

Perform the settings for each item.
Click the [SET] button after completing the settings.
When the [CLEAR] button is clicked, the contents of the settings will be cleared.

Step 4

To complete the settings, click the [Registration] button.
→ The settings will be applied.

Important:
- If the settings are applied, all login users will be forcibly logged out.
- The settings will not be applied by clicking the [SET] button in step 3. To apply the settings, click the [Registration] button on the setup menu (Advanced).
- Recording is interrupted for about 4 seconds after changing the settings and clicking the [Save] button.
- If an unnecessary status bar or scroll bar is displayed in the popup window, see page 97.

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Display/System Settings [Display Setup]

Perform the time and date, display settings such as the time and date display, the camera title display, the sequential display and the language setting.

Click "Display Setup" on the setup menu (Quick) to display the display settings window.
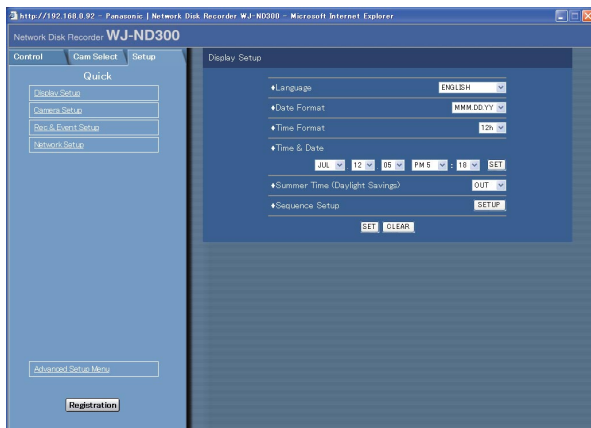
Step 1

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:
Live images will turn to black screen and recording will not be performed for around 4 seconds just after changing the time and date settings such by editing the time and date settings or by shifting to/from summertime.

Setup items

■ Language

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

■ Date Format

Select a date format to be displayed from the following.
Example: (Ex. April 1, 2005)
YY.MM.DD: APR.1.05
MMM.DD.YY: APR.1.05
DD.MMM.YY: 1.APR.05

■ Time Format

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

■ Time & Date

Adjust the current time and date.
Enter year, month, day, hour, minute and second in order, move the cursor to "SET" and click the SET button.

■ Summer Time (Daylight Savings)

Perform the settings for summer time from the following.
OUT: Does not function.
AUTO: Applies summer time in accordance with the setting of summer time. (Refer to pages 43 and 44 for the descriptions of how to perform the settings.)

■ Sequence Setup

Perform the settings for the sequential display of live images.
The following window will be displayed when the [SETUP] button is clicked.
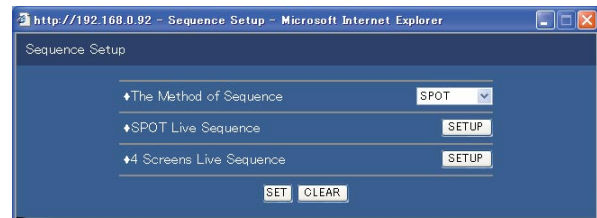
Select "Single screen" or "4-Screen" as the sequence. Clicking the [SET] button for the selected sequence will display the following window for setting the various items. Click the [SET] button after completing the settings, and close the window by clicking the [×] button at the top right of the window.
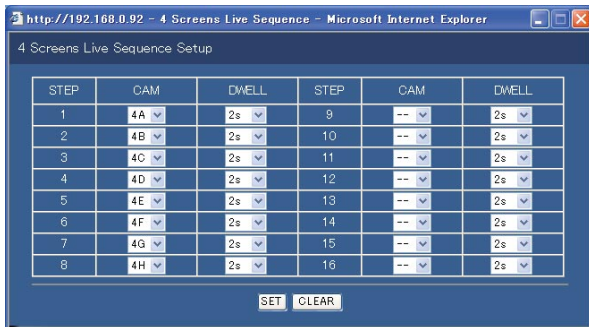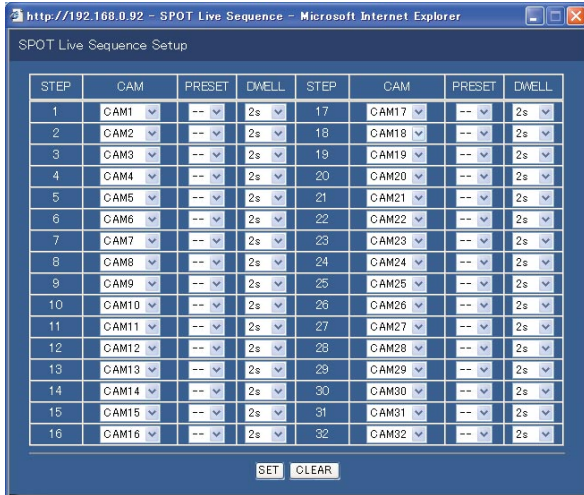
[PRESET POSITION]
Select a camera preset position (--, 1 to 16). Selecting "--" will not move the camera to the preset position.

[DWELL]
Select an interval time to go to the next sequential step from 1 - 30 seconds (in 1 second intervals).

[CAM]
Select a camera image to be displayed at each step from the following.
--: Skips the selected step.
CAM1 - 32: Displays an image from the selected camera channel on a single screen.
4A - 4H: Switches the images of the preset camera groups (A – H) of 4 channels in sequence on a 4-Screen, starting from A.
Camera groups can be set from [System] – [Basic Setup] – [Monitor Display] on the setup menu (Advanced) (page 41).

Camera Network Settings and Group Settings [Camera Setup]

Performs network settings such as camera IP address and port number, and group settings.

Click "Camera Setup" on the setup menu (Quick) to display the camera setting window.
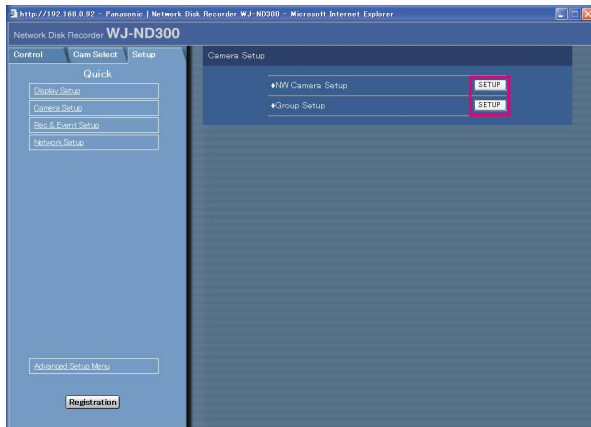
Step 1

Click the [SETUP] button and perform the settings for each item.
Refer to the following for further information about the settings for each item.

Setup items

■ NW Camera Setup

Perform the network camera settings such as the camera IP address and the port number. 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.
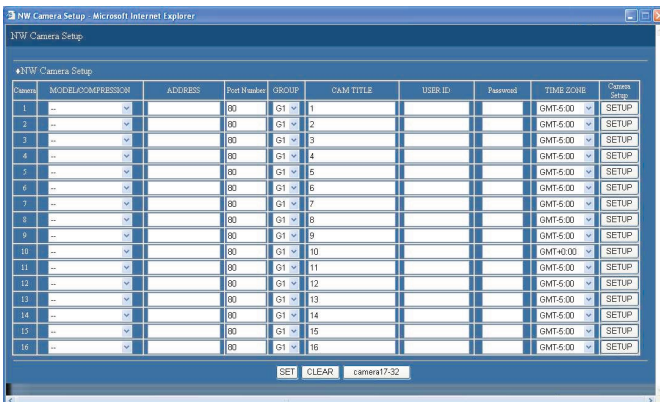
[MODEL/COMPRESSION]
Select a camera number and image compression method.

[ADDRESS]
Enter an IP address. 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 - G8).

[CAM TITLE]
Set the camera title displayed on the [Cam Select] tab, etc. Enter up to 16 alphanumeric characters.

[USER ID]
Set the user name 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.

[TIME ZONE]
Displays the time zone of the camera.

[Camera Setup]
Clicking the [SET] button of the desired camera will open the camera setting menu. Opening the camera setting menu is possible only if [Comm] – [Basic Setup] - [Port Forwarding] on the setup menu (Advanced) are set to "ON".

■ Group Setup

Displays the group title of the camera. 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.
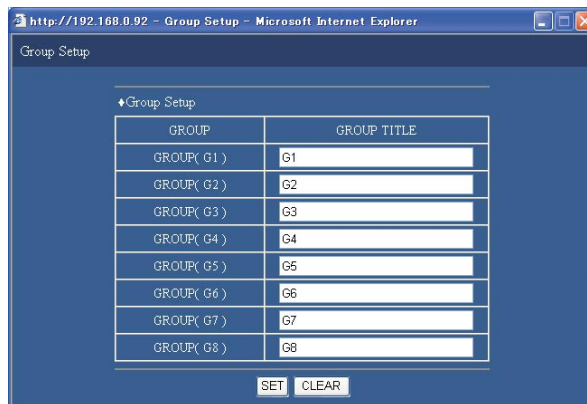
Displays the group title of the camera. Enter up to 16 alphanumeric characters.
Available characters are the same as for the camera title.

[Rec & Event Setup]

Perform the settings for the basic recording and the settings for event actions of each event type (camera site alarm, terminal alarm and command alarm).

Screenshot 1

Click "Rec & Event Setup" on the setup menu (Quick) to display the recording & event setup window.

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

■ REC Type

Select "QUICK" or "ADVANCED" for validation of the recording settings.
QUICK: The recording settings set on the setup menu (Quick) will be validated when recording.
ADVANCED: The recording settings set on the setup menu (Advanced) will be validated when recording.

Note:
• When "QUICK" is selected, the setup menu (Quick) will be displayed by clicking the [Setup] tab. When "ADVANCED" is selected, the setup menu (Advanced) will be displayed by clicking the [Setup] tab.
• When "QUICK" is selected, the following setup items of "Schedule" (Advanced) will not function. When it is necessary to function the following items, select "ADVANCED".

Submenu	Setup items	Status
Time Table	FTP SEND BY PERIODIC TIMER	Disabled
	ERROR REPORT MAIL	Disabled
	FTP Alarm Sending	Disabled
	Alarm Message	Functions normally (Fixed to ON.)
	Individual Alarm Notification	Disabled
	Alarm Message	Disabled
Program	Program 1 - 4	The settings performed on the setup menu (Advanced) will not be validated. The settings performed on the setup menu (Quick) will be validated. *
Special Days		Disabled

* To perform the schedule recording, perform the settings for "Time Table" and "Program".

[Measurement] Button
It is possible to start calculation of maximum value of recording rate/transmission rate (ips) that can be set for "Live video", "Manual recording" and "Event recording" by clicking this button.
Recording will stop for around 90 seconds due to the calculation.

■ LIVE VIDEO

Set the transmission rate of live images from cameras.
The following are available for the transmission rate.
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

■ Manual REC Operation

Perform the recording rate for manual recording.
The following are available for "Recording Rate".
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

■ EVENT REC

Set the recording rate, recording duration and the event action mode when an event (site alarm, terminal alarm, command alarm) occurs.
The following are available for "Recording Rate".
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
The following are available for "Time" (recording duration).
1 s - 10 s (in 1 second intervals)/20 s/30 s/1 min -
10 min (in 1 minute intervals)/20 min/30 min/40 min/
50 min/ 60 min
MANUAL: Recording will be performed while alarm signals (camera site alarm, terminal alarm, command alarm) are being supplied.

CONTINUE: Recording will not stop until the [ALARM RESET] button is pressed.

Note:
When "MANUAL" is selected for "Time" (recording duration), recording will be performed for at least 8 seconds at an event occurrence as long as the alarm is not canceled.

The following are available for "Operation Mode" (event action mode). Refer to the Operating Instructions (PDF) for further information about each event action mode.

ADM (Activity Detection Mode): Performs recording, preset function and writing an event log at an event occurrence. Other event actions will not be performed.

ALM (Alarm Mode): Performs recording, preset function and writing an event log, supplying the alarm output and sounding the buzzer according to the settings for "Event Setup".

OFF: Performs only recording of the event log. Other event actions will not be performed.

■ EVENT SETUP
Perform the settings for the alarm output duration and the buzzer sound duration at an event (camera site alarm, terminal alarm or command alarm) occurrence.

The following are available for alarm output duration. When OFF is selected, the alarm output will not be supplied.
(s: second, min: minute)
1 s - 30 s (in 1 second intervals)/40 s/50 s/1 min/2 min/ 3 min/4 min/5 min

EXT: The alarm output will continue until the [ALARM RESET] button is pressed.

OFF: No alarm output is supplied.

REC: The alarm output will be supplied during recording is being performed.

The following are available for "Buzzer" (buzzer sound duration).
When OFF is selected, a buzzer will not sound.
1 s - 30 s (in 1 second intervals)/40 s/50 s/1 min/2 min/ 3 min/4 min/5 min

EXT: The buzzer will continue until the ALARM RESET button is pressed.

OFF: The buzzer will not sound.

REC: The buzzer will sound only during recording is being performed.

■ Power ON Manual REC
Select ON or OFF to determine whether or not to start recording when the power is turned on by the connected external timer (or the switch).

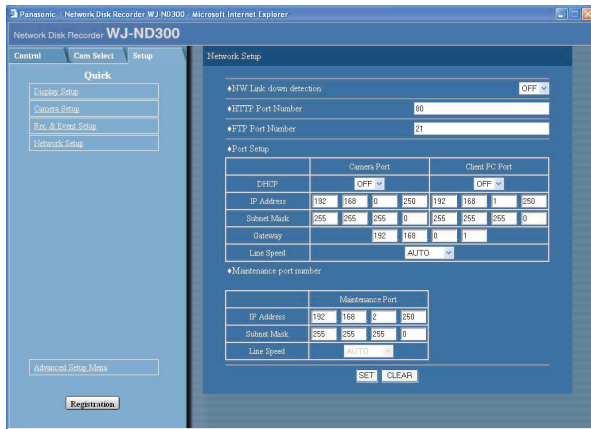**ON:** Manual recording will start automatically after completing the system check.

