

# Panasonic

## Network Disk Recorder

## Operating Instructions

Model Nos. **WJ-ND200K**

**WJ-ND200K/G**



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

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

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# Preface

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## Features

The Network Disk Recorders WJ-ND200K and WJ-ND200K/G (hereinafter WJ-ND200) are designed for use within a surveillance system, and perform recordings and playbacks pictures/audio from network cameras in the system. The network disk recorder is a recording device using a hard disk drive to record camera pictures instead of using video tapes so that pictures recorded by repeated overwriting will not experience deterioration of the recorded picture quality.

Up to 16 cameras can be connected via a network and it is possible to record their camera pictures. It is possible to perform the settings or operate the WJ-ND200 (this unit) using a web browser installed on a PC connected to a network. Up to 4 PCs (web browsers) can access this unit concurrently and it is possible to perform the settings and operate this unit.

No hard disk is supplied with this recorder. For purchasing hard disk, contact your dealer.

## Recording Functions

### Multi-recording

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

### Schedule recording

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

### Emergency recording

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

### External timer recording

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

### Event recording

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

### Audio recording

Audio can be recorded together with images.

## 2.5 Inch Removable Hard Disk

The optional hard disk can be installed and removed easily and quickly on the front of the recorder.

When using two hard disks, it is possible to replace the hard disks without interrupting recording.

## Downloading/Transmitting Images

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

## Event Notification Function

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

## Security Function and Reliability

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

## About these operating instructions

There are 3 sets of operating instructions for the WJ-ND200 as follows.

- Installation Guide (book)
- Operating Instructions (PDF, these operating instructions)
- Setup Instructions (PDF)

These "Operating Instructions" contain descriptions of how to operate this unit using a PC via a network. Refer to the "Setup Instructions (PDF)" for descriptions of how to perform the required settings to operate this unit using a PC and how to connect to other devices. (The setup instructions are for system installers.) The settings of the unit will be different depending on the settings of the LAN or the Internet service provider to which the unit is to be connected. Refer to an administrator of each network for further information about the respective network.

Refer to the provided "Installation Guide (book)" for descriptions of how to operate this unit using the buttons on the front panel of the unit, installation and system configurations.

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

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

## System requirements for a PC

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

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

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**Notes:**

- When using a PC that does not meet the above requirements, displaying of images may become slow or the web browser may become inoperable.
  - Audio will not be heard if a sound card is not installed on a PC. Audio may be interrupted depending on the network environment.
  - Refer to "Notes on Vista" (PDF) for further information about system requirements for PC and precautions when using Microsoft® Windows Vista®.
- 

## Trademarks and registered trademarks

- Adobe and Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- Microsoft, Windows, Windows Vista, Internet Explorer, ActiveX and DirectX are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Other names of companies and products contained in these operating instructions may be trademarks or registered trademarks of their respective owners.
- Intel and Pentium are trademarks or registered trademarks of Intel Corporation in the U.S. and other countries and are used under license.

## Abbreviations

The following abbreviations are used in these operating instructions.

Microsoft® Windows Vista® 32-bit edition is described as Windows Vista.

Microsoft® Windows® 2000 Professional Service Pack 4 is described as Windows 2000.

Microsoft® Windows® XP Professional SP2 and Microsoft® Windows® XP Home Edition SP2 are described as Windows XP.

## Terms used in these operating instructions

### HDD

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

### Recording rate (ips, I-Frame)

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

### Resolution

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

### M-JPEG

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

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**Manual recording**

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

**Schedule recording**

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

**Event recording**

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

**Emergency recording**

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

**External recording mode**

Function for changing the timetable using an external switch connected to the unit.

The timetable will be in the external recording mode during the external switch is "ON".

**SD memory recording/SD memory data**

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

**Event**

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

**Sequence**

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

**Electronic zoom**

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

**Camera control**

Camera control refers to controlling the functions of the combination cameras connected to the unit. These functions include Pan/Tilt, Zoom, Focus, Brightness, Preset Operations (moving the camera to a preset horizontal/vertical position), and Auto (for example, automatic panning).

**System Administrator**

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

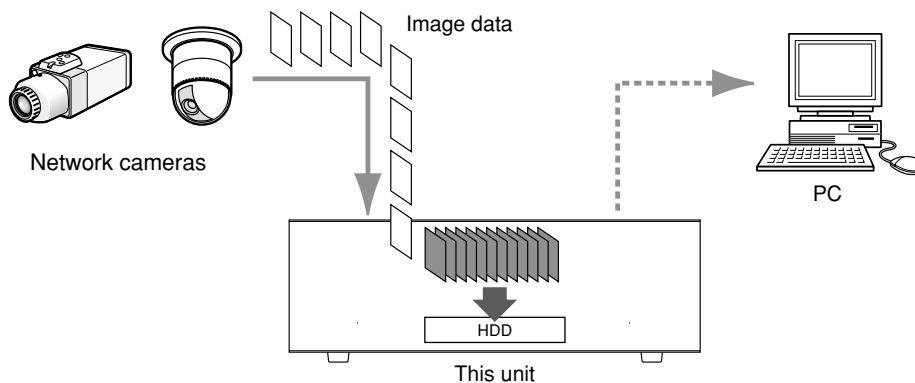
**Write protection switch**

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

# Recording/Playback/Live Image Transmission

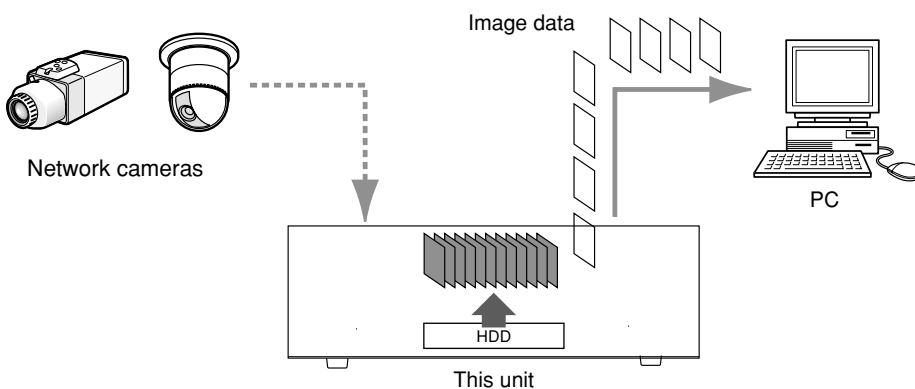
## Recording

Images will be transmitted from cameras to this unit and will be recorded. Images from up to 16 cameras can be recorded on a single network disk recorder. Recorded images are compliant with the JPEG/M-JPEG and MPEG-4 format.



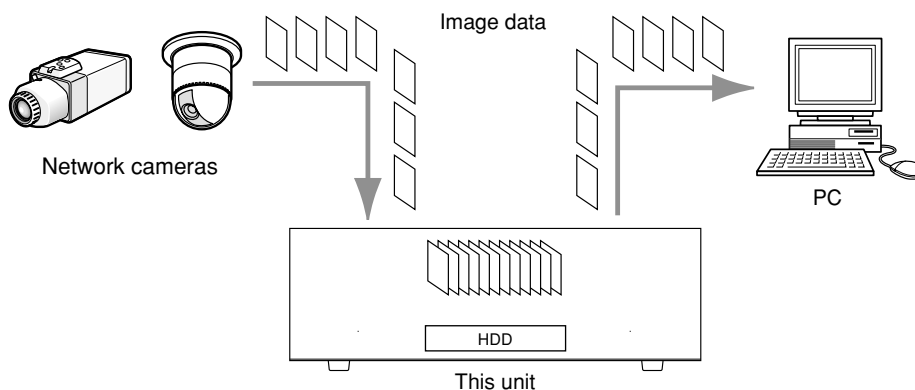
## Playback

Images recorded on the hard disk drive of this unit can be transmitted to a PC and they can be played. A single network disk recorder can transmit images to up to 4 PCs (web browsers). It is necessary to use a web browser or the optional software to display recorded images.



## Live image transmission

Live images from network cameras can be transmitted to PCs through this unit. Live images from up to 16 network cameras can be transmitted to up to 4 PCs concurrently.



# Restrictions When Operating MPEG-4 Images

There are following restrictions when "MPEG-4" is selected for the image compression method on the setup menu ("NW camera setup" under "Camera").

Refer to the setup instructions (PDF) for how to edit the settings.

## 1. When displaying live images

- ① Black screen may be displayed for the first few seconds (\*) when the following operations are performed while displaying live images.
  - When MPEG-4 live images are displayed (by switching camera channel, etc.)
  - When MPEG-4 image is enlarged (or when enlarged MPEG-4 image is resized to the original size)
- ② It may take several seconds (\*) for refresh interval of MPEG-4 image when displaying images on a 4-screen.  
**Example:** When "3 seconds" is selected for the refresh interval on the camera, MPEG-4 image will be refreshed in 3 seconds intervals.

## 2. When displaying images sequentially

When "MPEG-4" is selected for the image compression method of the camera selected for a camera channel on the setup menu ("Sequence Setup" under "Camera"), the respective sequence step will be skipped.

## 3. When playing recorded images

- ① Displayed playback time may be fast for several seconds (\*) when the following operations are performed while playing recorded images.
  - When MPEG-4 recorded images are played (by changing camera channel, etc.)
  - When MPEG-4 image is enlarged (or when enlarged MPEG-4 image is resized to the original size)  
(When operating to zoom in/out a paused MPEG-4 recorded image, image of several seconds later than the displayed image may be enlarged.)
  - When the [PLAY] button is clicked again while playing MPEG-4 image
  - When the first frame is displayed by clicking the [NEXT IMAGE] button during pausing
- ② Playback may be performed in several seconds intervals (\*) when the following operations are performed while playing MPEG-4 image.
  - Reverse playback
  - Fast playback/fast reverse playback
  - Reverse frame playback**Example:** When "3 seconds" is selected for the refresh interval on the camera, MPEG-4 image will be played in 3 seconds intervals.
- ③ When two records are played sequentially, the last few frames of the former record and the first few frames of the next record may be displayed overlapped.
- ④ When playing MPEG-4 image by designating time and date, playback may start from a point several seconds (\*) after the designated time and date or from the first frame of the next record.



#### 4. When recording images

- ① Time and date displayed on the recording event list (actual start time of recordings) may not exactly indicate the actual time of recording trigger (event occurrence time, start time of the schedule recording, etc.), and also the recording duration may be shortened for seconds worth two times of the refresh interval set on the camera.  
When the set recording duration and the set refresh interval of the camera are 10 seconds and 1 second respectively  $10 - (1 \times 2) = 8$  (sec). The minimum actual recording duration is 8 seconds.
- ② When pre-event recording is set to be performed, pre-event recording duration may be longer than the set duration.  
**Example:** Depending on the size of the image data, pre-recording duration may be around 10 seconds even when setting 5 seconds for the pre-event recording duration.

#### 5. When downloading recorded images

Download of recorded images may start from a point several seconds (\*) earlier than the designated start time. Set time range for download longer than the refresh interval set on the camera.

#### 6. When transmitting images recorded at an event occurrence to the FTP server

Duration of images to be transmitted to the FTP server, which are recorded at an event occurrence, may not be exactly the same as the duration set for "Duration-Pre" and "Duration-Post". Set "Duration-Pre" and "Duration-Post" longer than the refresh interval set on the camera.

#### 7. Other

- ① MPEG-4 images will not be attached to alarm mails.
- ② Even when images are to be transmitted to the FTP server periodically, MPEG-4 images will not be transmitted.

\* Time (seconds) differs depending on the refresh interval set on the camera (1 – 5 seconds). To shorten time lag, set the refresh interval on the camera shorter. Refer to the operating instructions of the camera for how to configure the refresh interval.

# Operational Mode

There are two operational modes; the mirroring mode and the single mode.

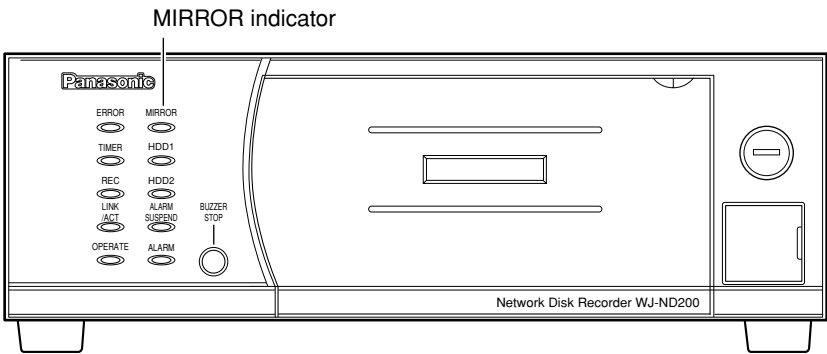
**Mirroring mode:** The two hard disk drives are used with the mirroring function and images from the camera will be recorded on them simultaneously. Even when one of them becomes faulty, images from the camera will be recorded on the other one.

**Single mode:** The two hard disk drives are used independently.

It is recommended to use this unit in the mirroring mode when using this unit for the first time. (When switching to the mirroring mode after using the unit in the single mode, images recorded on the hard disk drives will be deleted.)

## Check the current operational mode

The MIRROR indicator on the front panel of the unit indicates the current operational mode.



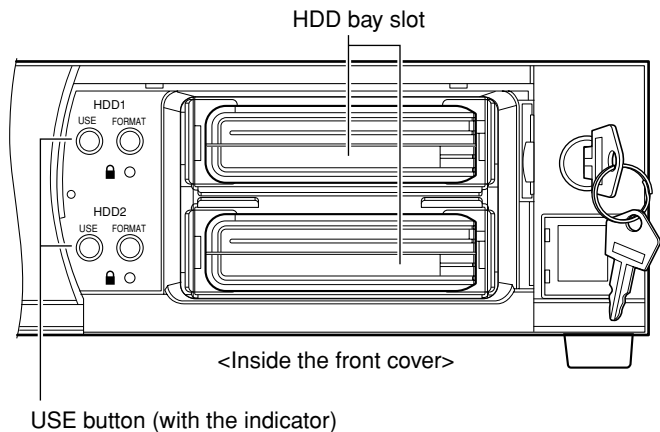
MIRROR indicator	Status (Current operational mode)
Off	In the single mode
Being lit green	In the mirroring mode
Blinking green	In the process of data recovery in the mirroring mode
Being lit red	In the mirroring mode with the following status <ul style="list-style-type: none"><li>• One of the hard disk drive is faulty</li><li>• Only one hard disk drive is mounted</li><li>• No hard disk drive is mounted</li></ul>

# Switch the operational mode from the single mode to the mirroring mode

To change the operational mode from the single mode to the mirroring mode, do the following.  
When using the mirroring function, disk size of two hard disk drives to be used shall be the same.

- 1 **Open the front cover and confirm that both the USE buttons are blinking green\*** (indicating that two hard disk drives are mounted).

\* Even when the USE buttons are not blinking green, it is possible to change the operational mode from the single mode to the mirroring mode. Refer to the important notice on page 12 for further information.

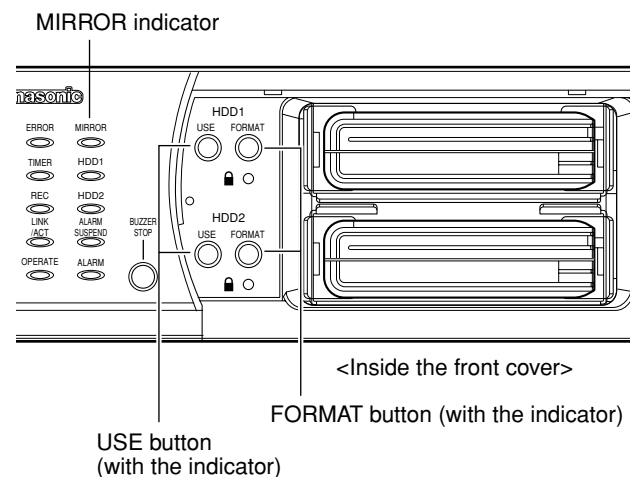


## Notes:

- The USE button indicates the status of the corresponding hard disk drive as follows.
    - Being lit green:** The power of the HDD (formatted) is on.
    - Blinking orange:** In the process of mounting or unmounting (shutdown) the HDD
    - Blinking green:** The power of the HDD (unformatted) is on.
    - Off:** One of the following
      - The power of the HDD is off
      - No HDD is connected or mounted on the corresponding HDD bay slot
  - Being lit orange:** In the process of recording, or obtaining SD memory data (images on the SD memory card)
  - Blinking red:** In the HDD exchange warning status
  - Being lit red:** In the HDD capacity warning status (HDD is running out)
- Refer to the setup instructions (PDF) for further information about the HDD exchange warning and the HDD capacity warning.
- Refer to page 13 for how to mount the hard disk drive.

- 2 **Hold down the both FORMAT buttons for 5 seconds or more.**

→ Formatting of the hard disk drives in the mirroring mode will start. (The buzzer will start sounding and the FORMAT buttons will start blinking green.)  
When completing the format, operation in the mirroring mode will automatically start.  
(Blinking of the FORMAT buttons will go off and the USE buttons and the MIRROR indicator will light green.)



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**Important:**

- Only the mounted hard disk drives can be formatted when operating in the mirroring mode. It is impossible to format an unmounted hard disk drive or a hard disk drive that is in the process of mounting.
  - When the USE button is not blinking green (neither off nor blinking orange), the corresponding hard disk drive is already formatted. When the hard disk drive is formatted, all data on the disk will be erased.
  - The hard disk drive for which the write protection is on cannot be formatted.
  - When the following operation is being performed, it is impossible to switch the operational mode from the single mode to the mirroring mode.
    - SD memory data obtainment
    - Auto camera registration ("Quick" – "Camera Auto Registration")
    - Camera search ("Camera" – "Camera Search")
  - When formatting the hard disk drives in the mirroring mode, connection to the FTP server and sending mails are unavailable.
  - When using in the mirroring mode, the actual available size of the hard disk drive will be smaller than when using in the single mode.
- 

## Switch the operational mode from the mirroring mode to the single mode

To change the operational mode from the mirroring mode to the single mode, do the following.

