

# Network Surveillance Recorder

First Step Guide

NSR-S10/S20

**IPELA**

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# Introduction

This First Step Guide assumes the following conditions and usage for your system, and explains the procedures up until actual operation. Use this document as a guide for setting up the unit before actual operation.

## Conditions and usage assumed in this guide

Automatic registration of Sony network cameras, and continuous recording with default configurations.

### To connect to an existing network...

Before connecting the unit to a network, be sure to perform the procedure described in “*Connecting to an Existing Network*” (page 12) to configure settings.

### When using external e-SATA storage...

Configure settings on the e-SATA storage before connecting it to the unit, and be sure to format the e-SATA storage and add it as a storage location as described in “*Configuring a Storage Location*” (page 8).

### For more advanced operations...

If your operating environment or purpose of use requires the more advanced functions and settings available on the NSR, refer to the User’s Guide (PDF) for details.

### Examples of advanced operations

- Alarm recording.
- Using audio.
- Using client computers.
- Advanced searching.
- Exporting video or still images to external media.
- Enlarging the image display or performing relay output to external devices in response to sensor inputs from external sources.

### Latest information and important notifications

For the operating environment of client computers, supported camera models, and important notifications, refer to Release Note (PDF).

You can download Release Note from the following URL.

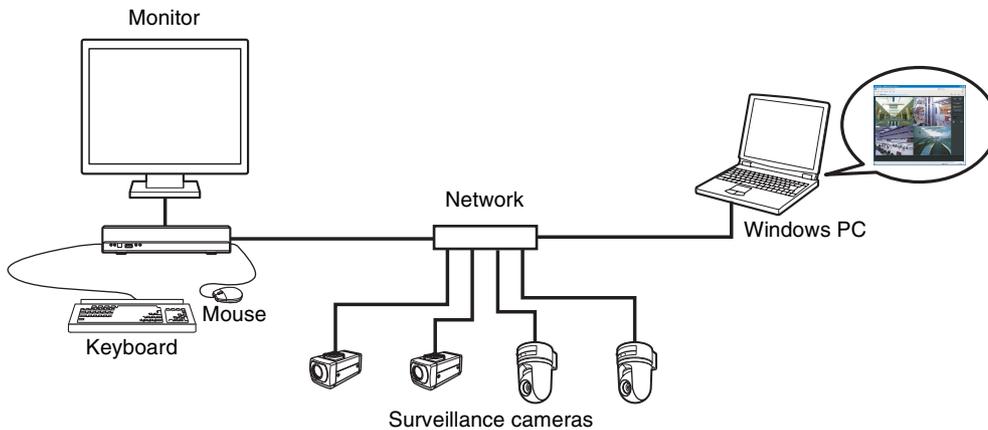
[http://www.sony.co.jp/Products/NSR/NSR-S\\_ReleaseNote\\_E.pdf](http://www.sony.co.jp/Products/NSR/NSR-S_ReleaseNote_E.pdf)

# Installation and Setup Procedure

This document provides general explanations on installation and setup of systems that are constructed as follows.

<b>Step 1 Installation</b>	<ul style="list-style-type: none"> <li>Prepare devices</li> <li>Connect devices</li> <li>Connect the AC adapter</li> </ul>
↓	
<b>Step 2 System Startup and Camera Registration</b>	<p>Search for cameras and register them automatically at NSR startup. Continuous recording starts automatically after the cameras are registered.</p>
↓	
<b>Step 3 Changing the Display Language</b>	<p>The factory default setting for the display language is English. If necessary, you can change the display language.</p>
↓	
<b>Step 4 Setting the System Date and Time</b>	<p>Set the system date and time according to your region of use.</p>
↓	
<b>Step 5 Preparation for Recording</b>	<p>Configure storage locations for recorded data. (when using e-SATA storage)</p>
↓	
<b>Settings complete</b>	
↓	
<b>Step 6 Verification</b>	<ul style="list-style-type: none"> <li>Verify monitoring</li> <li>Verify image recording and playback</li> </ul>

Here, a local network consisting only of the NSR, cameras, and a client computer (when necessary) such as follows is used as an example for explanation.



**Caution**

When connecting to an existing network, be sure to read “*Connecting to an Existing Network*” (page 12) before connecting the unit to the network.

**Notes**

- Be sure to read the Safety Regulations in the Installation Manual (separate document) before installing the unit.
- This manual uses screen examples of NSR-S10 in the explanations.

### Important

You can download the latest firmware for NSR-S10/S20 from the following URL. For the firmware update procedure, refer to the User's Guide (PDF).  
<http://www.sony.co.jp/Products/NSR/NSR-S.zip>

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## Step 1: Installation

Decide where the unit is to be installed, and then connect all of the equipment.

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### Preparing Devices

Prepare the following devices based on your intended use.

