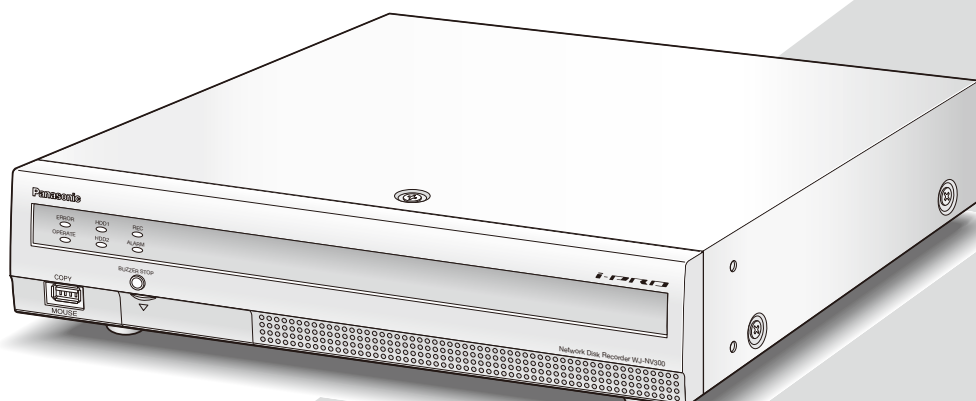


Panasonic®

Operating Instructions Network Disk Recorder

Model No. **WJ-NV300K**
WJ-NV300K/G



(This illustration represents WJ-NV300K.)



HDMI®
HIGH-DEFINITION MULTIMEDIA INTERFACE

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

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

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Preface

Features

The network disk recorders WJ-NV300K and WJ-NV300K/G (hereinafter, recorders) are designed for use within a surveillance system, and record images/audio from up to 32 network cameras (hereinafter, cameras) on the hard disk drives. Number of cameras to be used in the system (9 cameras in basic system) can be increased to 16, 24 and 32 (maximum) by purchasing the additional camera kit (WJ-NVE30, WJ-NVE30W).

Model No.	HDD slot(s)	Number of initial CHs/Maximum number of CHs	RAID function
WJ-NV300K	2	16CH/32CH	Available (*)
WJ-NV300K/G	2	9CH/32CH	Available (*)

(*) RAID5 or RAID6 mode is available when the Extension Unit (WJ-HDE400) is connected. But the HDD of the Extension Unit is not available for the mirroring mode.

This recorder supports connection with a monitor equipped with the HDMI (High-Definition Multimedia Interface) connector.

Connection using an HDMI cable (optional) offers display of playback/live images with superior quality.

It is possible to operate cameras from this recorder to display images from multiple cameras or switch cameras from which images are to be displayed, etc.

The optional parts described in this installation guide are based on information as of May, 2014. Contact your dealer for further information.

About the user manuals

There are 4 sets of operating instructions for the WJ-NV300K, WJ-NV300K/G as follows.

Installation Guide: Contains descriptions of how to install/connect this product with devices and descriptions about "Easy start".

Operating Instructions (PDF: this document):

Contains descriptions of how to configure the required settings and how to operate this product.

Both operations/configurations using the interface on the product and using a PC via a network are provided.

Quick Reference Guide: Contains descriptions of how to operate functions frequently used.

Operating Instructions of Additional Business Intelligence Kit (PDF):

Contains descriptions of how to use WJ-NVF30, WJ-NVF30W (option), how to register the license, how to configure the settings and how to operate.

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

Depending on descriptions, the model name of this recorder may be omitted as "NV300" in the manuals and on the setup. The screens used in these operating instructions show the case in which WJ-NV300K is used and 16 cameras are connected.

Refer to "readme.txt" on the provided CD-ROM for further information about the dedicated software (option) that receives and displays the event and error information, compatible cameras and their versions.

Refer to the Panasonic support website (<http://security.panasonic.com/pss/security/support/index.html>) for latest information about the compatible cameras and functions to be added or changed by firmware upgrade.

System requirements for a PC

It is recommended to operate this product using a PC that meets the following system requirements.

OS:	Microsoft® Windows Vista®, Microsoft® Windows® 7*1, Microsoft® Windows® 8.1
Web browser:	Windows® Internet Explorer® 10 (32-bit) Windows® Internet Explorer® 9 (32-bit) Windows® Internet Explorer® 8 (32-bit) Windows® Internet Explorer® 7 (32-bit)
CPU:	Intel® Core™ 2 Duo 2.66 GHz or faster
Memory:	1 GB or more
Monitor:	1 024 x 768 pixels or more, 24-bit True color or better
Network interface:	10BASE-T/100BASE-TX/1000BASE-T 1 port
Audio:	Sound card (When using the audio function)
Others:	CD-ROM drive: It is necessary to refer to the operating instructions on the provided CD-ROM. DirectX® 9.0c or later Adobe® Reader®: CD-ROM drive: It is necessary to refer to the operating instructions on the provided CD-ROM.

*1 Windows® XP compatibility mode is unavailable.

Important:

- If using a PC that does not meet the above system requirements, it may cause problems such as slow imaging or the browser becomes inoperable.
 - Microsoft® Windows® 7 Starter is not supported.
-

Note:

- Refer to "Notes about versions of Windows®/Internet Explorer®" (PDF) for further information about system requirements for a PC and precautions when using Microsoft® Windows® 8.1, Microsoft® Windows® 7, Microsoft® Windows Vista® or Microsoft® Internet Explorer®.
 - Refer to the Panasonic support website (<http://security.panasonic.com/pss/security/support/index.html>) for information about the latest operation verification of the supported operating systems and web browsers.
-

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- SDHC Logo is a trademark of SD-3C, LLC.
- All other trademarks identified herein are the property of their respective owners.

Abbreviations

The following abbreviations are used in this manual.

Microsoft® Windows® 8.1 is described as Windows 8.

Microsoft® Windows® 7 is described as Windows 7.

Microsoft® Windows Vista® is described as Windows Vista.

Windows® Internet Explorer® 10, Windows® Internet Explorer® 9, Windows® Internet Explorer® 8 and Windows® Internet Explorer® 7 are described as Internet Explorer.

SDHC/SD memory card is described as SD card or SD memory card.

Network cameras are described as cameras.

Restrictions when using this product

When using this product, some functions have the following restrictions. Before using this product, keep the following in mind.

When displaying live images from the camera

- Black screen may be displayed for the first several seconds (*) when the following operations are performed while displaying live images.
 - When live images are displayed (by switching camera, etc.)
 - When image is zoomed in or out

When playing recorded images

- First several seconds (*) may be skipped when the following operations are performed while playing recorded images.
 - When cameras are switched
 - When image is zoomed in or out (When operating to zoom in/out a paused recorded image, image of several seconds later than the displayed image may be zoomed in.)
 - When the playback button is clicked again while playing images
 - When the first frame is displayed by starting the frame by frame playback during pausing
- Playback may be performed in several seconds intervals (*) when the following operations are performed. Refer to the description of operations during playback on pages 125 and 161 for how to control playback.
 - Reverse playback
 - Fast playback/Fast reverse playback
 - Reverse frame playback
- When playing images by designating date & time, playback may start from a point several seconds* before/after the specified time or from the first frame of the next record.
- When the latest recorded image is played, playback may start from a point several seconds before/after a point that is 30 seconds before the latest recorded image.
- When the frame rate is set to 60 ips or 30 ips, recorded images may not be played smoothly.

When recording images

- The actual time of recording trigger (event occurrence time, start time of the schedule recording, etc.) and the recording start time (time displayed on the recording event list) may not exactly be the same.
- When pre-event recording is set to be performed, pre-event recording duration may be longer than the set duration.

When copying images

Copying of recorded images may start from a point several seconds (*) before the designated start time when copying recorded images.

When downloading recorded images

Downloading of recorded images may start from a point several seconds (*) earlier than the designated start time.

* Time (seconds) differs depending on the refresh interval setting of the camera (0.2 - 5 seconds). To shorten time lag, set the refresh interval of the camera shorter.
Refer to the operating instructions of the camera for information about the refresh interval setting.

When using an SD memory card/ external storage device

If operations are performed soon after an SDHC/SD memory card is inserted, it may take time to recognize the media. It also may take time if the capacity size of the inserted media is large.

Before using this product

About the face matching function (option)

By registering the license of the additional business intelligent kit, the face matching function, that detects faces whose features are closed to the registered faces by comparing face images in live image with the registered face images, will become available. The matching accuracy varies depending on installation, settings and adjustment of the camera, ambient environment and object. Matching of facial features may therefore not work under the following conditions:

- When illumination is not uniform, for example, outdoors
- Faces are interrupted by such objects as medical masks, sunglasses or helmets.
- Faces are not directed to the front side.
- Photographic subjects are moving quickly.
- Under the influence of strong external light (such as the headlights of a car, rising sunlight or setting sunlight)

* Configure the settings of the camera supporting this function before attempting to use the face matching function.

Motion detection (VMD) function

The motion detection (VMD) function of cameras detects motions referring to changes of luminance (brightness) in areas set in advance.

The motion detection function will not effectively work in the following situations or may sometimes be malfunctioning.

- When there is a very little difference in luminance (brightness) between a background and a subject
- When brightness of images is low such as at night
- When a subject moves very slow
- When a subject is very small
- When the amount of rays of light incidence changes frequently such as at a window or outdoors.
- When light such as sunlight or car headlight comes from outside
- When a fluorescent lamp flickers
- When a subject has depth

When configuring the motion detection settings, check the function performance both in daytime and at night after appropriately configuring the area settings and the sensitivity settings according to the camera installation conditions and possible movement of subjects. When the detection function does not work or false detection occurs, use a sensor separately. Refer to the operating instructions of the camera for further information.

Time display of recorded images

When displaying recorded images, the displayed date & time may sometimes skips. This is not malfunction. The displayed date & time on the monitor and the recorder may sometimes not be exactly the same. This is also not malfunction.

Response to the mouse operations

While this recorder is processing multiple operations at the same time, the response to the operations from the connected mouse may temporarily become slow. This is not malfunction.

Black screen displayed when playing recorded images

In the following cases, a black screen may be displayed during playing recorded images. However, this is not malfunction.

- When changing cameras or screen patterns during playback or pausing
- When skipping/reverse skipping during playback
- When fast forwarding/reverse fast forwarding during playback
- When the latest recorded image is played while displaying images on a multiscreen
- When going to the next recording event list by fast forwarding/reverse fast forwarding or skipping/reverse skipping during playback
- When playback operation is affected by another operation (such as when receiving multiple alarms sequentially or while copying is being performed simultaneously)

Recording operation

It is possible to connect up to 32 cameras to the recorder and record images from them on the hard disk drives. The following recording operations are available.

Schedule recording: Recording that is automatically performed at the designated time range on the designated day(s) of the week

Event recording: Recording that is automatically performed when an event occurs (such as terminal alarm/camera site alarm/command alarm, etc.)

Important:

- Recording may not be performed for around 3 seconds in the following cases. However, this is not a malfunction.
 - When the settings are changed and the setup menu is closed during recording
 - When the resolution, image quality or the frame rate is changed during recording
-

Event type

The following event recording types are displayed in list form on the web browser:

SCH: Schedule recording

The following are detailed event recording types.

COM: Displayed when a command alarm occurred

TRM: Displayed when a terminal alarm occurred

SITE: Displayed when a camera site alarm occurred

PRE: Pre-event recording

Basic operations

To operate this product, use the mouse (provided) connected to the mouse connection port on the rear of this product.

It is also possible to perform operations and some settings of the recorder from the web browser. For the setup items that can be configured and operated using the web browser, refer to pages 76 and 145.

Step 1

Connect the provided mouse to the mouse connection port on the rear side of the recorder.

→ The mouse cursor will be displayed on the main monitor.

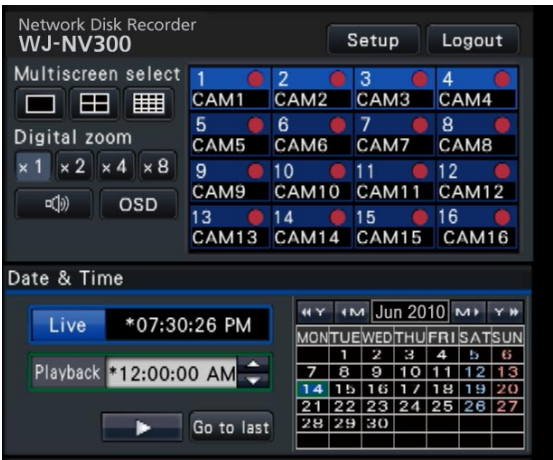
Step 2

Left-click the desired buttons and tabs on the screen.

(Hereinafter, "Left-click..." will be described as "Click..." in this document.)

When the entry field has the [▲] and [▼] buttons or the [▼] button, the setting value can be changed using the mouse wheel.

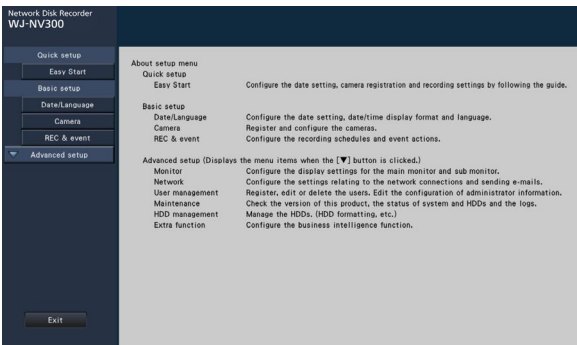
When no operation is made for 10 seconds or more, the mouse cursor will be hidden. The mouse cursor will be displayed again when the mouse is moved.



Step 3

Click the [Setup] button.

→ The top screen of the setup menu will be displayed.



Note:

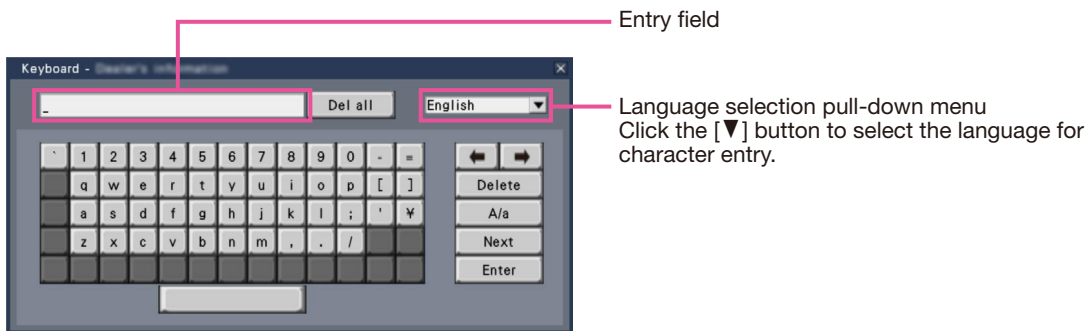
- If a setting window is in a list form and the [▼] button exists on the title column, it is possible to change all the settings in the same row at the same time.

Camera	Model	Compression	Image capture size	Basic setup			
				Rate	Quality	Audio	
1	PH02LL-00	H.264	VGA(640x480)	10 ips	FQ	Off	
2	PH02LL-00	H.264	VGA(640x480)	10 ips	FQ	Off	
3	PH02LL-00	H.264	VGA(640x480)	10 ips	FQ	Off	
4	PH02LL-00	H.264	VGA(640x480)	10 ips	FQ	Off	
5	PH02LL-00	H.264	VGA(640x480)	10 ips	FQ	Off	
6	PH02LL-00	H.264	VGA(640x480)	10 ips	FQ	Off	
7	PH02LL-00	H.264	VGA(640x480)	10 ips	FQ	Off	
8	PH02LL-00	H.264	VGA(640x480)	10 ips	FQ	Off	

About the operation of on-screen keyboard

Use the on-screen keyboard to enter characters for the setting items. When clicking the [] icon beside the entry field, the on-screen keyboard will be displayed, and it will become possible to enter characters by clicking the character keys on the keyboard.

On-screen keyboard screen



[Del all] button

Deletes all the characters in the entry field.

[←]/[→] button

Move the cursor in the entry field to either direction.

[Delete] button

Deletes a character pointed by the cursor in the entry field.

[A/a] button

This button changes the characters to be entered between capital letters and small letters.

[Next] button

Changes the keys to be displayed for character entry.

The displayed keys are changed as follows:

Keys for the language selected by the language selection pull-down menu → Combination characters
→ Special characters

[Enter] button

Determines the entered characters and closes the on-screen keyboard.

Note:

- Basic operations are also applied to the "Login" window and registration window for license.
 - Click the [x] button to close the window without determining the entered characters.
-

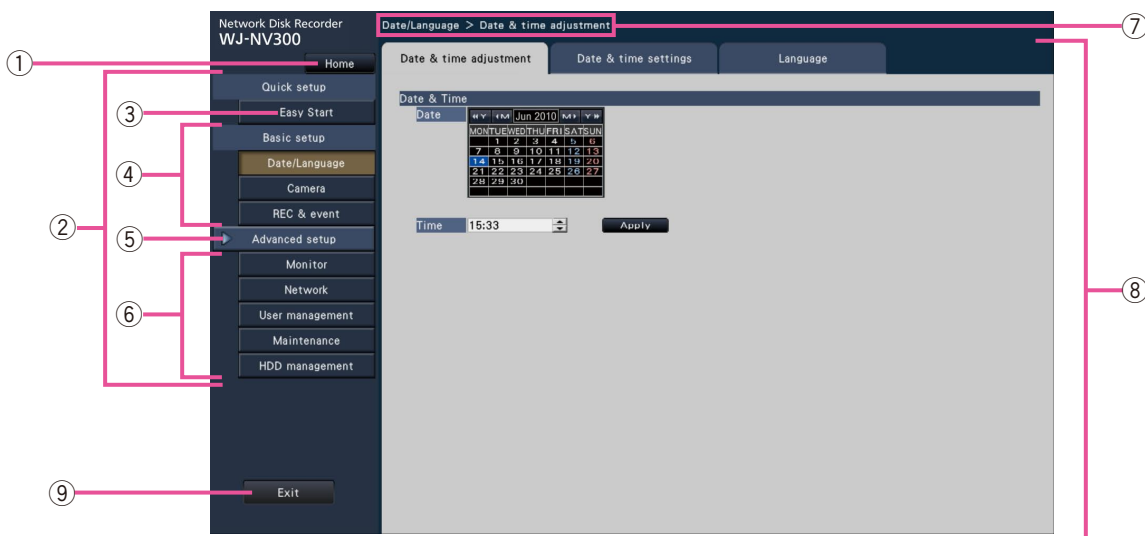
Setup menu

Configuration of each setting item in the setup menu should be completed in advance to use this recorder. The setup menu has the following levels for the setting items. On "Easy Start", the minimum settings required to operate the recorder will be performed, but other settings will remain default. On the [Basic setup] or [Advanced setup] page, the settings can be customized in accordance with a variety of operational modes.

The following is the example of the setup menu that describes the features and operations.

The setup menu will be displayed when clicking the [Setup] button (ⓘ page 94) at the upper right corner of the operational screen on the main monitor.

The buttons of the setup pages will be displayed on the left column of the setup menu.



① **[Home] button**

It is possible to return to the top screen (ⓘ page 9) of the setup menu from any setup page.

② **Setup menu panel**

Displays buttons of the setup pages.

③ **[Easy Start] button**

It is possible to configure the minimum settings required to operate the recorder, such as date & time and camera registration.

④ **[Basic setup] – Setup page buttons**

Each "Basic setup" page will be displayed.

⑤ **[Advanced setup] button**

The buttons to open the corresponding setup pages of the "Advanced setup" menu will be displayed. When clicking this button again, the buttons will be hidden.

⑥ **[Advanced setup] – Setup page buttons**

Each "Advanced setup" page will be displayed.

⑦ **Hierarchical display**

The name of the current setup page will be displayed in the hierarchy. The tab name will also be included.

⑧ **Setup page**

Displays each setup page. If the current setup page is composed of two or more tabs, it is possible to change the page display by clicking the tabs.

⑨ **[Exit] button**

Applies the settings to the recorder and closes the setup menu to return to the operational screen.

Except for some cases, the descriptions of this document follow the hierarchical display and setup pages.

Important:

- If the settings are applied, all login users will be forcibly logged out.
-

Configure the minimum settings [Easy Start]

The minimum settings required to operate the recorder, such as the date & time, camera registration, recording, can be configured on the setup menu - the "Quick setup" menu - "Easy Start".

First, configure the minimum settings on "Easy Start", and to configure more advanced settings, go to each setup page.

Available settings on "Easy Start"

- Date & time of the recorder
- Camera registration
- Order change of the registered camera numbers
- Recording frame rate and image quality

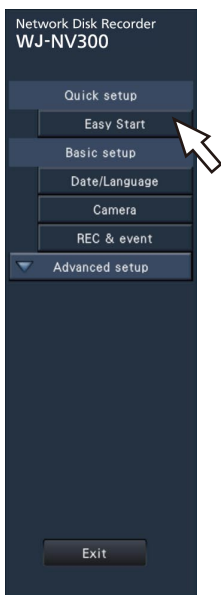
* Other settings will remain default or will be conformed to the camera settings.

* To reset the time, do not use "Easy Start", and go to "Basic setup" menu - "Date/Language" page.

Step 1

Click the [Easy Start] button on the top screen of the setup menu.

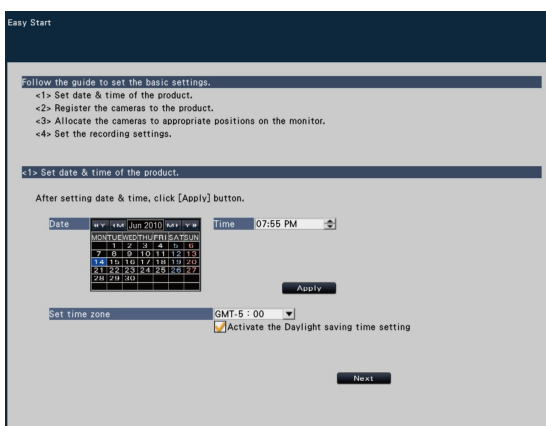
Refer to "Basic operations" (page 9) for how to display the setup menu.



→ The setup menu for the date & time will be displayed.

Step 2

Set the date & time.



[Date]

Set the current date. Select the year, month and day from the calendar.

[<<Y]/[Y>>] button: Selects the previous or next year.

[<M]/[M>] button: Selects the previous or next month.

[Time]

Set the current time.

Step 3

Click the [Apply] button after setting the date & time.

→ The second will be set to "00".

[Set time zone]

Select your time zone.

GMT-12:00 - GMT+13:00

Default: GMT-5:00 (WJ-NV300K)

GMT (WJ-NV300K/G)

Marking the checkbox for [Activate the Daylight saving time setting] will active daylight saving time.

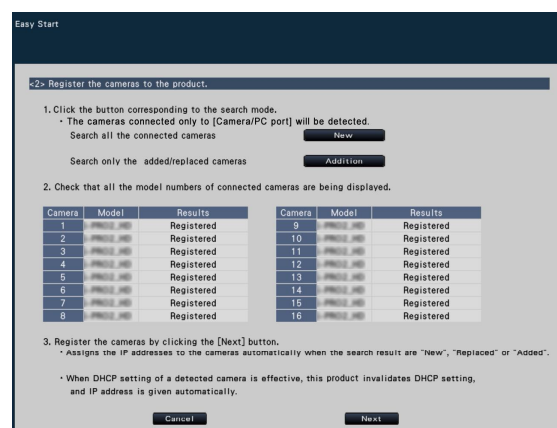
Step 4

Click the [Next] button.

→ The camera registration window opens.

Step 5

Register the cameras connected to the recorder.



Note:

- To use the existing IP address of the connected cameras, refer to "Detect cameras for registration [Detect cameras]" (☞ page 20) instead of this section.
 - Before the settings, register the cameras into the network. Only the cameras added by license registration will be detected even though more cameras than the registered license number are connected.
It is recommended to disconnect unnecessary cameras.
 - Cameras shall be connected to the Camera/PC port. Cameras will not be detected if they are connected to the PC port.
-

[New] button

Detects all the connected cameras.

The models and results of the detected cameras will be displayed. Make sure that the model numbers of all the connected cameras are being displayed.

[Addition] button

Detects only the added or replaced cameras.

The models and results of the detected cameras will be displayed. Make sure that the model numbers of all the added or replaced cameras are being displayed.

Important:

- The system will assign new IP addresses to all the connected cameras (including currently-operated cameras) by clicking [New] button.
 - Cameras newly added after the operation start will be registered in the default settings. To conform the settings to those of the registered cameras, perform the settings for the added cameras.
 - For the video encoder (WJ-GXE500), only the camera connected to CH1 will be detected. The channels CH2 to CH4 are needs to be registered from the setup menu.
-

[Camera]

Up to 32 cameras can be connected. By registering the licenses (☞ page 68), number of the cameras can be increased to 16, 24 or 32.

[Model]

When Panasonic network cameras are used, the model numbers will be displayed.

[Results]

New: Displayed when the camera is newly connected to the recorder.
Replaced: Displayed when the camera has been replaced by another one.
Added: Displayed when the camera connection is added to the recorder.
Registered: Displayed when the camera has already been registered.
Lost: Displayed when the registered camera is not detected.
Blank: No camera is detected.

Note:

- If "Lost" is displayed or the column is left blank, check if the power of the camera is turned on, and make sure that cables are properly connected.
-

Step 6

Click the [Next] button.

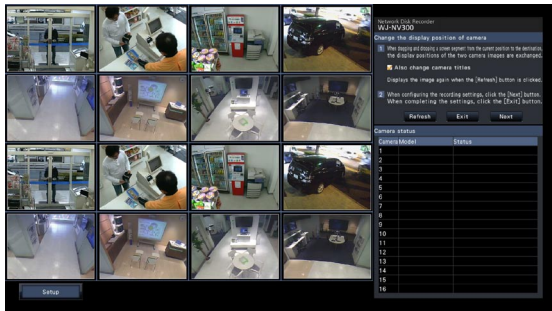
→ IP address will be given to the cameras newly connected, replaced or added, and the images from the camera will be displayed on the operational screen.

Note:

- On "Easy Start", it is impossible to register the cameras in other subnets via the same router.
 - For the security enhancement, changing of the IP address of the camera will become impossible when 20 minutes have passed after the power is turned on. Perform the camera detection within 20 minutes, or turn off the power of the camera and turn it on again if more than 20 minutes has passed. Refer to the operating instructions of the camera for further information.
When 20 minutes have passed after the power of the camera is turned on, "ONVIF" may be detected depending on the models of Panasonic cameras. In such a case, turn off the power of the camera and turn if on again to perform the camera detection.
 - When "On" is selected for the "DHCP" setting of the detected cameras, the recorder will forcibly change the setting to "Off" to give the IP addresses automatically.
 - When the [Cancel] button is clicked, the top screen of "Easy Start" (the menu to set the date & time) without applying the camera detection result will be displayed.
-

Step 7

When you wish to change the registered camera numbers, it is possible to change the order of the camera numbers.



Images from the cameras will be displayed on the monitor from the upper left corner to the right in order of the camera number (1, 2 ... 16: The monitor screen will change according to the number of the camera in use; 9 cameras on 9-screen, 16 cameras on 16-screen, and 24 or 32 cameras on 2 of 16-screen) To interchange camera numbers, drag the camera image to be moved with the mouse and drop on the desired position.

If the camera titles are to be interchanged as well, mark the "Also change camera titles" checkbox.

[Camera status]

The model numbers and statuses of each camera will be displayed in a list.

Displaying image: Displays the images from the camera using the IP address that is newly registered or that has already been registered.

Changing IP address: Images are being obtained from the camera whose IP address has been changed.

Undetectable: Cannot obtain images from the camera.

Authentication error: Failed in the authentication to display images from the camera.

Important:

- If "Undetectable" is displayed, check the camera connections, and retry the camera registration.
- If "Authentication error" is displayed, initialize the camera and retry the camera registration by referring to the operating instruction of the camera.
- If the registered camera is not correctly detected or if you wish to change the camera settings, change the registered information on the "Basic setup" menu - the "Camera" page - the "Camera registration" tab. (Page 19)

[Refresh] button

Obtain the latest camera image after interchanging cameras.

[Exit] button

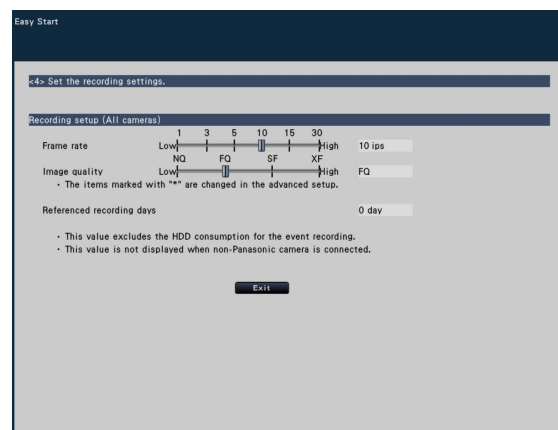
Exits the setup menu and returns to the top screen of the setup menu.

[Next] button

Proceeds to the settings for recording.

Step 8

Perform the settings for recording. If the settings are performed on "Easy Start", the settings will be applied to all the cameras.



[Frame rate]

Select the recording frame rate.

1 ips/ 3 ips/ 5 ips/ 10 ips/ 15 ips/ 30 ips

Default: 10 ips

Note:

- To apply 60 ips, configure on "Advanced recording setup" on the "Recording setup" tab under "REC & event" of "Basic setup".

[Image quality]

Selects the image quality of recorded images.

NQ (Normal): Standard quality

FQ (Fine): High quality

SF (Super Fine): Super fine quality

XF (Extra Fine): Extra fine quality

Default: FQ

Note:

- If "XF" is selected when the compression method of the camera is "MJPEG", "SF" will be set instead of "XF".

[Referenced recording days]

Calculates and displays the total number of days for which recording on the hard disk drives is available.

Note:

- The referenced recording days will be calculated based on the assumption that recording is started on Monday.
 - The HDD consumption for the event recording will be excluded.
 - If a camera manufactured by other than Panasonic is used, the value of "Referenced recording days" will not be displayed.
 - When configured to perform recording in high resolution and high quality, recording may sometimes not be performed at the specified rate. When there may be possibility to fail recording at the specified rate while using only Panasonic cameras, the confirmation window will be displayed.
-

Step 9

Click the [Exit] button.

- Saves the settings and returns to the top screen of the setup menu.

Configure the basic settings [Basic setup]

The basic settings of the recorder such as date & time and recording mode, etc. can be configured on the "Basic setup" page.

The "Basic setup" page provides access to the [Date/Language], [Camera] and [REC & event] pages.

Display the basic setup pages

Click the desired button on the setup menu.



[Date/Language] button: Displays the "Date/Language" page. Perform settings such as date & time and daylight saving time.

[Camera] button: Displays the "Camera" page. Perform registration and setup of network cameras.

[REC & event] button: Displays the "REC & event" page. Set up the recording schedules, cameras and the face matching function.

Set up date & time and language [Date/Language]

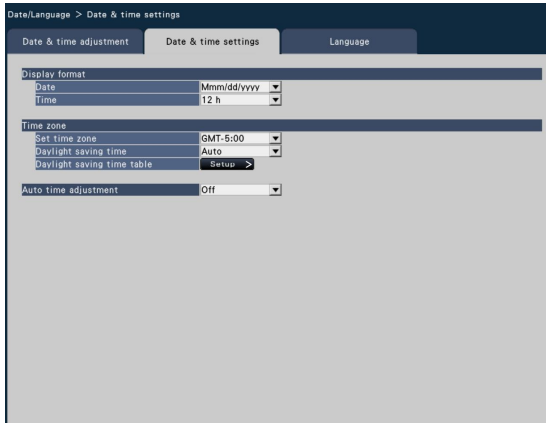
The "Date/Language" page has the [Date & time adjustment], [Date & time settings] and [Language] tabs.

[Date & time adjustment] tab

Set the current date & time. Refer to "Configure the minimum settings [Easy Start]" (📖 page 12).

[Date & time settings] tab

Perform settings such as date & time format, time zone, daylight saving time, and time adjustment method.



■ Display format

Select a display format for the current date & time.

Note:

- "Date & time display" on the [Camera setup] tab (page 23) corresponds to the display format settings on this tab.

[Date]

Select a date/time display format. (Example: March 1, 2014)

yyyy/mm/dd: 2014/03/01
Mmm/dd/yyyy: Mar/01/2014
dd/Mmm/yyyy: 01/Mar/2014
mm/dd/yyyy: 03/01/2014
dd/mm/yyyy: 01/03/2014

Default: Mmm/dd/yyyy (WJ-NV300K)
dd/mm/yyyy (WJ-NV300K/G)

[Time]

Select a time display format. (Example: 3 o'clock in the afternoon)

24 h: 15:00:00
12 h: 03:00:00 PM

Default: 12 h (WJ-NV300K)
24 h (WJ-NV300K/G)

■ Time zone

Select the time zone and shift to/from daylight saving time.

[Set time zone]

Select your time zone.

GMT-12:00 - GMT+13:00

Default: GMT-5:00 (WJ-NV300K)
GMT (WJ-NV300K/G)

[Daylight saving time]

Determine how to switch to/from daylight saving time. The asterisk "*" will be displayed before date & time during daylight saving time.

Out: No changeover to daylight saving time.

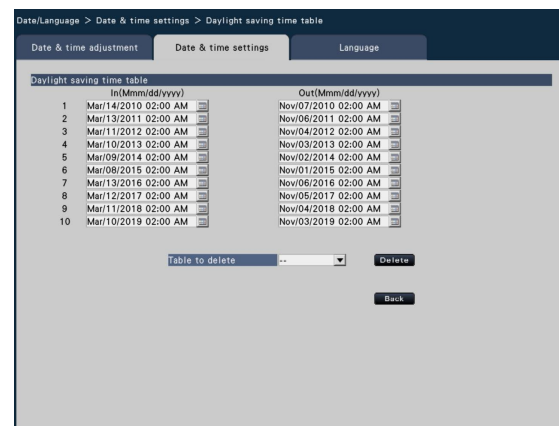
Auto: Automatic changeover to daylight saving time according to the daylight saving time changeover settings.

Default: Auto

[Daylight saving time table]

Set the start (In)/end (Out) date & time of daylight saving time.

Clicking the [Setup >] button will open the "Daylight saving time table" window.



Enter the start (In) and end (Out) date & time for daylight saving time. The calendar will be displayed by clicking the [] icon. Refer to the instructions "Configure the minimum settings [Easy Start]" (page 12) for how to perform the setting.

Up to 10 times and dates can be set for the changeover to daylight saving time.

To delete the set times and dates for switching to daylight saving time, select the number to be deleted from "Table to delete", and click the [Delete] button. To return to the previous page, click the [Back] button.

Important:

- Setting is impossible when the interval between start (In)/end (Out) is less than an hour.

[Auto time adjustment]

Select a method of auto clock adjustment from the following.

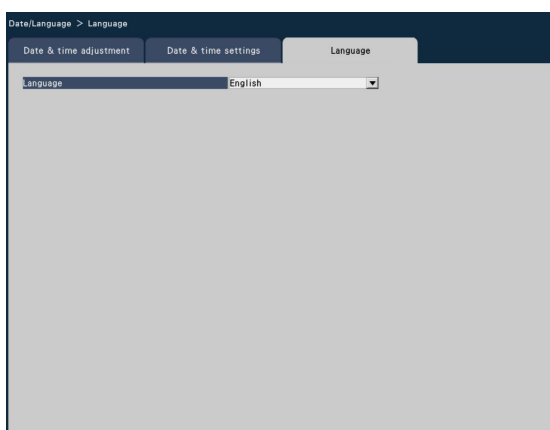
Off: Does not adjust the time automatically.

On: Receives a signal from the ALARM/CONTROL connector on the rear panel of the recorder and adjusts the clock. When the signal is received and if the clock is within 29 minutes $\pm$ the hour, the time will be adjusted to 00 minutes 00 seconds.

Default: Off

[Language] tab

Select the display language for the main monitor and for the web browser on the PC.



[Language]

Japanese/ English/ Français/ Español/ Deutsch/
Italiano/ Русский/ Português

Default: English

Camera setup [Camera]

The "Camera" page has 2 tabs; the [Camera registration] tab and the [Camera setup] tab.

[Camera registration] tab

Perform settings such as the network settings of the camera (IP address and port number), and the display position on the main monitor.

When performing the initial settings, displays camera information detected/set on the "Easy Start".



[Change the display position of camera]

The camera numbers can be interchanged. When the [Setup >] button is clicked, the "Change the display position of camera" window opens to edit the settings. (🔗 Page 22)

[Detect cameras]

The cameras connected to a network can be detected for registration. (🔗 Page 20)

[Registered information]

Change the "Model", "IP address" and "Compression".

When the [Setup >] button is clicked, the "Registered information" window opens to edit the settings.

(🔗 page 21)

In the event of communication trouble with the camera, one of the following error messages is displayed for "Error information".

Connection error: The communication with the camera disconnected.

Authentication error: The user authentication of the camera failed.

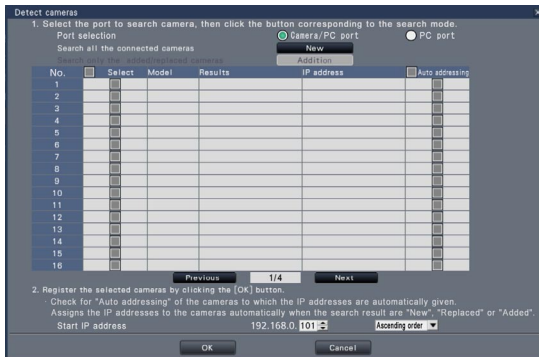
Camera error: The response from the camera is incorrect.

Note:

- When an error message is displayed, check the camera connections and settings (🔗 operating instructions of the camera). If the problem cannot be solved, register the camera again on "Easy Start". (🔗 Page 12)
-

Detect cameras for registration [Detect cameras]

Clicking the [Setup >] button of "Detect cameras" on the [Camera setup] tab will display the following window. After editing the settings, click the [OK] button to save the settings and return to the [Camera registration] tab.



Note:

- Before the settings, register the cameras into the network. Even though it is possible to detect up to 64 cameras, only the number of the cameras that covered by the license registration can be registered.

[Port selection]

Select the port to which the camera to be detected is connected.

[New] button

Detects all the connected cameras. The models, results of the detected cameras and IP addresses will be displayed.

[Addition] button

Detects only the added or replaced cameras. The models, results of the detected cameras and IP addresses will be displayed.

[Camera]

Up to 32 cameras can be connected. It is possible to increase the number of the camera to 16, 24 or 32 by registering the license.

[Select]

Mark the checkboxes of cameras to register. The vacant number will be fulfilled by the subsequent camera.

[Model]

When Panasonic cameras are used, the model numbers will be displayed.

[Results]

New: Displayed when the camera is newly connected to the recorder.

Replaced: Displayed when the camera has been replaced by another one.

Added: Displayed when the camera connection is added to the recorder.

Registered: Displayed when the camera has already been registered.

Lost: Displayed when the registered camera is not detected.

Blank: No camera is detected.

[IP address]

Displays the IP addresses configured for the detected cameras.

[Auto addressing]

The IP addresses of the cameras whose checkboxes are marked will be automatically configured.

[Start IP address]

Specify the start IP address and order when setting the IP address automatically.

Note:

- It is impossible to register the cameras in other subnets via the same router.
- For the security enhancement, changing of the IP address of the camera will become impossible when 20 minutes have passed after the power is turned on. Refer to the operating instructions of the camera for further information.
- When "On" is selected for the "DHCP" setting of the detected cameras, the recorder will forcibly change the setting to "Off" to give the IP addresses automatically.
- If the IP address of the camera is set to be assigned automatically, an IP address will be assigned to the camera when the [OK] button is clicked.
- Click the [Cancel] button to return to the [Camera registration] tab without applying the camera detection result.

Change the registered information [Registered information]

Click the [Setup >] button for "Registered information" on the [Camera registration] tab to display the following items.

After editing the settings, click the [OK] button to save the settings and return to the [Camera registration] tab.

Camera	Model	Address	Compression	User name	Password	Port No.
1						00080
2						00080
3						00080
4						00080
5						00080
6						00080
7						00080
8						00080
9						00080
10						00080
11						00080
12						00080
13						00080
14						00080
15						00080
16						00080

When deleting the registered information, set blank for the address of the camera to delete, or select the number of the camera to delete and click the [Delete] button.

Table to delete:

[Camera]

Up to 32 cameras can be connected. By registering the license for additional cameras, the number of cameras can be increased up to 16, 24, or 32. (Default: 16 for WJ-NV300K, 9 for WJ-NV300/G.)

[Model]

The model of a registered camera will be displayed. (Blank: Camera is not registered)

Click the [▼] button to select the camera model from the camera categories. Refer to the "readme.txt" on the provided CD-ROM for camera categories.

It is unnecessary to change it for normal use.

[Address]

An address already in use will be displayed. The address can be changed using the on-screen keyboard (⌨ page 10). Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

Note:

- Entering "http://" is not necessary if the host name is entered.

[Compression]

Select the image compression method.

H.264/ MJPEG

Note:

- When selecting "MJPEG" for "Compression", the live image transmission rate and the frame rate will be changed automatically to "5 ips". (⌨ Page 39)
- When selecting "H.264" for "Compression", it will become possible to select "XF" for the image quality setting.
- Depending on the model of the camera, the camera may reboot when the compression method is changed. The reboot will be detected as a communication error, but that is not a malfunction.

[User name]

Enter the user name for accessing the cameras and logging in using the on-screen keyboard (⌨ page 10). Register the user name whose access level is "Administrator".

[Password]

Enter the password to be used for the user whose name has been registered as "User name" (⌨ page 10). (Up to 32 alphanumeric characters)

[Port No.]

Set a port number from 1 - 65535 for use by the camera.

Default: 80

[Table to delete]

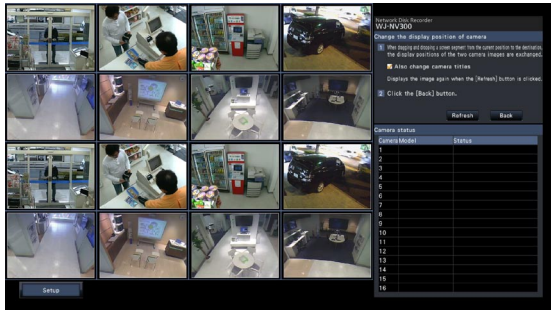
To delete registration information or remove a previously connected camera, either select the camera number and click the [Delete] button, or set the IP address of the respective camera to "000.000.000.000".

Note:

- Enter the port number in five digits, right aligned. (Example: When the port number is 80, enter "00080".) The leading zeros are omitted here.

Interchange camera numbers [Change the display position of camera]

Click the [Setup >] button for "Change the display position of camera" on the [Camera registration] tab to display the following items.



Images from the cameras will be displayed on the monitor from the upper left corner to the right in order of the camera number (1, 2 ... 16: The monitor screen will change according to the number of the camera in use; 9 cameras on 9-screen, 16 cameras on 16-screen, and 24 or 32 cameras on 2 of 16-screen.)

To interchange camera numbers, drag the camera image to be moved with the mouse and drop on the desired position.

If the camera titles are to be interchanged as well, mark the "Also change camera titles" checkbox.

[Refresh] button

Obtain the latest camera image after interchanging cameras.

[Back] button

Save the settings and return to the [Camera registration] tab.

[Camera setup] tab

Transmit the date & time and text displayed on an image, the refresh rate, the VMD alarm and the Light control mode etc. settings to the camera. Click the [Setup >] button for each item to open the respective setup window.



Note:

- The settings of some models of Panasonic cameras only can be configured. Refer to the "readme.txt" on the provided CD-ROM about the supported cameras. Some functions are not supported depending on the models of the connected cameras. For further information about detailed specifications, refer to the operating instructions of the cameras in use.
 - It is impossible to check the current settings using this recorder.
-

Set up date & time display [Date & time display]

Select the date & time display position for each camera and transmit it to the cameras to change the camera settings.

Clicking the [Setup >] button for "Date & time display" on the [Camera setup] tab will display the following items.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

■ Setting items

[Display]

Choose whether or not to display the date & time. If date & time display is activated, date & time will be displayed on camera images and will also be recorded with the recorded images.

To transmit the settings to the camera, mark this item, and select either of the following.

On: Date & time displayed

Off: Date & time not displayed

Note:

- The display format corresponds to the settings on the [Date & time settings] tab (page 17).

[Position]

Select the position to display the date & time on the images.

If the setting is to be transmitted to the camera, mark this item to select the display position.

L-Upper/ L-Lower/ R-Upper/ R-Lower

Note:

- The position to display the title edited on "Display Title" (page 25) is the same as the "Position" selected here to display the date & time edited on "Date & time display".

■ Camera selection

Select the camera to which the date & time display setting is to be sent. Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the date & time setting to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field. If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

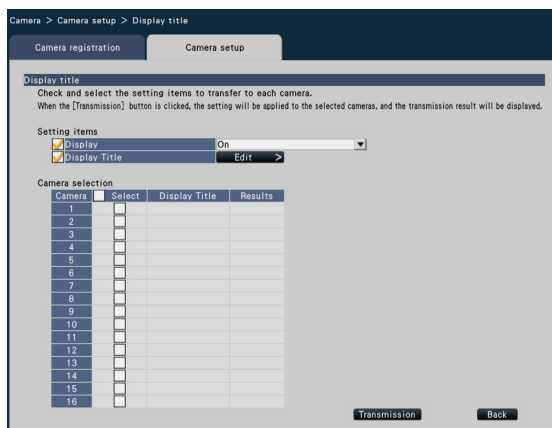
[Back] button

Click the button after completing the settings. The screen returns to the [Camera setup] tab.

