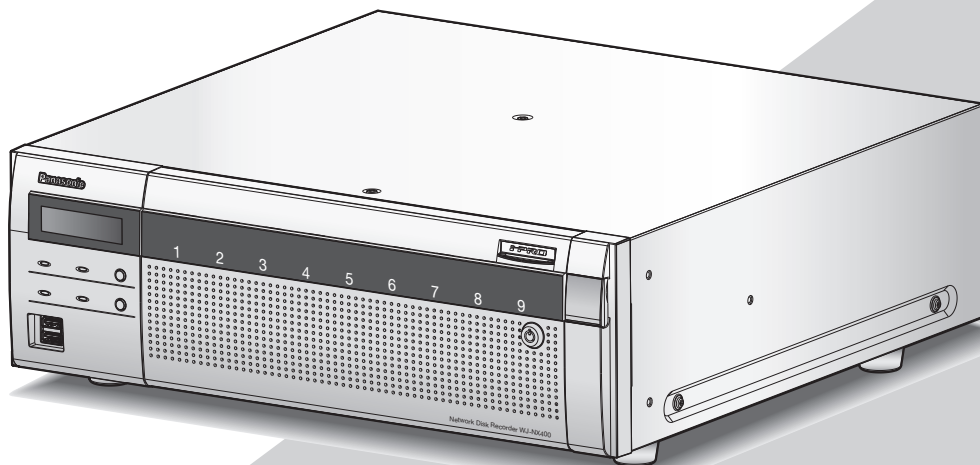


Panasonic[®]

Installation Guide

Network Disk Recorder

Model No. **WJ-NX400K**
WJ-NX400K/G



HDMI[®]
HIGH-DEFINITION MULTIMEDIA INTERFACE

The Operating Instructions (PDF) is on the Panasonic support website (<https://security.panasonic.com/download/>).

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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Important Information

Refer to the Important Information (PDF) in the provided CD-ROM for the following items.

Safety Information	• Important safety instructions
Introduction	• Preface • System requirements for a PC • Network security
Precautions	• Precautions for use
Major operating controls	• Major operating controls and their functions
User management	• User/Host management
HDD unit	• Handle the HDD units • Remove the HDD units from recorder
Others	• Troubleshooting • Specifications

Operating Instructions

Refer to the Operating Instructions (PDF) on the Panasonic support website for the following items.

Setup via recorder's main monitor	<ul style="list-style-type: none">• Basic setup<ul style="list-style-type: none">Set up date & time and language [Date/Language]Camera setup [Camera]Set up recording/events [REC & event]• Advanced setup<ul style="list-style-type: none">Configure the settings relating to monitors [Monitor]Configure the settings relating to network [Network]Configure the settings relating to the user management [User management]Configure the settings relating to maintenance [Maintenance]Manage the hard disk drives [HDD management]Configure the settings relating to the extra functions [Extra function]• Lists of the setting items
Operation via recorder's main monitor	<ul style="list-style-type: none">• Monitor live images<ul style="list-style-type: none">Operate the camera• Event function• Record images• Play recorded images• Useful functions<ul style="list-style-type: none">Copy recorded imagesPlay back copied images with this recorder
Operation via PC web browser	<ul style="list-style-type: none">• Monitor live images<ul style="list-style-type: none">Operate the camera• Event function• Play recorded images• Copy and download<ul style="list-style-type: none">Copy recorded imagesDownloadPlay back the copied/downloaded images on a PC• Setup

Introduction

Standard accessories

CD-ROM*1	1 pc.
Mouse	1 pc.
Installation Guide (this book)	1 pc.
Quick Reference Guide	1 pc.
Warranty (provided with WJ-NX400K)	1 pc.
Activation Key Card	1 pc.
Terminal Plug (12 pin)	2 pcs.
Terminal Plug (16 pin)	2 pcs.
Cable Clamp (for fixing cable connected to Terminal Plug)	1 pc.
Dust caps for the front USBs*2	2 pcs.
Power cord (WJ-NX400K)	1 pc.
Power cord (WJ-NX400K/G)	2 pcs.
Key	2 pcs.
Label*3	1 pc.
Rack mounting bracket	2 pcs.
Rack mounting bracket fixing screw	6 pcs.
Rack handle	2 pcs.
Screws for the rack handle	4 pcs.
Washer	4 pcs.
HDD canister	9 pcs.
HDD fixing screw	54 pcs.
Power cord clamp	1 pc.

*1 The CD-ROM contains the operating instructions (PDFs). Make sure to read them when installing or setting the recorder.

*2 Put the dust caps for the front USBs on the front copy port and mouse connection port to prevent dust brought by fan's intake while you are not using a mouse or an external storage device.

*3 This label is the same one found on the surface of this product. Keep it in view when installing this product in the rack.

About the user manuals

There are 4 manuals provided for the WJ-NX400K, WJ-NX400K/G as follows.

Installation Guide (this book):	Contains procedures of how to install/connect this product with devices and descriptions about "Easy Start".
Important Information (PDF):	Contains preface, precautions, and major operating controls and their functions and specifications.
Operating Instructions (PDF):	Contains descriptions of how to configure the required settings and how to operate this product.
Quick Reference Guide:	Refer to the Panasonic support website (https://security.panasonic.com/download/). Contains descriptions of how to operate functions frequently used.

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

"NX400" shown in the instructions and illustrations used in these operating instructions indicate the WJ-NX400K, WJ-NX400K/G. The screens used in these operating instructions show the case of NTSC model.

Refer to "readme.txt" on the provided CD-ROM for further information about the optional dedicated software, compatible network cameras (hereinafter, cameras) and their versions.

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

The external appearance in the document may differ from the actual product within no influence range on operation due to improvement of the product.

About HDD Unit

To install a hard disk drive in the recorder, it is necessary to assemble an HDD unit (encase the hard disk drive in the HDD canister). The HDD unit is designed to easily install/remove the hard disk drive in/from the recorder. Contact your dealer about purchasing, installing, and replacing the hard disk drives.

About Additional Camera Kit (option)

Number of cameras to be used in the system (64 cameras in basic system) can be increased to 96 and 128 (maximum) by purchasing the Additional Camera Kit (WJ-NXE40, WJ-NXE40W: option). Refer to following table regarding camera numbers.

Additional Camera Kit WJ-NXE40, WJ-NXE40W (license for 32 cameras)	NX400 only (No additional license)	one Additional Camera Kit (one additional license)	two Additional Camera Kit (two additional licenses)
	up to 64 cameras	up to 96 cameras	up to 128 cameras

Important:

- The following functions are not available when registering the additional camera kit license.
 - Display of the camera image on the main and the sub monitors connected to the recorder
 - * Camera images will be displayed on the web browser of the personal computer (hereinafter, PC), but not on the main or sub monitor.
 - Display, search, playback and copy of the recorded image on the main monitor connected to the recorder
 - Sub-stream recording
 - Re-encoding transmission
 - A part of setup menu operation
- * The main monitor displays not a camera image but a special menu. The sub monitors turn black.

About Secure Communication Kit (option)

Registering a license of a secure communication kit (option) to the recorder enables secure communication with cameras. Each secure communication kit differs in the number of cameras that can be registered as shown in the table below. Use several licenses as necessary.

WJ-NXS01, WJ-NXS01W	WJ-NXS04, WJ-NXS04W	WJ-NXS16, WJ-NXS16W	WJ-NXS32, WJ-NXS32W
1 camera	4 cameras	16 cameras	32 cameras

Precautions for installation

This product is designed to be used indoors.

Panasonic assumes no responsibility for injuries or property damage resulting from failures arising out of improper installation or operation inconsistent with this documentation.

Do not place this product in the following places:

- Locations exposed to direct sunlight
- Locations subject to having strong vibration or impact
- Locations near magnetic field sources such as a television or speakers
- Locations near the devices that emit large sound and generate vibration by sound pressure

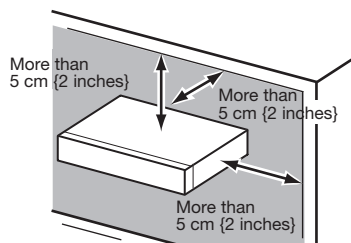
Introduction (continued)

- Locations where condensation forms easily, where temperature changes greatly or where humidity level is high
- Locations subject to steam and oil smoke such as a kitchen
- Locations which are not level
- Locations subject to dust
- Locations where it may get wet from rain or water splash

Do not install this product in locations where the product or the cables can be destroyed or damaged by persons with malicious intent.

Place this product horizontally on a level surface.

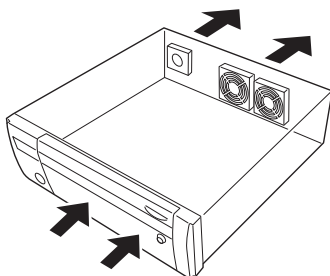
Do not place this product in an upright position. When stacking multiple recorders, clear a space of more than 5 cm {2 inches} from both sides, the top, the bottom and the rear of the recorders.



Heat dissipation

To prevent this product from overheating, heed the following. Failure to observe this may cause fire or trouble.

- Do not block the cooling fan outlet or the ventilation holes with a wall, rack, cloth, etc. Maintain the product periodically to prevent dust from blocking ventilation holes.
- The lifetime of the cooling fan is limited by use. It is recommended to replace them after around 30000 hours of operation. Contact your dealer for replacement of the cooling fans.
- Clear a space of more than 5 cm {2 inches} from both sides, the top, and the rear of the product. Do not block the ventilation holes on the front side since this product is designed to cool the hard disk drives by drawing in air from the front.



Avoid placing this product near noise sources

If the cables are placed near noise sources such as fluorescent lamps, noises may be produced. In this case, rewire avoiding the noise sources, or move the product to a place far from the source.

Grounding

Confirm that the wire is connected from the SIGNAL GND terminal to earth ground.

A grounding connection must be made before connecting the power plug or this product to the main power supply. When disconnecting the grounding wire, make sure that the power plug of this product is disconnected from the main power supply.

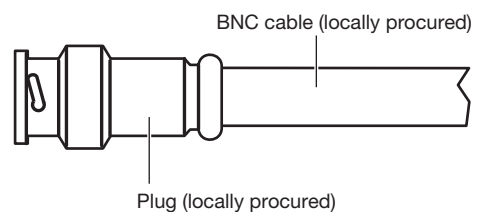
For BNC cable connection

Use only the recommended plug below when connecting the BNC plug to the connectors on the rear panel of this product.

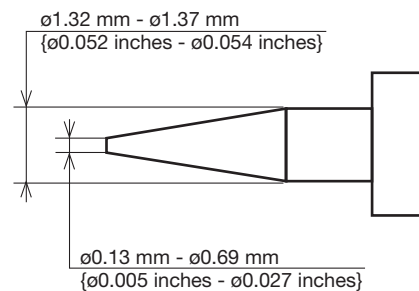
Applicable plug: MIL-C39012C, MIL-C39012/16F or BS

CECC2212: 1981

* Suffixes attached to the standards may be updated.



Tip dimensions inside the recommended BNC plug



Important:

- A compatible plug shall be used. Failure to observe this may cause trouble such as poor contact. At worst, the connector of this product may be damaged.

Avoid placing receptacles that contain liquids such as water near this product.

If liquid spills onto this product, it may cause fire or an electric shock.

Shielded (STP) LAN cables must be used with this unit to ensure compliance with EMC standards.

About sulfuration of rubber products

Do not leave rubber products containing sulfur (packing and rubber feet) close to the recorder or in the same storing box. Sulfur constituent from the rubber products may cause sulfuration corrosion on electrical parts or terminals and defects in the recorder.

Basic operations

This section explains operation of a mouse and the soft keyboard, and setting screen only.

The recorder can be operated using the mouse (provided) connected to the mouse connection port either on the front or the rear side of the recorder.

It is also possible to perform settings and some operations of the recorder from the web browser. Refer to the Operating Instructions (PDF) for descriptions of how to operate from the web browser and the configurable settings using the web browser.

Connection of a mouse

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

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

Mouse operation

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

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

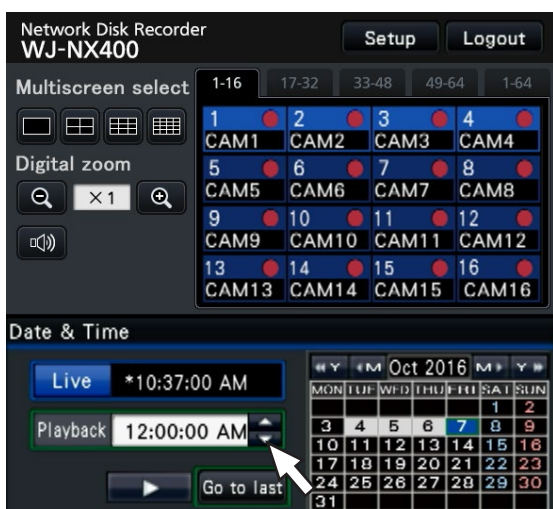
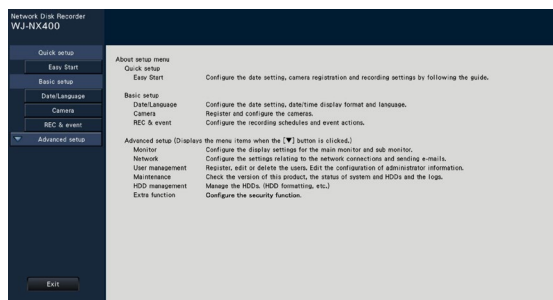
When the entry field has the [▲] and [▼] buttons or the [▼] button, the setting value can be changed using the mouse wheel.

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

Display method of the setting screen

Click the [Setup] button.