- 1** Open the front cover and remove the hard disk drives. Then, confirm that both the **USE** buttons are off (indicating that no hard disk drive is mounted).

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**Note:**

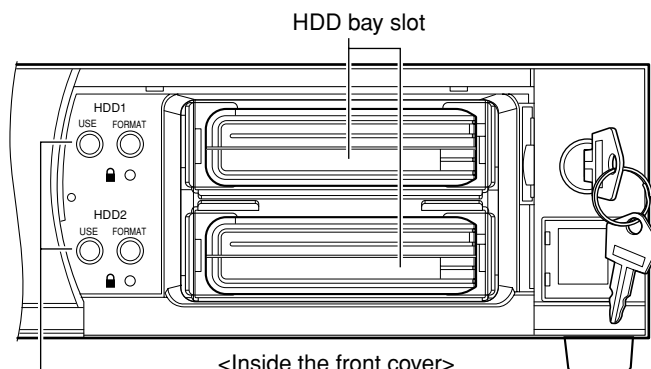
Refer to page 13 for how to remove the hard disk drive.

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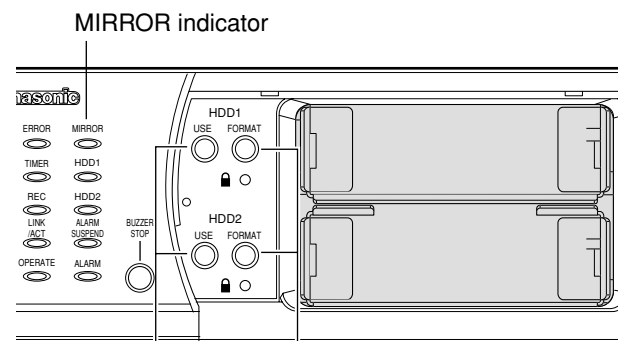
- 2** Hold down the both **FORMAT** buttons for 5 seconds or more.

Switching the operational mode from the mirroring mode to the single mode will start. (The buzzer will start sounding and the FORMAT buttons will start blinking green.)

When operation of the unit in the single mode starts, the FORMAT buttons and MIRROR indicator will go off.



USE button (with the indicator)



FORMAT button (with the indicator)

USE button (with the indicator)

# Hard Disk Drive Management

The following descriptions are of how to mount or format the hard disk drive, and of how to recover data on the disk (only when using in the mirroring mode).

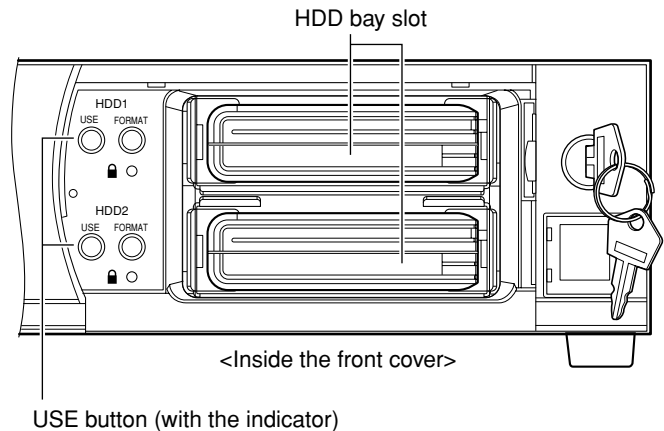
## Mount the hard disk drive

Mount the hard disk drive as follows.

**1** Insert the hard disk drive from the connector side of the hard disk drive into the empty HDD bay slot.

**2** Hold down the **USE** button respective to the HDD bay slot to which the hard disk drive is to be inserted for 2 seconds or more.

→ The mounting process will start. (The buzzer will start sounding and the corresponding USE button will start blinking orange.)  
When completing the mounting process, the USE button will light or blink green to indicate whether the mounted hard disk drive is formatted. When being lit green, the mounted hard disk drive is formatted. When blinking green, the mounted hard disk drive is unformatted.



## Remove the hard disk drive

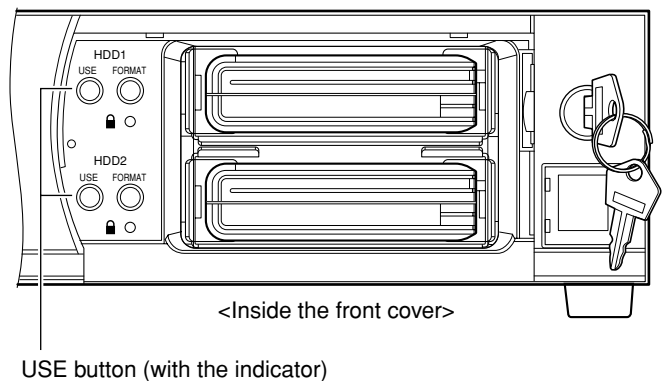
Remove the hard disk drive from the unit as follows.

**1** Open the front cover and confirm that both the **USE** buttons are being lit green\* (indicating that two hard disk drives are mounted).

\* Even when the USE buttons are not being lit green, it is possible to remove the hard disk drives. Refer to the important notice on page 14 for further information.

**2** Hold down the **USE** button respective to the HDD bay slot from which the hard disk drive is to be removed for 2 seconds or more.

→ The shutdown (unmount) process will start. (The corresponding USE button will start blinking orange.)  
When completing the shutdown process, the USE button will go off.  
Remove the hard disk drive after confirming that the USE button is not being lit or blinking.



### Note:

Refer to page 11 for further information about the status of the hard disk drive indicated by the USE button.

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**Important:**

- When the USE button of the hard disk on which recording is currently being performed is held down for 2 seconds or more while operating the unit in the single mode, recording will be continued on the other disk. In this case, some images to be recorded may not be recorded (for several seconds to change the disk for recording). When only the single hard disk is used, recording will stop.
  - When the USE button is held down for 2 seconds or more while operating the unit in the mirroring mode, the hard disk respective to the held USE button will be unmounted and the MIRROR indicator will light red.
  - When operating the unit in the mirroring mode, two hard disk drives to be used should be the same size.
  - When the unit is in the process of the SD memory data obtainment, it is impossible to mount or remove the hard disk drive.
  - When the following operation is being performed, it is impossible to add or remove the hard disk drives.
    - Auto camera registration ("Quick" – "Camera Auto Registration")
    - Camera search ("Camera" – "Camera Search")
  - Remove the hard disk drive after confirming that the USE button is not being lit nor blinking. Otherwise, data on the disk may be damaged.
- 

## Format (initialize) the hard disk drive (in the single mode)

Format the hard disk drive as follows when using the unit in the single mode.

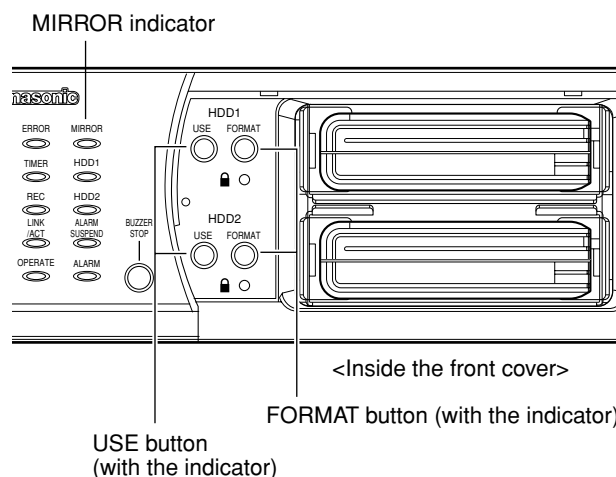
- 1 Open the front cover and confirm that the USE button is blinking green\* (indicating that the hard disk drive is mounted).**

\* Even when the USE buttons are not being lit green, it is possible to format the hard disk drives. Refer to the following important notice for further information.

- 2 Hold down the FORMAT button respective to the hard disk drive to be formatted for 5 seconds or more.**

→ Formatting of the hard disk drive will start. (The corresponding FORMAT button will start blinking green.)

When completing the formatting, the FORMAT button will go off and the respective USE button will light green.



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**Important:**

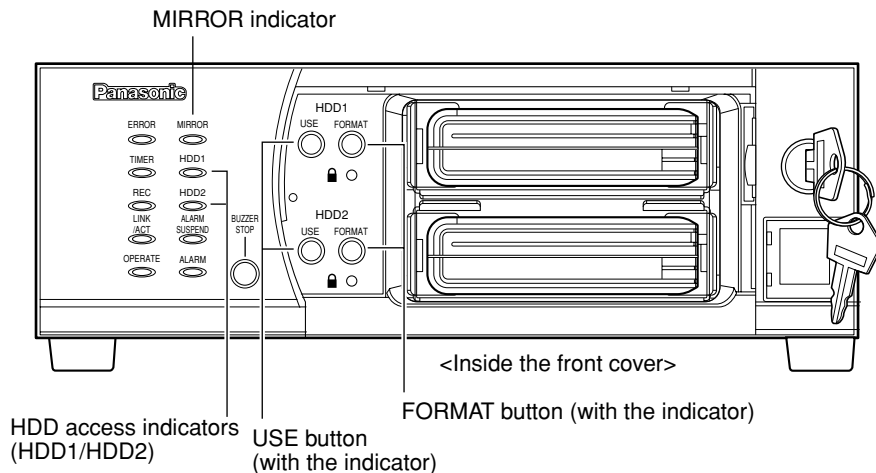
- Refer to page 11 for how to format the hard disk drives when operating the unit in the mirroring mode.
  - Only the mounted hard disk drive can be formatted when operating in the single mode. It is impossible to format an unmounted hard disk drive or a hard disk drive that is in the process of mounting.
  - The hard disk drive for which the write protection is on cannot be formatted.
  - When the unit is in the process of the SD memory data obtainment, it is impossible to switch the operational mode from the single mode to the mirroring mode.
  - When the following operation is being performed, it is impossible to format the hard disk drives.
    - Auto camera registration ("Quick" – "Camera Auto Registration")
    - Camera search ("Camera" – "Camera Search")
  - When formatting the hard disk drives in the mirroring mode, connection to the FTP server and sending mails are unavailable.
-

## Recovery data on the hard disk drive (in the mirroring mode)

When one of the two hard disk drives became faulty while operating in the mirroring mode, the faulty disk can be replaced without interrupting operation by the mirroring function (mirroring recovery).

When one of the hard disk drives became faulty, the USE button respective to the disk and the MIRROR button will light red.

When HDD2 became faulty while recording, for example, the HDD1 button will light orange (recording is currently being carried out) and the HDD2 button will light green (no recording is being carried out).



### 1 Remove the faulty disk. (→ page 13)

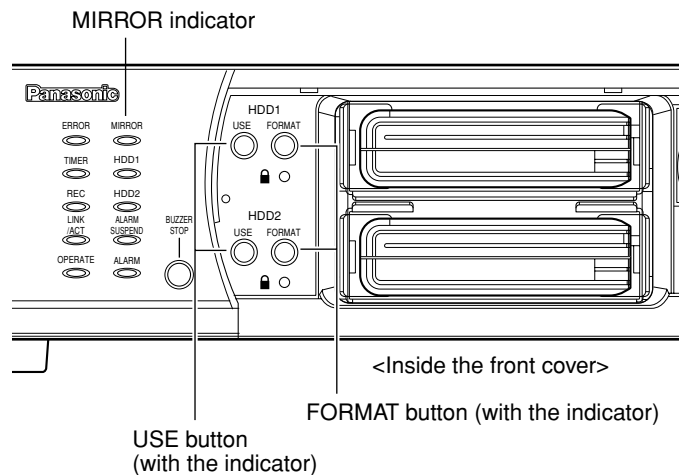
### 2 Mount the new hard disk drive. (→ page 13)

→ When completing the mounting process, the USE button will start blinking green.

### 3 Hold down the **FORMAT** button respective to the newly mounted hard disk drive for 5 seconds or more.

→ Mirroring recovery will start. (The buzzer will start sounding and the FORMAT button and the MIRROR indicator will start blinking green.)

When completing the mirroring recovery, the FORMAT button will go off and the MIRROR indicator will light green.



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**Important:**

- Mirroring recovery will not start if the FORMAT button respective to the normal disk (that is not the one replaced) is held down after mounting the new disk.
  - Mirroring recovery will be canceled when the FORMAT button respective to the newly mounted disk is held down for 5 seconds or more in the process of the mirroring recovery.
  - Nothing will be carried out if the FORMAT button or USE button respective to the normal disk (that is not the one replaced) is held down in the process of the mirroring recovery.
  - Mirroring recovery cannot be carried out when the write protection is on for the hard disk drive.
  - When the unit is in the process of the SD memory data obtainment, it is impossible to carry out the mirroring recovery.
  - When the following operation is being performed, it is impossible to carry out the mirroring recovery.
    - Auto camera registration ("Quick" – "Camera Auto Registration")
    - Camera search ("Camera" – "Camera Search")
  - When the size of the newly mounted disk is smaller than the source disk (that is not the one replaced), it is impossible to carry out the mirroring recovery.
- 

## **Precautions for the disk management**

The WJ-ND200 is normally in the stand-by mode for recording.

Read the following carefully before adding/removing/formatting the hard disk drive.

### **Before adding a hard disk drive**

When a hard disk drive is added while the write protection switch is "OFF", the oldest recorded data may be damaged. When adding a hard disk drive only for playback use, make sure that the write protection switch is "ON" before adding a hard disk drive.

### **Before removing/formatting the hard disk drive**

When the hard disk drive on which recording is being performed or recording is being paused is removed/formatted, the other hard disk drive will take over the recording operation. In this case, the oldest recorded data may be damaged.



# Recording

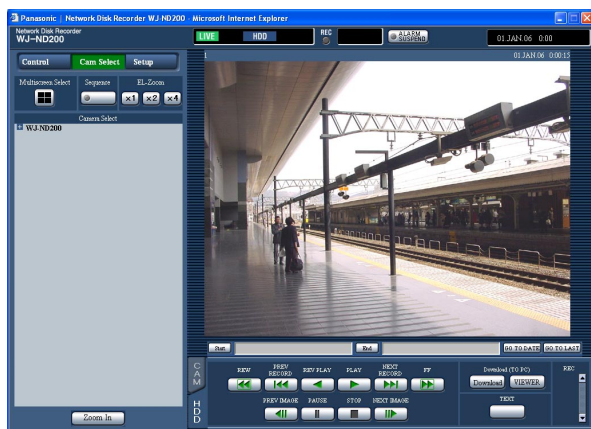
Start/stop recording manually.

Refer to a system administrator for the required settings for manual recording.

Refer to the setup instructions (PDF) for descriptions of how to turn on the unit and how to display the operation window.

## Screenshot 1

Display the [HDD] tab.



## Step 1

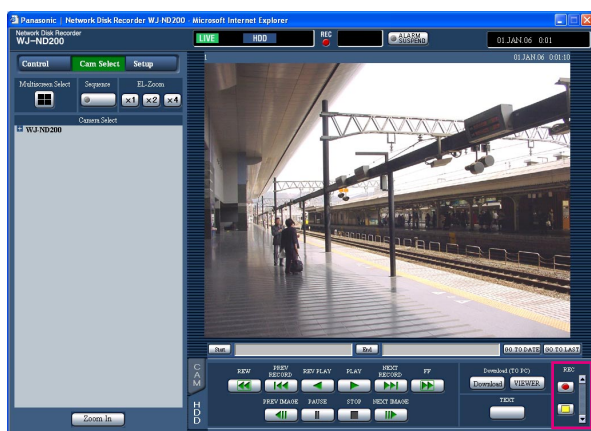
Click the [▲] button of the [REC] box.

### Note:


Hold down the [▲] button until the recording button and the recording stop button are displayed.

## Screenshot 2

The recording button will be displayed in the [REC] box.




## Step 2

Start recording by clicking the recording button .

- The [REC] indicator in the status display area will be lit red when recording has started.
- When images from cameras are currently recorded with higher priority than manual recording, manual recording will be suspended until that recording finishes.

Refer to the following for further information about each recording mode.

## Step 3

Click the recording stop button  to stop recording.  
→ The [REC] indicator will go off.

### Notes:

- When stopping manual recording while another recording with a different recording mode (ex. event recording (see Next page)) is being performed, the [REC] indicator will remain lit and the other recording will continue.
- It is impossible to record images when images are not being received from cameras.

---

## About the recording mode and the priority

There are 5 recording modes. Each recording mode and priority is as follows.

When two or more recordings with different recording modes started simultaneously, only recording with the highest priority will start.

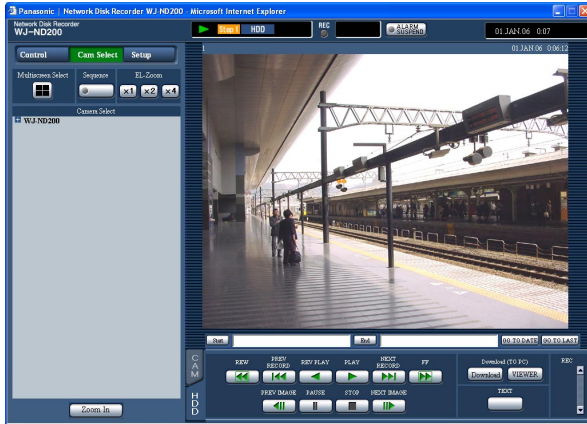
Recording Mode	Description	Priority
Emergency recording	When an emergency event occurs, perform recording automatically using an external switch, etc.	Highest
Post-event recording	Perform recording automatically at any event occurrence.	2
Manual recording	Start/stop recording manually.	3
Schedule recording	It is possible to perform recording automatically at a schedule time on a designated day of a week.	4
Pre-event recording	Perform recording manually at any event occurrence.	5

# Playback

A recorded image can be played. Playback is also available during recording.


