SONY

4-262-347-**12** (1)

Network Surveillance Recorder

User's Guide

Before operating the unit, please read this manual thoroughly and retain it for future reference.

NSR-S10/S20

IPELA

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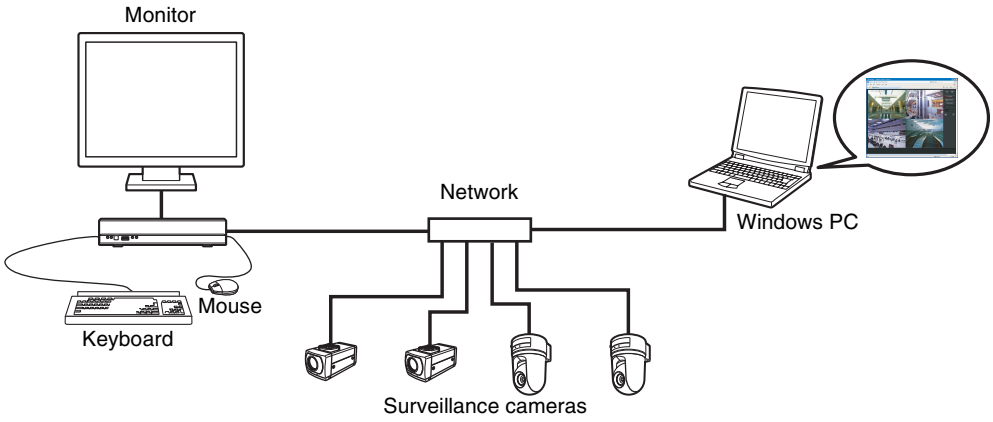
Introduction

Chapter 1

Overview

The NSR-S10/S20 is a network surveillance recorder for network cameras. The server allows you to monitor and record JPEG, MPEG-4 and H.264 images from network cameras via the network. The server also allows you to easily search for and play back previously recorded images.



Manage and control compatible cameras from remote locations

You can manage, control, and display the images from up to four network cameras with the NSR-S10, and up to eight network cameras with the NSR-S20. You can pan, tilt, and perform zoom operations of compatible cameras.

Large-capacity hard disks allow recording for long periods of time

Models with internal hard disks are equipped with large-capacity storage that enables recording for extended periods of time. In addition, the unit allows you to connect storage devices that support the e-SATA interface.

Monitor from a browser

You can access the NSR from a computer browser, which then can be used to monitor, record, or play back images.

Other features

- The NSR is capable of continuous recording, motion detection, and alarm recording, among others.
- Run searches for recorded images by date and time, sensors, movement detection, video signal loss, etc.
- Audio recording and playback [1)] are also supported from compatible cameras.

1) Optional audio amplifiers or speakers are required.

Important

- This manual uses screen examples of NSR-S10 in the explanations.
- This manual describes the installation and initial setup of this unit. For details on the various settings for this unit, refer to chapter 4, *"Detailed Descriptions of Settings and Windows" (page 33)*.
- For details on the system requirements for client computers, supported camera models, and other important information, refer to the Release Note (PDF).
  Access the following URL to download the Release Note.
  http://www.sony.co.jp/Products/NSR/NSR-S_ReleaseNote_E.pdf

System Requirements

The hardware required in order to use this recorder is as follows.

- Monitor[1)]
- Sony Network Camera
  Contact your Sony dealer for details about compatible Sony network cameras.
- USB keyboard[2)]
- USB mouse[3)]
- Network switch
- 1000Base-T/100Base-TX/10Base-T cable
- USB flash memory device[4)]

1) This unit supports computer displays that support analog RGB input.

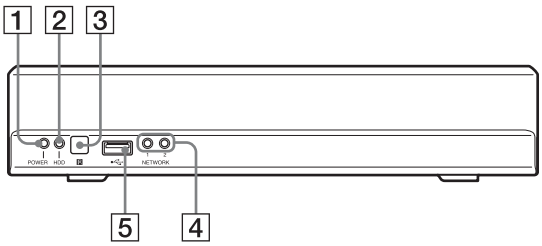
2) Use a USB keyboard with a cable. Note that wireless or infrared USB keyboards may not function with this unit. In addition, nonstandard keys may not function.

3) Use a USB mouse with a cable. Wireless or infrared USB mice may not function properly. Functions such as three-button and wheel operations may also function improperly.

4) Required when exporting videos or still images.
   - This unit supports USB 2.0 Mass Storage devices. However, it does not support USB 2.0 Mass Storage HDDs or CD/DVD drives. Do not connect mass storage devices other than USB memory devices to the unit. Be aware that errors may still occur when writing data to a USB 2.0 Mass Storage memory device, depending on the type of device used. If errors occur when writing data, use a USB flash memory device of a different type.

Features and Functions

Front panel



1 POWER LED
Lights green when the unit is turned on.

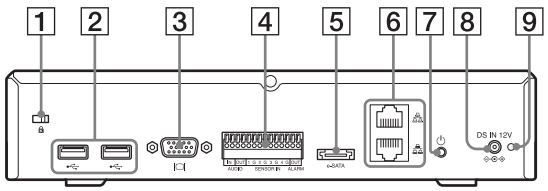
2 HDD LED
Blinks green when the internal hard disks are accessed.

3 Infrared sensor
Receives signals from the infrared remote control unit.

4 NETWORK LED (1, 2)
Lights green when there is activity at the corresponding LAN connector at the rear of the NSR.

5 USB connector
Use this connector to connect a USB keyboard, USB mouse or USB flash memory to the NSR.

Rear panel



1 Security slot
Attach an anti-theft cable here.

2 USB connector
Use this connector to connect a USB keyboard, USB mouse or USB flash memory to the NSR.

3 Monitor connector
Use this connector to connect a monitor.

4 I/O Port
Use this connector to connect audio, sensor inputs, and relay outputs.
For connection details and wiring diagrams for sensor inputs, see *"I/O Port" (page 64)*.

5 e-SATA connector
Use this connector to connect storage devices that support the e-SATA interface.

6 LAN connectors (1, 2)
Use these connectors to connect 10 Base-T, 100 Base-TX, or 1000 Base-T network cables.
The top connector is LAN2, and the bottom connector is LAN1.
LAN1: Network camera
LAN2: Network camera (LAN2 can only be used when using a different segment from LAN1.)

CAUTION for LAN ports
For safety reason, do not connect the LAN ports to any network devices that might have excessive voltage. Follow the instructions for the above ports.

7 ⏻ Power switch
Press this to turn on the unit.

Note

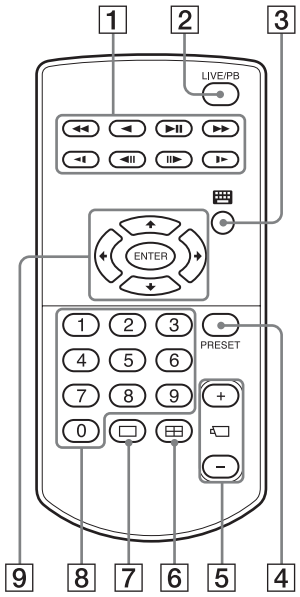
Although this button can be used to force a shut off of power to the unit, under normal circumstances the shutdown command on the screen should be used.

8 DC IN connector (12V)
Use this connector to connect the AC adapter.

9 Cable clamp hole
Attach the supplied cable clamp here to prevent the power cord from disconnecting.

Infrared remote control unit

If a button on the infrared remote control unit is pressed while the remote control unit is pointed at the infrared sensor on the main unit, then the main unit will perform the operation corresponding to that button.



1 Play button
Use this button to play recorded images.

◀◀ (Fast Rewind) button
Use this button for fast rewind. (2x, 4x, 8x, 16x, 32x, 64x speed)

◀ (Reverse Play) button
Use this button to play recorded images in reverse.

▶II (Play/Pause) button
During pause: Use this button for playback. (1x speed).
During playback: Use this button to pause playback.

▶▶ (Fast Forward) button
Use this button for fast forward. (2x, 4x, 8x, 16x, 32x, 64x speed)

◀I (Slow Rewind) button
Use this button for slow rewind. (1/2 speed, 1/4 speed)

◀II (Previous) button
Use this button to go back one frame.

I▶ (Slow Forward) button
Use this button for slow forward. (1/2 speed, 1/4 speed)

II▶ (Next) button
Use this button to advance one frame.

2 LIVE/PB button
Use this button to switch between live image display and playback of recorded images.

3 **(Soft Keyboard) button**
Use this button to display the soft keyboard that is used for text input.

4 **PRESET button**
Use this button to move the camera to a preset position.

5 **+ / – (Camera Number) Button**
Use these buttons to switch between cameras for selection.
Press the [+] button to select the next camera number, and the [–] button to select the previous camera number.

6 **(2 × 2 Layout) button**
This button switches the screen layout to 2 × 2 (4 screen).

7 **(1 × 1 Layout) button**
This button switches the screen layout to 1 × 1 (1 screen).

8 **Numeric keys**
Use these keys to input numbers.

9 **Operation selection buttons**
Use these buttons to select items.

▲ button
Use this button to move the focus cursor upwards in order to select an item that is higher on the screen.

◀ button
Use this button to move the focus cursor to the left in order to select an item that is located to the left on the screen.

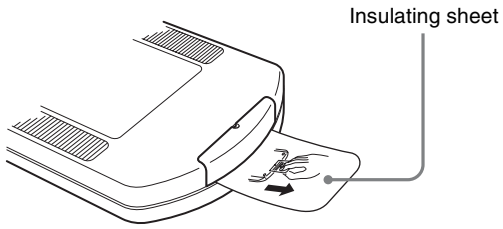
▼ button
Use this button to move the focus cursor downwards in order to select an item that is lower on the screen.

▶ button
Use this button to move the focus cursor to the right in order to select an item that is located to the right on the screen.

ENTER button
Use this button to confirm the selection of the current item or monitor frame, and to execute other operations.

Before using the infrared remote control unit

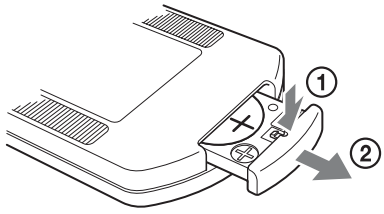
Remove the insulating sheet.



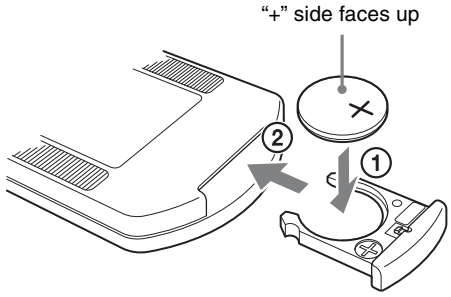
Replacing the lithium battery in the infrared remote control unit

The infrared remote control unit uses a standard CR2025 lithium battery. Do not use any battery other than the CR2025.

1 While holding down the locking lever (①), pull the battery holder out (②).



2 Insert the battery with the "+" side facing up (①) and then push the battery holder in until it clicks into place (②).



Caution

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.
When you dispose of the battery, you must obey the law in the relative area or country.

Battery replacement interval

When the lithium battery becomes weak, the unit may not respond even when the buttons are pressed. The average life of a lithium battery used in this unit is one year, but this will vary according to how frequently the unit is used. If the main unit does not respond when buttons on the remote control are pressed, replace the battery and try the operation again.

Operation and Control

Chapter 2

Overview

This chapter describes how to perform the basic operations listed below on the NSR, including logging on; using various windows; monitoring; and how to record, retrieve and play back images.

- *Logging On to the NSR (page 9)*
- *Basic Window Operations (page 11)*
- *Monitoring (page 15)*
- *Controlling Cameras (page 17)*
- *Recording, Searching, and Playing Images (page 18)*
- *Exporting Recorded Images (page 23)*
- *Releasing Alarms (page 26)*
- *System Administration (page 26)*
- *Shutting Down, Restarting and Logging Off (page 27)*

Note

For details on operation from a computer's browser, refer to Chapter 3, *"Monitoring from a Web Browser (WebViewer)" (page 28)*; for details on the camera and on various settings for recording, sensors, and alarms, refer to *"Detailed Descriptions of Settings and Windows" (page 33)*.

Logging On to the NSR

Before you can use the NSR, you must first log on.

1 Turn on the NSR.

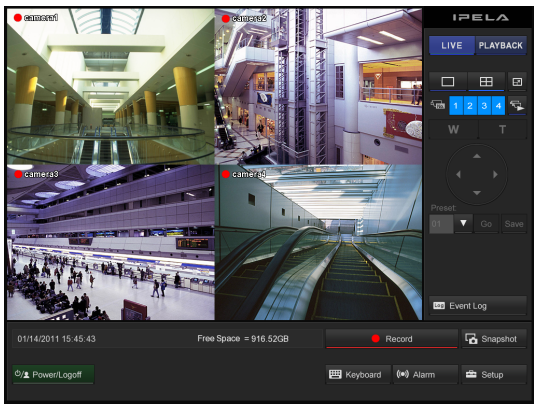
The power comes on automatically when the power cord of the AC adapter is plugged into the power outlet.
After the NSR has been turned off either by a screen-based operation or by the power switch on the rear panel, the power can be turned back on by pressing the power switch.

The unit beeps, and the POWER LED on the front panel lights green.
After a minute or two, the startup screen appears on the monitor.
After startup, the "Main" screen appears.

Note

- The user ID and password for logging in to the "Main" screen are as follows.
  Default user ID: admin
  Default password: admin
- For details how to change the auto login setting, refer to *"Settings Related to the System" (page 35)*.

Cameras connected to the same segment on the network are automatically located and registered to the NSR, and images from these cameras appear on the “Main” screen.

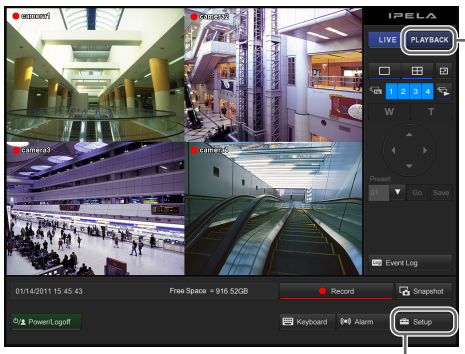


Continuous recording starts automatically after the cameras are registered.

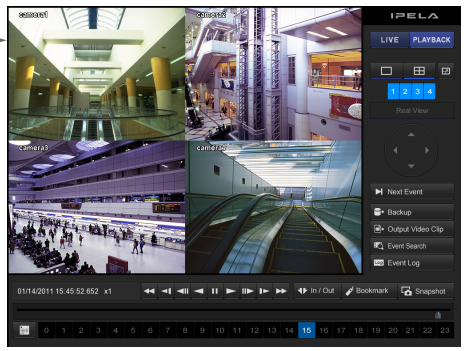
Basic Window Operations

This section provides a brief description of the basic operations for each screen.
This unit has a “Main” screen, which is used to monitor live images and to retrieve and play back recorded images, and a “Setup” screen, which is used for making various settings.

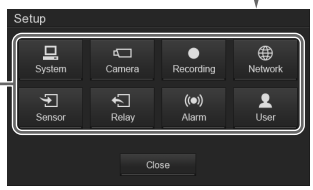
“Main” screen
“Monitoring (LIVE)” screen

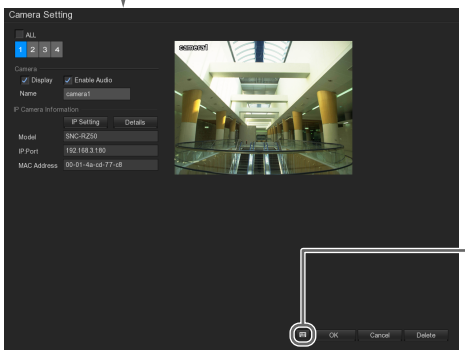


“PLAYBACK” screen



“Setup” Screen





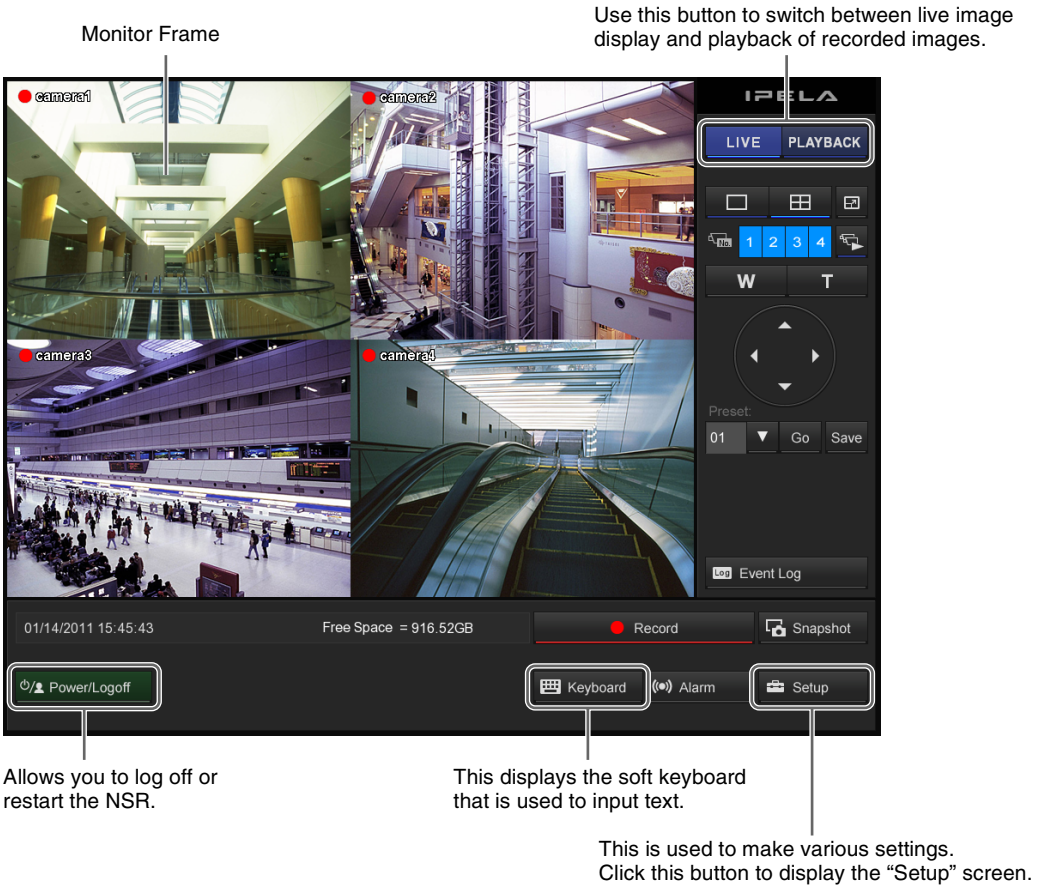
Various setting screens

Soft keyboard

“Main” screen

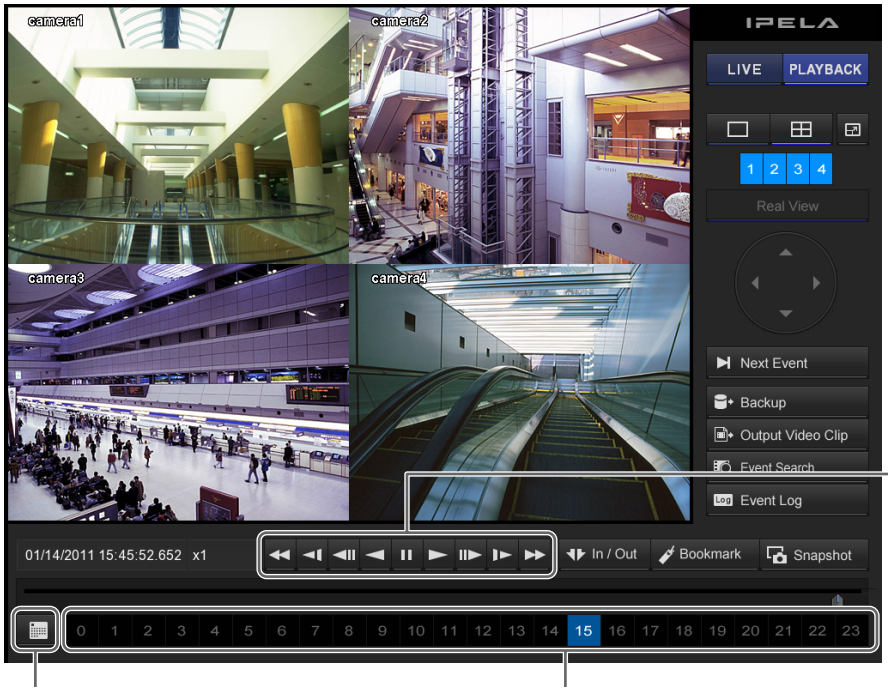
In the “Main” screen, you can monitor live images from each monitor frame, and search for and play back recorded images. To switch between live image display (monitoring) and playback of recorded images, click [LIVE] or [PLAYBACK] in the upper right corner of the screen.