- Monitor
- Monitor cable (if necessary)
- USB keyboard
- USB mouse
- Network camera
- Network switch
- LAN cable

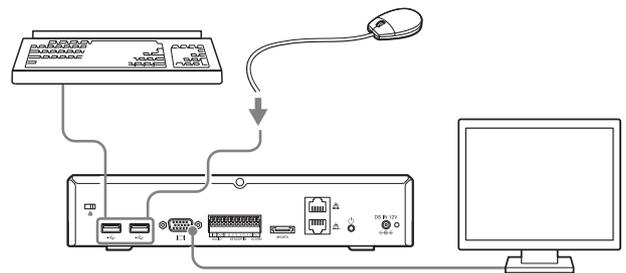
### Note

Even if no USB keyboard is connected, the screen-based soft keyboard can be used.

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### Connecting Each Device

Connect the monitor, USB mouse, and USB keyboard to the appropriate connectors on the front panel of the unit.

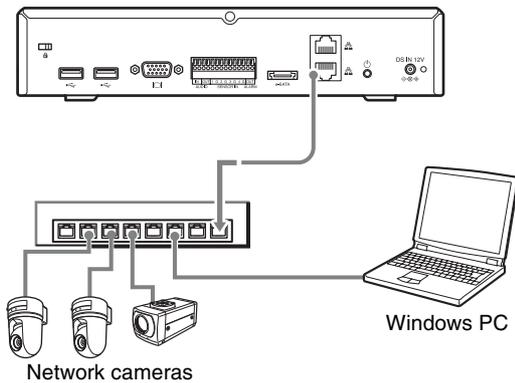


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## Connecting the Network Cameras

Connect the network cameras and the unit to the same segment of the IP camera network.

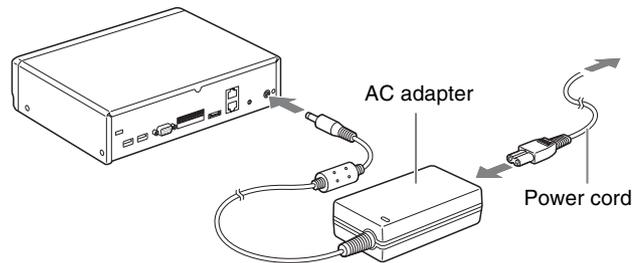
When using a client computer, connect it to the same segment of the network.



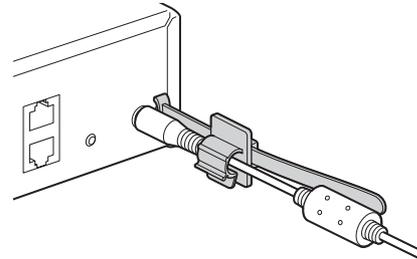
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## Connecting the AC adapter

Connect the AC adapter and power cord.



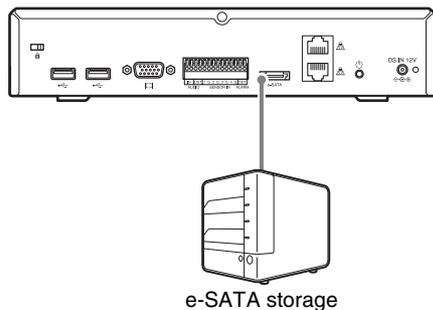
Attach the cable clip to prevent the plug from disconnecting.



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## Connecting e-SATA Storage

Use a e-SATA cable when connecting external e-SATA storage to this unit.



For details on recommended models, refer to the release notes.

Access the following URL to download the release notes.

[http://www.sony.co.jp/Products/NSR/NSR-S\\_ReleaseNote\\_E.pdf](http://www.sony.co.jp/Products/NSR/NSR-S_ReleaseNote_E.pdf)

### Caution

Create RAID volumes and configure other necessary settings on the storage device before connecting it to the unit. After startup, be sure to format the e-SATA storage and add it as a storage location as described in “*Configuring a Storage Location (when using e-SATA storage)*” (page 8).

## Step 2: System Startup and Camera Registration

After turning on the NSR, you can begin monitoring immediately if you register the cameras automatically.

### Note

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.

- 1 Plug the power cord of the AC adapter into the power outlet.

The unit beeps, and the POWER LED on the front panel lights green.

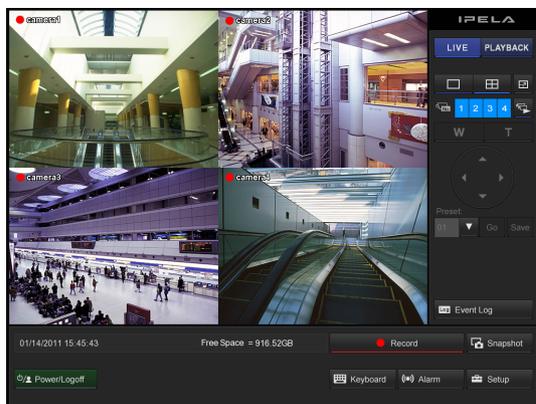
After a minute or two, the message “System Starting, Please Wait...” appears on the monitor.

