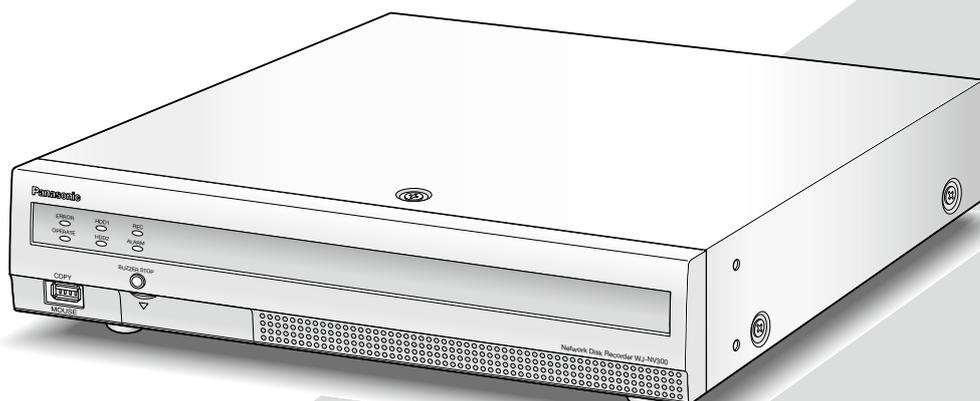


# Panasonic®

## Operating Instructions

### Network Disk Recorder

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



(This illustration represents WJ-NV300K.)



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.



























---

**[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.



























## 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 > Camera setup > Refresh interval

Camera registration    Camera setup

Refresh interval

Select the setting items.  
When the [Transmission] button is clicked, the setting will be applied to the selected camera, and the transmission result will be displayed.  
- Recording will stop temporarily after transmission.

Refresh interval: 1 s

Camera selection

Camera	Select	Results
1	<input type="checkbox"/>	
2	<input type="checkbox"/>	
3	<input type="checkbox"/>	
4	<input type="checkbox"/>	
5	<input type="checkbox"/>	
6	<input type="checkbox"/>	
7	<input type="checkbox"/>	
8	<input type="checkbox"/>	
9	<input type="checkbox"/>	
10	<input type="checkbox"/>	
11	<input type="checkbox"/>	
12	<input type="checkbox"/>	
13	<input type="checkbox"/>	
14	<input type="checkbox"/>	
15	<input type="checkbox"/>	
16	<input type="checkbox"/>	

Transmission    Back

### [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.
-























---

### ■ 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.















































---

**[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.
-

















---

**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.
-













































---

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/9-screen/16-screen on the sub monitor. When several cameras are selected on 1-screen or 4-screen/9-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. When the aspect ratio of the sub monitor (BNC) is 4:3, the vertically long images will be displayed compared with the images of the sub monitor (HDMI).
  - 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)

---

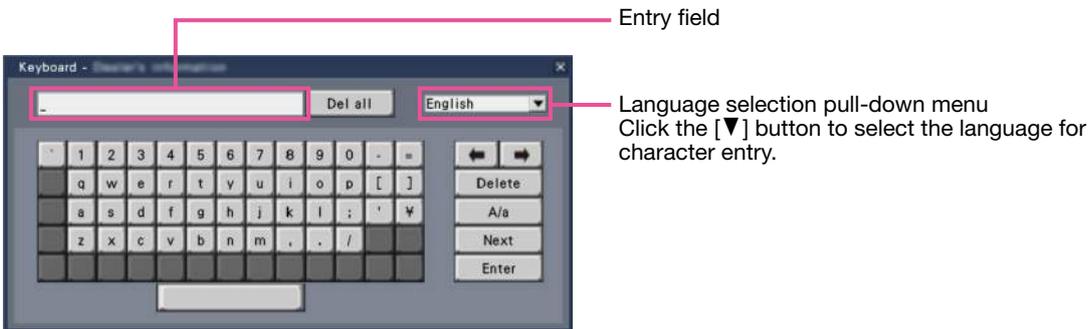
## Note:

- 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 [x] 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:**

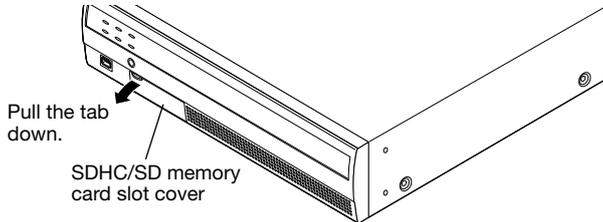
- If "On" is selected for the "Auto login" (☞ page 59), login will be automatically performed by the user registered in "Auto login user" in the logged-out state.
-

# Use an SD memory card

## Insert an SD memory card (option)

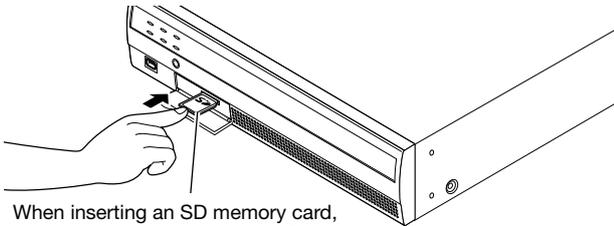
### Step 1

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.



When inserting an SD memory card, confirm that the label on the SD memory card is upside and only the upper right corner of the card has different shape.

### 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:

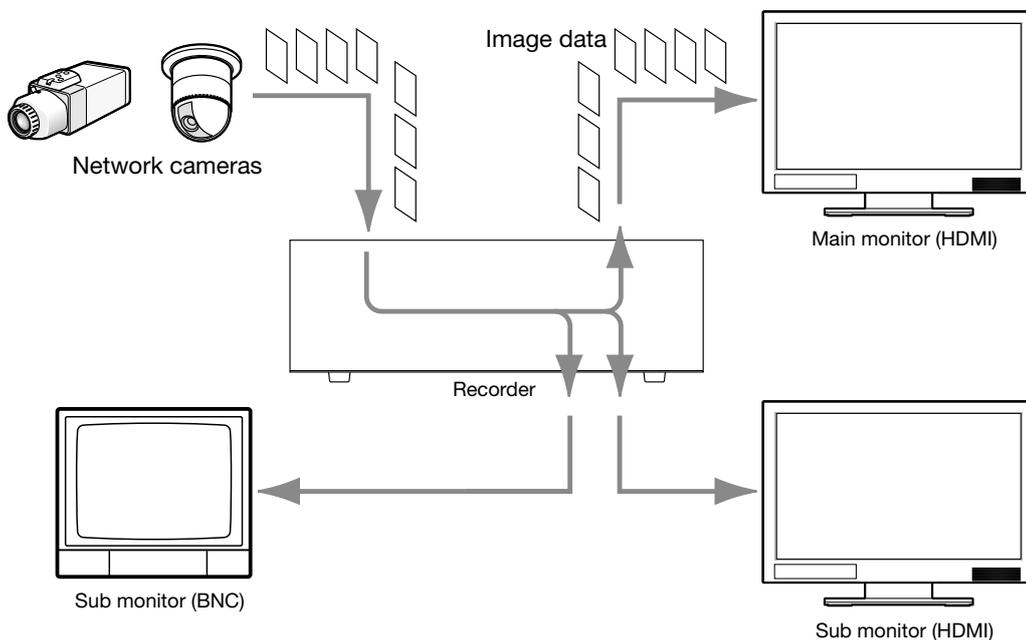
- The default administrator name and password are as follows.

<b>Administrator name</b>	<b>: ADMIN</b>
<b>Password</b>	<b>: 12345</b>

- 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

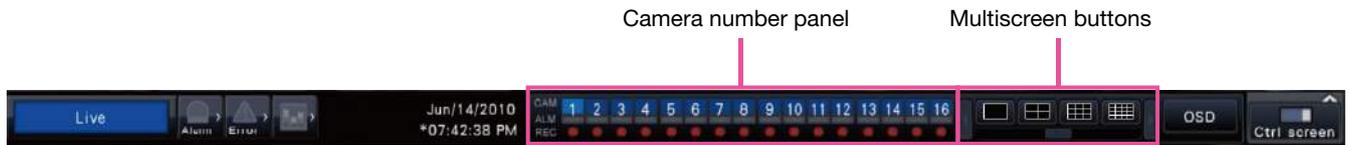
When displaying images on a 1-screen or 4-screen, the images can be enlarged/reduced. (Page 111)

### 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

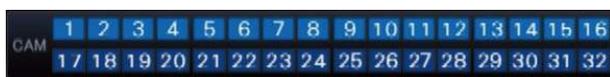
Blue: Camera is registered and image display area is not displaying images.

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.

