Outline of Digital Video Recorder Operations

The following table shows the outline of basic operations you can perform on the digital video recorder. For details, refer to the explanation that appears by clicking each link.

Viewing live video	Selecting a screen layout	
	Switching live video automatically in order of camera numbers (Sequence)	
	Viewing alarm video in single-screen layout when an alarm event occurs (Event Popup)	
	Viewing live video in full-screen mode (Enlarge)	
	Presetting the layout of video images from cameras (Save Preset)	
	Magnifying video (Zoom)	
Recording video	Automatic recording	Normal recording Records video continuously during the scheduled time period.
		Motion recording Records video whenever a motion is sensed in the target by the motion sensor.
		Alarm IN recording Records video whenever an alarm signal is input from an external sensor.
		Text recording Records video whenever a specific keyword is found in text from a POS or ATM.
	Manual recording	Performing manual recording in emergencies (Suspicion recording)
Searching and playing back recorded video	Operations on Live screen (Single-channel)	One Channel Search Searches for and plays back recorded or backup video from a single channel by specifying the date and time.
		Motion Search Uses the motion sensor to search scenes containing any motion in the target area.
		Time Bar Search Uses time bars to show recording information for all channels. (You can specify the point to start playback by clicking on the desired time bar.)
		Text Search Searches for video and text by using keywords from among data recorded in Text recording.
		Alarm Log Search Uses the alarm logs listed by event to search for video to play back.
	Operations on SEARCH screen (Multi-channel)	Date/Time search Searches for and plays back recorded or backup video from channels by specifying the date and time.
		Thumbnail search Searches for video scenes using thumbnail images from recorded video.
		Motion Search
		Time Bar Search
		Text Search
		Alarm Log Search
Searches for video scenes using thumbnail images from recorded video.		
Copying playback video	Copying a moving image (AVI)	
	Copying a still image (BMP or JPG)	
Backing up recorded data	Manual backup	
	Auto backup	
Remote-controlling a PTZ camera		
Emulating other DVR servers on network (Monitor Plus)		
Viewing operation history (logs)		
Configuring system settings	Configuring optional settings using ETC menu	
	Configuring detailed system settings on SETTINGS screen	
	Configuring system environment on Shell screen	

How to use this manual

Numbers and alphabetical letters

Each operation step begins with a boxed number (Example: `1` , `2` , `3`).

If it is not an operation step, a circled number or alphabetical letter is used (Example: ❶ , ❷ , Ⓐ , Ⓑ).

The numbers and alphabetical letters shown on each reference screen image correspond with those used in the operations steps that follow.

Use these symbols to locate where on the screen the relevant operation buttons and settings are provided.

Exclamation icons

: Indicates an important operational precaution.

: Indicates supplemental reference information.

The information provided in this manual is subjected to change without notice.

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Names and Functions of System Components

Front Panel
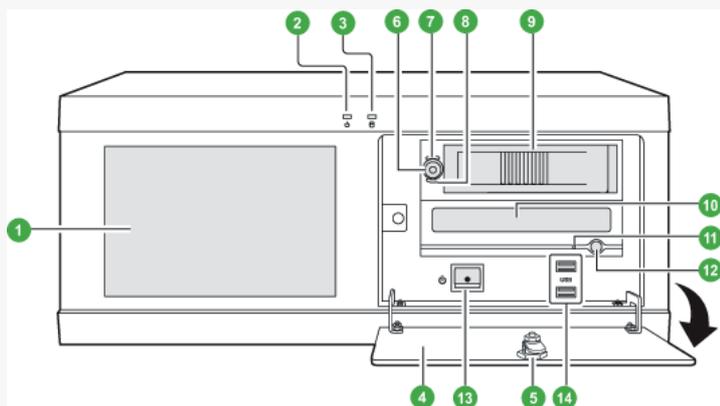
|			
1	Air duct	8	Access indicator (removable HDD)
2	Power indicator	9	Removable HDD
3	Access indicator	10	CD/DVD drive
4	Drive panel	11	CD/DVD access indicator
5	Drive panel key lock	12	CD/DVD eject button
6	Removable HDD key lock	13	Power switch
7	Power indicator (inner HDD)	14	USB terminal

Before turning the power on 13 , turn the standby switch on the rear panel on.

Be sure to power OFF the digital video recorder before installing or removing a removable hard disk.

Some hard disks may cause the digital video recorder to restart automatically when installed. They are recognized by the system when the digital video recorder restarts and become available for normal use.

Be sure to open the drive panel on the front face of the digital video recorder before you open/close the CD/DVD drive tray. Attempting to do so with the drive panel closed may cause the digital video recorder to restart.

Rear Panel
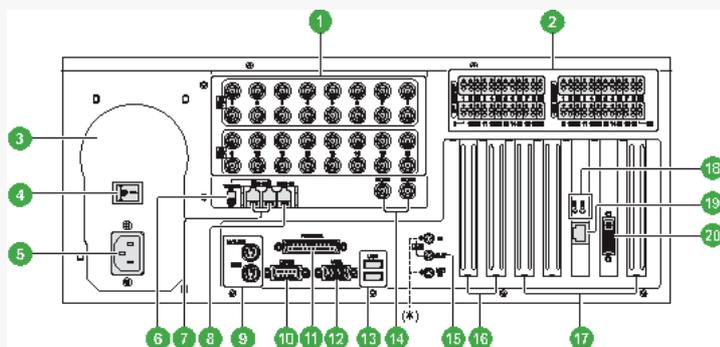
	Name	Description
1	IN/OUT terminals (video input/output)	-
2	ALARM IN/OUT teminals (alarm input/output)	-
3	Air duct	-
4	Standby switch	-
5	Power socket	-
6	RA-485 TERMINATE ON/OFF switch	-
7	RS-485 A/B port	To connect a Sanyo system controller, Sanyo PTZ camera, etc.
8	2nd RS-485 port	To connect a competitor's PTZ camea, etc.
9	MOUSE/KBD terminal (mouse/keyboard)	-
10	COM1 serial port	To connect expansion equipment, such as modems, ATM, POS, etc.
11	PRINTER port (printer)	-
12	VGA port (Monitor)	-
13	USB terminal	-
14	MON1/MON2 terminal (analog video output)	MON1: Multi-screen or single-screen MON2: Single-screen
15	LINE OUT terminal (audio output; mono)	-
16	PCI Express slot (for expansion)	-

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17	PCI bus slot (for expansion)	-
18	LINK/ACT indicator	LINK: On when connected to the network hub. ACT: Blinks when accessing the network.
19	LAN port (network)	-
20	Audio conversion port (audio input; mono)	Can input the audio of the 16 channels of the camera.
(*) The LINE IN/MIC IN terminals		are exclusively for service.

The digital video recorder has a built-in lithium battery that backs up the system clock information. The battery will supply power to keep the clock running if a power failure etc. causes the system to shut down.

The battery life is approximately two years. If this battery runs out, the system's time setting will be lost once the system is powered OFF. For battery replacement, consult the dealer from which you purchased the digital video recorder, or the authorized Sanyo Service Center nearest to you.

Specifications

Signal method	Conforms to the NTSC/PAL system (software switch) ▌ NTSC: 30 ips (Max. ips at CIF-size screen), 480 ips (Max. ips of digital video recorder) ▌ PAL: 25 ips (Max. ips at CIF-size screen), 400 ips (Max. ips of digital video recorder)
Compression method	Video: MPEG 4, Audio: G.721, 8 kHz sampling rate
Operating system	Microsoft® WindowsR XP
CPU	Intel® Pentium® 4 CPU 3.00 GHz
RAM	512 MB, DDR2 PC2-4200
Resolution	NTSC: 720×480, 720×240, 360×240 PAL: 720×576, 720×288, 360×288
Hard disk	▌ 1 unit integrated (80GB), it is possible to expanded to 2 units (using S-ATA) ▌ Removable HDD ×1 (using S-ATA)
DVD/CD	Integrated DVD/CD drive ×1 Maximum speed:

Disc	CD-ROM	CD-R	CD-RW	DVD-ROM	DVD-R	DVD-R DL
Read	–	48× (7.2MB/sec)	32× (4.8MB/sec)	–	18× (24.3MB/sec)	8× (10.8MB/sec)
Write	48× (7.2MB/sec)	40× (6.0MB/sec)	40× (6.0MB/sec)	16× (21.6MB/sec)	12× (16.2MB/sec)	8× (10.8MB/sec)

Disc	DVD-RW	DVD-RAM	DVD+R	DVD+R DL	DVD+RW	
Read	6× (8.1MB/sec)	12× (16.2MB/sec)	18× (24.3MB/sec)	8× (10.8MB/sec)	8× (10.8MB/sec)	
Write	8× (10.8MB/sec)	12× (16.2MB/sec)	12× (16.2MB/sec)	8× (10.8MB/sec)	8× (10.8MB/sec)	

Expansion slot	PCI Express ×2, PCI bus ×3
Communications	RS485/coaxial superimposition/network
Video input	VBS/VS 1.0 V (p-p), 75Ω, BNC (16CH)
Video output	▌ Loop through, BNC (16CH) ▌ VGA monitor: 15-Pin D-bus ×1 ▌ Multi-screen analog monitor: VS 1.0 V (p-p) 75Ω ×1 ▌ Single-screen analog monitor: VS 1.0 V (p-p) 75Ω ×1
Audio input	MicroCross® ×16
Audio output	−8 dBs 600 Ω, unbalanced mini jack ×1
Alarm input	100 ms or more, NO or NC available, Push lock ×16
Alarm output	Max. 25mA, NO or NC available, Push lock ×16
RS-485	RJ11 ×2, PTZ port ×1
RS-232C	COM/232C/communication: 9-pin D-sub ×1
Printer	25-pin D-bus ×1
USB	Conforms to 2.0/1.1, Front ×2/Rear ×2
Mouse	PS/2 mouse with wheels, 6-pin mini-DIN ×1
Keyboard	PS/2, 6-pin mini-DIN ×1
Interface	RJ-45 (10Base-T/100Base-TX/1000Base-T) ×1
Protocol	UTP, TCP/IP, HTTP, DHCP, SMTP, NTP, PPP
Software	DVR Utility
Power supply	AC 100 − 240 V, 50 − 60 Hz
Current consumption	8.0 A − 4.0 A
Operating Environment	▌ Temperature: 5°C − 40°C (41°F − 104°F) ▌ Humidity: less than 80 % (non-condensation)
Dimensions (W × H × D)	431 × 177 × 456 mm (17.0" × 7.0" × 18.0")
Weight	Approx. 21.8 kg (48.1 lbs.)

Please note that specifications and unit exterior design are subject to change without notification.
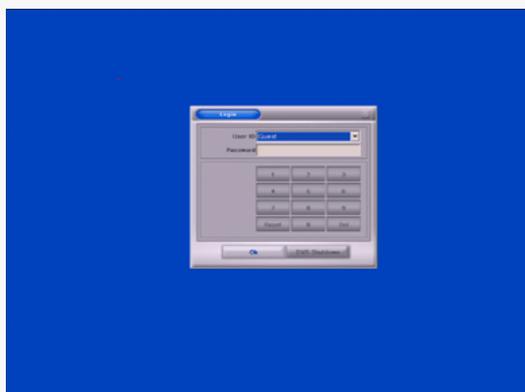
Power ON, Login, Logoff, and Shutdown

Starting the System

Open the drive panel with the supplied key and power ON the digital video recorder.
The startup screen appears and the digital video recorder starts loading the system program.
When finished loading the program, the system presents the [Login] screen.

Startup screen

[Login] screen

Logging into the System

Log into the system using your user name. On the [Login] screen, perform the following operation.

Default user name settings

The digital video recorder is shipped with the following two default user name settings.
If this is the first time you started the digital video recorder, log into the system as "Administrator".

Guest: By default, "Guest" is defined as a monitoring user. A monitoring user can view video from all cameras, but has an operating authority limited to working with the LIVE screen.
You may alter the operating authority of "Guest" in the User/Password settings, accessible from the SETTINGS screen.
(By default, "Guest" has no password setting and can log into the system without entering any password.)

Administrator: "Administrator" has all operating authorities required for system administration.
(By default, Administrator has a password of "0000.")

To register a new user or change the password or operating authority settings, you need to access the User/Password settings from the SETTINGS screen.

From security reasons, change the default password for "Administrator" after logging into the system.

Logging into the system

1 **Click the down-arrow button next to the [User name] field.**

The pull-down menu appears, showing all registered users. Select the user name you want to use to log into the system.
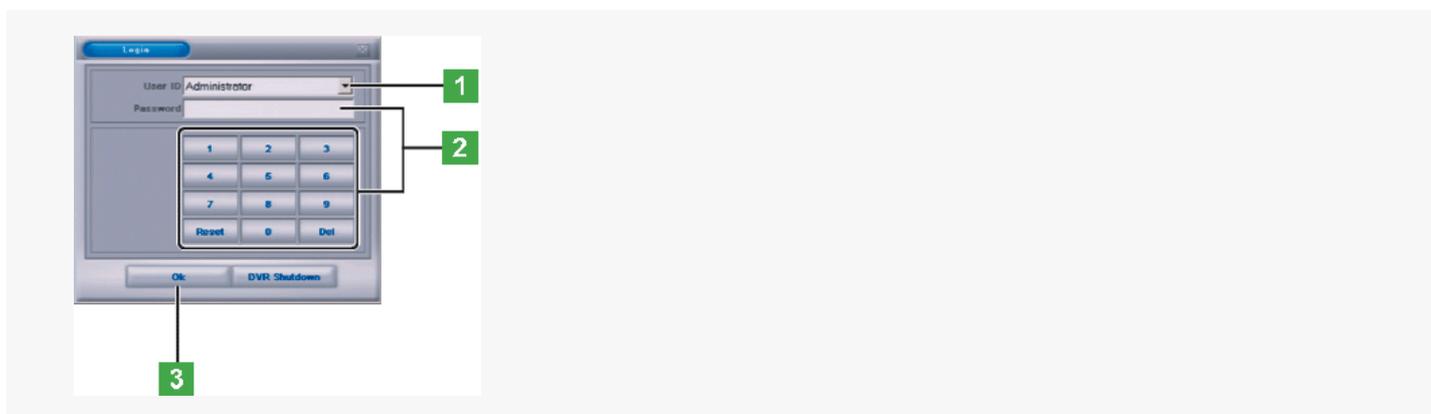
2 **In the [Password] field, type a valid password for the selected user.**

You may also use the numeric keypad.

- **Reset** : Clears all characters you typed.
- **Del** : Clears the last character you typed.

3 **Click** **OK** .

You are successfully logged into the system. The digital video recorder now shows the LIVE screen.

> You may configure the [Auto login options] setting in the User/Password settings accessible from the SETTINGS screen. This eliminates the need for entering a password because you automatically log into the system with the user name and camera layout settings you specified after power ON.

Logging Out of the System

To log into the system as a different user, you need to once log out and then log into the system again.

1 **Click the [LOGOUT] mode button.**

The logout confirmation dialog box appears.
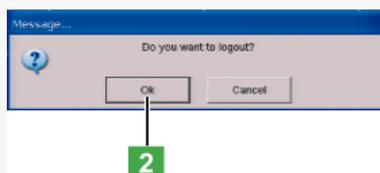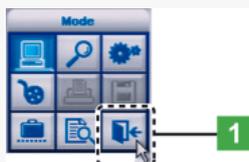
2 **Click** **OK** .

You are now logged out of the system successfully. The digital video recorder returns to the [Login] screen.

Shutting Down the System

To shut down the system, you must have the "Shutdown" operating authority. Before proceeding to the following steps, configure the [Authority] setting in the User/Password settings accessible from the SETTINGS screen.

1 **Display the [Login] screen.**

If you are logged into the system, once log out and then log into the system again.

2 **Select an user name with the "Shutdown" operating authority.**

3 **In the [Password] field, type a valid password and click** **DVR Shutdown** .

The DVR shutdown confirmation dialog box appears.
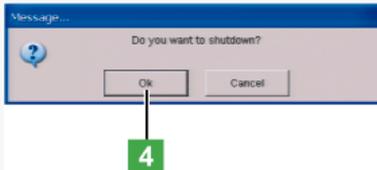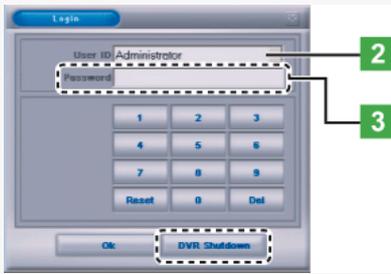
4 **Click** OK .

The screen closes and the digital video recorder shuts down automatically in approximately 15 seconds.

You may also click the [Go To Shell] button on the SETTINGS screen to shut down the system.

Mode Button Overview

A Selectable buttons: Shown with a blue icon.
B Currently selected button: Shown with the blue background.
C Unselectable buttons: Shown with a gray icon.

| Button	Displayed Screen/Menu	Operation Description
1 LIVE	LIVE screen	Displays the LIVE screen, where a monitoring user can monitor live video. Besides monitoring live video, these users can perform suspicion recording, one-channel search, and other operations.
2 SEARCH	SEARCH screen	Displays the SEARCH screen, where you can search for recorded video for playback. On this screen, you can play playback video and backup video simultaneously on a multiple-screen display.
3 SETTINGS	SETTINGS screen	Displays the SETTINGS screen used by "Administrator" users. These users can configure various settings for the system.
4 MANUALLY BACKUP	Manually Backup screen	Displays Manually Backup screen, where you can back up recorded video onto a recording medium such as a CD-ROM, DVD, or removable hard disk. (This button is only accessible from the LIVE screen only.)
5 PRINT	Print screen	Displays the Print screen, where you can print playback video. (This button is accessible from the SEARCH screen only.)
6 COPY	Copy screen	Displays the Copy screen, where you can copy playback video. Video data is copied using the AVI (for moving images) or BMP/JPG (for still images) format. (This button is accessible from the SEARCH screen only.)
7 ETC	Pull-down menu	Displays a pull-down menu that provides various options.
8 LOG VIEWER	Log Viewer screen	Displays the Log Viewer screen that provides a list of operation logs (history).
9 LOGOUT	Login screen	Displays the Login Screen, where you can log out of the system.

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Working with the LIVE Screen

The LIVE screen appears first after you log into the system.
On this screen, you can monitor live video, operate a PTZ (Pan/Tilt/Zoom) camera, and perform suspicion recording and playback of recorded video from a selected channel.
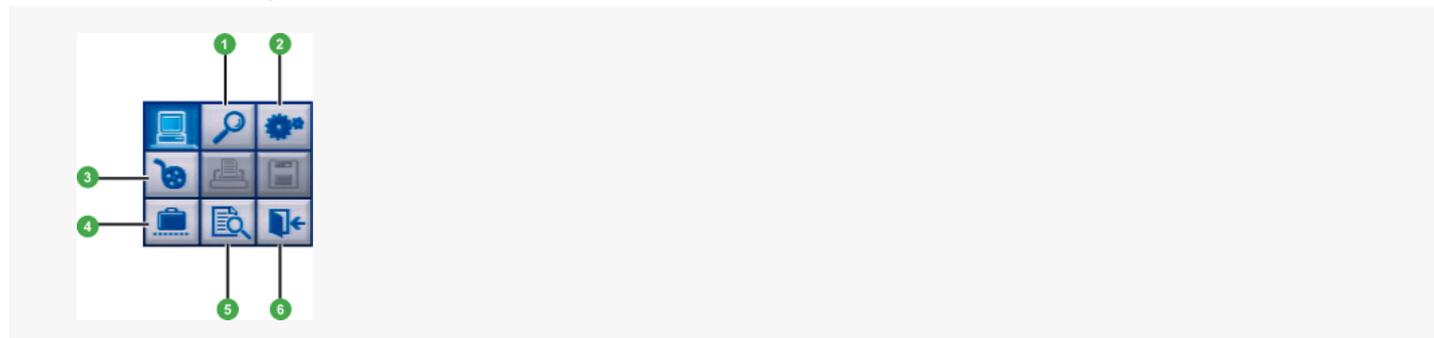
LIVE Screen Components and their Functions
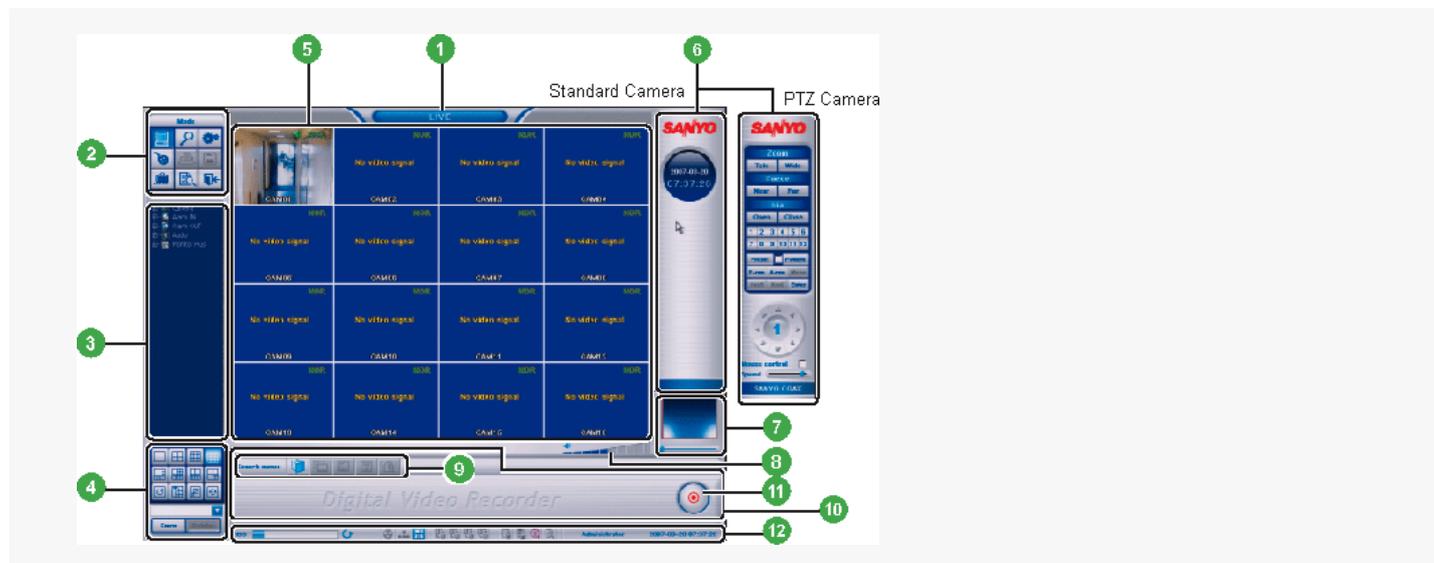
① Screen title

"LIVE" is shown as the screen title.
The title is "PTZ SETTINGS", however, when you monitor video from a PTZ camera in a single-screen layout.

② Mode buttons

On the LIVE screen, the following Mode buttons are available.

①	SEARCH button	Displays the SEARCH screen.
②	SETTINGS button	Displays the SETTINGS screen.
③	MANUALLY BACKUP button	Displays the Manually Backup screen.
④	ETC button	Displays the pull-down menu.
⑤	LOG VIEWER button	Displays the Log Viewer screen.
⑥	LOGOUT button	Displays the Login screen.

③ Camera Information

Camera information for all channels is listed in a tree format.
→Refer for details.

④ Screen Selection buttons

Use these buttons to switch the screen layout or the display method.
→Refer for details.

⑤ Video display area

Live video is displayed here.
→Refer for details.

> If no camera is connected, the following message appears based on the camera type (in [Camera]) you set in the Camera settings accessible from the SETTINGS screen:
>
> "Video": No video signal
> "LAN": Disconnection
> "None": "Digital Video Recording System" logo

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6 Camera Control panel

Switching to a single-screen layout when you monitor video from a PTZ camera causes the Camera Control panel to appear to enable remote control.
When this panel is not displayed, the current date and time are shown.
→ Refer for details.

7 Zoom panel

You can perform zoom-in and zoom-out operations (up to 3 times maginification) when you monitor video from a camera in a single-screen layout.
→ Refer for details.

8 Audio volume

You can adjust the sound volume for the channel for which audio output is set to "ON".
→ Refer for details.

9 Search menu buttons

When the LIVE screen appears, only the [One Channel Search] button is usable.
Clicking the [One Channel Search] button, however, enables you to use all buttons in the Search menu.
→ Refer for details.

10 Search panel display area

Clicking the [One Channel Search] button causes the Search panel to appear.
→ Refer for details.

11 Suspicion recording button

Use this button to perform manual recording in emergencies.
→ Refer for details.

 : Recording stopped.

 : Recording in progress.

12 Status bar

The status bar shows information such as hard disk usage and the connection statuses of the network device or recording medium.
→ Refer for details.

Information Displayed with Live Video

On the LIVE screen, live video from the connected cameras is displayed in the video display area.
Each video is displayed with the following information.

Display example for single-screen layout

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Display example for multiple-screen layout

❶ Camera title

This is the camera title you configured in the [Camera Title] setting in the Camera settings, which can be accessed from the SETTINGS screen.
Default setting: CAM01 to CAM16

❷ Zoom magnification

The current zoom magnification (up to 3 times) is shown here when you monitor video in a single-screen layout.
To change the zoom magnification, operate the zoom slider.

❸ Recording mode

The current recording mode is shown here.

- NOR: Normal recording
- MOT: Motion recording
- ALM: Alarm IN recording
- TXT: Text recording
- SUSP: Suspicion recording
- M/AL: Simultaneous Motion/Alarm IN recording
- M/T: Simultaneous Motion/Text recording
- AL/T: Simultaneous Alarm IN/Text recording
- M/AL/T: Simultaneous Motion/Alarm IN/Text recording
- 🔊: Audio recording

> - The "NOR" (Normal recording) indicator is not shown when the normal recording is performed simultaneously with the Motion, Alarm IN, or Text recording.
> - To set the Normal, Motion, Alarm IN, or Text recording mode, access the Schedule settings from the SETTINGS screen.
> - To set the Pre-alarm recording mode, configure the [Pre] setting in the Camera settings accessible from the SETTINGS screen.
> - To set the Audio recording mode, configure the [Audio] setting in the Camera settings accessible from the SETTINGS screen.
> - Audio recording is not possible if the [Duration] setting in the Camera settings accessible from the SETTINGS screen is "3 Sec" or less.

Selecting the Screen Layout and Display Method

To switch the screen layout or the display method of the video you are monitoring, use the Screen Selection buttons.
The currently selected button is shown with a blue icon.

Screen layout

Besides the single-screen display, you can select seven types of multiple-screen layouts.
In the default layout, each screen displays live video in the order of camera numbers.
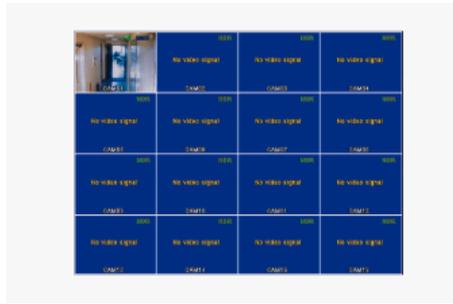

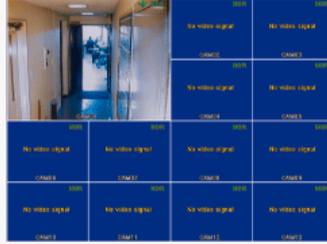❶ Single-screen (1 × 1)

❷ Quad-screen (2 × 2)

❸ 9-screen (3 × 3)

❹ 16-screen (4 × 4)

5 8-screen (Main 1 + Sub 7)

6 13-screen (Main 1 + Sub 12)

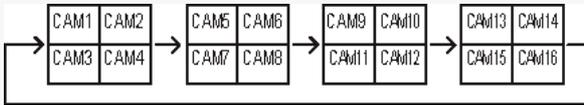**7** 10-screen (Main 2 + Sub 8)

8 7-screen (Main 3 + Sub 4)

Switching the camera images in a selected screen layout

You can switch the camera images displayed in the currently selected screen layout in the order of camera numbers by repeatedly clicking the same Screen Selection button.


To switch camera images automatically, use the [Sequence] button.

Switching the screen layout by clicking on a screen

Click on a screen to switch between the single-screen and multiple-screen layouts.

Clicking in a multiple-screen layout: The clicked video appears in a single-screen layout.

Clicking in a single-screen layout: The previously selected multiple-screen layout is restored.
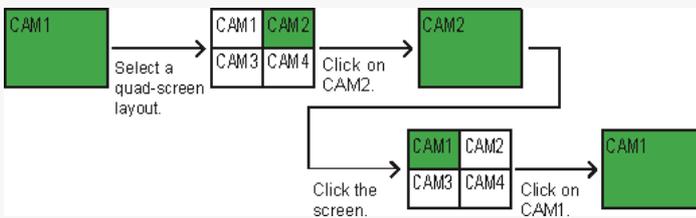
Although the system shows a 16-screen layout when powered ON, if you log out and then log in again, it will restore the screen layout setting used when you logged out.

However, if you shut down the system or switch to the Shell screen, the system will show the 16-screen layout when you log in, just as when started up.

Display method

1 : **Button to switch screen automatically (Sequence)**

Clicking this button automatically switches the displayed live video to the next images in the order of camera numbers, using the screen layout being selected.
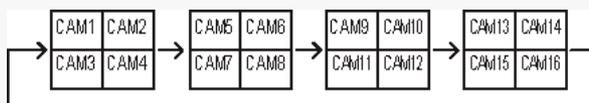
To stop the auto screen switching, click the [Sequence] button again.
You may use other Screen Selection buttons to stop the auto screen switching.

	To set the screen switching time, select [Layout sequence time] in the ETC menu.
	The auto screen switching feature is not available in the 16-screen layout mode.

2 : **Button to initialize the screen layout (Initialize Layout)**

Use this button to restore the default screen layout (in order of camera numbers) when using a preset camera layout.

3 : **Button to switch screens when an alarm event occurs (Event Popup)**

Selecting this button by clicking causes the alarm video to appear in a single-screen layout, if an alarm event occurs.

Normal display

The alarm video appears in a single-screen layout.

The previous screen will be restored as soon as the set event popup time is elapsed.
To disable the Event Popup feature, click the button again.

	To enable the Event Popup feature, set the Motion, Alarm IN, or Text recording mode for the desired channel in the Schedule settings accessible from the SETTINGS screen.
	To set the time during which alarm video is displayed, select [Event popup time] in the ETC menu.

4 : **Button to switch to the full-screen mode (Enlarge)**

Clicking this button (or right-clicking on a screen) causes only the camera's image to appear in the maximum display size of the monitor, using the screen layout being selected.

Normal screen mode

Full-screen mode

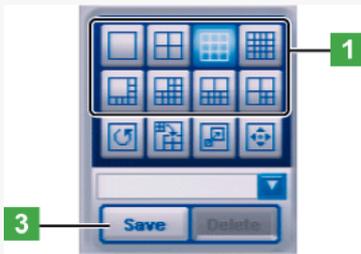Right-click on a full-screen display to return to the normal screen mode.

Presetting Camera Layouts

You can configure and preset the video layouts of your cameras according to your preference.

The configured camera layouts can be preset on a user basis.
In other words, you cannot display camera layouts preset by other users.

Presetting a camera layout

1 Using the Screen Layout buttons, select the screen layout in which you want to place video.

2 In the Camera Information panel, open the [Camera] folder, select a camera number, and drag it to the desired position.
The video in that position is now replaced with that of the camera you dragged.

Example of camera layout configuration in 9-screen layout

Ⓐ Drag Camera01 to the CH2 (Camera02) position.
Ⓑ Drag Camera08 to the CH6 (Camera06) position.
Ⓒ Drag Camera14 to the CH7 (Camera07) position.

Ⓐ Camera02 is replaced with Camera01.
Ⓑ Camera06 is replaced with Camera08.
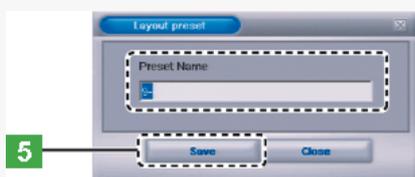Ⓒ Camera07 is replaced with Camera14.

3 Click **Save** .
The [Layout preset] dialog box opens.

4 In the [Preset Name] field, type a name (up to 22 characters) for the camera layout.
Notice that, in the [Preset Name] field, the display symbol of the selected screen layout has been filled automatically.

Screen layout	Display Symbol of Screen Layout
Single-screen (1 × 1)	1-
Quad-screen (2 × 2)	4-
9-screen (3 × 3)	9-
16-screen (4 × 4)	16-
8-screen (Main 1 + Sub 7)	1P7-
13-screen (Main 1 + Sub 12)	1P12-
10-screen (Main 2 + Sub 8)	2P8-
7-screen (Main 3 + Sub 4)	3P4-

5 Click **Save** in the dialog box.
The configured camera layout is preset and its preset name is added to the pull-down menu.
If any duplicated preset name exists, re-enter a correct preset name according to the displayed message.

Switching to a preset camera layout

1 Select the preset name of the camera layout.
The layout switches to the specified camera layout.

 Note that the pull-down menu shows only the preset names of the camera layouts preset by the user currently logged in.
Those preset by other users are not shown.

2 Click the [Initialize Layout] button.
The previous camera layout (in the order of camera numbers) is restored.

Deleting a preset camera layout

1 Select the preset name of the camera layout you want to delete.

2 Click **Delete** .

The deletion confirmation dialog box opens.

3 Click **OK**.

The selected preset name disappears from the pull-down menu.

Working with the Camera Information Panel

Camera information for all channels is listed in a tree format.

The tree list contains five folders, each of which can be opened and closed by clicking the + / - button (or double-clicking the folder name/camera title).
By opening each folder, you can view and change settings for that camera from the context menu.
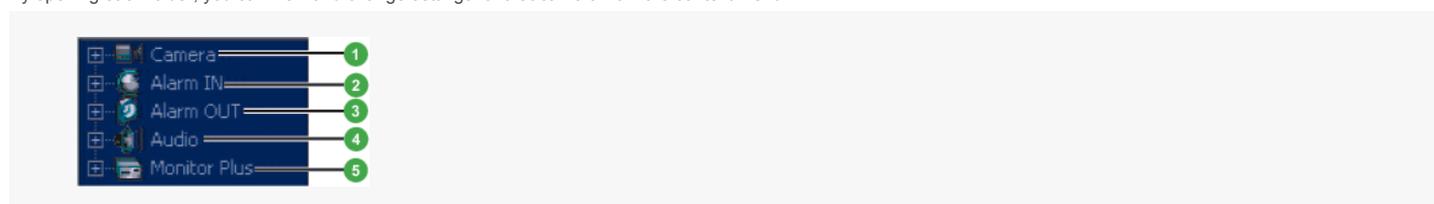
### 1 [Camera] folder

Viewing camera settings

Open this folder to view the camera settings configured in the Camera settings accessible from the SETTINGS screen.

A Camera number
B Camera title
C Resolution
D Protocol
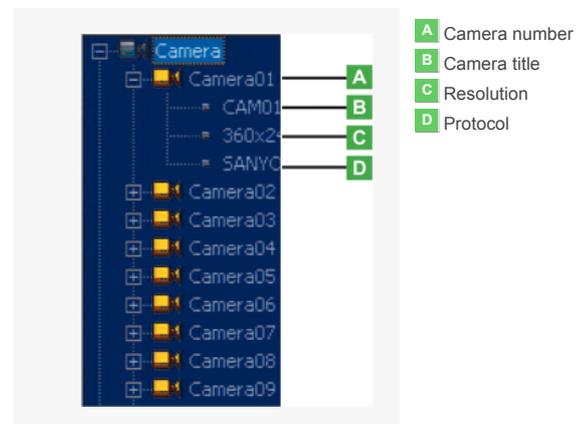
Setting in the context menu

Set which camera's image you want to view on the spot monitor connected to the digital video recorder.
To do so, right-click the desired camera number and, in the context menu, select or deselect [Spot Out] to turn On (a checkmark appears) or Off (a checkmark disappears) the output to the spot monitor, respectively.
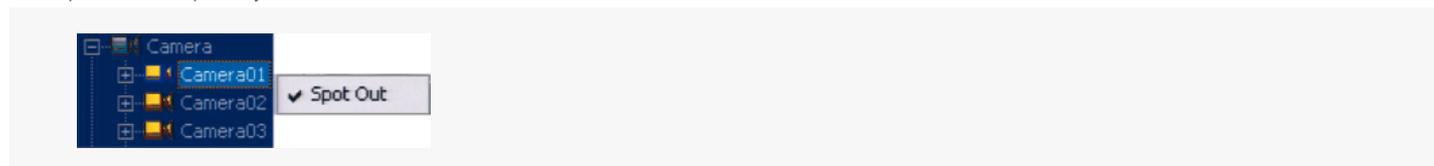
> If you set the Spot Out mode to "Fixed Mode" by selecting [Spot Out mode] in the ETC menu, you can specify only one camera to output video signals to the spot monitor (Default setting: Camera01).
>
> Note that you cannot specify network cameras.

2 [Alarm IN] folder

Open this folder to view the state of alarm inputs from external devices in the order of Alarm IN numbers.

A No alarm input
B Alarm being input
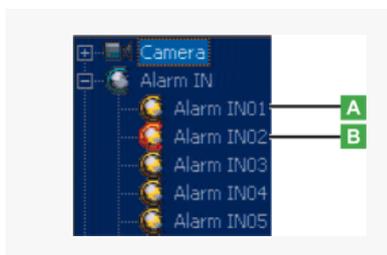
If you selected the [Alarm IN Suspicion Record] check box in the Alarm settings accessible from the SETTINGS screen, suspicion recording will occur automatically in conjunction with the input to Alarm IN16.

③ [Alarm OUT] folder

This folder contains the alarm output settings.
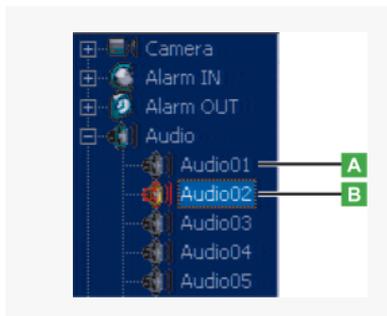Right-click the desired Alarm OUT number and, in the context menu, turn On/Off the alarm output.
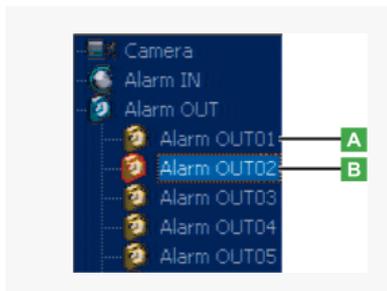
A Alarm output is "Off".
B Alarm output is "On".

④ [Audio] folder

This folder contains the audio output settings.
Right-click the desired Audio number and, in the context menu, turn On/Off the audio output.

A Audio output is "Off".
B Audio output is "On".

To enable the audio output, set [Audio] to "ON" in the Camera settings accessible from the SETTINGS screen.

Note that you can turn "ON" the audio output for only one camera.

These settings are provided solely for audio output and do not affect the audio recording behavior you configured in the [Audio] setting in the Camera settings.

⑤ [Monitor Plus] folder

This folder contains information on networked DVR servers. You can right-click this folder to perform operations related to the "Monitor Plus" feature from the context menu.

Operations on the folder

Right-clicking the [Monitor Plus] folder allows you to perform the following operations from the context menu.
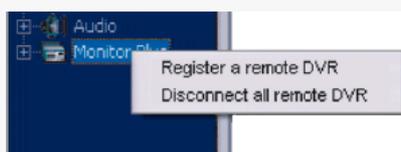
Register a remote DVR: Displays the [Server List] screen for DVR server registration.
Disconnect all remote DVR: Disconnects all DVR servers currently connected.

You may also register DVR servers in the [Register a remote DVR] setting, accessible by selecting [Monitor Plus] from the ETC menu.

Operations on a DVR server

Opening the [Monitor Plus] folder reveals the registered DVR servers.
You can then right-click the desired DVR server to perform the following operations from the context menu.

Connect to remote DVR: Establishes a connection to the selected DVR server.

Disconnect remote DVR: Disconnect the selected DVR server.

When connected, DVR servers are shown with a red border.

Zoom In

In a single-screen layout, you can perform zoom-in and zoom-out operations.

**1** **Click the camera's video you want to zoom in.**

In the Zoom panel, a thumbnail of the selected video appears.

2 **Operate the zoom slider.**

Move the slider to the right to increase the zoom magnification.

The current zoom magnification (1.00 to 3.00 times) is shown in the lower right of the screen.

The red rectangle on the thumbnail video indicates the area you currently zoom in.

Zoom Magnification   Zoom Panel
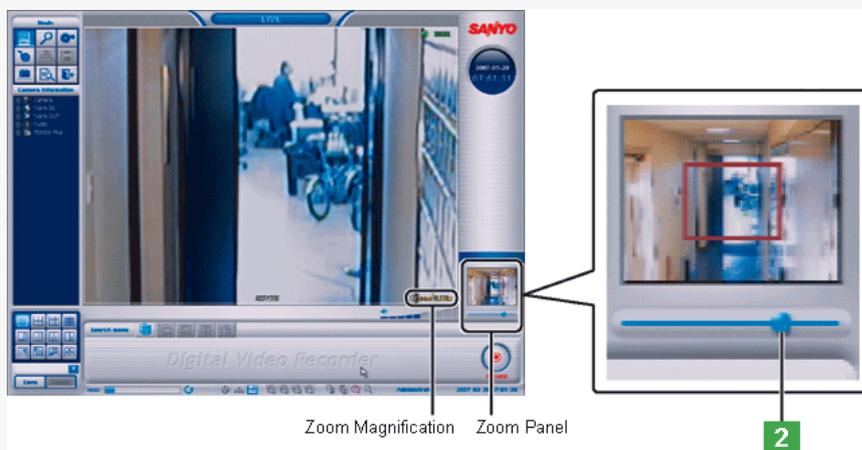
3 **Click the video again.**

Now, the video returns to the standard magnification you saw before zooming in.

When using a network camera, no thumbnail image is shown on the Zoom panel.

Audio Output

1 **In the Camera Information panel, open the [Audio] folder and right-click the desired channel. Then, in the context menu, set the audio output to "ON".**

Note that you can turn "ON" the audio output for only one channel.

2 **Click the camera's video for which you turned "ON" the audio output.**

The speakers connected to the digital video recorder start sounding.

3 **Adjust the sound volume using the volume control.**

To enable the audio output, set [Audio] to "ON" in the Camera settings accessible from the SETTINGS screen.

Although the digital video recorder can record audio signals from up to 16 channels, its output to speakers is limited to only one channel.

The sound may not output in sync with the video images.

The volume control cannot be used to turn "Off" the audio output.

Remote Controlling a PTZ Camera

When you monitor video from a PTZ camera in a single screen layout, the Camera Control panel is shown.
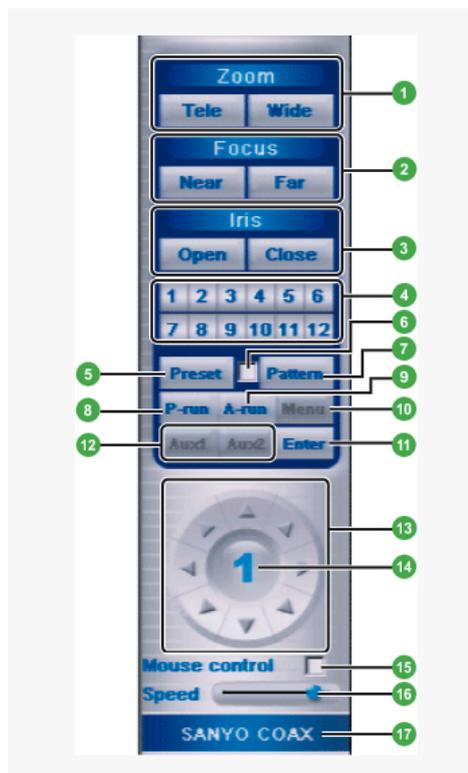
Notice that the screen title has been changed to "PTZ SETTINGS".

Now, besides normal PTZ operations, you can register preset positions and auto panning patterns.

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Before performing PTZ operations, configure the [Protocol] setting in the Camera settings accessible from the SETTINGS screen.

The features you can control using the Camera Control panel depend on the camera model.

1	Zoom	Use Tel / Wide to zoon in/out the video.
2	Focus	Use Near or Far to adjust the focus.
3	Iris	Use Open or Close to adjust the iris.
4	Preset numbers	Use these buttons to select a registration number for each preset position.
5	Preset	Use this button to register a preset position or orient the camera to a preset position.
6	Registration check box	Use this check box to enable or disable the preset position registration.
7	Pattern	Use this button to continuously execute a registered pattern of movements (movements according to a trajectory or command).
8	P-run	Use this button to move the camera around two or more preset positions in the order of the preset numbers so that you can monitor what's happening in these positions.
9	A-run	Use this button to move the camera to and fro between two preset positions.
10	Menu	Use this button to display the camera's menu setting screen.
11	Enter	Use this button to display the camera's menu setting screen. Use this button to switch to the next screen, or enter the setting value you typed.
12	Aux 1- 2	Reserved for additional features. (For how to use these buttons, consult the dealer from which you purchased the digital video recorder.)
13	PAN/TILT controller	Use this control to adjust the orientation of the camera.
14	Camera number	The currently selected camera number is shown.
15	Mouse control	Select this check box to use the mouse to control the camera orientation.
16	Speed	Use this slider bar to set how fast you can move around on the image during panning/tilting or screen shooting. The speed increases as you move the slider bar to the right.
17	Protocol information	The currently selected PTZ protocol is shown.

Registering a preset position

Camera states such as the orientation and zoom magnification can be registered as preset positions. You can register up to 12 preset positions.
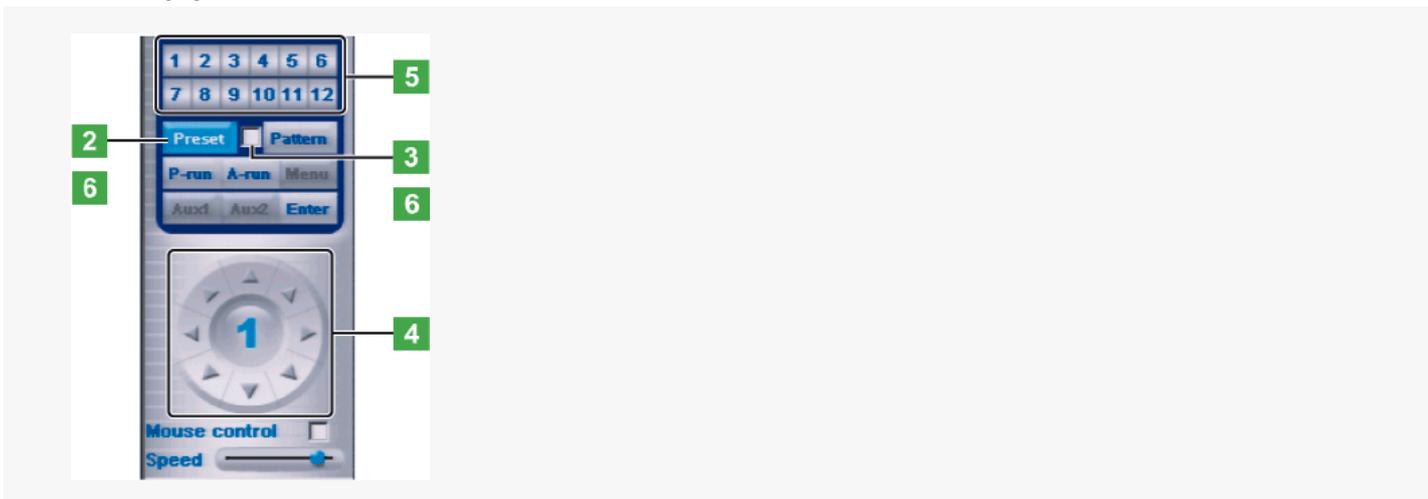
The preset positions may also be registered and deleted from the [PTZ] tab of the Camera settings accessible from the SETTINGS screen.

1 Click the camera's video.

The video image is now displayed in a single-screen layout.

2 Click Preset .

The button is now highlighted.

3 Select the Registration check box.

4 Set the camera orientation using the PAN/TILT controller.

Adjust also the zoom, focus, and iris settings as required.

5 Select a preset number.

The selected preset number is used to register camera states such as the current orientation and zoom magnification as a preset position.

6 Click Preset and deselect the Registration check box.

The button returns to the normal display (no more highlighted). The preset position has been registered.

Moving the camera to a preset position

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1 **Click the camera's video.**

The video image is now displayed in a single-screen layout.

2 **Select a preset number by clicking.**

The camera orientation has been set to the registered preset position.

Deleting a preset position

1 **Click the camera's video.**

The video image is now displayed in a single-screen layout.

2 **Click** `Preset` .

3 **Deselect the Registration check box.**

4 **Select the preset number you want to delete.**

The selected preset position has been deleted.

Executing a pattern of movements (Pattern)

You can continuously execute a registered pattern of movements (movements according to a trajectory or command).

1 **Click the camera's video.**

The video image is now displayed in a single-screen layout.

2 **Click** `Pattern` .

The button is highlighted and the camera follows the registered pattern of movements only while the mouse button is held down.

3 **Click any button other than** `Pattern` .

The camera stops following the registered pattern of movements.

Patrolling preset positions (P-run)

You can monitor what's happening by moving the camera through two or more preset positions in the order of preset numbers.

1 **Click the camera's video.**

The video image is now displayed in a single-screen layout.

2 **Click** `P-run` .

The button is highlighted and the camera patrols the preset positions only while the mouse button is held down.
During a patrol run, the preset number for the current position is highlighted.

3 **Click any button other than** `P-run` .

The camera stops patrolling the preset positions.

Moving the camera to and fro between two points (A-run)

You can move the camera to and fro between the registered start and end points.

1 **Click the camera's video.**

The video image is now displayed in a single-screen layout.

2 **Click** `A-run` .

The camera starts moving to and fro between the start and end points.

3 **Click any button other than** `A-run` .

The camera stops moving to and fro between the start and end points.

Controlling the mouse

Instead of using the PAN/TILT controller, you can use the mouse to change the camera orientation.

1 Select a camera.

2 **Select the [Mouse control] check box.**

Now, you can use mouse to control the camera.

3 **Click the left mouse button and move the mouse while holding down the left mouse button.**

The camera orientation changes according to the mouse movement.
Use the [Speed] slider to adjust the mouse control speed.

Shooting the screen

If you are using a three-button mouse, clicking the center mouse button causes the camera orientation to change so that the clicked point appears at the center of the screen.
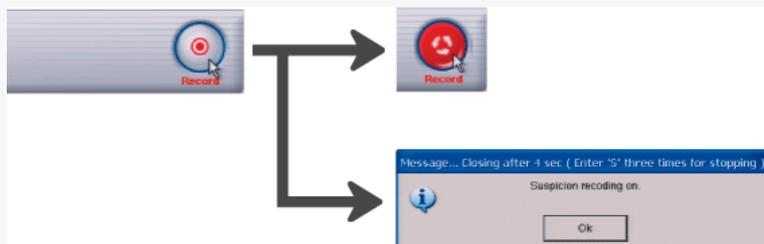
Suspicion Recording

To perform manual recording in emergencies, follow the steps below.
You can record video images from all cameras simultaneously, regardless of the screen layout.

1 **Click the Recording button (in white).**

The digital video recorder starts recording as soon as you click the Recording button, with the following confirmation message.
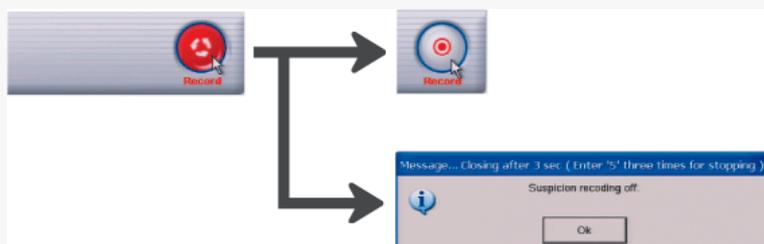
To close the confirmation message box, click **OK**. Or, the message box will disappear automatically in 5 seconds.

When recording starts, the Recording button turns red and the recording mode indicator (SUSP) appears in the upper right of the screen.

2 **Click the Recording button (in red).**

The recording stops with the following confirmation message.

To close the confirmation message box, click **OK**. Or, the message box will disappear automatically in 5 seconds.

When recording stops, the recording button turns back white and the recording mode indicator (SUSP) in the upper right of the screen disappears.

Stopping suspicion recording causes the digital video recorder to return to the previous recording mode you specified in the Schedule settings accessible from the SETTINGS screen.

Suspicion recording occurs using the recording rate of Normal recording. Therefore, when you play back recorded video, the recording mode indicator shows "NOR".

Searching for and Playing Back Video from Single Channel

On the LIVE screen, you can search for and play back recorded or backup video from a single channel by specifying the date and time.
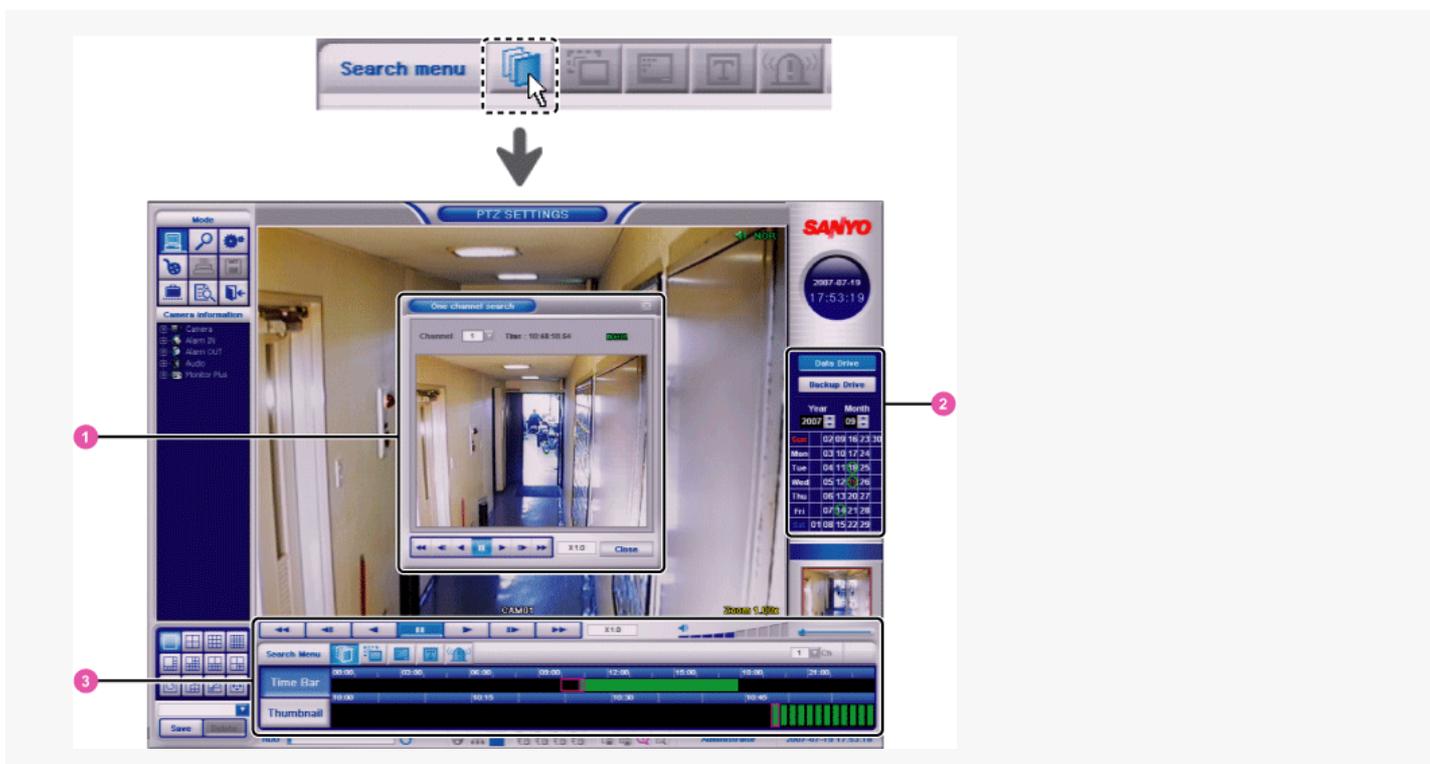
To play back video from more than one channel simultaneously, use the [Search menu] on the SEARCH screen.

[One channel search] window

In the [Search menu], click the [One Channel Search] button. Then, the following window and panels appears on the LIVE screen:
- ❶ **[One channel search] window**
- ❷ **Calendar panel**
- ❸ **Search panel**

> If you are using a three-button mouse, double-clicking the center mouse button also displays the screen for one channel search operation.

Functions of [One channel search] window components
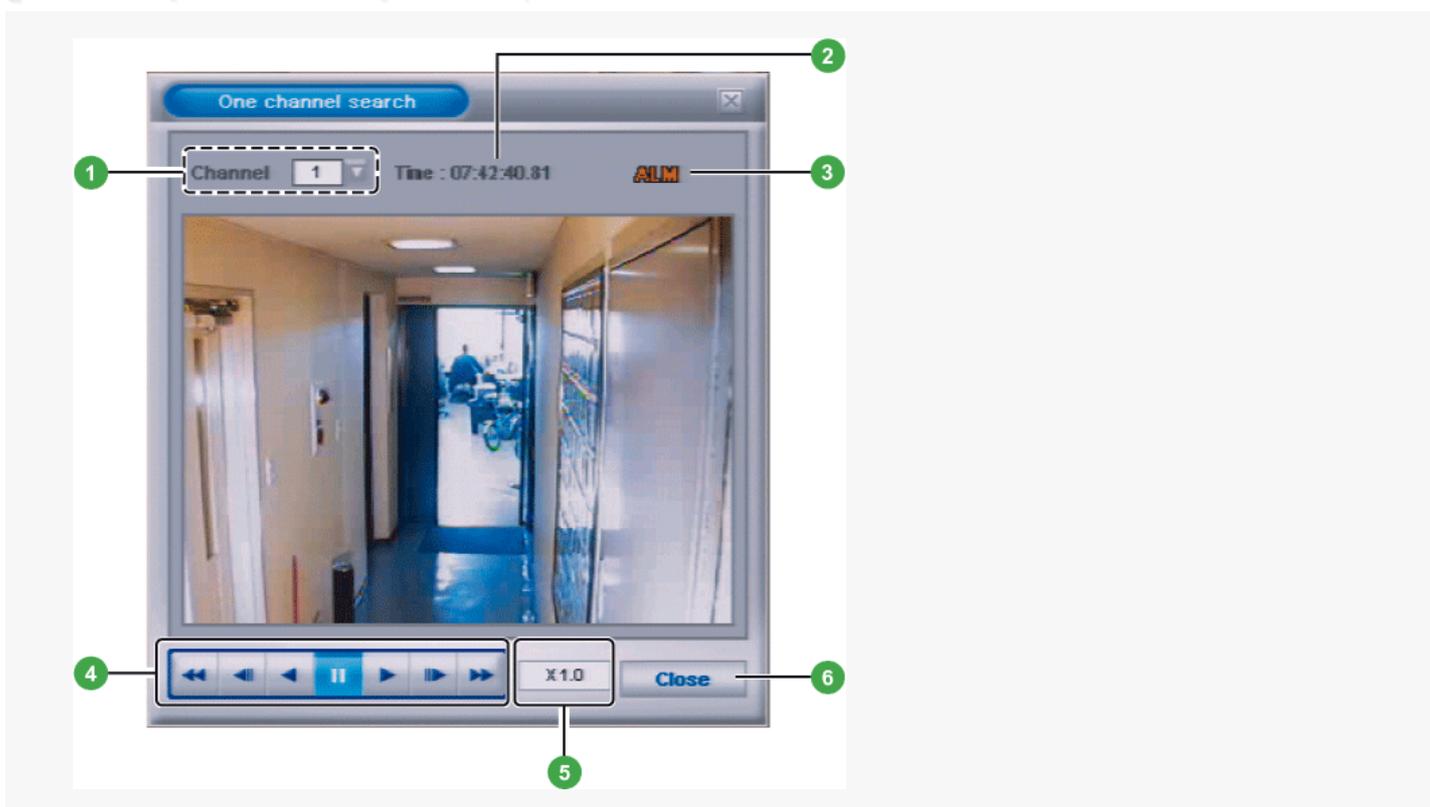
1 Channel selector (Channel)

2 Recording time (Hr/Min/Sec)

3 Recording mode

4 Playback buttons

|	
▶▶ ◀◀	: Fast-forward/rewind playback Provides 4-step speed adjustment (×2.0, 3.0, 4.0, and 5.0).
▶ ◀	: Frame-forward/rewind
▶ ◀	: Forward/reverse playback

: Pause

⑤ Playback speed indication

Shows the playback speed in six steps (×0.5, 1.0, 2.0, 3.0, 4.0, and 5.0).

⑥ Close

Closes the window.

Functions of Calendar panel components

On the Calendar panel, select whether to play recorded or backup video and specify the recording date of the video.
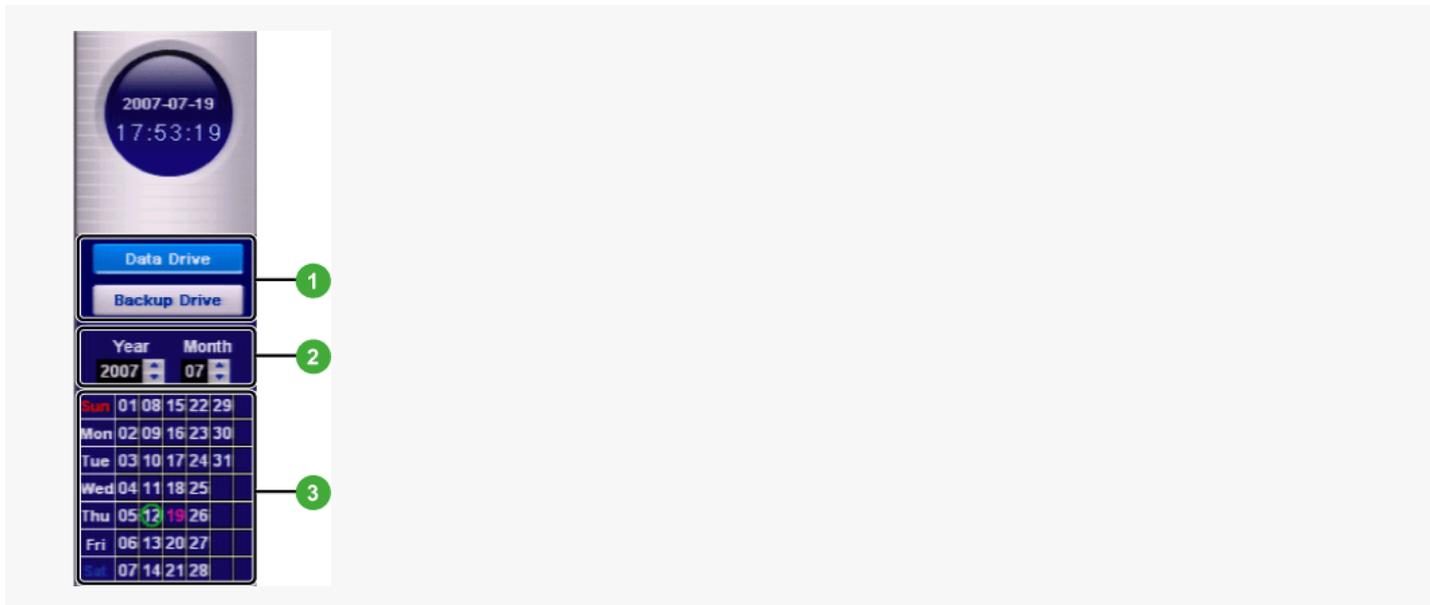
① Drive selection buttons

Data Drive

Use this button to play back recorded video stored on the data drive of the digital video recorder.

Backup Drive

Use this button to load and play back backup video stored on the backup drive.

Click the button and, in the [Select the folder] dialog box, select the folder where the backup video is stored.

> The color of the Calendar panel changes as follows depending on the selected drive type.
> Data Drive: Blue, Backup Drive: Orange

② Year/month setting

Use the spin buttons to display the calendar for the desired month of the year.

③ Calendar

Shows the calendar for the month of the year you specified in ② .
Select the video you want to play back by clicking the calendar day with recorded video data (indicated by a green circle).

Functions of Search panel components

Clicking **Time Bar** / **Thumbnail** toggles the panel appearance as shown below.
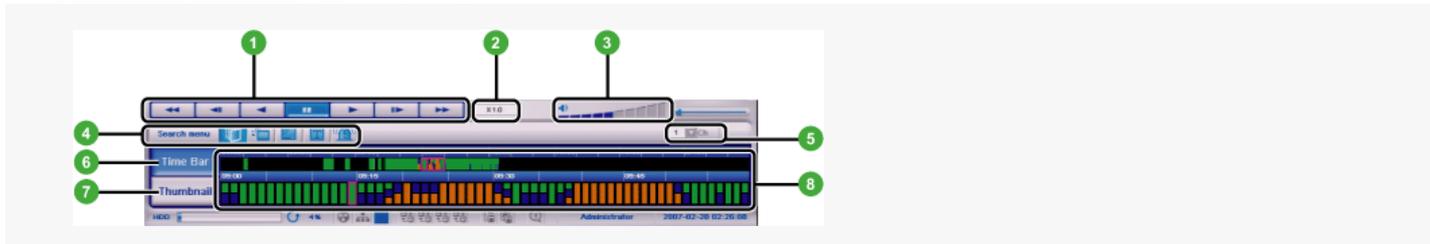
Click the [Thumbnail] button.   Click the [Time Bar] button.

1 Playback buttons

For function of these buttons, refer to the explanation of the playback buttons in the [One channel search] window.

2 Playback speed indication

Shows the playback speed in six steps (×0.5, 1.0, 2.0, 3.0, 4.0, and 5.0).

3 Audio volume control

Adjusts the audio output volume.

4 Search menu buttons

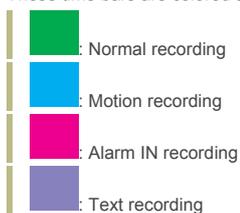Click the [One Channel Search] button to make all buttons selectable.

5 Channel selector (Ch)

Select the channel from which you want to playback recorded video.

6 Time Bar

Click this to show time bars (in hours/minutes) along the time scale.

These time bars are colored according to the recording mode.

■ : Normal recording

■ : Motion recording

■ : Alarm IN recording

■ : Text recording

7 Thumbnail

Click this to show 12 thumbnail images below the time scale, each representing the video recorded at that time, in an interval of 5 minutes.

8 Time scale

The recording time information is indicated as time bars or thumbnails.

The current playback point is indicated with a red border.

Upper scale (hours): Display range = 1 day (Scale = 1 hour × 24)

Lower scale (minutes): Display range = 1 hour (Scale = 1 minute × 60)

Using one channel search

You can search for and play back recorded or backup video from a single channel by specifying the date and time.