The “Main” screen appears after the unit starts up.

### Notes

- 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” in the User’s Guide (PDF).

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.

### Notes

- Only Sony cameras will be located and registered.
- Only cameras with IP address settings that have not been changed from factory default conditions will be located and registered. To register cameras with IP addresses that have been changed, return the camera IP address settings to default conditions and restart the NSR.
- When there are multiple cameras connected, the cameras are registered in the order in which they are located, and up to 4 cameras can be registered for NSR-S10 and up to 8 cameras for NSR-S20.

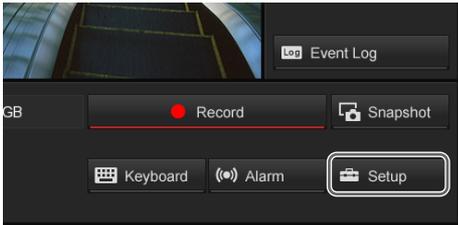
This completes connections.

Proceed to “Step 3: Changing the Display Language.”

## Step 3: Changing the Display Language

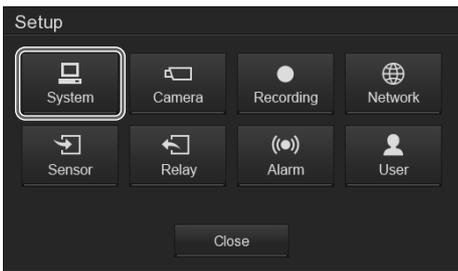
The factory default setting for the display language is English. If necessary, you can change the display language.

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



The “Setup” screen appears.

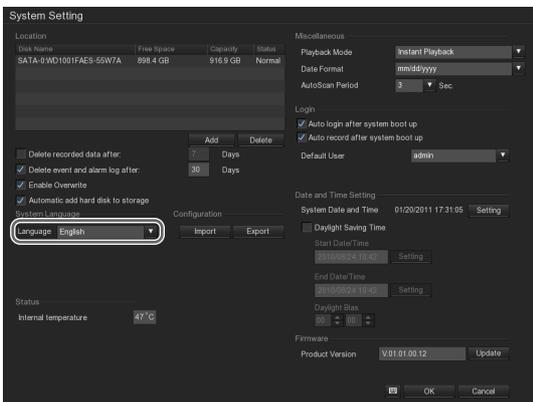
- 2 Click  (System Setting).



The “System Setting” screen appears.

- 3 Select a display language in the [Language] drop-down menu.

The screen display will change after the language is selected.

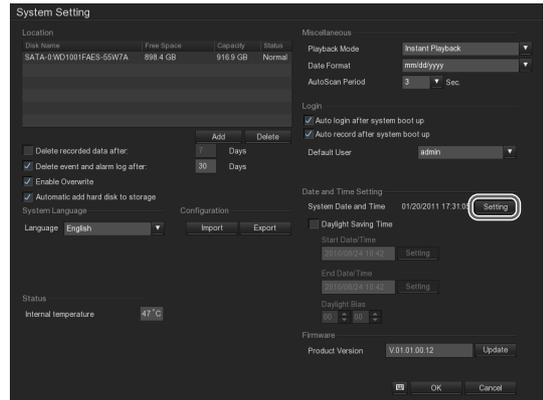


Proceed to “Step 4: Setting the System Date and Time.”

## Step 4: Setting the System Date and Time

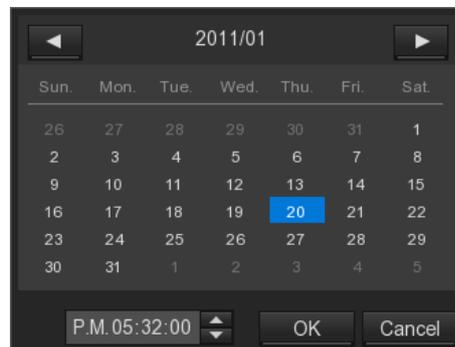
Set the date and time for the unit’s internal clock.

- 1 Click [Setting] to the right of the system date and time in the “System Setting” screen.



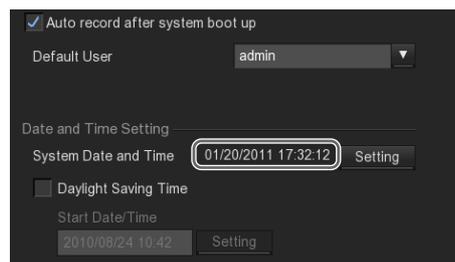
A calendar appears.

- 2 Set the current date and time, and click [OK].



The “System Setting” screen reappears.

- 3 Verify that the date and time to the right of [System Date and Time] are correct.



