SANYO

INSTRUCTION MANUAL

DVR Utility Software

VA-SW804
VA-SW80LITE

DVR Utility Software
VA-SW804 Version 1.2

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SANYO

COMPACT
disc

ENGLISH

FRANÇAIS

ESPAÑOL

DEUTSCH

Windows® XP
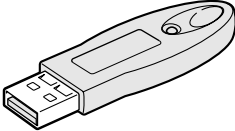
Instruction Manuals
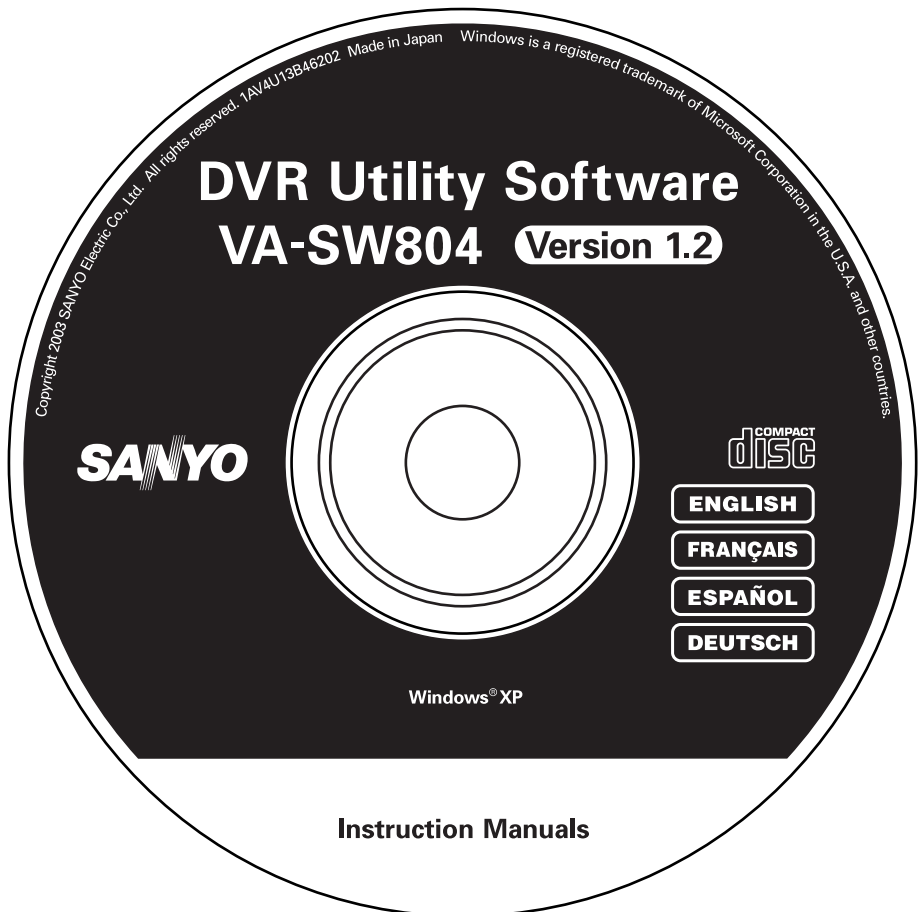
CONTENTS

DVR UTILITY SOFTWARE FEATURES

This software is a remote monitoring system for digital video recorders (DVR) and computer terminals that are connected via a network. It includes an extensive range of functions that are designed to make optimal use of the latest in technology and network features. It can cater to a wide variety of monitoring needs including ease of operation and system expandability.

● **You can create a network monitoring system that is computer-controlled simply by installing the software on a network computer.**

● **Up to eight computers can be connected to control up to a maximum of 1000 DVRs.**

● **Menu settings and recording and playback operations are just a few of the DVR operations that can be controlled across the network by a computer.**

● **Recording parameters can be set individually for each DVR.**

● **DVR image monitoring can be switched between a single screen and 4-screen multi screens. If a 4-channel DVR is connected, images for a maximum of 16 channels can be viewed at once in a single screen.**

● **The system is provided with complete security features. Users that have access to the system are verified by means of a user ID and password, and four different user levels (ID1 to ID4) are available, with different operating privileges for each level.**

SOFTWARE VERSION

Two versions of this software application are available. Upgrade the version if necessary. The descriptions given in this manual apply to both versions.

| VA-SW804	VA-SW80LITE
Sold separately	Included with this unit (DSR-M804/800 series)
Standard version with full functionality	Lite version with limited functions
Accessories: Hardware key (USB type)	Accessories: None

> **In order to activate all of the functions of this software, you will need to connect the hardware key to the USB port. If the hardware key is not connected, the functionality of the software will be limited. (P.9)**

NETWORK CONFIGURATION

This system consists of DVRs, monitoring cameras and computer terminals that are used for remote monitoring. All devices in the system are connected through a dedicated local area network (LAN).

● **Applicable models:**   **DSR-M804 (4-channel type), DSR-M800 (1-channel type)**
  The network configuration allows both models to be connected to the network without any problems.

● **Connection capacity DVRs: When IP address is set to "AUTO": Maximum of 1000**
  When IP address is set to "MANUAL": Maximum of 250
  Computer terminals: Maximum of eight (one master, seven slaves)
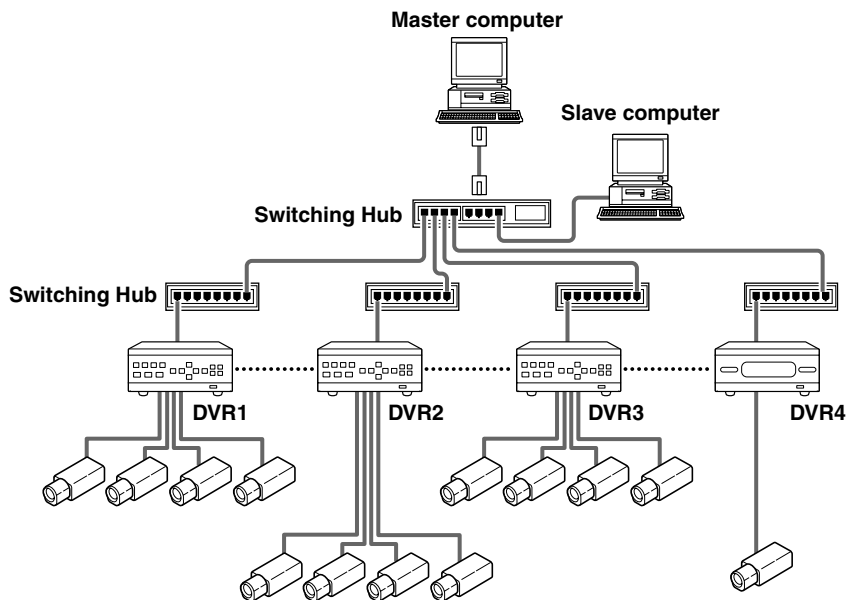
● **IP address setting range**

Computer terminals:	DVRs:
192.168.0.251 – 254	192.168.0.1 – 250
192.168.1.251 – 254	192.168.1.1 – 250
192.168.2.251 – 254	192.168.2.1 – 250
192.168.3.251 – 254	192.168.3.1 – 250
	(When the IP address setting is "AUTO")

Distinction between "Master" and "Slave"

A master computer is a computer terminal that has operating privileges available for registering and deleting DVRs that are connected to the network. The default setting is for one master computer. In contrast, general computer terminals that do not have operating privileges for registering and deleting DVRs are called slave computers, and a maximum of seven of them can be connected. (P.18)

- **When using the software on a network, carry out the required network settings at the DVRs first. IP addresses will be assigned automatically, but the "DVR NAME" and "GROUP" settings can also be changed manually using a computer. (P.20)**
- **You should make sure that the TCP/IP settings for the operating system (OS) that you are using match the computers that are connected to the network. (P.5)**
- **Connect the devices to an independent stand-alone network. Furthermore, check with the network administrator to make sure that the IP addresses that you set do not conflict with IP addresses that are already in use by the network.**

SYSTEM REQUIREMENTS

The following environment is required for the operation of this system.

	Recommended	Single Monitoring
System	IBM PC/AT or Compatible	
CPU	Pentium 4, 3GHz or faster	Pentium III 800MHz
Memory	256MB	
Interface	100Base TX, USB (1.1)	
Display	XGA (1024 × 768 pixel), 16-million color or greater*1 AGP graphics card for hardware overlay Or motherboard with onboard graphics chip*2	
Sound	Sound card that supports 48 kHz stereo playback (PCI connection recommended)*3	
OS	Windows® XP Professional	

*1 If using at a resolution of 1024x768, you will need to select "Auto-hide the taskbar" in the Taskbar Properties menu.
*2 Latest driver with 100% DirectX 8.1 compatibility is required.
*3 If no sound card is available, monitoring of DVR images and audio playback will not be possible when [AUDIO RECORDING] is set to [ON].

Recommended graphics chip	
ATI	RADEON9000 series or later
nVidia	GeForce4 series or later
	Quadro4 series or later
Matrox	MillenniumP series or later
S3 Graphics	Savage4 series or later
Intel (onboard)	845G series or later

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- **The firewall function of some computers may cause the port that is required for communication with the DVR to be isolated. If using the Windows XP firewall function or some other firewall software, disable the operation of the firewall function.**
- **If monitoring images that are distorted because of reasons such as an unstable sync signal, the display may not appear normally even if the PC meets the above specifications.**
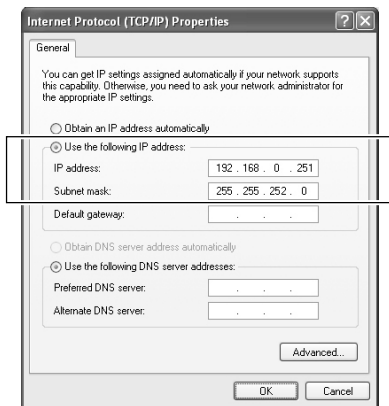
TCP/IP SETTINGS

TCP/IP (Transmission Control Protocol/Internet Protocol) is a standard protocol that is used for the Internet and intranets. When using the software on a network, you should first change the TCP/IP settings as required in accordance with the operating systems (OS) of the various computers that on the network that are to be used. (Operation is only guaranteed under Windows XP)

■ For Windows XP

1 **Click the Network Connections icon in the Control Panel.**
The "Network and Internet Connections" window will be displayed.

2 **Click "Local Area Connections".**
The "Network Connections" window will be displayed, and the settings for the LAN card (Ethernet adapter) being used will appear in the "LAN or High-Speed Internet" column.

3 **Right-click on the LAN card (Ethernet adapter) being used, and then select "Properties (R)" from the pop-up menu.**
The "General" tab window in the "Local Area Connection Properties" window will be displayed.

4 **Check that "Internet Protocol (TCP/IP)" is selected in the list of components used by the Ethernet board that appears in the "This connection uses the following items: (O)" box.**
If "Internet Protocol (TCP/IP)" is not selected, select it.

5 **Click [Properties (R)].**
The "General" tab window in the "Internet Protocol (TCP/IP) Properties" window will be displayed.

6 **Select "Use the following IP address: (S)" and then type in the IP address and the subnet mask.**
Type in "255.255.252.0" as the subnet mask as shown in the illustration.

7 **Check the settings, and then click [OK].**
The display will return to the "Local Area Connection Properties" window.

8 **Click [OK].**
This completes the TCP/IP settings.
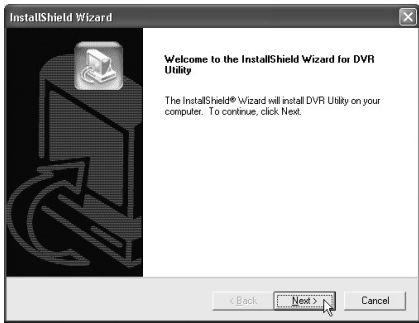
INSTALLING THE SOFTWARE

Install the DVR Utility Software to the computer that is connected to the network. The following procedure will install the hardware key driver and the MP2 viewer at the same time.

1 **Insert the DVR Utility Software CD into the CD-ROM drive of the computer.**
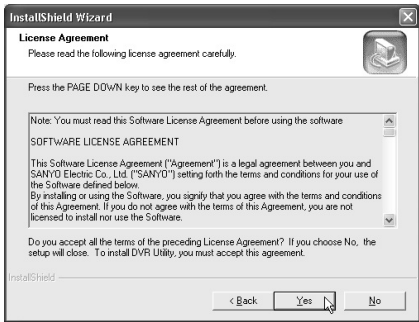The "Welcome" window appears.

2 **Click [Next] in the "Welcome" window.**

**3** **Click [Yes] in the "License Agreement" window.**
The License Agreement will be displayed. Be sure to check the terms of the License Agreement carefully.

**4** **Click [Next] in the "Choose Destination Location" window.**
Normally you should accept the default location without changing it. If you would like to change the destination folder for installing the software, type the path to the folder directly into the box, or click [Browse] and select the folder to be used for the installation.
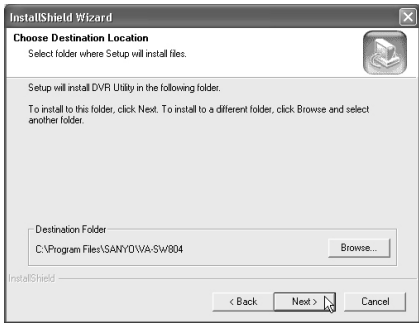

5 **Click [Next] in the "Select Program Folder" window.**
This lets you check the program folder where the program icon will be added. Normally you should accept the default folder without changing it. If you would like to change the program folder, type the folder name into the box, or select an existing folder from the list underneath.