1 On the LIVE screen, click [One Channel Search].

The [One channel search] window and associated panels appear.

2 Click the drive selection button.

By default, the [Data Drive] button is selected.

To play back backup video, click the [Backup Drive] button.

Data Drive

Use this button to play back recorded video stored on the data drive of the digital video recorder.

Backup Drive

Use this button to load and play back backup video stored on the backup drive.

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Click the [Backup Drive] button and, in the [Select the folder] dialog box, select the folder where the backup video is stored and click OK . Then, the digital video recorder loads the backup video from the selected folder.
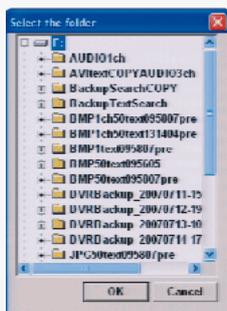
3 **On the calendar, click the day with the video you want to play back.**

The color of the Calendar panel changes as follows depending on the selected drive type.

Select the video you want to play back by clicking the calendar day with recorded video data (indicated by a green circle).

The beginning scene of the video recorded at the selected date appears in the [One channel search] window, with the recording information in the time bar display updated.

Calendar panel for Data Drive

Day with recorded video data: Indicated by a green circle.

Day currently selected: Indicated by the red day value.

Calendar panel for Backup Drive

Day with recorded video data: Indicated by a green circle.

Day currently selected: Indicated in blue text.

4 **In the Search panel, specify the point at which you want to start play back by clicking the desired time bar.**

Use the upper time bars to specify the playback start point in units of hours.

Use the lower time bars to specify the playback start point in units of minutes.

You can view the video image of the specified playback point in the [One channel search] window.

> If you do not specify the playback start point:
>
> For recorded video, the digital video recorder will start playing back the video after skipping back for the specified time from the last recorded point.
> To set the skip-back time, select [Skip back time] in the ETC menu. (By default, the skip-back time is set to 30 seconds.)
>
> For backup video, the digital video recorder will start playing back the beginning scene of the video stored in the specified backup folder.

5 **In the [One channel search] window, select the camera number for the video want to play back in the [Channel] field.**

You may select the camera number using the channel selector ("Ch") on the Search panel.

> If the LIVE screen has been in a single-screen layout before you click the [One Channel Search] button, that camera number is selected by default.
> If the screen has been in a multi-screen layout, however, "CH1" is selected by default.

6 **In the [One channel search] window, click the forward playback button.**

Playback starts from the specified playback start point. To perform fast-forward, pause, and other playback operations, use the corresponding playback buttons.

You may use the forward playback button provided on the Search panel.

Other Search menu buttons

Clicking the [Once Channel Search] button makes the following Search menu buttons operational in a single-channel display.
For how to operate these buttons, refer to "Working with the SEARCH Screen."
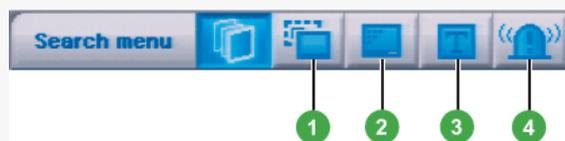
1 Motion search button

Uses the motion sensing feature of the digital video recorder to search and play back scenes containing any motion in the target area.
→Refer for details.

2 Time Bar search button

Lists recording information on all channels in the [All channel video map] window.
Specify the playback start point by clicking the desired time bar.
→Refer for details.

3 Text search button

Uses keywords to search for playback video with text, in text data recorded by a POS or ATM.
→Refer for details.

4 Alarm Log search button

Uses the alarm logs listed by event to search and play back recorded video.
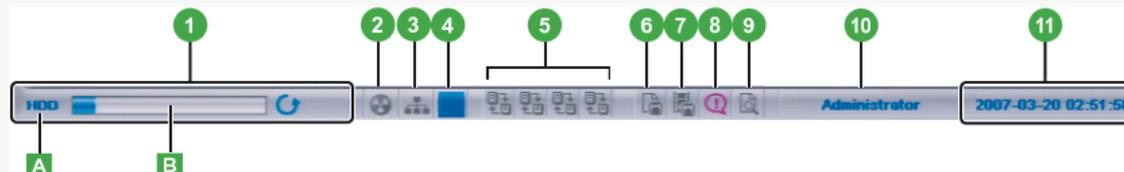→Refer for details.

The playback of searched video may start from slightly before the searched point.

Understanding Status Bar

The status bar shows information such as hard disk usage and the connection statuses of the network device or recording medium.

1 Digital video recorder's hard disk drive Information

A Drive letter and recording number for the video being recorded
This information appears when you place the mouse pointer near the "HDD" label.

B Data drive usage
The color of the gauge depends on the [Data drive] setting of the HDD overwrite option.

 : Overwrite ON
 : Overwrite OFF
The disk usage will be shown in percentage if the HDD overwrite option is set to "OFF".

Recorded data will be stored to 64-magabyte files for each camera.
If the HDD overwrite option is set to "OFF", as soon as the drive usage indication reaches 100%, the system will first stop recording to the current recording file that has become full and then stop recording for other cameras one after another.

2 Backup operation status

When a backup operation is in progress, the color of the icon changes.
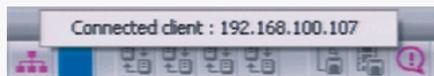
 : Auto backup in progress

 : Manual backup or copy in progress

3 Network connection status

The color of the icon turns purple when the system is connected externally from the network, such as when you perform a "Monitor Plus" operation or when using the supplied "DVR Utility" software.

Clicking the icon causes the IP address of the connected client to appear.

④ USB device connection status

Connecting a USB device to one of the USB ports of the digital video recorder changes the appearance of the icon as follows.

: USB device is not connected.

: USB device is connected.

> To disconnect any USB device, perform the following operation.
> 1 Click on the icon. The [Stop USB Mass Storage Device - Drive: (F)] box appears.
> 2 Click on the displayed box. The USB device is disconnected and the [Message] dialog box opens.
> 3 Click OK and remove the USB device.

⑤ "Monitor Plus" server connection status

The color of each icon indicates the connection status of the DVR server and the display status of the [Monitor Plus] screen.

: Connected with the [Monitor PLUS] screen displayed.

: Connected with the [Monitor PLUS] screen minimized.

Restore
Close

: Right-clicking these icons invokes the context menu that shows the "Restore" and "Close" commands.

⑥ Data backup operation status

The color of this icon indicates the data backup operation status and the display status of the [Backup] screen.

: Backup in progress with the [Backup] screen displayed.

: Backup in progress with the [Backup] screen minimized.
(Click the icon to restore the screen.)

⑦ Copy operation status

The color of this icon indicates the copy operation status and the display status of the [Copy] screen.

: Copying with the [Copy] screen displayed.

: Copying with the [Copy] screen minimized.
(Click the icon to restore the screen.)

⑧ Instruction Manuals

Click this icon to display the online manual for the digital video recorder.

: Click this icon to show the manual.

: The manual is shown.

⑨ Log Viewer operation status

The color of this icon indicates the log data saving status and the display status of the [Log Viewer] screen.

: Saving with the [Log Viewer] screen displayed.

: Saving with the [Log Viewer] screen minimized.
(Click the icon to restore the screen.)

⑩ Login user name

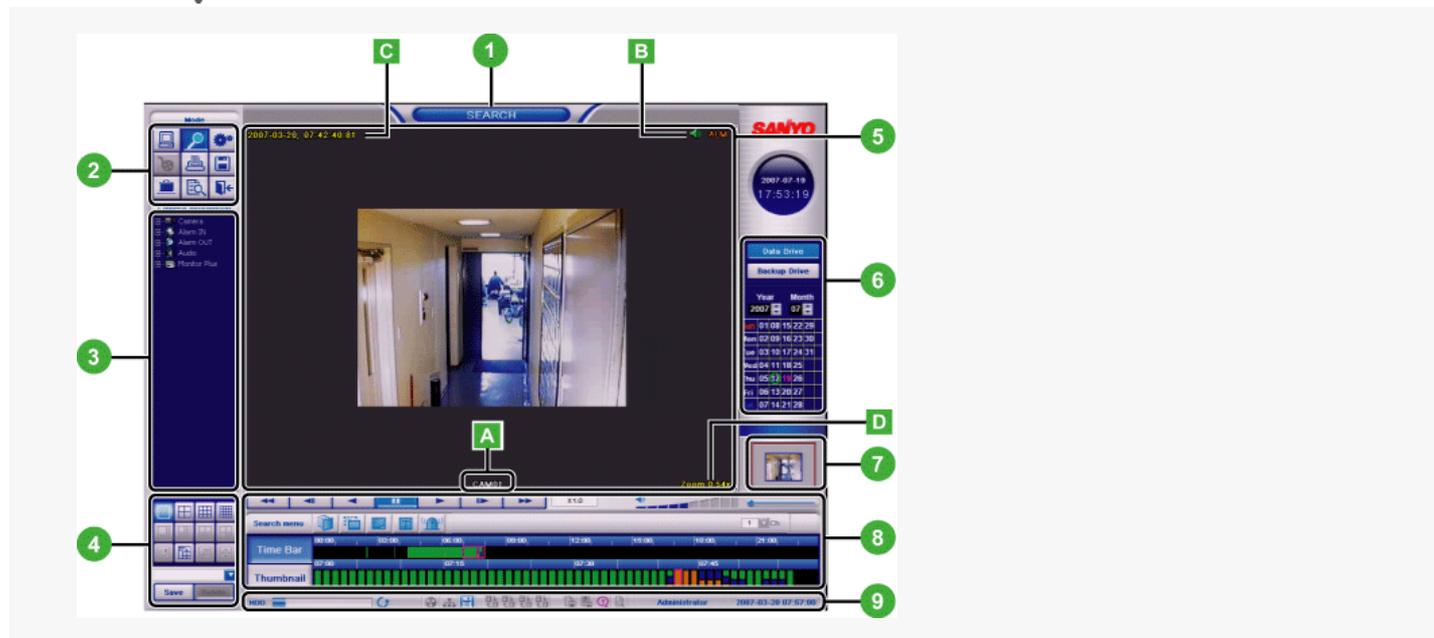## ⑪ Latest recording date and time

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Working with the SEARCH Screen

To search for and play back recorded or backup video, click the [SEARCH] mode button.
The screen changes to the SEARCH screen, where you can play back recorded video from multiple cameras on a multi-screen display.

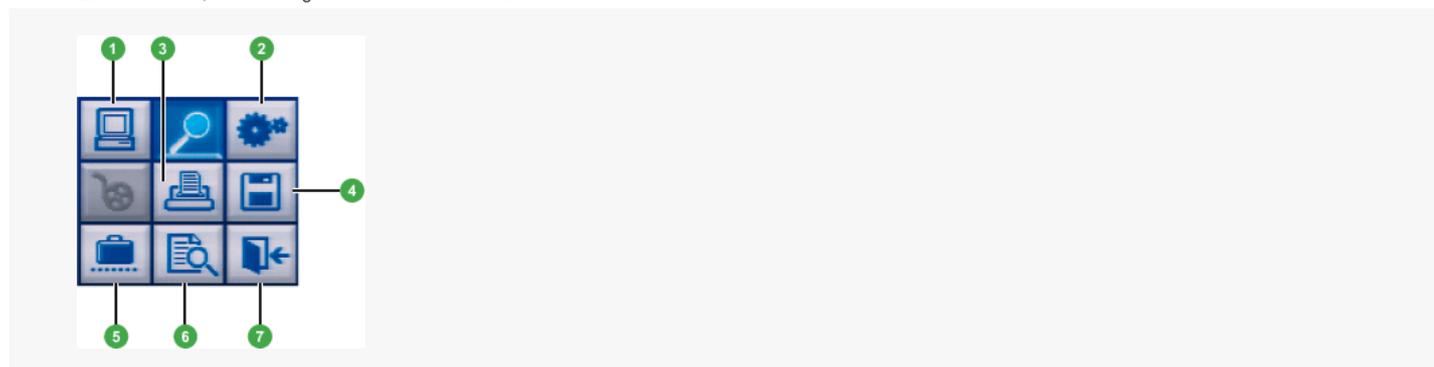## SEARCH Screen Components and their Functions

1 Screen title

"SEARCH" is shown as the screen title.

2 Mode buttons

On the SEARCH screen, the following Mode buttons are available.

1	LIVE button	Displays the LIVE screen.
2	SETTINGS button	Displays the SETTINGS screen.
3	PRINT button	Displays the Print screen.
4	COPY button	Displays the Copy screen.
5	ETC button	Displays the pull-down menu.
6	LOG VIEWER button	Displays the Log Viewer screen.
7	LOGOUT	Displays the Login screen.

3 Camera Information

Camera information for all channels is listed in a tree format.
→Refer for details.

4 Screen Selection buttons

Use these buttons to switch the screen layout or the display method.
On the SEARCH screen, the following buttons are available.

Screen Layout buttons for selecting the single-screen, quad-screen, 9-screen, and 16-screen layouts.
Buttons to display preset camera layouts and the [Initialize Layout] button

Selecting a single-screen layout initially displays reduced video, which is 0.54 times the actual size.

The preset camera layouts you can display on the SEARCH screen are limited to those listed in the pull-down menu, which are single-screen, quad-screen, 9-screen, and 16-screen layouts.

⑤ Video display area

Playback video is displayed here.
Each video is displayed with the following information.

A Camera name
B Recording mode

NOR:	Normal recording (including Suspicion recording)
MOT:	Motion recording
ALM:	Alarm IN recording
TXT:	Text recording
M/AL:	Simultaneous Motion/Alarm IN recording
M/T:	Simultaneous Motion/Text recording
AL/T:	Simultaneous Alarm IN/Text recording
M/AL/T:	Simultaneous Motion/Alarm IN/Text recording
PRE:	Pre-alarm recording
🔊	Audio recording

C Recording date and time
D Zoom magnification (in single-screen layout only)

If the channel has no recorded data at the playback point, the "Digital Video Recording System" logo will be shown.

⑥ Calendar panel

On the Calendar panel, select whether to play recorded or backup video and specify the recording date of the video.
➔ Refer for details.

⑦ Zoom panel

Use this panel to perform zoom operations.
You can adjust the zoom magnification in the range of 0.54 to 1.66 times.
➔ Refer for details.

⑧ Search panel

Use this panel to search and play back recorded video.
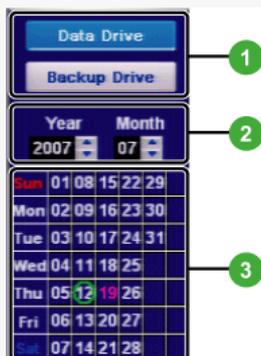➔ Refer for details.

⑨ Status bar

The status bar shows information such as hard disk usage and the connection statuses of the network device or recording medium.
➔ Refer for details.

Functions of Calendar panel components

① Video selection buttons

Use this button to play back the video recorded on a data drive on the digital video recorder. (Recorded video)

Backup Drive

Use this button to load the video stored on a backup or automatic backup drive. (Backup video)

Click the button and, in the [Select the folder] dialog box, select the folder where the backup video is stored.

② Year/month setting

Use the spin buttons to display the calendar for the desired month of the year.

③ Calendar

Shows the calendar for the month of the year you specified in ② .

Select the video you want to play back by clicking the calendar day with recorded video data (indicated by a green circle).

Functions of Search panel components

Clicking **Time Bar** / **Thumbnail** toggles the panel appearance as shown below.

Click this to show 12 thumbnail images below the time scale, each representing the video recorded at that time, in an interval of 5 minutes.

① Playback buttons

	: Fast-forward/rewind playback
▶▶ ◀◀	Provides 4-step speed adjustment (×2.0, 3.0, 4.0, and 5.0).
▮▶ ◀▮	: Frame-forward/rewind
▶ ◀	: Forward/reverse playback Provides 2-step speed adjustment (×1.0 and 0.5).
▮▮	: Pause

② Playback speed indication

Shows the playback speed in six steps (×0.5, 1.0, 2.0, 3.0, 4.0, and 5.0).

③ Audio volume control

The audio output is made when the playback speed is x1.0 in a single-screen layout.

④ Search menu

Click one of the buttons in the Search menu to start the desired search.

Thumbnail Search button
Presents up to 24 searched thumbnail images of the video at a time.

Motion Search button
Uses the motion sensing feature of the system to search scenes containing any motion in the target area. You can perform this search also on the LIVE screen.

Time Bar Search button
Lists recording information on all channels in the [All channel video map] window.
Specify the playback start point on the time bar to play back recorded video in the selected screen layout.
On the LIVE screen, you can playback video for the specified channel.

Text Search button
Uses keywords to search for playback video in text data recorded by a POS or ATM.
You can perform this search also on the LIVE screen.

Alarm log Search button
Uses the alarm logs listed by event to search and play back recorded video.
You can perform this search also on the LIVE screen.

The playback of searched video may start from slightly before the searched point.

⑤ Channel selector (Ch)

Select the channel from which you want to play back video in a single-screen layout.

⑥ Time Bar button

Click this to show time bars (in hours/minutes) along the time scale.
These time bars are colored according to the recording mode.

🟩	Normal recording
🟦	Motion recording
🟪	Alarm IN recording
🟪	Text recording
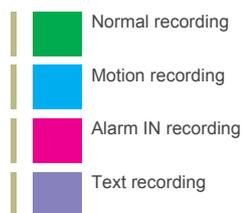
⑦ Thumbnail button

Click this to show 12 thumbnail images below the time scale, each representing the video recorded at that time, in an interval of 5 minutes.
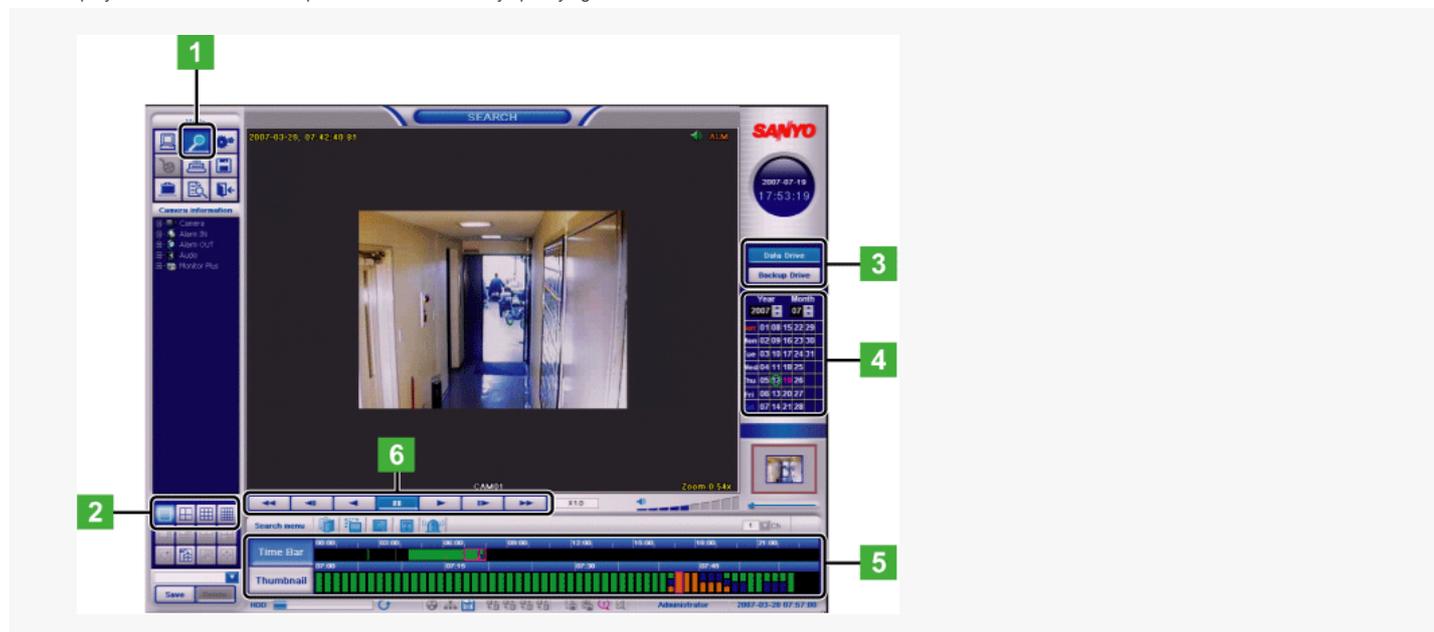
⑧ Time scale

The recording time information is indicated as time bars or thumbnails.
The current playback point is indicated with a red border.

- Upper scale (hours): Display range = 1 day (Scale = 1 hour × 24)
- Lower scale (minutes): Display range = 1 hour (Scale = 1 minute × 60)

Date/Time search

You can play back recorded or backup video from channels by specifying the date and time.

1 Click the [SEARCH] mode button.
The screen changes to the SEARCH screen.

2 Select the desired Screen Layout button.
You can select single-screen, quad-screen, 9-screen, or 16-screen layout.
When you select a multiple-screen layout, you can play back video from more than one camera simultaneously.

3 Click the drive selection button.
By default, the [Data Drive] button is selected.
To play back backup video, click the [Backup Drive] button.

Data Drive

Use this button to play back recorded video stored on the data drive of the digital video recorder.

Backup Drive

Use this button to load and play back backup video stored on the backup drive.

Click the [Backup Drive] button and, in the [Select the folder] dialog box, select the folder where the backup video is stored and click **OK** . Then, the digital video recorder loads the backup video from the selected folder.
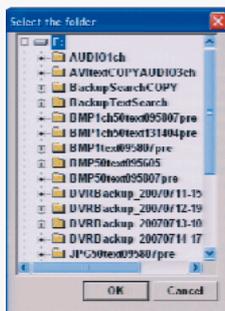
4 On the calendar, click the day with the video you want to play back.

The color of the Calendar panel changes as follows depending on the selected drive type.

Select the video you want to play back by clicking the calendar day with recorded video data (indicated by a green circle).

The beginning scene of the video recorded at the selected date appears on the screen, with the recording information in the time bar display updated.

    Calendar panel for Data Drive

Day with recorded video data: Indicated by a green circle.

Day currently selected: Indicated by the red day value.

    Calendar panel for Backup Drive

Day with recorded video data: Indicated by a green circle.

Day currently selected: Indicated in blue text.

5 In the Search panel, specify the point at which you want to start play back by clicking the desired time bar.

Use the upper time bars to specify the playback start point in units of hours.

Use the lower time bars to specify the playback start point in units of minutes.

You can view the video image of the specified playback point on the screen.

> If you do not specify the playback start point:
>
> For recorded video, the digital video recorder will start playing back the video from the last playback point of the previous playback.
>
> For backup video, the digital video recorder will start playing back the beginning scene of the video stored in the specified backup folder.

6 Click the forward playback button.

Playback starts from the specified playback start point. To perform fast-forward, pause, and other playback operations, use the corresponding playback buttons.

> After this, you can use other buttons in the [Search menu] to narrow down the video scenes you searched for in the Date/Time search mode using different search criteria.

Thumbnail search

You can search for the desired scenes of the video from the displayed thumbnails.

Use this search method if you want to compare images frame by frame, or choose the images you want to print or copy.

> Before starting a Thumbnail search, select the channel whose video scenes you search for.

1 **Click the [SEARCH] mode button.**

The screen changes to the SEARCH screen, which contains a still image of the video together with the Search panel.

2 **Select the desired video from the channel and switch to the single-screen layout.**

If you do not specify any channel, the video scenes from Channel 1 will be searched by default.

3 **In the [Search menu], click the [Thumbnail Search] button.**

The Thumbnail Search screen appears, showing the first thumbnail (still image) of the video.

4 **To show the second and later thumbnail images...**

Perform the following operation to show the second and later thumbnail images.

Play back video continuously.

Playing back the video causes the second and later thumbnail images to appear continuously frame by frame.

Pick up scenes one by one.

Click the time bar. Each time you click, a still thumbnail image of the playback point appears.

The currently selected thumbnail image is shown in a yellow rectangle, with its magnified view displayed in the upper preview area.

If you have more than 24 thumbnail images, the existing thumbnail images will be overwritten with later ones from the first thumbnail.

Moreover, changing the channel being selected during a search causes the display of the thumbnails to reset and start newly from the first thumbnail.

5 **To print/copy a searched image**

From among the displayed thumbnail images, click the image(s) you want to print or copy.

The selected image is now shown in a white rectangle (the last selected image is shown in a yellow rectangle).

For the next steps and later, refer to "Printing the Playback Video" or "Copying Playback Video".
→Refer for details.

6 **Click the [Thumbnail Search] button again.**

The Thumbnail Search screen closes and you return to the normal SEARCH screen.

Motion Search

Uses the motion sensing feature of the system to search scenes containing any motion in the target area.

Before starting a Motion search, select the channel whose video scenes you search for.

1 **Click the [SEARCH] mode button.**

The screen changes to the SEARCH screen, which contains a still image of the video together with the Search panel.

2 **Select the desired video from the channel and switch to the single-screen layout.**

If you do not specify any channel, the video scenes from Channel 1 will be searched by default.

3 **Start playing back the video and stop at the point you want to start a search.**

4 **In the [Search menu], click the [Motion Search] button.**

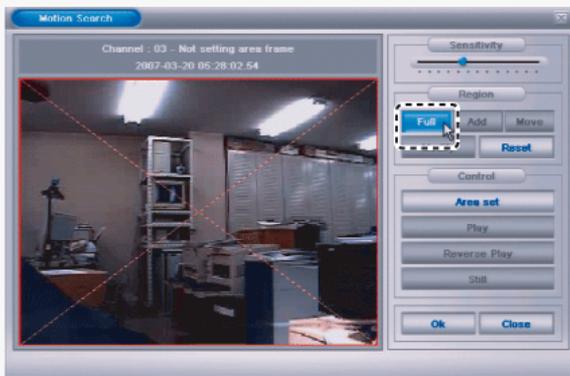The [Motion Search] screen appears.
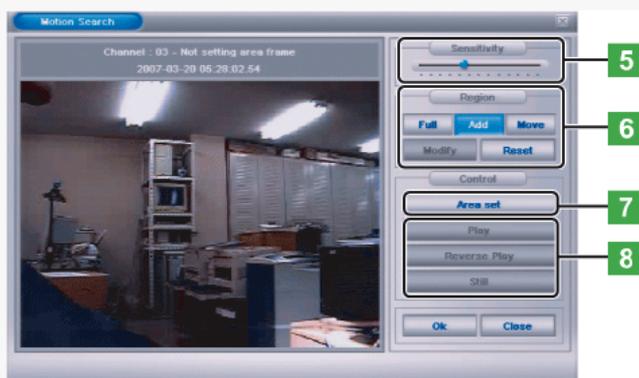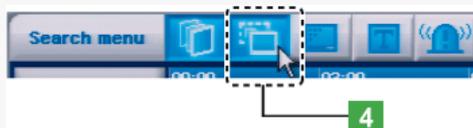
5 **In the [Sensitivity] section, use the slider to set the sensing sensitivity.**

The sensing sensitivity increases as you move the slider to the right.

6 **In the [Region] section, set the sensing area.**

To start a Motion search by sensing the entire screen, click Full .

To perform a Motion search for a specific area, click **Add** and then specify the sensing area by dragging.
The selected area is now shown in a red rectangle. You may set as many sensing areas as you want.
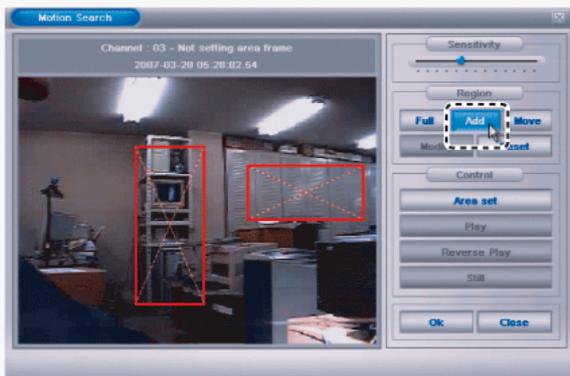
To adjust the size or position of a set sensing area, click **Move** and then drag as follows:

- To enlarge or shrink a sensing area horizontally or vertically, drag with the mouse pointer placed at a point on the red rectangle, where it turns to the ↕ ↔ shape.

- To enlarge or shrink a sensing area diagonally, drag with the mouse pointer placed at any corner of the red rectangle, where it turns to the ↗ ↘ shape.

- To move a sensing area, drag with the mouse pointer placed at a point near the center of the red rectangle, where it turns to the ✛ shape.
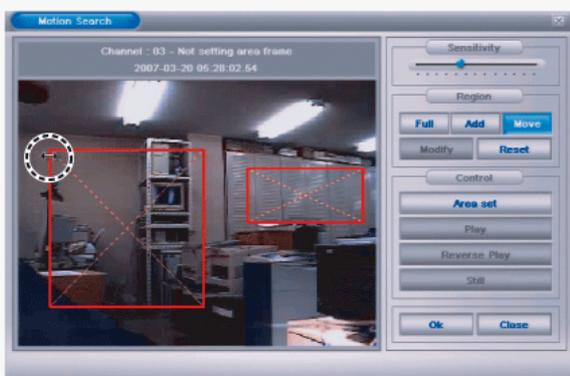
To cancel the sensing area setting, click **Reset**. This cancels all the sensing areas currently set.
Cancelling the existing sensing area is needed if you intend to set the sensing areas from the scratch.

7 **In the [Control] section, click** **Area Set** .

The digital video recorder is now ready for starting a Motion search, showing an yellow "Set area frame" message.

8 **Click the Play/Reverse Play button to start a search.**

The digital video recorder starts a playback and searches for scenes containing any motion in the target area.

Play: Starts a search in the forward direction.

Reverse Play: Starts a search in the reverse direction.

Still: Stops the search.

9 **The digital video recorder stops playing back the video when it finds a scene with any target motion, showing a red "Found" message.**

Portions where any motion is sensed are now shown as □□□ .
To resume the search, click the Play/Reverse Play button again.

10 **Click** `OK` .

The [Motion Search] screen closes, with the searched image displayed in the SEARCH screen.

> If you click `Close` , the [Motion Search] screen will close with the state in which you started the Motion search restored.
>
> The set sensing conditions will be retained even if you close the [Motion Search] screen.

Time Bar Search

You can list recording information on all channels in the [All channel video map] window.
Specify the playback start point on the time bar to play back recorded video in the selected screen layout.

1 **Click the [SEARCH] mode button.**

The screen changes to the SEARCH screen, which contains a still image of the video together with the Search panel.

2 **In the [Search menu], click the [Time Bar Search] button.**

The [All channel video map] window appears.
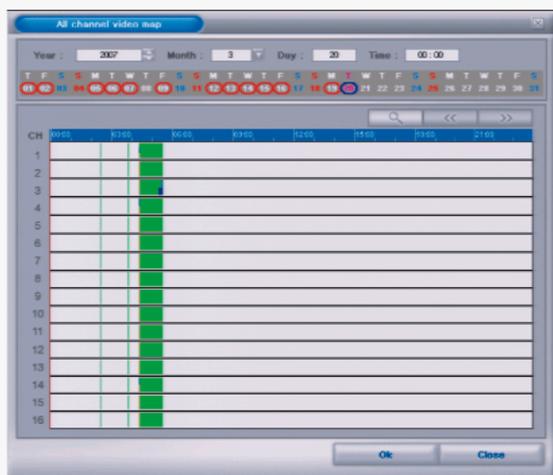
: Day with recorded video.

: Day currently selected.

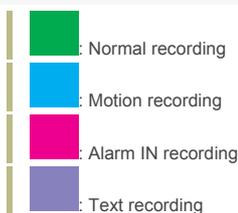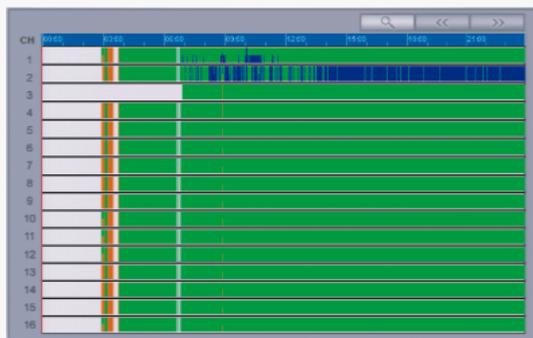**3** **Using the [Year] and [Month] fields, specify the year and month in which you want to perform a search.**

The calendar for the specified month appears.

4 **In the Calendar window, select the day on which the video you want to search was recorded.**

The search result appears as time bars for each channel.
The time scale is set to "1 hour × 24 graduations".

: Normal recording

: Motion recording

: Alarm IN recording

: Text recording

The "NOR" (Normal recording) indicator is not shown when the normal recording is performed simultaneously with the Motion, Alarm IN, or Text recording.
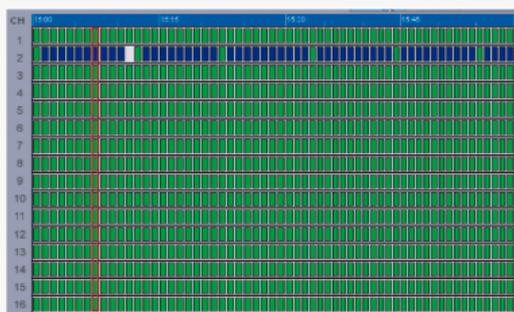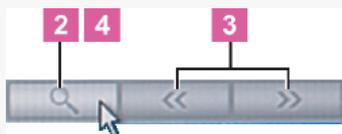
Showing the detailed view of the time bars

You can view the search result in more detail by showing the time bars for a specific hour in minutes.

1 **Drag the cursor line to the hour for which you want to show the minute time bars.**

2 **Click the magnifying glass button.**
The time scale changes to "1 minute × 60 graduations", showing when the recording occurred minute by minute.

3 **Click the Previous/Next hour button.**
The result for the next/previous hour is shown with the minute time bars.

4 **Click the magnifying glass button again.**
The default time scale (graduated in hours) is restored.

Playing back video from the searched point

1 **With the time bars (graduated in hours), move the cursor to the point at which you want to start playing back the video.**

2 Click **OK** .
A still image representing the searched playback start point appears in the screen layout currently selected.

3 **Use the Screen Selection button to select the desired screen layout for the playback video.**

4 **Click the forward playback button.**
Playback starts from the specified playback start point in the specified screen layout.

Text Search

2008/10/27

You can use keywords to search for playback video, by searching through data recorded by a POS or ATM.

> Before starting a Text search, select the channel whose video scenes you search for.

1 **Click the [SEARCH] mode button.**

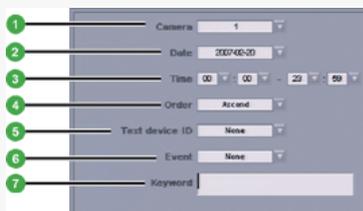The screen changes to the SEARCH screen, which contains a still image of the video together with the Search panel.

2 **In the [Search menu], click the [Text Search] button.**

The [Text Search] screen appears.

3 **Enter search criteria.**

To perform a Text search, you must specify **1** to **4** as search criteria.

1 Camera: Camera number (1 to 16).

2 Date: Recording date of the video you want to search.

In the calendar that pops up, click the day on which you want to perform a Text search.

3 Time: Search duration (in "hour:minute" - "hour:minute" format).

4 Order: Display order of the search results in the Text List area.

> **Descend:** Newer to older video.
> **Ascend:** Older to newer video.

5 Text device ID: POS ID (1 to 16)

6 Event:

Type of the events to be searched for.

> **None:** Searches for all text events in the specified search duration.
> **True:** Searches for text events including the specified keywords.
> **False:** Searches for text events that does not include the specified keywords.

7 Keyword:

In this field, type a list of search keywords (max. 30 characters).

4 **Click** **Search** **.**

The digital video recorder searches recorded data that matches the specified search criteria and shows them in the Text List area **A** .
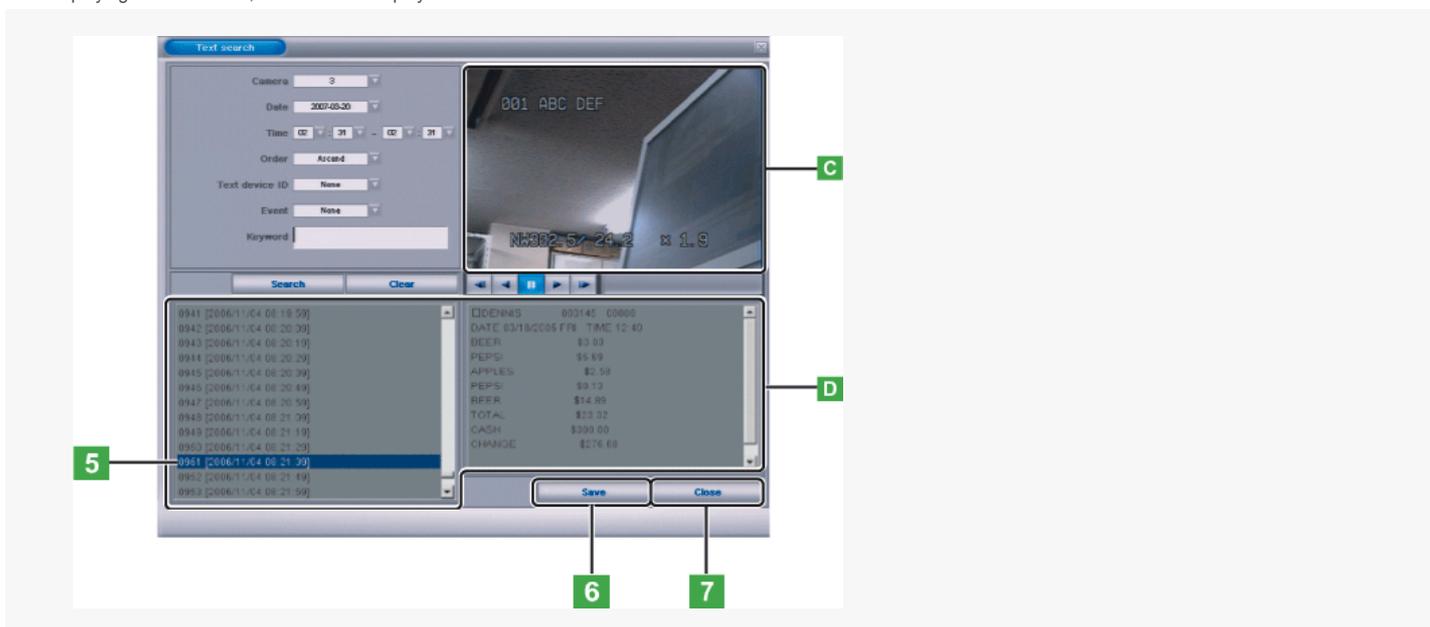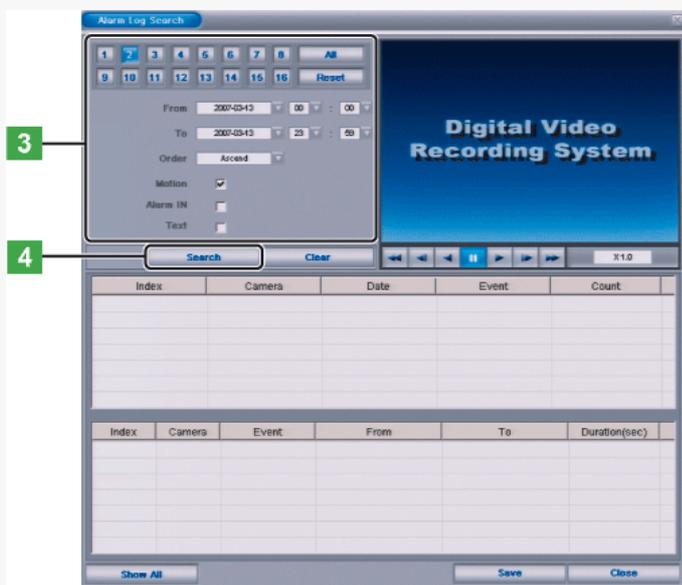
Click **Clear** **B** to clear all search results in the Text List area.

5 In the Text List area, select the recorded data you want to play back by double-clicking.

The surveillance video of the selected data C appears with its text data D .
To start playing back the video, click the desired playback buttons.

[⏸▶] [◀⏸]	: Frame-forward/rewind	
[▶] [◀]	: Forward/reverse playback	
[⏸]	: Pause	

6 Click [Save] .

The [Copy] screen appears, allowing you to save the searched video data.

7 Click [Close] .

The [Text Search] screen closes and you return to the state before starting the Text search.

Alarm Log Search

The Alarm Log list allows you to search and play back recorded video.

> Before starting an Alarm Log search, select the channel whose video scenes you search for.

1 Click the [SEARCH] mode button.

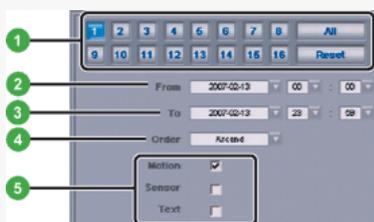The screen changes to the SEARCH screen, which contains a still image of the video together with the Search panel.

2 In the [Search menu], click the [Alarm Log Search] button.

The [Alarm Log Search] screen appears.

3 **Enter search criteria.**

To perform a Text search, you must specify ① to ④ as search criteria.

① Camera number (1 to 16).

    All : Selects all camera numbers.

    Reset : Deselects all camera numbers.

② Search start point (From)

    In the calendar that pops up, click the day on which the video scenes you want to search for were recorded and then, from the pull-down menu, select the search duration.

③ Search end point (To)

    In the same manner as you did in ② , set the date and time at which you want to finish this search.

④ Display order of the search results in the Alarm Log area (Order)

    Descend: Newer to older video.
   **Ascend:** Older to newer video.

⑤ Type of the events to be searched for.

    Motion: Searches for Motion recording events.
    Alarm IN: Searches for Alarm IN recording events.
    Text: Searches for Text recording events.

4 **Click** **Search** .

The digital video recorder searches recorded data that matches the specified search criteria and shows them in the Alarm Log list.

The Alarm Log list consists of the total-count and event-details list sections.
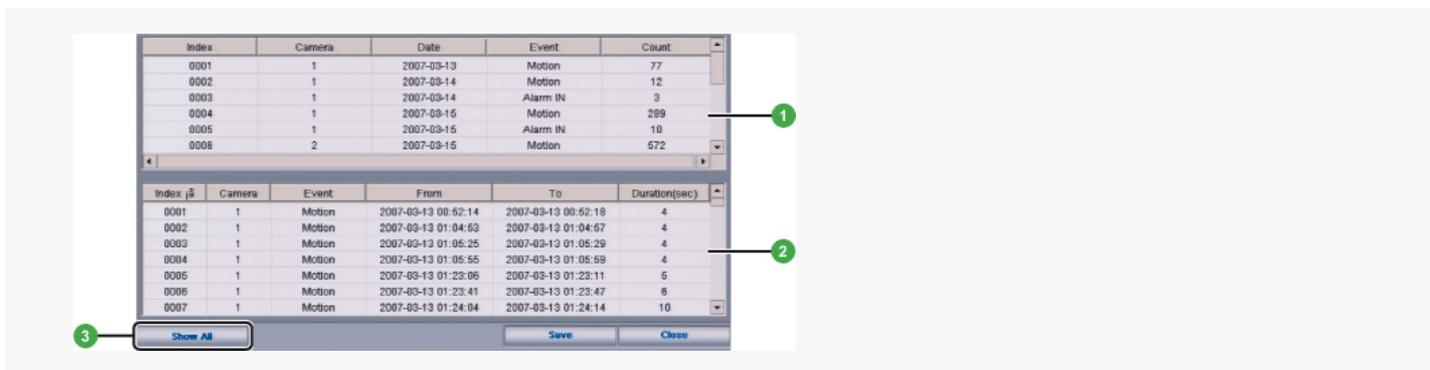
① **Total Count List**

Lists the total counts of searched events by sorting in the order of [Date], [Camera], and then [Event] columns.

You can select to display either the Daily or Hourly total from the pull-down menu.

② **Details List**

Lists the details of searched events.

By default, all searched logs are listed. To narrow down the range of logs to be displayed, select the desired row in the total-count list.

③ **Show All**

If you are viewing logs for a selected row, click this button to display all the searched logs back again in the Details List.

You can switch the sort order of the searched logs between the ascending and descending orders by clicking the header row of each column.

Click **Clear** to clear all the data in the Alarm Log list.

5 **Select the recorded data you want to play back in the Alarm Log list by double-clicking.**

The video of the recorded data you selected appears.

To start playing back the video, click the desired playback buttons. For how to play back the video, refer to the explanation for the playback buttons on the Search panel.
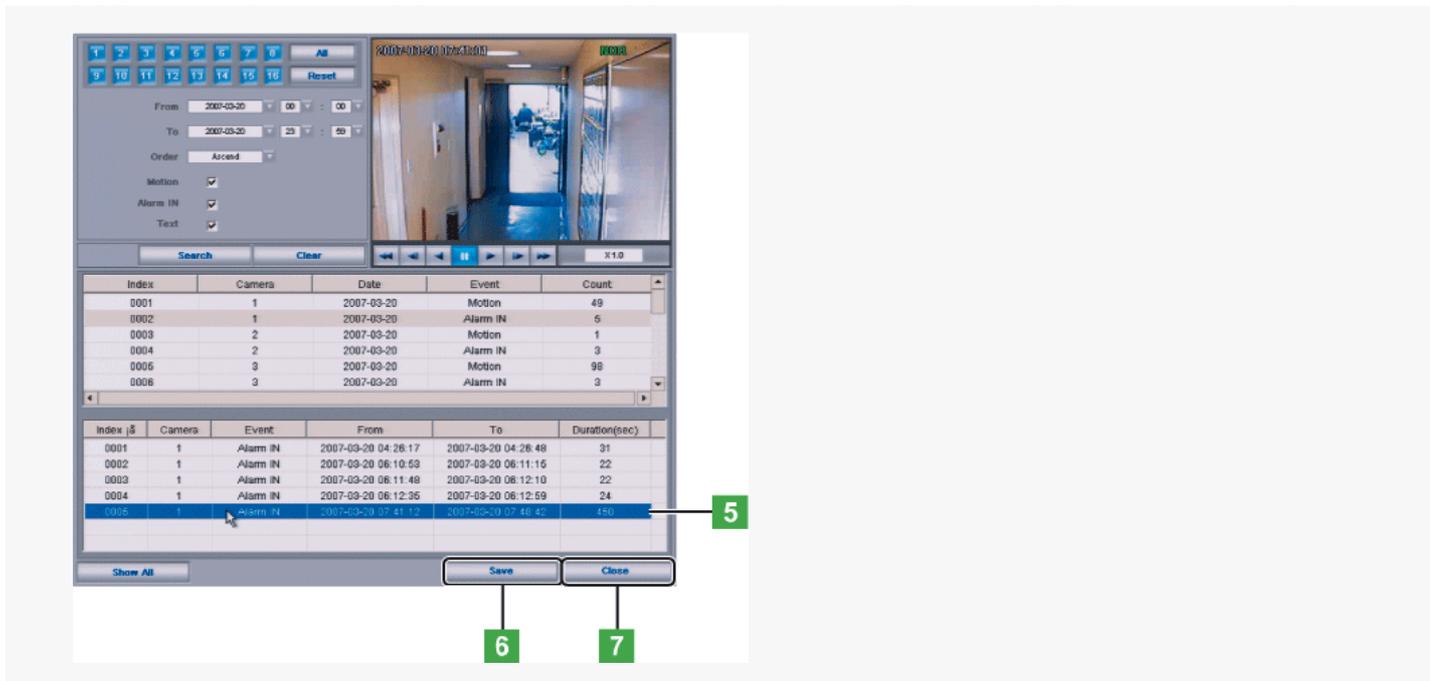
6 **In the details list, select the event you want to save and click** **Save** **.**

The [Copy] screen appears, allowing you to save the searched video data.

7 **Click** **Close** **.**

The [Alarm Log Search] screen closes and you return to the state before starting the Alarm Log search.

Printing and Copying

The SEARCH screen allows you to print and copy the video images being played back.
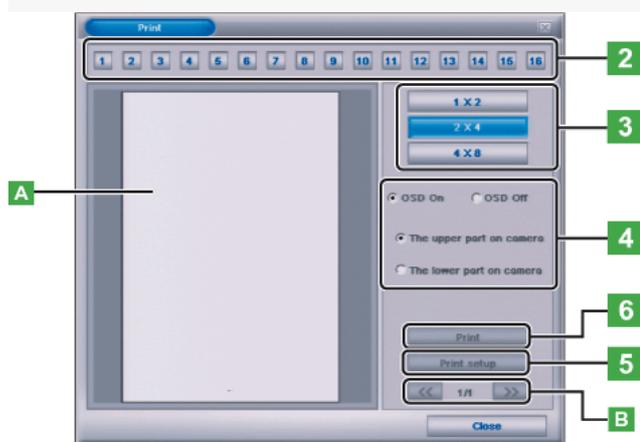
Printing Playback Video

You can print still images of the video you searched for playback.

	Before starting printing, you must install a printer driver in the digital video recorder.

1 **Click the [PRINT] mode button while the searched video is being played back or suspended.**

The [Print] screen appears.

2 **Click the channel number for the video you want to print.**

You may select more than one channel. The video images for the selected channel appear in order in the Preview area **A** .
To clear the images in the Preview area, click the channel number button again.

3 **Click the Print Layout button corresponding to the desired printing layout (horizontal × vertical).**
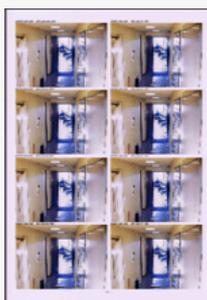
1×2   2×4   4×8

	If there are two or move preview pages, you can switch to the previous or next page by clicking 《 》 **B** .

4 **Select the OSD On/OSD Off radio button to show/hide the video information on each image.**

If you select "OSD On", select the radio button corresponding to the display position (upper/lower part) of the video information.

5 **Click** Print Setup **and perform print setup in the [Print] dialog box.**

6 **Click** Print .

The video images from the channel you specified are printed using the specified layout.

Copying Playback Video

You can copy the video being played back to a CD/DVD, USB memory, removable hard disk, or other recording media.
Select the copy-destination drive and then perform the following operation.

1 **Click the [COPY] mode button while the searched video is being played back or suspended.**

The [Copy] screen appears.
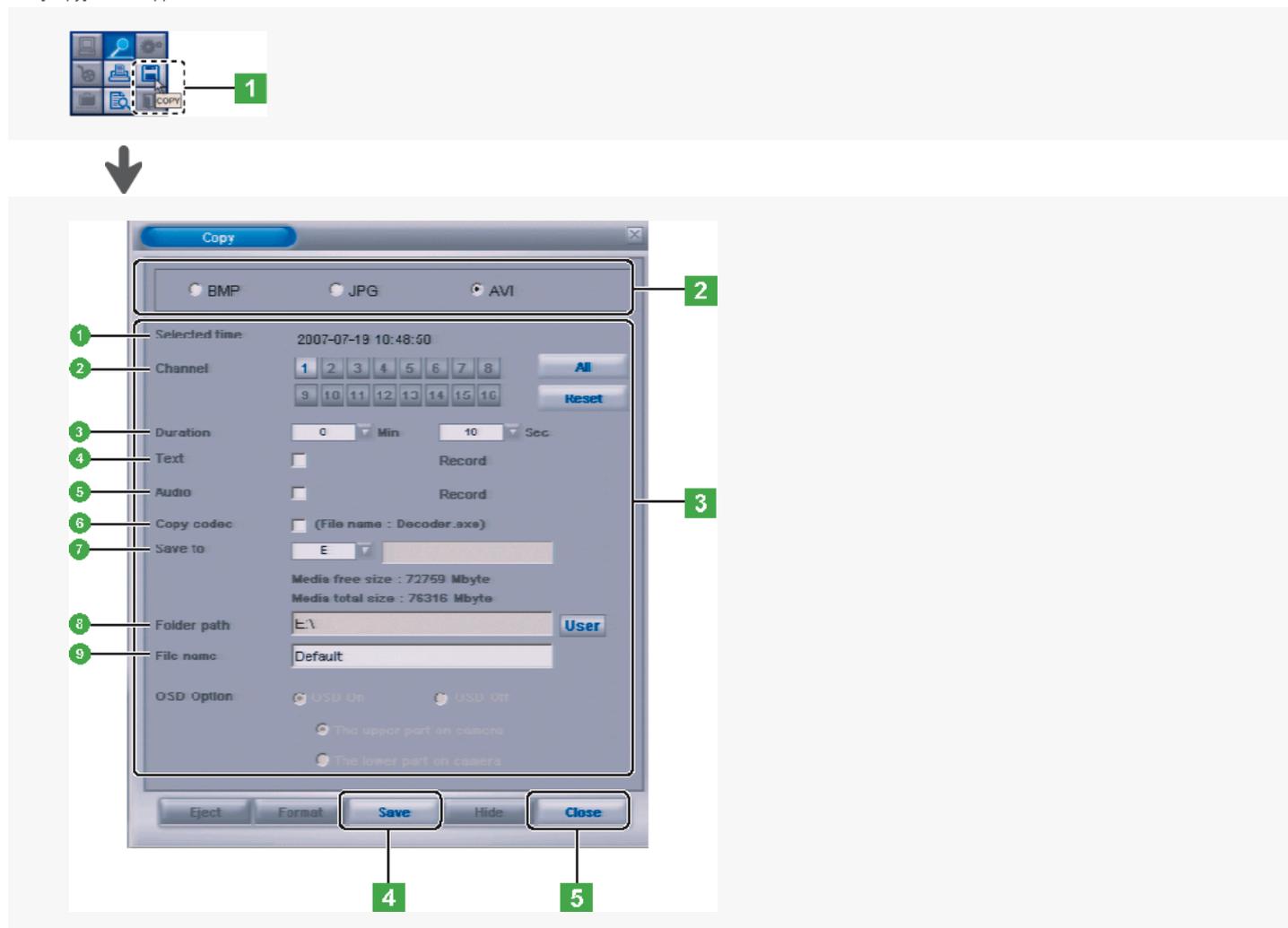
2 **Select the radio button corresponding to the format in which you want to save the video images.**
Available formats: BMP, JPG and AVI

3 **Set the copying conditions.**
The copying condition settings differ depending on the saving format you selected.

When you selected "AVI" (for moving images)

1 Selected Time:	Shows the recording date and time of the video from which the copying starts.
2 Channel:	Select the copy-source channel number.
	To select all channels, click `All`.
	Click `Reset` to deselect all of the selected channels.
	(The `All` / `Reset` button is unavailable if you are copying video in the Text search mode.)
3 Duration:	In the [Duration] section, specify how long you want to copy the video in minutes and seconds.
4 Text:	Use this check box when you copy data recorded in Text recording.
	Selecting the check box causes the digital video recorder to generate an SMI file in which text data is copied together with video data.
	The copied text data will be displayed in the caption area below the video.
5 Audio:	Select this check box to copy also the audio signals.
6 Copy Codec:	To play back AVI files using a personal computer, you need to install the MPEG4.Codec (PMK4.exe).
	Selecting this check box allows the system to automatically copy the MPEG4.Codec together with video data.
7 Save to:	Select the copy-destination drive.
8 Folder path:	Click the button next to the [Folder path] field and, in the [Select the folder] dialog box, select the desired copy-destination folder.
	The selected folder path appears, together with the available space and the total capacity of the copy-destination drive.
9 File Name:	Type a file name if you want to name it by yourself.
	By default, the system sets the following file name:
	―.

When you selected "BMP" or "JPG" (for still images)
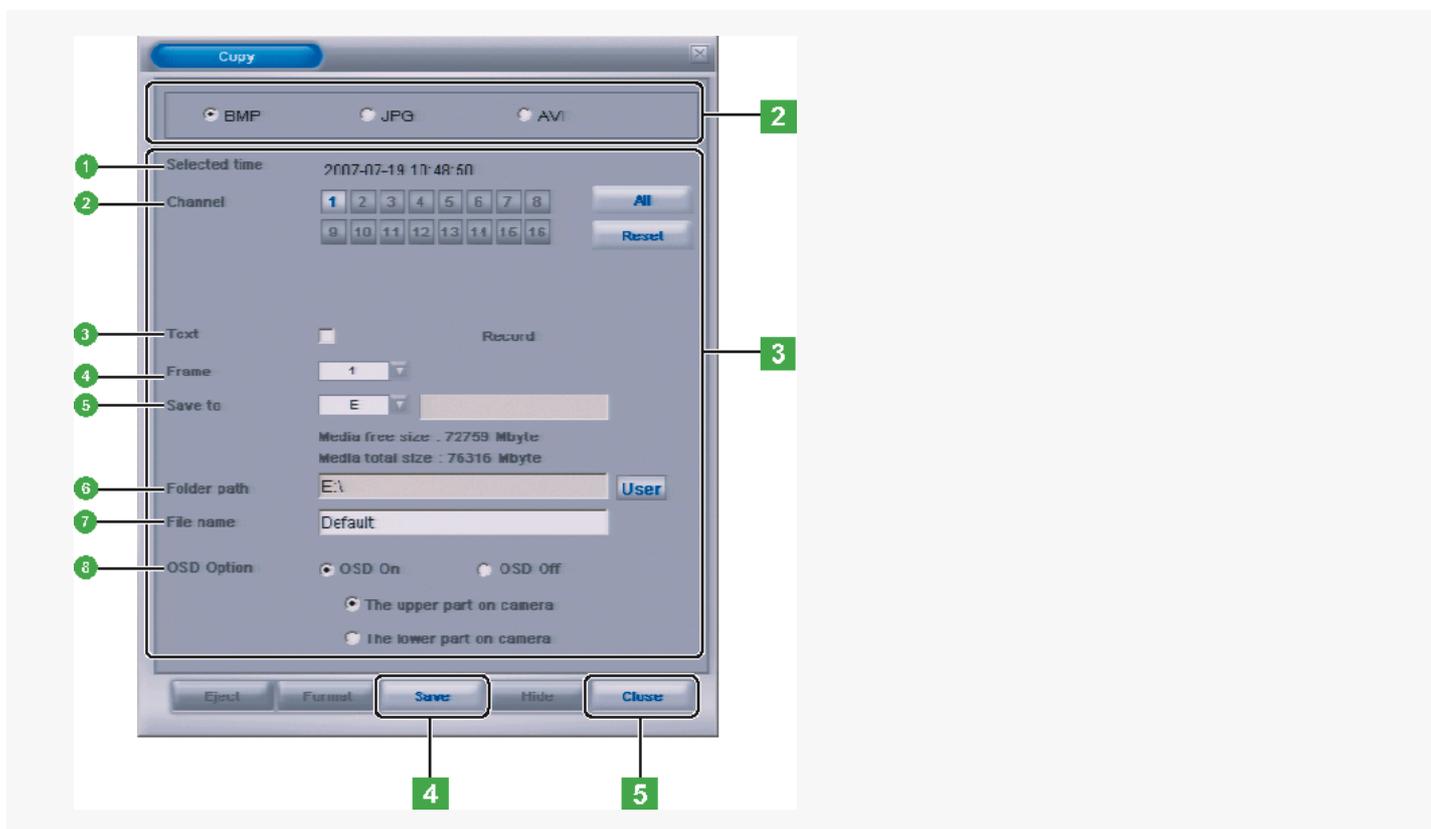
①	Selected Time:	Shows the recording date and time of the video from which the copying starts.
②	Channel:	Select the copy-source channel number. To select all channels, click All . Click Reset to deselect all of the selected channels. (The All / Reset button is unavailable if you are copying video in the Text search mode.)
③	Text:	Use this check box when you copy data recorded in Text recording. Selecting the check box causes the digital video recorder to copy text data together with image data. The copied text data will be superimposed on the video.
④	Frame:	In the [Duration] section, specify how long you want to copy the video in the number of frames (1 to 10).
⑤	Save to:	Select the copy-destination drive.
⑥	Folder path:	Click the button next to the [Folder path] field and, in the [Select the folder] dialog box, select the desired copy-destination folder. The selected folder path appears, together with the available space and the total capacity of the copy-destination drive.
⑦	File Name:	Type a file name if you want to name it by yourself. By default, the system sets the following file name: __ .
⑧	OSD Option:	To copy also video information displayed with each image, turn On the "OSD On" radio button and then select the desired display position (upper/lower part) of the video information.

4 **Click** Save .

The system starts copying the specified portion of the video.

> Until the copying is finished, you cannot perform any operation on the SEARCH and SETTINGS screens.
>
> If the copy-destination medium becomes full during coping, the system will cancel the copying process and present a message dialog box.
> The portion until the copying is cancelled is effective.

5 **Click** Close .

The [Copy] screen closes.
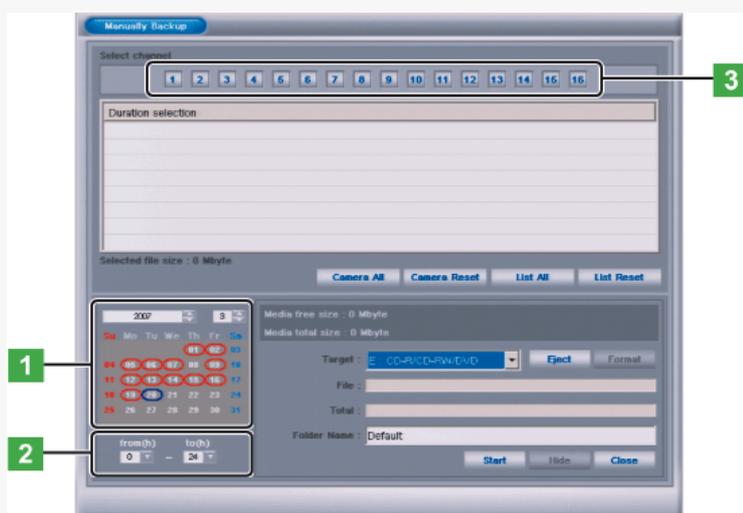
Other buttons

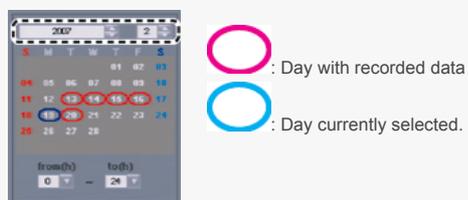|		
Eject / Inject	:	Opens and closes the tray if the copy destination is the E drive (CD-RW/DVD).
Format	:	Initializes the inserted recording medium if the copy destination is the E drive (CD-RW or DVD). Clicking this button opens the [Format Disk] dialog box. Confirm the initialization settings and click Start .
Hide	:	Minimizes the [Copy] screen into an icon in the status bar, while continuing the copying process. Minimizing the screen causes the color of the icon to be changed from blue to purple. → Click the purple icon to restore the screen.

selection] screen.

① **List All** : Selects all recorded data listed.

② **List Reset** : Deselect all recorded data listed.

5 **In the [Target] setting, select the backup-destination drive.**
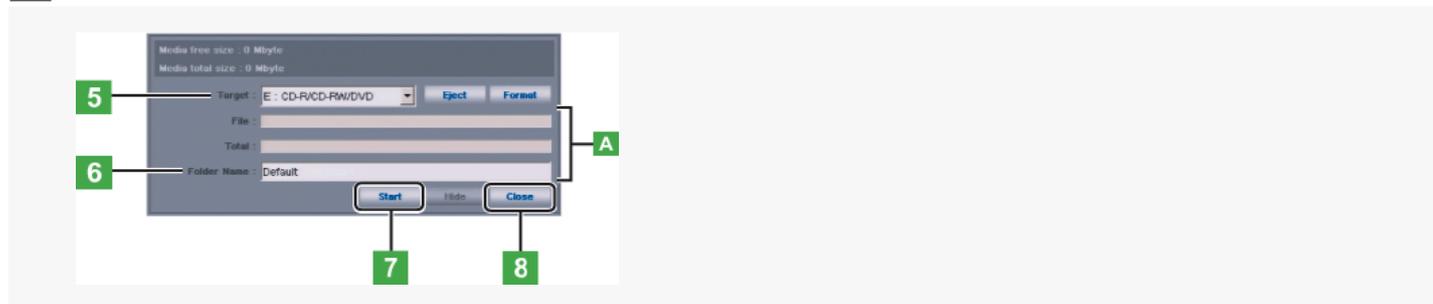
> In the [Media free size/ Media total size] section, the available space and the total capacity of the backup medium are shown.
> Confirm the total size of the files you selected does not exceed the size of the available space in the backup medium.

6 **In the [Folder Name] field, type the desired file name if you want to name it by yourself.**

> By default, the system sets the following folder name:
> —

7 Click **Start** .

The system starts a backup, showing its progress as a progress gauge **A** .
When the backup process is finished, a dialog box opens, showing the backup has been finished.

| When the backup destination is a CD/DVD
File: Indicates the writing status from the buffer to the backup medium.
Total: Indicates the writing status to the buffer.
| When the backup destination is a removable disk
File: Indicates the progress of writing each file.
Total: Indicates the progress of writing all files, if there are more than one file.

> If the backup medium runs out of space, the system will present a message dialog box.
>
> During an auto backup, you cannot perform manual backup from this screen until the backup of each file is finished.
>
> Until the backup is finished, you cannot perform any operation on the SEARCH and SETTINGS screens.

8 Click **Close** .

The [Backup] screen closes.

> The video data you backed up can be played back on the SEARCH screen (or on the LIVE screen in the one channel search mode).

Other buttons

Eject / **Inject** : Opens and closes the tray if the backup destination is the E drive (CD-R/CD-RW/DVD).

Format : Formats the backup medium if the backup destination is the E drive (CD-R/CD-RW/DVD).
Clicking this button opens the [Format Disk] dialog box. Confirm the initialization settings and click **Start** .

Hide : Minimizes the [Backup] screen into an icon in the status bar, while continuing the backup process.
Minimizing the screen causes the color of the icon to be changed from blue to purple.

 →

Click the purple icon to restore the screen.