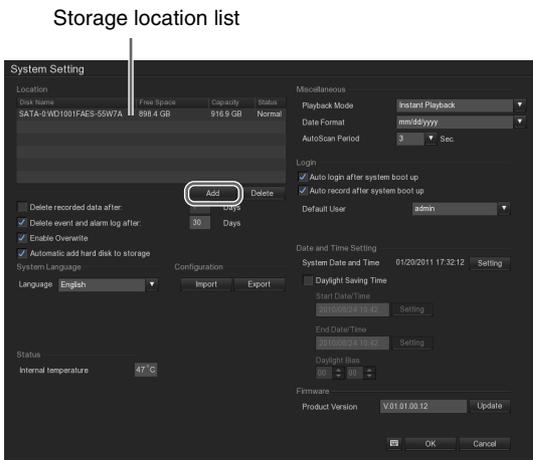
Proceed to “Step 5: Preparation for Recording.”

# Step 5: Preparation for Recording

## Configuring a Storage Location (when using e-SATA storage)

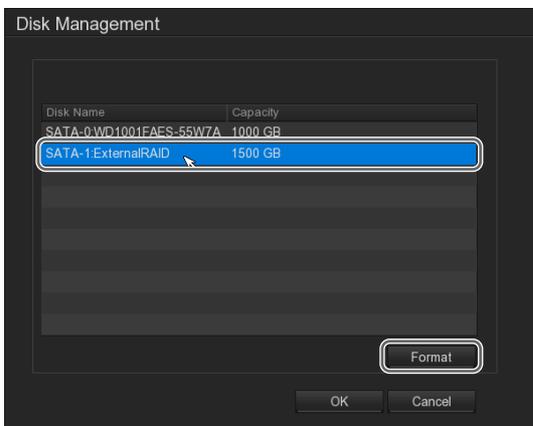
When using external e-SATA storage, format the storage and add it as a storage location as follows.

- 1 Click [Add] under the storage location list in the “System Setting” screen.



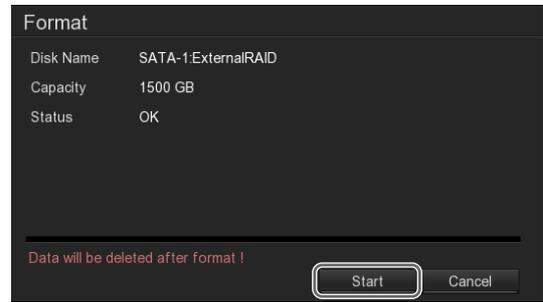
The “Disk Management” screen appears.

- 2 Select the connected e-SATA storage, and click [Format].

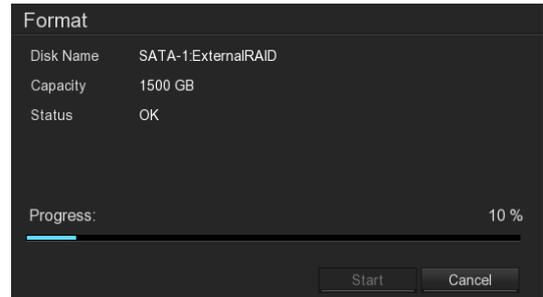


The “Format” screen appears.

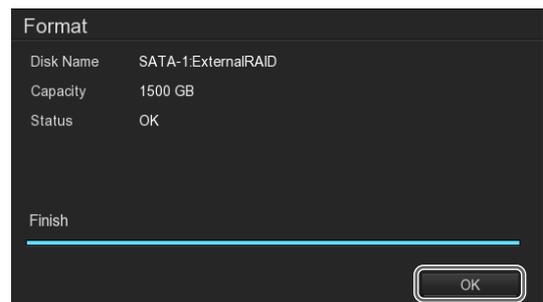
- 3 Click [Start].



Formatting starts.

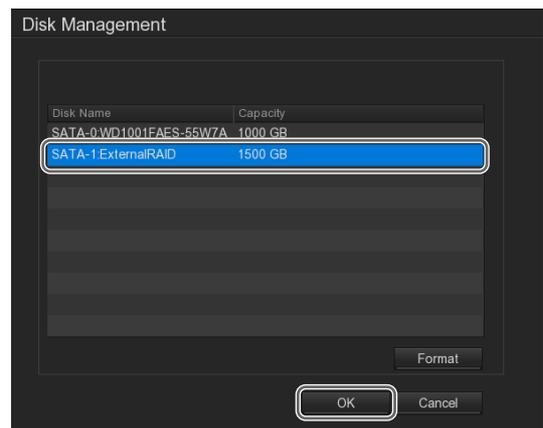


- 4 When formatting is complete, click [OK].