INSTALLING THE SOFTWARE
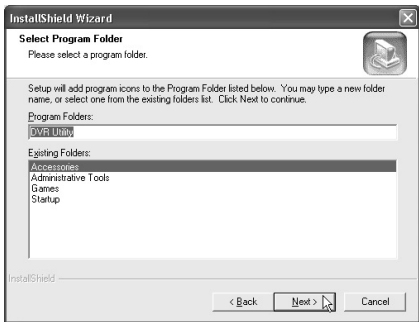
6 Installation will begin.

Installation of the software will begin, and a progress bar showing the installation progress will appear in the "Setup Status" window.
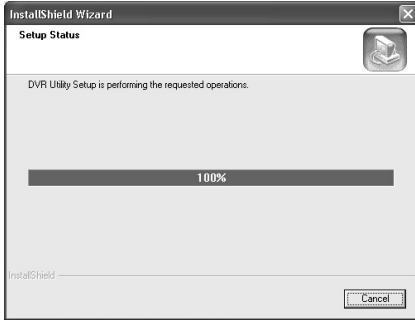
7 Restart the computer.

Click [Finish] in the "InstallShield Wizard Complete" window to restart the computer automatically. Once the computer has restarted, installation is then complete.

8 Shortcut icon display

After restarting the computer, a shortcut icon for the software will appear on the desktop. Double-click the icon to start the software.

● **Version Updates**

When updating the DVR Utility Software from version VA-SW800 to VA-SW804, you can follow the procedure given below to reuse the DVR registration list that was created by the VA-SW800 version.

① **Uninstall version VA-SW800.**

② **Install version VA-SW804.**

③ **Display the "SETUP" window, and open the "REGISTER DVR" tab.**

④ **With the computer connected to the LAN, select "MANUAL" for "TCP/IP ADDR.".**

⑤ **Click [CREATE LIST].**
After a brief period, the DVR registration list that was created by the VA-SW800 version will be regenerated and displayed.

⑥ **Click [OK].**
The list details will be stored on the computer and applied to the DVRs.

Refer to "INITIAL SETUP (SETUP WINDOW)" (P.18 – 22) for further details on these operations.

LOGGING IN/LOGGING OFF/DISPLAY LANGUAGE SETTING

The user level for each user on the network can be set to one of four levels. The user level is verified by means of the user name and password that are entered when the user logs in.

■ User Level

Different operating privileges are set for each user level. The range of operations that are permitted to be carried out by users depends on their user level. Set the user levels in accordance with the operating environment.

User Level		1	2	3	4
User Name		ID1	ID2	ID3	ID4
Monitoring live images	DVR selection, volume adjustment, etc.	○	○	○	○
Playback operations			○	○	○
Search operations	Time/date search (SEARCH)		○	○	○
	Alarm search		○	○	○
	Alarm thumbnail search		○	○	○
Saving operations	Saving still images		○	○	○
	Download		(○)	(○)	○
	Timer download *		(○)	(○)	○
Recording operations	Normal recording			○	○
	Timer recording			○	○
Default settings	Setting the language, TV system, master computer, download operation rights, password, automatic clock and sequence interval				○
	Registering and deleting DVRs				◎
Clock and system update settings	Clock settings				○
	Firmware updates				○
	System-related information display				○
Menu settings	DVR monitor language, daylight saving time and external time settings				○
	Recording condition setting				○
	Timer recording				○
	Holiday settings				○
	Display information and warning buzzer settings				○
	Monitoring window settings				○
	Motion sensor and camera title settings				○
Broadcast transmission settings *	Normal recording, timer recording			○	○
	Menu upload, Clock set, System update				○
Tamper detection	Checking for image tampering		○	○	○
Password (Default setting)		1111	2222	3333	4444

* VA-SW80LITE has restricted operation for some functions.

Operations marked with ◎ are limited to the master computer.

The permission levels in brackets are set using the SYSTEM SETUP tab in the SETUP window. (P.19)

■ Logging In

1 **Hardware key installation**

Insert the accessory hardware key into the USB port of the computer.

If the hardware key is not installed, the software will operate as the Lite version, and some functions will be disabled. (P.8, 11)
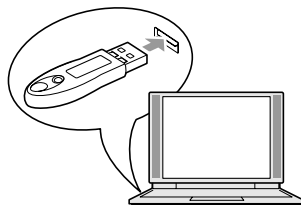
2 **Serial No. input (VA-SW80LITE)**

When the software is run for the first time after installation, the serial number input dialog box will be displayed. Type in the specified serial number. If the hardware key is installed, the serial number dialog box will not be displayed again the next time the software is run.

However, the serial number must be typed in at the following times.

- • When the hardware key is not installed
- • When running VA-SW80LITE (limited function version)
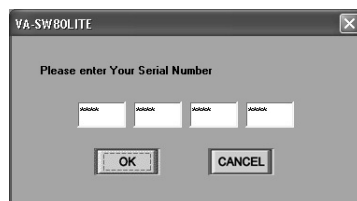
> If the number entered does not satisfy the checksum conditions, the input dialog box will be displayed again. If an incorrect serial number is typed in three times in succession, "AUTHENTICATION ERROR" will be displayed and the only available operation will be to exit (log off).
> The serial No. is listed on the label that is affixed to the pocket of the VA-SW80LITE CD-ROM disk.

3 **Authentication check**

When the software is run, the window for entering the user name and the password will be displayed. When logging in, type your user name into the "USER NAME" box and type the password for verification into the "PASSWORD" box. Then click [OK] or press the [ENTER] key. (Refer to username and password on page 8.)
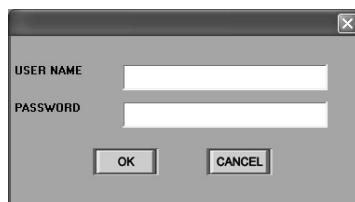
> If the password typed in is incorrect, the window for entering the user name and the password will be displayed again and you will need to type the password in once more. In addition, if you click a button to use an operation that is not permitted by the user level that you have logged in at, the window for entering the user name and the password will be displayed again and you will be required to type in the user name and password corresponding to the user level for that operation.

> After the software has been started, you can change the password in the "SETUP" window. (P.19)

■ Logging Off

Click [icon] on the toolbar to close the connection.

Make sure that you carry out this disconnect operation when exiting the software and closing the program window.

■ Display Language Setting

This software uses English as its default display language. However, you can use the SYSTEM SETUP tab in the "SETUP" window to set the display language to any one of the following four languages. (P.18)

When using the software, first change the display language setting to the required language.

Available languages:

English, French, Spanish, German

After you have changed the setting, restart the application. The displays will then appear in the newly selected language.
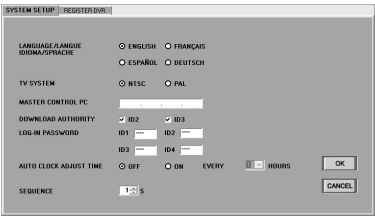
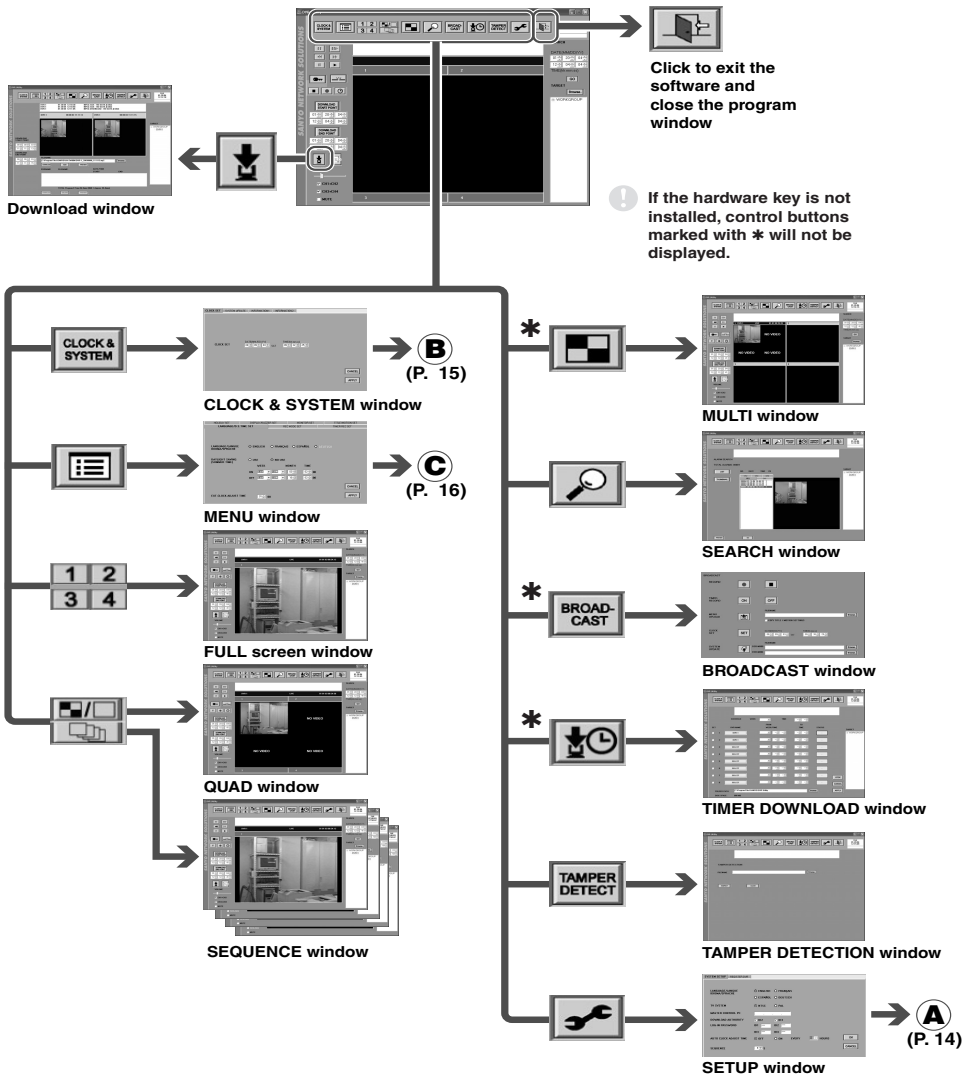## ■ Display While Communication is in Progress

When a screen operation has been carried out that requires the system to wait for a response from the DVR, the following message box will be displayed and the green indicator will flash.

The message box will disappear once communication is complete (or a communication error or other error) is generated.

BASIC WINDOW FLOWCHART

When the software is started and a user has logged in, the main window for live image monitoring and recording/playback is displayed. The software lets you display a variety of operating windows and setting windows starting from the main window, as shown in the flowchart diagram below.

Click to exit the software and close the program window

Download window

If the hardware key is not installed, control buttons marked with ✳ will not be displayed.

CLOCK & SYSTEM window → **B** (P. 15)

MENU window → **C** (P. 16)

FULL screen window

QUAD window

SEQUENCE window

MULTI window

SEARCH window

BROADCAST window

TIMER DOWNLOAD window

TAMPER DETECTION window

SETUP window → **A** (P. 14)

FUNCTIONS OF EACH MAIN WINDOW (MONITORING, RECORDING AND PLAYBACK WINDOW) COMPONENT

The main window is the initial window that is displayed the first time the software is run. This is the basic window for carrying out live image monitoring and recording and playback operations. With the DSR-M804 which has 4-channel capability, the main window is displayed as a 4-screen quad screen, but the window can also be switched to full screen (single screen) and multi-screen (16-screen) displays. The toolbar and date/time that appear at the top of the window appears in the same way for all windows, except when the login window is displayed at startup.
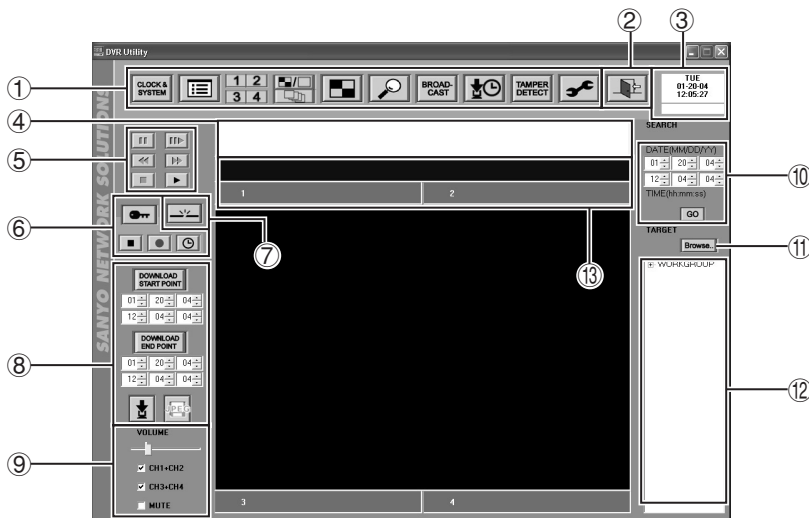
① **Toolbar**

This lets you use basic functions and open different setting windows with a single click. Click the required icon to use a function or window.