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

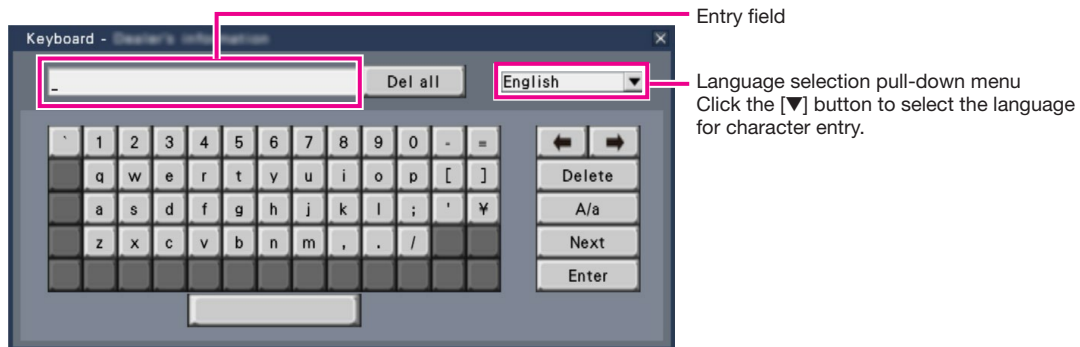


Introduction (continued)

About the operation of on-screen keyboard

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

On-screen keyboard screen



[Del all] button

Deletes all the characters in the entry field.

[←]/[→] button

Move the cursor in the entry field to either direction.

[Delete] button

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

[A/a] button

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

[Next] button

Changes the keys to be displayed for character entry.

The displayed keys are changed as follows:

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

[Enter] button

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

Note:

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

Setup menu

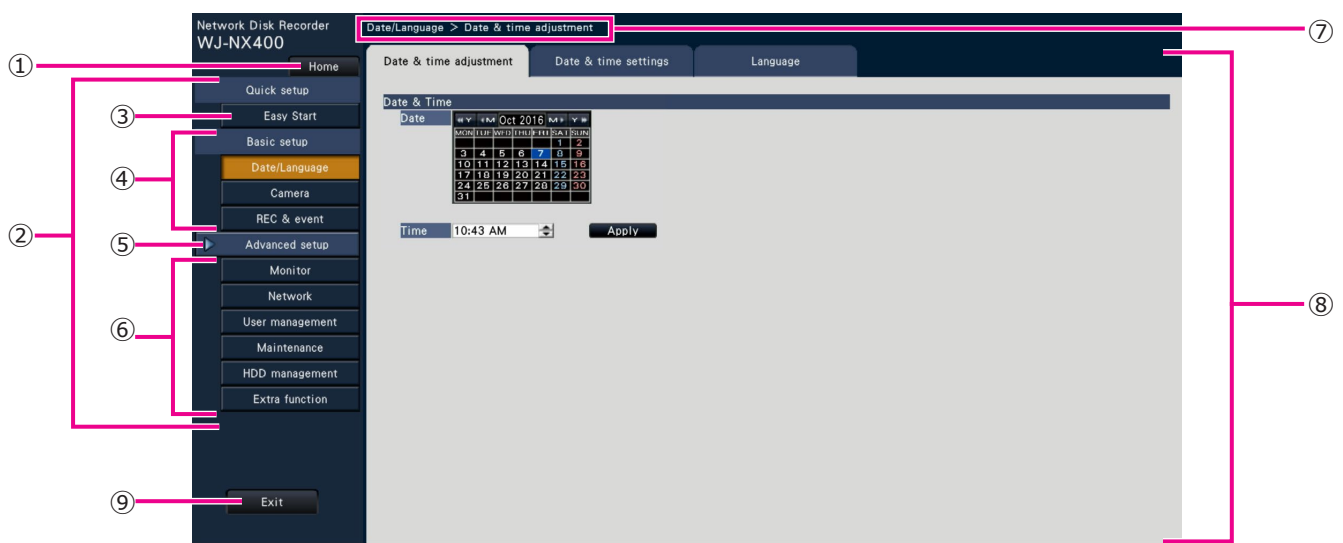
Configuration of each setting item in the setup menu should be completed in advance to use this recorder.

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

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

The setup menu will be displayed when clicking the [Setup] button (☞ Page 7) at the upper right corner of the operational screen on the main monitor.

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



① **[Home] button**

It is possible to return to the top screen (☞ Page 7) of the setup menu from any setup page.

② **Setup menu panel**

Displays buttons of the setup pages.

③ **[Easy Start] button**

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

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

Each "Basic setup" page will be displayed.

⑤ **[Advanced setup] button**

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

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

Each "Advanced setup" page will be displayed.

⑦ **Hierarchical display**

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

⑧ **Setup page**

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

⑨ **[Exit] button**

Applies the settings to the recorder and closes the setup menu to return to the operational screen (☞ Page 11).

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

Important:

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

Operations flow

- Professional knowledge on and experience in network and the HDD are required for the settings and changes of the operation.
- The main monitor is required for the settings.
 - * The settings can be done through a web browser on the PC (Refer to the Operating Instructions (PDF)).
- The PC is required for reading the Important Information, the Operating Instructions (PDF) and camera settings.

1

Obtain the license (Registration Key)

☞ Page 12 and Activation Key Card

Obtain the "Registration Key" of the recorder by following the instructions on the provided Activation Key Card. To increase the number of connected cameras or use the secure function, get the registration key of the additional license according to the appropriate Additional Kit (option). The obtained "Registration Key" will be used in Step 5.



2

Rack mounting

☞ Page 13

Install the recorder in the rack. (☞ Page 13) Go to step **3** when not installing it in the rack.



3

Connections

☞ Page 15

Connect the recorder to each device.



4

Turn on the devices

☞ Page 27

Turn on the power to launch in the following order.
① Turn on the power of the camera and the monitor.
② Turn on the power of the extension unit if connected.
③ Turn on the power of the recorder.



5

Register the license (Registration Key)

☞ Page 29

Register the Registration Key of the recorder. If necessary, register the "Registration Key" for the Additional Camera Kit or the Secure Communication Kit.

Important:

- Be sure to register the "Registration Key" of the recorder. If the "Registration key" of the recorder is not registered, the Additional Kit cannot be registered.
-



6

Assemble HDD unit

☞ Page 31

To install a hard disk drive in the recorder, it is necessary to assemble an HDD unit (encase the hard disk drive in the HDD canister).

Operations flow (continued)

7

Installation of HDD unit

☞ Page 32



8

Configure the minimum settings [Easy Start]

☞ Page 35



Setup

☞ Operating Instructions
(PDF file on the Panasonic support website)



Start operations

Remove the "HDD unit holding bracket" of the recorder and take out the HDD unit.

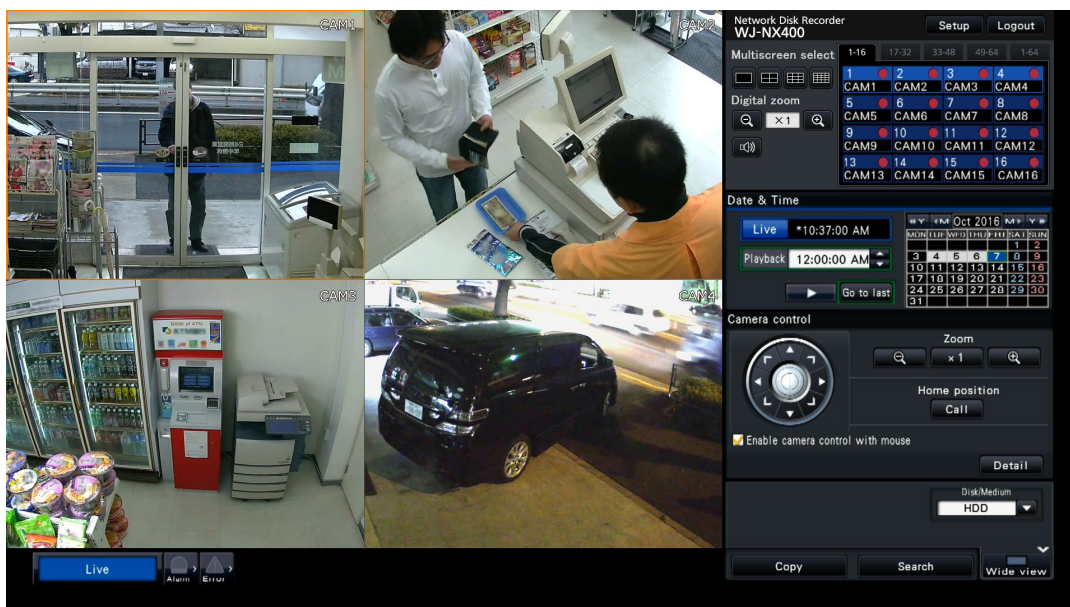
The removed "HDD unit holding bracket" is necessary when transporting the recorder. Keep it in an appropriate place.

Register the date & time and cameras on "Easy Start".

When it is not necessary to change other default settings, it is possible to start operations.

If necessary, perform the detailed settings for each function.

When the camera image is displayed on the main monitor or the web browser on the PC and can be recorded or played, the recorder is ready for operation.



Example of an operational screen

1 Obtain the license (Registration Key)

Keep the "Activation Key Card" provided with the recorder nearby.

Obtain the "Registration Key" of the recorder by following the instructions on the provided Activation Key Card.

To increase number of connected cameras, get the registration key number of the additional camera license according to the Additional Camera Kit (option).

To use the secure function, get the registration key number of the additional secure license according to the Secure Communication Kit (option).

* Each additional kit is the "Activation Key Card" with "the recorder ID number, activation ID number" for the applicable additional license.

Note:

- A PC or a mobile phone accessible to the Internet is necessary to acquire the registration key number.
-

2 Rack mounting

Install the recorder in an EIA standard 19-inch rack (Depth: 550 mm or more).

Note:

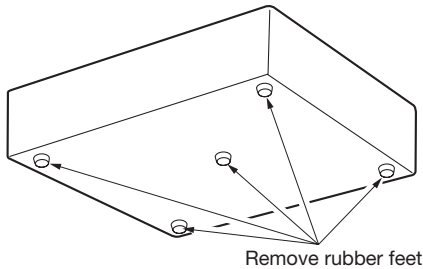
- Use four M5 × 12 screws (locally procured) to install the recorder in a rack.
- The illustration on this page is schematic. Details of the shape are omitted.

Installation procedure

Step 1

Remove the five rubber feet from the bottom of the recorder using a flathead screwdriver.

Use a screwdriver to remove the screws holding the rubber feet.

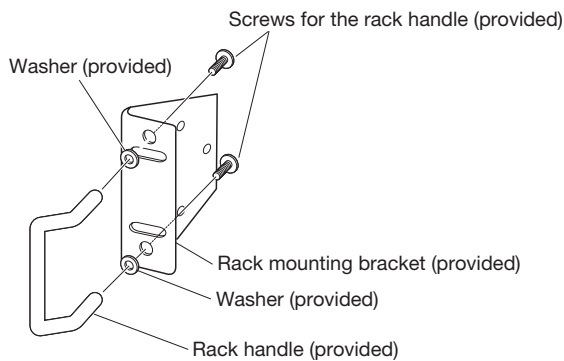


Step 2

Attach the rack handles (provided) to the rack mounting brackets (provided).

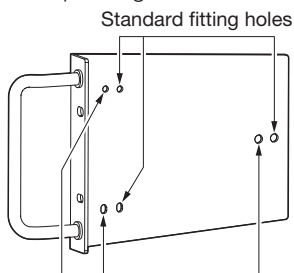
Fix them using the screws (provided) (×4) and the washers (provided) (×4) for the rack handle.

Tightening torque: 2.0 N·m ~ 2.4 N·m (1.48 lbf·ft ~ 1.78 lbf·ft)



Note:

- The rack mounting bracket (provided) has two types of fitting holes to adjust the protrusion of the front rack. Use either of them depending on the installation conditions.



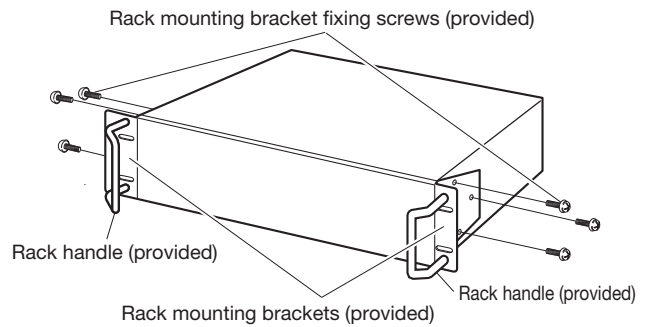
Fitting holes for the front position (about 15 mm {19/32 inches})

Step 3

Place the provided rack mounting brackets (provided) on both sides of the recorder and fix them with the rack mounting bracket fixing screw (provided) (×6).

Secure them using the rack mounting bracket fixing screw (provided) (×6).

Tightening torque: 0.88 N·m ~ 1.08 N·m (0.65 lbf·ft ~ 0.80 lbf·ft)

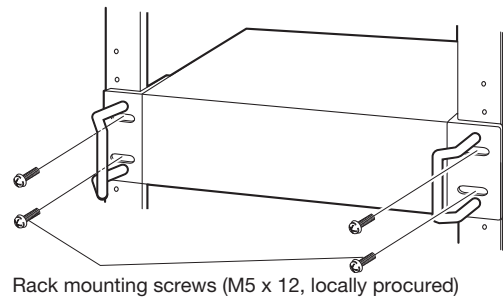


Step 4

Install the recorder in the rack by using four rack mounting screws.

Secure using the rack mounting screws (×4).

Tightening torque: 2.0 N·m ~ 2.4 N·m (1.48 lbf·ft ~ 1.78 lbf·ft)



Important:

- When installing the recorder in the rack, make a space of 1U (44 mm {1-23/32 inches}) above and below the recorder for ventilation.
- Keep the temperature in the rack below +45 °C {113 °F}.
- It is recommended to install cooling fans or equivalents to keep the temperature in the rack below +30 °C {86 °F}.
- Do not block the ventilation holes or slots to prevent the recorder from overheating.
- The recorder weighs over 10 kg {22.1 lbs}. Be careful not to drop the recorder when installing it into a rack. Dropping may cause damage, deformation of the recorder, or injury.