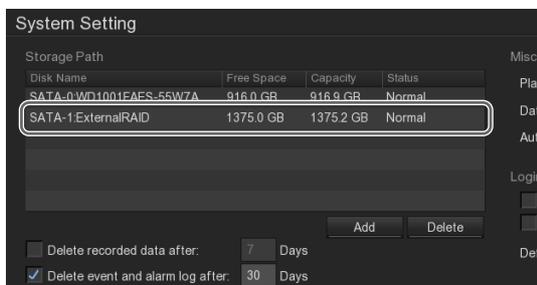


The “Disk Management” screen appears again.

- 5 Select the e-SATA storage, and click [OK].



The e-SATA storage is added as a storage location.



- 6 Click [OK] at the bottom of the “System Setting” screen to return to the “Setup” screen.

This completes configuration.  
Proceed to “Step 6: Verification.”

## Setting values for automatic registration

Cameras are registered with the following setting values.

### For monitoring

	SNC-RZ25		SNC-RZ50		SNT series		1280 × 720 compatible model	1920 × 1080 compatible model
	NTSC	PAL	NTSC	PAL	NTSC	PAL		
Video Size	640 × 480		NTSC 704 × 480 PAL 704 × 576		640 × 480		640 × 480 <sup>1)</sup>	640 × 480 <sup>1)</sup>
Video Format	MPEG-4		MPEG-4		MPEG-4		MPEG-4	MPEG-4
Frame rate	15		15	12	15	12	15	15
Quality/Bitrate	1,024 kbps		1,024 kbps		1,024 kbps		1,024 kbps	1,024 kbps

1) Cameras that support only 16:9 mode are registered with the default value 640 × 368. For the default value for each camera model, refer to Release Note (PDF).

### For monitoring

	SNC-RZ25		SNC-RZ50		SNT series		1280 × 720 compatible model	1920 × 1080 compatible model
	NTSC	PAL	NTSC	PAL	NTSC	PAL		
Video Size	640 × 480		NTSC 704 × 480 PAL 704 × 576		NTSC 720 × 480 PAL 720 × 576		1280 × 720	1920 × 1080
Video Format	MPEG-4		MPEG-4		H.264		H.264	H.264
Frame rate	15		15	12	15	12	10	10
Quality/Bitrate	1,024 kbps		1,024 kbps		1,024 kbps		2,048 kbps	3,072 kbps

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## Settings that require individual configuration

The following functions are disabled or not configured under automatic registration settings. For details on enabling these functions, refer to the User's Guide (PDF).

- Camera audio
- Sensor input
- Relay output

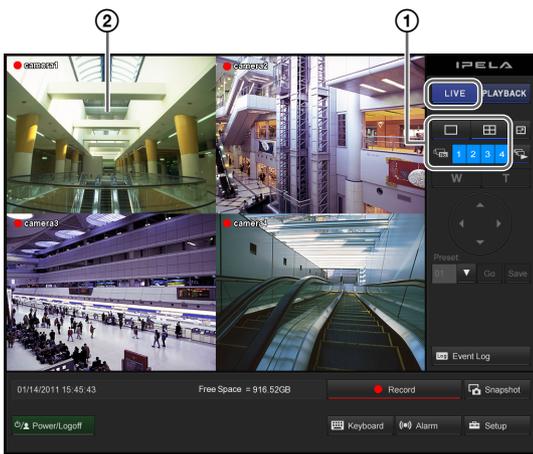
# Step 6: Verification

Check whether camera images can be monitored in the “Main” screen, and confirm that the images can be recorded or played back.

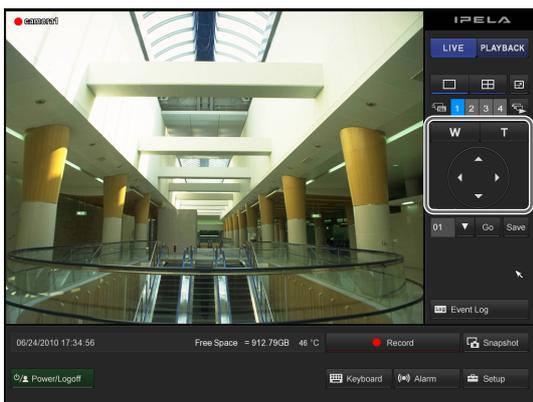
For details on “Main” screen operations, see “*Window Operations Guide*” (page 14) or refer to the User’s Guide (PDF).

## Verifying Monitoring

Click [LIVE] in the upper right corner of the screen, and confirm that you can monitor images from the cameras, etc., normally.

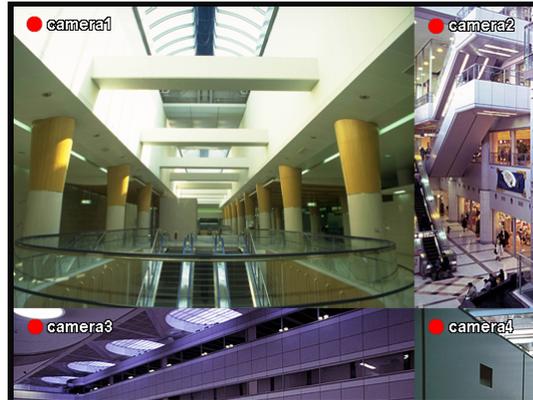


- ① Make changes to the layout, or click on camera IDs and verify that images from registered cameras are displayed.
- ② Click a monitor frame to switch to 1 × 1 (1 screen) layout, and perform pan, tilt, and zoom operations. The layout will switch to 1 screen display when you click a monitor frame or camera ID. During 1 × 1 (1 screen) layout, you can perform digital zoom by right-clicking and dragging the mouse.