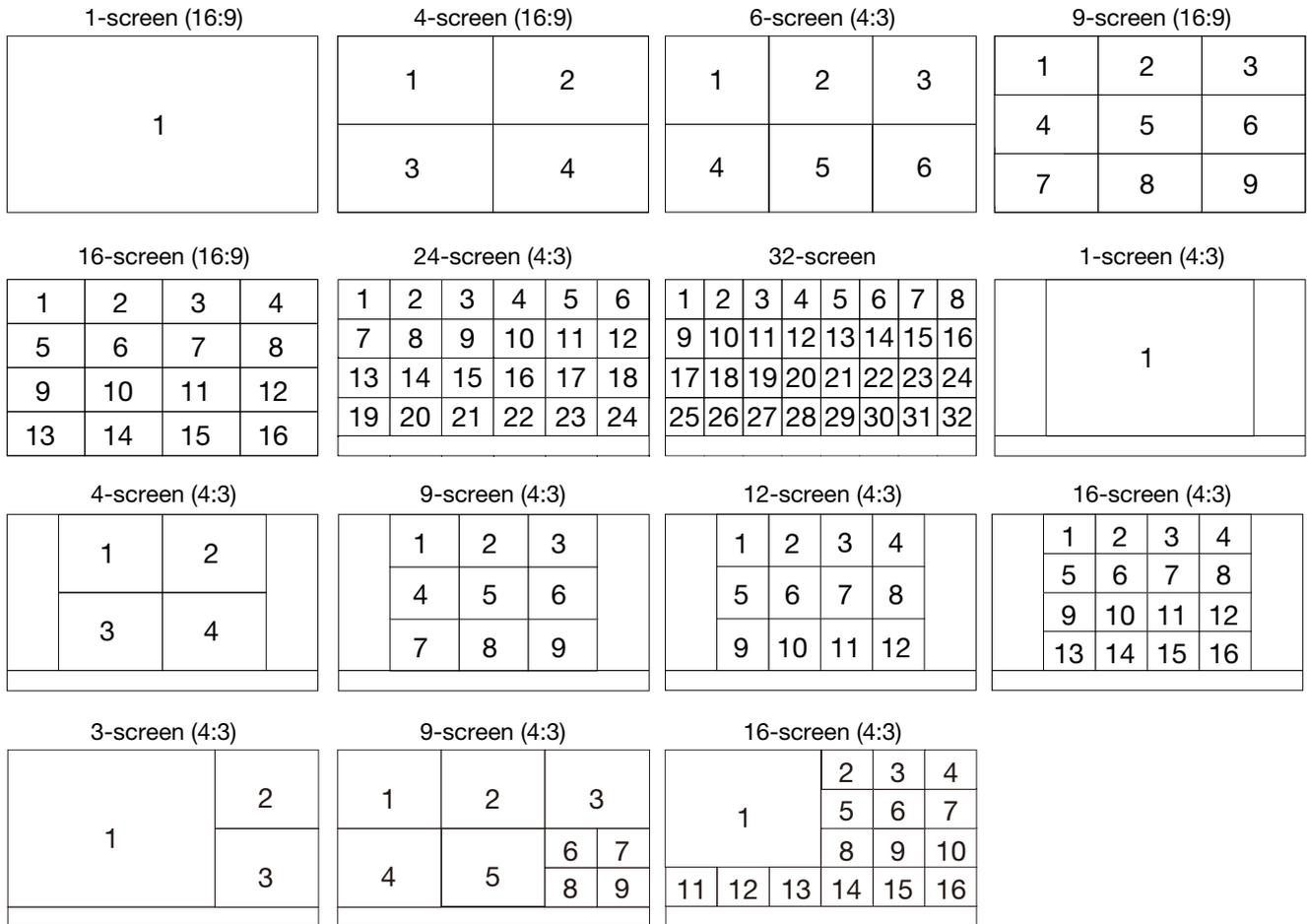
Camera license number	Multiscreen buttons
9	
16	
24	
32	

### Note:

- It is possible to hide/display the multi-screen selection buttons on the operation panel. Refer to the "Configure other settings relating to monitors" sections (page 51) for further information.
- When 5 or more multi-screen selection buttons are displayed, it is possible to switch the position of displayed buttons using the left/right buttons or the slider.
- The 24-screen and 32-screen display are not available for the sub monitor. (If any of the cameras listed in the "Camera selection" of the "Sub monitor" tab is selected, the sub monitor will be used.)

## Change the camera display position on the screen

The default camera display positions are as follows:



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.)

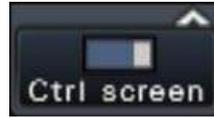
# Switch between control screen and wide view screen

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".

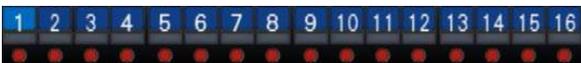
→ The image will be displayed on a 1-screen.

### 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.

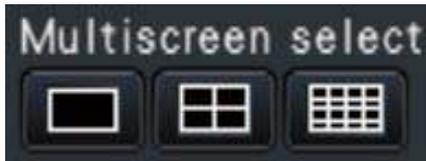
## Displaying images on a control screen

### 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)

## 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



- 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.
- 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" 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.)

---

### 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

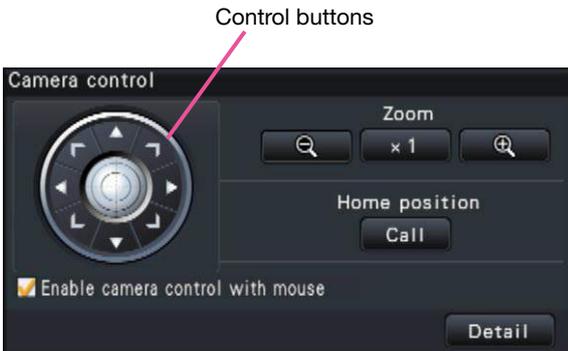
When displaying live images from a camera with the panning/tilting function on a 1-screen or 4-screen, the following camera operations are available.

**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 (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**

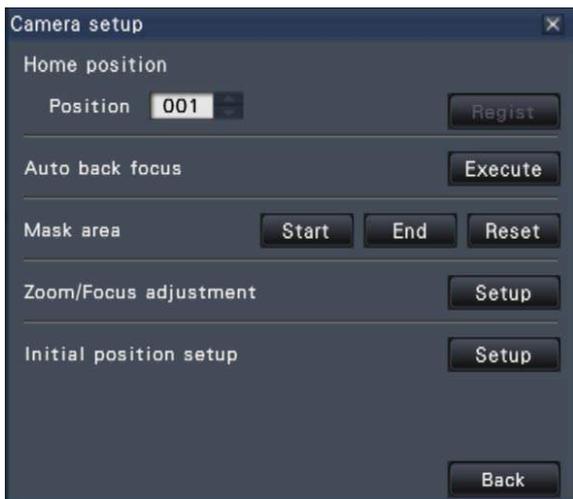
Activates the auto mode function of the camera.

### [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:**

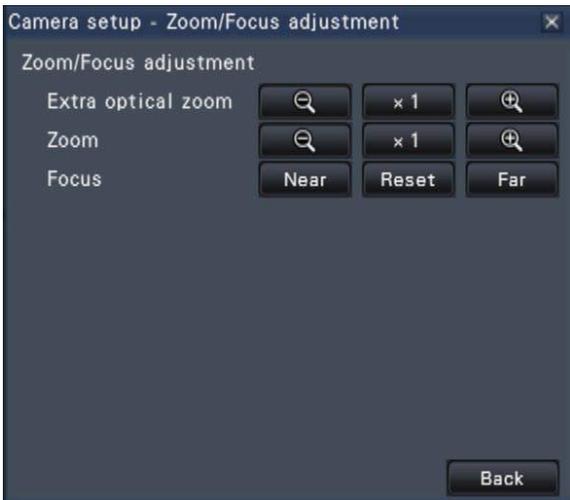
- It is possible to reset all the mask area settings by clicking the [Reset] button.
- 

# 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.

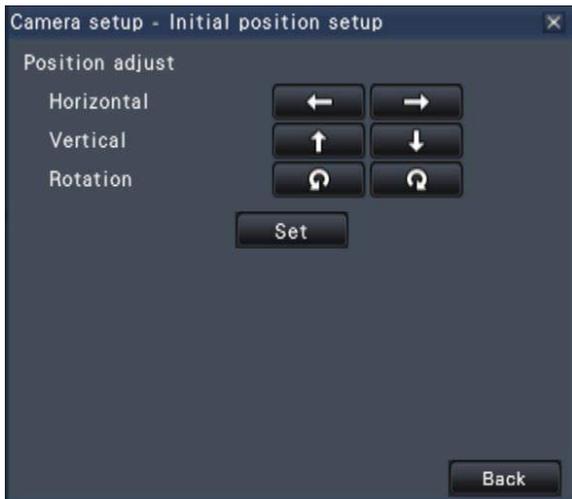
## Initial position setup

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
Alarm action					
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.