OFF: Manual recording will not start automatically after completing the system check.

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Perform the Settings for Network [Network Setup]

Basic settings for a network connection can be performed with this menu.

Click the "Network Setup" on the setup menu (Quick).
The "Network 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.

Setup items

■ NW Link down detection

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

■ 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.

Note:
• 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, the site alarm settings, and the port forwarding are unavailable for the HTTP port number.
20, 21, 23, 25, 42, 53, 67, 68, 69, 79, 80, 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, the site alarm settings, and the port forwarding 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 address 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.

[IP Address]
When "OFF" is selected for "DHCP", enter an IP address. For this unit, enter 4 units from the decimal numbers (0-254).

[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

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

Setup Menu (Advanced) Chart

Performing each setting item on the setup menu should be completed in advance to operate this unit.
The setup menu is operable on this tab.
Using the setup menu (Quick) and the setup menu (Advanced). First, check the settings items of the setup menu (Quick) and perform the settings. When more detailed settings are required, perform the settings on the setup menu (Advanced). Refer to page 26 for further information about the setup menu (Quick).
The following are available on the setup menu (Advanced).

Setup Menu (Advanced) Item List

Setup menu	Description	Page
System		
Basic Setup	Perform the settings for the basic operations of this unit.	41
Time & Date	Settings for the current time and for displaying the time and date can be performed.	42
Recording		
REC Setup	Basic recording setup can be performed with this menu.	45
Emergency REC Setup	Settings for emergency recording such as the recording time and recording rate can be performed on this menu.	47
Event		
Basic Setup	Settings for an event action can be performed with this menu.	48
Terminal Setup	Set event actions to be performed at a terminal alarm occurrence.	49
Site Alarm Setup	Set event actions to be performed at a site alarm occurrence.	50
Command Alarm	Set event actions to be performed at a command alarm occurrence.	51
Schedule		
Program	Create recording programs on this menu. Up to 4 programs can be created. Settings for recording actions such as the recording rate for each camera channel can be performed for each program with this menu.	52
Time Table	Create timetables for each day of the week, and assign a program to each timetable.	55
Special Days	Assign timetables to special days aside from other days of the week.	57
Camera		
NW Camera Setup	Perform the network camera settings such as the camera IP address and the port number.	58
Group Setup	Displays the group title of the camera.	59
Sequence Setup	Perform the settings for the sequential display of live images.	60

Setup menu	Description	Page
Comm		
Basic Setup	Settings for a network can be performed. Settings for a network connection such as settings of the IP address and gateway address can be performed.	62
DNS Setup	Basic network DNS settings can be performed with this menu. Settings relating to the DNS settings such as the domain name can be performed.	64
DDNS Setup	Basic network DDNS settings can be performed with this menu. Determine to enable or disable DDNS, or perform the settings of the registered user IDs.	65
Proxy Setup	Basic network proxy settings can be performed with this menu. Determine whether or not to use the proxy server, and perform the settings such as the server address settings, etc.	66
SNMP Setup	Perform the settings for the SNMP. Perform the settings for the status check of the unit, etc. by connecting the SNMP manager.	67
NTP Setup	Set this item when adjustment of the time is required to be set with the NTP server such as when setting the NTP server address.	68
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.	69
Mail Setup	Set this item to send e-mails to addresses registered in advance at an event or error occurrence.	71
Panasonic Alarm protocol	It is possible to send a mail to addresses registered in advance using Panasonic original transmission method when an event or a problem occurs. To receive messages using this function, the optional software (WV-AS65) is necessary.	72
User Mng.		
Basic Setup	Configure whether to enable or disable the user authentication and the host authentication.	73
Administrator Edit	Edit information of the registered administrators such as the password, the default screen, etc.	74
User Regist.	Set this item for user registration and user authentication. User name, password and operational level can be set.	75
User Edit/Delete	Correction or deletion of user information can be performed.	76
Host Regist.	Set this item for the host authentication by registering PCs (hosts) allowed to access this unit via a network. Operational levels and IP addresses of PCs can be set.	76
Host Edit/Delete	Correction or deletion of host information can be performed.	77
User Level	Functions operable in each user level can be set.	78

Setup menu	Description	Page
Maintenance		
Product Information	Versions of the software, the hardware (this unit) , MAC address, temperature inside the unit and software version of the connected extension unit will be displayed.	80
Disk Information	Hard disk information such as available capacity of the built-in hard disk or an extension unit will be displayed.	81
Partition Information	Available disk space size of the normal area, the event area, the copy area and the pre-recording areas will be displayed.	82
Network Information	Network information such as IP addresses of the connected devices, network line speed, the current settings for "NW BAND-WIDTH CONTROL", the maximum transmission rate, etc. will be displayed.	83
Disk End Mode	Perform the settings for action when running out of hard disk space.	84
HDD Capacity Warning	If the available hard disk capacity reaches a specified level, a warning will be displayed.	84
Data Delete	Data on the hard disk/external recording device will be deleted.	85
Save/Load	Contents of settings for this unit will be saved or loaded.	86
Config	It is possible to check the status of each recording area on the hard disk drive, and to perform the settings of the hard disk drives including the initialization (formatting).	88

Basic Operation with the Setup Menu (Advanced)

Screenshot 1

Start operation from the top page.

Step 1

Click the [Setup] tab.

Screenshot 2

The setup menu (Advanced) will be displayed.

Main menu

Step 2

Click the desired setup menu (Advanced).
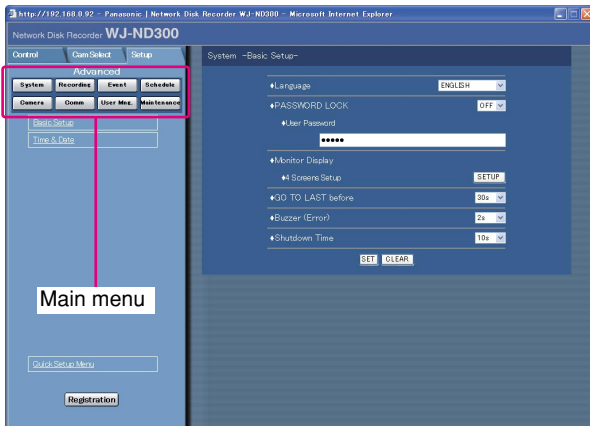
Note:

When "QUICK" is selected for "REC Type" of "Rec & Event Setup" (page 32), the setup menu (Quick) will be displayed by clicking the [Setup] tab. In this case, it is possible to display the setup menu (Advanced) by clicking "Advanced Setup Menu".

The submenus respective to the clicked button on the setup menu (Advanced) will be displayed.

Submenu

The settings page of the selected submenu will be displayed in the image display area.
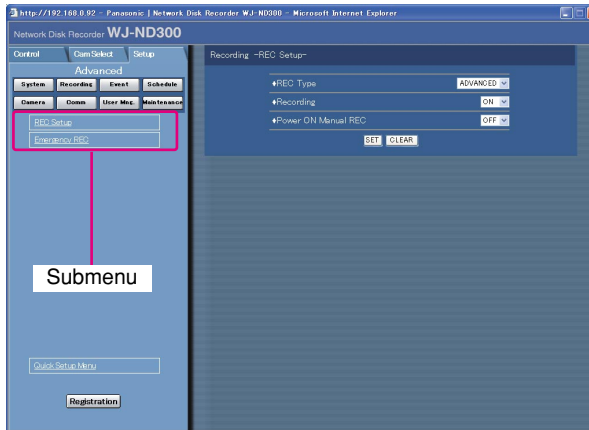
Step 3

Click the desired submenu on the setup menu (Advanced).
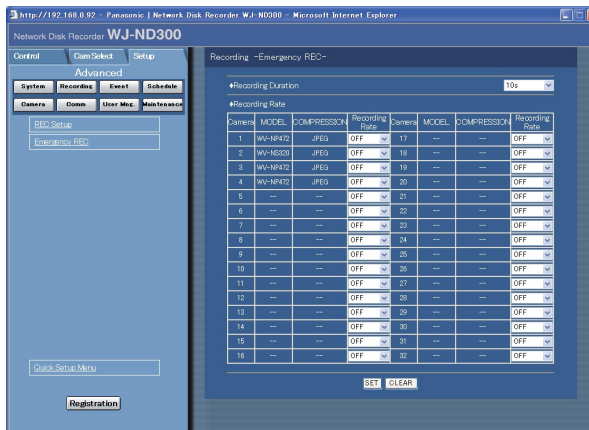
Step 4

Perform the settings for each item.
Click the [SET] button after completing the settings.
When the [CLEAR] button is clicked, the contents of the settings will be cleared.

Step 5

To complete the settings, click the [Registration] button.
→ The settings will be applied.

Important:
• If the settings are applied, all login users will be forcibly logged out.
• The settings will not be applied by clicking the [SET] button in step 4 yet. To apply the settings, click the [Registration] button on the setup menu (Advanced).

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.

Click the [System] button in the setup menu (Advanced) and then click "Basic Setup". The "Basic Setup" window 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.
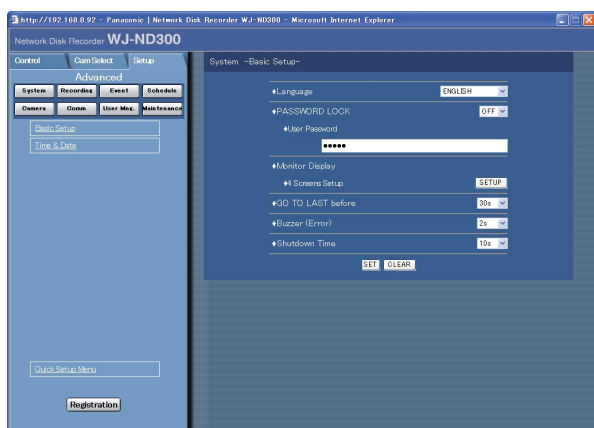
Setup items

■ Language
Select a language to be displayed on the web browser from the following.
JAPANESE/ENGLISH

■ PASSWORD LOCK
It is possible to lock the buttons on the front panel to make them unusable. It is necessary to set the password to be used to release the key lock when setting the key lock.
When the key lock is set once, the buttons on the front panel will be locked automatically if no operation is performed for around one minute, even after the key lock is released.
ON: Turn on the key lock function.
OFF: Turn off the key lock function.
Enter up to 5 numbers for the password.

Important:
Only the "LV1" user can perform the key lock settings. Refer to page 76 for further information about the user level.

■ 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-4H).
The following window will be displayed when the [Setup] button is clicked. It is possible to allocate 4 camera channels to each section (4A-4H). The section where the camera title is displayed will be the image display section to display images of the respective camera channel.
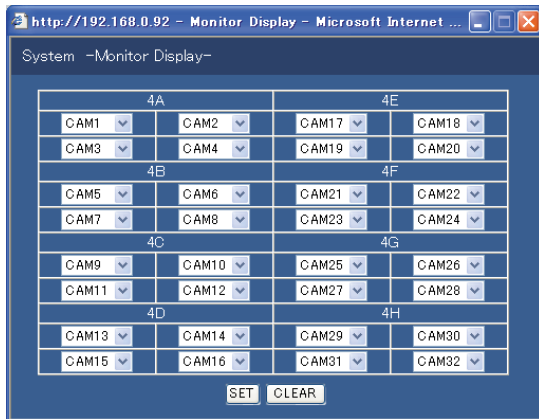
■ GO TO LAST before

Select a time to be skipped to when the [GO TO LAST] button is pressed during playback 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.

1 s - 30 s (in 1 second intervals)/**40 s/50 s/1 min/3 min/ 4 min/5 min** (in 1 minute intervals):
    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 [ALARM RESET] button is clicked.

■ 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.

Click the [System] button in the setup menu (Advanced) and then click "Time & Date". The "Time & Date" window will be displayed.
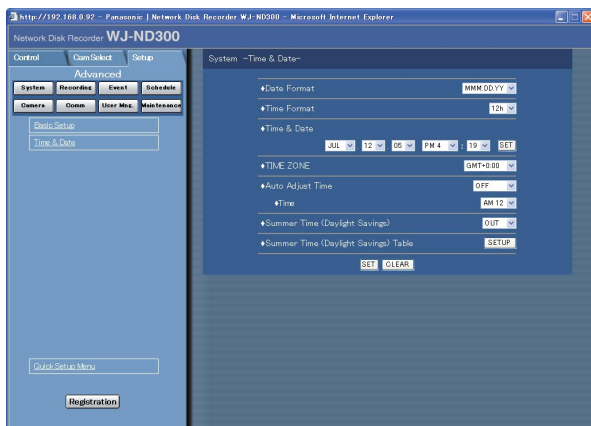
Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Click the [SET] button after completing the settings.

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Setup items

■ Date Format
Select a date format to be displayed from the following.
(Ex. April 1, 2005)
YY.MM.DD: APR.1.05
MMM.DD.YY: APR.1.05
DD.MMM.YY: 1.APR.05

■ 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.
Enter numbers in order for the year, month, day, hour and minute, and then click the [SET] button.

Important:
Live images will turn to black screen and recording will not be performed for around 4 seconds just after changing the time and date settings such by editing the time and date settings or by shifting to/from summertime.

■ TIME ZONE
Displays the time zone of the camera.