## Screenshot 1

Display the [HDD] tab.



## Step 1

Click the [PLAY] button.

- Playback of recorded images will start.  will be displayed in the status display area. Playback will start from the finish point (time and date) of the last playback.


### Notes:

- When played for the first time after login, the latest recorded image will be played. Playback will start 30 seconds before the time of the latest recorded image with the default setting. The following are available for the playback start time.  
5 s/10 s/30 s/1 min/5 min  
Refer to a system administrator for further information.
- Playback speed may become slow when load to be processed is getting higher (such when many cameras are connected or when live/recorded images are displayed on multiple windows).
- When playing images on a 4-Screen, images will be played with frame dropping.
- When playing images recorded at a different recording rate (one at a higher rate and the other at a lower rate) simultaneously on a 4-Screen, the difference between the displayed time for each channel will be widen.

- To play SD memory data, filter data using the recording event search and select data to be played from the result list (see page 24).
- Images and audio sometimes may not be synchronized.
- When a web browser, the viewer software and the HDD viewer are simultaneously running, playback of audio may not be performed correctly. To perform playback of audio correctly, launch and run only one of the above software.

## Step 2








Click the [STOP] button to stop playback.

-  displayed in the status display area will go off and a live image will be displayed.

### Notes:

- It is possible to change camera channels by clicking the desired camera channel in the [Camera Select] box during playback.
- It is possible to switch the screen to a quad-screen by clicking the desired [Multiscreen Select] button during playback.
- Clicking the camera title during quad display will display the clicked picture on a single screen.

## Other functions for playback

Pausing		<ul style="list-style-type: none"> <li>Playback will be stopped when this button is clicked during playback.</li> <li>Playback will be resumed when this button is clicked during pausing.</li> </ul>
Frame play/reverse frame play	 	<ul style="list-style-type: none"> <li>Frame play/reverse frame play is available only during pausing.</li> <li>When the [NEXT IMAGE] button is clicked, the next frame is played and paused.</li> <li>When the [PREV IMAGE] button is clicked, the previous frame is played and paused.</li> </ul> <hr/> <p><b>Note:</b> When the image currently being played is in MPEG-4 format, some frames of recorded images will not be displayed. Reverse frame play will be performed with the set refresh interval of the camera.</p> <hr/>
Fast playback/fast reverse playback	 	<ul style="list-style-type: none"> <li>Playback speed will be changed in the following order each time the [FF] button is clicked: Step2 (Approx. 4x) → Step3 (Approx. 8x) → Step4 (Approx. 16x) → Step5 (Approx. 32x) → Step6 (Approx. 48x) → Step7 (Approx. 96x)</li> <li>Reverse playback speed will be changed in the following order each time the [REW] button is clicked: Step2 (Approx. 4x) → Step3 (Approx. 8x) → Step4 (Approx. 16x) → Step5 (Approx. 32x) → Step6 (Approx. 48x) → Step7 (Approx. 96x)</li> <li>When the [PLAY] button or the [REV PLAY] button is clicked during fast playback/fast reverse playback, playback speed will return to the normal playback speed.</li> </ul> <hr/> <p><b>Note:</b> When the image currently being played is in MPEG-4 format, some frames of recorded images will not be displayed. Fast playback/fast reverse playback will be performed with the set refresh interval of the camera.</p> <hr/>
Skip/reverse skip	 	<ul style="list-style-type: none"> <li>When the [NEXT RECORD] button is clicked, playback is skipped to the recorded image of the next event.</li> <li>When the [PREV RECORD] button is clicked, playback is skipped to the recorded image of the previous event.</li> <li>When there is no recorded image to be skipped to, the current playback will continue, but the playback may start from a point around a minute before the last playback point.</li> </ul>

<p><b>Skips to the latest recorded image</b></p>	<div data-bbox="488 266 630 304" data-label="Image"> </div> <ul style="list-style-type: none"> <li>• Skips to the latest time of the image currently playing and plays it. Skips to the point 30 seconds before the time of the latest recorded image with the default setting. The following points are available to be skipped to. 5 s/10 s/30 s/1 min/5 min Refer to a system administrator for further information.</li> <li>• When the [GO TO LAST] button is clicked while displaying live images, playback of the latest recorded images from the selected camera channel will start.</li> </ul> <hr/> <p><b>Note:</b> When the [GO TO LAST] button is clicked while recording images at a lower recording rate, playback of the latest recorded images may be paused or images may not be displayed.</p>
<p><b>Playback on a multi-screen</b></p>	<div data-bbox="534 810 612 878" data-label="Image"> </div> <ul style="list-style-type: none"> <li>• Displays playback images on a 4-Screen.</li> <li>• Up to 4 camera images can be displayed simultaneously on a 4-Screen. Each time this button is clicked, images consisted from 4 camera channels (4A - 4D) set in advance (monitor display setting) will be switched and displayed sequentially on a 4-Screen. Refer to the setup instructions (PDF) for descriptions of how to perform the monitor display setting.</li> <li>• Click a camera title in the [Camera Select] box or the camera title displayed on the image to return to a single screen display.</li> </ul> <hr/> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• When playing images with audio on a multi-screen, audio recorded with images that are displayed on the upper left area will be played.</li> <li>• When displaying images on a multi-screen, it may cause out-of-sync between each channel. In this case, click the [PLAY] button after clicking the [PAUSE] button to correct the synchronization between each channel.</li> <li>• When frame play is performed while displaying images on a multi-screen, displayed paused images of each channel may not simultaneously go to the next/previous frame.</li> </ul>
<p><b>Text</b> (page 38)</p>	<div data-bbox="508 1644 630 1721" data-label="Image"> </div> <ul style="list-style-type: none"> <li>• The attached text information will be displayed when this button is clicked during pausing. Click the [TEXT] button after pausing playback.</li> <li>• The text information display/edit is available only when a recorded image is played on a single screen.</li> </ul>

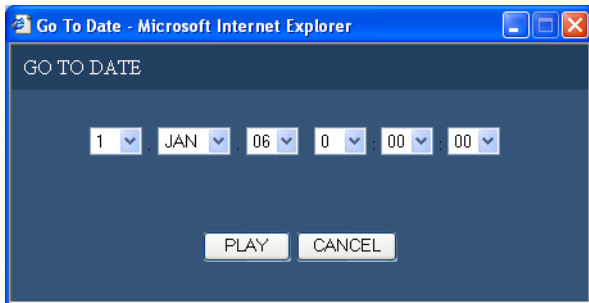
<b>Electronic zoom</b>	<div data-bbox="472 257 683 310" data-label="Image"> </div> <ul style="list-style-type: none"> <li>• Displayed playback images or live images will be enlarged.</li> <li>• Click the button in the [EL-Zoom] box to zoom in on the displayed image.</li> </ul> <p><b>[x1] button:</b> Returns to the original displayed size (x1 zoomed size).</p> <p><b>[x2] button:</b> Displays images with x2 zoomed size.</p> <p><b>[x4] button:</b> Displays images with x4 zoomed size.</p> <p>Clicking a point in the zoomed image moves the zoomed image by positioning the clicked point as the center point.</p>
<b>Zoom In</b>	<div data-bbox="477 576 678 629" data-label="Image"> </div> <ul style="list-style-type: none"> <li>• Enlarges the live camera image and playback picture. (Image can be enlarged when selecting "ZOOM IN" from the pop-up menu displayed by right-clicking on the image.)</li> <li>• To return the zoomed image to the original size, right-click on the image and select "BACK" from the displayed pop-up menu.</li> </ul> <hr/> <p><b>Note:</b> Image of a point several seconds later than the displayed image may be enlarged when the [Zoom In] button is clicked while playing MPEG-4 image.</p> <hr/>

# Start Playback from a Designated Time and Date

Start playback by designating the desired time and date of a recorded image to be played. Playback is also available during recording.

## Screenshot 1

Click the [GO TO DATE] button in the playback point operation area after selecting the desired camera channel to display the "GO TO DATE" window.



### Note:


When playing MPEG-4 image by designating time and date, playback may start from a point several seconds after the designated time and date or from the first frame of the next record.

## Step 1

Click the [✓] button and enter the desired time and date of a recorded image to be played.

## Step 2

Click the [PLAY] button.

→ Playback of recorded images corresponded to the entered time and date will start.  will be displayed in the status display area.

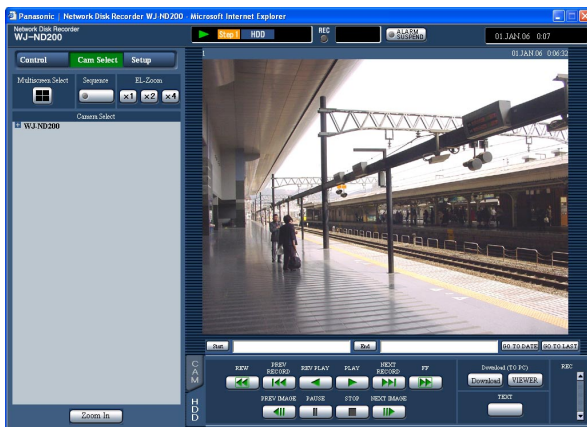
When there is no image for the entered time and date, the following action will be taken.

When there are images recorded after the entered time and date, the nearest recorded image after the entered time and date will be played.

When there are images recorded after the entered time and date, the nearest recorded image after the entered time and date will be played.


## Screenshot 2

The recorded images will be played.



## Step 3

Click the [STOP] button on the [HDD] tab to stop playback.

→  displayed in the status display area will go off and a live image will be displayed.

# Search and Play Recorded Event

Search for a recording event and play it (recording event search).  
Recording events can be searched by filtering as follows.

## About filtering

Conditions for filtering	How to search
DATE	Designate a time period and search images recorded in the designated period to play.
Event	Searches for images from the selected recording mode only. The following recording modes can be selected. Manual: Manual recording (📖 page 17) Schedule: Schedule recording (📖 Setup instructions (PDF)) Emergency: Emergency recording (📖 Setup instructions (PDF)) Site alarm: Recording at a site alarm occurrence (📖 page 33) Terminal alarm: Recording at a terminal alarm occurrence (📖 page 33) Command alarm: Recording at a command alarm occurrence (📖 page 33) SD memory: SD memory data (📖 Setup instructions (PDF))
Camera	Searches for images from the selected camera channel.
Text	Searches only images recorded with/without text information.

## About displaying the recording event list window

Number of the listed data

REC EVENT				
				Total: 16
All List	Refresh	Prev Page	Next Page	
Time & Date	CH	REC	HDD	INFO
<a href="#">01 JAN 07 3:00:01</a>	3	MAN	1	
<a href="#">01 JAN 07 3:00:00</a>	1	MAN	1	🔊📄
<a href="#">01 JAN 07 3:00:00</a>	2	MAN	1	🔊
<a href="#">01 JAN 07 3:00:00</a>	4	MAN	1	
<a href="#">01 JAN 07 2:00:00</a>	1	MAN	1	🔊
<a href="#">01 JAN 07 2:00:00</a>	2	MAN	1	🔊
<a href="#">01 JAN 07 2:00:00</a>	3	MAN	1	
<a href="#">01 JAN 07 2:00:00</a>	4	MAN	1	
<a href="#">01 JAN 07 1:00:01</a>	1	MAN	1	🔊
<a href="#">01 JAN 07 1:00:00</a>	2	MAN	1	🔊
<a href="#">01 JAN 07 1:00:00</a>	3	MAN	1	
<a href="#">01 JAN 07 1:00:00</a>	4	MAN	1	
<a href="#">01 JAN 07 0:04:13</a>	1	MAN	1	🔊
<a href="#">01 JAN 07 0:04:13</a>	2	MAN	1	🔊
<a href="#">01 JAN 07 0:04:13</a>	3	MAN	1	
<a href="#">01 JAN 07 0:04:13</a>	4	MAN	1	

**Number of the listed data:** The total number of the listed data will be displayed. When the total number of the listed data is more than 10 000, the ">10000" indication will be displayed.

**[All List] button:** Cancels filtering and lists all recording events except "SD memory".

**[Refresh] button:** Refreshes the displayed contents to the newest one.

**[Prev Page] button:** Displays the previous page of the list.

**[Next Page] button:** Displays the next page of the list.

**Time & Date:** Start time of recording will be displayed.

**CH:** A camera channel currently used for recording will be displayed. Recorded images of the displayed camera channel will be played on a single screen.

**REC:** Recording mode will be displayed.

**MAN:** Manual Recording

**SCH:** Schedule recording

**EMR:** Emergency recording

**TRM:** Recording at a terminal alarm occurrence

**COM:** Recording at a command alarm occurrence

**CAM:** Site alarm

**PRE:** Pre-event recording


**SD:** SD memory data



**HDD:** Number of the disk where the recorded image is located.

**INFO:** Additional information will be displayed.

 : Audio is attached to images.

 : Text information is attached to images.

---

**Note:**

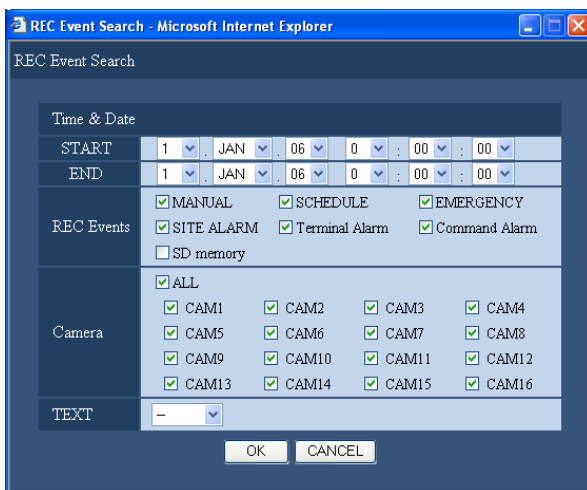
The [All List] button is unavailable during playback. When it is necessary to click the [All List] button, stop the playback first.

---

## How to operate

### Screenshot 1

Click the button in the [Search] box of the operational panel displayed by clicking the [Control] button. The "REC Event Search" window is displayed.



### Step 1

Select searching conditions.

#### "Time & Date"

Filter by time and date. Select a start time and an end time by clicking the [V] button.

#### "REC Events"

Filter by recording event. Click to select the desired recording event to be displayed when filtering by recording events.

---

**Note:**

When "SD memory" is selected, the selected conditions other than "SD memory" will be canceled.

When a condition other than "SD memory" is selected, "SD memory" will be canceled.

---

#### "Camera"

Filter by camera channel. Check the radio button of the desired camera channel to be searched for.

#### "TEXT"

Filter by with/without text information. Select "Added" or "None" by clicking the [V] button.

When "--" is selected, searching will be performed without filtering by with/without text information.

### Step 2

Click the [OK] button.

→ **FILTERING** will be displayed in the status display area, and then the filtered result will be displayed.

---

**Note:**

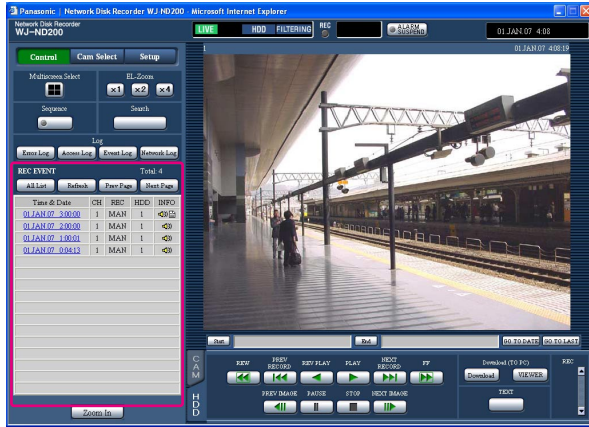
Click the [All List] button to cancel the filtering.

**FILTERING** will go off and all recording events (except "SD memory") will be listed.

---

## Screenshot 2

The search results (recording event list) will be displayed on the "Control" panel.



## Step 3

Click the time of the desired recording event.

→ Play a recorded image of the recording event from the selected time.

## Step 4

Click the [STOP] button to stop playback.

## Notes:

- Playback of SD memory data  
When a recorded image of the recording event contains not many frames to play smoothly, a black screen may be displayed or it may take time to refresh images. In this case, display the image with frame playback/reverse frame playback.
- Playback of SD memory data on a 4-Screen  
When there is something wrong with playback images on a 4-Screen, play images on a single screen.

## Monitor Live Images

Live image will be displayed in the web browser window.

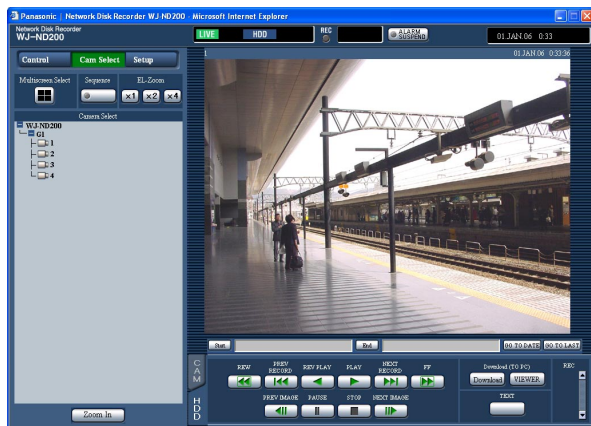
It is possible to display live images on a single screen or a multi-screen in the web browser window.

It is also possible to display live images sequentially (sequential display).