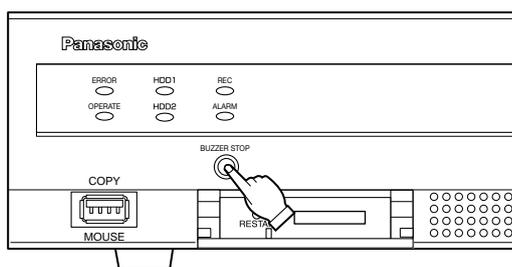
\*3 When "On" is selected for the "Attach alarm information" setting of the camera, i-VMD type information will be displayed in the alarm log. For further information, refer to the operating instructions of the camera in use.

## 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

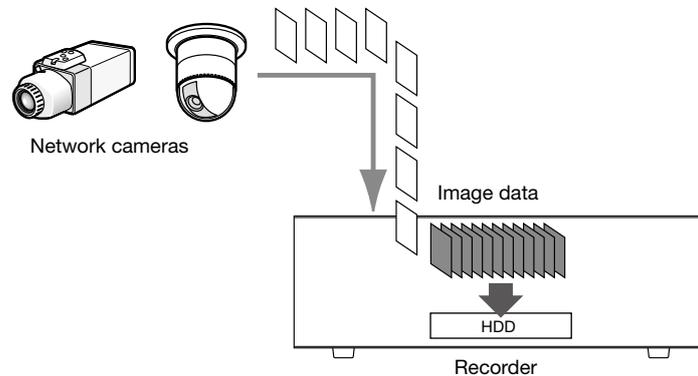
When an error (trouble) occurred on the recorder, the recorder will take the error action (a series of actions that notifies of the error occurrence). Information of the occurred error will be displayed on the status display panel of the main monitor. (Page 98) To cancel an error action, first click 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.

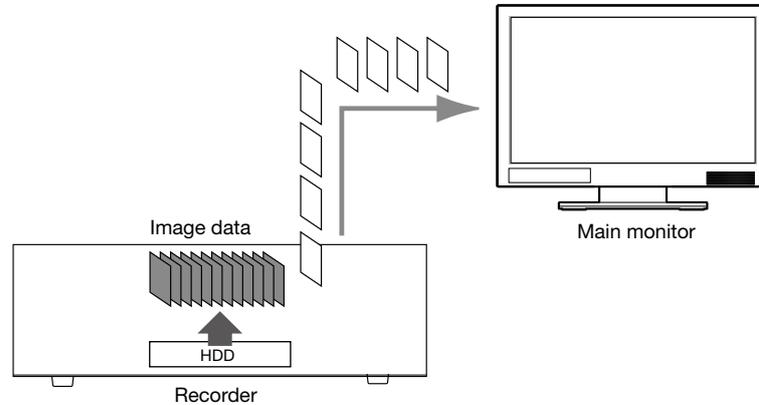
Recording mode	Priority
Event recording	1
Schedule recording	2
Pre-event recording	3

# 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.

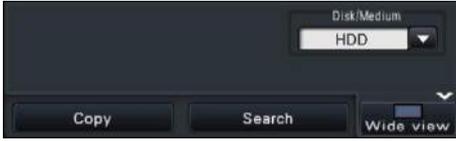
Resolution (Image capture size)	Frame rate	Display
QXGA	30 ips	4-screen
FHD, HD	60 ips	4-screen
QXGA	10 ips, 15 ips	4-screen (sub monitor display or re-encoding transmission enabled)
FHD, HD	30 ips	4-screen (sub monitor display or re-encoding transmission enabled)
SXVGA, SVGA	30 ips	4-screen (sub monitor 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	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	 	<p>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)</p> <p>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)</p> <p>The playback speed will be displayed on the playback status display.</p> <hr/> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>
Next record/Previous record button	 	<p>Clicking the next record button will play back the next later recording.</p> <p>Clicking the previous record button will play back the next earlier recording.</p> <p>When there is no next/previous recorded image to be skipped to, the current playback will continue.</p>
Go to last button		<p>When this button is clicked, playback of the latest recorded images will start. The starting point is around 30 seconds before the date &amp; time of the latest recorded images.</p>
Playback status display		<p>The status of the recorder such as the playback status, pause status etc. will be displayed.</p> <p>The playback speed will be displayed in fast forward/fast reverse mode.</p>
Wide view button		<p>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.</p>
Non-display button (Displayed during playback on a full screen)		<p>Hides the playback operation panel and the date &amp; time operation panel. These panels can be displayed again by the mouse operations.</p>

## 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.

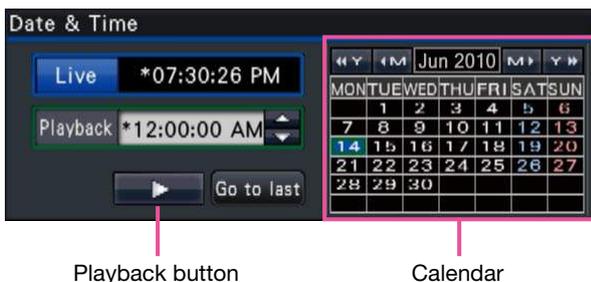
# Play images from a designated point

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 [ $\blacktriangle$ ]/[ $\blacktriangledown$ ] 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 [ $\ll$ Y]/[Y $\gg$ ] button to change the year and the [ $\ll$ M]/[M $\gg$ ] 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.

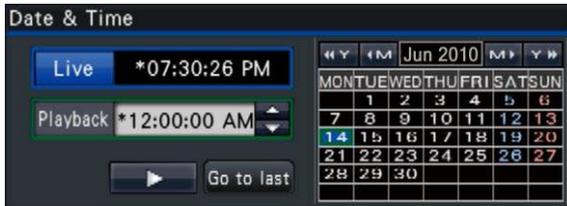
#### Note:

- 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:

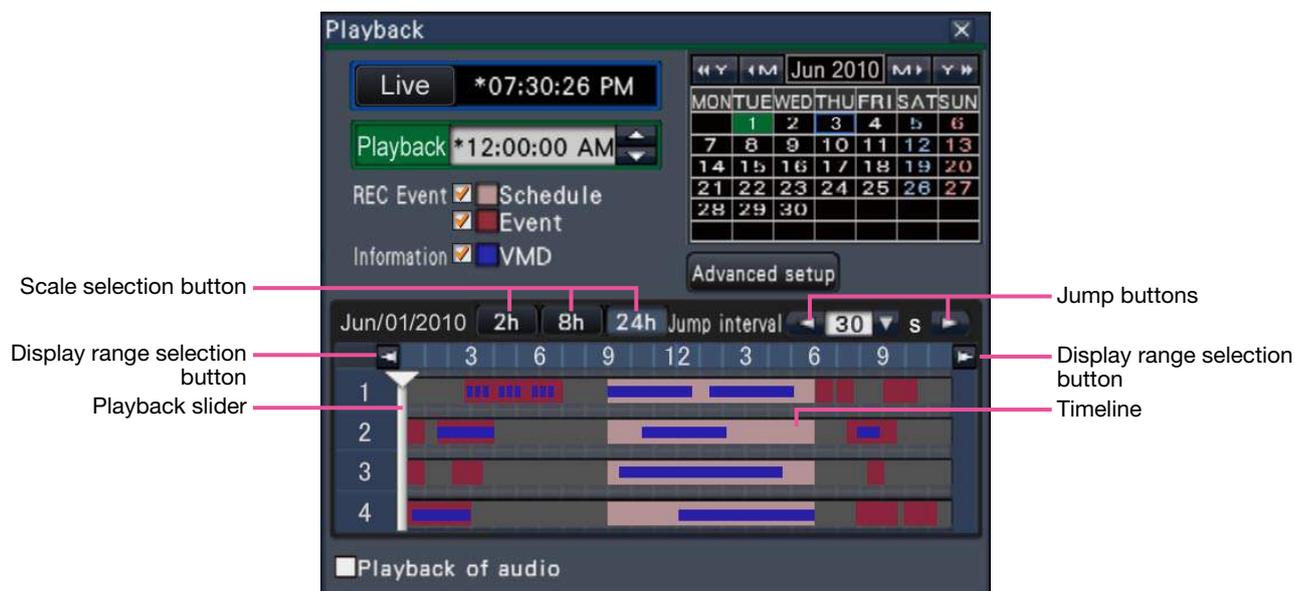
- Playback can also be stopped and live images can also be displayed by the following operations:
    - Clicking the [x] button on the date & time operation panel (playback display)
    - Changing the playback medium
  - When clicking the [Go to last] button while displaying images on a 4-screen, the 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

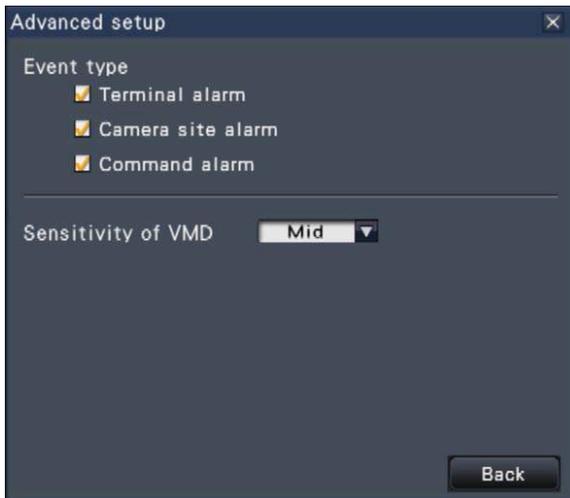
Move the playback point by a given amount of time and play back from that point. Clicking the [<] / [>] buttons will move the playback point by the amount of time specified under [Jump interval].