Set up OSD [Display Title]

Determine whether to display the title and select the title to display for each camera, the settings will be changed after the settings have been transmitted to the camera.

Clicking the [Setup >] button for "Display Title" on the [Camera setup] tab will display the following items.



■ Setting items

[Display]

Select whether or not to display the title on camera images. If title display is activated, the title will be displayed on camera images and will also be recorded with the recorded images.

To transmit the settings to the camera, mark this item, and select either of the following.

On: Title displayed

Off: Title not displayed

[Display Title]

To transmit the settings to the camera, mark this item, and edit the title displayed on the image. Clicking the [Edit >] button will display the following title editing window:



• [Display Title]

Enter a character string to be displayed on the image using the on-screen keyboard. (Page 10) (Up to 16 alphanumeric characters)

Available characters: 0-9, A-Z, ! # \$ % () * + , - . / : ; = ?

• [Camera title]

Display the camera title registered on the [Main monitor] tab of the monitor page (page 49).

• [Copy] button

The camera title registered on the [Main monitor] tab of the monitor page can be used as display title. Clicking this button will copy the camera title to the "Display Title" field.

• [Back] button

Click the button after completing the settings. This will close the window.

■ Camera Selection

Select the camera to which the setting of the "Display title" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Display title" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings. The screen returns to the [Camera setup] tab.

Set up how to turn on or off the indicators [Indicator]

Select how to turn on or off the link indicator, access indicator or status indicators for each camera and transmit the information to the cameras to change the camera settings.

Clicking the [Setup >] button for "Indicator" on the [Camera setup] tab will display the setup page.

Camera > Camera setup > Indicator

Camera registration Camera setup

Indicator

Select the setting items.
When the [Transmission] button is clicked, the setting will be applied to the selected cameras, and the transmission result will be displayed.

Indicator Off

Camera selection

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

Transmission Back

[Indicator]

On: All the indicators will light in accordance with the status.

On(Access): Only the live indicator will light when images are viewed.

Off: All the indicators will light off.

■ Camera Selection

Select the camera to which the "Indicator" setting is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Indicator" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

The screen returns to the [Camera setup] tab.

Set the camera image transmission priority [Transmission priority]

Select the transmission priority setting for each camera and transmit the information to the cameras to change the camera settings.

Clicking the [Setup >] button for "Transmission priority" on the [Camera setup] tab will display the setup page.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

[Transmission priority]

Select the transmission mode for H.264 images from the following.

The "Transmission priority" will be configured based on the markings of the checkboxes of "H.264(1)" and "H.264(2)".

Frame rate: H.264 images will be transmitted with the frame rate specified in "Frame rate".

Advanced VBR: H.264 images will be transmitted with the frame rate specified in "Frame rate".

When this parameter is selected, this product transmits images while adjusting the average of transmission amount in the period specified in "Control time period" to match it to the specified bit rate.

[Burst tolerance level]

Select the allowance of "Max bit rate (per client)" for the H.264 bit rate from the following.

High, Middle, Low

[Control time period]

Select the period of controlling H.264 bit rate to be recorded from the following.

1 h, 6 h, 24 h, 1 week

■ Camera Selection

Select the camera to which the setting of the "Transmission priority" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Transmission priority" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings. The screen returns to the [Camera setup] tab.

Set up Max bit rate [Max bit rate (per client)]

Select the bit rate per a client when the compression method of the camera is H.264 for each camera and transmit the information to the cameras to change the camera settings.

Clicking the [Setup >] button for " Max bit rate (per client) " on the [Camera setup] tab will display the setup page.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

[Max bit rate (per client)]

64 kbps/ 128 kbps/ 256 kbps/ 384 kbps/
512 kbps/ 768 kbps/ 1024 kbps/ 1536 kbps/
2048 kbps/ 3072 kbps/ 4096 kbps/ 6144 kbps/
8192 kbps

■ Camera Selection

Select the camera to which the setting of the "Max bit rate (per client)" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Max bit rate (per client)" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

The screen returns to the [Camera setup] tab.

Important:

- When the bit rate is changed, the camera image transmission will temporarily pause. During the pause, recording will not be performed.
-

Set up the refresh interval [Refresh interval]

Select the image refresh interval for each camera and transmit it to the cameras to change the camera settings. Clicking the [Setup >] button for "Refresh interval" on the [Camera setup] tab will display the setup page.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

[Refresh interval]

Select an interval to update the image display. If used in a network environment where frequent errors occur, shorten the refresh interval to reduce image distortions. However, the refresh interval may be longer than the set value.

0.2 s/ 0.5 s/ 1 s/ 2 s/ 3 s

■ Camera Selection

Select the camera to which the setting of the "Refresh interval" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Refresh interval" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

The screen returns to the [Camera setup] tab.

Important:

- Image transmission from the camera will temporarily be canceled and no image will be recorded during this period if the setting to change the refresh interval is transmitted to the camera.
-

Set up the method of camera installation [Upside-down]

Select the method of installation for each camera and transmit the information to the cameras to change the camera settings.

Clicking the [Setup >] button for "Upside-down" on the [Camera setup] tab will display the setup window.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

[Upside-down]

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

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

Wall: Select this when the camera is to be installed on a wall.

■ Camera Selection

Select the camera to which the setting of the "Upside-down" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Upside-down" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

The screen returns to the [Camera setup] tab.

Note:

- To flip the camera image vertically, select the "Off (ceiling)".
 - If a fisheye camera is registered, "Off (ceiling)" will be set. Select "Wall" to install the camera on the wall.
-

Set up pan/tilt-flip [Pan/tilt-flip]

Select the pan/tilt-flip function for each camera and transmit the information to the cameras to change the camera settings.

Clicking the [Setup >] button for "Pan/tilt-flip" on the [Camera setup] tab will display the setup page.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

[Pan/tilt-flip]

Select whether or not to activate the pan/tilt-flip function that can achieve camera controllability equal to 360° endless cameras.

On: The pan/tilt-flip function will work.

Off: The pan/tilt-flip function will not work.

■ Camera Selection

Select the camera to which the setting of the "Pan/tilt-flip" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Pan/tilt-flip" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

The screen returns to the [Camera setup] tab.

Set up Super Dynamic [Super Dynamic (Wide dynamic range)]

Select the Super Dynamic function for each camera and transmit the information to the cameras to change the camera settings.

Clicking the [Setup >] button for "Super Dynamic (Wide dynamic range)" on the [Camera setup] tab will display the setup page.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

[Super Dynamic (Wide dynamic range)]

Select "On" or "Off" to determine whether or not to activate the super dynamic function.

On(High): The super dynamic function will work.

When "On (High)" is selected, the tone level will be compensated to emphasize the contrast.

On: The super dynamic function will work. When "On" is selected, the tone level will be compensated to emphasize the sensitivity.

Off: The super dynamic function will not work.

■ Camera Selection

Select the camera to which the setting of the "Super Dynamic" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Super Dynamic" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

The screen returns to the [Camera setup] tab.

Set the adaptive black stretch function of the camera [Adaptive black stretch]

Determine whether to enable the adaptive black stretch function for each camera. The settings will be changed after the settings have been transmitted to the camera.

Clicking the [Setup >] button for "Adaptive black stretch" on the [Camera setup] tab will display the setup window.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

Important:

- When "On" is selected for "Adaptive black stretch", noise in dark area in image may increase and the periphery of the border between the dark area and the bright area will be displayed brighter/darker than the other brighter/darker area in the image.

[Adaptive black stretch]

By using the adaptive black stretch function, dark area in the image will turn brighter by the digital image processing.

On: The adaptive black stretch function will be enabled.

Off: The adaptive black stretch function will be disabled.

■ Camera Selection

Select the camera to which the setting of the "Adaptive black stretch" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Adaptive black stretch" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

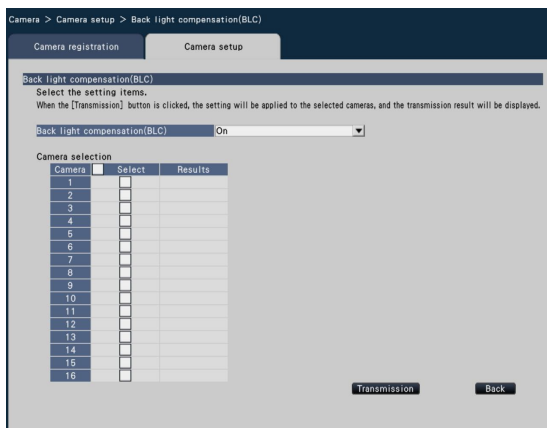
[Back] button

Click the button after completing the settings. The screen returns to the [Camera setup] tab.

Set the back light compensation function of the camera [Back light compensation (BLC)]

Determine whether to enable the back light compensation function for each camera. The settings will be changed after the settings have been transmitted to the camera.

Clicking the [Setup >] button for "Back light compensation (BLC)" on the [Camera setup] tab will display the setup window.



[Back light compensation (BLC)]

When "On" is selected for "Super Dynamic", this function is not available.

The back light compensation function masks the brighter area in image and compensates exposure in silhouette created by back light.

On: Mask area will automatically be set.

Off: Mask area will not be set automatically. It is necessary to set mask areas manually.

■ Camera Selection

Select the camera to which the setting of the "Back light compensation (BLC)" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Back light compensation (BLC)" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

The screen returns to the [Camera setup] tab.

Set up Light control mode [Light control mode]

Select how to control the amount of light for each camera and transmit the information to the cameras to change the camera settings.

Clicking the [Setup >] button for "Light control mode" on the [Camera setup] tab will display the setup page.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

[Light control mode]

Outdoor scene: Depending on the brightness level (illuminance), the iris will automatically be controlled together with the shutter speed adjustment to control light.

Indoor scene: The shutter speed will automatically be adjusted to prevent flicker caused by fluorescent light. (For the 50 Hz areas)

Indoor scene (60 Hz): Same as "Indoor scene" above. (For 60 Hz areas)

■ Camera Selection

Select the camera to which the setting of the "Light control mode" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Light control mode" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

The screen returns to the [Camera setup] tab.

Note:

- When "Outdoor scene" is selected, flicker may occur when a subject is under fluorescent lighting.
-

Set the automatic slow shutter of the camera [Auto slow shutter (Maximum shutter)]

Select the auto slow shutter setting for each camera and transmit the information to the cameras to change the camera settings.

Clicking the [Setup >] button for "Auto slow shutter (Maximum shutter)" on the [Camera setup] tab will display the setup page.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

Note:

- When "Max. 16/30 s" is selected, the electronic sensitivity will automatically be enhanced up to 16 times.
- When "Off" is selected for "Gain", this function is not available.

[Auto slow shutter (Maximum shutter)]

The auto slow shutter adjusts the sensor storage time to enhance the electronic sensitivity.

The following are available setting values.

Off(1/30 s)/ Max. 2/30s/ Max. 4/30s/ Max. 6/30s/
Max. 10/30s/ Max. 16/30s

■ Camera Selection

Select the camera to which the setting of the "Auto slow shutter" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Auto slow shutter" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

The screen returns to the [Camera setup] tab.

Important:

- When the auto slow shutter is set, the frame rate may drop. Noise or white dots (scratches) may also be seen in image.

Set the black and white switchover of the camera [Day & Night (electrical)]

Select the day and night setting for each camera and transmit the information to the cameras to change the camera settings.

Clicking the [Setup >] button for "Day & Night(electrical)" on the [Camera setup] tab will display the setup window.

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

[Day & Night(electrical)]

Select a method of how to switch between B/W image and color image from the following.

Off: Color images will always be displayed.

Auto: Color images will be switched to B/W images when the lighting intensity around the camera becomes approx. 1.0 lx or less. It may take time until color images are switched to B/W images.

■ Camera Selection

Select the camera to which the setting of the "Day & Night(electrical)" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "Day & Night(electrical)" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

The screen returns to the [Camera setup] tab.

Set up VMD alarm [VMD alarm]

Select the VMD function for each camera and transmit the information to the cameras to change the camera settings.

Clicking the [Setup >] button for "VMD alarm" on the [Camera setup] tab will display the setup page.

Camera > Camera setup > VMD alarm

Camera registration Camera setup

VMD alarm

Select the setting items.
When the [Transmission] button is clicked, the setting will be applied to the selected cameras, and the transmission result will be displayed.
The whole area of image will become VMD area.

Setting items

☒ VMD alarm On

☐ Detection sensitivity 1(Low)

Camera selection

Camera	Select	Results
1	☐	
2	☐	
3	☐	
4	☐	
5	☐	
6	☐	
7	☐	
8	☐	
9	☐	
10	☐	
11	☐	
12	☐	
13	☐	
14	☐	
15	☐	
16	☐	

Transmission Back

[VMD alarm]

Select whether or not to use the VMD (VMD: Video Motion Detection) alarm function when a change (movement) is detected in the image. Refer to the operating instructions of the camera in use for how to configure the VMD alarm.

On: Detects alarms.

Off: Does not detect alarms.

[Detection sensitivity]

1 (low) - 15 (high)

■ Camera Selection

Select the camera to which the setting of the "VMD alarm" is to be sent.

Mark the checkbox of the camera to which the setup information is to be transmitted.

[Transmission] button

Transmit the setting of the "VMD alarm" to the camera.

Once transmission is completed and the setting has been applied to the camera, "OK" will be displayed in the "Results" field.

If the display reads "Authentication error", etc., the camera connection or the setting may have failed.

[Back] button

Click the button after completing the settings.

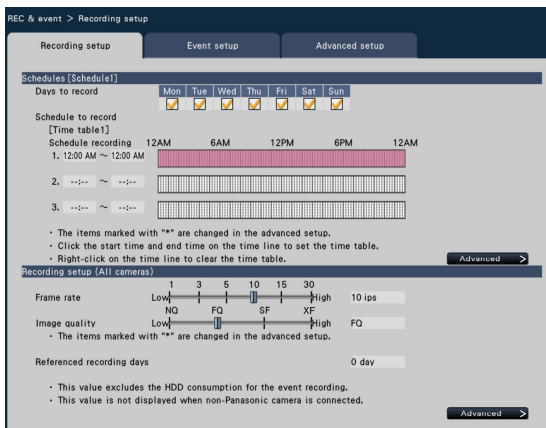
The screen returns to the [Camera setup] tab.

Set up recording/events [REC & event]

The "REC & event" page has 3 tabs; the [Recording setup] tab, the [Event setup] tab and the [Advanced setup] tab.

Recording setup tab [Recording setup]

Configure the settings relating to schedule recording. Set the day(s), time table(s), frame rate and image quality for recording.



■ Schedules

Recording will be performed according to the schedules set in advance. Select the day(s) of the week and the time table(s).

[Days to record]

Select the day(s) of the week to record. Mark the checkbox(es) of the day(s) of the week to record.

[Schedule to record]

3 time tables for schedule recording can be set up for "[Time table 1]". The time bar indicates 24 hours in steps of 15 minutes.

Click the desired position on the time bar to designate the start and end time. When the time is designated, the time bar turns red.

Note:

- At the default, schedule recording has been set for 24 hours on Time table 1. To delete the designated start and end time, right-click the timetable.
- The recording time table can be set by dragging the start and end time on the time bar with the mouse.
- Be sure to set so that there is no overlap between the 3 time tables. When attempting to set the same time as already set on another time bar, the time immediately before or after the overlapping time will be set.

[Advanced >] button

The "Advanced schedule setup" page will be displayed. In addition to 3 schedule recordings, 3 event recordings can be set up. The schedule settings can be set up to 2 patterns. (Page 40)

■ Recording setup (All cameras)

Set the recording frame rate and image quality. The settings will be applied to all cameras.

[Frame rate]

Select the recording frame rate.

1 ips/ 3 ips/ 5 ips/ 10 ips/ 15 ips/ 30 ips

Default: 10 ips

Important:

- When the compression method of the camera is MJPEG, 10 ips, 15 ips and 30 ips are unavailable. The default is "5 ips".

[Image quality]

Select the recording image quality.

NQ (Normal): Standard quality

FQ (Fine): High quality

SF (Super Fine): Super fine quality

XF (Extra Fine): Extra fine quality

Default: FQ

Note:

- If "XF" is selected when the compression method of the camera is "MJPEG", "SF" will be set instead of "XF".

[Referenced recording days]

Calculates and displays the total number of days for which recording on the hard disk drives is available.

Note:

- The referenced recording days will be calculated based on the assumption that recording is started on Monday.
- The HDD consumption for the event recording will be excluded.
- If a camera manufactured by other than Panasonic is used, the value of "Referenced recording days" will not be displayed.
- "*" preceding an item indicates that the item has been changed on the "Advanced recording setup" page.

- When configured to perform recording in high resolution and high quality, recording may sometimes not be performed at the specified rate. When there may be possibility to fail recording at the specified rate while using only Panasonic cameras, the confirmation window will be displayed.

[Advanced >] button

The "Advanced recording setup" will be displayed. Each camera can be set up separately for recording. (Page 42)

Configure the advanced settings for schedule recording [Advanced schedule setup]

Up to 2 schedules can be set. Up to 3 of the schedule recording or event recording can be set for each schedule on each of Time table 1 and 2.

Clicking the [Advanced >] button in the "Schedules" field will open the "Advanced schedule setup" page.

■ Days to record

Select the actions to be taken on each day of the week based on a time table. [●] indicates the selected state, [○] the unselected state.

Time table1: Recording according to Time table 1.

Time table2: Recording according to Time table 2.

Off: Neither schedule nor event recording will take place.

■ Event recording

Set the recording duration in the event that an alarm occurs and the recording duration before an alarm occurs.

[Event recording duration]

Set the recording duration in the event that an alarm occurs.

2 s/ 5 s/ 10 s/ 20 s/ 30 s/ 1 min/ 2 min/ 3 min/ 5 min/ 10 min/ 15 min

Manual: Recording will continue while receiving an alarm input signal. Recording will be performed for at least 8 seconds.

Ext.: Alarm output will continue until the alarm action is reset.

Default: 30 s

[Pre-event duration]

Set the recording duration before an alarm occurs.

0 s/ 5 s/ 10 s/ 15 s

Default: 0 s

Note:

- The actual recording time may sometimes be longer than the duration selected for this setting.
- Pre-event recording is not performed when "0 s" is selected.
- When images are set to be recorded together with audio, the audio may not be recorded at the beginning of the pre-event recording.
- Actual duration for the pre-event recording will approx. 5 seconds even if "10 s" or "15 s" is selected for "Pre-event recording duration" when recording with high resolution, high quality and high frame rate.

■ Schedule to record

3 schedule recordings and 3 event recordings each can be set up on Time table 1 and 2. Within the same time table, event recording has priority over schedule recording.

[Schedule recording] (🔍 Page 40)

[Event recording]

Set the time table for recording in the event that an alarm occurs. Alarm that falls into a time table that has not been set up will not trigger recording. Refer to page 39 for how to configure the time bar.

[e-Mail]

To send an alarm e-mail when an event occurs, mark this item.

[Panasonic alarm protocol]

Mark the checkbox of this item to automatically transmit information on an event that occurs to a PC using the Panasonic alarm protocol.

[Previous] / [Next]

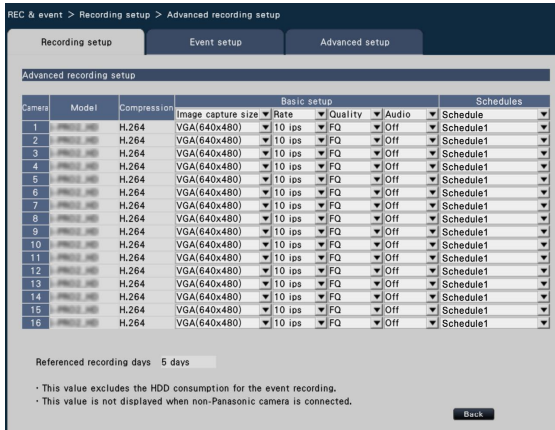
The schedule settings to be configured will be switched over.

[Back] button

Click the button after completing the settings. The screen returns to the [Recording setup] tab.

Set up recording for individual cameras [Advanced recording setup]

Set up items such as the image capture size, frame rate and image quality for individual cameras. Clicking the [Advanced >] button on the [Recording setup] tab will open the advanced setup page.



[Model]

The model number of the connected camera will be displayed.

(Blank: Camera is not registered)

[Compression]

The compression method selected when registering camera will be displayed.

[Image capture size]

Select a resolution for images to be recorded.

<When the aspect ratio is 4:3>

QVGA(320x240)/ VGA(640x480)/
SXVGA(1280x960)/ SVGA(800x600)/
QXGA(2048x1536)

<When the aspect ratio is 16:9>

QVGA(320x180)/ HVGAW(640x360)/
HD(1280x720)/ FHD(1920x1080)

Default: VGA(640x480)

Important:

- The available image capture sizes may differ depending on the model of the camera and the compression method.

Note:

- When configured to perform recording in high resolution and high quality, recording may sometimes not be performed at the specified rate.
- Depending on the model of the camera, the camera may reboot when the image capture size is changed. The reboot will be detected as a communication error, but that is not a malfunction.

[Rate] (Frame rate) (Page 39)

Note:

- The 60 ips is available depending on the camera model and settings of compression and image capture size.
- The images of "60 ips" can be displayed in one screen if a monitor compatible with 1920x1080 p/ 60 Hz (720x480 p/60 Hz) is used as a main monitor. (The images on the main monitor other than 1-screen and on the sub monitor are displayed in "30 ips".)

[Quality] (Image quality) (page 39)

[Audio]

Select whether or not to record audio together with images.

On: Audio will be recorded.

Off: Audio will not be recorded.

Default: Off

[Schedule]

Select a schedule in which the desired recording to be performed is included.

Schedule 1: Recording will be performed according to the settings for schedule 1.

Schedule 2: Recording will be performed according to the settings for schedule 2.

Default: Schedule1

[Referenced recording days] (Page 40)

[Back] button

Click the button after completing the settings. The screen returns to the [Recording setup] tab.

Configure event-related settings [Event setup] tab

Configure event-related settings such as the alarm output duration and buzzer duration.



■ Alarm action

Configure alarm-related items such as alarm output duration and alarm auto reset.

[Output duration]

Select the output duration for the alarm signal output from the terminal on the recorder's rear panel when an alarm occurs. When "0 s" is selected, alarm signals will not be output.

0 s/ 2 s/ 5 s/ 10 s/ 20 s/ 30 s/ 1 min

Ext.: Alarm output will continue until the alarm action is reset. Refer to the "Cancel the alarm action" (page 122) for further information about how to cancel the alarm action.

Rec.: Output of the alarm signal will continue during event recording.

Default: 2 s

[Buzzer duration]

Set the duration of the buzzer sound when an alarm occurs. When "0 s" is selected, the buzzer will not sound.

0 s/ 2 s/ 5 s/ 10 s/ 20 s/ 30 s/ 1 min

Ext.: The buzzer will keep on sounding until the alarm action is reset. Refer to the "Cancel the alarm action" (page 122) for further information about how to cancel the alarm action.

Rec.: The buzzer will keep on sounding during event recording.

Default: 2 s

[Auto reset time]

Set the time for automatically resetting the alarm action.

2 s/ 5 s/ 10 s/ 20 s/ 30 s/ 1 min/ 3 min/ 5 min

Ext.: The alarm action will not automatically reset.

Refer to the "Cancel the alarm action" (page 122) for further information about how to cancel the alarm action.

Default: Ext.

Note:

- If the time set for "Output duration" or "Buzzer duration" is longer than that set for "Auto reset time", the time set for "Auto reset time" will be applied.
-

[Message display]

Select whether or not to display a message on a PC connected to a network when an alarm occurs.

On: Display a message.

Off: Does not display a message.

Default: On

[Main monitor action]

While the main monitor is displaying the operation window, select whether or not to switch to 1-screen display in association with alarm occurrence.

On (Wide view): Switch to 1-screen in wide view in association with alarm occurrence

On: Switch the monitor display in association with alarm occurrence.

Off: Does not switch the monitor display.

Default: Off

Note:

- The images from the camera selected for "Recording camera" of "Advanced setup" are displayed on a 1-screen.
 - The main monitor action will not be activated while recorded images are being played back or the setup menu is being displayed.
 - When the auto reset time have passed, it will return to the previously displayed screen. (When the mouse is operated while the main monitor action is being taken, it will not return to the previously displayed screen.)
-

Advanced event setup

Configure advanced settings for individual alarm types (terminal alarm, camera site alarm, command alarm, and face matching alarm). Clicking the [Advanced >] button for each item will open the respective "Advanced setup".

* Only when the license of the additional business intelligence kit (WJ-NVF30, WJ-NVF30W) is registered

Set up terminal alarm [Advanced terminal alarm setup]

Configure the settings relating to the recording triggered by an alarm signal supplied to the ALARM/CONTROL connector of the recorder from an external alarm device such as a door sensor.

Configure the necessary settings for each alarm input terminal of the ALARM/CONTROL connector on the rear panel of the recorder.

Terminal	Recording camera	Preset	Terminal output	Terminal input
1	Cam.1	---	On	N.O.
2	Cam.2	---	On	N.O.
3	Cam.3	---	On	N.O.
4	Cam.4	---	On	N.O.
5	Cam.5	---	On	N.O.
6	Cam.6	---	On	N.O.
7	Cam.7	---	On	N.O.
8	Cam.8	---	On	N.O.
9	Cam.9	---	On	N.O.

■ Advanced terminal alarm setup

[Mode]

Select the action to be taken when an alarm signal is supplied.

Recording & alarm action: Performs all event actions according to the settings.

Recording only: Only recording, filing of event logs, and moving the camera to a preset position will be performed.

Off: Only filing of event logs will be performed.

Default: Recording & alarm action

[Alarm logs]

Determine whether or not to save the alarm logs.

Save: Logs will be saved.

Not save: Logs will not be saved.

Default: Save

[Setup by terminal]

Set up individual terminals numbered from 1 to 9.

[Recording camera]

Select the camera for recording. When "Off" is selected, recording will not be performed.

All: Applies all the registered cameras for recording.

Default: Camera number associated with the terminal number

Note:

- When many cameras are registered and "All" is selected for "Recording camera", the start of alarm recording may be delayed depending on the cameras. It is recommended to perform pre-event recording.

[Preset]

Select the camera preset position (001 to 256) to which the camera is to be moved when an alarm signal is received. If "---" is selected, the camera will not be moved to a preset position.

[Terminal output]

Choose whether or not to output an alarm signal from the alarm output terminal of the ALARM/CONTROL connector on the recorder's rear panel when an alarm signal is received.

On: Outputs alarm signals.

Off: Does not output alarm signals.

Default: On

[Terminal input]

Select the terminal status for supplying an alarm signal to the alarm terminal.

N.O. (Normally Open): Signals will be supplied when short-circuited.

N.C. (Normally Close): Signals will be supplied when open-circuited.

Default: N.O.

[Back] button

Click the button after completing the settings. The screen returns to the [Event setup] tab.

Note:

- Refer to the "Operate the camera" section (page 112) for further information about the camera preset positions.

Set up camera site alarm [Advanced camera site alarm setup]

Set up the action to be taken when a Panasonic alarm protocol received from a camera triggers camera site alarm.

Camera	Recording camera	Preset	Terminal output
1	Cam.1	---	On
2	Cam.2	---	On
3	Cam.3	---	On
4	Cam.4	---	On
5	Cam.5	---	On
6	Cam.6	---	On
7	Cam.7	---	On
8	Cam.8	---	On
9	Cam.9	---	On
10	Cam.10	---	On
11	Cam.11	---	On
12	Cam.12	---	On
13	Cam.13	---	On
14	Cam.14	---	On
15	Cam.15	---	On
16	Cam.16	---	On

Refer to the "Set up terminal alarm [Advanced terminal alarm setup]" section (page 45) for further information about the items available for "Advanced camera site alarm setup"; "Mode" and "Alarm logs", and also "Recording camera", "Preset" and "Terminal output" under "Setup by camera".

[Back] button

Click the button after completing the settings. The screen returns to the [Event setup] tab.

Set up command alarm [Advanced command alarm setup]

Set up the action to be taken when a command alarm signal received from a PC that is connected via a network protocol triggers command alarm.

CMD No.	Recording camera	Preset	Terminal output
1	Cam.1	---	On
2	Cam.2	---	On
3	Cam.3	---	On
4	Cam.4	---	On
5	Cam.5	---	On
6	Cam.6	---	On
7	Cam.7	---	On
8	Cam.8	---	On
9	Cam.9	---	On
10	Cam.10	---	On
11	Cam.11	---	On
12	Cam.12	---	On
13	Cam.13	---	On
14	Cam.14	---	On
15	Cam.15	---	On
16	Cam.16	---	On

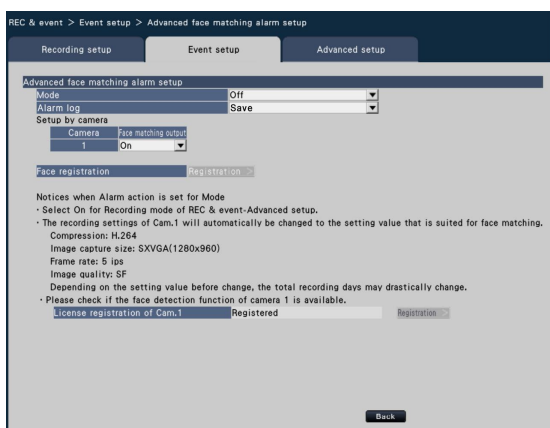
Refer to the "Set up terminal alarm [Advanced terminal alarm setup]" section (page 45) for further information about the items available for "Advanced command alarm setup"; "Mode" and "Alarm logs", and also "Recording camera", "Preset" and "Terminal output" under "Setup by command number".

[Back] button

Click the button after completing the settings. The screen returns to the [Event setup] tab.

Set up face matching alarm [Advanced face matching alarm setup]

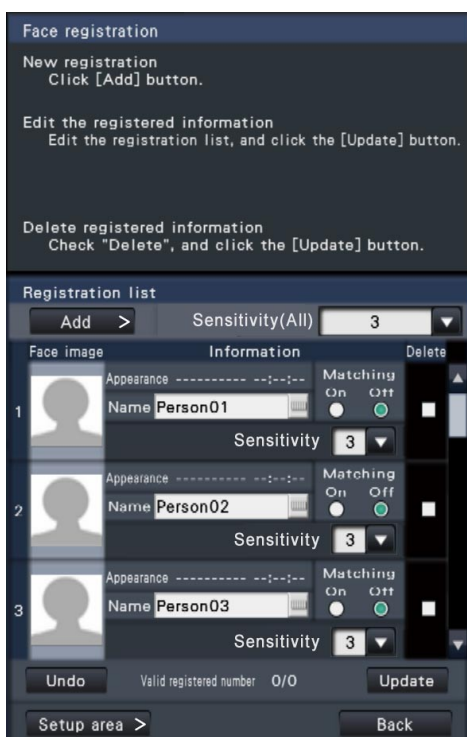
The settings for this function will become available by registering the license of the additional business intelligent kit (WJ-NVF30, WJ-NVF30W: optional). Configure the settings relating to the face matching alarm that will be triggered when a previously registered face image is detected among the camera's live images. Refer to "About the face matching function" (page 7) for details and cautions for use regarding the face matching function. Refer to the operating instructions (PDF) of the Additional Business Intelligence Kit for further information about face matching alarm.



Refer to the operating instructions (PDF) of the Additional Business Intelligence Kit for further information about how to configure the settings.

Register face images [Face registration]

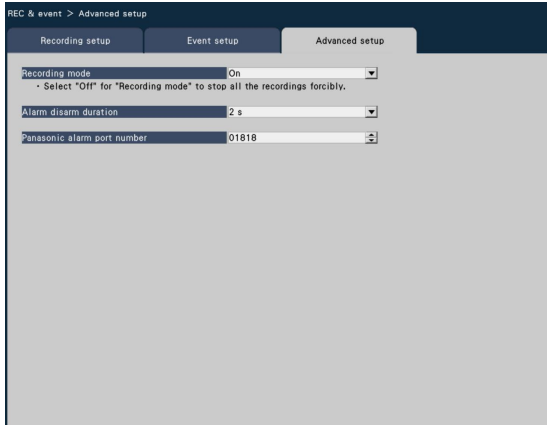
Use this page to register new face images, to check already registered face images or to assign names to the face images.



Refer to the operating instructions (PDF) of the Additional Business Intelligence Kit for further information about how to configure the settings.

Configure the advanced settings for recording and events [Advanced setup]

Configure the special settings related to recording on this tab. Set up the recording mode, alarm disarm duration and Panasonic alarm port number (the port number for incoming site alarm).



[Recording mode]

Determine whether or not to stop all recording actions. Set to "Off", primarily to stop access to the HDD before turning off the power.

On: Performs recording.

Off: Stops all recording actions.

Default: On

Important:

- If "Off" is selected, be sure to return the setting to "On" when resuming operation.
-

[Alarm disarm duration]

Set the period to suspend event actions for the case that the same kind of event (terminal alarm, camera site alarm, command alarm, face matching alarm) occurs repeatedly at the same camera.

2 s/ 3 s/ 5 s/ 10 s

Default: 2 s

[Panasonic alarm port number]

Specify the number of the port to be used for receiving site alarm.

Default: 1818

Note:

- Enter the port number in five digits, right aligned. (Example: When the port number is 80, enter "00080".) The leading zeros are omitted here.
-

Configure the settings relating to monitors [Monitor]

The settings relating to the display of the main monitor or sub monitor connected to the recorder and the monitor of the PC connected via a network are configured on the setup menu - the "Advanced setup" menu - the "Monitor" page.

The settings relating to image switching such as multiscreen display and sequence display of live images are also configured on this page.

The "Monitor" page has 3 tabs; the [Main monitor] tab, the [Sub monitor] tab and the [Advanced setup] tab.

Set up the main monitor [Main monitor]

Perform settings relating to the main monitor display such as the display position of the camera title.



■ Camera title

[Display]

Determine whether or not to display the camera title on the main monitor.

On: Displays the camera title.

Off: Does not display the camera title.

Default: On

[Position]

Select the position to display the camera title on images.

L-Upper/ L-Lower/ R-Upper/ R-Lower

Default: R-Upper

[Camera title]

Enter a camera title to display for each camera using the on-screen keyboard (see page 10). (Up to 14 characters)

Note:

- When using together with the date and time display to be set on the camera (see page 23) or OSD (Display Title, see page 25), adjust the position to be displayed to not to overlap with them.
 - The camera title configured on this setting will not be embedded on recorded images.
-

Configure the settings relating to sub monitors [Sub monitor]

Set up the sub monitor by selecting the camera images to display, the image display duration, etc.



■ Display settings

Set the display sequence for camera images (image switching).

[Mode]

Select how to display images from the cameras.

1-screen live sequence: Images from the cameras will sequentially be switched and displayed on 1-screen.

4-screen live sequence: Images from the cameras will sequentially be switched and displayed on 4-screen.

Switch by alarm terminal input: Switches camera 1 to 9 to display images on 1-screen according to the signal input triggered by the terminal alarms from terminal 1 to 9.

16Screen: Images from the cameras will be displayed on 16-screen without switching the screen.

[Duration]

Set the interval (duration) for switching camera images.

3 s/ 5 s/ 10 s

Default: 5 s

Note:

- When the number of the available cameras by the registered licenses is 9, "9Screen" can be selected instead of "16Screen". ("16Screen" will not be displayed.)
- The terminal status (N.O. or N.C.) for supplying an alarm signal to the alarm terminal depends on the settings for "Terminal input" of "Advanced terminal alarm setup" (page 45).

[Camera selection]

Select the cameras to be included in the sequence display.

Mark the checkbox next to the desired camera. The selected cameras will be displayed in numerical order.

Note:

- When "4-screen live sequence" or "16Screen" is selected for "Mode", images from the first 4 or 16 selected cameras will be displayed regardless of the order of the camera number.

[Secret view]

Secret view is a function that causes the camera image displayed on a 1-screen or the selected camera image on a multiscreen on the main monitor to be displayed as a black screen on the sub monitor.

Determine whether or not to use secret view.

On: Enables the secret view function.

Off: Disables the secret view function.

Default: Off

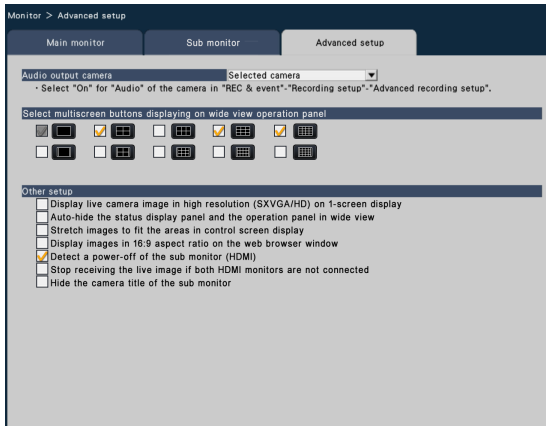
Note:

- While "1-screen live sequence" is being performed, the secret view images will be skipped (not displayed).
- The image on the sub monitor may momentarily go black when images are switched on the main monitor.

Configure other settings relating to monitors

[Advanced setup]

Configure the audio output setting of the monitor, and select the screen pattern buttons to be displayed on wide view.



■ Audio output camera

The camera channel whose audio is output from the recorder will be fixed. To fix the camera channel, select the camera whose audio is to be output from the recorder.

Selected camera: Does not fix the camera channel (The recorder will output the audio of the camera whose images are being displayed.)

Cam.1 - Cam.32: Fixes the camera channel (The recorder will always output the audio of the selected camera.)

Default: Selected camera

■ Select multiscreen buttons displaying on wide view operation panel

The button whose checkbox is marked will be displayed on the wide view operation panel.

■ Other setup

[Display live camera image in high resolution (SXVGA/HD) on 1-screen display]

When the checkbox is marked, images from the camera on 1-screen will be displayed with SXVGA or HD. Refer to the "readme.txt" for compatible cameras.

[Auto-hide the status display panel and the operation panel in wide view]

Mark the checkbox to display or hide the status display panel and the operation panel in wide view in association with whether the mouse cursor is displayed or hidden.

[Stretch images to fit the areas in control screen display]

Mark the checkbox to enlarge the vertical size of images with the aspect ratio of 16:9 to fit into the image display area on the control screen.

Note:

- When the images are enlarged with this setting, camera control or VMD search may sometimes not work properly in accordance with the specified coordinates or areas.
-

[Display images in 16:9 aspect ratio on the web browser window]

Mark the checkbox to display the images in the web browser window with the aspect ratio of 16:9.

[Detect a power-off of the sub monitor]

When the sub monitor is to be used and the checkbox is marked, the error action will be taken if the sub monitor is disconnected or the power is off.

[Stop receiving the live image if both HDMI monitors are not connected]

When the checkbox is marked, reception of live image from the camera will automatically be stopped and reduce the load of the network camera if both the main monitor and the sub monitor (HDMI) are not connected or if the power is off.

[Hide the camera title of the sub monitor]

When the checkbox is marked, the camera title will not be displayed on the sub monitor.

Configure the settings relating to network [Network]

The settings relating to the network of the recorder are configured on the setup menu - the "Advanced setup" menu - the "Network" page.

The "Network" page has [Basic], [e-Mail], [Panasonic alarm protocol] and [NTP/SNMP] tabs.

Configure the basic network settings [Basic]

The basic settings relating to the network can be configured on this tab.

Network > Basic

Basic e-Mail Panasonic alarm protocol NTP/SNMP

Network Setup (Camera/PC port)

IP address 192.168.0.250

Subnet mask 255.255.255.0

Default gateway 192.168.0.001

Line speed Auto

• When line speed has been changed, the system will restart automatically after saving setup data.

DNS Setup

DNS Off

Primary server address 000.000.000.000

Secondary server address 000.000.000.000

Domain name localdomain

DDNS Setup

DDNS Off

Other setup Advanced

Note:

- Enter the address octets and port numbers right-aligned. (Example: When the port number is 80, enter "00080".) The leading zeros are omitted here.

■ Network Setup [Camera/PC port]

Configure the network settings of the recorder.

[IP address]

The IP address of the recorder will be displayed. To change the IP address, click the [▲]/[▼] button.

Default: 192.168.0.250

[Subnet mask]

Select the subnet mask in accordance with the recorder's network environment. Enter in the same way as the IP address.

Default: 255.255.255.0

[Default gateway]

Select the address for the default gateway in accordance with the recorder's network environment. Enter in the same way as the IP address.

Default: 192.168.0.1

[Line speed]

Specify the line speed for data transmission.

Auto: Line speed will be applied automatically.

100M-Full: 100 Mbps full-duplex

100M-Half: 100 Mbps half-duplex

10M-Full: 10 Mbps full-duplex

10M-Half: 10 Mbps half-duplex

Default: Auto

Important:

- When the setup menu is closed after changing the line speed, the recorder will automatically reboot.

■ DNS Setup

The settings relating to DNS (Domain Name System) can be configured on this tab.

[DNS]

Determine whether or not to use the DNS.

Off: Does not use the DNS.

Manual: When using DNS, it is possible to search IP addresses by host name.

Default: Off

[Primary server address]**[Secondary server address]**

When the DNS is used, select the IP addresses for the primary and secondary DNS server. Enter in the same way as the IP address.

Default: 0.0.0.0

[Domain name]

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

Enter 3 to 63 alphanumeric characters including hyphens (-) and periods (.).

Default: localdomain

■ DDNS Setup

Select the DDNS service to determine whether or not to use DDNS.

Off: Does not use the DDNS function.

Viewnetcam.com: Uses the "Viewnetcam.com" service.

Dynamic DNS update: Uses Dynamic DNS Update (RFC2136 compliant).

Default: Off

Important:

- If using a third party DDNS service, it is necessary to set the port forwarding for the router before use.
- About Dynamic DNS Update (RFC2136 compliant) Operation not using "Viewnetcam.com" service but using a third party DDNS service is not guaranteed. We are not responsible for any troubles or accidents on the circumstances where the camera is used arising out of such services. If using a third party DDNS service (not using the "Viewnetcam.com"), refer to the DDNS service provider for its configuration.

Note:

- "Viewnetcam.com" is a Dynamic DNS service designed for use with Panasonic Network Cameras. Refer to the "Viewnetcam.com" website (<http://www.viewnetcam.com/>) for further information about the service.

When using the "Viewnetcam.com" service

The screenshot shows a 'DDNS Setup' window. It contains four fields: 'DDNS' with a dropdown menu set to 'Viewnetcam.com', 'Personal/Product URL' with a text input field, 'Your account link' with a text input field, and 'Access interval' with a dropdown menu set to '1 h'. Below these fields, there are two small notes: 'Set port forwarding to the router.' and 'Use IP address to access this product from the same subnet.'

[Personal(Product) URL]

The URL of the camera registered for "Viewnetcam.com".

When accessing the menu again after performing the initial settings, the temporary URL will be displayed.

[Your account link]

The URL of the registration window for the "Viewnetcam.com" service will be displayed.

Register the information in the registration window to enroll in the "Viewnetcam.com" service.

[Access interval]

Select the interval to access the "Viewnetcam.com" service server to check the IP address and the host name from the following.

10 min/ 20 min/ 30 min/ 40 min/ 50 min/ 1 h

Default: 1 h

Procedure to register information for the "Viewnetcam.com" service

Step 1

Access the URL displayed on "Your account link" from the PC connected to the Internet.

→ The registration window for "Viewnetcam.com" will be displayed.

Step 2

Register the information for "Viewnetcam.com" by following the instructions of the wizard.

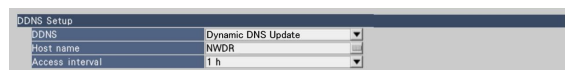
→ When the registration window is not displayed, check that the PC is being connected to the Internet, and click the reload button of the browser. When the message is displayed to inform that the registration is successful, close the registration window.

The URL selected at the time of registration can be used for recorder access. However, this URL is unavailable when accessing the recorder from the PC connected to the same network (LAN).

Note:

- When the registration for the "Viewnetcam.com" service is completed, the URL of the recorder registered for "Personal(Product) URL". It may take up to around 30 minutes until the URL of the registered recorder is validated.
- To cancel the enrollment in the "Viewnetcam.com" service, access the "Viewnetcam.com" website (<http://www.viewnetcam.com/>) later.
- It is possible to check the information registered for the "Viewnetcam.com" service by accessing the URL displayed beside "Your account link". When the URL is not displayed, check that the recorder is being connected to the Internet, exit the menu, and display this tab again to check the information.
- If access often fails due to the change in the global address of router, set a smaller value for "Access interval".

When using "Dynamic DNS Update"



DDNS Setup	
DDNS	Dynamic DNS Update
Host name	NWDR
Access interval	1 h

[Host name]

Enter the host name to be used for the Dynamic DNS Update service.

Available number of characters: 250 characters

Enter in the form of "(host name). (domain name)".

Default: NWDR

Note:

- Refer to the network administrator for further information about the available host names.

[Access interval]

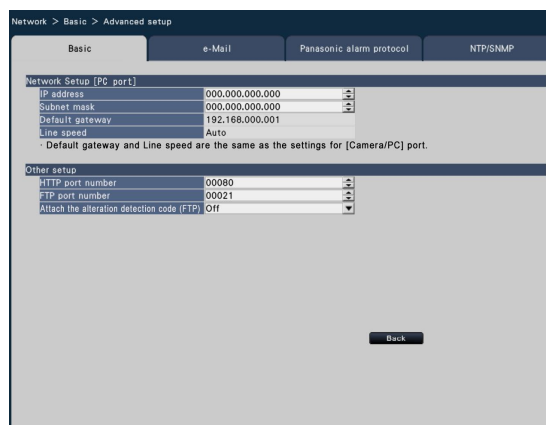
Select the interval to access the Dynamic DNS Update service server to check the IP address and the host name from the following.