■ Auto Adjust Time
Select a method of auto clock adjustment from the following.
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 connector on the rear panel signal to the other connected 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 seconds when changing the present time (accurate within ±5 seconds) using the time adjustment input (pin no.20).
• When "SLAVE" is selected, this function works differently depending on the recording status. For further information, refer to page 20 of the operating instructions.

■ 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 accordance with the settings for switching to summer time (Refer to the following).

■ **Summer Time (Daylight Savings) Table**
Set the start (ON)/end (OFF) 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 click-
ing 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.

Functions for Recording [Recording]

Perform the settings for recording. Perform the basic settings for recording and the settings for emergency recording.

Basic settings for recording [REC Setup]

Perform the basic settings for recording.

Click the [Recording] button in the setup menu (Advanced) and then click "REC Setup". The "REC 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.

Setup items

■ REC Type

Select "QUICK" or "ADVANCED" for validation of the recording settings.
QUICK: The recording settings set on the setup menu (Quick) will be validated when recording.
ADVANCED: The recording settings set on the setup menu (Advanced) will be validated when recording.

Note:
• When "QUICK" is selected, the setup menu (Quick) will be displayed by clicking the [Setup] tab. When "ADVANCED" is selected, the setup menu (Advanced) will be displayed by clicking the [Setup] tab.
• When "QUICK" is selected, the following setup items of "Schedule" (Advanced) will not function. When it is necessary to function the following items, select "ADVANCED".

Submenu	Setup items	Status
Time Table	FTP SEND BY PERIODIC TIMER	Disabled
	ERROR REPORT MAIL	Disabled
	FTP Alarm Sending	Disabled
	Alarm Message	Functions normally (Fixed to ON.)
	Individual Alarm Notification	Disabled
	Alarm Message	Disabled

Submenu	Setup items	Status
Program	Program 1 - 4	The settings performed on the setup menu (Advanced) will not be validated. The settings performed on the setup menu (Quick) will be validated. *
Special Days		Disabled

* To perform the schedule recording, perform the settings for "Time Table" and "Program".

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

Important:
When OFF is selected for this setting, no recordings will be performed. Select ON for normal use except when required to stop recording forcibly such as when a problem occurred with the unit.

■ Power ON Manual REC
Select ON or OFF to determine whether or not to start recording when the power is turned on by the connected external timer (or the switch).
OFF: Manual recording will not start automatically after completing the system check.
ON: Manual recording will start automatically after completing the system check.

Settings for emergency recording [Emergency REC]

Perform the settings for emergency recording such as the recording time or recording rate. Refer to the provided operating instructions for further information about emergency recording.

Click the [Recording] button in the setup menu (Advanced) and then click "Emergency REC". The "Emergency REC" window will be displayed.
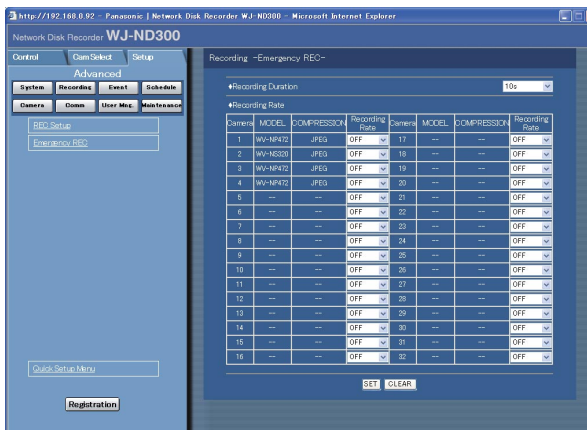
Step 1

Perform the settings for each item.

■ Recording Duration

Perform the settings for emergency recording such as the recording time and recording actions.
The following are available for the recording time.
1 s - 10 s (in 1 second intervals)/20 s/30 s/1 min - 10 min (in 1 minute intervals)/20 min/30 min/40 min/ 50 min/ 60 min

MANUAL: Recording will continue while the external switch is being held down.

CONTINUE: Recording will not stop until the [ALARM RESET] button is pressed.

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

■ Recording Rate

Perform the settings for emergency recording for each camera channel such as the recording rate or image quality.
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

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").

Step 2

Click the [SET] button after completing the settings.

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

Functions for Events [Event]

Perform the settings for event actions of each event type (site alarm, terminal alarm and command 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, terminal alarm, command alarm).

Screenshot 1

Click the [Event] button in the setup menu (Advanced) and then click "Basic Setup". The "Basic Setup" window will be displayed.
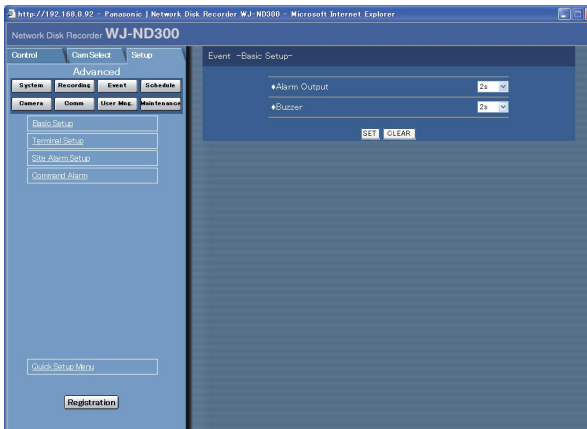
Step 1

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.
1 s - 30 s (in 1 second intervals)/40 s/50 s/1 min/2 min/ 3 min/4 min/5 min
EXT: The alarm output will continue until the [ALARM RESET] button is pressed.
REC: The alarm output will be supplied during recording is being performed.

■ Buzzer

Select ON or OFF to set whether or not to sound the buzzer at an event occurrence. The following are available for buzzer sound duration.
OFF: The buzzer will not sound.
1 s - 30 s (in 1 second intervals)/40 s/50 s/1 min/2 min/ 3 min/4 min/5 min
EXT: The buzzer will continue until the [ALARM RESET] button 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.

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Settings relating to the terminal alarm [Terminal Setup]

Set event actions at a terminal alarm occurrence for each camera channel.

Click the [Event] button in the setup menu (Advanced) and then click "Terminal Setup" to display the "Terminal Setup" window.
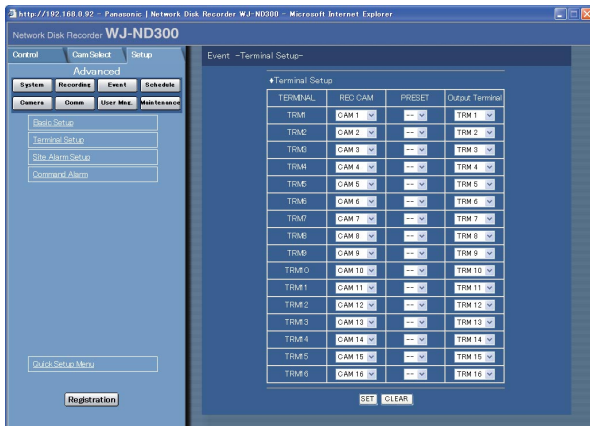
Step 1

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

[REC CAM]
Performs the settings for a camera channel currently used for recording.

[PRESET]
Select the preset position (--, 1-16) to which the camera will move at a terminal alarm occurrence for each terminal.
When "--" is selected, the camera will not move to the 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 original alarm from cameras, the port number used for receiving the original alarm, and the event actions for each camera channel at an original alarm occurrence.

Screenshot 1

Click "Event" on the setup menu (Advanced) and then click "Site Alarm Setup" to display the "Site Alarm Setup" window.
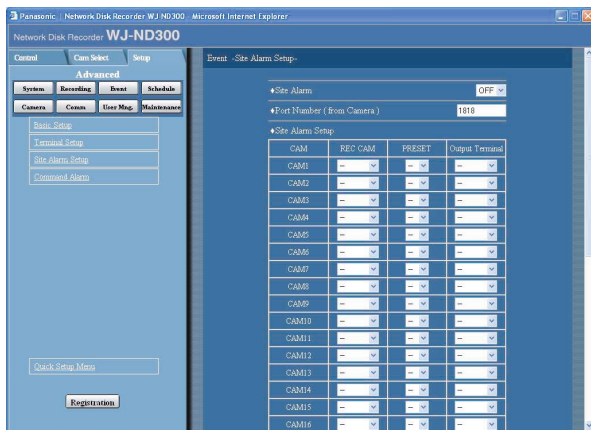
Step 1

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 currently used for recording.

[PRESET]
Select the preset position (--, 1-16) to which the camera will move at an alarm occurrence.
When "--" is selected, the camera will not move to the 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.

Perform the settings for command alarm [Command Alarm]

Set event actions at a command alarm occurrence for each camera channel.

Click the [Event] button in the setup menu (Advanced) and then click "Command Alarm" to display the "Command Alarm" window.
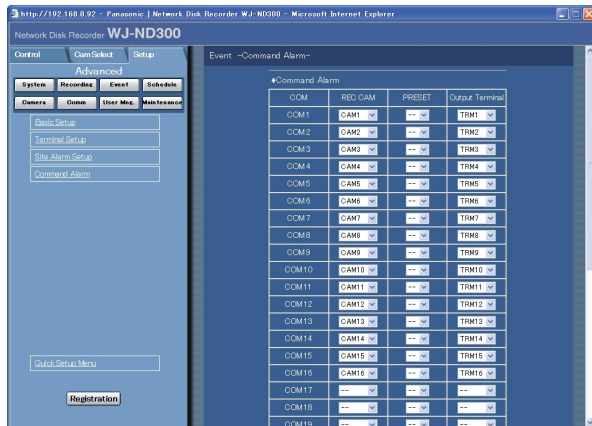
Step 1

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

[REC CAM]

Performs the settings for a camera channel currently used for recording.

[PRESET]

Select the preset position (--, 1-16) to which the camera will move at an alarm occurrence.
When "--" is selected, the camera will not move to the 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, etc.
It is possible to create special days apart from the normal schedule, and a recording 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 52)

↓

Create a timetable.	(page 55)

↓

Assign a program to a timetable.	(page 55)
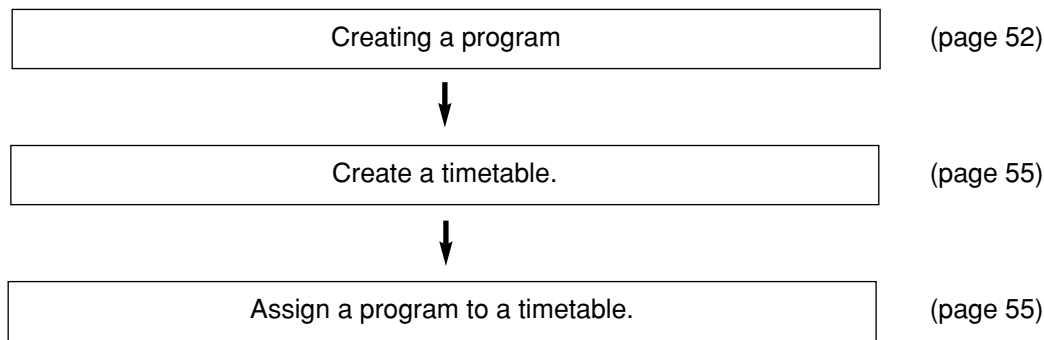
Creating a recording program [Program]

Up to 4 recording 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 menu (Advanced) and then click "Program" to display the "Program" window.

Step 1

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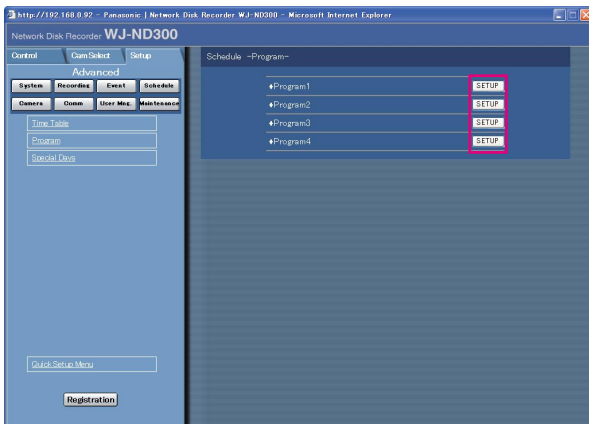
The "Program Setup" window will be displayed.

Perform the settings for each item.
Refer to the following for further information about the settings for each item.
When the [camera 17-32] button is clicked, the "CAM17-32" window will be displayed.

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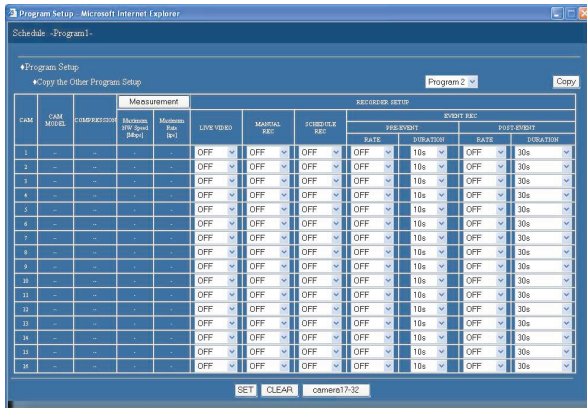
Setup items

■ 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.

Important:
Only the currently displayed page (the selected program) can be copied.

■ 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.
When OFF is selected, live image transmission will not be performed.
OFF/0.1 ips/0.2 ips/0.3 ips/0.4 ips/0.5 ips/1 ips/2 ips/3 ips/5 ips/10 ips/15 ips/ALL

[MANUAL REC]

Select the recording rate for manual recording.
OFF/0.1 ips/0.2 ips/0.3 ips/0.4 ips/0.5 ips/1 ips/2 ips/3 ips/5 ips/10 ips/15 ips/ALL
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/0.4 ips/0.5 ips/1 ips/2 ips/3 ips/5 ips/10 ips/15 ips/ALL
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 "RATE" (recording rate).
0.1 ips/0.2 ips/0.3 ips/0.4 ips/0.5 ips/1 ips/2 ips/3 ips/5 ips/10 ips/15 ips/ALL
OFF: No recording will be performed.