● **CLOCK & SYSTEM (P.23)**

This displays the "CLOCK & SYSTEM" window.

Used for clock setting, firmware updating and checking system-related information.

● **MENU (P.28)**

This displays the "MENU" window.

This window is used to carry out menu settings such as setting recording parameters.

● **FULL (P.43)**

The specified channel is displayed in a full screen (single screen).

● **QUAD (P.43)**

Images for all channels from the connected DVR are displayed in a 4-screen quad screen.

● **SEQUENCE (P.44)**

Images for all channels from the connected DVR are displayed in sequence with automatic switching.

● **MULTI (P.43)**

Images from four 4-channel DVRs are allocated to windows in a 4-screen split screen, with a maximum of 16 screens being displayed in the multi screen.

● **SEARCH (P.55)**

This displays the "ALARM SEARCH" or "ALARM THUMBNAIL SEARCH" window.

This window is used to search for alarm recordings.

12 English

FUNCTIONS OF EACH MAIN WINDOW (MONITORING, RECORDING AND PLAYBACK WINDOW) COMPONENT

● **BROADCAST (P.41)**

This displays the "BROADCAST" window.

This window is used for issuing batches of basic commands such as commands to start or stop recording to the DVRs that are connected to the system.

● **TIMER DOWNLOAD (P.66)**

This displays the "TIMER DOWNLOAD" window.

Timer reservations can be made for downloading recorded images.

● **TAMPER DETECT (P.74)**

This displays the "TAMPER DETECT" window.

This window lets you determine if any tampering has been carried out on recorded images.

● **SETUP (P.18)**

This displays the "SETUP" window.

This window is used to make initial program settings after the software has been installed.

② **EXIT**

Click to exit the software and close the program window

③ **Date and time display**

This shows the date and time set by the computer's internal clock.

The download status is displayed underneath the date and time. (P.69)

④ **Message display window**

Results for details such as error and alarm status and setting operations are displayed in sequential messages.

<DVR registration name, time of occurrence, details of occurrence>

Display example:
DVR-3 11-05-02 15:45:40 LIVE ERROR BROADCAST 11-05-02 15:50:20 DONE

- **The only error messages that are displayed are system errors such as communication errors.**
- **When the software is exited, the information is discarded from the display, but it can still be found in the log file that is saved in the log file sub-folder of the folder that the software has been installed into. (C:\ProgramFiles\SANYO\VA-SW804\log)**

⑤ **Playback control panel (P.54)**

This is used when playing back recorded images.

⑥ **Recording control panel (P.49 – 51)**

Use when manually recording the monitored images.

⑦ **Disconnect DVR (P.48)**

This breaks the connection to a DVR.

⑧ **Saving control panel (P.59, 60)**

Saves still images and downloads recorded images.

⑨ **Audio adjustment panel (P.48)**

Audio output items such as volume, channel selection and muting can be adjusted for both live and recorded images.

⑩ **Time/date search (SEARCH) (P.55)**

This lets you play back recorded images by specifying a date.

⑪ **Browse**

Click this button to specify files that are saved on a computer drive. Folders and files can be viewed in a list, and you can specify a file by typing its filename into the window.

The only types of file that can be viewed are files in MP2 format that have been downloaded from a DSR-M800 series. Files that have been saved in JPEG format cannot be viewed.

⑫ **TARGET**

The DVR names and attribute group names that are recorded by the computer are displayed in a tree list in the window. Menu settings and monitoring, recording and playback operations can be carried out by clicking a DVR name in the list to specify a DVR.

⑬ **Title bar (P.45)**

Image information is displayed on the bar in a two-level structure for DVRs and for cameras.

When a multi screen is displayed, a window can be selected by clicking on its title bar.

BASIC NETWORK SETTINGS (User Level: ID4)

In order to use a computer to control DVRs that are on the network, you first need to set some basic network-related system conditions. Click the icons on the toolbar in the main window to display the respective setting windows, click on the tab indexes to specify a particular setting menu, and use these setting menus to make the settings.

■ Initial Setup: SETUP Window (P.18)

This window contains the following two tabs. They are used to carry out initial settings relating to the network configuration and the system environment.

① **SYSTEM SETUP tab**
- Display language setting
- Setting the TV format (NTSC/PAL) in accordance with the input signals
- Setting the master computer address
- Download operation limit level setting
- Setting and changing passwords
- Setting the automatic adjustment function for DVR clocks
- Sequence screen switching interval setting

② **REGISTER DVR tab**
(Operation only possible at master computer)
The options in this tab let you add and remove DVRs on the network from the DVR registration list. In addition, it can be used to list the properties of each registered DVR.

①**SYSTEM SETUP tab**
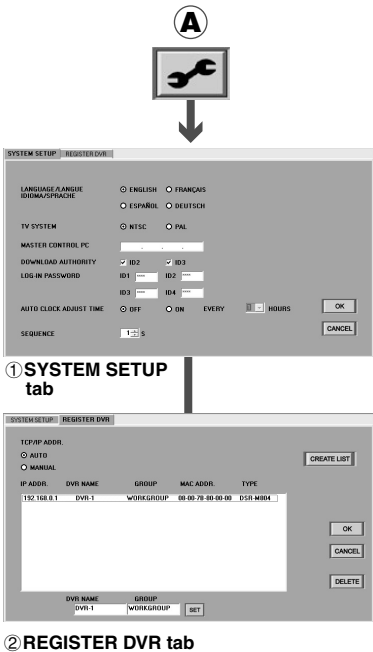
②**REGISTER DVR tab**

■ Clock Settings and System Updates: CLOCK & SYSTEM Window (P.23)

This consists of the following four types of tabs which can be used for operations such as setting the clock, updating the firmware and displaying system information.

① **CLOCK SET tab**
This is used to set the current time for selected DVRs.

② **SYSTEM UPDATE tab**
This is used to update the firmware for selected DVRs.

③ **INFORMATION1 tab**
This is used to display DVR setting information and information about the hard disk, and is also used for hard disk initialization.

④ **INFORMATION2 tab**
This shows information such as the DVR usage time, power outages and the firmware version.

> **With the DSR-M800, the firmware version is not displayed.**
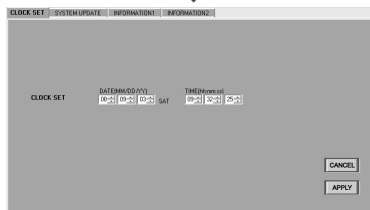
①CLOCK SET tab
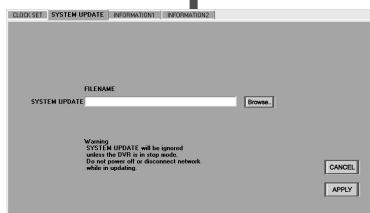
②SYSTEM UPDATE tab
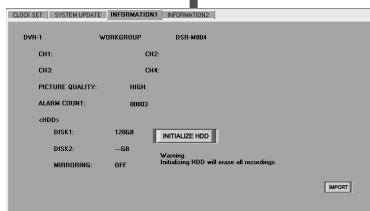
③ INFORMATION1 tab

④ INFORMATION2 tab

■ Menu Settings: MENU Window (P.28)

This window contains the following seven tabs. They are used to carry out operations such as setting recording conditions and setup environments for selected DVRs.

① **LANGUAGE/D.S.TIME SET tab**

This is used to make settings such as the display language for the monitor connected to the DVR, daylight saving settings, and also lets you adjust the time for connected peripheral devices.

② **REC MODE SET tab**

This is used to set the recording conditions for DVRs.

③ **TIMER REC SET tab**

This is used to set timer recording conditions for DVRs.

④ **HOLIDAY SET tab**

This is used to set holiday settings.

⑤ **DISPLAY/BUZZER SET tab**

This is used to set the display information for the monitor connected to the DVR, and also lets you make warning buzzer settings.

⑥ **MONITOR SET tab**

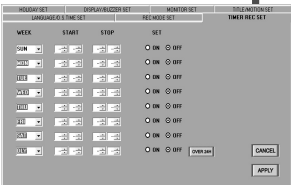This is used for monitor window settings at the DVR

⑦ **TITLE/MOTION SET tab**

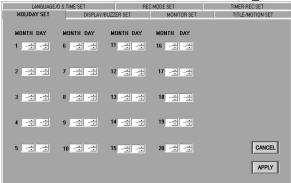This sets the motion sensor and camera title settings for each DVR channel.
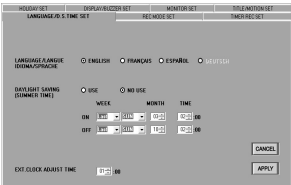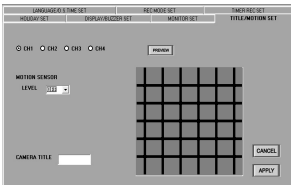

①**LANGUAGE/ D.S.TIME SET tab**
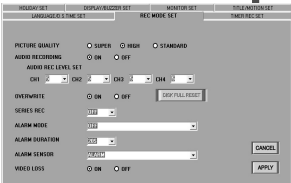
②**REC MODE SET tab**

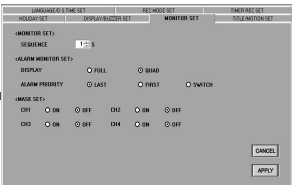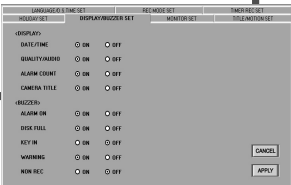③**TIMER REC SET tab**

④**HOLIDAY SET tab**

⑦**TITLE/MOTION SET tab**   ⑥**MONITOR SET tab**   ⑤**DISPLAY/BUZZER SET tab**

OPERATION OF SETTING BUTTONS

The following operation buttons are displayed in the various setting windows such as the initial setting and menu setting windows. The basic functions of each button are the same for each window.

	Button	Button function and related operations
Table setting	APPLY	Tab input data is saved, but it is not sent to the DVR. • When a button is clicked, the setting data is checked, and if an error is found, an error message is displayed. • If the data has been saved correctly, the tab index changes to yellow and a message will be displayed saying that the unit is ready to upload to the DVR. (Menu setting)
	CANCEL	Cancels input and setting data. • If [APPLY] has not been clicked yet, the input data will be canceled. • If [APPLY] has already been clicked, the original setting values can be restored by clicking the [CANCEL] button and then using [IMPORT] or [OPEN] to load the original data. • If an [IMPORT] or [OPEN] operation has not yet been carried out, the values in the displayed tab will be returned to the default settings. • If the tab index has changed to yellow, use the [CANCEL] operation to return it to the normal color. (Menu setting)
Saving and loading	IMPORT	This loads the current menu data from the selected DVR. • Menu data can also be loaded by double-clicking the DVR name in the "TARGET" window. • If the tab index has changed to yellow, use the [IMPORT] operation to return it to the normal color.
	OPEN	This loads the data that has been saved in the setting file on the computer's hard disk.
	OK	This uploads the setting data to a DVR. • For menu settings, the data that will be uploaded is the data for tabs with indexes that are displayed in yellow. • After the data is uploaded, the tab indexes will return to their normal color.
	SAVE	Saves the data being edited onto the hard disk of the computer. • The "Save as" dialog box will be displayed. Specify the destination folder and filename and then click [SAVE]. • File format: DSR-M804 Series Setup File (*.hbc) • If carrying out a menu upload from the "BROADCAST" window, save the menu data first.
	DELETE	Clears a DVR registration (only displayed for the REGISTER DVR tab).

INITIAL SETUP (SETUP WINDOW)　(User Level: ID4)

The "SETUP" window is the first window that is displayed after the software has been installed.

It contains two tabs: the "SYSTEM SETUP" tab and the "REGISTER DVR" tab. These tabs are used to carry out initial settings relating to the network configuration and the system environment. Click 🔧 on the toolbar to display the "SETUP" window, and then click a tab index to specify a tab.

■ SYSTEM SETUP tab
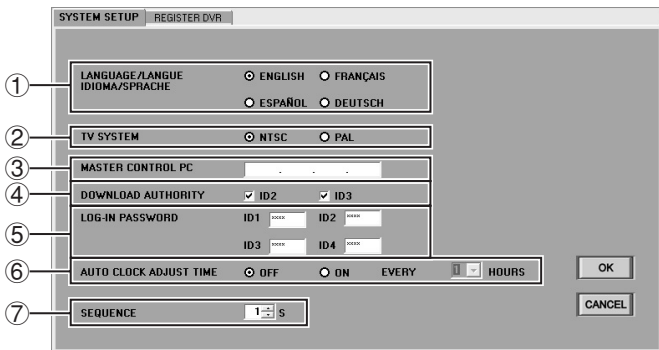
① **LANGUAGE (Default setting: ENGLISH)**
This sets the language that the software uses for displays. Select the button corresponding to the required language and then click [OK]. After this setting has been made, the display language will change the next time the software is started.

Available settings:
English, French, Spanish, German

② **TV SYSTEM (Default setting: NTSC)**
This sets the TV format (NTSC/PAL) in accordance with the input signals. Select a button and then click [OK].