10 min/ 20 min/ 30 min/ 40 min/ 50 min/ 1 h/ 6 h/ 24 h

Default: 1 h

■ Other setup

Click the [Advanced >] button to set bandwidth control, HTTP port number, and FTP port number. The setup menu (advanced) will be displayed.



Network Setup [PC port]	
IP address	000.000.000.000
Subnet mask	000.000.000.000
Default gateway	192.168.000.001
Line speed	Auto
Default gateway and Line speed are the same as the settings for [Camera/PC] port.	
Other setup	
HTTP port number	00080
FTP port number	00021
Attach the alteration detection code (FTP)	Off

[HTTP port number]

Specify the HTTP port number to be used to send images from the recorder.

It is unnecessary to change it for normal use.

1 - 65535

Default: 80

Note:

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

[FTP port number]

Designate the FTP port number of the recorder. It is unnecessary to change it for normal use.

1 - 65535

Default: 21

Note:

- The following numbers and the HTTP port number 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

[Attach the alteration detection code (FTP)]

Determine whether or not to attach the alteration detection code to the recorded images to be downloaded from an FTP server.

Off: Does not attach the alteration detection code.

On: Attaches the alteration detection code.

Default: Off

■ Network Setup [PC port]

Configure the network settings for the PC port of this product.

[IP address]

Default: 0.0.0.0

[Subnet mask]

Default: 0.0.0.0

[Back] button

Click this button after completing the settings.

Configure the settings relating to the mail notification [e-Mail]

The settings of alarm mail notice, the settings of error report mail (☞ page 179) and the settings to use the mail functions can be configured on this tab.

[SMTP server address]

Enter an IP address or a name of the SMTP server to send e-mails. The name of the SMTP server is available only when "Manual" is selected for "DNS" on the [Basic] tab accessed from the "Advanced setup" menu - the "Network" page of the setup menu. Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

[SMTP port number]

Enter the port number of the SMTP server.

1 - 65535

Default: 25

[POP server address]

Enter an IP address or name of the POP server to be used for POP before SMTP authentication. The name of the POP server is available only when "Manual" is selected for "DNS" on the [Basic] tab accessed from the "Advanced setup" menu - the "Network" page of the setup menu. Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

[Authentic method]

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

None/ POP before SMTP/ SMTP

Default: None

[Authentic method - User name]

Enter the user name to be required for the authentication. Enter up to 32 alphanumeric characters excluding "&" listed in the description of "Note".

[Authentic method - Password]

Enter the password to be required together with the user name for the authentication. Enter up to 32 alphanumeric characters excluding "&" listed in the description of "Note". An entered character for the password will be displayed as "*" or "•".

Note:

- Available characters are as follows.

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

[Sender's 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 (.), @, and _.

Default: NWDR

[SSL]

Alarm mails or error report mails will be encrypted and transmitted. When "On" is selected, "SMTP" will be set for the authentication method. Set the user name and password for the authentication.

On: Uses the SSL.

Off: Does not use the SSL.

Default: Off

[Destination address - Address1 - Address4]

Enter the mail addresses of the recipients of the alarm mail and the warning mail (see page 179). Enter up to 255 alphanumeric characters including hyphens (-), periods (.), @, and _.

Check the desired mail type (Warning/Alarm) to be sent.

Up to 4 destination addresses can be registered.

Configure the Panasonic alarm protocol settings [Panasonic alarm protocol]

The settings to notify the PC of the event and error information when an event or an error occurs can be configured on this tab.

To display the event and error information, it is necessary that the software (option) is installed on the recipient PC.

Refer to the "readme.txt" on the provided CD-ROM for details on the software.

[Port number(to PC)]

Enter the port number of the recipient PCs.

It is usually not necessary change the default.

Default: 1818

[Retry]

Set the number of retry attempts for the transmission to the PC.

0 - 8 (times) (In steps of times)

Default: 2

Note:

- If the transmission to the PC fails, increase the number of retry attempts.
-

[Destination address - Address1 - Address8]

Enter the addresses of the recipient PCs. Enter the IP address or host name for "Address1" - "Address8".

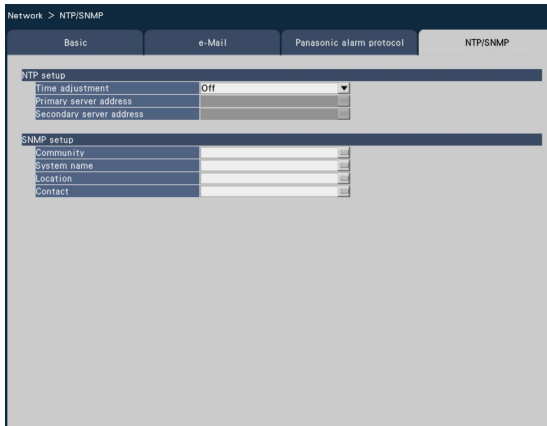
The host name is available only when "Manual" is selected for "DNS" on the [Basic] tab accessed from the "Advanced setup" menu - the "Network" page of the setup menu.

Up to 8 destination addresses can be registered.

Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

Configure the settings relating to NTP/SNMP synchronization [NTP/SNMP]

The settings to synchronize the system clock with the NTP (Network Time Protocol) and SNMP (Simple Network Management Protocol) server can be configured on this tab.



■ NTP setup

[Time adjustment]

Select "On" or "Off" to determine whether or not to adjust the time according to the NTP server.

On: Adjusts the time automatically.

Off: Does not adjust the time automatically.

Default: Off

Important:

- Inaccuracy of time stamp on recorded images due to inaccurate clock adjustment of this product may cause operational problems. When the system operation requires an accurate time setting, use the NTP auto time adjustment using an NTP server.

[Primary server address]

[Secondary server address]

Enter the address or name of the NTP server when adjusting the time using the NTP server.

The name of the NTP server is available only when "Manual" is selected for "DNS" on the [Basic] tab accessed from the "Advanced setup" menu - the "Network" page of the setup menu.

Enter up to 255 alphanumeric characters including hyphens (-) and periods (.).

Important:

- It is possible to run the recorder as an NTP server to be referred by the cameras. In this case, set the port number of the camera to "123". Refer to the operating instructions of the connected camera for information on how to configure the settings of the camera.

Note:

- Entering "http://" is not necessary if the server name is entered.

■ SNMP setup

Set this item to check the status of the recorder by connecting to the SNMP server.

Enter the items using the alphanumeric characters listed in "Note" (page 56) and symbols.

[Community]

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

[System name]

Enter a name (up to 255 alphanumeric characters) for management of the recorder by the SNMP system.

Example: No.1

[Location]

Enter a location where the recorder is installed. (up to 255 alphanumeric characters)

Example: 2F

[Contact]

Enter the contact information such as a mail address of an administrator of this recorder. (up to 255 alphanumeric characters)

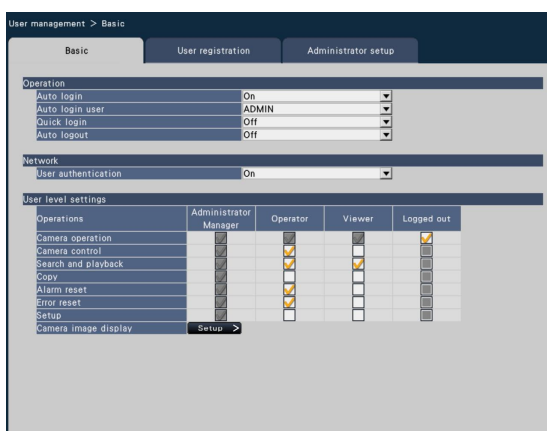
Configure the settings relating to the user management [User management]

The settings such as user authentication On/Off, administrator registration and operation levels can be configured on the setup menu - the "Advanced setup" menu - the "User management" page.

The "User management" page has [Basic], [User registration] and [Administrator setup] tabs.

Configure the basic settings relating to user management [Basic]

The settings relating to login when using the mouse, user authentication for network operations, and user levels can be configured on this tab.



■ Operation

Configure the settings to enable auto login when turning on the recorder.

[Auto login]

Select "On" or "Off" to determine whether or not to activate the auto login function.

On: Logs in to the recorder automatically.

Off: Does not log in to the recorder automatically.

Login is required when operating the recorder from the logout status.

Default: On

[Auto login user]

When "On" is selected for "Auto login", the users registered as auto login users in this setting can log in to the recorder automatically. An auto login user should be one of the users registered in the recorder.

Default: ADMIN

[Quick login]

Select "On" or "Off" to determine whether to enter or select the user name.

Off: User name needs to be entered.

On: Log in by selecting a displayed user name.

Default: Off

[Auto logout]

Set the time to wait until auto logout when no operations are made while displaying live images.

Off: Does not logout to the recorder automatically.

After 1 min/ After 3 mins/ After 5 mins/

After 30 mins

Default: Off

Note:

- When "On" is selected for "Auto login", the user will not be logged out automatically even if other values than "Off" is selected for "Auto logout". When logout is performed (see page 101), login will be automatically performed by the user registered in "Auto login user".
- To prevent inappropriate operations, it is recommended to select settings other than "Off" for "Auto logout".

■ Network

Determine whether or not to require user authentication for operating the recorder from a PC.

[User authentication]

Select "On" or "Off" to determine whether or not to authenticate the user.

On: Login followed by user authentication

Off: Login without user authentication

Default: On

■ User level settings

Set up the operations allowed at each user level (administrator/manager/operator/viewer) by marking the respective checkboxes. To stop a user from operating certain functions, do not check the respective function. The setting for the administrator cannot be changed. The system can also be set up to allow only live operation (image switching) after logout.

Note:

- Only a user logged in as "Administrator/Manager" can change the user level settings.
At the default, operations allowed at the user level are as follows:
Administrator/Manager: Possible to perform all the operations (Administrators)
Operator: Possible to perform a part of the settings of the recorder and alarm reset (Head of operators)
Viewer: Possible to monitor or play the images (Operators)
* Administrators and managers can perform all operations. The difference between an administrator and a manager is that an administrator has priority over a manager; if both perform the same operation at the same time, that of the administrator will have priority.
 - The screenshot shows the default.
 - When a user tries to operate a function that is not checked (restricted function), the login window may sometimes be displayed to prompt a user with the required user level to log in.
-

Restrictable operations

It is possible to allow or restrict the following operations for each user.

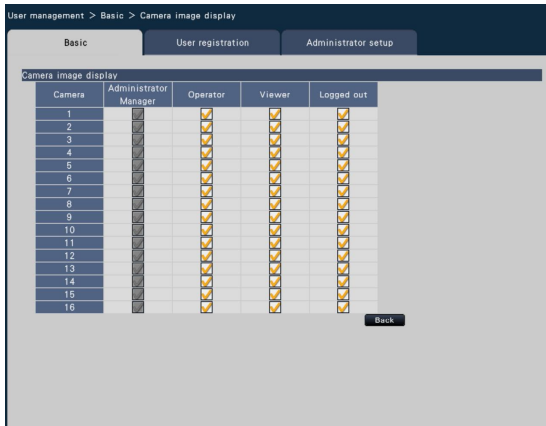
Operation	Description
Camera operation	Camera images displayed on the main monitor can be changed.
Camera control	Camera control such as panning and tilting can be performed.
Search and playback	Recorded images can be played back and searched by VMD search.
Copy	Recorded images can be copied to storage media such as an SD memory card.
Alarm reset	An alarm action can be canceled.
Error reset	An error action can be canceled.
Setup	Setup menus can be displayed and the settings can be configured.
Camera image display	The image and audio data of all cameras can be displayed/output. To set up the display of camera images, click the [Setup >] button. (☞ Set up the user level for individual cameras)

* It is recommended to restrict "Setup" to the administrator.

Set up the user level for individual cameras

Select the cameras allowed for operation by each user level (operator/viewer/logged out) by marking the respective checkboxes.

Remove the check mark from any cameras not to be displayed. The setting for the administrator/manager cannot be changed.

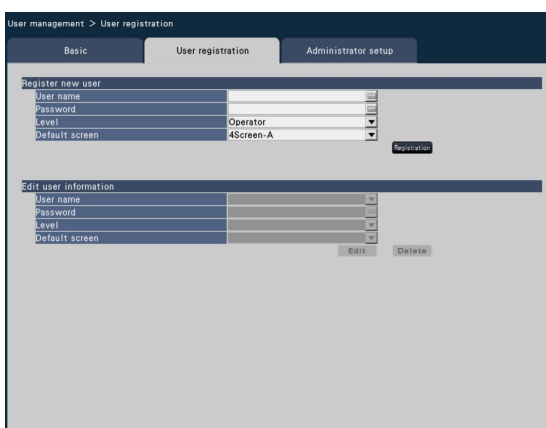


[Back] button

Click the button after completing the settings. The screen returns to the [Basic] tab.

Register, edit or delete the user information [User registration]

Use this tab to register, edit or delete user names and passwords.



[User name]

Enter the user name using the on-screen keyboard (page 10). Enter 5 to 14 alphanumeric characters for the name.

[Password]

Enter the user password using the on-screen keyboard (page 10). Enter 5 to 8 alphanumeric characters for the password. The registered password will be displayed as "*****" regardless of what is entered.

Important:

- For enhanced security, change the password on a regular basis.

■ Register new user

Register user information such as a user name, password and operation level.

The maximum number of users that can be registered is 16.

[Level]

Display the operation level of a user.

Operable functions can be set on the [Basic] tab
(☞ page 59).

Manager/ Operator/ Viewer

* Administrator and manager both have the same level, but the administrator has the higher priority.

Default: Operator

[Default screen]

Select a startup screen to be displayed after login.

Cam.1 - Cam.32: Displays an image from the selected camera channel on a 1-screen.

4Screen-A/ 4Screen-B/ 4Screen-C/ 4Screen-D/

4Screen-E/ 4Screen-F/ 4Screen-G/ 4Screen-H/

9Screen/ 16Screen-A/ 16Screen-B/

1-screen(Wide view)/ 4Screen(Wide view)/

9Screen(Wide view)/ 16Screen(Wide view)

(Refer to the "Operation window" section (☞ page 96) for further information about each setting value.)

Default: 4Screen-A

Note:

- Available settings for "Default screen" varies depending on the number of the cameras covered by the licenses.
- When a monitor that is not selected in the "Select multiscreen buttons displaying on wide view operation panel" option (under "Advanced setup" under "Monitor") is set as the default screen, "4Screen-A" will be displayed as the default screen.
- When "9Screen", "16Screen" or any of wide view screen is selected, the default screen on the web browser of the PC will be set to 4-screen with live images from camera 1 to 4.

[Registration] button

Select this button to newly register the edited user information.

■ Edit user information

Edit or delete the user information that has been registered.

Select the user whose user information is to be edited or deleted. To edit items, proceed as for new user registration.

[Edit] button

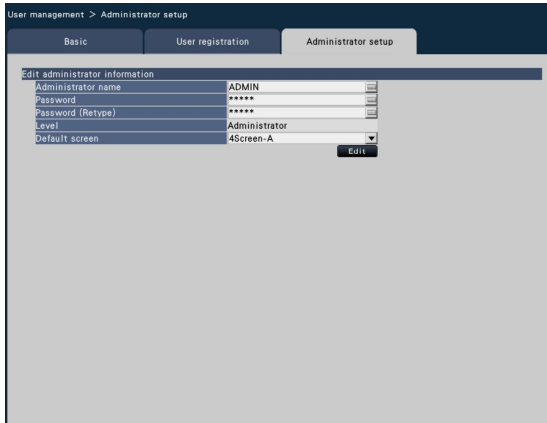
Registers the edited user information.

[Delete] button

Deletes the selected user.

Edit the administrator information [Administrator setup]

The administrator information relating to the password and default screen, etc. can be registered on this tab.



[Administrator name]

Enter the administrator name using the on-screen keyboard (☞ page 10). Enter 5 to 14 alphanumeric characters for the administrator name.

Default: ADMIN

[Password]

Enter the administrator password using the on-screen keyboard (☞ page 10). Enter 5 to 8 alphanumeric characters for the password.

The registered password will be displayed as "*****" regardless of what is entered.

Default: 12345

Important:

- For enhanced security, make sure to change the administrator name and password from the default. Change the password periodically.

[Password (Retype)]

Enter the password that has been set for "Password" again for confirmation.

[Level]

Display the operation level of an administrator. It is impossible to change the setting value for an administrator. "Administrator" has been set for the administrator.

[Default screen]

Select a startup screen to be displayed after login.

(☞ Page 62)

[Edit] button

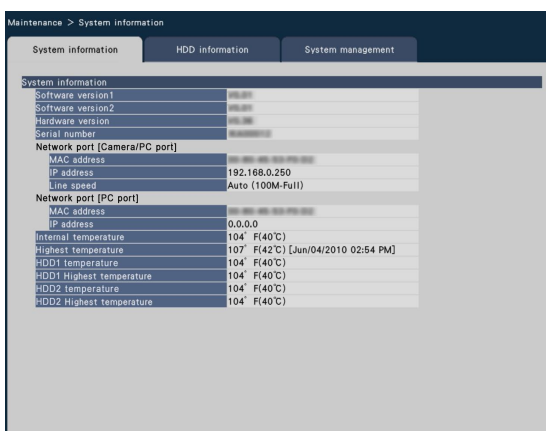
Register the edited administrator information.

Configure the settings relating to maintenance [Maintenance]

The version of the recorder and disk information is displayed, and the settings relating to hard disk drives can be configured on the setup menu - the "Advanced setup" menu - the "Maintenance" page. It is also possible to initialize the setup data of the setup pages, check the system logs and register the license on this page. The "Maintenance" page has [System information], [HDD information] and [System management] tabs.

Check the system information such as the version [System information]

The version (of the software and hardware), serial number, network information (MAC address, IP address, line speed), temperature inside the recorder and highest temperature inside the recorder, etc. are displayed on this tab.



System information	
Software version1	10.0.0.0
Software version2	10.0.0.0
Hardware version	10.0.0.0
Serial number	10.0.0.0
Network port [Camera/PC port]	
MAC address	10.0.0.0
IP address	192.168.0.250
Line speed	Auto (100M-Full)
Network port [PC port]	
MAC address	10.0.0.0
IP address	0.0.0.0
Internal temperature	104° F(40°C)
Highest temperature	107° F(42°C) [Jun/04/2010 02:54 PM]
HDD1 temperature	104° F(40°C)
HDD1 Highest temperature	104° F(40°C)
HDD2 temperature	104° F(40°C)
HDD2 Highest temperature	104° F(40°C)

Note:

- System information will not be updated while the "Maintenance" page is being displayed.
- Besides the setting value for "Line speed", the actual line speed will be displayed in "()".

Confirm the hard disk drive information [HDD information]

Capacity of the hard disk drive and the running time of this product or the extension unit (EXT1, EXT2), time range of the recorded images, etc. will be displayed.



HDD information - Single mode -				
	Capacity	Operation	Status	Recorded time range
MAIN	HDD1	161 h	Normal 1	
	HDD2	161 h	Normal 2	
EXT1	HDD1			
	HDD2			
	HDD3			
	HDD4			
	HDD5			
EXT2	HDD6			
	HDD7			
	HDD8			
	HDD9			
	HDD10			

Note:

- HDD information will not be updated while the "Maintenance" page is being displayed.

[Operation mode of HDD]

Operation mode of HDD will be displayed. Refer to page 73 for further information.

Note:

- The progress rate will be displayed during mirroring recovery.

[Capacity]

Displays the capacities of the hard disk drives.

[Operation]

Displays the operating time of the hard disk drives.

[Status]

Displays the statuses of the hard disk drives.

Normal: Hard disk drives that are operating normally

Playback-only: Hard disk drives for playback use only (Recording is unavailable.)

Removed: Hard disk drives that are excluded from operation due to fault

Error: Hard disk drives that have become faulty during the format process

Blank: No HDD connected

Added: HDD cannot be used until it is formatted/installed (Displayed only when in the mirroring mode)

N/A: HDD that is not available with the currently used HDD operation mode.

[Recorded time range]

Displays the time range of the images recorded on the hard disk drives.

Note:

- When using in RAID5/RAID6 mode, "Capacity", "Status" and "Recorded time range" will be displayed in the "HDD1" section of each extension unit. Running time will be displayed for each hard disk drive respectively.
-

[Overwrite cycle]

Calculates and indicates the overwriting cycle of the hard disk drives, based on the past recording performance (the date & time of the oldest recorded data, the current date & time and the capacity of the hard disk drive).

Note:

- While overwriting recording is being performed, the overwriting cycle will be calculated based on the date & time of the oldest recorded data and that of the newest recorded data.
 - The more often the recording was performed in the past, the more accurate the calculation of overwriting cycle will be.
 - When the recording conditions are changed or when data is automatically deleted, the overwriting cycle will not be indicated accurately.
-

Configure the settings and operations relating to the system [System management]

The settings relating to the actions at an error occurrence and auto data deletion from hard disk drives can be configured on this tab. It is also possible to display the logs on this page. In addition, general maintenance, such as license registration, setting initialization and firmware upgrade, can be performed on this tab.



■ System setup

[Error output duration]

Select the duration to output a signal to notify the external devices of an error (HDD error camera error, recorder error, recording error or network error).

When "0 s" is selected, the signal is not output.

0 s/ 2 s/ 5 s/ 10 s/ 20 s/ 30 s/ 1 min

Ext.: When "Ext." is selected, the signal will keep on being output until the error is reset.

Default: 2 s

Note:

- Refer to the "Cancel the error action" section (page 122) for how to reset the error.

[Error buzzer duration]

Configure the settings to sound a buzzer at an error occurrence. When "0 s" is selected, buzzer will not sound.

0 s/ 2 s/ 5 s/ 10 s/ 20 s/ 30 s/ 1 min

Ext.: When "Ext." is selected, the buzzer that started sounding at an error occurrence will keep on sounding until the buzzer is stopped.

Default: 2 s

Note:

- Refer to the "Stop buzzer beeping" (page 121) for further information about how to stop buzzer beeping.

[Network link down detection]

Select "On" or "Off" to determine whether or not to detect the network disconnection on the network port of the recorder.

On: Detects the network disconnection.

Off: Does not detect the network disconnection.

Default: Off

[HDD hour meter warning]

If the operation time of a hard disk drive reaches a specified level, a warning will be performed. When "Off" is selected, warning will not be performed.

Off/ 10000h/ 20000h/ 30000h/ 40000h/ 50000h

Default: 20000 h

[Auto data delete]

Select to determine how many days should have passed from the recorded day to delete data automatically from the hard disk drive.

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/ 45 days/ 60 days/ 90 days/ 120 days/ 150 days/ 180 days

Default: Off (Does not delete the data automatically.)

[Auto camera time synchronization]

When a date changes, the clock of the cameras will be synchronized with the clock of this product.

On: Synchronized

Off: Not synchronized

Default: On

■ Logs

The following logs can be checked.

- Access log: Logs of accessing the recorder
- Network log: Logs of network errors

To check each log, click the [View >] button.

No.	Date & Time	Log
1	Jun/14/2010 *05:00:38 PM	root LOGOUT
2	Jun/14/2010 *05:00:20 PM	root LOGIN
3	Jun/14/2010 *04:59:47 PM	ADMIN LOGIN
4	Jun/14/2010 *04:59:11 PM	POWER ON
5	Jun/14/2010 *02:52:00 PM	UPDATE SETTINGS
6	Jun/14/2010 *02:50:00 PM	UPDATE SETTINGS
7	Jun/14/2010 *02:39:48 PM	root LOGOUT
8	Jun/14/2010 *02:39:30 PM	root LOGIN
9	Jun/14/2010 *02:38:57 PM	ADMIN LOGIN
10	Jun/14/2010 *02:38:21 PM	POWER ON
11	Jun/14/2010 *02:36:16 PM	root LOGOUT
12	Jun/14/2010 *02:35:58 PM	root LOGIN
13	Jun/14/2010 *02:35:25 PM	ADMIN LOGIN
14	Jun/14/2010 *02:34:49 PM	POWER ON
15	Jun/14/2010 *02:25:12 PM	CONFIG LOGOUT
16	Jun/14/2010 *02:24:25 PM	CONFIG LOGIN
17	Jun/14/2010 *02:09:04 PM	root LOGOUT
18	Jun/14/2010 *02:08:39 PM	root LOGIN
19	Jun/14/2010 *02:08:14 PM	ADMIN LOGIN
20	Jun/14/2010 *02:07:39 PM	POWER ON

About the access log

The date & time when logged in/out for the recorder, the user name, and the IP address will be displayed. Up to 100 logs are saved.

When more than 100 logs are filed, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten.

****LOGIN/**LOGOUT:** A user has logged in/out the recorder.

CONFIG LOGIN/CONFIG LOGOUT: A host has logged in/out the "HDD management" page.

UPDATE SETTINGS: Settings have been changed.

POWER ON: The power of the recorder has been turned on.

POWER ON(UPDATE): The recorder is rebooted after the software is updated.

POWER ON(RESTART SWITCH): The recorder is rebooted by pushing the Restart button.

BEFORE TIME CHANGE MANUALLY: Before the system clock has been changed

AFTER TIME CHANGE MANUALLY: Just after the system clock has been changed

BEFORE TIME CHANGE BY NTP: Before the system clock has been changed by NTP

AFTER TIME CHANGE BY NTP: Just after the system clock has been changed by NTP

****** indicates a user name or an IP address.

About the network log

The network error logs (occurrence date & time and error details) will be displayed in list form.

Up to 100 logs are saved. When more than 100 logs are filed, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten. Refer to page 91 for further information about the error logs.

Note:

- Information will not be updated while logs are being displayed.

■ Functions for maintenance

License is added to operate the recorder. In addition, settings and operations are also performed for maintenance of the recorder.

Note:

- When using an unformatted SDHC/SD memory card or an SDHC/SD memory card formatted with a PC or another device, it is necessary to format it with this recorder. Refer to page 138 for how to format.

[Registration of license]

To use the recorder, it is necessary to obtain the "Registration Key" from the key management system and to register the license. Up to 32 cameras can be added by registering the license of the additional camera kit.

Contact your dealer for additional cameras. Clicking the [Setup >] button will open the registration window to register the license. (Page 68)

[Reset all settings]

Initializes the setting data. Click the [Execute >] button to display the confirmation window for starting initialization.

Note:

- The following setting items will not be reset to the default or loaded.
 - HTTP port number
 - FTP port number
 - Network port
 - DNS Setup
 - License number

[Save data (to SD card)]

Saves the setting data on the SD memory card. Click the [Execute >] button to display the confirmation window to start saving.

[Load data (from SD card)]

Loads the setting data saved in an SD memory card on the recorder. Click the [Execute >] button to display confirmation window to start loading.

[Save face data (to SD card)]

Saves the face matching data on the SD memory card. Click the [Execute >] button to display the confirmation window to start saving. (When the license of the additional business intelligence kit is registered)

[Load face data (from SD card)]

Loads the face matching data saved in an SD memory card on the recorder. Click the [Execute >] button to display confirmation window to start loading. (When the license of the additional business intelligence kit is registered)

[Firmware update]

Updates the software saved on an SD memory card to the recorder to upgrade the firmware.

Click the [Execute >] button to display the confirmation window to start initializing.

Only an administrator can execute the firmware update.

Note:

- Contact your dealer for further information about the firmware update.
-

[Other]

The page to save the maintenance data will open. (☞ Page 70)

Register the licenses for the recorder and the Additional Camera Kit [Registration Key]

The licenses to operate the recorder and activate the extra functions are registered. The license that covers 9 cameras to use is provided with this product at the point of purchase. By registering licenses of the additional camera kit, number of the available cameras will increase to 16, 24 or 32.

To register the options, the "Registration Key" that can be obtained from the Key Management System is required. Refer to the provided "Activation Key Card" to obtain the "Registration Key" of this product. Refer to the "Activation Key Card" of the additional camera kit (WJ-NVE30, WJ-NVE30W) for how to obtain the "Registration Key" to add cameras.

Important:

- After registering the "Registration Key" for the recorder or that for the Additional Business Intelligence Kit, be sure to click the [Restart] button to reboot the recorder. The license will not be effective before the recorder is rebooted.
 - When the Registration Key of this product is registered
 - When the registration key of the additional camera kit or any other additional/extension kit is registered
 - The added cameras shall be registered on "Easy start" (☞ page 12) . Each setting value is the default. Configure each setting according to your needs.
-

Maintenance > System management > Registration of license

System information | HDD information | System management

Entry information of the key management system

SFG ID:

Activation Key No.: Refer to the Activation Key Card.

Registration ID: Refer to the Activation Key Card.

Registration of license

Product: Registration >

Additional camera

Registration Key 1: Registration >

Registration Key 2: Registration >

Registration Key 3: Registration >

Additional business intelligence

Registration Key: Registration >

Optional extension for Fisheye network camera

Registration Key: Registration >

Click the [Restart] button after registering the license.
To activate the license, this product needs rebooting.

Restart

Dealer's information

Back

[Entry information of the key management system]

This is the ID number required to obtain the "Registration Key". The Activation Key Card provided with the recorder describes how to access the key management system.

[Registration of license]

Register the "Registration Key" to operate the recorder and activate the extra functions.

[Product - Registration Key]

Enter the "Registration Key" obtained from the key management system. When the [Registration >] button next to the entry field is clicked, the registration window to register the license. When using the recorder for the first time, be sure to register the "Registration Key".

[Additional camera - Registration Key1-2]

(WJ-NV300K)

[Additional camera - Registration Key1-3]

(WJ-NV300K/G)

To add cameras, enter the registration key of the additional camera kit. Entering "Registration Key1", "Registration Key2" and "Registration Key3" will increase the number of the available cameras to 16, 24 and 32 respectively. Refer to the "Activation Key Card" of the additional camera kit for how to obtain the "Registration Key" to add cameras. When the [Registration] button next to the entry field is clicked, the registration window to register the license.

[Additional business intelligence - Registration Key]

When activating the extra functions, enter "Registration Key". Refer to the operating instructions (PDF) of the Additional Business Intelligence Kit for further information.

[Optional extension for Fisheye network camera]

When activating the extra functions, enter "Registration Key". Read "Extensive Options.pdf" on the CD-ROM provided with this product.

Note:

- When the license registration is completed, click the [Restart] button. The recorder will reboot and the registered license will become effective.
-

[Dealer's information]

Up to two pieces of information, such as a dealer name and its telephone number, can be registered using the on-screen keyboard (☞ page 10). Registration is possible for a maximum of 32 characters for each entry field.

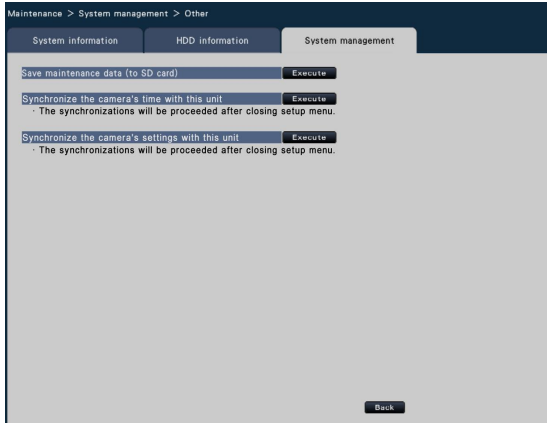
Click the [Restart] button after entering the items. The recorder will reboot, and the settings will be applied.

[Back] button

By clicking this button when license is not activated or when only "Dealer's information" is changed, the display will return to the [System management] tab.

Save logs onto the SD memory card/correct the clock of the cameras [Other]

All logs can be saved onto the SD memory card, and the time and date setting on the camera can be synchronized with this product.



Important:

- Since this setting will change the settings of all cameras, please take an extra caution in case that the settings of each camera are customized individually.
-

[Save maintenance data (to SD card)]

Save all logs onto the SD memory card.

Saving of the logs will start by executing on the confirmation window displayed by clicking the [Execute >] button.

Note:

- When using an unformatted SDHC/SD memory card or an SDHC/SD memory card formatted with a PC or another device, it is necessary to format it with this recorder. Refer to page 138 for how to format.
 - If operations are performed soon after an SD memory card is inserted, it may take time to recognize the SD memory card. It also may take time if the capacity size of the inserted SD memory card is large.
-

[Synchronize the camera's time with this unit]

Time and date of all the registered cameras will be synchronized with the clock of this product. The time and date synchronization will be executed when the setting is completed after executing on the confirmation window displayed by clicking the [Execute >] button.

[Synchronize the camera's settings with this unit]

Reconfigure the settings of all the registered cameras based on the setting information of this product. The time and date synchronization will be executed when the setting is completed after executing on the confirmation window displayed by clicking the [Execute >] button.

Manage the hard disk drives [HDD management]

The operations relating to the hard disk drives such as checking the capacity of each recording area and formatting the drives can be performed on the "HDD management" page of the setup menu - the "Advanced setup" menu.

Important:

- All other operations such as recording and playback will stop when the "HDD management" page is displayed.
- Displaying the "HDD management" page forcibly logs out any other users currently logged in to the recorder.

How to display the "HDD management" page

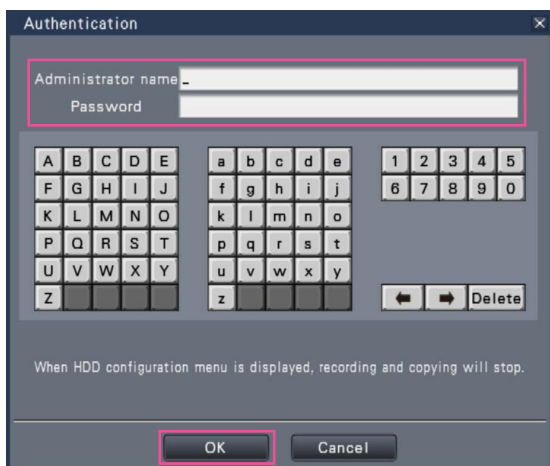
Step 1

Click the [HDD management] button of the setup menu - the "Advanced setup" menu.

→ The window with the administrator name and password entry fields will be displayed. The window is also displayed when a user has already logged in as the administrator.

Step 2

Click the [OK] button after entering "Administrator name" and "Password" of an administrator.

A screenshot of an "Authentication" dialog box. It has a title bar with a close button. Inside, there are two input fields: "Administrator name" and "Password". Below these is a numeric keypad with letters A-Z and numbers 0-9. To the right of the keypad are left and right arrow buttons and a "Delete" button. At the bottom, there are "OK" and "Cancel" buttons. A small note at the bottom reads: "When HDD configuration menu is displayed, recording and copying will stop."

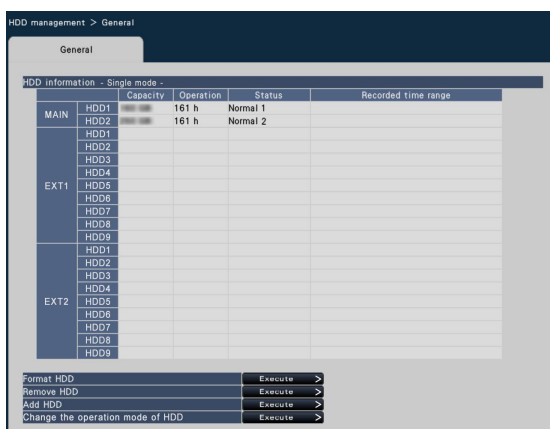
→ The "HDD management" page will be displayed.

Click the [Operation] button to return from the "HDD management" page to the operational screen.



Check the hard disk drive information [HDD information]

The capacities, operation time and statuses of the hard disk drives are displayed.



Refer to the setup menu - the "Advanced setup" menu - the "Maintenance" page - the [HDD information] tab for further information about the items displayed on the [HDD information] tab. (Page 64)

Format the hard disk drives [Format HDD]

Hard disk drives are formatted. It is necessary to initialize the HDD after replacing the HDD.

Important:

- When a hard disk drive is formatted, all the recorded images will be erased.

Step 1

Click the [Execute >] button for "Format HDD" on the [General] tab - [HDD management] page.

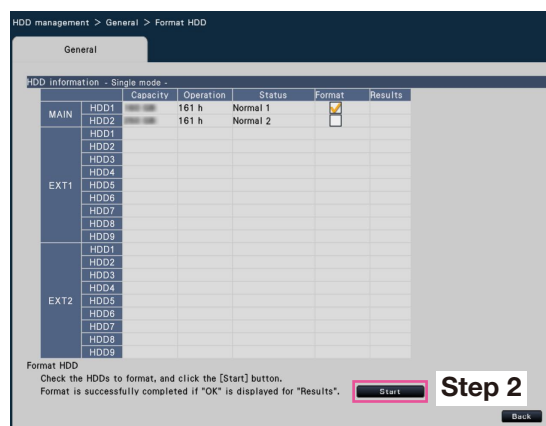
→ The window to format hard disk drives will be displayed.

Step 2

Check the hard disk drives to format in the "Format" field, and click the [Start] button.

When "OK" is displayed on the "Results" field, click the [Back] button.

When "Error" is displayed, format the hard disk drives again.



About the removal process and the link process of hard disk drives

When replacing hard disk drives, it is necessary to perform the removal process/ the link process.
Be sure to consult the dealer for the removal, installation, and the related process of hard disk drives.

Important:

- When the link process is performed, the data will be erased.

About the change of the HDD operational mode

About the HDD operational mode

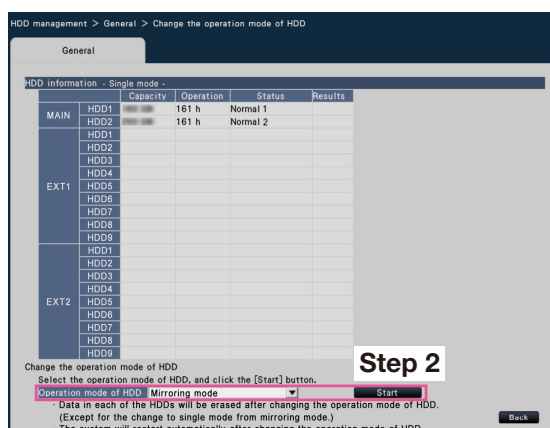
- Single mode: Images and audio from the cameras will be recorded on the HDD of this product in order.
- Mirroring mode: The same images and audio from the cameras will be recorded on the 2 HDDs of this product. When one of the 2 HDDs is replaced with a new one, it is possible to copy data on the other HDD to the replaced HDD. The HDDs of the extension unit are not available for this mode.
- RAID5 mode: Even if one of the HDDs becomes faulty, recorded images can be recovered using the other remaining HDDs in this mode. The HDDs of this product are not available. 3 or more HDDs are required in the extension unit.
- RAID6 mode: Even if 2 of the HDDs become faulty, recorded images can be recovered using the other remaining HDDs in this mode. The HDDs of this product are not available. 4 or more HDDs are required in the extension unit.

Change the operation mode of HDD [Change the operation mode of HDD]

Step 1

Click the [Execute >] button on the "Change the operation mode of HDD" section.

→ The "Change the operation mode of HDD" window will be displayed.



Step 2

Select the desired operation mode of HDD, and then click the [Start] button.

Important:

- When the operational mode of HDD is changed (except the case that the operational mode is changed from the mirroring mode to the single mode), all data on the HDDs will be erased.
- The capacity of the HDD in the mirroring mode will become almost half if compared with the single mode.
- When the operational mode of HDD is changed from the mirroring mode to the single mode, the status of the HDD will turn to "Playback-only".
- When "Operation mode of HDD" is changed, the recorder will be automatically rebooted.

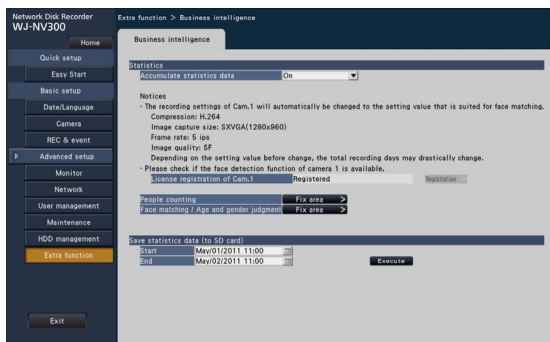
Note:

- When one of the HDDs is replaced in the mirroring mode, "Add" will be displayed in the status information section of "HDD information". The newly replaced HDD will start working in the mirroring mode when "Add HDD" is executed. In this case, all data on the replaced HDD will be erased.
 - It is not possible to change the mode directly from "Mirroring mode" to "RAID5 mode" or "RAID6 mode" (and vice versa). When changing the mode, make sure to change it to "Single mode" once, then change it to the desired one.
-

Configure the settings relating to the extra functions [Extra function]

The settings relating to the extra functions such as the statistical processing are configured and the statistical processing data can be saved on an SDHC/SD memory card on the "Extra function" page of the setup menu - the "Advanced setup" menu.

The "Extra function" page has the [Business intelligence] tab.



Refer to the operating instructions (PDF) of the Additional Business Intelligence Kit for further information about how to configure the settings.

Lists of the setting items (Setup menu)

Quick setup (Easy Start)

Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default
Date & time adjustment	–		2013/1/1 0:00 - 2037/12/31 23:59	20nn/mm/1 0:00 ("nn" and "mm" are calculated base on the serial number of the recorder.)
	Set time zone		GMT-12:00, GMT-11:00, GMT-10:00, GMT-9:00, GMT-8:00, GMT-7:00, GMT-6:00, GMT-5:00, GMT-4:30, GMT-4:00, GMT-3:30, GMT-3:00, GMT-2:00, GMT-1:00, GMT, GMT+1:00, GMT+2:00, GMT+3:00, GMT+3:30, GMT+4:00, GMT+4:30, GMT+5:00, GMT+5:30, GMT+5:45, GMT+6:00, GMT+6:30, GMT+7:00, GMT+8:00, GMT+9:00, GMT+9:30, GMT+10:00, GMT+11:00, GMT+12:00, GMT+13:00	GMT-5:00 (NV300K), GMT (NV300K/G)
	Activate the Daylight saving time*1		Checked/Not checked	Checked
Recording setup	Recording setup (The same setting for all cameras)	Frame rate	1 ips, 3 ips, 5 ips, 10 ips, 15 ips, 30 ips	10 ips
		Image quality	XF, SF, FQ, NQ	FQ
		Referenced recording days	(Calculated result will be displayed.)	(Calculated result will be displayed.)

Basic setup

(Remarks: "●" are the setting items configured on "Easy Start". "◎" are the setting items configured from the web browser.)

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Date/Language					
Date & time adjustment	Date & Time		2013/1/1 0:00 - 2037/12/31 23:59	20nn/mm/1 0:00 ("nn" and "mm" are calculated base on the serial number of the recorder.)	● ◎
Date & time settings	Display format	Date	yyyy/mm/dd, Mmm/dd/yyyy, dd/Mmm/yyyy, mm/dd/yyyy, dd/mm/yyyy	Mmm/dd/yyyy (NV300K), dd/mm/yyyy (NV300K/G)	◎
		Time	24 h, 12 h	12 h (NV300K), 24 h (NV300K/G)	◎
	Time zone	Set time zone	Refer to "Set time zone" of "Quick setup (Easy Start)".	Refer to "Set time zone" of "Quick setup (Easy Start)".	◎
		Daylight saving time	Out, Auto	Auto	◎

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Date & time settings	Time zone	Daylight saving time table (In)	2013/1/1 0:00 - 2037/12/31 23:59	2014/3/9 2:00 AM (NV300K)* ² 2014/3/30 1:00 (NV300K/G)* ³	⊙
		Daylight saving time table (Out)	2013/1/1 0:00 - 2037/12/31 23:59	2014/11/2 2:00 AM (NV300K)* ⁴ 2014/10/26 1:00 (NV300K/G)* ⁵	⊙
	Auto time adjustment		Off, On	Off	⊙

*1 Marking the checkbox for [Activate the Daylight saving time] is the same as selecting "Auto" for "Daylight saving time".