Notes:
• 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/COMPRESSON").
• When selecting "0.5 ips" or less for the recording rate, it is necessary to select "10 s" or longer for the recording duration.
• "ALL" is available only for the post-event recording. It is unavailable for the pre-event recording.

Important:
Depending on the network environment, the recording duration of the recorded data may be longer that the set duration for the pre-event recording.

The following recording duration can be set.
• Pre-event recording
1 - 10 s (in 1-second interval)/20 s/30 s/1 - 10 min (in 1-minute interval)/20 - 60 min (in 10 minutes intervals)

- Post-event recording
  1 - 10 s (in 1-second interval)/20 s/30 s/1 - 10 min (in 1-minute interval)/20 - 60 min (in 10-minutes interval)
  MANUAL: Recording will continue while the external switch is being held down.
  CONTINUE: Recording will not stop until the [ALARM RESET] button is pressed.

Note:
When "MANUAL" is selected for "DURATION" (recording duration), recording will be performed for at least 8 seconds at an event occurrence as long as the alarm is not canceled.

■ Measurement
It is possible to start calculation of maximum value of recording rate/transmission rate (ips) that can be set for "LIVE VIDEO", "MANUAL REC" and "EVENT REC" by clicking this button.
Recording will stop for around 90 seconds due to the calculation.

Notes:
- Do not change any settings while calculation.
- Recording, playback and live image transmission will stop in the process of calculation. Other users who have logged in to this unit will be forcibly logged out. (They need to log in to this unit after the calculation is complete.)
- Calculation result is indicated as a reference value. It may come to a different result depending on the status of the network environment.

Set the time zone and assign programs [Time Table]

Create recording timetables for each day of the week, and assign a recording 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 menu (Advanced) and then click "Time Table" to display the "Time Table" window.
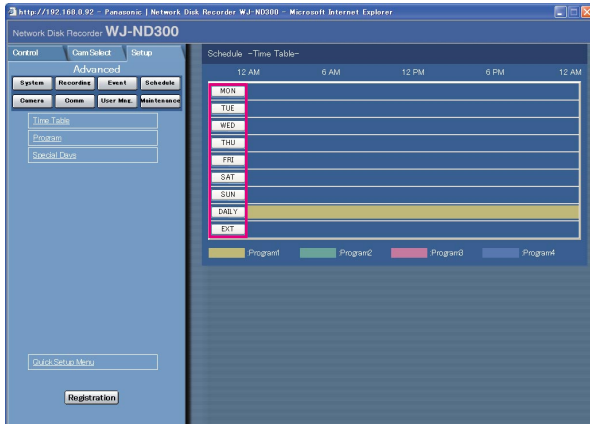
Step 1

Click the button of the desired day of the week.

Note:
When a signal is supplied from the ALARM/CONTROL connector on the rear panel (the external recording mode changeover terminal (pin no. 24)) of the unit will work with the set timetable for "EXT."

Screenshot 2

The timetable of the selected day of the week will be displayed.
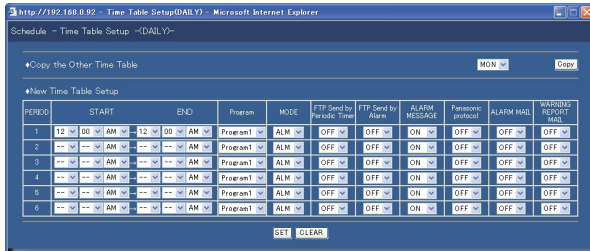
Step 2

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.

Screenshot 3

The "Time Table" window will be displayed again.
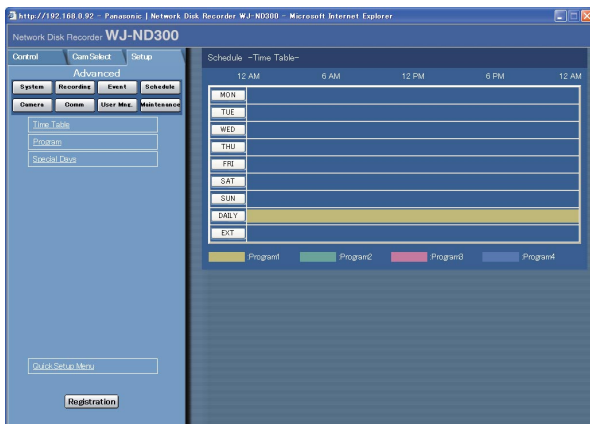
Step 4

The set timetables and programs will be applied.
Programs will be displayed with different colors.
Program1: Yellow
Program2: Green
Program3: Pale purple
Program4: Dark blue

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.

■ New Time Table Setup
Perform the settings of the following item for each time zone.

[START]
Set the start time of the time zone.

[END]
Set the end time of the time zone.

[Program]
Select the desired "Program".

[MODE]
Select the alarm mode to be activated at an alarm occurrence from the following.
ADM (Activity Detection Mode): Performs only recording, writing an event log and camera movement to a preset position at an event occurrence. Other event actions will not be performed.
ALM (Alarm Mode): Performs every event action according to the settings.
OFF: Performs only recording of the event log. Other event actions will not be performed.

[FTP Send by Periodic Timer]
Perform the "FTP Send by Periodic Timer" settings of the setup menu ("Comm" – "FTP Setup") first (page 69), and select "ON" or "OFF" to determine whether or not to send images to the FTP server periodically.

[FTP Send by Alarm]
Select "ON" or "OFF" to determine whether or not to send images to the FTP server at an event occurrence. (page 71)

[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 (or error information) to a PC according to the "Panasonic Alarm protocol" of the setup menu ("Comm" – "Panasonic Alarm protocol") (page 72).
To receive a notification (or error information) and display the contents of the notification, the optional software (WV-AS65) 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 71 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.

[WARNING REPORT MAIL]
Select ON or OFF to determine whether or not to send an error mail when a problem occurred. Refer to page 71 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 warning report 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.
- When the [CLEAR] button is clicked in step 2, the settings will be canceled.
- Repeat steps 1-4 to set programs of another day of the week.

Perform the settings of recording programs 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 a recording schedule to the specified special days.

Click the [Schedule] button in the setup menu (Advanced) and then click "Special Days" to display the "Special Days" window.
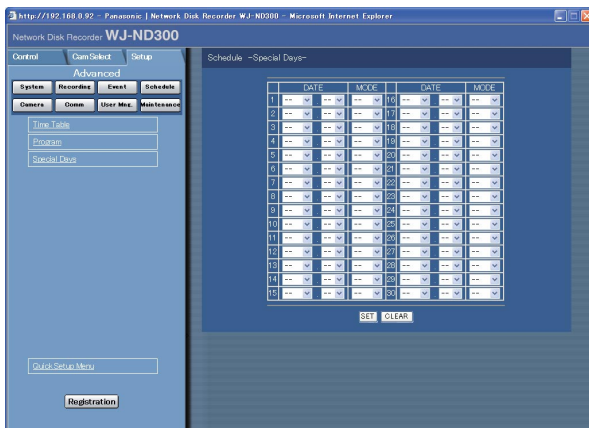
Step 1

Click the [∨] button and select date to be set as special day and the day of the week of the recording program to be assigned to the special day.

Step 2

Click the [SET] button after completing the settings.

Note:
When two or more created programs (programs 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 (EXT) → Special days → Day of the week → Daily.

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.

Click the [Camera] button in the setup menu (Advanced) and then click "NW Camera Setup" to display the "NW Camera Setup" window.

Step 1

Click the [SETUP] button.
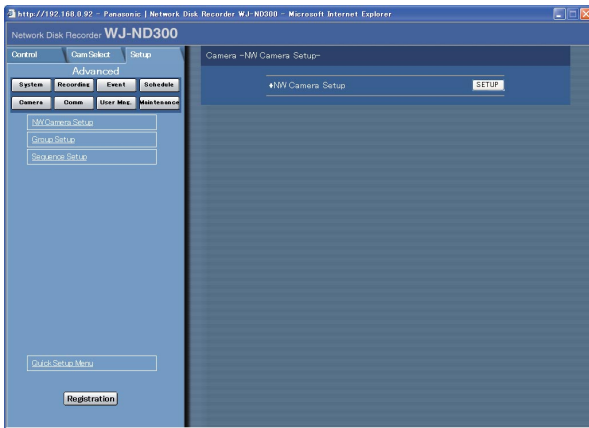
The "NW Camera Setup (Advanced)" window will be displayed.

Step 2

Perform the settings for each item.
Refer to the next page for further information about the settings for each item.
When the [camera 17-32] button is clicked, the "CAM17-32" window will be displayed.
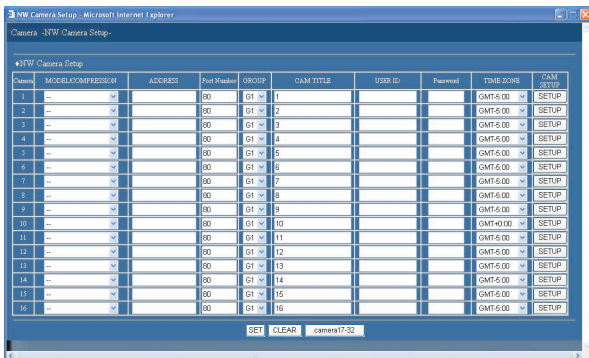
Step 3

Click the [SET] button after completing the settings.

Setup items

[MODEL/COMPRESSION]
Select the model of the camera and the image compression method.

[ADDRESS]
Enter an IP address. Enter up to 255 alphanumeric characters.

[Port Number]
Set the HTTP port number to be used for the camera. A number from 1 - 65535 is available.

[GROUP]
Select the desired group (G1-G8) to which the camera is to be belonged.

[CAM TITLE]
Set the camera title displayed on the [Cam Select] tab, etc. Enter up to 16 alphanumeric characters.

[USER ID]
Set the user ID to be used to access and log in the camera. Enter up to 32 alphanumeric characters.

[Password]
Set the password to be used to access and log in the camera. Enter up to 32 alphanumeric characters.

[TIME ZONE]
Displays the time zone of the camera.

[CAM SETUP]
It is possible to display the camera setup menu by clicking the [SETUP] button of the desired camera. Refer to the operating instructions of the camera in use for descriptions of how to perform the camera settings.

Important:
- The camera setup menu can be displayed only when "ON" is selected for "Port Forwarding" ("Advanced" – "Comm" – "Basic Setup" – "Port Forwarding").
- Depending on the network environment, some of the camera settings menu may not be displayed.

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

Set the title of the camera group.

Click the [Camera] button in the setup menu (Advanced) and then click "Group Setup" to display the "Group Setup" window.
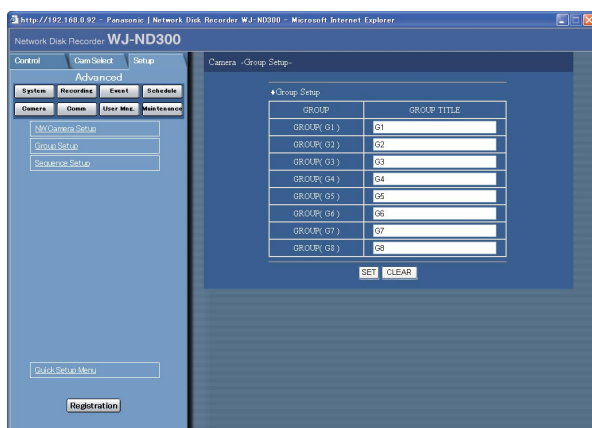
Step 1
Displays the group title of the camera. Enter up to 16 alphanumeric characters.
The available characters are the same characters available for the camera title.

Step 2
Click the [SET] button after completing the settings.

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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 menu (Advanced) and then click the [Sequence Setup] button to display the "Sequence Setup" window.
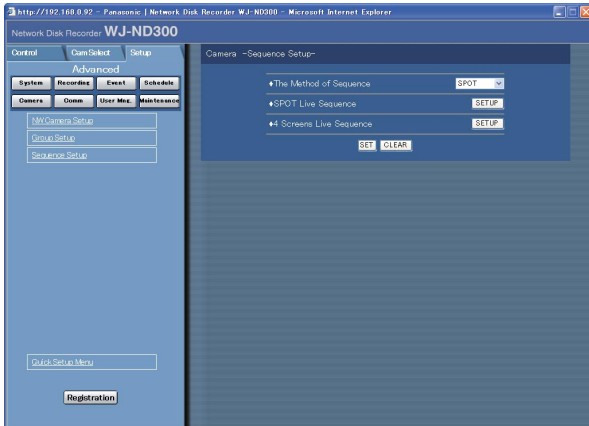
Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Click the [SET] button after completing the settings.

Setup items

[The Method of Sequence]

Select "SPOT" or "4 Screens" for "The Method of Sequence".

[SPOT] [4 Screens]

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.