## Display images from cameras on a 1-screen

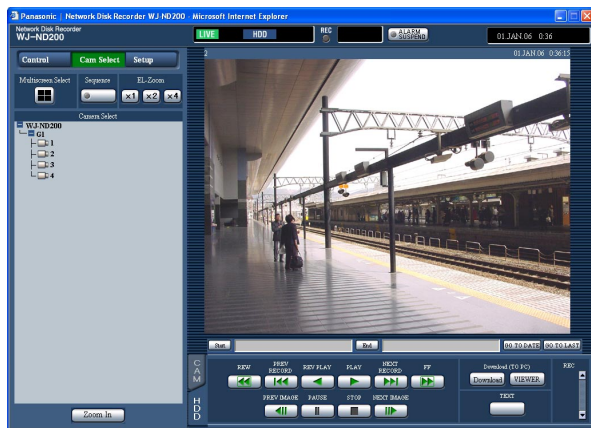
### Screenshot 1

Display the "Cam Select" panel.



### Screenshot 2

Live images from the selected camera channel will be displayed.



### Step 1

Click the desired camera title from the list displayed in the [Camera Select] box.

**Notes:**

- Camera selection  
When the "WJ-ND200" icon is clicked, a group title will be displayed. When the displayed group title is clicked, a list of the cameras belonging to the selected group will be displayed. Click a displayed camera title to display images from the respective camera channel.
- Camera selection from the pop-up menu displayed by right-clicking  
It is possible to switch the camera channel by selecting a desired camera channel from the pop-up menu displayed by right-clicking on the currently displayed image.

**Notes:**

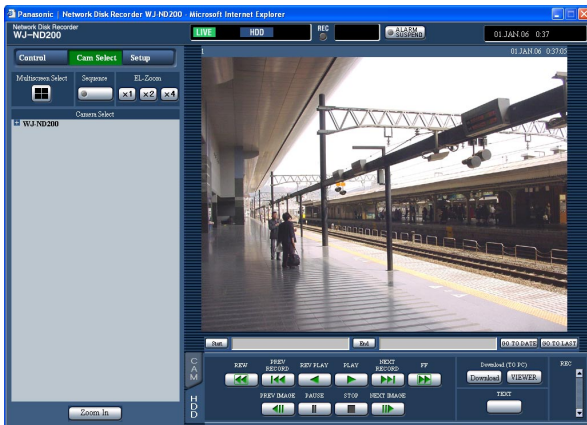
- About the electrical zoom  
When displaying an image on a single screen, zooming in on the displayed image is possible. Click the button in the [EL-Zoom] box to zoom in on the displayed image.  
**[x1] button:** Returns to the original displayed size (x1 zoomed size).  
**[x2] button:** Displays images with x2 zoomed size.  
**[x4] button:** Displays images with x4 zoomed size.  
Clicking a point in the zoomed image moves the zoomed image by positioning the clicked point as the center point.
- When the [GO TO LAST] button is clicked while displaying live images, playback of the latest recorded images from the selected camera channel will start.
- Audio will not be heard when displaying live images.

# Display images from cameras on a 4-screen

Images from cameras will be displayed on a 4-Screen.

## Screenshot 1

Display the "Cam Select" panel.

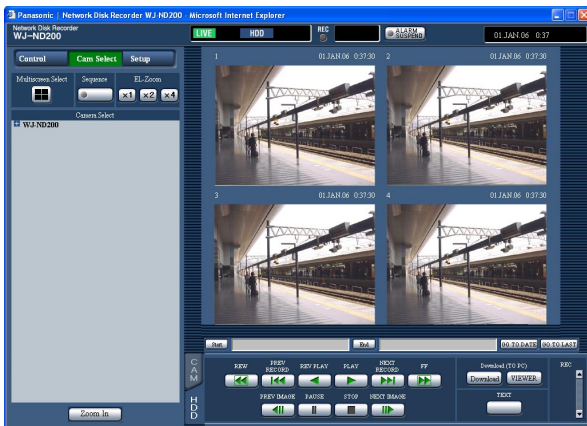


## Step 1

Click the button of the [Multiscreen Select] box.

## Screenshot 2

Images from cameras will be displayed on a 4-Screen.



## Step 2

Up to 4 camera images can be displayed simultaneously on a 4-Screen.

Each time the button is clicked, the camera picture is changed to quad display according to the settings made in the "Monitor Display" page ("System" – "Basic Setup" – "Monitor Display").

## Step 3

Click a camera title in the [Camera Select] box or the camera title displayed on the image to return to a single screen display.

## Notes:

- Displaying images on a 4-screen from the pop-up menu displayed by right-clicking  
It is possible to switch the 4-Screen by selecting a desired camera channel from the pop-up menu displayed by right-clicking on the currently displayed image.
- When the [GO TO LAST] button is clicked while displaying live images, playback of the latest recorded images from the selected camera channel will start.

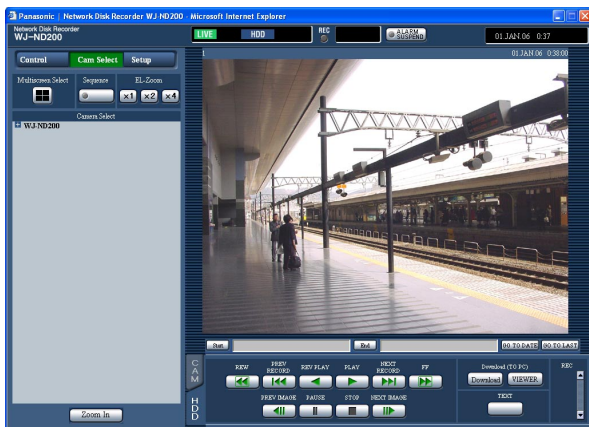
# Display images in the sequential display

Displayed images from cameras will be switched automatically.

Camera images will be displayed sequentially according to the settings performed in advance.

## Screenshot 1

Display the "Cam Select" panel.



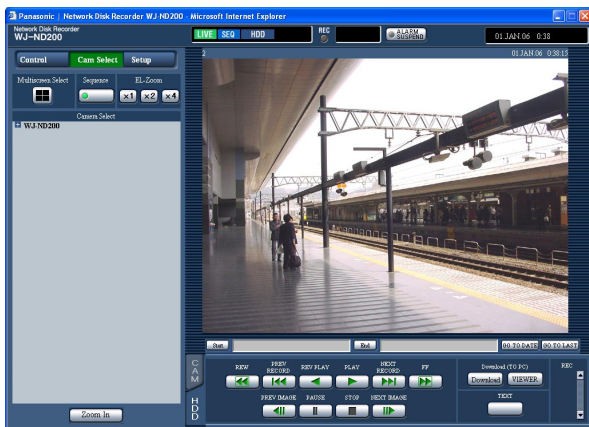
## Step 1

Click the button of the [Sequence] box.

→ The sequence action will start and the lamp on the button will light (green) during sequence operation. The "SEQ" indication will also light on the status display area.

## Screenshot 2

Live images will be displayed sequentially according to the settings performed in advance.



## Step 2

To stop the sequential display, click the button once again. The lamp on the button will go off when sequence operation is stopped.

When operations to display images on a single screen or 4-Screen are performed during the sequential display, the sequential display will be canceled.

## Notes:

- The sequence step that is unavailable to display will be skipped. (MPEG-4 image is also unavailable to display. It will be skipped automatically.)
- When the [GO TO LAST] button is clicked while displaying live images, playback of the latest recorded images from the selected camera channel will start.
- Starting the sequential display from the pop-up menu displayed by right-clicking  
It is possible to start the sequential display by selecting "SEQ" from the pop-up menu displayed by right-clicking on the currently displayed image. When "SEQ" is selected during the sequential display, the sequential display will stop.

# Control Cameras

When displaying live images, the following camera controls are possible.

Panning/tilting:	Moves a camera horizontally/vertically.
Zooming:	Zooms in/out of images.
Focus:	Adjusts the focus.
Brightness:	Adjusts the brightness.
Preset action:	Moves a camera to the preset position registered in advance.
Auto:	Moves a camera with an auto function set in advance.

---

## Notes:

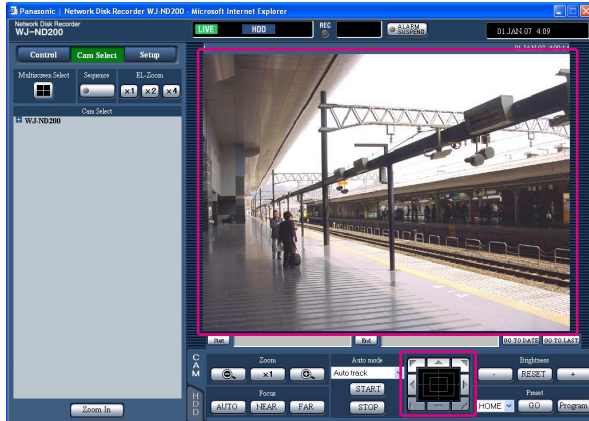
- Depending on the models of the connected cameras, it may be impossible to control the camera or some functions may be not available.
  - Controlling cameras is possible only when displaying live images on a single screen.
- 

## Panning/tilting operation

Moves a camera horizontally/vertically.

### Screenshot 1

Display the [CAM] tab.



### Step 1

Moves a camera horizontally/vertically in the following ways.

**Control buttons:** Click to move the camera.

**Control pad:** Click to move the camera. Panning/tilting speed will be faster if a clicked point gets farther from the center point of the control pad.

**Image display area:** Click the desired point to be the center of the field angle in the displayed image. The camera moves to position the clicked point as the center point of its image.



# Zoom/focus/brightness operations

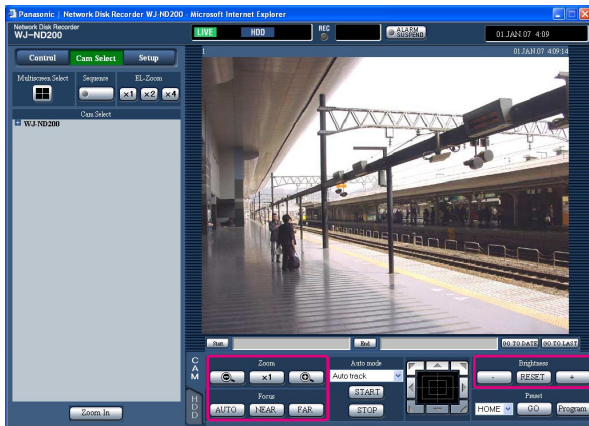
**Zooming:** Zooms in/out of images. Depending on the models of the connected cameras, the image size for the respective zooming portion may be different. For further information, refer to the operating instructions of the camera.

**Focus adjustment:** Adjusts the focus. The auto focus function is available.

**Brightness:** Adjusts the brightness. The adjusted brightness can be reset to the default.

## Screenshot 1

Display the [CAM] tab.



### Note:

Zooming is available using the wheel on the wheel mouse.

## Step 1

### Zooming

Adjust zooming by clicking the [⊖] button or the [⊕] button in the [Zoom] box.

When clicking the [x1.0] button, the zoom ratio will be reset.

### Focus adjustment

Adjust the focus by clicking the [NEAR] button or the [FAR] button in the [FOCUS] box.

The auto focus function is available by clicking the [AUTO] button.

### Brightness adjustment

Adjust the brightness by clicking the [−] (dark) button or the [+] (bright) button in the [Brightness] box.

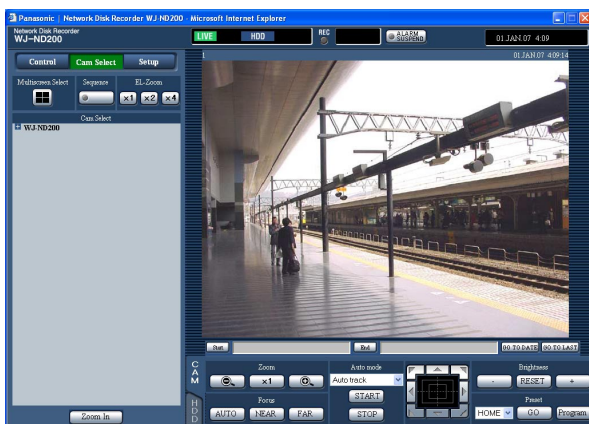
Click the [RESET] button to reset the settings for the brightness.

# Registration of a camera direction on the preset position

The current camera direction can be registered on the specified preset position. Registered preset positions can be used with a camera supporting the preset position function.

## Screenshot 1

Display the [CAM] tab.



## STEP1

Perform the pan/tilt operation to move the camera to the position to be registered.

## STEP2

Click the [✓] button in the [Preset] box to select a preset number (1 - 256) to be registered.

HOME is not available for registration.

## STEP3

Click the [Program] button.

→ The selected preset number is used for registration.

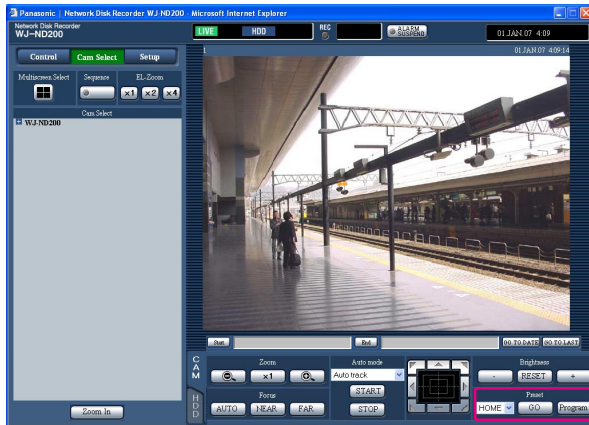
## Move a camera to the preset position

Moves a camera to the preset position registered in advance. Registering preset positions is required to perform the preset function.

Refer to the operating instructions of the connected camera for the descriptions of how to register the preset position. It is impossible to register the preset positions of cameras using this unit.

### Screenshot 1

Display the [CAM] tab.



### Step 1

Click the [✓] button in the [Preset] box to select a preset number (HOME, 1 - 256) to be moved.

### Step 2

Click the [GO] button.

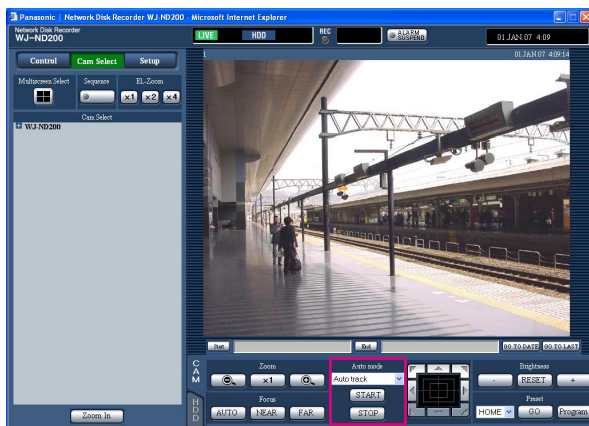
→ The camera moves to the registered preset position respective to the selected preset number.

## Auto mode function (auto pan, etc)

Moves a camera with an auto function set in advance.

### Screenshot 1

Display the [CAM] tab.



### STEP1

Click the [✓] button in the [Auto mode] box to select a mode (Auto pan, etc.) to be started.

### Step 2

The auto mode function can be performed by clicking the [START] button in the [Auto mode] box.

Click the [STOP] button to stop 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.



# About the Event Function

The event action will be performed when the following events occur.

- Terminal alarm: When a signal is supplied from an external device such as a door sensor to the ALARM terminal, this is stated as an event of a terminal alarm.
- Command alarm: A command alarm is sent from a PC via a network.
- Site alarm: An alarm using Panasonic Alarm Protocol is sent from a network camera.

## Action at an event occurrence

The event action will be performed according to the settings when an event occurs.

---

### Note:

When an event occurred and the corresponding camera's compression method is "MPEG-4", event recording may start from a point several seconds after the event occurrence and the recording duration may be shortened for several seconds.

---

### Starts recording

Recording will be performed according to the settings such as recording duration, recording rate, etc. that were configured on the setup menu. (Refer to the setup instructions (PDF) for further information.)

Depending on the settings, it is possible to start recording images before an event occurs (Pre-event recording).

### Displays alarm message

The pop-up window that notifies of an event occurrence will be displayed at an event occurrence.

### Blinks the alarm indicator

The alarm indicator on the front panel of the unit will start blinking at an event occurrence.

### Sounds the buzzer

The buzzer will start sounding for the set duration according to the settings configured on the setup menu. (Refer to the setup instructions (PDF) for further information.)

### Moves a camera to the preset position

The camera will move to the preset position registered in advance at an event occurrence.

Refer to the operating instructions of the connected camera for the descriptions of how to register the preset position.

### Notifies of an event occurrence by sending e-mails

When an event occurs, this unit notifies of the event occurrence with the time and date of the event occurrence by sending e-mails (alarm mails) to the registered addresses. It is also possible to attach an image to the alarm mail.

When an alarm occurred and the corresponding camera's compression method is "MPEG-4", no image will be attached to the alarm mail. (It is impossible to attach an MPEG-4 image to the alarm mail.)

Up to 4 addresses can be registered as recipients of the alarm mail.

To send the alarm mail at an event occurrence, it is required to perform the settings on the setup menu in advance. (Refer to the setup instructions (PDF) for further information.)

---

**Supplies a signal from the ALARM connector or the ALARM/CONTROL connector on the rear panel of this unit (Alarm signal output)**

It is possible to output signals from the ALARM connector or the ALARM/CONTROL connector on the rear panel of the unit and sound the buzzer when an event occurs. The alarm signal output duration can be configured on the setup menu. (Refer to the setup instructions (PDF) for further information.)

**Records the event log**

The event type and the occurrence time and date will be recorded when an event occurs.

**Transmits recorded images to an FTP server at an event occurrence**

When an event occurs, recorded images will be continued transmitting to an FTP server automatically for the set duration from the recording start time. To send the alarm mail at an event occurrence, it is required to perform the settings on the setup menu in advance. (Refer to the setup instructions (PDF) for further information.)

**Notifies of an alarm occurrence according to the Panasonic alarm protocol settings**

Select "ON" or "OFF" to determine whether or not to notify of an alarm occurrence (or error information) to a PC according to the "Panasonic Alarm Protocol" of the setup menu ("Comm" – "Panasonic Alarm Protocol").