## Verifying Image Recording and Playback

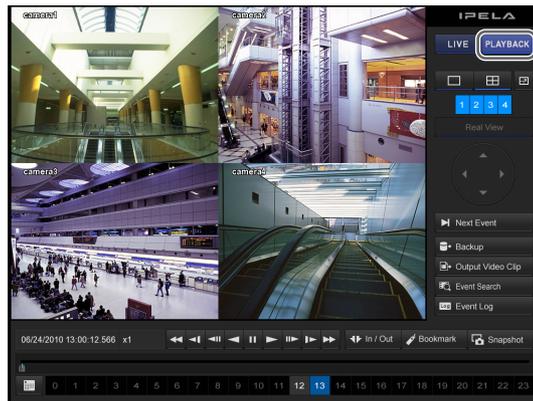
As automatic recording should already be in progress, verify that the “●” icon appears in the monitor frame.



### To play back recordings

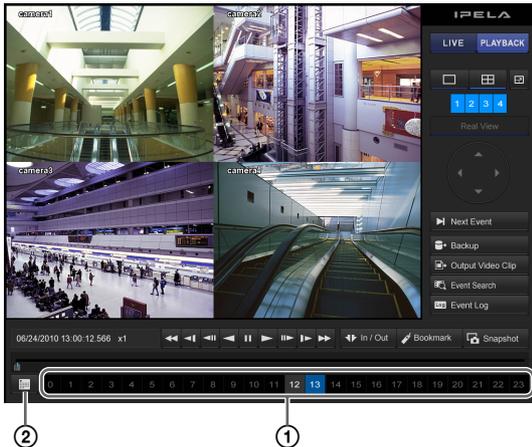
Click [PLAYBACK].

Clicking [PLAYBACK] causes the screen to change to the “Playback” screen, and then automatically begins playback of the most recently recorded image.

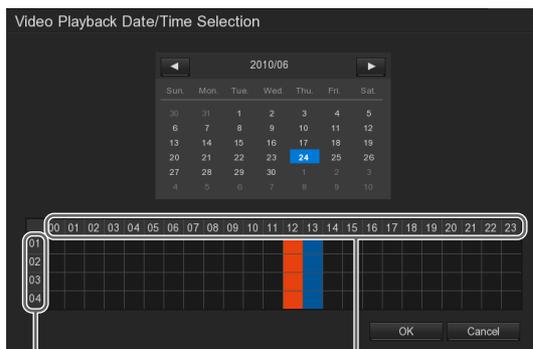


## Playing a recording from a specified date and time

You can specify the date time of the recorded image that you want to play at the bottom of the screen.



- ① If you want to play an image that was recorded today, click the corresponding time button.
- ② If you want to play an image from a specified date and time, and click  (Date Selection). Specify the date on the calendar that appears, and specify camera IDs and time on the time table. Time periods for which recorded images exist are displayed in . Click a  time period to select it, and the selected time period will become .



Camera IDs

Time periods

- ③ Click [OK].  
The images are played back.

This concludes basic verification.

## To use other NSR features and configure advanced settings

For details on using preset functions to control the camera, enabling alarm recording, and using other NSR features, refer to the User's Guide (PDF).

# Connecting to an Existing Network

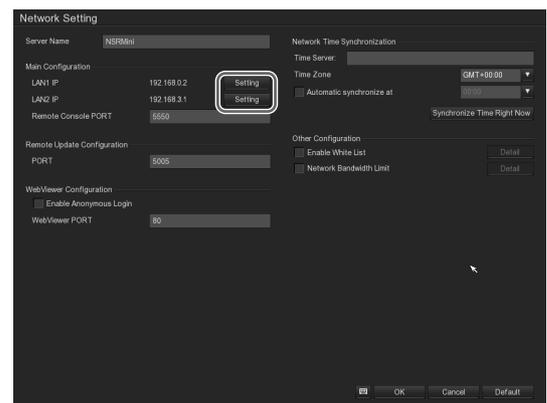
If the IP addresses of the cameras are set to factory default conditions when you connect the NSR to the network, the NSR will automatically change the camera IP addresses and create a network that consists only of the NSR and the cameras.

Be sure to configure the following settings when connecting to an existing network and using the NSR. For details on each operation, refer to the User's Guide (PDF).