[CAM]
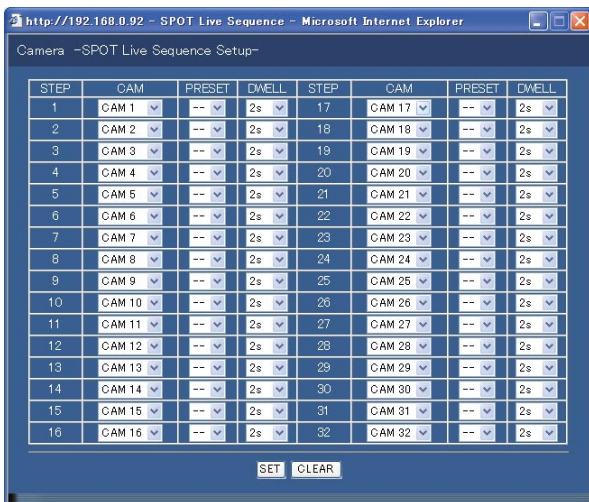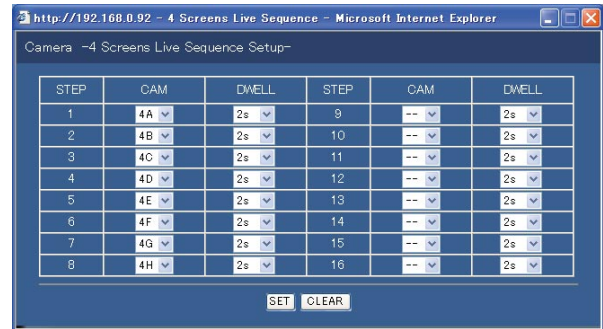
Select a camera image to be displayed at each step from the following.

- -: Skips the selected step.

CAM1 - 32: Displays an image from the selected camera channel on a single screen (SPOT).

4A - 4H: Images of the camera group (A-H) consisted from 4 camera channels in advance will be switched and displayed sequentially on a 4-Screen.
The camera group settings can be performed on the "Monitor Display" settings of the setup menu ("Advanced" – "System" – "Basic Setup" – "Monitor Display"). Refer to page 41 for further information.

[PRESET]
Select a camera preset position (- -, 1 to 16). When "--"
is selected, the camera will not move to the preset posi-
tion.

[DWELL]
Select an interval time to go to the next sequential step
from 1 - 30 seconds (in 1-second interval).

Settings for Communication with other Devices [Comm]

Perform the network settings such as settings of the IP address of this unit and gateway address.
The following are the descriptions of how to perform the required settings for communicating with PCs.

Basic network settings [Basic Setup]

Basic network settings can be performed with this menu.

Click the [Comm] button in the setup menu (Advanced) and then click "Basic Setup". The "Basic 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.

Setup items

■ NW Link down detection
Select "ON" or "OFF" to enable or disable the network line disconnection detection for the CAMERA/client PC port on the rear of the unit.
ON: Detects if the disconnection of the network line connected to the CAMERA/client PC port occurs.
OFF: Does not detect the network line disconnection.

■ NW Bandwidth Control
Select a rate for transmission to the FTP server from the following.
Unlimited/32 kbps/64 kbps/128 kbps/256 kbps/
512 kbps/1 024 kbps/2 Mbps/5 Mbps/10 Mbps

■ Port Forwarding
Perform the settings relating to the port forwarding.
When the [SETUP] button 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.
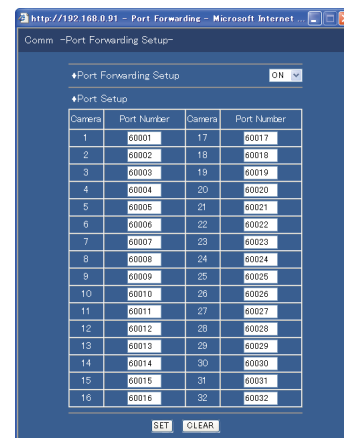
[Port Forwarding Setup]
Select "ON" or "OFF" to determine whether or not to set the port forwarding.
The camera setup menu can be displayed only when "ON" is selected for "Port Forwarding" ("Advanced" - "Comm" - "Basic Setup" - "Port Forwarding").

[Port Setup]
Set the port numbers used to connect each camera.

■ 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.

Note:
- 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, the site alarm settings, and the port forwarding are unavailable for the HTTP port numbers.
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, the site alarm settings, and the port forwarding 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 (camera port, client PC port and maintenance 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 address 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.

[IP Address]
When "OFF" is selected for "DHCP", enter an IP address. For this unit, enter 4 units from the decimal numbers (0-254).

[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

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Note:
- It is impossible to change the line speed of the maintenance port.
- When the setup menu is closed after changing the line speed, the unit will automatically restart.

Basic settings relating to DNS [DNS Setup]

Basic network DNS settings can be performed with this menu.

Click the [Comm] button in the setup menu (Advanced) and then click "DNS Setup" to display the "DNS Setup" window.
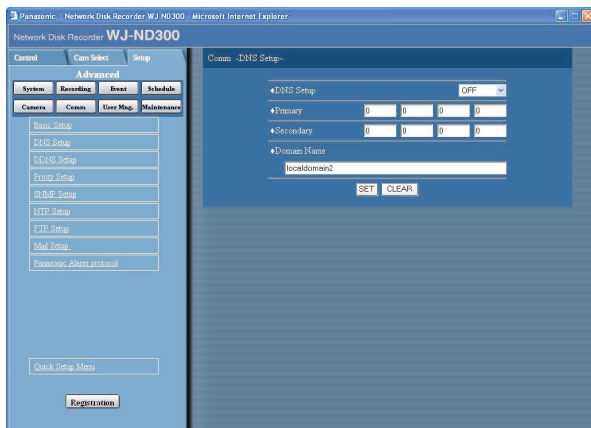
Step 1

Perform the settings for the following items.

■ 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.

Step 2

Click the [SET] button after completing the settings.

Basic network settings relating to DDNS [DDNS Setup]

Basic network DDNS settings can be performed with this menu.

Click the [Comm] button in the setup menu (Advanced) and then click "DDNS Setup" to display the "DDNS Setup" window.
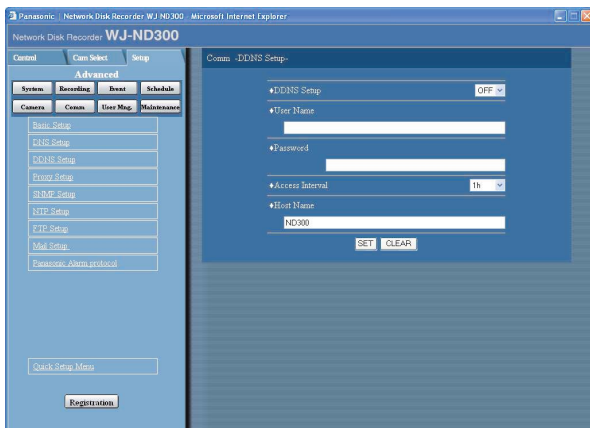
Perform the settings for the following items.

■ DDNS Setup

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.

■ User Name

Enter a user name registered in the DDNS.
Enter up to 32 alphanumeric characters.

■ Password

Enter a password respective to the entered user name.
Enter up to 32 alphanumeric characters.

Note:
The following alphanumeric characters 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

■ Host Name

Enter a host address 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 menu (Advanced) and then click "Proxy Setup" to display the "Proxy Setup" window.
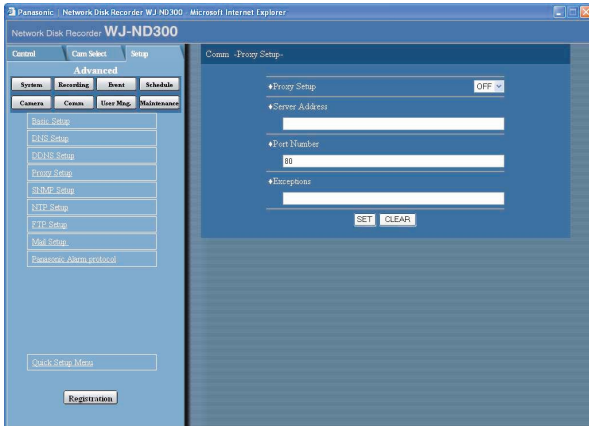
Step 1

Perform the settings for the following items.

■ **Proxy Setup**

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 (;), hyphens (-) and periods (.).

Notes:
  • A semicolon (;) is used for dividing the addresses.
  • Entering "*" validates all numbers.

Step 2

Click the [SET] button after completing the settings.

Perform the 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.

Screenshot 1

Click the [Comm] button in the setup menu (Advanced) and then click "SNMP Setup" to display the "SNMP Setup" window.
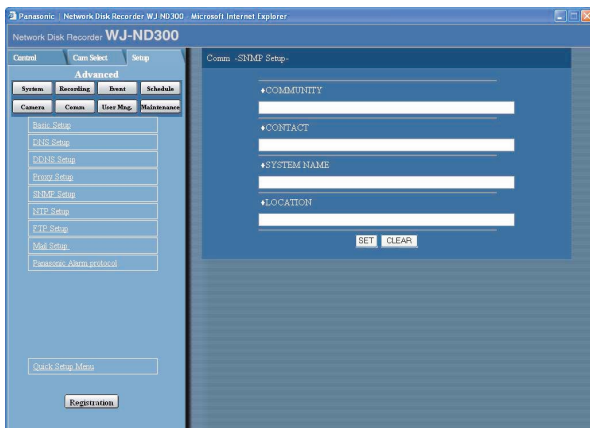
Step 1

Perform the settings for the following items.

■ COMMUNITY

Enter a name used for SNMP authentication in alphanumeric characters. Enter up to 32 alphanumeric characters.

■ CONTACT

Enter the mail address of an administrator of this unit. Enter up to 255 alphanumeric characters.

■ SYSTEM NAME

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

■ LOCATION

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

Step 2

Click the [SET] button after completing the settings.

Note:
The following alphanumeric characters 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 ! " # $ % & ' ( ) * + , - . /: ; < = > ? @ [\ ] ^ _ ` { | } ~

Perform the settings for the time adjustment of a network [NTP Setup]

Click the [Comm] button in the setup menu (Advanced) and then click "NTP Setup" to display the "NTP Setup" window.
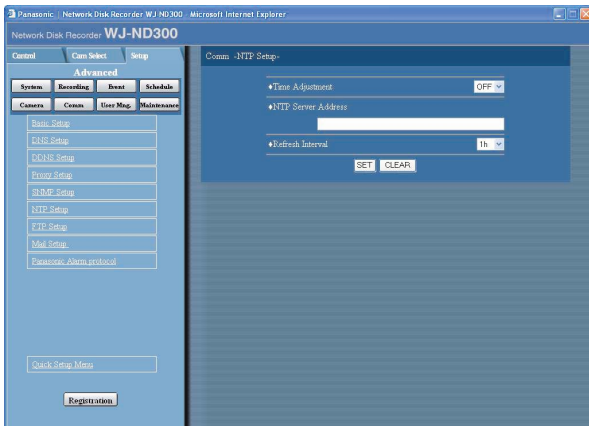
Step 1

Perform the settings for the following items.

■ Time Adjustment
Select ON or OFF to determine whether or not to adjust the time according to the NTP server.

■ 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 (.).

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

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.

Perform the settings for the FTP server [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 can be performed with the FTP Setup menu.

Screenshot 1

Click the [Comm] button in the setup menu (Advanced) and then click "FTP Setup". The "FTP Setup" window will be displayed.
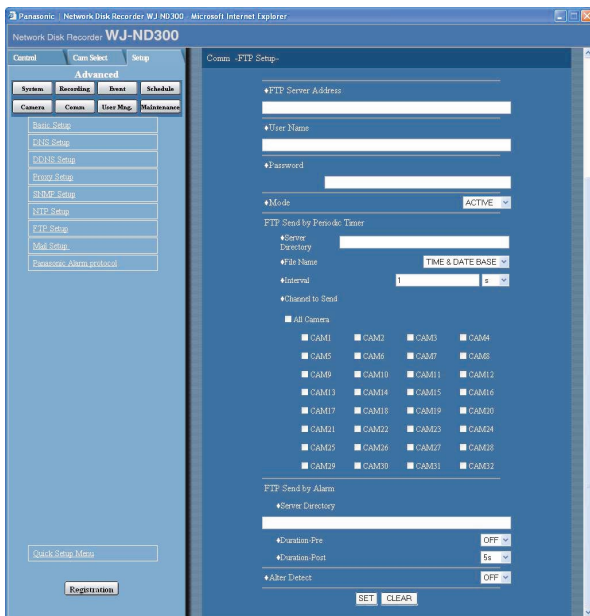
Step 1

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 (up to 255 characters) of the FTP server that receives 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).

■ Password

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

■ Mode

Select an action mode for sending images to the FTP server. Change to "PASSIVE" when sending images is difficult with "ACTIVE".

FTP Send by Periodic Timer

Perform the following settings to periodically send recorded images. Perform the settings to determine whether or not to send recorded images to the FTP server using the timetable (page 55).

■ 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 "Use the time and date as a file name" or "Use a number as a file name".

■ 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.

■ 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.

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 55).

■ 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 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 53 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" menu

■ 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.

Perform the settings for mail notification [Mail Setup]

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

Click the [Comm] button in the setup menu (Advanced) and then click "Mail Setup" to display the "Mail Setup" window.
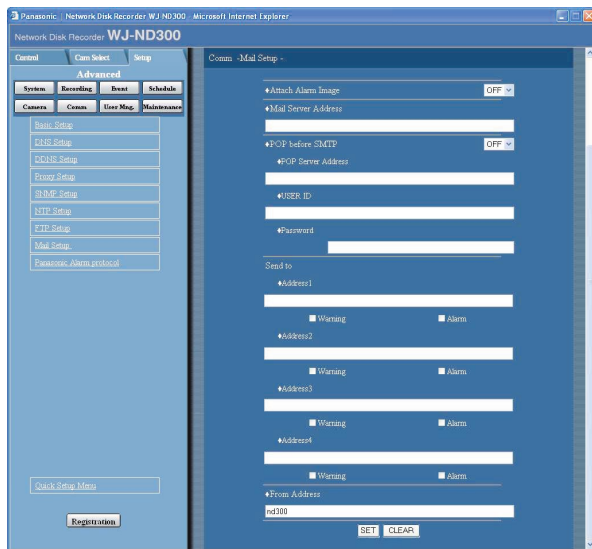
Perform the settings for each item.
Refer to the following for further information about the settings for each item.