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.

Alarm log		
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

▲Previous Total:4 Next ▼

### 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.

Error log		
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

▲Previous Total:32 Next ▼

**Remedy**  
Recording images may not have been performed from the time of the error occurrence until the recovery. Check the data.

### 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 play 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 prevent 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.

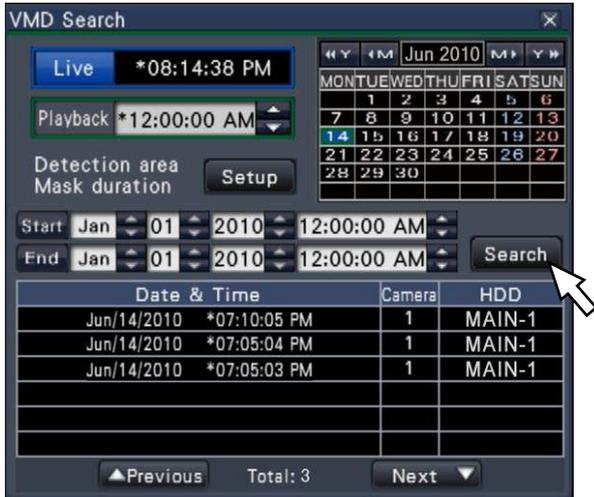
#### Note:

- 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.

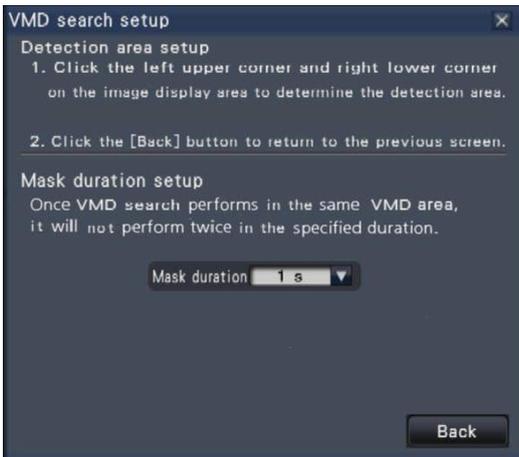
### Step 1

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:**

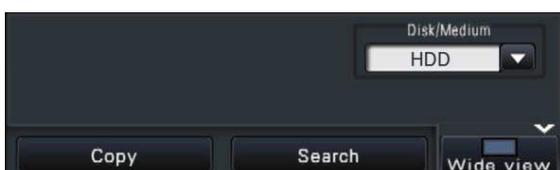
- This product cannot play images copied on an external storage device, Use the dedicated viewer software to play them.

**Step 1**

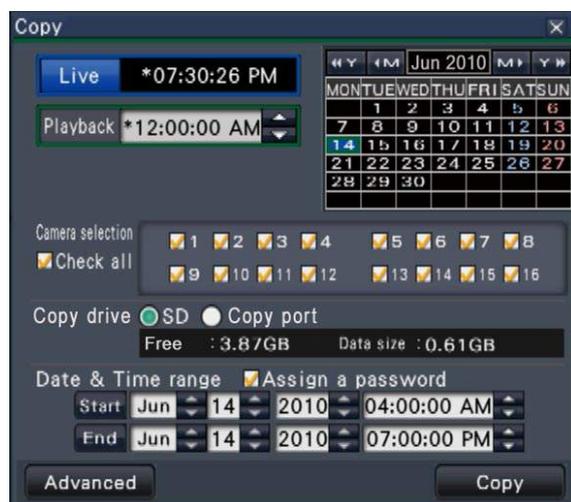
Insert an SD memory card to this product or connect an external storage device to the copy port "COPY".  
(☞ Page 102)

**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:

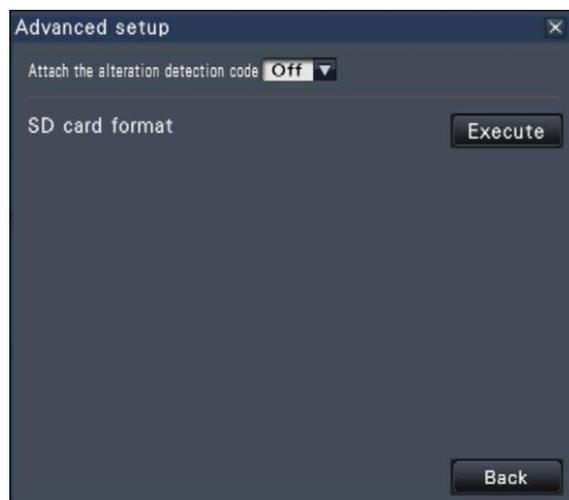
Item	Description
Camera selection	Check the number of the camera whose recorded data is to be copied. Checking [Check all] will copy the recorded data of all cameras.
Copy drive	Indicates the copy destination.
Date & Time range	Specify times and dates to define the range for copying recorded data. Set 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

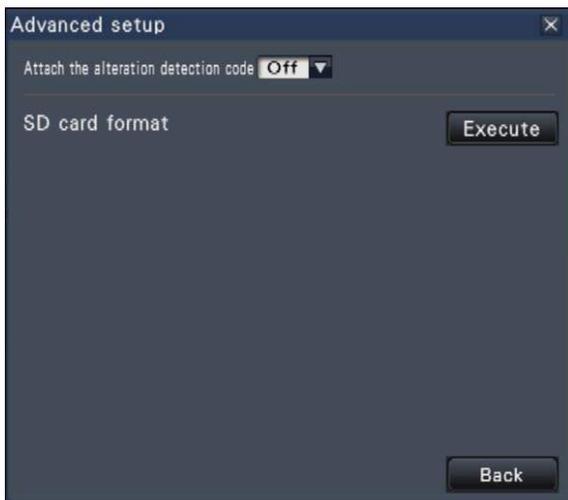
Click the [Copy] button on the operation panel of the main monitor. (☞ Page 135)

→ 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.

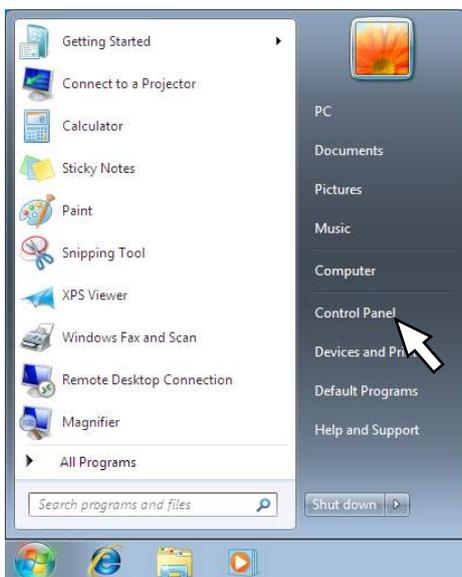
## Configure the network settings of the PC

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.



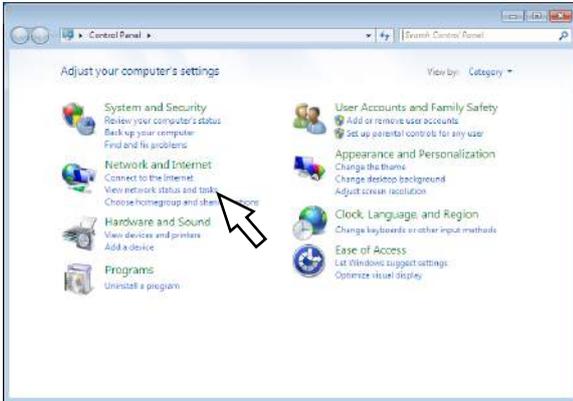
→ "Control panel" will be displayed.

### Important:

- Log in to the PC as an administrator.

## Step 2

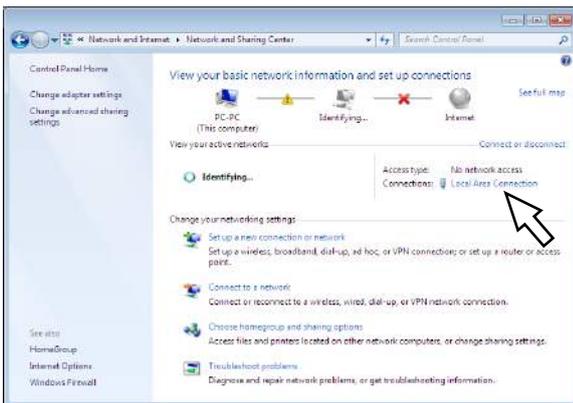
Click "View network status and tasks".