*2 The second Sunday in March, 2:00 AM this year and subsequent years

*3 The last Sunday in March, 1:00 this year and subsequent years

*4 The first Sunday in November, 2:00 AM this year and subsequent years

*5 The last Sunday in October, 1:00 this year and subsequent years

Language	Language	Japanese/ English/ Français/ Español/ Deutsch/ Italiano/ Русский/ Português	English	⊙
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Camera

Camera registration	Model		(Indication only)	(Indication only)	⊙
	Address		(Indication only)	(Indication only)	⊙
	Compression		(Indication only)	(Indication only)	⊙
	Error information		(Indication only)	(Indication only)	⊙
	Registered information	Model	Model number of the camera	(Blank)	⊙
		Address	(Address)	(Blank)	● ⊙
		Compression	H.264, MJPEG	(Blank)	⊙
		User name	(Text will be entered.)	(Blank)	⊙
		Password	(Text will be entered.)	(Blank)	⊙
		Port No.	(Port No.)	80	⊙
Camera setup	Date & time display	Display (check box)	Checked/Not checked		
		Display (drop-down list)	Off, On		
		Position (check box)	Checked/Not checked		
		Position (drop-down list)	L-Upper, L-Lower, R-Upper, R-Lower		
		Camera selection	Checked/Not checked		
	Display title	Display (check box)	Checked/Not checked		
		Display (drop-down list)	Off, On		
		Display Title (check box)	Checked/Not checked		
		Display Title	(Text will be entered.)	(Blank)	
		Camera selection	Checked/Not checked		
	Indicator	Indicator	On, On(Access), Off		
		Camera selection	Checked/Not checked		
	Transmission priority	Transmission priority	Frame rate, Advanced VBR		
		H.264(1)	Checked/Not checked		
		H.264(2)	Checked/Not checked		
		Burst tolerance level	High, Middle, Low		
		Control time period	1 h, 6 h, 24 h, 1 week		
		Camera selection	Checked/Not checked		

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Camera setup	Max bit rate (per client)	Max bit rate (per client)	64 kbps, 128 kbps, 256 kbps, 384 kbps, 512 kbps, 768 kbps, 1024 kbps, 1536 kbps, 2048 kbps, 3072 kbps, 4096 kbps, 6144 kbps, 8192 kbps		
		Camera selection	Checked/Not checked		
	Refresh interval	Refresh interval	0.2 s, 0.5 s, 1 s, 2 s, 3 s		
		Camera selection	Checked/Not checked		
	Upside-down	Upside-down	On (desktop), Off (ceiling), Wall		
		Camera selection	Checked/Not checked		
	Pan/tilt-flip	Pan/tilt-flip	Off, On		
		Camera selection	Checked/Not checked		
	Super Dynamic (Wide dynamic range)	Super Dynamic (Wide dynamic range)	Off, On, On (High)		
		Camera selection	Checked/Not checked		
	Adaptive black stretch	Adaptive black stretch	Off, On		
		Camera selection	Checked/Not checked		
	Back light compensation (BLC)	Back light compensation (BLC)	Off, On		
		Camera selection	Checked/Not checked		
	Light control mode	Light control mode	Outdoor scene, Indoor scene, Indoor scene(60 Hz)		
		Camera selection	Checked/Not checked		
	Auto slow shutter (Maximum shutter)	Auto slow shutter (Maximum shutter)	Off(1/30 s), Max. 2/30s, Max. 4/30s, Max. 6/30s, Max. 10/30s, Max. 16/30s		
		Camera selection	Checked/Not checked		
	Day & Night (electrical)	Day & Night (electrical)	Off, Auto		
		Camera selection	Checked/Not checked		
	VMD alarm	VMD alarm	Off, On		
		Camera selection	Checked/Not checked		
		Detection sensitivity	1(Low), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15(High)		
REC & event					
Recording setup	Schedule1 Days to record	Mon, Tue, ..., Sun	Checked/Not checked	Checked	
	Schedule1 Schedule to record	Time table1-Schedule recording (Schedule bar)	--:--, 00:00 - 24:00	Schedule bar 1: 00:00 - 24:00 Schedule bar 2: --:-- - -:-- Schedule bar 3: --:-- - -:--	
	Recording setup (All cameras)	Frame rate	1 ips, 3 ips, 5 ips, 10 ips, 15 ips, 30 ips	10 ips	●
		Image quality	XF, SF, FQ, NQ	FQ	●
		Referenced recording days	(Calculated result will be displayed.)	(Calculated result will be displayed.)	

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Recording setup	Schedule1 Advanced setup	Days to record (Mon, Tue, ..., Sun)	Time table1, Time table2, Off	Time table1	⊙
		Event recording (Event recording duration)	2 s, 5 s, 10 s, 20 s, 30 s, 1 min, 2 min, 3 min, 5 min, 10 min, 15 min, Manual, Ext.	30 s	⊙
		Event recording (Pre-event duration)	0 s, 5 s, 10 s, 15 s	0 s	⊙
		Schedule to record (Time table1-Schedule recording-Schedule bar)	--:-- , 00:00 - 24:00	Schedule bar 1: 00:00 - 24:00 Schedule bar 2: --:-- --:-- Schedule bar 3: --:-- --:--	⊙
		Schedule to record (Time table1-Event recording)	--:-- , 00:00 - 24:00	Schedule bar 1: 00:00 - 24:00 Schedule bar 2: --:-- --:-- Schedule bar 3: --:-- --:--	⊙
		Schedule to record (Time table1-Event recording-e-Mail)	Checked/Not checked	Schedule bar 1: Not checked Schedule bar 2: Not checked Schedule bar 3: Not checked	⊙
		Schedule to record (Time table1-Event recording-Panasonic alarm protocol)	Checked/Not checked	Schedule bar 1: Not checked Schedule bar 2: Not checked Schedule bar 3: Not checked	⊙
		Schedule to record (Time table2-Schedule recording-Schedule bar)	--:-- , 00:00 - 24:00	Schedule bar 1: --:-- --:-- Schedule bar 2: --:-- --:-- Schedule bar 3: --:-- --:--	⊙
		Schedule to record (Time table2-Event recording)	--:-- , 00:00 - 24:00	Schedule bar 1: --:-- --:-- Schedule bar 2: --:-- --:-- Schedule bar 3: --:-- --:--	⊙
		Schedule to record (Time table2-Event recording-e-Mail)	Checked/Not checked	Schedule bar 1: Not checked Schedule bar 2: Not checked Schedule bar 3: Not checked	⊙
		Schedule to record (Time table2-Event recording-Panasonic alarm protocol)	Checked/Not checked	Schedule bar 1: Not checked Schedule bar 2: Not checked Schedule bar 3: Not checked	⊙

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Recording setup	Schedule2 Advanced setup	Days to record (Mon, Tue, ..., Sun)	Time table1, Time table2, Off	Time table1	⊙
		Event recording (Event recording duration)	2 s, 5 s, 10 s, 20 s, 30 s, 1 min, 2 min, 3 min, 5 min, 10 min, 15 min, Manual, Ext.	30 s	⊙
		Event recording (Pre-event duration)	0 s, 5 s, 10 s, 15 s	0 s	⊙
		Schedule to record (Time table1-Schedule recording-Schedule bar)	--:--, 00:00 - 24:00	Schedule bar 1: --:-- --:-- Schedule bar 2: --:-- --:-- Schedule bar 3: --:-- --:--	⊙
		Schedule to record (Time table1-Event recording)	--:--, 00:00 - 24:00	Schedule bar 1: --:-- --:-- Schedule bar 2: --:-- --:-- Schedule bar 3: --:-- --:--	⊙
		Schedule to record (Time table1-Event recording-e-Mail)	Checked/Not checked	Schedule bar 1: Not checked Schedule bar 2: Not checked Schedule bar 3: Not checked	⊙
		Schedule to record (Time table1-Event recording-Panasonic alarm protocol)	Checked/Not checked	Schedule bar 1: Not checked Schedule bar 2: Not checked Schedule bar 3: Not checked	⊙
		Schedule to record (Time table2-Schedule recording-Schedule bar)	--:--, 00:00 - 24:00	Schedule bar 1: --:-- --:-- Schedule bar 2: --:-- --:-- Schedule bar 3: --:-- --:--	⊙
		Schedule to record (Time table2-Event recording)	--:--, 00:00 - 24:00	Schedule bar 1: --:-- --:-- Schedule bar 2: --:-- --:-- Schedule bar 3: --:-- --:--	⊙
		Schedule to record (Time table2-Event recording-e-Mail)	Checked/Not checked	Schedule bar 1: Not checked Schedule bar 2: Not checked Schedule bar 3: Not checked	⊙
		Schedule to record (Time table2-Event recording-Panasonic alarm protocol)	Checked/Not checked	Schedule bar 1: Not checked Schedule bar 2: Not checked Schedule bar 3: Not checked	⊙

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Recording setup	Advanced recording setup	Model	(Registered information will be displayed.)	(Registered information will be displayed.)	⊙
		Compression	(Registered information will be displayed.)	(Registered information will be displayed.)	⊙
		Image capture size	When the aspect ratio is 4:3 QVGA(320x240), VGA(640x480), SXVGA(1280x960) SVGA(800x600), QXGA(2048x1536) When the aspect ratio is 16:9 QVGA(320x180), HVGAW(640x360), HD(1280x720), FHD(1920x1080)	VGA(640x480)	⊙
		Rate	1 ips, 3 ips, 5 ips, 10 ips, 15 ips, 30 ips, 60 ips	10 ips	● ⊙
		Quality	XF, SF, FQ, NQ	FQ	● ⊙
		Audio	Off, On	Off	⊙
		Schedules	Schedule1, Schedule2	Schedule1	⊙
		Referenced recording days	(Calculated result will be displayed.)	(Calculated result will be displayed.)	⊙
Event setup	Alarm action	Output duration	0 s, 2 s, 5 s, 10 s, 20 s, 30 s, 1 min, Ext., Rec.	2 s	⊙
		Buzzer duration	0 s, 2 s, 5 s, 10 s, 20 s, 30 s, 1 min, Ext., Rec.	2 s	⊙
		Auto reset time	2 s, 5 s, 10 s, 20 s, 30 s, 1 min, 3 min, 5 min, Ext.	Ext.	⊙
		Message display	Off, On	On	⊙
		Main monitor action	Off, On, On(Wide view)	Off	⊙
	Advanced terminal alarm setup	Mode	Off, Recording only, Recording & alarm action	Recording & alarm action	⊙
		Alarm log	Save, Not save	Save	⊙
		Setup by terminal (Recording camera)	Off, Cam.1, ..., Cam.32, All	Camera number associated with the terminal number	⊙
		Setup by terminal (Preset)	001 - 256, ---	---	⊙
		Setup by terminal (Terminal output)	Off, On	On	⊙
		Setup by terminal (Terminal input)	N.O., N.C.	N.O.	⊙
	Advanced camera site alarm setup	Mode	Off, Recording only, Recording & alarm action	Recording & alarm action	⊙
		Alarm log	Save, Not save	Save	⊙
		Setup by camera (Recording camera)	Off, Cam.1, ..., Cam.32	Camera number	⊙
		Setup by camera (Preset)	001 - 256, ---	---	⊙
		Setup by camera (Terminal output)	Off, On	On	⊙

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Event setup	Advanced command alarm setup	Mode	Off, Recording only, Recording & alarm action	Recording & alarm action	⊙
		Alarm log	Save, Not save	Save	⊙
		Setup by command number (Recording camera)	Off, Cam.1, ..., Cam.32	Camera number	⊙
		Setup by command number (Preset)	001 - 256, ---	---	⊙
		Setup by command number (Terminal output)	Off, On	On	⊙
	Advanced face matching alarm setup	Mode	Off, Alarm action	Off	⊙
		Alarm log	Save, Not save	Save	⊙
		Setup by camera (Face matching output)	Off, On	On	⊙
	Face registration	Registration list (Sensitivity)	1(Low), 2, 3, 4, 5(High)	3	
		Registration list (Face image)	Undefined	Undefined	
		Registration list (Appearance)	(Indication only)	(Indication only)	
		Registration list (Name)	(Text will be entered.)	Person001 ... Person100	
		Registration list (Matching)	On, Off	Off	
		Setup area	(Desired area on the screen)	Matching area1: All area Matching area2 - 4: Undefined	
Advanced setup	Recording mode		Off, On	On	⊙
	Alarm disarm duration		2 s, 3 s, 5 s, 10 s	2 s	⊙
	Panasonic alarm port number		(Port No.)	1818	⊙

Advanced setup

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Monitor					
Main monitor	Camera title	Display	Off, On	On	⊙
		Position	L-Upper, L-Lower, R-Upper, R-Lower	R-Upper	⊙
		Camera title	(Text will be entered.)	CAM1, ..., CAM32	⊙
Sub monitor	Display settings	Mode	1-screen live sequence, 4-screen live sequence, Switch by alarm terminal input, 16Screen (* 9Screen)	1-screen live sequence * When the registered licenses cover up to 9 cameras, images from the cameras will be displayed on 9-screen instead of 16-screen.	⊙
		Duration	3 s, 5 s, 10 s	5 s	⊙
		Camera selection	Checked/Not checked	Not checked	⊙
		Secret view	Off, On	Off	⊙

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Advanced setup	Audio output camera		Selected camera, Cam.1, ..., Cam.32	Selected camera	⊙
	Select multiscreen buttons displaying on wide view operation panel*	1-screen	Checked/Not checked	Checked, Fixed	⊙
		4-screen	Checked/Not checked	Checked	⊙
		6-screen	Checked/Not checked	Not checked	⊙
		9-screen	Checked/Not checked	Checked	⊙
		16-screen	Checked/Not checked	Checked	⊙
		24-screen	Checked/Not checked	Not checked	⊙
		32-screen	Checked/Not checked	Not checked	⊙
		1-screen (pillar box)	Checked/Not checked	Not checked	⊙
		4-screen (pillar box)	Checked/Not checked	Not checked	⊙
		9-screen (pillar box)	Checked/Not checked	Not checked	⊙
		12-screen (pillar box)	Checked/Not checked	Not checked	⊙
		16-screen (pillar box)	Checked/Not checked	Not checked	⊙
	Other setup	Display live camera image in high resolution (SXVGA/HD) on 1-screen display	Checked/Not checked	Not checked	⊙
		Auto-hide the status display panel and the operation panel in wide view	Checked/Not checked	Not checked	⊙
		Stretch images to fit the areas in control screen display	Checked/Not checked	Not checked	⊙
		Display images in 16:9 aspect ratio on the web browser window	Checked/Not checked	Not checked	⊙
		Detect a power-off of the sub monitor (HDMI)	Checked/Not checked	Checked	⊙
		Stop receiving the live image if both HDMI monitors are not connected	Checked/Not checked	Not checked	⊙
		Hide the camera title of the sub monitor	Checked/Not checked	Not checked	⊙

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Network					
Basic	Network Setup [Camera/PC port]	IP address	(IP address)	192.168.0.250	⊙
		Subnet mask	(IP address)	255.255.255.0	⊙
		Default gateway	(IP address)	192.168.0.1	⊙
		Line speed	Auto, 100M-Full, 100M-Half, 10M-Full, 10M-Half	Auto	⊙
	DNS Setup	DNS	Off, Manual	Off	⊙
		Primary server address	(IP address)	0.0.0.0	⊙
		Secondary server address	(IP address)	0.0.0.0	⊙
		Domain name	(Text will be entered.)	localdomain	⊙
	DDNS Setup	DDNS	Off, Viewnetcam.com, Dynamic DNS update	Off	⊙
		Access interval (Viewnetcam.com)	10 min, 20 min, 30 min, 40 min, 50 min, 1 h	1 h	⊙
		Host name (Dynamic DNS)	(Text will be entered.)	NWDR	⊙
		Access interval (Dynamic DNS)	10 min, 20 min, 30 min, 40 min, 50 min, 1 h, 6 h, 24 h	1 h	⊙
	Advanced setup	HTTP port number	(Port No.)	80	⊙
		FTP port number	(Port No.)	21	⊙
		Attach the alteration detection code (FTP)	Off, On	Off	⊙
	Network Setup [PC port]	IP address	(IP address)	0.0.0.0	⊙
		Subnet mask	(Subnet mask)	0.0.0.0	⊙

* "6Screen", "9Screen" and "9Screen" (pillar box) will be displayed on the setting menu when the registered licenses cover 9 cameras.

* "16Screen" and "12Screen" (pillar box) will be displayed on the setting menu when the registered licenses cover 16 cameras.

* "16Screen" (pillar box) will be displayed on the setting menu when the registered licenses cover 16 cameras.

* "24Screen" will be displayed on the setting menu when the registered licenses cover 24 cameras.

* "32Screen" will be displayed on the setting menu when the registered licenses cover 32 cameras.

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks	
Network						
e-Mail	e-Mail setup	SMTP server address	(Text will be entered.)	(Blank)	⊙	
		SMTP port number	(Port No.)	25	⊙	
		POP server address	(Text will be entered.)	(Blank)	⊙	
		Authentic method	None, POP before SMTP, SMTP	None	⊙	
		User name	(Text will be entered.)	(Blank)	⊙	
		Password	(Text will be entered.)	(Blank)	⊙	
		Sender's address	(Text will be entered.)	NWDR	⊙	
		SSL	Off, On	Off	⊙	
		Destination address (Address)	(Text will be entered.)	(Blank)	⊙	
		Destination address (Warning)	Checked/Not checked	Checked	⊙	
		Destination address (Alarm)	Checked/Not checked	Checked	⊙	
		Panasonic alarm protocol	Panasonic alarm protocol	Port number(to PC)	(Port No.)	1818
Retry	0, ..., 8			2	⊙	
Destination address (Address)	(Text will be entered.)			(Blank)	⊙	
NTP/SNMP	NTP setup	Time adjustment	Off, On	Off	⊙	
		Primary server address Secondary server address	(Text will be entered.)	(Blank)	⊙	
	SNMP setup	Community	(Text will be entered.)	(Blank)	⊙	
		System name	(Text will be entered.)	(Blank)	⊙	
		Location	(Text will be entered.)	(Blank)	⊙	
		Contact	(Text will be entered.)	(Blank)	⊙	
User management						
Basic	Operation	Auto login	Off, On	On	⊙	
		Auto login user	(Select from the registered user names.)	ADMIN	⊙	
		Quick login	Off, On	Off	⊙	
		Auto logout	Off, After 1 min, After 3 mins, After 5 mins, After 30 mins	Off	⊙	
	Network	User authentication	Off, On	On	⊙	
	User level settings	Camera operation	Checked/Not checked	Manager: (Checked, Fixed) Operator: (Checked, Fixed) Viewer: (Checked, Fixed) Logged out: Checked	⊙	
		Camera control	Checked/Not checked	Manager: (Checked, Fixed) Operator: Checked Viewer: Not checked Logged out: (Not checked, Fixed)	⊙	
		Search and playback	Checked/Not checked	Manager: (Checked, Fixed) Operator: Checked Viewer: Checked Logged out: (Not checked, Fixed)	⊙	

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Basic	User level settings	Copy	Checked/Not checked	Manager: (Checked, Fixed) Operator: Not checked Viewer: Not checked Logged out: (Not checked, Fixed)	◎
		Alarm reset	Checked/Not checked	Manager: (Checked, Fixed) Operator: Checked Viewer: Not checked Logged out: (Not checked, Fixed)	◎
		Error reset	Checked/Not checked	Manager: (Checked, Fixed) Operator: Checked Viewer: Not checked Logged out: (Not checked, Fixed)	◎
		Setup	Checked/Not checked	Manager: (Checked, Fixed) Operator: Not checked Viewer: Not checked Logged out: (Not checked, Fixed)	◎
		Camera image display	Checked/Not checked	Manager: (Checked, Fixed) Operator: Checked Viewer: Checked Logged out: Checked	◎
User registration	Register new user	User name	(Text will be entered.)	(Blank)	◎
		Password	(Text will be entered.)	(Blank)	◎
		Level	Manager, Operator, Viewer	Operator	◎
		Default screen*	Cam.1, ... , Cam.32, 4Screen-A, 4Screen-B, 4Screen-C, 4Screen-D, 4Screen-E, 4Screen-F, 4Screen-G, 4Screen-H, 9Screen, 16Screen-A, 16Screen-B, 1Screen (Wide view), 4Screen (Wide view), 9Screen (Wide view), 16Screen (Wide view)	4Screen-A	◎
	Edit user information	User name	(Select from the registered user names.)	Undefined	◎
		Password	(Text will be entered.)	(Blank)	◎
		Level	Manager, Operator, Viewer	Undefined	◎

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
User registration	Edit user information	Default screen*	Cam.1, ... , Cam.32, 4Screen-A, 4Screen-B, 4Screen-C, 4Screen-D, 4Screen-E, 4Screen-F, 4Screen-G, 4Screen-H, 9Screen, 16Screen-A, 16Screen-B, 1Screen (Wide view), 4Screen (Wide view), 9Screen (Wide view), 16Screen (Wide view)	(Blank)	⊙
Administrator setup	Administrator name		(Text will be entered.)	ADMIN	⊙
	Password		(Text will be entered.)	12345	⊙
	Password (Retype)		(Text will be entered.)	12345	⊙
	Level		Administrator	Administrator	⊙
	Default screen*		Cam.1, ... , Cam.32, 4Screen-A, 4Screen-B, 4Screen-C, 4Screen-D, 4Screen-E, 4Screen-F, 4Screen-G, 4Screen-H, 9Screen, 16Screen-A, 16Screen-B, 1Screen (Wide view), 4Screen (Wide view), 9Screen (Wide view), 16Screen (Wide view)	4Screen-A	⊙

* Available settings for "Default screen" varies depending on the number of the cameras covered by the licenses. The following are available settings depending on the number of the cameras covered by the registered licenses.

9 cameras: 9Screen, 16 cameras or more: 4Screen-D, 16Screen-A, 16Screen (Wide view)

24 cameras or more: 4Screen-E, 4Screen-F, 16Screen-B

32 cameras: 4Screen-G, 4Screen-H

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Maintenance					
System information	Software version1		(Indication only)	(Indication only)	⊙
	Software version2		(Indication only)	(Indication only)	⊙
	Hardware version		(Indication only)	(Indication only)	⊙
	Serial number		(Indication only)	(Indication only)	⊙
	Network port [Camera/PC port]	MAC address	(Indication only)	(Indication only)	⊙
		IP address	(Indication only)	(Indication only)	⊙
		Line speed	(Indication only)	(Indication only)	⊙
	Network port [PC port]	MAC address	(Indication only)	(Indication only)	⊙
		IP address	(Indication only)	(Indication only)	⊙
	Internal temperature		(Indication only)	(Indication only)	⊙
	Highest temperature		(Indication only)	(Indication only)	⊙
	HDD1 temperature		(Indication only)	(Indication only)	⊙
	HDD1 Highest temperature		(Indication only)	(Indication only)	⊙
	HDD2 temperature		(Indication only)	(Indication only)	⊙
	HDD2 Highest temperature		(Indication only)	(Indication only)	⊙
HDD information	Capacity		(Indication only)	(Indication only)	⊙
	Operation		(Indication only)	(Indication only)	⊙
	Status		(Indication only)	(Indication only)	⊙
	Recorded time range		(Indication only)	(Indication only)	⊙
	Overwrite cycle		(Indication only)	(Indication only)	⊙

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
System management	System setup	Error output duration	0 s, 2 s, 5 s, 10 s, 20 s, 30 s, 1 min, Ext.	2 s	⊙
		Error buzzer duration	0 s, 2 s, 5 s, 10 s, 20 s, 30 s, 1 min, Ext.	2 s	⊙
		Network link down detection	Off, On	Off	⊙
		HDD hour meter warning	Off, 10000 h, 20000 h, 30000 h, 40000 h, 50000 h	20000 h	⊙
		Auto data delete	Off, 1 day, ..., 10 days, 14 days, 30 days, 45 days, 60 days, 90 days, 120 days, 150 days, 180 days	Off	⊙
		Auto camera time synchronization	Off, On	On	⊙
	Logs	Access log (Date & Time / Log)	(Indication only)	(Indication only)	
		Network log (Date & Time / Log)	(Indication only)	(Indication only)	
	Entry information of the key management system	MPR ID	(None)	(Unique number given to the device)	
		Activation Key No.	(None)	Refer to the Activation Key Card.	
		Registration ID	(None)	Refer to the Activation Key Card.	
	Registration of license	Product-Registration Key	(Text will be entered.)	(Blank)	
	Additional camera	Registration Key 1	(Text will be entered.)	(Blank)	
		Registration Key 2	(Text will be entered.)	(Blank)	
		Registration Key 3 (WJ-NV300K/G)	(Text will be entered.)	(Blank)	
	Additional business intelligence	Registration Key	(Text will be entered.)	(Blank)	
	Optional extension for Fisheye network camera	Registration Key	(Text will be entered.)	(Blank)	
	Dealer's information		(Text will be entered.)	(Blank)	
	Functions for maintenance	Reset all settings	(None)	(None)	⊙
		Save data (to SD card)	(None)	(None)	
		Load data (from SD card)	(None)	(None)	
		Save face data (to SD card)	(None)	(None)	
		Load face data (from SD card)	(None)	(None)	
		Download face data (Only available for Web browser)	(None)	(None)	⊙
		Upload face data (Only available for Web browser)	(None)	(None)	⊙
		Firmware update	(None)	(None)	⊙
		Other	(None)	(None)	

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
HDD management					
General	HDD information	Capacity	(Indication only)	(Indication only)	◎
		Operation	(Indication only)	(Indication only)	◎
		Status	(Indication only)	(Indication only)	◎
		Recorded time range	(Indication only)	(Indication only)	◎
	Format HDD	HDD information (Capacity)	(Indication only)	(Indication only)	◎
		HDD information (Operation)	(Indication only)	(Indication only)	◎
		HDD information (Status)	(Indication only)	(Indication only)	◎
		HDD information (Format)	Checked/Not checked	Not checked	◎
		HDD information (Results)	(Indication only)	(Indication only)	◎
	Remove HDD	HDD information (Capacity)	(Indication only)	(Indication only)	
		HDD information (Operation)	(Indication only)	(Indication only)	
		HDD information (Status)	(Indication only)	(Indication only)	
		HDD information (Remove)	Checked/Not checked	Not checked	
		HDD information (Results)	(Indication only)	(Indication only)	
	Add HDD	HDD information (Capacity)	(Indication only)	(Indication only)	
		HDD information (Operation)	(Indication only)	(Indication only)	
		HDD information (Status)	(Indication only)	(Indication only)	
		HDD information (Add)	Checked/Not checked	Checked	
		HDD information (Results)	(Indication only)	(Indication only)	
	Change the operation mode of HDD	HDD information (Capacity)	(Indication only)	(Indication only)	
		HDD information (Operation)	(Indication only)	(Indication only)	
		HDD information (Status)	(Indication only)	(Indication only)	
		HDD information (Results)	(Indication only)	(Indication only)	
		Operation mode of HDD	Single mode, Mirroring mode, RAID5 mode, RAID6 mode	(Blank)	

Menu/Tab	Setting item (including those of the "Advanced setup" menu)		Available range	Default	Remarks
Extra function					
Business intelligence	Accumulate statistics data		Off, On	Off	◎
	People counting	Detection area	x: 0 – 1280, y: 0 - 960	Detection area1: All area Detection area2-4: No setting	
	Face matching / Age and gender judgement	Matching area	x: 0 – 1280, y: 0 - 960	Detection area1: All area Detection area2-4: No setting	
	Save statistics data (to SD card)	Start	2013/1/1 0:00 - 2037/12/31 23:59	The day before "End"	
		End	2013/1/1 0:00 - 2037/12/31 23:59	The date & time when this tab is displayed	
	Download statistics data (Only available for Web browser)	Start	2013/1/1 0:00 - 2037/12/31 23:59	The day before "End"	◎
		End	2013/1/1 0:00 - 2037/12/31 23:59	The date & time when this tab is displayed	◎

About the error logs and the network logs

Error logs

This section describes the display contents on the status display panel of the main monitor, the logs of error occurrence (error logs) and their details.

The display contents of each error logs are common between the main monitor and the web browser.

- "x" indicates the extension unit number.
- "y" indicates the HDD (hard disk drive) number.
- "f" indicates the cooling fan number.
- "cc" indicates the camera number.

Description	Display of the status display panel	Error log	Output from connector
Thermal error warning	Thermal error: MAIN Thermal error: EXTx	Thermal error: MAIN Thermal error: EXTx	Recorder error
FAN warning	Fan error: MAIN-f Fan error: EXTx-f	Fan error: MAIN-f Fan error: EXTx-f	Recorder error
Network camera error detection	Communication error: Cam.cc	Communication error: Cam.cc	Camera error
Network camera error recovery	–	Communication recovered: Cam.cc	–
Network camera error detection (audio)	Audio communication error: Cam. cc	Audio communication error: Cam. cc	Camera error
Network camera error recovery (audio)	–	Audio communication recovered: Cam. cc	–
Video loss (Notification of video input signal loss occurred on the encoder)	Video loss: Cam.cc	Video loss: Cam.cc	Camera error
Video loss recovery (Notification of video input signal loss recovered on the encoder)	–	Video recovered: Cam.cc	–
Recording error detection	Recording error	Recording error (RCA) Recording error (AGT) Recording error (WCK)	Recording error
SMART warning	SMART warning: MAIN-y SMART warning: EXTx-y	SMART warning: MAIN-y SMART warning: EXTx-y	HDD error
HDD hour meter warning	Hour meter warning: MAIN-y Hour meter warning: EXTx-y	Hour meter warning: MAIN-y Hour meter warning: EXTx-y	HDD error
HDD skip*1	–	HDD skip: MAIN-y HDD skip: EXTx-y HDD skip: EXTx	–
HDD write error	–	Write error: MAIN-y Write error: EXTx-y	–
HDD read error	–	Read error: MAIN-y Read error: EXTx-y	–
Alteration detection	Altered: Cam.cc	Altered: Cam.cc	Recorder error
Remove auto links (per HDD)	HDD removed: MAIN-y HDD removed: EXTx-y	HDD logically removed: MAIN-y HDD logically removed: EXTx-y	HDD error
HDD format error	Format error: MAIN-y Format error: EXTx-y	Format error: MAIN-y Format error: EXTx-y	HDD error
HDD removal error (Properly recognized HDD was removed without proper operations.)	Swap warning: MAIN-y Swap warning: EXTx-y	Swap warning: MAIN-y Swap warning: EXTx-y	HDD error
Reboot (Related to CPU)	–	System reboot(CPU)	–
Reboot (Related to DEC)	–	System reboot(DEC)	–
Reboot (Related to NW error)	–	System reboot(NW error)	–

Description	Display of the status display panel	Error log	Output from connector
Failed to write data on the media	Copy error	Write error: SD card Write error: COPY	–
Failed to read the data from the media	–	Read error: SD card Read error: COPY	–
Copy media FULL	–	No available space: SD card No available space: COPY	–
Number of data on the copy medium exceeded	–	Over limitation: SD card Over limitation: COPY	–
Face data error	Face data error	Face data error	–
NW link error	Network link error	–	Network error
Line speed warning (When line speed becomes "Half" while "Auto" is being set)	Line speed warning	Line speed warning	–
When time is not adjusted due to the time difference of 1000 second or more from the NTP server	Skip time adjustment	Skip time adjustment	–
Failed to resolve an address of Panasonic alarm protocol from DNS	–	Address error: PANASONIC ALARM	Network error
No response from a notified address of Panasonic alarm protocol	–	No response: PANASONIC ALARM	Network error
Undefined error of Panasonic alarm protocol	–	Other error: PANASONIC ALARM	Network error
Remove auto links (per unit)	HDD removed: EXTx	HDD logically removed: EXTx	HDD error
RAID5 Format error	Format error: EXTx	RAID5 Format error: EXTx	HDD error
RAID6 Format error	Format error: EXTx	RAID6 Format error: EXTx	HDD error
RAID5 1down*2	RAID5 1down: EXTx	RAID5 1down: EXTx	
RAID5 2down*2	RAID5 2down: EXTx	RAID5 2down: EXTx	
RAID6 1down*2	RAID6 1down: EXTx	RAID6 1down: EXTx	
RAID6 2down*2	RAID6 2down: EXTx	RAID6 2down: EXTx	
RAID6 3down*2	RAID6 3down: EXTx	RAID6 3down: EXTx	
HDD RAID5 Recovery failure	RAID5 Recovery failure: EXTx	RAID5 Recovery failure: EXTx	HDD error
HDD RAID6 Recovery failure	RAID5 Recovery failure: EXTx	RAID6 Recovery failure: EXTx	HDD error
Parameter initialization error	–	Invalid unit: EXTx	HDD error
Reboot (No extension unit connection detected)	–	System reboot(EXT)	–
Undetected sub monitor	Undetected sub monitor	Undetected sub monitor	–
Complete mirroring recovery	–	Complete mirroring recovery	–
Complete RAID5 recovery	–	Complete RAID5 recovery: EXTx	–
Complete RAID6 recovery	–	Complete RAID6 recovery: EXTx	–

*1 "HDD skip" is the function that continues recording on another hard disk drive even if an error occurs, such as an HDD write error.

*2 Refer to the operating instructions of the extension unit for recovering from RAID down.

About the network log

This section describes the details on the network logs and their details. The network logs are displayed by selecting the "Maintenance" page - [System management] tab - "Network log" on the setup menu or the web browser of a PC that is connected to the recorder.

Contents to be displayed are the same as when using the web browser.

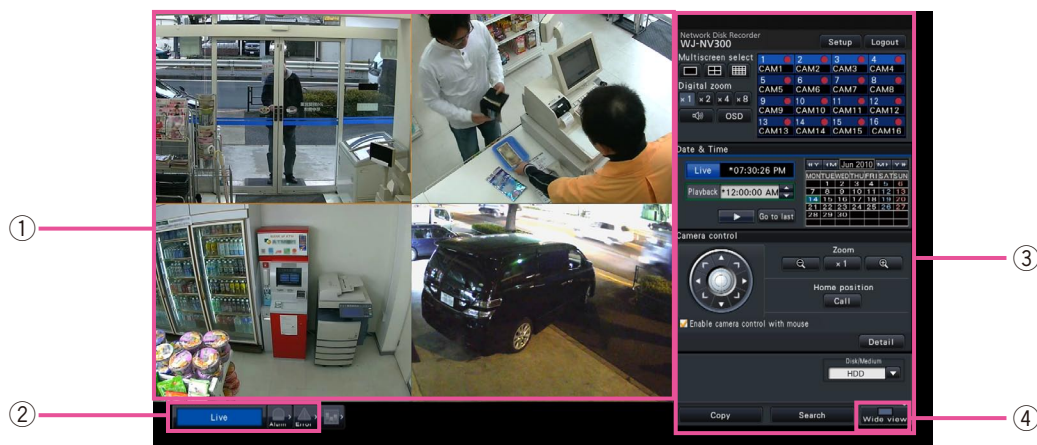
Description	Network log	Output from connector
NW link error	NETWORK LINK ERROR	Network error
E-mail transmission complete	<SMTP>MAIL_SEND	–
SMTP authentication error	<SMTP>SMTP_ATTEST_ERR	Network error
POP3 authentication error	<SMTP>POP3_ATTEST_ERR	Network error
Failed to resolve POP3 server address from DNS	<SMTP>POP3_ADD_ERR	Network error
Failed to find POP3 server	<SMTP>POP3_SVR_ERR	Network error
Failed to resolve SMTP server address from DNS	<SMTP>SMTP_ADD_ERR	Network error
Failed to find SMTP server	<SMTP>SMTP_SVR_ERR	Network error
MAIL FROM command error	<SMTP>MAIL_FROM_ERR	Network error
RCPT TO command error	<SMTP>RCPT_TO_ERR	Network error
Other errors for SMTP	<SMTP>OTHER_ERR	Network error
FTP server transfer complete	<FTP>SVR_FWD_OK	–
Other error for FTP	<FTP>OTHER_ERR	Network error
Synchronization with the NTP server complete	<NTP>GET_TIME_OK	–
Failed to resolve NTP server address from DNS	<NTP>SVR_ADD_ERR	Network error
Synchronization with the NTP server failed (Time is not synchronized.)	<NTP>TIME_INVALID	Network error
Failed to adjust the time	<NTP>SET_TIME_ERR	Network error
Failed to find NTP server	<NTP>SVR_ERR	Network error
Other errors for NTP	<NTP>OTHER_ERR	Network error
Password error for SNMP user name	<SNMP>USER_PASS_ERR	Network error
SNMP object inquiry failure	<SNMP>OBJ_ERR	Network error
Other errors for SNMP	<SNMP>OTHER_ERR	Network error
Password error for HTTP user name	<HTTP>USER_PASS_ERR	Network error
HTTP download failure	<HTTP>DOWNLOAD_ERR	Network error
HTTP request invalid	<HTTP>REQUEST_ERR	Network error
Other errors for HTTP	<HTTP>OTHER_ERR	Network error
Failed to resolve the DDNS server address from DNS.	<DDNS>SVR_ADD_ERR	Network error
No response from the DDNS server.	<DDNS>SVR_ERR	Network error
Same host name has registered.	<DDNS>HOST_NAME_ERR	Network error
Undefined error.	<DDNS>OTHER_ERR	Network error

Operation window

The recorder can be operated using the provided mouse connected to the mouse connection port on the rear side of the recorder. When operating the recorder using a web browser, refer to "Network" (☞ page 52).

Ctrl (control) screen display

The control screen is the default screen at startup. The main operations of the recorder are performed from this screen.



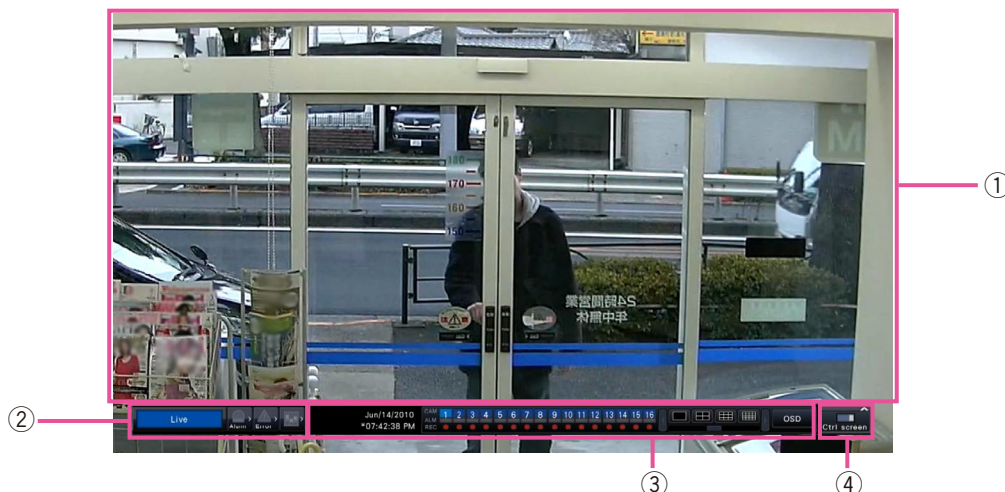
Ctrl screen

This screen will be displayed after startup. Main operations of this product can be performed on this screen.

- ① **Image display area**
Displays images from the camera. (☞ Page 104)
- ② **Status display panel**
Displays the statuses of the recorder. Also displays alarm/error status and remedies. (☞ Page 98)
- ③ **Operation panel**
Used to switch between screens, to play back recordings, operate the camera and so on. Displays the current date & time.
- ④ **[Wide view] button**
Switches the main monitor to wide view display.

Wide view display

This view offers a large image display area, especially suited for monitoring live images. However, operations are restricted.



- ① **Image display area**
Displays images from the camera. (☞ Page 104)

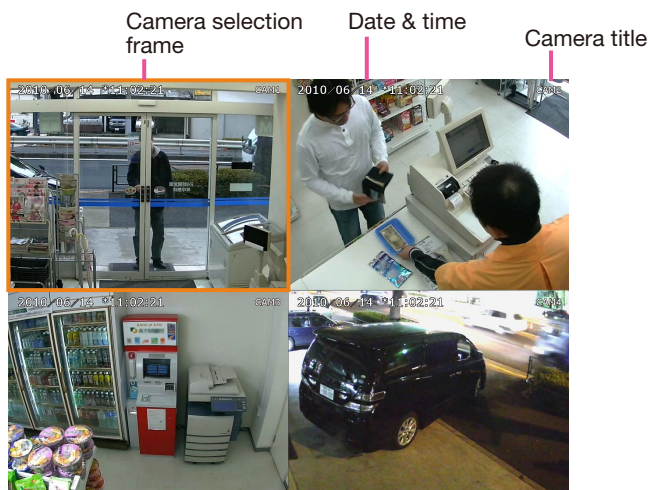
- ② **Status display panel**
Displays the statuses of the recorder. Also displays alarm/error status and remedies. (☞ Page 98)
When clicking alarm button or error button, this panel may be displayed overlapped on the operation panel.

- ③ **Operation panel**
Switches between screens and screen patterns. Displays the current date & time.

- ④ **[Ctrl screen] button**
Switches the main monitor to control screen display.

Image display area

Displays live images and playback images on the control screen. Only live images can be displayed on the wide view screen.



Camera title/date & time

The set camera title will be displayed. The display position can be selected from upper-left ("L-Upper"), lower-left ("L-Lower"), upper-right ("R-Upper") and lower-right ("R-Lower"). The default display position is "R-Upper". (Default: Upper right). Date & time will be displayed as set on the camera.

Camera selection frame

Displays the camera being operated. When using 1-screen/4-screen display (☞ pages 109 and 110), the cameras can be operated with the mouse.

Image display area

The number of images that can be displayed on the multiscreen differs for the control screen and the wide view screen.

Number of the multi-screen selection buttons to be displayed will also vary depending of the number of the registered licenses.

Screen display	Status	Multiscreen buttons	Camera license number			
			9	16	24	32
Ctrl screen	Live	1-screen	○	○	○	○
		4-screen	○	○	○	○
		9-screen	○	–	–	–
		16-screen	–	○	○	○
	Play	1-screen	○	○	○	○
		4-screen	○	○	○	○
		9-screen	–	–	–	–
		16-screen	–	–	–	–
Wide view display	Live	1-screen	○	○	○	○
		4-screen	○	○	○	○
		6-screen	○	○	○	○
		9-screen	○	○	○	○
		16-screen	–	○	○	○
		24-screen	–	–	○	○
		32-screen	–	–	–	○
		1-screen (pillar box)	○	○	○	○
		4-screen (pillar box)	○	○	○	○
		9-screen (pillar box)	○	○	○	○
		12-screen (pillar box)	–	○	○	○
		16-screen (pillar box)	–	○	○	○

○: Multi-screen selection buttons will be displayed.

–: Multi-screen selection buttons will not be displayed.

Note:

- It is possible to select whether to display or hide the wide view multi-screen selection button. Refer to the "Configure other settings relating to monitors" section (page 51) for further information.
- "24Screen" and "32Screen" will be come available only when not all of the cameras are selected at the "Cam. select" under "Sub monitor".

In the image display area, the startup screen to be displayed upon login (default screen) can be set for each login user individually.

The available screens that can be set as the default screen are as follows. Refer to page 62 for how to configure the default screen.

Cam.1 to Cam.32:	Each camera displayed on a 1-screen
4Screen-A:	Camera 1 to 4 displayed on a 4-screen
4Screen-B:	Camera 5 to 8 displayed on a 4-screen
4Screen-C:	Camera 9 to 12 displayed on a 4-screen
4Screen-D:	Camera 13 to 16 displayed on a 4-screen
4Screen-E:	Camera 17 to 20 displayed on a 4-screen
4Screen-F:	Camera 21 to 24 displayed on a 4-screen

4Screen-G:	Camera 25 to 28 displayed on a 4-screen
4Screen-H:	Camera 29 to 32 displayed on a 4-screen
9Screen:	Camera 1 to 9 displayed on a 9-screen
16Screen-A:	Camera 1 to 16 displayed on a 16-screen
16Screen-B:	Camera 17 to 32 displayed on a 16-screen
1-screen (Wide view):	1-screen display in wide view
4-screen (Wide view):	4-screen display in wide view
9-screen (Wide view):	9-screen display in wide view
16-screen (Wide view):	16-screen display in wide view

Note:

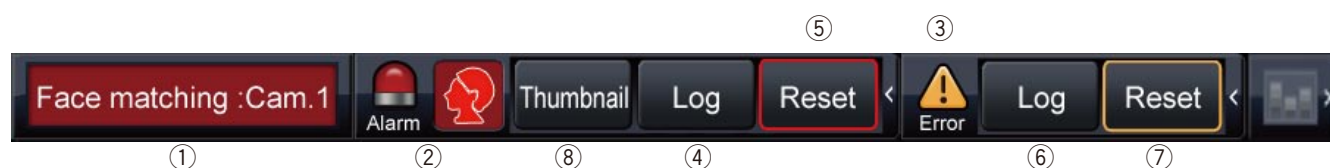
- If any of the default screen other than "Cam.1" - "Cam.32" or "4Screen-A" - "4Screen-H" is selected, the 4-screen that automatically displays images from camera 1 to camera 4 will become the default screen of the web browser on the PC.
-

About the status display panel

Normal operation



In case of alarm/error (When the associated buttons are displayed)



① Status display area

Recorder status indications and their details are shown in the table below. In the event that the recorder enters several statuses at the same time, these are displayed in their order of priority. If both statuses have the same priority, the one that occurred last will be displayed.

Status	Description	Example	Priority
Live	Live images are being displayed.		6 (Low)
During playback	Recorded images are being played.		6
In the process of RAID recovery	Currently in the process of RAID recovery.		5
Copying	Data is being copied. Copying progress is displayed in %.		4
Formatting SD	SD memory card is being formatted.		4
Formatting HDD	HDD is being automatically formatted.		3
In the alarm state	Indicates an alarm occurrence. Detailed information of the alarm will be displayed.		2
In the error state	Indicates that an error has occurred. A detailed description of the error content will be displayed.		1 (High)

② Alarm buttons (When the face matching function is not used:

Indicate that an alarm has occurred. Turn red in the alarm state. Clicking the buttons will toggle between displaying/not displaying buttons such as the alarm log button and the alarm reset button.

<Face matching function>

If the face matching function has been configured for use, the following display functions and operations are available:

- No face matching alarm
- Face matching alarm is being issued

③ **Error button**

Indicate that an error has occurred. Turn yellow in the error state. Clicking the buttons will toggle between displaying/not displaying buttons such as the error log button and the error reset button.

④ **Alarm log display button**

The alarm logs are displayed on the operation panel of the control screen. Up to 750 alarm logs are saved. When more than 750 logs are filed, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten.

⑤ **Alarm reset button**

Cancels the alarm action. Clickable only in the alarm state.

⑥ **Error log display button**

The error (trouble) logs are displayed on the operation panel of the control screen. Up to 1000 error logs are saved. When more than 1000 logs are filed, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten.

⑦ **Error reset button**

Cancels the error (trouble) action. Clickable only in the error state.