Click the [SET] button after completing the settings.

Setup items

■ 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.

■ 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 SMTP server or the POP server name.Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

[USER ID]
Enter a user name (login name) to access the POP server. Enter up to 32 alphanumeric characters. The available characters are the characters listed on the next page except (&) and blank (space).

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

■ 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.

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■ 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 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.
To receive a notification (or error information) and display the contents of the notification, the optional software (WV-AS65) is necessary.

<div style="display:flex">
<div>

Screenshot 1

Click the [Comm] button in the setup menu (Advanced) and then click "Panasonic Alarm protocol" to display the "Panasonic Alarm protocol" window.

</div>
<div>
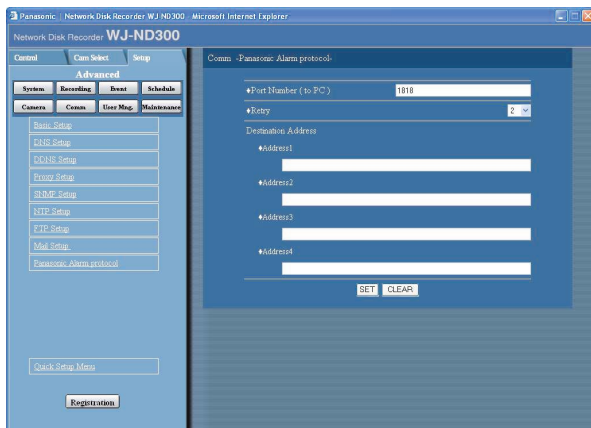
Step 1

Perform the settings for the following items.

■ Port Number (to PC)

Enter a port number to be used for the PC.

■ Retry

Set the retry number of the transmission to the PC.

■ Destination Address

Enter the IP 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 (.), at mark (@) and underscores (_).

Step 2

Click the [SET] button after completing the settings.

</div>
</div>

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Settings Relating to the User 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 menu (Advanced) and then click "Basic Setup". The "Basic Setup" window will be displayed.
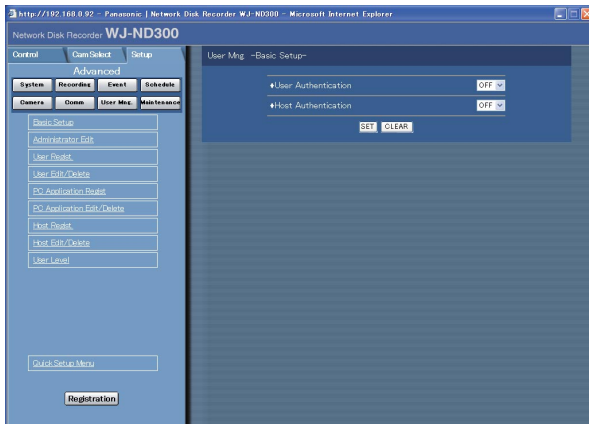
Step 1

Perform the settings for the following 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.

Edit information of the registered administrator [Administrator Edit]

It is possible to edit the registered administrator information such as the password, operational level, etc.

Click the [User Mng.] button in the setup menu (Advanced) and then click "Administrator Edit". The "Administrator Edit" 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.

Important:
Edit of the administrator information is available only when the user is logged in as an administrator.
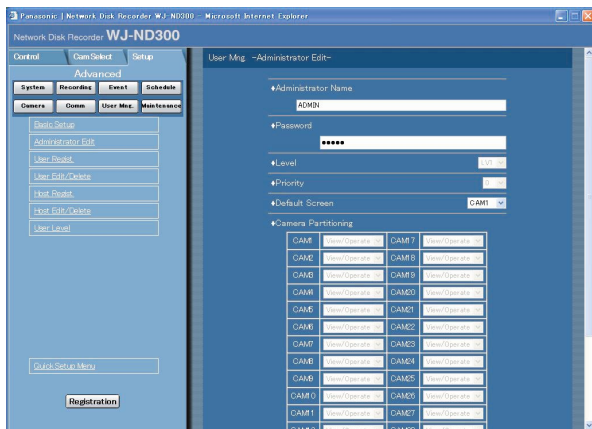
Setup items

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

■ User Password
Enter a password. Enter 4 to 8 alphanumeric characters for a password.

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.
Operable functions for LV1 can be set in "User Level" menu (page 78).

■ 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 - 32: Displays live images from the selected camera channel on a single screen.
4A - 4H: Images of the camera group (A-H) consisted from 4 camera channels in advance will be switched and displayed sequentially on a 4-Screen.
The camera group settings can be performed on the "Monitor Display" settings of the setup menu ("Advanced" - "System" - "Basic Setup" - "Monitor Display"). Refer to page 41 for further information.
SEQ: Images will be displayed in the sequential display. The operational settings of the sequential display can be performed on the "Sequence Setup" setting of the setup menu ("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.
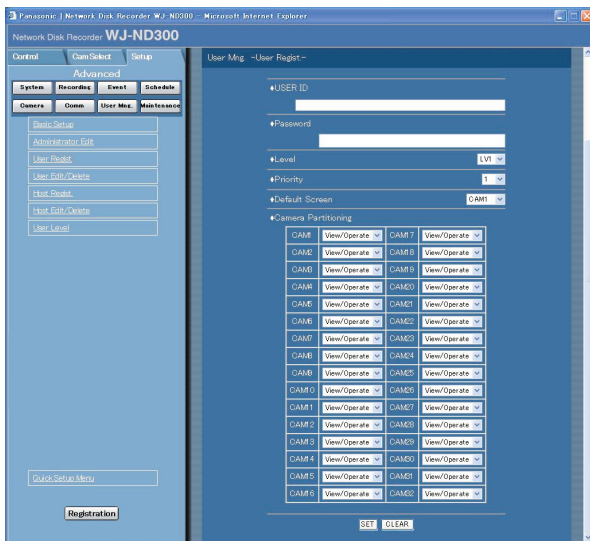**View/Operate:** Both displaying live images and controlling cameras are possible.

Registration of a user who operates this unit [User Regist.]

Register user information such as a user name and password.

Click the [User Mng.] button in the setup menu (Advanced) and then click "User Regist.". The "User Regist." window will be displayed.

Setup items

■ USER ID
Enter a user name. Enter 4 to 14 alphanumeric characters for a user name.

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

Notes:
- Set a unique password, not something that would be easily guessed by a third person. The password also should be memorable.
- Up to 32 users can be registered.

■ Level
Select a user level from the following. Operable functions for each level can be set in "User Level" menu (page 78).
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.

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.

■ Default Screen
Select a startup display to be displayed after login from the following.
CAM1 - 32: Displays live images from the selected camera channel on a single screen.
4A - 4H: Images of the camera group (A-H) consisted from 4 camera channels in advance will be switched and displayed sequentially on a 4-Screen.
The camera group settings can be performed on the "Monitor Display" settings of the setup menu ("Advanced" - "System" - "Basic Setup" - "Monitor Display"). Refer to page 41 for further information.
SEQ: Images will be displayed in the sequential display. The operational settings of the sequential display can be performed on the "Sequence Setup" setting of the setup menu ("Camera" - "Sequence Setup").

■ Camera Partitioning
Select a controllable range for each camera channel from the following.
View/Operate: Both displaying live images and controlling cameras are possible.
View: Neither displaying live images nor controlling cameras are possible.
- -: Neither displaying live images nor controlling cameras are possible.

Edit/delete registered user information [User Edit/Delete]

Edit or delete registered user information.

Click the [User Mng.] button in the setup menu (Advanced) and then click "User Edit/Delete". The "User Edit/Delete" window will be displayed.
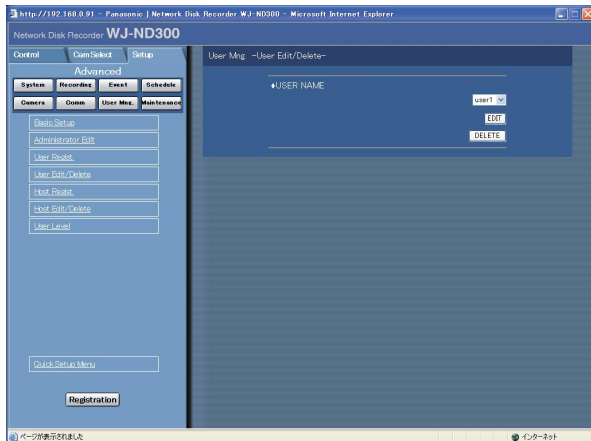
Step 1

Click the [∨] button to select the desired user information to be edited or deleted.
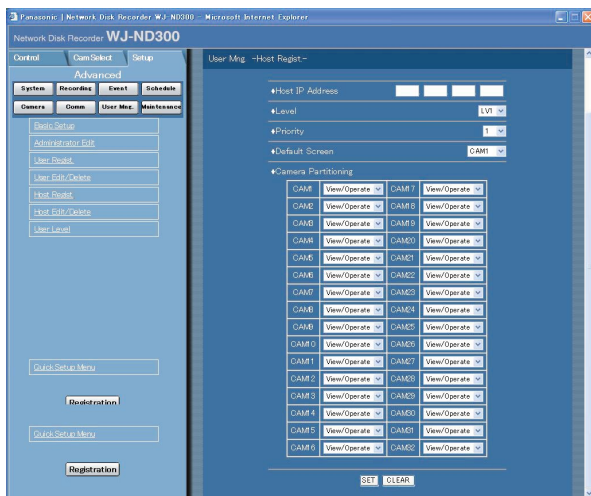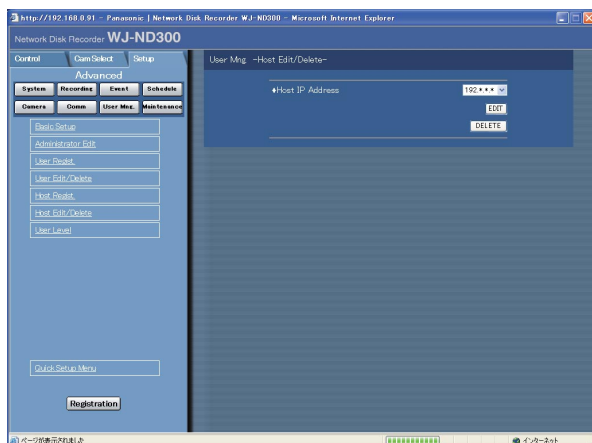
Step 2

• Click the [EDIT] button to edit the selected user information.
The "Edit user information" window will be displayed with information of the registered user. Edit user information in the same way as the user registration. (page 75)
• Click the [DELETE] button to delete the selected user.

Registration of a PC (host) accessible to this unit [Host Regist.]

Register information of a PC (host) that accesses this unit via a network such as a LAN.

Screenshot 1

Click the [User Mng.] button in the setup menu (Advanced) and then click "Host Regist.". The "Host Regist." window will be displayed.

Step 1

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

Step 2

Click the [SET] button after completing the settings.

Note:
Up to 32 hosts can be registered.

Setup items

■ Host IP Address

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

Note:
- 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 "User Level" menu (page 78).
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 - 32: Displays live images from the selected camera channel on a single screen.
4A - 4H: Images of the camera group (A-H) consisted from 4 camera channels in advance will be switched and displayed sequentially on a 4-Screen.
The camera group settings can be performed on the "Monitor Display" settings of the setup menu ("Advanced" - "System" - "Basic Setup" - "Monitor Display"). Refer to page 41 for further information.
SEQ: Images will be displayed in the sequential display. The operational settings of the sequential display can be performed on the "Sequence Setup" setting of the setup menu ("Camera" - "Sequence Setup").

■ Camera Partitioning

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

Edit/delete registered host information [Host Edit/Delete]

Edit or delete registered host information.

Click the [User Mng.] button in the setup menu (Advanced) and then click "Host Edit/Delete". The "Host Edit/Delete" window will be displayed.

Click the [∨] button to select the desired host information to be edited or deleted.

- Click the [EDIT] button to edit the selected host information.
  The "Edit host information" window will be displayed with information of the registered host. Corrections can be performed in the same way as registration. (page 76)
- Click the [DELETE] button to delete the selected host IP address.

Setting of operation level [User Level]

Assign a level (LV 1/LV 2/LV 3/LV 4) to every user to restrict operable functions.

Click the [User Mng.] button in the setup menu (Advanced) and then click "User Level". The "User Level" window 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 79 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 (Operator)

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 menu. (It is impossible to edit the settings of [Comm], [Camera], [User Mng.] and [Maintenance].
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 Setup	It is possible to edit the settings of the [Maintenance] menu.
Camera Control	It is possible to pan/tilt the camera.
Event Log Status	It is possible to browse event logs. Refer to the Operating Instructions (PDF).
Access Log Status	It is possible to browse event logs. Refer to the Operating Instructions (PDF).
Error Log Status	It is possible to browse error 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).)
Alarm Suspend	An event action can be suspended. (Refer to the Operating Instructions (PDF).)
Copy	A recorded image can be manually copied. (Refer to the Operating Instructions (PDF).)
Manual REC Operation	Manual recording can be started and stopped.
Playback Operation	A recorded image can be played.

Note:
When checking the checkboxes of [Comm], [Camera], [User Mng.] and [Maintenance], the checkbox of [Setup] will be checked automatically. On the contrary, even when the checkbox of [Setup] is checked, [Comm], [Camera], [User Mng.] 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, temperature inside the unit and software version of the connected extension unit will be displayed.