ETC Menu Overview

Clicking the [ETC] mode button causes the following pull-down menu to appear, presenting various options.
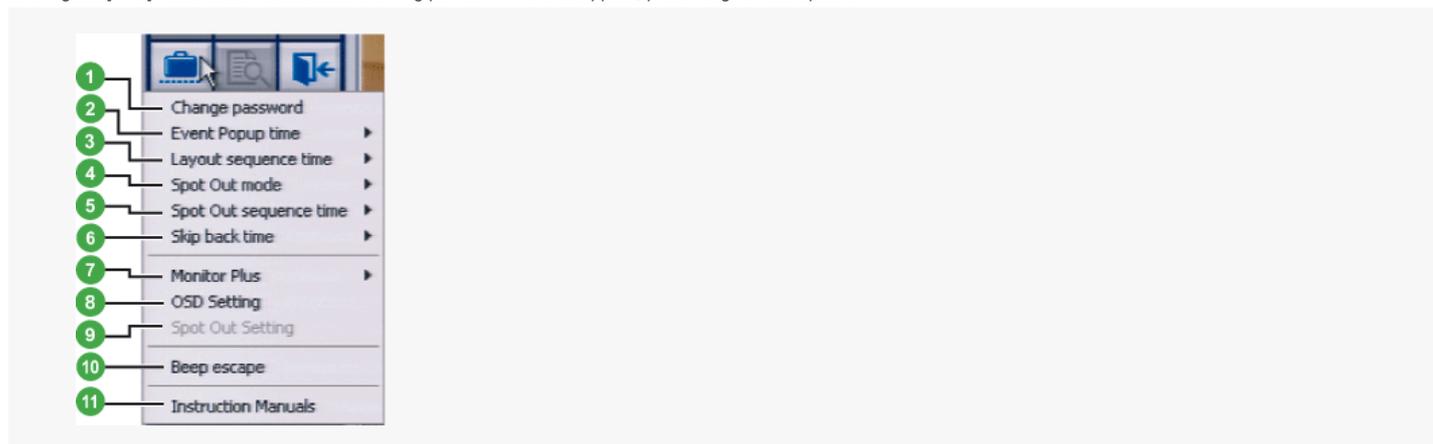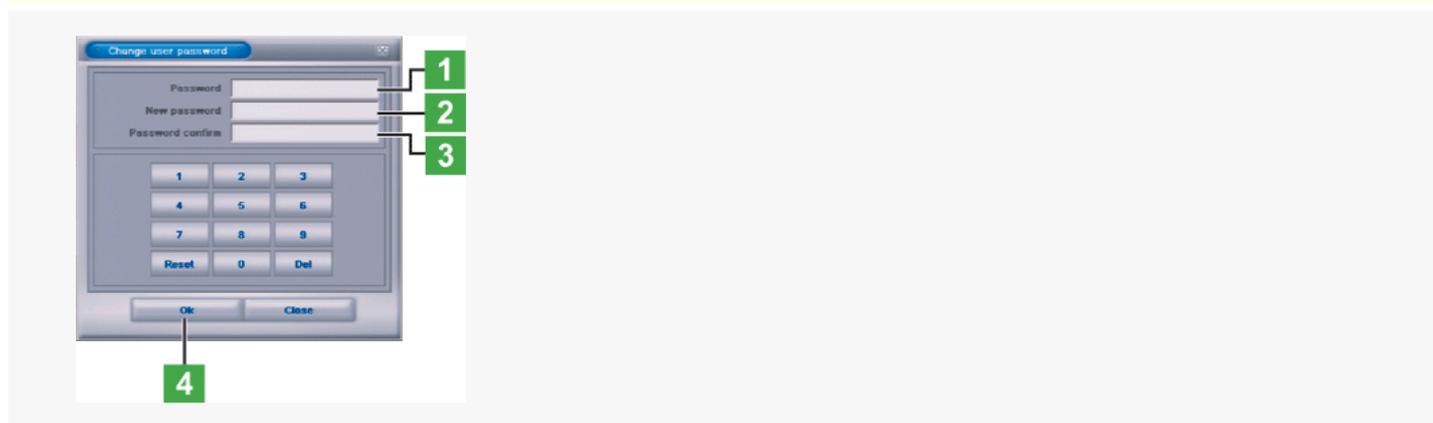

① Change password

Allows the current login user to change his/her password.
Selecting this menu command displays the [Change user password] screen, where you can change your password in the following procedure.

> If you are using the default user names, "Guest" or "Administrator", you cannot use this menu command to change your password.

1 **In the [Password] field, type your current password.**
To do so, use the numeric keypad.

2 **In the [New password] field, type a new password.**
Enter a new password with a length of up to 20 characters.

3 **In the [Password confirm] field, type the new password again.**
For confirmation, re-enter the new password you entered in Step 2.

4 **Click** **OK** **.**
Your password has been changed and the [Change user password] screen closes.

② Event popup time

Provides options related to the Event Popup feature.
Set the time during which alarm video is displayed if an alarm event occurs.
Options: 1 to 10, 12, 14, 16, 18, 20, 25, and 30 sec

③ Layout sequence time

Provides options related to the automatic screen switching feature.
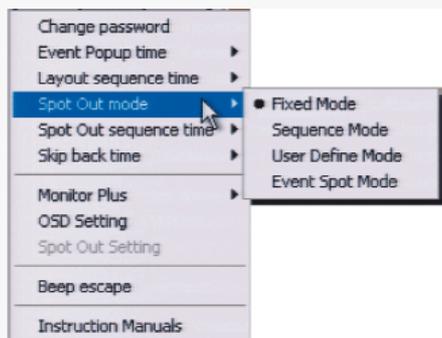Set the interval at which the displayed video is switched.
Options: 1 to 10, 12, 14, 16, 18, 20, 25, and 30 sec

④ Spot Out mode

Sets the display mode of the spot monitor connected to the digital video recorder.
Configure the related settings depending on the display mode.

Change password
Event Popup time ►
Layout sequence time ►
Spot Out mode ►
Spot Out sequence time ►
Skip back time ►

Monitor Plus ►
OSD Setting
Spot Out Setting

Beep escape

Instruction Manuals

● Fixed Mode
Sequence Mode
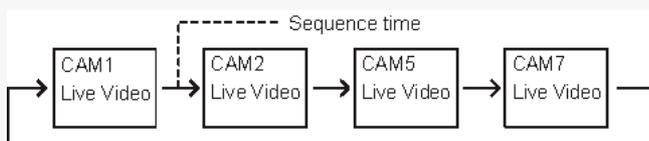User Define Mode
Event Spot Mode

Fixed Mode:

Fixes the channel from which you can monitor video to a single channel.
In the Camera Information panel, right-click one of the channels and, in the context menu, select [Spot Out] to turn On (a checkmark appears) the output to the spot monitor.
By default, video from Camera 1 is displayed.

Sequence Mode:

Displays video from all channels (CH1 to CH16) in the order of channel numbers by automatically switching the screens.

Sequence time

| CAM1 Live Video | → | CAM2 Live Video | → | CAM5 Live Video | → | CAM7 Live Video |

Select [Spot Out sequence time] ⑤ in the ETC menu to set the time until the displayed video is switched.

User Define Mode:

Allows you to configure automatic switching patterns by setting the channel from which you monitor video, video display sequence, video switching time, etc.
Select [Spot Out Setting] in this menu to set the display conditions.

Event Spot Mode:

Displays alarm video if an alarm event occurs.
The alarm video will be retained until the next alarm event occurs.

| CAM1 Alarm Video | New alarm event occurs. → | CAM2 Alarm Video | New alarm event occurs. → | CAM7 Alarm Video |

In the Camera Information panel, right-click one of the channels and, in the context menu, select [Spot Out] to turn On (a checkmark appears) the output to the spot monitor. You can select more than one channel.

⑤ Spot Out sequence time

Allows you to set the time until the displayed video is switched, if you have set the [Spot Out mode] to "Sequence Mode".
Options: 1 to 10, 12, 14, 16, 18, 20, 25, and 30 sec

⑥ Skip back time

In One Channel Search, the digital video recorder starts playing back the video after skipping back for the set time from the last recorded point.
Using this menu command, you can set the skip back time.
Options: 30/45 sec, 1 to 5 min, and 10 min

⑦ Monitor Plus

Register a remote DVR:

Allows you to register the DVR servers you want to emulate from the digital video recorder.

Arrange all Monitor Plus window:

Allows you to switch the appearance of the cascading screen display when the digital video recorder is connected to more than one DVR server.

⑧ OSD Setting:

Displays the [OSD Setting] screen, where you can turn On/Off the on-screen video information display as well as the display position.
When finished configuring the OSD settings, click [Apply] and then [OK].
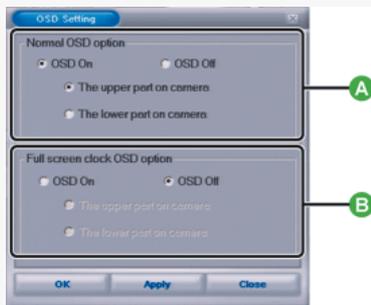
A Normal OSD option

To display the video information in the normal display mode, turn On the "OSD On" radio button and then select the desired display position (upper/lower part).

B Full screen clock OSD option

To display the clock information in the full-screen mode, turn On the "OSD On" radio button and then select the desired display position (upper/lower part).

9 Spot Out Setting

Displays the [Spot Out Setting] screen, where you can configure automatic switching patterns if you have set the [Spot Out mode] to "User Define Mode".
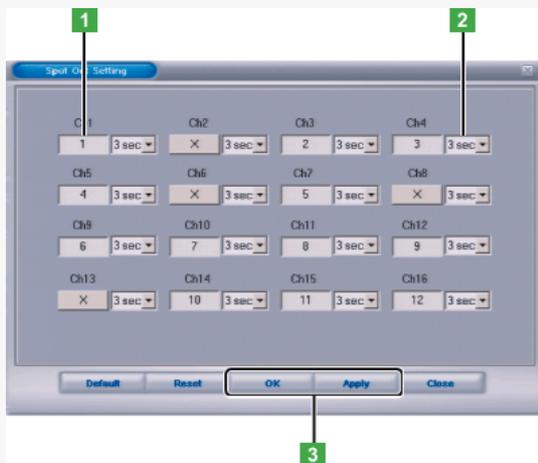
1 Click the Channel (Ch) button.

This toggles the output mode of the selected channel to the spot monitor between "Show" (the display sequence number appears) and "Hide" ("X" appears).
Switching the Spot Out mode from "Show" to "Hide" automatically adjusts the display sequence numbers for other channels.

> You cannot set the Spot out mode for channels for which the [Camera] (camera type) setting on the SETTING screen is configured to "None" or "LAN".

2 Using the pull-down menu next to the Ch setting, set for each channel how long the video output is made to the spot monitor.

3 Click Apply and then OK .

Default : Automatically sets the display sequence numbers for all channels in an ascending order and the output time to the spot monitor uniformly to "3 sec".

Reset : Sets the Spot Out mode to "Hide" for all channels.

Close : Cancels the Spot Out setting and closes the screen.

10 Beep escape

Mutes the alarm beep that will be output if an event occurs.
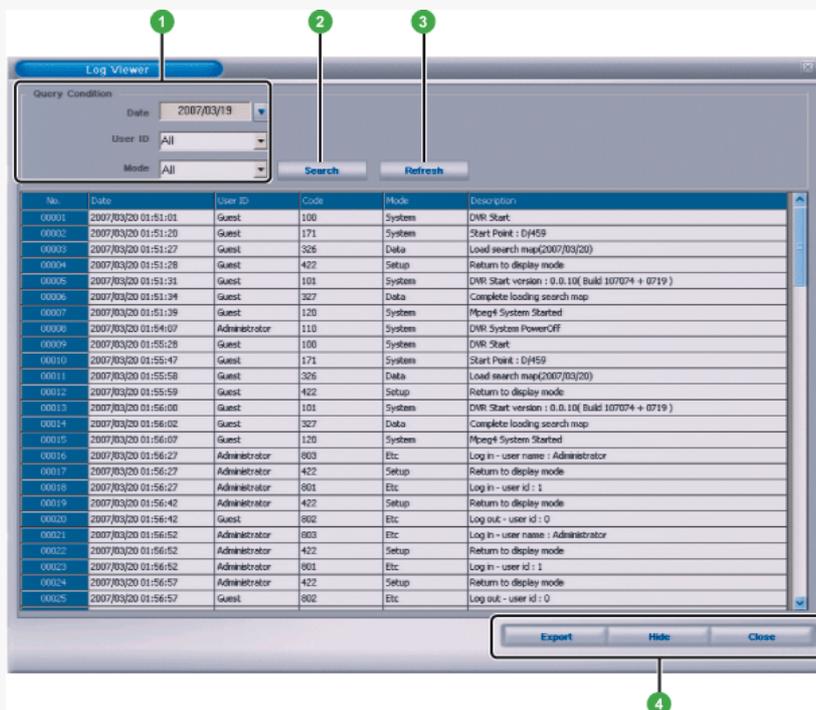
11 Instruction Manuals

Click this icon to display the online manual for the digital video recorder.

Working with the Log Viewer

Clicking the [LOG VIEWER] mode button causes the [Log Viewer] screen to appear.

Names and Functions of Log Viewer Components

① Query condition

Allows you to set the query conditions to search for the logs.

Date:	Click the Calendar button and specify the year, month, and day of the operations you want to query for.
User ID:	Select the user name in the pull-down menu.
Mode:	Select the operation mode in the pull-down menu.

② Search

Starts a query search. The searched logs will be listed in chronological order, from older to newer operations.

③ Refresh

Refreshes the screen information.

④ Other buttons

Export	:	Saves the logs displayed on the screen. Click the button and, in the [Save As] dialog box, set the saving conditions.
Hide	:	Minimizes the [Log Viewer] screen into an icon in the status bar, while continuing the saving process. Minimizing the screen causes the color of the icon to be changed from blue to purple. Click the purple icon to restore the screen.
Close	:	Closes the [Log Viewer] screen.

Monitor Plus Operation

This digital video recorder offers the "Monitor Plus" feature, allowing you to emulate up to four networked DVR servers.

Registering DVR Servers

You can register DVR servers on the [Server List] screen.
The [Server List] screen can be displayed using either of the following methods.

> **Click [Monitor Plus] in the ETC menu, and select [Register a remote DVR].**

> **In the context menu that appears by right-clicking the [Monitor Plus] folder on the Camera Information panel, select [Register a remote DVR].**
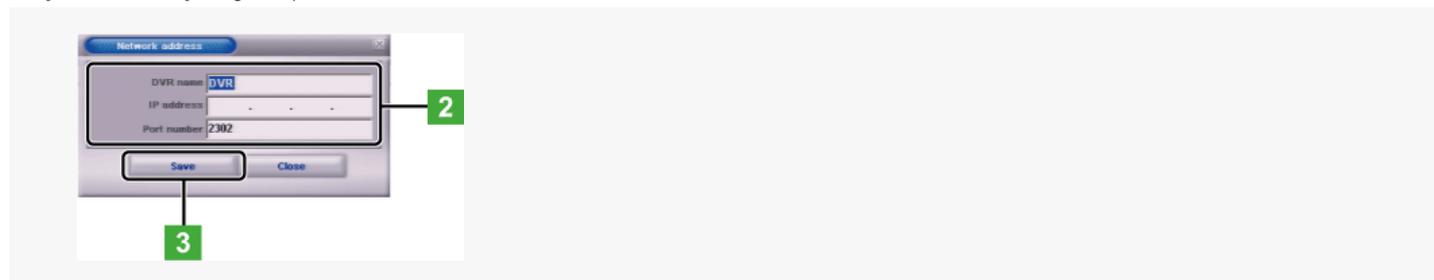
Registering new DVR servers

The above shows an example screen after registering DVR servers.

1 Click **Add new** .

The [Network address] dialog box opens.

2 **Enter network information (DVR name/IP address/Port number) on the DVR server you want to register.**

By default, [DVR name] is set to "DVR" and [Port number] is set to "2302".
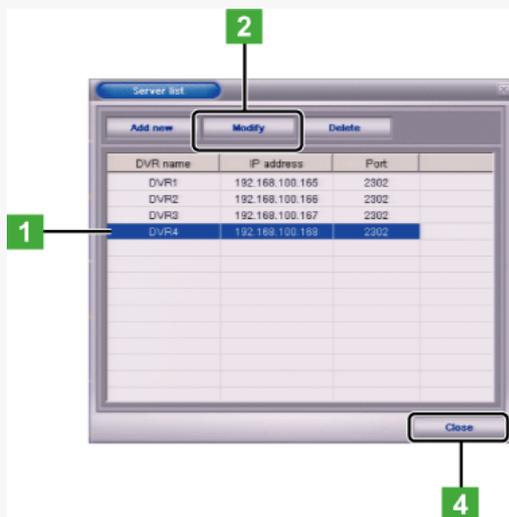
3 Click **Save** .

The [Network address] dialog box closes and the information on the registered DVR server appears in the server list **A** .
To register the next and later DVR servers, repeat the same steps (Steps 1 to 3).You can register up to 100 DVR servers.

4 **When finished registering all DVR servers, click **Close** .**

The [Server List] screen closes and, on the Camera Information panel, the names of the registered DVR servers are listed in the tree list.

Modifying a registered DVR server setting

1 **In the server list, select the desired DVR server.**
The selected line is now highlighted.

2 Click **Modify** .
The [Network address] dialog box opens.

3 **Modify the desired registered setting and click** **Save** .
The [Network address] dialog box closes. The content of the server list has been updated.

4 Click **Close** .
The [Server List] screen closes.

Deleting a registered DVR server

1 **In the server list, select the desired DVR server.**
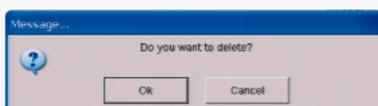The selected line is now highlighted.

2 Click **Delete** .
The deletion confirmation dialog box opens.

3 Click **OK** **in the dialog box.**
The selected DVR server disappears from the server list.
The name of the deleted DVR server disappears from the tree list in the Camera Information panel.

4 Click **Close** .
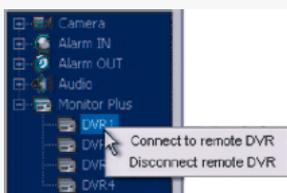The [Server List] screen closes.

Connecting to a DVR server

You can connect to DVR servers from the Camera Information panel.

1 **On the Camera Information panel, open the "Monitor Plus" folder.**
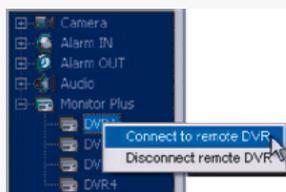The currently registered DVR names appear below the folder name.

2 **Right-click the DVR server you want to connect to.**
The context menu appears.

3 **Click [Connect to remote DVR].**
The [Login] screen appears.

4 **In the [User name] and [Password] fields, select your user name and enter the password.**

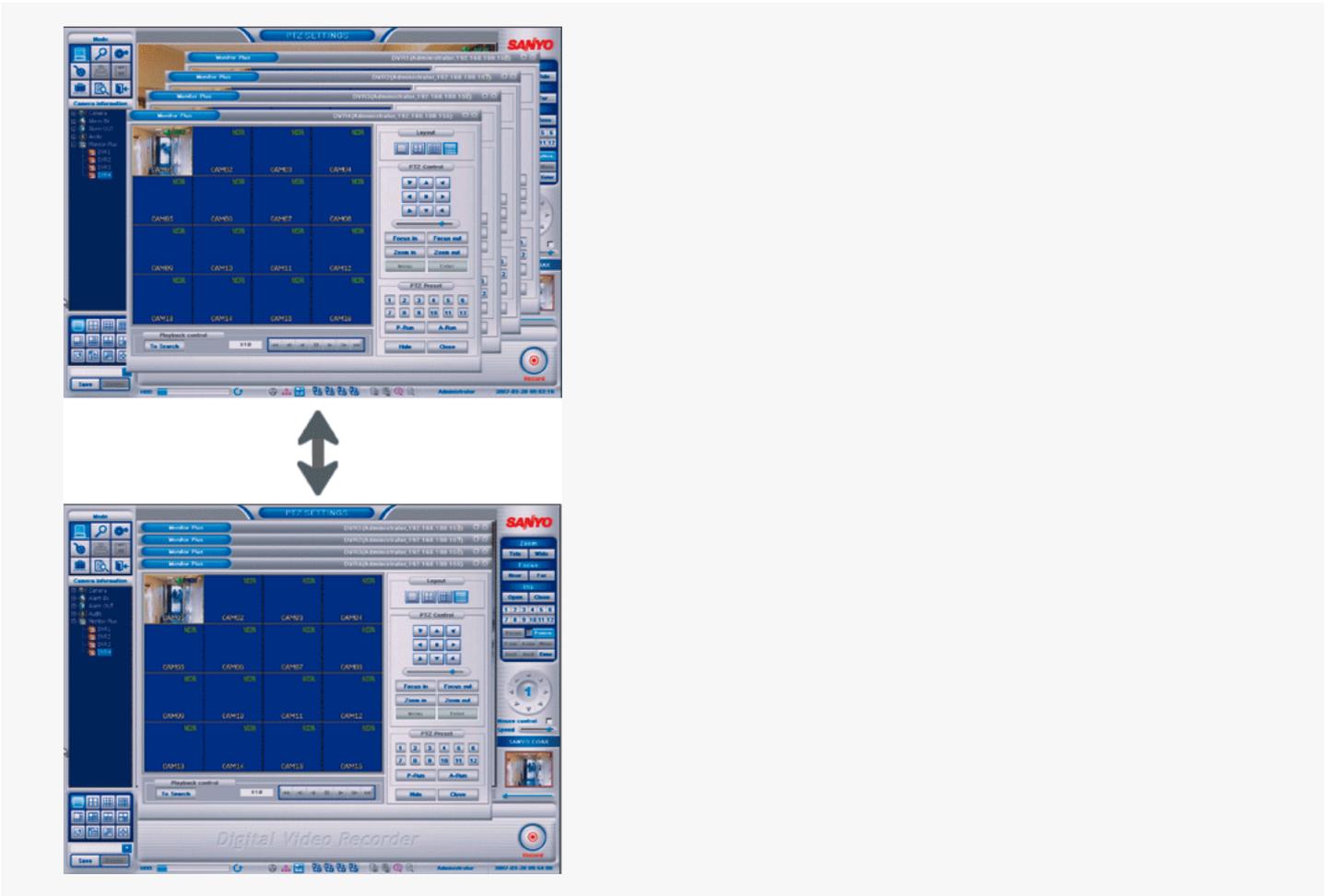As soon as a connection to the DVR server is established, the [Monitor Plus] screen appears.
On the Camera Information panel, the connected DVR server is shown with a red border in the tree list.

You can connect to up to four DVR servers simultaneously by following the same procedure (Steps 2 to 4).

The [Monitor Plus] screens are in a cascading display when two or more DVR servers are connected.

To switch the appearance of the cascading screen display, click [Monitor Plus] in the ETC menu and then select [Arrange all Monitor Plus window].

5 To disconnect a DVR server

On the Camera Information panel, select the DVR server you want to disconnect in the tree list and, in the context menu, select [Disconnect remote DVR].
The connection to the DVR server is disconnected and the [Monitor Plus] screen closes.
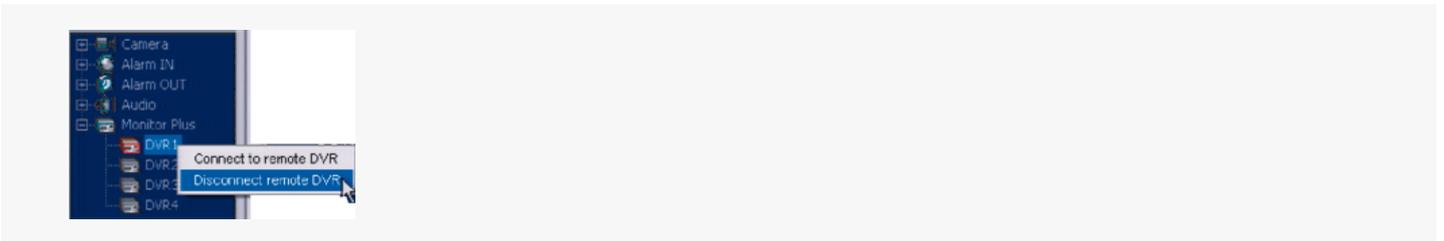
> To disconnect all the connected DVR servers simultaneously, on the Camera Information panel, right-click the "Monitor Plus" folder and, in the context menu, select [Disconnect all remote DVR].

[Monitor Plus] Screen Components and their Functions

You can emulate other DVR servers on the network from a DVR server.
If your target DVR server is connected to two or more DVR servers and its screen is in a cascading display, bring it to the front by clicking.
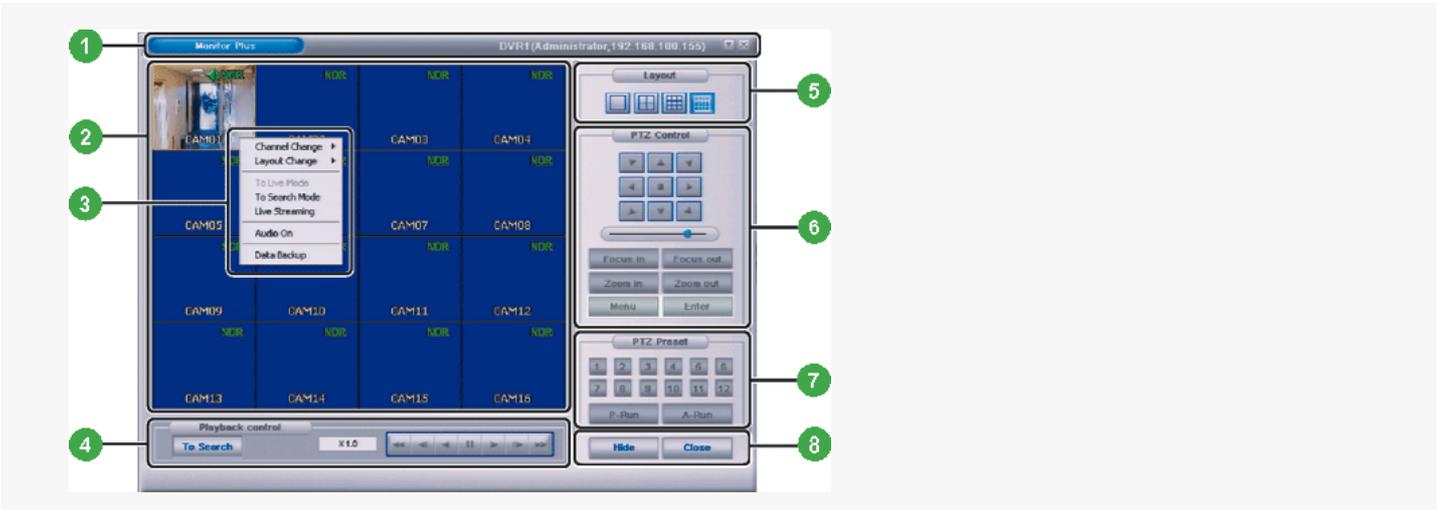
❶ Title bar

Shows the DVR name, IP address, and user name.

❷ Video display area

Displays live or playback video. Each video is displayed with information such as the camera title and the recording mode.
In a multiple-screen layout, the screen you select by clicking has a yellow border.

❸ Context menu

Right-clicking a video invokes the context menu, providing the following menu commands.

Channel Change:

Selects the camera whose video you want to monitor on the screen being selected.

Layout Change:

Switches among the four screen layouts (single-screen, quad-screen, 9-screeen, and 16-screen).

To Live Mode:

Switches from the Search video to the Live video mode.

To Search Mode:

Switches from the Live video to the Search video mode.

Live Streaming:

Displays the live streaming video.
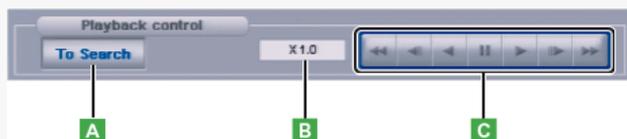
Audio On/Off:

Turns On/Off the audio output.

Data Backup:

Backs up the recording data to other recording media.
Perform data backup operation on the [Data Backup] screen.

❹ Playback control

The Playback control panel is used to play back the searched video. To play back video, you need to select a single channel.

A To Search

Switches to the Search mode.

B Playback speed indication

Shows the playback speed in six steps (×0.5, 1.0, 2.0, 3.0, 4.0, and 5.0).

C Playback buttons

: Fast-forward/rewind playback
Provides 4-step speed adjustment (×2.0, 3.0, 4.0, and 5.0).

: Frame-forward/rewind

: Forward/reverse playback
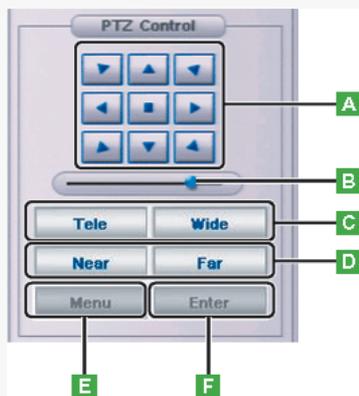Provides 2-step speed adjustment (×1.0 and 0.5).

: Pause

❺ Layout

You can select the single-screen, quad-screen, 9-screen, or 16-screen layout.

❻ PTZ Control

In a single-screen layout, you can remotely operate a PTZ camera.

A Use this control to adjust the orientation of the camera.

B Use this slider bar to set how fast you can move around on the image during panning/tilting or screen shooting.
The speed increases as you move the slider bar to the right.

C Use these buttons to adjust the focus.

D Use these buttons to zoom in/out the video.

E Use this button to display the camera's menu setting screen.

F Use this button to display the camera's menu setting screen.
Use this button to switch to the next screen, or enter the setting value you typed.

⑦ PTZ Preset

Use the PTZ preset buttons to run the camera with registered preset settings.

| P-Run | The camera moves around two or more preset positions in the order of preset numbers so that you can monitor what's happening in these positions. |
| A-Run | The camera moves to and fro between two preset positions. |

⑧ Other buttons

| Hide | Minimizes the [Monitor PLUS] screen into an icon in the status bar.
Minimizing the screen causes the color of the icon to be changed from blue to purple.
Right-clicking these icons invokes the context menu that shows the "Restore" and "Close" commands. |

| Close | Exits the emulation mode with the screen closed. |

Playing back video

1 **Click the video from the channel you want to play back.**
The screen selected by clicking is shown with an yellow border.
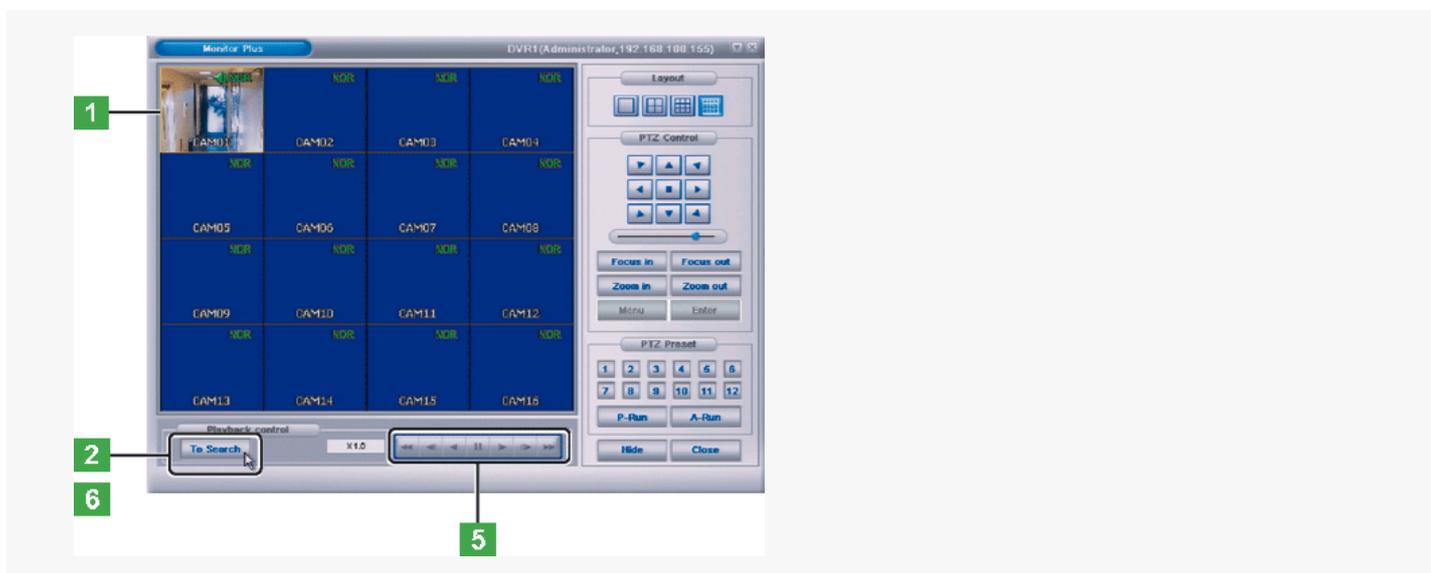
2 On the [Playback Control] panel, click **To Search** .

The Calendar window appears.

The label of the [To Search] button changes to [To Live].

> You may also display the calendar by right-clicking on the screen and, in the context menu, selecting [To Search Mode].

3 In the Calendar window, select the day on which the video you want to play back was recorded.

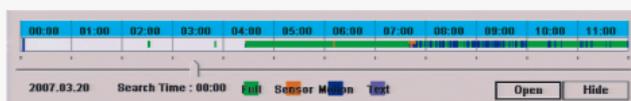The time bars for the selected day appear.

Clicking the blue hour indication area sequentially changes the time scale display as shown below.

You can scroll the time scale display forward and backward by operating the slider bar.

24-hour display (1 hour × 24 graduations)

12-hour display (1 hour × 12 graduations)

6-hour display (30 minutes × 12 graduations)
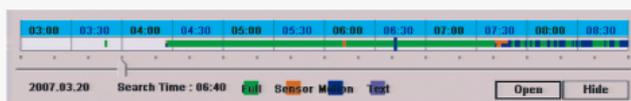
3-hour display (30 minutes × 6 graduations)

4 Click the desired time bar to determine the playback start point and, click **Open** .

The time bars disappear and the still image of the specified start point appears.

5 Click the forward playback button on the [Playback Control] panel.

The digital video recorder starts playing back the video from the specified playback point.

To perform fast-forward, pause, and other playback operations, use the corresponding playback buttons.

6 **On the [Playback Control] panel, click** [To Live] .

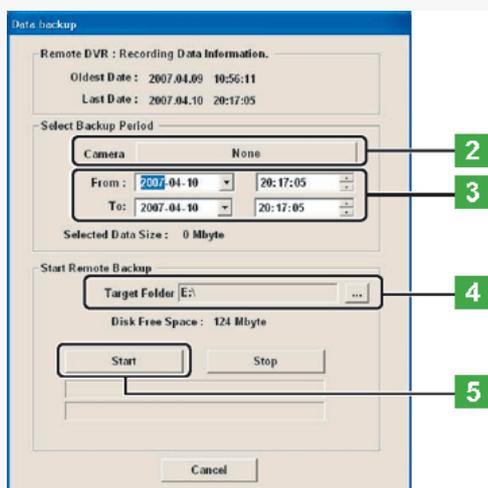Now, the video display area shows again the live video.

> You can also display the live video again by right-clicking the video and selecting [To Live Mode] in the context menu.
>
> If you select another channel to switch the playback video during playback, the channel from which you are playing back video currently will be switched automatically to the live video.

Backing up data

1 **Right-click the video from the channel you want to back up and, in the context menu, select [Data Backup].**

The [Data backup] screen appears.

```
Data backup

 Remote DVR : Recording Data Information.
    Oldest Date :  2007.04.09  10:56:11
    Last Date :  2007.04.10  20:17:05

 Select Backup Period
    Camera          None                      [2]

    From :  2007-04-10  ▼   20:17:05          [3]
    To:     2007-04-10  ▼   20:17:05
    Selected Data Size :   0 Mbyte

 Start Remote Backup
    Target Folder  E:\              ...        [4]
    Disk Free Space :  124 Mbyte

       Start          Stop                     [5]

                  Cancel
```

2 **Click the [Camera] button (shown as** [None] **by default) and specify the camera number for the data you want to back up.**

The [Camera] button now shows the selected camera number.

3 **In the [From] and [To] fields, specify the recording date/time range of the data you want to back up.**

Set the recording date/time range to between the [Oldest Data] and [Last Data] values shown in [Remote DVR: Recording Data Information].

Setting a date/time range causes the digital video recorder to display automatically the size of the recorded data to be backed up.

4 **In the [Target Folder] setting, select the backup-destination folder.**

The system now shows the space available in the backup-destination folder.

Confirm the total size of the files you selected does not exceed the size of the available space in the backup medium.

5 **Click** [Start] .

The system starts a backup, showing its progress as a progress gauge.

When the backup process is finished, a dialog box opens, showing the backup has been finished.

> To cancel the backup process halfway, click [Stop] .

▲

Working with the SETTINGS Screen

The SETTINGS screen is used by "Administrator" users. It is used to set the detailed settings of the digital video recorder.

SETTINGS Screen Components and their Functions

Clicking the [SETTINGS] mode button causes the SETTINGS screen to appear.
Use the setting buttons provided at the right end of the screen to access the desired settings.
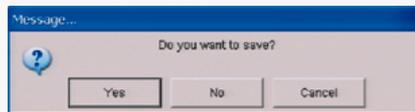

1 Screen title

"SETTINGS" is shown as the screen title.

2 Setting buttons

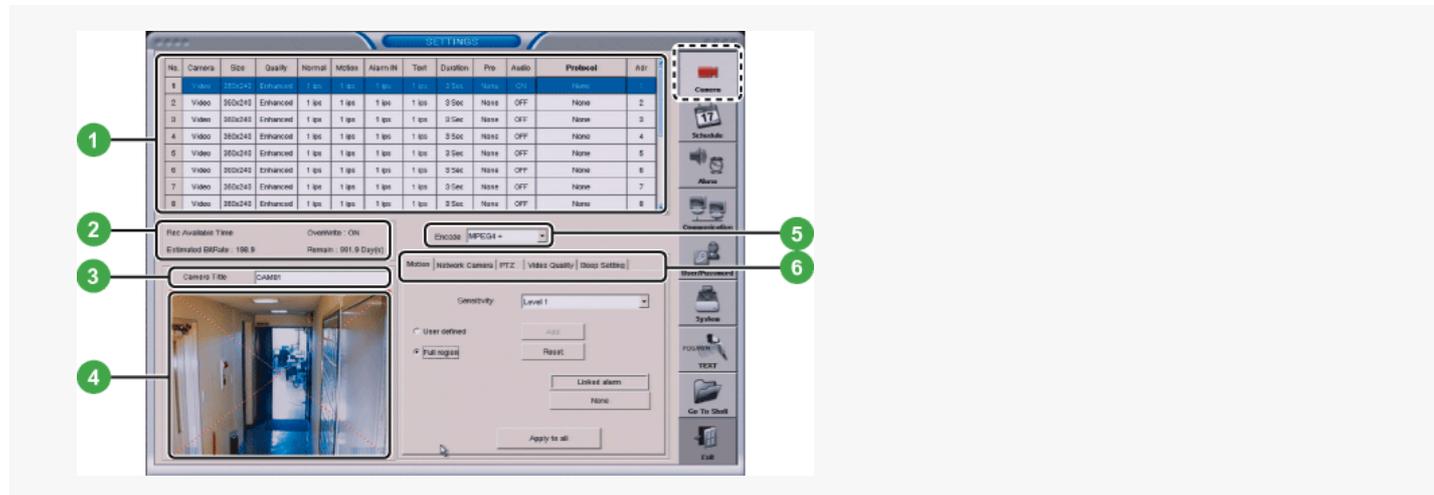Clicking each setting button displays the corresponding settings screen.

	Camera Settings	Allows you to set the operation conditions of each camera connected to the digital video recorder.
	Schedule Settings	Allows you to set the recording schedule.
	Alarm Settings	Allows you to configure the settings related to the alarm input/output.
	Communication Settings	Allows you to configure the communication conditions and other settings necessary to establish a network connection.
	User/Password Settings	Allows you to register users who use this system and their operating authorities. Only "Administrator" users can click this button.
	System Settings	Allows you to configure the basic system conditions, system behaviors when an event occurs, backup conditions, and other settings.
	Text Settings	Allows you to perform Text recording by connecting the digital video recorder to a POS or ATM.
	Go to Shell	Allows you to exit the system and go to the Shell screen, where you can configure the system environment. Only "Administrator" users can click this button.
	Exit	Allows you to return to the LIVE screen. Clicking this button opens a confirmation dialog box, asking you whether or not to save the settings you have configured. Select Yes or No to proceed. If you select Yes , besides the settings configured on the SETTINGS screen, the screen layout, ETC menu, and [Monitor PLUS] settings will be saved simultaneously.

2008/10/27

Camera Settings

Click the [Camera] setting button to display the Camera settings.
Here, you can set the operation conditions of each camera connected to the digital video recorder.

① Camera setting table

Clicking each header cell of the setting table invokes a pull-down menu.
Configure the camera type, connection conditions, and other settings for each camera.

No.:

Click the camera number of the camera for which you want to configure settings. The video from the camera you selected appears in the Preview area ④ .

Camera:

Set the camera type for each camera.

Selecting "LAN" causes the line for that camera to appear in a different color.

Setting options:
None (No camera connected)
Video (Normal camera)
LAN (Network camera)

Size:

Set the screen size for the bundle of channels: CH1 to 4, CH5 to 8, CH9 to 12,or CH13 to 16.

Setting options:

PAL: F360×288, 720×288, and 720×576

NTSC: Setting options: 360×240, 720×240, and 720×480

Quality:

Set the camera quality for each camera.
Setting options: Basic, Normal, Enhanced, Fine, and Super fine

Normal:

Set the recording rate used in Normal recording for each camera.

The recording rates shown in the pull-down menu depend on the [Size] setting. (This is also true for the recording modes described below.)

Motion:

Set the recording rate used in Motion recording for each camera.

Alarm IN:

Set the recording rate used in Alarm IN recording for each camera.

Text:

Set the recording rate used in Text recording for each camera.

Duration:

Set the duration of Motion, Alarm IN, and Text recordings for each camera (1 Sec to 5 Min).

Pre:

Set the operation conditions in Pre-alarm recording for each camera
Setting options:

None (No Pre-alarm recording)
Short (Short Pre-alarm recording time)
Medium (Standard Pre-alarm recording time)
Long (Long Pre-alarm recording time)

Audio:
Turn ON/OFF audio recording for each camera.

Protocol:
Set the PTZ operation protocol for each camera.

Adr:
Set the PTZ operation address for each camera (1 to 127).

Size: Shows each camera's size setting automatically.

Quality: Honors each camera's quality setting, which is not shown in the setting table, however.

Audio: Select the [Network Camera] tab, click Detail Setup , and access [Network camera detail settings] to configure the audio setting.

Audio recording is not possible if the [Duration] setting is "3 Sec" or less.

Right-clicking a header cell of the list and then selecting [All camera config copy] in the context menu applies the predefined setting to all cameras (not applicable to the [Camera] column).

When connecting a network camera to the digital video recorder, turn OFF the camera's SSL setting.

The video from network cameras is not output to the MON1/MON2 (video output) terminals and the Zoom panel.

---

② Rec Available Time

The video data transmission speed and the remaining recording time calculated based on the values you set in the Camera setting table are shown.

Estimated BitRate: Video data transmission speed
OverWrite: Overwrite recording status (ON/OFF)
Remain: Remaining recording time (in days)

③ Camera Title

If you want to change the camera title shown with the camera's video etc., type here a new title with a length of 22 characters or less.

Default setting: CAM01 to CAM16

Camera Title	CAM01

④ Preview area

Clicking a camera number in the Camera setting table causes the video from the selected camera to appear in the Preview area.

⑤ Encode setting

Set the encoding format.
Setting options: MPEG4 and MPEG4+

⑥ Detailed Setup Tabs

These five index tabs are used to access detailed condition settings.

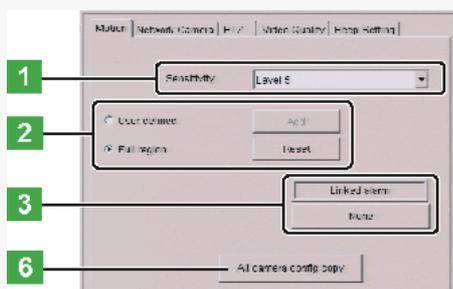| Motion	Network Camera	PTZ	Video Quality	Beep Setting

Configuring the motion sensor (Motion)

Configure the motion sensor feature that senses any motion in the target.

In the Preview area, portions where any motion is sensed under the configured conditions will be indicated by blue rectangles.

These rectangles are shown based on the sensing sensitivity and sensing area settings currently stored in the system.

If you have changed any of these sensing conditions, click the [Exit] setting button to save the settings you have configured.

---

1 In the [Sensitivity] setting, select the sensing sensitivity from the pull-down menu.

The sensing sensitivity can be set in nine levels (Level 1 to 9).

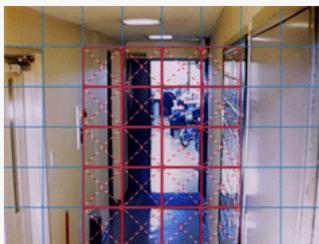Higher the sensitivity level, lower the sensing sensitivity.

2 **Using the radio buttons, specify whether to define the sensing area by yourself.**

When [User defined] is selected:

The [Add] button becomes selectable, allowing you to define the sensing area as desired.

In the preview area, click in the grid cell where you want to enable sensing.

Each time you click, the color of the selected grid cell toggles between red and blue to indicate that sensing is enable or disabled, respectively.
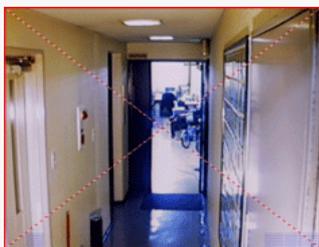

Click **Reset** to discard all sensing area settings.

When [Full region] is selected:

The whole screen is set as the sensing area.

The whole preview area is enclosed with a red border to indicate that full-region sensing is enabled.

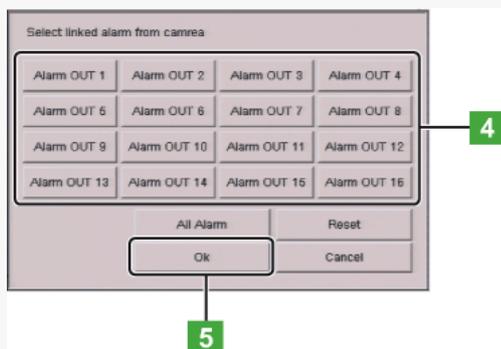Clicking **Reset** switches the screen to the [User defined] mode.

3 **In the [Linked alarm] section, click the button (labeled as** **None** **by default).**

The [Select linked alarm from camera] setting dialog box appears.

4 **Click the Alarm OUT number of each terminal that outputs an alarm signal when a motion is sensed.**

Clicking an Alarm OUT number turns On the alarm output from the corresponding terminal. You can turn On the alarm output for more than one terminal.

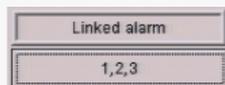Click the terminal number again to turn Off the alarm output.

All Alarm : Turns On the alarm output for all Alarm OUT numbers.

Reset : Turns Off the alarm output for all Alarm OUT numbers.

Cancel : Cancels all settings and closes the dialog box.

5 **When finished, click** **OK** .

The Motion setting dialog box closes. On the [Motion] tab, the button in [Linked alarm] setting now shows the settings you have configured ("None", Alarm OUT Nos. (1 to 16), or "All").

> Linked alarm
>
> 1,2,3

In the [Linked alarm] setting, click the button again to return to the setting dialog box.

6 To configure all cameras to have the same settings, Click ⎧ All camera config copy ⎫.

The system applies the settings configured on the [Motion] tab to all cameras.

(The settings, however, are not applied to network cameras.)

Configuring network cameras (Network Camera)

For each camera for which you set the camera type to "LAN" in the Camera setting table (in the [Camera] setting), configure the settings necessary to establish a network connection.
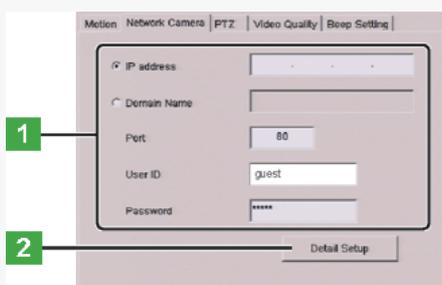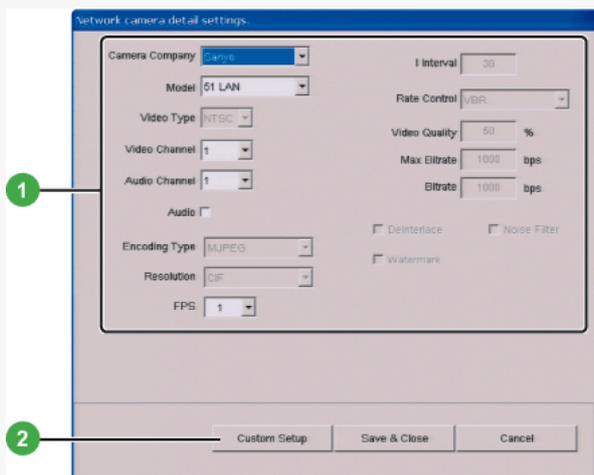

1 Specify the address and other information on the camera.

"IP address" or "Domain Name"

Port (Default setting: 80)

User ID (Default setting: guest)

Password (Default setting: guest)

2 Click Detail Setup .

The [Network camera detail settings] dialog box opens.

3 Configure the detailed settings of the camera.

1 Network camera detailed settings

The displayed items vary depending on the camera model.

Camera Company:

Select the manufacturer of the camera.

Model:

Select the model of the camera.

Video Type:

Select the video type (NTSC or PAL).

Video Channel:

Select the channel that transmits video signals.

Audio Channel:

Select the channel that transmits audio signals.

Audio:

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Select this check box to enable audio recording.

Encoding Type:

The camera's Codec setting (MJPEG, MPEG1, MPEG2, MSMPEG 4 V1, or DIVX) is shown.

Resolution:

The camera's resolution setting is shown.

FPS:

Select the frame rate.

I Interval:

The camera's I frame interval setting is shown.

For example, if the [I Internal] is "30", one I frame will be inserted every 30 P frames.

Rate Control:

The camera's recording method setting (CBR (Constant Bit Rate) or VBR (Variable Bit Rate)) is shown.

Video Quality:

The video quality is not shown.

Max Bitrate:

The camera's maximum VBR (Variable Bit Rate) setting is shown.

Bitrate:

The camera's maximum CBR (Constant Bit Rate) setting is shown.

Deinterlace:

Select this check box to enable deinterlacing.

Noise Filter:

Select this check box to enable noise filtering.

Watermark:

Select this check box to enable water marking to prevent interpolation.

2 Custom Setup

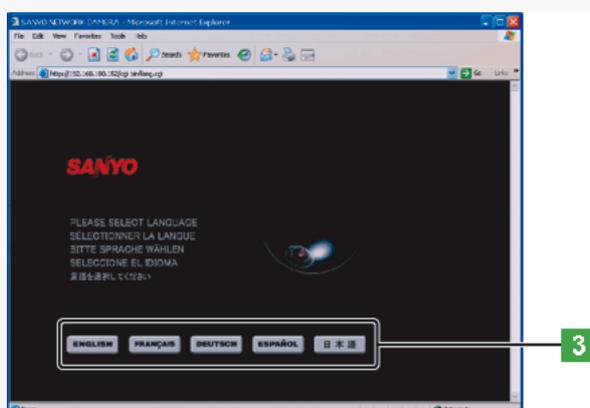You can set up your camera using the built-in Web browser.

1 **Click [Custom Setup].**

The Web browser starts, presenting a dialog box for user authentification.

2 **Type an "Administrator" user name and password and click [OK].**

The language selection screen appears.

3 **Click the button corresponding to the language you want to use.**

The camera setup screen appears.

For the setup procedure, refer to the instruction manual that comes with your camera.
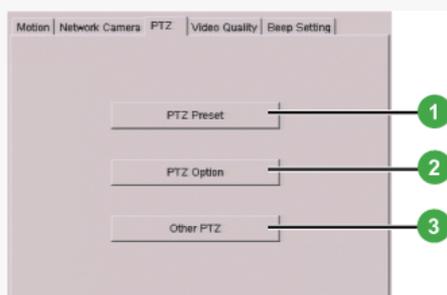
Save & Close : Saves the configured settings and closes the dialog box.

Cancel : Cancels the configured settings and closes the dialog box.

Configuring a PTZ camera (PTZ)

Setting a protocol in the Camera setting table (in the [Protocol] column) allows you to configure the operation settings of a PTZ camera.
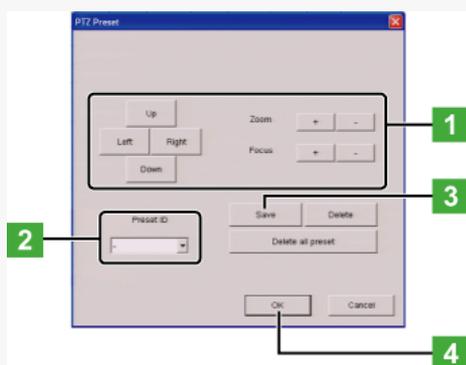

1 Button to preset PTZ camera positions (PTZ Preset)

Click **PTZ Preset** .

In the dialog box that appears, register camera states such as the current orientation and zoom magnification as preset positions. You can register up to 12 preset positions.

The registration and deletion of these preset positions may also be performed from the PTZ Camera Control panel.

Registering preset positions

1 Set the orientation, zoom, and focus of the camera you want to register using the following buttons.

Up / **Down** / **Left** / **Right** :
Adjusts the orientation of the camera in the up/down/left/right direction.

Zoom **+** / **-** :
Adjusts the zoom magnification.

Focus **+** / **-** :
Use these buttons to adjust the focus.

2 In the [Preset ID] setting, select a registration number (1 to 12) for the preset position from the pull-down menu.

3 Click Save .

The current position is registered as a preset position with the selected preset number.
By following the same procedure (Steps 1 to 4), you can register up to 12 preset positions.

4 Click OK .

The configured preset positions have been registered. The setting dialog box closes.

Deleting preset positions

To delete preset positions one by one:

Select the preset number you want to delete in the [Preset ID] setting and Click Delete . The registered preset position has been deleted.

To delete all preset positions:

Click Delete all preset . All the preset positions currently registered have been deleted.

② Button to set PTZ camera options (PTZ Option)

Click PTZ Option .
You can orient the camera to a preset position, linked to the occurrence of an event.

1 Using the following radio buttons, specify the type of event to which you want to link a preset position.

Setting options:

Motion:

Motion event that occurs when any motion is sensed in the target by the motion sensor.

Alarm IN:

Alarm IN event that occurs when an external alarm signal is input.

Alarm OUT:

Alarm OUT event that occurs when alarm output is made.

2 Select the channel for which you want to link the event type to a preset position from the pull-down menu.

3 Select the camera you want to orient to a preset position, linked to the occurrence of an event of the set type.

The pull-down menu lists each camera number for which a protocol is set in the [Protocol column] in the Camera setting table.

4 Select the preset position to which you want to orient the camera.

The pull down menu shows the preset ID you registered for the camera in Step **3** .

5 To enable auto return feature, select the check box and, in [Duration(Sec)] setting, select the return duration.

When the selected return duration expires, the camera automatically returns to the previous preset position.

Setting options: 05, 10, 20, 30, 40, 50, 60 Sec

6 To configure all cameras to have the same settings, Click All camera config copy .
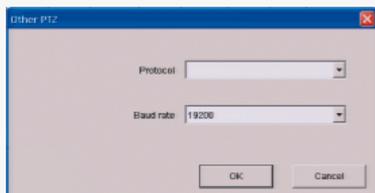
The system applies the settings configured on this screen to all cameras.

7 Click OK .

The PTZ option settings have been configured. The setting dialog box closes.
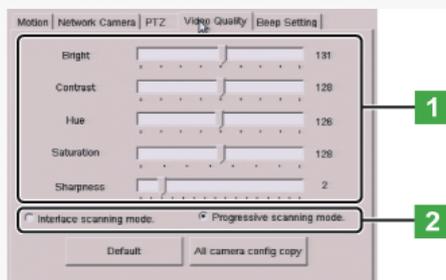
③ Button to preset other PTZ cameras (Other PTZ)

If you have set the [Protocol] to "Other RS485" in the Camera setting table, Click Other PTZ on the [PTZ] tab. Then, in the setting dialog box that appears, set the protocol and the baud rate and Click OK .

Configuring the video quality (Video Quality)

Configure the quality of the video displayed on the monitor.

1 Adjust the video quality using the slider bars.

Note that this adjustment is possible when the [Camera] setting in the Camera setting table is set to "VIDEO".

Brightness: Brightness of the video

Contrast: Contrast of the video

Hue: Hue of the video
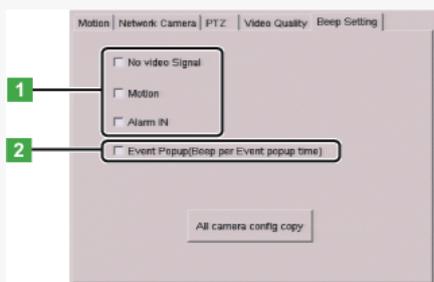
Saturation: Saturation of the video

Sharpness

2 Using the following radio buttons, select the scanning mode of live video.

Interlace scanning mode:

Fast but does not support the panning view.

Progressive scanning mode:

More dense and supports the panning view.

Default : Resets the settings on the tab to the defaults.

All camera config copy : Applies the settings on the tab to all cameras.

Configuring the alarm beep (Beep Setting)

Configure the alarm beep that will be output if an event occurs.

1 Select the check box for the event type for which you want to enable the alarm beep.

The alarm beep will sound if an event of the selected type occurs. You can select more than one event type.

Setting options:

No Video Signal: Type of event that occurs when the video signal is interrupted

Motion: Type of event that occurs when any motion is sensed in the target by the motion sensor

Alarm IN: Type of event that occurs when an external alarm signal is input
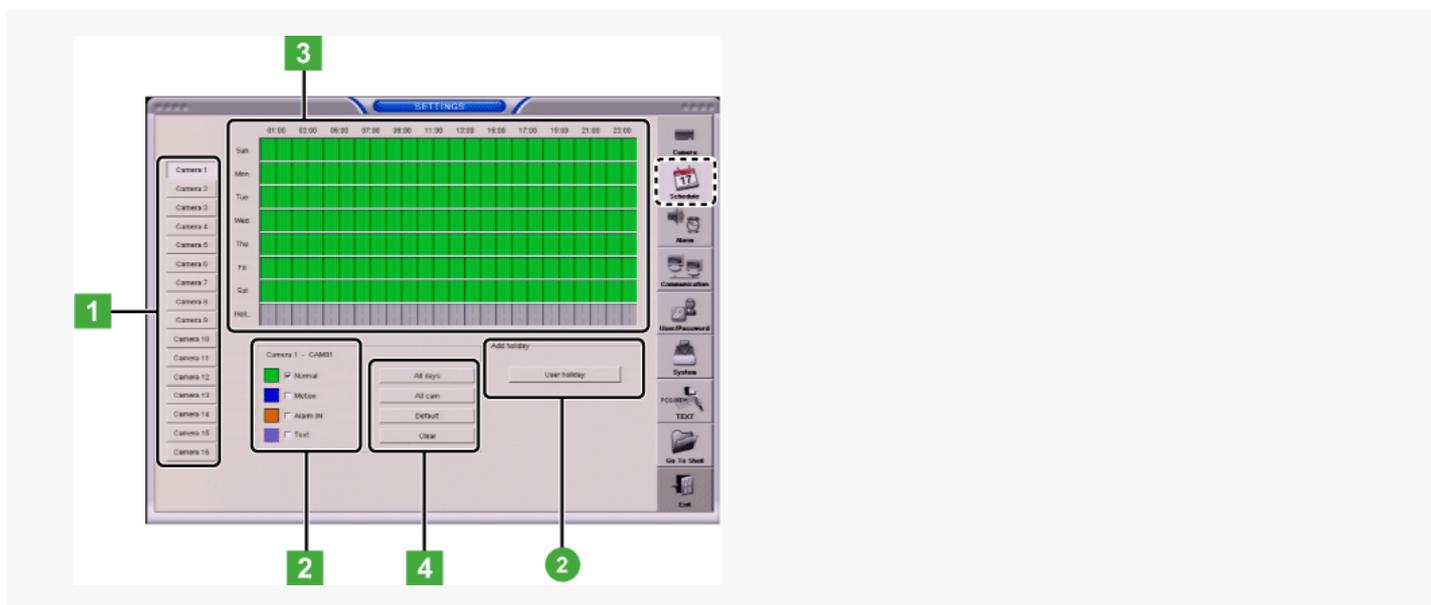
2 Select the Event Popup check box to enable the Event Popup feature.

When the Event Popup feature is enabled, the system displays relevant event video in the single-screen mode whenever an event occurs and sounds an alarm beep.

All camera config copy : Applies the settings on the tab to all cameras.

Schedule Settings

Click the [Schedule] setting button to display the recording schedule settings.

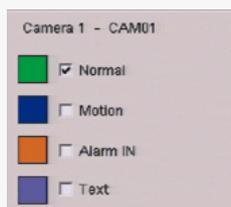2008/10/27

1 Setting a recording schedule

You can configure a recording schedule in the following steps:
Configuring a recording schedule allows you to automatically record video as you planned.

1 Click the button for the camera (Camera 1 to Camera 16) for which you want to configure a recording schedule.

2 Select the check box for the recording mode you want to set.
Now, you can configure a recording schedule. You can select more than one recording mode.

Normal:
Records video continuously during the scheduled time period.

Motion:
Records video whenever a motion is sensed in the target by the motion sensor.

Alarm IN:
Records video whenever an alarm signal is input from an external sensor.

Text:
Records video whenever a keyword match is found in the text, if connected to a text input device such as POS or ATM.

3 In the Schedule setting area, drag on the time bar for the desired day of the week to set a recording schedule.
For each day (of the week), you can set the recording time period in increments of 15 minutes.
As you drag, the time bars are filled with a color assigned to the recording mode you selected in Step **2** .

> If you drag again over a time period in which you already set a schedule, the time bar will be overwritten to update the schedule.

- Ⓐ 00:00 to 08:00: Normal recording
- Ⓑ 08:00 to 16:00: Normal/Motion/Alarm IN recording
- Ⓒ 16:00 to 22:00: Motion/Alarm IN recording
- Ⓓ 22:00 to 24:00: Normal/Text recording

4 Follow the same procedure (Steps **2** to **3**) to set a recording schedule for each day of the week.
To apply the same schedule for all cameras or for all days of the week, use the following buttons.

All days :
Applies the set recording schedule to all days of the week.
To cancel, click the button again.

All cam :
Applies the set recording schedule to all cameras.

To cancel, click the button again.

| Default | :

Sets Normal recording for all time periods in each day of the week.

| Clear | :

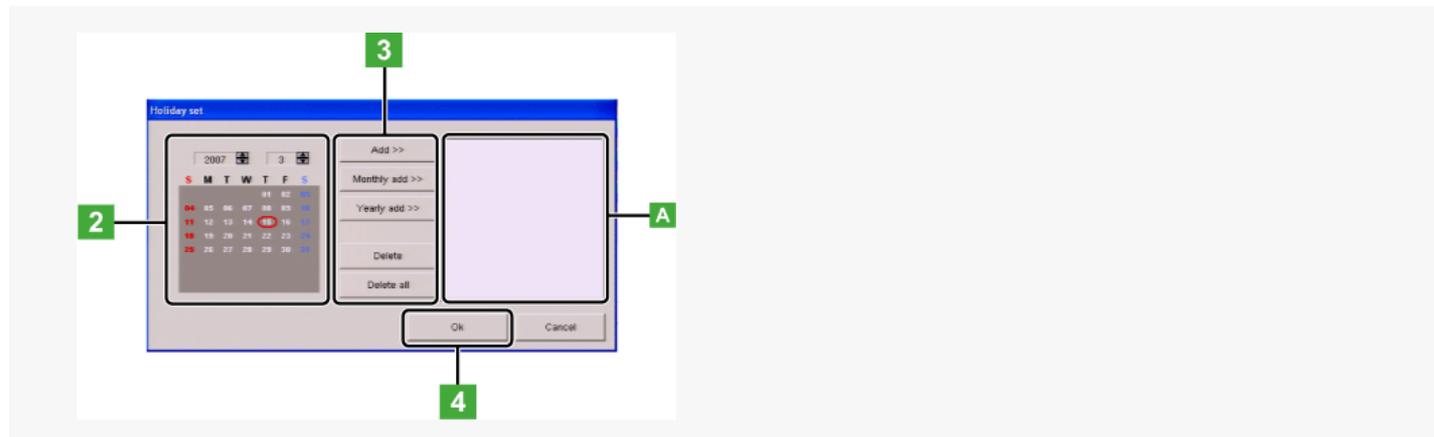Clears the set recording schedule.

> The schedule you set in the lowermost [Holiday] area applies to the holidays you defined in the next "Holiday setting" section.
>
> Without the holiday setting, the [Holiday] setting area is grayed out, preventing you from setting the holiday schedule.

② Setting holidays

You can define specific, monthly, or yearly holidays.

1 Click User holiday .

The [Holiday Set] screen appears.

2 On the calendar, select the date on which you want to set a holiday by clicking.

The selected date is highlighted.

Use the spin buttons to set the year and month of the calendar.

3 Use the following buttons to add the selected date to the holiday list A .

Use an appropriate button depending on whether you set a specific, monthly, or yearly holiday.

Button	Function	Display Example in Holiday List
Add>>	Adds the selected date (year-month-day) as a specific holiday.	2007-03-15
Monthly add>>	Adds the selected date (day) as a monthly holiday.	Monthly 15
Yearly add>>	Adds the selected date (month-day) as an yearly holiday.	Yearly 03-15
Delete	Deletes the selected holiday setting from the holiday list.	(One holiday setting deleted)
Delete all	Deletes all holiday settings.	(All holiday settings deleted)

4 Click OK .

The defined holiday settings have been saved. The dialog box closes.

> Clicking Cancel cancels the holiday settings and closes the dialog box.

Alarm Settings

Click the [Alarm] setting button to display the Alarm settings.

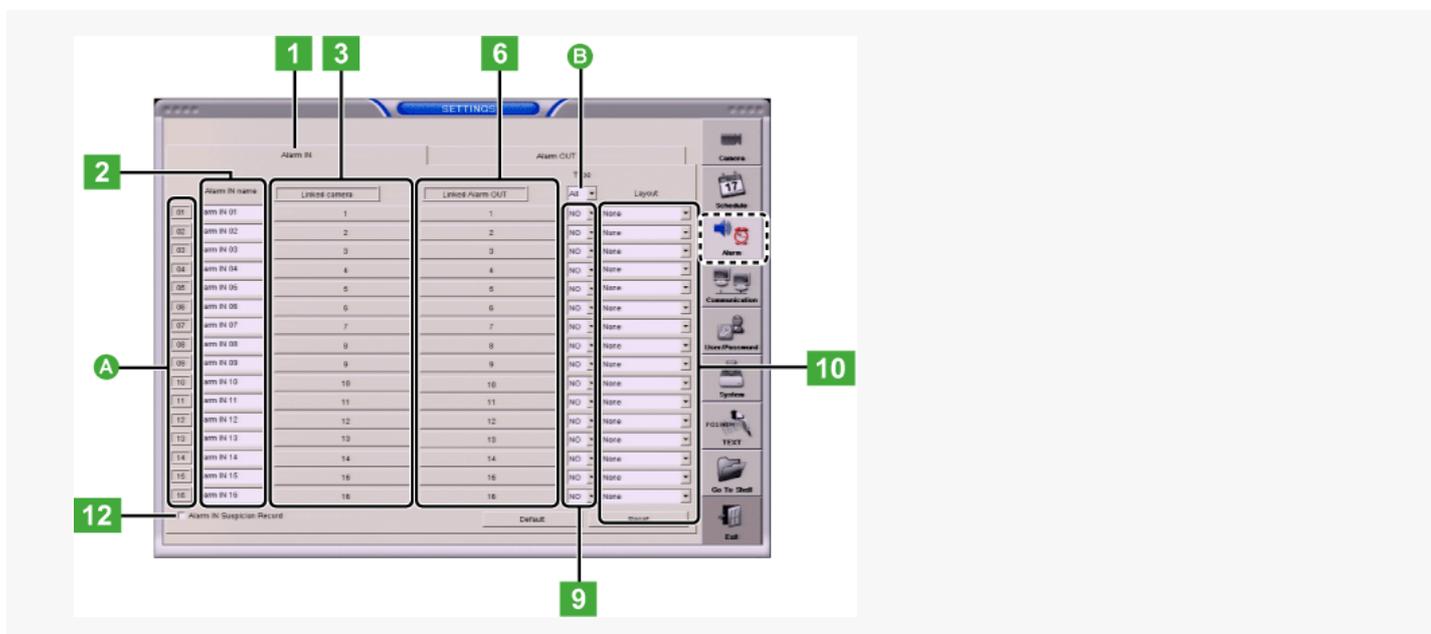> Each Alarm IN/OUT number A shown on this screen represents the corresponding alarm input/output terminal located on the rear panel of the digital video recorder.
>
> For information on alarm input/output connections, refer to the separate digital video recorder installation manual.