“Monitoring (LIVE)” screen



For details on monitoring, refer to *Monitoring (page 15)* and *Controlling Cameras (page 17)*.

“PLAYBACK” screen



These are used when playing back recorded images.

This is used when searching for a recording from a specified date and time.

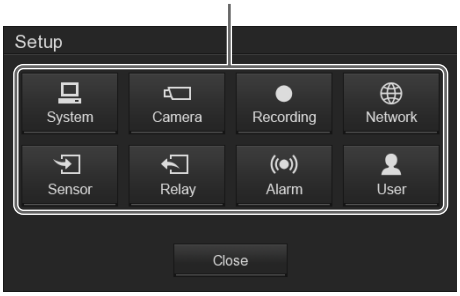
These are used to specify particular time frames from which to play back images in the selected monitor frame.

For details on searching for and playing back recorded images, refer to *“Recording, Searching, and Playing Images” (page 18)*.

“Setup” Screen

Click the button for the item that you want to configure to display the configuration screen.

Click the button for the item you want to set.



Various setting screens

These screens are used for making settings that are necessary for operating the NSR, such as camera registration, schedule settings, and user registration.

Monitoring

You can monitor the live images currently being captured by the camera, as well as the audio from the camera. The AutoScan function, which displays the camera images in succession in the 1 × 1 (1 screen) layout, can also be used when monitoring.

Monitoring Live Images

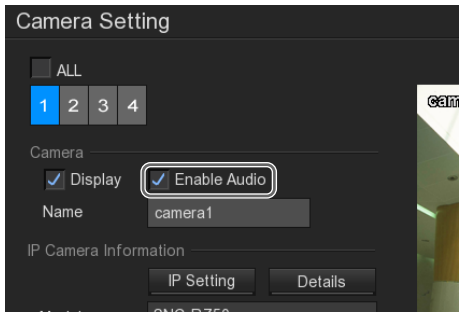
You can monitor the images the camera is currently capturing by clicking [LIVE] in the upper right corner of the screen.

Changing the Layout

The layout can be changed by clicking the layout buttons. In addition, the image from a specific camera can be displayed in the 1 × 1 (1 screen) layout by clicking the camera ID button or by clicking the monitor frame.

Monitoring Audio from Cameras

Enable audio from the cameras by checking the [Enable Audio] checkbox on the “Camera Setting” screen.
For details on this setting, refer to *“Settings Related to the Cameras” (page 40)*.



When audio from a camera is enabled, “ ” appears in the upper left corner of the monitor frame.

Displaying images from different cameras in succession (AutoScan)

Once you click (AutoScan) and AutoScan function is enabled (the button turns blue), the camera images are displayed in succession.

You can set the display time for each monitor frame. For details on how to make this setting, refer to *“AutoScan Period” (page 39)* in *““System Setting” Screen Details”*.

Turning AutoScan function off

Click (AutoScan) again; the button turns off.

Functions and Operating Procedure of “Monitoring (LIVE)” Screen

On the “Monitoring (LIVE)” screen, you can perform operations such as monitoring the live images captured from the current camera.

Ⓐ During 1 × 1 (1 screen) layout

You can perform digital zoom by right-clicking and dragging the mouse.

Ⓑ Monitor Frame

You can display live images and play back recorded images in the monitor frames. Clicking on one of the monitor frames switches that monitor frame to full screen display.

The following icons appear in monitor frames.

: Recording in progress

: Motion is detected.
When motion is detected while recording is in progress, appears.

: Audio enabled (grayed out when disabled)

Ⓒ Camera ID

This is used to select the camera for displaying images in the monitor frame.

Ⓓ Layout switch

Switches the layout of the monitor frames.

: This button switches the screen layout to 1 × 1 (1 screen).

: This button switches the screen layout to 2 × 2 (4 screen).

Ⓔ Monitor frame status switch

Switches the monitor window status (live/playback).

Ⓕ (Fullscreen)

This displays the current layout (monitor arrangement) over the whole screen. To return to the normal screen, click that appears in the upper right corner of the screen. You can also return to the normal screen by pressing the Esc key on the keyboard.

Ⓖ (AutoScan)

This displays the camera images in succession.

Ⓗ Camera Control

If the camera is equipped with pan, tilt, and zoom functions, this controls these functions for the camera images.

Wide-angle/Telephoto Zoom

W T

This controls zooming between wide-angle and telephoto views.
[W] is for wide-angle (zoom out), and [T] is for telephoto (zoom in).

Pan/Tilt

This moves the camera up, down, left, or right.

Caution

If an analog camera equipped with pan, tilt, and zoom functions is connected to an SNT-EX series unit, these functions of the analog camera cannot be controlled by the NSR.

Preset

This moves the camera to the selected preset position.
For details on this operation, refer to *"Using Camera Presets" (page 17)*.

Ⓘ Event Log **(Event Log)**

This displays the event/operation/system/network history.

Ⓙ Snapshot **(Save)**

This exports the image currently displayed as a still image file.
Still images are exported in JPEG format.

Ⓚ Setup **(System Setup)**

This displays the "Setup" screen.

Ⓛ Alarm **(Alarm Status)**

This displays the status and history of alarms.
To release an alarm condition, click this button and then click [Reset] in the "Alarm Status" screen that appears.

Ⓜ Keyboard **(Keyboard)**

This displays the soft keyboard that is used to input text.

Ⓝ Record **(Record)**

This starts or stops the recording of camera images according to the recording mode configured in the "Recording Setting" screen.
Under default settings, recording starts automatically at system startup.

Ⓞ Power/Logoff **(Exit)**

This allows you to reboot, power off, or log on as a different user.

Ⓟ **Status display**

This displays the current date and time, and the current hard disk capacity.

Controlling Cameras

You can move the camera to preset positions stored in the camera.

Using Camera Presets

You can move the camera to preset positions stored in the camera. You can also configure a new preset position.

1 Select the monitor frame displaying the images from the camera that you want to control.

2 Using [Preset], select the desired preset number and then click [Go].

The camera moves to the preset position.

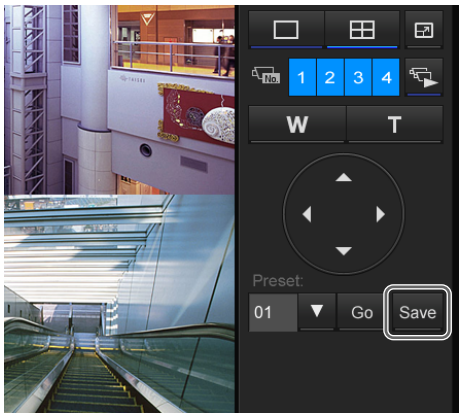
Configuring a New Preset Position

These settings are only available for cameras with a function for configuring preset positions.

1 Select the monitor frame displaying the image from the camera for which you want to configure the preset position.

2 Adjust the camera position using the pan, tilt, and zoom operations while watching the image.

3 Select the desired preset number for the new present and then click [Save].



The new preset position is configured.

Note

The number of presets depends on the type of camera used. For details, refer to the user's guide for your camera.

Recording, Searching, and Playing Images

You can record live images, and search and play back recorded image data and audio data.
This section describes the following operations.

- *Recording Camera Images (page 18)*
  You can record the images currently being captured by a camera.
- *Playing Recorded Images (page 19)*
  Simple operations are available for playing recorded images, including instant playback for automatically rewinding a specified amount of time and playing, specifying the playback position by date and time, and playing from alarm history.
- *Searching by Event (page 20)*
  You can search for and play back recorded images according to a specified event (sensor input, movement detection, or loss of video signal)
- *Setting a Bookmark (page 21)*
  You can bookmark recorded images for quick retrieval.

Recording Camera Images

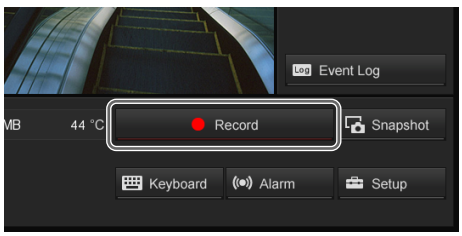
You can manually start and stop the recording of camera images according to the recording settings configured in the "Recording Setting" screen. When you start or stop recording, the operation is performed for all cameras.

Notes

- You cannot start recording images from a camera for which [Recording Mode] is set to [No Recording] in the "Recording Setting" screen.
- If no live images are displayed, click [LIVE] on the upper right corner of the screen.

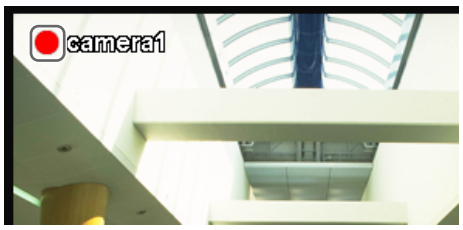
1 Click Record (Record).

If continuous recording or motion detection recording is in progress, clicking Record (Record) will stop the recording. In such cases, click Record again to start recording manually.



Recording starts.

● appears in the upper left corner of the monitor frame while recording is in progress.



Note

Recording continues even if you change the layout.

2 To stop recording, click Record (Record) again.

Recording stops.

Playing Recorded Images

Simple operations are available for playing recorded images, including instant playback for automatically playing the most recently recorded image, and specifying the playback position by date and time.

Note

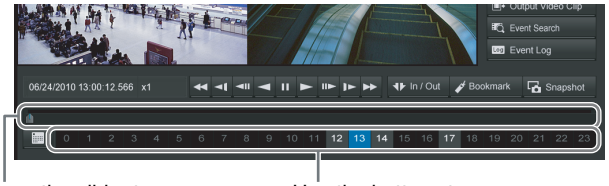
You can set the operation that happens when you click [PLAYBACK] and switch to the "Playback" screen. For details on how to make this setting, refer to *"Playback Mode" (page 39)* in *""System Setting" Screen Details"*.

Instant Playback

When you click [PLAYBACK], the recorded image is played back.

Changing the Playback Time Frame for Selected Images

You can change the time frame from which to play back images for the selected image by using the hour buttons and playback slider at the bottom of the "Playback" screen. Use the hour buttons to specify the hour, and the playback slider to specify the minute.



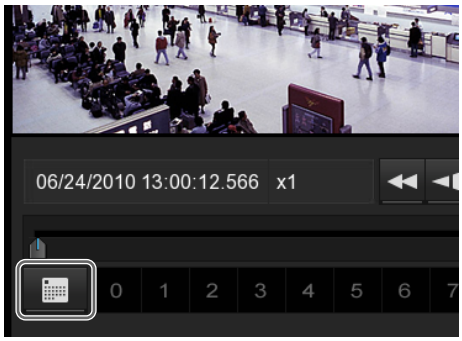
Move the slider to specify the minute.

Use the buttons to specify the hour.

Specifying a Date and Time for Playback

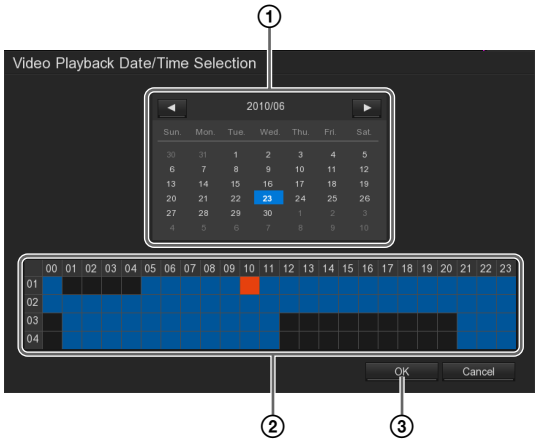
This allows you to specify a date and time for the playback position of the recorded images.

1 Click (Date Selection) in the lower left corner of the "Playback" screen.



The calendar appears.

2 Specify the date and time.



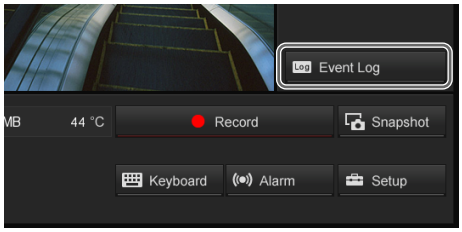
① Select the date.

② Select the camera and time for which a recording is to be played back.
Time periods for which recorded images exist are displayed in . When you click a time period, the selected time period will become .

③ Click [OK].
The recording is played back.

Playing from Event History

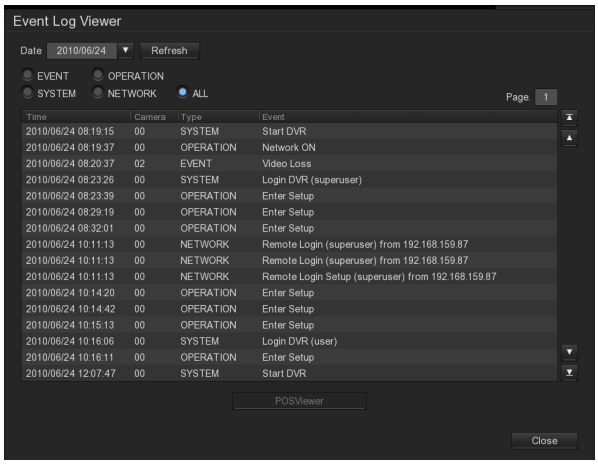
1 Click Event Log (Event Log) in the lower right corner of the screen.



The “Event Log Viewer” screen appears.

2 Select the event type and date.

The relevant events are displayed.
If a recorded image exists, double-click the history to play the recorded image.



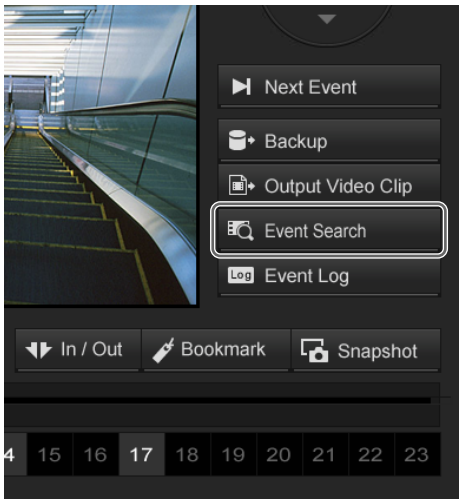
3 To close the “Event Log Viewer” screen, click [Close].

Searching by Event

You can search for and play back recorded images according to a specified event (sensor input, movement detection, or loss of video signal).

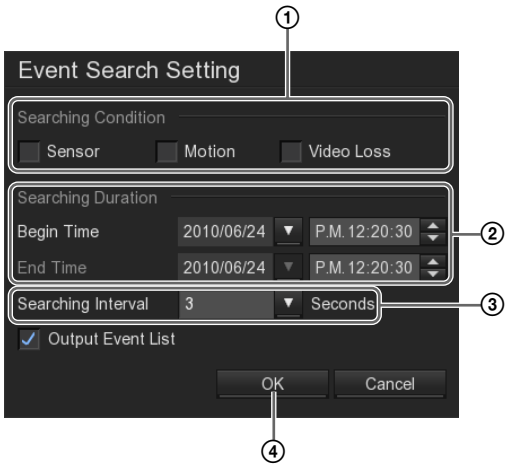
1 Select the monitor frame displaying the image from the camera for which you want to search.

2 Click Event Search (Event Search) on the right side of the “Playback” screen.



The “Event Search Setting” screen appears.

3 Set the search conditions.



① Select the check boxes of the events for which to search.

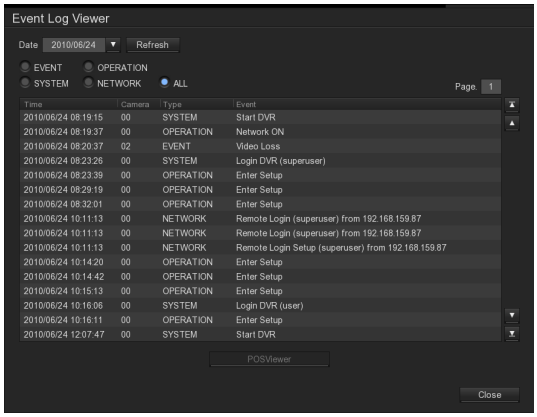
② Specify a range of dates and times for which to search.

③ Select the number of seconds to search for.

④ Click [OK].

The search begins, and the results are displayed in the “Event List” screen.

4 Double-click the event that you want to play back.



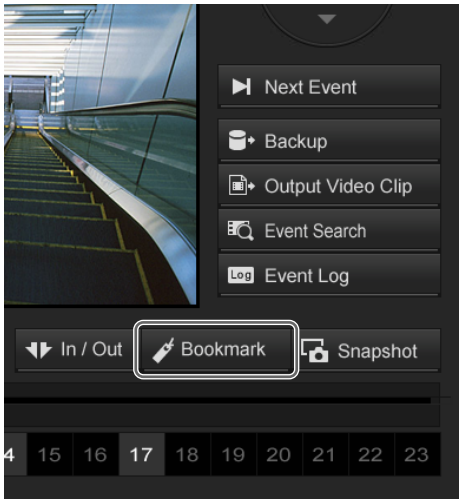
The recorded images are played back.

5 To close the “Event List” screen, click [Close].

Setting a Bookmark

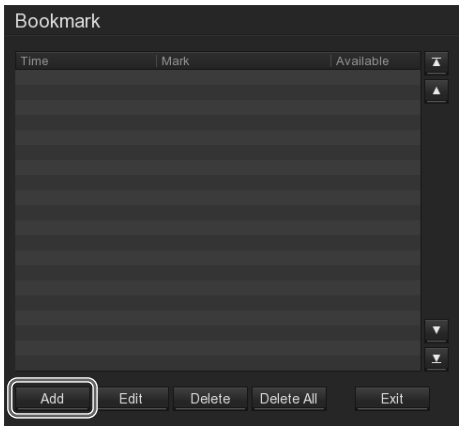
You can bookmark recorded images for quick retrieval.

1 Pause at the scene that you want to bookmark, and click Bookmark (Bookmark).



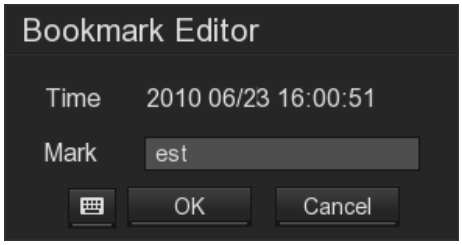
The “Bookmark” screen appears.

2 Click [Add].



The “Bookmark Editor” screen appears.

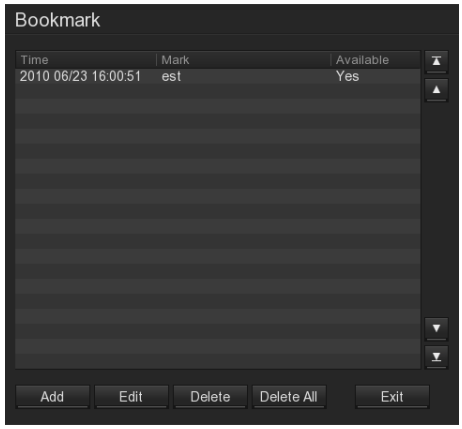
3 Input the bookmark name, and click [OK].