⑧ **Face display (Thumbnail) button**

The latest face matching results are displayed on the operation panel of the control screen. (☞ Operating Instructions of WJ-NVF30, WJ-NVF30W)

Sub monitor (monitor for display of live images only)

Important:

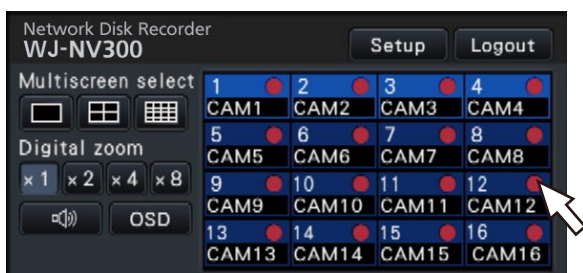
- Configuration and operation of the recorder from the sub monitor is not possible.
-

Live images from the specified cameras can be displayed on 1-screen or 4-screen/16-screen (9-screen) on the sub monitor. When several cameras are selected on 1-screen or 4-screen, camera images will be switched sequentially at the selected switching interval (sequence display). In addition, camera images can be switched according to the signal input triggered by a terminal alarm. (☞ Page 50)

Note:

- The date & time and camera also appear on the camera image displayed on the sub monitor, but some characters may be cut off.
 - To display images, it is necessary to select the cameras to be displayed in the setup menu in advance. The recorder is not configured to display camera images by default.
 - Depending on the selected switching interval, a black screen may appear before camera images are displayed.
 - When the secret view function is selected, the single screen on the main monitor or selected images on a multiscreen will not be displayed.
 - While "1-screen live sequence" is being performed, the secret view images will be skipped (not displayed).
 - The image of a camera where an error has occurred will not be displayed.
 - The size of displayed images will be fit into the screen regardless of the aspect ratio.
 - Depending on whether enabling or disabling the display switchover or the re-encoding transmission of the main monitor, the frame rate or the resolution of camera images on the sub monitor may vary, or the sub monitor may momentarily go black. Likewise, when the camera images on the sub monitor switches, the frame rate or the resolution of camera images on the main monitor may vary, or the main monitor may momentarily go black.
-

Basic operations



To operate, use the mouse connected to the recorder to move the mouse cursor displayed on the main monitor and left-click the buttons or tabs displayed on the screen. (Hereinafter, "Left-click..." will be described as "Click..." in this document.)

In lines where the [▲]/[▼] buttons are displayed, the value on which the cursor is placed can be changed by turning the mouse wheel. For example, when setting date & time, the hours, minutes and seconds can be changed.

The shape of the mouse cursor will change as follows depending on the display screen and mouse operation.

-  : Normal operation
-  : When dragging a camera number panel (wide view screen)

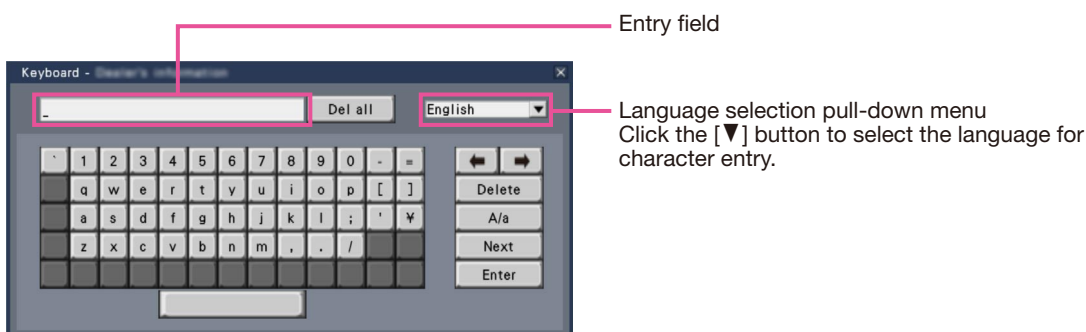
Note:

- When no operation is made for 10 seconds or more, the mouse cursor will be hidden. The mouse cursor will be displayed again when the mouse is moved.
 - It is impossible to connect a mouse to the mouse connection port if the connector from the mouse is upside down. When it is hard to connect, check the upside down position of the connector.
-

About the operation of on-screen keyboard

Setting items can be entered using the on-screen keyboard. When clicking the  icon beside the entry field, the on-screen keyboard will be displayed, and it will become possible to enter characters by clicking the character keys on the keyboard.

On-screen keyboard screen



[Del all] button

Deletes all the characters in the entry field.

[←]/[→] button

Move the cursor in the entry field to either direction.

[Delete] button

Deletes a character pointed by the cursor in the entry field.

[A/a] button

This button changes the characters to be entered between capital letters and small letters.

[Next] button

Changes the keys to be displayed for character entry.

The displayed keys are changed as follows:

Keys for the language selected by the language selection pull-down menu → Combination characters → Special characters

[Enter] button

Determines the entered characters and closes the on-screen keyboard.

Note:

- Basic operations are also applied to the "Login" window and the window for entering a password.
 - Click the [×] button to close the window without determining the entered characters.
-

Logout

Click the [Logout] button. To log out, click the [OK] button in the confirmation window displayed.

Note:

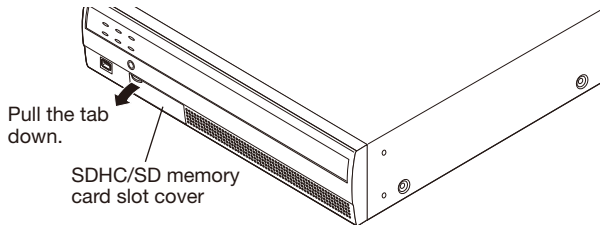
- If "On" is selected for the "Auto login" (☞ page 59), login will be automatically performed by the user registered in "Auto login user" in the logged-out state.
-

Use an SD memory card

Insert an SD memory card (option)

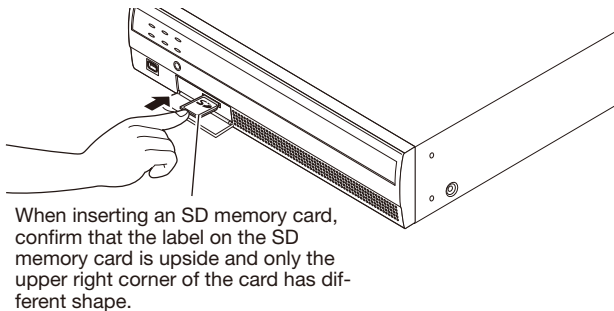
Step 1

Open the SDHC/SD memory card slot cover.



Step 2

Insert a SD memory card to the slot until it clicks.
Hearing a click means that the card is properly inserted.



Step 3

Close the SDHC/SD memory card slot cover.

Note:

- When removing the SD memory card from the slot, push the card until it clicks and pull it out straight. When pulling out the SD memory card, hold both edges with your fingers.



- The SDHC/SD memory card slot cover is designed to come off when an excessive force is applied. In this case, attach the slot cover to the original position.

Login operation at startup

When "Off" is selected for "Auto login" (☞ page 59), the recorder will start up in the logged-out state after completing the system check.

When the operation window is displayed on the main monitor, enter a user name and password as follows:

Step 1

Click the [Login] button on the operation screen.

→ The "Login" window will be displayed.

Step 2

Enter a user name and password. For character entry, refer to "About the operation of on-screen keyboard" (☞ page 100).



- Refer to page 61 for how to register users.

Note:

- When "On" is selected for "Quick login", the user name can be selected from the pull-down menu. The password entered will be displayed as "*" marks.
- In the logged-out state or when a user other than administrative or manager privileges is logged, the login window will be displayed if tries to operate an unauthorized function.

Step 3

Click the [OK] button.

→ When the entered user name and password are correct, the login window will disappear and the login button will change to the logout button. When the entered user name and password are incorrect, the error window will be displayed. Close the error window and log in again.

Note:

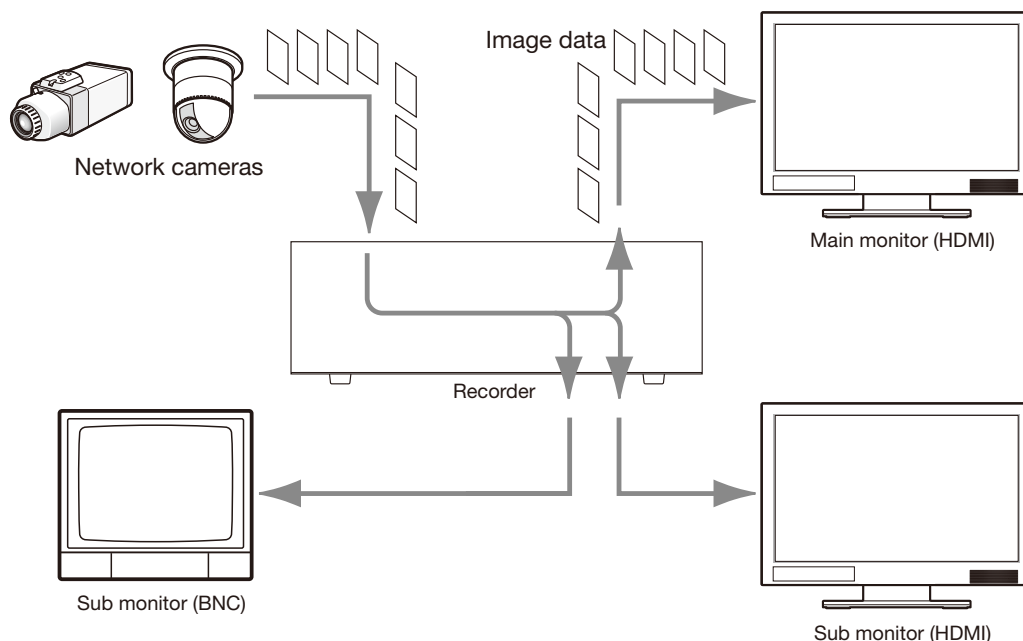
- The default administrator name and password are as follows.

Administrator name :	ADMIN
Password :	12345

- To enhance the security, change the default administrator name and password before running the recorder. Change the password periodically. Refer to page 63 for how to change the password.
- To log out, click the [Logout] button on the operation screen.
- When a user logs out during copying, the copying will be canceled. (When operating the recorder using a web browser, it will take around 90 seconds until copying is stopped after the web browser is closed.) When the auto logout function is activated, logout will be executed when the specified time have passed after copying is completed.
- Displaying images in the logged-out state
After startup with "Auto login" set to "Off", the "4Screen-A" will be displayed.
When logging out during the login process, the same screen as right before logout will be displayed.
(Which camera images the user is authorized to display depends on the user level set up.)
- When "On" is selected for "Auto login", it is unnecessary to perform the operations described on this page.

Monitor live images

When the recorder started up, live images from cameras will be displayed according to the configured settings. Live images from cameras are displayed via the recorder.



It is possible to display live images on a 1-screen or on a multiscreen. Depending on the configuration of the sub monitor, the cameras can automatically be switched and images from the cameras can be displayed on 1-screen or 4-screen. (Page 50)

When displaying images from the camera for which "On" is selected for "Audio" under "Recording setup" (page 42), audio captured by the camera will be output. When displaying images on a multiscreen, audio from the selected camera will be heard.

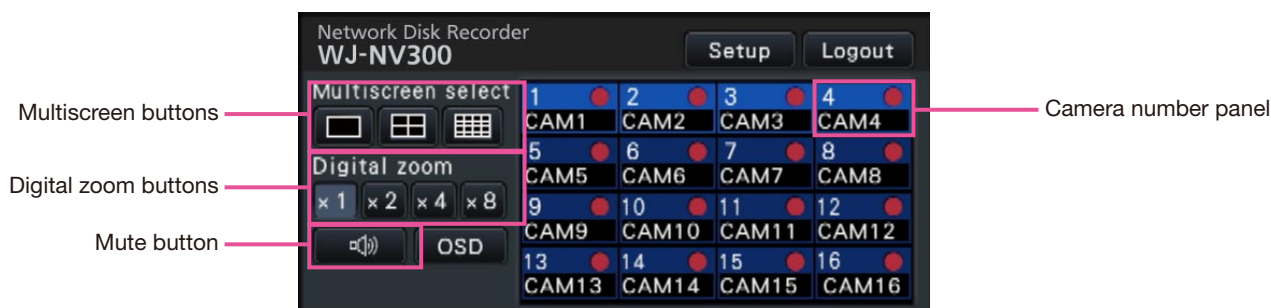
Note:

- Depending on the camera in use or network environment, the audio of live images from the camera may be delayed, but that may not affect the audio output from recorded images.
- Update processing of audio data will be performed to synchronize live images with audio.
Due to the processing, the audio of live images from the camera may be momentarily interrupted, but that may not affect the audio output from recorded images.

About the operation panel

Operations with live images differ depending on whether they are performed on the control screen or on the wide view screen.

Control screen / Operation panel



Camera number panel

Depending on the number of the registered licenses of the additional camera kit, the screen pattern will change to 9-/16-/24-/32-screen.

When the registered licenses cover 9 or 16 cameras, camera-related information, such as camera's registration status, camera title and recording status, etc. will be displayed.

Camera number:

(Character color)

White: Camera is registered.

Gray: Camera is not registered.

(Background color)

Aqua: Image display area is displaying images

Blue: Camera is registered and image display area is not displaying images.

Gray: Recording is not possible or camera is not registered.

Camera title: Shows the first 8 characters of the previously entered camera title.

(Character color)

Same as camera number

(Background color)

Red: Event recording is being performed.

Gray: Camera is not registered.

Recording indicator: Lights red when recording is being performed. Display of [] indicates a connection error.

When the registered licenses cover 24 or 32 cameras, no camera number will be displayed and camera-related information will be provided only by camera title display and the recording indicator.

Camera title: Shows the first 5 characters of the previously entered camera title.

(Character color)

White: Camera is registered.

Gray: Camera is not registered.

(Background color)

Aqua: Image display area is displaying images

Blue: Camera is registered and image display area is not displaying images.

Gray: Recording is not possible or camera is not registered.

Red: Event recording is being performed.

Multiscreen buttons

The 1-screen/4-screen/16-screen buttons are displayed.

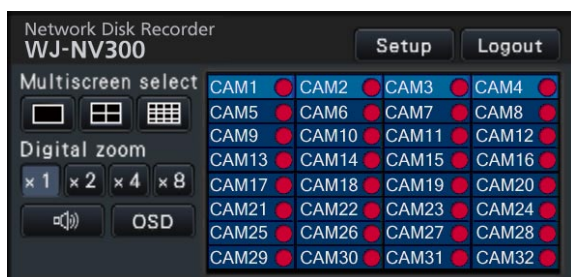
When the registered license covers 9 cameras, the 9-screen button will be displayed instead of the 16-screen button.

Digital zoom buttons

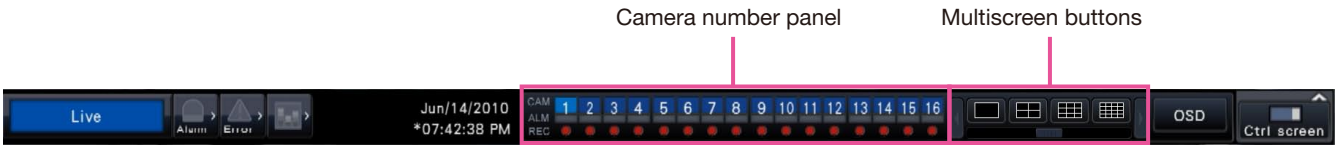
When displaying images on a 1-screen or 4-screen, the images can be enlarged/reduced. ( Page 111)

Mute button

Each click of this button toggles between mute and mute cancel of the camera audio.



Wide view operation panel



Camera number panel

Depending on the number of the registered licenses of the additional camera kit, the screen pattern will change to 9-/16-/24-/32-screen.

When the registered licenses cover 9 or 16 cameras, camera-related information, such as camera's registration status, alarm status and recording status, etc. will be displayed.

Camera number [CAM]:

(Character color)

White: Camera is registered.

Gray: Camera is not registered.

(Background color)

Aqua: Image display area is displaying images

Blue: Camera is registered and image display area is not displaying images.

Gray: Recording is not possible or camera is not registered.

Alarm display [ALM]: Lights red when event recording is being performed

Recording indicator [REC]: Lights red when recording is being performed.

When the registered licenses cover 24 or 32 cameras, the alarm display [ALM] and the recording indicator [REC] will not be displayed and camera-related information will be provided only by camera number display.



Camera number [CAM]:

(Character color)

White: Camera is registered.

Gray: Camera is not registered.

(Background color)

Aqua: Image display area is displaying images

Blue: Camera is registered and image display area is not displaying images.

Gray: Recording is not possible or camera is not registered.

Red: Event recording is being performed.

Multiscreen buttons

The screen pattern buttons will be displayed as follows.

Camera license number	Multiscreen buttons
9	
16	
24	

Change the camera display position on the screen

The default camera display positions are as follows:

1-screen	4-screen	6-screen	9-screen
1	1 2 3 4	1 2 3 4 5 6	1 2 3 4 5 6 7 8 9
16-screen	24-screen	32-screen	1-screen
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	1
4-screen	9-screen	12-screen	16-screen
1 2 3 4	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

It is possible to change the camera image by dragging & dropping the number of the camera number panel (1 to 16) onto the desired display position.

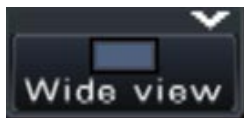
Note:

- When a camera is assigned to a screen segment to which another camera is already assigned, the image of the camera originally assigned to that position will disappear.
- The assigned camera position is retained even if the recorder is rebooted (note however that initializing the settings will also reset the camera positions to the defaults).
- The audio of the camera assigned to the top left position will be output.
- If "Mute" was selected on the control screen, no audio will be output.
- The size of displayed images will be fit into the screen regardless of the aspect ratio.
- The images transmitted from following cameras can only be displayed on up to 4-screen.
- Cameras whose "Compression" is set for "JPEG" and "Image capture size" for "QXGA(2048x1536)"
- Cameras whose "Compression" is set for "H.264" and "Image capture size" is for "QXGA(2048x1536)", with a sub monitor selecting 1-screen. (In 1-screen sequence, the next camera image to be displayed after the currently displayed image is included.)

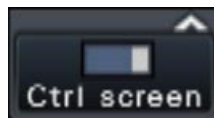
Switch between control screen and wide view screen

Camera images will be displayed on a full screen.

[Wide view] button of the control screen



[Ctrl screen] button of the wide view screen



Step 1

Click the [Wide view] button (☑ page 94) on the operation window.

→ Images from the camera will be displayed on a full screen. The 1-screen is displayed by default.

Step 2

To return from the full screen to the control screen, click the [Ctrl screen] button.

→ The display reverts to the control screen. The image display area corresponds to the default screen set up by the login user. When a wide view screen is set as the default screen, "4Screen-A" will automatically be applied.

Note:

- Clicking the [Wide view] button again will switch to the multiscreen displayed before.

1-screen display

Live images from cameras can be displayed on a 1-screen.

Displaying images on a control screen

Step 1

When displaying in a multi-screen, click the 1-screen button of the "Multiscreen select".

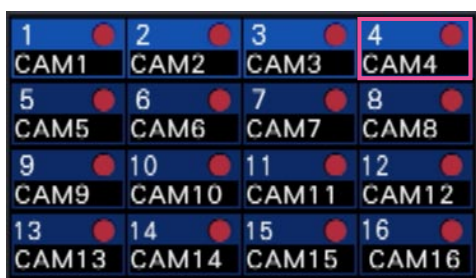
→ The image will be displayed on a 1-screen.

Step 2

Click the camera number panel of the desired image from the camera.

→ The background color of the selected camera number will turn aqua, and live images will be displayed.

Camera No. box in the control screen



Note:

- Another way to display images on a 1-screen is to double-click the camera number panel of the camera to be selected in the image display area.
- In the multiscreen display area, double-clicking the camera selection frame is also possible to display an image on a 1-screen.
- The audio of the camera whose images are being displayed will be output. (It is possible to fix audio to be output on "Audio output camera" under "Advanced setup" under "Monitor".)
- At the default, black zones will be displayed on the top and bottom of images with the aspect ratio of 16:9. Refer to page 51 for the setting to enlarge the vertical size of displayed images.

Displaying images on a wide view

Step 1

When displaying in a multi-screen, click the 1-screen button of the "Multiscreen select".

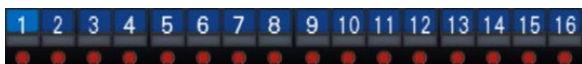
→ The image will be displayed on a 1-screen.

Step 2

Drag the camera No. to be displayed over the live image and drop it.

→ The background color of the selected camera number will turn aqua, and live images will be displayed.

Camera No. box in the wide view screen



Note:

- The audio of the camera whose images are being displayed will be output. (It is possible to fix audio to be output on "Audio output camera" under "Advanced setup" under "Monitor".)

Display images from cameras on a multiscreen

Live images from cameras can be displayed on a multiscreen.

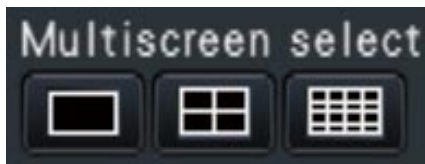
Displaying images on a control screen

Step 1

Click one of the [Multiscreen select] buttons.

→ Live images from cameras will be displayed on a multi-screen.

Displaying images on a control screen



- 4-Screen button
Each click of a button switches to the next 4 screens in the sequence: camera 1 to 4 → camera 5 to 8 → camera 9 to 12 → camera 13 to 16.
- 9-Screen button, 16-Screen button
All images from camera 1 to 9 (or camera 1 to 16) will be displayed.
When the registered licenses cover 24 or 32 cameras, images from the cameras will be displayed and switched on 16-screen (camera 1-16 → camera 17-24 (32)).

Note:

- After having switched from multiscreen to 1-screen display, double-clicking the image display area will display the multiscreen displayed before switching screens.
- It is also possible to switch the images displayed on the 4-screen/16-Screen by clicking the camera number panel with the 4-screen/16-Screen displayed. (When the panel of camera 5 is clicked with the 1- to 4-screen displayed, the images of camera 5 to 8 will be displayed)
- The audio of the selected camera will be output. (It is possible to fix audio to be output on "Audio output camera" under "Advanced setup" under "Monitor".)
- In case of 9 camera licenses, cameras will be switched as follows by clicking the 4-screen button:
Camera 1 to 4 → camera 5 to 8 → camera 9 (image displayed in the top left segment only) → camera 1 to 4
- At the default, black zones will be displayed on the top and bottom of images with the aspect ratio of 16:9. Refer to page 51 for the setting to enlarge the vertical size of displayed images.

Displaying images on a wide view

Step 1

Click one of the [Multiscreen select] buttons.

→ Live images from cameras will be displayed on a multiscreen.

[Multiscreen select] button of the wide view screen



Note:

- The audio of the camera assigned to the top left position will be output. (It is possible to fix audio to be output on "Audio output camera" under "Advanced setup" under "Monitor".)

Display or hide the camera title

It is possible to display/hide the camera title displayed on the monitor.

Step 1

Each time the [OSD] button is clicked, the camera title displayed on the main monitor and the sub monitor (HDMI) will be hidden/displayed alternately.

On-screen display button (OSD)



Note:

- The setting to display/hide the camera title will be retained until the power is turned off. Once the power is turned off and on again, the camera title will be displayed on system start.
- The camera title displayed on the sub monitor can be hidden regardless of this operation. Refer to the "Configure other settings relating to monitors" section (page 51) for further information.

Use digital zoom

Images on the 1-screen and 4-screen can be digitally zoomed. It is also possible to move the zoomed area within the displayed image.

Note:

- Digital zoom is not available on the wide view screen and on the 9-Screen/16-screen.
- To use this function on the 4-screen, do so after first selecting the desired camera image. To select a camera, click the camera number panel or the camera image. Once a camera has been selected, the selection frame will be displayed around the camera image.

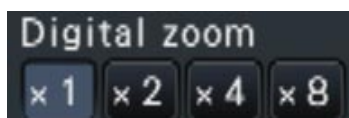
Step 1

Confirm that the image display area is displayed on the 1-screen or 4-screen.
(when displaying on the 4-screen, select the camera whose image is to be zoomed)

Step 2

Click the digital zoom buttons [x2] [x4] [x8].
→ The displayed image will be enlarged x2/x4/x8 centering on the center point of the screen.

Digital zoom buttons



Note:

- Clicking a point in the zoomed image makes the clicked point the center of the image.
- If "Enable camera control with mouse" on the camera control panel (page 112) is not checked, the digital zoom factor can also be changed by placing the cursor on the image in the image display area and turning the mouse wheel. In this case, the point where the mouse cursor is positioned will become the zoom center.

Step 3

Click the digital zoom button [x1] to cancel the digital zooming.

Note:

- Digital zoom is automatically canceled by other operations such as selecting another camera or changing the screen pattern.

Operate the camera

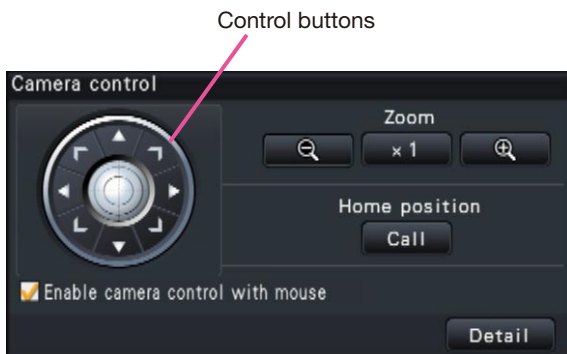
When displaying live images from a camera with the panning/tilting function on a 1-screen or 4-screen, the following camera operations are available.

Note:

- It may be impossible to operate the camera or some functions may be inoperable depending on the model of the camera.
 - Operations are performed from the operation window. When working with the wide view screen, open a 1-screen or 4-screen operation window by clicking the [Ctrl screen] button in the bottom right corner of the screen.
 - For a fixed camera, the buttons on the camera control panel and other controls will be disabled.
-

Camera control panel

Operate the cameras displayed as selected (inside selection frame) in the image display area. On the 1-screen, the camera whose image is currently displayed, can be operated. On the 4-screen, click the camera number panel on the operation panel, or select a camera image by clicking it in the image display area.

**Control buttons**

Move (pan/tilt) the camera in the clicked direction. Keeping the button pressed will move the camera continuously.

[Zoom] button

Adjusts the zoom factor.

[Home position/Call] button

Move the camera to the home position.

[Enable camera control with mouse] checkbox

When this item is checked, pan/tilt (clicking) and zoom (mouse wheel) can be controlled with the mouse on the selected camera image.

Note:

- When this checkbox is marked, digital zooming (see page 111) by turning the mouse wheel operation is not possible. When the camera control panel is inoperable for the fixed camera, the digital zoom can be performed by turning the mouse wheel even when the checkbox is checked.
-

[Detail] button

Display the "Camera control [Advanced]" panel, and perform any of the following camera operations.

**[Focus] button**

Adjust the focal point.

[Brightness] button

Adjusts the lens iris of the camera.

Auto mode

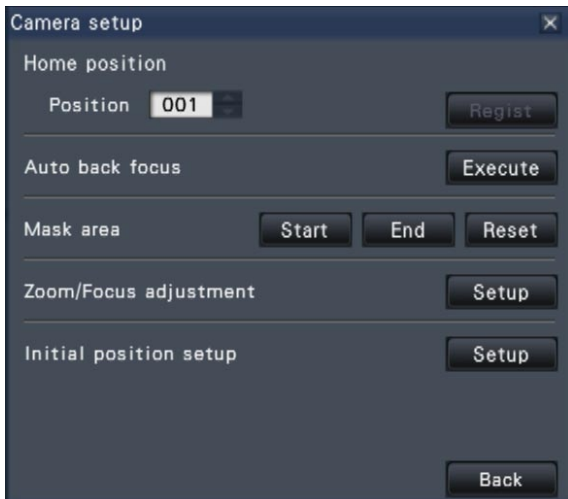
Activates the auto mode function of the camera.

[Position]

Registers the current orientation of the camera as a preset position. Moves the camera to a previously registered preset position.

[Setup] button

Displays the camera setup window for registering a home position (☞ page 117) and executing auto back focus (☞ page 117).



[Back] button

Closes the "Camera control [Advanced]" and returns to the camera control panel.

Note:

- Controlling the cameras is not possible on the wide view screen and on the 9-Screen/16-screen.
-

Panning/Tilting

Adjusts the horizontal/vertical position of the camera.

Step 1

When displaying the images on a 4-screen, select the desired cameras.

Step 2

Click the [Control] button.

Click the desired point to be located at the center of the angular field of view. The camera will move to locate the clicked point as the center point in the image display area.

Note:

- To enable operations in the displayed camera image from the recorder, check "Enable camera control with mouse" on the camera control panel.
-

Zooming

Zoom the displayed camera image in/out by zooming the camera lens. Depending on the models of the connected cameras, the available zooming factors may be different. Refer to the operating instructions of the camera for further information.

Step 1

When displaying the images on a 4-screen, select the desired cameras.

Step 2

Click the [-] button or the [+] button.
Alternatively, adjust the zoom by placing the mouse pointer on the image and turning the mouse wheel.
Click the [x1] button to reset the zoom factor to x1.

Note:

- To enable operations in the displayed camera image from the recorder, check "Enable camera control with mouse" on the camera control panel.
- When selecting an area in the image display area by dragging the mouse, the selected area will be located at the center of the image display area and the zoom ratio will be adjusted automatically.

Move to home position

Move the camera to a previously registered home position. The home position needs to be registered in advance. (☞ Page 117)

Step 1

When displaying the images on a 4-screen, select the desired cameras.

Step 2

Click the [Call] button to move to the home position.

Focus adjustment

Adjusts the focal point. The auto focus function is available.

Step 1

When displaying the images on a 4-screen, select the desired cameras.

Step 2

Click the [Detail] button.
→ The "Camera control [Advanced]" panel will be displayed. (☞ Page 112)

Step 3

Click the [Near] or [Far] button.
When the [Auto] button is clicked, focus will automatically be adjusted.

Iris (brightness) adjustment

Adjusts the lens iris of the camera.

Step 1

When displaying the images on a 4-screen, select the desired cameras.

Step 2

Click the [Detail] button.

→ The "Camera control [Advanced]" panel will be displayed. (☞ Page 112)

Step 3

Click the [-] or [+] button.

It is possible to reset the set brightness by clicking the [Reset] button.

Auto mode

Activates the auto mode function of the camera.

Step 1

When displaying the images on a 4-screen, select the desired cameras.

Step 2

Click the [Detail] button.

→ The "Camera control [Advanced]" panel will be displayed. (☞ Page 112)

Step 3

Click the auto mode button [▼] of the camera, and select one of the following auto modes:

Auto track: The camera will automatically track an object moving on the screen.

Auto pan: The camera direction will automatically move (pan) between the start point and end point set in advance.

Preset sequence: The camera will move (pan) to the preset positions registered in advance in order of the preset position number (numerical order).

Patrol: The camera will trace the manually recorded panning pattern.

Step 4

Click the [Start] button to start the selected auto mode function.

Click the [Stop] button to turn off the auto mode function.

Note:

- Refer to the operating instructions of the connected camera for further information about the auto mode function of the camera.
-

Register camera preset positions

Register the current camera position as a preset position. The preset positions can be registered only when using a camera supporting the preset position function.

Step 1

When displaying the images on a 4-screen, select the desired cameras.

Step 2

Click the [Detail] button.

→ The "Camera control [Advanced]" panel will be displayed. (☞ Page 112)

Step 3

Move the direction of the camera to the position to be registered using the panning/tilting function of the camera. (☞ Page 113)

Step 4

Click the [▲]/[▼] button in the [Position] box to select a preset number. Select a preset number (1 - 256) to be registered.

Step 5

Click the [Regist] button.

→ The camera direction will be registered to the selected preset position number.

Move camera preset positions

Move the camera to the registered preset position. It is necessary to register preset positions in advance.

Step 1

When displaying the images on a 4-screen, select the desired cameras.

Step 2

Click the [Detail] button.

→ The "Camera control [Advanced]" panel will be displayed. (☞ Page 112)

Step 3

Click the [▲]/[▼] button in the [Position] box to select a preset number. Select a preset number (0 - 256) to be registered. Selecting preset position number 0 will move the camera to home position.

Step 4

Click the [Call] button.

→ The camera direction will move to the preset position corresponding to the selected preset position number.

Note:

- A non-registered preset number can be selected, but the camera will not move even if the [Call] button is clicked.
-

Register home position

The home position is set with the camera positioned at an already registered preset position.

Step 1

Register the camera preset positions on the "Camera control [Advanced]" panel. (☞ Page 112)

Step 2

Click the [Setup] button.

→ The camera setup window will be displayed.
(☞ page 113)

Step 3

Click the [▲]/[▼] button in the [Position] box to select a preset number to register as the home position.
Select a preset number (1 - 256) to be registered.

Note:

- On some Panasonic camera models, preset position number 0 is registered as home position.
Refer to the "readme.txt" on the provided CD-ROM about the supported cameras.
-

Step 4

Click the [Regist] button.

→ The selected preset number will be registered as the home position.

Step 5

Click the [Back] button.

→ The camera setup window closes, and the display returns to the "Camera control [Advanced]" panel.

Execute auto back focus

The auto back focus function starts to automatically adjust back focus based on a subject located in the center of the screen by clicking the execute button. For further information about this function, refer to the operating instructions of the camera in use.

Step 1

When displaying the images on a 4-screen, select the desired cameras.

Step 2

Display the "Camera control [Advanced]" panel (☞ page 112), and click the [Setup] button.

→ The camera setup window (☞ page 113) will be displayed.

Step 3

Click the [Execute] button next to "Auto back focus".

Step 4

Click the [Back] button.

→ The camera setup window closes, and the display returns to the "Camera control [Advanced]" panel.

Set up mask areas

Set up mask areas of the camera. For further information about this function, refer to the operating instructions of the camera in use.

Step 1

Click the [Setup] button.

- The camera setup window will be displayed.
( page 113)

Step 2

Click the [Start] button.

- A grid will appear over the image display area and the segments designated as mask areas are covered with white translucent masks.

Step 3

Click a segment in the image display area.

- Each click of the segment toggles between On and Off for the mask area setting.

Step 4

Click the [End] button.

- The mask area setting will be completed and the grid will disappear.

Step 5

Click the [Back] button.

- The camera setup window closes, and the display returns to the "Camera control [Advanced]" panel.

Note:

- It is possible to reset all the mask area settings by clicking the [Reset] button.

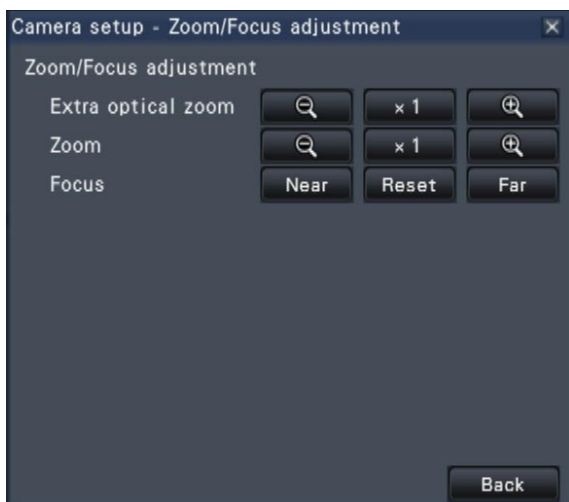
Zoom/Focus adjustment

Adjust zooming or focusing of the camera. For further information about this function, refer to the operating instructions of the camera in use.

Step 1

Click the [Setup] button.

- The zoom/focus adjustment screen will be displayed.



Step 2

Zooming can be adjusted by clicking the [-] button, the [x1] button or the [+] button.

Focusing can be adjusted by clicking the [Near] button, the [Reset] button or the [Far] button.

Step 3

Click the [Back] button.

- The screen will return to the camera setting page.

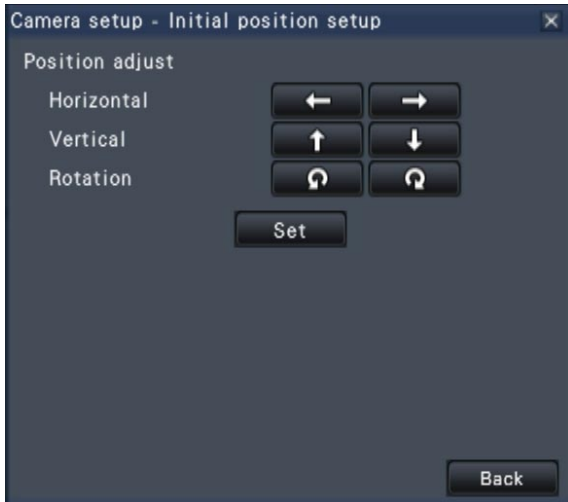
Initial position setup

Tilting degree adjustment, vertical angle adjustment, horizontal adjustment of image clipping position can be performed. For further information about this function, refer to the operating instructions of the camera in use.

Step 1

Click the [Setup] button.

→ The initial position setup window will be displayed.



Step 2

Adjust the position using the buttons or by clicking on the image.

Step 3

Click the [Set] button.

→ The adjusted position will be saved on the camera.

Step 4

Click the [Back] button.

→ The screen will return to the camera setting page.

Event function

The recorder will take an event action when any of the following events occur.

- Terminal alarm: An event when an alarm input signal is supplied from an external device such as a door sensor to the alarm input terminal on the rear of the recorder.
- Camera site alarm: An event when an alarm (camera terminal alarm, etc.) is detected by a camera.
- Command alarm: An alarm when receiving an alarm from a PC, etc. via a network.
- Face matching alarm: Alarm issued when a face contained in a live image matches an already registered facial image.

Important:

- Face matching alarm does not apply event recording.
-

Note:

- Refer to the Operating Instructions of the Additional Business Intelligence Kit for further information about the setting conditions or restrictions of the face matching function. Face matching alarm is available only when the face matching function has been configured for use.
-

Action to be taken upon an event occurrence

When the recorder recognizes an event, it will take an event action according to the set action mode.

Event action mode

In the event modes shown below, the recorder takes one of the following event actions when an event occurs. The event action mode can be configured on the setup menu. (☞ Page 45)

Recording & alarm action: Performs all event actions according to the settings. ("A" in the following table)

Recording only: Performs only recording, filing alarm logs, and moving to camera presets. ("B" in the following table)

Alarm action: Performs only alarm actions according to the settings. ("C" in the following table)

Off: Files only alarm logs. ("D" in the following table)

* "Alarm action" can be selected only for the face matching alarm.

A different event action will be taken depending on the selected event action mode. Refer to a system administrator for further information.

Event action	Description	Mode*1			
		A	B	C	D
Recording					
Start event recording	Recording will start according to the recording duration configured on the setup menu.	●	●	×	×
Define pre-event recording	Camera images recorded before an event occurs can be associated with the event and saved on the hard disk.	●	●	×	×
Alarm action					
Move the camera to the preset position	Move the camera to the preset position registered in advance.	●	●	×	×
Blink the alarm indicator	The alarm indicator on the front panel will start blinking.	○	×	○	×

Event action	Description	Mode*1			
		A	B	C	D
Sound the buzzer	The buzzer will start sounding for the duration set in advance.	●	×	●	×
Outputs alarm signals.	Output signals will be sent from the ALARM/CONTROL connector at the rear of the recorder.	●	×	●	×
Display event information on the main monitor	The event type and terminal/camera number will be displayed on the status display panel. At the same time, the alarm button turn red.	○	×	○	×
Display the alarm icon on a web browser	The alarm icon will be displayed on the event error display area of the web browser.	○	○	○	×
Display the alarm message on a web browser	A window that notifies of an event occurrence will be displayed on the web browser. * The alarm message displayed last has priority. To close the window, click the [x] button.	●	×	●	×
Record the alarm logs*3	Date & time of the event and event information will be recorded in a log list.	●	●	●	●*2
Send a mail that notifies of an event occurrence	An e-mail notifying of the event and its date & time (alarm mail) will be sent to registered e-mail addresses (up to 4).	●	×	●	×
Provide an alarm notification to a PC according to the Panasonic alarm protocol setting	When an event occurs, a notification will be sent to a PC in accordance with the settings made under [Panasonic alarm protocol]. (Page 41, 57)	●	×	●	×
Display the images on a 1-screen when an alarm occurs	Display the images recorded by the camera associated with the alarm number on a 1-screen	●	×	●	×

*1 ○: Takes action regardless of the setting, ●: takes action in accordance with the setting, ×: takes no action

*2 Since the face matching function is not performed when "Mode" - "Advanced face matching alarm set up" is set to "Off", there is no entry made into the log either.

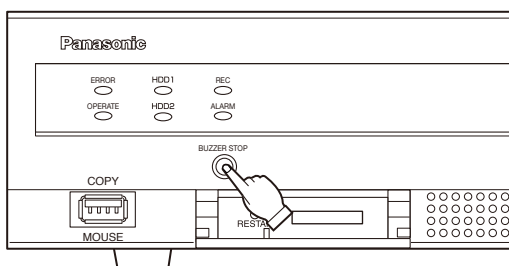
*3 When "On" is selected for the "Attach alarm information" setting of the camera, i-VMD type information will be displayed in the alarm log. For further information, refer to the operating instructions of the camera in use.

Stop buzzer beeping

The buzzer sounding to announce an alarm or error can be stopped from the recorder's front panel.

Step 1

Press the [BUZZER STOP] button.



Note:

- The buzzer can also be stopped by canceling the alarm action or error action. (Page 122) The [BUZZER STOP] button does not reset any of the other alarm actions.

→ The buzzer will stop.

Cancel the alarm action

The recorder will take an alarm action according to the settings configured in advance when an event occurs in the alarm mode (ALM). Information of the occurred alarm will be displayed on the status display panel of the main monitor. (Page 98) To reset the alarm action, click the [Alarm] button on the status display panel, and click the alarm [Reset] button.

When an item other than "Ext." is selected for "Auto reset time" on the "Event setup" tab under "REC & event" on the setup menu (page 43), the following actions will automatically be taken, unless the alarm action is canceled by clicking the alarm [Reset] button.

- The alarm indicator on the front panel will stop blinking and light steadily.
- The alarm status display on the main monitor will disappear.
- The sounding buzzer and the alarm output will stop.

Step 1

Click the [Alarm] button displayed on the main monitor, and click the alarm [Reset] button.



→ The alarm action will be canceled and the alarm indicator will go off.

Note:

- When the alarm action is canceled, the event recording will stop and return to the operational status just before the event occurred.

Cancel the error action

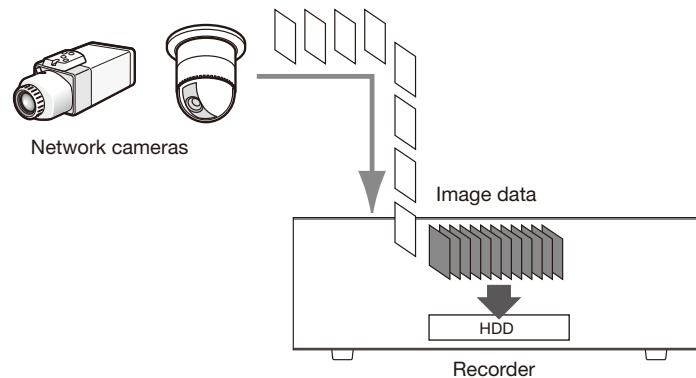
When an error (trouble) occurred on the recorder, the recorder will take the error action (a series of actions that notifies of the error occurrence). Information of the occurred error will be displayed on the status display panel of the main monitor. (Page 98) To cancel an error action, first click the [Error] button on the status display panel and then the displayed error [Reset] button.

Note:

- When an error occurs, take remedial action by following the instructions displayed on the error log panel (page 131). The error indicator on the front of the recorder will go off when the cause of the error has been eliminated.

Record images

Live images can be recorded on the recorder. Images from up to 32 cameras can be simultaneously recorded with this recorder.



Record images (schedule recording)

Recording can be automatically started and stopped according to a previously specified schedule. Refer to page 39 for schedule recording.

Note:

- When event recording is triggered by an alarm during the schedule recording, event recording has the higher priority. Refer to the "Recording mode and its priority" section below for further information about the priority of the recording mode.
 - To stop schedule recording, stop the recording on the setup menu. Refer to page 48 for further information.
 - In case of a network error, the image of the camera where the communication error has occurred will not be recorded. Recording starts when the network error is recovered. If the status in which the communication with the camera is disconnected recovers within around 40 seconds, error logs will not be saved.
 - Schedule-recorded image data will be divided into multiple files every hour on the hour. In that moment, recording may sometimes be interrupted around for 1 second.
-

Recording mode and its priority

There are 3 recording modes. The recording modes and their priority levels are as follows.

When two or more recordings with different recording modes started simultaneously, only recording with the higher priority will start.

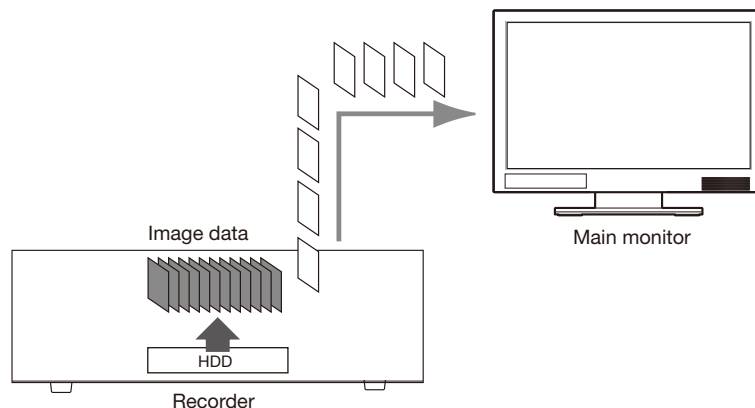
Recording mode	Priority
Event recording	1
Schedule recording	2
Pre-event recording	3

Play recorded images

Display the images recorded on the recorder's hard disk on the main monitor.

Playback operation can be made while recording. Playback of images can be controlled from the operation display area.

Refer to page 125 and following pages for playback operation.



Note:

- When playing recorded images on a 1-screen, audio recorded together with these images will be output.
- When displaying recorded images on a multiscreen, audio from the camera to be displayed on a screen will be heard.
- No audio will be output when playing back in fast forward/fast reverse.
- The camera image can be changed by clicking the camera number (1 to 32) during playback.
- The Multiscreen select button, digital zoom button, Mute button and OSD button remain effective during playback. Refer to "Monitor live images" (page 104) for further information.
- When displaying images recorded at the following setting values of resolution and frame rate on each segment of a multiscreen, the images will be played back with the selected refresh interval.