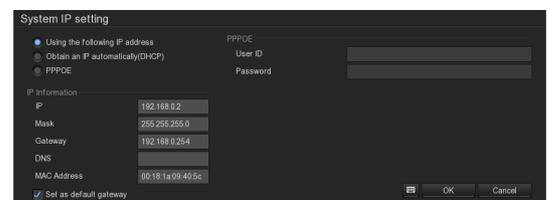
- 1 Turn on the NSR, and log onto the NSR.
- 2 Configure the IP address for the NSR.

Click  (Network Setting) in the "Setup" screen, and configure the IP address for the NSR in the "Network Setting" screen that appears.

- ① Click [Setting] for [LAN1 IP] or [LAN2 IP].



- ② Configure the IP address, subnet mask, and default gateway for the NSR, and the IP address for the DNS.

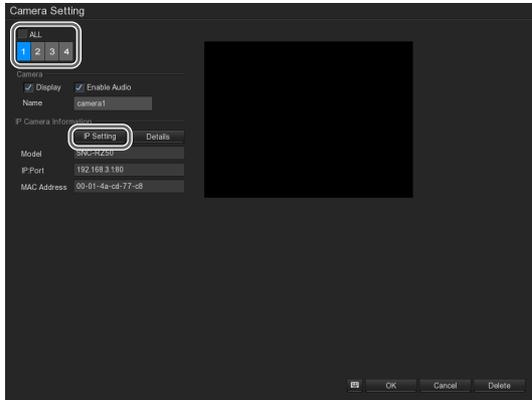


- 3 Connect the NSR to the network.
- 4 Restart the NSR.

## 5 Register the cameras.

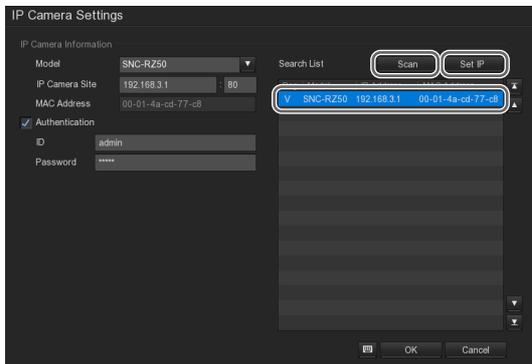
Click  (Camera Setting) in the “Setup” screen, and register cameras in the “Camera Setting” screen that appears.

- 1 Select the camera ID to which you want to register the camera, and click [IP Setting] under [IP Camera Information].



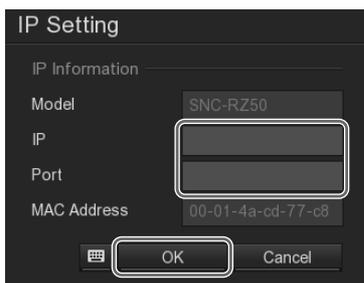
The “IP Camera Settings” screen appears.

- 2 Click [Scan] to search for cameras, select the camera you want to register, and then click [Set IP].



The “IP Setting” screen appears.

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

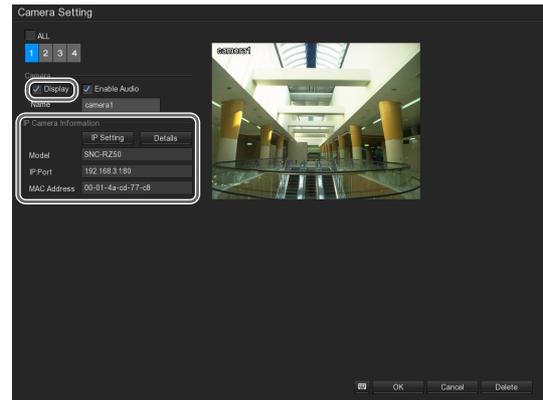


The “IP Camera Settings” screen appears again.

### Note

The default port number is “80”.