→ The "Network and Sharing Center" window will be displayed.

## Step 3

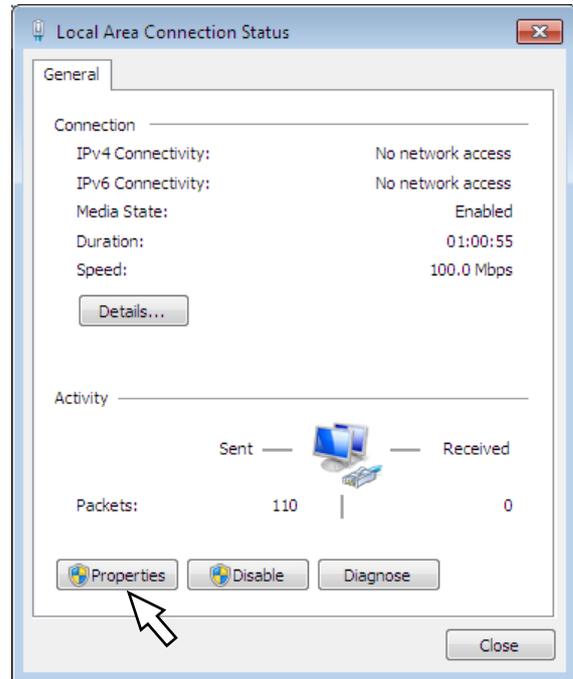
Click "Local Area Connection".



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

## Step 4

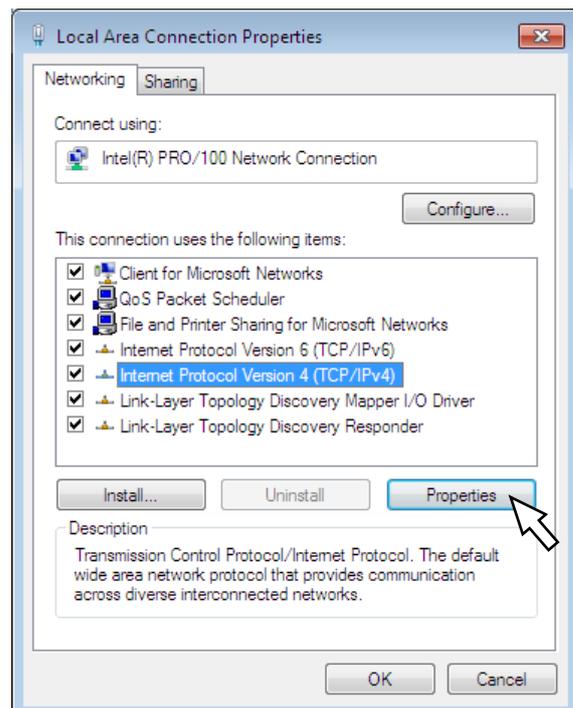
Click [Properties]



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

## Step 5

Click "Internet Protocol Version 4 (TCP/IPv4)", and then [Properties].

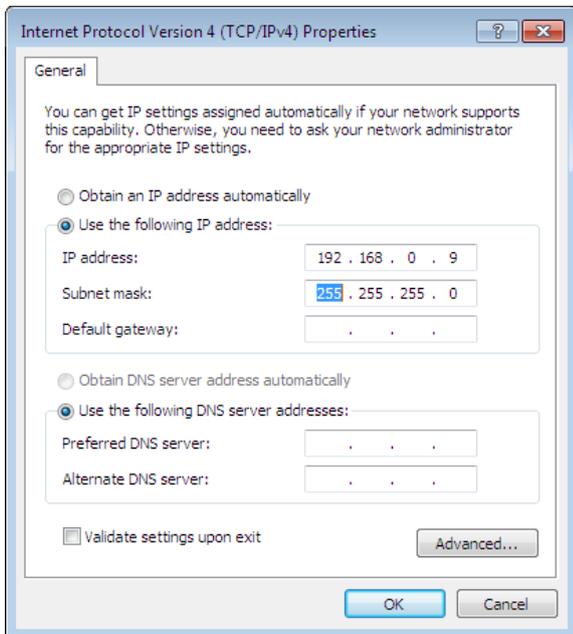


→ The "Internet Protocol Version 4 (TCP/IPv4) Properties" window will be displayed.

## 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

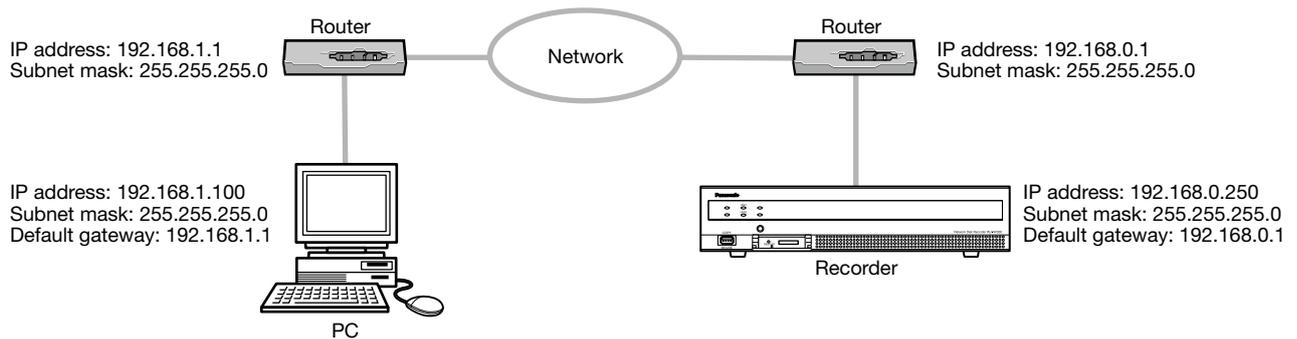
It is possible to enhance the network security by dividing the subnet using a router to authenticate users twice (by the recorder and by the router). When connecting the recorder to an unsecured network, secure the network connection by installing a VPN (Virtual Private Network) device, etc. between the recorder and the host PC.

---

#### Important:

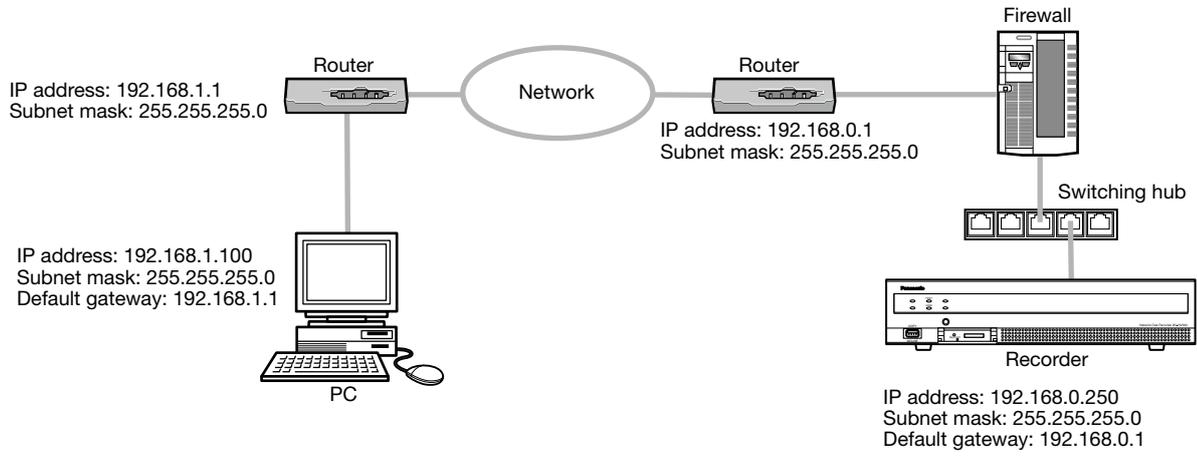
- The settings for the network security vary depending on the network to which the recorder is to be connected such as an intranet or Internet service provider. Refer to a network administrator for further information about the network security.
- 

#### [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

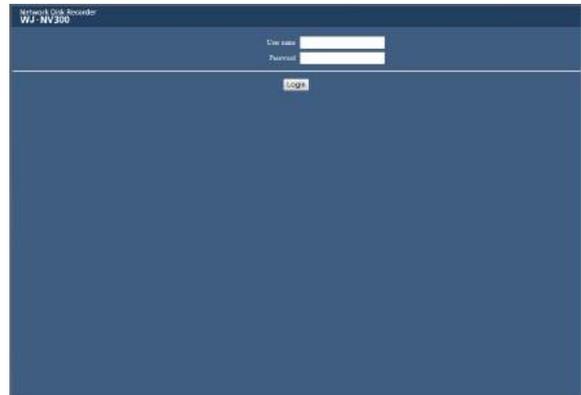
- If a message is displayed on the information bar, see page 184.

### 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 (☞ 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. (☞ 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.