Resolution (Image capture size)	Frame rate	Display
SXVGA	15 ips, 30 ips	4-screen
QXGA	30 ips	4-screen
FHD, HD	60 ips	4-screen
QXGA	10 ips, 15 ips, 30 ips	4-screen (sub monitor display or re-encoding transmission enabled)
FHD, HD	30 ips, 60 ips	4-screen (sub monitor display or re-encoding transmission enabled)
SXVGA, SVGA	30 ips	4-screen (sub monitor display or re-encoding transmission enabled)
QXGA	30 ips	1-screen (sub monitor display and re-encoding transmission enabled)
FHD	60 ips	1-screen (sub monitor display and re-encoding transmission enabled)
FHD	10 ips, 15 ips, 30 ips, 60 ips	4-screen (sub monitor display and re-encoding transmission enabled)

- Different values selected for resolution and frame rate will cause the data size of the playback images on the multiscreen to differ considerably, which may result in non-synchronized playback. In this case, pause and then restart playback (page 125).
- At the default, black zones will be displayed on the top and bottom of images with the aspect ratio of 16:9 when images are played back on the control screen. Refer to page 51 for the setting to enlarge the vertical size of displayed images.
- The size of displayed images will be fit into the screen regardless of the aspect ratio when images are played back on a full screen.

Playback operation panel

In playback mode, operation buttons are displayed on the playback operation panel. In addition to the operation buttons, the playback operation panel displays the playback status.

Normal status (during display of live images)

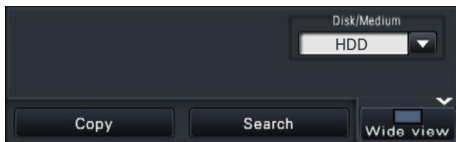
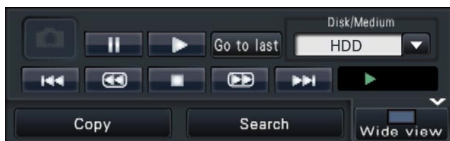
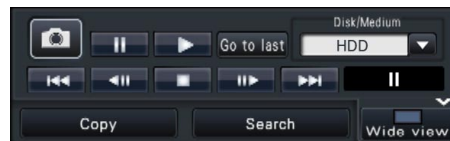


Image playback status



Playback pause status



The functions of the buttons are as follows:

Function	Example	Operation
Playback button		Plays recorded images. Clicking this button while playback is paused will cancel the pause status. When the playback button is clicked during fast playback/fast reverse playback, the playback speed will be x1.
Stop button		Playback will stop and live images will be displayed when this button is clicked during playback/pause.
Pause button		Playback will be paused when this button is clicked during playback. Pause will be canceled when this button is clicked during playback/pause.
Captured image button		Saves images paused during playback on SD memory card.* Clickable only while playback is paused on a 1-screen. When this button is clicked, the button will turn gray, and images will be saved. The SD memory card can be removed when the button becomes available.
Next image/Previous image button	 	When the next image button is clicked during pausing, the next frame is played and paused. When the previous image button is clicked during a pause, the previous frame is played and paused.

Note:

- When playing H.264 images, some frames of recorded images will not be displayed. Reverse frame-by-frame playback will be performed with the refresh interval setting of the camera.

Function	Example	Operation
Fast forward/Fast reverse button	 	Playback speed of fast playback will be changed in the following order each time the fast forward button is clicked: Step2 (Approx. 2x) → Step3 (Approx. 4x) → Step4 (Approx. 8x) → Step5 (Approx. 16x) → Step6 (Approx. 32x) → Step7 (Approx. 48x) Playback speed of fast reverse playback will be changed in the following order each time the fast reverse button is clicked: Step2 (Approx. 2x) → Step3 (Approx. 4x) → Step4 (Approx. 8x) → Step5 (Approx. 16x) → Step6 (Approx. 32x) → Step7 (Approx. 48x) The playback speed will be displayed on the playback status display. Note: When playing H.264 images, some frames of recorded images will not be displayed. Except for x2 fast playback speed, fast playback/fast reverse playback will be performed with the refresh interval setting of the camera.
Next record/Previous record button	 	Clicking the next record button will play back the next later recording. Clicking the previous record button will play back the next earlier recording. When there is no next/previous recorded image to be skipped to, the current playback will continue.
Go to last button		When this button is clicked, playback of the latest recorded images will start. The starting point is around 30 seconds before the date & time of the latest recorded images.
Playback status display		The status of the recorder such as the playback status, pause status etc. will be displayed. The playback speed will be displayed in fast forward/fast reverse mode.
Wide view button		When this button is clicked during playback, the recorded images will be displayed on a full screen. Clicking the [Ctrl screen] button during playback on a full screen will return the image display to the previous status.
Non-display button (Displayed during playback on a full screen)		Hides the playback operation panel and the date & time operation panel. These panels can be displayed again by the mouse operations.

About captured images

The images captured by clicking the image capture button and saved on an SD memory card will not be displayed with this recorder.

To display those images on a PC monitor, the data format and destination to save are as follows:

File format for recorded images: JPEG (DPOF-compatible)

Destination to save: SD memory card [DCIM]\100_PANA\P1000001.JPG
P1000002.JPG, ...

* The folder will be created from 100_PANA to 999_PANA. If the folder already contains the file P1000999.JPG, a folder with a new number will be created.

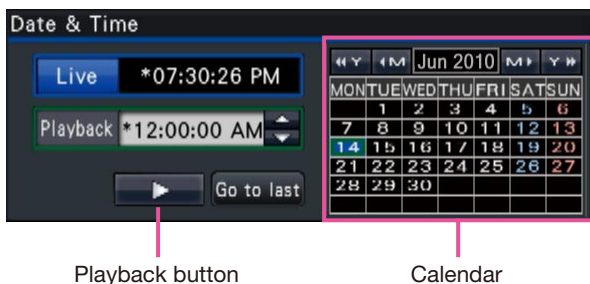
Play images from a designated point

It is possible to start playback from a designated date & time or the latest recorded image.

Play image recorded at a designated date & time

Start playback by designating the date & time of a recorded image on the date & time operation panel.

Date & time operation panel (normal display)



Step 1

Click the [▲]/[▼] button in the [Playback] box to set the date & time to be played.

Step 2

Select the month from the calendar in which date & time of the image to play back is included.
Click the [<<Y]/[Y>>] button to change the year and the [<M]/[M>] button to change the month.

Note:

- The current date is displayed in aqua.

Step 3

Click the date & time of the image to play back from the calendar.

→ The frame around the selected date turns green, and playback starts at the designated date & time.

The date & time operation panel will turn to the playback display (page 129) and the playback operation panel will be displayed on lower section of the date & time operation panel (page 125).

Note:

- Unless you want to change the date & time on the calendar, click the playback button.

Step 4

To stop playback and return to live images, click the [Live] button or the stop button on the playback operation panel.

→ Playback will stop, and live images will be displayed.

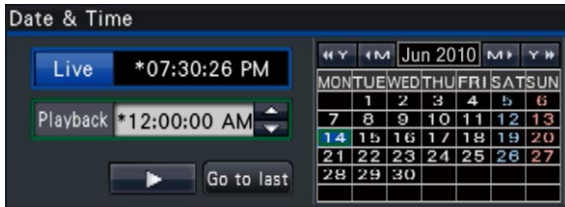
Note:

- Playback can also be stopped and live images can also be displayed by the following operations:
 - Clicking the [x] button on the date & time operation panel (playback display)
 - Changing the playback medium
- When there is no image stored under the entered date & time, proceed as follows:
 - When there are images recorded after the designated date & time, the oldest image recorded after the designated date & time will be played.
 - When there are no images recorded after the designated date & time, the newest image recorded before the designated date & time will be played.

Play the latest recorded image

When this button is clicked, playback of the latest recorded images will start. The starting point is around 30 seconds before the date & time of the latest recorded images.

Date & time operation panel (normal display)



Step 1

Click the [Go to last] button.

- Playback of the latest recorded images will start. The date & time operation panel will change to playback display (page 129). At the same time, the playback operation panel (page 125) is displayed at the bottom of the date & time operation panel.

Step 2

To stop playback and return to live images, click the [Live] button or the stop button on the playback operation panel.

- Playback will stop, and live images will be displayed.

Note:

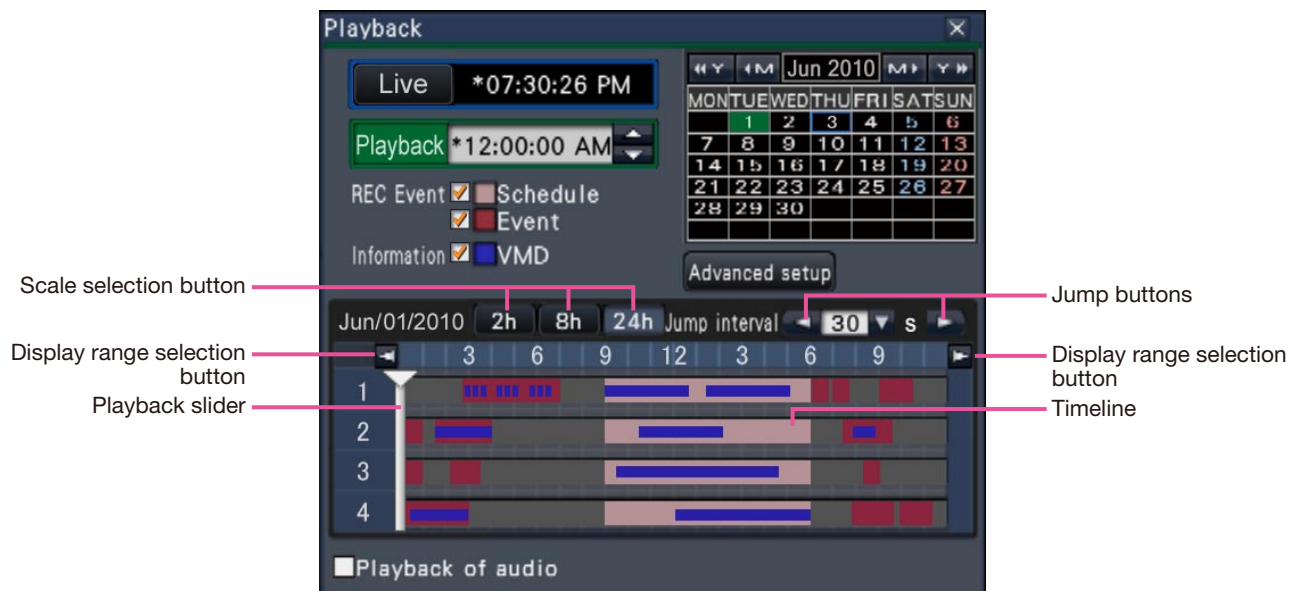
- Playback can also be stopped and live images can also be displayed by the following operations:
 - Clicking the [x] button on the date & time operation panel (playback display)
 - Changing the playback medium
 - When clicking the [Go to last] button while displaying images on a 4-screen, the recorded image may not be displayed depending on the timing. In this case, click the [Go to last] button again.
-

Playback by designating a timeline

When playback starts, the date & time operation panel will change to playback display.

This section explains how to use the timeline display to designate a playback date & time by operating the playback slider.

Date & time operation panel (playback display)



The playback display shows available recorded images and displays these on a timeline sorted by type. It is possible to change the type of recorded images displayed on the timeline, change the timeline scale, and designate the recorded image to play.

[REC Event]

Mark the checkboxes of different types of recorded images and display them on a timeline. If changes are made during playback, playback will be paused and a new search will be performed.

Schedule: Schedule-recorded images will be displayed in pink

Event: Event-recorded images will be displayed in red

[Information/VMD]

When this box is checked, the time zone recorded when the VMD function was activated (motion was detected in an image) will be displayed in blue on the timeline. (Playback will be paused.)

Periods for which no recorded images are available will be displayed in black.

Note:

- To display the result of the motion detection search, it is necessary to configure the settings of the connected cameras that support the motion detection search function in advance. Refer to the "readme.txt" on the provided CD-ROM about the supported cameras. Refer to the operating instructions of the camera in use for further information.

[Advanced setup] button

Display the advanced setup panel and change event types and other information displayed on the timeline. (Page 130) Playback will be paused.

[Scale selection] button

Select a timeline display covering 2 hours (2 h), 8 hours (8 h) or 24 hours (24 h).

[Display range selection] button

The timeline will be displayed in accordance with the setting of the scale selection button.

[Playback slider]

Displays the time during playback. Drag and drop the playback slider to a desired time on the timeline to start playback from that time.

Note:

- The playback slider may not soon move to the desired position.
-

[Jump interval]/Jump buttons

Move the playback point by a given amount of time and play back from that point. Clicking the [<] / [>] buttons will move the playback point by the amount of time specified under [Jump interval].

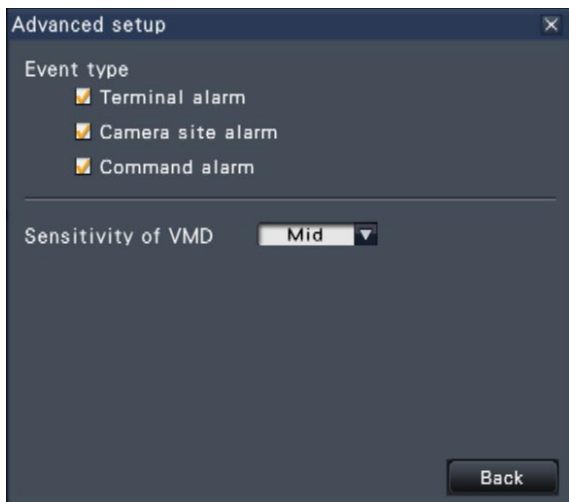
Available ranges: 10 s/ 15 s/ 30 s/ 60 s/ 180 s/ 300 s

[Playback of audio]

This item is displayed when the recorder is set up to lock in a camera with audio output. If this checkbox is marked, the audio associated with the displayed image will be output. (🔊 Page 51)

Change event types and other information displayed on the timeline

[Advanced setup]



[Event type]

Set event types to be displayed on the timeline. To display event-recorded images on a timeline, mark their checkboxes.

Refer to page 120 for further information about each alarm.

[VMD sensitivity adjustment]

Set the sensitivity for the motion detection displayed on the timeline. Sensitivity increases in the steps shown below.

Low → Mid → High → All

[Back] button/[X] button

Click this button to return to the date & time operation panel (playback display).

Search and play

Search a desired recorded image and play it. There are the following 2 searching methods.

- Play images selected from alarm and error logs (Log search)
- Search and play images recorded triggered by the motion detection of the camera (VMD search)

Play images selected from logs (log search)

Display the alarm log list or error log list, and click a date & time to play the corresponding recorded images.

Note:

- The corresponding recorded data that is displayed in the selected log list cannot be played if the data has already been overwritten or erased.

Step 1

Click the [Alarm] button or [Error] button on the status display panel.

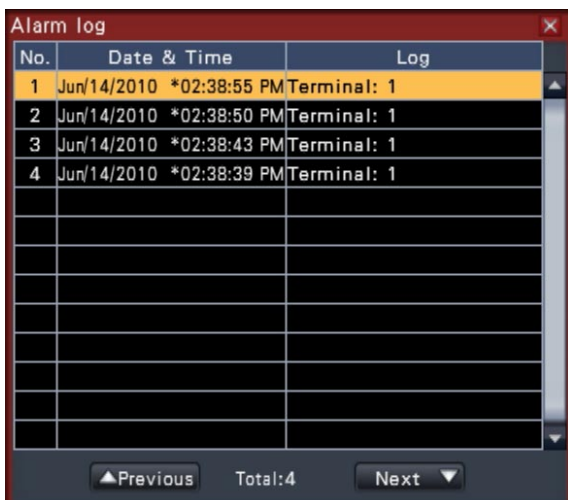
→ The corresponding [Log] buttons will be displayed.



Step 2

Click the [Log] button.

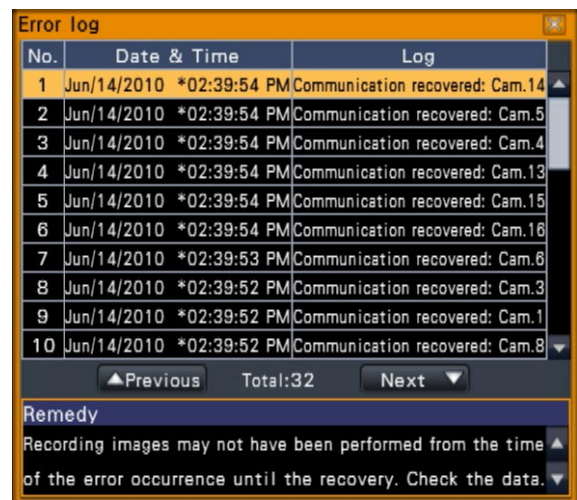
→ The alarm log panel or error log panel will be displayed. It is possible to switch between list pages by clicking the [Previous]/[Next] buttons.



No.	Date & Time	Log
1	Jun/14/2010 *02:38:55 PM	Terminal: 1
2	Jun/14/2010 *02:38:50 PM	Terminal: 1
3	Jun/14/2010 *02:38:43 PM	Terminal: 1
4	Jun/14/2010 *02:38:39 PM	Terminal: 1

Note:

- Up to 750 alarm logs are saved. When more than 750 logs are filed, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten.



No.	Date & Time	Log
1	Jun/14/2010 *02:39:54 PM	Communication recovered: Cam.14
2	Jun/14/2010 *02:39:54 PM	Communication recovered: Cam.5
3	Jun/14/2010 *02:39:54 PM	Communication recovered: Cam.4
4	Jun/14/2010 *02:39:54 PM	Communication recovered: Cam.13
5	Jun/14/2010 *02:39:54 PM	Communication recovered: Cam.15
6	Jun/14/2010 *02:39:54 PM	Communication recovered: Cam.16
7	Jun/14/2010 *02:39:53 PM	Communication recovered: Cam.6
8	Jun/14/2010 *02:39:52 PM	Communication recovered: Cam.3
9	Jun/14/2010 *02:39:52 PM	Communication recovered: Cam.1
10	Jun/14/2010 *02:39:52 PM	Communication recovered: Cam.8

Note:

- Up to 1000 error logs are saved. When more than 1000 logs are filed, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten.

Step 3

Select the line with the desired list, and click the playback button on the playback operation panel.

(page 125)

→ Playback will start from a point approx. 5 seconds before the date & time selected.

Note:

- Playback can also be started by double-clicking the desired date & time line.
- To start playback from the beginning of the pre-event recording when the "Pre-event duration" setting is longer than 5 seconds, click the playback button, and then click the previous record button.

Step 4

To stop playback and return to live images, click the stop button on the playback operation panel.

(☞ page 125)

→ Playback will stop, and live images will be displayed.

Note:

- Playback can also be stopped and live images can also be displayed by the following operations:
 - Clicking the [x] button on the date & time operation panel (playback display)
 - Clicking the [Live] button on the date & time operation panel (playback display)
 - Changing the playback medium

Search and play recorded images triggered by motion detection (VMD search)

Search images recorded with a camera supporting the VMD search function by the date motion was detected and play them. Click a date & time on the result list to play corresponding recorded images.

Important:

- To perform the motion detection search, it is necessary to configure the settings of the connected cameras that support the motion detection search function in advance. Refer to the "readme.txt" on the provided CD-ROM about the supported cameras. Refer to the operating instructions of the camera in use for further information.

Step 1

Display the images from the camera to search on a 1-screen. (☞ Page 109)

Step 2

Click the [Search] button on the playback operation panel. (☞ Page 125)

→ The VMD search panel is displayed.



Step 3

Designate the time range to search.

Set the year, month, day and time of the start and end point by clicking the respective [▲]/[▼] buttons.

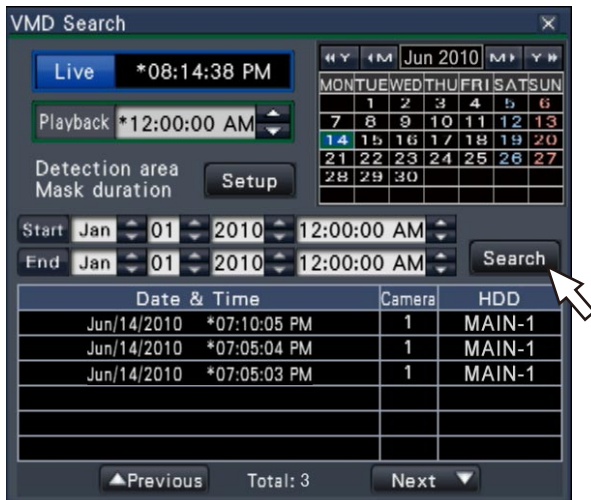
Note:

- It is also possible to set the start point and end point of the search range by clicking the [Start]/[End] buttons after selecting the desired time in the [Playback] box and clicking the desired date on the calendar.

Step 4

Click the [Search] button.

→ This will run a VMD search within the designated search range and display a list of results. It is possible to switch between list pages by clicking the [Previous]/[Next] buttons.



Note:

- Playback can also be stopped and live images can also be displayed by the following operations:
 - Clicking the [x] button on the date & time operation panel (playback display)
 - Clicking the [Live] button on the date & time operation panel (playback display)
 - Changing the playback medium

Note:

- Up to 100 logs are saved in the list. When more than 100 logs are filed in the search result, "> 100" will be displayed.
- The VMD search function searches the entire camera image by default. To designate a search area, click the [Setup] button next to [Detection area / Mask duration] on the "VMD search setup" panel. (Page 134)
- It may take some time until the search results are displayed.

Step 5

Select the line with the desired list, and click the playback button on the playback operation panel.

(page 125)

→ Playback will start from the date & time selected.

Note:

- Playback can also be started by double-clicking the desired date & time line.

Step 6

To stop playback and return to live images, click the stop button on the playback operation panel.

→ Playback will stop, and live images will be displayed.

Set up VMD areas, etc. [VMD search setup]

Set up VMD areas within images and a mask duration.

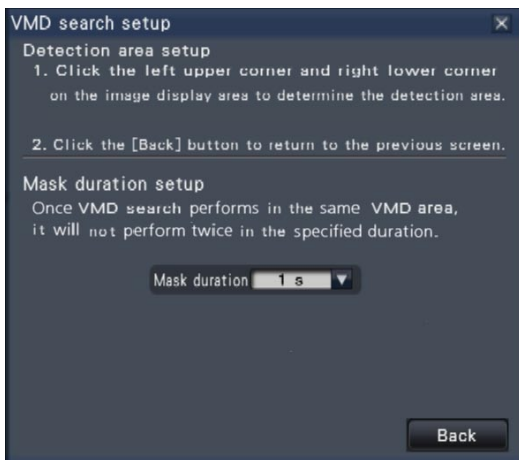
Step 1

Display the images from the camera to search on a 1-screen. (☞ Page 109)

Step 2

Click the [Setup] button next to [Detection area / Mask duration].

→ The "VMD search setup" panel will be displayed.



Step 3

Click 2 points of the upper left and lower right to create a square to be set as the area on the displayed image.

→ The set area will be displayed in gray, and the area will become subject to be searched for motion detection.



Note:

- As the detection areas will be set up to match the image display area divided into 16x16 segments, the top left and bottom right detection areas may not be exactly as designated.
- It is impossible to delete the detection area that has been set. To change the detection area setting, perform Step 3 again.

Step 4

If VMD search takes too much time or the search produces too many results, set a mask duration to reduce the search frequency. When mask duration is set, no motion detection will be performed from the time motion is detected to the time mask duration is set.

To set, click the [▼] button next to [Mask duration setup] on the advances setup panel.

Mask duration: 1 s/ 5 s/ 10 s/ 30 s/ 1 min/ 5 min/ 10min

Default: 1 s

Step 5

Click the [Back] button or the [x] button.

→ The display returns to the VMD search panel.

Copy recorded images

Copy images recorded by the recorder onto SD memory card or external storage devices (External HDD and USB memory).

It is recommended to make back-up copies on a regular basis for unexpected situations such as malfunction of the hard disk drives. Personal information may be included in copied images. Take an extra caution to handle and manage the medium used for copying to prevent from information leakage.

It is impossible to copy recorded images when the recorder is in the following statuses.

- When the copy window is being opened by other user via a network
- When the SD memory card or external storage device is being selected by another user via a network
- When the media other than hard disk drives is selected

The copied recorded images can be played on the recorder or on a PC using the dedicated viewer software. The viewer software will be automatically copied to an SD memory card or an external storage device on which recorded images are copied. Refer to page 174 for how to operate the viewer software. Refer to page 139 for how to play the copied recorded images on the recorder.

Note:

- To copy recorded images onto an SD memory card, it is necessary to format an unformatted SD memory card or an SD memory card formatted with another device on this recorder. (☞ Page 138)
 - When copying images onto an external storage device, format the device first before starting copying.
 - Required time for copying varies depending on the data size to be copied. It will take longer time to copy recorded images when they were recorded with a larger image capture size, in a higher quality or at a higher frame rate even though the same number of cameras and the same duration are set for copying.
 - Copying of recorded images may sometimes be performed incorrectly when there exist 2 or more images recorded at the same date & time resulting in change of the date & time setting or the auto time adjustment function.
 - In the following cases, the copying currently being performed will stop.
 - When any of the settings of the recorder is changed
 - When a user who started manual copy logged out (It will take around 90 seconds until copying is stopped after the web browser is closed.)
 - When the original data (source for copying) is lost (overwritten or malfunction of the hard disk drive)
-

Important:

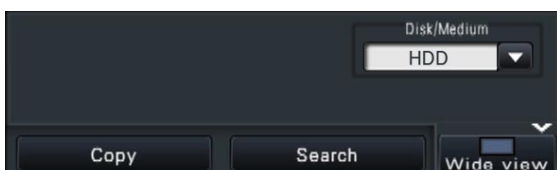
- This product cannot play images copied on an external storage device, Use the dedicated viewer software to play them.
-

Step 1

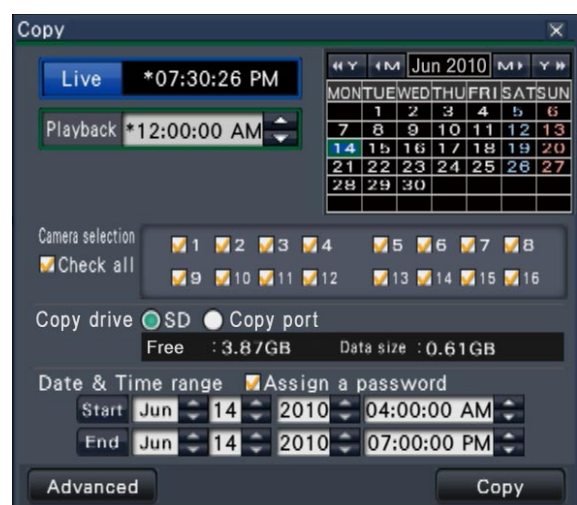
Insert an SD memory card to this product or connect an external storage device to the copy port "COPY".
(☞ Page 102)

Step 2

Click the [Copy] button on the operation panel of the main monitor.



→ The copy panel will be displayed (if in playback mode, playback will be paused).



Note:

- The copy panel cannot be displayed in the web browser when it has already been opened by another user. When copying is already underway, the copy cancel window will be displayed.

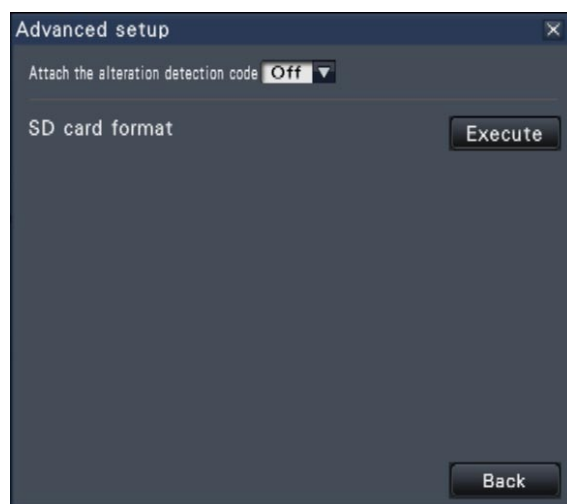
Step 3

The following items can be set up for copying of recorded data:

Item	Description
Camera selection	Check the number of the camera whose recorded data is to be copied. Checking [Check all] will copy the recorded data of all cameras.
Copy drive	Indicates the copy destination.
Date & Time range	Specify times and dates to define the range for copying recorded data. Set the year, month, date & time of the start point and end point. It is also possible to set the start point and end point of the filter range by clicking the [Start]/[End] buttons after clicking the desired date on the calendar and then selecting the desired time in the [Playback] box.
Assign a password	Check this item to assign a password to the copied data. The password will be required to play back copied data that is password protected.
Free	The remaining space of the storage medium will be displayed.
Data size	The total volume of all recorded images to be copied (including the viewer software) will be displayed. * Indicated as *.** GB while the data volume is being calculated.

Note:

- To attach a code for alteration detection, click the [Advanced] button. On the advanced setup window, set [Attach the alteration detection code] to "On".



- Clicking the [Back] button will return to the copy panel.

Step 4

Click the [Copy] button on the copy panel.

- If the [Assign a password] checkbox has been marked, the password entry screen will be displayed.
Otherwise proceed to Step 6.



Step 5

Enter the password, and then click the [Next] button. For character entry, refer to "About the operation of on-screen keyboard" (☞ page 100).

- Enter 5 to 8 alphanumeric characters for a password.
- To confirm the password, enter the same password again into the "Retype" column.
- To save the entered password, check "Memorize password temporarily". The next time data is copied, the password entry window will open with the password already filled in. The password will be retained in memory until the power of the recorder is turned off.

→ The copy start confirmation window will be displayed.

Step 6

Click the [OK] button in the copy start confirmation window.

→ "Copying" is displayed in the status display area, and copying will start. When copying is completed, "Copying" will go off.

Important:

- Do not disconnect the SD memory card or the external storage device when copying is being performed. Otherwise the data stored on the SD memory card or the external storage device could be lost.
 - If the copy destination lacks sufficient remaining storage capacity, copying will continue until the medium is full. Use a medium with sufficient storage capacity to avoid left over data that is not copied.
 - Copying will be performed in the following order: Viewer Software → Images → Audio Depending on the designated time range for copying and the remaining space of the storage medium, images and audio may not be copied.
 - Clicking the [Copy] button during the copying process will display the copy cancel confirmation window, allowing you to cancel copying. Copying continues while the copy cancel confirmation window is displayed.
 - Do not turn off the power of the recorder while copy is in progress. If the power is turned off while copying, the storage media copied on will become unusable.
 - Recorded images (data) of up to 1 million can be copied onto the external device connected to the copy port "COPY". However, it is impossible to copy any more data exceeding these limits even when there is a sufficient remaining capacity.
-

Format SD memory card

To copy recorded images onto an SD memory card, an unformatted SD memory card or an SD memory card formatted with a PC or another device is required to be formatted with this product.

Important:

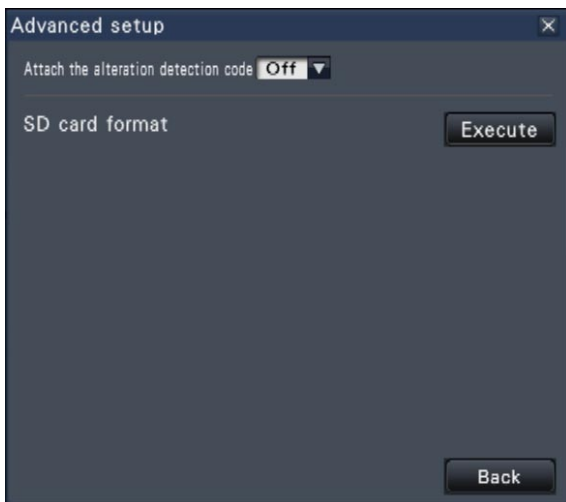
- Formatting will delete all data and setup information stored on an SD memory card. Image data once deleted cannot be restored.
 - This product cannot format the external storage device connected to the copy port "COPY". Format the medium using a PC.
-

Step 1

Click the [Copy] button on the operation panel of the main monitor. (☞ Page 135)
→ The copy panel will be displayed.

Step 2

Click the [Advanced] button. (☞ Page 135)
→ The setup menu (advanced) will be displayed.

**Step 3**

Click the [Execute >] button for "SD card format".
→ The confirmation window will be displayed.

Step 4

Click the [OK] button.
→ Formatting of the SD memory card will start, and a window indicating that formatting is in progress will be displayed.
When formatting is completed, the format completion window will be displayed.

Important:

- Do not turn off the power of the recorder while formatting is in progress.
-

Play back copied images with this recorder

Display a list of recorded images copied onto an SD memory card (copied data), select recorded images from the list, and play them. It is possible to search for copied data using filters.

Important:

- Recorded images copied on the external storage connected to the copy port "COPY" cannot be played.
-

Step 1

Insert an SD memory card on which the recorded data are copied. (☞ Page 102)

Step 2

Select [SD] of the "Disk/Medium" on the playback operation panel.

→ The media playback panel will be displayed. Up to 10000 logs are saved in the list. When more than 10000 logs are filed in the search result, "> 10000" will be displayed.



Step 3

To filter the number of items displayed on the copied data list, proceed as described below.

To play back without filtering, proceed to Step 5.

Filtering by camera

Mark the checkbox for [Filtering by camera]. Filtering will be applied to the camera whose image is displayed.

Filter by designating date & time

Specify the filter range by designating a date & time. To specify the filter range, set the year, month, day and time of the start and end point by clicking the respective [▲]/[▼] buttons.

Note:

- It is also possible to set the start point and end point of the filter range by clicking the [Start]/[End] buttons after selecting the desired time in the [Playback] box and clicking the desired date on the calendar.
-

Step 4

Click the [Filtering] button.

→ A list of search results for the specified filter criteria is displayed. It is possible to switch between list pages by clicking the [Previous]/[Next] buttons.

Step 5

Select the line with the desired date & time, and click the playback button on the playback operation panel.

→ Playback will start from the date & time selected. If the multiscreen was displayed, it will change to the 1-screen.

Note:

- Playback can also be started by double-clicking the desired date & time line.
 - If the selected copied data is password protected, the password entry screen will be displayed. Enter the assigned password, and click the [OK] button. If the wrong password is entered, the copied data cannot be played back. For character entry, refer to "About the operation of on-screen keyboard" (☞ page 100).
-

Step 6

To stop playback and return to live images, click the stop button on the playback operation panel.

→ Playback will stop, and live images will be displayed.

Note:

- Playback can also be stopped and live images can also be displayed by the following operations:
 - Clicking the [x] button on the media playback panel.
 - Clicking the [Live] button on the date & time operation panel (playback display)
 - Changing the playback medium
-

Configure the network settings

The recorder can be operated using a mouse or from a web browser on a PC (excluding certain functions and settings). On the following pages, operation from a web browser, setting up the PC and related matters will be described.

When operating the recorder using a web browser, it is necessary in advance to configure the network settings of the recorder and a PC.

When the network settings of the PC are as follows, it is unnecessary to configure the settings. It is possible to configure the settings and operate the recorder using a web browser after completing the connection.

IP address: 192.168.0.2 - 192.168.0.249, 192.168.0.251 - 192.168.0.254

Subnet mask: 255.255.255.0

Default gateway: 192.168.0.1

When the settings are configured differently from the above, configure the network settings of the recorder or a PC.

Configure the network settings of the recorder

The network settings of the recorder can be configured on the "Network" page - the [Basic] tab of the setup menu.

Refer to the chapter relating to the [Basic] tab of "Network" of the setup menu on page 52 for how to operate.

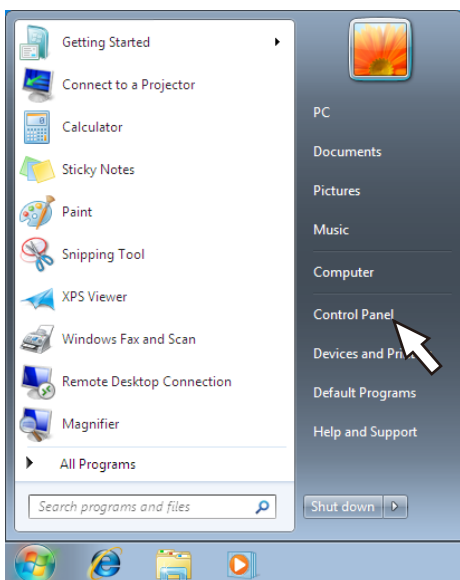
Configure the network settings of the PC

The TCP/IP setting of the PC shall be changed to conform to the settings of the recorder. When using the recorder with the default (IP address:192.168.0.250), set the IP address of the PC to "192.168.0.xxx (a number from 2 to 254 except 250 (this recorder))".

The settings described in these operating instructions are based on the standard settings for Windows 7. Refer to the operating instructions of the respective OS for further information.

Step 1

Click "Control Panel" on the start menu.



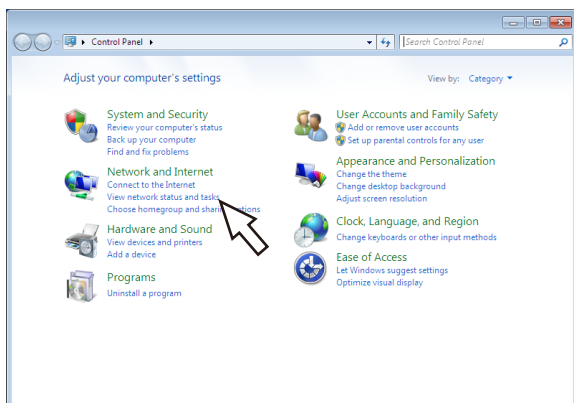
Important:

- Log in to the PC as an administrator.

→ "Control panel" will be displayed.

Step 2

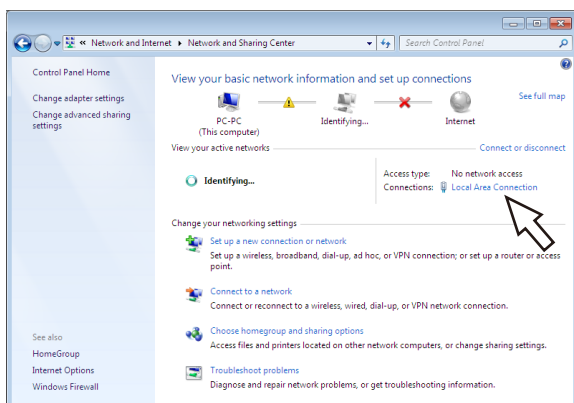
Click "View network status and tasks".



→ The "Network and Sharing Center" window will be displayed.

Step 3

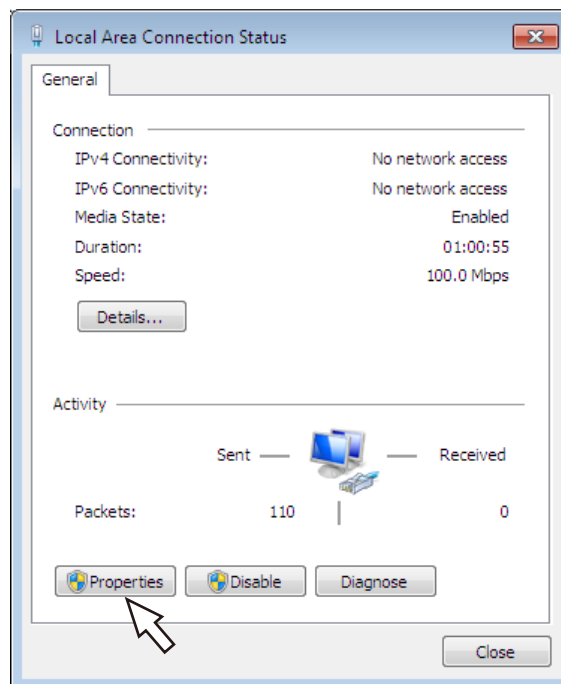
Click "Local Area Connection".



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

Step 4

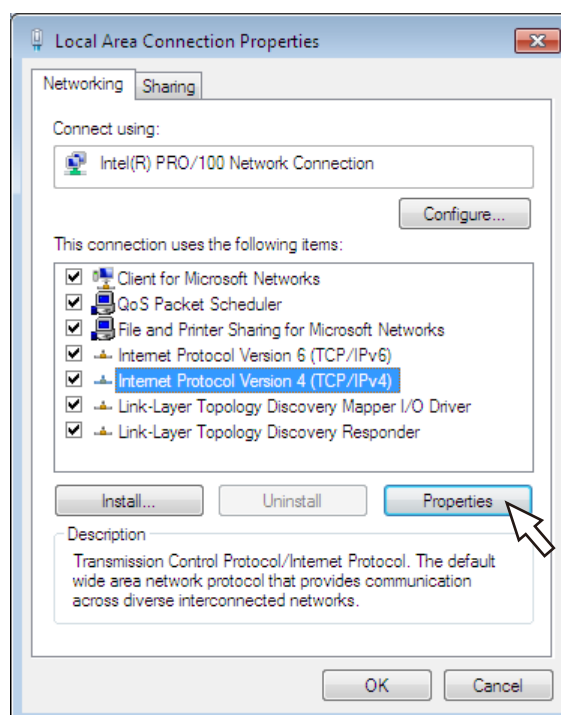
Click [Properties]



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

Step 5

Click "Internet Protocol Version 4 (TCP/IPv4)", and then [Properties].

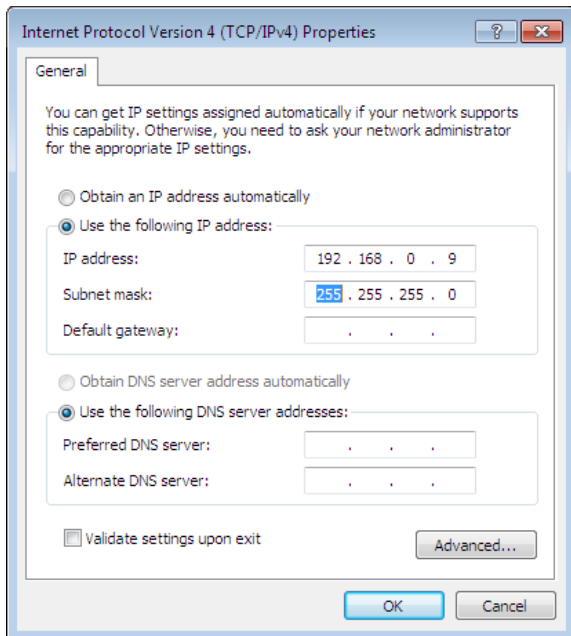


→ The "Internet Protocol Version 4 (TCP/IPv4) Properties" window will be displayed.

Step 6

Select [Use the following IP address] and set "IP address" and "Subnet mask" as follows:

- IP address: 192.168.0.9
- Subnet mask: 255.255.255.0



Depending on the network configuration, it is necessary to configure "Default gateway". Contact the system administrator for further information about the settings.

Step 7

Click the [OK] button and close the window.

Network security of the recorder

The security function of the recorder

① Access restriction by the user authentication

It is possible to restrict users to access the recorder by selecting "On" for "User authentication". (📖 Page 59)

② Access restriction by changing the HTTP port number

By changing the HTTP port number, it is possible to prevent illegal access such as a port scanning, etc. (📖 page 54)

Important:

- Design and enhance security countermeasures to prevent leakage of information such as image data, authentication information (user name and password), alarm mail information, FTP server information, etc. Perform the countermeasure such as the access restriction using the user.
 - After the unit is accessed by the administrator, make sure to close the web browser for added security.
 - Change the administrator password periodically for added security.
-

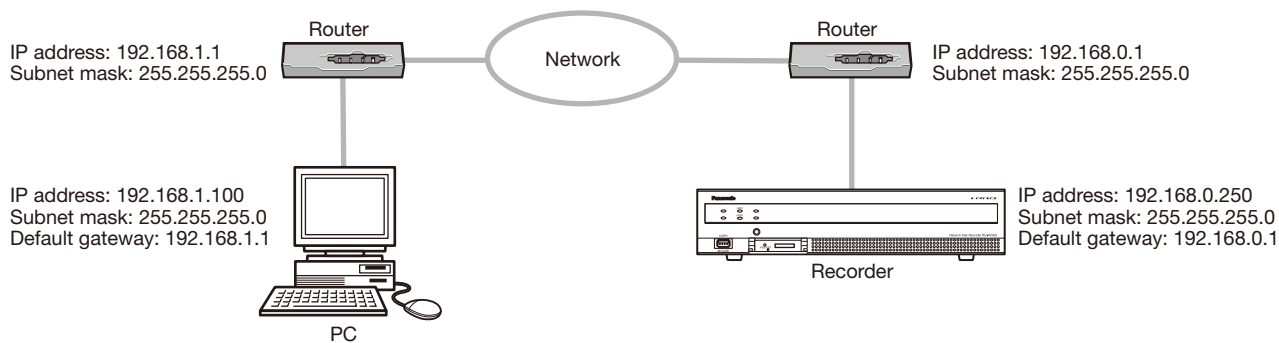
Enhance network security

It is possible to enhance the network security by dividing the subnet using a router to authenticate users twice (by the recorder and by the router). When connecting the recorder to an unsecured network, secure the network connection by installing a VPN (Virtual Private Network) device, etc. between the recorder and the host PC.