Available settings	Quality	Resolution (pixel)
NTSC (30 fps)	SUPER	720 × 480
	HIGH (Default setting)	720 × 480
	STANDARD	720 × 480 (DSR-M804) 352 × 480 (DSR-M800)
PAL (25 fps)	SUPER	720 × 576
	HIGH (Default setting)	720 × 576
	STANDARD	720 × 576 (DSR-M804) 352 × 576 (DSR-M800)

❗ **The quality setting can be changed using "REC MODE SET" in the "MENU" window. (P.30)**

③ **MASTER CONTROL PC (Default setting: Blank)**
This sets the master computer for the network. Type in the IP address for the computer to be used and then click [OK].

❗ **Any settings or changes made to MASTER CONTROL PC will only take effect after the software has been shut down and restarted.**

18 English

④ **DOWNLOAD AUTHORITY**
(Default setting: ID2, ID3)
This sets the download operation permissions for ID2 and ID3 user levels. Use the buttons to specify which operations are to be allowed for each user level and then click [OK]. Operations can also be enabled for user level ID2 and disabled for the higher user level ID3.

📝 **When images are downloaded, you can browse through the images even if the MASK function (for stopping the images from a specified channel from being displayed on the window), has been activated for that channel. This setting is used when download operation permissions have been restricted in order to prevent browsing of masked images.**

⑤ **LOG-IN PASSWORD**
(Default setting: ID1: 1111, ID2: 2222, ID3: 3333, ID4: 4444)
You can set the passwords for different user levels by the following procedure. Passwords consist of alphanumeric characters, and can be four to eight characters in length.

● **Example of changing: To change the password for ID2 from "2222" to "1234"**

1 Type the new password (1234) into the password entry box and then click [OK].
The "Change password" dialog box will be displayed for you to confirm the password change.
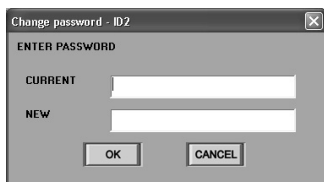
2 Type the current password (2222) into the "CURRENT" box of the "Change password" dialog box, and type the new password once more into the "NEW" box, and then click [OK].
If the passwords that you entered are correct, the password will then be changed. You can change the passwords for other user levels in the same way.

❗ **If either the current or new password that you type into the box is incorrect, an error message will be displayed. If this happens, re-type the correct passwords.**

⑥ **AUTO CLOCK ADJUST TIME**
(Default setting: OFF)
This function is used to automatically adjust the time for all DVRs to match the time set by the computer's clock. Use the button to select "ON", specify the adjustment interval, and then click [OK]. The automatic clock adjustment function will operate each time the specified interval of time has passed.
Available settings: 1/2/3/6/12/24 hours

❗ **This function is invalid if the time will be switching to or from summer time within the current hour.**

⑦ **SEQUENCE (Default setting: 1)**
Use the spin buttons to set the display time (window switching interval) for each channel in the sequence screen.
**Available settings:** 1–30 seconds

● **Refer to page 17 for explanations of the setting buttons (OK/CANCEL).**

■ REGISTER DVR tab (Operation only possible at master computer)

The operations in this tab are limited to the master computer only. They let you register and delete DVRs that are connected to the monitoring network. Slave computers obtain the registration information by communicating with the master computer.

● Names and functions of each window component
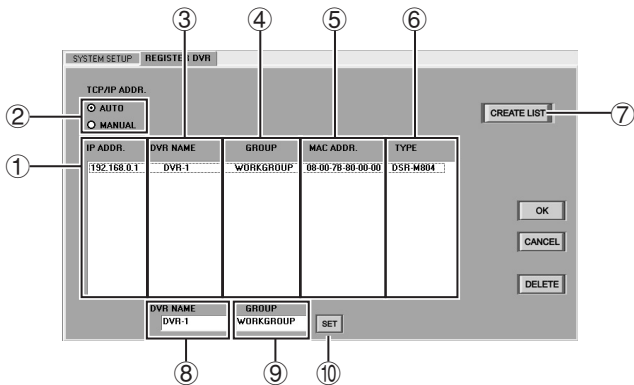
① **TCP/IP addresses (IP ADDR.)**
This shows the addresses for registered DVRs.

② **TCP/IP address select buttons (AUTO/MANUAL)**
These buttons select the method (automatic or manual) to use for assigning DVR addresses.

③ **DVR names (DVR NAME)**
This shows the registration names for the DVRs.

(When a new DVR is registered, the last digits of the MAC address are used as the default setting.)

④ **Attribute groups (GROUP)**
This shows attribute groups (such as setup location) for registered DVRs.

⑤ **Media Access Control Address (MAC ADDR.)**
This shows the unique machine addresses for each DVR. These addresses are displayed automatically.

⑥ **DVR type (TYPE)**
Shows the types of DVRs connected.

● DSR-M804/DSR-M800

⑦ **Registration list create button (CREATE LIST)**
In AUTO mode, the list is created using the Automatic setting method (P.21), and in MANUAL mode, it is created using the Manual setting method (P.22).

⑧ **DVR name entry box (DVR NAME)**
When registering a new DVR, type the name for the DVR in this box using 10 alphanumeric characters or less.

(When a new DVR is registered, the last digits of the MAC address are used as the default setting.)

⑨ **DVR attribute group entry box (GROUP)**
When registering a new DVR, type the attribute group (such as setup location) for the DVR in this box using 10 alphanumeric characters or less.

⑩ **SET button**
When registering a new DVR, click this button after typing in the required data in the "DVR NAME" and "GROUP" boxes. The new DVR will then be registered.

● **Refer to page 17 for explanations of the setting buttons (OK/CANCEL/DELETE).**

● **Registering a new DVR**
A maximum of 1000 DVRs that are connected to the network can be registered by the computer.

To register a new DVR, you can use either the automatic or manual method of assigning the TCP/IP address.

A **Automatic setting method**
(A maximum of 1000 devices can be set.)

1 **Select "AUTO" in the "TCP/IP ADDR." box.**
The automatic setting mode for addresses will be enabled.

2 **Click CREATE LIST .**
The buttons in the window will be locked.

3 **Press and hold the [STILL] button on the front of the DVR that is being connected.**
Keep pressing until the DVR's built-in buzzer starts making short beeps. The addresses will be assigned automatically and they will be displayed in the "TCP/IP Address", "MAC Address" and "DVR Type" registration lists.

> **If the buzzer makes a series of short beeps followed by a longer beep, it means that an error has occurred when assigning the addresses. If this happens, repeat the operation.**

If there is more than one DVR to be registered, repeat this operation for each DVR.

4 **Click CREATE LIST .**
The buttons will be unlocked.

Select the address that is displayed (in blue) in the registration list and then double-click the address.

5 **Type the DVR name and attribute group into the "DVR NAME" and "GROUP" boxes respectively, and then click SET .**
The DVR name and attribute group that have been typed in will be displayed in the registration list.

6 **Click OK .**
The selected DVR will then be registered by the computer, and the "DVR Name" and "Attribute Group" settings will be applied to the DVR.

(Only capital letters can be entered.)

B **Manual setting method**
(A maximum of 250 devices can be set.)

1 **Select "MANUAL" in the "TCP/IP ADDR." box.**
The manual setting mode for addresses will be enabled.

2 **Manually set "IP ADDRESS" using the "NETWORK SET" menu for the DVR.**
Enter a number between 001 and 250 for the last three digits of the address.

3 **Click** CREATE LIST .
The buttons in the window will be locked.

4 **Registration list display**
The "TCP/IP Address", "MAC Address" and "DVR Type" that have been set manually will be displayed in the registration list.

5 **Click** CREATE LIST .
The buttons will be unlocked.

Select the address that is displayed (in blue) in the registration list and then double-click the address.

6 **Type the DVR name and attribute group into the "DVR NAME" and "GROUP" boxes respectively, and then click** SET .
The DVR name and attribute group that have been typed in will be displayed in the registration list.

7 **Click** OK .
The selected DVR will then be registered by the computer, and the "DVR Name" and "Attribute Group" settings will be applied to the DVR.

Repeat the above procedure to register other new DVRs.

(Only capital letters can be entered.)

● **Deleting a DVR registration**
Follow the procedure below to delete a DVR registration.
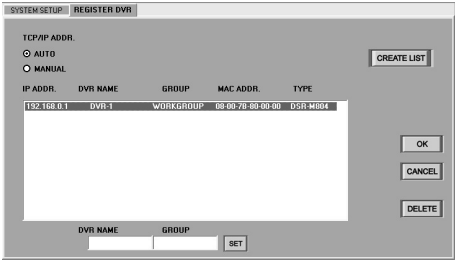
1 **Specify the address of the registration to be deleted.**
If you click on the address line of the registration list to be deleted, the display color will change to blue.

2 **Disconnect the connection cable from the DVR to be deleted from the registration.**
If you try to delete the DVR's registration while the DVR is still connected to the network, an error will occur.

3 **Click** DELETE .
A dialog box asking you to confirm the registration deletion will be displayed. Click [OK] to confirm the deletion.

The registration for the specified DVR will be deleted from the registration list.

Repeat the above procedure to delete other DVR registrations.

CLOCK AND SYSTEM UPDATE SETTINGS

The "CLOCK & SYSTEM" window contains four tabs which can be used for tasks such as setting the time, updating the firmware and displaying system-related information. Click [CLOCK & SYSTEM] on the menu bar to display the setting window and then click a tab index to select a tab.

■ CLOCK SET tab

(Default setting: according to the computer's internal clock)

Use the following procedure to set the current date and time for selected DVRs.

1 **Click the "CLOCK SET" tab index.**
The "CLOCK SET" tab window will be displayed.

2 **Select a DVR in the "TARGET" window.**
The display color for the selected DVR will change to blue.

3 **Use the spin buttons to set the date (DATE [MM/DD/YY]) and the time (TIME [hh:mm:ss]), and then click [APPLY].**
The specified date and time will then be set.

To cancel the date and time setting, click [CANCEL] before clicking [APPLY].
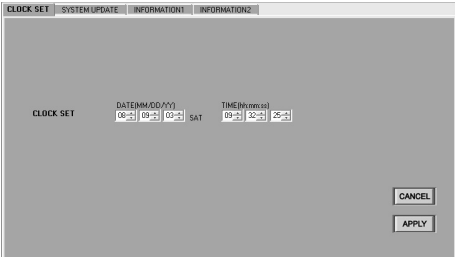
> ● **Setting range: January 1, 2002 – December 31, 2036**
> ● **The date order will be according to the Windows environment settings.**

■ SYSTEM UPDATE tab

Use this tab window to specify a filename to use for updating DVR firmware.

1 Click the "SYSTEM UPDATE" tab index.
The "SYSTEM UPDATE" tab window will be displayed.

2 Select a DVR in the "TARGET" window.
The display color for the selected DVR will change to blue.

3 Click [Browse..] (①).
Reference files will be displayed in the dialog box.

4 Specify the update file (Example: ABCDEF.BIN), and then click [Open] (④).
The full path and filename for the update file will appear in the "FILENAME" box (②) in the "SYSTEM UPDATE" window.

(Example: c:\Program Files\SANYO\ VA-SW804\ABCDEF.BIN)

5 Click [APPLY] (③).
A dialog box asking you to confirm the update will be displayed. Click [YES] to continue with the update.

To change the name of the file that has been entered, click [CANCEL] before clicking [APPLY].

6 Run the update.
A dialog box showing the progress of the update will be displayed, and the green indicator will flash.
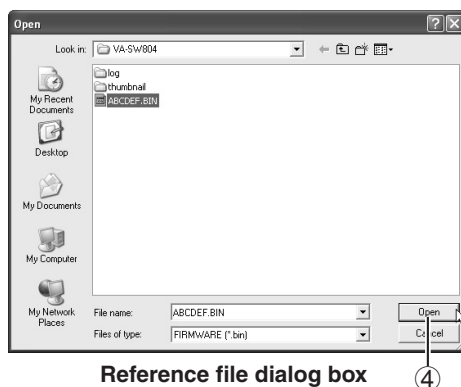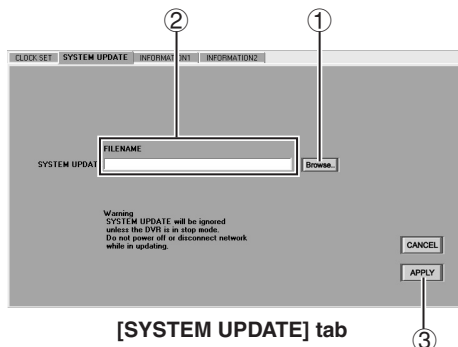
[SYSTEM UPDATE] tab

Reference file dialog box

- **Only firmware files that have been provided by SANYO can be used for updates. No other files can be used. If you try to use a file that has not been provided by SANYO to update the DVR's firmware, damage to the DVR may result.**
- **During recording, playback and search with the DVR, update is not possible.**
- **It takes several minutes for the update to be completed, so do not disconnect from the network or turn off the power for the computer or DVR during this time.**

■ INFORMATION1 tab

As well as displaying DVR setting information and hard disk-related information, this can be used to initialize the hard disk. Specify a DVR name in the DVR list in the "TARGET" window and then click **IMPORT**, or double-click the DVR name. The information for the selected DVR will be loaded and displayed.