Configuring the alarm inputs

On this screen, configure the camera and alarm OUT numbers linked to external alarm input.

> To record video in conjunction with alarm inputs, in addition to this setting, you need to configure a recording schedule (in the Schedule settings).

1 **Click the [Alarm IN] tab.**
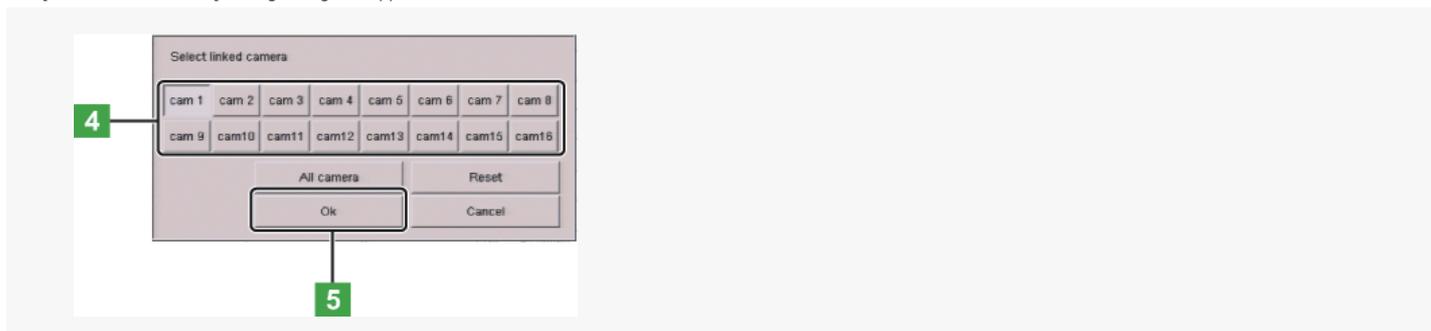
The alarm IN settings appears.

For each alarm IN number, follow the next and later setting steps.

2 **In the [Alarm IN name] field, type a name for the alarm input.**

To change the default name, type a new name with a length of 22 characters or less.

3 **Click the [Linked Camera] button.**

The [Select linked camera] setting dialog box appears.

All camera :

Selects all camera numbers.

Reset :

Deselects all camera numbers.

Cancel :

Cancels the settings and closes the dialog box.

4 **Click the camera number you want to link to alarm input.**

This links the camera number to alarm input. You can select more than one camera number.

5 **Click OK .**

The dialog box closes. On the [Alarm IN] tab, the button next to the [Linked Camera] button now shows the setting ("None", camera No., or "All").

6 **Click the [Linked Alarm OUT] button.**

The [Select linked alarm from camera] setting dialog box appears.

All Alarm :

Selects all alarm OUT numbers.

┃ **Reset** :

Deselects all alarm OUT numbers.

┃ **Cancel** :

Cancels the settings and closes the dialog box.

7 **Click the alarm OUT number you want to link to alarm input.**

This links the camera number to alarm input. You can select more than one camera number.

8 **Click** **OK** **.**

The dialog box closes. On the [Alarm IN] tab, the button next to the [Linked Alarm OUT] button now shows the setting ("None", alarm OUT No., or "All").

9 **Under [Type], click the down-arrow button for the desired alarm IN number and, from the pull-down menu, select the polarity of the alarm input signal.**

Setting options:

┃ NO (Normal Open):

The terminal is normally open and a signal is output if closed.

┃ NC (Normal Close):

The terminal is normally closed and a signal is output if opened.

> 🖊 To apply the same setting to all alarm IN numbers, under [Type], select "All" **B** from the pull-down menu.

10 **To switch the camera layout on the monitor screen in conjunction with alarm inputs, under [Layout], click the down-arrow button for the desired alarm IN number to open the pull-down menu.**

Then, select the desired layout name from the listed preset names.

11 **Follow the same procedure (Steps 2 to 10) to configure settings for all alarm IN numbers.**

12 **To link suspicion recording to alarm input, select the [Alarm IN Suspicion Record] check box.**

This allocates the alarm IN number 16 to suspicion recording.

┃ Linked camera number:

The system automatically sets [Select linked camera] to "All".

┃ Linked alarm OUT number:

Set this in the [Select linked alarm from camera] setting dialog box.

☑ Alarm IN Suspicion Record

> 🖊 Selecting the [Alarm IN Suspicion Record] causes the digital video recorder to start suspicion recording automatically whenever an alarm signal is input to the alarm input terminal 16.
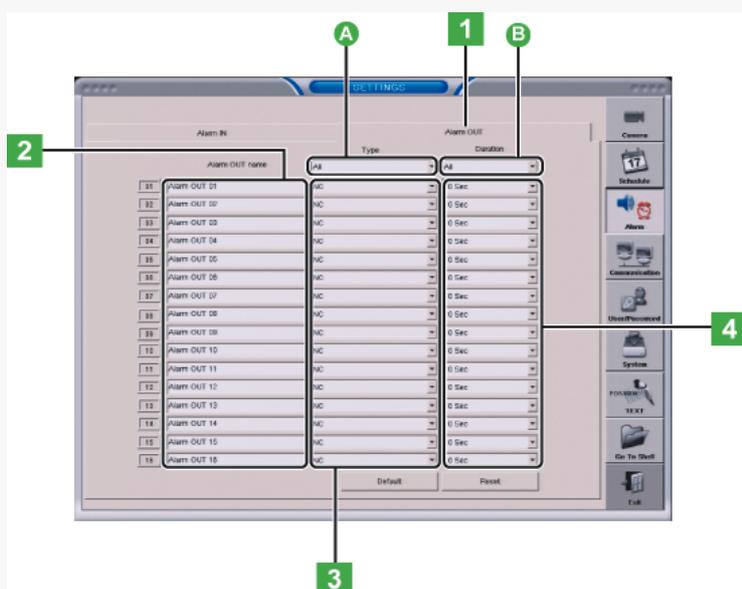
┃ **Default** : Resets the all settings on the tab to the defaults.

┃ **Reset** Cancels all settings on the tab and restores the previous conditions.

▊ Configuring the alarm outputs

Configure the alarm output settings on the [Alarm OUT] tab.

1 **Click the [Alarm OUT] tab.**

The alarm OUT settings appears.

For each alarm OUT number, follow the setting steps below.

2 **In the [Alarm OUT name] field, type a name for the alarm output.**

To change the default name, type a new name with a length of 22 characters or less.

3 **Under [Type], click the down-arrow button for the desired alarm OUT number and, from the pull-down menu, select the polarity of the alarm output signal.**
Setting options:

| NO (Normal Open):
The terminal is normally open and a signal is output if closed.

| NC (Normal Close):
The terminal is normally closed and a signal is output if opened.

> To apply the same setting to all alarm OUT numbers, under [Type], select "All" **A** from the pull-down menu.

4 **Under [Duration], click the down-arrow button for the desired alarm OUT number and, from the pull-down menu, select the duration of the alarm output signal.**
Setting options:

| 1 TIME: Alarm signal is output once.

| 5 Sec to 10 Min: Specify the alarm output time as a numeric value.

| Continue: Alarm output continues until stopped.

> To apply the same setting to all alarm OUT numbers, under [Duration], select "All" **B** from the pull-down menu.

5 **Follow the same procedure (Steps 2 to 4) to configure settings for all alarm OUT numbers.**

| Default : Resets the all settings on the tab to the defaults.

| Reset Cancels all settings on the tab and restores the previous conditions.

Communication Settings

Click the [Communication] setting button to display the Communication settings.
Allows you to configure the communication conditions and other settings necessary to establish a network connection.

① Configuring the basic settings

Enter the basic information on this digital video recorder.

1 **In the [DVR name] field, type the name of the digital video recorder.**
Provide a name of 22 characters or less.

2 **In the [Network type] setting, check the network protocol.**
By default, this is set to "TCP/IP."

3 **In the [DNS] field, type the domain name or IP address of the DNS server.**
Clicking Default sets the default values (192.168.0.1).

4 **In the [Port] field, type the port number.**
Provide a port number of 5 characters or less.

| Video/Audio (Default setting: 2302)

The port used to send/receive video data (live/playback video) and audio data.

Backup (Default setting: 35000)

The port used to receive backup data.

Web Server (Default setting: 80)

The port used to connect the Web browser (Internet Explorer) to a DVR server.

> The digital video recorder uses the "Web Server" port to display the initial connection screen and the "Video/Audio" port to send/receive video/audio data.
>
> The digital video recorder uses the "Video/Audio" port for all operations. The "Backup" and "Web Server" ports are not used.

② Configuring the TCP/IP settings

Using the following radio buttons, select how you want to set the TCP/IP address.

A Obtain an IP address automatically (DHCP)

Select this to use DHCP to obtain an IP address automatically.

B Use this IP address

Select this to specify an IP address manually. You need to specify the following information.

IP address

To renew the IP address, Click [IP Refresh] .

Subnet mask

Gateway

> Starting the digital video recorder without connecting a LAN cable to the LAN port causes all these settings to reset to the default values.

③ Configuring the DDNS

To use Sanyo's DDNS (Dynamic DNS) service, perform the following DDNS server setting.

> By using the DDNS service, you can automatically access and connect to your digital video recorder from Internet Explorer by simply entering the domain name registered with the DDNS server. There is no need to enter the IP address of the digital video recorder.

1 **Select the [Use DDNS] check box.**

2 **Access Sanyo's DDNS service site and register your domain name.**

For how to register your domain name, refer to the "Registering a Domain Name" section below.

3 **In the [Domain Name] field, type the registered domain name.**

4 **Click [Update IP].**

A message dialog box appears, saying that the setting has been completed.
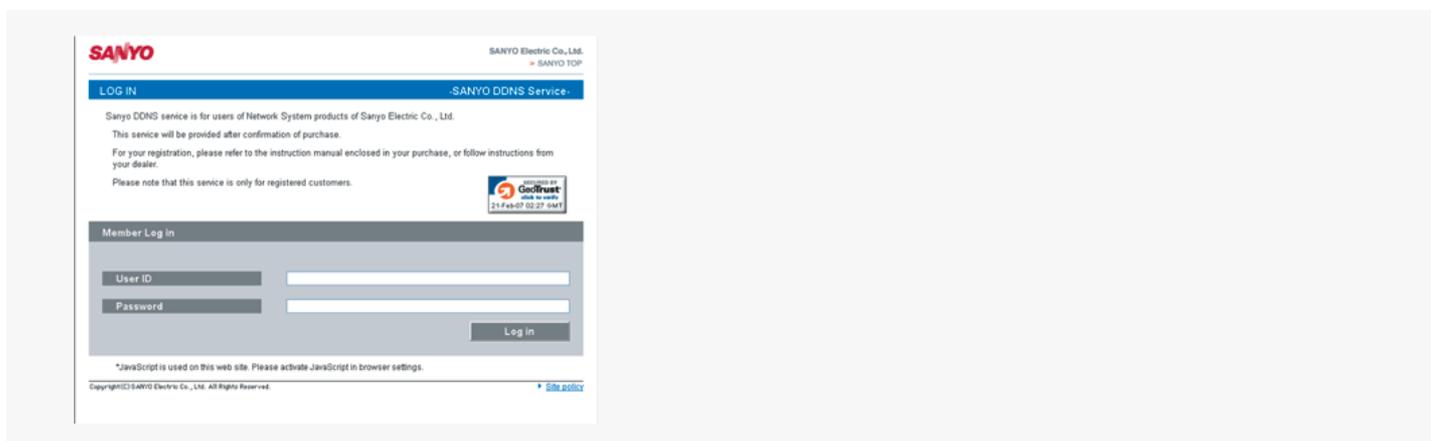
1 **Access Sanyo's DDNS service site from your personal computer.**

In Internet Explorer, enter the following address. The login screen for the Sanyo DDNS service appears.

https://www.ddns-sanyosecurity.com

2 **Type the user ID and user password shown in the Communication settings and Click [Login] .**

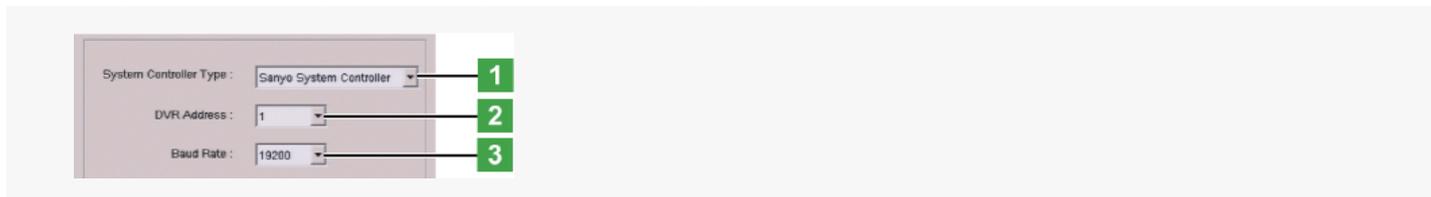The domain name registration page appears.

3 Type the domain name you want to use and click the [Submit] button.

Your domain name has been registered to the DDNS server.
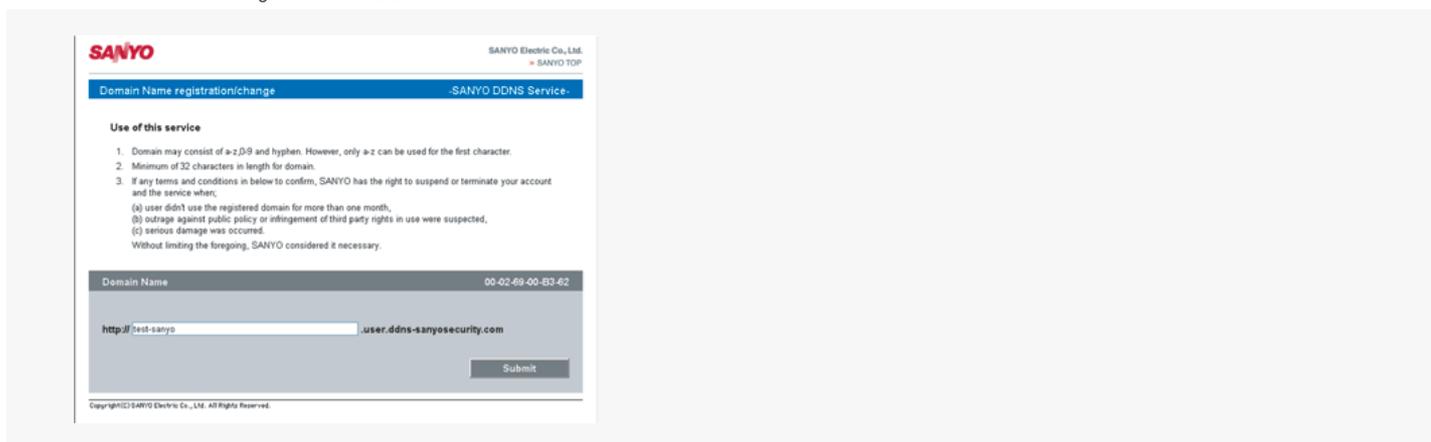

4 Configuring the system controller

To connect a system controller to the digital video recorder, you need to enter necessary information.

1 In the [System Controller Type] setting, select the system controller type from the pull-down menu.

Setting option: Sanyo System Controller

2 In the [DVR Address] field, select the address (1 to 8) of the digital video recorder from the pull-down menu.

3 In the [Baud Rate] setting, select the baud rate from the pull-down menu.

Setting options: 2400, 4800, 9600, and 19200

5 Configuring the E-mail

To send the alarm-notification E-mail, follow the steps below.
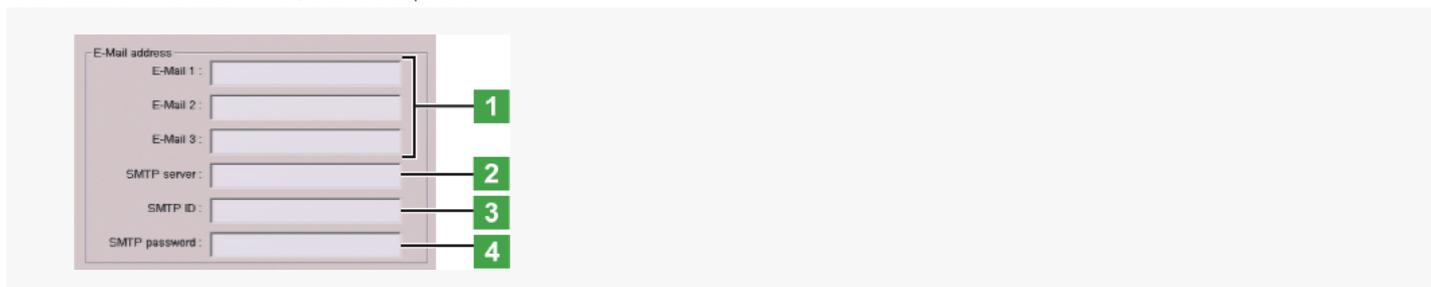
1 In each [E-Mail] field, type the address to which you want to send an E-mail if an alarm occurs.

You can enter up to three E-mail addresses.

2 In the [SMTP server] field, type the domain name or IP address of the SMTP server.

3 In the [SMTP ID] field, type an authentification ID as needed.

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4 In the [SMTP PASSWORD] field, type an authentification password as needed.

User/Password Settings

Click the [User/Password] setting button to display the User/Password settings.
On this screen, register users who use this system and their operating authorities.
Only "Administrator" users can perform this setting.
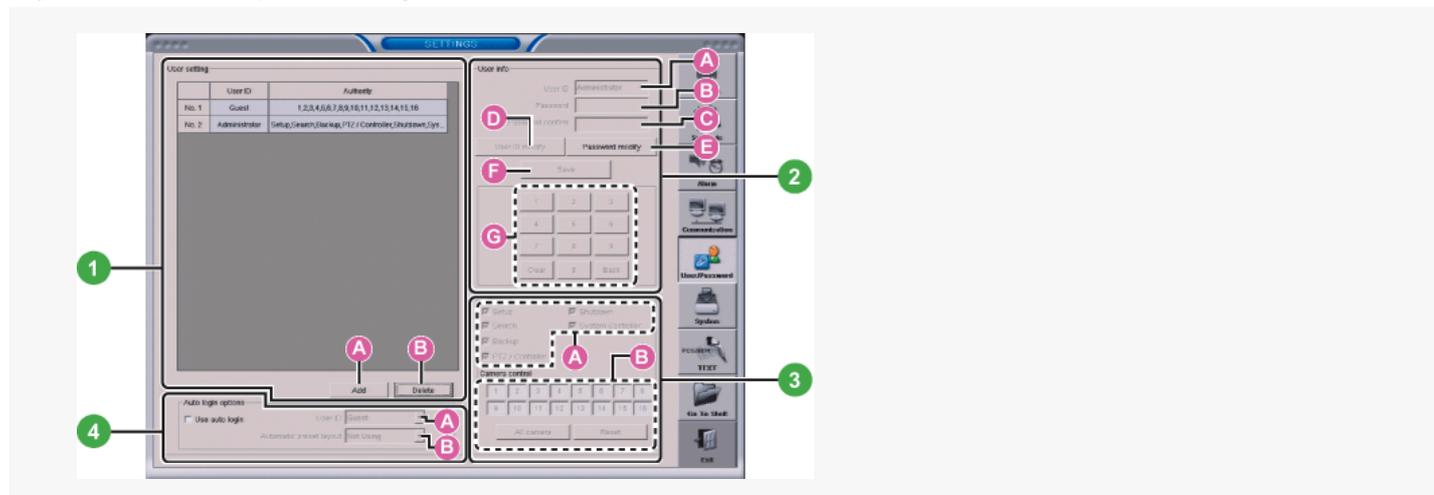
User/Password settings screen components and their functions

1 User list (User Setting)

The name and operating authorities of each registered user are listed.

> By default, "Guest" and "Administrator" are listed.

Ⓐ **Add** : Adds a new user./ **Cancel** : Cancels unsaved settings.
Clicking the [Add] button changes the button label to [Cancel].
Ⓑ **Delete** : Deletes the selected user.

2 User information input area (User Info)

Type the user name and password.
Ⓐ User ID: Type (or view) the name of the user.
Ⓑ Password/New password: Type the password for the user.
Ⓒ Password confirm: Type the password for confirmation.
Ⓓ **User ID modify** : You can modify the user name.
Ⓔ **Password modify** : Click this to switch the [Password] box for password modification.
Ⓕ **Save** : Click this to save the user name and password and register the user to the user list.
Ⓖ Numeric keypad: Use these buttons for password entry.
Close : Clears all characters in the input field.
Back : Clears the last character in the input field.

3 Operating authority setting (Authority)

Set the operating authorities of the user you are registering.
Ⓐ Authority
Select the check box for each operating authority you want to grant to the user.
Ⓑ Camera control
Specify the camera number of the camera for which you want to grant the user the operating authority on the LIVE screen.

4 Auto login setting (Auto login options)

Use the Auto Login feature to allow the user to automatically log into the system when the system starts up, without prompting for password entry.
To enable this feature, select the [Use auto login] check box and configure the following settings.
Ⓐ User ID:
Select the login user name.
Ⓑ Automatic preset layout:
To allow the user to use preset camera layouts on the first screen after login, select one of the preset names from the pull-down menu

Registering a new user

1 Click **Add** .
Now, you can configure the settings in the [User info] section.

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2 **In the [Use ID] field, type the name of the user.**

Provide a user name of 20 characters or less.

3 **In the [Password] field, type the password for the user using the numeric keypad.**

Provide a user name of 20 characters or less.

4 **In the [Password confirm] field, type the password for confirmation using the numeric keypad.**

For confirmation, re-enter the password you entered in Step **3** .

5 **Click** Save .

The user name and password have been registered for the user. Now, in the user list, the user name and operating authorities of the user are shown.

> When you add a new user, the user is registered as a monitoring user with the operating authorities for all cameras (Camera controls 1 to 16 are selected). Change the operation authorities as needed.

Configuring the operating authorities

By following the steps below, you can change the operating authorities of registered users.
The changed operating authorities are shown real-time in the user list.

> You cannot change the operating authorities of "Administrator".

1 **In the user list (in the [User Setting] section), click the user whose operating authorities you want to change.**

2 **In the [Authority] section, select the check box for each operating authority you want to grant the user.**

① Setup: Operation on the SETTINGS screen
② Search: Operation on the SEARCH screen
③ Backup: Operation on the MANUALLY BACKUP screen
④ PTZ/Controller: Remote operation of a PTZ camera
⑤ Shutdown: System shutdown
⑥ System Controller: System controller operation

> Only "Administrator" can have the operating authority for the [User/Password] and [Go to Shell] buttons. You cannot grant this operating authority to other users.

3 **In the [Camera control] section, use the number buttons to specify the camera for which you want to grant the user the operating authority on the LIVE screen.**

All camera :
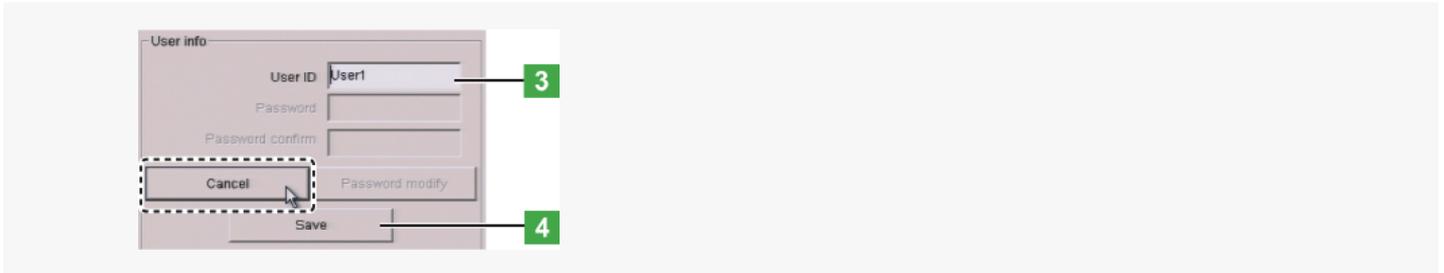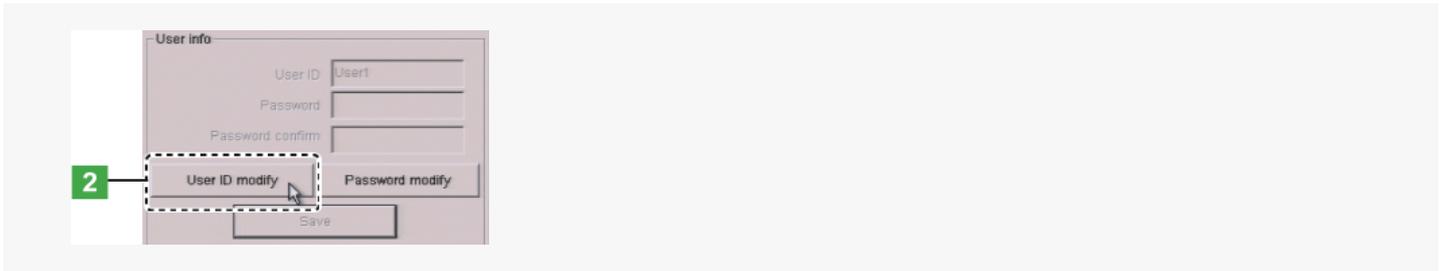Sets the selected operating authorities to all cameras.

Reset :
Resets the operating authorities set for all cameras.

Changing the user name

1 In the user list (in the [User Setting] section), select the user whose name you want to change.

2 In the [User Info] section, Click [User ID modify] .

In the [User ID] field, the name of the current user appears and the label of the [User ID modify] button changes to [Cancel].

3 In the [User ID] field, type a new name for the user.

4 Click [Save] .

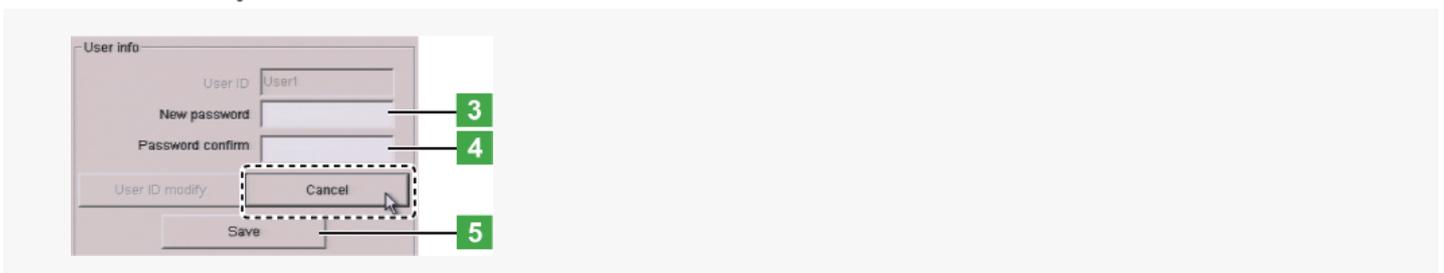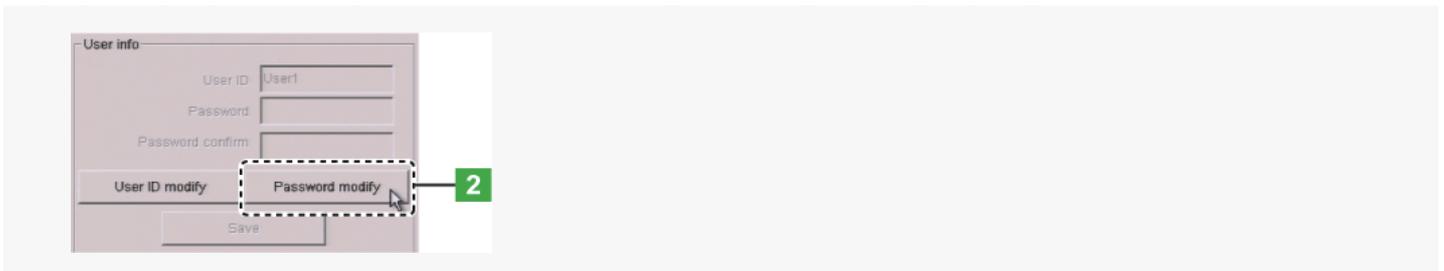The user name has been changed. The new user name is now listed in the user list.

> You cannot change the default user name, "Administrator".

Changing the password

1 In the user list (in the [User Setting] section), select the user whose name you want to change.

2 In the [User Info] section, Click [Password modify] .

The [New password] and [Password confirm] fields are enabled and the label of the [Password modify] button changes to [Cancel].

3 In the [New password] field, type a new password using the numeric keypad.

Enter a new password with a length of up to 20 characters.

4 In the [Password confirm] field, type the password for confirmation using the numeric keypad.

Re-enter the password you entered in Step **3** .

5 Click [Save] .

The password has been changed.

Deleting a registered user
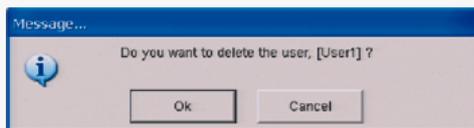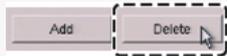
You cannot delete "Administrator" and "Guest".

1 **In the user list, click the name of the user you want to delete.**

2 **Click** Delete .

The deletion confirmation dialog box opens.

3 **Click** OK .

The user has been deleted. The user is no longer listed in the user list.

Add   Delete

Message...

Do you want to delete the user, [User1] ?

Ok   Cancel

System Settings

Click the [System] setting button to display the System settings.
Allows you to configure the basic system conditions, system behaviors when an event occurs, backup conditions, and other settings.
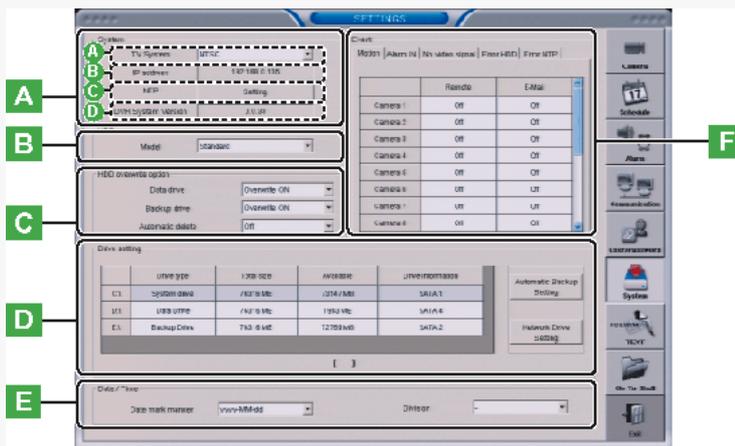
A **Configuring the basic system settings (System)**

These are the basic information on the digital video recorder.

Ⓐ TV System:

From the pull-down menu, select the video type (NTSC or PAL).

Ⓑ IP address:

The IP address of the digital video recorder you set in the Communication settings is shown.
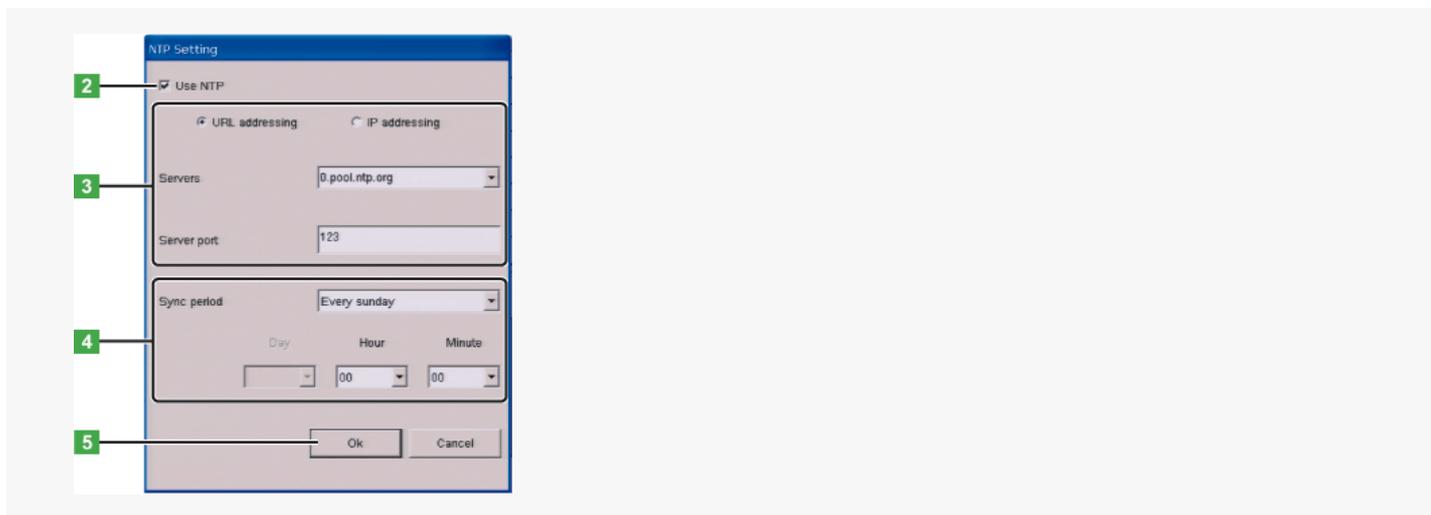
Ⓒ NTP:

To automatically adjust the time setting of the digital video recorder by establishing a connection to an NTP server, you need to configure the NTP server in the procedure below.

To use an NTP server, you must have a connection to the Internet.

1 In the [NTP] setting, Click Setting .

The [NTP Setting] dialog box opens.

2 Select the [Use NTP] check box.

Now, you can enter information in the dialog box.

3 Using the radio buttons, select the addressing method and enter address information.

When "URL addressing" is selected

Type the domain name and port number ("123" by default) of the server.

When "IP Addressing" is selected

Type the IP address and port number ("123" by default) of the server.

4 In the [Sync Period] setting, select how often you want to obtain the time information from the NTP server and when to synchronize the time information.

5 Click OK .

The NTP server has been registered. The dialog box closes.

D DVR System Version:

The firmware version of the digital video recorder is shown.

B Configuring the uninterruptible power supply (UPS)

This setting is required if you use an UPS (Uninterruptible Power Supply).
In the [Model] setting, select "Standard" from the pull-down menu.
Setting options:

None: UPS not used

Standard: UPS used

> You may configure the UPS by clicking the **Power Management (UPS)** button in the [System] section of the [Configuration Setting] dialog box accessible from the Shell screen.

C Configuring the overwrite options (HDD overwrite option)

You can specify how the digital video recorder behaves if the hard disk becomes full during recording.
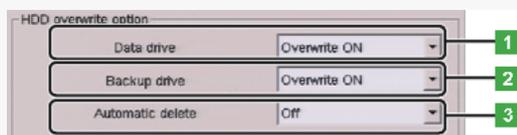
1 Setting the data drive overwrite method (Data drive)

Setting options:

Overwrite ON:

Continues recording by overwriting data from the oldest video.

Overwrite OFF:

Stops recording with a message.

2 Setting the backup drive overwrite method (Backup drive)

Setting options:

Overwrite ON:

Continues recording by overwriting data from the oldest video in the drive, if the backup drive becomes full.

Overwrite OFF:

Stops recording with a message, if the backup drive becomes full.

> The digital video recorder, when stopped in the "Overwrite OFF" mode, will resume recording if you change the setting to "Overwrite ON".
>
> However, when recording in the "Overwrite ON" mode, the digital video recorder will stop recording with a warning message if you change the setting to "Overwrite

OFF", because the drive capacity is already full.

3 Setting the Auto Data Deletion period (Automatic Delete)

The Auto Data Deletion feature, when enabled, will automatically erase the data saved in the data drive if the set deletion period elapses.

Setting options:

Off: Disables the Auto Data Deletion feature.

1 to 99DAYS: Sets the Auto Data Deletion period.

The minimum unit of recording data is 64 Mbytes. If the recorded data is less than 64 Mbytes, the Automatic Delete feature will not be activated even if the Auto Data Deletion period is expired. Setting Normal recording always causes 64 Mbytes or more of recorded data to be stored, so the Automatic Delete feature functions without fail.

D Confirming the drive settings (Drive setting)

You can configure various drive settings on the digital video recorder.
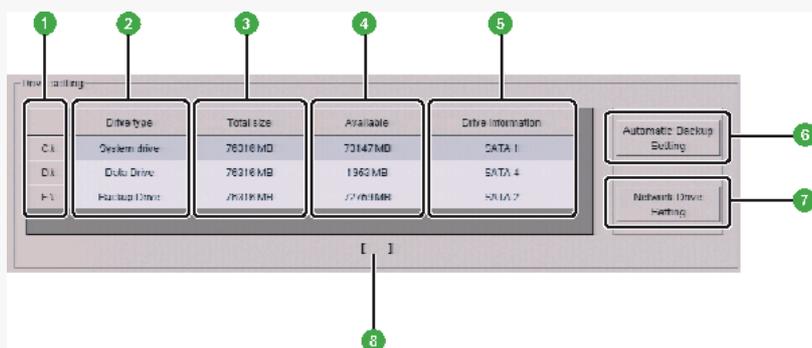
1 Drive letter:

Shows the drive letter for each available drive.

"C" and "D" are drives installed as standard on the digital video recorder.

Installing a removable hard disk or connecting to a network drive causes the corresponding drive letter to be added.

2 Drive type:

Shows the drive type recognized by the system.

Select an appropriate drive type for each drive from the pull-down menu.
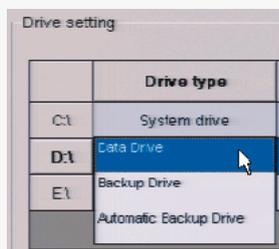
Setting options:

Data Drive: Drive that stores recorded data.

Backup Drive: Drive that stores back up data.

Automatic Backup Drive: Drive that stores automatically backed up data.

The recorded data for the specified channel will be backed up automatically in 64-Mbyte files.

To use the automatic backup function, you must configure the automatic backup settings.

Although the system initially recognizes removable hard disks as "Backup Drive", you can change the drive type as desired.

The drive type for the C drive (system drive) cannot be changed.

You cannot set the drive type to "Data drive" if the available disk space on the hard drive is 3 Gbytes or less.

You cannot perform recording and playback if you set the drive type to other than "Data drive" for all drives.

The digital video recorder's removable disk drive does not support hot-swapping.
Be sure to power OFF the digital video recorder before installing or removing a removable hard disk.

Even if you have installed an additional hard disk, you cannot continue recording if an error occurs on that disk. Be sure to configure the transmission settings on the [Error HDD] tab so that you can take prompt action in the event of an error.

3 Total size:

Shows the total capacity of the drive.

4 Available:

Shows the available remaining capacity of the drive.

This information changes only after you format the hard disk. It will not be changed even if you change the drive type.

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> Mapping a newly formatted drive to "Data Drive" causes the system to secure the entire disk space less the management area as the reserved area.
> Since, in the Windows file management method, this reserved area is recognized as a used area, the remaining disk capacity of a "Data Drive" type disk appears to be less than the actual remaining capacity available for recording.

5 Drive Information:

Shows reference information on the drive.

6 [Automatic Backup Setting] button

Use this button to display the [Automatic Backup Drive Setting] window.
→Refer for details.

7 [Network Drive Setting] button

Use this button to display the [Network Drive Setting] window.
→Refer for details.

8 Blinking drive letter

Shows a blinking letter, which indicates the drive used for current recording.

## Configuring an automatic backup drive (Automatic Backup Setting)

If you have set the drive type of any drive on the digital video recorder to "Automatic Backup Drive", you must create a backup folder and set the group of backup channels and the size of that backup folder.

Register any combination of channels from which you want to back up data as a group.
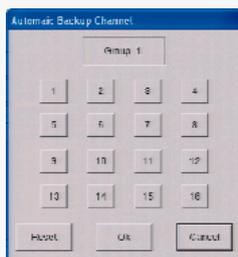You will specify this group of channels when creating a backup folder.

1 Click the [Automatic Backup Setting] button.

The [Automatic Backup Drive Setting] window opens.
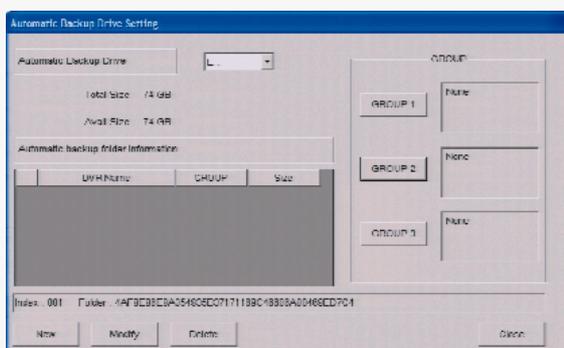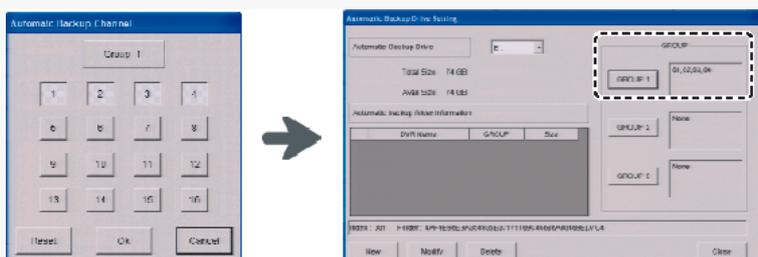

2 Click GROUP1 .

The [Automatic Backup Channel] window for Group 1 opens.

3 Click each channel from which you want to backup data and click OK .

You can select more than one camera.
The following is an example of registering Channels 1 to 4 to "GROUP 1".

By following the same procedure (Steps 2 to 3), you can register up to three groups.

> You may register duplicated channels for each group.

Create the folder in which to store automatically backed up data for each drive.

1 Select the drive from [Automatic Backup Drive] pull-down menu.

The pull-down menu shows the drive letter for each drive for which you set the drive type to "Automatic Backup Drive".
Selecting a drive letter causes the total size and the available size of the corresponding drive to appear.
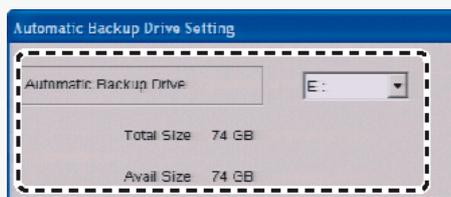
2 Click New.

The [Create Folder] window opens.
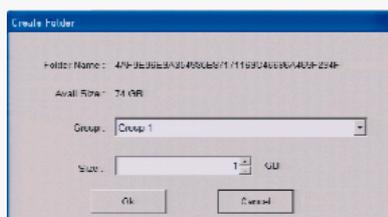
3 In the [Group] and [Size] fields, specify the group number and the size of the backup folder, and click OK.

This creates an automatic backup folder in the specified drive and the folder settings appear in the [Automatic backup folder information] list of the [Automatic Backup Drive Setting] window.

Folder Name:
Set automatically.

Avail Size:
Shows the available folder size automatically.

Group:
From the pull-down menu, select the group of channels from which you want to back up data (Group 1 to 3).
To register channels to each group, use the [Automatic Backup Channel] window.

Size:
Specify the size of the backup folder in gigabytes (GB).
This size must not exceed the value indicated in [Avail Size].

By following the same procedure (Steps 2 to 3), you can create two or more automatic backup folders for each drive.

In the [Automatic backup folder information] list, select the folder whose settings you want to modify and click Modify. Then, the [Create Folder] window opens. Modify the settings and click OK.

In the [Automatic backup folder information] list, select the folder you want to delete and click Delete. Then, the deletion confirmation dialog box opens. Click Yes to delete the folder.

It is recommended that you set one group per drive when setting the backup channels.
Setting more than one group may lower the processing performance of the digital video recorder.

The folder list will show automatic backup folders on other digital video recorders together, if configured on the same drive.
However, these folders on other digital video recorders will be grayed out, preventing you from using the [Modify] and [Delete] buttons.

4 Click Close to close the window.

Now, the automatic backup drive has been configured.

**Configuring a network drive (Network Drive Setting)**

To use a NAS (Network Attached Storage) file sharing system to connect the digital video recorder to a network drive, you must also configure that network drive.

A network drive can be configured as an "Automatic Backup Drive" or "Backup Drive".
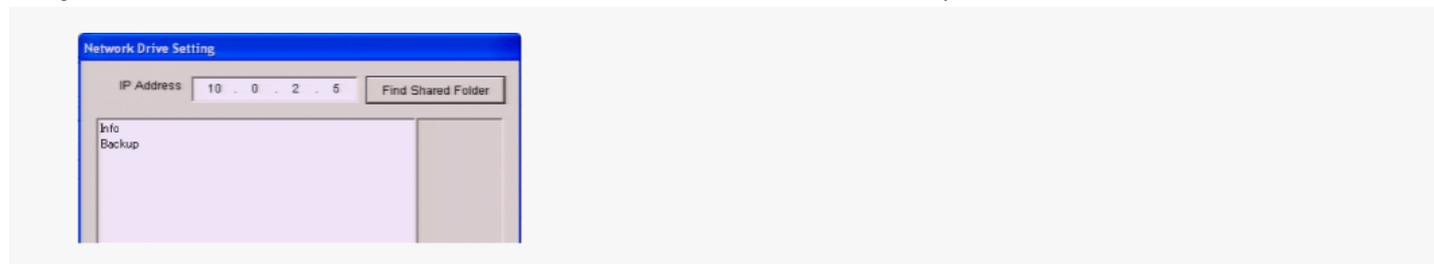
1 Click the [Network Drive Setting] button.

The [Network Drive Setting] window opens.
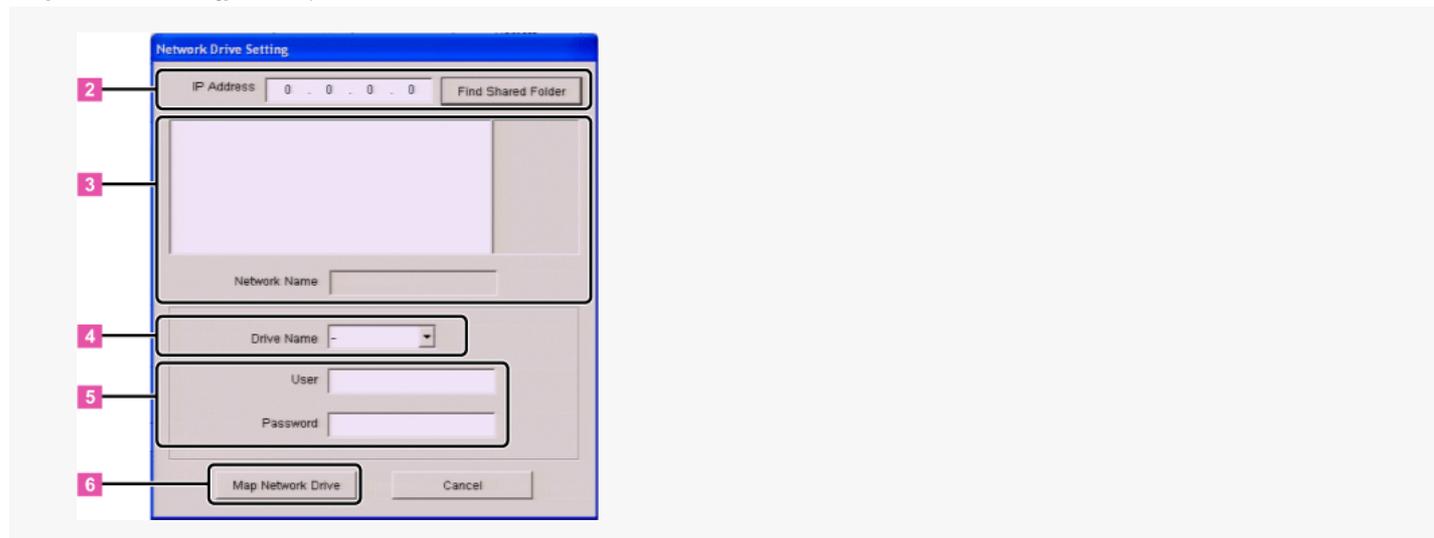
2 Type the IP address of the NAS system and click Find Shared Folder.

The digital video recorder searches for all shared folders for which a network connection can be established and, if any, shows them in the folder list.

> In the folder list, folders created by NAS system administrators using a dedicated utility are shown.
> For how to create a NAS folder, refer to the manual for the NAS system.

3 From the folder list, select the folder into which you want to back up data.

The name of the selected folder appears as [Network Name].

4 From the [Drive Name] pull-down menu, select the drive letter.

Setting options: Z to G (The drive letters for unused drives are listed in a descending order.)

> Setting the drive letters for network drives in an ascending order causes duplicated drive names when you install a USB memory, resulting in a failure.
> Be sure to set the drive letters in a descending order starting from "Z" as listed in the pull-down menu.

5 In the [User] and [Password] fields, type the user name and password.

You must type a user name and password configured by a NAS system administrator.

6 Click Map Network Drive.

When the digital video recorder is connected successfully to the network drive, the following message dialog box appears.
"Network drive is mapped successfully."
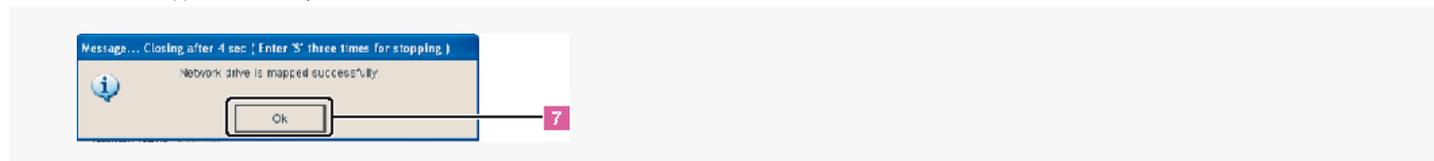
7 Click OK in the dialog box.

The network drive has now been configured and displayed in the [Drive setting] list.
By following the same procedure (Steps 1 to 7), you can register two or more network drives.
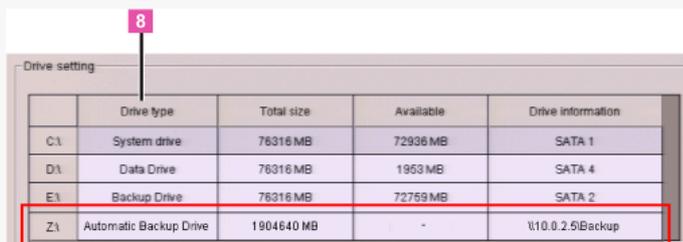
	Drive type	Total size	Available	Drive information
C:\	System drive	76316 MB	72936 MB	SATA 1
D:\	Data Drive	76316 MB	1953 MB	SATA 4
E:\	Backup Drive	76316 MB	72759 MB	SATA 2
Z:\	Automatic Backup Drive	1904640 MB	-	\\10.0.2.5\Backup

If the drive letter for the configured network drive is not listed in the [Drive setting] section, click the [Exit] button at the lower right of the screen to save the configured drive settings. Then, click the [System] button again to display the System settings screen.

To disconnect the digital video recorder from a network drive, right-click the corresponding drive setting in the [Drive setting] list and, in the context menu, select [Unmap Network Drive].

8 Select the drive type.

Although the drive type of a network drive is set to "Automatic Backup Drive" by default, you can change it to "Backup Drive".

9 If you have changed the drive type to "Automatic Backup Drive", configure the backup channel and folder size settings.

Refer to "Configuring an automatic backup drive (Automatic Backup Setting)".

Depending on your network environment or other reasons, the digital video recorder may not communicate properly with connected network drives.
If you cannot transfer backup data properly due to a communication failure, adjust the video quality and recording rate settings.

If you execute the "Shutdown" or "Go To Shell" command when an automatic backup to a network drive is in progress, the digital video recorder will take approximately five minutes to shut down in order to release the buffered data.

The supplied network operation software, "DVR Utility", may also be used to play back backup video stored on a network drive.
To use this software, you need to configure Windows in advance in the [Map Network Drive] dialog box.

E Configuring the date display format (Date/Time)

You can set the date display format and the separator used for it.
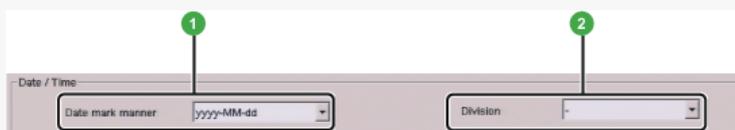
1 Date mark manner

Select the format of the date shown on the digital video recorder.
Setting options:
yyyy-MM-dd, MM-dd-yyyy, and dd-MM-yyyy

2 Division

Select the separator used to separate the year, month, and day of the date.
Setting options:
Hyphen (-), slash (/), and period (.)

F Configuring the signal/E-mail transmission at event occurrence (Event)

You can send a signal or an E-mail to networked computers if an event occurs.
Click the tab for the desired event and turn On/Off the signal/E-mail transmission for that event.

This E-mail transmits text information only.

You can specify the destination address(es) of this E-mail in the [E-Mail address] field(s) in the Communication settings.

1 Motion

This tab provides the transmission settings for the Motion event that occurs when any motion is sensed in the target by the motion sensor.
Turn On/Off the transmission for each camera number.

Remote:

On (Transmits video and text information to networked computers.)/Off (No transmission)

E-Mail:

On (Transmits an E-mail to the specified E-mail address.)/Off (No transmission)

❷ Alarm IN

This tab provides the transmission settings for the Alarm IN event that occurs when alarm input is made externally.
Turn On/Off the transmission for each Alarm IN number.

Remote:

On (Transmits video and text information to networked computers.)/Off (No transmission)

E-Mail:

On (Transmits an E-mail to the specified E-mail address.)/Off (No transmission)

❸ No video signal

This tab provides the transmission settings for the "No video signal" event that occurs when the video signal is interrupted.
Turn On/Off the transmission for each camera number.
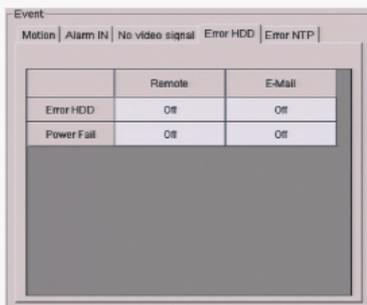

Remote:

On (Transmits video and text information to networked computers.)/Off (No transmission)

E-Mail:

On (Transmits an E-mail to the specified E-mail address.)/Off (No transmission)

❹ Error HDD

This tab provides the transmission settings for the hard disk error event that occurs when an error or power interruption occurs in the hard disk.
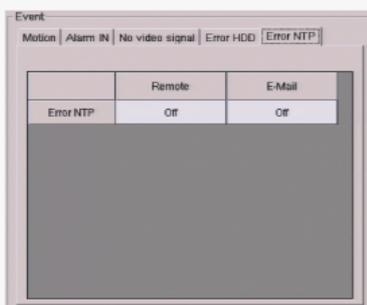
Remote:

On (Transmits text information to networked computers.)/Off (No transmission)

E-Mail:

On (Transmits an E-mail (text) to the specified E-mail address.)/Off (No transmission)

⑤ Error NTP

This tab provides the transmission settings for the NTP server error event that occurs when an error occurs in the NTP server to which the digital video recorder is connected.

Remote:

On (Transmits text information to networked computers.)/Off (No transmission)

E-Mail:

On (Transmits an E-mail to the specified E-mail address.)/Off (No transmission)
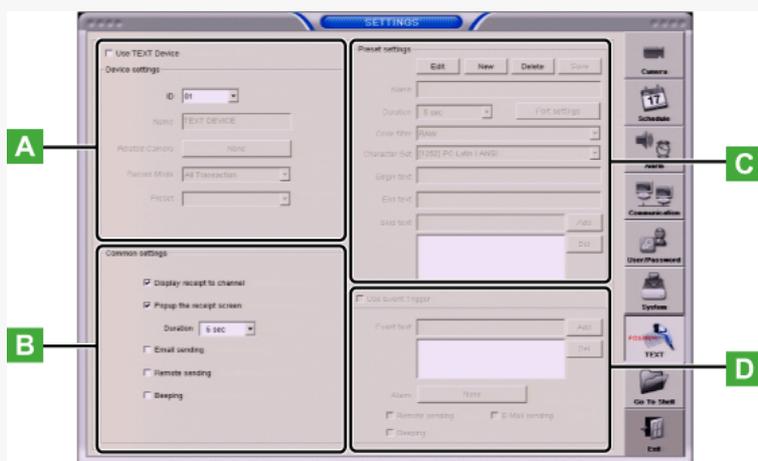
Text Settings

Click the [Text] setting button to display the Text settings.

On this screen, you can configure settings used, when the digital video recorder is connected to a text input device such as a POS or ATM, to record text information from receipts or payment vouchers together with monitoring video, so that various alarm features can be used when a specific keyword(s) is detected in the text.

> To connect the digital video recorder to a POS, use a serial cable via a serial distribution amplifier.

A Configuring the basic settings of text input devices (Device settings)

These are the settings for both the connected text input device and the camera that works in conjunction with that text input device.

> Before you configure the following settings, you need to preset the text input device (in the [Preset settings] section C).

1 **Select the [Use TEXT Device] check box.**
Now, you can enter device settings.

2 **Assign an ID number (01 to 16) to the text input device by selecting from the pull-down menu.**
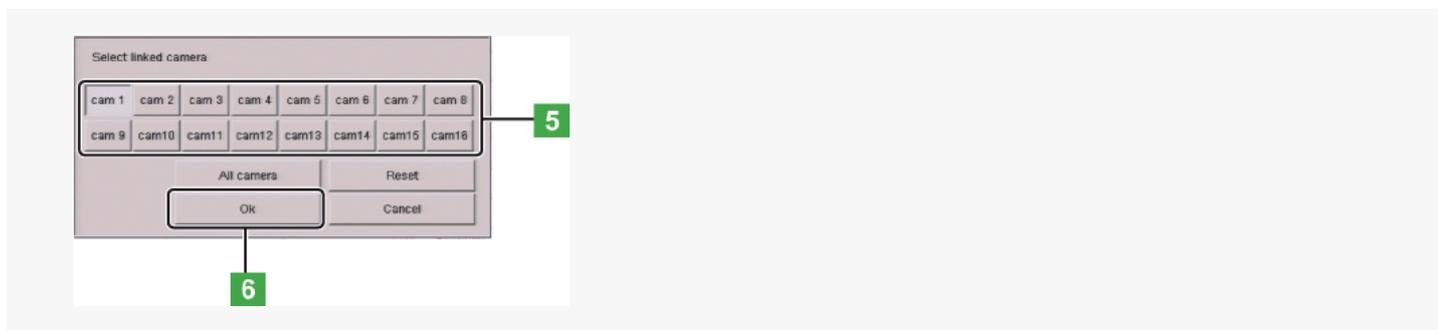
3 **Type a name for the text input device.**

4 **In the [Related Camera] setting, click the button (labeled as "None", by default).**
The [Select linked camera] setting dialog box appears.
Select the camera that works in conjunction with the text input device during Text recording.
You can select more than one camera.

All camera :
Selects all camera numbers.
Reset :
Deselects all camera numbers.
Cancel :
Cancels the settings and closes the dialog box.

5 **Click the camera number you want to link to the text input device.**
This links the camera number to alarm input. You can select more than one camera number.

6 **Click** **OK** **.**
The dialog box closes. The button in the [Related Camera] setting now shows the setting ("None," camera No., or "All").

7 **In the [Record Mode] setting, select the recording mode of the digital video recorder.**
Setting options:
All Transaction:
Records text information included in all receipts.
Event Trigger Text:
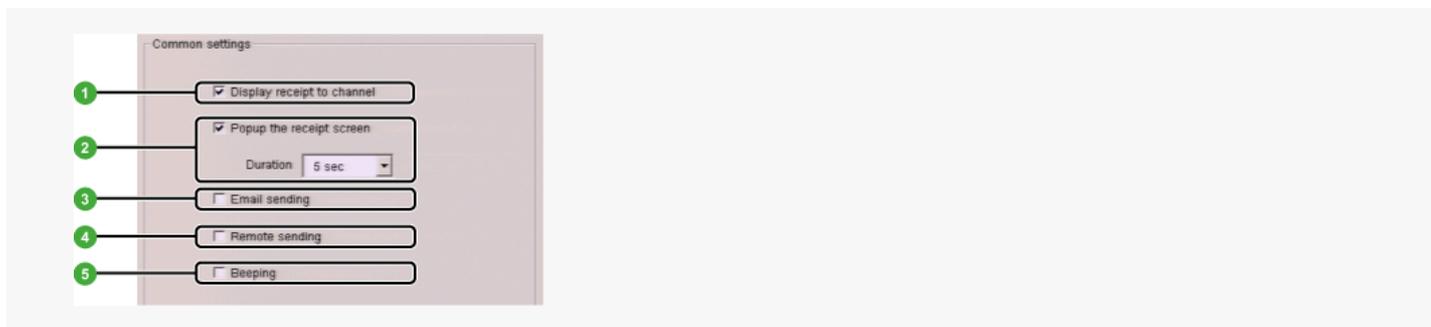Records text information only if event text is detected in receipts.

8 **In the [Preset] setting, select the preset name of the text input device from the pull-down menu.**

The pull-down menu shows the preset name of each text input device you set in [Preset settings].

B **Configuring the system behaviors when issuing a receipt (Common settings)**

Specify the system behaviors when a receipt is issued by selecting or deselecting the check box for each behavior.

❶ Display receipt to channel

Select this check box to enable the on-screen display of text information included in each receipt.

❷ Popup the receipt screen

Select this check box to enable the on-screen display of text information included each receipt in a single-screen layout.
After selecting this check box, specify how long the text information is displayed in the [Duration] setting.

❸ Email sending

Select this check box to enable the transmission of text information included in each receipt via E-mail.

You can specify the destination address(es) of this E-mail in the [E-Mail address] field(s) in the Communication settings.
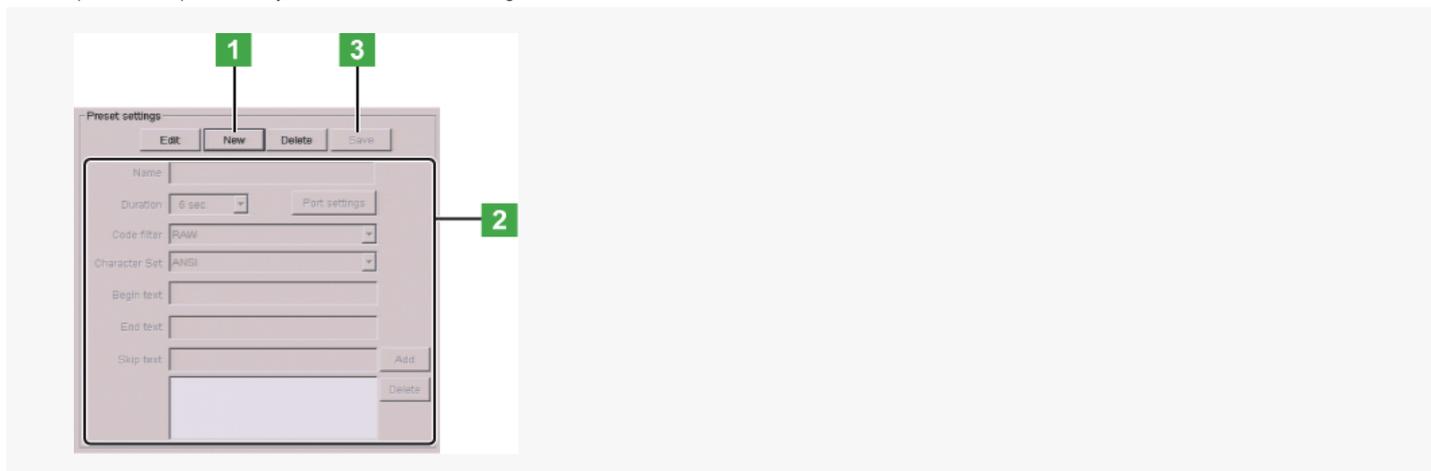
❹ Remote sending

Select this check box to enable the transmission of text information included in each receipt to networked personal computers.

❺ Beeping

Select this check box to enable the beeping of the alarm buzzer when each receipt is issued.

C Presetting a text input device (Preset settings)

You can preset text input devices you want to connect to the digital video recorder.

Registering preset positions

1 Click **New** .

Now, you can enter device settings. Notice that the label of the **New** button is now **Cancel** .

2 Configure each of the following settings.

❶ Name

Type a preset name for the text input device.
The set preset name will be listed in the pull-down menu of the [Preset] setting in Device settings.

❷ Duration

Select the time period (3 to 60 seconds) before each receipt is printed.

❸ Code filter

Select the communication protocol used for transmission from the text input device to the digital video recorder.

❹ Character Set

Select the character code transmitted from the text input device to the digital video recorder.

❺ Begin text

The printing of a receipt begins when this text is detected.

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You can specify a single text string only.

The printing of a receipt ends when this text is detected.
You can specify a single text string only.

⑦ Skip text

The printing of a receipt is skipped when this text is detected.
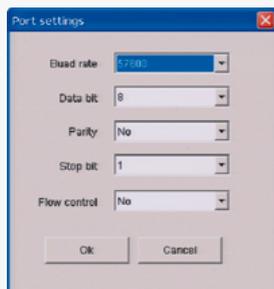You can specify two or more text strings.

Type the desired text string in the upper box and Click [Add]. Then, the text string is listed in order in the lower box.
To delete a text string, select it in the lower box and Click [Delete].

⑧ Port settings

In the Text settings, Click [Port settings] and configure the port settings in the following dialog box.

> Configure the port to match the text input device's current communication settings. If the settings are inconsistent, text information will not be correctly displayed.