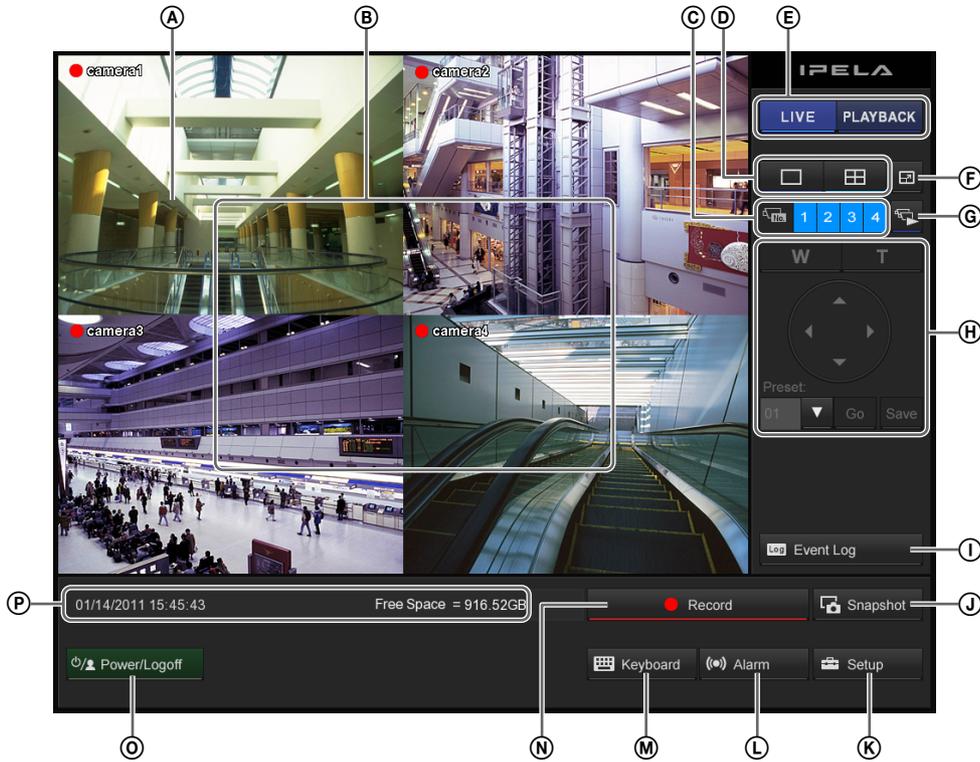
- 4 Click [OK].  
The “Camera Setting” screen appears again.
- 5 Verify each setting under [IP Camera Information], and select the [Display] check boxes.  
Selecting the [Display] check boxes enables display of the camera images.



# Window Operations Guide

## “Main” Screen

### “Monitoring (LIVE)” screen



#### Ⓐ 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).

#### Ⓕ (Full Screen)

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.

## H 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



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.

## I (Event Log)

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

## J (Save)

This exports the image currently displayed as a still image file.

Still images are exported in JPEG format.

## K (System Setup)

This displays the “Setup” screen.

## L (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.

## M (Keyboard)

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

## N (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.

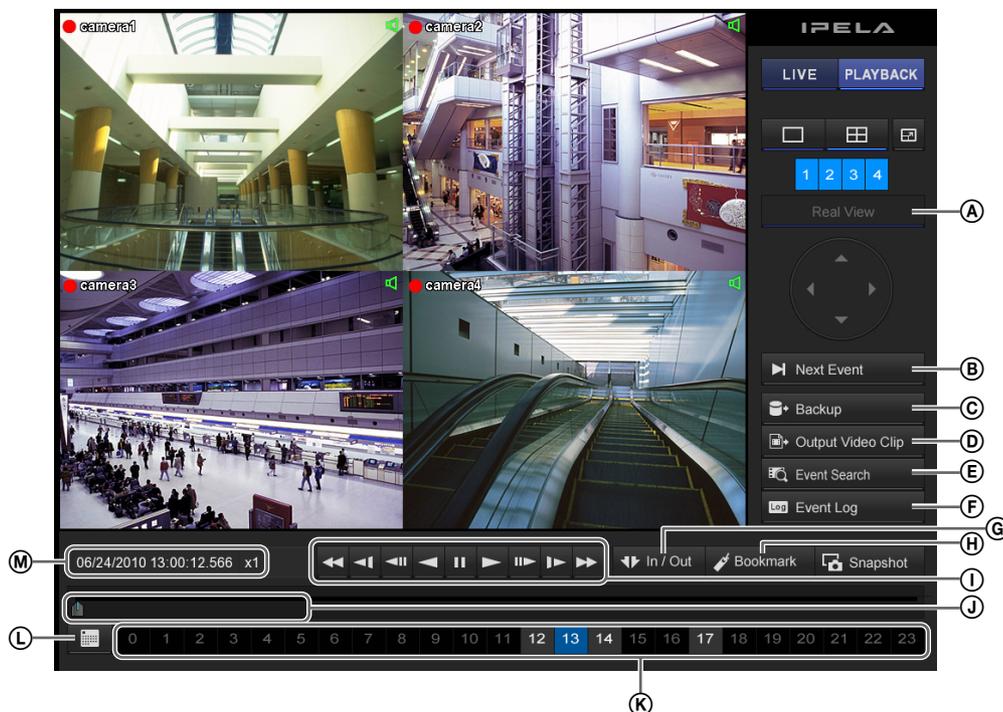
## O (Exit)

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

## P (Status display)

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

## “Playback” screen



### A 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.

### B 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.

### C Backup (Backup)

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

### Caution

Do not connect mass storage devices other than USB memory devices to the unit.

### D Output Video Clip (Export)

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

### E 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.

### F Event Log (Event log)

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

### G 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.

### H Bookmark (Bookmark)

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

### I 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.

**Ⓜ Status display**

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

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## Concerning GPL-LPGL

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This source code is provided on the Web.

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