<DVR setting information>
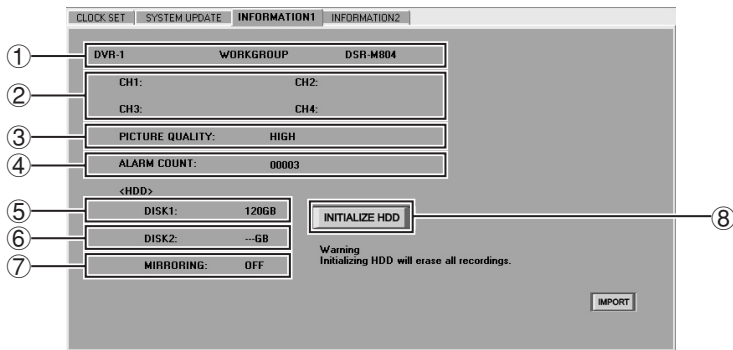
① **DVR profile**
Shows the DVR name, attribute group, and DVR type.

② **CH1 to CH4**
Shows the camera titles for each channel that has been set in the "MENU" window.

③ **PICTURE QUALITY**
Shows the picture quality that has been set in the "MENU" window.

④ **ALARM COUNT**
Shows the cumulative number of alarms.

<Hard disk information and initialization>

⑤ **DISK1**
Shows the total capacity of the standard hard disk.

⑥ **DISK2**
Shows the total capacity of the expansion hard disk.

⑦ **MIRRORING**
This displays the mirroring settings for the DVR when an additional hard disk has been installed.

Display items:
- **ON:** Mirroring is set.
- **OFF:** Mirroring is not set.

What is mirroring?

Mirroring recording is the term used to refer to recording the same images on two hard disks when an extra hard disk has been added. Turning on mirroring is a backup option so that if the data recorded on one disk becomes corrupted for some reason, the data from the other disk that was recorded correctly can be retrieved instead.

⑧ **INITIALIZE HDD**
This initializes the hard disks in the DVR.
If you click INITIALIZE HDD , a confirmation
dialog box will be displayed. Click [Yes] to
continue with the hard disk initialization.
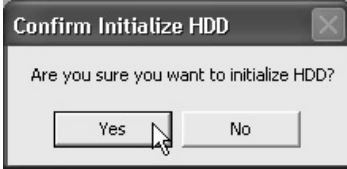
- **When a hard disk is initialized, all images that are stored on that hard disk will be erased. You should make a backup of any important data on a separate storage device before carrying out the initialization.**
- **If an additional hard disk has been added, be sure to initialize it.**
- **Do not turn off the power while the hard disk is being initialized.**

■ INFORMATION2 tab

Shows information such as the DVR usage time, power outages and the firmware version. Specify a DVR name in the DVR list in the "TARGET" window and then click IMPORT , or double-click the DVR name. The information for the selected DVR will be loaded and displayed.
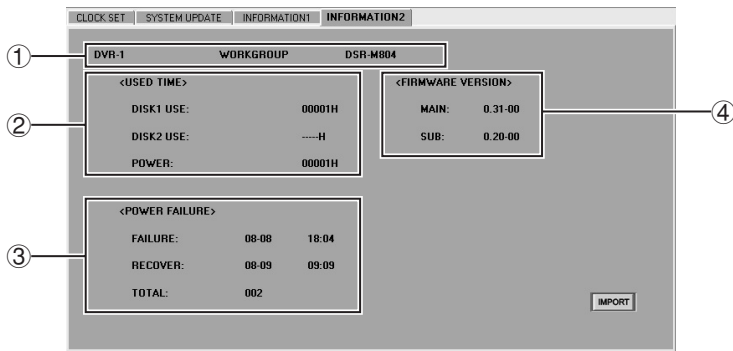
① **DVR profile**
   Shows the DVR name, attribute group, and DVR type.

② **USED TIME**
   This shows the usage time for the selected DVR.

   • **DISK1 USE:** Total usage time for disk 1
   • **DISK2 USE:** Total usage time for disk 2
   • **POWER:** Total power on time for the DVR

③ **POWER FAILURE**
   This shows the power failure history for the selected DVR.

   • **FAILURE:** Date and time of most recent failure
   • **RECOVER:** Date and time of most recent restore
   • **TOTAL:** Total number of power outages

④ **FIRMWARE VERSION**
   Shows the firmware version for the specified DVR.

   • **MAIN:** Main firmware version
   • **SUB:** Sub firmware version

> **With the DSR-M800, the firmware version is not displayed.**

MENU SETTINGS (MENU WINDOW)   (User Level: ID4)

The "MENU" window contains 7 tabs which are used to set the DVR operating conditions. Click [⊞] in the menu bar to display the setting window.

● **Basic flow of menu settings**

1 Select a setting tab.
Click the tab index to switch to the specified tab.

2 Click [IMPORT] underneath the "MENU" window if necessary.
The current setting data is loaded and displayed.

3 Set the menu items in the tab.

4 Click [APPLY] in the tab.
The settings will saved in the editing table and the tab index will change to yellow.

5 Click [OK] underneath the "MENU" window.
The settings will be uploaded to the DVR, and the tab index will return to the normal color. You can click [OK] after changing the settings for more than one tab if desired.

■ LANGUAGE/D.S.TIME SET tab

Click on the DVR to be set in the "TARGET" window to select it. The display color for the selected DVR will change to blue.
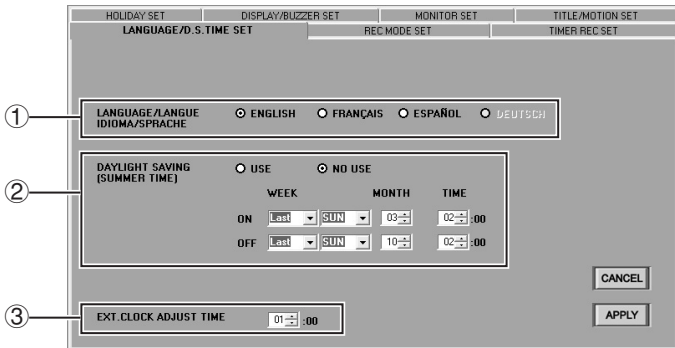
① **LANGUAGE/LANGUE/IDIOMA/SPRACHE (Default setting: ENGLISH)**
This is used to set the display language for the monitor connected to the DVR. Select the button corresponding to the required language and then click [APPLY].

Available settings:
English, French, Spanish, German

> **This is not the display language setting for the computer. If you change the display language for the monitor connected to the DVR, this will not effect the computer screen display in any way.**

② **DAYLIGHT SAVING (Default setting: NO USE)**

This sets daylight saving time and whether daylight saving is to be used or not.

Available settings:

USE: The software switches automatically to daylight saving time.

NO USE: The software does not switch to daylight saving time.

If "USE" is selected, you will need to specify the dates and times for the software to switch from standard time to daylight saving time and from daylight saving time to standard time.

The following example shows the default settings.

Example:

- After 1:59 on the last Sunday in March, the clock will change to show 3:00 and the time will advance by one hour.

- To put the clock back by one hour so that 1:59 is followed by 1:00 on the last Sunday in October.

a. Sets the week to change to daylight saving time.

b. Sets the weekday for changing to daylight saving time.

c. Sets the month for changing to daylight saving time.

d. Sets the hour for changing to daylight saving time.

e. Sets the week for daylight saving time to end.

f. Sets the weekday for daylight saving time to end.

g. Sets the month for daylight saving time to end.

h. Sets the hour for daylight saving time to end.

To change the default setting, use drop-down list boxes and spin buttons to change the [ON (time for switching to daylight saving time)] and [OFF (time for daylight saving time to end)] settings, and then click [APPLY].

③ **EXT. CLOCK ADJUST TIME**

If more than one DVR is connected, the clocks for all DVRs can be adjusted automatically to the same time.

Use the spin buttons to set the time, and then click [APPLY]. When a signal is input to the CLOCK ADJ IN terminal at the rear of the DVR, the time adjustment function will operate.
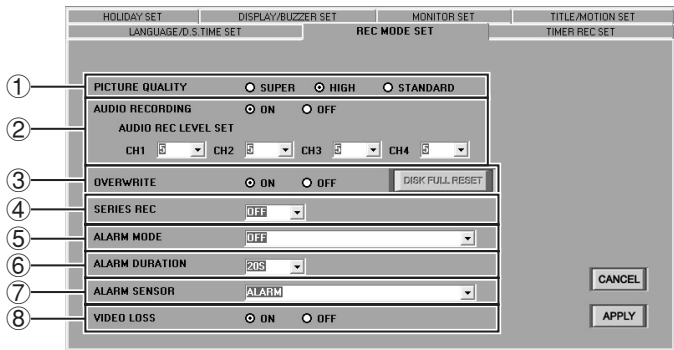
> **!** This only applies for DVRs that are equipped with a CLOCK ADJ IN terminal.

● **Refer to page 17 for explanations of the setting buttons (CANCEL/APPLY).**

■ REC MODE SET tab

Click on the DVR to be set in the "TARGET" window to select it. The display color for the selected DVR will change to blue.

① **PICTURE QUALITY (Default setting: HIGH)**
This sets the quality of the images that are recorded by the DVR. The higher the quality of the images, the shorter is the possible recording time capacity. Select the desired quality and then click [APPLY].

Available settings:
- **SUPER:** Super-high quality (84 recording hours or more)
- **HIGH:** High quality (168 recording hours or more)
- **STANDARD:** Standard quality (336 recording hours or more)

The possible recording times are for reference only, and are based on a 120 GB hard disk.

② **AUDIO RECORDING (Default setting: ON)**
This sets whether audio is to be recorded at the same time as images (when alarm recording is not in progress). Select "ON" or "OFF" and then click [APPLY].

Available settings:
- **ON:** Audio signals are also recorded.
- **OFF:** Audio signals are not recorded.

If [AUDIO RECORDING] has been set to [ON], set [AUDIO RECORDING LEVEL] for each channel.

Available settings: 1–10 (Default setting: 5)

If the computer does not have a sound card installed (or if the sound card is disabled), it will not be possible to monitor DVR images which have [AUDIO RECORDING] set to [ON] or to play back the audio portions of recordings.

③ **OVERWRITE (Default setting: ON)**
This sets what is to happen when the hard disk recording area becomes full.

Available settings:

• **ON:** When the recording area becomes full, recording continues automatically with new images being recorded over the top of already-recorded images.
(The [DISK FULL RESET] button is forcibly locked.)

> **If recording continues for long periods while "OVERWRITE" is set to "ON", old images will be overwritten and deleted in the order that they were recorded. You should regularly make copies of any important data if necessary.**

• **OFF:** When the recording area becomes full, recording stops automatically.
(The [DISK FULL RESET] button is forcibly unlocked.)
Refer to the next page for details on how to resume recording.

● **Resuming recording that has been halted**
If "OVERWRITE" has been set to "OFF", recording will stop automatically when the hard disk recording area becomes full and the "DISK FULL" criteria are met.

When this happens, you can resume recording in overwrite mode by clicking DISK FULL RESET . However, this varies from the normal situation when "OVERWRITE" is set to "ON" in that the data is only overwritten once, and when the recording area becomes full again, recording will stop once more.

④ **SERIES REC (Default setting: OFF)**
If the series recording function has been set when more than one DVR is connected, recording can continue onto a second or subsequent hard disk when one hard disk becomes full. If using series recording, use the drop-down list box to select the timing for recording onto a 2nd hard disk to start, and then click [APPLY].

Available settings:
• **OFF:** Series recording is not carried out.
• **–1M:** Approximately 1 minute before the hard disk becomes full
• **–2M:** Approximately 2 minutes before the hard disk becomes full
• **–3M:** Approximately 3 minutes before the hard disk becomes full

⑤ **ALARM MODE (Default setting: OFF)**
This sets the recording mode for alarm recording. Make the selection from the drop-down list box and then click [APPLY].

Available settings:
- **OFF:** Alarm recording is not carried out.
- **ENABLED:** Alarm recording is always carried out regardless of the timer recording settings.
- **AL-REC ON TIMER:** Alarm recording is only carried out while timer recording is in progress.
- **AL-REC OFF TIMER:** Alarm recording is only carried out while timer recording is not in progress.
- **OLY AL-REC ON TMR:** Alarm recording is carried out during the time specified for timer recording, and timer recording is not carried out.

⑥ **ALARM DURATION (Default setting: 20S)**
This sets the alarm recording duration when an alarm occurs. Select the duration from the drop-down list box and then click [APPLY].

Available settings:
5S, 10S, 20S, 40S, 1M, 2M, 3M, 4M, 5M, 10M, 15M, CC

⑦ **ALARM SENSOR (Default setting: ALARM)**
This sets the operating conditions for alarm recording. Make the selection from the drop-down list box and then click [APPLY].

Available settings:
- **ALARM:** In response to an external alarm
- **SENSOR:** In response to motion sensor input
- **ALARM OR SENSOR:** In response to either an external alarm or motion sensor input
- **ALARM AND SENSOR:** In response to both an external alarm and motion sensor input occurring at the same time

⑧ **VIDEO LOSS (Default setting: ON)**
This sets whether a warning is output or not when the image feed is cut off. Select "ON" or "OFF" and then click [OK] or [APPLY].

Available settings:
- **ON:** A warning is output when the image feed is cut off.
- **OFF:** No warning is output when the image feed is cut off.