<b>Administrator name : ADMIN</b>
<b>Password : 12345</b>

- 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

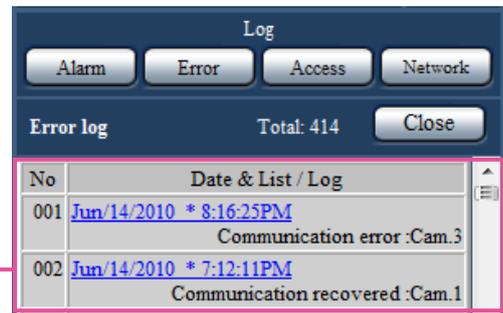
Can be used to play back or operate recorded images.

# 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).

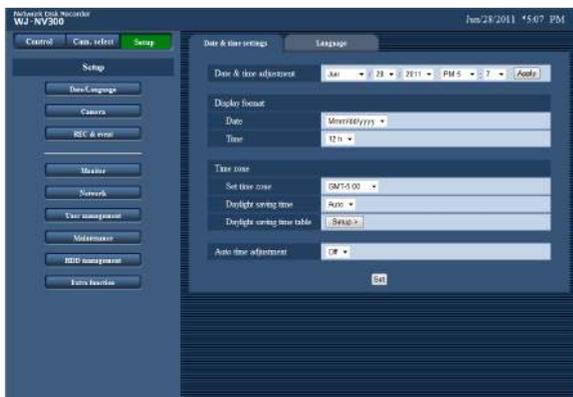
### Camera selection box

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.

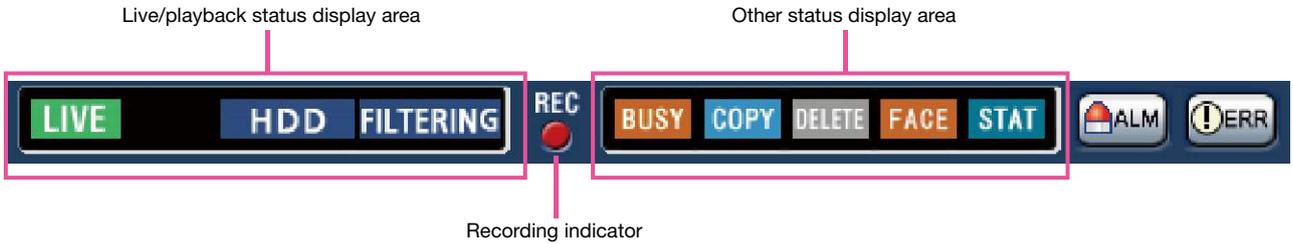
### **[Extra function] button**

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.

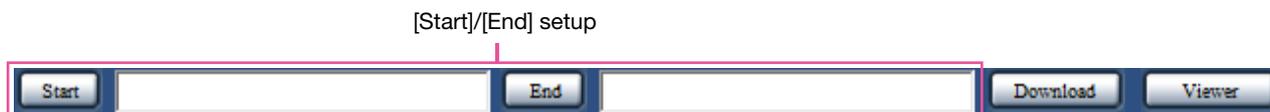
### Alarm button [ALM]

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)

### [Download] button

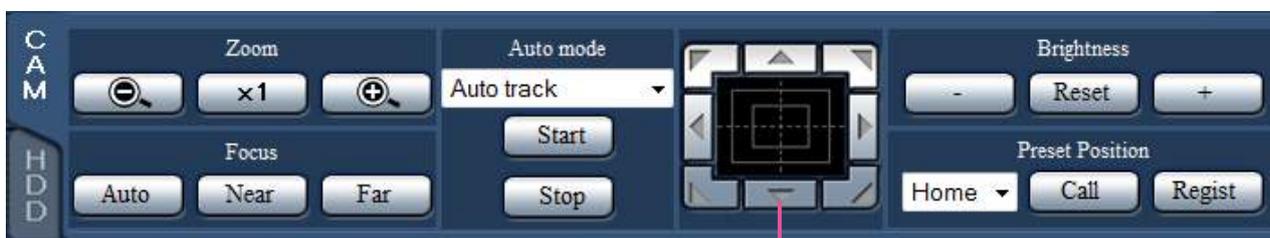
Downloads recorded images and audio at the designated date & time.

### [Viewer] button

Download the viewer software for playing the downloaded images and audio.

## [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:

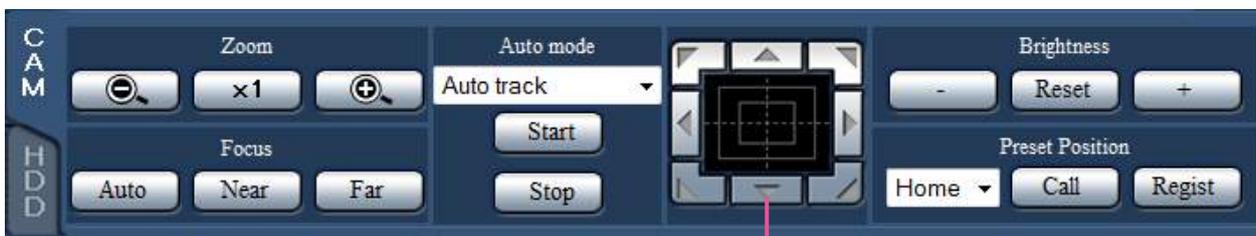
- To change the screen pattern to a multi-screen, right-click on the live images and select the item from the displayed menu.
  - Selecting "Wide view" from the right-click menu will enlarge the displayed images on a 4-screen.
  - Clicking the [Go to last] button on the [HDD] tab while displaying live 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	 / 	<ul style="list-style-type: none"> <li>Plays recorded images.</li> <li>Plays back recorded images in reverse.</li> <li>* Playback and reverse playback may not work when the [Play] or [Rev play] button is clicked while recording images at a lower frame rate.</li> </ul>
[Stop] button		<ul style="list-style-type: none"> <li>Playback will stop and live images will be displayed when this button is clicked during playback.</li> </ul>
[Pause] button		<ul style="list-style-type: none"> <li>Playback will be paused when this button is clicked during playback.</li> <li>Playback will resume when this button is clicked during pause.</li> </ul>
[FF]/[FR] button	 / 	<ul style="list-style-type: none"> <li>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)</li> <li>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)</li> <li>The playback speed will be displayed on the playback status display.</li> <li>* 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.</li> </ul>
[Next record]/[Prev record] button	 / 	<ul style="list-style-type: none"> <li>When the [Next record] button is clicked, playback point will skip to the start time of the next recorded images.</li> <li>When the [Prev record] button is clicked, playback point will skip to the start time of the previous recorded images.</li> <li>* 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.</li> </ul>
[Next image]/[Prev image] button	 / 	<ul style="list-style-type: none"> <li>The next frame will be displayed when the [Next image] button is clicked during playback/pause, and playback will pause.</li> <li>The previous frame will be displayed when the [Prev image] button is clicked during playback/pause, and playback will pause.</li> <li>* 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.</li> </ul>
[Go to last] button		<ul style="list-style-type: none"> <li>When this button is clicked, playback of the latest recorded images will start. The starting point is around 30 seconds before the date &amp; time of the latest recorded images. While recording, the playback starts 30 seconds prior to the current time.</li> <li>* 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.</li> </ul>

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)

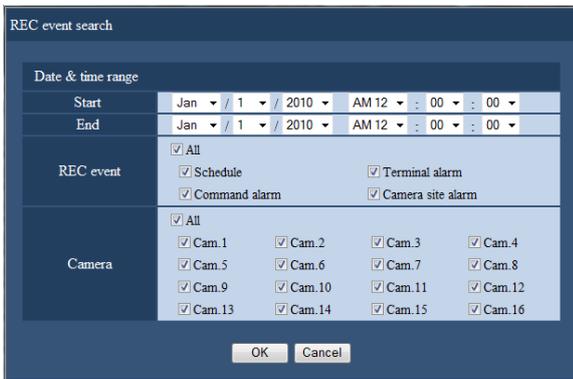
Search the recording event list for a recording event and play it back.

**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.



**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.



---

**[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.

---

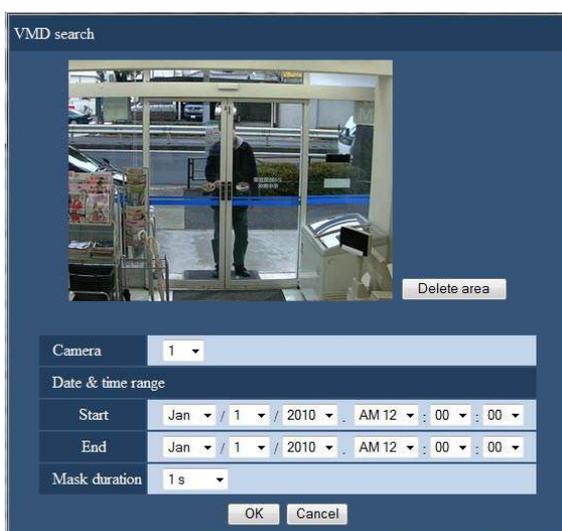
**Important:**

- 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.