The bookmark is added to the list.

Returning to a Bookmark

When you double-click the desired bookmark, the corresponding bookmarked scene is displayed in the monitor frame.



Functions and Operating Procedure of “Playback” Screen

Ⓐ Real View

This displays images from cameras in real size (dot by dot).

This function is only available when the video size of the camera is 1280 × 720 or higher.

If the entire area of the image is not displayed in Real View mode, use the pan and tilt buttons to the right to move the displayed area.

Ⓑ Next Event (Find Next)

This is used to jump to the next event in the recorded data. This function is enabled when using the event search function.

Ⓒ Backup (Backup)

This is used to back up recorded images as files to USB flash memory.

Ⓓ Output Video Clip (Export)

This is used to export recorded images as proprietary format files (.dvr) to USB flash memory.

Ⓔ Event Search (Event Search)

This is used to search for recorded images based on event log records (sensor input, movement detection, loss of video signal, etc.).

To use the Next Event (Find Next) function, deselect the [Output Event List] check box in the “Event Search Setting” screen and perform the search.

Ⓕ Event Log (Event log)

This displays the event/operation/system/network history.

Ⓖ In / Out (Set Segment)

This is used to specify the portion of a recorded image to be exported.

Click this button to set the current playback position as the start point or end point.

If you want to change the start point and end point after setting them, click In / Out again to clear the settings.

Ⓗ Bookmark (Bookmark)

This is used to set a bookmark at the current playback position.

Ⓘ Playback control buttons

These are used when playing back recorded images.

(Fast Rewind)

Use this button for fast rewind. (2x, 4x, 8x, 16x, 32x, 64x speed)

(Slow Rewind)

Use this button for slow rewind. (1/2 speed, 1/4 speed)

(Previous)

Use this button to go back one frame.

(Rewind)

Use this button to play recorded images in reverse.

(Pause)

Use this button to pause playback.

(Play)
Use this button for playback. (1x speed).

(Next)
Use this button to advance one frame.

(Slow Forward)
Use this button for slow forward. (1/2 speed, 1/4 speed)

(Fast Forward)
Use this button for fast forward. (2x, 4x, 8x, 16x, 32x, 64x speed)

Ⓙ Playback slider
This displays the current playback position.
You can also move the slider to change the position.

Ⓚ Time button
This is used to play back images that were recorded today. The numbers indicate the time.

Ⓛ Date and time setting button
This is used when searching for a recording from a specified date and time.
Clicking (Date Selection) causes the calendar to appear, which can then be used to specify the date and time.

Ⓜ Status display
This displays the date and time that an image was recorded, and the playback speed.

Exporting Recorded Images

You can back up stored copies of recorded images onto USB flash memory, and export them as proprietary format movies (.dvr files) or as still images (JPEG files).

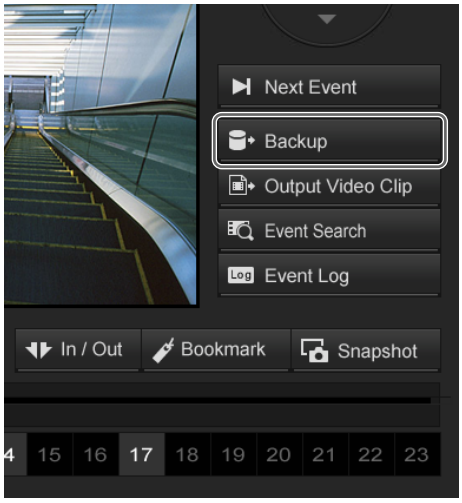
Notes

- Multiple items cannot be exported at the same time.
- This unit does not support USB HDDs or CD/DVD drives. Do not connect mass storage devices other than USB memory devices to the unit.

Backing Up Recorded Images

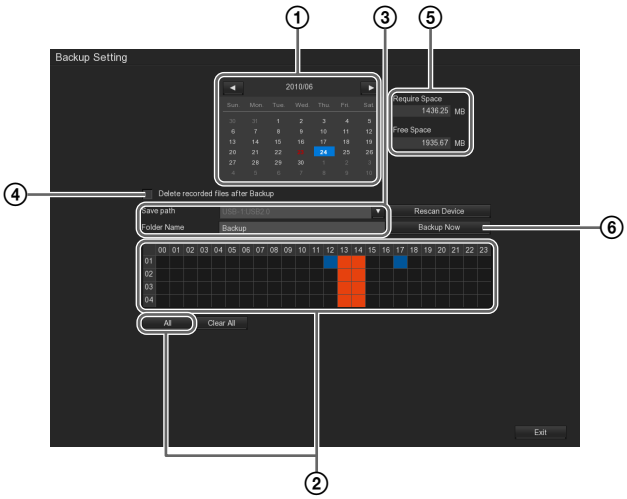
You can back up previously stored recorded images with a specified date and time.

1 Click Backup (Backup) on the right side of the "Playback" screen.



The "Backup Setting" screen appears.

2 Set each item.



① Select the date that is the target for backing up.

② Select the camera and time period that are the targets for backing up.
The time periods for which recordings have been stored are displayed in blue. When a square is selected, it changes to red.
Clicking [All] causes all of the time periods for which recordings are stored to be selected.

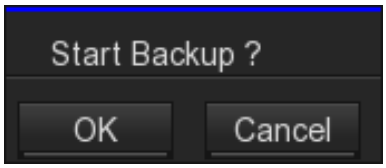
③ Select the media to which the files are to be backed up, and enter the folder name.

④ To have recorded images deleted after they have been backed up, select the [Delete recorded files after Backup] check box.

⑤ Click [Rescan Device] to check the backup file space and free space.

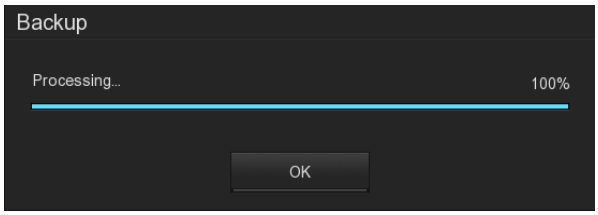
⑥ Click [Backup Now].
A confirmation message appears.

3 Click [OK].



Backup of the recorded images starts.
The following screen appears during backup to allow you to confirm the progress.

4 When backup is complete, click [OK].



5 To close the “Backup Setting” screen, click [OK].

In addition to the recorded images, the NSR-S Viewer software for playing back movie files (.dvr) is also copied.

Exporting Recorded Images as Movies

You can export saved recorded images as movies in a format (.dvr files) that can be played with NSR-S Viewer.

Note

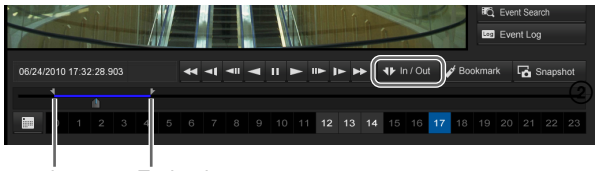
NSR-S Viewer is copied with the image files when you back up recorded images.

1 On the “Playback” screen, display the recorded image that you want to export in the monitor frame.

2 Set the layout to 1 screen display.

3 Specify the start point and end point for the recorded images to be exported.

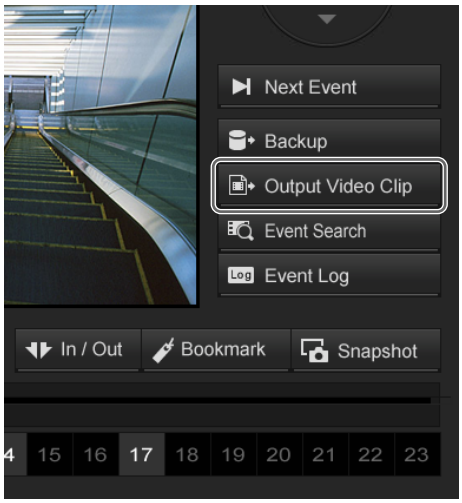
Click In / Out (Set Segment) to set the current playback position as the start point or end point.



Note

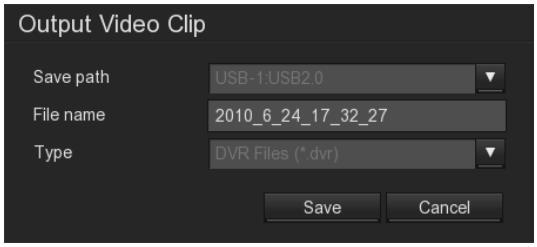
If you want to change the start point and end point after setting them, click In / Out again to clear the settings.

4 Click Output Video Clip (Export).

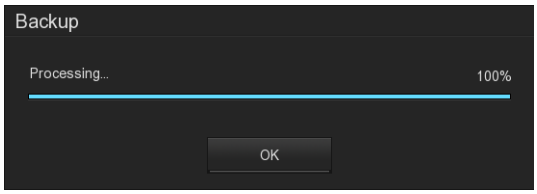


The “Output Video Clip” screen appears.

5 Set the media to which the files are to be backed up, the folder name, and the file format, and then click [Save].



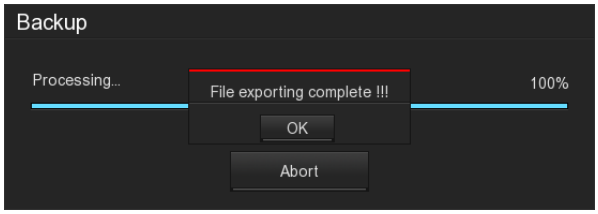
Exporting starts.
The following screen appears during exporting to allow you to confirm the progress.



Note

If there is insufficient free space on the media, a warning message appears and exporting stops.

6 When exporting is complete, click [OK].

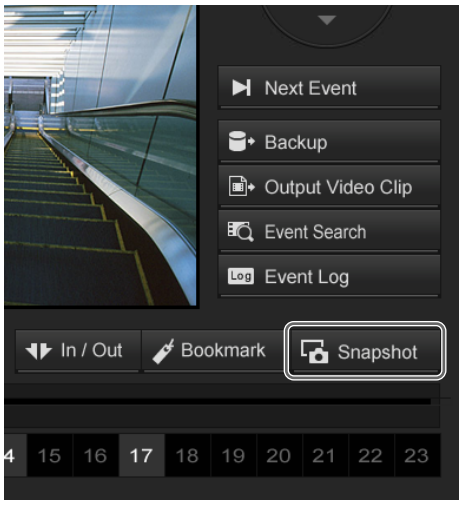


Exporting Recorded Images as Still Images

You can capture one scene of recorded or live images and export it as a still image file (JPEG file).

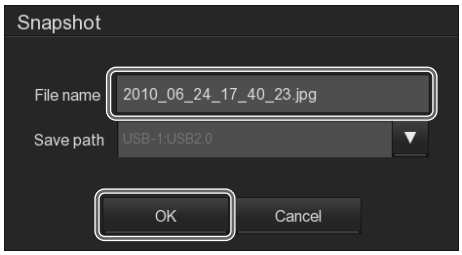
1 Click Snapshot (Save) at the scene you want to export.

To capture a recorded image, display the target recorded image in the monitor frame, pause the image at the scene that you want to export, and then click Snapshot (Save).



The “Snapshot” screen appears.

2 Select the media to which you want to export the image, and click [OK].



The still image is exported.

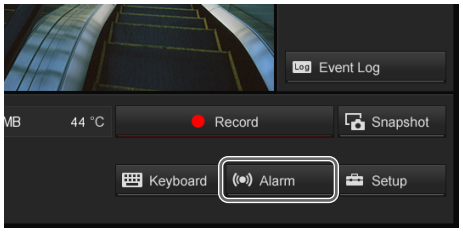
Notes

- If there is insufficient free space on the media, a warning message appears and exporting stops.
- Images are captured in the same size as the resolution of the camera. However, when the resolution is 1920 × 1080, images will be captured in 1920 × 1088 size.

Releasing Alarms

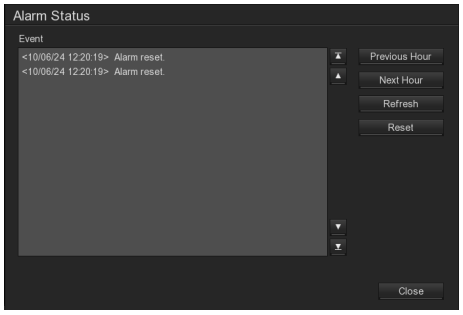
When an alarm is activated, a warning sound is emitted from the unit.
In such cases, perform the following to release the alarm condition and turn off the warning sound.

1 Click Alarm (Alarm Status) in the lower right corner of the “Monitoring (LIVE)” screen.



The “Alarm Status” screen appears.

2 Click [Reset].



The alarm condition is released, and the warning sound stops.

Caution

- After you perform the above to release an alarm, the alarm will activate again after one minute if the problem that triggered the alarm (e.g. an HDD malfunction) has not been resolved. To prevent the warning sound from being emitted repeatedly, deselect the [Play Warning Sound] check box in the *“Alarm Setting” Screen (page 57)*.
- If the e-mail notification function for alarm occurrences is enabled, e-mail will be sent once per minute until the problem that triggered the alarm is resolved. To stop the sending of e-mail, deselect the [Send E-Mail] check box in the *“Alarm Setting” Screen (page 57)*.

System Administration

This section describes how to change the password and how to check the event log.
For details on other aspects of system administration and settings, see Chapter 4 *“Detailed Descriptions of Settings and Windows” (page 33)*.

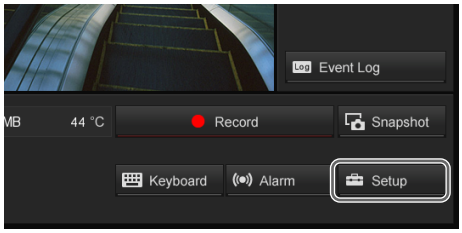
Changing the Password

You can change the password for logging on to NSR.

Note

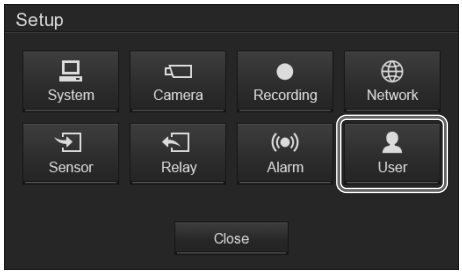
The password is extremely important to the security of this equipment. Be sure to keep the password secure.

1 Click Setup (System Setup) in the lower right corner of the “Monitoring (LIVE)” screen.



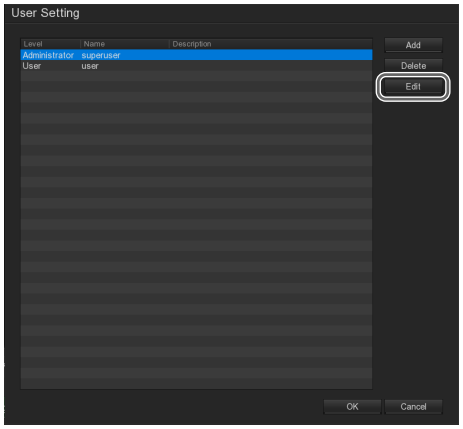
The “Setup” screen appears.

2 Click (User Setting).



The “User Setting” screen appears.

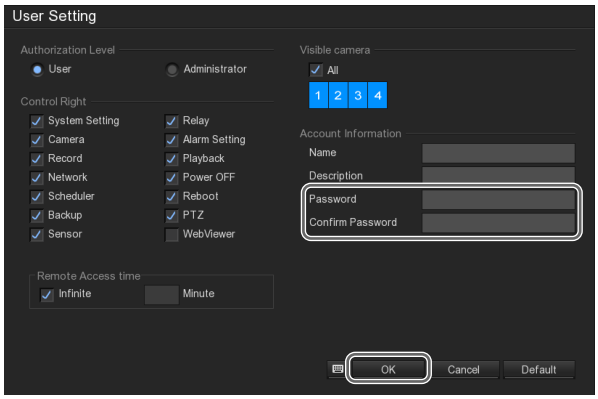
3 Select the user for which you want to set a password, and then click [Edit].



The “User Setting” screen appears.

4 Enter a new password, and click [OK].

Enter the same password again in [Confirm Password].

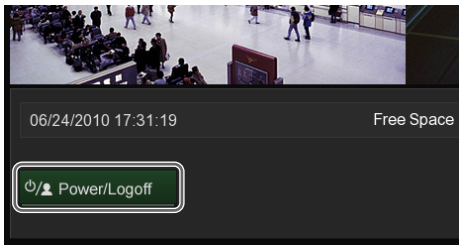


The password is changed.

5 To close the “User Setting” screen, click [OK].

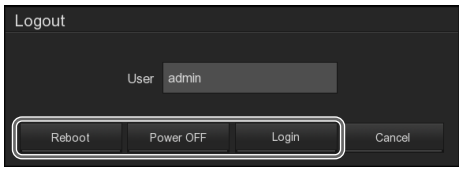
Shutting Down, Restarting and Logging Off

1 Click Power/Logoff (Exit) in the lower right corner of the “Monitoring (LIVE)” screen.



The “Logout” screen appears.

2 Click the button for the desired operation.



The selected operation is performed.

Chapter 3 Monitoring from a Web Browser (WebViewer)

Overview

You can access the NSR through a web browser on a computer that is connected to the network, and use the web browser to monitor the camera images as a client of the NSR.

System Requirements for WebViewer

For details on the system requirements for WebViewer, refer to the Release Note (PDF). Access the following URL to download the Release Note.
http://www.sony.co.jp/Products/NSR/NSR-S_ReleaseNote_E.pdf

Note

Some functionality is limited.

Notes on Accessing the NSR

Administrator privileges are required when using WebViewer to access the NSR and monitor camera images.

When using Windows XP

Log onto Windows as an administrator, and start Internet Explorer.

When using Windows Vista or Windows 7

As administrator privileges are required to start Internet Explorer, perform the following.

① Lower the UAC level for the user under “User Accounts” in the “Control Panel.”
For Windows Vista: Turn off User Account Control with [Turn User Account Control on or off].
For Windows 7: Select the lowest level with [Change User Account Control settings].

② Restart the computer, and then start Internet Explorer.

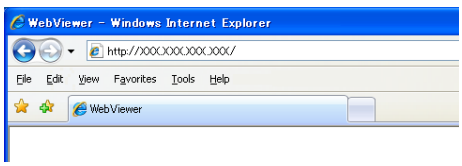
Notes

- If you access the NSR without administrator privileges, Internet Explorer may freeze. In such cases, force Internet Explorer to close and restart the computer.
- If you accessed the NSR without administrator privileges, delete the following folder located in the Program Files folder of the C drive, start Internet Explorer with administrator privileges, and then connect to the NSR.
  C:\Program Files\remoteAP

Accessing the NSR from a Web Browser

1 Launch the web browser on the computer.

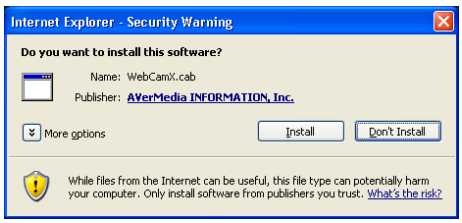
2 Type “http//<IP address of the NSR>” in the address bar of the web browser.



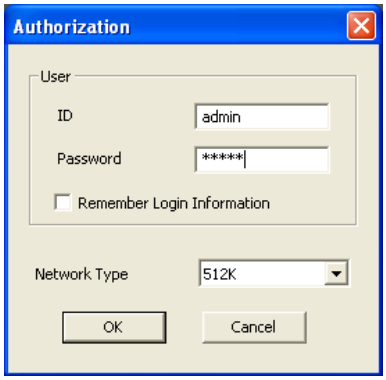
The “Authorization” screen appears.