> **If you would like the warning buzzer to sound when the image feed is cut off, set "VIDEO LOSS" to "ON" and then change the "BUZZER" setting. (P.37)**

● **Refer to page 17 for explanations of the setting buttons (CANCEL/APPLY).**

■ TIMER REC SET tab

This sets the timer recording conditions for DVRs. Click on the DVR to be set in the "TARGET" window to select it. The display color for the selected DVR will change to blue.
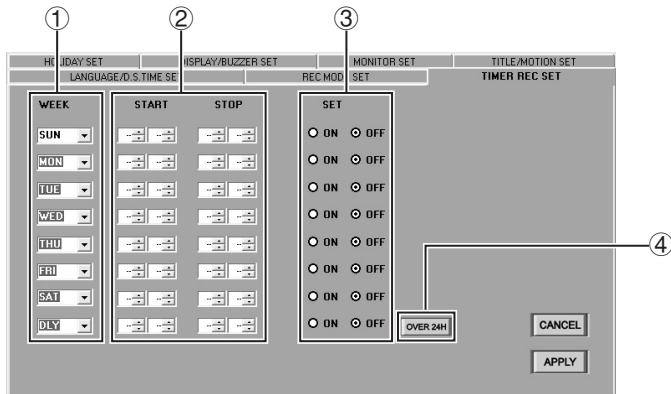
① **WEEK**

Select the day for timer recording to be carried out from the drop-down list box.

Available settings:

SUN, MON, TUE, WED, THU, FRI, SAT, DLY

DLY: The timer operates during the same part of the day for each day of the week.

② **START/STOP**

Use the spin buttons to set the start and end times for timer recording.

③ **SET (Default setting: OFF)**

This sets whether recording is to be carried out or not during the set timer period.

Available settings:

ON: Timer recording is carried out.

OFF: Timer recording is not carried out.

④ **OVER 24H**

Click when timer recording is to continue for a continuous period of more than 24 hours.

When the button is clicked, the setting format changes. Use the last two rows (row 7 and row 8) to make the settings.

First row (row 7): Sets the day and time for recording to start.

Last row (row 8): Sets the day and time for recording to stop.

If the [OVER 24H] button operations have been used to extend the timer setting day to the following day, a "T" symbol will appear in front of the recording stop day and time.

Example 1: To set timer recording to occur between 10:30 and 15:30 on Mondays

1 Select "MON" from the "WEEK" drop-down list box.

2 Use the [START] spin button to select [10:30].

3 Use the [STOP] spin button to select [15:30].

4 Select "ON" in the "SET" box.

5 After making the above settings, click [APPLY] and then click [OK].
When you click [OK], the settings are applied to the DVR and timer setting is then complete.

6 Click the timer button on the recording control panel in the main window.

The DVR will switch to timer recording standby mode, and timer recording will start automatically when the set time is reached.

The timer button can only be operated by users at user level ID3 or ID4.

Example 2: To set timer recording from 10:30 on Monday to 20:30 on Wednesday

1 Click [OVER 24H].
The format will change to the format for setting continuous timer recording for more than 24 hours. Use the last two rows (row 7 and row 8) to make the settings.

2 Select "MON" from the "WEEK" drop-down list box in row 7.

3 In the same way, use the [START] spin button in row 7 to select [10:30].

4 Select "WED" from the "WEEK" drop-down list box in row 8.

5 In the same way, use the [STOP] spin button in row 8 to select [20:30].

6 Select "ON" in the "SET" box in row 8.

7 After making the above settings, click [APPLY].
This completes the settings for continuous timer recording for more than 24 hours.

8 Click the timer button on the recording control panel in the main window.

The DVR will switch to timer recording standby mode, and timer recording will start automatically when the set time is reached.

The timer button can only be operated by users at user level ID3 or ID4.

● **Refer to page 17 for explanations of the setting buttons (CANCEL/APPLY).**

■ HOLIDAY SET tab

This window is used to specify particular days as holidays. The timer recording operation on specified holidays will be the same as that for Sundays. A holiday setting can be made for days such as festival and national holidays when the same level of security as for Sundays is required.

1 **Click on the DVR to be set in the "TARGET" window to select it.**
The display color for the selected DVR will change to blue.

2 **Use the [MONTH] and [DAY] spin buttons to set the month and day.**
Up to 20 days can be specified as holidays.

3 **Click [APPLY].**
This completes the holiday setting.

> **If "DLY" has been set in the timer settings, then timer recording on Sundays and holidays will also be carried out using the "DLY" setting conditions.**

● **Refer to page 17 for explanations of the setting buttons (CANCEL/APPLY).**

■ DISPLAY/BUZZER SET tab

This is used to set the display information and buzzer operation for the monitor connected to the DVR.
Click on the DVR to be set in the "TARGET" window to select it. The display color for the selected DVR
will change to blue.
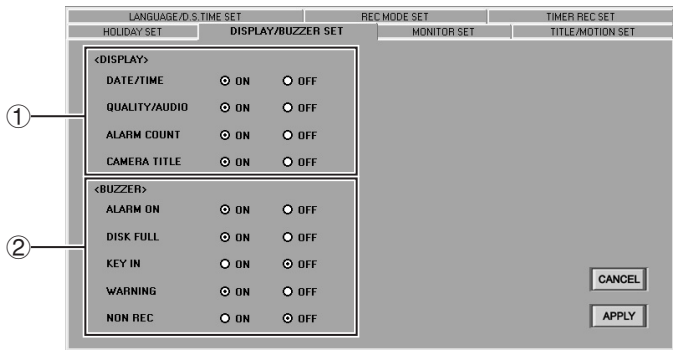
① **DISPLAY**

Select "ON" to set the monitor screens to display the following information, or select "OFF" if you do
not need the information to be displayed, and then click [APPLY].

● **DATE/TIME (Default setting: ON)**
- For live images: Current date and time
- For playback images: Recording date and time

● **QUALITY/AUDIO (Default setting: ON)**

Image quality and audio recording settings

If "AUDIO RECORDING" is set to "ON", an "A" symbol is displayed in the monitor screen.

● **ALARM COUNT (Default setting: ON)**

Cumulative number of alarms

The maximum number of alarms that can be displayed is "19,999". When this number is
exceeded, the display starts counting again from "0".

● **CAMERA TITLE (Default setting: ON)**

Title for connected camera

② **BUZZER**

Select "ON" to set the warning buzzer to sound at the following times, or select "OFF" if you do not need the warning buzzer to sound, and then click [APPLY].

● **ALARM ON (Default setting: ON)**

When an alarm is detected

● **DISK FULL (Default setting: ON)**

When free hard disk space is zero

(Only enabled when [OVERWRITE] is set to [OFF])

● **KEY IN (Default setting: OFF)**

When a button on the DVR's front panel is pressed

● **WARNING (Default setting: ON)**

When one of the following situations occurs

• When a problem occurs with the hard disk

• When there is a problem with a fan

• When an error occurs during recording

● **NON REC (Default setting: OFF)**

When recording has stopped or when it is stopped purposely by someone else.

● **Refer to page 17 for explanations of the setting buttons (CANCEL/APPLY).**

■ MONITOR SET tab

This sets the window settings for the monitor that is connected to a DVR. Select the DVR to be set from the "TARGET" window. The selected DVR will change to blue.

<MONITOR SET>
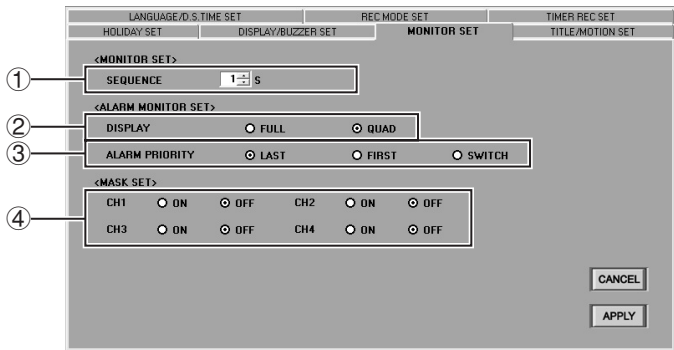
① **SEQUENCE (Default setting: 1)**
Use the spin buttons to select the display time (window switching interval) for each channel in the sequence screen, and then click [APPLY].

Available settings: 1–30 seconds

<ALARM MONITOR SET>

② **DISPLAY (Default setting: QUAD)**
Select the display window to use when an alarm occurs, and then click [APPLY].

Available settings:
- **FULL:** Only the channel where the alarm occurs is displayed in a full window.
- **QUAD:** A 4-screen quad screen is displayed including the channel where the alarm occurred.

③ **ALARM PRIORITY (Default setting: LAST)**
This sets the screen display order if multiple alarms occur at more than one channel. Use the buttons to select the display order and then click [APPLY]. This setting is only enabled if the previous "DISPLAY" setting has been set to "FULL".

Available settings:
- **LAST:** Images from the last alarm occurring have priority.
- **FIRST:** Images from the first alarm occurring have priority.
- **SWITCH:** Images switch between multiple alarms at intervals of 1 second.

<MASK SET>

④ **MASK SET (Default setting: OFF)**
You can set the normal window and the playback window so that images from specified channels are not displayed. Set the window display to "ON" or "OFF" for each channel (CH1 to CH4) and then click [APPLY].
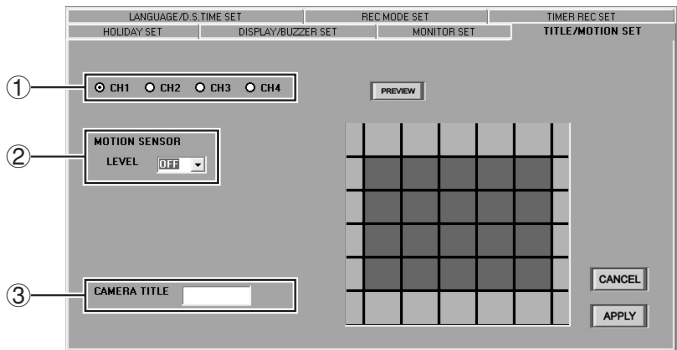
- **ON:** Images and audio are masked.
- **OFF:** Images and audio are not masked.

(The word "MASK" will be displayed on a black window.)

● **Refer to page 17 for explanations of the setting buttons (CANCEL/APPLY).**

■ TITLE/MOTION SET tab

This sets the motion sensor and camera title settings for each channel. Select the DVR in the "TARGET" window. The selected DVR will change to blue.

① **Specifying a channel**
Select a channel for motion sensor or camera title setting.

Available settings: CH1/CH2/CH3/CH4

② **MOTION SENSOR Set**
When motion sensor is set for monitoring, alarm recording is carried out automatically when a moving object is detected. The motion sensor detection conditions can be set as follows.

● **Motion detection position**
If you click PREVIEW , a live image from the specified DVR will be displayed in the preview window as a still image. Click on one of the squares in the 5 (width) × 4 (height) matrix in the center of the window. The sensor setting will alternate between "ON" and "OFF" each time you click.

  ● **Background:** Sensor ON
  ● **No background:** Sensor OFF

● **Sensitivity (Default value: OFF)**
Select the sensitivity from the drop-down list box.

Available settings: OFF/1–10
The lower the value, the higher the sensitivity.

> **If using motion sensing to activate alarm recording, change the ALARM SENSOR menu setting to "SENSOR".**

③ **CAMERA TITLE**
This sets the camera title for the specified channel. Type the camera title into the box, click [APPLY] and then click [OK].

● **Maximum no. of characters:** 10
● **Allowable characters:**
  0–9 / A–Z / - / : / * / . / _ (space)
Default setting:
CH1: 1/CH2: 2/CH3: 3/CH4: 4

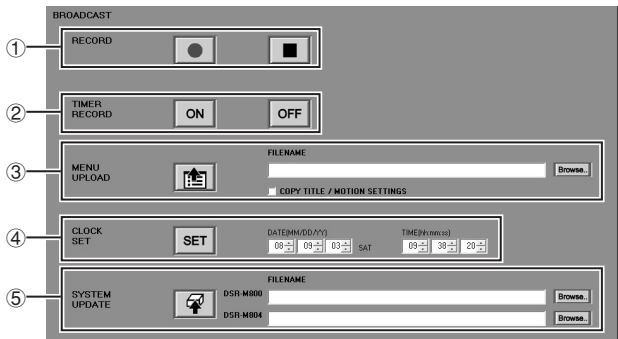● **Refer to page 17 for explanations of the setting buttons (CANCEL/APPLY).**

BROADCAST TRANSMISSION SETTINGS (BROADCAST WINDOW) (User Level: ID3/4)

Basic commands can be transmitted from a single user terminal to all connected DVRs in a single operation. This is called "broadcasting". Click [BROAD-CAST] on the toolbar to display the BROADCAST window.

The operation permissions for this window vary depending on the command being used.

① **RECORD**
(User Level: 3 or higher)
Click [●] or [■] to broadcast recording start and stop commands to the connected DVRs.

② **TIMER RECORD**
(User Level: 3 or higher)
Click [ON] or [OFF] to broadcast "ON/OFF" commands for setting timer recording.

③ **MENU UPLOAD (User Level: ID4)**
This broadcasts menu setting data that is stored on the computer's hard disk (data that has been saved using the "SAVE" command) to all connected DVRs.