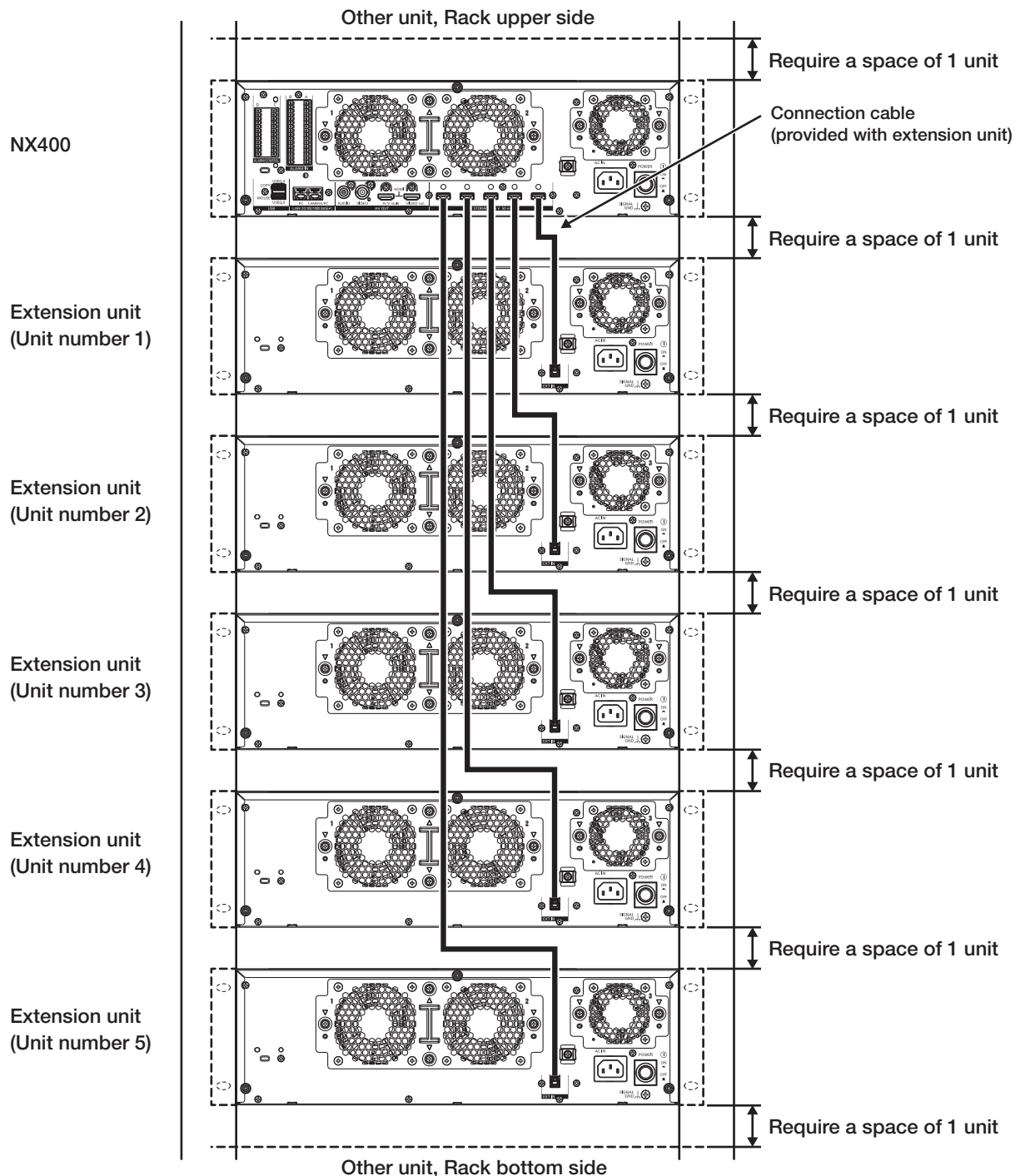
2 Rack mounting (continued)

Position in the Rack

This is an example where the recorder and the extension unit (WJ-HXE400, max 5 units) are installed in the rack.

Connect the recorder and the extension unit using the connection cable (1.5 m {4 feet 11 inches}) provided with the extension unit.

(Page 19)



Note:

- When installing the recorder in the rack, leave a space of 1U (44 mm {1-23/32 inches}) above and below the recorder for ventilation.
- The unit number of the connected extension unit is the same as the external storage connector number of the recorder.

3 Connections

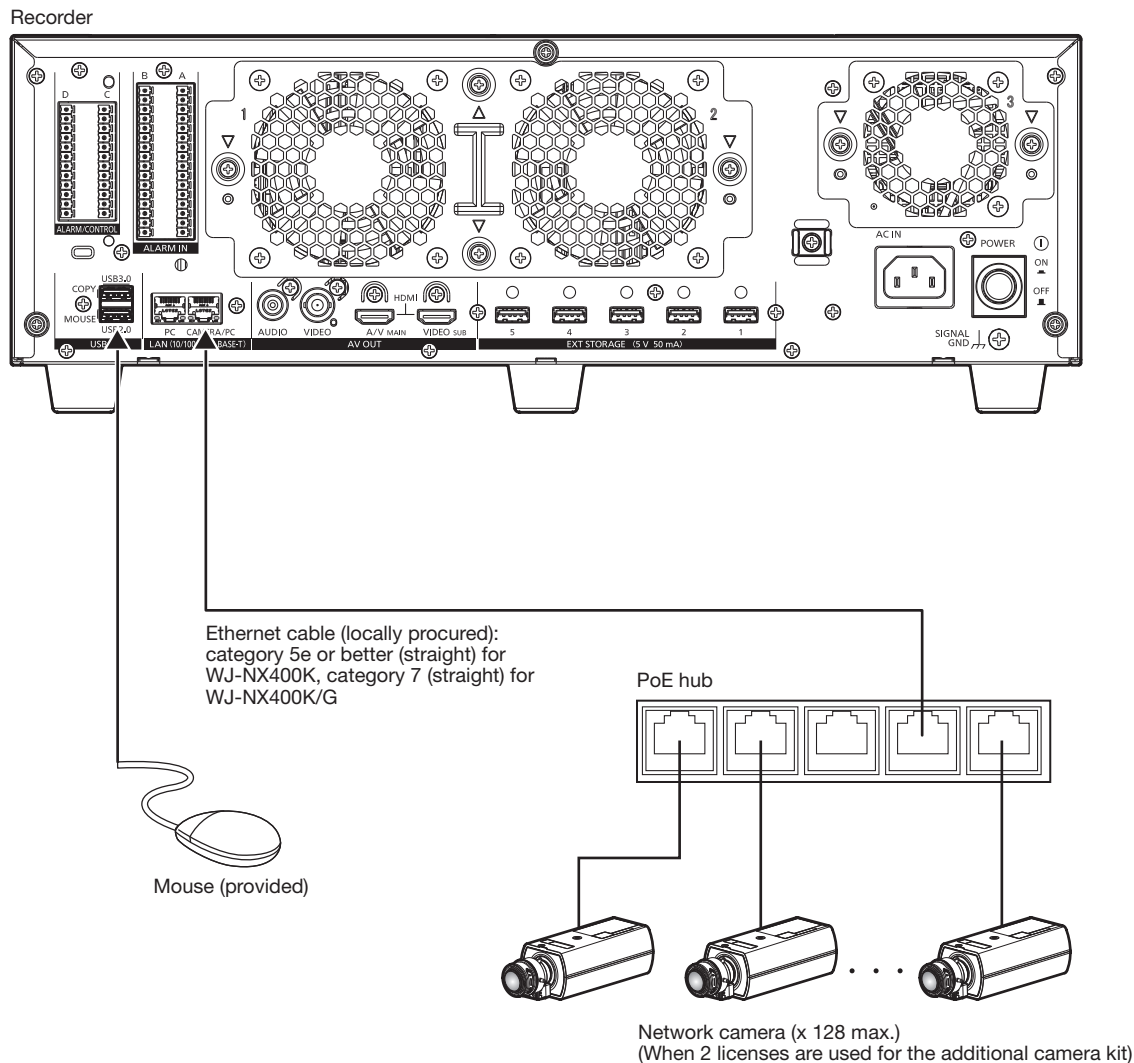
Connection of cameras and a mouse

Up to 128 cameras can be connected to the recorder via a switching hub.

Connect to the Camera/PC port of the recorder.

Use a Ethernet cable (straight) to connect the recorder and the switching hub.

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



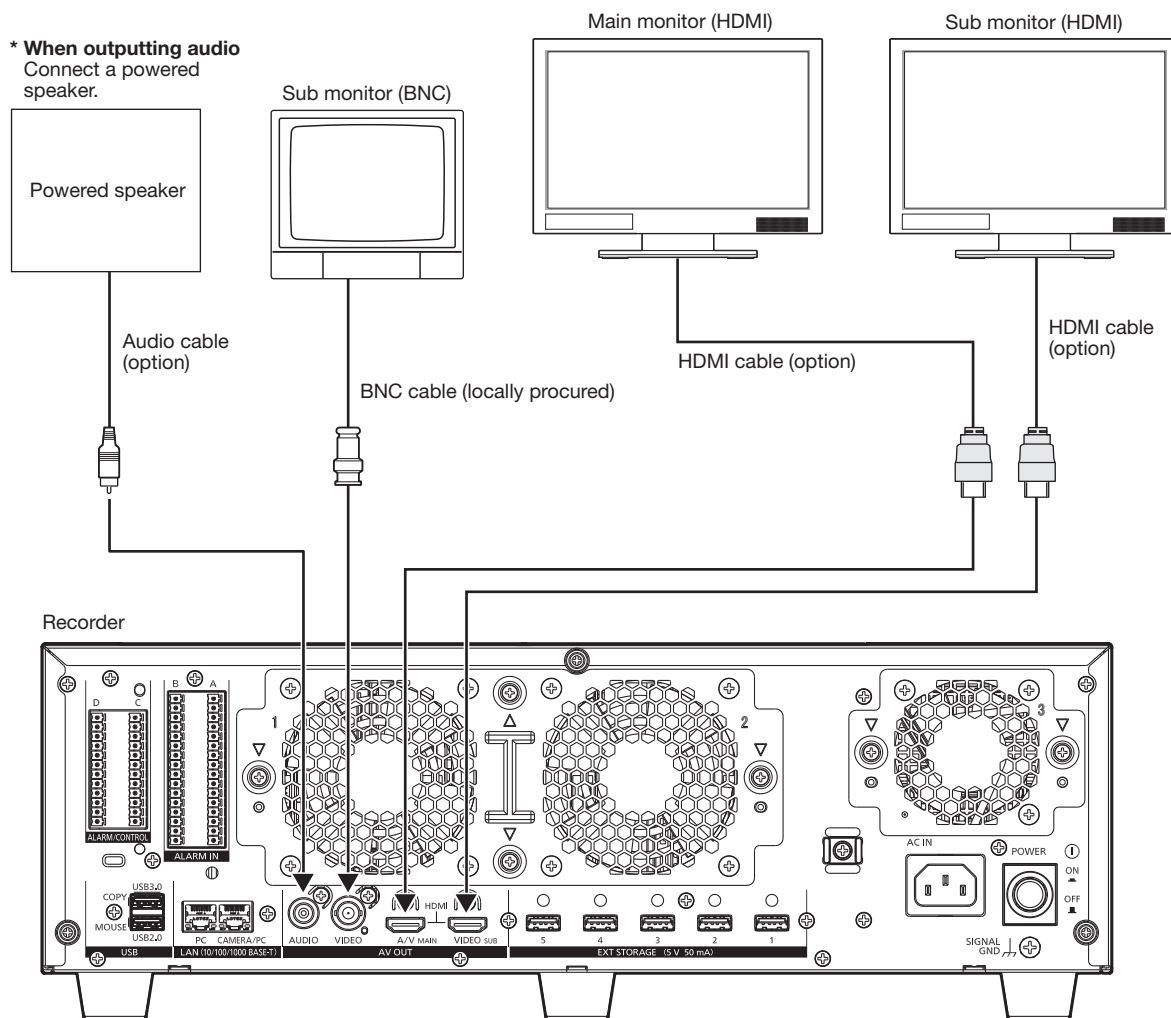
Note:

- Make sure to use the wired network to connect with the recorder even for the cameras equipped with the wireless LAN function.

3 Connections (continued)

Connection of monitors

Connect a main monitor (to be used to display live images, recorded images or the setup menu) and a sub monitor (to be used to display live images only) to the HDMI (video/audio output) connectors using HDMI cables (optional). Connect a sub monitor (BNC) to the video output connector using a BNC cable (locally procured).



Important:

- If the additional camera license is not registered, the main or sub monitor displays image of a channel (from 1 to 64 channel).
- When the additional camera license is registered, the image will be displayed only on the web browser of the PC. The main and sub monitors go black and do not display the image.

Note:

- Use "High Speed HDMI® Cable". When the main monitor is used in 4K/25P(30P), use a 10.2 Gbps compatible HDMI cable.
- To maintain the stable performance without deteriorating the image quality, use an HDMI cable whose length is 5 m {16 feet 5 inches} or less.
- Audio will be output from the monitor when the monitor is connected with an HDMI cable.
- Same audio output from the main monitor will be heard from the speaker connected with an audio cable.
- No audio will be heard from the sub monitor (HDMI) connected with an HDMI cable.