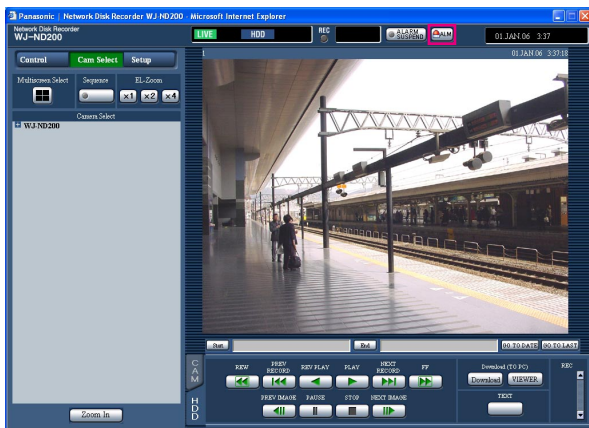
To receive a notification (or error information) and display the contents of the notification, the optional software is necessary.

## Cancel the alarm action

The alarm action will be performed when an event is detected.  
To cancel the alarm action manually, do the following.

### Screenshot 1

[ALM] will be displayed in the status display area when an alarm occurs.



### Step 1

Click the [ALM] button.

→ The alarm action will be canceled.

### Note:

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

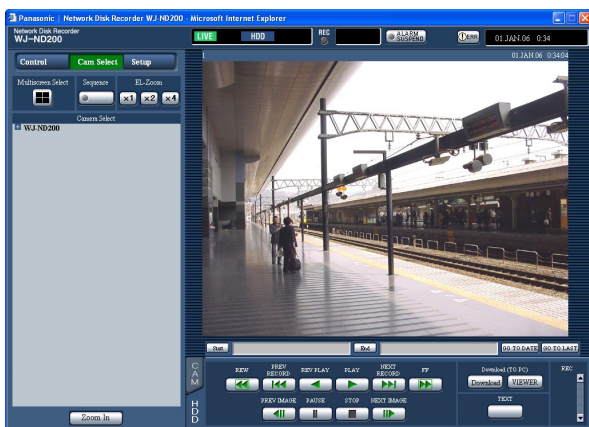
## Suspend the alarm action

Configure the settings to not to perform the alarm action even when an event occurs. It is useful to suspend the alarm action at an event occurrence such when maintaining the unit for a certain period.

Even though the alarm action is suspended, recording of images, event log recording, the preset action and display of the [ALM] button will be performed.

### Screenshot 1

Display the operating window.



### Step 1

Click the [ALARM SUSPEND] button.

→ The alarm action will be suspended.

The "ALARM SUSPEND" indicator on the front panel of the unit will light.

### Step 2

To release the alarm suspension, click the [ALARM SUSPEND] button again.

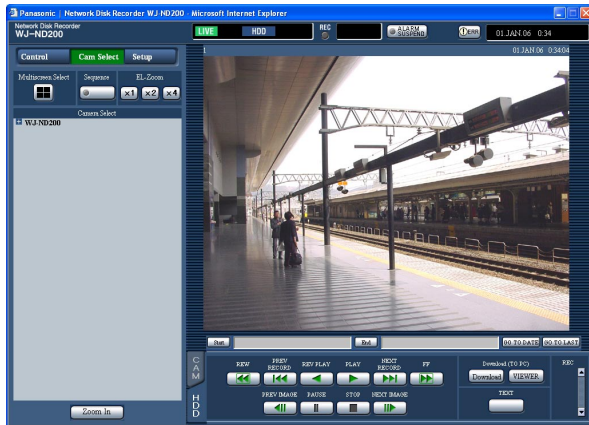
→ The "ALARM SUSPEND" indicator on the front panel of the unit will go off.

## Cancel the error status

When an error occurred, the unit will be in the error status.  
To release the unit from the error status, do the following.

### Screenshot 1

When an error occurred, the [ERR] button will be displayed in the status display area.



### Step 1

Click the [ERR] button.

→ The unit will be released from the error status.

### Note:

The ERROR indicator on the front panel of the unit will not go off until the error is reset even when the [ERR] button is clicked.

# Deletion of Recorded Images Saved on the Hard Disk Manually

Delete recorded images saved in the hard disk manually.

By setting a time and date, the images recorded the day before the set time and date will be subject to deletion.

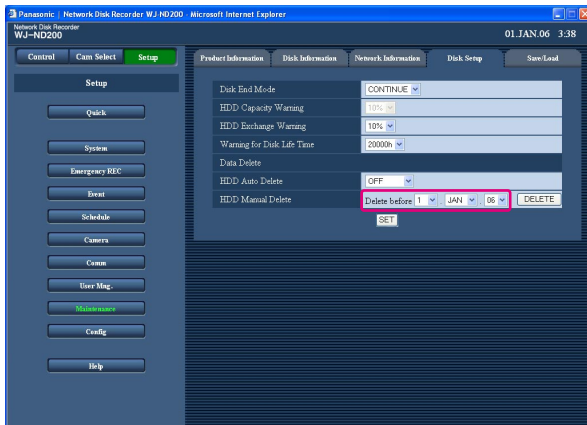
---

## Important:

- It is impossible to recover the deleted images.
  - It is possible to delete recorded images automatically when the set days have passed from the day the image was recorded (HDD Auto delete). Refer to a system administrator for further information.
  - When "STOP" is selected for "Disk End Mode" of "Maintenance", the available disk space will not be increased even though deletion is performed.
- 

## Screenshot 1

Display the "Setup" panel by clicking the [Setup] button, and then click the [Maintenance] button. Display the "Disk Setup" page by clicking the [Disk Setup] tab.



## Step 1

Set time and date for "HDD Manual Delete" by clicking [V] button.

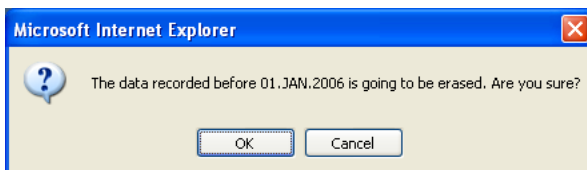
Images recorded before the set time and date will be deleted.

## Step 2

Click the [DELETE] button.

## Screenshot 2

The confirmation window will be displayed.



## Step 3

Click the [OK] button.

→ Deletion will start.

# Display/Edit the Text Information

It is possible to attach text information to images when recording.

It is possible to enter up to 200 characters for text information.

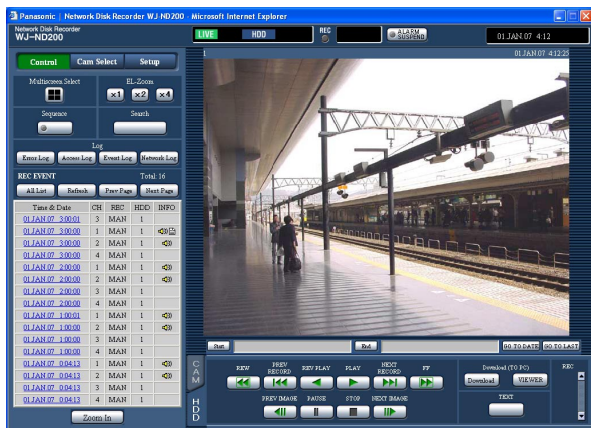
These are the descriptions of how to display/edit the attached text information to images.

## Note:

Displaying/editing text information is possible during pausing playback on a single screen.

## Screenshot 1

Start operation after starting playback of recorded images on a single screen.



## Step 1

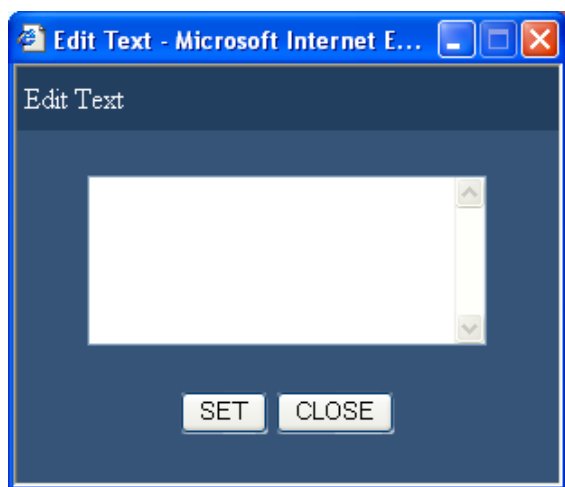
Pause playback by clicking the [PAUSE] button.

## Step 2

Click the [TEXT] button in the [HDD] tab.

## Screenshot 2

The "Edit Text" window will be displayed.



## Step 3

The text information attached to the recorded images will be displayed.

## Step 4

Edit text information. It is possible to enter up to 200 characters (up to 10 lines) for text information.

### • About the available characters

The following alphanumeric characters can be entered.

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz 0 1  
2 3 4 5 6 7 8 9 ! @ [ \ ] ^ \_ ` | } ~ (space)

## Step 5

Click the [SET] button.

→ The text information will be registered.

## Step 6

Click the [CLOSE] button.

→ The "Edit Text" window will close.

# Transmits Camera Images onto an FTP Server

---

It is possible to transmit images to an FTP server.

Image transmission can be performed at a designated interval periodically (FTP SEND BY PERIODIC TIMER) or at an event occurrence (FTP SEND BY ALARM).

## Transmit images from cameras periodically

It is necessary to perform the settings on the setup menu in advance to transmit images from cameras to an FTP server periodically.

The settings relating to "FTP SEND BY PERIODIC TIMER" such as FTP server directory, transmission interval, source camera channel, etc. can be performed on the setup menu ("Comm" - "FTP Setup" - "FTP Send by Alarm"). Select "ON" or "OFF" on the setup menu ("Schedule" - "Time Table" - "FTP SEND PERIODIC TIMER") whether or not to transmit images periodically.

Refer to the setup instructions (PDF) for setup.

When the image compression method of the camera used for the camera channel selected for "Channel to Send" (of "FTP Send by Periodic Timer" on the "FTP Setup" menu) is "MPEG-4", images will not be transmitted.

## Transmit images from cameras at an event occurrence

It is necessary to perform the settings on the setup menu in advance to transmit images from cameras to an FTP server at an event occurrence.

The settings relating to "FTP Send by Alarm" such as FTP server name, "Duration-Pre", "Duration-Post", etc. can be performed on the setup menu ("Comm" - "FTP Setup" - "FTP ALARM SENDING").

Select "ON" or "OFF" on the setup menu ("Schedule" - "Time Table" - "FTP Send by Alarm") whether or not to transmit images at an event occurrence.

Refer to the setup instructions (PDF) for setup.

# Check Logs

The following logs can be checked.

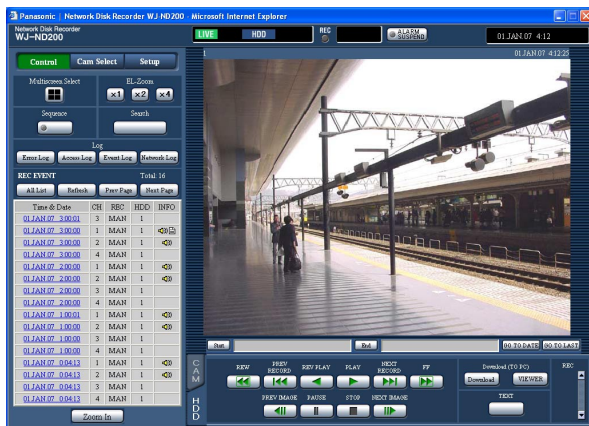
- Error log
- Access log
- Event log (event occurrence time and details)
- Network trouble log

## Check the error log

The error log will be displayed in list form.

### Screenshot 1

Display the "Control" panel by clicking the [Control] button.

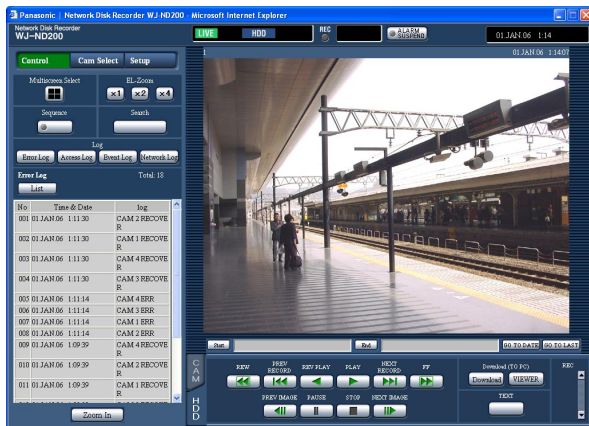


### Step 1

Click the [Error Log] button in the [Log] box.

### Screenshot 2

The error log (the error log window) will be displayed in list form. Refer to page 57 for further information about the error log.



### Step 2

Click the [List] button to close the error log window.

### Notes:

- Up to 100 error logs can be kept. When more than 100 event logs are filed, the older event logs will be overwritten by the newer event logs. In this case, the oldest log is the first to be overwritten.
- When the same trouble as the one recorded on the latest log occurred, only the time and date of the latest log will be updated.
- Live images will not be refreshed correctly while the displayed logs are being refreshed.

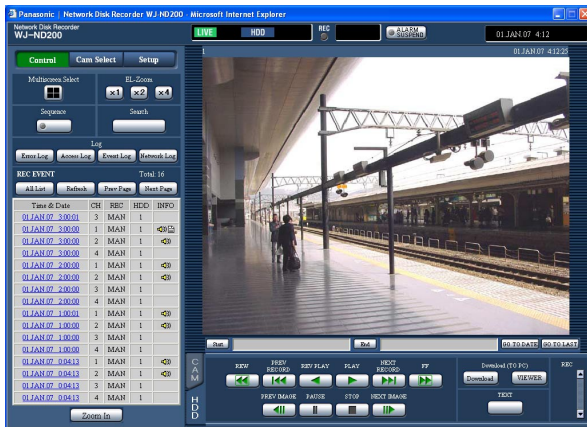


# Check the access log

The time when logged in/out for this unit, the user name, or the IP address will be displayed.

## Screenshot 1

Display the "Control" panel by clicking the [Control] button.

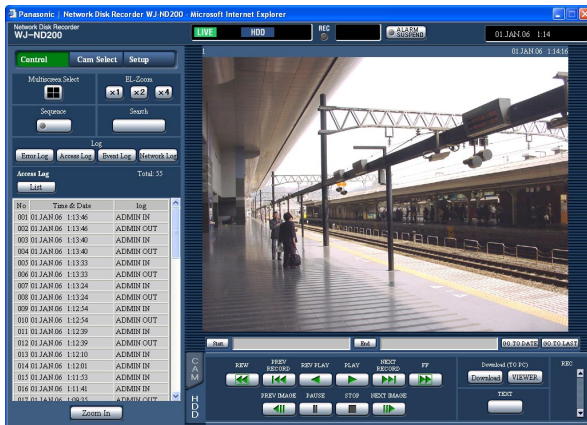


## Step 1

Click the [Access Log] button in the [Log] box.

## Screenshot 2

The access log (the access log window) will be displayed in list form.



## Indications for access log

**\*\*IN:** The user name or the IP address displayed before "IN" indicates the user/host logged in.

**\*\*OUT:** The user name or the IP address displayed before "OUT" indicates the user/host logged out.

A user name or an IP address will be displayed in the "\*\*\*" part.

## Step 2

Click the [List] button to close the access log window.

## Notes:

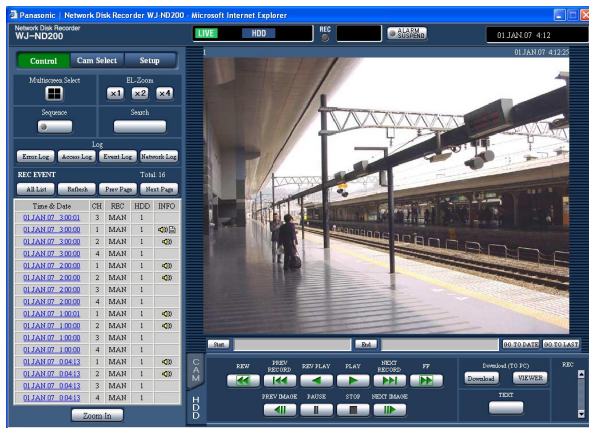
- Up to 100 access logs can be kept. When more than 100 event logs are filed, the older event logs will be overwritten by the newer event logs. In this case, the oldest log is the first to be overwritten.
- Live images will not be refreshed correctly while the displayed logs are being refreshed.

## Check the event log

The event logs (event occurrence times and their details) will be displayed. Refer to page 33 for further information about each event.

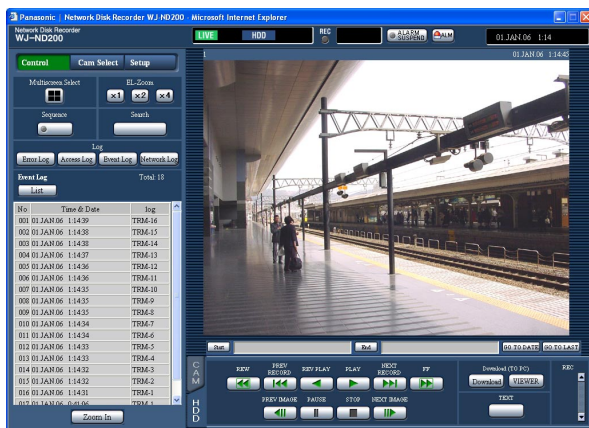
### Screenshot 1

Display the "Control" panel by clicking the [Control] button.



## Screenshot 2

The event log (the event log window) will be displayed in list form.



### Step 1

Click the [Event Log] button in the [Log] box.