Screenshot 1

Click the [Maintenance] button in the setup menu (Advanced) and then click "Product Information". The "Product Information" window will be displayed.

Step 1

Versions of the software, the hardware (this unit), MAC address, temperature inside the unit and software version of the connected extension unit will be displayed.
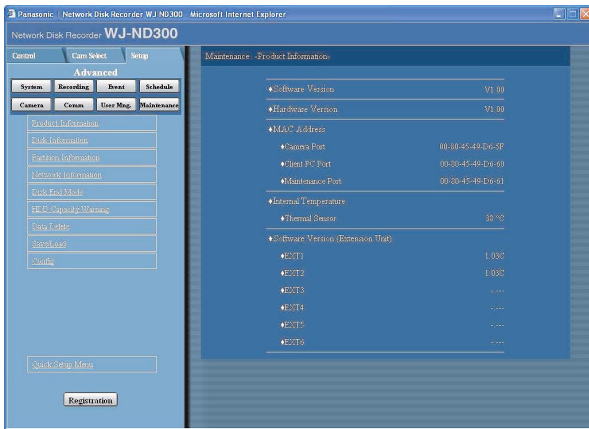
Confirmation of the available hard disk space [Disk Information]

The disk size and the available capacity of the HDDs of this unit or the extension unit (EXT1-6) will be displayed. It is also possible to check the time range of the images recorded on the selected HDD. Refer to the Operating Instructions (PDF) for further information about the built-in hard disk of this unit. Settings for the hard disk life time warning time (hour meter) can be performed with this menu.

Screenshot 1

Click the [Maintenance] button in the setup menu (Advanced) and then click "Disk Information". The "Disk Information" window will be displayed.
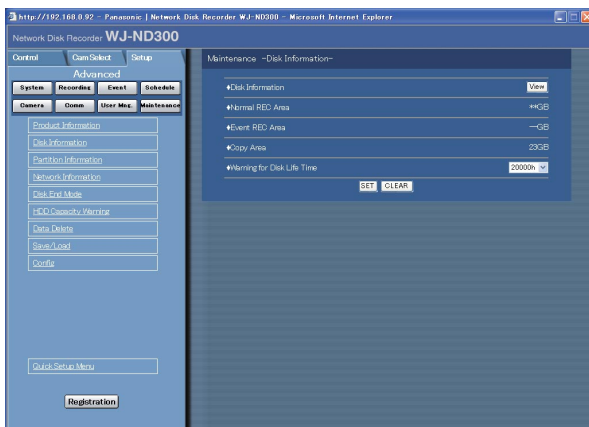
Step 1

When the [View] button on the "Disk Information" menu is clicked, the following window will be displayed and the disk size and the available capacity of each hard disk drive and the time range of the images recorded on the hard disk will be displayed.

The following settings are also available on this menu.

■ Warning for Disk Life Time

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

Step 2

Click the [SET] button after completing the settings.

Note:

The displayed available disk space on this menu will not include the space required for data management. Therefore, the understated available disk space will be displayed.

Check the available capacity of each recording area on the hard disk drive [Partition Information]

The available capacity of the normal area, the event area, the copy area and the pre-recording areas on the built-in hard disk will be displayed.

**Screenshot 1**

Click the [Maintenance] button in the setup menu (Advanced) and then click "Partition Information". The "Product Information" window will be displayed.

Step 1

The available capacity of the normal area, the event area, the copy area and the pre-recording areas on the built-in hard disk will be displayed.
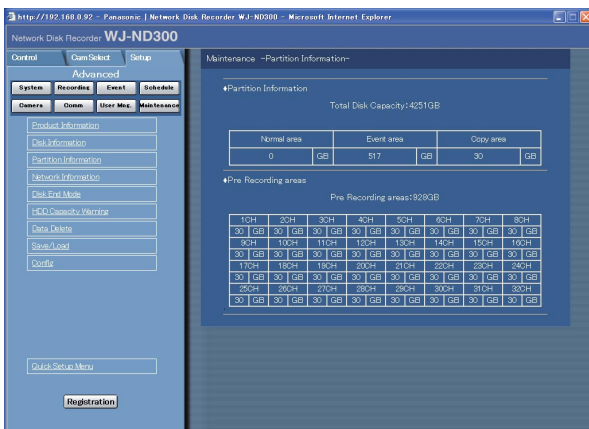
Check the network status of the devices connected to this unit [Network Information]

Network information such as IP addresses of the connected devices, network line speed, the current settings for "NW Bandwidth Control", the maximum transmission rate, etc. will be displayed.

Screenshot 1

Click the [Maintenance] button in the setup menu (Advanced) and then click "Network Information". The "Network Information" window will be displayed.
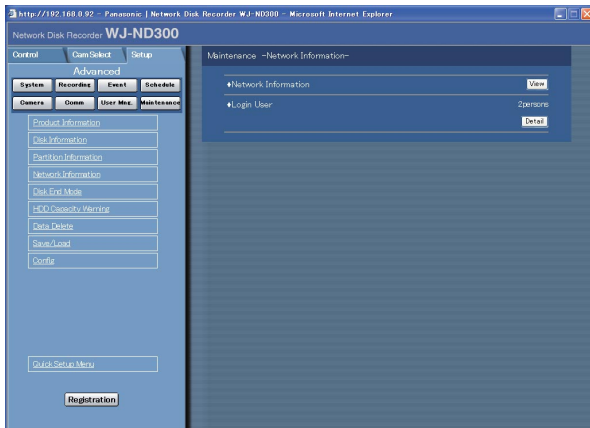
Step 1

When the [View] button on the "Network Information" menu is clicked, the following window will be displayed and the IP addresses of the devices connected to each port and cameras, network line speed, the current settings for "NW Bandwidth Control" and the maximum transmission rate will be displayed.

It is also possible to display the number of the currently accessing user and their user IDs, user level and the access time by clicking the [Detail] button of "Login User".

■ User Detail
Information of the user who is currently logged in will be displayed.

■ FTP User Detail
Information of the user who is currently accessed via FTP will be displayed.

Screenshot 2

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Settings for actions when the available hard disk space is running out [Disk End Mode]

Select an action from the following to be taken when the available disk space of the built-in hard disk (normal area, event area, copy area) is running out.

Click the [Maintenance] button in the setup menu (Advanced) and then click "Disk End Mode". The "Disk End Mode" window will be displayed.
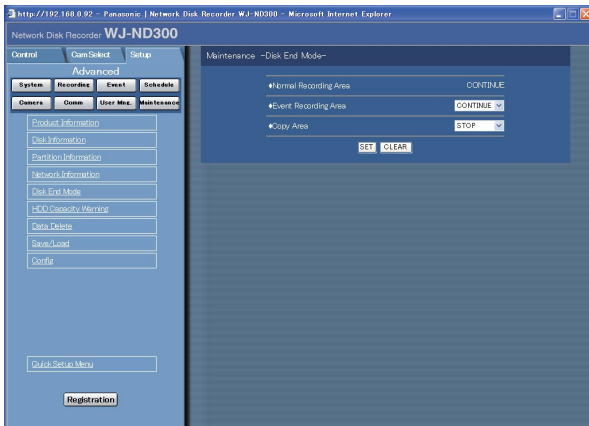
Step 1

Perform the settings for the warning action when the available disk space of each area has run out by clicking the [∨] button.

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

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

Note:
The "Disk End Mode" setting for the normal area is "CONTINUE" and it is impossible to change it.

Step 2

Click the [SET] button after completing the settings.

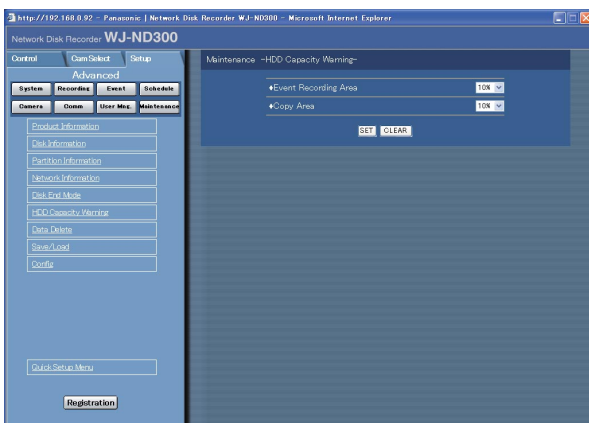## Warning settings for the available hard disk space [HDD Capacity Warning]

Select a level of the available disk space to issue a warning when the available disk space of the built-in hard disk (event area, copy area) reaches a specified level.

Important:
When "CONTINUE" is selected for "Disk End Mode", a warning will not be issued.

Click the [Maintenance] button in the setup menu (Advanced) and then click "HDD Capacity Warning". The "HDD Capacity Warning" window will be displayed.

Step 1

Perform the settings for the warning action when the available disk space of each area has run out by clicking the [∨] button.
1% to 10% can be set for this item in 1% intervals.
When OFF is selected, the warning action will not be performed.

Step 2

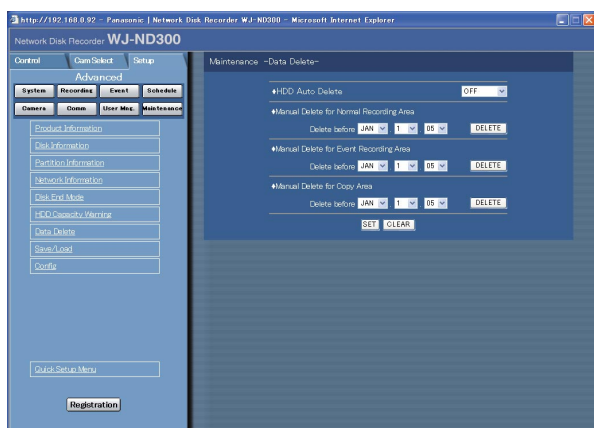Click the [SET] button after completing the settings.

Deletion of image data on the hard disk [Data Delete]

Image data on the built-in hard disk will be deleted.
The two ways to delete data are auto deletion and manual deletion.

Click the [Maintenance] button in the setup menu (Advanced) and then click "Data Delete". The "Data Delete" window will be displayed.

Notes:
• Images recorded on the HDD copy area will not be deleted even when the set retention days for "HDD Auto Delete" have passed.
• Deletion by the "HDD Auto Delete" function will start at 0:05:00.When "1DAY" is selected, deletion will start as follows.

Start time of recording	Time and date of auto deletion
Aug.4.05　0:00:00	Aug.5.05 0:05:00
Aug.3.05 11:55:00PM	Aug.4.05 0:05:00
Aug.3.05 11:55:00PM	Aug.4.05 0:05:00

Step 1

Delete data in the following ways.

■ **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

■ **Manual Delete for Normal Recording Area**
By setting the time and date, images in the normal recording area of the hard disk that were recorded up until a day before the set time and date will be deleted. Click the [DELETE] button after setting the time and date by clicking the [∨] button.

■ **Manual Delete for Event Recording Area**
By setting the time and date, images in the event recording area of the hard disk that were recorded up until a day before the set time and date will be deleted. Click the [DELETE] button after setting the time and date by clicking the [∨] button.

■ **Manual Delete for Copy Area**
By setting the time and date, images in the copy area of the hard disk that were recorded up until a day before the set time and date will be deleted.
Click the [DELETE] button after setting the time and date by clicking the [∨] button.

Step 2
Click the [SET] button after completing the settings.

Saving and loading of settings of SETUP MENU [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).
The settings of the setup menu can be reset to the default settings on this menu.

Click the [Maintenance] button in the setup menu
(Advanced) and then click "Save/Load". The
"Save/Load" window will be displayed.
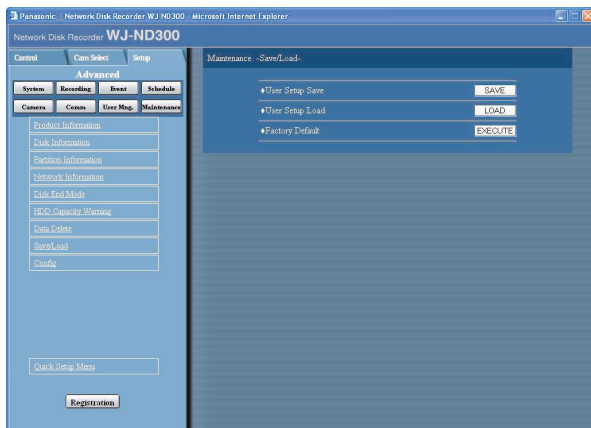
Step 1
- Click the [SAVE] button to save the settings of the
  setup menu in this unit.
- Click the [LOAD] button to call up the saved settings.
- Click the [EXECUTE] button to reset the settings to
  the default settings.

Important:
- The settings of the menus under "Basic Setup" will
  not be reset even when the [EXECUTE] button is
  clicked.
    - NW Link down detection
    - NW Bandwidth Control
    - HTTP Port Number
    - FTP Port number
    - Port Setup

Note:
When the "DHCP" setting of the loaded settings is
"ON" and the IP address setting is different between
the current setting and the saved setting, the dis-
played IP address and the current IP address will
not match. In this case, set the "DHCP" setting to
"ON" using the buttons on the front panel of this unit
instead of using the web browser.

About the Hard Disk Drives

Images from cameras will be recorded on the built-in hard disk drive of this unit.
This unit manages recorded images by dividing the hard disk drive into 4 areas virtually.
  • Normal recording area: Images recorded by manual recording will be stored in this area.
  • Event recording area: Recording area for event recording
  • Copy area: Copied images will be stored in this area.
  • Pre-recording area: Images recorded by pre-/post-event recording will be stored in this area.
It is possible to check the available disk space of each recording area on the "Disk Information" menu
("Maintenance" - "Disk Information").
(page 81)
The settings relating to the hard disk drives such as initialization of the hard disk drives of this unit or the extension
unit can be performed with the "HDD DISK MENU".
(page 88)

Note:
It is necessary to create either of a normal recording area or an even recording area. When a normal recording
area is not created, images recorded by manual recording and schedule recording will be stored in the event
recording area. When an event recording area is not created, images recorded by event recording and emer-
gency recording will be stored in the normal recording area.