3 Connections (continued)

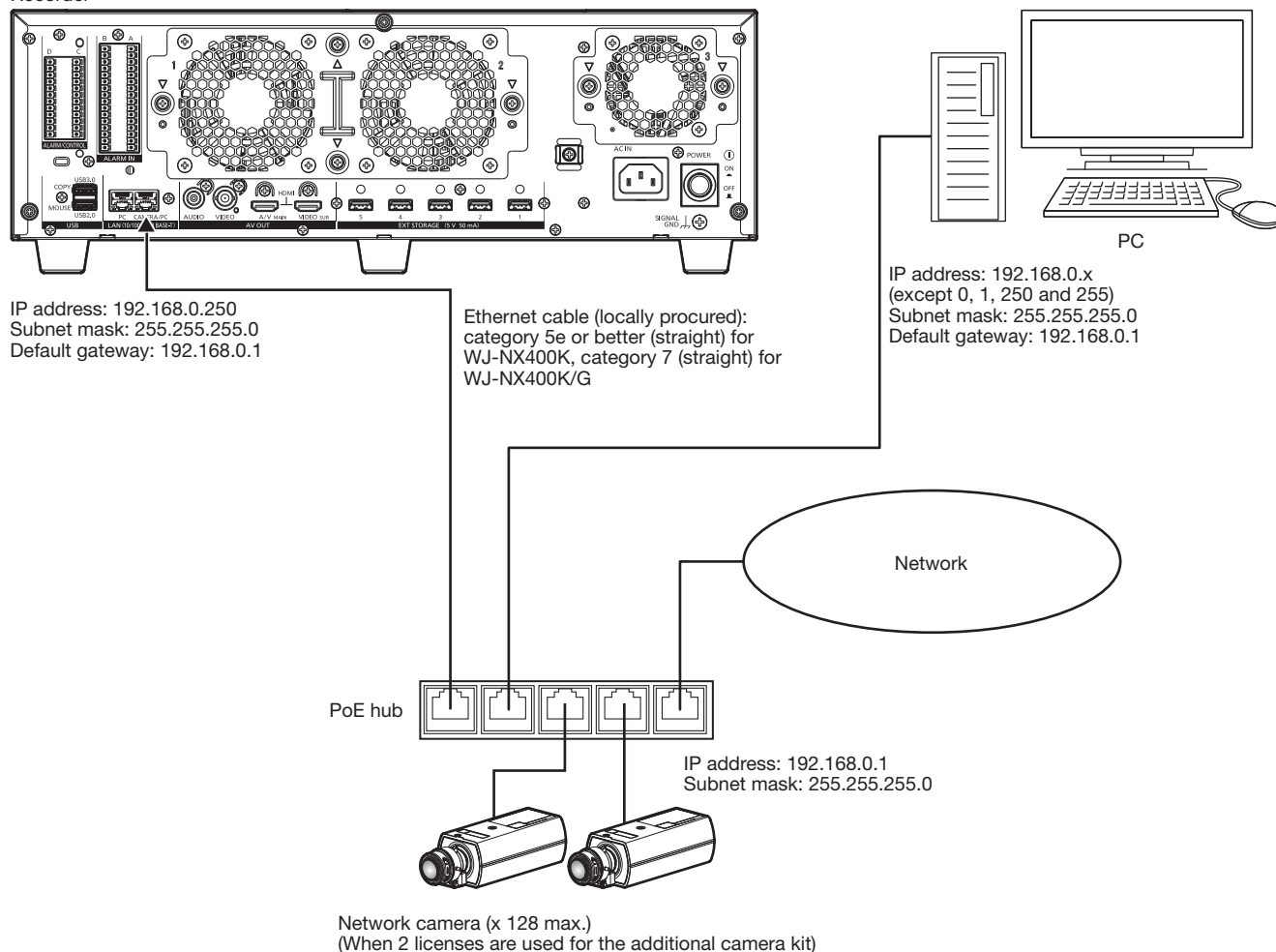
Connection of a PC

Connect this recorder and a PC via a switching hub.

When PC and the camera are in the same network

When the PC and the camera are configured on the same network, connect the PC to the Camera/PC port.

Recorder

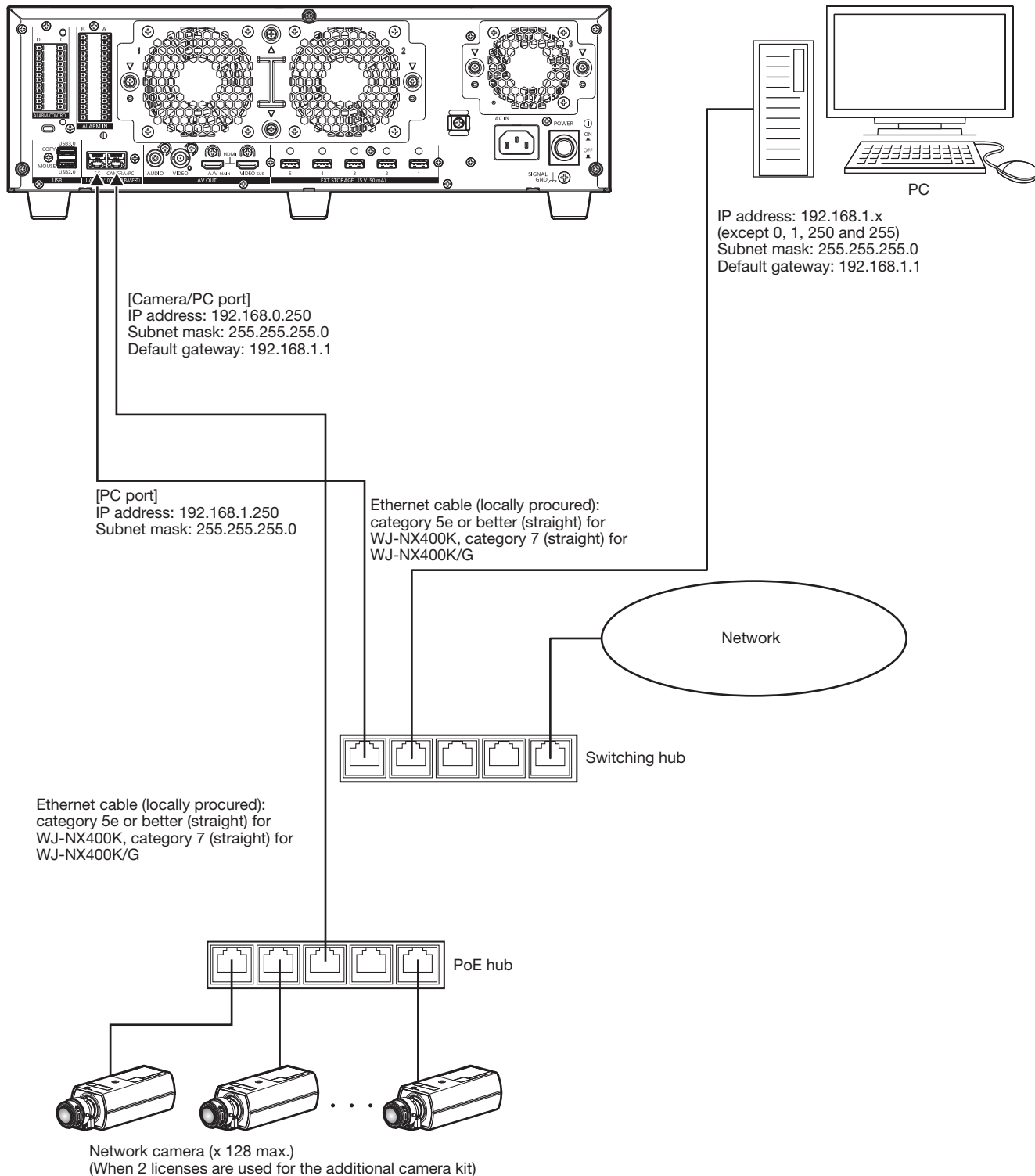


3 Connections (continued)

When PC and the camera are in different networks

When the PC and the camera are configured on different networks, connect the PC to the PC port.

Recorder



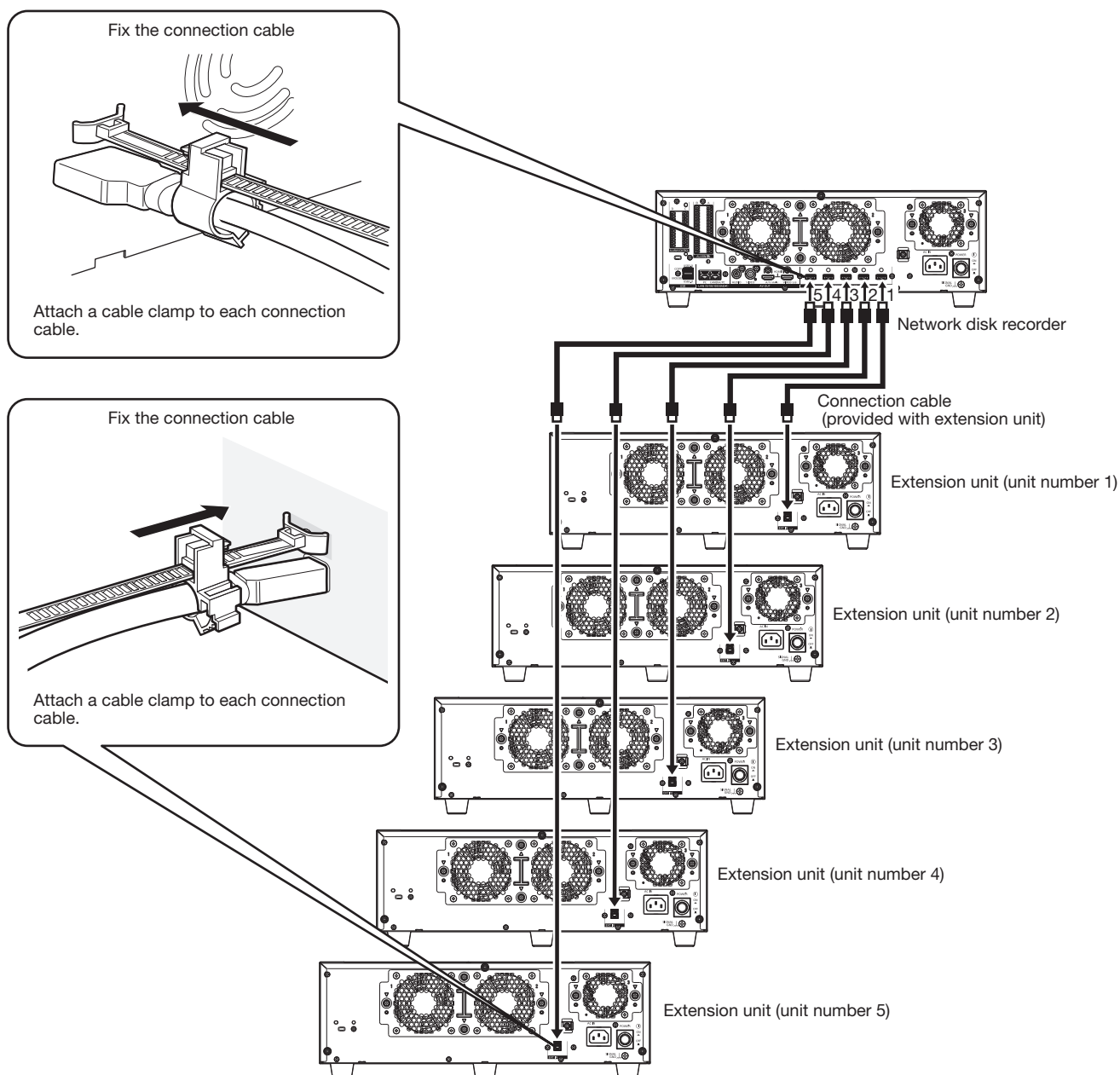
Note:

- Cameras shall be connected to the camera/PC port. If the camera is connected to the PC port, the camera will not be detected automatically.

3 Connections (continued)

Connection of extension units

Up to 5 extension units (WJ-HXE400: optional) can be connected with a single network disk recorder. Connect the recorder and the extension unit using the connection cable provided with the extension unit. Connect the extension units as shown in the illustration below. Refer also to the operating instructions of the extension unit.



Important:

- Use only the dedicated connection cable provided with the extension unit when connecting the recorder and the extension unit.
- Fix the connection cable firmly using the cable clamp provided with the extension unit. When the cable is not connected firmly or when it is disconnected, the system may become unstable or recording may fail. Refer to the operating instructions of the extension unit for details on how to fit the cable clamp.
- Do not wind the cable in a coil.

3 Connections (continued)

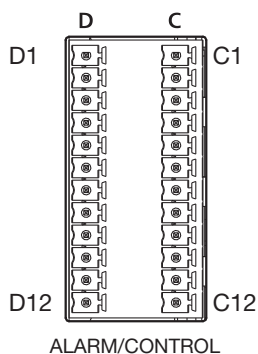
How to use the terminals of the ALARM/CONTROL

The ALARM/CONTROL connectors on the back is used when connecting an external device such as a sensor that outputs alarm signals or when installing an external alarm device such as a buzzer or a lamp outside.

Insert the unarmored cable into the provided terminal plug (12 pin) and then mount it on the ALARM/CONTROL connector on the back.

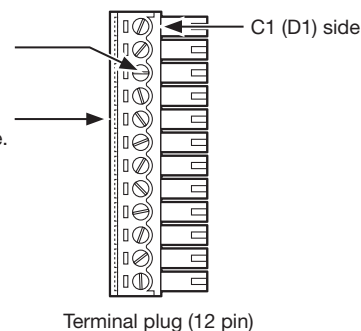
* The cable should be a single or twisted wire with AWG 26~16 and an exposed length of 9 mm {11/32 inches}.

ALARM/CONTROL connector on the back



Cable connections

- ① Loosen the screw of the desired terminal on the terminal plug.
- ② Tight the screw when the cable is fully inserted into the terminal hole.
- ③ Mount the terminal plug with the cable connected on the ALARM/CONTROL connector socket on the back.