### Indications for event log

**COM:** Command alarm

**EMR:** Emergency recording

**TRM:** Terminal alarm

**CAM:** Site alarm

**SCD:** Scene change alarm

**EXT:** External recording

**HDDy ON/OFF\*\*:** Number of times the USE button

inside the front cover is pressed ("y" indicates disk number, "\*\*\*" indicates number of times)

**SD START:** Start the SD memory data obtainment

**SD ABORT:** Abort the SD memory data obtainment

**SD END:** End the SD memory data obtainment

## Step 2

Click the [List] button to close the event log window.

**Notes:**

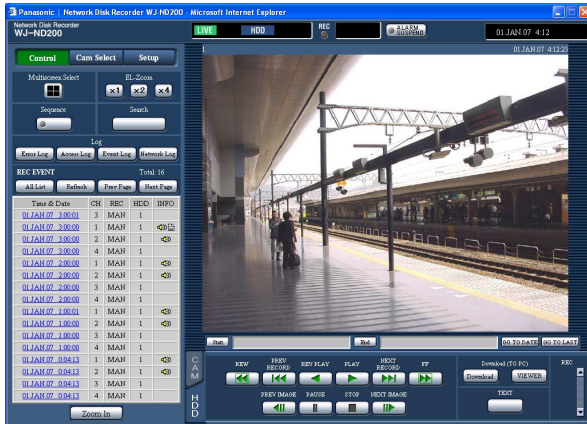
- Up to 750 event logs can be kept. When more than 750 event logs are filed, the older event logs will be overwritten by the newer event logs. In this case, the oldest log is the first to be overwritten.
- Live images will not be refreshed correctly while the displayed logs are being refreshed.

## Check the network log

The network log (network event) will be displayed in list form.

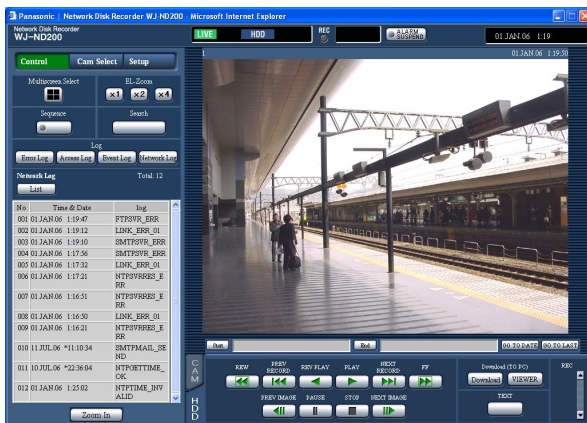
### Screenshot 1

Display the "Control" panel by clicking the [Control] button.



### Screenshot 2

The network log (the network log window) will be displayed in list form. Refer to page 57 for further information about the network log.



### Step 1

Click the [Network Log] button in the [Log] box.

## Step 2

Click the [List] button to close the network log window.

**Notes:**

- Up to 1 000 network trouble logs can be kept. When more than 1,000 event logs are filed, the older event logs will be overwritten by the newer event logs. In this case, the oldest log is the first to be overwritten.
- When the same trouble as the one recorded on the latest log occurred, only the latest log will be updated.
- Live images will not be refreshed correctly while the displayed logs are being refreshed.

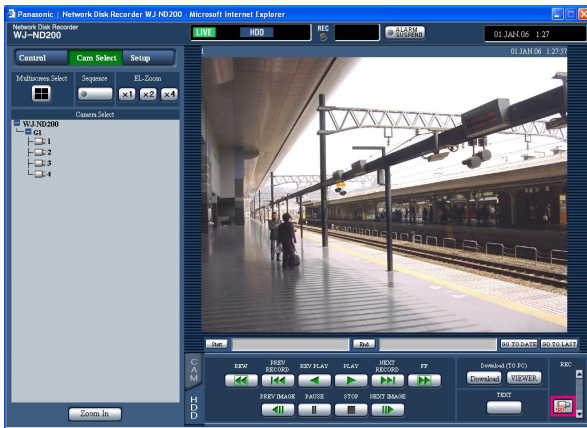
# Obtain Images on an SD Memory Card

Images recorded on the SD memory card on the camera can be obtained as follows.

Refer to the setup instructions (PDF) for further information about the SD memory card recording and for how to set the recording rate for the SD memory card recording.

## Screenshot 1

When the recording rate for "SD MEMORY REC" is configured, the SD memory data obtain button will be displayed.



## Step 1

Click the SD memory data obtain button.

→ The unit will check if there is any recorded image on the SD memory card.

When a recorded image is found, the letters "SD" on the SD memory data obtain button will turn red and obtainment of SD memory data will start.

When completing the obtainment, the letters "SD" on the SD memory data obtain button will turn blue.

## Important:

- The SD memory data obtain button can be clicked by only users for whom the "SD MEMORY REC" checkbox is checked on the "User Level" page ("User Mng." – "User Level" – "SD MEMORY REC").
- SD memory data cannot be obtained when the emergency recording is being performed.
- When the recording rate for "SD MEMORY REC" is not set, the SD memory obtain button will not be displayed.

## Note:

The color of the letters "SD" on the SD memory data obtain button indicates the following statuses.

**Blue:** Indicates that no recorded images found on the SD memory card.

**Red:** Indicates that the unit is currently obtaining recorded images on the SD memory card.

## Download Recorded Images

Designate the start point and the end point of played images and download images to a PC.

Recorded images will be downloaded as image data files (extension:n3r). Refer to page 50 for the descriptions of how to play the downloaded images.

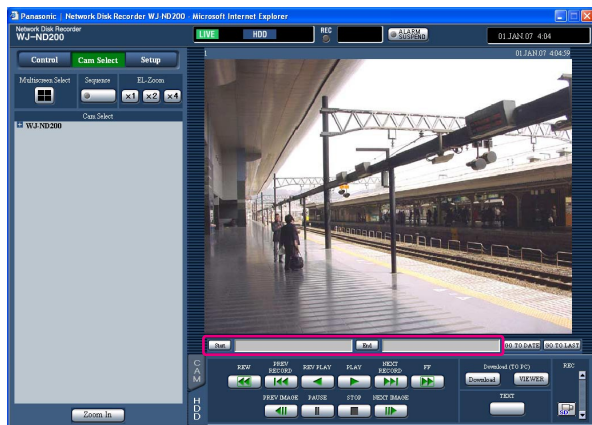
**Important:**

- When downloading, the available disk space must be 2 or more times the size of the file to be downloaded. It is a feature of Microsoft® Internet Explorer.
- When the download is canceled in the process, it may be impossible to properly play the downloaded file on a PC.

### Screenshot 1

Start operation after starting playback of recorded images on a single screen.

Display the [HDD] tab.



### Step 1

Enter the desired start time for download in the [Start] box on the playback point operation area.

It is also possible to designate the start time by clicking the [Start] button at the desired point to set as the start point of the image to be downloaded.

→ The time and date of the start point will be displayed in the playback position display area.

## Step 2

Enter the desired end time for download in the [End] box on the playback point operation area.

It is also possible to designate the end time by clicking the [End] button at the desired point to set as the end point of the image to be downloaded.

→ The time and date of the end point will be displayed in the playback position display area. It is possible to designate up to 20 minutes of the time range per download.

### Step 3

Click the [Download] button.

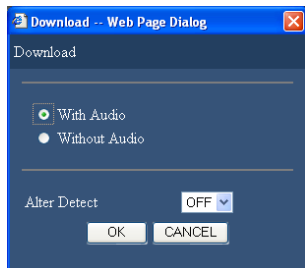
**Note:**

Download may start from a point several seconds later than the designated start time and may end at a point several seconds after the designated end time when downloading MPEG-4 images.



## Screenshot 2

The "Download" pop-up window will be displayed.



## Step 4

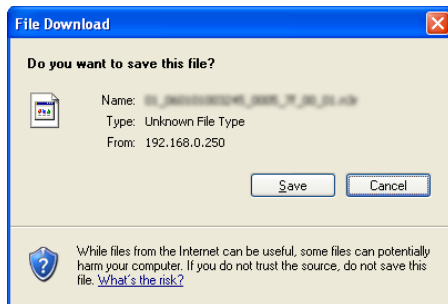
Click the [OK] button after selecting "With Audio" or "Without Audio", and "ON" or OFF for "Alter Detect" to determine whether or not to attach an alteration detection code to recorded images to be downloaded.

### Note:

The download time will be longer when "ON" is selected for "Alter Detect".

## Screenshot 3

The download window will be displayed.



## Step 5

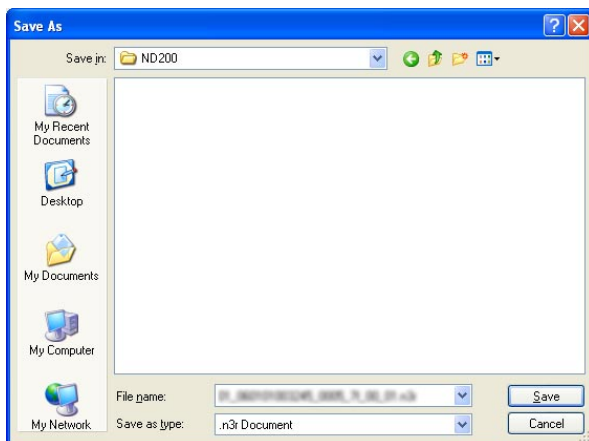
Click the [Save] button.

### Note:

When the "With Audio" radio button is checked in step4, the download window will be displayed again after completing download of images.

## Screenshot 4

The "Save As" window will be displayed.



## Step 6

Create a new folder in the desired directory and click the [Save] button.

→ Image data (extension:n3r) and audio data (extension:n3a) will be downloaded.

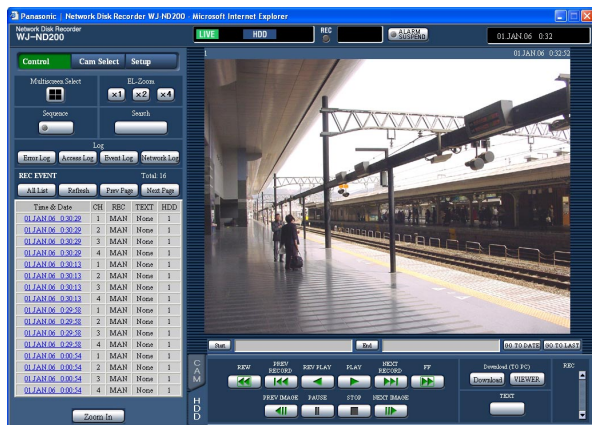
# Play Downloaded Images

Recorded images will be downloaded as image data files (extension:n3r). It is possible to play, save and print downloaded images using the viewer software provided from this unit to PC.

## Download the viewer software

### Screenshot 1

Display the [HDD] tab.

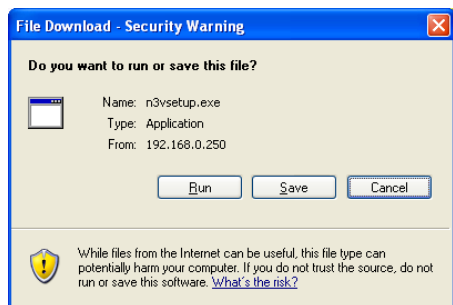


### Step 1

Click the [VIEWER] button of the [Download (TO PC)] box.

### Screenshot 2

The download window will be displayed.

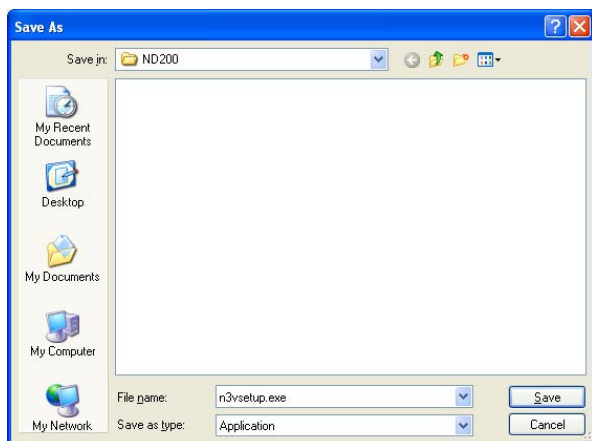


### Step 2

Click the [Save] button.

### Screenshot 3

The "Save As" window will be displayed.



### Step 3

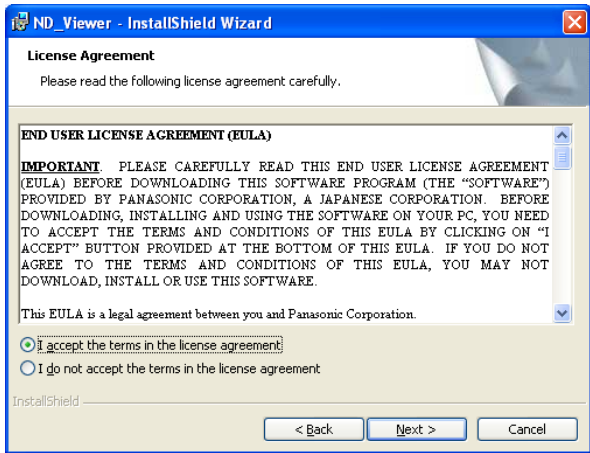
Create a new folder in the desired directory and click the [Save] button.

→ The viewer software will be downloaded.

# Install the viewer software

## Screenshot 1

The install wizard window will be displayed.



## Step 1

Double-click the downloaded file (n3vsetup.exe).

### Note:

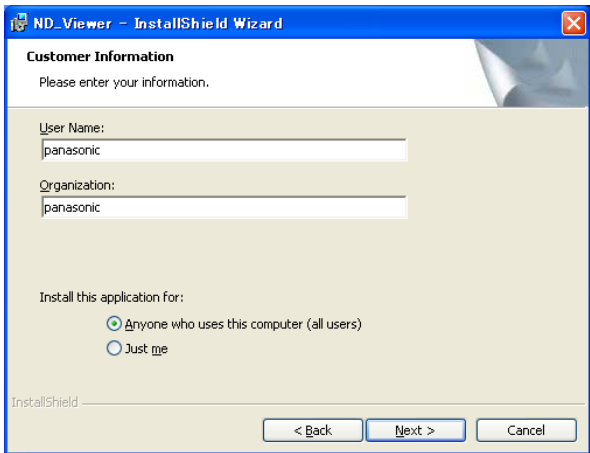
When the older version of the viewer software is installed, installation may not be successfully completed. Uninstall the older version first before starting the installation.

## Step 2

When agreed to the displayed license agreement, click the check box of "I accept the terms in the license agreement" and then click the [Next] button.

## Screenshot 2

The user information entry screen will be displayed.



## Step 3

Complete the customer information fields and click the [Next] button.

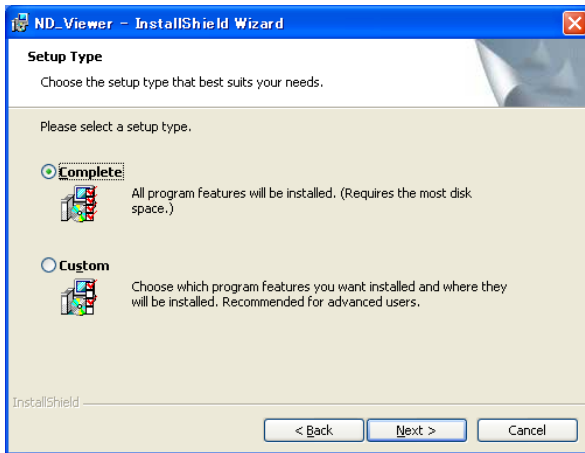
### Note:

Customer information entry is not required to proceed.



### Screenshot 3

The setup type selection screen will be displayed.

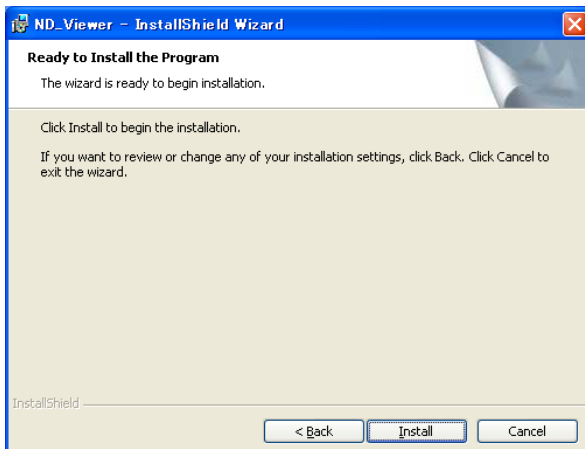


### Step 4

Select "Complete" and click the [Next] button.

### Screenshot 4

The wizard is ready to install.

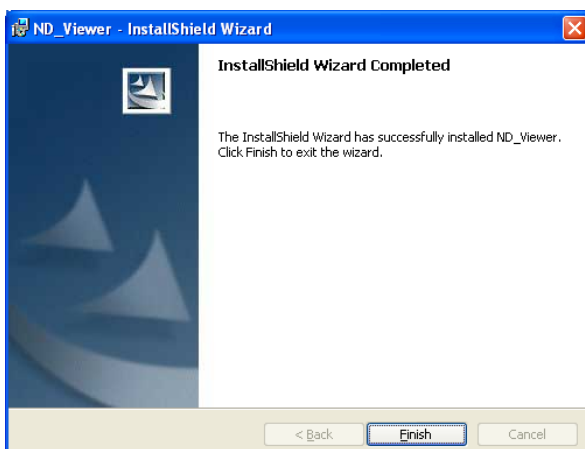


### Step 5

Click the [Install] button.

### Screenshot 5

When the installation is successfully completed, the following window will be displayed.



### Step 6

Click the [Finish] button.

→ The installation of the viewer software is complete.

# Uninstalling the viewer software

## [For Windows XP]

1. Open "Add or Remove Programs" in "Control Panel".
2. Select "ND\_Viewer" (the program to be deleted) from presently installed programs and click the [Remove] button.  
The uninstall program will be launched and the wizard will be displayed.
3. Uninstall the program by following instructions on the monitor.