Important:

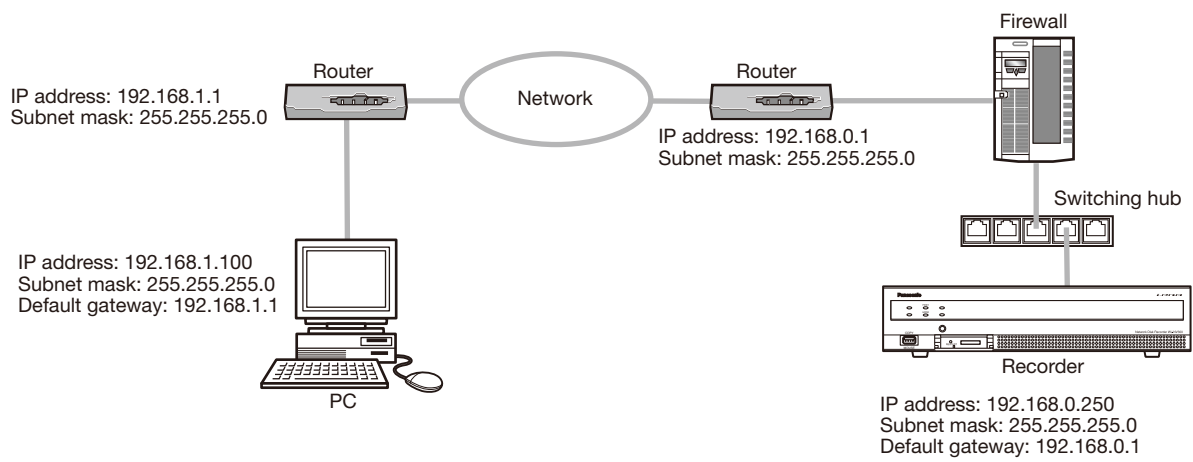
- The settings for the network security vary depending on the network to which the recorder is to be connected such as an intranet or Internet service provider. Refer to a network administrator for further information about the network security.
-

[Connection example]



By using a firewall, etc., it is possible to use packet filtering and protocol filtering to enhance the network security.

[Connection example]



Display the operation window

Boot the PC and operate the recorder using a web browser.

Step 1

Start the web browser.

Step 2

Enter the IP address or URL assigned to the recorder into the address box, and then press the [Enter] key.

→ The authentication window will be displayed. The authentication window will not be displayed when "Off" is selected for "User authentication" on the [Basic] tab of "User management" of the setup menu.

Important:

- Refer to a system administrator for further information about the set IP address.
- Do not attach "0" before the numbers when entering IP address.

Example:

○: 192.168.0.50

×: 192.168.0.050

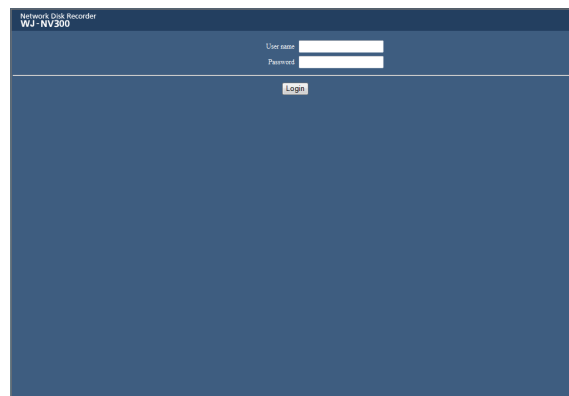
- If a message is displayed on the information bar, see page 184.

Note:

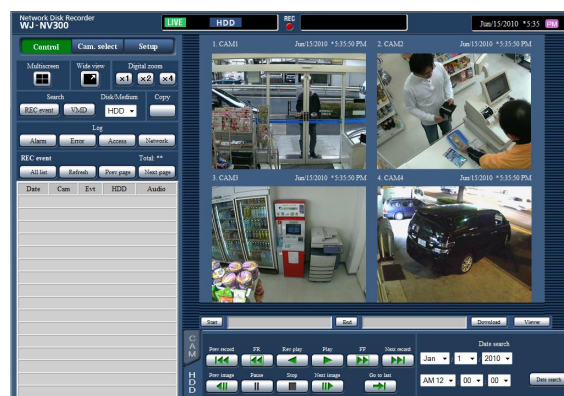
- When the top page is displayed for the first time, the install wizard of the ActiveX control required to display images from the camera will be displayed. Follow the instructions of the wizard.
- The ActiveX control and the viewer software (see page 172) will be installed at the same time.
- When any ActiveX control for a Panasonic recorder other than this product is already installed, uninstall "WebVideo ActiveX" from "Uninstall a program" and then install ActiveX control for this product. (see Page 172)
- When the installation wizard is displayed each time displaying other page even though installation of ActiveX control for this product has been completed, reboot the PC.
- The ActiveX control used on each PC should be licensed individually. Refer to your dealer for the software licensing.

Step 3

Enter the user name and password registered in the recorder, and then click the [Login] button.



→ The top page will be displayed.



Important:

- Refer to a network administrator for the set user name and password.
- Refer to page 61 for how to register users.
- The default administrator name and password are as follows.

Administrator name : ADMIN
Password : 12345

- To enhance the security, change the administrator name and password before running the recorder. Change the password periodically. Refer to page 61 for how to change the password.
- Refer to page 184 when a message is displayed on the information bar or when an unnecessary status bar or scroll bar is displayed on the window.

About the operation window

Top Page



[Control] button

Displays operations such as searching for and copying recorded images, search results and log information.

It can also be used to switch camera images between display of live images on a multiscreen, wide screen, etc.

[Cam. select] button

Can be used for camera operations such as switching camera images.

[Setup] button

Can be used to configure the settings of the recorder. Refer to the "Settings of this product" section starting from page 9 for setup items and their further information. Refer to page 177 for basic operations.

Status display area

The current status of the recorder such as playback status, recording status, etc. will be displayed.

Current time display area

The current date & time will be displayed.

Image display area

Playback images and live images will be displayed. The camera title is displayed at the upper left and the date & time (the current date & time of the camera's clock when displaying live images and the date & time when the images were recorded when playing recorded images) at the upper right. Clicking the camera title while displaying images on a multiscreen will display images from the respective camera on a 1-screen.

At the default, the aspect ratio of each screen segment is 4:3. Refer to page 51 for the setting to change the aspect ratio to 16:9.

Download operation area

Downloads the images currently being played and the viewer software.

[CAM] tab

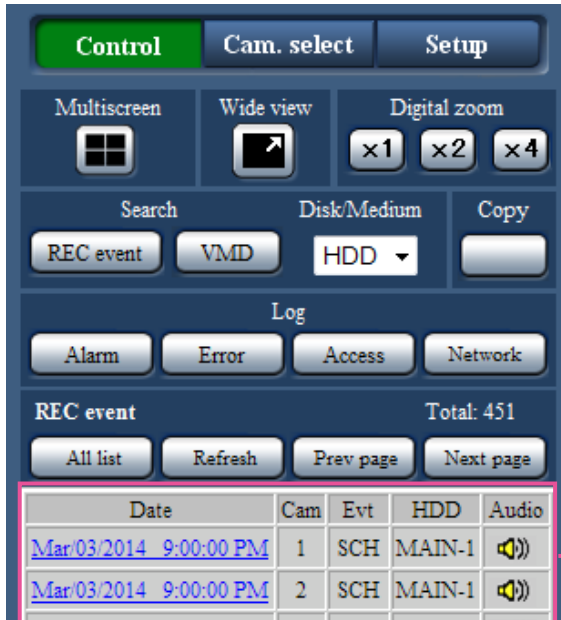
Camera operations such as zooming, focusing, auto mode, etc. can be performed on this tab.

[HDD] tab

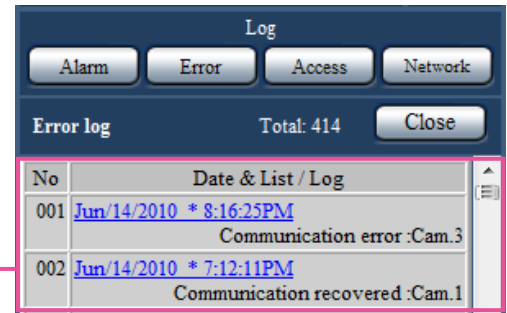
Can be used to play back or operate recorded images.

Control panel

The following operation panels will be displayed when the [Control] button is clicked.



List display area



[Multiscreen] box

Images recorded using up to 4 cameras can be played simultaneously on a multi-screen. Each click of the button switches to the next 4 screens in the sequence: camera 1 to 4→camera 5 to 8→camera 9 to 12→camera 13 to 16.

[Wide view] box

Displays live or recorded images on a full-screen.
(🔍 Page 154)

[Digital zoom] box

Camera image displayed on a 1-screen will be displayed in the proportion of the clicked zoom ratio button.

[x1]: x1, [x2]: x2, [x4]: x4

[Search] box

Use this button to search recorded images. The search result will be displayed in the list display area.

• [REC event] button

Select [HDD] for "Disk/Medium" to display this button. The recording event search window will be displayed.

• [VMD] button

Select [HDD] for "Disk/Medium" to display this button. The motion detection search window will be displayed.

• [Copy data] button

Select [SD] for "Disk/Medium" to display this button. The copy data search window will be displayed.

Disk/Medium

Select a destination folder to store the current playing images.

HDD/SD

[Copy] box

Select [HDD] for "Disk/Medium" to display this button.

The copy data window will be displayed by clicking this button. Use this button to manually copy recorded images onto an SD memory card or an external storage device.

[Log] box

Select a log for display.

Clicking the buttons will display the respective logs in the list display area.

Displayed logs: Alarm log, error log, access log, and network log

• [Close] button

Close the window displaying log information.

List display area

Number of data: Displays the total number of listed data.

No: The number will be displayed in the order of occurrence.

Date & Time: Date & time when an event or trouble occurred will be displayed.

Log: Details of the occurred event are displayed. The following are the maximum number of logs that can be saved. When the number of logs exceeds the limit, the older logs will be overwritten by the newer logs. In this case, the oldest log is the first to be overwritten.

Alarm logs: Up to 750

Error logs: Up to 1000

Access logs: Up to 100

Network log: Up to 100

Clicking date & time in the list can start playback from that date & time. (When clicking date & time in the log information, playback will be started from a point approx. 5 seconds before the date & time selected.)

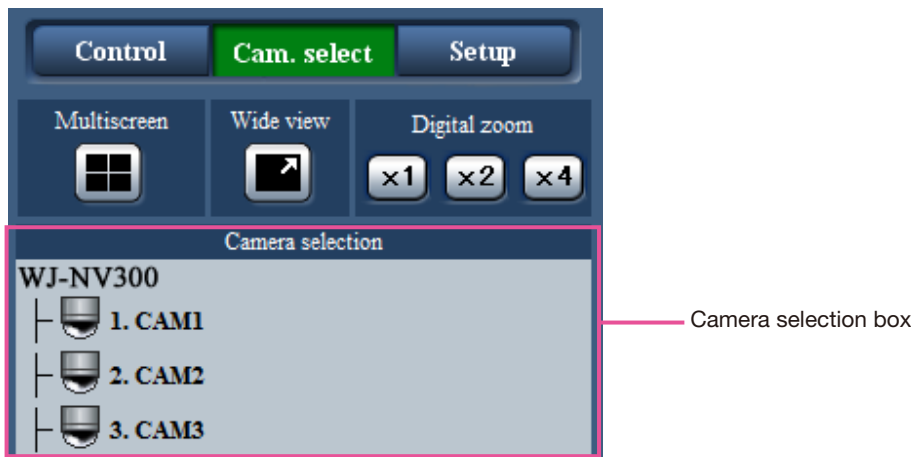
To display search results or a list of copied data, refer to "Search and play recording events" (☞ page 163) and "Check a list of copied recorded images" (☞ page 170), respectively.

Note:

- To start playback from the beginning of the pre-event recording when the "Pre-event duration" setting is longer than 5 seconds, click the playback button, and then click the previous record button.
- The corresponding recorded data that is displayed in the selected log list or log information cannot be played if the data has already been overwritten or erased.

Camera selection panel

Clicking the [Cam. select] button will display the operation panel shown below. Switch the image display area and select camera images.



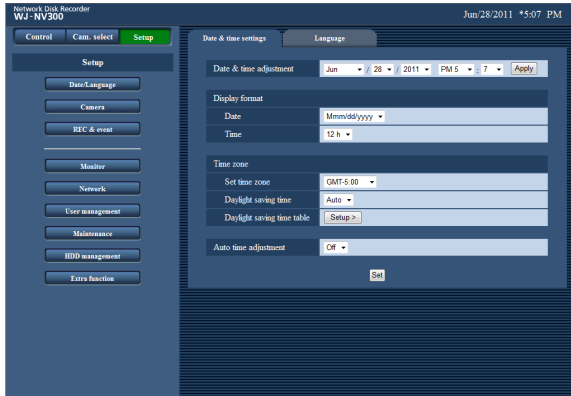
For the [Multiscreen] box, [Wide view] box and [Digital zoom] box, refer to "Control Panel" (☞ page 147).

Camera selection box

Clicking the camera title will display images from the selected camera on a 1-screen in the image display area.

Setup panel

The following setup panel will be displayed when the [Setup] button is clicked. The settings such as the date & time display of the recorder can be configured. Refer to the "Settings of this product" section starting from page 9 for setup items and their further information. Refer to page 177 for basic operations.



[Date/Language] button

Displays the "Date/Language" page. Perform settings such as date & time and daylight saving time.

[Camera] button

Displays the "Camera" page. Perform registration of network cameras.

[REC & event] button

Displays the "REC & event" page. Configure the settings relating to the recording schedules and alarms.

[Monitor] button

Configure the settings relating to the main monitor and the sub monitor.

[Network] button

Configure the settings relating to the network.

[User management] button

Register, edit or delete the user information. The administrator information can also be changed.

[Maintenance] button

Displays the system information of the recorder.

[HDD management] button

Hard disk drives can be formatted.

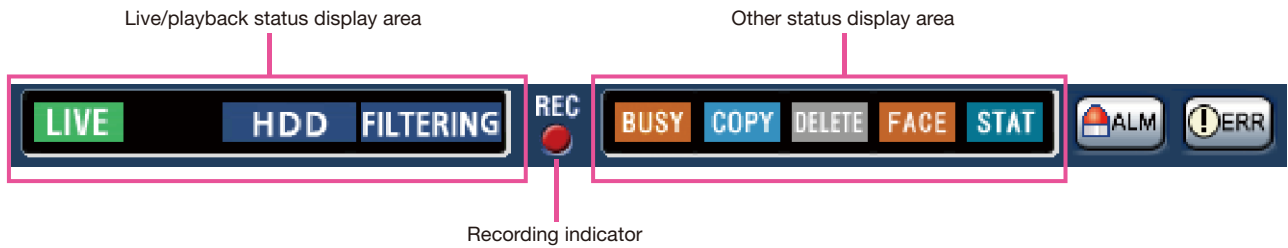
[Extra function] button

Download the statistics data of the additional business intelligence functions.

(This button will be displayed after registering the license for the recorder.)

Refer to the Operating Instructions of the Additional Business Intelligence Kit for further information.

Status display area



Live/playback status display area

The status of an image (live image/recorded image) will be displayed. The following information will be displayed:

- : Indicates that live images are being displayed.
- : Indicates that playback images are being displayed.
- : Indicates that reverse playback images are being displayed.
- : Indicates that fast playback images are being displayed.
- : Indicates that fast reverse playback images are being displayed.
- : Indicates that a paused image is being displayed.
- : Indicates that recorded images/audio are being downloaded.
- : Indicates that downloading of recorded images/audio is completed.

[Step 1] - [Step 7]

Indicates the playback speed.

- : Normal playback speed (1x)
- : Approx. 4x playback speed
- : Approx. 8x playback speed
- : Approx. 16x playback speed
- : Approx. 32x playback speed
- : Approx. 48x playback speed
- : Approx. 96x playback speed

: Indicates that the HDD is selected as playback media.

: Indicates that the SD memory card is selected as playback media.

: Indicates that the formatting of SD memory card, external storage devices or HDD is in progress.

: Indicates that recovery of the mirroring/RAID is in progress

: Indicates filtering of recording events.

Recording indicator

Indicates the status of recording.

- : Indicates that recording is being performed.
- : Indicates that recording is not being performed.

Other status display area

Indicates the following statuses.

- : Indicates that the camera is inoperable since a user with a higher priority is currently operating the camera.
- : Indicates that copying is being performed.
- : Indicates that recorded images are being deleted. (Auto deletion only)
- : Indicates that face matching is being performed (only if the face matching function has been set up).
- : Indicates that the statistical processing is being performed.

Alarm button [ALM]

This button will be displayed when an event occurs. The alarm action will be canceled by clicking this button.

Error button [ERR]

This button will be displayed when an error occurs. The error action will be canceled by clicking this button.

Download operation area



[Start]/[End] setup

Specify the time range for downloading images and audio by setting a start and end time. This operation is available only during playback on a 1-screen.

(Page 169)

[Viewer] button

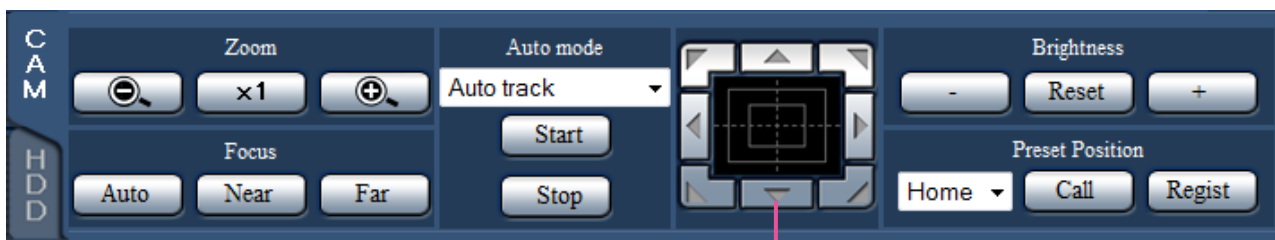
Download the viewer software for playing the downloaded images and audio.

[Download] button

Downloads recorded images and audio at the designated date & time.

[CAM] tab

When displaying live images from a camera with the panning/tilting function, the following camera controls are available. Depending on the model of the camera, some operations may not work.



Control buttons/Control pad

[Zoom] box

Zooming can be adjusted by clicking the [-] button (wide) or the [+] button (tele). Click the [x1] button to reset the zoom factor to x1.

[Focus] box

Focusing can be adjusted by clicking the [Near] button or the [Far] button. The auto focus function can be performed by clicking the [Auto] button.

[Auto mode] box

Select the auto mode function of the camera. Select the auto mode function (Auto track, Auto pan, Preset sequence, or Patrol) of the camera by clicking the [▼] button, and then click the [Start] button. Click the [Stop] button to stop the auto mode function.

Control buttons/Control pad

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 images. Panning/tilting speed will be faster if a clicked point gets farther from the center point of the control pad.

[Brightness] box

The brightness (lens iris) can be adjusted by clicking the [-] (darker) button or the [+] (brighter) button. It is possible to reset the adjusted brightness by clicking the [Reset] button.

[Preset Position] box

- **[Regist] button**

Register the current camera position as a preset position.

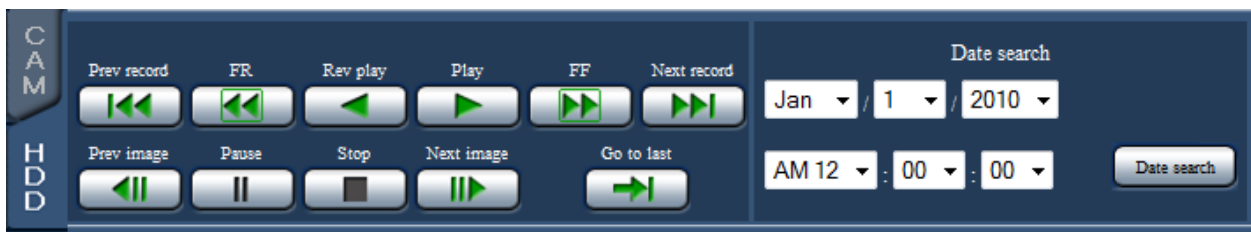
Select a preset position number (1 - 256) by clicking the [▼] button after moving the camera to a position to be registered as a preset position, and then click the [Regist] button. It is impossible to register the position as "Home".

- **[Call] button**

Moves the camera to the preset position registered in advance.

Select a preset position number (Home, 1 - 256) by clicking the [▼] button, and then click the [Call] button. It is necessary to register preset positions in advance to move the camera to the preset positions.

[HDD] tab



[Play]/[Rev play] button

Plays recorded images in forward or reverse.

[FF]/[FR] button

Plays recorded images at high speed in forward or reverse.

Playback speed of fast playback will change 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)

[Next record]/[Prev record] button

Skips to the next recorded image or previous recorded image and plays it.

[Next image]/[Prev image] button

Clicking this button during playback/pausing will display the next or previous frame and playback will be paused.

[Pause] button

Playback will be paused when this button is clicked during playback. Playback will start when this button is clicked during pause.

[Stop] button

Stops playback and displays live images.

[Go to last] button

The starting point of playback is approx. 30 seconds before the date & time of the latest recorded images.

[Date search] box

Start playback by designating the desired date & time of image. Click the [▼] button and determine the desired date & time.

Clicking the [Date search] button will play back the images corresponding to the selected date.

Monitor live images

Live images will be displayed in the web browser window. It is possible to display live images on a 1-screen or a 4-screen (multiscreen) and to expand the image display area across the full screen.

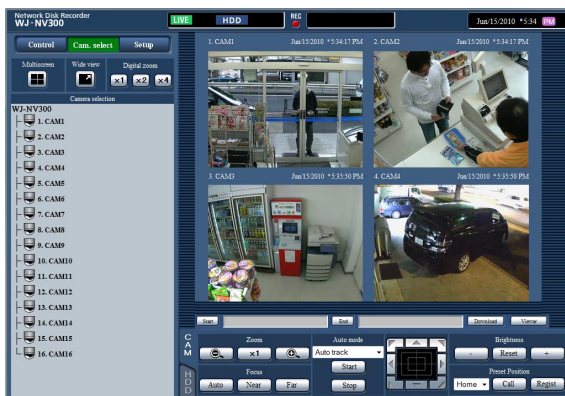
Display images on a 1-screen

To display live images on a 1-screen, take the following procedures.

Step 1

Click the [Cam. select] button. (☞ Page 146)

→ A list of the registered cameras will be displayed in the [Camera selection] box.



Step 2

Select the title of the camera.

→ Live images from the selected camera will be displayed.

Note:

- Selecting a camera from the right-click pop-up menu also will display images from the selected camera.
- Clicking the [Go to last] button on the [HDD] tab while displaying live images will start playback from a point around 30 seconds before the latest recorded image of the camera currently being displayed.

Use digital zoom

Enlarges the displayed live images.

When playing recorded images on a 1-screen, click a button in the [Digital zoom] box.

[x1] button: Displays live images with x1 zoomed size.

[x2] button: Displays live images with x2 zoomed size.

[x4] button: Displays live images with x4 zoomed size.

Clicking a point in the zoomed image makes the clicked point the center of the image.

Display images in wide view

Display live images across the full screen. When working on a 1-screen, click the [Wide view] button (the operation panel will disappear).

To return the wide view image to the original size, right-click on the image and select "Ctrl screen" from the displayed menu.

Note:

- To enlarge the displayed live images, also right-click on the live images and select "Wide view" from the displayed menu.
-

Display images on a 4-screen (multiscreen)

Live images from cameras will be displayed on a 4-screen.

Step 1

Click the [Cam. select] button.

→ A list of the registered cameras will be displayed in the [Camera selection] box. (Page 148)

Step 2

Click the [Multiscreen] button.

→ Live images from the cameras (registered as a group) will be displayed on a 4-screen.

Step 3

Each click of the [Multiscreen] button switches to the next 4 screens in the sequence: camera 1 to 4→camera 5 to 8→camera 9 to 12→camera 13 to 16...

(The sequence depends on the number of the camera licenses.)

Step 4

Click a camera title in the [Camera selection] box or the camera title displayed on the image to display on a 1-screen again.

→ The display returns to the 1-screen.

Note:

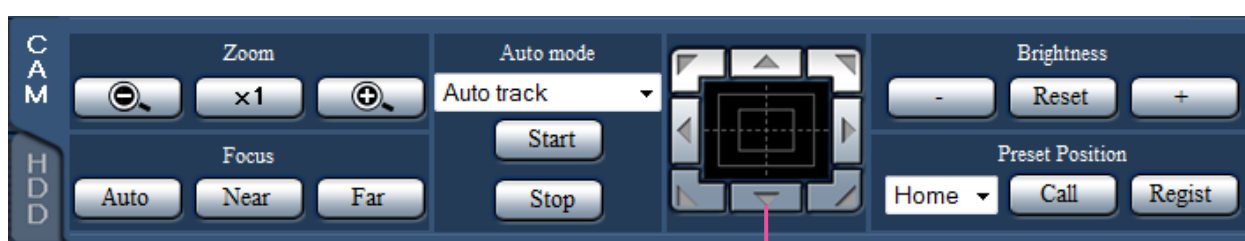
- To change the screen pattern to a multi-screen, right-click on the live images and select the item from the displayed menu.
 - Selecting "Wide view" from the right-click menu will enlarge the displayed images on a 4-screen.
 - Clicking the [Go to last] button on the [HDD] tab while displaying live images will start playback from a point around 30 seconds before the latest recorded image of the camera currently being displayed.
 - When playing recorded images on a 4-screen, the audio of the camera assigned to the top left screen segment will be output.
 - When starting VMD search while displaying images on a multiscreen, the camera image displayed in the top left screen segment will be searched.
-

Operate the camera

When displaying live images from a camera with the panning/tilting function, the following camera controls are available. It may be impossible to operate the camera or some functions may be inoperable depending on the model of the camera.

- Panning/Tilting: Adjusts the horizontal/vertical position of the camera.
- Zoom: Zoom in/out the displayed image.
- Focus: Adjust the focal point.
- Brightness: Adjusts the lens iris of the camera.
- Preset position operation: Move the camera to the preset position (that is determined on the camera's setup menu and registered in the recorder).
- Auto mode: Activates the auto mode function of the camera.

To operate the camera, display the [CAM] tab of the top page.



Control buttons/Control pad

Panning/Tilting

When displaying live images on a 1-screen, moves a camera horizontally/vertically in the following ways.

Control buttons

Click to move (pan/tilt) a camera in the clicked direction.

Control pad

Click to move (pan/tilt) a camera in the clicked direction. Panning/tilting speed will be faster if a clicked point gets farther from the center point of the control pad.

Note:

- Click the desired point to be located at the center of the angular field of view. The camera will move to locate the clicked point as the center point in the image display area.
-

Zooming

Zoom in/out the displayed image. Depending on the models of the connected cameras, the available zooming factors may be different. Refer to the operating instructions of the camera for further information.

Zooming can be adjusted by clicking the [-] button (wide) or the [+] button (tele). Click the [x1] button to reset the zoom factor to x1.

Note:

- It is possible to adjust zooming by turning the mouse wheel.
 - When selecting an area in the image display area by dragging the mouse, the selected area will be located at the center of the image display area and the zoom ratio will be adjusted automatically.
-

Focus adjustment

Adjusts the focal point. The auto focus function is available.

Focusing can be adjusted by clicking the [Near] button or the [Far] button.

The auto focus function can be performed by clicking the [Auto] button.

Iris (brightness) adjustment

Adjusts the lens iris of the camera.

The brightness (lens iris) can be adjusted by clicking the [-] (darker) button or the [+] (brighter) button. It is possible to reset the adjusted brightness by clicking the [Reset] button.

Register preset positions

Registers the current camera position as a preset position. Camera supporting the preset position function can be used.

Step 1

Perform the pan/tilt operation to move the camera to the position to be registered.

Step 2

Click the [▼] button in the [Preset Position] box to select a preset number (1 - 256). (It is impossible to register the position as "Home".)

Step 3

Click the [Regist] button.

→ The preset position will be registered under the selected preset number.

Move to preset positions

Moves the camera to the preset position registered in advance. Preset positions need to be registered in advance.

Step 1

Click the [▼] button in the [Preset Position] box to select a preset number (Home, 1 - 256).

Step 2

Click the [Call] button.

→ The camera moves to the registered preset position respective to the selected preset number.

Auto mode

Activates the auto mode function of the camera.

Step 1

Click the [▼] button in the [Auto mode] box, and then select the desired auto function from the following.

Auto track: The camera will automatically track an object moving on the screen.

Auto pan: The camera direction will automatically move (pan) between the start point and end point set in advance.

Preset sequence: The camera will move (pan) to the preset positions registered in advance in order of the preset position number (numerical order).

Patrol: The camera will trace the manually recorded panning pattern.

Step 2

Click the [Start] button to start the selected auto mode function of the camera.

Click the [Stop] button to turn off the auto mode function.

Note:

- Refer to the operating instructions of the connected camera for further information about the auto mode function of the camera.
-

Event function

The recorder will take an event action when any of the following events occur.

- Terminal alarm: An event when an alarm input signal is supplied from an external device such as a door sensor to the alarm input terminal on the rear of the recorder.
- Camera site alarm: An event when an alarm (camera terminal alarm, etc.) is detected by a camera.
- Command alarm: An alarm when receiving an alarm from a PC, etc. via a network.
- Face matching alarm*: Alarm issued when a face matches an already registered facial image.

* When the license of the additional business intelligence kit is registered

Note:

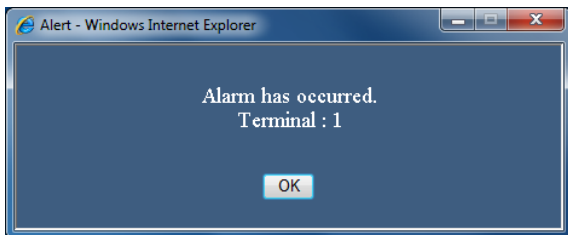
- Operations such as registration of facial images, display of face matching results, and starting and stopping the face matching function are not possible from a web browser, regardless of whether the recorder is set up for use of this function. Refer to the Operating Instructions of the Additional Business Intelligence Kit for further information about the setting conditions or restrictions of the face matching function.
-

Action to be taken upon an event occurrence

When the recorder recognizes an event, it will take an event action according to the set action mode. Refer to the "Event action" (☞ page 120) for further information about the event action and action mode. The actions that can be set up and checked from a PC when an event occurs are described below.

Display the alarm message

A window that notifies of an event occurrence will be displayed.



Click the [OK] button or the [x] button to close the window. When several events occur at the same time, the information for the event that occurred last will be displayed.

Display the alarm button

The [ALM] button will be displayed in the status display area. The alarm action will be canceled by clicking [ALM] button. (☞ Page 159)

Display the error button

The [ERR] button will be displayed in the status display area. The error action will be canceled by clicking [ERR] button. (☞ Page 159)

Send a mail that notifies of an event occurrence

A mail that notifies of the event occurrence with the date & time of the event occurrence will be sent (Alarm mail).

Up to 4 destination addresses for the alarm mail can be registered.

Provide an alarm notification to a PC according to the Panasonic alarm protocol setting

When an event or an error occurs, information about the event/ error will automatically be notified to the registered PC according to the "Panasonic alarm protocol" setting. To receive a notification and display the contents, it is necessary to install the dedicated software (option).

Refer to the "readme.txt" on the provided CD-ROM about the dedicated software.

Cancel the alarm action

To cancel the alarm action manually, click the [ALM] button in the status display area.



→ The alarm action will be canceled. The event recording will stop and return to the operational status just before the event occurred.

Cancel the error action

When an error (trouble) occurred on the recorder, the recorder will take the error action (a series of actions that notifies of the error occurrence). An error display window providing information on the error that occurred will be displayed on the web browser. To cancel the error action manually, close the error display window, and click the [ERR] button in the status display area.



→ The error action will be canceled.

Note:

- When an error occurs, take remedial action by following the instructions displayed on the error log panel (page 131). The error indicator on the front of the recorder will go off when the cause of the error has been eliminated.
-

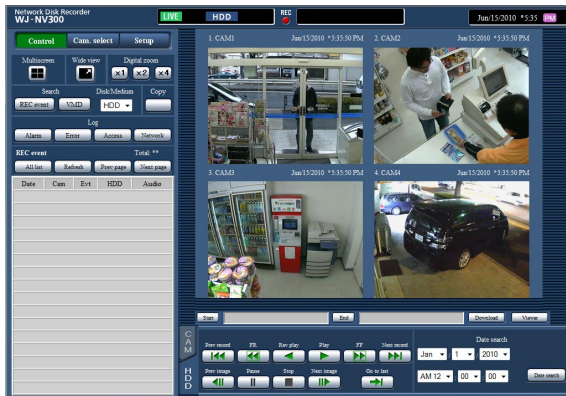
Play recorded images

Display camera images recorded on the recorder's hard disk. There are 2 ways to play recorded images as follows. Play image recorded at a designated date & time. Search and play recorded images. Playback operation can be made while recording.

Step 1

Click the [HDD] tab on the top page of the operation window.

→ The [HDD] tab will be displayed.



Step 2

Click the [Play] button.

→ Playback of a recorded image will be performed. The "Playback" indication and the "Step 1" indication will be displayed on the status display area.

Playback will start from the point at which the last playback was stopped (date & time).

Step 3

Click the [Stop] button on the [HDD] tab.

→ "Playback" and "Step 1" will disappear from the status display area, and playback will stop. Live images from the camera will be displayed on the image display area.

Note:

- When displaying images on a 1-screen, audio assigned to the camera from which images are currently being displayed will be heard. When displaying images on a multiscreen, audio assigned to the camera from which images are displayed on the upper left corner will be heard.
- When starting playback for the first time after login, playback will start from a point around 30 seconds before the latest recorded image. While recording, the playback starts 30 seconds prior to the current time.
- When both a web browser and the viewer software are active, playback of audio may not be performed correctly. To play audio correctly, use either the web browser or the viewer software and close the other.
- When load to be processed is too heavy for the recorder (such as when many cameras are connected, images (live/playback) are displayed on many windows (segments)), playback speed may become slow or playback may stop for a while.
- When displaying images on a multiscreen, playback will be performed while skipping the actual recording.
- When playing images recorded at a higher frame rate and images recorded at a lower frame rate together on a multiscreen, there will be a widening gap between the displayed times.
- Playback images and audio may sometimes not be synchronized exactly.
- The camera image can be changed by clicking the [Cam. select] button and the camera title during playback.
- It is possible to switch 1-screen to a multi-screen during playback by clicking the [Multiscreen] button.
- When clicking a camera title on the image displayed on a multiscreen, images from the camera whose camera title is clicked will be displayed on a 1-screen.

About playback operation

The following operations are available during playback:

Function	Example	Operation
[Play]/[Rev play] button	 / 	- Plays recorded images. - Plays back recorded images in reverse. * Playback and reverse playback may not work when the [Play] or [Rev play] button is clicked while recording images at a lower frame rate.
[Stop] button		Playback will stop and live images will be displayed when this button is clicked during playback.
[Pause] button		- Playback will be paused when this button is clicked during playback. - Playback will resume when this button is clicked during pause.
[FF]/[FR] button	 / 	- Playback speed of fast playback will be changed in the following order each time the [FF] button is clicked: Step2 (Approx. x4) → Step3 (Approx. x8) → Step4 (Approx. x16) → Step5 (Approx. x32) → Step6 (Approx. x48) → Step7 (Approx. x96) - Playback speed of fast reverse playback will be changed in the following order each time the [FR] button is clicked: Step2 (Approx. x4) → Step3 (Approx. x8) → Step4 (Approx. x16) → Step5 (Approx. x32) → Step6 (Approx. x48) → Step7 (Approx. x96) - The playback speed will be displayed on the playback status display. * When playing H.264 images, some frames of recorded images will not be displayed. Fast playback/fast reverse playback of images will be performed with the refresh interval setting of the camera.
[Next record]/[Prev record] button	 / 	- When the [Next record] button is clicked, playback point will skip to the start time of the next recorded images. - When the [Prev record] button is clicked, playback point will skip to the start time of the previous recorded images. * When there is no next/previous recorded image to be skipped to, the current playback will continue. In this case, playback time of the current playback may sometimes be displayed as around for 1 minute ago.
[Next image]/[Prev image] button	 / 	- The next frame will be displayed when the [Next image] button is clicked during playback/pause, and playback will pause. - The previous frame will be displayed when the [Prev image] button is clicked during playback/pause, and playback will pause. * When playing H.264 images, some frames of recorded images will not be displayed. Reverse frame-by-frame playback will be performed with the refresh interval setting of the camera.
[Go to last] button		- When this button is clicked, playback of the latest recorded images will start. The starting point is around 30 seconds before the date & time of the latest recorded images. While recording, the playback starts 30 seconds prior to the current time. * When the [Go to last] button is clicked while recording images at a lower frame rate, playback of the latest recorded images may be paused or images may not be displayed.

Refer to the page 147 for further information about the [Multiscreen], [Digital zoom] and [Wide view].

Play image recorded at a designated date & time

Start playback by designating the desired date & time of a recorded image. Playback operation can be made while recording.

Step 1

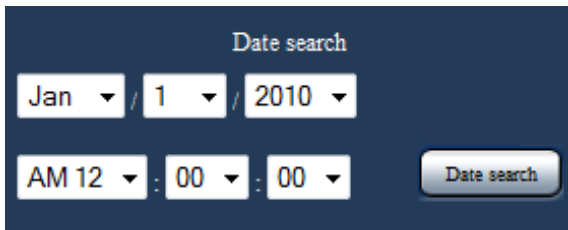
Click the [Cam. select] button on the top page of the operation window, and select a camera for playback from the camera selection box. (☞ Page 148)

Step 2

Click the [HDD] tab. (☞ Page 146)

Step 3

Click the [▼] button and determine the date & time of the desired images.



Step 4

Click the [Date search] button.

→ "Playback" and "Step 1" will be displayed in the status display area, and playback will start from the image corresponding to the designated date & time.

(About playback operation: "Play recorded images" (☞ page 161))

Note:

- When playing H.264 image by designating date & time, playback may start from a point several seconds before or after the designated date & time.
 - When no recorded image found at the designated date & time, playback of images recorded after and at the closest to the designated date & time will start.
-

Search and play recording events (REC event search)

Search the recording event list for a recording event and play it back.

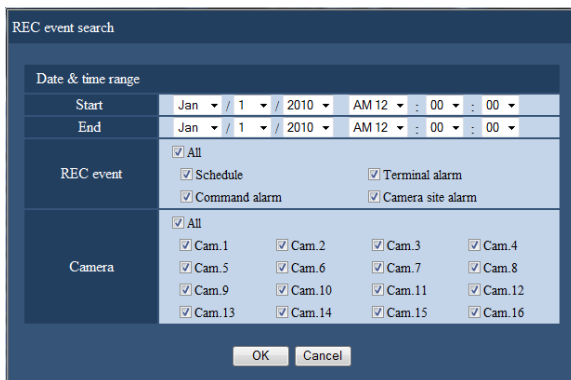
Important:

- To use recording event search, "HDD" must be selected for [Disk/Medium]. It is also possible to filter recording events using the search filters.
- Face matching alarm cannot be played back by recording event search on the web browser. Start playback from the alarm log list. (Page 147)

Step 1

Click the [Control] button on the top page (page 146) of the operation window, and click the [REC event] button in the [Search] box.

→ The recording event search window will be displayed.



The screenshot shows the 'REC event search' window. It has sections for 'Date & time range' with start and end date/time pickers, 'REC event' with checkboxes for Schedule, Terminal alarm, Command alarm, and Camera site alarm, and 'Camera' with checkboxes for all 16 cameras. 'All' is selected for both event types and cameras. 'OK' and 'Cancel' buttons are at the bottom.

Step 2

Specify the search conditions (filters).

[Date & time range]

Select a time range by designating a start and end date & time. The designated time range will be searched.

[REC event]

Searches for images recorded by the selected recording mode only. Check the checkbox corresponding to the desired event type. When the checkbox for [All] is marked, the checkboxes of all of the following events can be marked:

Schedule [SCH]: Recording by the schedule recording event

Terminal alarm [TRM]: Recording triggered by a terminal alarm

Command alarm [COM]: Recording triggered by a command alarm

Camera site alarm [CAM]: Recording triggered by camera site alarm

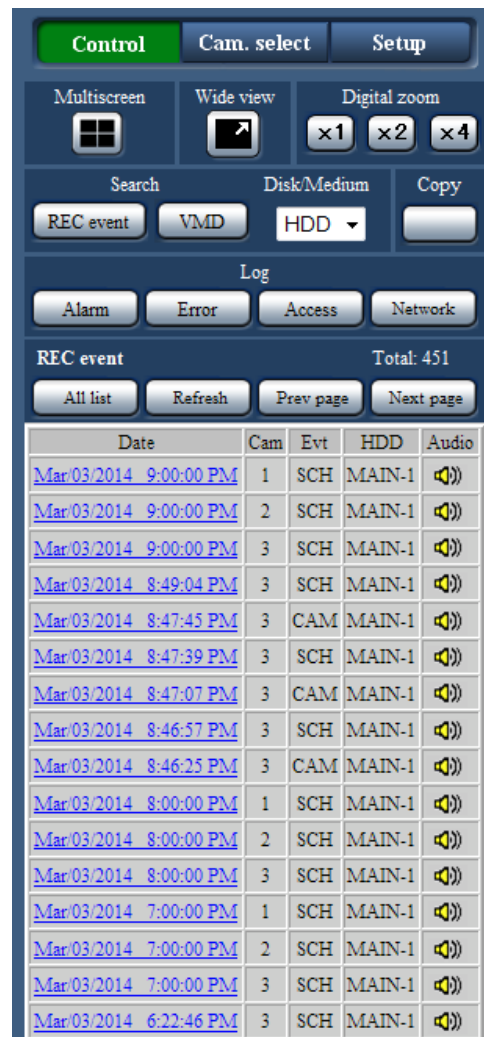
[Camera]

Searches for images recorded with each selected camera. Mark the checkbox corresponding to the desired camera. When the checkbox for [All] is marked, the checkboxes of all cameras can be marked.

Step 3

Click the [OK] button.

→ "FILTERING" appears in the status display area, and the filtered result will be displayed in the list display area.



The screenshot shows the main operation window. At the top are 'Control', 'Cam. select', and 'Setup' buttons. Below are 'Multiscreen', 'Wide view', and 'Digital zoom' controls. The 'Search' section has 'REC event', 'VMD', and 'HDD' buttons. The 'Log' section has 'Alarm', 'Error', 'Access', and 'Network' buttons. The 'REC event' section shows 'Total: 451' and 'All list', 'Refresh', 'Prev page', 'Next page' buttons. A table displays the search results with columns: Date, Cam, Evt, HDD, and Audio.

Date	Cam	Evt	HDD	Audio
Mar/03/2014 9:00:00 PM	1	SCH	MAIN-1	
Mar/03/2014 9:00:00 PM	2	SCH	MAIN-1	
Mar/03/2014 9:00:00 PM	3	SCH	MAIN-1	
Mar/03/2014 8:49:04 PM	3	SCH	MAIN-1	
Mar/03/2014 8:47:45 PM	3	CAM	MAIN-1	
Mar/03/2014 8:47:39 PM	3	SCH	MAIN-1	
Mar/03/2014 8:47:07 PM	3	CAM	MAIN-1	
Mar/03/2014 8:46:57 PM	3	SCH	MAIN-1	
Mar/03/2014 8:46:25 PM	3	CAM	MAIN-1	
Mar/03/2014 8:00:00 PM	1	SCH	MAIN-1	
Mar/03/2014 8:00:00 PM	2	SCH	MAIN-1	
Mar/03/2014 8:00:00 PM	3	SCH	MAIN-1	
Mar/03/2014 7:00:00 PM	1	SCH	MAIN-1	
Mar/03/2014 7:00:00 PM	2	SCH	MAIN-1	
Mar/03/2014 7:00:00 PM	3	SCH	MAIN-1	
Mar/03/2014 6:22:46 PM	3	SCH	MAIN-1	

[Total]

Displays the total number of searched data. When more than 10001 data matched, the ">10000" indication will be displayed.

[All list] button

Cancels filtering and displays all recording events.

[Refresh] button

Updates the list to the latest one.

[Prev page] button

Displays the previous page of the list.

[Next page] button

Displays the next page of the list.

[Date & Time]

Start time of recording will be displayed.

[Cam]

The camera which recorded the images will be displayed.

[Evt]

Event type will be displayed. (☞ Page 163)

[HDD]

The hard disk drive number in which the corresponding recorded images are stored will be displayed.

[Audio]

When audio is attached to recorded images, the audio icon will be displayed.

Note:

- The [All list] button will become unavailable during playback. To use the [All list] button, stop playback and click it.
 - When many cameras are connected, the recording start time of each camera may sometimes not be the same.
-

Step 4

Click the date & time of the desired recording event.

→ Playback of recorded images of the selected recording event will start. (About playback operation (☞ page 161))

Motion detection search and playback (VMD search)

Search for recorded images from images recorded triggered by the VMD function of cameras by designating a time range. Click a date & time on the result list to play corresponding recorded images.

Important:

- To perform the VMD search, it is necessary to configure the settings of the connected cameras that support the motion detection function in advance. Refer to the "readme.txt" on the provided CD-ROM about cameras supporting the VMD search function. Refer to the operating instructions of the camera in use for further information.
-

Step 1

Click the [Control] button on the top page (☞ page 146) of the operation window, and click the [VMD] button in the [Search] box.

→ The "VMD search" window will be displayed. Display of live images and display of playback images will be paused.



Step 2

Specify the search conditions (filters).

[Camera]

Select the camera for VMD search.

[Date & time range]

Select a time range by designating a start and end date & time. The designated time range will be searched.

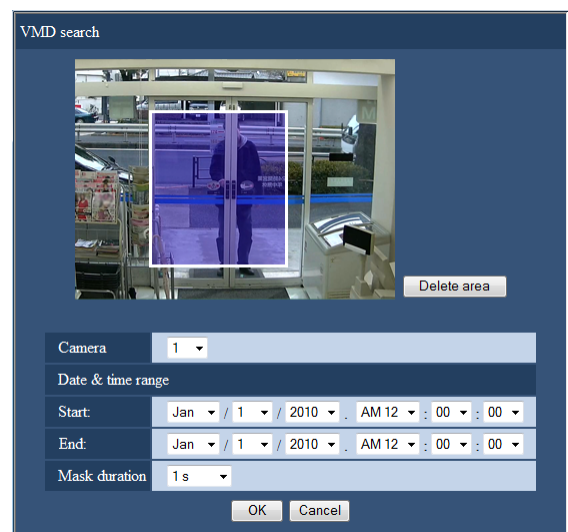
[Mask duration]

Select the time span to be searched.