Pin array

Pin No.	Signal	Operation	Remarks
C1	Alarm output 1	Alarm signal will be supplied at an event occurrence	Open collector output 24 V DC max., -200 mA max.
C2	Alarm output 2	Alarm signal will be supplied at an event occurrence	
C3	Alarm output 3	Alarm signal will be supplied at an event occurrence	
C4	Alarm output 4	Alarm signal will be supplied at an event occurrence	
C5	Time adjustment I/O	According to the signal input from the other device, the time of the recorder will be adjusted to the hour based on the input time In addition, the signal is output at the setting time of the recorder and the time of other equipment is adjusted to the time of the recorder	Input: Non-voltage make contact input Output: Open collector output 24 V DC max., -200 mA max.
C6	Preliminary Input/Output 1	These are for future input and output, and cannot be used	
C7	Preliminary Input/Output 2		
C8	Preliminary Input/Output 3		
C9	Preliminary Input/Output 4		
C10	+5 V output	+5 V output	+5 V±0.5 V, 200 mA max.
C11	Signal ground		
C12	Signal ground		
D1	Alarm reset input	Canceling the alarm display	Non-voltage make contact input
D2	Emergency recording input	Starting emergency recording signal input	
D3	Outage detection input	Start of outage processing according to the signal input	
D4	External recording mode switching input	Changeover to the external recording mode by the signal input	
D5	Network error output	A signal will be output upon detection of a disconnected Ethernet link or IP expiration of the DHCP	Open collector output 24 V DC max., -200 mA max.
D6	HDD error output	Signal output upon detection of an HDD error	
D7	Camera error output	Signal output upon detection of a camera error	
D8	Recording error output	Signal output upon detection of a recording error	
D9	Recorder error output	Signal output upon detection of a recorder error	
D10	Outage processing end output	Signal output upon completion of outage processing	High (ON) 5 V DC Low (OFF) 0 V DC
D11	Signal ground		
D12	Signal ground		

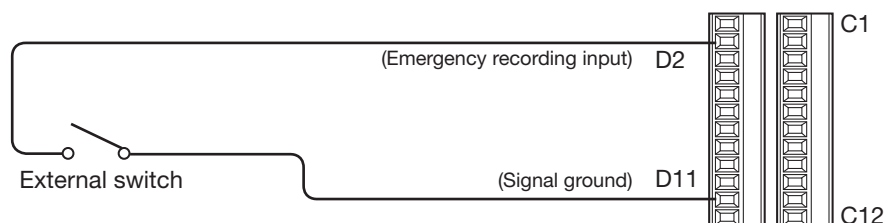
* Refer to the "About the error logs and the network logs" (Operating Instructions (PDF)) for further information about each error output.

3 Connections (continued)

Connection example for emergency recording

When the external switch is turned on, emergency recording will start.

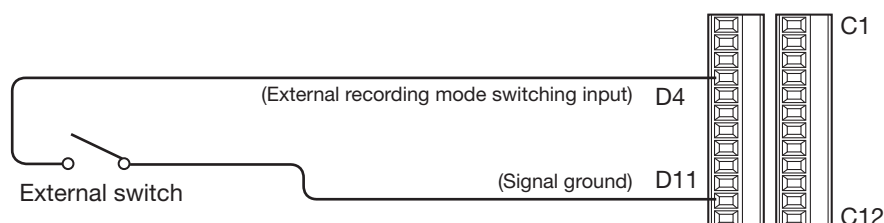
Recording time and recording rate for emergency recording differ according to the settings of "Emergency rec." on the setup menu. (Refer to the Operating Instructions.)



Connection example for external recording switching

When the external switch is turned on, the recording program will be switched and recording will start.

The recording program can be set by selecting "Ext." for "Time table" of "Schedule" on the setup menu. (Refer to the Operating Instructions (PDF) for further information.)

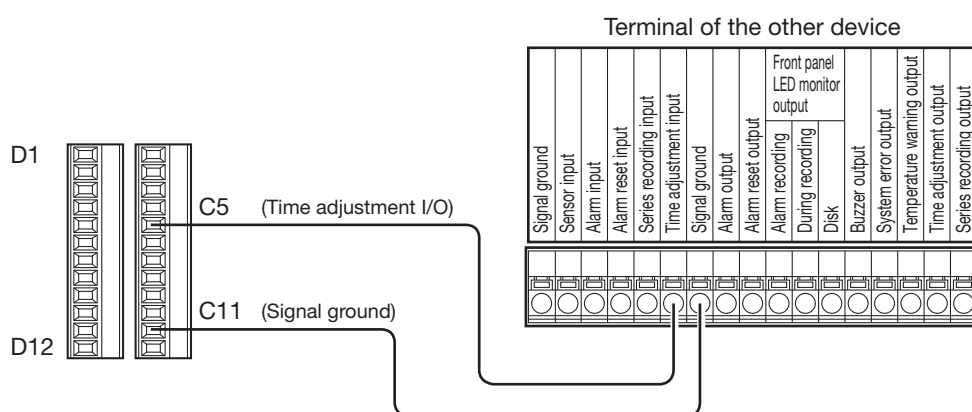


Connection example 1 for the auto adjustment time function

When "Auto time adjustment" found in "Date & time settings" under "Date/Language" on the setup menu is set to "Master".

"Time adjustment output" becomes available and the clock of this recorder will be applied to other devices.

The time adjust output signal will be supplied from C5 terminal to other recorders at the time set for "Activation time" of "Time & date" under "Basic" on the setup menu.



3 Connections (continued)

Connection example 2 for the auto adjustment time function

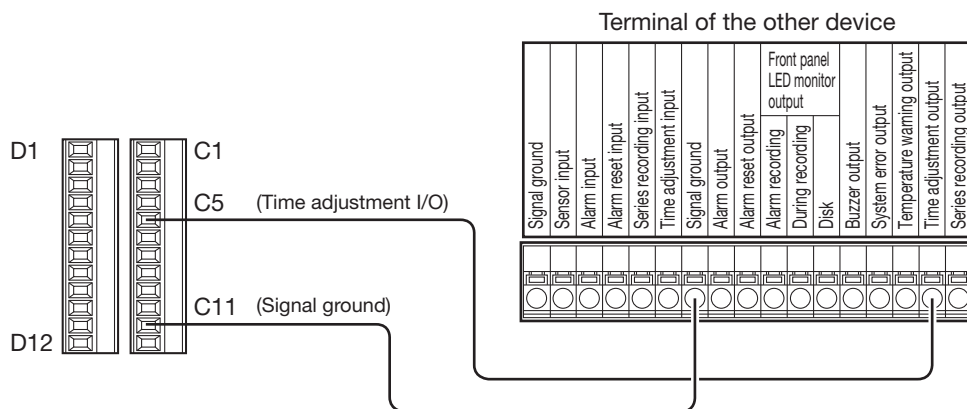
When "Auto time adjustment" found in "Date & time settings" under "Date/Language" on the setup menu is set to "Slave".

When a signal output from the other device is supplied to the time adjustment input (C5 terminal) and the time difference between the recorder and the other device is 29 minutes or less, the clock of the recorder will be set to the time set for the other device.

When a signal output is supplied to the recorder 29 minutes before/after the hour, the clock of the recorder will be set to the hour (nn:00:00). ("nn" is the hour.)

Example:

- Signal is supplied at 2:50:00 pm → Set at 3:00:00 pm
- Signal input supplied at 3:28:45 pm → Set at 3:00:00 pm
- Signal is supplied at 3:29:30 pm → Time will not be adjusted.



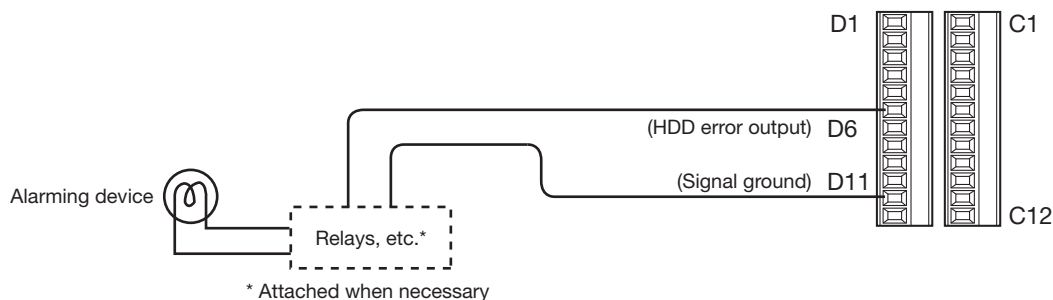
Important:

- When "Slave" is selected, the clock will not be adjusted during event recording or emergency recording.

Connection example of control output

When an alarm device such as a buzzer or a lamp is connected, the signal output from terminal D5~9 can be used to notify the status by sounding a buzzer or lighting a lamp.

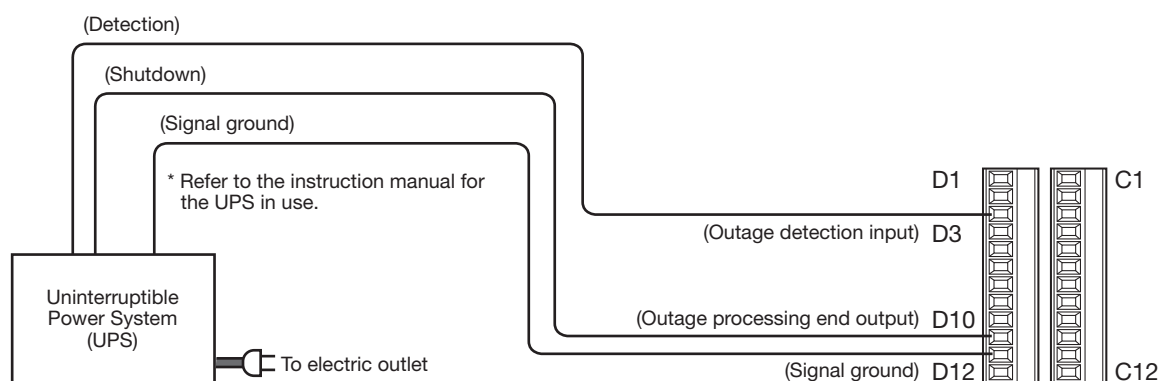
The following example is of a connection with the HDD error output (D6 terminal).



3 Connections (continued)

Connection with an uninterruptible power system (UPS)

This is an example of a connection with the uninterruptible power system (UPS) to be installed to protect from a power outage. When a signal is supplied to the outage detection input terminals from the uninterruptible power system (UPS), internal processing (stops recording safely) will start to shut off the power supply for the recorder. After completion of the internal processing, the signal will be output from the outage processing end output to the UPS and the recorder will be ready to be shut off.



Important:

- Be sure to use an UPS that provides a sine wave output.
Do not use an UPS that provides a square wave. It may damage the recorder.
-

3 Connections (continued)

How to use the terminals of the ALARM IN

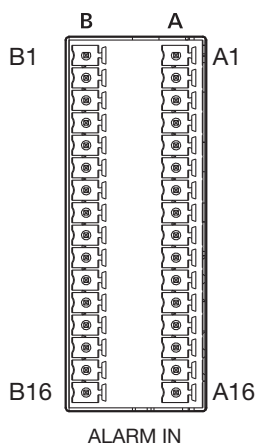
ALARM IN terminals on the back are used to connect the alarm devices such as sensors, door switches, etc.

Insert the unarmored cable into the provided terminal plug (16 pin) and then mount it on the ALARM IN terminal on the back.

* The cable should be a single or twisted wire with AWG 26~16 and an exposed length of 9 mm {11/32 inches}.

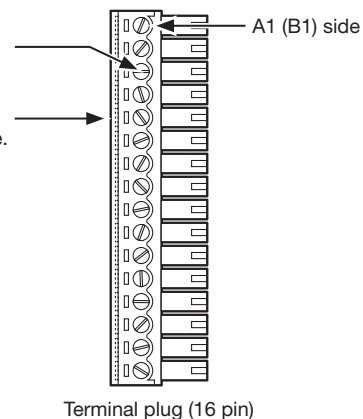
* Tie cables of the ALARM/CONTROL connectors and of the ALARM IN connectors, and fix them with the cable clamp (provided). Refer to "Major Operating Controls and Their Functions" of the Important Information for further information.

ALARM IN terminal on the back



Connections

- ① Loosen the screw of the desired terminal on the terminal plug.
- ② Tight the screw when the cable is fully inserted into the terminal hole.
- ③ Mount the terminal plug with the cable connected on the alarm input terminal socket on the back.



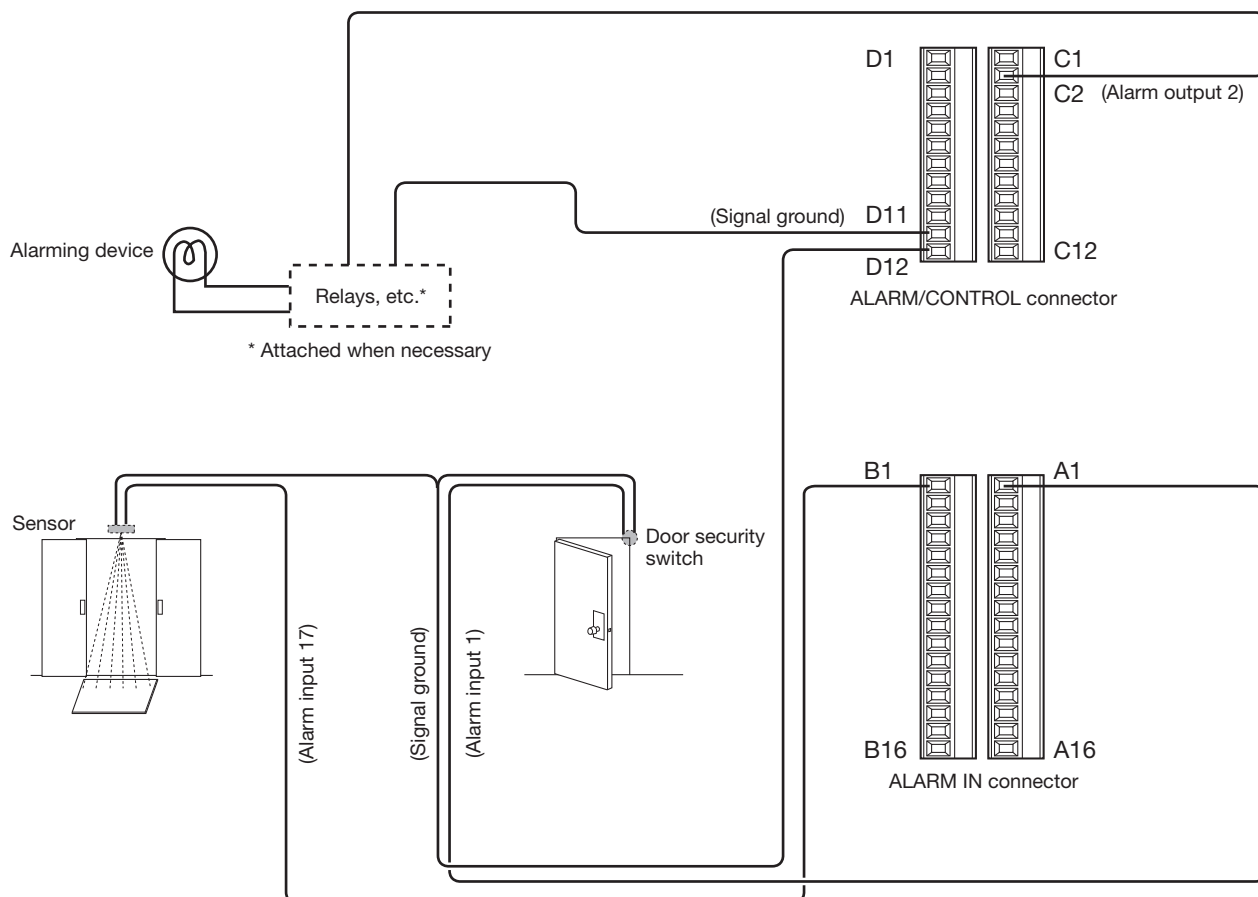
Pin array

Pin No.	Signal	Operation	Remarks
A1	Alarm input 1	Event action will be performed according to the settings	Non-voltage make contact input
A2	Alarm input 2		
A3	Alarm input 3		
A4	Alarm input 4		
A5	Alarm input 5		
A6	Alarm input 6		
A7	Alarm input 7		
A8	Alarm input 8		
A9	Alarm input 9		
A10	Alarm input 10		
A11	Alarm input 11		
A12	Alarm input 12		
A13	Alarm input 13		
A14	Alarm input 14		
A15	Alarm input 15		
A16	Alarm input 16		
B1	Alarm input 17		
B2	Alarm input 18		
B3	Alarm input 19		
B4	Alarm input 20		
B5	Alarm input 21		
B6	Alarm input 22		
B7	Alarm input 23		
B8	Alarm input 24		
B9	Alarm input 25		
B10	Alarm input 26		
B11	Alarm input 28		
B12	Alarm input 28		
B13	Alarm input 29		
B14	Alarm input 30		
B15	Alarm input 31		
B16	Alarm input 32		