Note

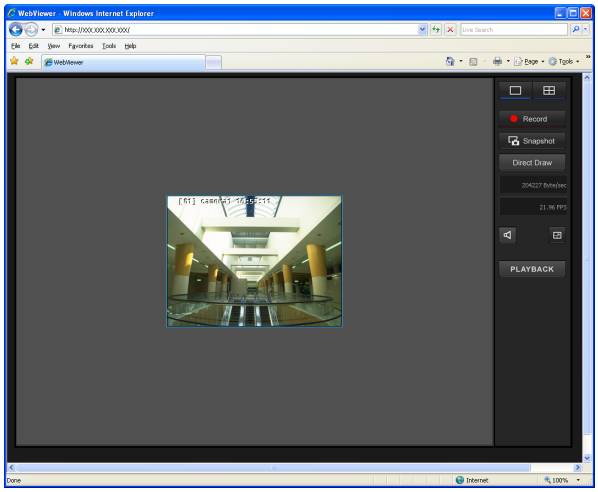
When the warning message appears, click [Install].



3 Enter the user ID and password, select the network type, and click [OK].

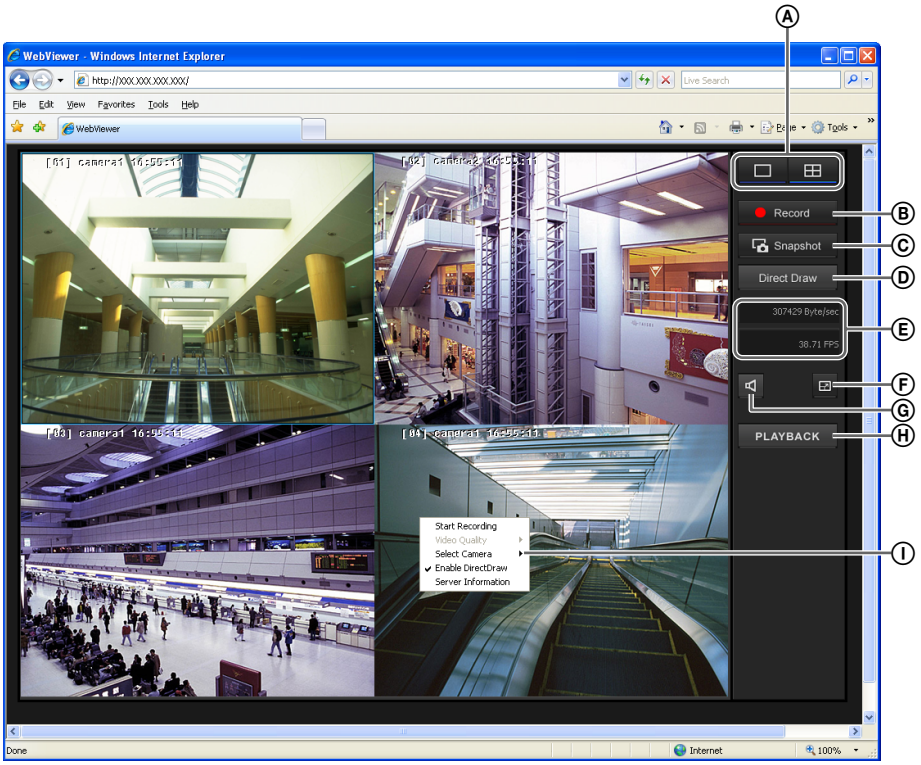


The WebViewer page is displayed in the 1 × 1 (1 screen) layout.



Functions and Operating Procedure of WebViewer Page

You can monitor images using the same type of operation as on the “Main” screen of the NSR. In addition, you can also use the menu that appears when you right-click on the monitor frame.



Ⓐ Layout switch

Switches the layout of the monitor frames.

: This button switches the screen layout to 1 × 1 (1 screen).

: This button switches the screen layout to 2 × 2 (4 screen).

Ⓑ Record (Record)

This records live images.

To start recording, select the monitor frame in which the image from the camera is being displayed, and then click this button. To stop recording, click this button again.

appears in the upper left corner of the monitor frame while recording is in progress.

The image is saved in an AVI-format file (.avi).

When motion detection is active, also appears in the upper left corner of the monitor frame.

Note

WebViewer does not record audio. To record audio, do so from the NSR-S10/S20 unit.

Ⓒ Snapshot (Snapshot)

This exports one scene of recorded images as a still image file.

Still images are exported in bitmap (.bmp) format.

Ⓓ Direct Draw

Displays a cleaner version of the image from the web camera.

Ⓔ Display Information

This displays the bandwidth (the amount of bandwidth used for transferring images over a network connection) and the frame rate.

Ⓕ (FullScreen)

This displays the current layout (monitor arrangement) over the whole screen.

To return to the normal display, click the that appears in the lower right corner of the screen.

You can also return to the normal display by pressing the Esc key on the keyboard.

Ⓖ (Remote Audio)

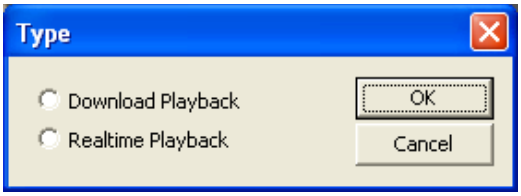
You can turn the audio output on and off.

When audio output is on, appears in the upper left corner of the monitor frame.

Ⓗ PLAYBACK

Allows you to play back images recorded on the NSR-S10/S20.

The following screen appears when you click this button. When you select a playback mode and click [OK], the *"NSR-S Viewer" screen (page 32)* appears, allowing you to control the image playback.



Realtime Playback

Receive video streams of images recorded on the NSR-S10/S20 unit.

You can select the camera and date and time from which to play back images. However, you cannot export images.

Download Playback

Download images from a specific camera and a specific time period from the NSR-S10/S20 unit to the computer for playback.

After you select the camera and a date and time, 16 thumbnails appear. Place a red frame around the image to play back by clicking it, and double-click to start playback.

You can perform playback controls, such as rewind, to configure a start point and end point, and export the image.

Note

Download of images from the NSR-S10/S20 unit to the computer may take several tens of seconds.

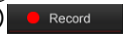
Ⓘ Right-click menu

This is the menu that appears when you right-click on the monitor frame.

The following commands are available in this menu:

Start Recording

Starts the recording of images.

Operation is the same as Ⓑ 

(Record Start).

Video Quality

This allows you to select the resolution of the image.

Select Camera

This allows you select the camera for displaying images in the monitor frame.

Enable DirectDraw

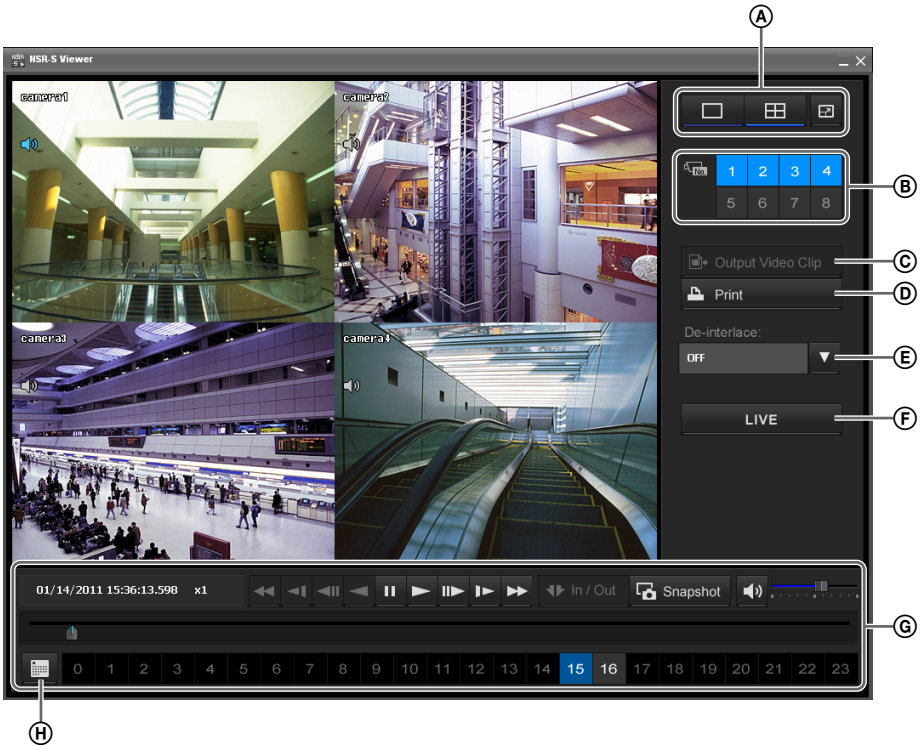
This allows you to enable/disable Direct Draw.,

Server Information

Displays information concerning the server that is connected (the NSR).

“NSR-S Viewer” screen

The “NSR-S Viewer” screen appears when you click [PLAYBACK] in the WebViewer page and select the playback mode.
The “NSR-S Viewer” screen allows you to control the playback of images recorded on the NSR-S10/S20 unit.



Ⓐ PLAYBACK

Switches the layout of the monitor frames.
: Switches the screen layout to 1 × 1 (1 screen).
: Switches the screen layout to 2 × 2 (4 screens).
: Displays the current monitor frame layout in full screen.
Press the Esc key on the keyboard to return to normal display.

Ⓑ Camera ID

Selects the cameras from which images are displayed in the monitor frames.

Ⓒ Output Video Clip (Export)

Allows you to export images in a file format (.dvr) for video clips to a USB flash memory device.

Ⓓ Print

Prints the screen currently displayed.

Ⓔ D-interlace

Switches the D-interlace mode.
1: Video without motion.
2: Video with motion.

Ⓕ LIVE

Returns to the WebViewer page.

Ⓖ Playback control buttons

Used when playing back recorded images.
For details on how to use each button, refer to *Functions and Operating Procedure of “Playback” Screen (page 22)*.

Ⓗ Date and time setting button

Used when searching for a recording from a specified date and time.
Clicking (Date Selection) causes the calendar to appear, which can then be used to specify the date and time.

Chapter 4 Detailed Descriptions of Settings and Windows

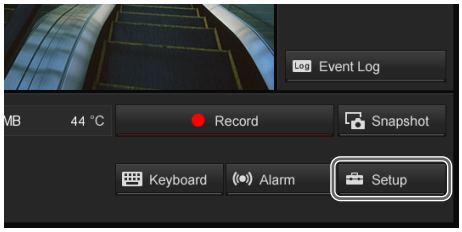
Available Settings

The following settings can be made with this unit.

Setup Menu	Description	Reference
System Setting	• Storage location setting • Recording data storage settings • Screen display language • Importing/exporting configuration data • Playback mode • Date format • AutoScan cycle • Logon settings • Date and time setting • Firmware update	*page 35*
Camera Setting	• Camera settings (IP address, camera name, password, etc.) • Image quality settings • Sensor input settings • Relay settings	*page 40*
Recording Setting	• Recording schedule • Motion detection	*page 45*
Network Setting	• Server name • IP Address • WebViewer setting • Time synchronization server settings • Remote access permission • Bandwidth	*page 49*
Sensors Setting	• I/O device sensor input	*page 52*
Relay Setting	• I/O device relay	*page 53*
Alarm Setting	• Alarm Out • Action setting	*page 55*
User Setting	• User registration • User authorization settings	*page 61*

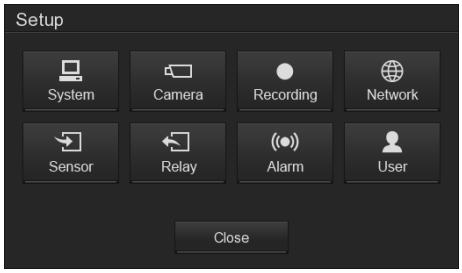
Displaying “Setting” screen

1 Click Setup (System Setup) in the lower right corner of the “Monitoring (LIVE)” screen.



The “Setup” screen appears.

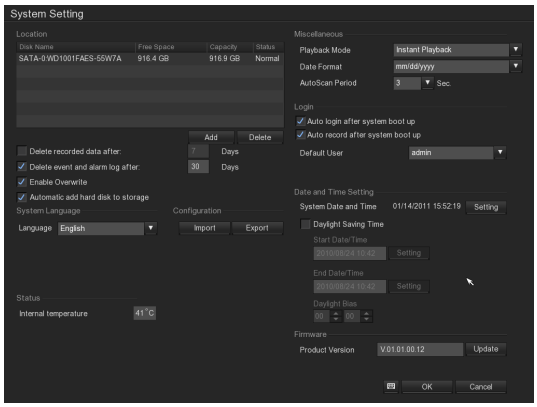
2 Click the button for the item you want to set.



The configuration screen that corresponds to the button appears.

Ex.) When (System Setting) was clicked

The “System Setting” screen appears.

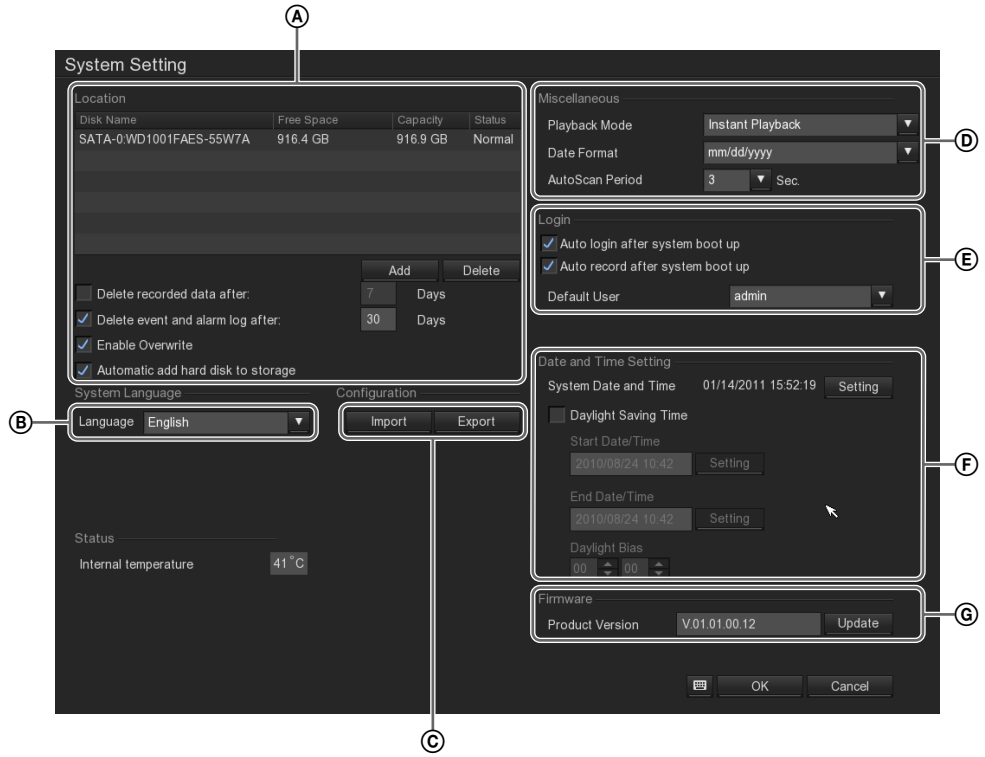


System Setting

Settings concerning the NSR system, such as the saving of storage settings and recording data, the login password, etc., are made on the “System Setting” screen.

Settings Related to the System

To display the “System Setting” screen, click (System Setting) in the “Setup” screen.
The following settings can be made on the “System Setting” screen.



Ⓐ This section allows you to add storage locations and the deletion of recorded data.
For details on each of the items, refer to *“Adding a Storage Location” (page 36)*.

Ⓑ This section allows you to select the screen display language.

Ⓒ This section allows you to save the NSR configuration data on external media, and to import previously saved configuration data.
For details on each of the items, refer to *“Importing/ Exporting Configuration Data” (page 36)*.

Note

The configuration data includes various settings of the NSR. You can easily restore settings to a prior state by importing previously saved configuration data. The configuration data should be saved periodically; for example, after changing the settings or upgrading the software.

Ⓓ This section allows you to set the playback mode, the date format, and the AutoScan period.
For details on each of the items, refer to *“Miscellaneous” (page 39)*.

Ⓔ This section allows you to set auto login, the default user, etc.
For details on each of the items, refer to *“Login” (page 40)*.

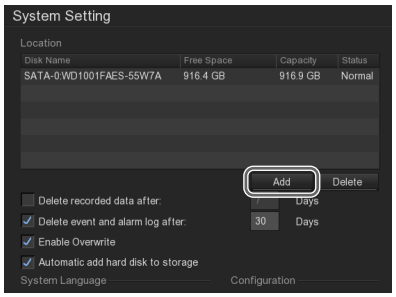
Ⓕ This section allows you to set the system clock and to set daylight savings time.
For details on each of the items, refer to *“Date and Time Setting” (page 40)*.

Ⓖ This section is used to update the unit’s firmware.
For details, refer to *“Firmware Update” (page 63)*.

Adding a Storage Location

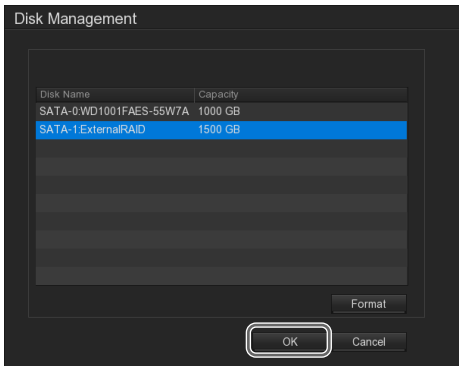
Add a storage location if you are using e-SATA storage as external storage. For details on using e-SATA storage, refer to the First Step Guide (PDF).

1 Click [Add] under the storage location list.

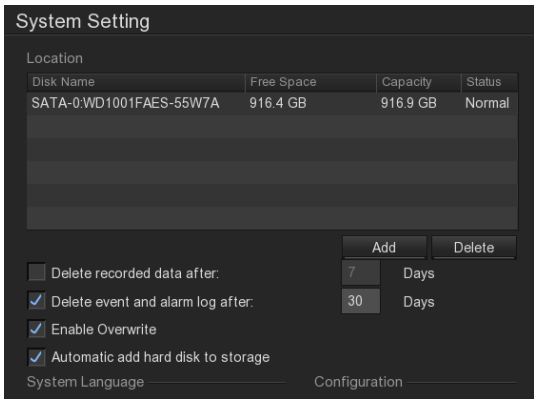


The “Disk Management” screen appears.

2 Select a disk drive to use as the storage location, and click [OK].



The storage location is added.



Notes

- For models without a built-in HDD, selecting the [Automatic add hard disk to storage] check box will allow external storage locations to be automatically added when they are connected to the unit. A sound will be emitted for 30 seconds to notify you when an external storage location has been added.
- Although you will be notified by sound when an external storage location has been added and recording starts, if you are using the unit without a monitor connected, it is recommended that you also confirm whether data is being written to the disk by checking whether the HDD LED on the front of the unit is flashing.

Importing/Exporting Configuration Data

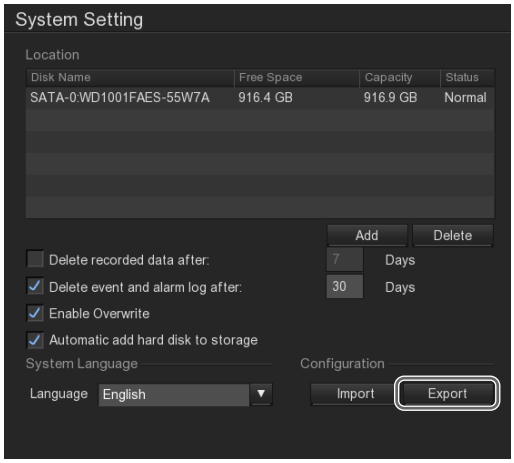
You can save NSR configuration data onto external media, and import previously saved configuration data.

Notes

- The configuration data includes the various settings that can be configured in the settings screen of the NSR unit. You can easily restore settings to a prior state by importing previously saved configuration data. The configuration data should be saved periodically; for example, after changing the settings or upgrading the software.
- USB storage devices other than USB flash memory are not supported.