# Playback downloaded images

---

### Note:

Depending on the version of the viewer software, images may not be played properly. In this case, download the viewer software from the recorder and install it by following instructions as described on page 48.  
Refer to the "readme.txt" on the provided CD-ROM for information about the version compatibility.

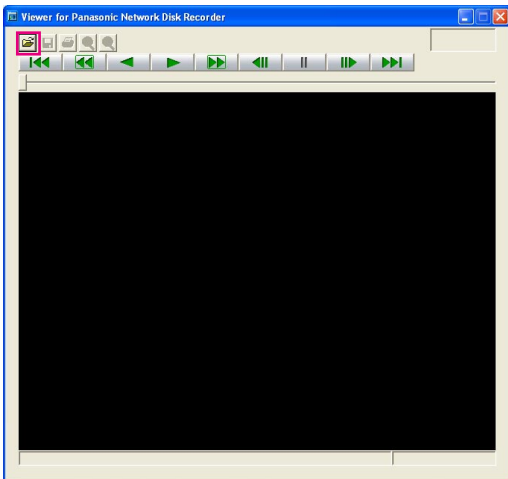
---

### Screenshot 1

Start up the viewer software and display the following window.

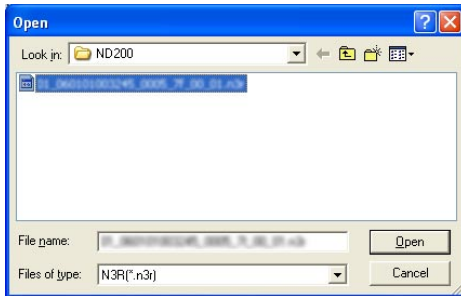
### Step 1

Click the [OPEN] button.



## Screenshot 2

The [Open file] window will be displayed.



## Step 2

Select the downloaded image data file (filename.n3r).

### Notes:

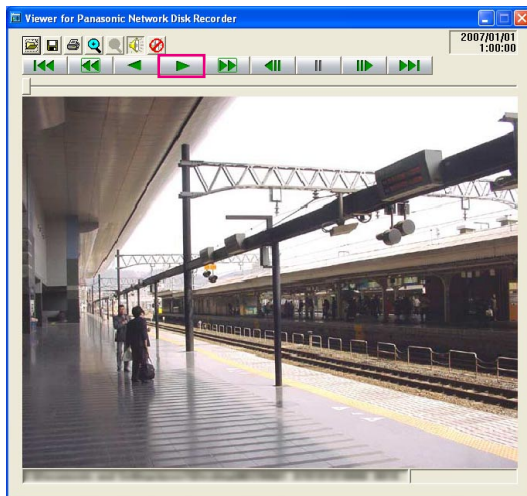
- It is possible to select two files or more (up to 32 files) by clicking the desired files while holding down the [Ctrl] key or the [Shift] key.
- When playing audio, make sure that the image data (extension: n3r) and the audio data (extension: n3a) are in the same folder.

## Step 3

Click the [Open] button.

## Screenshot 3

The recorded images will be played in this area.



## Step 4

Click the [PLAY] button.

### Notes:

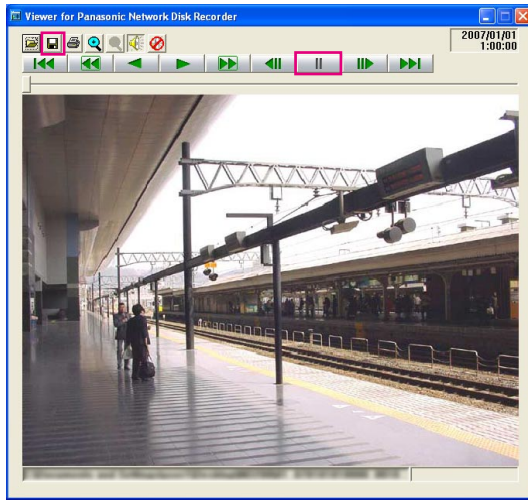
- When played image reached the end, black screen will be displayed and paused.
- When two files or more are selected, it is possible to skip to the previous/next file to play by clicking the << / >> buttons.
- When the magnifying glass button is clicked, the displayed image will be enlarged two times.
- When performance of the PC in use is low, images may not be played smoothly.
- It is possible to turn on/off audio by clicking the speaker / mute buttons.
- When a web browser, the viewer software and the HDD viewer are simultaneously running, playback of audio may not be performed correctly. To perform playback of audio correctly, launch and run only one of the above software.

# Save downloaded images

It is possible to save the paused image as a jpeg file (extension: .jpg). Saving the downloaded file is available only when the image is paused.

## Screenshot 1

Start operation when playing the downloaded images using the viewer software.



## Step 1

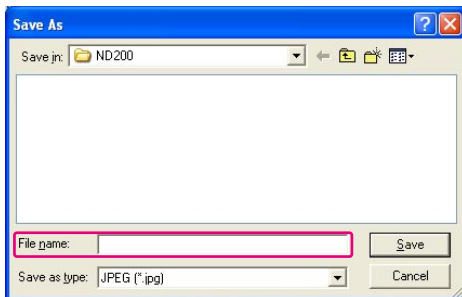
Click the [PAUSE] button.

## Step 2

Click the [SAVE] button.

## Screenshot 2

The "Save As" window will be displayed.



## Step 3

Enter the file name and select "JPG (\*.jpg)" for "Save as type".

## Step 4

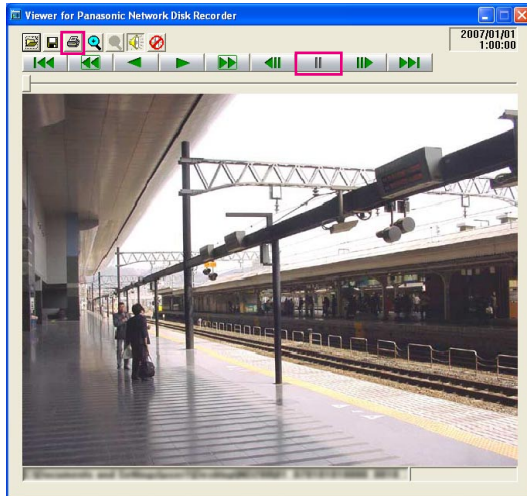
Designate the folder and click the [Save] button.  
→ The image data will be downloaded and saved.

## Print the displayed image

It is possible to print the paused image.

### Screenshot 1

Start operation when playing the downloaded images using the viewer software.



### Step 1

Click the [PAUSE] button.

### Step 2

Click the [PRINT] button.

---

### Note:

The time and date being displayed on the viewer when paused will also be printed.

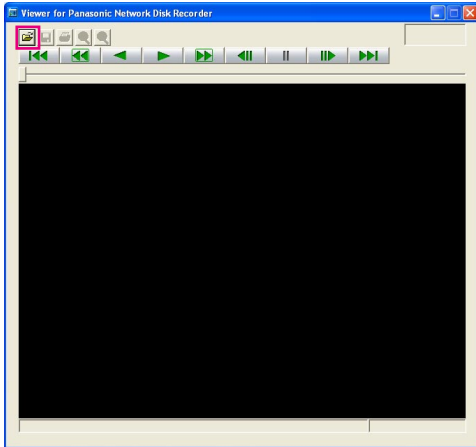
---

## Perform the alteration detection

It is possible to detect the alteration of the data if a code for the alteration detection has been attached to the downloaded data. Refer to page 46 for descriptions of how to attach a code for the alteration detection.

### Screenshot 1

Start up the viewer software and display the following window.

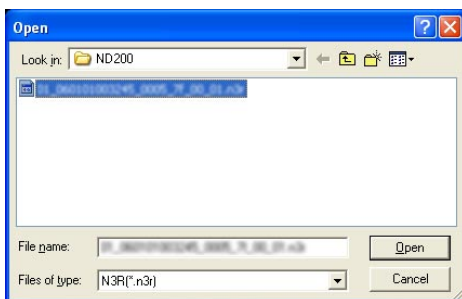


### Step 1

Click the [OPEN] button.

### Screenshot 2

The [Open file] window will be displayed.



### Step 2

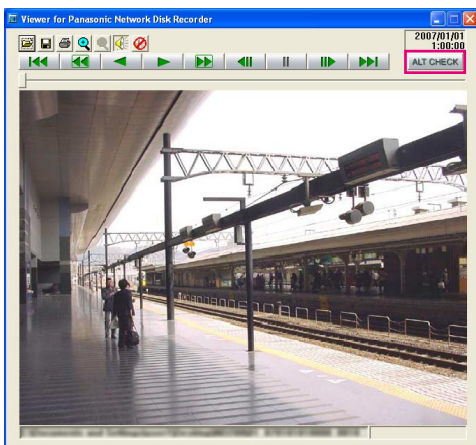
Select the downloaded image data file (filename.n3r).

### Step 3

Click the [Open] button.

### Screenshot 3

The first frame of the downloaded image will be displayed and paused.



### Step 4

Click the [ALT CHECK] button.

→ The alteration detection will start.

The following pop-up window will be displayed while/after performing the alteration detection.

**OK (Not Altered):** No alteration was detected.

**NG (Altered):** Alteration was detected.

---

### Note:

The [ALT CHECK] button will be displayed only when opening an image data file with a code for the alteration detection.

---

# Notification by E-Mail

## Alarm mail notification

The following mail will be sent to notify of an alarm occurrence to a registered address when an alarm occurs.

Contents of the alarm mail:

In ND200 (192.168.0.250), alarm was occurred.  
Alarm date: xx-xxx-xxxx xx:xx:xx GMT xx:xx (Example: 01-JAN-2006 GMT+0:00)  
Cause of alarm: Displays an event type and a camera channel or an alarm number (Example: COMMAND ALARM 5CH)  
File name of alarm image: The file name of the image attached to an e-mail.  
URL: <http://192.168.0.250/>

## Warning mail notification

The following mail will be sent to notify of a trouble occurrence to a registered address when the trouble occurs.

ND200 (192.168.0.250) STATUS REPORT.  
DATE: .....1-JAN-2006 12:00:00 GMT+0:00  
STATUS:The description of the trouble will be displayed. (Ex. THERMAL ERROR)

Display	Description
DATE	Time and date when the trouble occurred will be displayed.
STATUS	<p>The description of the trouble will be displayed.</p> <p>HDD Capacity warning*<sup>1</sup>: &lt;except FULL&gt; HDD CAPACITY REMAINS **% ** indicates the available disk space (%) &lt;FULL&gt; HDD FULL</p> <p>HDD exchange warning: HDDx EXCHANGE WARNING **% x indicates disk number ** indicates the available disk space (%)</p> <p>Power outage detection: Recover from a power outage: Network camera error detection: CAM** COMMUNICATION ERROR ** indicates camera channel</p> <p>Network camera error recovery: CAM** COMMUNICATION RECOVERED ** indicates camera channel</p> <p>Network camera error detection (audio): CAM** COMMUNICATION ERROR (AUDIO) ** indicates camera channel</p> <p>Network camera error recovery (audio): CAM** COMMUNICATION RECOVERED (AUDIO) ** indicates camera channel</p> <p>HDD smart warning: HDDx DISK WARNING x indicates disk number</p> <p>HDD hour meter warning: HDDx HOUR METER WARNING x indicates disk number</p>

Display	Description
Remove auto links:	HDDx LOGICALLY REMOVED x indicates disk number
Mirroring recovery failure:	MIRROR RECOVERY FAILURE x x indicates disk number
Format error in the single mode:	HDDx FORMAT ERROR x indicates disk number
Format error in the mirroring mode:	MIRROR FORMAT ERROR
Alteration detected:	ALTERED xxCH xx indicates camera channel
Fan trouble:	FAN ERROR x x indicates fan number
Thermal trouble:	THERMAL ERROR
Network link error:	NETWORK LINK ERROR
DHCP IP address lost:	DHCP ERROR
Camera SD memory card error:	CAM xx SD ERR xx indicates camera channel
Camera SD memory card starting write error:	CAM xx SD START ERR xx indicates camera channel
Camera SD memory card ending write error:	CAM xx SD END ERR xx indicates camera channel
Camera SD memory card list request error:	CAM xx GET LIST ERR xx indicates camera channel
Camera SD memory card data obtainment failure:	CAM xx GET IMG ERR xx indicates camera channel
Camera SD memory card data deletion failure:	CAM xx DEL IMG ERR xx indicates camera channel
Warning for number of times the USE button is pressed:	HDD x ON/OFF WARNING *** x indicates disk number *** indicates number of times the USE button is pressed
HDD remove error (removed without pressing the USE button)	HDD x SWAP WARNING X indicates the disk number
Video loss detection:	CAM xx VIDEO LOSS xx indicates camera channel
Video loss recovery:	CAM xx VIDEO RECOVERED xx indicates camera channel

#### \*1: HDD capacity warning

A warning mail with the <except FULL> content will be sent when the available disk space becomes less than the set value for "HDD Capacity Warning" of "Disk Setup" of the "Maintenance" menu. After a warning mail is sent, a warning mail with the <except FULL> content will be sent each time 1% of the available disk space is reduced, and a warning mail with the <FULL> content will be sent when there is no available disk space.



# About the Error Log

The following are the descriptions about the contents of the error log and the network error log.

Content	Error Log	Network log	Output from the connector on the rear panel
Power outage detection	PWR LOSS	—	Outage processing end output
Recover from a power outage	PWR RECOVER	—	—
Fan warning	FAN f	—	Error output
Thermal error warning	THERMAL	—	Error output
Alteration detection	ALTERD **CH	—	Error output
USE button pressed number of times	HDD d ON/OFF **	—	HDD error output
HDD Write error	W-ERR d	—	—
HDD Read error	R-ERR d	—	—
HDD S.M.A.R.T. warning	SMART d	—	HDD error output
HDD hour meter warning	H.METER d	—	HDD error output
HDD SKIP warning* <sup>1</sup>	SKIP HDD d	—	—
Remove auto links* <sup>2</sup>	REMOVE d	—	HDD error output
Mirroring recovery failure	M-FAIL d	—	HDD error output
Single mode format failure	HDD d FORMAT-ERR	—	HDD error output
Mirroring mode format failure	M-FORMAT-ERR	—	HDD error output
HDD remove error* <sup>3</sup>	HDD d SWAP WARNING	—	HDD error output
HDD exchange warning	HDD d EXCHANGE **%	—	Available disk space warning output
Available capacity warning	HDD-**%	—	Available disk space warning output
Available capacity warning (FULL)	HDD-FULL	—	Available disk space warning output
Network link error	—	LINK_ERR	Network error output
Network camera error detection	CAM cc ERR	—	Camera error output
Network camera error recovery	CAM cc RECOVER	—	—
Network camera error detection (audio)	CAM cc ERR (A)	—	Camera error output
Network camera error recovery (audio)	CAM cc RECOVER (A)	—	—
Video loss detection* <sup>4</sup>	CAM cc VIDEO LOSS	—	Camera error output
Video loss recovery* <sup>4</sup>	CAM cc VIDEO RECOVERED	—	—

\*1: "HDD SKIP" is the function that continues recording even when an error occurs, such as HDD write error, by recording images on the next HDD.

\*2: "Remove auto links" means unmounting of the hard disk drive without removing the disk from the unit.

\*3: HDD remove error is an error that occurs when the hard disk drive is removed without pressing the respective USE button.

\*4: "Video loss" is an error that may occur between the WJ-NT304, WJ-NT314 and the camera connected to the WJ-NT304. To detect video loss occurrences using the WJ-ND200, it is necessary to configure the "Panasonic alarm protocol setup" setting of the WJ-NT304, WJ-NT314, and the "Site Alarm Setup" setting of the WJ-ND200.

Content	Error Log	Network log	Output from the connector on the rear panel
E-mail transmission complete	–	SMTPMAIL_SEND	–
E-mail authentication error	–	SMTPATTEST_ERR	Network error output
Failed to resolve POP3 server address from DNS	–	SMTPPOP3ADD_ERR	Network error output
Failed to find POP3 server	–	SMTPPOP3SVR_ERR	Network error output
Failed to resolve SMTP server address from DNS	–	SMTPSVRADD_ERR	Network error output
Failed to find SMTP server	–	SMTPSVR_ERR	Network error output
MAIL FROM command error	–	SMTPMAILFROM_ERR	Network error output
RCPT TO command error	–	SMTPRCPTTO_ERR	Network error output
Other errors for SMTP	–	SMTPOTHER	Network error output
FTP client transmission complete	–	FTPCLIENT_OK	–
FTP server transfer complete	–	FTPSVRFWD_OK	–
Failed to resolve FTP server address from DNS	–	FTPSVRADD_ERR	Network error output
Failed to find FTP server	–	FTPSVR_ERR	Network error output
FTP uploading error	–	FTPUPLOAD_ERR	Network error output
FTP passive mode error	–	FTPPASSIVE_ERR	Network error output
FTP log-in failure	–	FTPLOGIN_FAULT	Network error output
FTP log-out failure	–	FTPLOGOUT_FAULT	Network error output
Other error for FTP	–	FTPOTHER	Network error output
DDNS IP address update	–	DDNSIPADDUPDATE_OK	–
No response from the DDNS server	–	DDNSSVRRES_ERR	Network error output
Password error for DDNS user name	–	DDNSUSERPASS_ERR	Network error output
DDNS IP address update error	–	DNSIPADDUPDATE_ERR	Network error output
Other error for DNS	–	DNSOTHER	Network error output
Synchronization with the NTP server complete	–	NTPGETTIME_OK	–
Failed to resolve NTP server address from DNS	–	NTPSVRADD_ERR	Network error output
Failed to adjust the time	–	NTPSETTIME_ERR	Network error output
No response from the NTP server	–	NTPSVRRES_ERR	Network error output
Time from the NTP server is invalid	–	NTPTIME_INVALID	Network error output
Other errors for NTP	–	NTPOTHER	Network error output
SNMP transmission complete	–	SNMPSEND_OK	–
Password error for SNMP user name	–	SNMPUSERPASS_ERR	Network error output
SNMP object inquiry failure	–	SNMPOBJ_ERR	Network error output

<b>Content</b>	<b>Error Log</b>	<b>Network log</b>	<b>Output from the connector on the rear panel</b>
Other errors for SNMP	–	SNMPOTHER	Network error output
Having IP address complete	–	DHCP_IPADD_OK	–
DHCP lost	–	DHCP_IPADD_LOST	Network error output
DHCP IP address update failure xx%	–	DHCP_IPADDUPDATE_ERR	Network error output
DHCP IP address registration failure	–	DHCP_IPADDENT_ERR	Network error output
Other error for DHCP	–	DHCPOTHER	Network error output
HTTP log-in	–	HTTPLOGIN	–
Password error for HTTP user name	–	HTTPUSERPASS_ERR	Network error output
HTTP download failure	–	HTTPDOWNLOAD_ERR	Network error output
HTTP request invalid	–	HTTPDREQUEST_ERR	Network error output
Other errors for HTTP	–	HTTPOTHER	Network error output
Move to CONFIG		CONFIG_LOGIN	–
Camera SD memory card error	CAM cc SD ERROR		Camera error output
Request to start writing on the camera SD denied	CAM cc SD START ERR		Camera error output
Request to finish writing on the camera SD denied	CAM cc SD END ERR		Camera error output
Request to obtain a data list on the camera SD denied	CAM cc GET LIST ERR		Camera error output
Request to obtain SD memory data on the camera SD denied	CAM cc GET IMG ERR		Camera error output
Request to delete SD memory data on the camera SD denied	CAM cc DEL IMG ERR		Camera error output

Refer to the next page for the parameters of the indications.