3 Connections (continued)

Alarm connection example

When a signal output from the other device is supplied to the Alarm input 1 to 32 terminals (pin nos. A1~A16, B1~B16), recording or an alarm action will be performed in accordance with the settings. When an alarm device such as a buzzer, a lamp, etc., is installed outside, connect them to the Alarm output terminal (pin no. C2).



Time and polarities of the ALARM/CONTROL connector

Terminal name	Active Time	Remarks
Alarm input	100 ms or more	N.O.: L active N.O.: H active
Alarm reset input	100 ms or more	L active
Emergency recording input	100 ms or more	L active
Outage detection input	5 s or more	L active
External recording mode switching input	100 ms or more	L active
Network error output	At an error occurrence until the period selected for "Error output duration" has passed*	L active
HDD error output	At an error occurrence until the period selected for "Error output duration" has passed*	L active
Camera error output	At an error occurrence until the period selected for "Error output duration" has passed* or the camera reset	L active
Recording error output	At an error occurrence until the period selected for "Error output duration" has passed*	L active
Recorder error output	At an error occurrence until the period selected for "Error output duration" has passed*	L active
Outage processing end output	10 s or more	H active
Alarm output	The set time on the setup menu	L active
Time adjustment I/O	Input: 100 ms or more Output: The set time on the setup menu	Input/Output: L active

* The error output duration is configured on the "Advanced setup" menu - the "Maintenance" page - "System setup" of the setup menu. (Operating Instructions (PDF))

Note:

- During "L active (Low active)", the logic will be implemented when the voltage level of signal is low.
- During "H active (High active)", the logic will be implemented when the voltage level of signal is high.

4 Turn on the devices

Turn on the power of the recorder

Turn on the power of the recorder. When using the recorder for the first time, register the license for the recorder. (Page 29)

Important:

- When using extension units, connect all the extension units to the power cords and turn on the power of all the extension units before turning on the power of the recorder.

Step 1

Connect the provided power cord to the power cord inlet on the rear panel of the recorder, and insert the power plug to an outlet whose rating is as follows.

WJ-NX400K: 120 V AC, 60 Hz

WJ-NX400K/G: 220 V - 240 V AC, 50 Hz/60 Hz

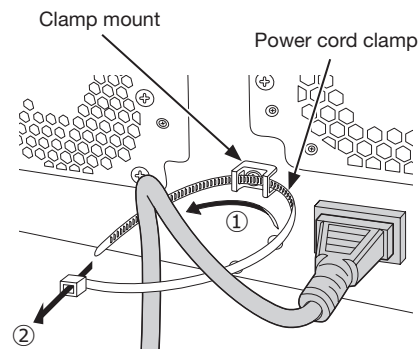
→ The [OPERATE] indicator on the front of the recorder will light, the system check will start, and the startup window will be displayed on the main monitor.



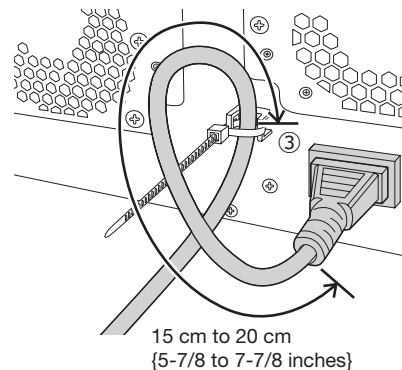
Important:

- Never turn off the power of the recorder during startup.
- Insert the power cord fully into the power supply terminal so that it will not loosen or come out.
- Fix the power cord firmly at 15 cm to 20 cm {5-7/8 to 7-7/8 inches} from the plug with the provided power cord clamp to prevent the cable from unplugging.

How to use the power cord clamp



- ① Pass the power cord clamp through the clamp mount.
- ② Make a ring with the power cord clamp as shown in the illustration to tighten the power cord.

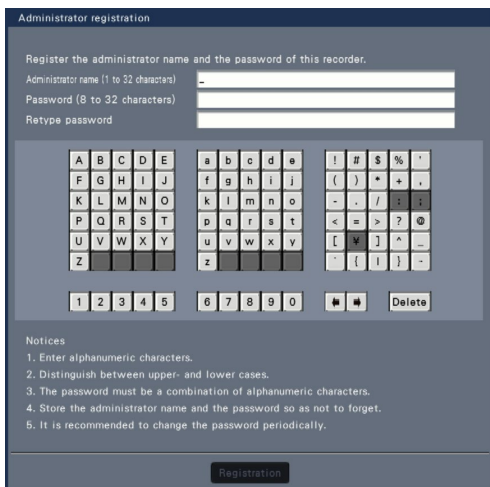


- ③ Tighten the power cord at 15 cm to 20 cm {5-7/8 to 7-7/8 inches} from the connector and fix it to the clamp mount. Cut the unnecessary part of the power cord clamp as necessary.

4 Turn on the devices (continued)

Step 2

The administration registration window is displayed on the main monitor.

The screenshot shows the 'Administrator registration' window. It has a title bar and a main area with the instruction 'Register the administrator name and the password of this recorder.' Below this are three input fields: 'Administrator name (1 to 32 characters)', 'Password (8 to 32 characters)', and 'Retype password'. Below the input fields is a large alphanumeric keypad with letters A-Z, numbers 0-9, and various symbols. At the bottom left, there is a 'Notices' section with five numbered instructions. At the bottom right, there is a 'Registration' button.

Administrator registration

Register the administrator name and the password of this recorder.

Administrator name (1 to 32 characters)

Password (8 to 32 characters)

Retype password

Notices

1. Enter alphanumeric characters.
2. Distinguish between upper- and lower cases.
3. The password must be a combination of alphanumeric characters.
4. Store the administrator name and the password so as not to forget.
5. It is recommended to change the password periodically.

Registration

Enter an administrator, a password and a password confirmation following the instruction on the display, and click [Registration].

Important:

- Change the password periodically.

Precautions on storing the administrator name and the password

If you forget the set administrator name and password, you need to initialize* the recorder. Once the recorder is initialized, all the settings are deleted. Keep information on the administrator name and the password in a safe place where nobody can see it except you.

* Contact your dealer for initializing.

Step 3

If the license for the recorder has not been registered yet, the message asking you to register the "Registration Key" will be displayed after the completion of the system check and the administrator registration.

This window will not be displayed after Registration Key is registered.

Refer to the provided Activation Key Card for how to get Registration Key.

If the "Registration Key" for the recorder has not been registered yet, register the "Registration Key" by following the procedures on page 29.

Note:

- If the "Registration Key" for the recorder is once registered, the message asking you to register the "Registration Key" will not be displayed from the next time.

(When turn off the power of the recorder)

Follow the procedure below to turn off the power.

Important:

- When using extension units, turn off the power of the recorder before turning off the extension units.

Step 1

During recording, set "Recording mode" on [Advanced setup] tab under "REC & event" under [Basic Setup] from Setup menu to "Off" to stop all recordings. (📄 Operating Instructions (PDF))

Step 2

Press the power button after confirming that [Recording] indicator is off.

→ [OPERATE] indicator on the front of the recorder will go off.

Important:

- Remove the plug from the outlet if not operating the recorder for a long period.

Note:

- Be sure to perform the operation to start recording (select "On" for "Recording mode") after turning on the power of the recorder again.

5 Register the license (Registration Key)

When using the recorder for the first time, using the secure function, or increasing the number of the cameras to be connected, it is necessary to register the recorder license (Registration Key).

Important:

- In the following cases, the recorder must be rebooted by clicking the [Restart] button. The licenses will not be effective until the recorder is rebooted.
 - When the Registration Key of the recorder is registered
 - When the license of the additional camera kit is added
- The added cameras shall be registered on "Easy start" (Page 35) or on the "Camera registration" tab. Each setting value is the default. Configure each setting according to your needs.

Step 1

Obtain the "Registration Key" for the recorder by following the instructions on the provided "Activation Key Card".

To add cameras, get the additional license registration key number in the Additional Camera Kit (option). To use the secure function, get the additional license registration key number in the Secure Communication Kit (option). Refer to the "Activation Key Card" for further information.

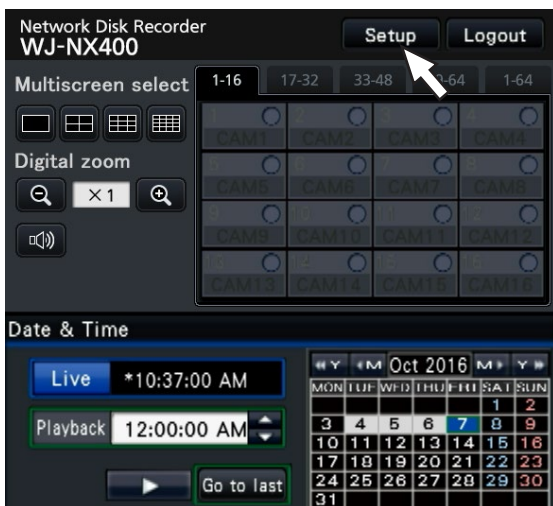
Step 2

Start the recorder. (Page 27)

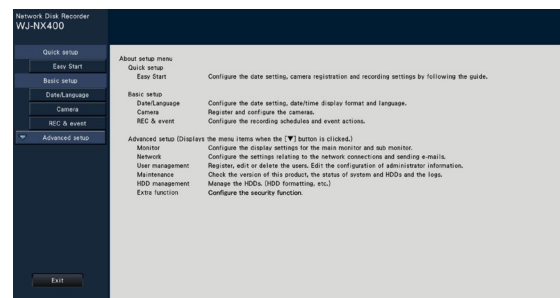
→ When the system check is complete, the operational screen will be displayed on the main monitor.

Step 3

Click the [Setup] button.



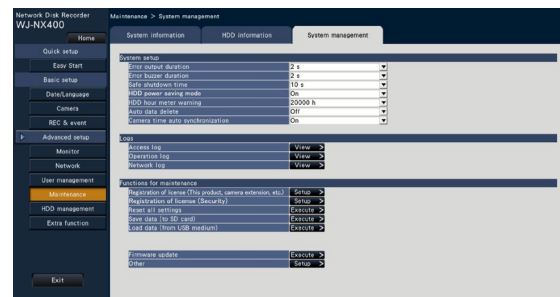
→ The setup menu will be displayed.



Step 4

Click [Advanced setup] - [Maintenance] - the [System management] tab on the setup menu.

→ The "System management" page will be displayed.

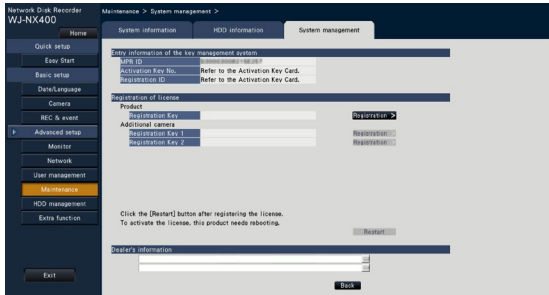


5 Register the license (Registration Key) (continued)

Step 5

Click the [Setup >] button of [Registration of license (This product, camera extension, etc.)].

→ The registration window will be displayed.



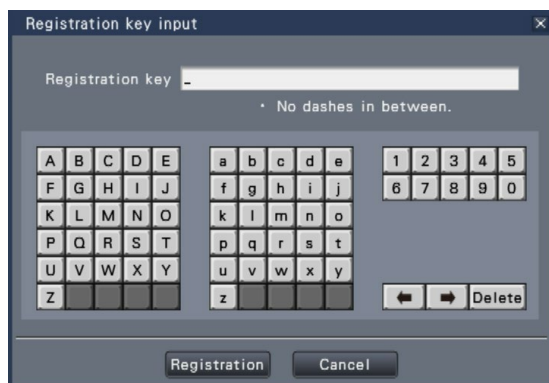
Step 6

Click the [Registration >] button of "Product" - "Registration Key".

→ The "Registration key input" window will be displayed.

Step 7

Enter the "Registration key" for the recorder in the "Registration key" field using the on-screen keyboard, and click the [Registration] button.



→ The "Registration key input" window will return to the registration window.

Note:

- When an error message is displayed, enter the effective "Registration Key" again on the entry field.

Step 8

To increase number of connected cameras, enter the registration key of the additional camera license obtained in step 1 to the "Registration Key 1-2" fields under "Additional camera" on the "Registration of license" page shown in step 5.