Baud rate
Data bit
Parity
Stop bit
Flow control

When finished, Click [OK] to close the dialog box.

3 Click [Save].

The text input device has been preset. The preset name will be listed in the pull-down menu of the [Preset] setting in Device settings.

Modifying a registered DVR server setting

1 In the Device settings, select the preset name from the pull-down menu of the [Preset] setting.

2 Click [Edit].

Now, you can enter device settings.

3 Modify the preset settings.

4 Click [Save].

The preset device settings for the device have been modified.

Deleting a registered DVR server

1 In the Device settings, select the preset name in the [Preset] setting.

2 Click [Delete].

The deletion confirmation dialog box opens.

3 Click [OK].

The preset name disappears from the pull-down menu of the [Preset] setting in Device settings.

D Configuring the event trigger text [Use Event Trigger]
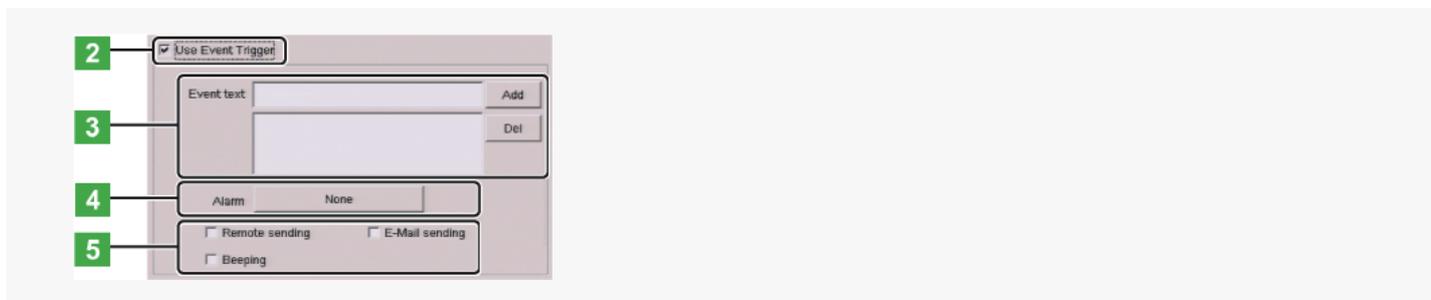
You can configure the alarm trigger so that an alarm event is raised when a specific keyword(s) is detected in the text.

1 Select the [Use TEXT Device] check box.

The [Use Event Trigger] check box is now selectable.

2 Select the [Use Event Trigger] check box.

Now, you can enter device settings.

3 **In the [Event text] setting, type an event trigger keyword in the upper box.**

You can specify two or more keywords.

When finished, Click Add . Then, the text is listed in order in the lower box.

To delete a keyword, select it in the lower box and Click Del .

4 **In the [Alarm] section, click the button (labeled as None by default).**

The [Select linked alarm from camera] setting dialog box appears.

In this dialog box, select the alarm OUT number of the terminal, from which you want to output an alarm signal when the event trigger keyword(s) is detected.

You can select more than one camera.

All Alarm :

Selects all alarm OUT numbers.

Reset :

Deselects all alarm OUT numbers.

OK :

Saves the settings and closes the dialog box.

Cancel :

Cancels the settings and closes the dialog box.

When finished, Click OK .

The dialog box closes. The button in the [Alarm] setting now shows the setting ("None," alarm OUT No., or "All").

5 **Configure other linked operation**

Configure other actions you want to trigger if event trigger text is detected.

Select the check box for each action you want to trigger. You can select more than one action.

Remote sending:

Select this check box to enable the transmission of text information included in each receipt on which event text is detected to networked personal computers.

Email sending:

Select this check box to enable the transmission of text information included in each receipt on which event text is detected via E-mail.

Beeping:

Select this check box to enable the beeping of the alarm buzzer when event text is detected.

You can specify the destination address(es) of this E-mail in the [E-Mail address] field(s) in the Communication settings.

To record monitoring video using event text as the alarm trigger, you need to set a Text recording schedule in Schedule settings.

Performing a Text search on the SEARCH screen allows you to search for specific video and text by using keywords from among the data recorded in Text recording.
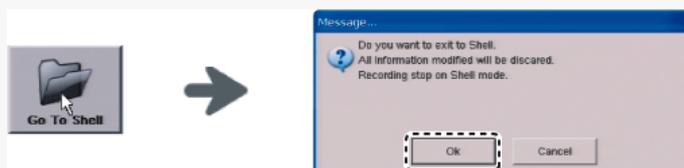
Working with the Shell Screen

### Switching to the Shell Screen (Go To Shell)

Click the [Go To Shell] button on the SETTINGS screen and then Click OK in the confirmation dialog box. Then, the system's operation window closes and the Shell screen (desktop) appears.
On the Shell screen, you select operations from five menu icons.

Switching to the Shell screen discards all the settings you configured on the SETTINGS screen.
Before clicking the [Go To Shell] button, once click [Exit] to save the changes.

While the Shell screen is displayed, the digital video recorder stops all recording behaviors.
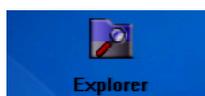
① Explorer
Allows you to perform standard Windows operations.
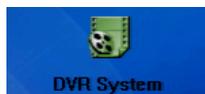
② DVR System
Starts the system in the operation mode and displays the [Login] screen. Once you have logged into the system, the LIVE screen appears.

③ Configuration Setting
Displays the [Configuration Setting] screen, where you can configure the system environment.

④ DVR SelfTest
The button is provided exclusively for servicing purposes. Use it to check the operation of the digital video recorder.
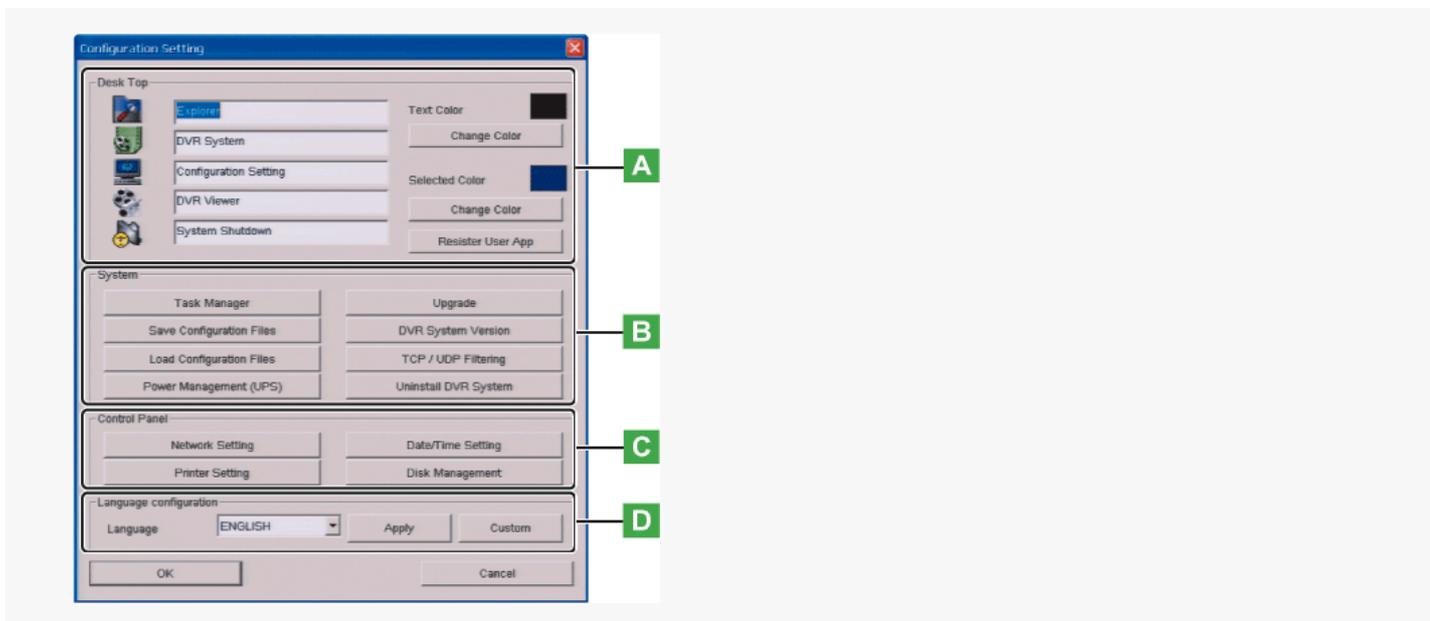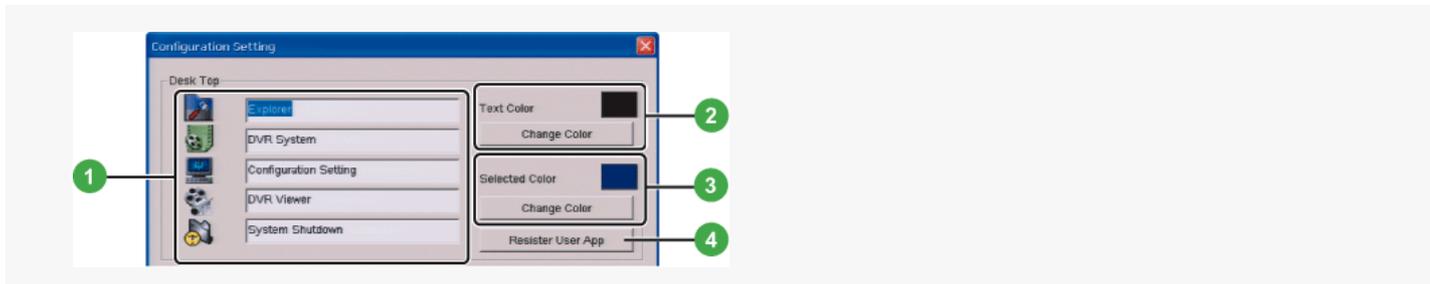
⑤ System Shutdown
Shuts down the system. Clicking this button causes the Shell screen to close the digital video recorder to power OFF automatically.

Configuration Setting

In this dialog box, configure the system environment of the digital video recorder. When finished, Click OK to close the dialog box.

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A Configuring the desktop appearance (Desk Top)

1 Icon labels

To change the default label of each icon, type a new label in the text box.

2 Text Color

The currently set text color of the icons is shown.

Click the [Change Color]. Then, the [Color] dialog box opens, allowing you to change the text color.

3 Selected Color

The currently set text color of the icons when selected is shown.

Click the [Change Color]. Then, the [Color] dialog box opens, allowing you to change the text color.

4 Register User App

You can register up to five user applications you want to use with this digital video recorder.

Click the button and register the desired applications in the [Register External Application] window.
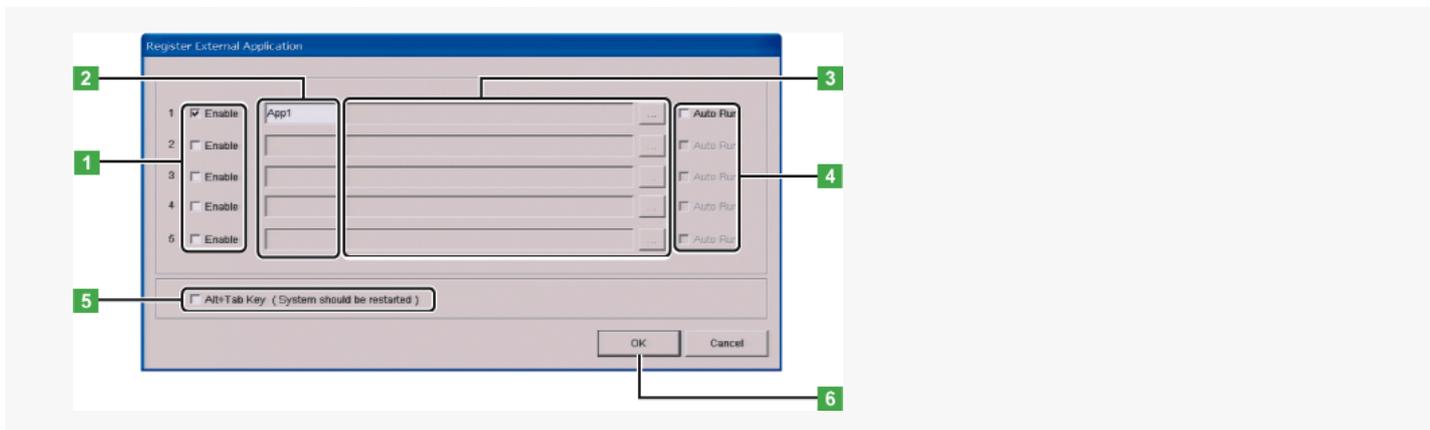
1 Select the [Enable] check box.

This enables the registration of a user application.

2 Type the name of the application you want to register.

Default setting: App1 to App5

3 **Click the button and select the storage location of the application files.**

4 **Select the [Auto Run] check box to enable the optional Auto Run feature.**

Selecting the check box causes the application to start automatically when the system starts up.

5 **Select the [Alt+Tab key] check box to enable "Alt+Tab" key combination.**
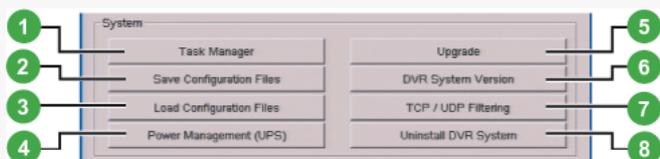
Selecting the check box enables the "Alt+Tab" key combination, which allows you to switch to the desired application that is running from the system's operation screen.

6 **Click** OK .

The icon for each application you registered appears at the bottom of the screen.
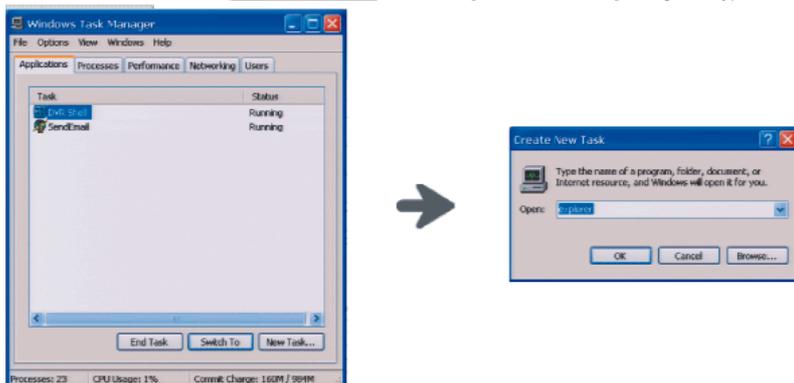
B **Configuring the basic system settings (System)**

1 **Button to create new tasks (Task Manager)**

Clicking this button displays the [Windows Task Manager] window.

To start a new task, Click New Task... and, in the [Create New Task] dialog box, type the name of the task you want to create.

2 **Button to save the system configuration (Save Configuration Files)**

Click the button and, in the [Save Configuration] dialog box, select the folder into which you want to save the system configuration.
The settings you configured in this dialog box are stored as configuration files.
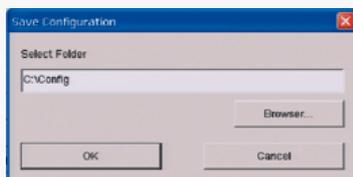
3 **Button to load the stored configuration files (Load Configuration Files)**

Click the button and, in the [Browse for Folder] dialog box, select the configuration file you want to load.
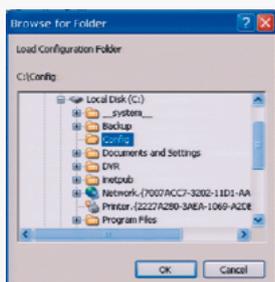
4 **Button to configure the UPS (Power Management (UPS))**

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You can configure the UPS in the [Power Options Properties] dialog box.

1 Click [Power Management (UPS)] .

The [Power Options Properties] dialog box opens.
When the digital video recorder is connected to a UPS, the dialog box shows the [Alarms] tab.

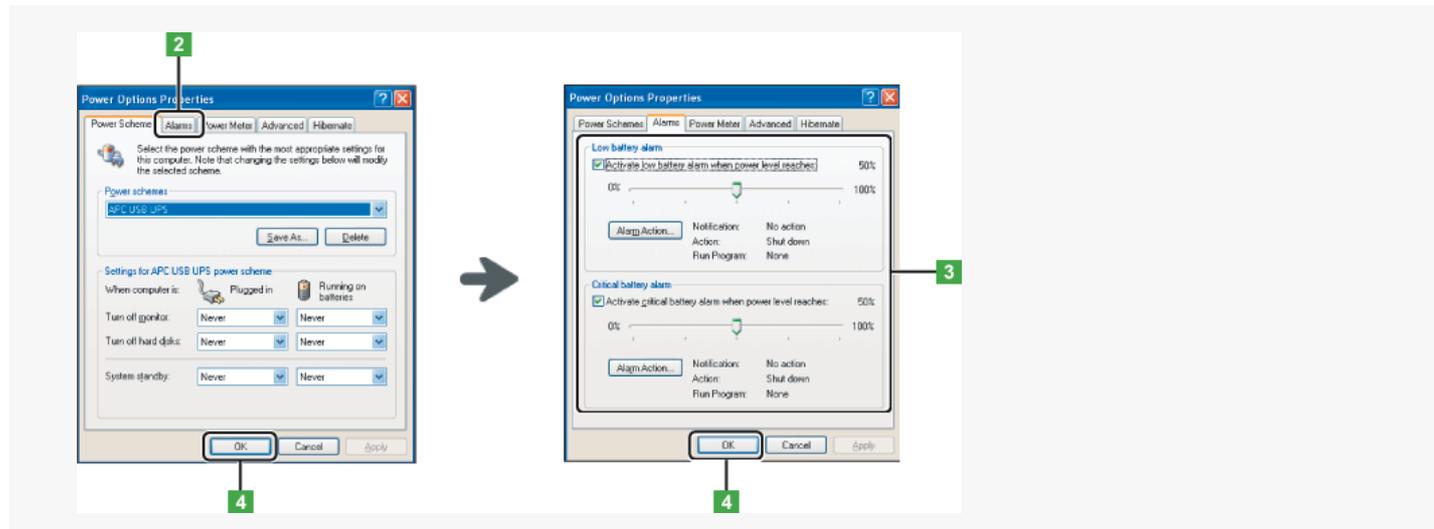**2 Click the [Alarms] tab.**

The settings on the [Alarm] tab appear.

3 Configure the [Low battery alarm] and [Critical battery alarm] settings.

4 Click [OK] **to save the settings.**

5 From the SETTINGS screen, access the System settings and configure the [Model] setting in the [UPS] section.

> Connecting an UPS to the digital video recorder causes the system to perform the operations in the event of a power failure.
>
> 1) Switches the power supply to the connected UPS and beeps if the [Low battery alarm] or [Critical battery alarm] value is reached.
>
> 2) Saves the data currently in memory to the hard disk.
>
> 3) Shuts down the digital video recorder if the battery runs out.
>
> The history of these operations is saved as operation logs.

5 Button to update the system program (Upgrade)

1 Click [Upgrade] .

The [Upgrade] dialog box opens.

2 Select the button for the type of program you want to update and Click [OK] .
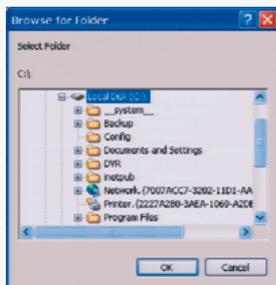
The [Browse for Folder] dialog box opens.
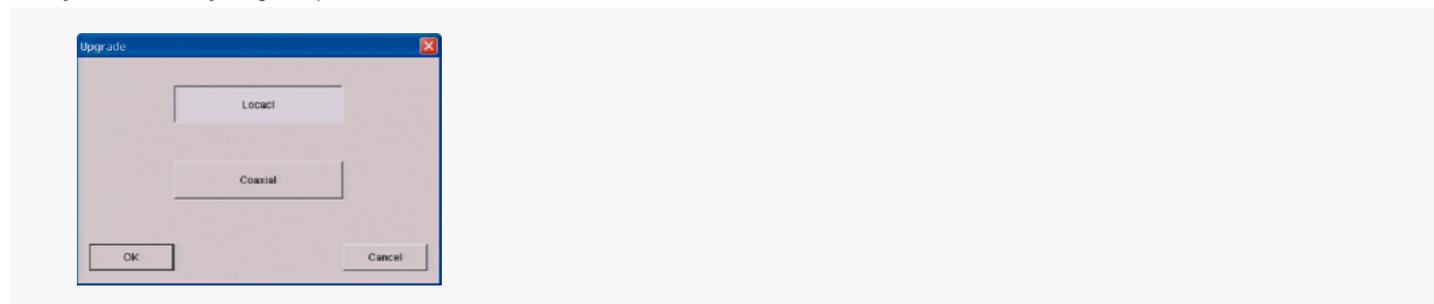
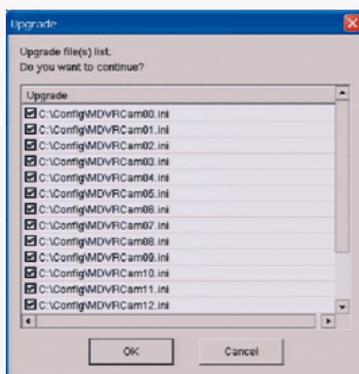Setting options:

Local:

Coaxial:

3 Select the folder where the program files you want to update are stored and Click [OK] .

The files to be updated appear in the [Upgrade] dialog box.

4 Select the check box for each file you want to update in the file list and Click OK .

The selected files are updated.
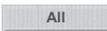
All : Selects all check boxes.
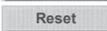
Reset : Deselect all check boxes.
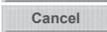
Cancel : Cancels the settings and closes the dialog box.

6 Button to show the system version (DVR System Version)

Click this button to view the program version and the model name of the digital video recorder.

7 Button to configure the filters (TCP/UDP Filtering)

Click this button to configure the network connection filters.

8 Button to uninstall the system programs (Uninstall DVR System)

Click this button to uninstall the system programs installed in the digital video recorder.

To uninstall the system programs, you need to enter a valid "Administrator" password in the [User Confirm] window.

Only "Administrator" users can uninstall the system programs.

C Displaying the standard Windows control panel (Control Panel)

1 Button to configure the network tasks (Network Setting)
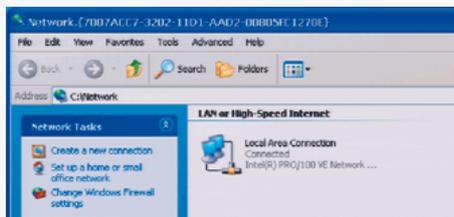
② **Button to configure the printer tasks (Printer Setting)**

③ **Button to configure the date and time settings (Date/Time Setting)**

If this is the first time you powered ON the digital video recorder, you need to switch to the Shell screen from the SETTINGS screen and click this button to configure the date and time settings.
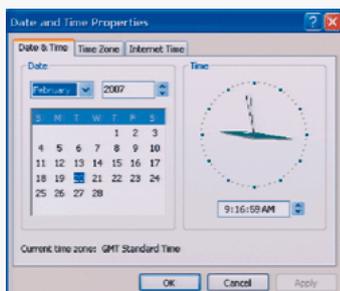
④ **Button to manage the disks (Disk Management)**
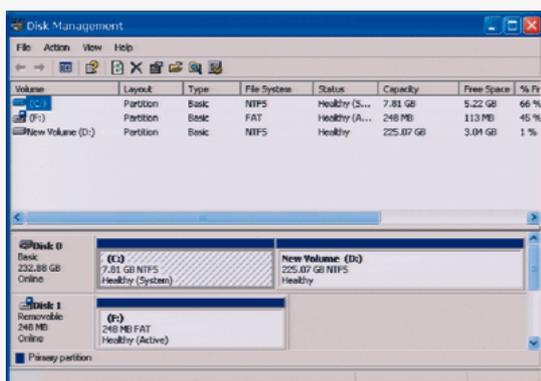
D **Configuring the display language settings (Language configuration)**

Click this button to configure the language displayed on the digital video recorder.

① **Enabling the display language**

In the [Language] setting, select the desired language from the pull-down menu and Click Apply .
The system displays the selected language when you log in the system the next time and later.

Available languages: English, Korean, Portuguese, Spanish, Italian, French, and German

② Customizing the display language

You can customize the display language according to your preference.

1 Click [Custom] .

The [Language Customization] dialog box opens.
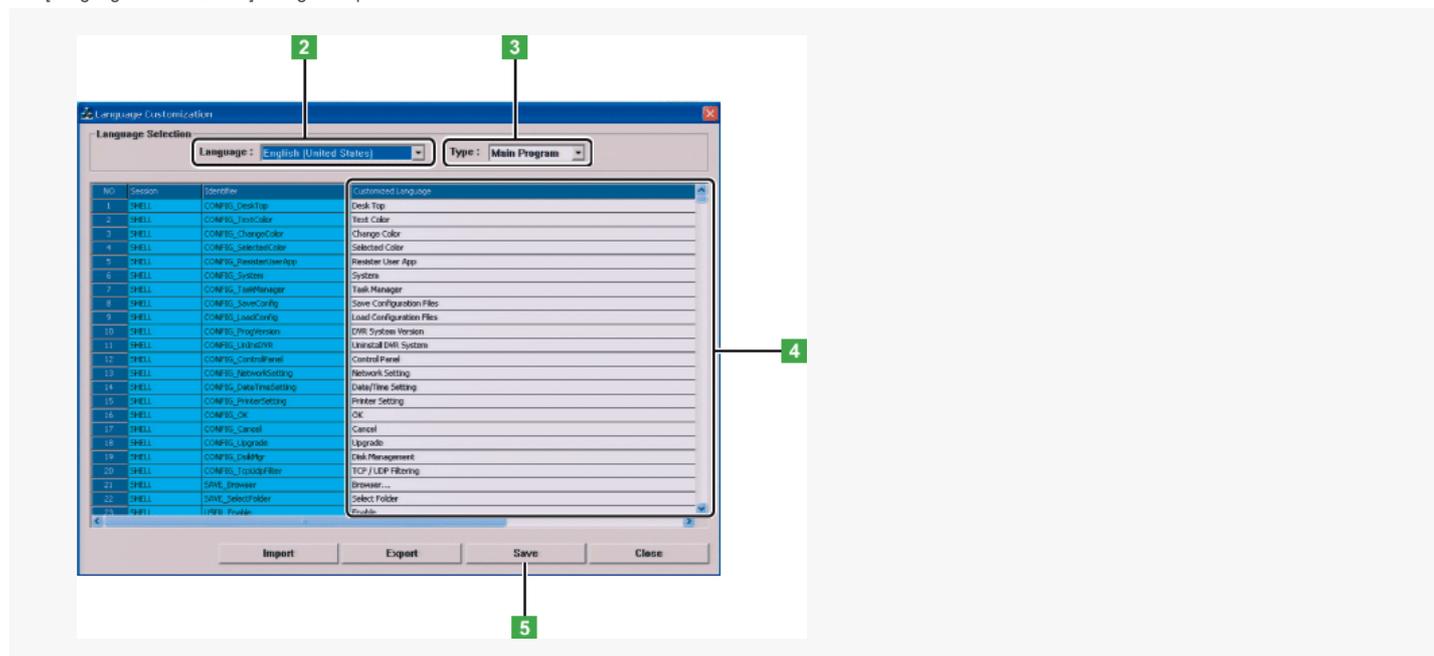
2 In the [Language] setting, select the language you want to customize.

3 In the [Type] setting, select the program type.

Select "Main Program" or "Tool-Tip". The variables of the selected program type are listed.

4 In the [Customized Language] column, type the text you want to display in the language.

5 Click [Save] .

The customized settings have been saved.

> To export or import the customized settings, click the [Import] or [Export] button, respectively, and select the target folder in the [Browse For Folder] dialog box.

DVR Utility (Operation)

Installing the DVR Utility

You can use the supplied software "DVR Utility" to remote-control the digital video recorder from your personal computer.
Confirm that your computer meets the following operating environment requirements before installing the DVR Utility.

Operating Environment

This software requires the following operating environment.

- Operating system: Windows XP
- CPU: Pentium 4 (3.0 GHz or higher processor)
- Memory: 512 Mbytes or more
- Video Card: 102×768 (32Bit, Color)
- Monitor: 1024 × 768 dots
- LAN Card: 10/100Mbps, Ethernet
- Hard disk drive: 10 Gbytes
- DirectX version: 8.1

Installation procedure

You can install DVR Utility using the installation wizard.

1 **Insert the supplied CD-ROM (Application Disc) into your personal computer's CD-ROM drive and double-click [DVR Utility].**
The installer starts and the start page of the wizard appears.

2 **In the start page of the wizard, Click Next .**
The [Choose Destination Location] page appears.
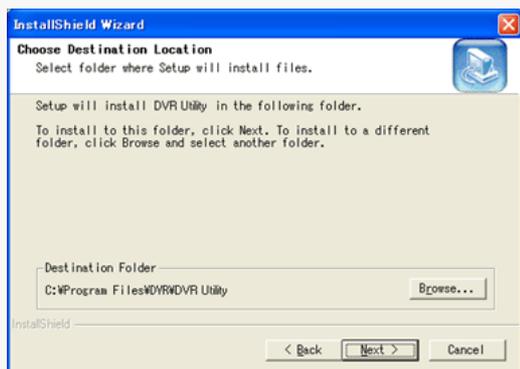
3 **Specify the folder into which you want to install DVR Utility and Click Next .**
The installation process starts and the progress of the installation appears in the [Setup Status] screen.

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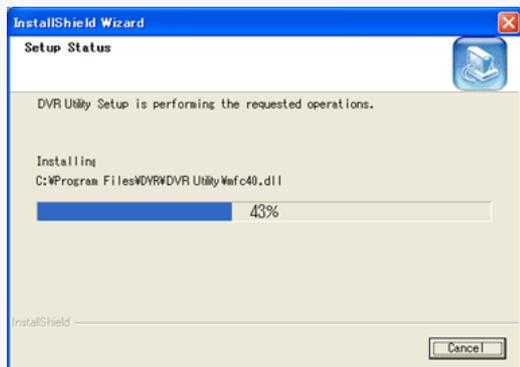
4 When the installation process is finished, click [Finish].

The shortcut icon "DVR Utility" appears on the desktop.

To uninstall DVR Utility, in the Control Panel, select [Add or Remove Programs] and select the DVR Utility application.

Connecting to the Digital Video Recorder from a Network Computer

You can connect your computer to the digital video recorder in the following steps.

1 Click the [DVR Utility] shortcut icon on the desktop.

The DVR Utility starts and the initial screen appears.

2 **Click the [Connect] menu button.**

The [Network Connection] screen appears.
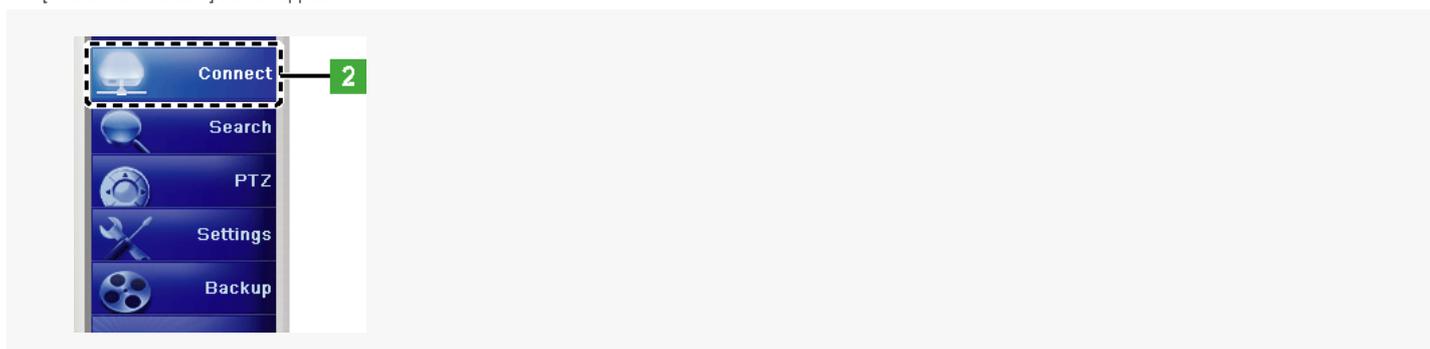
3 **In the [Connection Type] setting, select the service provider type.**

Normally, use the default settings to continue the connection procedure.

DirectPlay8 IPX Service Provider

DirectPlay8 TCP/IP Service Provider (Default setting)
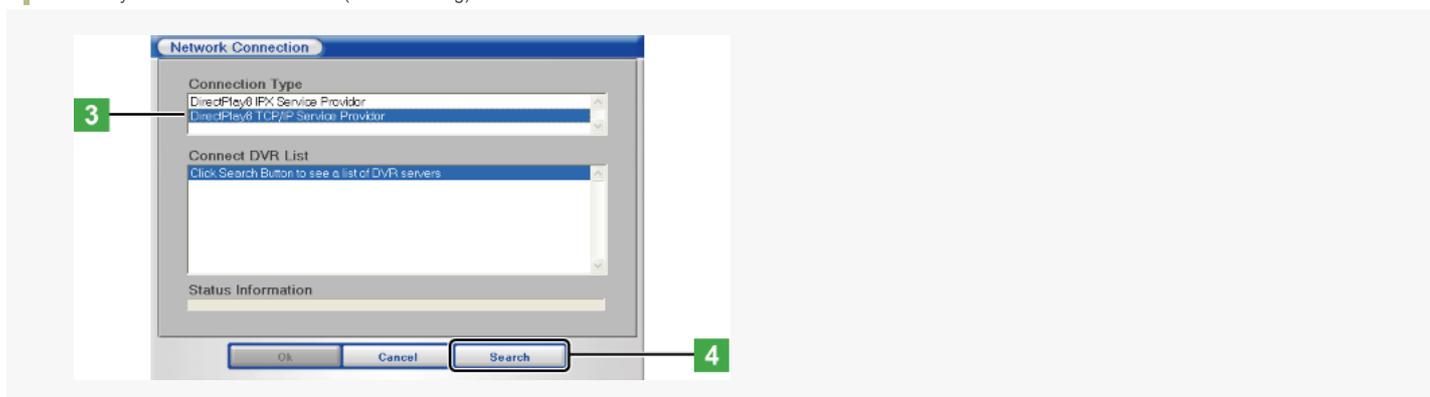
4 **Click** Search **.**

The [DVR Server List-TCP/IP] screen appears.

5 **In the [Select DVR Server] setting, select "ALL (LAN)" from the pull-down menu and Click** OK **.**

The [DVR Server List-TCP/IP] screen closes. The DVR Utility automatically searches for all digital video recorders on the local network.

The name and IP address of each searched digital video recorder will be listed in the [Connect DVR List] section of the [Network Connection] screen.
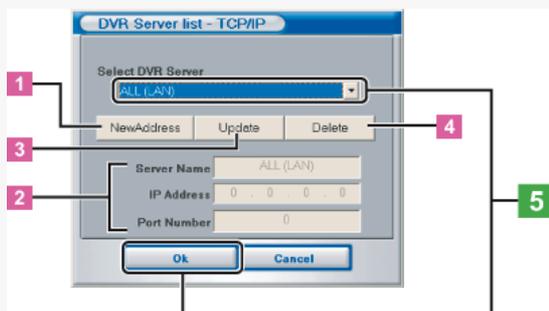
To register a digital video recorder manually so that it is listed in the pull-down menu, follow the steps below.

1 Click New Address .

2 In the appropriate text boxes, type the server name, IP address, and port number of the digital video recorder you want to register.

3 Click Update .

The registered digital video recorder is now listed in the pull-down menu.

4 To delete a registered digital video recorder, select it from the pull-down menu and Click Delete .

6 In the [Connect DVR List] section, select the digital video recorder you want to connect to and Click OK .

Or, double-click directly on the list.

The [Login] screen appears, allowing you to connect to the digital video recorder.
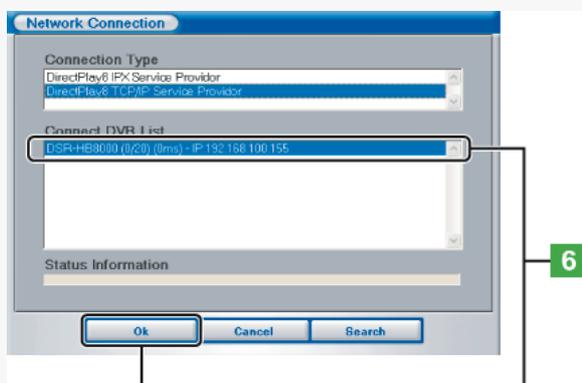
7 Select your user name from the pull-down menu of the [User ID] setting, type a valid password in [Password] field, and Click OK .

Once you have logged into the system successfully, the LIVE screen for the specified digital video recorder appears.

You cannot connect to any digital video recorder on which the SETTINGS screen is displayed.

Moreover, if any operation is performed on the SETTINGS screen, the digital video recorder will be disconnected immediately.

If Windows XP's built-in firewall feature or a third-party's firewall software is installed on your computer, the DVR Utility cannot operate normally because it cannot communicate with the digital video recorder.
To use the DVR Utility, be sure to disable the firewall settings.

Note that, in Windows XP SP2, the firewall feature is installed by default.

Therefore, when you start the DVR Utility to attempt to establish a connection to the digital video recorder, a confirmation dialog box opens, asking you whether or not to unblock the software. At this time, select [Unblock].
Then, Windows unblocks the DVR Utility, allowing the DVR Utility to communicate with the digital video recorder.

> **Windows Security Alert**
>
> To help protect your computer, Windows Firewall has blocked some features of this program.
>
> Do you want to keep blocking this program?
>
> Name: Internet Explorer
> Publisher: Microsoft Corporation
>
> [Keep Blocking] [Unblock] [Ask Me Later]
>
> Windows Firewall has blocked this program from accepting connections from the Internet or a network. If you recognize the program or trust the publisher, you can unblock it. When should I unblock a program?

Working with the LIVE Screen

LIVE Screen Components and their Functions
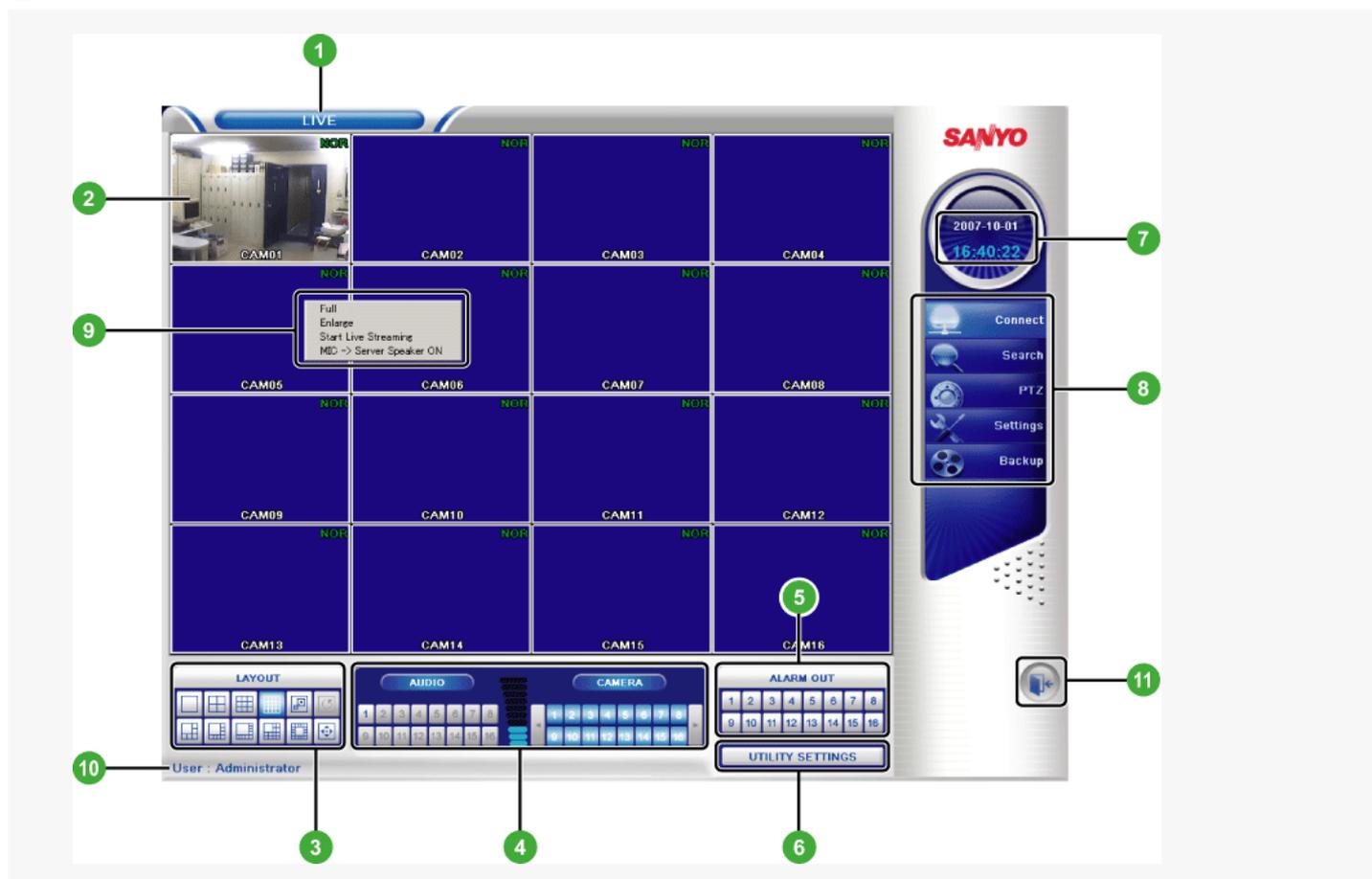
1 Screen title

"LIVE" is shown as the screen title.
The title is "PTZ SETTINGS," however, when you are operating a PTZ camera.

2 Video display area

The live video of the camera connected to the digital video recorder is displayed here.
Each video is displayed with the camera title, recording, mode, recording date, and other information.
→ Refer for details.

3 Screen Selection buttons (LAYOUT)

Use these buttons to switch the screen layout or the display method.
→ Refer for details.

4 Channel Selection buttons (AUDIO/CAMERA)

Use these controls to select the video/audio channel and adjust the audio volume level.
→ Refer for details.

5 Alarm output selection buttons (ALARM OUT)

Use these buttons to select the channel of the digital video recorder from which you want to output alarm signals. You can select more than one channel.

6 Utility settings button (UTILITY SETTINGS)

Use this button to access the [Utility Settings] screen, where you can set network-related options.
→ Refer for details.

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7 Current time

8 Operation menu buttons

Use these buttons to display the selected operation screen.

Connect
Displays the [Network Connection] screen.
On this screen, you can connect your personal computer to a networked digital video recorder.
If you attempt to connect to another digital video recorder, a confirmation dialog box opens, asking you to confirm the disconnection. Click Yes to once disconnect the current connection.

Search
Displays the SEARCH screen.
On this screen, you can search for and play back recorded or backed-up video.

PTZ
Displays the Camera Control panel for PTZ operation.
On this screen, you can remote-control the camera from your personal computer.

Settings
Displays the SETTINGS screen.
It is used to configure the detailed settings of the digital video recorder.

Backup
Displays the [Remote Backup] screen.
On this screen, you can save video data recorded with the digital video recorder to your personal computer.

9 Context menu

Right-clicking an item on the screen invokes the context menu, presenting a list of operation commands available at that time.
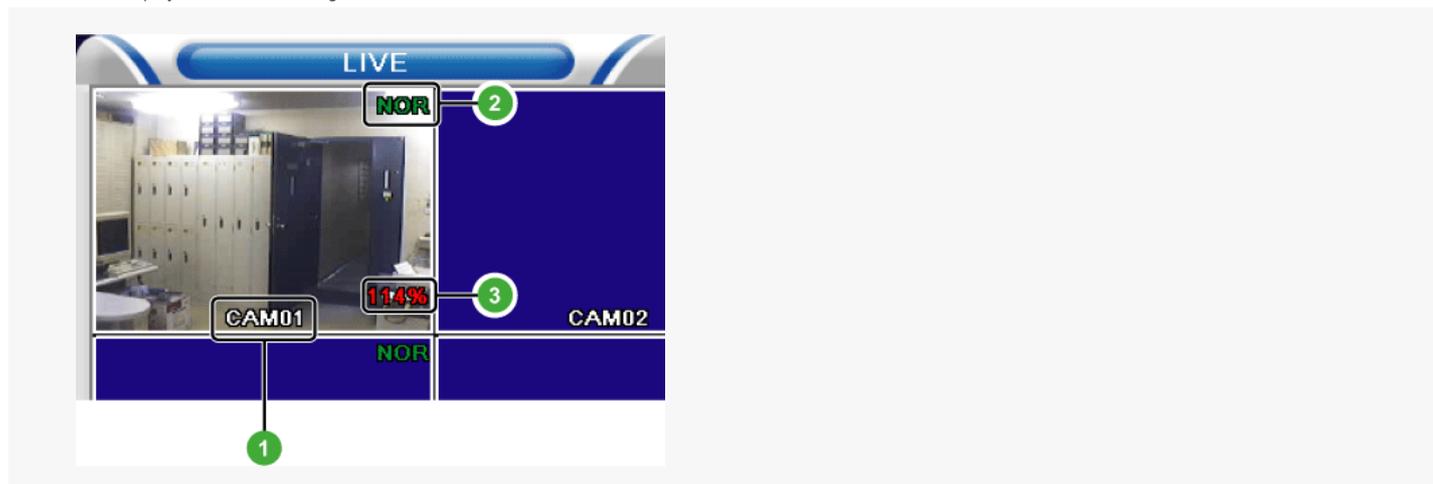→ Refer for details.

10 Login user name

11 Exit button

Clicking this button opens a dialog box, asking you whether or not to exit the system.

Select Yes to close the operation screen to exit DVR Utility.

Information Displayed with Live Video

Each video is displayed with the following information.

1 Camera title

This is the camera title you configured in the [Camera Title] setting in the Camera settings, which can be accessed from the SETTINGS screen.
Default setting: CAM01 to CAM16

2 Current recording mode

NOR: Normal recording
MOT: Motion recording
ALM: Alarm IN recording
TXT: Text recording
SUSP: Suspicion recording
M/AL: Simultaneous Motion/Alarm IN recording
M/T: Simultaneous Motion/Text recording
AL/T: Simultaneous Alarm IN/Text recording
M/AL/T: Simultaneous Motion/Alarm IN/Text recording

> The "NOR" (Normal recording) indicator is not shown when the normal recording is performed simultaneously with the Motion, Alarm IN, or Text recording.
>
> To set the Normal, Motion, Alarm IN, or Text recording mode, access the Schedule settings from the SETTINGS screen.
>
> To set the Pre-alarm recording mode, configure the [Pre] setting in the Camera settings accessible from the SETTINGS screen.
>
> To set the Audio recording mode, configure the [Audio] setting in the Camera settings accessible from the SETTINGS screen.
>
> Audio recording is not possible if the [Duration] setting in the Camera settings accessible from the SETTINGS screen is "3 Sec" or less.

3 Zoom magnification

The current zoom magnification is shown here when you zoom in/out the video.

Screen layout

Using the Screen Selection buttons, besides the single-screen display, you can select eight types of multiple-screen layouts.
By default, the LIVE screen is displayed in a 16-screen layout.

Single-screen

Quad-screen (2 × 2)

9-screen (3 × 3)

16-screen (4 × 4)

6-screen (Main 1 + Sub 5)

8-screen (Main 1 + Sub 7)
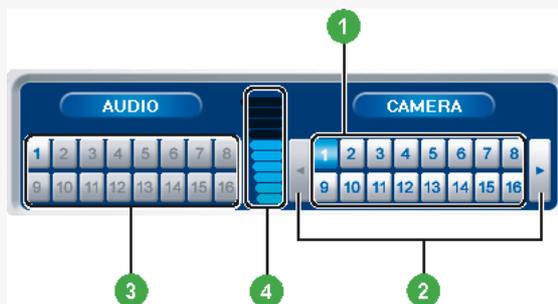

10-screen (Main 1 + Sub 9)

13-screen (Main 1 + Sub 12)

17-screen (Main 1 + Sub 16)

Channel Selection buttons

Use these controls to select the video/audio channel and adjust the audio volume level.

① Camera channel selection buttons

The button for the channel you are currently monitoring is shown in blue.
Clicking a channel button causes the channel to be displayed in a single-screen layout.

② Next/Previous Channel buttons

Displays the video for the next/previous camera channel(s).
In a multiple-screen layout, the number of channels displayed on the screen at a time (channel bundle) are switched.

③ Audio channel selection buttons

Allows you to select a single audio output channel.

④ Audio volume control

Adjusts the audio output in 10 levels.

🖼: Button to switch screens when an alarm event occurs (Event Popup)

Selecting this button by clicking causes the alarm video to appear in a single-screen layout, if an alarm event occurs.
The previous screen will be restored as soon as the set event popup time is elapsed.

To disable the Event Popup feature, click the button again.

> The target event type and the alarm video display time can be set on the [Utility Settings] screen.

🔁: Button to switch screen automatically (Sequence)

Click this button to switch the displayed live video images continuously in the order of camera numbers using the screen layout being selected.

Clicking the button opens the [Auto Rotation Interval] dialog box. Use the spin buttons to set the time until the display video is switched (1 to 60 seconds) and Click OK .
The displayed video images will be switched automatically at the specified time interval.
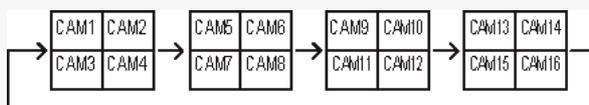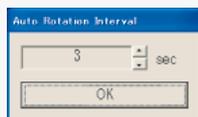
To disable the automatic screen switching feature, click the button again.

> The automatic screen switching function is not available in the 16-screen (4 x 4) and 17-screen (Main 1 + Sub 16) layout modes.

🔲: Button to switch to the full-screen mode (Enlarge)

Click this button to display only the camera's image in the maximum display size of the monitor using the screen layout being selected.

To return to the normal screen mode, right-click on the full-screen video and, from the context menu, select [Normal Mode].

Zoom In

You can zoom into a specific area of the video you are monitoring.

1 **Select the desired multiple-screen layout using the Screen Selection buttons.**
You cannot perform zoom-in operation in a single-screen layout.

2 **Drag the mouse pointer to enclose the area you want to zoom into in the selection rectangle.**
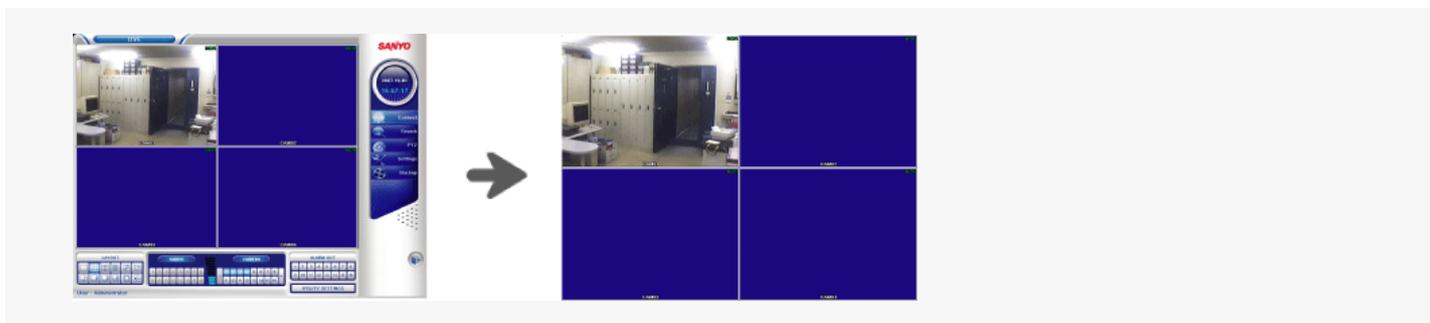The smaller the selection rectangle, the higher the zoom magnification.

3 **Drop the mouse pointer.**
The area enclosed in the selection rectangle now appears in the entire display area of the monitor, with the current zoom magnification indicated at the lower right of the display.

4 **Click on the video.**
The video returns to the normal screen mode.

Context menu

Right-clicking an item on the screen invokes the context menu, presenting a list of operation commands available at that time.
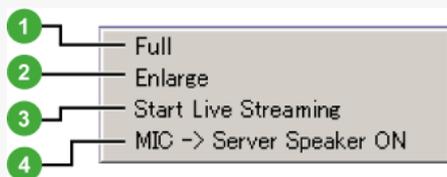
1 Screen layout switching command

The screen layout switching command shown in the context menu varies depending on the current screen layout.

In single-screen layout:
Available commands: Quad, 9CH Multi, 16CH Multi, and Previous Layout
Selecting this brings you back to the previous split-screen layout.

In quad-, 9-, or 16-screen layout:
Available command: Full
Selecting this command causes the right-clicked image to be displayed in the single-screen layout.

In 6-, 8-, 10-, 17-, or 13-screen layout:
Command display: Set Main View
Selecting this command causes the right-clicked image to be displayed in the Main View.

② Enlarge/Normal Mode

Switches between the normal screen and full-screen modes.

③ Start Live Streaming/Stop Live Streaming

Starts/Stops the Live Streaming mode.
Starting the Live Streaming mode causes the red status message "Live Streaming" to appear at the lower left of the screen, which indicates that you can receive live video data in real-time.

④ MIC → Server Speaker ON/OFF

Turns On/Off the audio output.
Turning ON the server speaker causes the red status message "MIC" to appear at the upper right of the screen, indicating that the sounds collected by the microphone connected to the personal computer are being output from speakers connected to DVR servers.
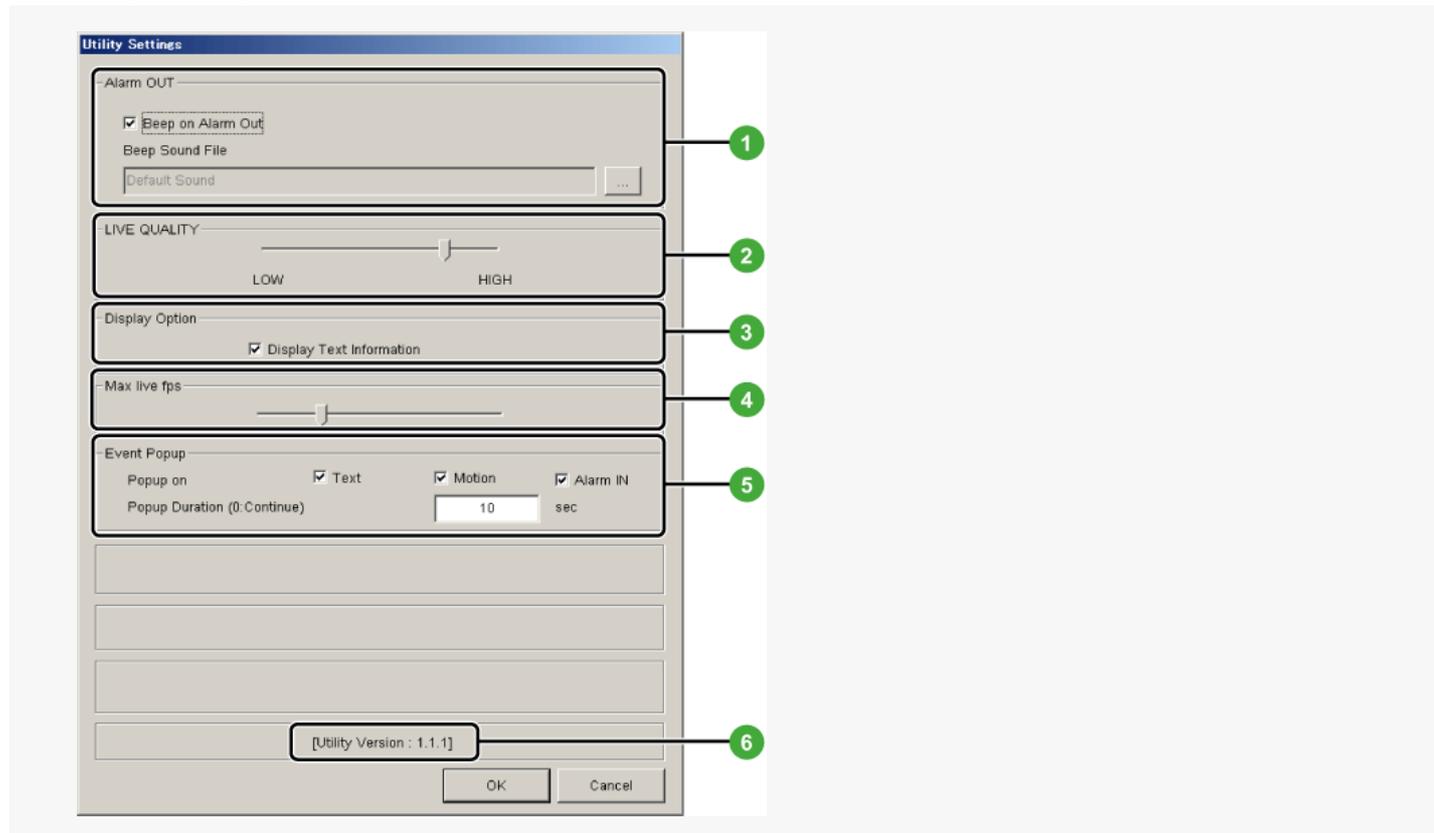
Utility settings (UTILITY SETTINGS)

Clicking UTILITY SETTINGS causes the [Utility Settings] screen to appear.
On the screen, you can configure network-related options.

① Alarm OUT

Use this setting to cause the alarm buzzer to sound while an alarm signal is output.
Select the [Beep on Alarm Out] check box and specify the desired file in the [Beep Sound File] setting.

② LIVE QUALITY

Use the slider bar to set the quality of live video.

③ Display Option:

In this section, configure the following display options.
Display Text Information
Deselect the check box if you do not want to display text information on the screen.

④ Max live fps

Use the slider bar to set the maximum frame rate (fps) of live video.

⑤ Event Popup

Set the operating conditions for the Event Popup feature.
Popup on
Select the type of the event you want to use as the trigger for displaying the alarm video. You can select more than one event type.
Text: Selecting this causes the alarm video to appear when a specific keyword(s) is found in the data recorded in Text recording.
Motion: Selecting this causes the alarm video to appear when any motion is sensed in the target by the camera's built-in motion sensor.
Alarm IN: Selecting this causes the alarm video to appear when an alarm signal is input from an external sensor.
Popup Duration
Set the time during which alarm video is displayed.

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Setting this value to "0" causes the alarm video to continue while the alarm signal is output.

6 Utility Version

Displays the version of this software.

Working with the SEARCH Screen

Clicking the [Search] mode button switches the screen to SEARCH screen.

SEARCH Screen Components and their Functions
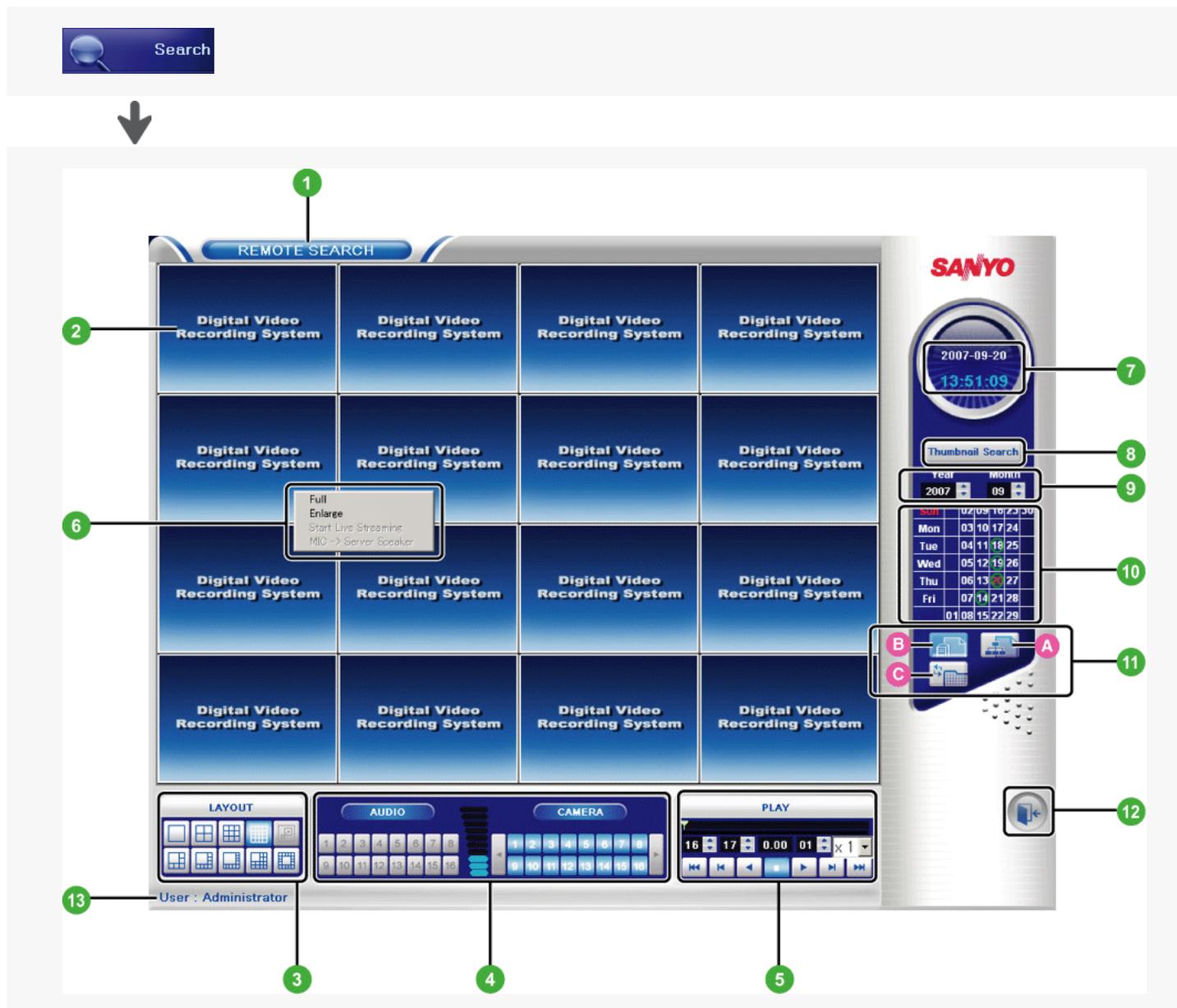
1 Screen title

The displayed screen title varies depending on the type of video you searched for playback.

REMOTE SEARCH: Recorded video stored on the digital video recorder under remote control.

BACKUP SEARCH: Backup video stored on the personal computer (or removable disk).

2 Video display area

Playback video is displayed here.
Each playback video is displayed with the camera title, recording mode, recording date, and other information.
For the meaning of displayed information such as the recording mode, refer to "Information Displayed with Live Video".

3 Screen Selection buttons (LAYOUT)

Use these buttons to switch the screen layout of playback video.

On the SEARCH screen, you cannot use the "Event Popup", "Sequence", and "Enlarge" buttons.

You can execute the "Enlarge (Full Screen)" command from the context menu.

4 Channel Selection buttons (AUDIO/CAMERA)

Use these controls to select the video/audio channel and adjust the audio volume level of playback video. For operation, refer to the corresponding explanation in the LIVE screen section.

5 Playback control panel (PLAY)

Use this panel to perform playback operations including fast-forward and frame-forward.

6 Context menu

Right-clicking an item on the screen invokes the context menu, presenting a list of operation commands available at that time. For operation, refer to the corresponding explanation in the LIVE screen section.

- Screen layout switching command
- Enlarge/Normal Mode

7 Current time

8 Thumbnail Search button

You can search for the desired scenes of the video from the displayed thumbnails.

9 Year/month setting

Use the spin buttons to display the calendar for the desired month of the year.

10 Calendar

Shows the calendar for the month of the year you specified in 9 .
The color of the calendar changes depending on the selected drive type (11).
Select the video you want to play back by clicking the calendar day with recorded video data (indicated by a green circle). Then, you can specify the point to start playback in the [Time Bar Search] window.

11 Drive selection buttons

A (Remote Data button)

Use this button to play back recorded video stored on the data drive of the digital video recorder under remote control.

B (Local Data button)

Use this button to play back backup video stored on the personal computer (or removable disk).

C (Select DVR Backup Folder button)

Selecting the Local Data button enables this button.

Click the button and, in the [Browse for Folder] dialog box, specify the folder containing the video you want to play back.

12 Exit button

Use this button to close the SEARCH screen and return to the LIVE screen.

13 Login user name

Normal playback procedure

1 Click the [Search] menu button.

The screen changes to the SEARCH screen, which is by default displayed in a 16-screen layout.

2 Click the drive selection button.

By default, the Remote Data button **A** is selected.
To play back backed-up video, click the [Local Date] button **B** and then [Select DVR Backup Folder] button **C** .

A (Remote Data button)

Use this button to play back recorded video stored on the data drive of the digital video recorder under remote control.

B (Local Data button)

Use this button to play back backup video stored on the personal computer (or removable disk).

C (Select DVR Backup Folder button)

If you have selected the Local Data button, click this button and, in the [Browse for Folder] dialog box, select the folder containing the video you want to play back.

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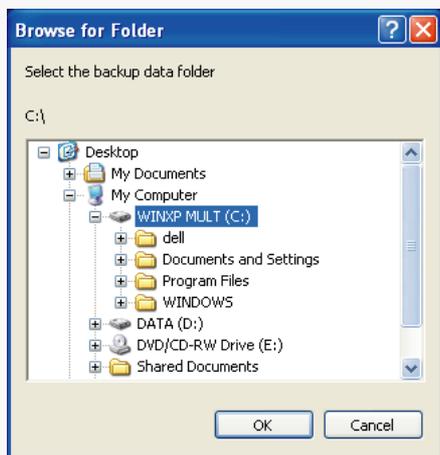
Backed-up video can be played back even if the computer is not connected to the digital video recorder.

To play back backup video stored on a NAS network drive, configure Windows in the [Map Network Drive] dialog box in advance.

3 **Select the video you want to play back by clicking the desired day on the calendar.**

The color of the calendar changes depending on the selected drive type.

A green circle indicates the day with video data.

The [Time Bar Search] window opens, showing the recording information for the selected day as time bars.

❚ **Calendar for Remote Data (Recorded video)**

Day with recorded video data: Indicated by a green circle.

Day currently selected: Indicated by the red day value.

❚ **Calendar for Local Data (Backup video)**

Day with recorded video data: Indicated by a green circle.

Day currently selected: Indicated in blue text.

4 **Click in the window or drag the cursor line to determine the playback start point and Click** Open **.**

The [Time Bar Search] window closes and the still image of the selected playback start point appears in the video display area.

1 Time scale

Clicking the blue hour indication area sequentially changes the time scale as shown below.