# When the Error Log is Displayed

Do the following when the error log is displayed. Contact the dealer when an unlisted error occurred.

Error Log	Description	Solution
W-ERR d R-ERR d SKIP d	Failed to write/read data on the HDD. The HDD may be malfunctioning.	If this error occurs frequently, contact the dealer to replace the HDD*.
SMART d	The HDD may be malfunctioning and may work incorrectly.	Contact the dealer to replace the HDD*.
H.METER d	The set time for the hour meter has passed. It may be reaching the end of the HDD's lifetime.	Contact the dealer to replace the HDD*.
REMOVE d	The HDD has been unmounted from the system automatically.	Contact the dealer. After replacing the faulty disk*, the error status will be canceled.
HDD-**- or HDD-FULL	The HDD is almost full or completely full.	Format or replace the HDD*.
CAM cc ERR	Communication with the network camera is unstable, or no network camera is connected.	Check the communication status between this unit and the network camera.
LINK_ERR	The unit is disconnected from the network.	Check the network connection.
CAMERA cc SD ERROR	An SD card memory error occurred. The SD memory card may be not detected, or there is no available space on the SD memory card on the camera.	Check the SD memory card and the settings on the camera.
CAM cc SD START ERR CAM cc SD END ERR CAM cc GET LIST ERR CAM cc GET IMG ERR CAM cc DEL IMG ERR	An SD card memory error occurred. Communication with the network camera is unstable, or no network camera is connected.	Check the SD memory card and the settings on the camera. Check the communication status between this unit and the network camera.
HDDd FORMAT-ERR M-FORMAT ERR	The HDD may be malfunctioning, or may be not inserted correctly and firmly.	Remove and mount the hard disk drive again by following the instructions of how to mount/remove the hard disk drive, and then format it. If this error occurs frequently, contact the dealer to replace the HDD*.
M-FAILd	Failed to recover data using the mirroring function. The HDD may be malfunctioning.	Contact the dealer to replace the HDD*.

\*: The HDD should be replaced by/purchased from the qualified service personnel or system installers.

## Parameter in the logs above

Parameter	Description	Detail
f	FAN number	1-2: FAN number (FAN1-FAN2)
d	Disk number	1-2: Disk number (HDD1-HDD2) 5: Others
cc	Camera number	01-16: Camera number

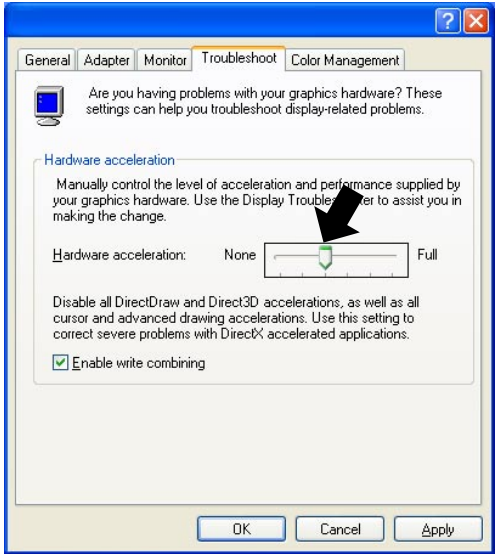
# Troubleshooting

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

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

Symptom		Cause/solution	Reference pages
Cannot access from the browser.	▶	<ul style="list-style-type: none"> <li>Is the Ethernet cable firmly connected to the 10BASE-T/100BASE-TX port? Confirm the cable is firmly connected.</li> </ul>	—
	▶	<ul style="list-style-type: none"> <li>Is the connection indicator of the 10BASE-T/-100BASE-TX port lit? When it is not lit, connection to a LAN is not established or a network is not working correctly. Confirm that the connection indicator of the 10BASE-T/100BASE-TX port is lit. Refer to a system administrator if it is not lit.</li> </ul>	—
	▶	<ul style="list-style-type: none"> <li>Is the valid IP address set? Refer to a system administrator for further information.</li> </ul>	Refer to the setup instructions (PDF).
	▶	<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.</li> </ul>	Refer to the setup instructions (PDF).
	▶	<ul style="list-style-type: none"> <li>Are there contradictions between the address and the network subnet to be accessed? When this unit and the client PC are in the same subnet, are the IP addresses of this unit and the client PC set in same subnet? Or is "Use Proxy Server" for the settings of the browser checked? When accessing this unit in the same subnet, entering the address of this unit in the "Don't Use Proxy For These Addresses" box is recommended.</li> </ul>	Refer to the setup instructions (PDF).
The buttons on the browser are displayed out of alignment.	▶	<ul style="list-style-type: none"> <li>The buttons may not be displayed orderly if the font setting of Windows has been changed from the default setting. Use with the default font setting.</li> </ul>	—

Symptom		Cause/solution	Reference pages
Some contents are not displayed on the browser.	▶	<ul style="list-style-type: none"> <li>Reload the contents by pressing the [F5] key.</li> </ul>	—
The image 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>	—
	▶	<ul style="list-style-type: none"> <li>Images recorded at low recording rate (less than 1 ips) may sometimes not be refreshed.</li> </ul>	—
Cannot record images.	▶	<ul style="list-style-type: none"> <li>Is the HDD inserted correctly and firmly?</li> <li>Is the HDD formatted correctly?</li> <li>Isn't the write protection of the HDD set to "ON"?</li> <li>Check the current information of the HDD. The disk information can be check on the "Disk Information" page ("Maintenance" – "Disk Information").</li> <li>Is the HDD removed from the unit before? Once the HDD is removed from the unit, it is necessary to format the HDD again to record images on it.</li> </ul>	13 14  Refer to the setup instructions (PDF).
Live/recorded images in MPEG-4 format are not displayed in a normal manner.	▶	<ul style="list-style-type: none"> <li>When turning on the power of this unit or when connecting the LAN cable to the network port when the camera is active, images may not be displayed/recorded in a normal manner for around a minute (at a maximum) just after turning on the power of this unit or after connecting the LAN cable to the network port.</li> </ul>	—
Audio is not recorded Audio is not be played correctly	▶	<ul style="list-style-type: none"> <li>Is "Mic input" selected for "Audio mode" on the setup menu of the network camera?</li> <li>Is "32 kbps" selected for "Audio bit rate" on the setup menu of the network camera?</li> </ul>	Refer to the setup instructions (PDF).
No SD memory data is displayed in the recording event list.	▶	<ul style="list-style-type: none"> <li>It is impossible to play SD memory data from the recording event list or time and date search result. After filtering by "SD memory" in the recording event list, select an event to play it.</li> </ul>	—
	▶	<ul style="list-style-type: none"> <li>The recording time of SD memory data will be displayed based on the clock of the camera. Check the clock of the camera.</li> </ul>	—
Cannot play SD memory data.	▶	<ul style="list-style-type: none"> <li>When the SD memory data contains not many frames, playback sometimes may not be performed in a normal manner. In this case, display the image with frame playback/reverse frame playback.</li> </ul>	—

Symptom	Cause/solution	Reference pages
<p>When displaying MPEG-4 images on a multi-screen or when enlarging the displayed image using the zoom function, images from two or more cameras are displayed in sequence on a single area.</p>	<ul style="list-style-type: none"> <li>This may occur due to the display adapter and driver combination.</li> </ul> <p>When this occurred, update the driver of the display adapter to the latest version first. If updating the driver does not solve the problem, adjust the hardware acceleration as follows.</p> <p>The following instructions are for Windows XP.</p> <ol style="list-style-type: none"> <li>(1) After closing all browser windows, right-click on the desktop and select "Properties" from the displayed pop-up menu.</li> <li>(2) Select "Settings" from "Display Properties", and then click the [Advanced] button.</li> <li>(3) Click the [Troubleshoot] tab and disable the DirectDraw acceleration by adjusting the level of "Hardware acceleration".</li> </ol> 	<p>—</p>
<p>Cannot close the authentication window displayed when displaying the basic operation window.</p>	<ul style="list-style-type: none"> <li>Are the correct user name and password entered? Confirm the correct user name and password.</li> </ul>	<p>Refer to the setup instructions (PDF).</p>

Symptom	Cause/solution	Reference pages
Cannot play audio using the Viewer software.	<ul style="list-style-type: none"> <li>Are an image data (extension: n3r) and an audio data (extension: n3a) in the same folder? Check the directory designated as the destination folder.</li> </ul>	—
Cannot play the downloaded image file.	<ul style="list-style-type: none"> <li>When any setting 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>	—
The message "Please Wait." remains on the screen.	<ul style="list-style-type: none"> <li>The "ActiveX control" is not installed in the PC. Install the "ActiveX control" by referring to the following page.</li> </ul>	66
No live image is displayed.	<ul style="list-style-type: none"> <li>Are the connected network cameras configured correctly? Check the settings of the setup menu ("Camera" - "NW Camera Setup").</li> </ul>	Refer to the setup instructions (PDF).
	<ul style="list-style-type: none"> <li>Are the settings of the setup menu ("Schedule" - "Program" - "LIVE VIDEO") configured correctly? Check the settings.</li> </ul>	Refer to the setup instructions (PDF).
	<ul style="list-style-type: none"> <li>Are the network settings of the cameras and the unit configured correctly? Check the settings of IP address, subnet mask and default gateway for them.</li> </ul>	Refer to the setup instructions (PDF).
	<ul style="list-style-type: none"> <li>When MPEG-4 is selected for the image compression method of the camera, live images may not be displayed in the image display area and black screen will be displayed for a few minutes in the following cases. <ul style="list-style-type: none"> <li>When frequently checked if the appropriate values are set for the recording settings (by clicking the [Measurement] button on the "Program Setup" window ("Schedule" - "Program")).</li> <li>When the settings of the unit are saved repeatedly. Wait around 10 minutes without any operations. The unit will function normally.</li> </ul> </li> </ul>	—
	<ul style="list-style-type: none"> <li>When trying to display MPEG-4 images via Internet, images may not be displayed. MPEG-4 image display via Internet is affected by the configurations of the network devices such as a router. Refer to the network administrator for further information.</li> </ul>	—

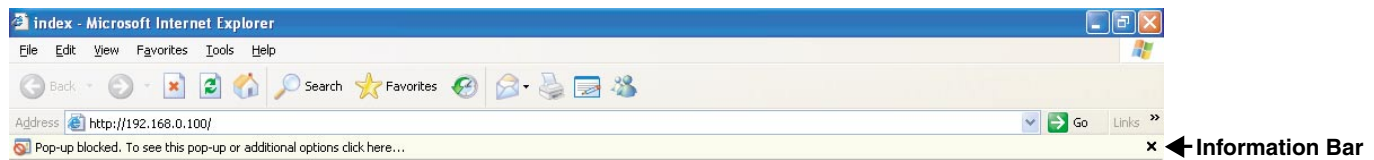


Symptom		Cause/solution	Reference pages
Live/recording images are not displayed.	▶	<ul style="list-style-type: none"> <li>When logged in with "Limited" user account of Windows operating system, images will not be displayed since the active X control may not be installed correctly. Log in with "Computer administrator" user account.</li> </ul>	—
<p>Refresh of live images is unstable.</p> <p>Browser disconnection sometimes occurs.</p> <p>Network performance is poor.</p> <p>Image file downloaded from the FTP server is faulty.</p>	▶	<ul style="list-style-type: none"> <li>When the image compression method of all cameras in use is not the same, performance may become lower. (Refresh of images will be unstable.)</li> </ul>	—
	▶	<ul style="list-style-type: none"> <li>The configured settings for transmission rate/recording rate may be beyond the maximum network performance. Lower the value/rate of the settings relating to the network such as the transmission rate, recording rate, etc.</li> </ul>	Refer to the setup instructions (PDF).
	▶	<ul style="list-style-type: none"> <li>The line speed settings may be not the same between the unit and the hub, for example, 100M BASE-TX Full for the unit and 100M BASE-TX half, etc. Some hubs change the line speed automatically depending on the network traffic and it may cause configuration errors. Check the line speed settings of both the unit and the hub, and configure the line speed settings of both to conform them.</li> </ul>	—
	▶	<ul style="list-style-type: none"> <li>Are the settings of the network camera set correctly? Check the model of the set camera on the setup menu ("Camera" - "NW Camera Setup").</li> </ul>	Refer to the setup instructions (PDF).
Cannot operate the camera.	▶	<ul style="list-style-type: none"> <li>Are the user ID and the password for the network camera set correctly? Check if the user ID and password are set correctly on the setup menu ("Camera" - "NW Camera Setup").</li> </ul>	Refer to the setup instructions (PDF).
Cannot format the hard disk using the FORMAT button inside the front cover.	▶	<ul style="list-style-type: none"> <li>Is "ON" selected for "Enable format button" on the "Config" page? When "OFF" is selected, it is impossible to format the hard disk using the FORMAT button. Check the "Enable format button" setting on the "Config" page.</li> </ul>	Refer to the setup instructions (PDF).

## When using a PC on which Windows XP Service Pack2 (SP2) is installed

The following may occur during operation when using a PC on which Windows XP Service Pack2 (SP2) is installed. Follow the instructions below when the following occurred. By performing the following solutions, other applications may not be affected.

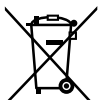
The "Information Bar" expressed in the following symptom and solutions will be displayed just below the address bar only when there is information to communicate.



Symptom	Solutions	Reference pages
The following message is displayed on the information bar. "Pop-up blocked. To see this pop-up or additional options, click here..."	<ul style="list-style-type: none"><li>Click the information bar and select "Always Allow Pop-ups from This Site...". The dialog window saying "Allow pop-ups from this site?" will be displayed. Click the [Yes] button.</li></ul>	—
The following message is displayed on the information bar. "This site might require the following Active X control: 'wvasetup.exe' from 'Panasonic Corporation'. Click here to install..."	<ul style="list-style-type: none"><li>Click the information bar and select "Install ActiveX Control...". The "Security Warning" window will be displayed. Click the [Install] button on the displayed "Security Warning" window.</li></ul>	—

Symptom	Solutions	Reference pages
<p>The following message is displayed on the information bar.</p> <p>"To help protect your security, Internet Explorer blocked this site from downloading files to your computer. Click here for options..."</p>	<ul style="list-style-type: none"> <li>Click the information bar and select "Download File...".</li> </ul> <p>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. The "Security Settings" window will be displayed. Under "Downloads", select "Enable" for "Automatic prompting for file downloads". Click the [OK] button. The "Warning" window will be displayed. Click the [Yes] button.</p>	—
<p>The following message is displayed on the information bar when tried to execute a downloaded file.</p> <p>"The publisher could not be verified. Are you sure you want to run this software?"</p>	<ul style="list-style-type: none"> <li>Click the [Run] button.</li> </ul>	—
<p>An unnecessary status bar or scroll bar is displayed on the pop-up window.</p>	<ul style="list-style-type: none"> <li>Click "Internet Options" on the Tool menu of Internet Explorer, and [Security] tab. Then, click the [Custom Level...] button to open the "Security Setting" window. Under "Miscellaneous", select "Enable" for "Allow script-initiated windows without size or position constraints". Click the [OK] button. The "Warning" window will be displayed. Click the [Yes] button.</li> </ul>	—
<p>When trying to download audio files using a web browser, a pop-up window is displayed and cannot download audio files.</p>	<ul style="list-style-type: none"> <li>Click "Internet Options" on the Tool menu of Internet Explorer, and [Security] tab. Then, click the [Custom Level...] button to open the "Security Setting" window. Under "Download", select "Enable" for "Automatic prompting for file downloads". The "Warning" window will be displayed. Click the [Yes] button.</li> </ul>	—

### Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)



This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

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

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

for further details of your nearest designated collection point.

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

### For business users in the European Union

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

### Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.

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

#### For U.S. and Canadian fields:

##### **Panasonic System Networks Company of America, Division of Panasonic Corporation of North America**

[www.panasonic.com/business/](http://www.panasonic.com/business/)

For customer support, call 1.800.528.6747

Three Panasonic Way, Secaucus, New Jersey 07094 U.S.A.

##### **Panasonic Canada Inc.**

5770 Ambler Drive, Mississauga, Ontario, L4W 2T3 Canada

(905)624-5010

[www.panasonic.ca](http://www.panasonic.ca)

#### For European and other fields:

##### **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 F.R.Germany