To use the secure function, click the [Setup >] button of [Registration of license (Security)] under the system management screen shown in Step 4, and then enter the registration key of the secure communication license obtained in Step 1 in the "Registration Key 1-128" fields under "Secure communication" on the "Registration of license" page.

The operations are the same as those of Step 6 and 7.

Note:

- Register the registration key for the recorder first, and then for the additional camera and secure communication licenses.

Step 9

Click the [Restart] button on the registration window to register the license.

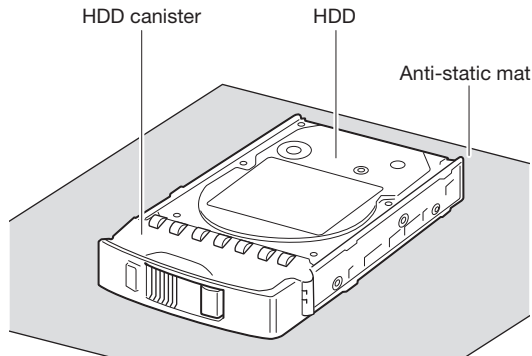
→ The recorder will reboot and each license will become effective.

6 Assemble HDD unit

To install a hard disk drive in the recorder, it is necessary to assemble an HDD unit (encase the hard disk drive in the HDD canister).

The HDD unit is designed to easily install/remove the hard disk drive in/from the recorder.

Contact your dealer about purchasing, installing, and replacing the hard disk drives.



Important:

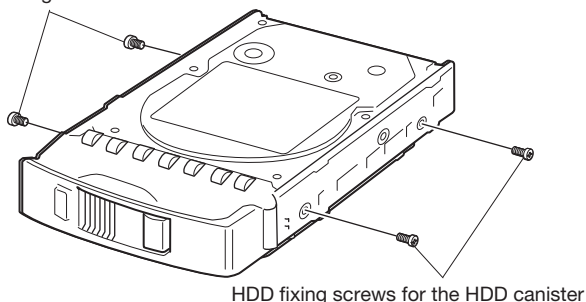
- Hard disk drives are precision devices. Before installing the hard disk drives, read the "Hard disk drive" section of Precautions in important information together with the following.
 - Before touching a hard disk drive, release static electricity from your body using an anti-static grounding strap, etc. Even after releasing static electricity, hold the side of the hard disk drive when carrying it. To prevent damage to the hard disk drive from static electricity, do not touch the circuit board and the connectors of the hard disk drive.
 - Use an anti-static mat and an anti-static grounding strap when installing/replacing the hard disk drives.
 - When installing hard disk drives, use a low-torque powered screwdriver or a torque screwdriver to tighten screws with the specified torque.

Step 1

Fix both sides of the hard disk drive with the dedicated HDD canister using the 4 provided screws for HDD canister installation.

Tightening torque for the screws: 0.49 N·m (5 kgf·cm) (use a low-torque powered screwdriver or a torque screwdriver)

HDD fixing screws for the HDD canister



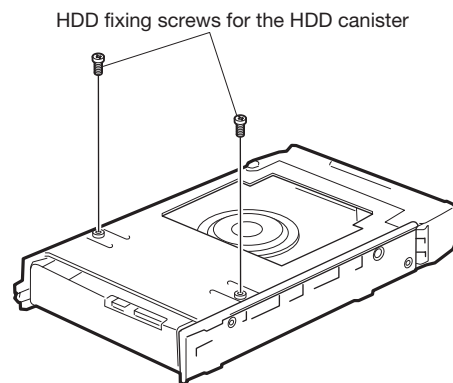
Step 2

Fix the bottom of the hard disk drive with the HDD canister using the 2 provided screws for HDD canister installation.

Tightening torque for the screws: 0.49 N·m (5 kgf·cm) (use a low-torque powered screwdriver or a torque screwdriver)

Important:

- To use 5TB, 6TB or more capacity of HDD in the future with HDD canister, please do not fix two provided screws into bottom side. Because the screw length is longer than depth of tapped hole of HDD.



7 Installation of HDD unit

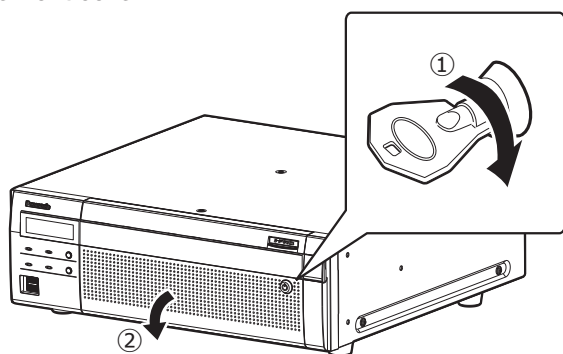
Install HDD unit in recorder

The illustration on this page is schematic. Details of the shape are omitted.

It is possible to install the HDD units without stopping the operation (except when RAID1/RAID5/RAID6 mode is in operation).

Step 1

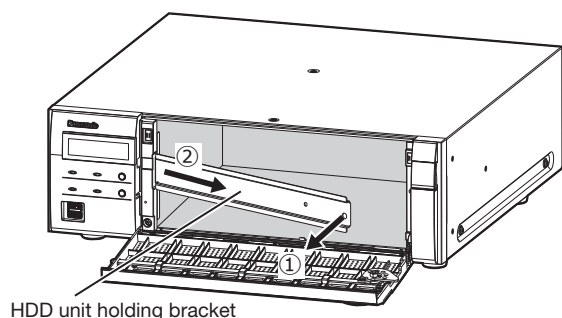
After inserting the key (provided) into the key hole on the front cover, push and turn it to the right to open the front cover.



Step 2

Remove the HDD unit holding bracket.

- ① Remove the screw.
- ② Slide the HDD unit holding bracket sideways and remove it.



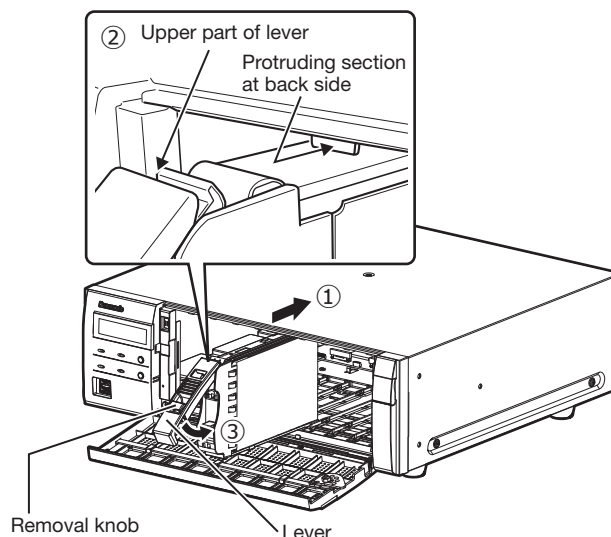
HDD unit holding bracket

- Keep the removed screw and the HDD unit holding bracket in an appropriate place.

Step 3

Insert the HDD units into the HDD slots in order starting from HDD1.

- ① Lift up the lever on the HDD unit while holding down the removal knob, and then insert the HDD unit all the way into the HDD slot.
Insert the HDD unit carefully without knocking it against anything (and without knocking against HDD units which are already inserted).
- ② Push the upper part of the lever securely until it hits the protruding section at the back side of disk slot top and then turn down the lever.
- ③ The removal knob fits into position with a "click" sound when turning down the lever.



Important:

- Insert the HDD units from the slot number 1.
- When mounting the HDD unit, be careful not to pinch your fingers with the lever.

- ④ The LCD displays as follows.

MAIN - y
NEW HDD DETECT

* y is a slot number

- When the inserted hard disk drive is formatted, it will be recognized as the hard disk drive for playback use only. In this case, [STS] (HDD status) indicator on the front of the HDD unit will blink green. Initialize the HDD following the instructions of "Initialize the HDD unit" (Page 34) when you use it as recording media.
- If the HDD unit is not identified, confirm that the HDD unit is inserted all the way into the HDD slot.

7 Installation of HDD unit (continued)

Install HDD unit in extension unit

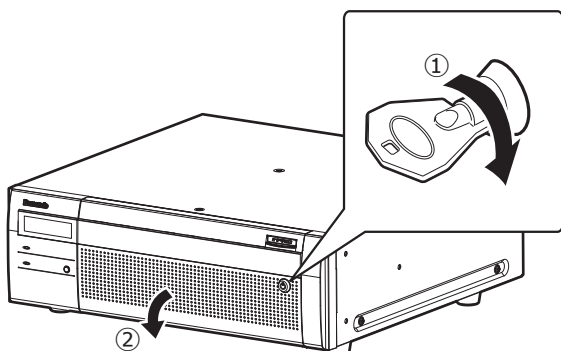
Install the HDD units in the extension unit as in the recorder.

The illustration on this page is schematic. Details of the shape are omitted.

It is possible to install the HDD units without stopping the operation (except when RAID1/RAID5/RAID6 mode is in operation). Attach an even number of HDDs if it is being operated in RAID1 mode, attach three or more HDDs if it is being operated in RAID5 mode, and attach four or more HDDs if it is being operated in RAID6 mode. Then, connect the extension unit to the recorder, turn on the power of the extension unit first and then turn on the power of the recorder.

Step 1

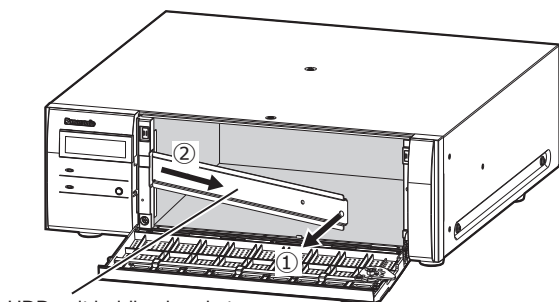
After inserting the key (provided) into the key hole on the front cover, push and turn it to the right to open the front cover.



Step 2

Remove the HDD unit holding bracket.

- 1 Remove the screw.
- 2 Slide the HDD unit holding bracket sideways and remove it.



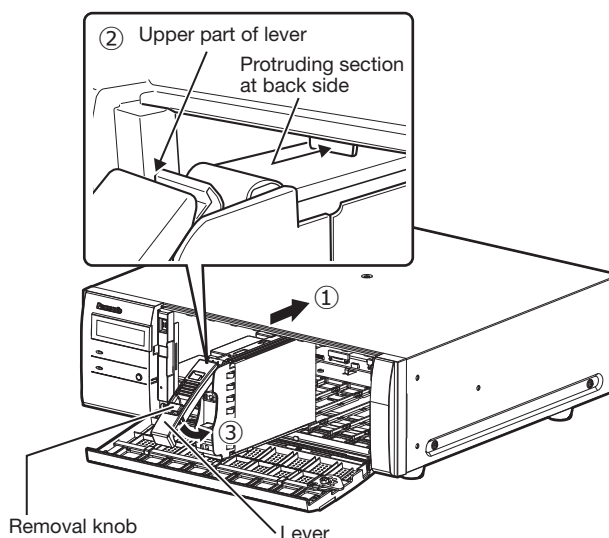
HDD unit holding bracket

- Keep the removed screw and the HDD unit holding bracket in an appropriate place.

Step 3

Insert the HDD unit into the disk slot of the extension unit adjusting the HDD number on the HDD slot.

- 1 Lift up the lever on the HDD unit while holding down the removal knob, and then insert the HDD unit all the way into the HDD slot.
Insert the HDD unit carefully without knocking it against anything (and without knocking against HDD units which are already inserted).
- 2 Push the upper part of the lever securely until it hits the protruding section at the back side of disk slot top and then turn down the lever.
- 3 The removal knob fits into position with a "click" sound when turning down the lever.



Important:

- Insert the HDD units from the slot number 1.
- When mounting the HDD unit, be careful not to pinch your fingers with the lever.

④ The LCD of NX400 displays as follows.

EXT x - y
NEW HDD DETECT

* x is an extension unit number
y is a slot number in the extension unit

- When the inserted hard disk drive is formatted, it will be recognized as the hard disk drive for playback use only. In this case, [STS] (HDD status) indicator on the front of the HDD unit will blink green. Initialize the HDD following the instructions of "Initialize the HDD unit" (Page 34) when you use it as recording media.
- If the HDD unit is not identified, confirm that the HDD unit is inserted all the way into the HDD slot.

7 Installation of HDD unit (continued)

Initialize the HDD unit

Open the "HDD management" page from the setting screen and format the HDD.

Step 1

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

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

Step 2

Enter the "Administrator name" and the "Password" registered on page 28, and then click the [OK] button.

The Authentication window has a title bar with a close button. It contains two input fields: "Administrator name" and "Password". Below these fields is a virtual keyboard with three sections: uppercase letters (A-Z), lowercase letters (a-z), and symbols/numbers (!, #, \$, %, ', (,), *, +, -, ., /, :, ;, <, =, >, ?, @, [\], ^, _ , ` { | } , ~). At the bottom of the keyboard are numeric keys (1-0) and a "Delete" button. Below the keyboard, a note states: "When HDD configuration menu is displayed, recording and copying will stop." At the bottom of the window are "OK" and "Cancel" buttons.

→ The "HDD management" page will be displayed.

Step 3

Confirm that the connected HDD is displayed on the "HDD management" page.

The HDD management page has a breadcrumb trail: "HDD management > General". It features a "General" tab and a table titled "HDD Information - Single mode". The table has columns: Capacity, Operation, Status, and Recorded time range. It lists HDDs under two categories: MAIN (HDD1 to HDD9) and EXT1 (HDD1 to HDD9). HDD1 is shown with a capacity of 2000 GB and a status of "Addition". Below the table are "Prev page", "1/3", and "Next page" navigation buttons. At the bottom, there is a list of actions: "Format HDD", "Remove HDD", "Add HDD", and "Change the operation mode of HDD", each with an "Execute" button next to it.

Step 4

Click "Execute" next to "Format HDD" on the "HDD management" page.

→ HDD format screen is displayed.