24-hour display (1 hour × 24 graduations)

12-hour display (1 hour × 12 graduations)

6-hour display (30 minutes × 12 graduations)

3-hour display (30 minutes × 6 graduations)

2 Time bars: Shows recording information on each channel in the color defined for each recording mode.

3 Slider bar: Allows you to scroll the day indication above time bars forward and backward.

4 Cursor line: Shows the position of the playback point.

5 **Open** : Closes the [Time Bar Search] window and displays the still image of the selected playback point in the video display area.

6 **Cancel** : Closes the [Time Bar Search] window with the setting cancelled.

7 Daylight button

When the Daylight Saving feature is ON, a time difference of one hour is applied.

When the date selected in the calendar falls in the daylight-saving time period, you can select the time scale display mode.

ON: Displays the time in the daylight-saving time scale.

OFF: Displays the time in the normal time scale.

The Daylight button appears only if the selected date in the calendar is in the daylight-saving time period.

The Daylight button appears during normal playback only.

5 Use the Screen Selection buttons to select the desired screen layout.

6 Click the forward playback button on the Playback control panel.

The digital video recorder starts playing back the video.
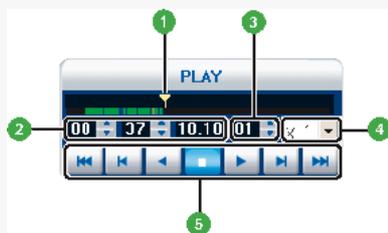
❶ Time bars

The pointer moves across the time bars for each playback channel to indicate the playback point.

You can drag the pointer to move the playback point as desired.

❷ Time/minute adjustment

Use the spin button to move the playback position forward or backward in units of hours or minutes.

❸ Channel selector

Use the spin button to switch the video for the channel displayed in a single-screen layout.

❹ Playback speed adjustment

From the pull-down menu, select one of the five playback speed levels (x0.5, 1.0, 2.0, 3.0, 4.0, and 5.0).

❺ Playback button

: Skips to the end or beginning of the video.

: Forwards/rewinds the video frame by frame as a still image.

: Forward/reverse playback

: Pause

Thumbnail Search

You can search for the desired scenes of the video from the displayed thumbnails.
Using Thumbnail search, you can compare images frame by frame, or choose the images you want to print or save.

Thumbnail Search

Using Thumbnail search

1 Click **Thumbnail Search** while video is being played back (or paused) on the SEARCH screen.
The screen changes to the Thumbnail Search mode and the first still image of the video appears in the Preview area.

2 Select the channel (single channel) which you want to search for video scenes using the Camera channel selection buttons.
If you do not specify any channel, the video scenes from Channel 1 will be searched by default.

3 Start playing back the video using the forward playback button.
The second and later thumbnail images appear one frame another in the thumbnail display area. You can display up to 27 thumbnail images on the screen.

The currently selected thumbnail image is shown in a blue rectangle, with its magnified view displayed in the upper preview area.
If you already have 27 thumbnail images, the subsequent images will overwrite the existing thumbnail images from the beginning.

4 To print/save a searched image

From the displayed thumbnail images, select the image you want to print or copy and, on the Thumbnail Search panel, click the [Print] or [Save Image] button.
You may select more than one thumbnail image.
For how to print/save a thumbnail, refer to "Thumbnail Search panel components and their functions".

The selected image is now shown in a yellow rectangle (the last selected image is shown in a blue rectangle).

Thumbnail Search panel components and their functions

The Thumbnail Search mode provides a dedicated control panel, enabling you to perform operations as described below.
The buttons, when selected, are shown in blue.
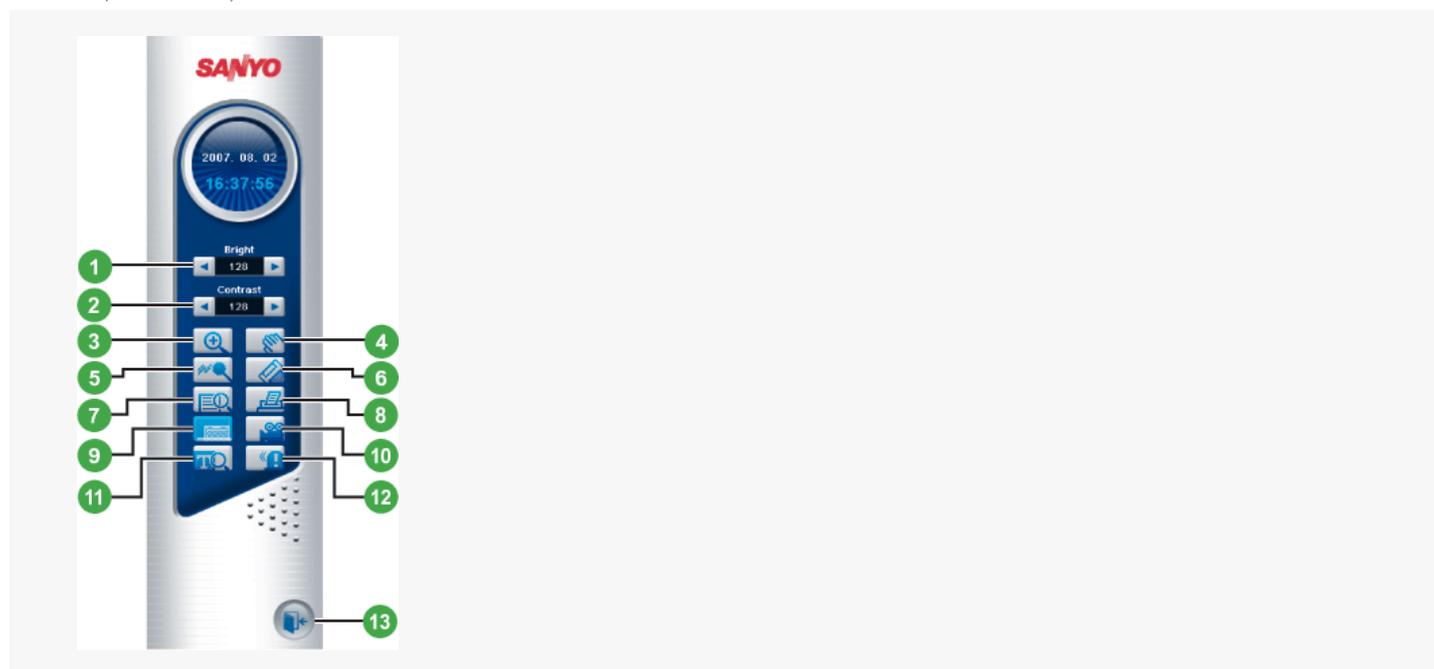
1 Button to adjust the brightness

Use this button to adjust the brightness of the image.

2 Button to adjust the contrast

Use this button to adjust the contrast of the image.

3 Button to enlarge the preview screen (Zoom)

Clicking this button and then dragging on the preview image lets you enlarge the preview image.

④ 🖐 Button to move the preview screen (Pan)

Clicking this button and then dragging on the preview image lets you move the position of the preview image.

⑤ 🔍 Button to set the noise filter (Filtering)

Click this button to set the noise filter on the image.

⑥ 🖊 Button to save images (Save Image)

From the thumbnail images displayed, you can save the selected images.
Click this button and, after confirming how many images you are saving, configure the saving conditions in the [Save As] dialog box.
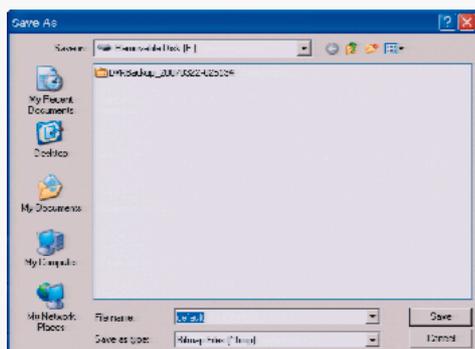
⑦ 📇 Button to preview the images to be printed (Print Preview)

If you are printing the thumbnail images selected from those displayed, use this button to set the image layout etc. on the [IMAGE PRINT] screen.

A Print

Prints the selected thumbnails using the conditions you set on the screen.

B Print Setup

Displays the [Print] dialog box, where you can set printing conditions.

C Previous/Next

Displays the previous/next page if the images are to be printed on two or more pages.

D Zoom In/Zoom Out

Zooms in/out the print preview images. This does not affect the images to be printed.

E 1×2/2×4/4×8

Allows you to select the layout (horizontal × vertical) of the images to be printed on a single page.

F Close

Closes the [IMAGE PRINT] screen.

⑧ Button to print images (Print)

Click the button and, in the [Print] dialog box, set the printing conditions.

> Clicking this button causes the images to be printed in the fixed "1 × 2" layout.
>
> To print the images in a different screen layout ("2 × 4" or "4 × 8"), click the Print Preview button ⑦ and set the layout in the [IMAGE PRINT] screen.

## ⑨ Button to show/hide thumbnail images (Show/Hide Thumbnail Image)

Use this button to show/hide the thumbnail images.
Hide the thumbnail images to enlarge the Preview area.

⑩ Button to save moving images (AVI Export)

Allows you to save video in the AVI format by specifying the duration of recording.
Click the button and, in the [AVI Export] dialog box, configure the saving conditions.
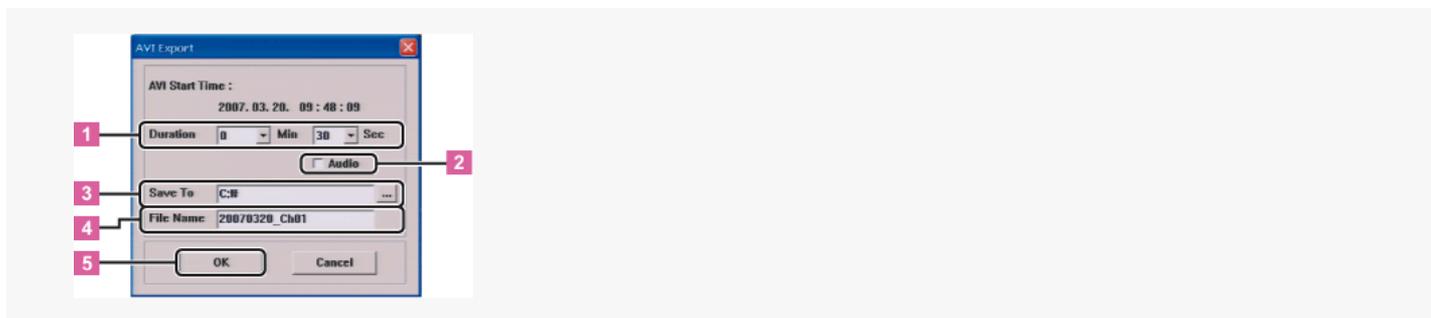
1 In the [Duration] setting, specify how long you want to save the recorded data from the pull-down menu.

The saving of the recorded data will start at the date and time specified under [AVI Start Time].

2 Using this check box, select the data you want to save with the video.

Text:

Use this option to save data recorded in Text recording.

When selected, an SMI file is created to save text data together with video data.

The text data will be displayed in the caption area below the video image.

Audio:

Use this option to save video data together with audio data.

The saved audio data will also be copied.

3 Click the [Save To] button to select the storage location of the data to be saved.

4 In the [File Name] field, type the desired file name if you want to name it by yourself.

Default settings: _

5 Click OK .

The saving of the recorded data starts.

11 Text Search button

Use this button to switch to the [Text Search] screen.
On the [Text Search] screen, use keywords to search for video images in text data recorded by a POS or ATM.
→Refer for details.

12 Alarm Log Search button

Use this button to switch to the [Alarm Log Search] screen.
Uses the alarm logs listed by event to search and play back recorded video.
→Refer for details.

13 EXIT button

Closes the [Thumbnail Search] screen to return to the SEARCH screen.

Text Search

You can use keywords to search for playback video, by searching through data recorded by a POS or ATM.

1 Click the Text Search button on the Thumbnail Search panel.

The [Text Search] screen appears.

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2 **Enter search criteria.**

To perform a Text search, you must specify ❶ to ❹ as search criteria.

❶ Camera: Camera number (1 to 16).
❷ Date: Recording date of the video you want to search.
In the calendar that pops up, click the day on which you want to perform a Text search.
❸ Time: Search duration (in "hour:minute" - "hour:minute" format).
❹ Order: Display order of the search results in the Text List area.

Descend:	Newer to older video.
Ascend:	Older to newer video.

❺ Text device ID: POS ID (1 to 16)
❻ Event:
Type of the events to be searched for.

None:	Searches for all text events in the specified search duration.
True:	Searches for text events including the specified keywords.
False:	Searches for text events that does not include the specified keywords.

❼ Keyword:
In this field, type a list of search keywords (max. 30 characters).

3 **Click Search .**

The digital video recorder searches recorded data that matches the specified search criteria and shows them in the Text List area A .
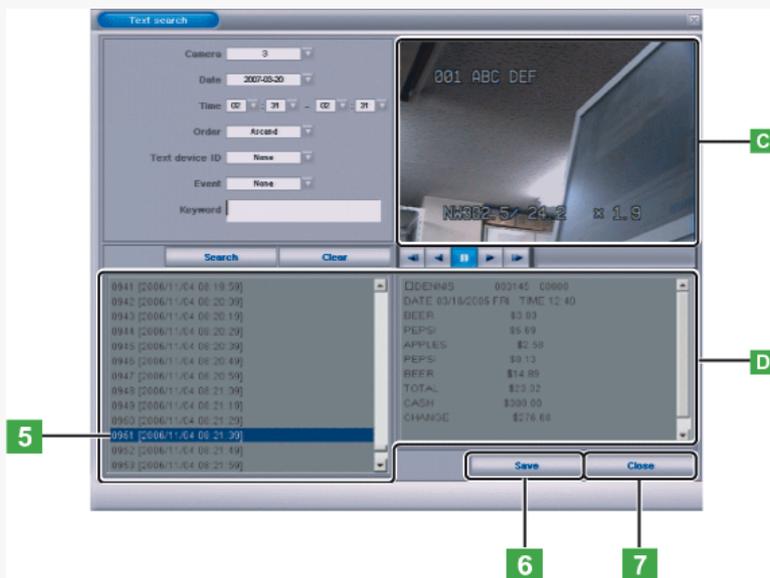Click Clear B to clear all search results in the Text List area.

4 **In the Text List area, select the recorded data you want to play back by double-clicking.**

The surveillance video of the selected data C appears with its text data D .
To start playing back the video, click the desired playback buttons.

■   : Frame-forward/rewind

■   : Forward/reverse playback

■ : Pause

5 **Click** .

The [Save As] dialog box opens, allowing you to save the searched video data.

6 **Click** .

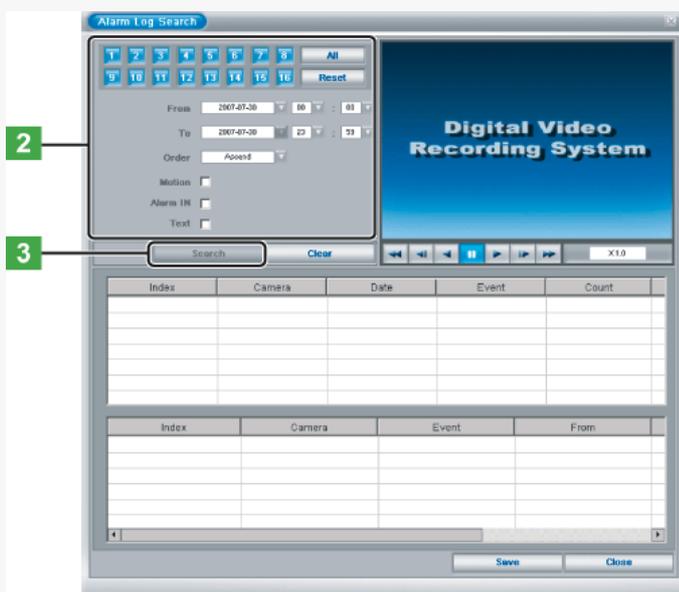The [Text Search] screen closes and you return to the state before starting the Text search.

Alarm Log Search

The Alarm Log list allows you to search and play back recorded video.

1 **Click the Alarm Log Search button on the Thumbnail Search panel.**

The [Alarm Log Search] screen appears.

2 **Enter search criteria.**

To perform a Text search, you must specify ❶ to ❹ as search criteria.

1 Camera number (1 to 16).

    All : Selects all camera numbers.

    Reset : Deselects all camera numbers.

2 Search start point (From)

    In the calendar that pops up, click the day on which the video scenes you want to search for were recorded and then, from the pull-down menu, select the search duration.

3 Search end point (To)

    In the same manner as you did in **2** , set the date and time at which you want to finish this search.

4 Display order of the search results in the Alarm Log area (Order)

    Descend: Newer to older video.
    Ascend: Older to newer video.

5 Type of the events to be searched for.

    Motion: Searches for Motion recording events.
    Alarm IN: Searches for Alarm IN recording events.
    Text: Searches for Text recording events.

3 **Click** **Search** .

The digital video recorder searches for any event data that matches the specified search criteria and shows them in the total-count list section (upper section) of the Alarm Log list.

> Matched events are sorted by data in the [Camera], [Date], and [Event] columns in this order, with the total counts of the matched events shown in the [Count] column.
>
> You can switch the sort order of the searched logs between the ascending and descending orders by clicking the header row of each column.
>
> Click **Clear** to clear all the data in the Alarm Log list.

4 **In the total-count list section of the Alarm Log list, click the recorded data you want to play back.**
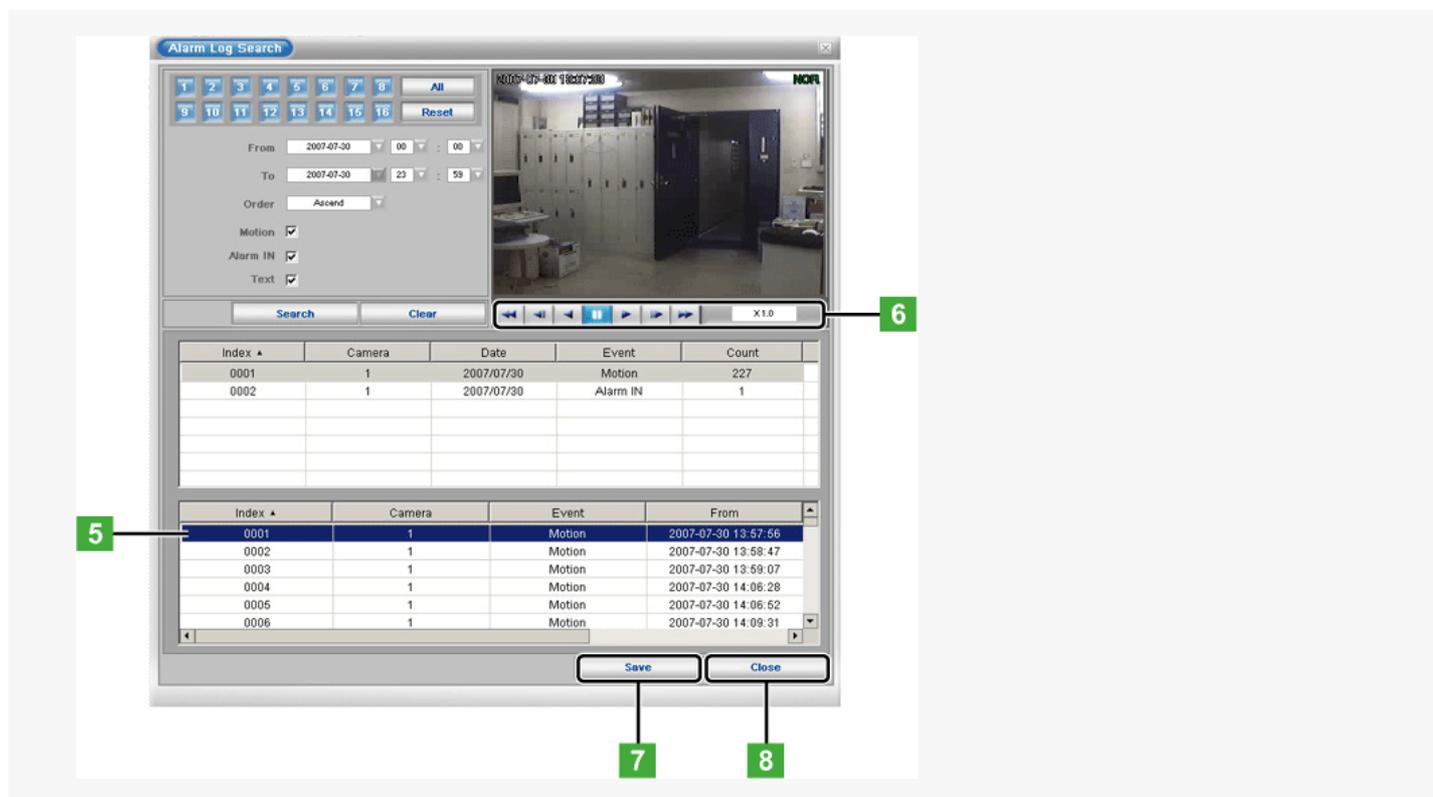
The details of the selected event appear in the event-details list section (lower section) of the Alarm Log list.

5 **In the event-details list section of the Alarm Log list, select the desired row and then click.**

The beginning video scene of the selected event appears.

6 **Click the forward playback button.**

Plays back the selected video image.

| ▶▶ | ◀◀ | : Fast-forward/rewind playback
Click one of these buttons repeatedly to adjust the playback speed in four steps (x2.0, 3.0, 4.0, and 5.0).

| ▶ | ◀ | : Frame-forward/rewind

| ▶ | ◀ | : Forward/reverse playback
Click one of these buttons repeatedly to adjust the playback speed in two steps (x1.0 and 0.5).

| ‖ | : Pause

The selected playback speed appears in the playback speed box at the right end.

7 **Click** Save **to save the video being played back.**

The [Save As] dialog box opens, allowing you to save the searched video data.

8 **Click** Close **.**

The [Alarm Log Search] screen closes and you return to the state before starting the Alarm Log search.

Controlling a PTZ Camera

On this screen, you can remote-control a PTZ camera from your personal computer.

> Before performing any PTZ operation, on the digital video recorder, configure the [Protocol] setting in the Camera settings accessible from the [SETTINGS] screen.
>
> The features you can control using the Camera Control panel depend on the camera model.

Procedure

1 **Click the [PTZ] menu button.**

The title of the screen changes to "PTZ SETTINGS" and the Camera Control panel for PTZ operations appears.
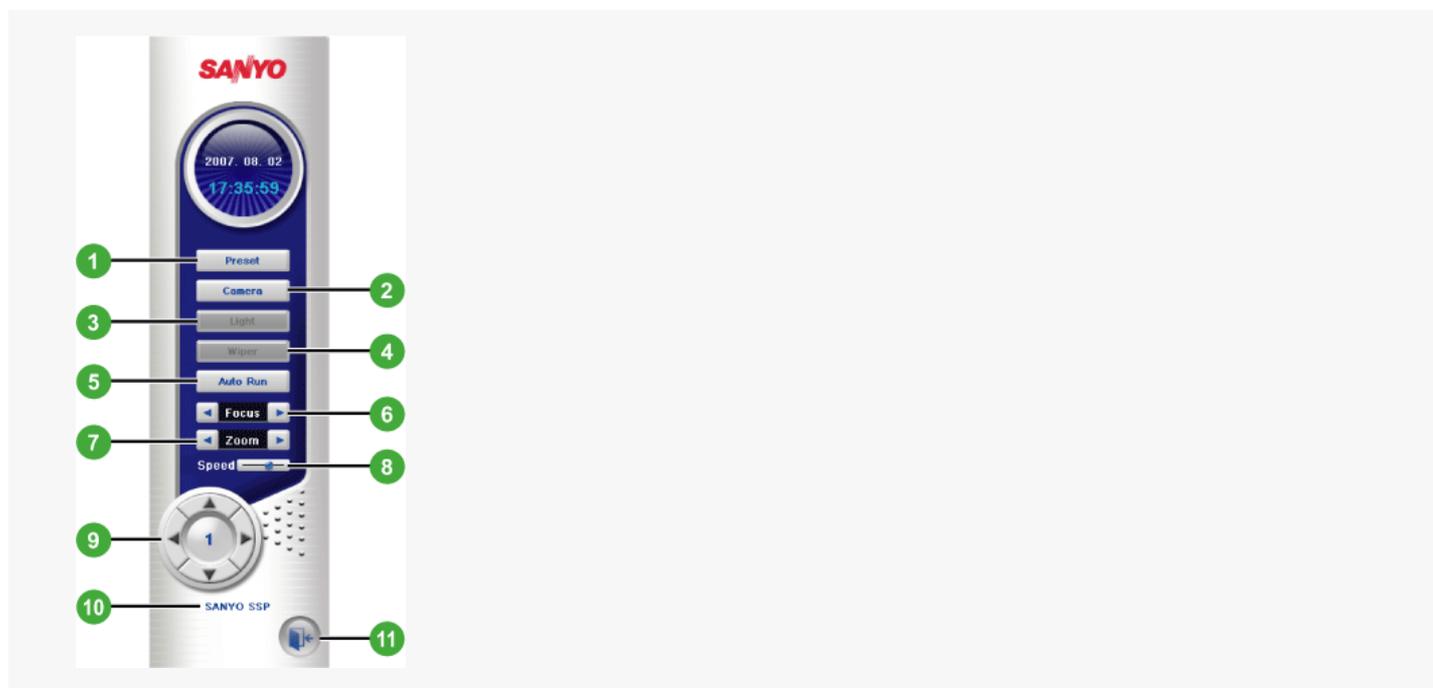

2 **Select the camera you want to control using the camera channel selection buttons.**

The live video from the selected camera appears in a single-screen layout.

3 **Control the camera using the Camera Control panel.**

Camera Control panel components and their functions

1 Preset

Displays the buttons you can use to control cameras based on preset settings.

2 Camera (Optional)

Turns On/Off the camera power.

3 Light (Optional)

Turns On/Off the illuminating light.

4 Wiper (Optional)

Turns On/Off the wiper.

5 Auto Run (Optional)

The camera moves to and fro between two preset positions.

6 Focus

Use these buttons to adjust the focus.

7 Zoom

Use these buttons to zoom in/out the video.

8 Speed

Adjusts the panning/tilting speed.

9 PAN/TILT controller

Use this control to adjust the orientation of the camera.
(The controller will show the camera number of the controlled camera.)

10 PTZ protocol

11 Exit button

Exits the PTZ operation mode and closes Camera Control panel.

> For how to use the optional features, consult the dealer from which you purchased the digital video recorder.

Controlling a camera based on preset settings

Click **Preset** to display the buttons for controlling cameras based on preset settings.

Registering a preset position (Set)

Camera states such as the orientation and zoom magnification can be registered as preset positions. You can register up to 12 preset positions.
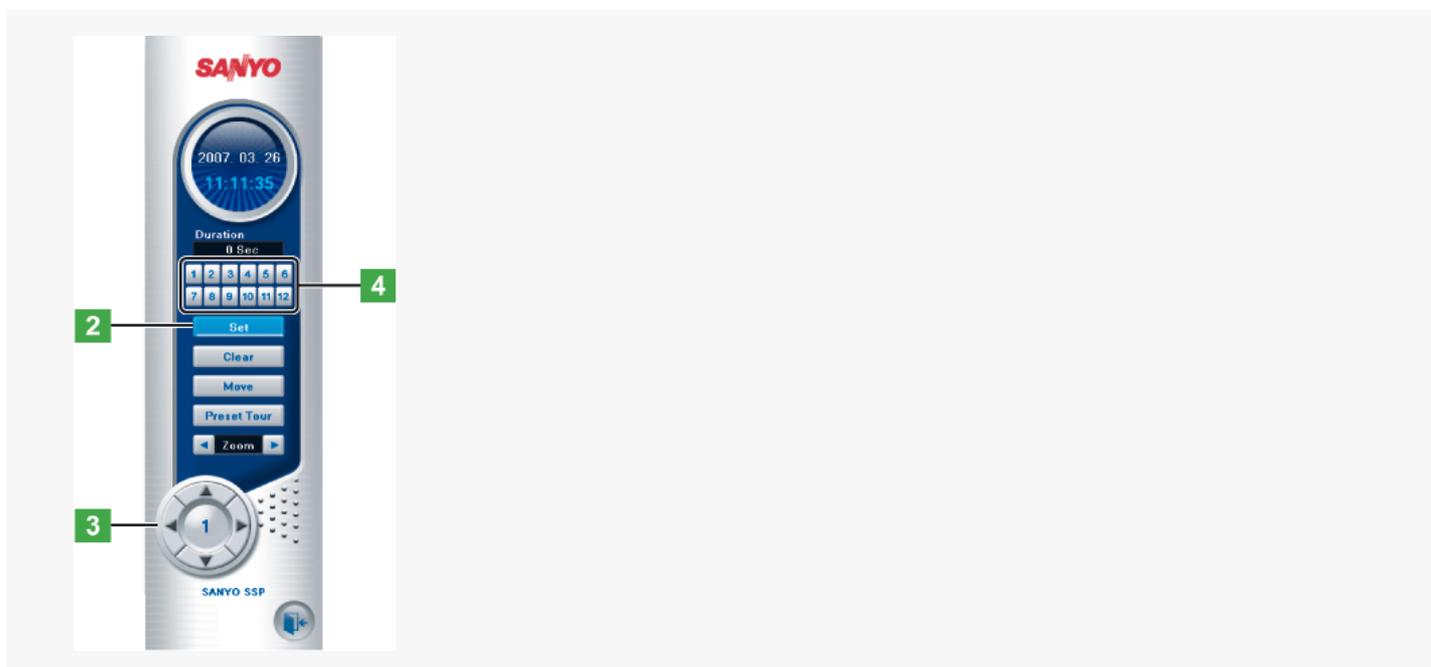
1 Select a camera.

Select the camera you want to control using the camera channel selection buttons and switch to a single-screen layout.
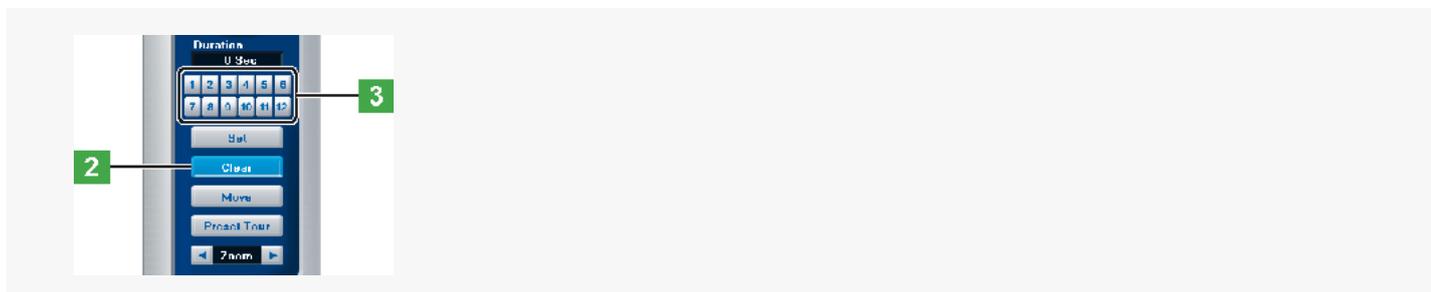
2 Click Set .

3 Set the camera orientation using the PAN/TILT controller.

Adjust also the zoom and focus settings as required.

4 Select a preset number.

The selected preset number is used to register camera states such as the current orientation and zoom magnification as a preset position.

Deleting a preset position (Clear)

1 Select a camera.

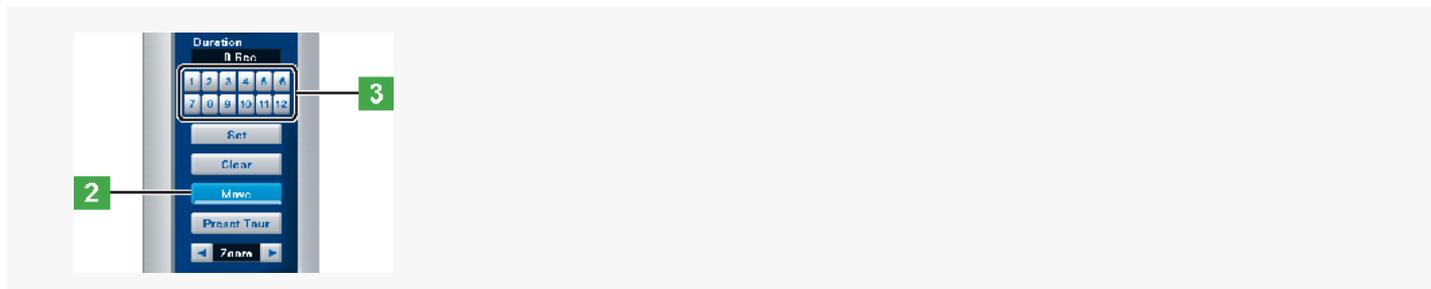**2** Click Clear .

3 Select the preset number you want to delete.

The preset position registered with the selected preset number has been deleted.

Moving the camera to a preset position (Move)

1 Select a camera.

2 Click Move .

3 Select a preset number.

The camera orientation has been set to the registered preset position.

## Patrolling preset positions (Preset Tour)

1 Select a camera.

2 Click Preset Tour .

The camera moves around two or more preset positions in the order of preset numbers so that you can monitor what's happening in these positions.

Backing Up Recorded Data to your Computer via Network (Remote Backup)

You can back up data recorded with the digital video recorder to your personal computer connected via network.
Clicking the [Backup] menu button displays the [Remote Backup] screen.

[Remote Backup] screen components and their functions
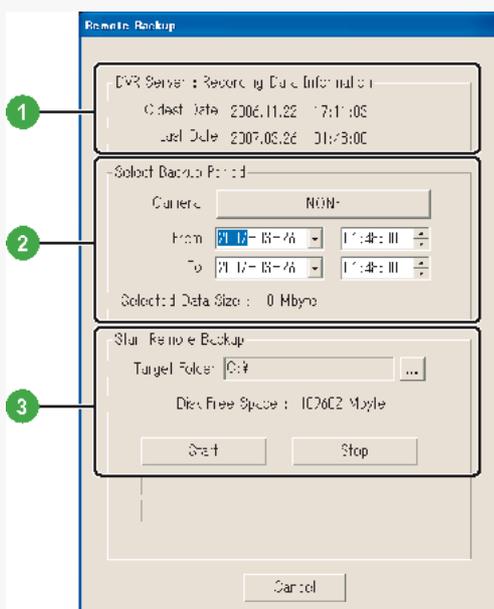
1 DVR Server: Recording Data Information

The range of the recorded data to be backed up (the date and time when the recording was started and ended) is shown here.

2 Select Backup Period

Camera

Click the button and, in the [Select Linked Camera] setting dialog box, specify the camera number for the data you want to back up.

From/To

Specify the range (start and end points) of data you want to back up by the recording date and time.

Selected Data Size

Shows the size of the selected range of data.

3 Start Remote Backup

Start the backup process by specifying the folder into which you want to back up the selected data.

Target Folder

Specify the backup-destination drive and folder.

Disk Free Space

The available disk space on the selected drive is shown.

| Start |

Starts the backup process.

| Stop |

Stops the backup process.

Progress gauge

The progress of the backup process is shown on the gauge.

Procedure

1 In the [Camera] section, click the button (labeled as | NONE |, by default).
The [Select Linked Camera] setting dialog box opens.

Camera | NONE |

2 Select the camera number for the data you want to back up and Click | OK |.
Clicking a camera number toggles the backup On/Off status of the camera. You can select more than one camera number.

Select Linked Camera

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

| All Camera | | Reset |
| OK | | Cancel |

| All Camera | : Sets all camera numbers to On.
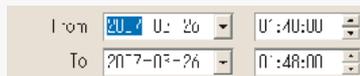| Reset | : Resets the backup status of all camera numbers to Off.
| OK | : Closes the dialog box with the settings applied.
| Cancel | : Cancels all settings and closes the dialog box.

3 In the [From] and [To] fields, specify the range of the data you want to back up (the date and time when the recording was started and ended).
Select the date using the calendar; select the time using the spin buttons.
Under [Select Data Size], the size of the selected range of data appears.

From 2007 03 26 / 07:40:00
To 2007-03-26 / 07:48:00

The upper limit of the this data size is the value shown in the [Recording Data Information] section.

4 In the [Target Folder] setting, select the backup-destination drive and folder.
Under [Disk Free Space], the available disk space on the selected drive appears.
Confirm the total size of the files you selected does not exceed the size of the available space in the backup medium.

Target Folder C:¥ | ... |

5 Click | Start |.
The system starts a backup, showing its progress as a progress gauge.
When the backup process is finished, a dialog box opens, showing the backup has been finished.

| Start | | Stop |
➡ DVR Client ✕
Backup Completed
| OK |

When the backup destination is a CD/DVD
Upper line: Indicates the writing status from the buffer to the backup medium.
Lower line: Indicates the writing status to the buffer.
When the backup destination is a removable disk
Upper line: Indicates the progress of writing each file.
Lowe line: Indicates the progress of writing all files, if there are more than one file.

If the backup medium runs out of space, the system will present a message dialog box.
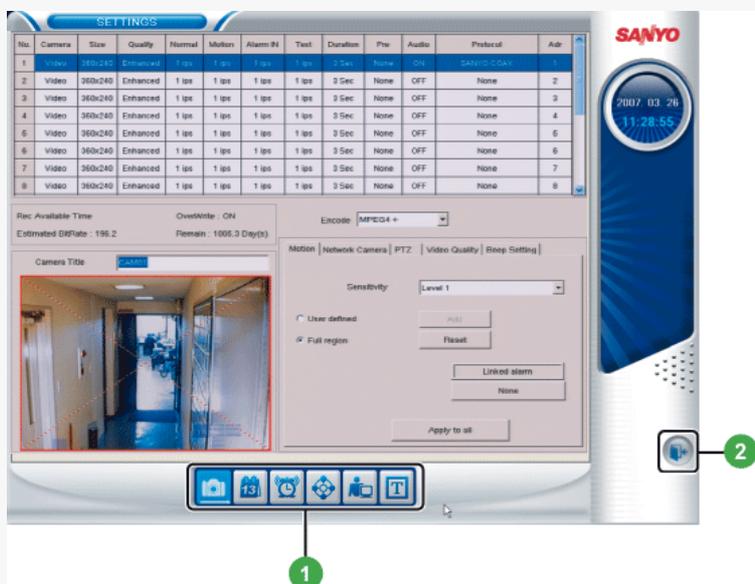
DVR Utility (Setting)

Working with the SETTINGS screen

The SETTING screen is used by "Administrator" users. It is used to set the detailed settings of the digital video recorder.

SETTINGS Screen Components and their Functions

Clicking the [Settings] menu button and entering a valid password causes the SETTINGS screen to appear.

1 Settings menu buttons

Use these buttons to switch among the six setting screens provided.

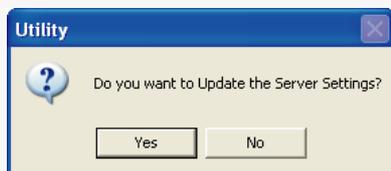|		
	Camera Settings	Allows you to set the operation conditions of each camera connected to the digital video recorder.
	Schedule Settings	Allows you to set the recording schedule.
	Alarm Settings	Allows you to configure the alarm input/output settings.
	Communication Settings	Allows you to set the destination of alarm-notification E-mails.

	User/Password Settings	Allows you to register users who use this system and their operating authorities. Only "Administrator" users can click this button.
	Text settings	Allows you to configure Text recording settings by connecting a text input device such as a POS or ATM to the digital video recorder.

② Exit button

Use this button to close the SETTINGS screen and return to the LIVE screen.

Clicking this button opens a confirmation dialog box, asking you whether or not to save the settings you have configured. Select Yes or No to proceed.

Camera Settings

Click the [Camera] setting button to display the Camera settings.
Here, you can set the operation conditions of each camera connected to the digital video recorder.

① Camera setting table

Clicking each header cell of the setting table invokes a pull-down menu.
Configure the camera type, connection conditions, and other settings for each camera.

No.	Camera	Size	Quality	Normal	Motion	Alarm IN	Text	Duration	Pre.	Audio	Protocol	Adr
1	Video	360 X 240	Enhanced	1 fps	1 fps	1 fps	1 fps	3 Sec	None	OFF	SANYO SSP	1
2	Video	360 X 240	Enhanced	1 fps	1 fps	1 fps	1 fps	3 Sec	None	OFF	None	2
3	Video	360 X 240	Enhanced	1 fps	1 fps	1 fps	1 fps	3 Sec	None	OFF	None	3
4	Video	360 X 240	Enhanced	1 fps	1 fps	1 fps	1 fps	3 Sec	None	OFF	None	4
5	Video	360 X 240	Enhanced	1 fps	1 fps	1 fps	1 fps	3 Sec	None	OFF	None	5
6	Video	360 X 240	Enhanced	1 fps	1 fps	1 fps	1 fps	3 Sec	None	OFF	None	6
7	Video	360 X 240	Enhanced	1 fps	1 fps	1 fps	1 fps	3 Sec	None	OFF	None	7
8	Video	360 X 240	Enhanced	1 fps	1 fps	1 fps	1 fps	3 Sec	None	OFF	None	8

No.:

Click the camera number of the camera for which you want to configure settings. The video from the camera you selected appears in the Preview area ③ .

Camera (View-only):

Shows the camera type you set on the digital video recorder.

If set to "LAN", the row for that camera is shown in a different color.

Displayed items:
None (No camera connected)
Video (Normal camera)
LAN (Network camera)

Size:

Set the screen size for the bundle of channels: CH1 to 4, CH5 to 8, CH9 to 12,or CH13 to 16.

Setting options:
PAL: F360×288, 720×288, and 720×576

NTSC: Setting options: 360×240, 720×240, and 720×480

Quality:

Set the camera quality for each camera.
Setting options: Basic, Normal, Enhanced, Fine, and Super fine

Normal:

Set the recording rate used in Normal recording for each camera.

The recording rates shown in the pull-down menu depend on the [Size] setting. (This is also true for the recording modes described below.)

Motion:

Set the recording rate used in Motion recording for each camera.

Alarm IN:

Set the recording rate used in Alarm IN recording for each camera.

Text:

Set the recording rate used in Text recording for each camera.

Duration:

Set the duration of Motion, Alarm IN, and Text recordings for each camera (1 Sec to 5 Min).

Pre:

Set the operation conditions in Pre-alarm recording for each camera

Setting options:

None (No Pre-alarm recording)

Short (Short Pre-alarm recording time)

Medium (Standard Pre-alarm recording time)

Long (Long Pre-alarm recording time)

Audio:

Turn ON/OFF audio recording for each camera.

Protocol (View-only):

Shows the PTZ operation protocol you set on the digital video recorder.

Adr:

Set the PTZ operation address for each camera (1 to 127).

> If the camera type ([Camera]) is set to "LAN", you cannot change the settings via the network. (except the [Adr] setting)
>
> Audio recording is not possible if the [Duration] setting is "3 Sec" or less.
>
> Right-clicking a cell of the list and then selecting [All camera config copy] in the context menu applies the defined setting to all cameras.

② Camera Title

If you want to change the camera title shown with the camera's video etc., type here a new title with a length of 22 characters or less.

Default setting: CAM01 to CAM16

Camera Title	CAM01

③ Preview area

Clicking a camera number in the Camera setting table causes the video from the selected camera to appear in the Preview area.

④ Encode setting

Set the encoding format.

Setting options: MPEG4 and MPEG4+

⑤ Detailed Setup Tabs

These tabs are used to configure detailed condition settings.

Motion	Network Camera	PTZ	Video	Beep Setting

> You cannot set the contents of the [Network Camera] and [PTZ] tabs via the network.

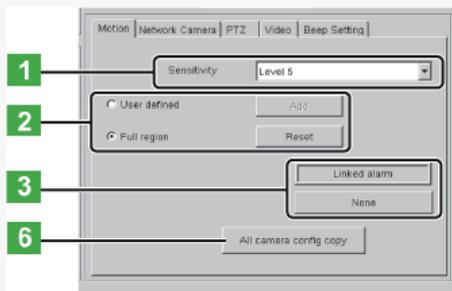## Configuring the motion sensor (Motion)

Configure the motion sensor feature that senses any motion in the target.

> In the Preview area, portions where any motion is sensed under the configured conditions will be indicated by blue rectangles.
>
> These rectangles are shown based on the sensing sensitivity and sensing area settings currently stored in the system.
>
> If you have changed any of these sensing conditions, click the [Exit] setting button to save the settings you have configured.

1 **In the [Sensitivity] setting, select the sensing sensitivity from the pull-down menu.**

The sensing sensitivity can be set in nine levels (Level 1 to 9).

Higher the sensitivity level, lower the sensing sensitivity.

2 **Using the radio buttons, specify whether to define the sensing area by yourself.**

When [User defined] is selected:

The [Add] button becomes selectable, allowing you to define the sensing area as desired.

In the preview area, click in the grid cell where you want to enable sensing.

Each time you click, the color of the selected grid cell toggles between red and blue to indicate that sensing is enable or disabled, respectively.

Click **Reset** to discard all sensing area settings.

When [Full region] is selected:

The whole screen is set as the sensing area.

The whole preview area is enclosed with a red border to indicate that full-region sensing is enabled.

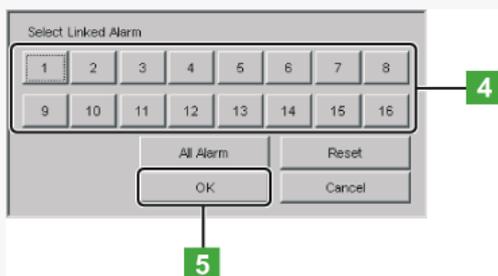Clicking **Reset** switches the screen to the [User defined] mode.

3 **In the [Linked alarm] section, click the button (labeled as None by default).**

The [Select linked alarm from camera] setting dialog box appears.

4 **Click the Alarm OUT number of each terminal that outputs an alarm signal when a motion is sensed.**

Clicking an Alarm OUT number turns On the alarm output from the corresponding terminal. You can turn On the alarm output for more than one terminal.

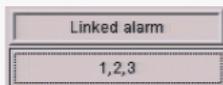Click the terminal number again to turn Off the alarm output.

All Alarm : Turns On the alarm output for all Alarm OUT numbers.

Reset	: Turns Off the alarm output for all Alarm OUT numbers.
Cancel	: Cancels all settings and closes the dialog box.

5 When finished, click OK .

The Motion setting dialog box closes. On the [Motion] tab, the button in [Linked alarm] setting now shows the settings you have configured ("None", Alarm OUT Nos. (1 to 16), or "All").

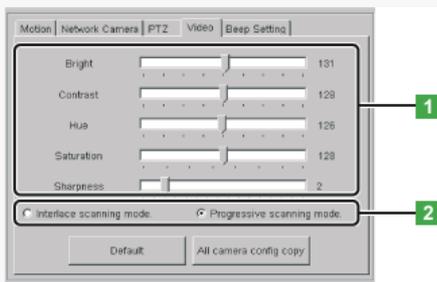In the [Linked alarm] setting, click the button again to return to the setting dialog box.

6 To configure all cameras to have the same settings, Click All camera config copy .

The system applies the settings configured on the [Motion] tab to all cameras.

(The settings, however, are not applied to network cameras.)

Configuring the video quality (Video)

Configure the quality of the video displayed on the monitor.

1 Adjust the video quality using the slider bars.

Note that this adjustment is possible when the [Camera] setting in the Camera setting table is set to "VIDEO".

Brightness: Brightness of the video

Contrast: Contrast of the video

Hue: Hue of the video

Saturation: Saturation of the video

Sharpness

2 Using the following radio buttons, select the scanning mode of live video.

Interlace scanning mode:

Fast but does not support the panning view.
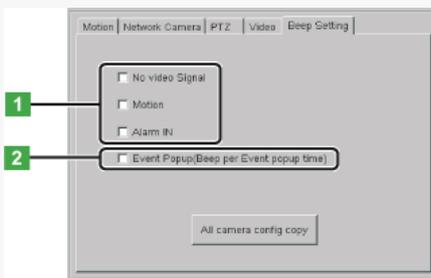
Progressive scanning mode:

More dense and supports the panning view.

Default	: Resets the settings on the tab to the defaults.
All camera config copy	: Applies the settings on the tab to all cameras.

Configuring the alarm beep (Beep Setting)

Configure the alarm beep that will be output if an event occurs.

1 Select the check box for the event type for which you want to enable the alarm beep.

The alarm beep will sound if an event of the selected type occurs. You can select more than one event type.

Setting options:

No Video Signal: Type of event that occurs when the video signal is interrupted

Motion: Type of event that occurs when any motion is sensed in the target by the motion sensor

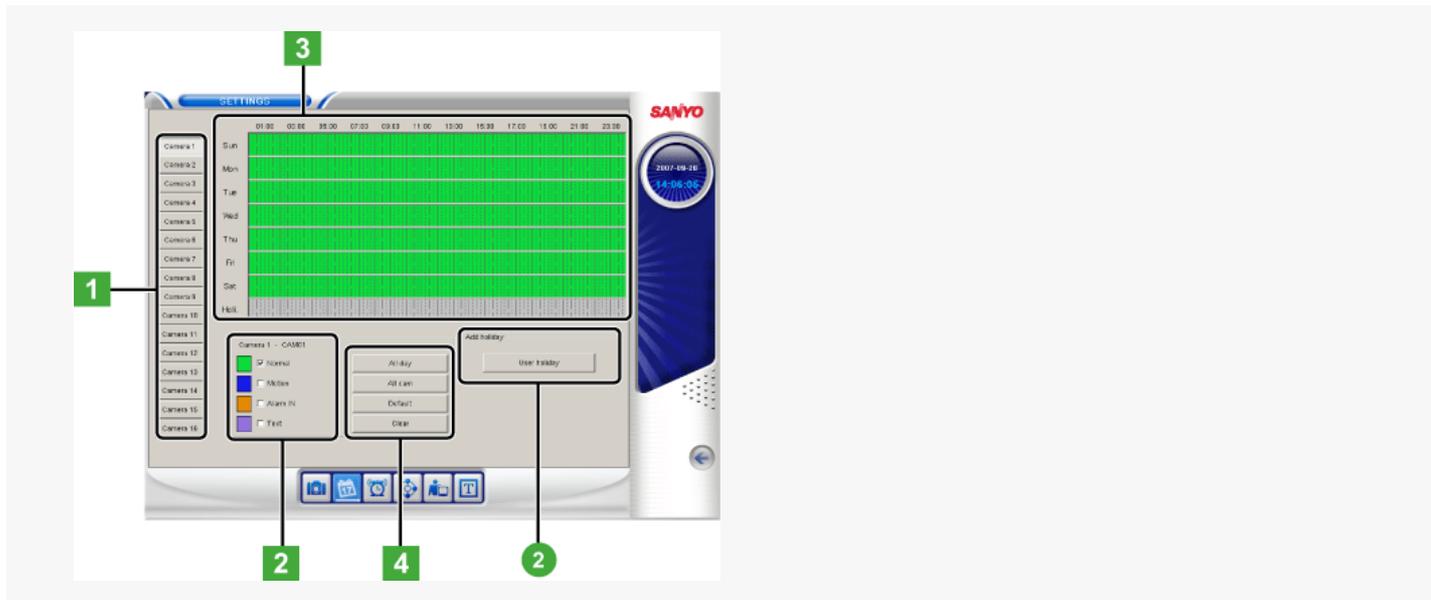Alarm IN: Type of event that occurs when an external alarm signal is input

2 Select the Event Popup check box to enable the Event Popup feature.

When the Event Popup feature is enabled, the system displays relevant event video in the single-screen mode whenever an event occurs and sounds an alarm beep.

| All camera config copy | : Applies the settings on the tab to all cameras.

Schedule Settings

Click the [Schedule] setting button to display the recording schedule settings.
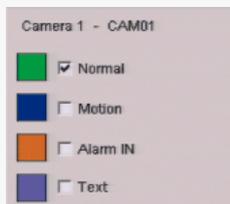

① Setting a recording schedule

You can configure a recording schedule in the following steps:
Configuring a recording schedule allows you to automatically record video as you planned.

1 Click the button for the camera (Camera 1 to Camera 16) for which you want to configure a recording schedule.

2 Select the check box for the recording mode you want to set.
Now, you can configure a recording schedule. You can select more than one recording mode.

Normal:
Records video continuously during the scheduled time period.
Motion:
Records video whenever a motion is sensed in the target by the motion sensor.
Alarm IN:
Records video whenever an alarm signal is input from an external sensor.
Text:
Records video whenever a keyword match is found in the text, if connected to a text input device such as POS or ATM.

3 In the Schedule setting area, drag on the time bar for the desired day of the week to set a recording schedule.
For each day (of the week), you can set the recording time period in increments of 15 minutes.
As you drag, the time bars are filled with a color assigned to the recording mode you selected in Step **2** .

> If you drag again over a time period in which you already set a schedule, the time bar will be overwritten to update the schedule.

Ⓐ 00:00 to 08:00: Normal recording
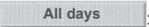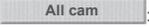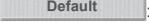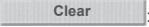Ⓑ 08:00 to 16:00: Normal/Motion/Alarm IN recording
Ⓒ 16:00 to 22:00: Motion/Alarm IN recording
Ⓓ 22:00 to 24:00: Normal/Text recording

4 Follow the same procedure (Steps **2** to **3**) to set a recording schedule for each day of the week.

To apply the same schedule for all cameras or for all days of the week, use the following buttons.

| All days |:

Applies the set recording schedule to all days of the week.

To cancel, click the button again.

| All cam |:

Applies the set recording schedule to all cameras.

To cancel, click the button again.

| Default |:

Sets Normal recording for all time periods in each day of the week.

| Clear |:

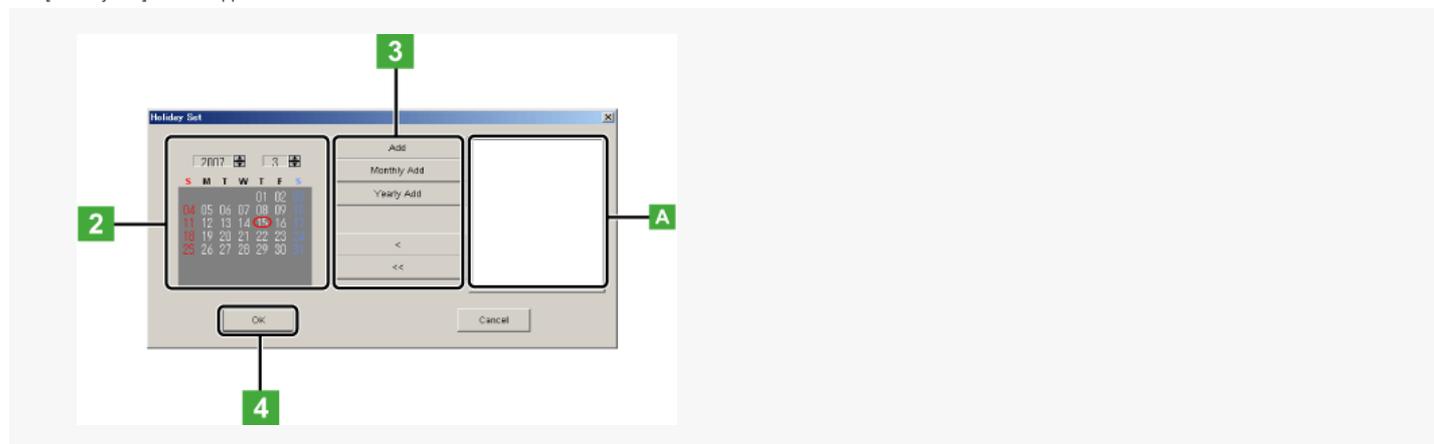Clears the set recording schedule.

> The schedule you set in the lowermost [Holiday] area applies to the holidays you defined in the next "Holiday setting" section.
>
> Without the holiday setting, the [Holiday] setting area is grayed out, preventing you from setting the holiday schedule.

2 Setting holidays

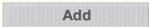You can define specific, monthly, or yearly holidays.

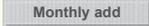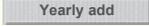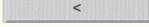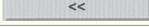**1** Click | User holiday |.

The [Holiday Set] screen appears.

2 On the calendar, select the date on which you want to set a holiday by clicking.

The selected date is highlighted.
Use the spin buttons to set the year and month of the calendar.

3 Use the following buttons to add the selected date to the holiday list A.

Use an appropriate button depending on whether you set a specific, monthly, or yearly holiday.

Button	Function	Display Example in Holiday List
Add	Adds the selected date (year-month-day) as a specific holiday.	2007-03-15
Monthly add	Adds the selected date (day) as a monthly holiday.	Monthly 15
Yearly add	Adds the selected date (month-day) as an yearly holiday.	Yearly 03-15
<	Deletes the selected holiday setting from the holiday list.	(One holiday setting deleted)
<<	Deletes all holiday settings.	(All holiday settings deleted)

4 Click | OK |.

The defined holiday settings have been saved. The dialog box closes.

> Clicking | Cancel | cancels the holiday settings and closes the dialog box.

Alarm Settings

Click the [Alarm] setting button to display the Alarm settings.

> Each Alarm IN/OUT number A shown on this screen represents the corresponding alarm input/output terminal located on the rear panel of the digital video recorder.
>
> For information on alarm input/output connections, refer to the separate digital video recorder installation manual.

Configuring the alarm inputs

On this screen, configure the camera and alarm OUT numbers linked to external alarm input.

> To record video in conjunction with alarm inputs, in addition to this setting, you need to configure a recording schedule (in the Schedule settings).

1 **Click the [Alarm IN] tab.**

The alarm IN settings appears.

For each alarm IN number, follow the next and later setting steps.

2 **In the [Alarm IN name] field, type a name for the alarm input.**

To change the default name, type a new name with a length of 22 characters or less.

3 **Click the [Linked Camera] button.**

The [Select linked camera] setting dialog box appears.

All camera :

Selects all camera numbers.

Reset :

Deselects all camera numbers.

Cancel :

Cancels the settings and closes the dialog box.

4 **Click the camera number you want to link to alarm input.**

This links the camera number to alarm input. You can select more than one camera number.

5 **Click** **OK** .

The dialog box closes. On the [Alarm IN] tab, the button next to the [Linked Camera] button now shows the setting ("None", camera No., or "All").

6 **Click the [Linked Alarm OUT] button.**

The [Select linked alarm from camera] setting dialog box appears.

All Alarm :

Selects all alarm OUT numbers.

Reset :

Deselects all alarm OUT numbers.

Cancel :

Cancels the settings and closes the dialog box.

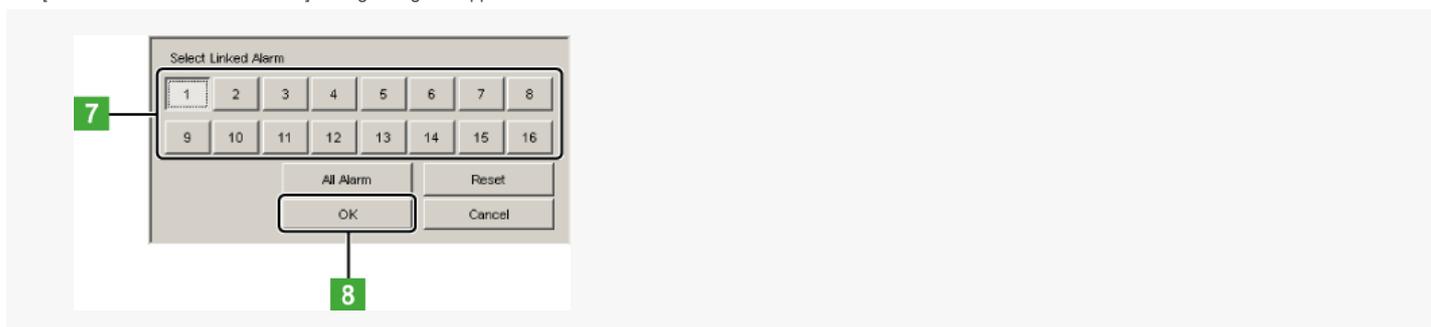**7** **Click the alarm OUT number you want to link to alarm input.**

This links the camera number to alarm input. You can select more than one camera number.

8 **Click** **OK** .

The dialog box closes. On the [Alarm IN] tab, the button next to the [Linked Alarm OUT] button now shows the setting ("None", alarm OUT No., or "All").

9 **Under [Type], click the down-arrow button for the desired alarm IN number and, from the pull-down menu, select the polarity of the alarm input signal.**

Setting options:

NO (Normal Open):

The terminal is normally open and a signal is output if closed.

NC (Normal Close):

The terminal is normally closed and a signal is output if opened.

To apply the same setting to all alarm IN numbers, under [Type], select "All" **B** from the pull-down menu.

10 **To switch the camera layout on the monitor screen in conjunction with alarm inputs, under [Layout], click the down-arrow button for the desired alarm IN number to open the pull-down menu.**

Then, select the desired layout name from the listed preset names.

11 **Follow the same procedure (Steps 2 to 10) to configure settings for all alarm IN numbers.**

12 **To link suspicion recording to alarm input, select the [Alarm IN Suspicion Record] check box.**

This allocates the alarm IN number 16 to suspicion recording.

Linked camera number:

The system automatically sets [Select linked camera] to "All".

Linked alarm OUT number:

Set this in the [Select linked alarm from camera] setting dialog box.

☑ Alarm IN Suspicion Record

Selecting the [Alarm IN Suspicion Record] causes the digital video recorder to start suspicion recording automatically whenever an alarm signal is input to the alarm input terminal 16.

Note that you cannot perform suspicion recording manually when the [Alarm IN Suspicion Record] is selected.
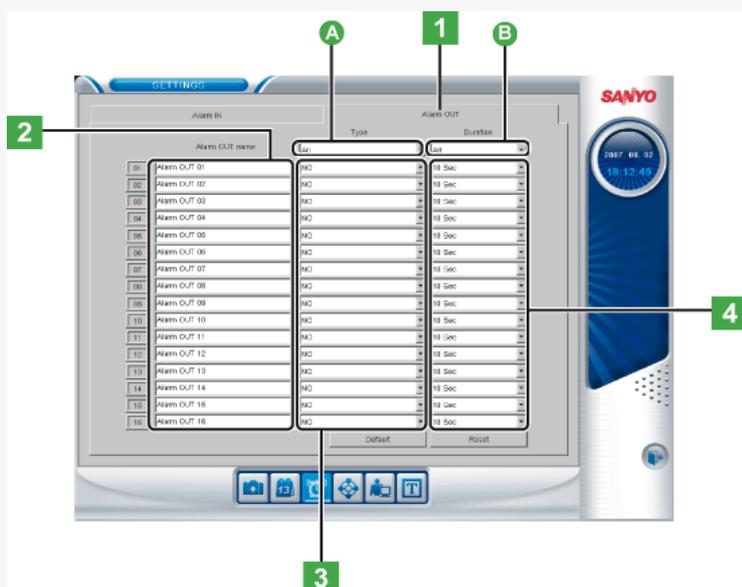
Default : Resets the all settings on the tab to the defaults.

Reset Cancels all settings on the tab and restores the previous conditions.

Configuring the alarm outputs

Configure the alarm output settings on the [Alarm OUT] tab.

1 **Click the [Alarm OUT] tab.**

The alarm OUT settings appears.

For each alarm OUT number, follow the setting steps below.

2 **In the [Alarm OUT name] field, type a name for the alarm output.**

To change the default name, type a new name with a length of 22 characters or less.

3 **Under [Type], click the down-arrow button for the desired alarm OUT number and, from the pull-down menu, select the polarity of the alarm output signal.**

Setting options:

- NO (Normal Open):
  The terminal is normally open and a signal is output if closed.
- NC (Normal Close):
  The terminal is normally closed and a signal is output if opened.

> To apply the same setting to all alarm OUT numbers, under [Type], select "All" **A** from the pull-down menu.

4 **Under [Duration], click the down-arrow button for the desired alarm OUT number and, from the pull-down menu, select the duration of the alarm output signal.**

Setting options:

- 1 TIME: Alarm signal is output once.
- 5 Sec to 10 Min: Specify the alarm output time as a numeric value.
- Continue: Alarm output continues until stopped.

> To apply the same setting to all alarm OUT numbers, under [Duration], select "All" **B** from the pull-down menu.

5 **Follow the same procedure (Steps 2 to 4) to configure settings for all alarm OUT numbers.**

- Default : Resets the all settings on the tab to the defaults.
- Reset Cancels all settings on the tab and restores the previous conditions.
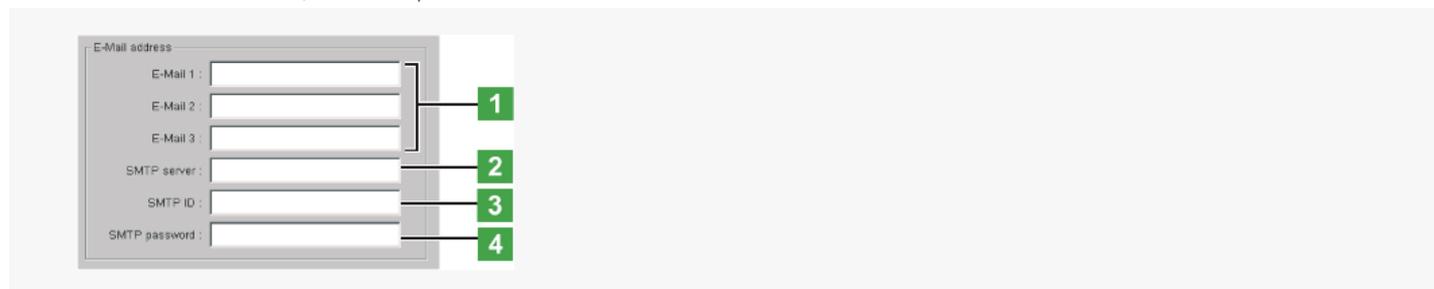
Communication Settings

Click the [Communication] setting button to display the Communication settings.
You can set the destination of alarm-notification E-mails via the network.

Setting the destination of alarm-notification E-mails

To send the alarm-notification E-mail, follow the steps below.

1 **In each [E-Mail] field, type the address to which you want to send an E-mail if an alarm occurs.**
You can enter up to three E-mail addresses.