1 Click [Browse..] .
A dialog box will be displayed.

2 Select the required menu file that has been saved, and then click [Open].
The selected filename will be displayed in the "FILENAME" box of the "MENU UPLOAD" window.

> **You should first save the menu setting details into a file before using this function.**

3 Click [📋] .
The menu setting details will then be transmitted.

You can select whether to transmit the "Camera Title" and "Motion Sensor" settings or not. To transmit the setting, select the check box.

④ **CLOCK SET (User Level: ID4)**
This sets the date and time for all connected
DVRs to the specified time.

1 **Use the spin buttons to set the date
(DATE [MM/DD/YY]) and time (TIME [hh/
mm/ss]).**

> **The date order will be according to the
> Windows environment settings.**

2 **Click** SET **.**

⑤ **SYSTEM UPDATE**
This broadcasts firmware data to all DVRs to
update their firmware.

The transmitted files can be read by both the
DSR-M800 and the DSR-M804.

1 **Click** Browse.. **.**
A dialog box will be displayed.

2 **Select the required menu and then
click [Open].**
The selected filename will be displayed in
the "FILENAME" box of the "SYSTEM
UPDATE" window.

3 **Click** 🖨 **.**
The firmware data will then be transmitted.

> - **Only firmware files that have been
>   provided by SANYO can be used for
>   updates. No other files can be used. If
>   you try to use a file that has not been
>   provided by SANYO to update the
>   DVR's firmware, damage to the DVR
>   may result.**
> - **DVRs cannot be updated while
>   recording or playback is in progress
>   or while the SEARCH menu is
>   displayed.**
> - **It takes several minutes for the
>   update to be completed, so do not
>   disconnect from the network or turn
>   off the power for the computer or DVR
>   during this time.**

IMAGE DISPLAY WINDOWS

This system allows monitored live images and playback images to be viewed in the following three types of screen.

■ Display Screen Type

1 QUAD screen

This is the main window for this system.

This shows all of the camera images (channel 1 to channel 4) from all cameras that are connected to the specified DVR in a 4-screen split display.

After logging in, this quad screen is displayed in the main window.

2 MULTI screen

The quad screens for four DVRs that are specified from all of the DVRs that are connected to the network can all be viewed at once in a 4-screen split screen. The multi screen can contain up to a maximum of 16 of these sub-screens. Both live images and playback images can be watched at the same time.

3 FULL screen

This lets you view the camera images in a single full screen from one selected camera channel (channel 1 to channel 4) from the cameras that are connected to a DVR.

- **Images from the same DVR cannot be viewed in more than one screen at the same time.**

- **For live images, channels where a video loss occurs or which have been set to MASK or where no camera is connected appear as a black screen with the message "VIDEO LOSS", "MASK" or "NO VIDEO" displayed respectively. (With the DSR-M800, the message is not displayed.)**

■ Switching Display Windows

To switch the display window, click the window select button on the toolbar or use the switching operation described below.

: Images from all cameras (channel 1 to channel 4) connected to the DVR
: Image from Camera 1 (channel 1) of the DVR
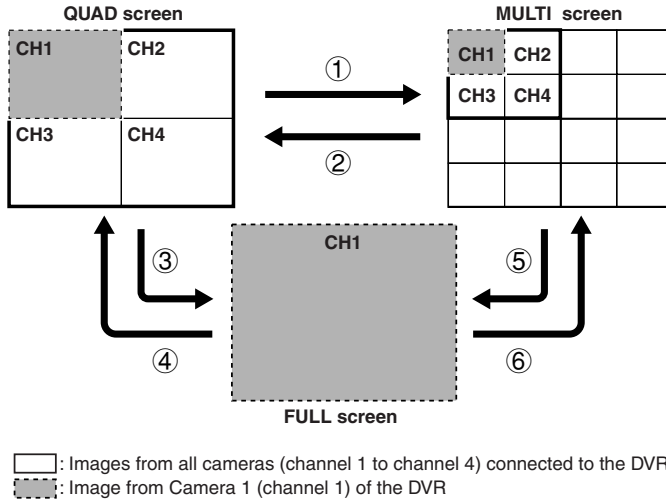
① **QUAD screen → MULTI screen**
- Click ▣ on the toolbar.
- Or double-click the quad screen.

② **MULTI screen → QUAD screen**
- Click the title bar to specify a DVR, and then click ▣ on the toolbar.
- Or, double-click the DVR images that you would like to view in the quad screen.

③ **QUAD screen → FULL screen**
- Click the channel number that you would like to view in the full screen from ⊞ on the toolbar.

④ **FULL screen → QUAD screen**
- Click ▣ on the toolbar.

⑤ **MULTI screen → FULL screen**
- Click the title bar to specify a DVR, and then click the channel number that you would like to view in the full screen from the ⊞ on the toolbar.

⑥ **FULL screen → MULTI screen**
- Click ▣ on the toolbar.
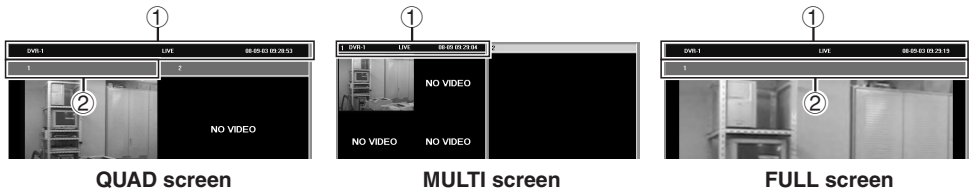
■ Sequence Display Function

If you click the ▣ in the toolbar of a quad or full screen, the images from all channels of the specified DVR will be displayed in sequence in a full screen. If you click ▣ once more, sequence operation will stop and the display will return to the screen (quad or full) that was being displayed before sequence display started.

- This function is only enabled when live images are being displayed.
- The display interval set using [SEQUENCE] in the SYSTEM SETUP tab.
- Channels that are set to "MASK" or "NO VIDEO" are skipped during display.

■ Title Bar

The title bars at the top of each window have two levels, for the DVR and for the cameras in order to show the relevant information for the images being displayed. In addition, you can specify a window in the multi screen by click the title bar for that window.


QUAD screen   **MULTI screen**   **FULL screen**

	DVR title bar ①	Camera title bar ②
Display window	Displayed for each DVR in the quad, multi and full screens	Displayed for each channel However, it is not displayed in the multi screen.
Display information	• DVR names • Recording operation status ● **(Red):** Recording in progress or timer recording in progress 🕐**:** Timer standby or recording in progress • Image mode **LIVE:** Live images being monitored **PLAY:** Playback images (playback speed) (Display example: PLAY×1/2) **STILL:** Still image • Image date and time **In live mode:** Current date and time **In play mode:** Recording date and time	• Channel number • Camera title
Screen select function	When viewing live images or carrying out operations such as recording/playback or in the multi screen, click the title bar to select a window (DVR). The color of the selected title bar will change. • **Gray:** Unselected • **Blue:** Selected	
Alarm data display	Alarm data for live or playback images is indicated by the color of the title bar. • **Red:** Alarm generated (live images) • **Yellow:** Alarm image playback in progress (playback images) The title bars that display alarm data vary depending on the screen. • **QUAD/FULL screen:** Camera title bar • **MULTI screen:** DVR title bar	

MONITORING LIVE IMAGES (User Level: ID1 or higher)

Live images from monitoring cameras that are connected to the network can be viewed by specifying a DVR. In addition, the display window can also be selected as desired.

■ Monitoring with QUAD Screens

Images from a single DVR (comprising 4 channels) can be viewed in a 4-screen split screen.
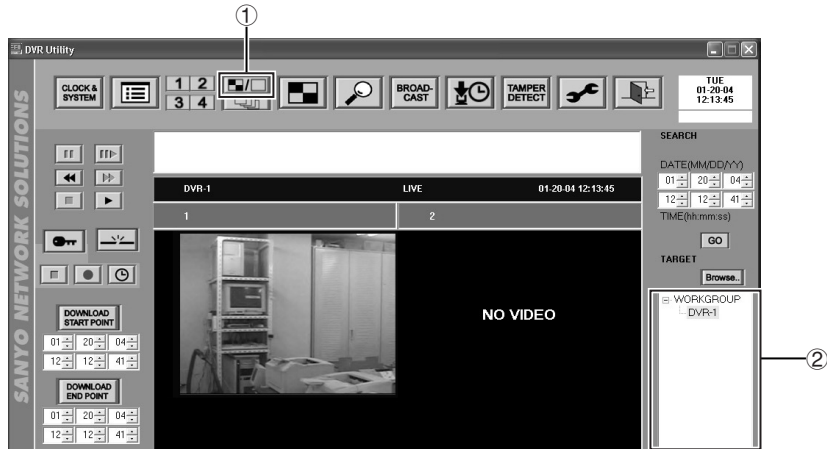
1 Click ▣/▢ (①) on the toolbar.
The quad screen is displayed.

When the software is run, the quad screen is displayed automatically.

2 Double-click a DVR in the "TARGET" window (②).
Live images from the specified DVR (channel 1 to channel 4) are displayed in a 4-screen split screen. The title bar shows the DVR name, image mode and the current date and time.

**(Display example:
DVR-1 LIVE 01-20-04 12:13:45)**

3 Change the display screen if required.
You can click a toolbar icon to switch to full screen, sequence screen or multi screen. (P.44)

• **DVR reconnect function**

If a problem occurs for some reason while live images are being displayed, hold down the [Shift] key and double-click the DVR name in the "TARGET" window. When the confirmation box appears, click [Yes] to reconnect to the DVR.
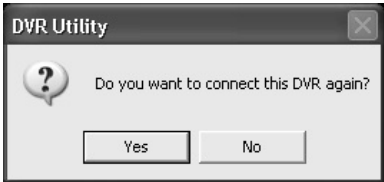
■ Monitoring with MULTI Screens

Live images from up to a maximum of 4 DVRs can be displayed at the same time in a single screen.
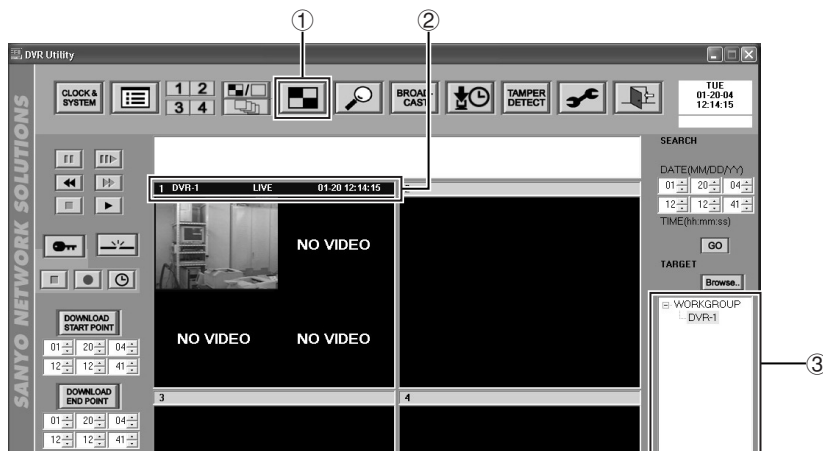
1   **Click [icon] (①) on the toolbar.**
The multi screen is displayed.

2   **Select one screen from the four screens that are displayed, and then click the title bar (②).**
The title bar will change to blue.

3   **Double-click a DVR in the "TARGET" window (③).**
Live images (channel 1 to channel 4) for the specified DVR are displayed. The DVR name, image mode and the current time will be displayed in the title bar.

**(Display example:
DVR-1 LIVE 01-20 12:14:15)**

4   **Set the DVR to monitor in the four screens by the same procedure.**
For the DSR-M804, the images from a single DVR have a 4-channel structure, and so up to a maximum of 16 screens will be displayed.

> **Images from the same DVR cannot be viewed in more than one screen at the same time.**

5   **Change the display screen if required.**
You can click on the toolbar icon to switch between quad screen and full screen display. (P.44)

■ Disconnecting DVRs

To disconnect a DVR, click [icon] in the main window.

When you do this, communication with the DVR that is being monitored (or the DVR that has been specified by clicking a title bar when monitoring in a multi screen) will stop and the screen will return to the status it was at before the connection.

To reconnect the DVR, follow the normal procedure and double-click the DVR in the "TARGET" window.

■ Image Audio Output

If "AUDIO RECORDING" has been set to "ON" in the menu settings, the sound for the images being monitored can also be output. The sound that is output will come from the DVR that has been specified by clicking a title bar.

The audio output can be set and adjusted using the audio adjustment panel.

① **Volume adjustment**
Drag the control to the left or right to adjust the volume.

② **Output channel selection**
Use the check boxes to select the channel. Multiple channels can be selected.

- **CH1+CH2:** Sound from channels 1 and 2 (L) is output
- **CH3+CH4:** Sound from channels 3 and 4 (R) is output

③ **Sound muting**
If you select the MUTE button, the sound will be muted. The MUTE button takes priority over the channel select buttons.