Step 5

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

The Format HDD screen has a breadcrumb trail: "HDD management > General > Format HDD". It features a "General" tab and a table titled "HDD Information - Single mode". The table has columns: Capacity, Operation, Status, Format, and Results. It lists HDDs under two categories: MAIN (HDD1 to HDD9) and EXT1 (HDD1 to HDD9). HDD1 is shown with a capacity of 2000 GB and a status of "Addition". Below the table are "Prev page", "1/3", and "Next page" navigation buttons. At the bottom, there is a "Format HDD" section with instructions: "Check the HDDs to format, and click the [Start] button. Format is successfully completed if 'OK' is displayed for 'Results'." Below this is a "Start" button and a "Back" button.

→ Format check screen is displayed.

Step 6

Click the [OK] button on Format check screen. When "OK" is displayed on the "Results" field on the HDD format screen, click the [Back] button.

When "Error" is displayed, format the hard disk drives again. Click the [Operation] button to return from the "HDD management" page to the operational screen.

The operational screen shows the "Network Disk Recorder WJ-NX400" at the top. Below it is a button labeled "HDD management". At the bottom is a button labeled "Operation".

8 Configure the minimum settings [Easy Start]

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

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

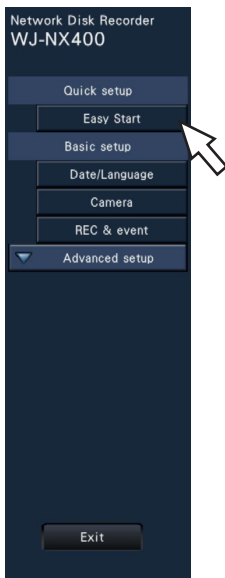
Available settings on "Easy Start"

- Date & time of the recorder
- Camera registration
- * Other settings will remain default or will be conformed to the camera settings.
- * To apply 25, 50 or 60 ips for the recording frame rate, configure on the advanced recording setup (for each camera) on the "Recording setup" tab under "REC & event" of "Basic setup", but not on Easy Start.
- * To reset the time, do not use "Easy Start", and go to "Basic setup" menu - "Date/Language" page.
- Order change of the registered camera numbers
- Recording frame rate and image quality

Step 1

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

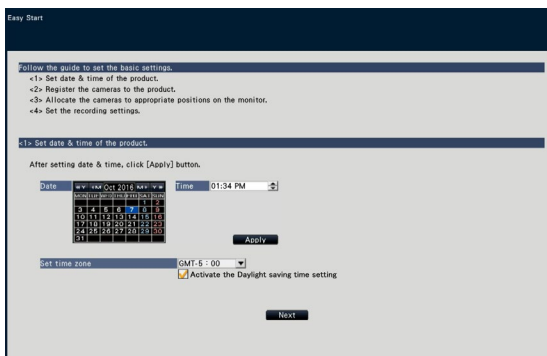
Refer to "Basic operations" (Page 7) for how to display the setup menu.



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

Step 2

Set the date & time.



[Date]

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

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

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

[Time]

Set the current time.

Step 3

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

→ The second will be set to "00".

[Set time zone]

Select your time zone.

GMT-12:00 - GMT+13:00

Default: GMT-5:00 (WJ-NV400K)

GMT (WJ-NV400K/G)

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

Step 4

Click the [Next] button.

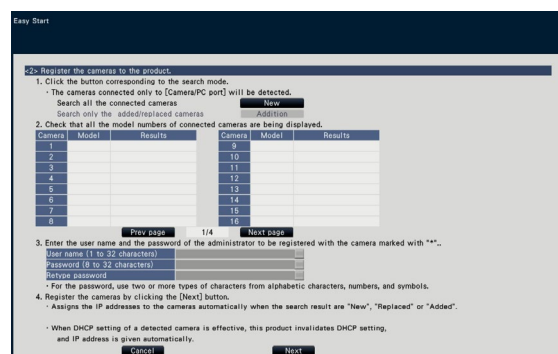
→ The camera registration window opens.

Note:

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

Step 5

Register the cameras connected to the recorder.



8 Configure the minimum settings [Easy Start] (continued)

[New] button

Usually use it with no camera registered in the recorder.
Detects all the connected cameras.
The models and results of the detected cameras will be displayed.
Make sure that the model numbers of all the connected cameras are being displayed.

[Addition] button

Usually use it when there are added or replaced cameras during operation.
Detects only the added or replaced cameras.
The models and results of the detected cameras will be displayed.
Make sure that the model numbers of all the added or replaced cameras are being displayed.

Important:

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

[Camera]

After the license is registered (☞ Page 29), 64, 96 or 128 cameras can be connected.

[Model]

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

[Results]

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

Note:

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

Step 6

Enter a user name and a password to register for a camera with "*" in the results.

Step 7

Click the [Next] button.

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

Note:

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

Step 8

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



Images from the cameras will be displayed on the monitor from the upper left corner to the right in order of the camera number (1, 2 ... 64).

To interchange camera numbers, drag the camera image to be moved with the mouse and drop on the desired position. If the camera titles are to be interchanged as well, mark the "Also change camera titles" checkbox.

8 Configure the minimum settings [Easy Start] (continued)

[Camera status]

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

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

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

Undetectable: Cannot obtain images from the camera.

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

Important:

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

[Refresh] button

Obtain the latest camera image after interchanging cameras.

[Exit] button

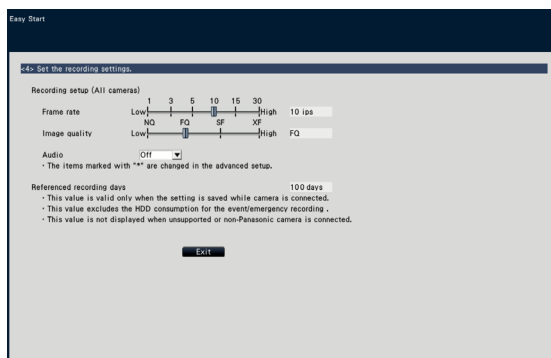
Exits the setup menu and returns to the top screen of the setup menu.

[Next] button

Proceeds to the settings for recording.

Step 9

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



[Frame rate]

Select the recording frame rate.

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

Default: 10 ips

Important:

- To apply 60 ips, configure on "Advanced recording setup" on the "Recording setup" tab under "REC & event" of "Basic setup".
- For a camera whose compression method is [MJPEG], "10 ips / 15 ips / 30 ips" cannot be selected.
- If a camera whose compression method is [MJPEG] is included, [MJPEG] camera is set to "5 ips" even if "10 ips / 15 ips / 30 ips" is set by slider bar of frame rate setting. You can confirm the current setting value with [Advanced setup >] in Recording setup (All cameras).

[Image quality]

Selects the image quality of recorded images.

NQ (Normal): Standard quality

FQ (Fine): High quality

SF (Super Fine): Super fine quality

XF (Extra Fine): Extra fine quality

Default: FQ

Important:

- For a camera whose compression method is [MJPEG], "XF" cannot be selected.
- If a camera whose compression method is [MJPEG] is included, [MJPEG] camera is set to "SF" even if "XF" is set by slider bar of image quality setting. You can confirm the current setting value with [Advanced setup >] in Recording setup (All cameras).

[Referenced recording days]

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

Note:

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

Step 10

Click the [Exit] button.

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

When the camera image is displayed on the main monitor or the web browser on the PC and can be recorded or played, the recorder is ready for operation.

Troubleshooting

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

Contact your dealer if a problem cannot be solved even after checking and trying the solution in the table or a problem is not described below.

Symptom	Cause/solution	Ref. pages
Power is not turned on.	<ul style="list-style-type: none"> Is the power plug connected to the outlet firmly? Confirm the cable is firmly connected. 	–
	<ul style="list-style-type: none"> Check if the power cord is properly inserted into the power socket of the recorder. Check if it is connected firmly. 	Important Information
Camera images are not displayed on the monitor	<ul style="list-style-type: none"> Is the lens cap of the camera detached from the camera? Check whether the lens cap is removed. 	–
	<ul style="list-style-type: none"> Is the power of the camera and connected devices on? Check whether the power is supplied to the camera and the devices. 	–
	<ul style="list-style-type: none"> Confirm that the cables are connected correctly and firmly. Confirm the cables are firmly connected. 	15, 16
	<ul style="list-style-type: none"> Depending on the HDMI monitor, it may not be displayed properly. Turn the monitor off and on and check whether it is displayed. 	–
	<ul style="list-style-type: none"> Is the monitor luminance appropriately adjusted, or is the contrast appropriately adjusted? Check whether the settings are appropriate. 	–
	<ul style="list-style-type: none"> Users who have logged into the system may not be authorized to display the images from cameras. Check the user level settings of these users. 	Operating Instructions
	<ul style="list-style-type: none"> Have the licenses of the additional camera kit been registered? If you have increased the camera connection number, and the camera image on the monitor does not appear, please use the browser on your PC. 	5
Part of the displayed image is missing.	<ul style="list-style-type: none"> This phenomenon is caused by dispersion of display area on the monitor. This is not a malfunction. 	–
	<ul style="list-style-type: none"> When a function to automatically enlarge the images in the connected monitor is enabled, some part of the images may not be displayed depending on the photographic subject. 	–
Image is blurred.	<ul style="list-style-type: none"> Is the lens of the camera soiled with dirt or dust? Check whether the lens of the camera is clean. 	–
Cannot open the setup menu.	<ul style="list-style-type: none"> Users who have logged into the system may not be authorized to display the setup menu. Check the user level settings of these users. 	Operating Instructions
	<ul style="list-style-type: none"> Isn't it the sub monitor you are currently operating? The setup menu cannot be displayed on the sub monitor. 	16
The images or embedded characters displayed on the monitor look blurry.	<ul style="list-style-type: none"> Depending on the photographic subject or HDMI monitor that is connected, images or embedded characters may look blurry. This phenomenon is not trouble. 	–
No alarm action is taken.	<ul style="list-style-type: none"> Check if alarm input signals are properly input to the ALARM/CONTROL connector at the rear panel. 	24
	<ul style="list-style-type: none"> Are the settings of the alarm connector appropriate? 	Operating Instructions
	<ul style="list-style-type: none"> Is "Off" or "Recording only" selected for "Mode"? Check whether the settings are appropriate. 	Operating Instructions
The "Communication error: Cam.cc" indication is displayed on the main monitor.	<ul style="list-style-type: none"> Confirm that the camera is connected correctly and firmly. Check the camera connection. 	15
	<ul style="list-style-type: none"> If the connection is appropriate, the cable may be broken or the camera may be out of order. Contact the dealer. 	–

Troubleshooting (continued)

Symptom	Cause/solution	Ref. pages
The "Thermal error" indication is displayed on the main monitor.	<ul style="list-style-type: none"> The ambient operating temperature is +5 °C to +45 °C {41 °F to 113 °F}. The "Thermal error" is displayed based on the internal thermal information of the HDD. If the "Thermal error" indication is displayed, it is recommended to change the installation environment so that the ambient temperature is maintained at approx. +25 °C {77 °F}. When the "Thermal error" indication is displayed frequently, contact your dealer. 	13
	<ul style="list-style-type: none"> Check if the fan is malfunctioning. 	Operating Instructions
	<ul style="list-style-type: none"> Check if the recorder ventilation holes or cooling fan are blocked, and also check for dust collected around the ventilation holes. 	6
The clock of the recorder may keep bad time.	<ul style="list-style-type: none"> The clock function of the recorder is accurate within ±30 seconds per month. To keep the correct recording, set the time periodically, or enable the auto time adjustment function on the rear panel terminal, or configure the system using the NTP function so as to keep the correct current time. 	—
[STS] indicator of the HDD unit lights/blinks red.	<ul style="list-style-type: none"> The hard disk drive is faulty. Contact your dealer. 	—
The extension unit is not recognized. (When an extension unit is connected)	<ul style="list-style-type: none"> Make sure that the connection cable provided with the extension unit is being used. 	14
	<ul style="list-style-type: none"> Make sure that the connection cable is not loose. 	14
	<ul style="list-style-type: none"> Was the power of the extension unit turned on before turning on the power of the recorder? Turn off the power of the recorder and the extension unit. Turn on the extension unit before turning on the power of the recorder. 	27
	<ul style="list-style-type: none"> When using a circuit breaker or equivalent device to turn on/off the power of the whole system at one time, make sure that all devices are connected to the same power source. 	—
	<ul style="list-style-type: none"> When using an UPS (uninterruptible power system), connect all devices to the same UPS. 	—
The HDD unit is not identified. [STS] indicator of the HDD unit is not on.	<ul style="list-style-type: none"> Make sure that the HDD unit is inserted all the way into the HDD slot. 	32
	<ul style="list-style-type: none"> The hard disk drive is faulty. 	—
"EXTu ERR INITIAL ERR" is displayed on the LCD of the recorder. u: Unit number	<ul style="list-style-type: none"> Initialize an applicable extension unit. When operating the recorder in RAID5 mode, attach three or more HDDs in the extension unit. If the recorder is being operated in RAID6 mode, attach four or more HDDs in the extension unit. Then, connect to the recorder and turn on the power of the extension unit first, and later turn on the power of the recorder. 	Operating Instructions
The error indicator blinks red.	<ul style="list-style-type: none"> A system error occurred. Contact your dealer. 	—
"Authentication error" of the camera is displayed.	<ul style="list-style-type: none"> Initialize the camera and retry the camera registration upon referring to the operating instructions of the camera. 	—

Inspect the power cord, power plug and connectors periodically.

Symptom	Cause/solution	Ref. pages
The power cord insulation is damaged.	<ul style="list-style-type: none"> The power cord, connector, or power plug is damaged. This may result in electric shock or a fire. Unplug the power plug from the AC outlet immediately, and refer to qualified service personnel. 	—
The power cord, plug and connectors get hot during use.		
The power cord gets hot when bent or stretched.		

Disposal of Old Equipment and Batteries
Only for European Union and countries with recycling systems



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries must not be mixed with general household waste.
For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation.
By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.
For more information about collection and recycling, please contact your local municipality.
Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



Note for the battery symbol (bottom symbol)

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

For U.S.A.

Disposal may be regulated in your community due to environmental considerations. For disposal or recycling information, please visit Panasonic website: <http://www.panasonic.com/environmental> or call 1-888-769-0149.

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