2 **In the [SMTP server] field, type the domain name or IP address of the SMTP server.**

3 **In the [SMTP ID] field, type an authentification ID as needed.**

4 **In the [SMTP PASSWORD] field, type an authentification password as needed.**
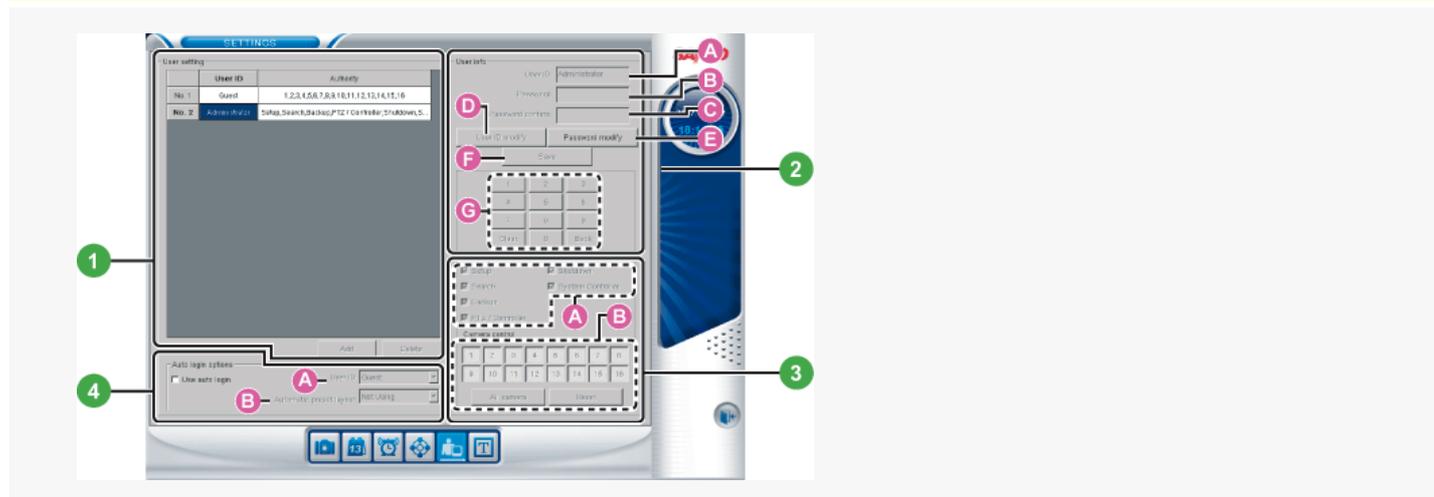
User/Password Settings

Click the [User/Password] setting button to display the User/Password settings.
You can change the user name, password, and operating authority of each registered user.

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Only "Administrator" users can perform this setting.

> You cannot register new users or delete registered users via the network.

User/Password settings screen components and their functions

1 User list (User Setting)

The name and operating authorities of each registered user are listed.

> By default, "Guest" and "Administrator" are listed.
> You cannot use Add (the button to register new users) and Delete (the button to delete registered users).

2 User information input area (User Info)

Type the user name and password.

- **A** User ID: Type (or view) the name of the user.
- **B** Password/New password: Type the password for the user.
- **C** Password confirm: Type the password for confirmation.
- **D** User ID modify : You can modify the user name.
- **E** Password modify : Click this to switch the [Password] box for password modification.
- **F** Save : Click this to save the user name and password and register the user to the user list.
- **G** Numeric keypad: Use these buttons for password entry.
  - Close : Clears all characters in the input field.
  - Back : Clears the last character in the input field.

3 Operating authority setting (Authority)

You can change the operating authority of each registered user.

- **A** Authority
  Select the check box for each operating authority you want to grant to the user.
- **B** Camera control
  Specify the camera number of the camera for which you want to grant the user the operating authority on the LIVE screen.

4 Auto login setting (Auto login options)

Use the Auto Login feature to allow the user to automatically log into the system when the system starts up, without prompting for password entry.
To enable this feature, select the [Use auto login] check box and configure the following settings.

- **A** User ID:
  Select the login user name.
- **B** Automatic preset layout:
  To allow the user to use preset camera layouts on the first screen after login, select one of the preset names from the pull-down menu
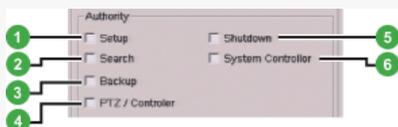
Changing the operating authority

The changed operating authorities are shown real-time in the user list.

> You cannot change the operating authorities of "Administrator".

1 In the user list (in the [User Setting] section), click the user whose operating authorities you want to change.

2 In the [Authority] section, select the check box for each operating authority you want to grant the user.

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① Setup: Operation on the SETTINGS screen

② Search: Operation on the SEARCH screen

③ Backup: Operation on the MANUALLY BACKUP screen

④ PTZ/Controller: Remote operation of a PTZ camera

⑤ Shutdown: System shutdown

⑥ System Controller: System controller operation

Only "Administrator" can have the operating authority for the [User/Password] and [Go to Shell] buttons. You cannot grant this operating authority to other users.

3 In the [Camera control] section, use the number buttons to specify the camera for which you want to grant the user the operating authority on the LIVE screen.

All camera :
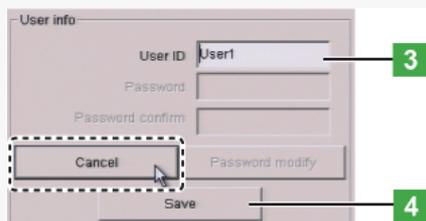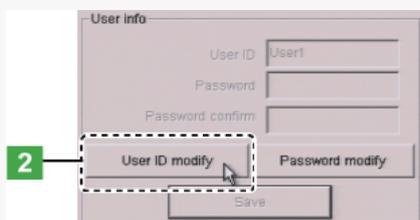Sets the selected operating authorities to all cameras.

Reset :
Resets the operating authorities set for all cameras.

Changing the user name

1 In the user list (in the [User Setting] section), select the user whose name you want to change.

2 In the [User Info] section, Click **User ID modify** .
In the [User ID] field, the name of the current user appears and the label of the [User ID modify] button changes to [Cancel].

3 In the [User ID] field, type a new name for the user.

4 Click **Save** .
The user name has been changed. The new user name is now listed in the user list.
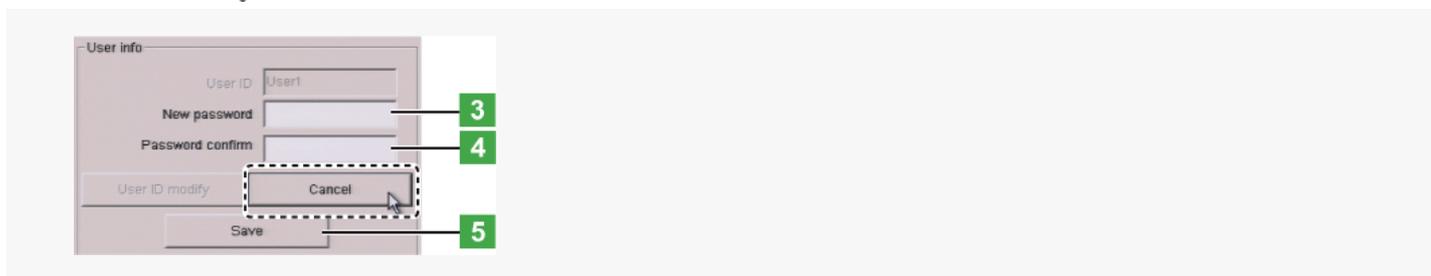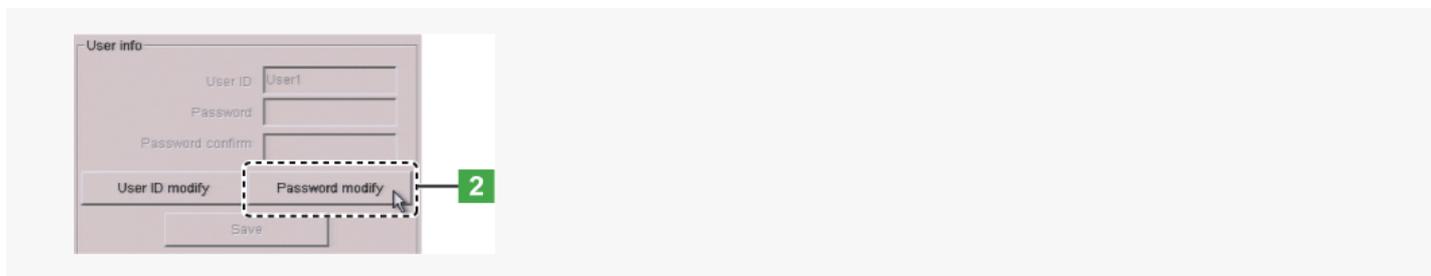
You cannot change the default user name, "Administrator".

Changing the password

1 In the user list (in the [User Setting] section), select the user whose name you want to change.

2 In the [User Info] section, Click **Password modify** .
The [New password] and [Password confirm] fields are enabled and the label of the [Password modify] button changes to [Cancel].

3 | **In the [New password] field, type a new password using the numeric keypad.**

Enter a new password with a length of up to 20 characters.

4 | **In the [Password confirm] field, type the password for confirmation using the numeric keypad.**

Re-enter the password you entered in Step **3** .

5 | **Click** Save **.**
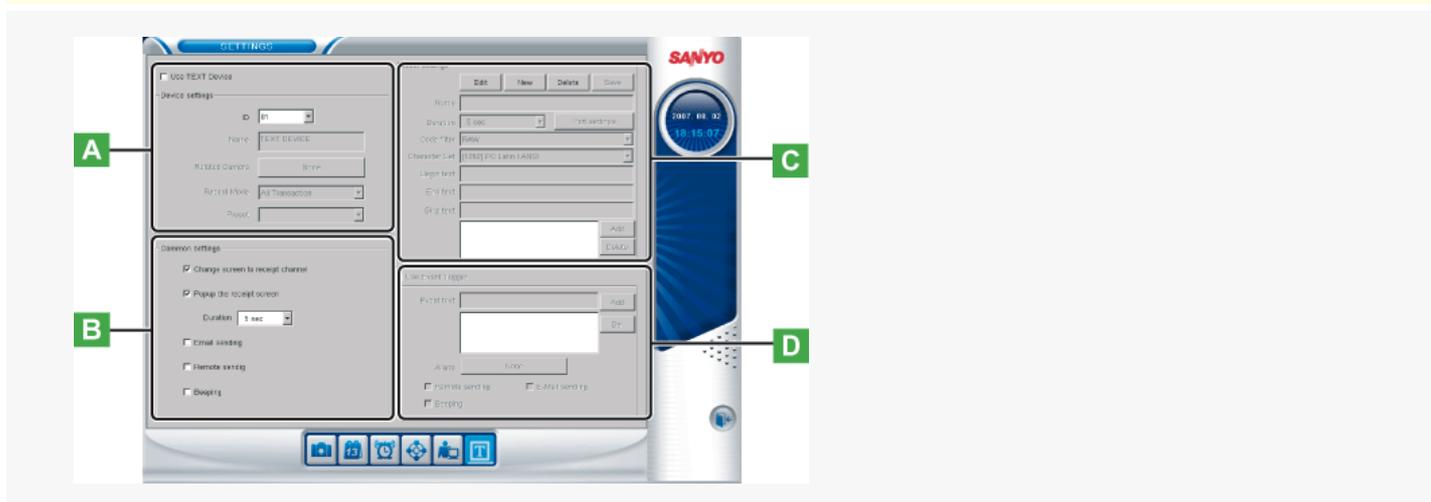
The password has been changed.

Text Settings

Click the [Text] setting button to display the Text settings.

On this screen, you can configure settings used, when the digital video recorder is connected to a text input device such as a POS or ATM, to record text information from receipts or payment vouchers together with monitoring video, so that various alarm features can be used when a specific keyword(s) is detected in the text.

> To connect the digital video recorder to a POS, use a serial cable via a serial distribution amplifier.

A Configuring the basic settings of text input devices (Device settings)

These are the settings for both the connected text input device and the camera that works in conjunction with that text input device.

> Before you configure the following settings, you need to preset the text input device (in the [Preset settings] section **C**).

1 **Select the [Use TEXT Device] check box.**

Now, you can enter device settings.

2 **Assign an ID number (01 to 16) to the text input device by selecting from the pull-down menu.**
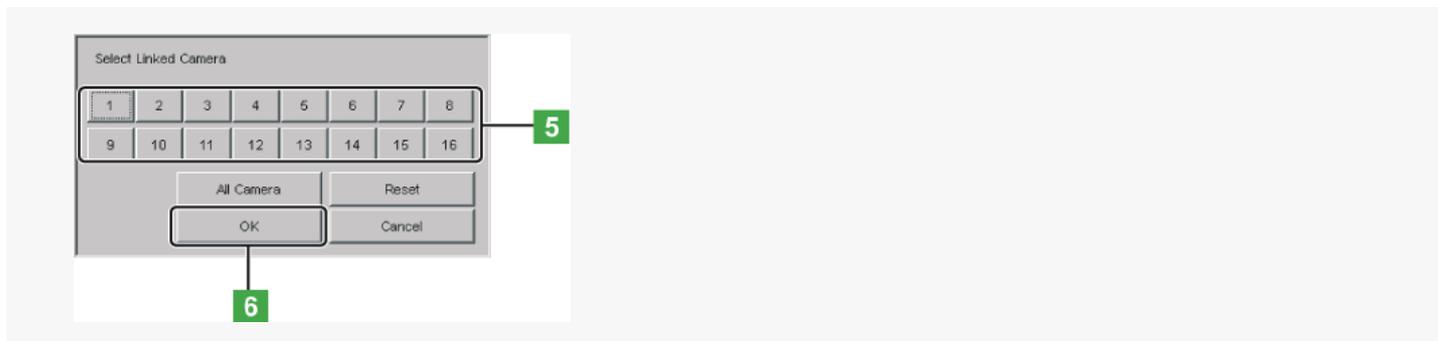
3 **Type a name for the text input device.**

4 **In the [Related Camera] setting, click the button (labeled as "None", by default).**

The [Select linked camera] setting dialog box appears.

Select the camera that works in conjunction with the text input device during Text recording.

You can select more than one camera.

All camera :

Selects all camera numbers.

Reset :

Deselects all camera numbers.

Cancel :

Cancels the settings and closes the dialog box.

5 **Click the camera number you want to link to the text input device.**

This links the camera number to alarm input. You can select more than one camera number.

6 **Click** **OK** **.**

The dialog box closes. The button in the [Related Camera] setting now shows the setting ("None," camera No., or "All").

7 **In the [Record Mode] setting, select the recording mode of the digital video recorder.**

Setting options:

All Transaction:

Records text information included in all receipts.

Event Trigger Text:

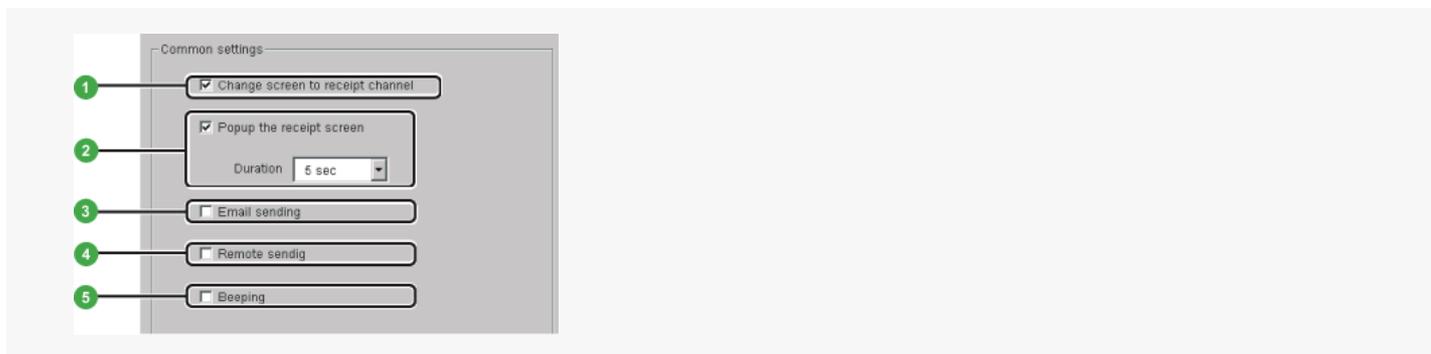Records text information only if event text is detected in receipts.

8 **In the [Preset] setting, select the preset name of the text input device from the pull-down menu.**

The pull-down menu shows the preset name of each text input device you set in [Preset settings].

B **Configuring the system behaviors when issuing a receipt (Common settings)**

Specify the system behaviors when a receipt is issued by selecting or deselecting the check box for each behavior.

Change screen to receipt channel

Select this check box to enable the on-screen display of text information included in each receipt.

Popup the receipt screen

Select this check box to enable the on-screen display of text information included each receipt in a single-screen layout.
After selecting this check box, specify how long the text information is displayed in the [Duration] setting.

Email sending

Select this check box to enable the transmission of text information included in each receipt via E-mail.

You can specify the destination address(es) of this E-mail in the [E-Mail address] field(s) in the Communication settings.
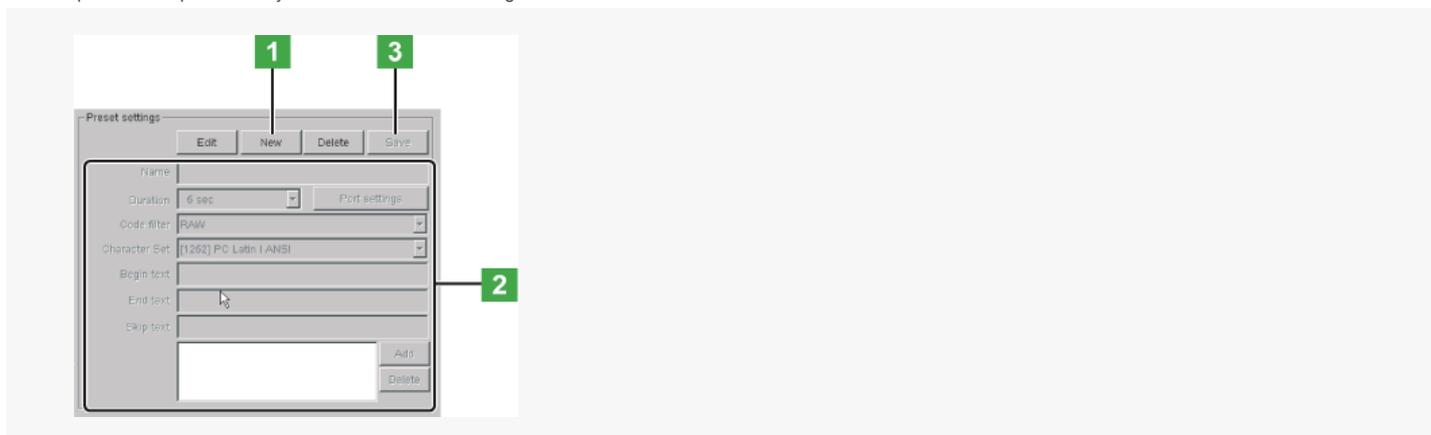
Remote sending

Select this check box to enable the transmission of text information included in each receipt to networked personal computers.

Beeping

Select this check box to enable the beeping of the alarm buzzer when each receipt is issued.

C Presetting a text input device (Preset settings)

You can preset text input devices you want to connect to the digital video recorder.

Registering preset positions

1 Click New .
Now, you can enter device settings. Notice that the label of the New button is now Cancel .

2 Configure each of the following settings.

Name

Type a preset name for the text input device.
The set preset name will be listed in the pull-down menu of the [Preset] setting in Device settings.

Duration

Select the time period (3 to 60 seconds) before each receipt is printed.

Code filter

Select the communication protocol used for transmission from the text input device to the digital video recorder.

Character Set

Select the character code transmitted from the text input device to the digital video recorder.

Begin text

The printing of a receipt begins when this text is detected.
You can specify a single text string only.

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6 End text

The printing of a receipt ends when this text is detected.

You can specify a single text string only.

7 Skip text

The printing of a receipt is skipped when this text is detected.

You can specify two or more text strings.

Type the desired text string in the upper box and Click [Add] . Then, the text string is listed in order in the lower box.

To delete a text string, select it in the lower box and Click [Delete] .

8 Port settings

In the Text settings, Click [Port settings] and configure the port settings in the following dialog box.

> Configure the port to match the text input device's current communication settings. If the settings are inconsistent, text information will not be correctly displayed.

Baud rate

Data bit

Parity

Stop bit

Flow control

When finished, Click [OK] to close the dialog box.

3 Click [Save] .

The text input device has been preset. The preset name will be listed in the pull-down menu of the [Preset] setting in Device settings.

Modifying a registered DVR server setting

1 In the Device settings, select the preset name from the pull-down menu of the [Preset] setting.

2 Click [Edit] .

Now, you can enter device settings.

3 Modify the preset settings.

4 Click [Save] .

The preset device settings for the device have been modified.

Deleting a registered DVR server

1 In the Device settings, select the preset name in the [Preset] setting.

2 Click [Delete] .

The deletion confirmation dialog box opens.

3 Click [OK] .

The preset name disappears from the pull-down menu of the [Preset] setting in Device settings.

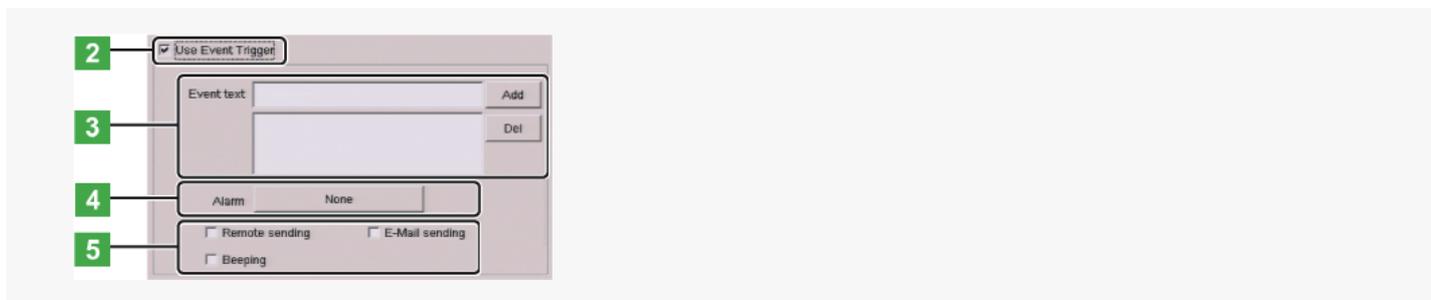## D Configuring the event trigger text (Use Event Trigger)

You can configure the alarm trigger so that an alarm event is raised when a specific keyword(s) is detected in the text.

1 Select the [Use TEXT Device] check box.

The [Use Event Trigger] check box is now selectable.

2 Select the [Use Event Trigger] check box.

Now, you can enter device settings.

3 In the [Event text] setting, type an event trigger keyword in the upper box.

You can specify two or more keywords.

When finished, Click Add . Then, the text is listed in order in the lower box.

To delete a keyword, select it in the lower box and Click Del .

4 In the [Alarm] section, click the button (labeled as None by default).

The [Select linked alarm from camera] setting dialog box appears.

In this dialog box, select the alarm OUT number of the terminal, from which you want to output an alarm signal when the event trigger keyword(s) is detected.

You can select more than one camera.

All Alarm :

Selects all alarm OUT numbers.

Reset :

Deselects all alarm OUT numbers.

OK :

Saves the settings and closes the dialog box.

Cancel :

Cancels the settings and closes the dialog box.

When finished, Click OK .

The dialog box closes. The button in the [Alarm] setting now shows the setting ("None," alarm OUT No., or "All").

5 Configure other linked operation

Configure other actions you want to trigger if event trigger text is detected.

Select the check box for each action you want to trigger. You can select more than one action.

Remote sending:

Select this check box to enable the transmission of text information included in each receipt on which event text is detected to networked personal computers.

Email sending:

Select this check box to enable the transmission of text information included in each receipt on which event text is detected via E-mail.

Beeping:

Select this check box to enable the beeping of the alarm buzzer when event text is detected.

You can specify the destination address(es) of this E-mail in the [E-Mail address] field(s) in the Communication settings.

To record monitoring video using event text as the alarm trigger, you need to set a Text recording schedule in Schedule settings.

Performing a Text search on the SEARCH screen allows you to search for specific video and text by using keywords from among the data recorded in Text recording.

Using the Web Browser (Operation)

Operating Environment

You can use the Web browser (Internet Explorer) installed on your personal computer to operate the digital video recorder from a remote location.
To do so, you must meet the following operating requirements:

- Operating system: Windows XP
- CPU: Pentium 4 (3.0 GHz or higher processor)
- Memory: 512 Mbytes or more
- Video Card: 102×768 (32Bit, Color)
- Monitor: 1280×1024
- LAN Card: 10/100Mbps, Ethernet
- Hard disk drive: 10 Gbytes
- DirectX version: 8.1 or higher
- Web browser: Internet Explorer Ver.6.0 or later

Connecting Your Computer to the Digital Video Recorder

You can connect your computer to the digital video recorder in the following steps.

1 **Start Internet Explorer.**

2 **In the address bar of the Internet Explorer, type the URL of the digital video recorder and press the Enter key.**
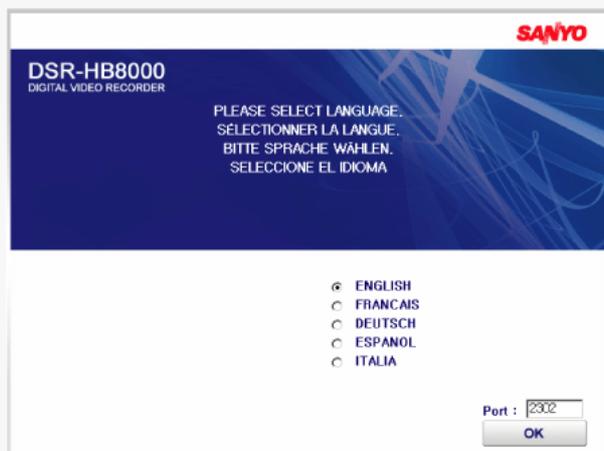Following "http://", type the IP address you set on the digital video recorder.
When your computer has been connected to the digital video recorder, the initial screen appears, where you can select the language you want to use.

(The above is an example of entering the address "192.168.0.105.")

3 **Click the radio button corresponding to the preferred language.**

Language options: English, French, German, Spanish, Italian

4 **Type the port number of the digital video recorder and click** OK **.**
Type the port number you set on the digital video recorder in the [Video/Audio] setting in the [Port] section of the Communication Settings (Default setting: 2302).
The [Login] screen appears.

> To operate the digital video recorder from Internet Explorer, you need to install the "ActiveX control" on your computer.
> If this is the first connection attempt, install the "ActiveX control" in advance according to the instructions that appear on the screen.

5 **Select your user name from the pull-down menu of the [User ID] setting, type a valid password in [Password] field, and Click** OK **.**
Once you have logged into the system successfully, the Live screen for the specified digital video recorder appears.

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You cannot connect to any digital video recorder on which the SETTINGS screen is displayed.

Moreover, if any operation is performed on the SETTINGS screen, the digital video recorder will be disconnected immediately.
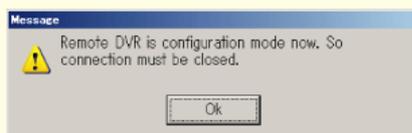

If the screen after login shows the message "Press SPACEBAR or ENTER to active and use this control", click on the screen.
Then, the control is activated and the message disappears.

Installing the ActiveX Control

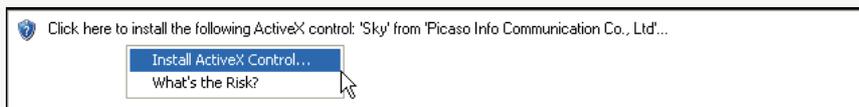Follow the steps below to install the ActiveX control.

1 **Read the message presented in the Information Bar A .**

After reading the message, click **OK** to close the warning dialog box B .
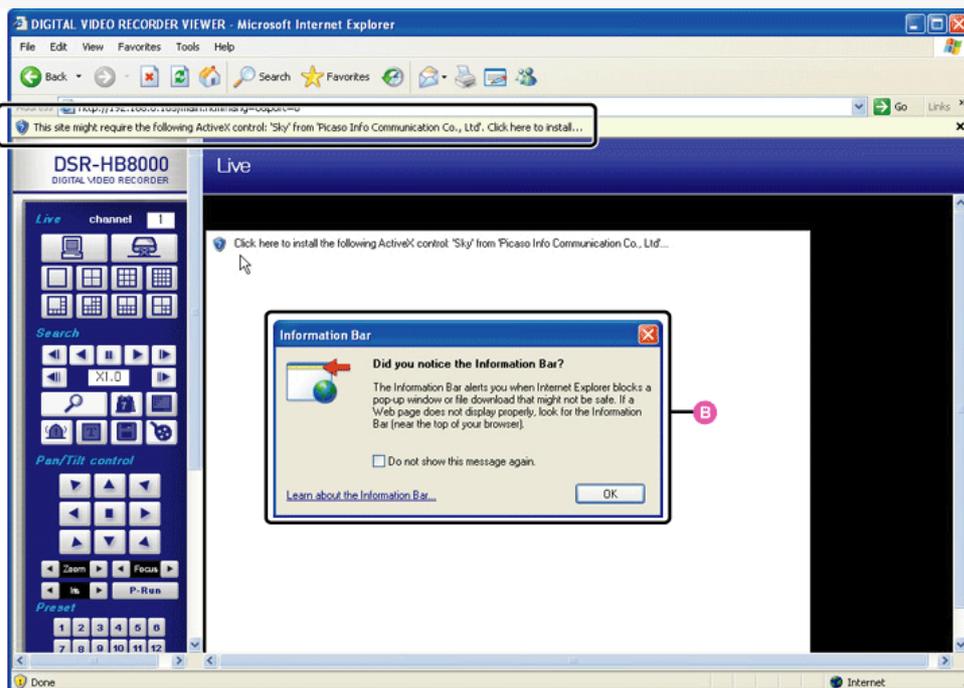
2 **Click the Information Bar and, in the context menu, select [Install ActiveX Control...].**

The installation confirmation dialog box opens.

3 Click **Install** .

This launches the ActiveX control installation process.

If Windows XP's built-in firewall feature or a third-party's firewall software is installed on your computer, the DVR Utility cannot operate normally because it cannot communicate with the digital video recorder.

To use the DVR Utility, be sure to disable the firewall settings.

Note that, in Windows XP SP2, the firewall feature is installed by default.

Therefore, when you start Internet Explorer and attempt to establish a connection to the digital video recorder, a confirmation dialog box opens, asking you whether or not to unblock the software. At this time, select [Unblock].

This instructs the Windows Firewall to unblock the DVR Utility, enabling your computer to communicate with the digital video recorder.

## Operation Screen Components and their Functions
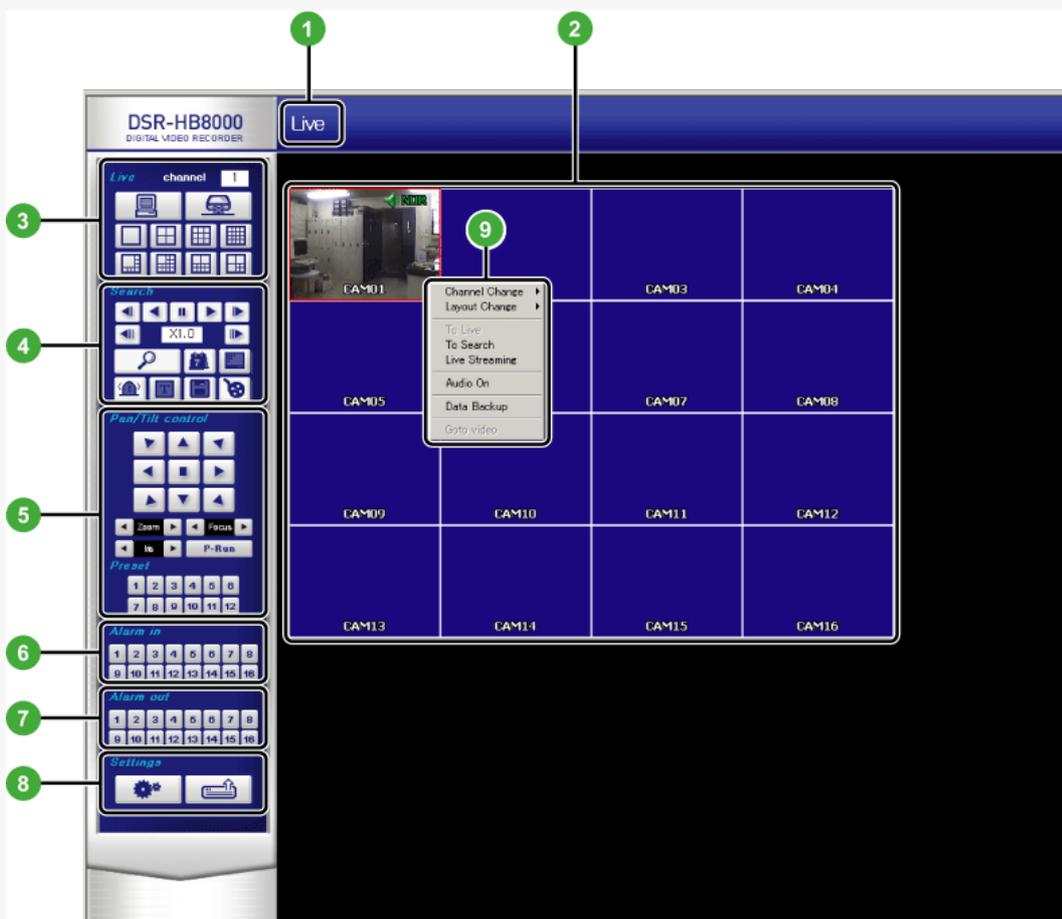
1 Screen title

The displayed screen title varies depending on the operation mode.
By default, the screen title after login is "Live".
Displayed title: Live, Search, PTZ, or Settings

2 Video display area

The live or playback video of the camera connected to the digital video recorder is displayed here.
Each video is displayed with the following information.
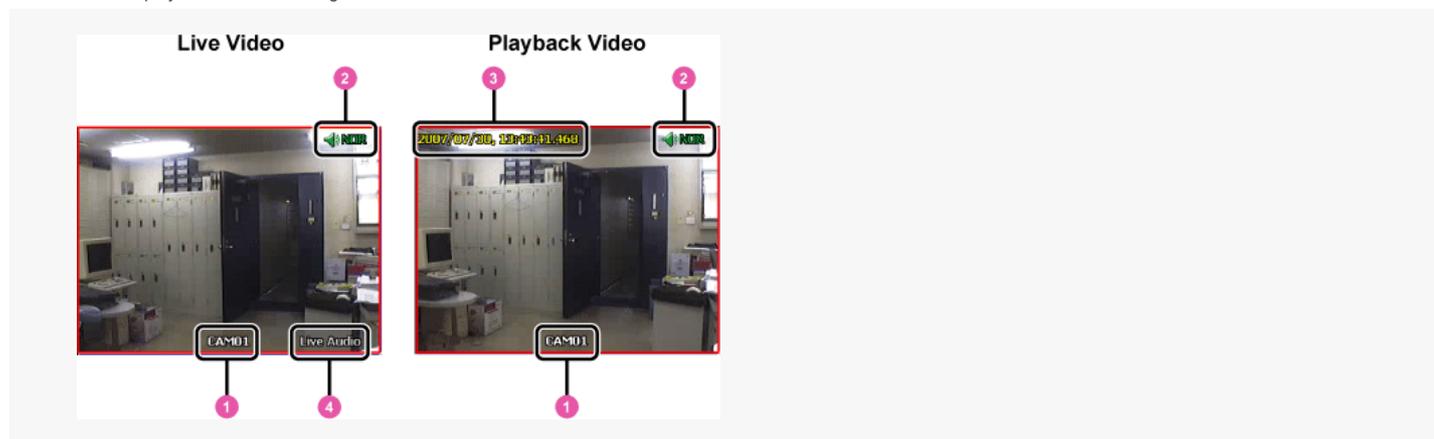
① Camera title

This is the camera title you configured in the [Camera Title] setting in the Camera settings, which can be accessed from the SETTINGS screen.

Default setting: CAM01 to CAM16

② Recording mode

Live video is shown with the recording mode currently in use.
For playback video, however, the recording mode of the video currently being played back is shown.

NOR: Normal recording.

MOT: Motion recording.

ALM: Alarm IN recording

TXT: Text recording

SUSP: Suspicion recording (shown only with live video)

M/AL: Simultaneous Motion/Alarm IN recording.

M/T: Simultaneous Motion/Text recording.

AL/T: Simultaneous Alarm IN/Text recording.

M/AL/T: Simultaneous Motion/Alarm IN/Text recording.

🔊 : Audio recording

The "NOR" (Normal recording) indicator is not shown when the normal recording is performed simultaneously with the Motion, Alarm IN, or Text recording.

To set the Normal, Motion, Alarm IN, or Text recording mode, access the Schedule settings from the SETTINGS screen.

To set the Pre-alarm recording mode, configure the [Pre] setting in the Camera settings accessible from the SETTINGS screen.

To set the Audio recording mode, configure the [Audio] setting in the Camera settings accessible from the SETTINGS screen.

Audio recording is not possible if the [Duration] setting in the Camera settings accessible from the SETTINGS screen is "3 Sec" or less.

"SUSP" indicating suspicion recording appears only when you are monitoring live video.
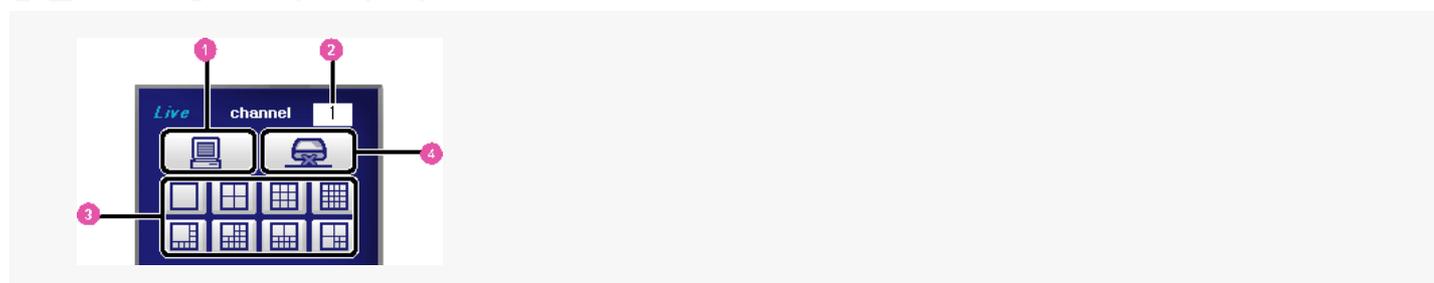When playing back video recorded in the suspicion recording mode, "Normal" indicating normal recording is shown.

③ Recording date and time

Shown with playback video.

④ Audio output (Live Audio)

When the audio output for live video is set to ON, "Live Audio" appears.

③ Monitoring control panel (Live)

① Live button

Click this button to display the Live screen.

② Channel indication

Shows the camera number of the camera being selected.
The video from the camera being selected is shown in a red rectangle.

③ Screen Layout buttons

Eight screen layouts are available.
→Refer for details.

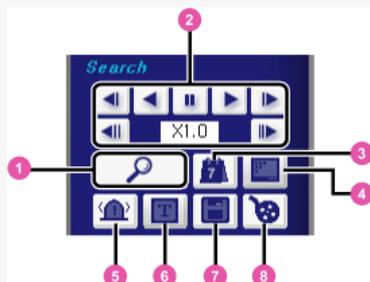#### ❹ Disconnect button

Clicking this button causes the disconnection confirmation dialog box to appear.

Click OK to disconnect your computer from the digital video recorder, with the operation screen closed.

Microsoft Internet Explorer

❓ Do you want to disconnect?

OK   Cancel

④ Search/Playback control panel (Search)

① Search button

Use this button to display the [Search] screen.

② Playback buttons

Use this panel to perform playback operations including fast-forward and frame-forward.
The selected playback speed appears in the playback speed box at the right end.

③ Calendar display button

Use this button to display the calendar, on which you can select the recording date of the video you want to play back.
(This button is available on the SEARCH screen only.)

④ Map display button

Use this button to display, in the [Time Bar Search] window, the recording information for the date you specified on the calendar as a data map.
(This button is available on the SEARCH screen only.)

⑤ Alarm Log Search button

Use this button to switch to the [Alarm Log Search] screen.
Uses the alarm logs listed by event to search and play back recorded video.
➔Refer for details.

⑥ Text Search button

Use this button to switch to the [Text Search] screen.
On the [Text Search] screen, use keywords to search for video images in text data recorded by a POS or ATM.
➔Refer for details.

⑦ Copy button

Use this button to save the still image of the video being played back.
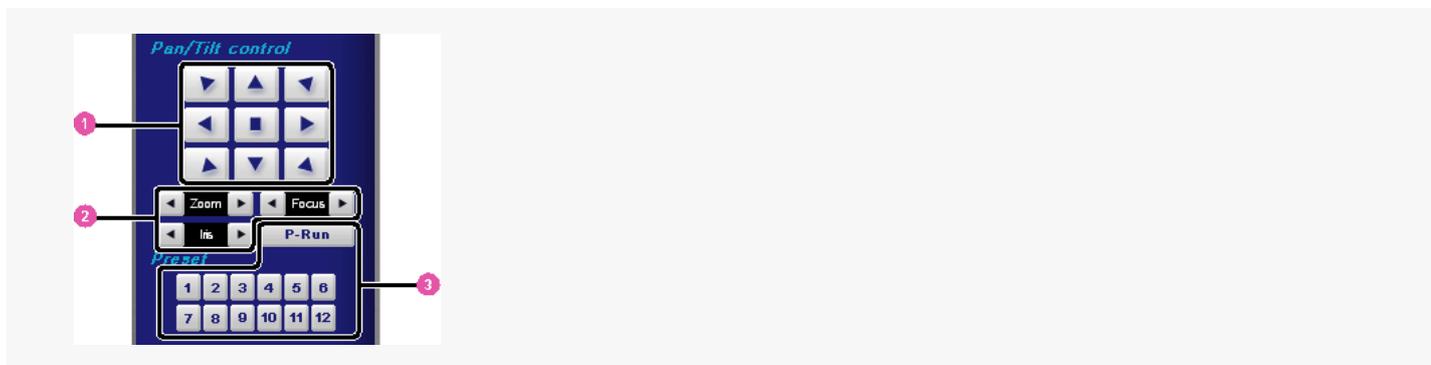➔Refer for details.

⑧ Data Backup button

On the screen, you can save video data recorded with the digital video recorder to your personal computer or a removable disk.
➔Refer for details.

⑤ PTZ control panel (Pan/Tilt control and Preset)

On this screen, you can remote-control a PTZ camera from your personal computer.
➔Refer for details.

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Use this button to adjust the orientation of the camera.
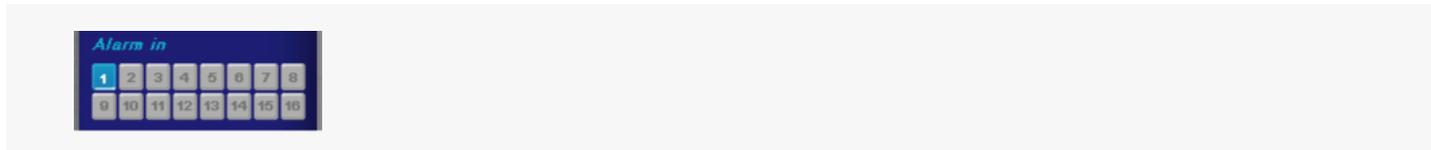
② Zoom/Focus/Iris adjustment button

Use these buttons to adjust the zoom, focus, and iris settings.

③ Preset buttons

Use these buttons to set the camera orientation to a registered preset position.
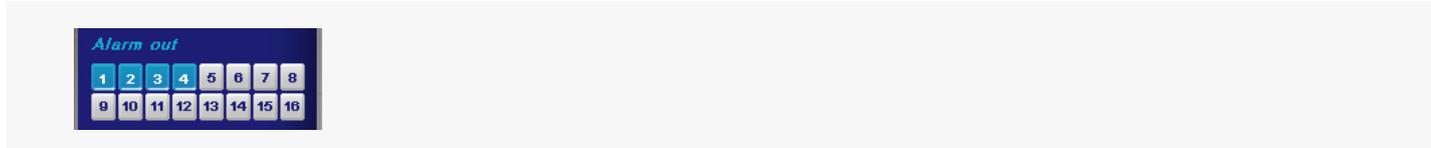
⑥ Alarm input channel indication panel (Alarm in)

The channel shown blue shows the channel in which an alarm has occurred.

⑦ Alarm output channel indication panel (Alarm out)

Use these buttons to select the channel of the digital video recorder from which you want to output alarm signals. You can select more than one channel.
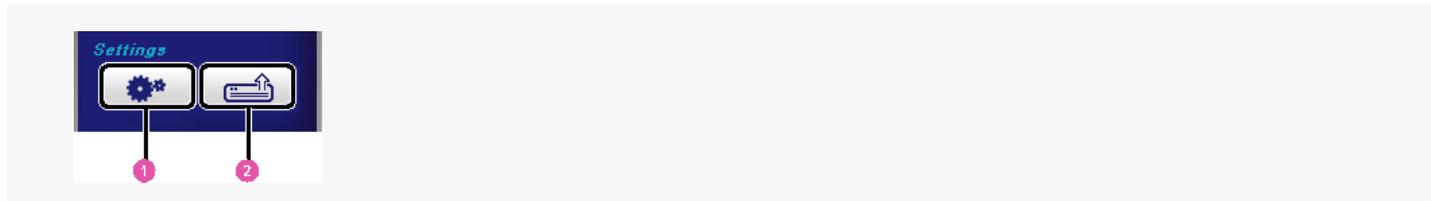
> This setting is linked to the Alarm OUT settings on the Camera Information panel on the digital video recorder.

⑧ Settings control panel (Settings)

It is used to configure the detailed settings of the digital video recorder.
→Refer for details.

① Setting button

Use this button to display the Settings screen.

② Upload button

Use this button to upload the settings configured on the Settings screen to the digital video recorder.

⑨ Context menu

Right-clicking a video image invokes the context menu, presenting a list of operation commands available at that time.
These operation commands (excluding the [Data Backup] and [Layout Change] commands) are available only for the right-clicked screen.
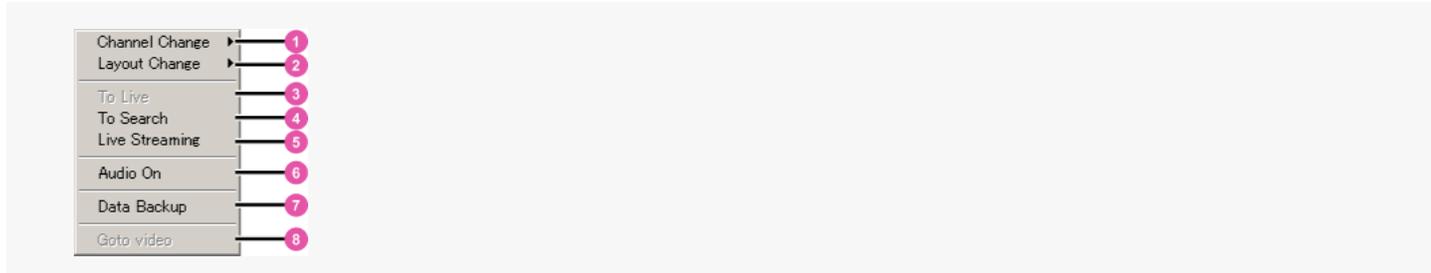
① Channel Change

Allows you to change the video image displayed on the clicked screen using the pull-down menu.

② Layout Change

Eight screen layouts are available.

③ To Live

Switches the mode of the screen showing the image you clicked from the playback to live video mode.

④ To Search

Switches the mode of the screen showing the image you clicked from the live to playback video mode.
To display playback video, select the date on the calendar and specify the playback start point on the time bar display
➜Refer for details.

⑤ Live Streaming

Allows you to receive the live video data in real-time, with the streaming image displayed in a separate window.
➜Refer for details.

⑥ Audio On

Turns On/Off the audio output of live video.
Turning On the audio output (a check mark appears) causes the message "Live Audio" to appear at the lower right of the screen.

⑦ Data Backup

Displays the [Data backup] screen.
On the screen, you can save video data recorded with the digital video recorder to your personal computer or a removable disk.
➜Refer for details.

⑧ Go to video

Allows you to specify the playback start point as time during playback.

Viewing live video

Click the Live button. Then, the screen switches to the Live screen with the screen title "Live".
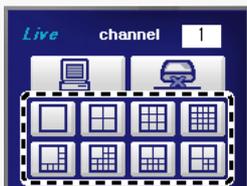The initial Live screen after login appears in the 16-screen layout.

Screen layout

Use the eight Screen Layout buttons to choose the desired screen layout.
Then, the screens appear in the order of camera numbers in the selected screen layout.

You may also select the screen layout from the context menu.

|	
Single-screen	Quad-screen (2 × 2)
9-screen (3 × 3)	16-screen (4 × 4)
8-screen (Main 1 + Sub 7)	13-screen (Main 1 + Sub 12)
10-screen (Main 2 + Sub 8)	7-screen (Main 3 + Sub 4)

Switching the camera images in a selected screen layout

You can switch the video images displayed in the currently selected screen layout in the order of camera numbers by repeatedly clicking the same Screen Layout button.

Example of switching in the single-screen layout
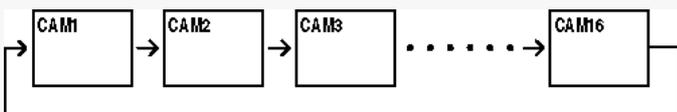
Example of switching in the quad-screen layout
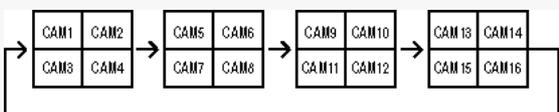
## Switching the screen layout by double-clicking the screen

Double-clicking on a screen image to switch between the single-screen and split-screen layouts.

Double-clicking an image in a split-screen layout:

The double-clicked image appears in the single-screen layout.

Double-clicking an image in the single-screen layout:

The screen returns to the previously selected split-screen layout.
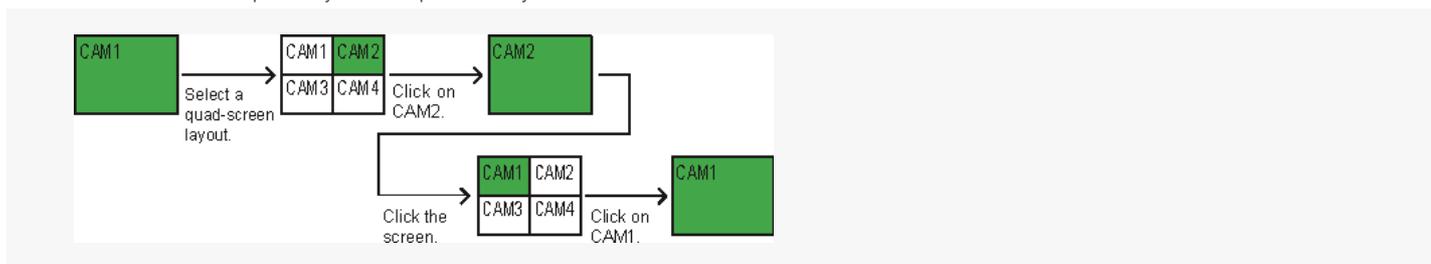
Specifying the video image to be displayed on the screen

Right-click on the screen and, in the [Channel Change] pull-down menu, select the desired camera number.

Then, the video for the specified camera number appears on the right-clicked screen.

If you have selected a split-screen layout, you can display duplicated video images from the same camera using the [Channel Change] command.

Displaying streaming video

Allows you to receive the live video data in real-time, with the streaming image displayed in a separate window.

1 **Right-click the desired video image and, in the context menu, click [Live Streaming].**

Streaming video appears in the [MPEG-4 Live Streaming] window.

2 **Select the size of streaming video.**

Setting options:

Small: 160×120

Normal: 320×240

Large: 640×480

3 **Click** Close .

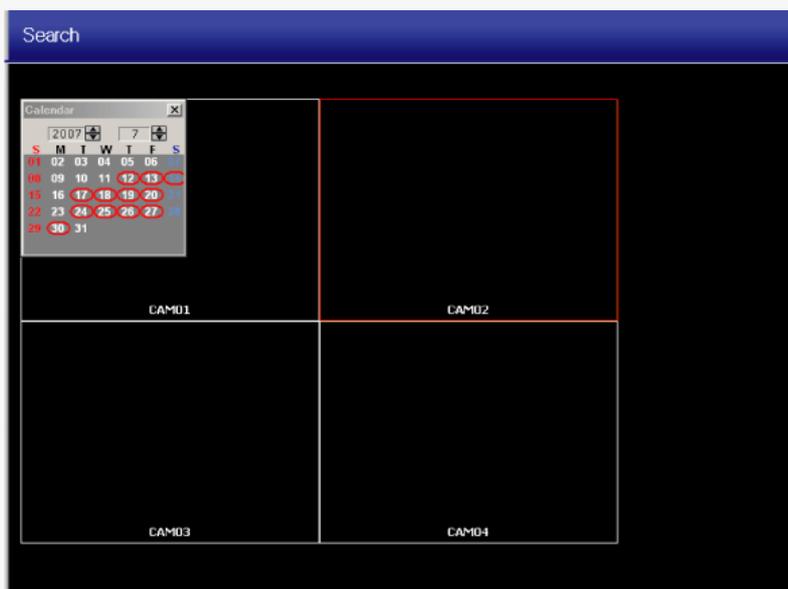The window showing streaming video closes.

> Streaming video can also be displayed on the [Search] screen

Playing Back Recorded Video

Follow the steps below to play back the video recorded with the digital video recorder.

1 **Click the Search button.**

The screen changes to the Search screen and the [Calendar] window opens.

2 **Select the video you want to play back by clicking the desired day on the calendar.**

A red circle indicates the day with recorded data.

For all channels, the recording information for the selected date is displayed in the [Time Bar Search] window.

Day with recorded video data: Indicated by a red circle.

Day currently selected: Indicated by a blue circle.

> Depending on your network environment or the data volume, it may take several minutes until recording information appears in the [Time Bar Search] window.

3 **Click in the window or drag the cursor line to determine the playback start point and Click** ▢ Open ▢ .
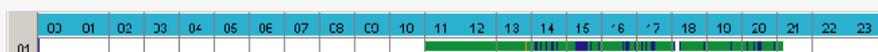
The [Time Bar Search] window closes and the still image of the selected playback start point appears in the video display area.

1 Time scale

Clicking the blue hour indication area sequentially changes the time scale as shown below.

24-hour display (1 hour × 24 graduations)

12-hour display (1 hour × 12 graduations)

6-hour display (30 minutes × 12 graduations)

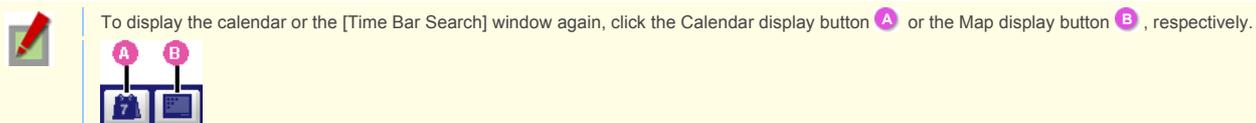3-hour display (30 minutes × 6 graduations)

2 Time bars: Shows recording information on each channel in the color defined for each recording mode.

3 Slider bar: Allows you to scroll the day indication above time bars forward and backward.

4 Cursor line: Shows the position of the playback point.

5 Open : Closes the [Time Bar Search] window and displays the still image of the selected playback point in the video display area.

To display the calendar or the [Time Bar Search] window again, click the Calendar display button **A** or the Map display button **B** , respectively.

A **B**

4 **Use the Screen Selection buttons to select the desired screen layout.**

5 **Click the forward playback button on the Playback control panel.**

The digital video recorder starts playing back the video.

: Fast-forward/rewind playback
Click one of these buttons repeatedly to adjust the playback speed in four steps (x2.0, 3.0, 4.0, and 5.0).

: Frame-forward/rewind

: Forward/reverse playback
Click one of these buttons repeatedly to adjust the playback speed in two steps (x1.0 and 0.5).

: Pause

The selected playback speed appears in the playback speed box at the right end.

To specify the playback start point as time, follow the steps below:

1 Right-click anywhere in the window and, in the context menu, click [Go to video].
Text boxes appear, allowing you to specify the playback start time. (By default, these boxes show the time when you right-clicked in the window.)

2 Type the playback start time (in the hour:minute:second format) and click OK .
The playback stops if in progress.

3 Click the forward playback button on the Playback control panel.
Playback starts from the specified channel for all channels.

Playing back video using the context menu

On the Live screen, you can switch only the video from the specified camera to the playback mode.

For the operations on the calendar, [Time Bar Search] window, and Playback control panel, refer to the corresponding explanations for the SEARCH screen.

1 **Right-click the desired video image and, in the context menu, click [To Search].**
The Calendar window appears.

2 **Select the video you want to play back by clicking the desired day on the calendar.**
A red circle indicates the day with recorded data.
The recording information for only the specified time is displayed in the [Time Bar Search] window.

3 **Click the desired time bar to determine the playback start point and, click** Open .
The [Time Bar Search] window closes and the still image of the selected playback start point appears in the video display area.
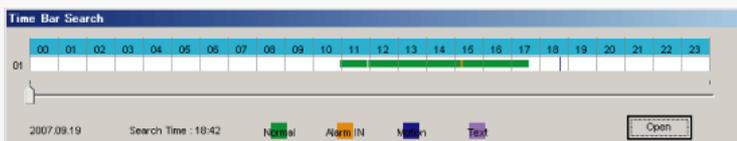
The video image from only the selected channel changes to the playback mode.
For other channels, live video is displayed with the screen title still showing "Live."

4 **Click the forward playback button on the Playback control panel.**
The digital video recorder starts playing back the video.

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5 **Right-click the video image being played back and, in the context menu, click [To Live].**

Now, the screen shows again live video, instead of playback video.
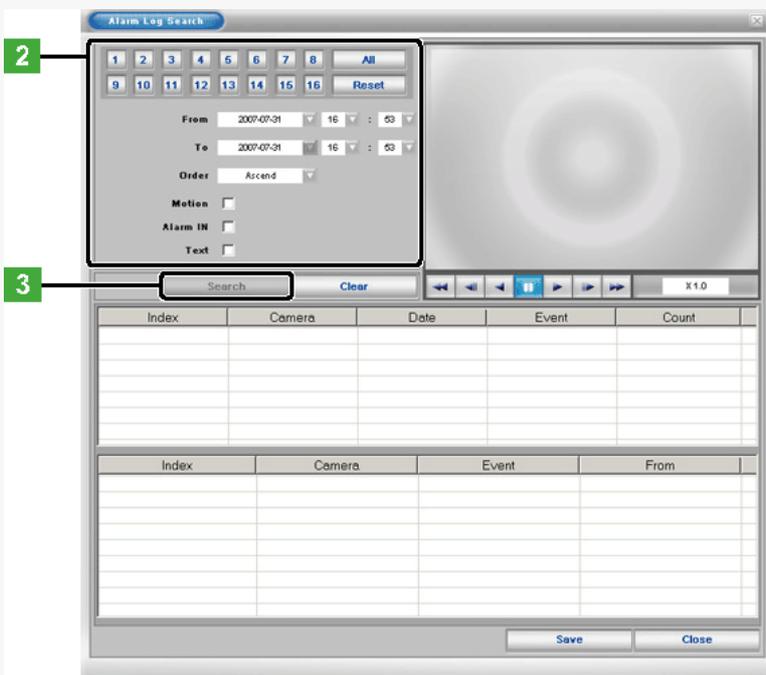
Alarm Log Search

The Alarm Log list allows you to search and play back recorded video.

> Before performing an Alarm Log search, display the Search screen.
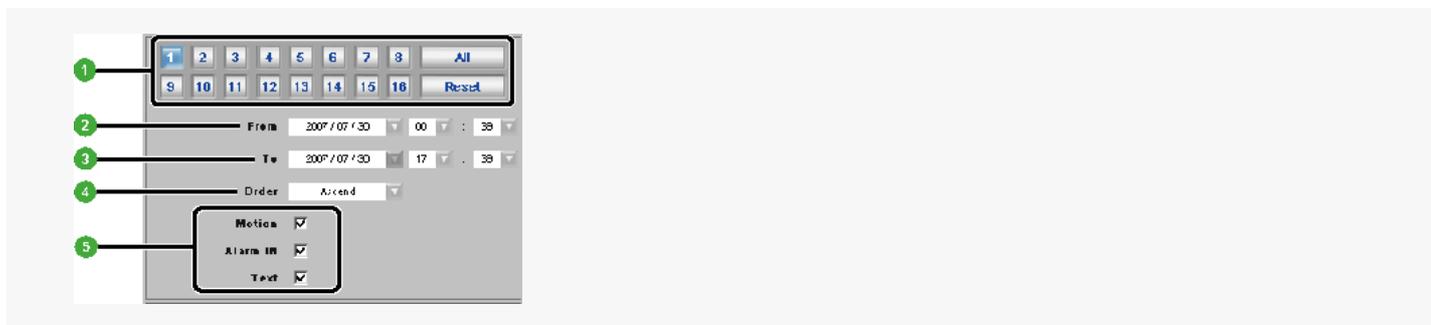
1 **On the Search screen, click the [Alarm Log Search] button.**

The [Alarm Log Search] screen appears.

2 **Enter search criteria.**

To perform a Text search, you must specify ① to ④ as search criteria.

1 Camera number (1 to 16).

    All : Selects all camera numbers.

    Reset : Deselects all camera numbers.

2 Search start point (From)

    In the calendar that pops up, click the day on which the video scenes you want to search for were recorded and then, from the pull-down menu, select the search duration.

3 Search end point (To)

    In the same manner as you did in **2** , set the date and time at which you want to finish this search.

4 Display order of the search results in the Alarm Log area (Order)

    Descend: Newer to older video.
    Ascend: Older to newer video.

5 Type of the events to be searched for.

    Motion: Searches for Motion recording events.
    Alarm IN: Searches for Alarm IN recording events.
    Text: Searches for Text recording events.

3 Click **Search** .

The digital video recorder searches for any event data that matches the specified search criteria and shows them in the total-count list section (upper section) of the Alarm Log list.

| Index	Camera	Date	Event	Count
0001	1	2007/07/30	Motion	156
0002	1	2007/07/30	Alarm IN	1

> Matched events are sorted by data in the [Camera], [Date], and [Event] columns in this order, with the total counts of the matched events shown in the [Count] column.
>
> You can switch the sort order of the searched logs between the ascending and descending orders by clicking the header row of each column.
>
> Click **Clear** to clear all the data in the Alarm Log list.

4 **In the total-count list section of the Alarm Log list, click the recorded data you want to play back.**

The beginning video scene of the selected event data appears, with the details of that event shown in the event-details list section (lower section) of the Alarm Log list.
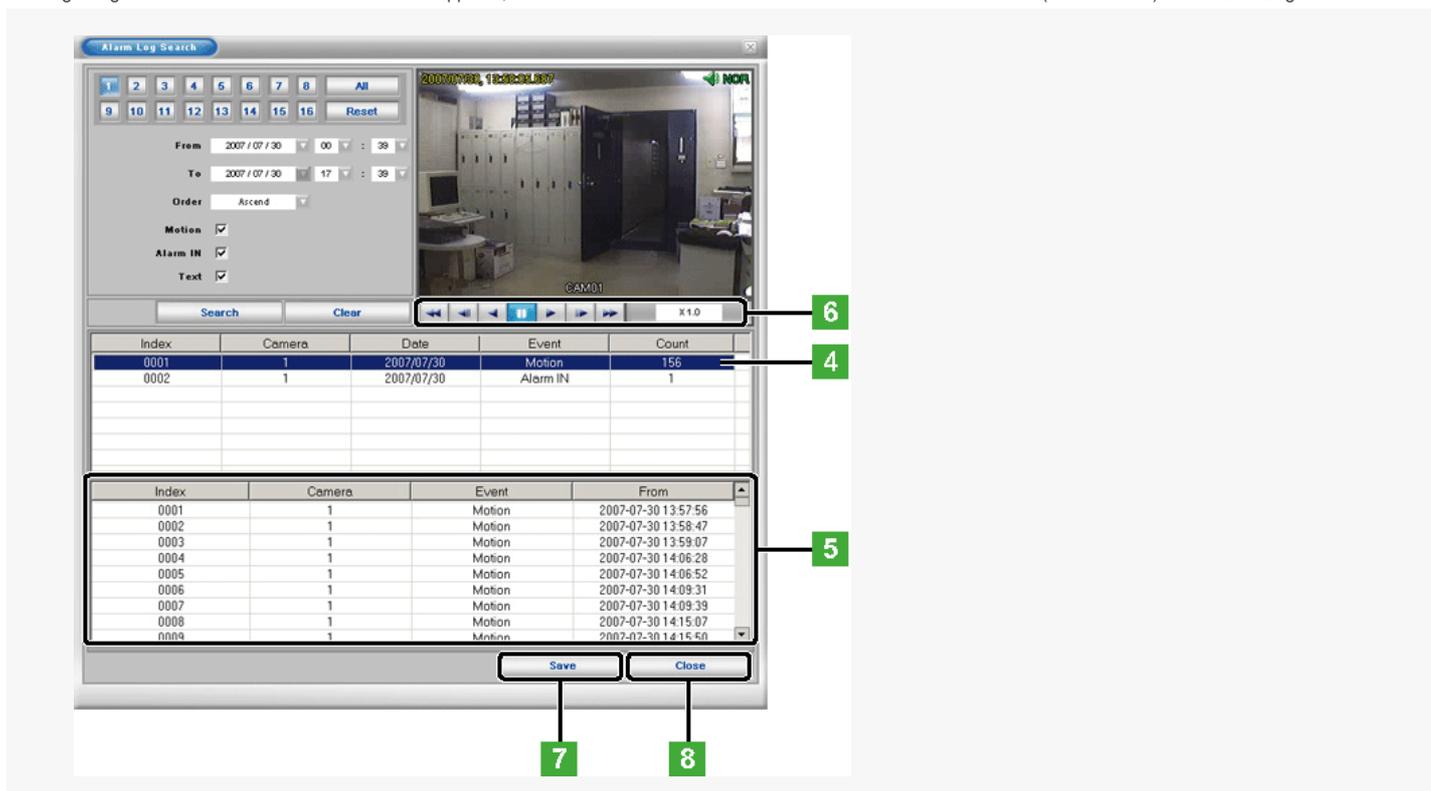
5 **To narrow down the search result to a particular video image, click the desired row in the event-details section of the Alarm Log list.**

The selected video image appears.

6 **Click the forward playback button.**

Plays back the selected video image.

▶▶ ◀◀ : Fast-forward/rewind playback
Click one of these buttons repeatedly to adjust the playback speed in four steps (x2.0, 3.0, 4.0, and 5.0).

⏸▶ ◀⏸ : Frame-forward/rewind

▶ ◀ : Forward/reverse playback
Click one of these buttons repeatedly to adjust the playback speed in two steps (x1.0 and 0.5).

⏸ : Pause

The selected playback speed appears in the playback speed box at the right end.