Exporting the configuration data

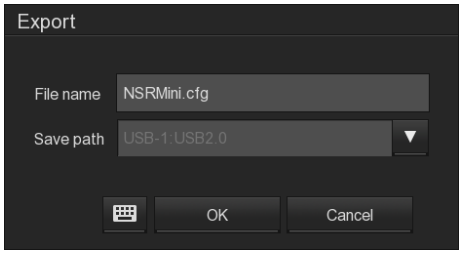
1 Click [Export] under [Configuration].



The “Export” screen appears.

2 Enter a file name for the configuration data, select the media on which to store the data, and then click [OK].

You can use alphanumeric characters and some symbols (periods (.), hyphens (-), underscores (_)) when entering the file name.

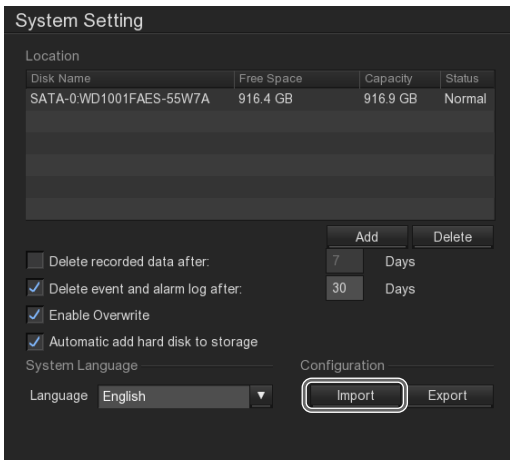


A message appears when export is complete.

3 Click [OK].

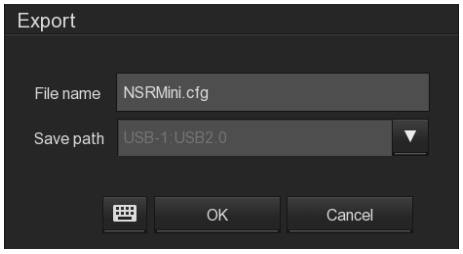
Importing the configuration data

1 Click [Import] under [Configuration].



The “Import” screen appears.

2 Enter the file name of the configuration data, select the media on which the data is stored, and then click [OK].



A message indicating that this operation will restart the NSR appears.

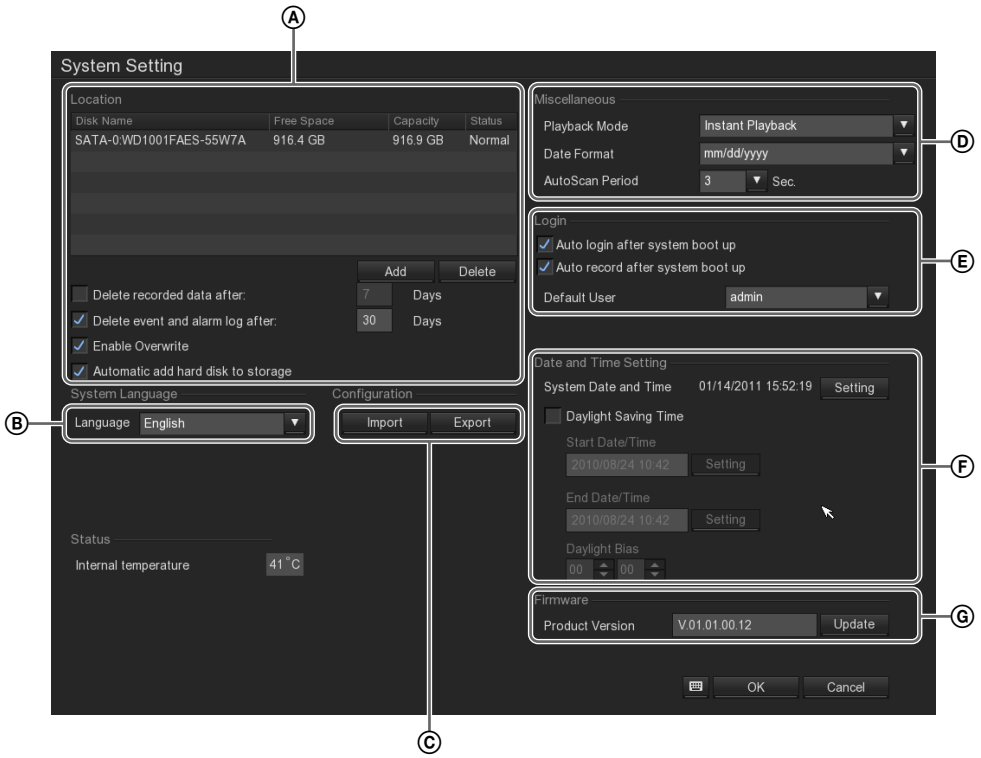
3 Click [OK].

A confirmation message appears.

4 Click [OK].

The NSR will restart after import is complete, and the imported configuration data will be restored.

“System Setting” Screen Details



Ⓐ Location

This section is used to make settings concerning the storage of recording data and the storage location.

Storage location list

Information on the storage locations that have been set appears in the list.

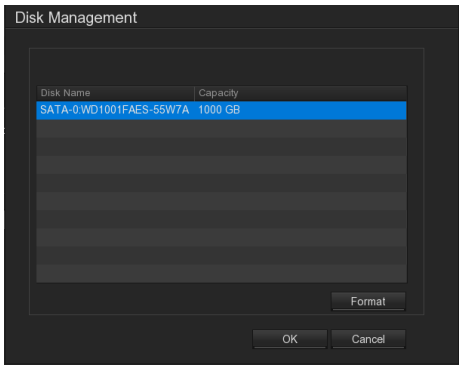
Caution

You cannot record images from a camera if the storage location list is empty. Refer to *“Adding a Storage Location” (page 36)* to add storage locations.

Add

Use this button to add a storage location.
When this button is clicked, the “Disk Management” screen appears.

Select the disk drive that you want to add, and then click [OK] to add that storage location to the list.



Delete

This button deletes the storage location that is selected in the storage location list.

Delete recorded data after XX Days

Select this check box when you want to ensure that storage space will be kept available by setting the number of days to store recording data, so that data that exceeds that number of days is automatically deleted.
If you select this check box, enter the number of days to store recording data.

Delete event and alarm log after XX Days
Select this check box when you want to set the number of days to store the event log data and alarm history data, so that the log data is automatically deleted after that number of days has passed.
If you select this check box, enter the number of days to store event log data and alarm log data.

Overwrite Enable
Select this check box when you want to ensure that storage space will be kept available by having the oldest data deleted automatically, regardless of how many days have passed.

Caution

When the data overwrite function is enabled and a file currently being played back falls under the conditions for deletion, playback of that file stops and the file is deleted.

Automatic add hard disk to storage
For models without a built-in HDD, this automatically adds external storage locations when you connect them to the NSR unit.

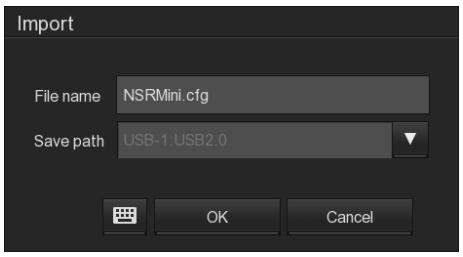
Note

A sound will be emitted for 30 seconds to notify you when an external storage location has been added.

Ⓑ System Language
This section allows you to select the screen display language.

Ⓒ Configuration
This section allows you to save the NSR configuration data on external media, and to import previously saved configuration data.

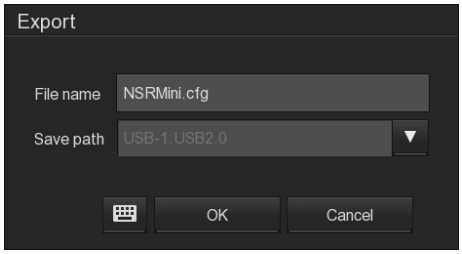
Import
This button imports saved configuration data.
When this button is clicked, the “Import” screen appears.
Select the location where the configuration data is stored, enter the file name, and then click [OK].



Caution

If configuration data is imported, any recording operation that is currently in progress is automatically halted. If a recording schedule had been set, recording resumes automatically after importing is completed. If manual recording had been in progress, it is necessary to restart recording manually.

Export
You can save NSR configuration data onto external media.
When this button is clicked, the “Export” screen appears.
Select the media on which to store the configuration data, enter the file name for the configuration data, and then click [OK].
You can use alphanumeric characters and some symbols (periods (.), hyphens (-), underscores (_)) when entering the file name.



Ⓓ Miscellaneous
This section allows you to set the playback mode, the date format, and the AutoScan period.

Playback Mode
You can select the operation that happens when you switch to the “Playback” screen from the “Monitoring (LIVE)” screen.

Play the last file
Automatically plays recorded image data from the date and time of the previous playback session.

Select date and time
Displays the “Video Playback Date/Time Selection” screen so that you can specify the date and time of the recording you want to play.

Instant Playback
Automatically plays the image data that was just recorded.

Date Format
Select the format for the date and time.

AutoScan Period
You can set (in units of seconds) the time that each monitor frame is displayed when using the AutoScan function.

Ⓔ Login

This section allows you set the operation of the unit at logon.

Auto Login after system boot up

Select this check box to logon automatically when the NSR is started up.

Auto Record after system boot up

Select this check box to start recording automatically when the NSR is started up.

Default User

You can select the default user for automatic logon.

Ⓕ Date and Time Setting

This sets the NSR's clock.

System Date and Time

This displays the current date and time.
Clicking [Setting] causes the calendar to appear, which can then be used to change the date and time.

Daylight Saving Time

Select this check box to enable daylight saving time. If this check box is selected, set the following items.

Start Date/Time

This sets the date and time at which daylight saving time starts.
Click [Setting], and use the calendar that appears to set the date and time.

End Date/Time

This sets the date and time at which daylight saving time ends.
Click [Setting], and use the calendar that appears to set the date and time.

Daylight Bias

Set the amount of time that is added to standard time.

Ⓖ Firmware

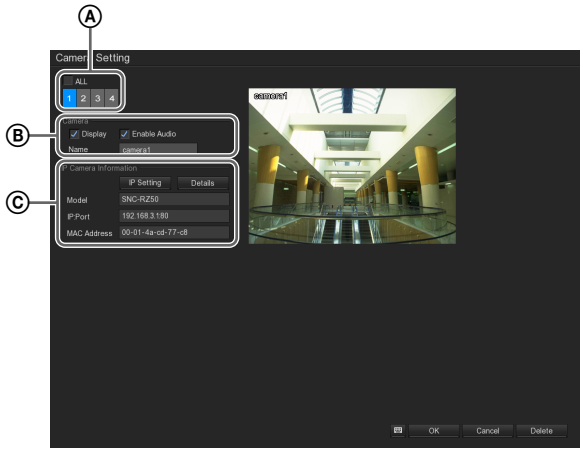
This section is used to update the unit's firmware.
For details, refer to *"Firmware Update" (page 63)*.

Camera Setting

Settings concerning cameras, such as camera IP addresses and names, image quality, sensor input, and relays, are made on the "Camera Setting" screen.

Settings Related to the Cameras

To display the "Camera Setting" screen, click Camera (Camera Setting) in the "Setup" screen.
The following settings can be made on the "Camera Setting" screen.



Ⓐ Select the camera for which the settings are being made.
Selecting a camera ID causes the image from that camera to appear in the preview area on the right side of the screen.
Select the [All] check box to set for all cameras at one time. If the [All] check box is selected, images from the cameras cannot be previewed.

Ⓑ You can set image display, enable/disable audio, set the camera name, etc.

Caution

If you deselect the [Display] check box for a camera, you will not be able to monitor images from that camera. If no image is displayed from a given camera, check to make sure that the [Display] check box for that camera is selected.

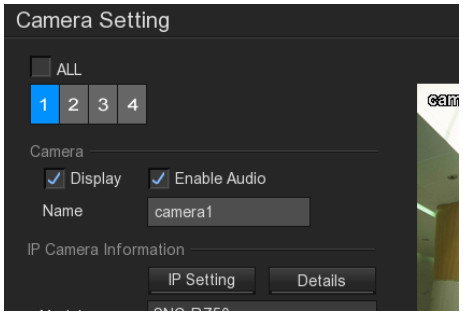
Ⓒ This section allows you to set the camera IP address, image quality, sensor input, relays, etc., and to confirm information concerning the camera.
For details on setting the IP address for an IP camera, refer to *"Camera Settings" (page 41)*. For details on

image quality, sensor input, and relays, refer to *“Advanced Camera Settings” (page 41)*.

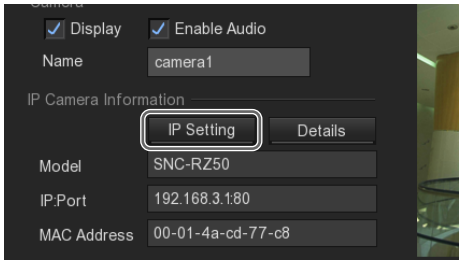
Camera Settings

You can set the IP address of a camera, and the ID and password that are used to access the camera. You can also detect Sony network cameras connected to the same network, and change the IP addresses, etc.

1 Select the camera number.



2 In [IP Camera Information], click [IP Setting].

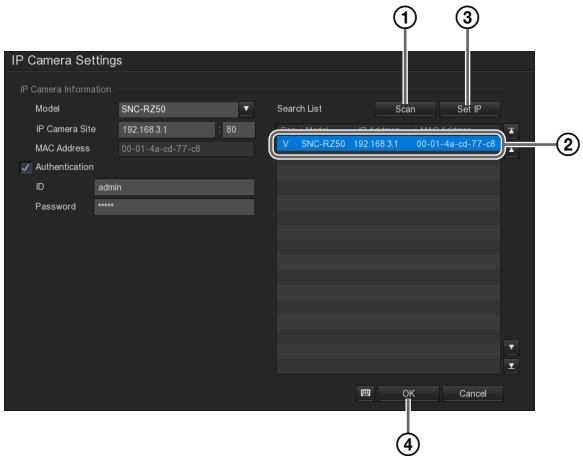


The “IP Camera Settings” screen appears.

3 Set each item.

For details on each of the items, refer to *“Camera Settings” screen (page 43)*.

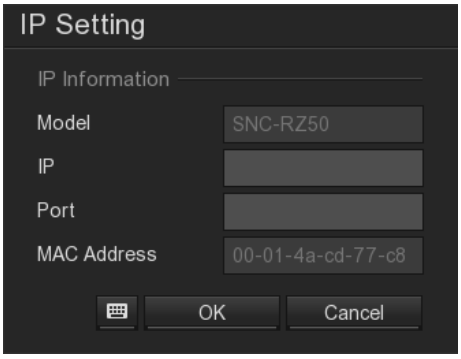
If you want to detect Sony network cameras connected to the same network, and change the IP addresses, etc., follow the procedure described below.



① Click [Scan].
Sony network cameras connected to the same network are automatically located and displayed in the list.

② Select the camera for which you want to change the settings, and click [Set IP].
The “IP Setting” screen appears.

③ Enter the IP address and port number, and click [OK].

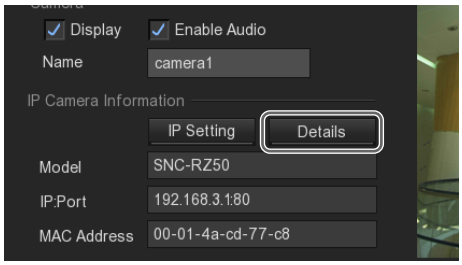


The IP address is changed.

Advanced Camera Settings

You can set image quality, sensor input, and relays.

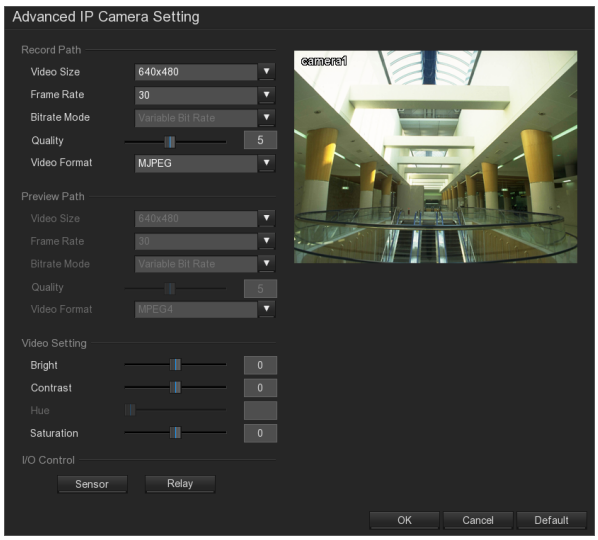
1 In [IP Camera Information], click [Details].



The “Advanced IP Camera Setting” screen appears.

2 Configure each setting to set the image quality.

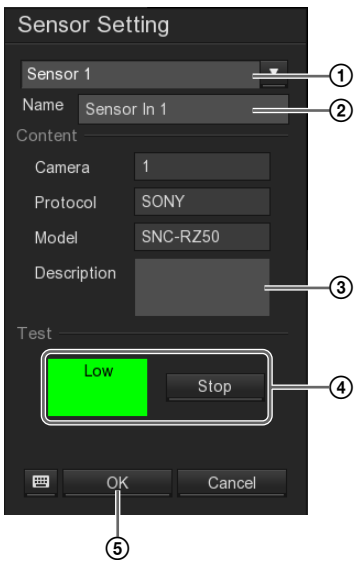
For details on each of the items, refer to *“Advanced IP Camera Setting” screen (page 44)*.



3 To set sensor input, click [Sensor].

The “Sensor Setting” screen appears.

4 Make the sensor input settings.



① Select the sensor ID.

② Enter the sensor name.
Use only alphanumeric characters and symbols (excluding \ / : * ? " < > |).

③ Enter the sensor description.

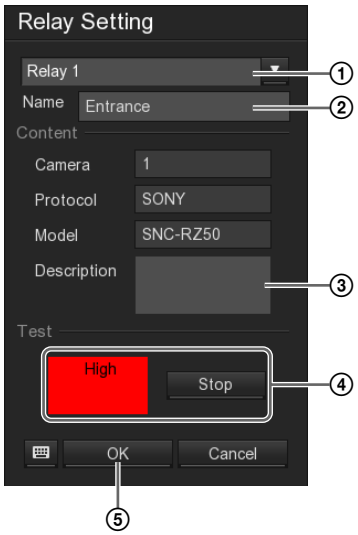
④ Click [Test] and confirm the sensor status.
Red indicates “high,” and green indicates “low.”

⑤ Click [OK].
The settings are saved.

5 To set a relay, click [Relay].

The “Relay Setting” screen appears.

6 Make the relay settings.



① Select the relay ID.

② Enter the relay name.
Use only alphanumeric characters and symbols (excluding \ / : * ? " < > |).

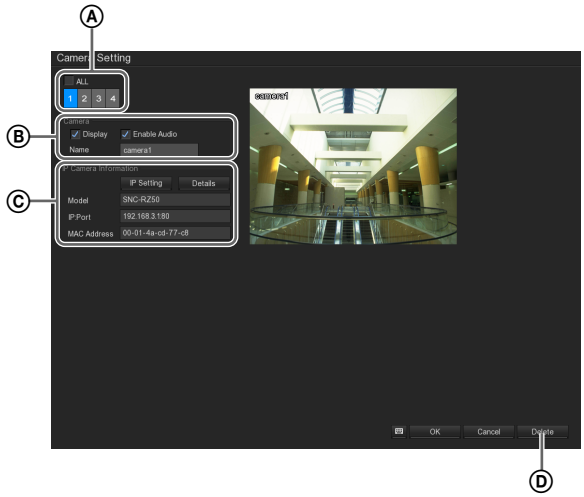
③ Enter the relay description.

④ Click [Test] and confirm the relay status.
Red indicates “high,” and green indicates “low.”