Step 3

Set up a VMD area. Drag the mouse on the screen.

→ A frame will be displayed, and the area within the frame will be set as VMD search area.



Note:

- To delete the created area, click the [Delete area] button.
-

Step 4

Click the [OK] button.

→ The VMD search will start. The search result will be displayed in the list display area. (☞ Page 163) It may sometimes take time to complete the search.

Important:

- In the result list of the VMD search, the audio icon will not be displayed in the "Audio" column even if audio is attached to the recorded images.
-

Step 5

Click the date & time of the desired recording event.

→ Playback of recorded images of the selected recording event will start. (About playback operation (🔍 page 161))

Note:

- Up to 100 logs are saved in the list. When more than 100 logs are filed in the search result, "> 100" will be indicated.
 - Recorded images will be played on a 1-screen. To play on a multi-screen, click the [Multiscreen] button after starting playback.
 - When starting the VMD search while displaying images on a multiscreen, the camera whose images are displayed at the upper left corner will become subject to the VMD search.
-

Copy recorded images

Copy images recorded by the recorder onto SD memory card or external storage devices. It is recommended to make back-up copies on a regular basis for unexpected situations such as malfunction of the hard disk drives. Refer to page 135 for further information about the copy function. Refer to page 172 for information on how to play copied images.

Step 1

Click the [Control] button on the top page (page 146) of the operation window.

Step 2

Click the button in the [Copy] box.



→ The "Copy" window will be displayed.

Step 3

Specify the detailed conditions of recorded images to be copied. Specify the information to be set as conditions.

The 'Copy' window is a dialog box with a dark blue header and a light blue body. It contains several sections: 'Date & time range' with 'Start' and 'End' date/time pickers; 'Camera' with a grid of checkboxes for 'All' and 16 individual cameras (Cam.1 to Cam.16); 'Copy drive' with radio buttons for 'HDD >> SD' (selected) and 'HDD >> COPY port'; 'Alteration detection' with a dropdown menu set to 'Off'; 'Password' with checkboxes for 'Assign a password' and input fields for 'Password' and 'Password (Retype)'; 'Data size' with a display showing '--- GB' and a 'Measurement' button; and 'Free' with a display showing '0.00 GB'. At the bottom are 'OK' and 'Cancel' buttons.

[Date & time range]

Designate the start date & time and the end date & time of recorded images to be copied. Click the [▼] button, and then designate date & time.

[Camera]

Select the camera you wish to copy. Mark the checkbox next to the desired camera. When the checkbox for [All] is marked, the checkboxes of all cameras can be marked.

[Copy drive]

Select the SD memory card or the external storage device (connected to the copy port) as the copy destination.

Mark the checkbox corresponding to either of "HDD >> SD" or "HDD>>Copy port".

[Alteration detection]

Determine whether or not to attach the alteration detection code to the recorded images to be copied. When the alteration detection code is attached, it is possible to check if the copied recorded images have been altered or not when playing the copied recorded images using the viewer software. Click the [▼] button, and then select "On" or "Off".

[Password]

To copy with password protection, mark the corresponding checkbox and enter a password. (5 to 8 alphanumeric characters) The password will be required to play back the copied data.

[Data size]

When the [Measurement] button is clicked, size of the data to be copied will be displayed.

[Free]

The remaining capacity of the destination medium (SD memory card/external storage device) will be displayed.

Step 4

When the [OK] button is clicked, the confirmation window will be displayed. Then click the [OK] button on the displayed confirmation window.

→ The data copy window will close. Copying will start and the "COPY" icon will be displayed in the status display area. When copying is complete, the "COPY" icon will disappear.

Important:

- Do not remove the SD memory card during copying on the SD memory card. It may damage data on the SD memory card.
 - When copying to an external storage device is being performed, do not disconnect the external storage device. Otherwise the data stored on the external storage device could be lost.
 - When the copy end time is set earlier than the start time, copying will not start even when the [OK] button is clicked.
 - When copy medium lacks enough storage space, data will be copied until the copy medium is full. Use a medium with sufficient storage capacity to avoid left over data that is not copied.
 - Copying will be performed in the following order: Viewer Software → Images → Audio Depending on the designated time range for copying and the remaining space of the storage medium, images and audio may not be copied.
 - When clicking the button in the [Copy] box during copying, the confirmation window for cancellation of the current copying will be displayed. It is possible to cancel the current copying on this window.
 - Do not turn off the power of the recorder while copy is in progress. If the power is turned off while copying, the storage media copied on will become unusable.
 - Recorded images (data) of up to 1 million can be copied onto the SD memory card or the external device connected to the copy port "COPY". However, it is impossible to copy any more data exceeding these limits even when there is a sufficient remaining capacity.
 - When another user operating the recorder has opened the copy panel or when the destination medium has been selected by another user, the copy window cannot be displayed.
-

Download recorded images currently being played

Designate the start point and the end point of recorded images currently being played and download images to a PC.

When downloading recorded images, recorded images and audio will be downloaded as an image data file (filename.n3r) and an audio data file (filename.n3a) respectively. Refer to page 172 for information on how to play downloaded recorded images.

Important:

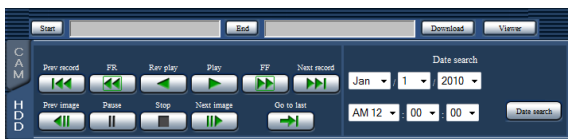
- Note when downloading that, due to limitations of Internet Explorer, the free disk space of the PC must be 2 or more times the size of the file to be downloaded.
 - When download is canceled in the process of the download, it is impossible to properly play the downloaded file on a PC.
-

Step 1

Click the [HDD] tab on the top page (☞ page 146) of the operation window.

Step 2

Play back the recorded images on a 1-screen.
Click the [Start] button in the download operation area at the playback point where the download is to start. Another way to start the download is to click the start time box and enter date & time.



→ The date & time of the start point will be displayed next to the [Start] button.

Step 3

Click the [End] button in the download operation area at the playback point where the download is to end. Another way to end the download is to click the end time box and enter date & time.

→ The date & time of the end point will be displayed next to the [End] button.

Note:

- It is possible to designate up to 20 minutes of the time range per download.
-

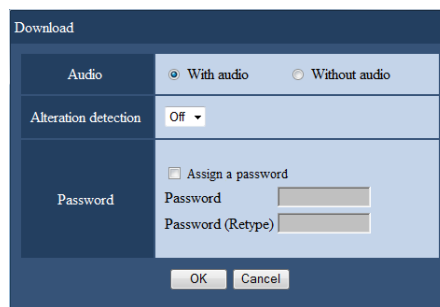
Step 4

Click the [Download] button.

→ The "Download" window will be displayed.

Step 5

Select "On" or "Off" for "Password" to determine whether or not to download images with audio and to determine whether or not to attach an alteration detection code to recorded images to be downloaded. When assigning a password, enter 5 to 8 alphanumeric characters for the password. When the setting is completed, click the [OK] button.



→ The file download window will be displayed.

Step 6

Click the [Save] button.

→ The window to specify the save destination will be displayed.

Step 7

Create a new folder in the desired directory and click the [Save] button.

→ Recorded images and audio will be downloaded as an image data file (filename.n3r) and an audio data file (filename.n3a) respectively.

Note:

- When "With audio" is selected, the "Download" window will be displayed again after the download is complete.
 - If a message is displayed on the information bar, see page 184.
 - When playing on a multiscreen, it is impossible to download recorded images.
-

Check a list of copied recorded images

Display a list of data (recorded images) copied on an SD memory card, and then select a recorded image to play from the list. It is possible to search for copied data using filters. Available filters are "Date & time range" and "Camera".

Step 1

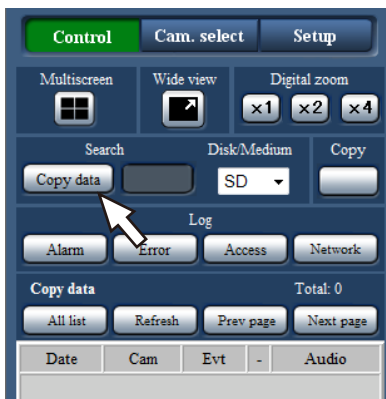
Insert an SD memory card on which the recorded data are copied. (Page 102)

Step 2

Click the [Control] button on the top page (page 146) of the operation window.

Step 3

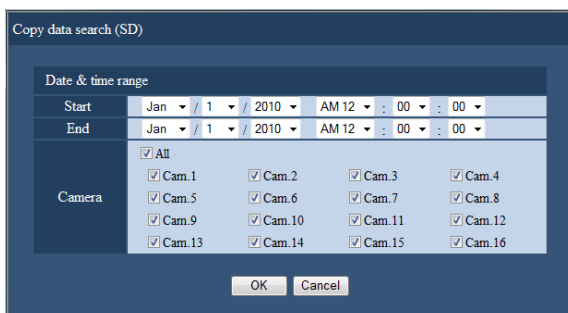
Select "SD" for "Disk/Medium" in the [Search] box, and then click the [Copy data] button.



→ The copy data search window will be displayed.

Step 4

Specify the search conditions (filters).



[Date & time range]

Select a time range by designating a start and end date & time. The designated time range will be searched.

[Camera]

Searches for images recorded with each selected camera. Mark the checkbox corresponding to the desired camera. When the checkbox for [All] is marked, the checkboxes of all cameras can be marked.

Step 5

Click the [OK] button.

→ Copied data matching the search criteria will be displayed on the list display window.

Copy data					Total: 10
All list Refresh Prev page Next page					
Date	Cam	Evt	-	Audio	
Jun/14/2010 *11:00:25 AM	1	SCH			
Jun/14/2010 *10:58:06 AM	1	SCH			
Jun/14/2010 *10:53:19 AM	1	SCH			
Jun/14/2010 *10:38:47 AM	1	SCH			
Jun/14/2010 *10:36:58 AM	1	SCH			
Jun/14/2010 *10:17:37 AM	1	SCH			
Jun/14/2010 *10:08:39 AM	1	SCH			
Jun/14/2010 *10:00:00 AM	1	SCH			
Jun/14/2010 *9:50:03 AM	1	SCH			
Jun/14/2010 *9:35:20 AM	1	SCH			

[Total]

Displays the total number of searched data. When more than 10001 data matched, the ">10000" indication will be displayed.

[All list] button

Cancels filtering and displays all recording events.

[Refresh] button

Updates the list to the latest one.

[Prev page] button

Displays the previous page.

[Next page] button

Displays the next page.

[Date & Time]

Start time of recording will be displayed.

[Cam]

A camera used for recording will be displayed.

[Evt]

Event type will be displayed. (🔍 Page 163)

[Audio]

Nothing will be displayed here.

Important:

- Do not remove the SD memory card during playback of copied data on the SD memory card. It may damage data on the SD memory card.
-

Note:

- When checking a list after inserting the other SD memory card, select "HDD" for "Disk/Medium" in the [Search] box first and then select "SD".
 - Refer to page 172 for information on how to play copied images.
-

Play back the copied/downloaded images on a PC

When recorded images are copied/downloaded, recorded images and audio will be copied/downloaded as an image data file (filename.n3r) and an audio data file (filename.n3a) respectively into the copy/download destination. It is possible to play, save and print the copied/downloaded data files using the dedicated viewer software.

To play recorded images copied on the media device

To play images copied on the media device, double-click the executable file (ND_Viewer.exe) to launch the viewer software. The executable folder is copied in the following folder together with recorded images.

Copying on an SD memory card

Folder: [Drive]: \PRIVATE \MEIGROUP \PSS \NVR \ND_Viewer

When the copy destination is an external storage device

Folder: [Drive]: \Panasonic\NVR\ND_Viewer

Refer to page 174 for how to use the viewer software.

Note:

- The viewer software copied onto the media device can be launched without installation on a PC. When copying the viewer software to another folder or another PC, copy all the files contained in ND_Viewer.exe.
-

Play recorded images downloaded using a web browser

To play back images downloaded from the web browser, start the installed viewer software. If the PC used for downloading has ActiveX control installed, the viewer software will have been installed at the same time (☞ page 145). If another PC is used for playback, it is necessary to download the viewer software and install it on the PC.

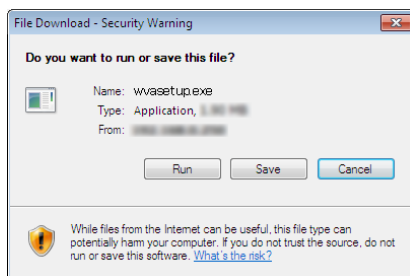
Refer to page 174 for how to use the viewer software.

Download the viewer software

Step 1

Click the [Viewer] button in the download operation area on the top page (☞ page 146) of the operation window. (☞ Page 151)

→ The file download window will be displayed.



Step 2

Click the [Save] button.

→ The window to specify the save destination will be displayed.

Step 3

Create a new folder in the desired directory and click the [Save] button.

→ The viewer software will be downloaded.

Install the viewer software

When the older version of the viewer software is installed on a PC, uninstall it before installing the newer version.

Step 1

Double-click the downloaded file (wvasetup.exe).

→ The installer launches. Follow the instructions of the installation wizard.

Note:

- If agreed to the displayed license agreement, select "I accept the terms in the license agreement".
 - Select "Anyone who uses this computer (all users)". Installation is possible even if the "User Name" field and the "Organization" field on the "Customer Information" page are left blank.
 - Select "Complete" if the "Setup Type" page is displayed.
-

Step 2

Click the [Install] button.

→ The Installation will start. When installation is complete and the completion window is displayed, click the [Finish] button.

Note:

- When the viewer software is installed, the ActiveX control will be installed at the same time.
-

Uninstall the viewer software

Step 1

Open "Uninstall a program" in "Control Panel".

Step 2

Select "WebVideo ActiveX" (the program to be deleted) from the presently installed programs, and then right-click on it. Select "Uninstall" from the displayed right-click menu.

→ The uninstaller launches.

Step 3

Complete the uninstallation by following the instructions of the wizard.

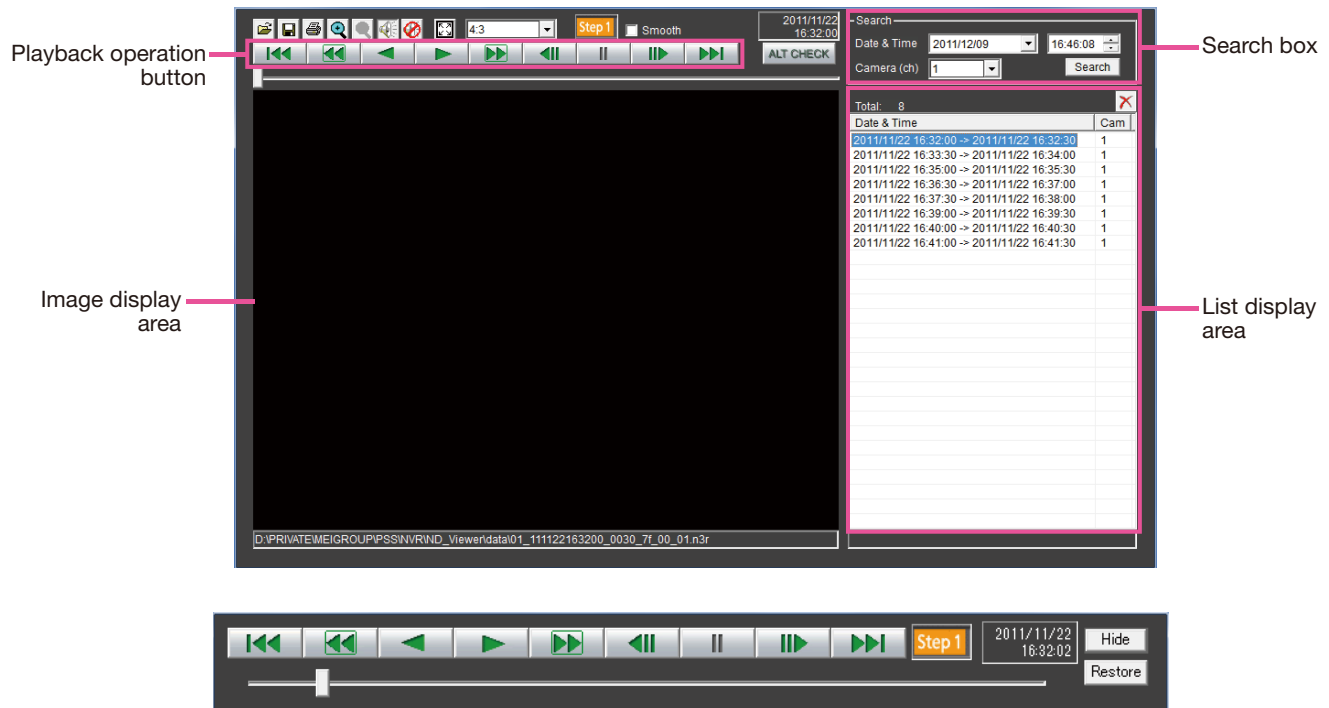
Note:

- When the viewer software is uninstalled, the ActiveX control will be uninstalled at the same time.
-

How to use the viewer software

Select "ND_Viewer" from the start menu ("All programs" – "Panasonic" – "Network Disk Recorder" – "ND_Viewer") or double-click the ND_Viewer icon on the desktop.

For images copied on an SD memory card or external storage devices, double-click the executable file (ND_Viewer.exe) to launch the viewer software (see page 172 for the filing location of the executable file).



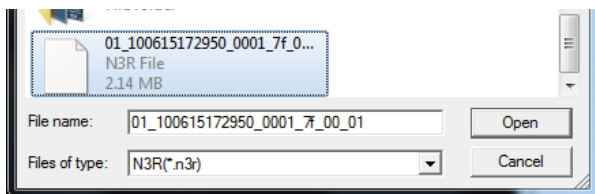
Playback operation window when images are displayed on a full screen

Select recorded images currently being played

Step 1

Click the [Open] button.

→ The "Open" window will be displayed.



Step 2

Select the downloaded image data file (filename.n3r), and click the [Open] button. Another way to select a file is to drag and drop it onto the viewer software without first displaying the window for opening files, → The information on the file selected in the list display area will be displayed.

Date & Time: Displays a start time and an end time for copying the recorded images.

Cam: Displays the camera number.

Note:

- Do not change the file name of the copied or downloaded image data. If the file name is changed, the file information will not be displayed correctly.
- It is possible to select multiple files (up to 100 files) by clicking the desired files while holding down the [Ctrl] key or the [Shift] key and display all of them in a list by drag & drop.
- The files can be sorted by start date & time in ascending or descending order by clicking the header of the list display area,
- To add image data to the list display area, right-click the list and select [Add file] from the menu displayed. When the window for opening files is displayed, proceed to Step 2. The image data added will be displayed on the sorted list.

- When the number of displayed image data files has reached 100, no more files can be added. The total number of selected image data files is displayed under "Total:" on the list.
 - Clicking the  button will delete all data displayed on the list. Another way to clear the list is to right-click the list and select [Clear all list].
 - When there is a data in the same directory as the viewer software or the "data" folder in the same directory, the data will automatically be loaded for playback.
 - It is possible to change the aspect ratio of the image display area by selecting the ratio from . Select the setting in accordance with the aspect ratio and the image capture size of the image data.
-

Playback downloaded images

Use the playback operation button to play downloaded images. If the same camera channel is displayed on the list, the next list image in playback mode or the previous list image in reverse playback mode will be played back consecutively. If the same camera channel is not displayed on the list, playback will stop, the image display area will turn black and playback will be paused.

Note:

- When starting playback of password protected data, the password entry screen will be displayed. Enter the required password.
 - Clicking the  button in playback (or the  button in reverse playback) will play the next (or previous) images on the list of the camera whose images are currently being played back.
 - Clicking the  button will enlarge the image. Clicking the  button will reset the image to its original size.
 - If there is audio data (filename.n3a), the /[] buttons will be displayed. Click these buttons to play back with or without audio.
 - When a web browser and the viewer software are running at the same time, audio may not be played properly. To play audio correctly, use either the web browser or the viewer software and close the other.
 - Playback images and audio may sometimes not be synchronized exactly.
 - When the [Search] button is clicked after selecting "Date & Time" and "Camera(ch)" in the search box, playback of the image data of the selected camera data will start from the top of the data corresponding to the selected date & time.
 - Clicking the  button will display the image on a full screen. Clicking the [Restore] button on the operation window or pressing the [Esc] key on the keyboard will return the image display to the previous status.
 - Clicking the [Hide] button or right-clicking the mouse can hide the playback operation window.
 - Mark the "Smooth" checkbox to display the fast playback images more smoothly. The fast playback speed may be limited depending on the performance of the PC in use or process status.
-

Detect alterations

It is possible to detect alterations in data (☞ page 169) if a code for alteration detection has been attached to the downloaded data.

When data to which the alteration code has been added is selected, the [ALT CHECK] button will be displayed. Clicking the button starts alteration detection and displays the result in a window.

[OK (Not Altered)]: No alteration was detected.

[NG (Altered)]: Alteration was detected.

Save still images

Save an image displayed in the image display area as a JPEG file on a PC.

Step 1

Click the [] button.

→ The "Save As" window will be displayed.



Step 2

Enter the file name and select "Save as type: JPEG (*.jpg)". Designate the folder and click the [Save] button.

→ The image data will be saved.

Save image data (copy)

Save selected image data (filename.n3r) in any folder on the PC.

Step 1

Right-click the list and select [Copy] from the displayed menu.

→ The "Save As" window will be displayed.

Step 2

Designate the folder name and destination drive and click the [Save] button.

→ The image will be copied and saved.

Note:

- It is not possible to operate the viewer software while copy is in progress.
-

Print the displayed image

Print the image displayed in the image display area.

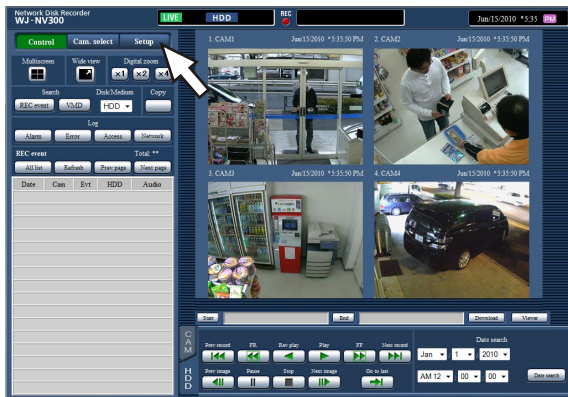
Pause playback at the desired point and click the [] button. When printing an image whose extension is "n3r", the date & time when paused using the viewer software will be printed.

Setup

Basic operations

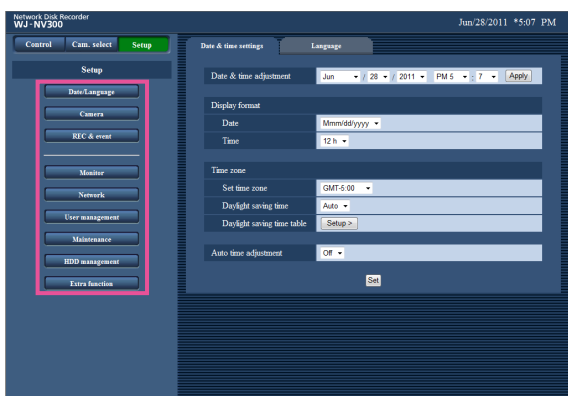
Step 1

Click the [Setup] button.



Step 2

Click the button for the desired menu.



Step 3

Click the button for the desired submenu.

Step 4

Configure each setting item. Click the [Set] button after completing the settings.

→ The settings will be applied. When moving to another page without clicking the [Set] button, the configured settings will be canceled.

Important:

- If the settings are applied, other login users will be forcibly logged out.
- If the settings relating to the user management are applied, all login users will be forcibly logged out.
- Recording may not be performed for around 4 seconds just after the settings are applied.

Note:

- If the license for the Additional Business Intelligence Kit has been registered, it is possible to save the statistics data on a PC. Refer to the Operating Instructions of the Additional Business Intelligence Kit for further information about the statistical processing and how to operate.

Configure the settings

It is possible to configure the settings of the recorder using a web browser.

Refer to page 76 for setup items that can be configured from the web browser and their further information.

Update the firmware

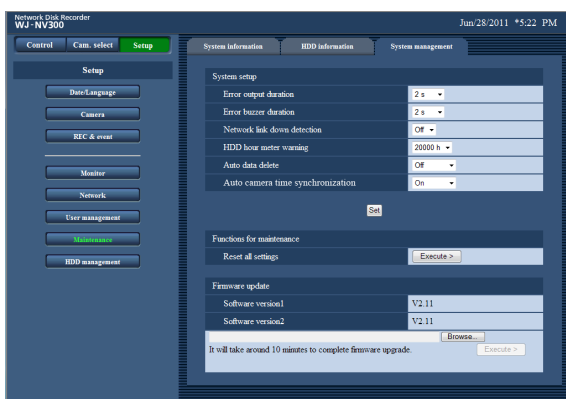
To update the firmware of the recorder to the latest version, proceed as follows.
Refer to page 68 for the operations when the firmware is saved on the SD memory card.

Step 1

Download the firmware of the latest version onto a hard disk drive of a PC.

Step 2

Click the [Maintenance] button and then click the [System management] tab.



Step 3

Designate the downloaded firmware by clicking the [Browse...] button of "Firmware update".

Step 4

Click the [Execute >] button.

→ The confirmation window will be displayed to start the update procedure.

Note:

- Contact your dealer for further information about the firmware update.
-

Notification by e-mail

Alarm mail

The camera/PC port address are indicated in an alarm mail as follows.

Contents of the alarm mail (example)

In NV300 (192.168.0.250), alarm was occurred.

Occurrence date and time: xxxx-xx-xx xx:xx:xx GMT+xx:xx (Example. 2010-1-1 12:00:00 GMT+9:00)

Alarm descriptions: Alarm descriptions, camera channel or alarm number will be described.
(Example: SITE ALARM 5ch)

URL: http://192.168.0.250/

Warning mail

The following mail will be sent to notify of a trouble occurrence to a registered address when the trouble occurs.

NV300 (192.168.0.250) Status notification

Occurrence date and time: xxxx-xx-xx xx:xx:xx GMT+xx:xx (Example. 2010-1-1 12:00:00 GMT+9:00)

Status: MAIN THERMAL ERROR

Indication	Description
Date & time	Date & time when the trouble occurred will be displayed.
Status	The description of the trouble will be displayed. xx indicates the camera number, x indicates the unit number, y indicates the HDD number
	Thermal trouble: Main unit: MAIN THERMAL ERROR Extension unit: EXTx THERMAL ERROR
	Alteration detected: ALTERED xxch
	HDD smart warning: Main unit: MAIN-y SMART WARNING Extension unit: EXTx-y SMART WARNING
	HDD hour meter warning: Main unit: MAIN-y HOUR METER WARNING Extension unit: EXTx-y HOUR METER WARNING
	Auto remove of link: Main unit: MAIN-y LOGICALLY REMOVED Extension unit: EXTx-y LOGICALLY REMOVED
	Cooling fan error: Main unit: MAIN FANy ERROR Extension unit: EXTx FANy ERROR (y indicates the fan number)
	NW camera error detection: CAM xx COMMUNICATION ERROR
	Network camera error detection (audio): CAM xx COMMUNICATION ERROR(AUDIO)
	NW camera error recovery: CAM xx COMMUNICATION RECOVERED
	Network camera error recovery (audio): CAM xx COMMUNICATION RECOVERED(AUDIO)
	HDD remove error: Main unit: MAIN-y SWAP WARNING Extension unit: EXTx-y SWAP WARNING
	Format error: Main unit: MAIN-y SINGLE FORMAT ERROR Extension unit: EXTx-y SINGLE FORMAT ERROR EXTx RAID5 FORMAT ERROR EXTx RAID6 FORMAT ERROR

Indication	Description
Status	RAID5 1down: EXTx RAID5 1 DOWN
	RAID5 2down: EXTx RAID5 2 DOWN
	RAID6 1down: EXTx RAID6 1 DOWN
	RAID6 2down: EXTx RAID6 2 DOWN
	RAID6 3down: EXTx RAID6 3 DOWN
	HDD RAID5 Recovery failure: EXTx RAID5 RECOVERY FAILURE
	HDD RAID6 Recovery failure: EXTx RAID6 RECOVERY FAILURE
	Copy media FULL: SD MEMORY CARD FULL COPY MEDIUM FULL
	Number of data on the copy medium exceeded: OVER LIMITATION ON SD MEMORY CARD OVER LIMITATION ON COPY MEDIUM
	Starting mirroring recovery MIRROR RECOVERY START
	Starting RAID5 recovery EXTx-y RAID5 RECOVERY START
	Starting RAID6 recovery EXTx-y RAID6 RECOVERY START
	Complete mirroring recovery MIRROR RECOVERY COMPLETE
	Complete RAID5 recovery EXTx RAID5 RECOVERY COMPLETE
	Complete RAID6 recovery EXTx RAID6 RECOVERY COMPLETE

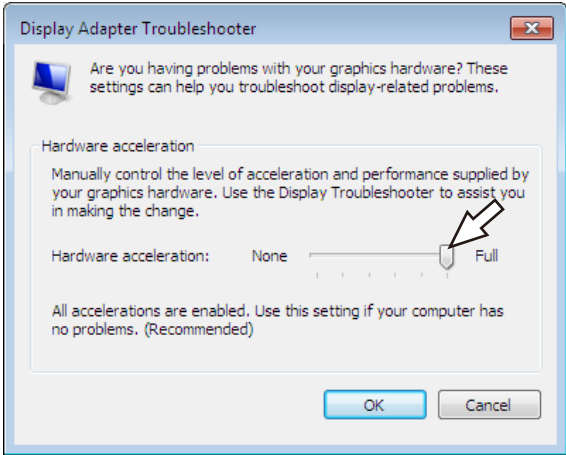
Troubleshooting

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 in the table or a problem is not described below.

Symptom	Cause/solution	Reference
Recording cannot be performed.	Is "On" is selected for "Recording mode"? Check whether the settings are appropriate.	48
	Are the settings of the schedules appropriate? Check whether the settings are appropriate.	40
Cannot play back images.	Are there any recorded images on the hard disk drives? Check if there are recorded images.	72
	Users who have logged into the system may not be authorized to playback images recorded on the hard disk drives. Check the user level settings of these users.	60
	Users who have logged into the system may not be authorized to display the images from cameras. Check the user level settings of these users.	60
Audio is not output from the camera. Or audio is accompanied by noise.	Is the audio encoding format of the camera set to "G.726(32kbps)"? This recorder supports "G.726(32kbps)" only. Check the setting of the connected camera.	—
	Is other than "Selected camera" selected for "Audio output camera" in the "Monitor" - "Advanced setup" tab? Check whether the setting is appropriate.	51
Cannot control the cameras.	Check whether the camera numbers and IP addresses that are displayed on the setup menu - the "Advanced setup" menu - the [Camera] page - [Camera registration] tab.	19
	Check if the user name and password has correctly been entered on the setup menu - the "Advanced setup" menu - the [Camera] page - [Camera registration] tab.	21
The message "Please insert a medium." is displayed even after an SD memory card or an external storage device is inserted.	If operations are performed soon after an SD memory card or an an external storage device is inserted, it may take time to recognize the media. Close the message window and wait for a while before retry.	—
The alarm buttons are the "Face matching stopped" state even though no operations are performed to stop the face matching function.	Are the settings configured as follows? Compression: H.264 Image capture size: SXVGA (1280 x 960) Frame rate: 5 ips Image quality: SF The face matching function will become unavailable if the settings are changed. Check whether the settings are appropriate.	42

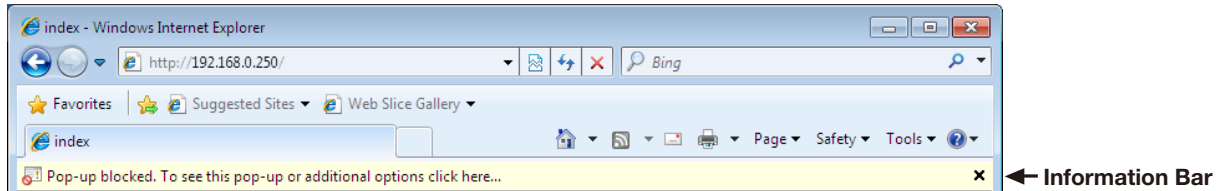
Symptom	Cause/solution	Reference
Cannot access from the web browser.	Is the Ethernet cable firmly connected to the 10BASE-T, 100BASE-TX or 1000BASE-T port? Confirm the cable is firmly connected.	Installation Guide
	Is the connection indicator of the network port lit? When it is not lit, connection to a LAN is not established or a network is not working correctly. Confirm that the connection indicator of the network port is lit. Refer to the system administrator if it is not lit.	Installation Guide
	Is the valid IP address set? Refer to a system administrator for further information about the settings.	52
	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 about the settings.	52
	Are there contradictions between the address and the network subnet to be accessed? When the recorder and the client (PC) are on the same subnet, is the same subnet set for the IP addresses of the recorder and the PC? Or is "Use Proxy Server" for the settings of the browser checked? When accessing the recorder in the same subnet, entering the address of the recorder in the "Don't Use Proxy For These Addresses" box is recommended.	52
The image displayed on the browser 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.	–
Image refresh of the browser is slow. Response of the browser is slow.	Isn't the network traffic heavy? These symptoms may occur when the network traffic is heavy.	–
A pop-up is not displayed on the browser.	It may be possible that a pop-up blocker other than Internet Explorer is activating. Check the installed software and cancel the pop-up blocker.	–
Cannot close the authentication window displayed when displaying the operation window.	Are the correct user name and password entered? Confirm the correct user name and password.	61, 62
Audio is interrupted during playback using the viewer software.	When playing images recorded at a higher frame rate, audio may sometimes be played interrupted.	–
Cannot play the downloaded recorded images.	When any setting of the setup menu has been changed during the download, the download will be canceled automatically. In this case, the downloaded file is not a complete file and it is impossible to play it.	–

Symptom	Cause/solution	Reference
An error message is displayed when trying to launch the viewer software by dragging and dropping multiple files onto it.	Decrease the number of the selected files or select files after launching the viewer software.	—
When displaying images on a multi-screen, images from two cameras or more are displayed in sequence on a screen of multiscreen.	- This may occur due to the display adapter and driver combination. When this occurred, update the driver of the display adapter to the latest version first. - If updating the driver does not solve the problem, adjust the hardware acceleration as follows. The following are descriptions when using Windows 7. - After closing all web browser windows, right-click on the desktop and select "Screen resolution" from the displayed pop-up menu. - Click "Advanced settings" on the "Screen resolution" window. - Select the [Troubleshoot] tab, and click the [Change settings] button. - Disable the DirectDraw acceleration by adjusting the performance level of "Hardware acceleration" on the "Display Adapter Troubleshooter" window. 	—
When switching cameras during live image display, images becomes coarse for a moment or the size of characters displayed on image from the camera changes.	This product automatically change the resolution setting of the camera according to the screen pattern of the main monitor or the sub monitor. Depending on the timing, resolution of images from the previously selected camera before switching may remain being applied for a moment after switching. In addition, depending on the camera model, the size of character may look different after switching since the size of character is different for each resolution.	—

Message displayed on the information bar

Depending on the operation system in use, the following may occur. Follow the instructions below when the following occurred. By performing the following solutions, other applications may not be affected.

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



Symptom	Cause/solution	Reference
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". When the warning window is displayed, click the [Yes] button.	—
The following message is displayed on the information bar. "This site might require the following ActiveX control: 'wvasetup.exe' from 'Panasonic System Networks Co., Ltd.'. Click here to install..."	Click the information bar and select "Install ActiveX Control...". Click the "Install" button on the displayed "Security Warning" window.	—
The following message is displayed on the information bar. "To help protect your security, Internet Explorer blocked this site from downloading files to your computer. Click here for options..."	Click the information bar and select "Download File...". When downloading fails even though you selected "Download File...", perform the following operation. 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 "Downloads", select "Enable" for "Automatic prompting for file downloads". Then click the [OK] button. When the warning window is displayed, click the [Yes] button.	—
The following message is displayed on the information bar when tried to execute a downloaded file. "The publisher could not be verified. Are you sure you want to run this software?"	Click the [Run] button.	—
Unnecessary status bar or scroll bar is displayed on the pop-up window. An URL is displayed on the pop-up title bar and the title is not displayed completely.	- 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. When the warning window is displayed, click the [Yes] button. - In addition, when using Internet Explorer 7.0, select "Enable" for "Allow websites to open windows without address or status bars".	—

Glossary

ActiveX Control

A software module developed by Microsoft. It is used to add functions, downloaded from a web server via the Internet or intranet, to Internet Explorer. The recorder uses it to display video.

Bit rate

Indicates how many bits of data can be processed or transmitted in a unit of time. Generally, the units are in bps, or bits per second. Used to indicate the compression rate of video and audio data, and how much data a communications line can send and receive in 1 second.

Broadband router

Router used to access the Internet via high-speed ADSL or fiber optic lines.

Camera operation

Operations of the camera connected to the recorder such as pan and tilt (horizontal and vertical position), zooming, focusing, brightness (iris adjustment), pre-set motions (movement towards a set horizontal and vertical position) and auto functions (automatic camera rotation, etc.).

DDNS (Dynamic DNS)

A technology for dynamically translating DNS server information to enable the transfer of only differences in information between DNS servers (refer to "DNS").

Default gateway

Network device used as a gateway for networks, such as a local network, to access PCs on an external network.

DHCP (Dynamic Host Configuration Protocol)

A protocol that enables PCs to automatically get information from a server needed for accessing a network.

Digital zoom

The function that enlarges live images and playback images during playback. The digital zoom enlarges the images by the recorder and is separate from the zoom function included as part of the camera operations for enlarged images.

DNS (Domain Name System)

The long lists of numbers or IP addresses that are used in network environments are difficult to remember, which makes them impractical. This is why PCs are given an easy-to-follow name (domain name) which is converted to an IP address before they are communicated with. The DNS provides translation between domain names and IP addresses.

Event

Indicates an occurrence that causes the recorder to take an event action. Events include terminal alarm, command alarm, camera site alarm and face matching alarm, etc.

Event action

A specific action to be taken at an event occurrence. When "ALM" is selected, the occurrence of an event is announced by displaying a notification on the monitor, lighting the status indicators and sounding the buzzer. When "ADM" is selected, the occurrence of an event will not be announced and only recording and filing of event logs will be performed. In OFF mode, only an event log is filed.

Event recording

Function for starting recording automatically when an event occurs. Event recording includes Pre-event recording that records images before the event and event recording that records images after the event.

Face matching

Refers to a function that detects facial features of people in images and matches them against similar facial features recorded earlier. The recorder can be set up to output an alarm signal when the detection result is positive.

FHD(Full HD)

Resolution with 1920 x 1080 pixels.

Firewall

A type of security used when accessing outside networks like the Internet. A PC is used to prevent computers outside a local network from accessing the network.

Frame rate (ips)

Refers to the unit that determines the smoothness with which the recorded images are played back. "ips" indicates the number of recorded frames in 1 second. The higher the number, the smoother the movement, but the available recording time becomes shorter.

FTP (File Transfer Protocol)

A protocol that is commonly used for transferring files over the Internet.

Full duplex

Communications method that allows simultaneous sending and receiving by transmitting in both directions using an independent sending line and receiving line.

Global (IP) address

IP address assigned to each device connected to the Internet that is equivalent to an address on the Internet. IP address is required for Internet communications. In contrast, IP address freely available to assigned to each device within an intranet is called as "Private (IP) address".

H.264

One of the compression methods of moving images.

Half duplex

Communications method that switches between sending and receiving using a single communications line.

HD(High Definition)

Resolution with 1280 x 720 pixels.

HDD

Stands for Hard Disk Drive (a high capacity storage device). This product uses hard disk drives instead of video tapes for recording.

HVGAW(Half VGA Wide)

Resolution with 640 x 360 pixels.

Image quality

Image quality varies depending on the compression rate. In this product, the following image qualities (compression rates) are available and they can be selected for each camera. XF (Extra Fine: Extra fine quality), SF (Super Fine: Super high quality), FQ (Fine: High quality), NQ (Normal: Standard quality)

Internet

A global system of interconnected computer networks. It is required to contract with an Internet service provider to connect to the Internet.

IP address (Internet Protocol Address)

The identification number assigned to PCs connected via IP networks such as the Internet or an Intranet, or to individual communications devices. Do not assign the same address to multiple devices, especially on the Internet.

LAN (Local Area Network)

A communications network for connecting PCs, printers and other network devices in a relatively small area such as in a building or floor of a building or campus in which data is transferred.

MAC address (Media Access Control address)

Fixed physical address assigned to network devices. Devices send and receive data based on this.

M-JPEG

Indicates a video format to sequentially transmit JPEG images from cameras. Some cameras phrase this video codec as just "JPEG".

Multiscreen display

This product can display multiple camera simultaneously while displaying live images or playback images. Displaying of images from 4 cameras or from 16 cameras simultaneously is called as the 4-screen display or 16-screen display respectively.

NAT (Network Address Translation)

A technology for sharing a single global address between two or more PCs.

NTP (Network Time Protocol)

A protocol developed to accurately maintain time among hosts on the Internet.

Pillar box

A display format to which blank space is added to both sides of the video to maintain the aspect ratio.

Plug-in software

Small programs used to add functions to application software.

POP 3

A protocol for receiving e-mail stored on a server on the Internet or an Intranet.

POP 3 Server

A server that supports POP3, currently the most widely used mail sending protocol.

Port number

A sub address set below the IP address to connect multiple parties simultaneously for communication (TCP, UDP, etc.) on the Internet.

Primary (DNS) server

DNS servers usually have more than 2 systems and the primary server is the main system.

Private (IP) address

IP address assigned when connecting primarily to LAN. Private IP addresses can be assigned freely on a network and do not require a formal application. However, because private IP addresses cannot be used to access the Internet, a router or other device it is necessary to assign a global IP address.

Protocol

A set of rules that allows the exchange of data amongst different types PCs with information. The Internet uses the TCP/IP protocol as its base and information is transferred following http and ftp protocols depending on the application.

QVGA

Resolution with 320 x 240 (320 x 180) pixels.

QXGA

Resolution with 2048 x 1536 pixels.

RAID5

Even if a HDD becomes faulty, correct data can be read from the remaining HDDs since 3 or more HDDs are logically regarded as a single HDD and parity data (error correction code data) is automatically attached. Recorded images can be recovered by replacing the failed HDD. 3 or more HDDs are required.

RAID6

Even if 2 HDDs become faulty, recorded images can be recovered using the remaining HDDs since RAID6 has 2 parity data (error correction code data). 4 or more HDDs are required.

Resolution (Image capture size)

Resolution refers to the degree of fineness and quality of the camera pictures recorded by this product. In this product, it indicates the number of pixels used in the image displayed on the screen. A horizontal resolution of 640 pixels and a vertical resolution of 480 pixels is expressed as 640x480.

Router

Placed in between different networks, a router sends data to the proper destination via network. If data on the network is addressed to an external network, routers send the data to the outside of the network after judging the optimum sending route.

Schedule recording

Function that automatically starts video and audio recording on a preset time schedule.

SD memory card (Secure Digital memory card)

A small, lightweight and removable storage device having a large capacity.

Secondary (DNS) server

DNS servers usually have more than 2 systems and the secondary server is the sub system. If there is trouble with the primary server, the secondary server takes over.

SMTP (Simple Mail Transfer Protocol)

A protocol for sending e-mail on the Internet or an Intranet. Used when transferring mail between servers or when clients send mail to the server.

SMTP authentication (Simple Mail Transfer Protocol authentication)

SMTP mail transfer protocol appended with a user authentication function. It authenticates passwords and user accounts between SMTP servers and clients. Both SMTP servers and clients must support SMTP authentication.

SMTP server

A server that supports SMTP, currently the most widely used mail transfer protocol.

SNMP (Simple Network Management Protocol)

A protocol for monitoring and managing networked communications devices, such as routers, PCs, cameras and Network Disk Recorders via a network.

Subnet mask/Subnet prefix length

Numerical value to define whether to use several bits for a network address to distinguish among subnet IP addresses in a network. According to the values, devices can determine which part of the address is the network address and which part is the host address.

Subnet

A small network used as a unit of administration when a larger network is divided into smaller networks. Large networks in corporations, for example, the network can be broken down into smaller networks called "subnets" to make the network more manageable and lines used more efficiently. In this case, these smaller networks are called subnets.

SVGA(Super VGA)

Resolution with 800 x 600 pixels.

SXVGA

Refers to a resolution of 1280x960 pixels.

TCP/IP (Transmission Control Protocol/Internet Protocol)

The standard network protocol for the Internet and Intranets.

Time zone

A time zone is a region or a country that has uniform standard time.

URL (Uniform Resource Locator)

An address for locating information resources such as documents and images on the Internet.

VGA (Video Graphic Array)

Resolution with 640 x 480 pixels.

VMD (Motion detection) search

The function that automatically detects motion in images. In this product, it is possible to search for date & time of motion detection in recorded images.

VPN

Service used to make public lines as private lines. Many companies are using this as a new medium of communication instead of costly private lines. Depending on service, VPN also provides a secure line using authentication technology and encryption.

WAN

Allows physically separated PCs, such as between the head office and a branch office, to connect via a phone line or private line data for exchanging.

Web browser

A software application which enables to display web pages. Microsoft Internet Explorer is one of the most widely used web browser.

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