7 Click [Save] to save the video being played back.

The [Save As] dialog box opens, allowing you to save the searched video data.

8 Click [Close] .

The [Alarm Log Search] screen closes and you return to the state before starting the Alarm Log search.
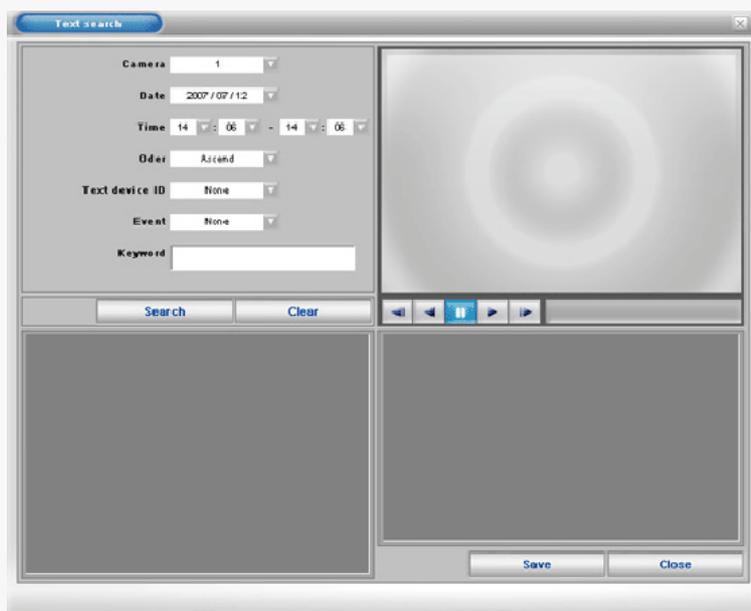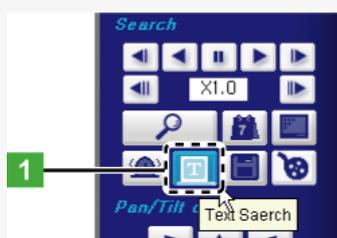
Text Search

You can use keywords to search for playback video, by searching through data recorded by a POS or ATM.

Before performing a Text search, display the [Search] screen.

1 **On the [Search] screen, click the Text search button.**

The [Text Search] screen appears.

2 **Enter search criteria.**

To perform a Text search, you must specify ① to ④ as search criteria.

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1 Camera: Camera number (1 to 16).
2 Date: Recording date of the video you want to search.
In the calendar that pops up, click the day on which you want to perform a Text search.
3 Time: Search duration (in "hour:minute" - "hour:minute" format).
4 Order: Display order of the search results in the Text List area.

Descend: Newer to older video.
Ascend: Older to newer video.

5 Text device ID: POS ID (1 to 16)
6 Event:
Type of the events to be searched for.

None: Searches for all text events in the specified search duration.
True: Searches for text events including the specified keywords.
False: Searches for text events that does not include the specified keywords.
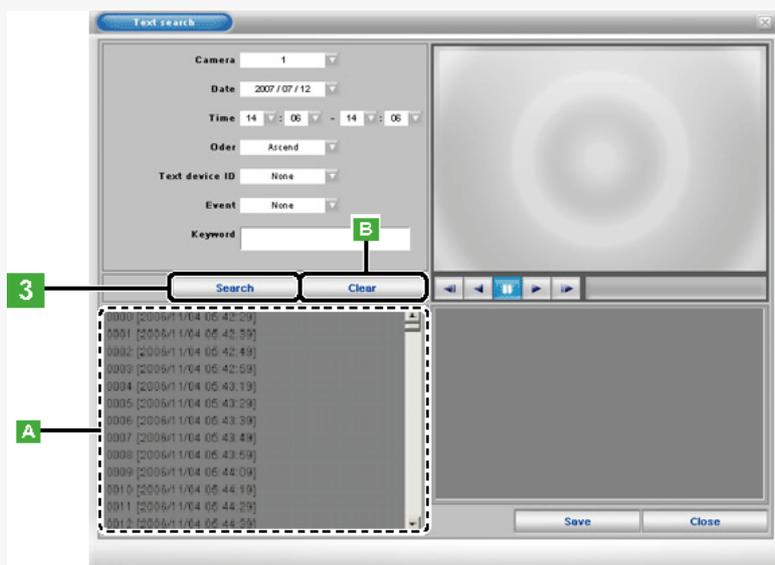
7 Keyword:
In this field, type a list of search keywords (max. 30 characters).

3 **Click** Search .

The digital video recorder searches recorded data that matches the specified search criteria and shows them in the Text List area A .
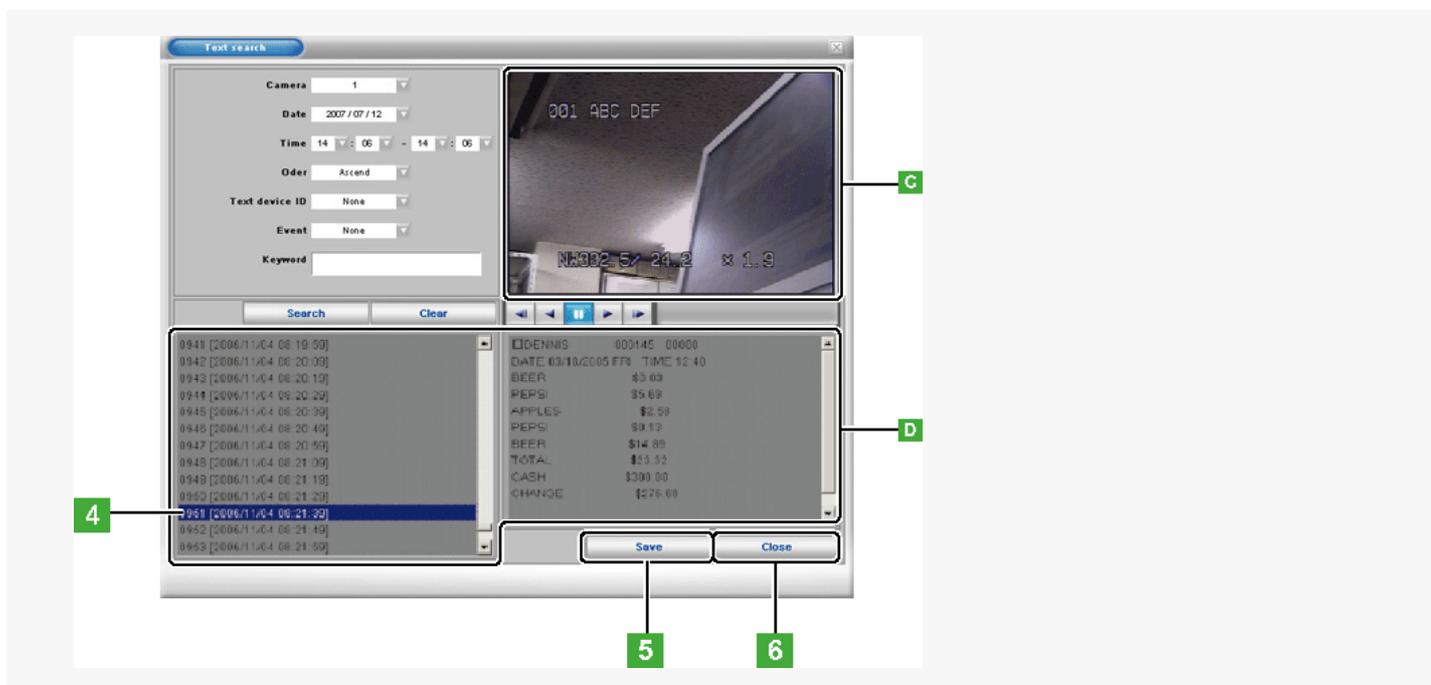Click Clear B to clear all search results in the Text List area.

4 **In the Text List area, select the recorded data you want to play back by double-clicking.**

The surveillance video of the selected data C appears with its text data D .
To start playing back the video, click the desired playback buttons.

: Frame-forward/rewind

: Forward/reverse playback

: Pause

5 **Click** . .

The [Save As] dialog box opens, allowing you to save the searched video data.

6 **Click** . .

The [Text Search] screen closes and you return to the state before starting the Text search.

Copying a Playback Image

Use this button to save the still image of the video being played back.

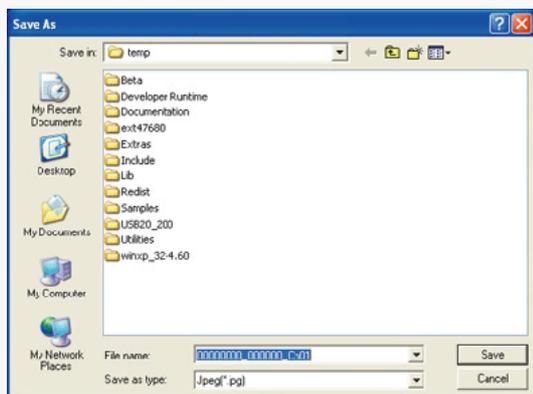**1** **Click the Stop button during playback to display a still image of the video.**

2 **Click the video image you want to save.**

The selected image is shown in a yellow rectangle.

3 **Click the [Copy] button.**

The [Save As] dialog box opens.

4 **Select the storage location of the image and click** Save .

This saves the selected image in the JPEG format.

Backing Up Recorded Data

On the screen, you can save video data recorded with the digital video recorder to your personal computer or a removable disk.

Click the Data Backup button. Then, the screen switches to the [Remote Backup] screen.

> The data backup operation can be performed anytime regardless of the screen mode.

[Remote Backup] screen components and their functions
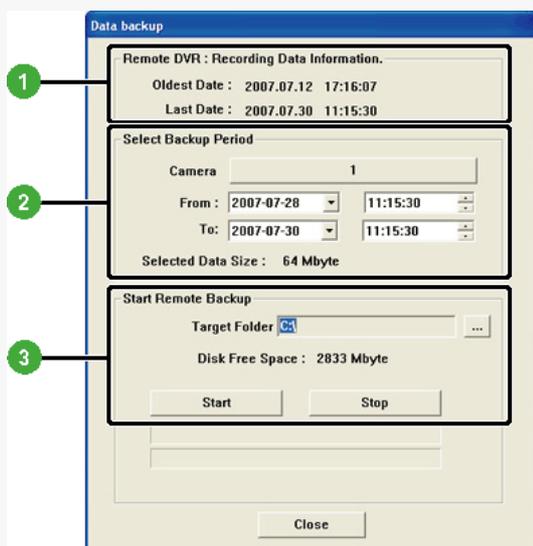
1 DVR Server: Recording Data Information

The range of the recorded data to be backed up (the date and time when the recording was started and ended) is shown here.

2 Select Backup Period

Camera

Click the button and, in the Camera Selection dialog box, specify the camera number for the data you want to back up.

From/To

Specify the range (start and end points) of data you want to back up by the recording date and time.

Selected Data Size

Shows the size of the selected range of data.

③ Start Remote Backup

Start the backup process by specifying the folder into which you want to back up the selected data.

Target Folder

Specify the backup-destination drive and folder.

Disk Free Space

The available disk space on the selected drive is shown.

Start

Starts the backup process.

Stop

Stops the backup process.

Progress gauge

The progress of the backup process is shown on the gauge.

Data backup procedure

1 In the [Camera] section, click the button (labeled as **None** , by default).
The Camera Selection dialog box appears.

Camera **None**

2 Select the camera number for the data you want to back up and Click **OK** .
Clicking a camera number toggles the backup On/Off status of the camera. You can select more than one camera number.

Be sure to make a backup copy of the selected camera.

Cam1 Cam2 Cam3 Cam4 Cam5 Cam6 Cam7 Cam8
Cam9 Cam10 Cam11 Cam12 Cam13 Cam14 Cam15 Cam16

All   Reset
OK   Cancel

All : Sets all camera numbers to On.
Reset : Resets the backup status of all camera numbers to Off.
OK : Closes the dialog box with the settings applied.
Cancel : Cancels all settings and closes the dialog box.

3 In the [From] and [To] fields, specify the range of the data you want to back up (the date and time when the recording was started and ended).
Select the date using the calendar; select the time using the spin buttons.
Under [Select Data Size], the size of the selected range of data appears.

From : 2007-07-30 ▾ 11:15:30
To: 2007-07-30 ▾ 11:18:30

The upper limit of the this data size is the value shown in the [Recording Data Information] section.

4 In the [Target Folder] setting, select the backup-destination drive and folder.
Under [Disk Free Space], the available disk space on the selected drive appears.
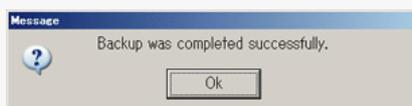Confirm the total size of the files you selected does not exceed the size of the available space in the backup medium.

Target Folder C:¥ ...

5 Click **Start** .
The system starts a backup, showing its progress as a progress gauge.
When the backup process is finished, a dialog box opens, showing the backup has been finished.

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When the backup destination is a CD/DVD

Upper line: Indicates the writing status from the buffer to the backup medium.

Lower line: Indicates the writing status to the buffer.

When the backup destination is a removable disk

Upper line: Indicates the progress of writing each file.

Lowe line: Indicates the progress of writing all files, if there are more than one file.

> If the backup medium runs out of space, the system will present a message dialog box.

Controlling a PTZ Camera

On this screen, you can remote-control a PTZ camera from your personal computer.
When operating a PTZ camera, the screen title changes to "PTZ".

> Before performing any PTZ operation, on the digital video recorder, configure the [Protocol] setting in the Camera settings accessible from the [SETTINGS] screen.
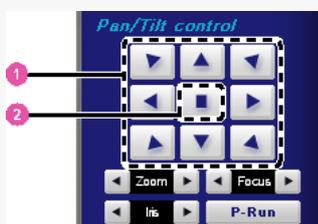>
> The features you can control using the Camera Control panel depend on the camera model.

Operating a PTZ camera

1 **Click the video image from the PTZ camera you want to operate.**

The selected image is shown in a yellow rectangle.

2 **Using the buttons provided on the Camera Control panel, adjust the orientation of the camera.**

① These control buttons allows you to move the camera in eight directions.
② Click this button to stop the camera movement.

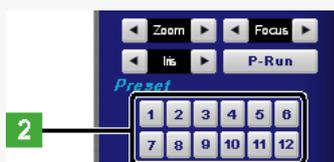**3** **Adjust the focus, iris, and zoom settings.**

Controlling a camera based on preset settings

> You cannot register preset positions using Internet Explorer.
> Before performing the following preset operations, register preset positions either on the digital video recorder or via the operation menu of DVR Utility.

Moving the camera to a preset position (Preset)

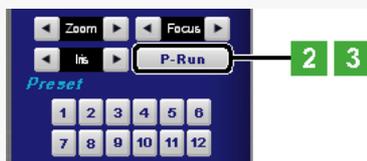**1** **Click the video image from the PTZ camera you want to operate.**

The selected image is shown in a yellow rectangle.

2 **Select a preset number.**

The camera orientation has been set to the registered preset position.

Patrolling preset positions (P-Run)

The camera moves around two or more preset positions in the order of preset numbers so that you can monitor what's happening in these positions.

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1 **Click the video image from the PTZ camera you want to operate.**

The selected image is shown in a yellow rectangle.

2 **Click** **P-Run** .

The button is highlighted and the camera starts a preset run.
During a patrol run, the preset number for the current position is highlighted.

3 **Click** **P-Run** **again.**

The button returns to the normal display (no more highlighted) and the patrol run stops.

Using the Web Browser (Setting)

Working with the Settings screen

The SETTING screen is used by "Administrator" users. It is used to set the detailed settings of the digital video recorder.

Settings screen components and their functions

Click the Settings button in the [Settings] section to display the [Settings] screen.

1 Settings menu buttons

Use these buttons to switch among the six setting screens provided.

Camera Settings

Allows you to set the operation conditions of each camera connected to the digital video recorder.

Schedule Settings

Allows you to set the recording schedule.

Alarm Settings

Allows you to configure the alarm input/output settings.

Communication Settings

Allows you to set the destination of alarm-notification E-mails.

User/Password Settings

Allows you to register users who use this system and their operating authorities.
Only "Administrator" users can click this button.

Text Settings

Allows you to configure Text recording settings by connecting a text input device such as a POS or ATM to the digital video recorder.

2 Upload button

Use this button to upload the settings configured on the Settings screen to the digital video recorder.

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Closing the Settings screen

Click the Live button or the Search button.
This brings you to the corresponding screen, with the Settings screen closed.

To switch to the Live screen

To switch to the Search screen

Attempting to close the Settings screen causes the following confirmation dialog box to appear, asking whether or not to save the settings. Click [Yes] or [No] .

Camera Settings

Click the [Camera] setting button to display the Camera settings.
Here, you can set the operation conditions of each camera connected to the digital video recorder.

1 Camera setting table

Clicking each header cell of the setting table invokes a pull-down menu.
Configure the camera type, connection conditions, and other settings for each camera.

No.	Camera	Size	Quality	Normal	Motion	Alarm IN	Text	Pre	Duration
1	Video	360 X 240	Enhanced	1 ips	1 ips	1 ips	1 ips	3 Sec	None
2	Video	360 X 240	Enhanced	1 ips	1 ips	1 ips	1 ips	3 Sec	None
3	Video	360 X 240	Enhanced	1 ips	1 ips	1 ips	1 ips	3 Sec	None
4	Video	360 X 240	Enhanced	1 ips	1 ips	1 ips	1 ips	3 Sec	None
5	Video	360 X 240	Enhanced	1 ips	1 ips	1 ips	1 ips	3 Sec	None
6	Video	360 X 240	Enhanced	1 ips	1 ips	1 ips	1 ips	3 Sec	None
7	Video	360 X 240	Enhanced	1 ips	1 ips	1 ips	1 ips	3 Sec	None
8	Video	360 X 240	Enhanced	1 ips	1 ips	1 ips	1 ips	3 Sec	None

No.:

Click the camera number of the camera for which you want to configure settings. The video from the camera you selected appears in the Preview area ③ .

Camera (View-only):

Shows the camera type you set on the digital video recorder.

If set to "LAN", the row for that camera is shown in a different color.

Displayed items:

None (No camera connected)

Video (Normal camera)

LAN (Network camera)

Size:

Set the screen size for the bundle of channels: CH1 to 4, CH5 to 8, CH9 to 12,or CH13 to 16.

Setting options:

PAL: F360×288, 720×288, and 720×576

NTSC: Setting options: 360×240, 720×240, and 720×480

Quality:

Set the camera quality for each camera.

Setting options: Basic, Normal, Enhanced, Fine, and Super fine

Normal:

Set the recording rate used in Normal recording for each camera.

The recording rates shown in the pull-down menu depend on the [Size] setting. (This is also true for the recording modes described below.)

Motion:

Set the recording rate used in Motion recording for each camera.

Alarm IN:

Set the recording rate used in Alarm IN recording for each camera.

Text:

Set the recording rate used in Text recording for each camera.

Duration:

Set the duration of Motion, Alarm IN, and Text recordings for each camera (1 Sec to 5 Min).

Pre:

Set the operation conditions in Pre-alarm recording for each camera

Setting options:

None (No Pre-alarm recording)

Short (Short Pre-alarm recording time)

Medium (Standard Pre-alarm recording time)

Long (Long Pre-alarm recording time)

Audio:

Turn ON/OFF audio recording for each camera.

Protocol (View-only):

Shows the PTZ operation protocol you set on the digital video recorder.

Adr:

Set the PTZ operation address for each camera (1 to 127).

> If the camera type ([Camera]) is set to "LAN", you cannot change the settings via the network. (except the [Adr] setting)
>
> Audio recording is not possible if the [Duration] setting is "3 Sec" or less.
>
> Right-clicking a cell of the list and then selecting [All camera config copy] in the context menu applies the defined setting to all cameras.

② Camera Title

If you want to change the camera title shown with the camera's video etc., type here a new title with a length of 22 characters or less.

Default setting: CAM01 to CAM16

Camera Title [CAM01]

③ Preview area

Clicking a camera number in the Camera setting table causes the video from the selected camera to appear in the Preview area.
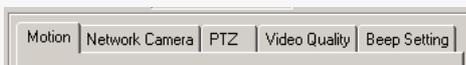
④ Encode setting

Set the encoding format.

Setting options: MPEG4 and MPEG4+

⑤ Detailed Setup Tabs

These tabs are used to configure detailed condition settings.

| Motion | Network Camera | PTZ | Video Quality | Beep Setting |

You cannot set the contents of the [Network Camera] and [PTZ] tabs via the network.
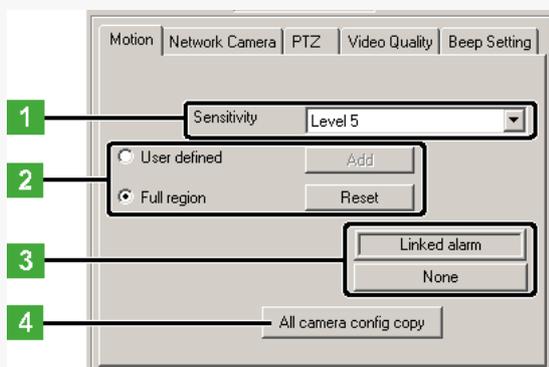
Configuring the motion sensor (Motion)

Configure the motion sensor feature that senses any motion in the target.

In the Preview area, portions where any motion is sensed under the configured conditions will be indicated by blue rectangles.

These rectangles are shown based on the sensing sensitivity and sensing area settings currently stored in the system.

If you have changed any of these sensing conditions, click the [Exit] setting button to save the settings you have configured.

| Motion | Network Camera | PTZ | Video Quality | Beep Setting |

1 Sensitivity   Level 5

2 ○ User defined   Add
    ● Full region   Reset

3 Linked alarm
    None

4 All camera config copy

1 In the [Sensitivity] setting, select the sensing sensitivity from the pull-down menu.

The sensing sensitivity can be set in nine levels (Level 1 to 9).

Higher the sensitivity level, lower the sensing sensitivity.

2 Using the radio buttons, specify whether to define the sensing area by yourself.

When [User defined] is selected:

The [Add] button becomes selectable, allowing you to define the sensing area as desired.

In the preview area, click in the grid cell where you want to enable sensing.

Each time you click, the color of the selected grid cell toggles between red and blue to indicate that sensing is enable or disabled, respectively.

Click **Reset** to discard all sensing area settings.

When [Full region] is selected:

The whole screen is set as the sensing area.

The whole preview area is enclosed with a red border to indicate that full-region sensing is enabled.

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Clicking Reset switches the screen to the [User defined] mode.

3 In the [Linked alarm] section, click the button (labeled as None by default).

The [Select linked alarm from camera] setting dialog box appears.

4 Click the Alarm OUT number of each terminal that outputs an alarm signal when a motion is sensed.

Clicking an Alarm OUT number turns On the alarm output from the corresponding terminal. You can turn On the alarm output for more than one terminal.

Click the terminal number again to turn Off the alarm output.

All Alarm : Turns On the alarm output for all Alarm OUT numbers.

Reset : Turns Off the alarm output for all Alarm OUT numbers.

Cancel : Cancels all settings and closes the dialog box.
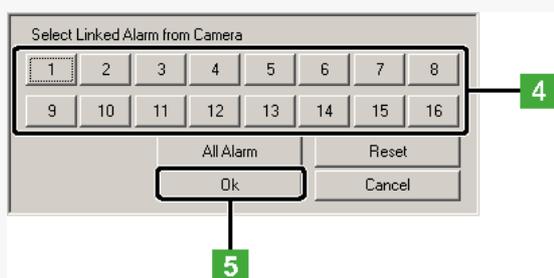
5 When finished, click OK .

The Motion setting dialog box closes. On the [Motion] tab, the button in [Linked alarm] setting now shows the settings you have configured ("None", Alarm OUT Nos. (1 to 16), or "All").

In the [Linked alarm] setting, click the button again to return to the setting dialog box.

6 To configure all cameras to have the same settings, Click All camera config copy .

The system applies the settings configured on the [Motion] tab to all cameras.

(The settings, however, are not applied to network cameras.)

Configuring the video quality (Video Quality)

Configure the quality of the video displayed on the monitor.

1 Adjust the video quality using the slider bars.

Note that this adjustment is possible when the [Camera] setting in the Camera setting table is set to "VIDEO".

Brightness: Brightness of the video

Contrast: Contrast of the video
Hue: Hue of the video
Saturation: Saturation of the video
Sharpness

2 Using the following radio buttons, select the scanning mode of live video.

Interlace scanning mode:
Fast but does not support the panning view.
Progressive scanning mode:
More dense and supports the panning view.

Default : Resets the settings on the tab to the defaults.

All camera config copy : Applies the settings on the tab to all cameras.

Configuring the alarm beep (Beep Setting)

Configure the alarm beep that will be output if an event occurs.

1 Select the check box for the event type for which you want to enable the alarm beep.

The alarm beep will sound if an event of the selected type occurs. You can select more than one event type.
Setting options:

No Video Signal: Type of event that occurs when the video signal is interrupted

Motion: Type of event that occurs when any motion is sensed in the target by the motion sensor

Alarm IN: Type of event that occurs when an external alarm signal is input

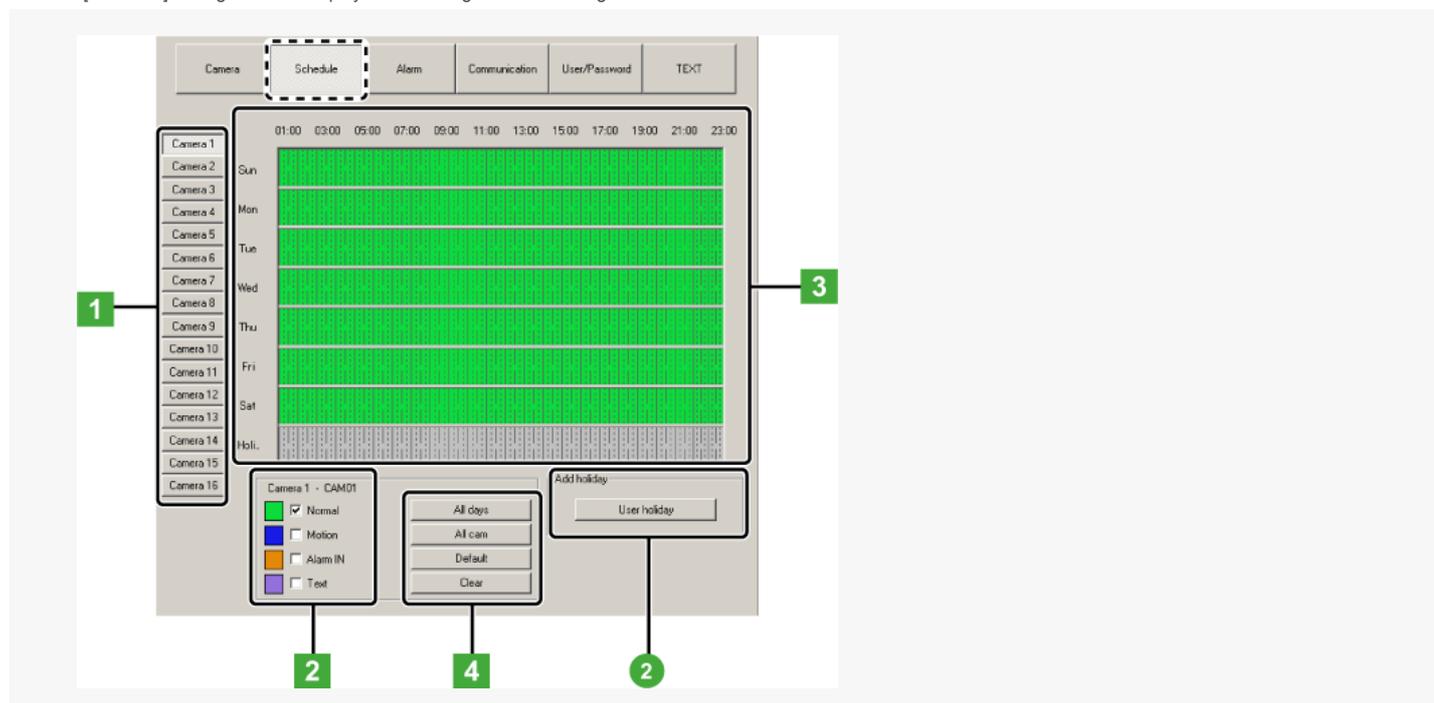### 2 Select the Event Popup check box to enable the Event Popup feature.

When the Event Popup feature is enabled, the system displays relevant event video in the single-screen mode whenever an event occurs and sounds an alarm beep.

All camera config copy : Applies the settings on the tab to all cameras.

Schedule Settings

Click the [Schedule] setting button to display the recording schedule settings.
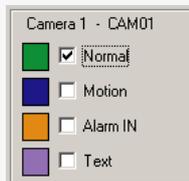
① Setting a recording schedule

You can configure a recording schedule in the following steps:
Configuring a recording schedule allows you to automatically record video as you planned.

1 Click the button for the camera (Camera 1 to Camera 16) for which you want to configure a recording schedule.

2 Select the check box for the recording mode you want to set.
Now, you can configure a recording schedule. You can select more than one recording mode.

```
Camera 1 - CAM01
  ☑ Normal
  ☐ Motion
  ☐ Alarm IN
  ☐ Text
```

Normal:
Records video continuously during the scheduled time period.
Motion:
Records video whenever a motion is sensed in the target by the motion sensor.
Alarm IN:
Records video whenever an alarm signal is input from an external sensor.
Text:
Records video whenever a keyword match is found in the text, if connected to a text input device such as POS or ATM.

3 In the Schedule setting area, drag on the time bar for the desired day of the week to set a recording schedule.
For each day (of the week), you can set the recording time period in increments of 15 minutes.
As you drag, the time bars are filled with a color assigned to the recording mode you selected in Step **2** .

> If you drag again over a time period in which you already set a schedule, the time bar will be overwritten to update the schedule.

Ⓐ 00:00 to 08:00: Normal recording
Ⓑ 08:00 to 16:00: Normal/Motion/Alarm IN recording
Ⓒ 16:00 to 22:00: Motion/Alarm IN recording
Ⓓ 22:00 to 24:00: Normal/Text recording

4 Follow the same procedure (Steps **2** to **3**) to set a recording schedule for each day of the week.
To apply the same schedule for all cameras or for all days of the week, use the following buttons.

All days :
Applies the set recording schedule to all days of the week.
To cancel, click the button again.
All cam :
Applies the set recording schedule to all cameras.
To cancel, click the button again.
Default :
Sets Normal recording for all time periods in each day of the week.
Clear :
Clears the set recording schedule.

> The schedule you set in the lowermost [Holiday] area applies to the holidays you defined in the next "Holiday setting" section.
>
> Without the holiday setting, the [Holiday] setting area is grayed out, preventing you from setting the holiday schedule.

② Setting holidays

You can define specific, monthly, or yearly holidays.

1 Click User holiday .
The [Holiday Set] screen appears.

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2 On the calendar, select the date on which you want to set a holiday by clicking.

The selected date is highlighted.

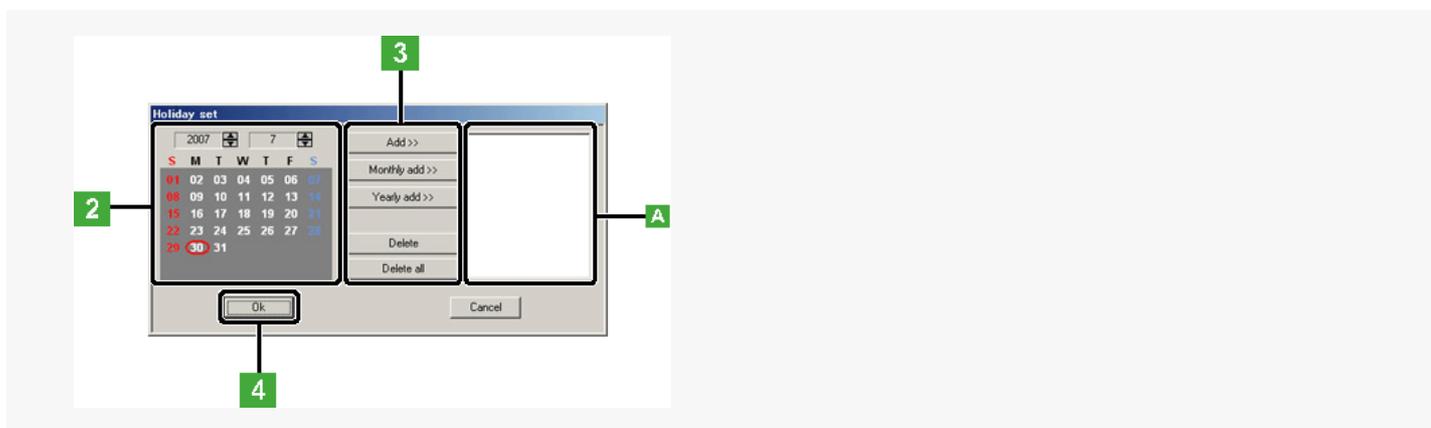Use the spin buttons to set the year and month of the calendar.

3 Use the following buttons to add the selected date to the holiday list A .

Use an appropriate button depending on whether you set a specific, monthly, or yearly holiday.

Button	Function	Display Example in Holiday List
Add>>	Adds the selected date (year-month-day) as a specific holiday.	2007-03-15
Monthly add>>	Adds the selected date (day) as a monthly holiday.	Monthly 15
Yearly add>>	Adds the selected date (month-day) as an yearly holiday.	Yearly 03-15
Delete	Deletes the selected holiday setting from the holiday list.	(One holiday setting deleted)
Delete all	Deletes all holiday settings.	(All holiday settings deleted)

4 Click OK .

The defined holiday settings have been saved. The dialog box closes.

> Clicking Cancel cancels the holiday settings and closes the dialog box.

Alarm Settings

Click the [Alarm] setting button to display the Alarm settings.

> Each Alarm IN/OUT number A shown on this screen represents the corresponding alarm input/output terminal located on the rear panel of the digital video recorder.
>
> For information on alarm input/output connections, refer to the separate digital video recorder installation manual.

Configuring the alarm inputs

On this screen, configure the camera and alarm OUT numbers linked to external alarm input.

> To record video in conjunction with alarm inputs, in addition to this setting, you need to configure a recording schedule (in the Schedule settings).

1 Click the [Alarm IN] tab.

The alarm IN settings appears.
For each alarm IN number, follow the next and later setting steps.

2 In the [Alarm IN name] field, type a name for the alarm input.

To change the default name, type a new name with a length of 22 characters or less.

3 Click the [Linked camera] button.

The [Select linked camera] setting dialog box appears.

All :

Selects all camera numbers.

Reset :

Deselects all camera numbers.

Cancel :

Cancels the settings and closes the dialog box.

4 Click the camera number you want to link to alarm input.

This links the camera number to alarm input. You can select more than one camera number.

5 Click **OK** .

The dialog box closes. On the [Alarm IN] tab, the button next to the [Linked Camera] button now shows the setting ("None", camera No., or "All").

6 Click the [Linked Alarm OUT] button.

The [Select linked alarm from camera] setting dialog box appears.

All Alarm :

Selects all alarm OUT numbers.

Reset :

Deselects all alarm OUT numbers.

Cancel :

Cancels the settings and closes the dialog box.

7 **Click the alarm OUT number you want to link to alarm input.**
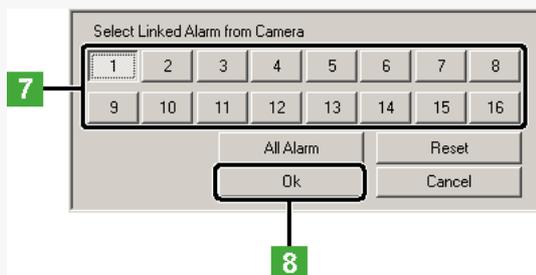
This links the camera number to alarm input. You can select more than one camera number.

8 Click **OK** .

The dialog box closes. On the [Alarm IN] tab, the button next to the [Linked Alarm OUT] button now shows the setting ("None", alarm OUT No., or "All").

9 **Under [Type], click the down-arrow button for the desired alarm IN number and, from the pull-down menu, select the polarity of the alarm input signal.**

Setting options:

NO (Normal Open):

The terminal is normally open and a signal is output if closed.

NC (Normal Close):

The terminal is normally closed and a signal is output if opened.

> To apply the same setting to all alarm IN numbers, under [Type], select "All" **B** from the pull-down menu.

10 **To switch the camera layout on the monitor screen in conjunction with alarm inputs, under [Layout], click the down-arrow button for the desired alarm IN number to open the pull-down menu.**

Then, select the desired layout name from the listed preset names.

11 **Follow the same procedure (Steps 2 to 10) to configure settings for all alarm IN numbers.**

12 **To link suspicion recording to alarm input, select the [Alarm IN Suspicion Record] check box.**

This allocates the alarm IN number 16 to suspicion recording.

Linked camera number:

The system automatically sets [Select linked camera] to "All".

Linked alarm OUT number:

Set this in the [Select linked alarm from camera] setting dialog box.

☑ Alarm IN Suspicion Record

> Selecting the [Alarm IN Suspicion Record] causes the digital video recorder to start suspicion recording automatically whenever an alarm signal is input to the alarm input terminal 16.
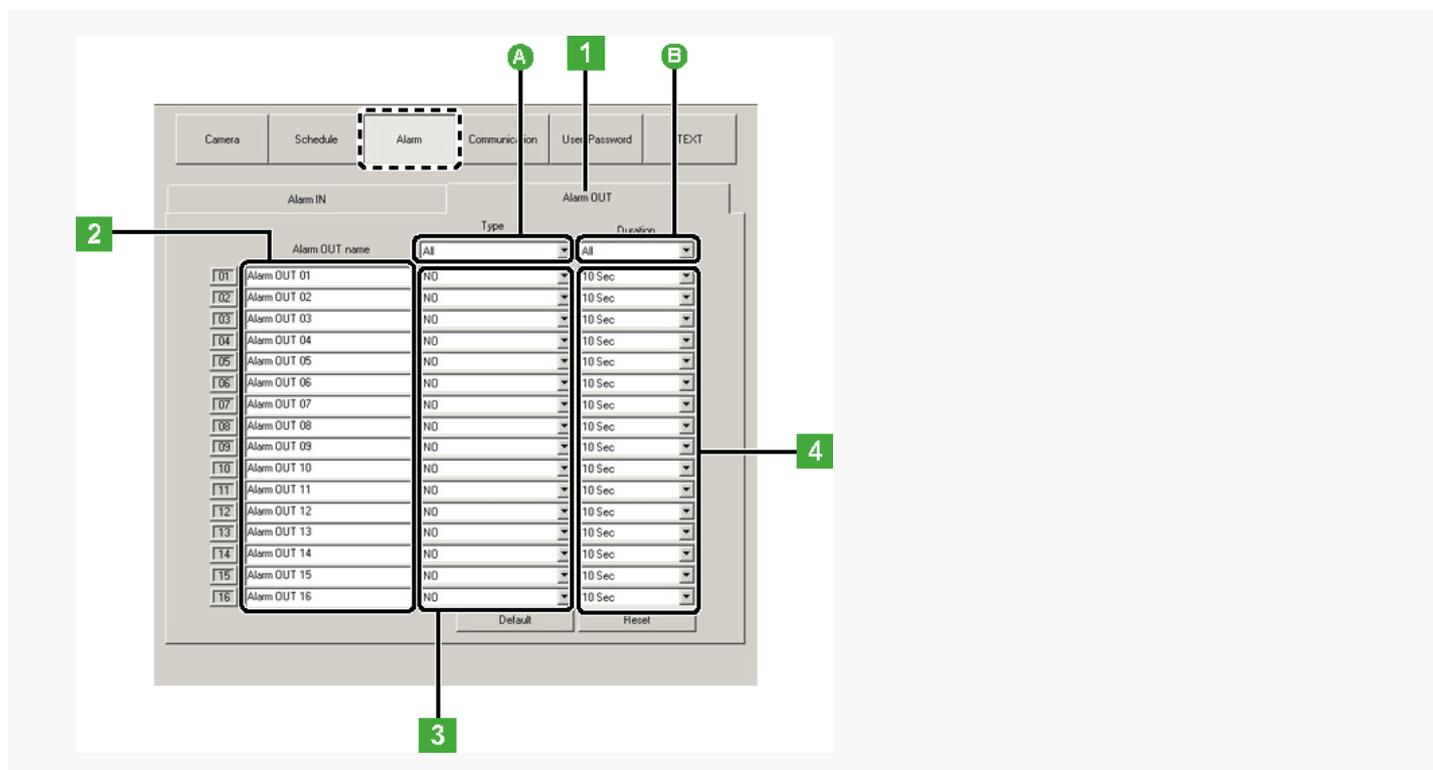>
> Note that you cannot perform suspicion recording manually when the [Alarm IN Suspicion Record] is selected.

Default : Resets the all settings on the tab to the defaults.

Reset Cancels all settings on the tab and restores the previous conditions.

Configuring the alarm outputs

Configure the alarm output settings on the [Alarm OUT] tab.

1 **Click the [Alarm OUT] tab.**

The alarm OUT settings appears.

For each alarm OUT number, follow the setting steps below.

2 **In the [Alarm OUT name] field, type a name for the alarm output.**

To change the default name, type a new name with a length of 22 characters or less.

3 **Under [Type], click the down-arrow button for the desired alarm OUT number and, from the pull-down menu, select the polarity of the alarm output signal.**

Setting options:

| NO (Normal Open):

The terminal is normally open and a signal is output if closed.

| NC (Normal Close):

The terminal is normally closed and a signal is output if opened.

To apply the same setting to all alarm OUT numbers, under [Type], select "All" Ⓐ from the pull-down menu.

4 **Under [Duration], click the down-arrow button for the desired alarm OUT number and, from the pull-down menu, select the duration of the alarm output signal.**

Setting options:

| 1 TIME: Alarm signal is output once.

| 5 Sec to 10 Min: Specify the alarm output time as a numeric value.

| Continue: Alarm output continues until stopped.

To apply the same setting to all alarm OUT numbers, under [Duration], select "All" Ⓑ from the pull-down menu.

5 **Follow the same procedure (Steps 2 to 4) to configure settings for all alarm OUT numbers.**

| **Default** : Resets the all settings on the tab to the defaults.
| **Reset** Cancels all settings on the tab and restores the previous conditions.

Communication Settings

Click the [Communication] setting button to display the Communication settings.

You can set the destination of alarm-notification E-mails via the network.

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Setting the destination of alarm-notification E-mails (E-Mail address)

To send the alarm-notification E-mail, follow the steps below.

1 **In each [E-Mail] field, type the address to which you want to send an E-mail if an alarm occurs.**
You can enter up to three E-mail addresses.

2 **In the [SMTP server] field, type the domain name or IP address of the SMTP server.**

3 **In the [SMTP ID] field, type an authentification ID as needed.**

4 **In the [SMTP PASSWORD] field, type an authentification password as needed.**
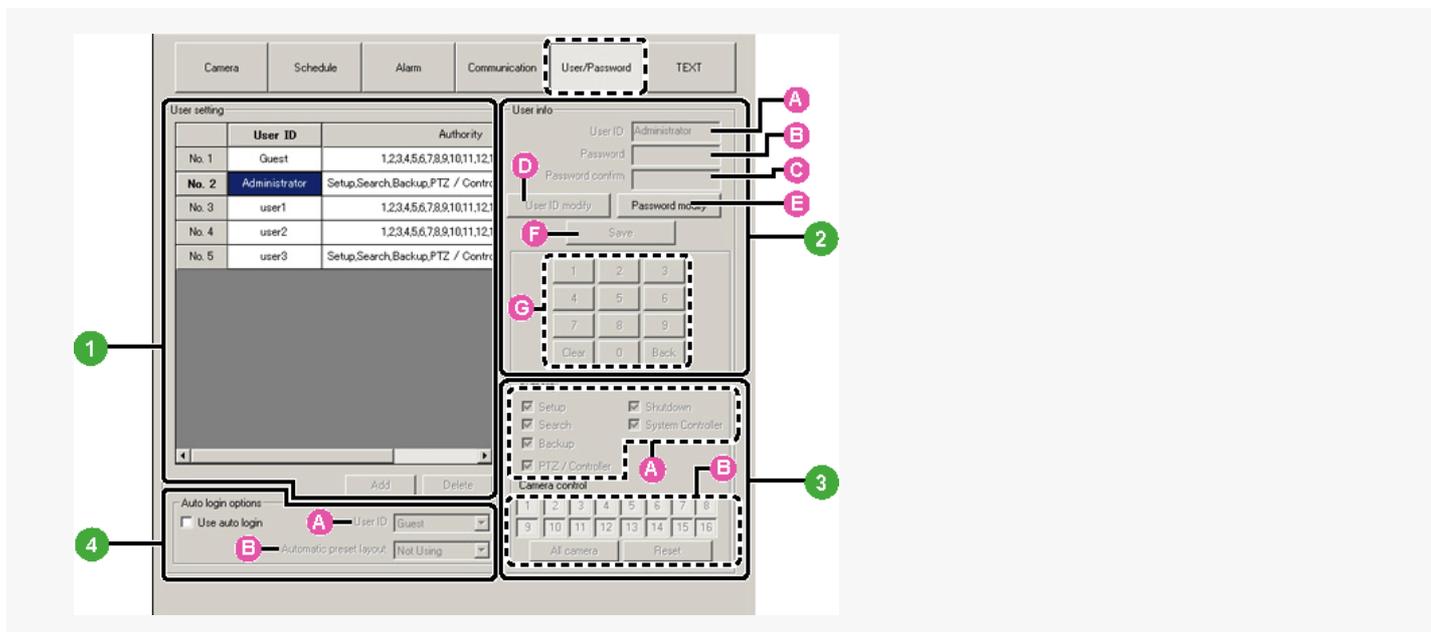
User/Password Settings

Click the [User/Password] setting button to display the User/Password settings.
You can change the user name, password, and operating authority of each registered user.
Only "Administrator" users can perform this setting.

You cannot register new users or delete registered users via the network.

User/Password settings screen components and their functions

1 User list (User Setting)

The name and operating authorities of each registered user are listed.

> By default, "Guest" and "Administrator" are listed.
>
> You cannot use **Add** (the button to register new users) and **Delete** (the button to delete registered users).

2 User information input area (User Info)

Type the user name and password.

- **A** User ID: Type (or view) the name of the user.
- **B** Password/New password: Type the password for the user.
- **C** Password confirm: Type the password for confirmation.
- **D** **User ID modify** : You can modify the user name.
- **E** **Password modify** : Click this to switch the [Password] box for password modification.
- **F** **Save** : Click this to save the user name and password and register the user to the user list.
- **G** Numeric keypad: Use these buttons for password entry.

  Close : Clears all characters in the input field.

  Back : Clears the last character in the input field.

3 Operating authority setting (Authority)

You can change the operating authority of each registered user.

- **A** Authority

  Select the check box for each operating authority you want to grant to the user.
- **B** Camera control

  Specify the camera number of the camera for which you want to grant the user the operating authority on the LIVE screen.

4 Auto login setting (Auto login options)

Use the Auto Login feature to allow the user to automatically log into the system when the system starts up, without prompting for password entry.
To enable this feature, select the [Use auto login] check box and configure the following settings.

- **A** User ID:

  Select the login user name.
- **B** Automatic preset layout:

  To allow the user to use preset camera layouts on the first screen after login, select one of the preset names from the pull-down menu

Changing the operating authority

The changed operating authorities are shown real-time in the user list.

> You cannot change the operating authorities of "Administrator".

1 In the user list (in the [User Setting] section), click the user whose operating authorities you want to change.

2 In the [Authority] section, select the check box for each operating authority you want to grant the user.

1 Setup: Operation on the SETTINGS screen

2 Search: Operation on the SEARCH screen

3 Backup: Operation on the MANUALLY BACKUP screen

4 PTZ/Controller: Remote operation of a PTZ camera

5 Shutdown: System shutdown

6 System Controller: System controller operation

Only "Administrator" can have the operating authority for the [User/Password] and [Go to Shell] buttons. You cannot grant this operating authority to other users.

3 In the [Camera control] section, use the number buttons to specify the camera for which you want to grant the user the operating authority on the LIVE screen.

All camera :
Sets the selected operating authorities to all cameras.

Reset :
Resets the operating authorities set for all cameras.

Changing the user name

1 In the user list (in the [User Setting] section), select the user whose name you want to change.

2 In the [User Info] section, Click **User ID modify** .
In the [User ID] field, the name of the current user appears and the label of the [User ID modify] button changes to [Cancel].

3 In the [User ID] field, type a new name for the user.

4 Click **Save** .
The user name has been changed. The new user name is now listed in the user list.
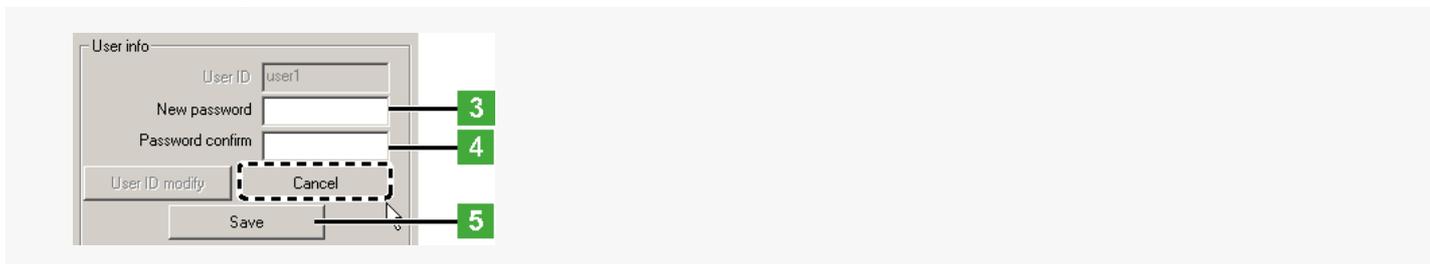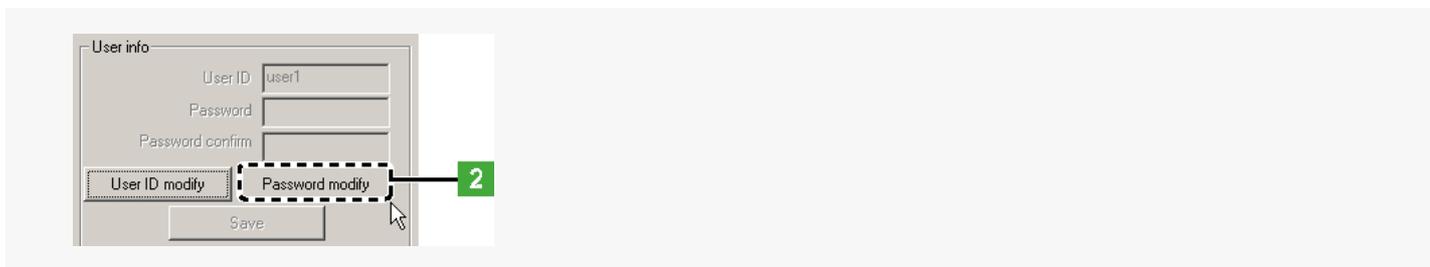
You cannot change the default user name, "Administrator".

Changing the password

1 In the user list (in the [User Setting] section), select the user whose name you want to change.

2 In the [User Info] section, Click **Password modify** .
The [New password] and [Password confirm] fields are enabled and the label of the [Password modify] button changes to [Cancel].

3 In the [New password] field, type a new password using the numeric keypad.

Enter a new password with a length of up to 20 characters.

4 In the [Password confirm] field, type the password for confirmation using the numeric keypad.

Re-enter the password you entered in Step **3** .

5 Click Save .

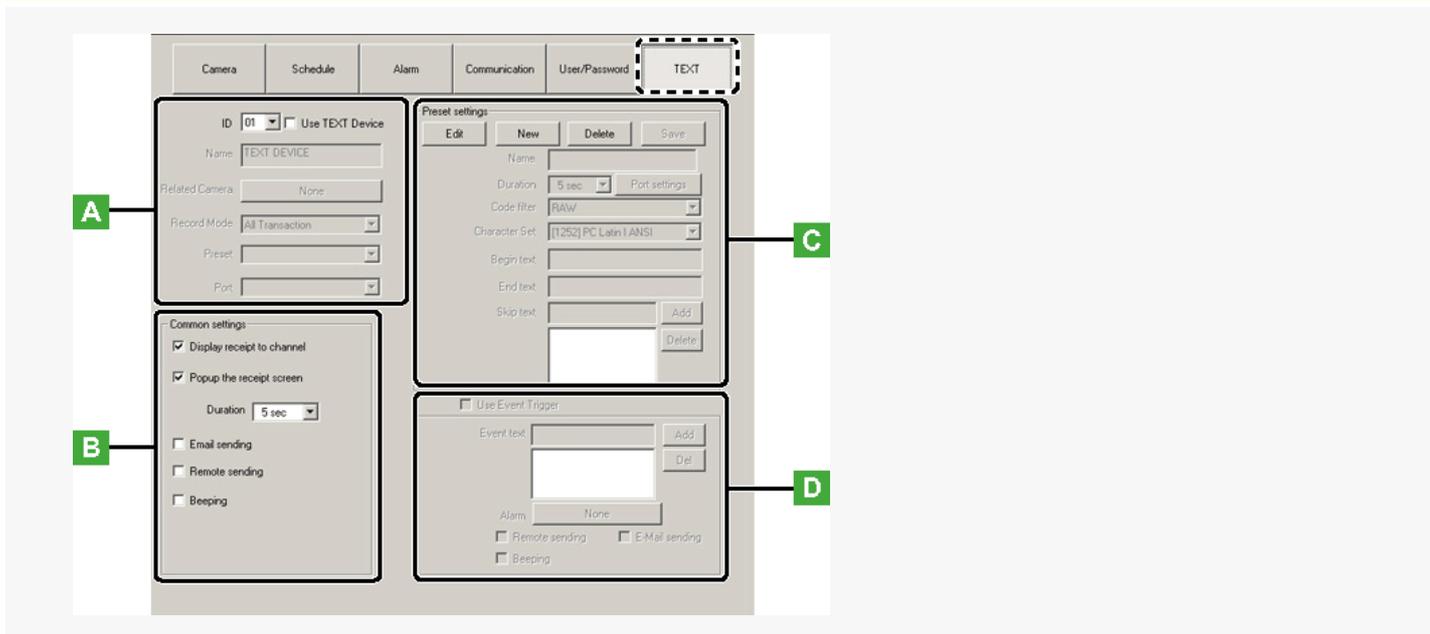The password has been changed.

Text Settings

Click the [TEXT] setting button to display the Text settings.

On this screen, you can configure settings used, when the digital video recorder is connected to a text input device such as a POS or ATM, to record text information from receipts or payment vouchers together with monitoring video, so that various alarm features can be used when a specific keyword(s) is detected in the text.

To connect the digital video recorder to a POS, use a serial cable via a serial distribution amplifier.
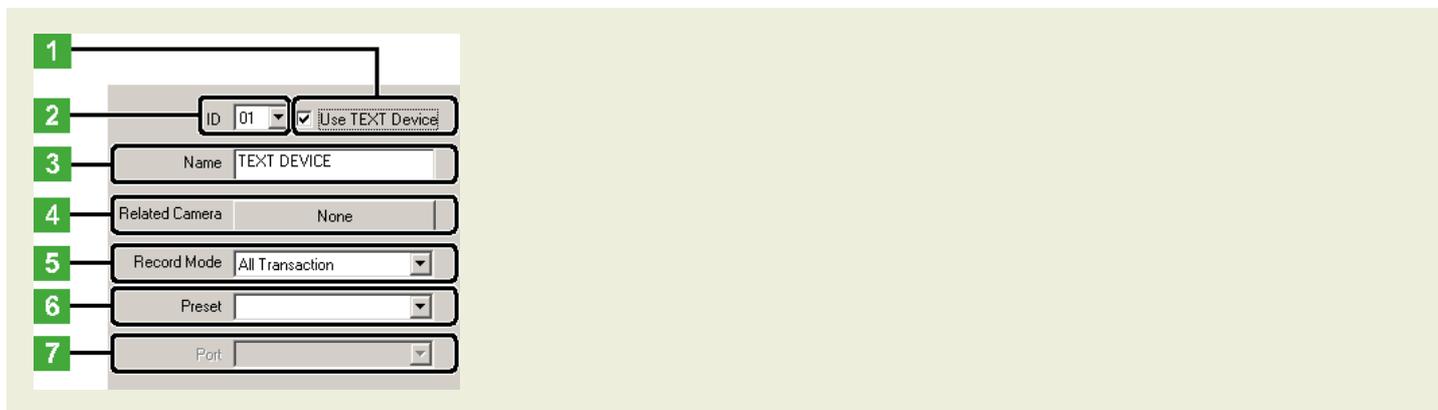
A Configuring the basic settings of the text input device

These are the settings for both the connected text input device and the camera that works in conjunction with that text input device.

Before you configure the following settings, you need to preset the text input device (in the [Preset settings] section **C**).

1 **Select the [Use TEXT Device] check box.**

Now, you can enter device settings.

2 **Assign an ID number (01 to 16) to the text input device by selecting from the pull-down menu.**

3 **Type a name for the text input device.**

4 **In the [Related Camera] setting, click the button (labeled as "None", by default).**

The [Select linked camera] setting dialog box appears.
Select the camera that works in conjunction with the text input device during Text recording.
You can select more than one camera.

All camera :

Selects all camera numbers.

Reset :

Deselects all camera numbers.

Cancel :

Cancels the settings and closes the dialog box.

5 **Click the camera number you want to link to the text input device.**

This links the camera number to alarm input. You can select more than one camera number.

6 **Click** **OK** .

The dialog box closes. The button in the [Related Camera] setting now shows the setting ("None," camera No., or "All").

7 **In the [Record Mode] setting, select the recording mode of the digital video recorder.**

Setting options:

All Transaction:

Records text information included in all receipts.

Event Trigger Text:

Records text information only if event text is detected in receipts.

8 **In the [Preset] setting, select the preset name of the text input device from the pull-down menu.**
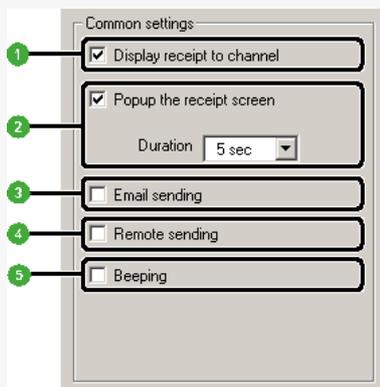
The pull-down menu shows the preset name of each text input device you set in [Preset settings].

9 **In the [Port] setting, check the COM port number.**

By default, this is set to "COM1".

B **Configuring the system behaviors when issuing a receipt (Common settings)**

Specify the system behaviors when a receipt is issued by selecting or deselecting the check box for each behavior.

❶ Display receipt to channel

Select this check box to enable the on-screen display of text information included in each receipt.

❷ Popup the receipt screen

Select this check box to enable the on-screen display of text information included each receipt in a single-screen layout.

After selecting this check box, specify how long the text information is displayed in the [Duration] setting.

❸ Email sending

Select this check box to enable the transmission of text information included in each receipt via E-mail.

> ✏ You can specify the destination address(es) of this E-mail in the [E-Mail address] field(s) in the Communication settings.
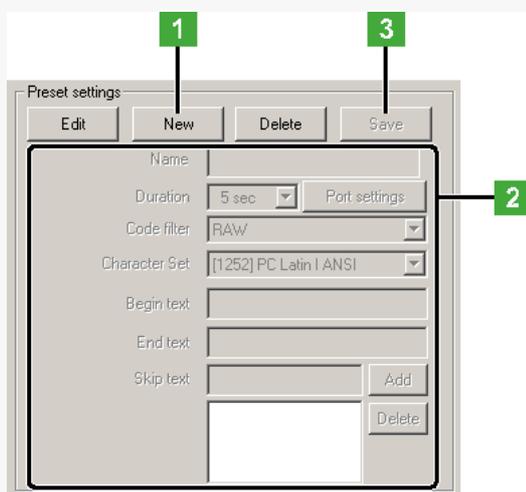
❹ Remote sending

Select this check box to enable the transmission of text information included in each receipt to networked personal computers.

❺ Beeping

Select this check box to enable the beeping of the alarm buzzer when each receipt is issued.

C Presetting a text input device (Preset settings)

You can preset text input devices you want to connect to the digital video recorder.

Registering preset positions

1 Click New .

Now, you can enter device settings. Notice that the label of the New button is now Cancel .

2 Configure each of the following settings.

❶ Name

Type a preset name for the text input device.

The set preset name will be listed in the pull-down menu of the [Preset] setting in Device settings.

❷ Duration

Select the time period (3 to 60 seconds) before each receipt is printed.

❸ Code filter

Select the communication protocol used for transmission from the text input device to the digital video recorder.

④ Character Set

Select the character code transmitted from the text input device to the digital video recorder.

⑤ Begin text

The printing of a receipt begins when this text is detected.
You can specify a single text string only.

⑥ End text

The printing of a receipt ends when this text is detected.
You can specify a single text string only.

⑦ Skip text

The printing of a receipt is skipped when this text is detected.
You can specify two or more text strings.

Type the desired text string in the upper box and Click Add . Then, the text string is listed in order in the lower box.
To delete a text string, select it in the lower box and Click Delete .

⑧ Port settings

In the Text settings, Click Port settings and configure the port settings in the following dialog box.

> Configure the port to match the text input device's current communication settings. If the settings are inconsistent, text information will not be correctly displayed.

| Baud rate
| Data bit
| Parity
| Stop bit
| Flow control

When finished, Click OK to close the dialog box.

3 Click Save .

The text input device has been preset. The preset name will be listed in the pull-down menu of the [Preset] setting in Device settings.

Modifying a registered DVR server setting

1 **In the Device settings, select the preset name from the pull-down menu of the [Preset] setting.**

2 Click Edit .

Now, you can enter device settings.

3 **Modify the preset settings.**

4 Click Save .

The preset device settings for the device have been modified.

Deleting a registered DVR server

1 **In the Device settings, select the preset name in the [Preset] setting.**

2 Click Delete .

The deletion confirmation dialog box opens.

3 Click OK .

The preset name disappears from the pull-down menu of the [Preset] setting in Device settings.

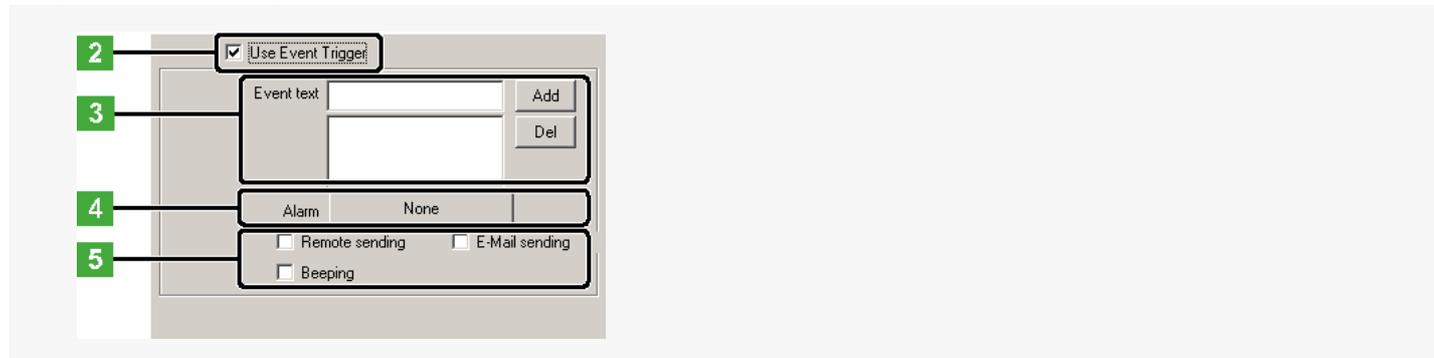## D Configuring the event trigger text (Use Event Trigger)

You can configure the alarm trigger so that an alarm event is raised when a specific keyword(s) is detected in the text.

1 **Select the [Use TEXT Device] check box.**
The [Use Event Trigger] check box is now selectable.

2 **Select the [Use Event Trigger] check box.**

Now, you can enter device settings.

3 In the [Event text] setting, type an event trigger keyword in the upper box.

You can specify two or more keywords.

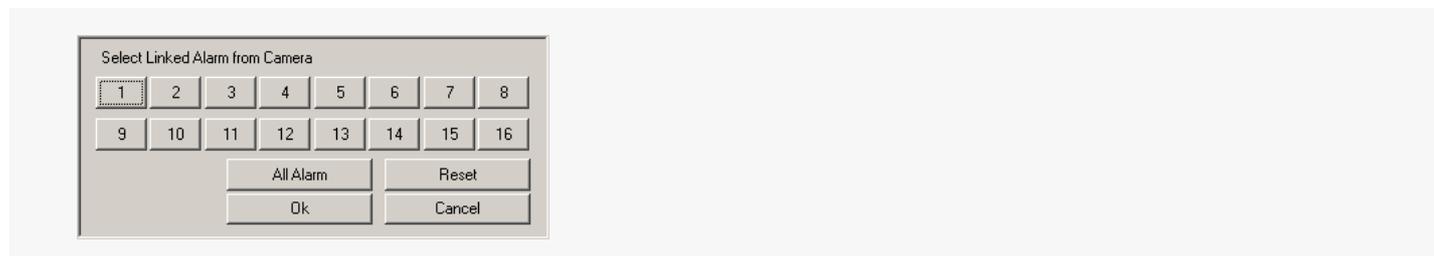When finished, Click `Add` . Then, the text is listed in order in the lower box.

To delete a keyword, select it in the lower box and Click `Del` .

4 In the [Alarm] section, click the button (labeled as `None` by default).

The [Select linked alarm from camera] setting dialog box appears.

In this dialog box, select the alarm OUT number of the terminal, from which you want to output an alarm signal when the event trigger keyword(s) is detected.

You can select more than one camera.

`All Alarm` :

Selects all alarm OUT numbers.

`Reset` :

Deselects all alarm OUT numbers.

`OK` :

Saves the settings and closes the dialog box.

`Cancel` :

Cancels the settings and closes the dialog box.

When finished, Click `OK` .

The dialog box closes. The button in the [Alarm] setting now shows the setting ("None," alarm OUT No., or "All").

5 Configure other linked operation

Configure other actions you want to trigger if event trigger text is detected.

Select the check box for each action you want to trigger. You can select more than one action.

Remote sending:

Select this check box to enable the transmission of text information included in each receipt on which event text is detected to networked personal computers.

Email sending:

Select this check box to enable the transmission of text information included in each receipt on which event text is detected via E-mail.

Beeping:

Select this check box to enable the beeping of the alarm buzzer when event text is detected.

> You can specify the destination address(es) of this E-mail in the [E-Mail address] field(s) in the Communication settings.
>
> To record monitoring video using event text as the alarm trigger, you need to set a Text recording schedule in Schedule settings.
>
> Performing a Text search on the SEARCH screen allows you to search for specific video and text by using keywords from among the data recorded in Text recording.