⑤ Click [OK].
The settings are saved.

“Camera Setting” Screen Details

“Camera Settings” Screen



Ⓐ Camera ID

Select the camera for which the settings are being made. Selecting a camera ID causes the image from that camera to appear in the preview area on the right side of the screen.

All

Sets for all cameras.
If the [All] check box is selected, images from the cameras cannot be previewed.

Ⓑ Camera

You can set image display, enable/disable audio input, set the camera name, etc.

Display

Select the check box to display the image from the camera.

Caution

If you deselect the [Display] check box for a camera, you will not be able to monitor images from that camera. If no image is displayed from a given camera, check to make sure that the [Display] check box for that camera is selected.

Enable Audio

Select the check box to acquire audio from the camera.

Name

Enter the camera name.
Use only alphanumeric characters and symbols (excluding \ / : * ? " < > |).

Description

Enter the camera description.

Ⓒ IP Camera Information

This section allows you to set the camera IP address, image quality, sensor input, relays, etc., and to confirm information concerning the camera.

IP Setting

This displays *“IP Camera Settings” screen (page 43)*.
On the “IP Camera Settings” screen, you can change the IP address of cameras, locate Sony network cameras that are connected to the same network, etc.

Details

This displays *“Advanced IP Camera Setting” screen (page 44)*.
On the “Advanced IP Camera Setting” screen, you can set the image quality and make sensor input settings, relay settings, etc.

Model

The camera model is displayed.

IP: Port

The IP address and port number of the camera are displayed.

MAC Address

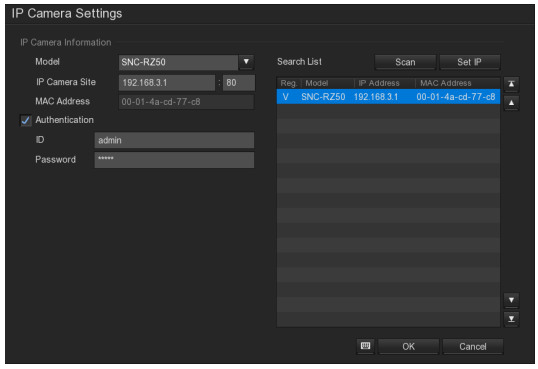
The MAC address of the camera is displayed.

Ⓓ Default

This restores the default settings.

“IP Camera Settings” Screen

This screen is displayed by clicking [IP Setting] in the “Camera Setting” screen.



Protocol

Select when connecting to the camera via a protocol.
If this is selected, select the protocol to be used from the drop-down list.

Model

Select the camera model.

IP Camera Site

Enter the IP address and port number for the camera.

MAC Address

The MAC address of the camera is displayed.

Authentication
Select this check box to enable user authentication.
If this check box is selected, set the following items.

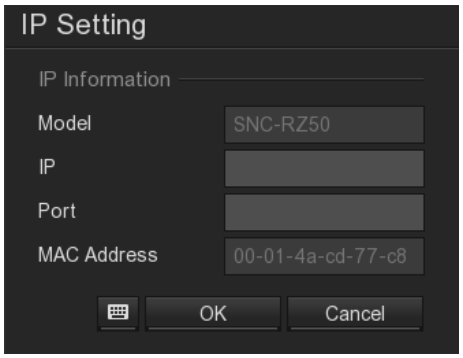
ID
Enter the user ID for authentication.

Password
Enter the password for authentication.

Search List
Displays a list of information on the cameras that were located.

Scan
Sony network cameras connected to the same segment are located and displayed in the list. (up to 32 channels)

Set IP
This is used to change the IP address of a camera that was located.
When a camera in the list is selected and this button is clicked, the “IP Setting” screen appears. Set each item, and then click [OK] to save the changes.



“Advanced IP Camera Setting” Screen

This screen is displayed by clicking [Details] in the “Camera Setting” screen.

Ⓐ Recording Settings
This section can be used to configure settings related to recorded images.

Video Size
Select the resolution of the camera.

Frame Rate
Select the frame rate of the camera.

Bitrate Mode
Select the bitrate mode of the camera.

Quality
Select the image quality for images of the camera.

Video Format
Select the video format for the camera.

Ⓑ Display Settings
This section can be used to configure settings related to preview images.

Video Size
Select the resolution of the camera.

Frame Rate
Select the frame rate of the camera.

Bitrate Mode
Select the bitrate mode of the camera.

Quality
Select the image quality for images of the camera.

Video Format
Select the video format for the camera.

Ⓒ Video Settings
In this section, you can make settings related to the images captured from a camera.

Bright
Adjust the brightness of images captured from the camera, either by moving the slider or by inputting a numeric value.

Contrast
Adjust the contrast of images captured from the camera, either by moving the slider or by inputting a numeric value.

Hue
Adjust the hue of images captured from the camera, either by moving the slider or by inputting a numeric value.

Saturation
Adjust the saturation of images captured from the camera, either by moving the slider or by inputting a numeric value.

Ⓓ I/O Control

This section can be used to set sensor input and relays. For details how to make these settings, refer to *"Advanced Camera Settings" (page 41)*.

Sensor

This displays the "Sensor Setting" screen, which is used to set sensor input.

Relay

This displays the "Relay Setting" screen, which is used to set relays.

Ⓔ Default

This restores the default settings.

Recording Setting

You can set recording to be performed at regular intervals by configuring a recording schedule, or set recording to start when an alarm occurs.

Recording schedules

The following recording modes are available for scheduled recording on the NSR-S10/S20.

- **Continuous Recording**
  This records images from cameras at regular intervals according to the set schedule.
- **Motion Recording**
  This begins recording only when a moving object is detected within the time set for the schedule.
- **No Recording**
  This performs no schedule recording.

You can enable the recording modes individually, or use any combination of the three modes. You can also configure time periods during which actions such as alarms and system reboots are disabled.

Example 1) Configure [Continuous Recording] during the day on weekdays, [Motion Recording] during nights, and [No Recording] during weekends.
For details on this configuration, refer to *"Recording Mode Combinations for Schedule Recording" (page 46)*.

Example 2) Configure recording to be disabled only during specific days and time periods.
For details on this configuration, refer to *"Setting a Schedule" (page 47)*.

Example 3) Configure periods during which actions such as alarms and system reboots are disabled.
For details on this configuration, refer to *"Setting a Schedule" (page 47)*.

Alarm recording

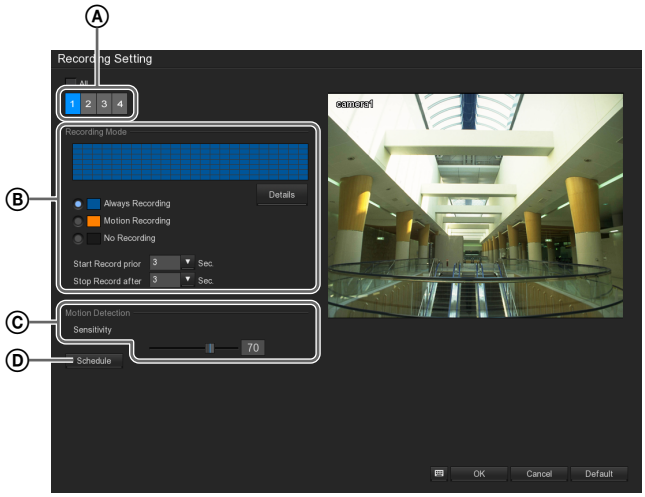
In addition to motion detection recording using individual cameras, the NSR-S10/S20 allows recording in response to a combination of conditions such as motion detection and sensor inputs from multiple cameras.
In such cases, configure the following settings.

- Set [Recording Mode] to [No Recording] in the *"Recording Setting" screen (page 48)*.
- Select [Start Recording] for [Action] in the *"Alarm Setting" Screen (page 57)*.

You can make settings concerning recording in the "Recording Setting" screen.

Making Settings Related to Recording

To display the “Recording Setting” screen, click Recording (Record Setting) in the “Setup” screen.
The following settings can be made on the “Recording Setting” screen.



Ⓐ Select the camera for which the settings are being made.
Select the [All] check box to make the same settings for all cameras at one time.

Ⓑ This section specifies the days of the week and time periods for recording schedules.
For details, refer to *“Recording Mode Combinations for Schedule Recording” (page 46)*.

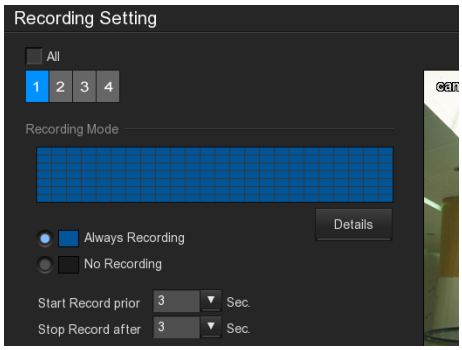
Ⓒ This sets the sensitivity at which moving objects are detected.

Ⓓ This is used when setting a recording schedule.
For details, refer to *“Setting a Schedule” (page 47)*.

Recording Mode Combinations for Schedule Recording

You can use a combination of recording modes, and specify the days of the week and time periods to perform schedule recording. For example, you can configure [Continuous Recording] during the day on weekdays, [Motion Recording] during nights, and [No Recording] during weekends.

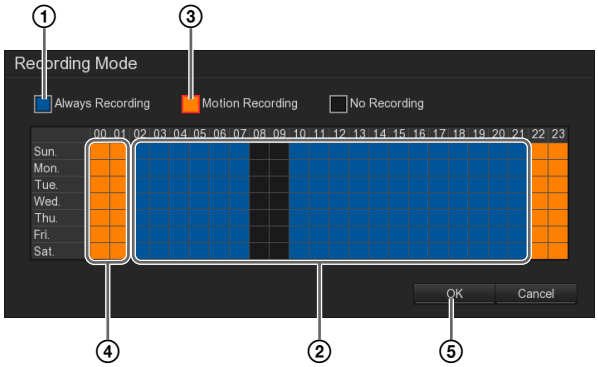
1 Click [Details] under [Recording Mode].



The “Recording Mode” screen appears.

2 Create a recording time table.

Example) When combining continuous recording, motion recording, and no recording



① Select [Continuous Recording].
A red border appears when selected.

② Click within the squares (which will turn blue) corresponding to the days of the week and the time periods that you wish to set to continuous recording.

③ Select [Motion Recording].
Make this setting when using the recorder’s motion detection function rather than the camera’s motion detection function.
When using the camera’s motion detection function, make the setting on the camera instead.

See the release notes for cameras that can be used with the recorder’s motion detection function.
Access the following URL to download the release notes.
http://www.sony.co.jp/Products/NSR/NSR-S_ReleaseNote_E.pdf

④ In the same way, click within the squares (which will turn orange) corresponding to the days of the week and the time periods that you wish to set for motion recording.

Note

The days of the week and time periods for which recording is disabled will remain in black.

⑤ Click [OK].

3 Click [OK].

The settings are saved.

Setting a Schedule

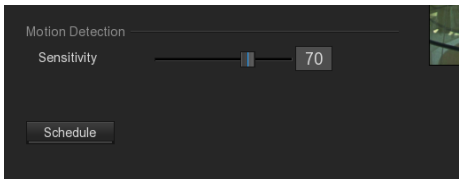
Schedules can be configured for the following operations on the NSR.

- Recording
- Disabling alarms
- Rebooting

Caution

Schedules cannot be configured individually for each camera.

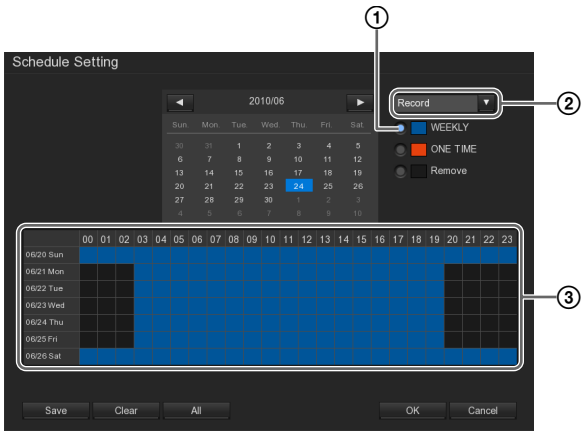
1 Click [Schedule].



The “Schedule Setting” screen appears.

2 Set the schedule.

When setting a schedule that repeats weekly



① Select the operation you want to set.

② Select [WEEKLY].

③ Click within the squares (which will turn blue) corresponding to the days of the week and the time periods that you wish to schedule.

④ Click [Save].
The settings are saved.

⑤ Repeat steps ② to ④ if you want to set another operation.

When specifying a date and time for the schedule

① Select [ONE TIME].

② Select the operation you want to set.

③ On the calendar, select the date to be scheduled.

④ Click within the squares corresponding to the days of the week and the time periods that you wish to schedule.

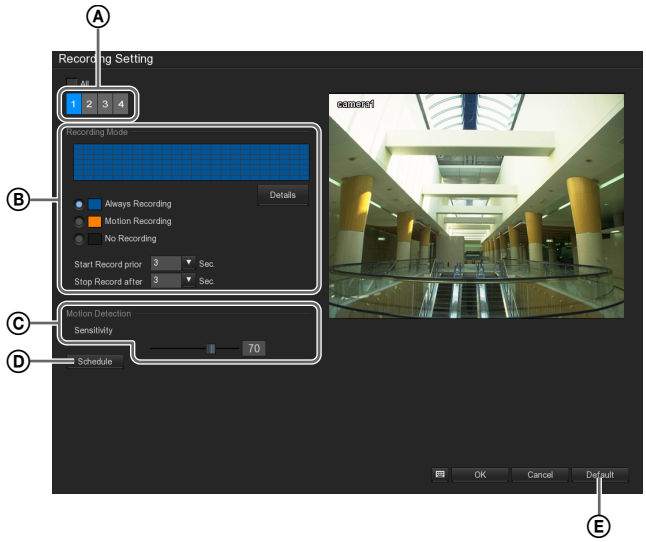
⑤ Click [Save].
The settings are saved.

⑥ Repeat steps ② to ⑤ if you want to set another operation.

3 Click [OK].

Details of “Recording Setting” Screen

“Recording Setting” screen



Ⓐ Camera ID

Select the camera for which the settings are being made. Selecting a camera causes the image from that camera to appear in the preview area on the right side of the screen.

All

Select the [All] check box to make the same settings for all cameras at one time.
If the [All] check box is selected, images from the cameras cannot be previewed.

Ⓑ Recording Mode

Specify the days of the week and time periods for schedule recordings and other operations to be performed.

Continuous Recording

This records images from cameras at regular intervals according to the set schedule.

Motion Recording

This begins recording only when a moving object is detected within the time set for the schedule.
If this is selected, use the [Pre Event Start] and [From Event End] fields to set the durations of the recording (before and after the detected motion) to be stored.

No Recording

This performs no schedule recording.

Details

This displays the “Recording Mode” screen.
You can specify the days of the week and time periods for schedule recordings and other operations to be performed in the “Recording Mode” screen. For the setting procedure, refer to *“Recording Mode Combinations for Schedule Recording” (page 46).*

Pre Event Start

Input how many seconds of the image before the moving object was detected are to be stored.

Notes

- This setting is applied to all cameras.
- Images that precede the motion detection will be recorded at a maximum of 1 fps (one frame per second). In addition, the duration of the recording that precedes motion detection may differ depending on the resolution and bitrate settings of the camera. See the release notes for details.
  Access the following URL to download the release notes.
  http://www.sony.co.jp/Products/NSR/NSR-S_ReleaseNote_E.pdf

From Event End

Input how many seconds of the image after the moving object was detected are to be stored.

Note

This setting is applied to all cameras.

Ⓒ Motion Detection

Make this setting when using the recorder’s motion detection function rather than the camera’s motion detection function.
When using the camera’s motion detection function, make the setting on the camera instead.

See the release notes for cameras that can be used with the recorder’s motion detection function. Access the following URL to download the release notes.
http://www.sony.co.jp/Products/NSR/NSR-S_ReleaseNote_E.pdf

Set the sensitivity at which moving objects are detected, either by moving the slider or by inputting a numeric value.
Higher values mean that motion is detected with greater sensitivity.
When a camera detects a moving object, a green square appears in the upper left corner of the monitor frame.

Ⓓ Schedule

Displays the “Schedule Setting” screen.
The “Schedule Setting” screen is used to set recording schedules. For the setting procedure, refer to *“Setting a Schedule” (page 47).*

Ⓔ Default

This restores the default settings.

Network Setting

You can make network settings such as the server name and IP address of the NSR, access restrictions, etc. Make settings concerning the network in the “Network Setting” screen.

Settings Related to the Network

To display the “Network Setting” screen, click (Network Setting) in the “Setup” screen. The following settings can be made on the “Network Setting” screen.

Ⓐ This sets the NSR’s server name.

Ⓑ You can use this section to set the NSR’s IP address, the port number for the remote console, etc.

Ⓒ This sets the port number that is used for firmware updates over the network.

Ⓓ This section is used to make settings concerning WebViewer access.

Ⓔ This section sets the time synchronization server.

Ⓕ This section is used to restrict access to the NSR and to restrict line requests.

“Network Setting” Screen Details

“Network Setting” screen

Ⓐ Server Name

Enter the NSR’s server name.
Only alphanumeric characters may be used.

Ⓑ Main Configuration

You can use this section to set the NSR’s IP address, the port number for the remote console, etc.

LAN1 IP

The IP address for the LAN 1 connector is displayed.

LAN2 IP

The IP address for the LAN 2 connector is displayed.

Setting

This displays *“System IP setting” Screen (page 51)*.
The “System IP setting” screen is used to specify the IP address setting method.

Remote Console Port

Enter the port number to be used for remote access of the NSR over the Internet.

Ⓒ Remote Update Configuration (intended for future expansions)

Ⓓ WebViewer Configuration

Make these settings when using the WebViewer function to access the NSR through a Web browser from a client computer.

Enable Anonymous Login

Select this check box to enable anonymous logins.
If this check box is selected, no password is required in order to access the NSR through a Web browser from a client computer.

WebViewer Port

Enter the port number to be used by the WebViewer.

Ⓔ Network Time Synchronization

This section sets the time synchronization server.

Time Server

Enter the IP address of the NTP server from which to obtain the time.

Time Zone

Select the region for setting the date and time.

Automatic synchronize at:

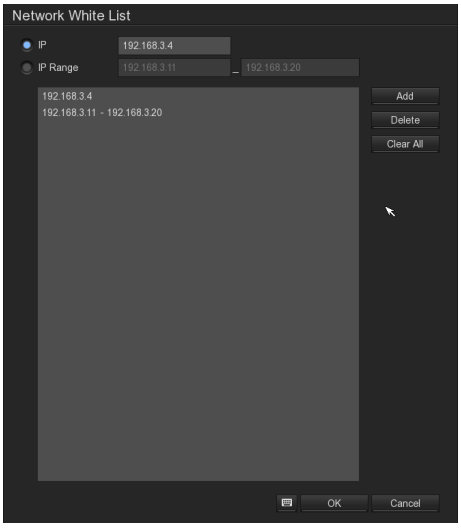
Select this check box to acquire the time on a daily basis at a specified time of day.
If you select this check box, select the time of day at which the time is to be acquired.

Synchronize Now
When this button is clicked, the current time is acquired.

Ⓕ Other Configuration
This section is used to restrict access to the NSR and to restrict bandwidth.

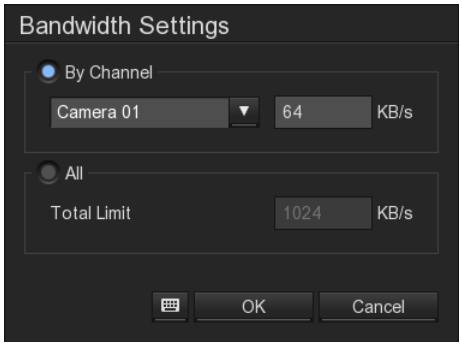
Enable White List
When you want to restrict access to the NSR, you can create a list of IP addresses that have permission for remote access or WebViewer access (a network white list).
Select the check box to enable the network white list.