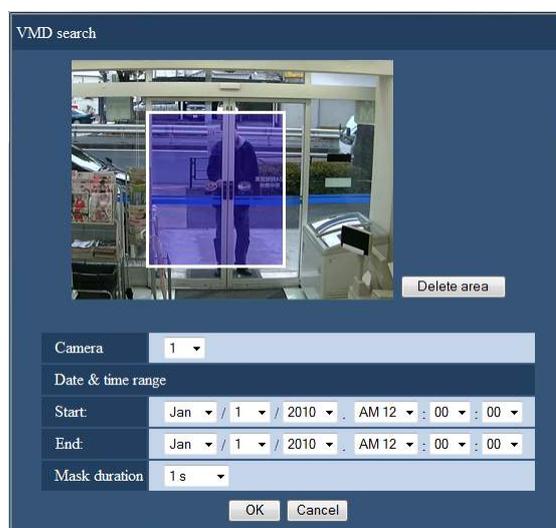
**[Mask duration]**

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

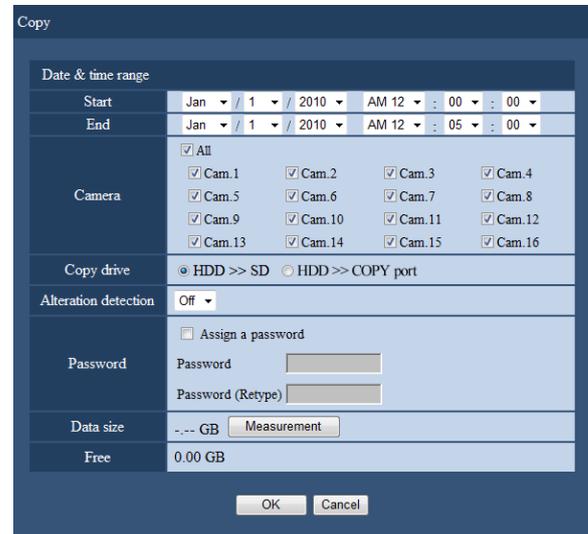
Click the button in the [Copy] box.



→ 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.



### [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.
- 

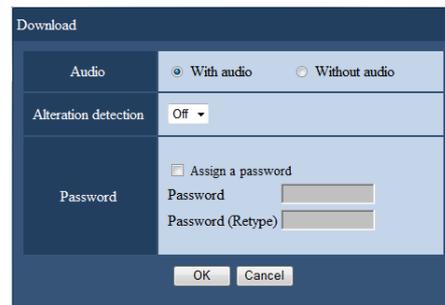
**Step 4**

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

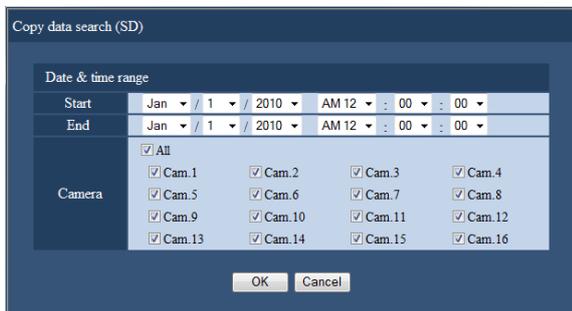
Select "SD" for "Disk/Medium" in the [Search] box, and then click the [Copy data] button.



→ 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.

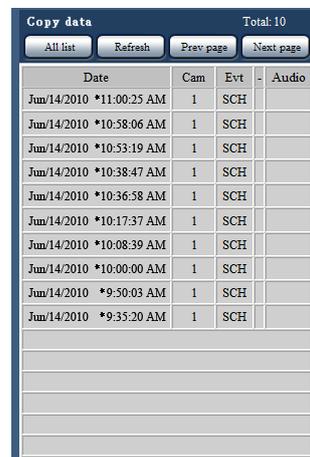
### [Camera]

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.



### [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.

---

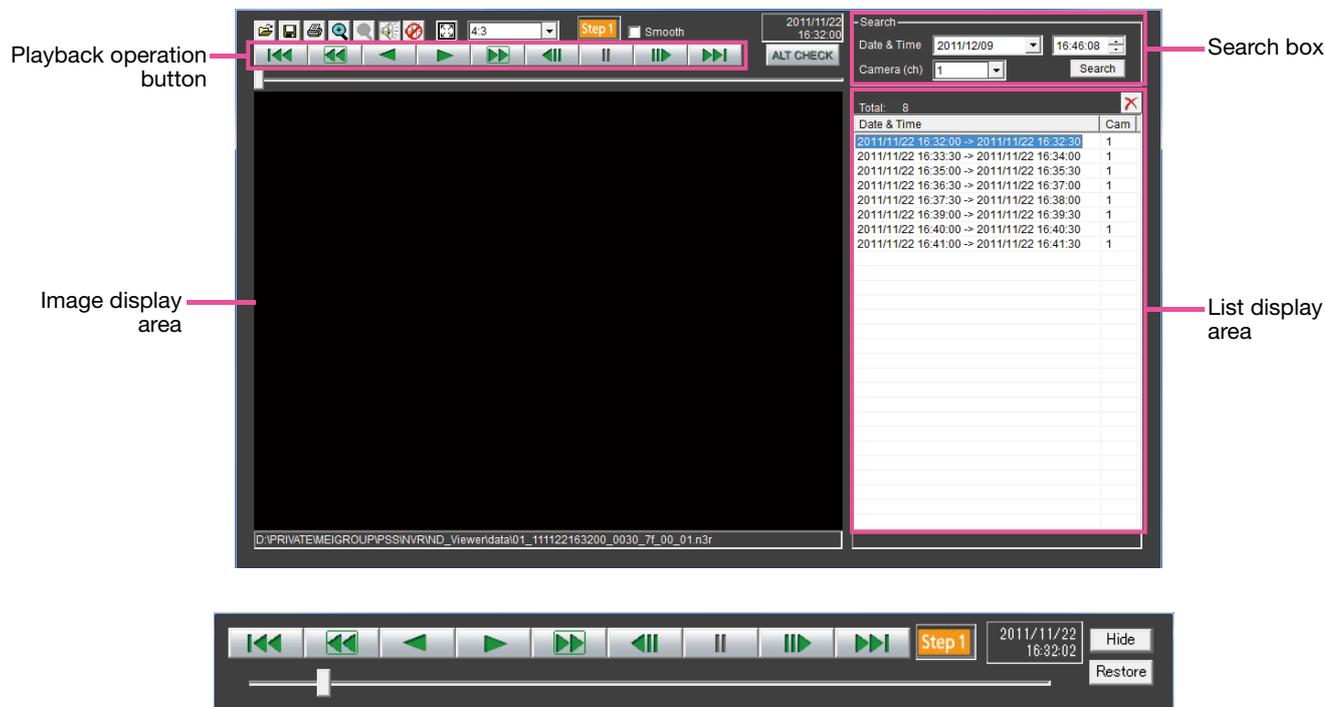
#### Note:

- 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).



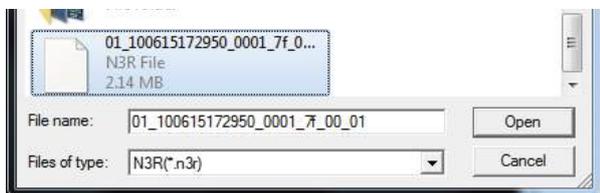
Playback operation window when images are displayed on a full screen

## Select recorded images currently being played

### Step 1

Click the [📁] 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 (see 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

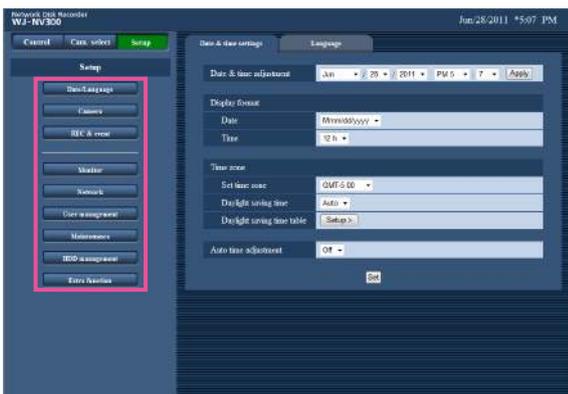
### Step 1

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

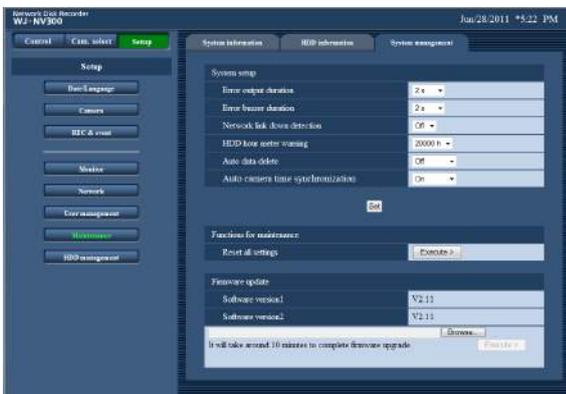
To update the firmware of the recorder to the latest version, proceed as follows.  
Refer to page 68 for the operations when the firmware is saved on the SD memory card.