Summary of the RAID 5 function (Redundant Arrays for Independent Disks, independent data disks with distributed parity blocks)

It is possible to use the RAID 5 function with the optional RAID board (WJ-NDE301).
RAID level 5 regards 3 or more drives as one drive, and it is possible to read data by attaching error correction data
even though one of the drives is broken automatically. (It is impossible to recover data if two drives are simultane-
ously damaged or the second drive data fails during the data recovery process.)
When using the RAID function, the logical disk size of the extension unit will be as below.
Logical disk size = Smallest size of the disk among the disks in the extension unit x (Number of the disks in the
extension unit – 1)
Note: Depending on the model of a hard disk drive, the logical disk size may be a few percent smaller than the size
resulting from the formula above.

Important:
  • It is impossible to use the RAID function with the WJ-ND300 alone if the WJ-ND300 in use is not featured the
    built-in RAID board.
  • The settings relating to the RAID function can be performed on the setup menu displayed on the LCD on the
    front panel of the unit.
    Refer to the Installation Guide for further information.

Display the HDD DISK MENU

The settings relating to the hard disk drive can be performed on the HDD DISK MENU.
It is possible to initialize (format of the hard disk drive), unmount the hard disk drive and check the available disk space of each recording area on the HDD DISK MENU.
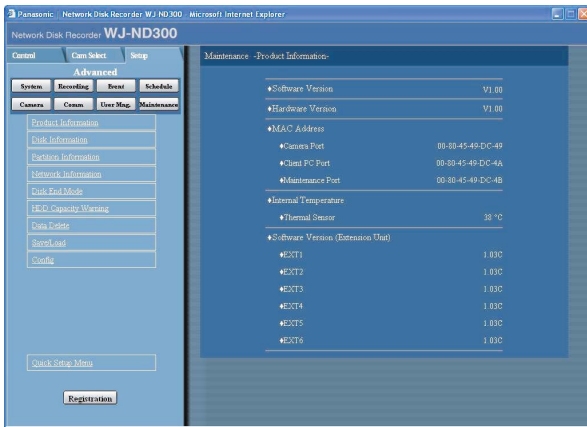

Important:
When the HDD DISK MENU is displayed, all operations (including recording and playback) except the HDD DISK MENU operation will stop.

Screenshot 1
Click the [Maintenance] button on the setup menu (Advanced) to display the "Product Information" menu.

Step 1
Click "Config" on the "Product Information" menu.

Screenshot 2
The authentication window will be displayed.

Step 2
Click the [OK] button after entering the user ID and the password.
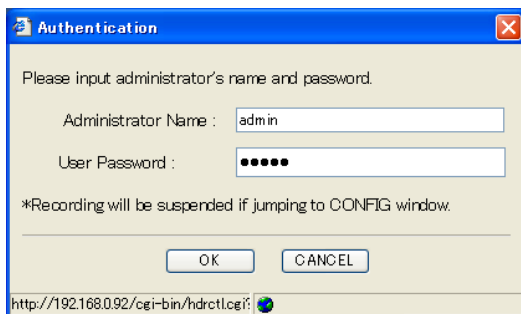
Screenshot 3

The top menu (Connection Information) of the HDD DISK MENU will be displayed.
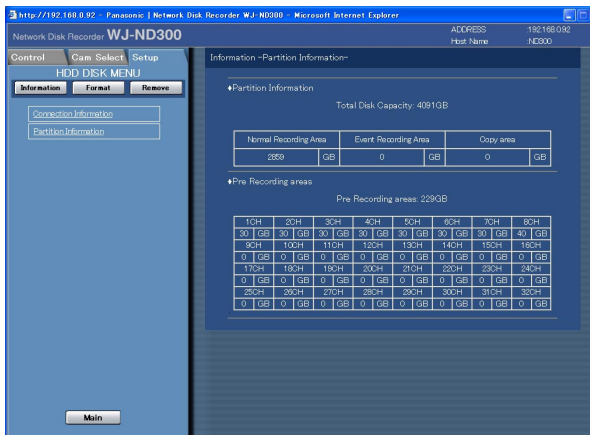
Step 3

Information of the hard disk drives of the unit or the connected extension unit will be displayed.
To display the available disk space of each recording area, click "Partition Information".

Screenshot 4

The "Partition Information" menu will be displayed.

Step 4

The available disk size of each recording area on the hard disk drive will be displayed.

Initialize the Hard Disk Drive [Format]

Initialize (format) the built-in hard disk drive and the hard disk drives of the connected optional extension unit.
It is possible to select and initialize a hard disk drive independently.
When using in the RAID 5 mode, all the unit will be initialized.
It is necessary to initialize the hard disk drive in the following cases.
  • When the built-in hard disk of the unit is replaced or when the hard disk drive is added newly
  • When using the connected optional extension unit for the first time
It is also required to partition the hard disk drive into the normal recording area, the event recording area, the copy area and the pre-recording area.

Important:
    When initialized, all recorded data will be erased.

Initialize the normal recording area/event recording area/copy area [Format]

Initialize (format) the normal recording area/event recording area/copy area as follows.

Screenshot 1

Click the [Format] button on the top menu (Connection Information) of the HDD DISK MENU to display the "Format" window.

Step 1

Select the desired hard disk drive to be initialized.
  • To initialize all the hard disk drives, check the "All Format" checkbox.
  • To select all the hard disk drives in the unit, check the checkbox of the desired unit displayed in the far left column. When the checkbox of the unit is checked, all the hard disk drive displayed on the right (in the same row) will be selected.
  • To select the hard disk drive independently, check the checkbox of the desired hard disk drive.

Step 2

Click the [SET] button after completing the settings.

Note:
    Pre-recording area will be deleted when the normal recording area/event recording area/copy area are formatted.

Screenshot 2

The table will be displayed and the available disk space of each recording area will be indicated.

Screenshot 3

The deletion confirmation window will be displayed.

Screenshot 4

When completing the initialization, the result will be displayed.

Main

Step 3

Enter the desired disk size to be allocated for each recording area (normal area/event area/copy area).

Note:
• Disk size to be allocated for each recording area should be larger than the size resulting from the following formula. Minimum disk size to be allocated for each recording area = Number of hard disks to be initialized x 30 GB.
When it is unnecessary to set the capacity, enter "0".

Step 4

Click the [Format] button after completing the settings.

Step 5

Click the [OK] button.

Step 6

When the [OK] button is clicked, the "Format" window will be displayed.

Step 7

Click the [Main] button to return to the operation window. The unit will restart when this button is clicked.

Initialize the pre-recording area [Pre Recording areas Format]

Initialize the pre-recording area as follow.

Screenshot 1

Click "Pre Recording areas Format" on the top menu (Connection Information) of the HDD DISK MENU to display the "Pre Recording areas Format" window.
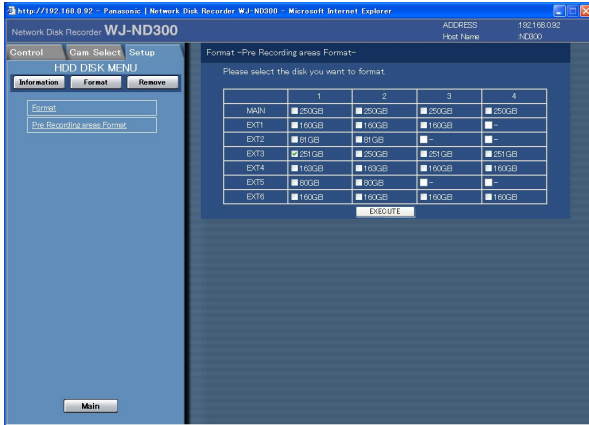
Step 1

Select the desired hard disk drive to be initialized. Only a single hard disk drive can be set as the pre-recording area.

Step 2

Click the [EXECUTE] button after completing the settings.

Screenshot 2

The table will be displayed and the capacity of the pre-recording area can be configured with this table.

Step 3

Enter the desired disk size to be allocated as the pre-recording area for each camera channel.

Notes:
- Disk size of each pre-recording area should be larger than 30 GB. When it is unnecessary to designate the disk size, enter "0".
- When operating in the RAID 5 mode, pre-recording areas of up to 16 camera channels can be set at the unit or an extension unit.

Step 4

Click the [Format] button after completing the settings.

Screenshot 3

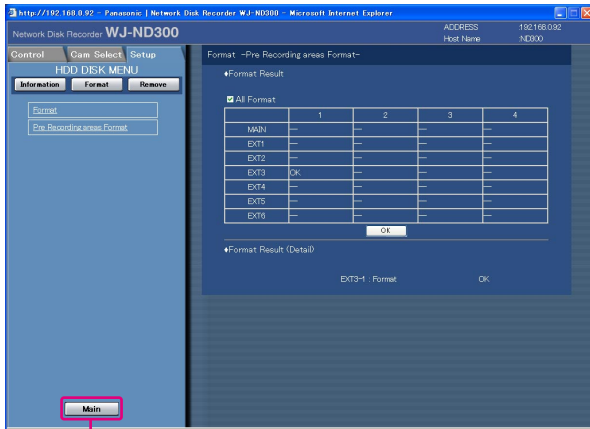The deletion confirmation window will be displayed.
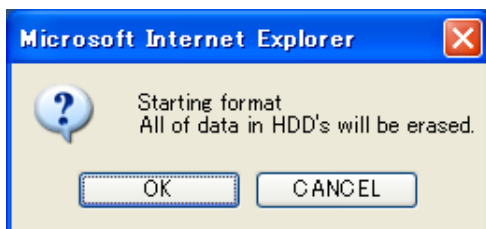
Step 5

Click the [OK] button.

Screenshot 4

When completing the initialization, the result will be displayed.

Main

Step 6

When the [OK] button is clicked, the "Format" window will be displayed.

Step 7

Click the [Main] button to return to the operation window. The unit will restart when this button is clicked.

Remove the Hard Disk Drive from the System Logically [Remove]

It is possible to remove the hard disk drive logically (unmount) without uninstalling (detaching) the hard disk drive physically. It is recommended to remove the hard disk logically when the hard disk of the unit or an extension unit is having trouble and it is necessary to remove it temporarily but not to stop operation.
Do the following to remove the hard disk drive logically.

Screenshot 1

Click "Remove" on the top menu (Connection Information) of the HDD DISK MENU to display the "Remove" window.

Step 1

Click the [EXECUTE] button to remove the hard disk drive indicated with "*" or "LOST" on the HDD DISK MENU.

Note:
> Asterisks (*) will be displayed after replacing the hard disk drive.
> "LOST" will be displayed when the hard disk drive is removed.

Screenshot 2

When completing the logical remove of the hard disk drive, the result will be displayed.

Step 2

When the [OK] button is clicked, the "Remove" window will be displayed.

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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.
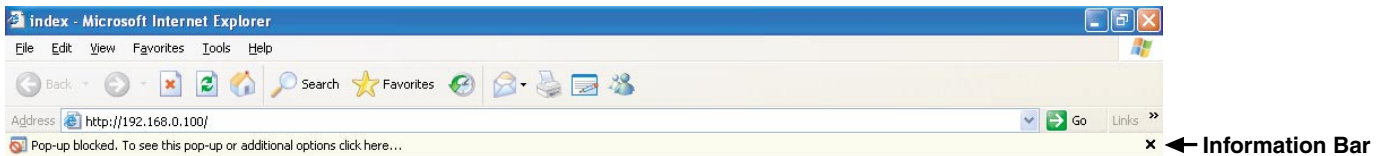
Symptom	Cause/solution	Reference pages
Cannot access from the browser.	• Is the Ethernet cable firmly connected to the 10/100 BASE-T port? Confirm the cable is firmly connected.	–
	• Is the connection indicator of the 10/100BASE-T port lit? When it is not lit, connection to a LAN is not established or a network is not working correctly. Confirm that the connection indicator of the 10/100BASE-T 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.	63
	• 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.	63
	• Are there contradictions between the address and the network subnet to be accessed? 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.	63

Symptom		Cause/solution	Reference pages
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.	–
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.	75
The message "Please Wait." remains on the screen.	▶	• The "Active X control" is not installed in the PC. Install the "Active X control" by referring to the following page.	97
No live image is displayed.	▶	• Are the connected network cameras configured correctly? Check the settings of the setup menu ("Camera" -"NW Camera Setup").	58
	▶	• Are the settings of the setup menu configured correctly? Check the settings of the setup menu ("Schedule" - "Program" - "LIVE VIDEO").	54
	▶	• 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.	9
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").	58
	▶	• 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").	58

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 and the security level may not be affected.

The "Information Bar" expressed in the following symptom and solutions will be displayed just below the address bar only when there is information to communicate.

← **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: 'ND300 CTL.cab' from 'Matsushita Electric Industrial Co., Ltd'. Click here to install..." ▶	• Click the information bar and select "Install Active X Control". The "Security Warning" window will be displayed. Click the "Install" button on the displayed "Security Warning" window.	–
Unnecessary status bar or scroll bar is displayed on the pop-up window. ▶	• Click "Internet Options" on the Tools menu of Internet Explorer, and then click the "Security" tab. Then, click the "Custom Level..." button to open the "Security Setting" window. Under "Miscellaneous", select "Enable" for "Allow script-initiated windows without size or position constraints". Click the "OK" button. The "Warning" window will be displayed. Click the "Yes" button.	–

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