Detail
The “Network White List” screen appears.
You can use the “Network White List” screen to create a list of IP addresses that have permission for remote access.
If you select [IP] or [IP Range] and input IP addresses that you want to grant access and then click the [Add] button, those IP addresses are added to the list.



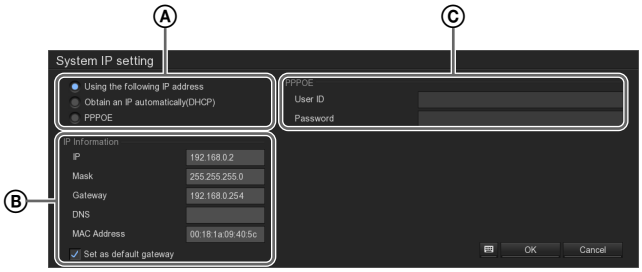
Network Bandwidth Limit
Select the check box to configure limits to the network bandwidth.

Detail
The “Bandwidth Settings” screen appears.
The “Bandwidth Settings” screen can be used to set an upper limit on the bandwidth that is used to transfer images over the network connection.
If you want to set a separate limit for each individual channel, select [By Channel] and then enter a limit for each channel.
If you want to set a total limit for all channels, select [All] and then enter the total limit.



Ⓖ Default
This restores the default settings.

“System IP setting” Screen
This screen is displayed by clicking [Setting] in the [Main Configuration] section on the “Network Setting” screen.



Ⓐ Use the following IP address
Select this when setting the IP address manually.
If this is selected, set each of the items under [IP Information].

Obtain an IP automatically (DHCP)
Select this when using DHCP to obtain the address setting automatically.

PPPOE
Select this when connecting to the Internet over a PPPoE line, such as ADSL.
If this is selected, set each of the items under [PPPOE].

Ⓑ IP Information
Set each item in this section when setting the IP address manually.

IP
Enter the IP address.

Mask
Enter the subnet mask.

Gateway
Enter the IP address for the default gateway.
Do not enter this is if there is only a local network or there is no need to connect to another network.

DNS
Enter the IP address for the DNS (Domain Name Server).
Do not enter this if there is no DNS, or if it is not required.

MAC Address
This displays the MAC address of the device.

Set as default gateway
Select this check box to set the NSR as the default gateway.

Ⓒ PPPOE
Set each item here when connecting to the Internet over a PPPoE line, such as ADSL.
Make these settings based on the information from the Internet service provider agreement. For details, contact your Internet service provider.

User ID
Enter the user name provided by the Internet service provider.

Password
Enter the password provided by the Internet service provider.

Sensor Setting

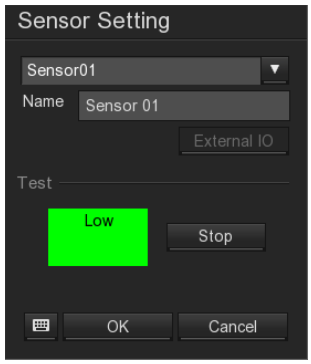
You can configure settings related to this unit's sensor inputs.
Sensor inputs can be specified and used for actions and schedule recording events.

Examples of sensor inputs:
Temperature, humidity, smoke, vibration, security, infrared, ultrasonic waves, etc.

Make settings concerning sensor inputs in the "Sensor Setting" screen.

Settings Related to Sensor Input

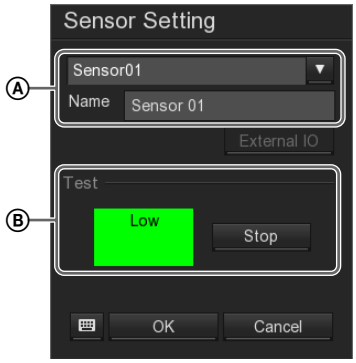
To display the "Sensor Setting" screen, click (Sensor Setting) in the "Setup" screen.
After setting each of the items, click [Test] and confirm the sensor status.



Note

To use sensor inputs, the sensor input pin settings on the device must also be enabled.

"Sensor Setting" Screen Details



Ⓐ Sensors

Select the sensor that you want to set from the drop-down list.
The drop-down list shows the I/O devices connected to the NSR system that were detected automatically.

Name

Enter the name of the sensor input.
Use only alphanumeric characters and symbols (excluding \ / : * ? " < > |).

Ⓑ Test

Click [Test] to confirm the sensor input status.
Red indicates “high,” and green indicates “low.”
Click [Stop] to stop testing.

Relay Setting

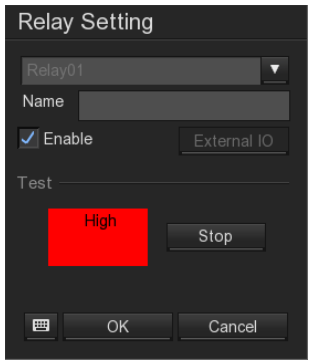
You can configure settings related to this unit’s relay outputs.
Relays (alarm outputs) are used to transmit alarms to devices equipped with alarm input functions, such as warning lamps and door opening devices.

Examples of applications for relays)
Warning siren, warning lamp, light, door, etc.

Make settings concerning relays in the “Relay Setting” screen.

Settings Related to Relays

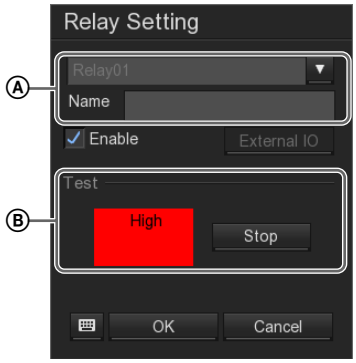
To display the “Relay Setting” screen, click  (Relay Setting) in the “Setup” screen.
After setting each of the items, click [Test] and confirm the relay status.



Note

To use relays, the alarm output pin settings on the device must also be enabled.

“Relay Setting” Screen Details



Ⓐ Relay

Select the relay that you want to set from the drop-down list.
The drop-down list shows the I/O devices connected to the NSR system that were detected automatically.

Name

Enter the relay name.
Use only alphanumeric characters and symbols (excluding \ / : * ? " < > |).

Enable

Select the check box to enable the relay setting.

Ⓑ Test

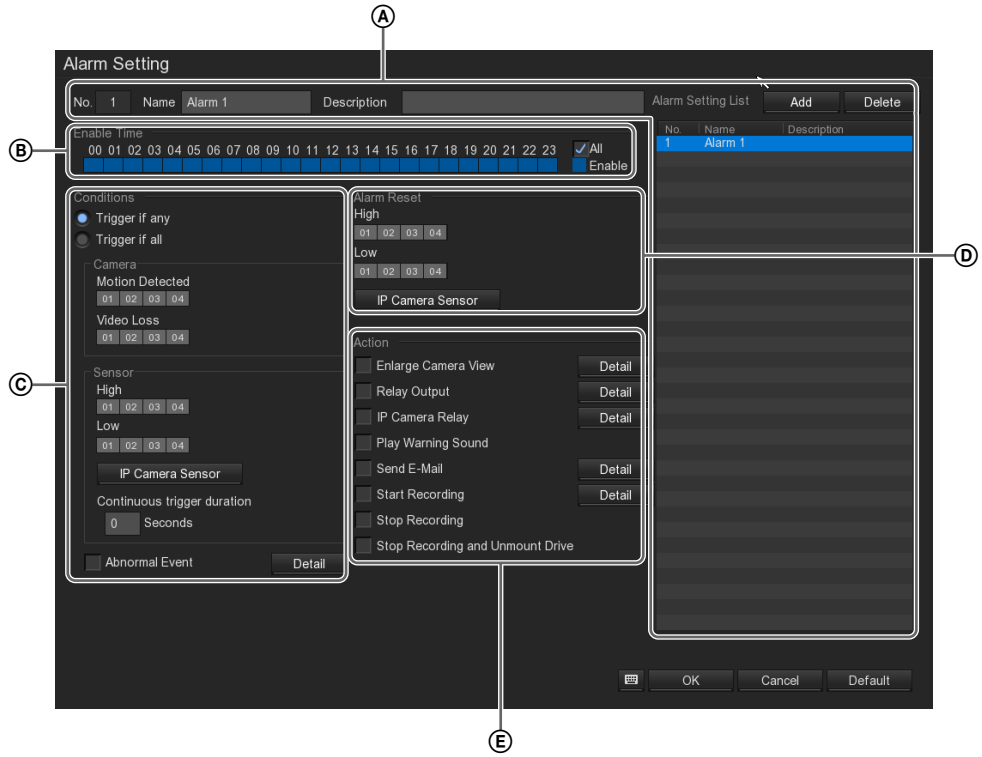
Click [Test] to confirm the relay status.
Red indicates “high,” and green indicates “low.”
Click [Stop] to stop testing.

Alarm Setting

The NSR can be made to record or perform actions in response to sensor inputs or motion detection by setting those triggers as alarms.

Settings Related to Alarms

To display the “Alarm Setting” screen, click (Alarm Setting) in the “Setup” screen.
The following settings can be made on the “Alarm Setting” screen.



Ⓐ This registers the alarm settings.
For details, refer to *“Registering the Alarm Settings” (page 56)*.

Ⓑ This allows you to specify time periods during which the alarm settings are enabled.

Ⓒ This section is used to specify the conditions that generate an alarm.
Camera and sensor states that can be used as alarm triggers and abnormalities of the NSR hardware can be specified as such conditions.
For details on each of the items, refer to *“Conditions” (page 57)*.

Ⓓ This allows you to set sensor states which cause the alarm condition to be released.
For details on each of the items, refer to *“Alarm Reset” (page 58)*.

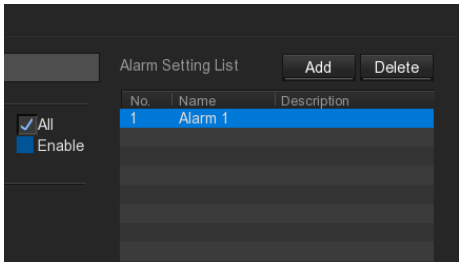
Ⓔ This section is used to set the actions that are performed when an alarm is generated.
For details on each of the items, refer to *“Action” (page 58)*.

Registering the Alarm Settings

This registers the alarm settings in a list.

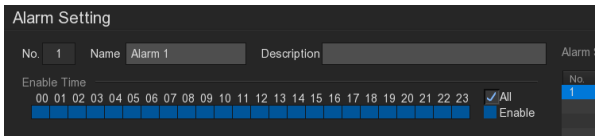
1 Click [Add].

The setting is registered in the list.



2 Enter the name and description of the alarm setting.

The number is assigned sequentially.

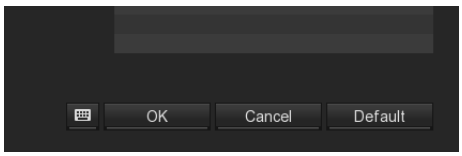


3 Set the contents of the alarm.

For details on each of these items, refer to *""Alarm Setting" Screen Details" (page 57).*

4 Repeat steps 1 through 3 to register additional alarm settings.

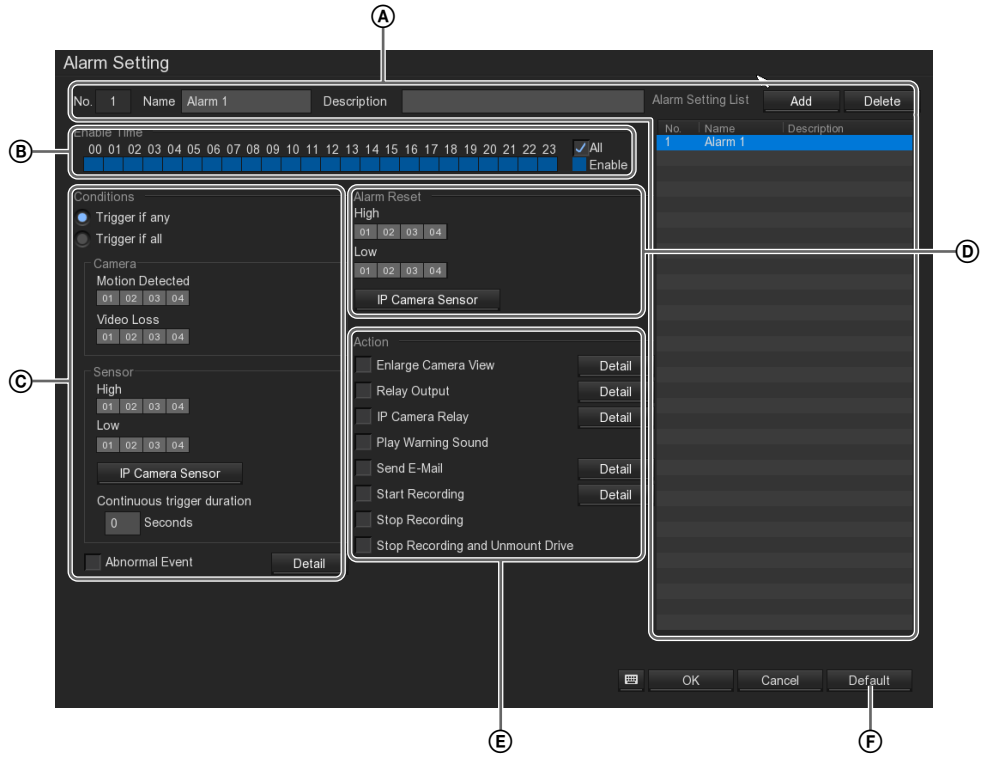
5 Click [OK].



The alarm settings are saved.

“Alarm Setting” Screen Details

“Alarm Setting” Screen



Ⓐ No.

This displays the number of the alarm setting.

Name

Enter the name of the alarm setting.
Use only alphanumeric characters and symbols (excluding \ / : * ? " < > |).

Description

Enter the description of the alarm setting.

Add

This adds the alarm setting to a list.

Delete

This deletes the selected alarm setting from the list.

Alarm Setting List

This displays a list of the registered alarm settings.

Ⓑ Enable Time

This allows you to specify time periods during which the alarm settings are enabled by clicking in the squares corresponding to the desired time period.
Select the [All] check box to enable alarms for all time periods.

Ⓒ Conditions

This section is used to specify the conditions that generate an alarm.

Trigger if any

This causes an alarm to be generated if any one of the set conditions is met.

Trigger if all

This causes an alarm to be generated if all of the set conditions are met.

Camera

This sets the cameras that are to serve as alarm triggers.

Motion Detected

Select the cameras for which motion detection is to trigger an alarm.

Video Loss

Select the cameras for which loss of video signal is to trigger an alarm.

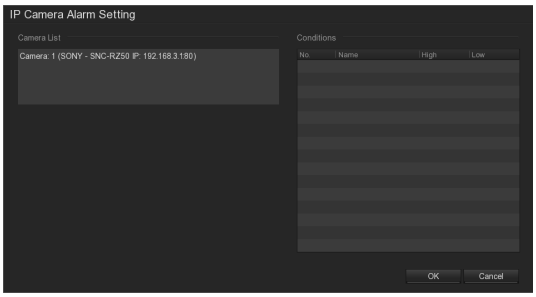
Sensor

This sets the sensor statuses that are to serve as alarm triggers.

High
Select the cameras for which a “high” sensor status of the NSR-S10/S20 unit is to trigger an alarm.

Low
Select the cameras for which a “low” sensor status of the NSR-S10/S20 unit is to trigger an alarm.

IP Camera Sensor
Configure this to use the sensor inputs of the cameras.
Clicking this displays the “IP Camera Alarm Setting” screen. Select a camera from the [Camera List], and select a sensor status ([High] or [Low]) under [Conditions] to the right.



Continuous trigger duration
Enter the number of seconds to wait before generating an alarm in cases where a sensor status that triggers an alarm remains continuously.

Abnormal Event
Select this check box to trigger an alarm when the NSR enters an abnormal state.
Clicking on [Detail] causes the [Abnormal Event] screen to appear, which can be used to set the conditions that trigger an alarm.

Select the check boxes of the conditions that are to be alarm triggers.

Reboot
This generates an alarm when the NSR system reboots for any reason other than a hardware abnormality.

Abnormal Reboot
This generates an alarm when the NSR system reboots due to a hardware abnormality.

Recording is switched off
This generates an alarm when recording is switched off.

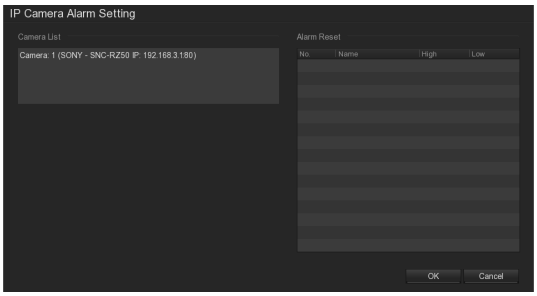
Hard Disk failed
This generates an alarm when a hard disk error occurs.

Ⓓ Alarm Reset
This section sets sensor states which cause the alarm condition to be released.

High
Select the cameras for which a high sensor status is to release an alarm.

Low
Select the cameras for which a low sensor status is to release an alarm.

IP Camera Sensor
Displays the “IP Camera Alarm Setting” screen. Select the camera and sensor input pin that will act as the alarm release trigger from the camera list.

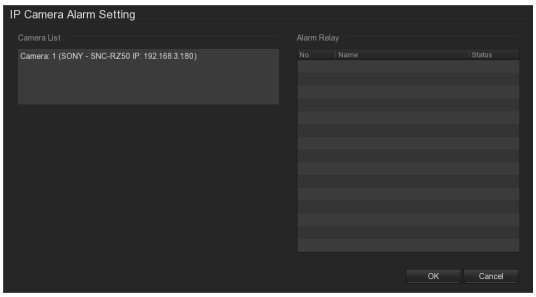


Ⓔ Action
Select the check boxes for the actions that are to be performed when an alarm is generated.

Enlarge Camera View
This displays the monitor frame displaying the specified camera image in the 1 × 1 (1 screen) layout.
If you select this check box, click [Detail] and then, when *“‘Enlarge Camera View” Screen” (page 59)* appears, specify the camera for which the enlarged image is to be displayed.

Relay Output
This outputs an alarm on a relay output.
If you select this check box, click [Detail] and then, when *“‘Alarm Relay” Screen” (page 59)* appears, set the alarm output pin to on or off.

IP Camera Relay
Select cameras for relay output.
If you select this check box, click [Detail] to display the “IP Camera Alarm Setting” screen, and then select the cameras for relay output and the relay terminals.



Play Warning Sound
This plays a warning sound when an alarm is generated.

Send E-Mail
This sends an e-mail to preregistered e-mail addresses when an alarm is generated.
If you select this check box, click [Detail] and then, when *“‘‘E-Mail Setting” Screen” (page 60)* appears, make the e-mail settings.

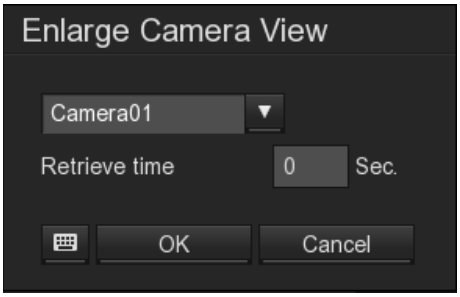
Start Recording
This starts recording when an alarm is generated.
If you select this check box, click [Detail] and then, when *“‘‘Alarm Recording Setting” Screen” (page 60)* appears, set the camera and frame rate for recording.

Stop Recording
This stops recording when an alarm is generated.

Stop Recording and Unmount Drive
For models without a built-in HDD, this unmounts the external drive when an alarm is generated.
A sound will be emitted for 30 seconds to notify you when a drive has been unmounted.

Ⓕ Default
This restores the default settings.