## 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 slow response:	Main unit: MAIN-y SLOW RESPONSE Extension unit: EXTx-y SLOW RESPONSE
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 fun 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

<b>Indication</b>	<b>Description</b>
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

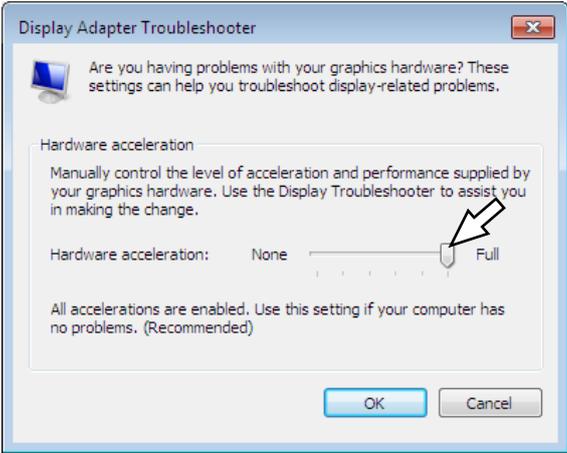
# Troubleshooting

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.	<ul style="list-style-type: none"> <li>Is "On" is selected for "Recording mode"? Check whether the settings are appropriate.</li> </ul>	48
	<ul style="list-style-type: none"> <li>Are the settings of the schedules appropriate? Check whether the settings are appropriate.</li> </ul>	40
Cannot play back images.	<ul style="list-style-type: none"> <li>Are there any recorded images on the hard disk drives? Check if there are recorded images.</li> </ul>	72
	<ul style="list-style-type: none"> <li>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.</li> </ul>	60
	<ul style="list-style-type: none"> <li>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.</li> </ul>	60
Audio is not output from the camera. Or audio is accompanied by noise.	<ul style="list-style-type: none"> <li>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.</li> </ul>	-
	<ul style="list-style-type: none"> <li>Is other than "Selected camera" selected for "Audio output camera" in the "Monitor" - "Advanced setup" tab? Check whether the setting is appropriate.</li> </ul>	51
Cannot control the cameras.	<ul style="list-style-type: none"> <li>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.</li> </ul>	19
	<ul style="list-style-type: none"> <li>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.</li> </ul>	21
The message "Please insert a medium." is displayed even after an SD memory card or an external storage device is inserted.	<ul style="list-style-type: none"> <li>If operations are performed soon after an SD memory card or 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.</li> </ul>	-
The alarm buttons are the "Face matching stopped" state even though no operations are performed to stop the face matching function.	<ul style="list-style-type: none"> <li>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.</li> </ul>	42

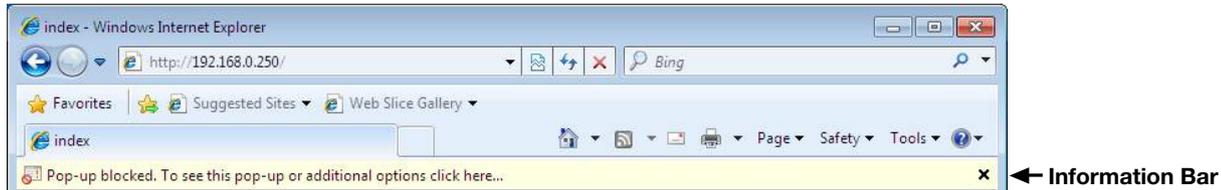
Symptom	Cause/solution	Reference
Cannot access from the web browser.	<ul style="list-style-type: none"> <li>Is the Ethernet cable firmly connected to the 10BASE-T, 100BASE-TX or 1000BASE-T port? Confirm the cable is firmly connected.</li> </ul>	Installation Guide
	<ul style="list-style-type: none"> <li>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.</li> </ul>	Installation Guide
	<ul style="list-style-type: none"> <li>Is the valid IP address set? Refer to a system administrator for further information about the settings.</li> </ul>	52
	<ul style="list-style-type: none"> <li>Are you accessing the wrong IP address? Check the connection as follows. &gt;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.</li> </ul>	–
	<ul style="list-style-type: none"> <li>Is the same IP address provided to other devices? Refer to a system administrator for further information about the settings.</li> </ul>	52
	<ul style="list-style-type: none"> <li>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.</li> </ul>	52
The image displayed on the browser is not being refreshed.	<ul style="list-style-type: none"> <li>Depending on the traffic of the network, there might be difficulties in displaying images. Press the [F5] button on the keyboard to request images.</li> </ul>	–
Image refresh of the browser is slow. Response of the browser is slow.	<ul style="list-style-type: none"> <li>Isn't the network traffic heavy? These symptoms may occur when the network traffic is heavy.</li> </ul>	–
A pop-up is not displayed on the browser.	<ul style="list-style-type: none"> <li>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.</li> </ul>	–
Cannot close the authentication window displayed when displaying the operation window.	<ul style="list-style-type: none"> <li>Are the correct user name and password entered? Confirm the correct user name and password.</li> </ul>	61, 62
Audio is interrupted during playback using the viewer software.	<ul style="list-style-type: none"> <li>When playing images recorded at a higher frame rate, audio may sometimes be played interrupted.</li> </ul>	–
Cannot play the downloaded recorded images.	<ul style="list-style-type: none"> <li>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.</li> </ul>	–

Symptom	Cause/solution	Reference
<p>An error message is displayed when trying to launch the viewer software by dragging and dropping multiple files onto it.</p>	<ul style="list-style-type: none"> <li>Decrease the number of the selected files or select files after launching the viewer software.</li> </ul>	<p>–</p>
<p>When displaying images on a multi-screen, images from two cameras or more are displayed in sequence on a screen of multiscreen.</p>	<ul style="list-style-type: none"> <li>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. <ul style="list-style-type: none"> <li>If updating the driver does not solve the problem, adjust the hardware acceleration as follows. The following are descriptions when using Windows 7. <ol style="list-style-type: none"> <li>After closing all web browser windows, right-click on the desktop and select "Screen resolution" from the displayed pop-up menu.</li> <li>Click "Advanced settings" on the "Screen resolution" window.</li> <li>Select the [Troubleshoot] tab, and click the [Change settings] button.</li> <li>Disable the DirectDraw acceleration by adjusting the performance level of "Hardware acceleration" on the "Display Adapter Troubleshooter" window.</li> </ol> </li> </ul> </li> </ul> 	<p>–</p>
<p>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.</p>	<p>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.</p>	<p>–</p>

## 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..."	<ul style="list-style-type: none"> <li>Click the information bar and select "Always Allow Pop-ups from This Site". When the warning window is displayed, click the [Yes] button.</li> </ul>	-
The following message is displayed on the information bar. "This site might require the following ActiveX control: 'wvsetup.exe' from 'Panasonic System Networks Co., Ltd.'. Click here to install..."	<ul style="list-style-type: none"> <li>Click the information bar and select "Install ActiveX Control...". Click the "Install" button on the displayed "Security Warning" window.</li> </ul>	-
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..."	<ul style="list-style-type: none"> <li>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.</li> </ul>	-
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?"	<ul style="list-style-type: none"> <li>Click the [Run] button.</li> </ul>	-
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.	<ul style="list-style-type: none"> <li>Click "Internet Options" on the Tools menu of Internet Explorer, and then click the [Security] tab. Then, click the [Custom Level...] button to open the "Security Setting" window. Under "Miscellaneous", select "Enable" for "Allow script-initiated windows without size or position constraints". Click the [OK] button. When the warning window is displayed, click the [Yes] button.</li> <li>In addition, when using Internet Explorer 7.0, select "Enable" for "Allow websites to open windows without address or status bars".</li> </ul>	-

# 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.

**For U.S. and Canada:**

**Panasonic System Communications Company of North America,  
Unit of Panasonic Corporation of North America**

[www.panasonic.com/business/](http://www.panasonic.com/business/)  
For customer support, call 1.800.528.6747  
Two Riverfront Plaza, Newark, NJ 07102-5490

**Panasonic Canada Inc.**

5770 Ambler Drive, Mississauga, Ontario, L4W 2T3 Canada  
(905)624-5010  
[www.panasonic.ca](http://www.panasonic.ca)

**For Europe and other countries:**

**Panasonic Corporation**

<http://panasonic.net>

Importer's name and address to follow EU rules:

Panasonic Testing Centre  
Panasonic Marketing Europe GmbH  
Winsbergring 15, 22525 Hamburg, Germany