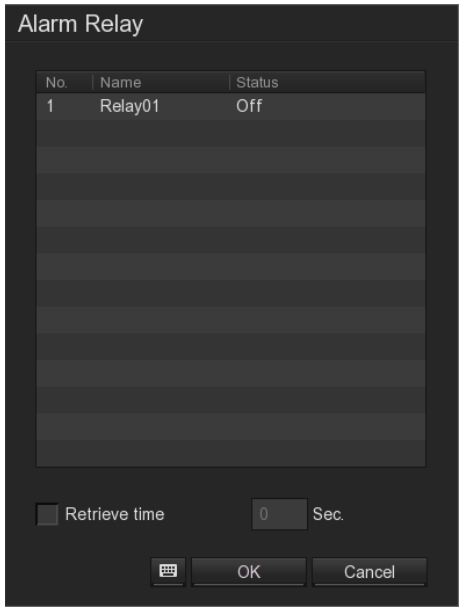
“Enlarge Camera View” Screen
This screen is displayed by clicking [Detail] next to [Enlarge Camera View] under [Action] on the “Alarm Setting” screen.



Camera ID
This selects the camera to be displayed in the 1 × 1 (1 screen) layout when an alarm is generated.

Duration
Enter the length of time (in seconds, from 0 to 600) that the enlarged view is to be displayed before returning to the layout that was in effect before the alarm was generated. The previous layout can also be returned to manually.

“Alarm Relay” Screen
This screen is displayed by clicking [Detail] next to [Relay Output] under [Action] on the “Alarm Setting” screen.

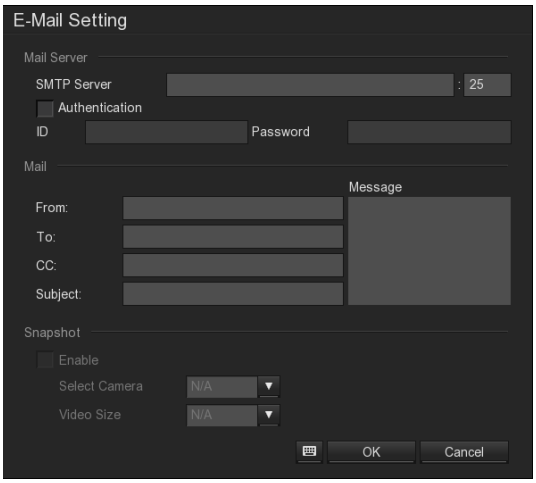


Relay List
Configure On/Off settings for each relay pin.
This list is enabled when the [Enable] check box in the *“Relay Setting” screen (page 53)* is selected.
You can switch between On/Off settings by clicking the cells under [Status].

Duration
To set a time limit until the relay output is released, select this check box and enter the number of seconds.

“E-Mail Setting” Screen

This screen is displayed by clicking [Detail] next to [Send E-Mail] under [Action] on the “Alarm Setting” screen.



Mail Server
Set the mail server information here.

SMTP Server
Enter the IP address for the SMTP server.

Authentication
Select this check box to use SMTP authentication.
If you select this check box, enter the user ID and password for SMTP authentication.

Mail
This section sets the contents of the e-mail.

From
Enter the originating mail address.

To
Enter the receiving mail address.

CC
Enter the CC mail address.
If you are setting multiple addresses, use a semi-colon to separate each address.

Subject
Enter the subject line.

Message
Enter the main text of the e-mail.

Snapshot (intended for future expansions)

“Alarm Recording Setting” Screen

This screen is displayed by clicking [Detail] next to [Start Recording] under [Action] on the “Alarm Setting” screen.

Recording Cameras
Select the cameras that are to start recording.

All
Select this check box to start recording on all cameras.

Frame Rate
Select the frame rate.

Camera Setting
Records at the frame rate set for the camera.

Max
Records at the maximum frame rate for the camera.

Pre Event Start
Input how many seconds of the image before the trigger was detected are to be stored.

Note

Images that precede the trigger will be recorded at a maximum of 1 fps (one frame per second). In addition, the duration of the recording that precedes the trigger may differ depending on the resolution and bitrate settings of the camera. See the release notes for details.
Access the following URL to download the release notes.
http://www.sony.co.jp/Products/NSR/NSR-S_ReleaseNote_E.pdf

From Event End
Input the number of seconds to wait after an alarm trigger is released and before recording is stopped.

User Setting

You can register users in NSR, and set logon passwords and access permissions for each function.
Register users in the “User Setting” screen.

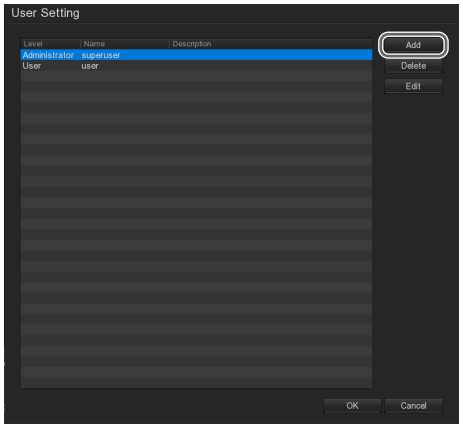
Caution

- Be careful because if you forget the password for a user, the actions permitted only for that user will no longer be able to be performed.
- Only a user who has been granted the “System Setting” permission can perform operations such as registering users and configuring user settings.

Registering a User

To display the “User Setting” screen, click (User Setting) in the “Setup” screen.
Add users to the user list on the “User Setting” screen.

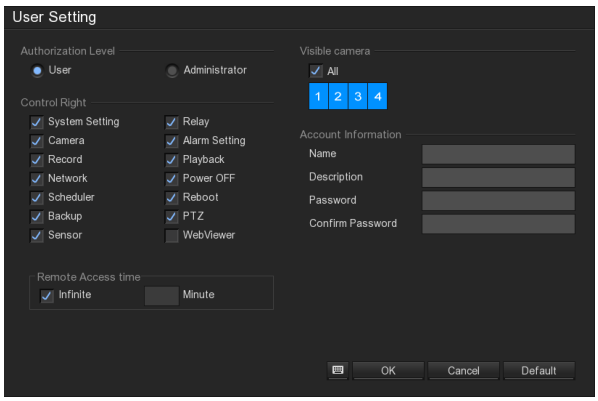
1 Click [Add] in the upper right corner of the screen.



The following screen appears.

2 Set each item, and click [OK].

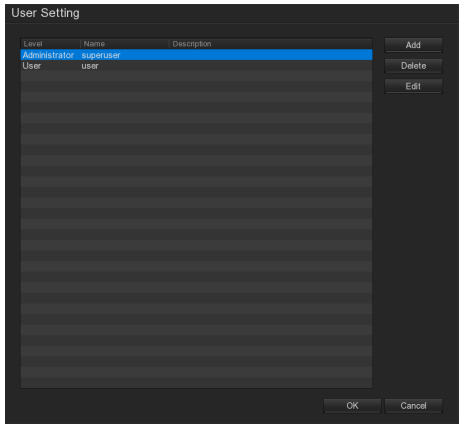
For details on each of the items, refer to *““User Setting” Screen (Setting)” (page 62)*.



The user is added to the list.

“User Setting” Screen Details

“User Setting” Screen (User List)



User List

This displays a list of the users registered to NSR.
The list shows each user’s permission level, name, and description.

Add

This adds a new user.
When this button is clicked, *““User Setting” Screen (Setting)” (page 62)* appears.

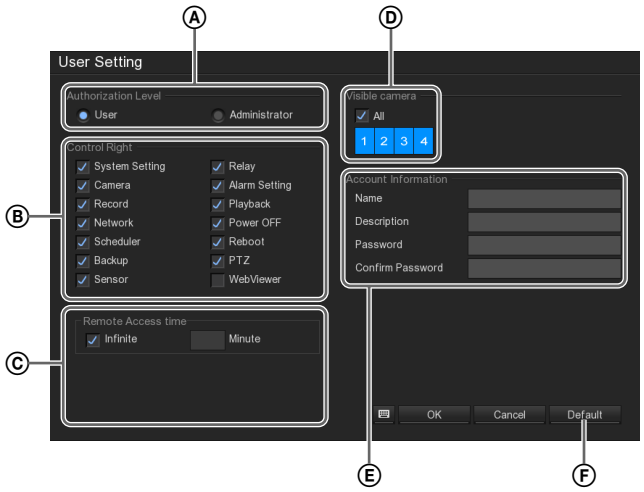
Delete

This deletes the selected user from the list.

Edit

This is used to change the settings of the selected user in the list.
When this button is clicked, *““User Setting” Screen (Setting)” (page 62)* appears.

“User Setting” Screen (Setting)



Ⓐ Authorization Level

Select the authorization level for the user.

Ⓑ Control Permissions

Select the check boxes for the permissions to grant to the user.

Ⓒ Remote Access Duration

Sets the length of time for which remote access is permitted.
If you do not want to limit the access time, select the [Infinite] check box.
If you do want to limit the access time, deselect the check box and enter the time limit in minutes.

Ⓓ Viewable camera

Select the cameras for which monitoring is permitted.
To permit monitoring of all cameras, select the [All] check box.

Ⓔ Account Information

Configure settings such as the user name and password.

Name

Enter the user name.

Description

Enter the user description.

Password

Enter the password.

Confirm Password

Enter the same password again for confirmation.

Ⓕ Default

This restores the default settings.

Miscellaneous

Chapter 5

Firmware Update

You can install firmware (distributed by Sony) in the NSR. Firmware is distributed by Sony as more NSR-compatible cameras and functions are added. Access the following URL to download the latest NSR-S10/S20 firmware.
http://www.sony.co.jp/Products/NSR/NSR-S.zip

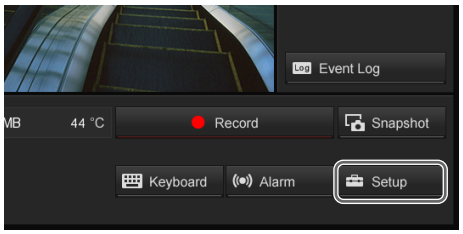
For details on changes to the software, refer to the Release Note (PDF). Access the following URL to download the Release Note.
http://www.sony.co.jp/Products/NSR/NSR-S_ReleaseNote_E.pdf

1 Copy the firmware to USB flash memory, and then plug the USB flash memory into the NSR.

Caution

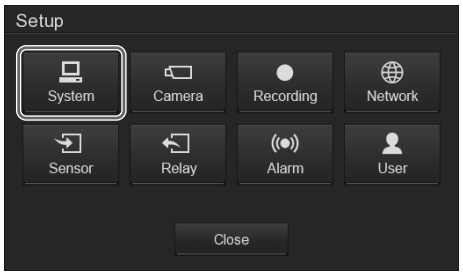
Never change the file name of the firmware.

2 Click Setup (System Setup) in the lower right corner of the “Monitoring (LIVE)” screen.



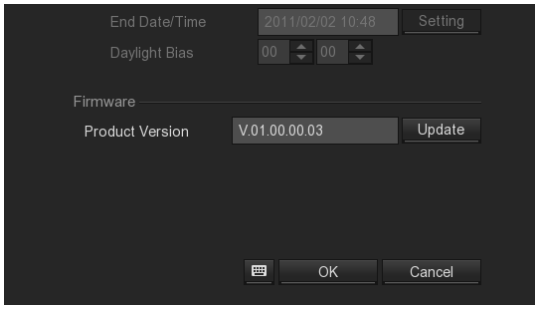
The “Setup” screen appears.

3 Click System (System Setting).



The “System Setting” screen appears.

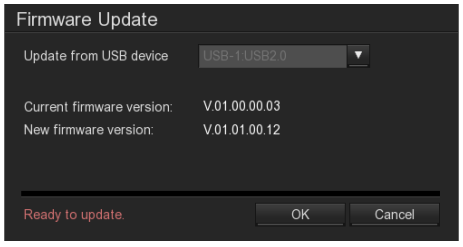
4 Click [Update] in the [Firmware] section.



The “Firmware Update” screen appears.

5 Select the media where the patch file is stored, and click [OK].

Be sure to confirm that the firmware version is correct.



A confirmation message appears.

6 Click [OK].

Update starts.

Caution

Do not turn off the power while update is in progress.

A message appears when update is complete, and the unit restarts automatically.
After the unit restarts, confirm whether the firmware version has been updated in the “System Setting” screen.

I/O Port

Pin Assignment of I/O Port

Audio In/Out

Pin NO.	AUDIO
1	AUDIO IN (used for future expansion)
2	AUDIO IN GND (used for future expansion)
3	AUDIO OUT
4	AUDIO OUT GND

Sensor In and Relay Out

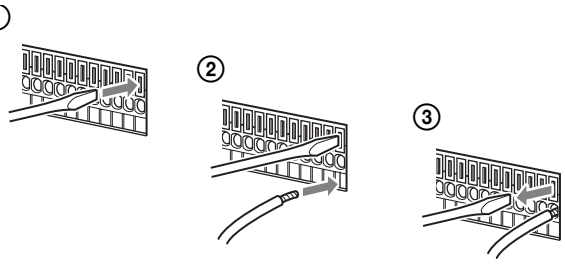
Pin NO.	SENSOR
5	SENSOR IN 1
6	SENSOR IN 1 GND
7	SENSOR IN 2
8	SENSOR IN 2 GND
9	SENSOR IN 3
10	SENSOR IN 3 GND
11	SENSOR IN 4
12	SENSOR IN 4 GND
13	RELAY OUTPUT +
14	RELAY OUTPUT –

Using the I/O Receptacle

Insert a small slotted screwdriver into the upper or lower slot of the hole you want to connect a wire to (AWG No. 26 to 20). Hold down the screwdriver and insert the wire, then release the screwdriver.

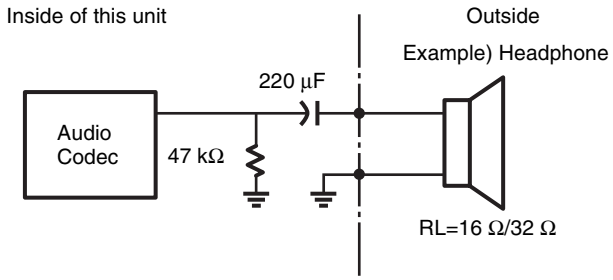
Caution

Do not use excessive force when inserting the screwdriver into the slot. Doing so may result in damage.

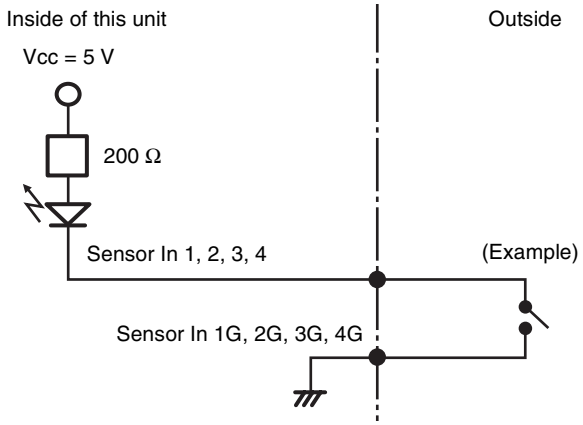


Repeat this procedure to connect all required wires.

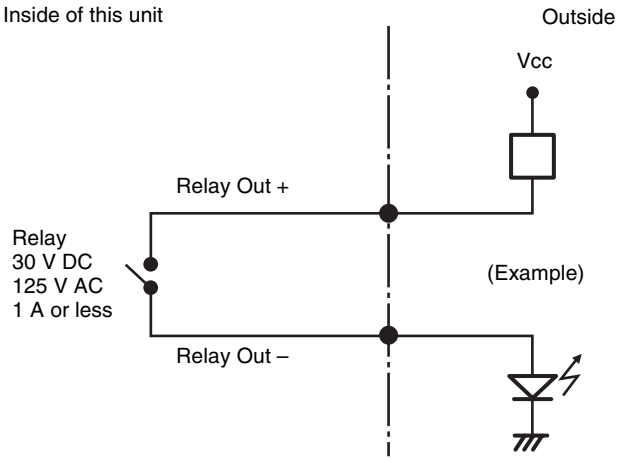
Wiring Diagram for Audio Output



Wiring Diagram for Sensor Input



Wiring Diagram for Relay Output



Troubleshooting

Before contacting your retailer or a Sony Support Center, please check the following items. If the problem persists, contact them.

The NSR does not work.
- Verify that the power cable is connected correctly.
- Make sure the wall outlet has power. Test it by plugging another device.

The monitor remains blank.
- Verify whether the power cord is correctly connected.
- Verify whether the monitor cable is correctly connected. Confirm that the monitor is connected to monitor connector.

The new external hardware is not working properly.
- Make sure the cables for the new external device are firmly connected and the pins are not bent.

An external device connected to a USB connector does not work.
- This unit supports standard USB 2.0 Mass Storage devices. Depending on the type of USB 2.0 Mass Storage device, however, errors may occur when writing data to the device. If errors occur when writing data, use a USB flash memory device of a different type.
- To ensure proper operation of USB devices, do not connect the devices via a USB hub. Connect the devices directly to the USB connectors on the unit. Operation is not guaranteed when devices are connected via a USB hub, USB switch, or extension cable.
- Refer to the documentation that came with the USB device.

The NETWORK LED does not light up.
- Check the cabling and network equipment for the proper connection.

Cannot access the hard disk drive.
- Due to rapid flashing during frequent access to the hard disk drive, the HDD LED may appear to be steadily lit.

The NSR heats up quickly
- When one unit is stacked on top of another unit, the heat generated by both units can get extremely hot. Do not stack units on top of each other, place the unit on other objects that may generate heat, or install the unit in confined spaces.

Specifications

NSR-S10/S20

External connectors

Front USB: USB 2.0 (1)

Rear Monitor output:
Analog RGB (mini D-SUB 15 pin) (1)
LAN (1000Base-T/100Base-TX/10Base-T) (RJ-45) (2)
USB: USB 2.0 (2)
e-SATA connector (1)
Audio input (MIC) (response frequency 4 kHz, sample rate 8 kHz, input signal level 1 Vrms, input resistance 10 k ohm) (1) (used for future expansion)
Audio output (output level 30 Vrms (RL = 32 ohm), 60 Vrms (RL = 16 ohm), full-scale output voltage 1 Vrms, output impedance 16/32 ohm, output channel 1 (mono)) (1)
Sensor input (compatible with 5 V to 6 V DC devices, photo coupler input, insulated from main unit) (4)
Relay output (maximum 30 V DC, 125 V AC, 1 A, mechanical relay output, insulated from main unit) (1)

Operating environment

Operating temperature: 5 °C to 40 °C (41 °F to 104 °F)
Operating humidity: 20% to 80% (maximum wet-bulb temperature: 30 °C (86 °F)
no condensation)
Temperature range for storage: –20 °C to +60 °C (–4 °F to +140 °F)
Humidity range for storage: 20% to 90% relative humidity (maximum wet-bulb temperature 35 °C/ 95 °F, no condensation)
Power and miscellaneous
Power: 12 V DC
Current consumption: Max. 4.0 A
AC adapter: 100-240 V AC to 50/60 Hz
Dimensions: 245 (W) × 53 (H) × 160 (D) mm ($9\frac{3}{4} \times 2\frac{1}{8} \times 6\frac{3}{8}$ in.) (excluding protrusions)
Weight: approximately 1.4 kg (3 lb.) (including 0.6 kg (1.3 lb.) for HDD)

Supplied accessories

AC adapter (1)
Power cord (1)
SATA Cable (only for models without internal HDDs)
SATA power cable (1) (only for models without internal HDDs)
Cable clamp (1)
Infrared remote control unit (1)
Installation Manual (1)
CD-ROM (First Step Guide, User's Guide) (1)
Warranty booklet (1)

Design and specifications are subject to change without notice.

Notes

- Always make a test recording, and verify that it was recorded successfully.
  SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF FAILURE OF THIS UNIT OR ITS RECORDING MEDIA, EXTERNAL STORAGE SYSTEMS OR ANY OTHER MEDIA OR STORAGE SYSTEMS TO RECORD CONTENT OF ANY TYPE.
- Always verify that the unit is operating properly before use.
  SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.