> Sound will not be output for channels which have the MASK setting activated, regardless of the output audio settings.
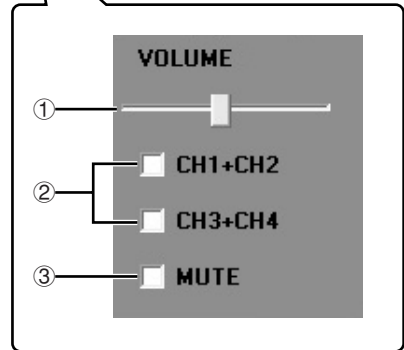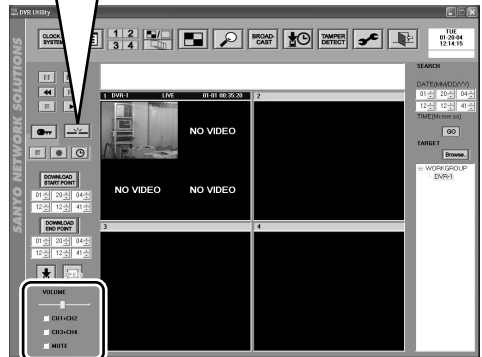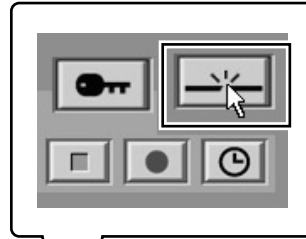
RECORDING IMAGES

Images that are being monitored can be recorded onto the hard disk inside the DVR. There are three recording modes that are available: "Normal recording" involves using manual operations to record live images that are being monitored; "Timer recording" lets you specify a time for recording to take place automatically; and "Alarm recording" automatically starts recording when an alarm such as an intruder is detected.

> **Images are recorded for DVRs as a single unit, and specifying individual channels for recording is not possible. If 4 channel of a DVR are connected, the images from all four cameras will be recorded at the same time.**

■ Normal Recording (User Level: ID3 or higher)

You can specify a DVR and then click the recording button to immediately start recording the live images that are currently being monitored.

● Normal recording from the quad screen

The following operations describe how to carry out normal recording from the quad screen.

1 **Click** **(①) on the toolbar.**
The quad screen will be displayed.

2 **Double-click a DVR in the "TARGET" window (②).**
Live images from the selected DVR will be displayed in the window. The title bar will change to blue and image mode (LIVE) will be displayed.

3 **Click** **(③) on the recording control panel.**
The REC indicator on the DVR will illuminate and recording of the live images will start.

A ● symbol will appear in the title bar while recording is in progress.

4 **To stop recording, click** **(④) on the recording control panel.**
The REC indicator on the DVR will switch off and recording will stop.
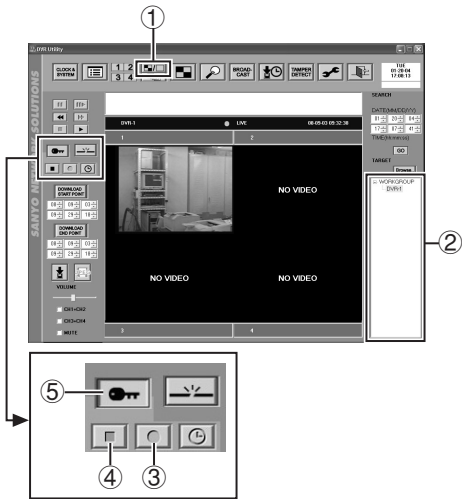
> • **If you would like to avoid recording being stopped by mistake while it is in progress, click** **(⑤). The recording control panel buttons will be grayed out and locked. Click the button once more to cancel the lock.**
> • **The color of the title bar will change to red (green letters) while the DVR is carrying out alarm recording during live monitoring.**

### ● Normal recording from the full screen/sequence screen

The basic operations are the same as for the quad screen. Carry out steps 2 to 4 for quad screen operation when the respective screens are displayed.

RECORDING IMAGES

● **Normal recording from the multi screen**

Images from multiple DVRs can be recorded at the same time from the multi screen. The operations for each window are the same as for the quad screen.

1 **Click** ▣ **(①) on the toolbar.**
The multi screen will be displayed.

2 **Click the title bar (②) of the recording window.**
The title bar will change to blue.

3 **Double-click a DVR in the "TARGET" window (③).**
Live images from the selected DVR will be displayed in the window. The title bar will change to blue and image mode (LIVE) will be displayed.

4 **Click** ▣ **(④) on the recording control panel.**
The REC indicator on the DVR will illuminate and recording of the live images will start.

A ● (red) mark will be displayed in the title bar while recording is in progress.

5 **Recording in a maximum of four windows is possible using the same procedure.**

6 **To stop recording in a window, click the title bar to select the window and then click** ▣ **(⑤).**
The REC indicator on the selected DVR will switch off and recording will stop.
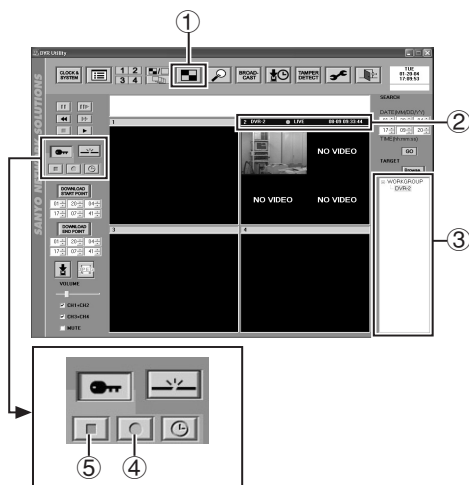
● **Recording images that are not displayed**

When normal recording is being carried out, it is not necessary to have the live images displayed in any window on the screen. Once the DVR has been specified in the "TARGET" window on the screen, the commands made using the recording control panel will be valid regardless of the display status of the images.

• The "TARGET" window and the recording control panel will be displayed in the main screen, and normal recording will be possible.

• The "BROADCAST" window can be used to transmit recording start and stop commands all at once for all registered DVRs.

■ Timer Recording

(Setting recording conditions: User level ID4, Timer button operations: User level ID3 or ID4)
This automatically starts recording at the time specified by the timer.

1 Use the "TIMER REC SET" tab window in the "MENU" window to set the timer recording conditions. (P.33)

2 Click the timer button in the recording control panel.
The TIMER indicator on the DVR will illuminate and the DVR will switch to timer recording standby mode. When the set time is reached, recording will start automatically.

If timer recording has been set, a ⊕ symbol will be displayed in the title bar of the window.

3 To stop timer recording while in timer standby mode, click the timer button once more.

> If "OLY AL-REC ON TMR" is selected for "ALARM MODE" in the "REC MODE SET" tab window, alarm recording will have priority after the timer setting time has been reached, so you do not need to use the timer button in this case.

■ Alarm Recording (User Level: ID4)

If an external alarm (sensor switch that is installed to the alarm input terminal of the DVR) or a motion sensor detects a problem, recording of alarm images starts automatically.

1   Use the "REC MODE SET" tab window in the "MENU" window to set the alarm recording conditions. (P.30)

2   When an alarm such as from an intruder is detected, the ALARM indicator on the DVR will illuminate and alarm recording will start automatically.

3   Once the specified alarm recording duration has elapsed, the ALARM indicator will switch off and alarm recording will stop automatically.

Alarm recording images can be searched for using the search function. (P.55)

The following limitations apply to alarm recording operation.

(1) Immediately after the recording operation starts

(2) Immediately after the [PICTURE QUALITY] or [AUDIO RECORDING] menu setting has been changed and the display has returned to the camera window.

For (1) and (2):

• Alarm input will not be received for a maximum period of 4 seconds, but alarm input can be received after that.

• Recording of images as a result of alarm input will not be carried out for a maximum period of 6 seconds.

(3) Immediately after recording ends

• Alarm input will not be received for a maximum period of 5 seconds, but alarm input can be received after that.

• Recording of images as a result of alarm input will not be carried out for a maximum period of 10 seconds.

The following limitations apply to normal recording and timer recording operation.

• Normal recording and timer recording operations can be received immediately after the "PICTURE QUALITY" or "AUDIO RECORDING" menu settings are changed and the display has returned to the camera window, but recording operation is not possible for a maximum period of 6 seconds.

• Normal recording and timer recording operations can be received immediately after a recording operation ends, but recording will not be carried out for a maximum period of 10 seconds.

PLAYING BACK RECORDED IMAGES

When playing back recorded images, click the playback button in live mode. Playback of images from the specified DVR will start.

■ Playing Back Recorded Images

1 **Switches to live image mode.**
Live images from the DVR to be played back will be displayed in the window.

At the multi screen, click the title bar to specify the DVR to be played back in the 4-screen display. The title bar of the window for the specified DVR will change to blue.

2 **Click** ▶ **in the playback control panel.**
The display will change to the playback images and the normal recordings and alarm recordings for the specified DVR will be played back in order. The image mode display in the title bar will also change from "LIVE" to "PLAY".

At the multi screen, you can use the same procedure to display recorded images for up to a maximum of four DVRs. Images from the same DVR cannot be played back in more than one window.

> **If you click** ▶ **without specifying a DVR, the following pop-up menu will be displayed to prompt you to specify a DVR. Click [OK] and then select the DVR in the "TARGET" window.**

3 **Using the playback control panel**
The playback control panel can be used to carry out playback operations such as still and cue. (P.54)

> - **While alarm recordings are being played back, the title bar for the corresponding channel will change to yellow (red characters).**
> - **When playing back images in the multi screen, the sound played back will be the sound from the window with the blue title bar.**
> - **If the images in one window of the multi screen are being fast forwarded or rewound, you cannot cue or review images in any of the other windows. There is no restriction on slow playback and still operations.**

■ Functions of Each Playback Control Panel Component

▶ (Playback) button:

This button is used to play back recorded images at normal speed.

■ (Stop) button:

This button is used to stop playback and to switch back to live mode.

- You can freely toggle between live mode and playback mode by clicking the Stop and Playback buttons alternately.

◀◀ ▶▶ (Cue and Review) buttons:

The playback speed becomes incrementally faster when these buttons are clicked.

- Speed increments: ×7.5, ×15, ×30, ×180

> ! **The rate displayed for the playback speed is a guide to the playback speed. It may vary from the actual playback speed rate.**

❚❚ (Still) button:

This button is used to pause playback. A still image is displayed when this button is clicked.

- If you click the still button while playback is paused, frame advance playback (one frame at a time) is carried out.
- To cancel the still, click the playback button again.

❚▶ (Slow play) button:

This button can be used to carry out slow playback after playback has been paused. The playback speed becomes slower each time the ▶▶ button is clicked.

- Speed increments: 1/8, 1/4, 1/2

● Notes on starting playback

- If playback is interrupted and then resumed using the computer, playback will resume from the point where it was previously stopped.
- The DVR will be reset once the software is closed, so playback will start again from the beginning of recording next time. This is the same as resetting the DVR itself.

● Playback speed display

The playback speed appears in the title bar of the playback window.

(Display example: PLAY × 1/2)

● Sound playback

If the "AUDIO RECORDING" menu setting is set to "ON", you can play back the sound that was recorded along with the images. The method of selecting the cannel and adjusting the sound is the same as for live images. (P.48)

SEARCHING (User Level: ID2 or higher)

Normal recording images, timer recording images and alarm recording images that have been recorded by a DVR can be searched through using the computer and played back. The following three search modes are available.

● Time/date search: (P.55)
This lets you search all images on the DVR's hard disk(s) randomly by specifying a recording date.

● Alarm search: (P.56)
This lets you search for alarm recordings from an alarm list.

● Alarm thumbnail search: (P.58)
This lets you search for alarm recording images by means of thumbnails (compressed images).

■ Time/Date Search

This lets you search for images that have been recorded on the DVR's hard disk by the date and time that they were recorded.

1 **Display the playback window for the DVR to be searched.**
The playback window can be either in the quad screen or the multi screen. If using the multi screen, click the title bar to specify the DVR to be searched.

2 **Click the top [SEARCH] spin buttons (①) to select the date (day/month/year) to start searching from.**

3 **Click the bottom [SEARCH] spin buttons (②) to select the time (hour/minutes/ seconds) to start searching from.**

4 **Click** GO **(③).**
The images will be played back from the specified date and time.

You can carry out operations such as still and cue of the playback images using the playback control panel. (P.54)
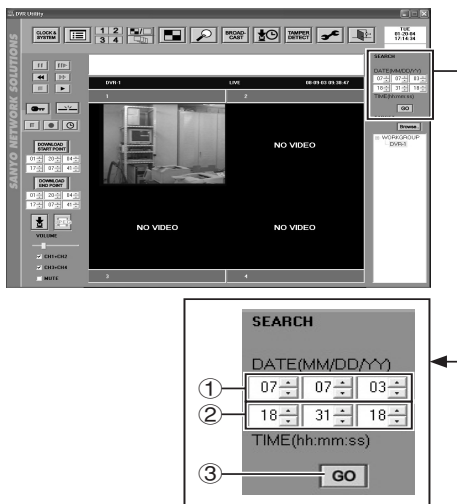

Example: To specify 18:31:18 on July 7, 2003

> ● **If no images are found for the specified date and time, the images that are immediately after that date and time are displayed.**
> ● **The date display order will vary depending on the Windows time display settings. The display order that has been set with Windows will be displayed as text at the top and bottom of the spin buttons.**

■ Alarm Search

All alarm recordings made by the selected DVR are displayed in the alarm list in the "ALARM SEARCH" window. This method of searching lets you select alarms to be played back from the alarm list.
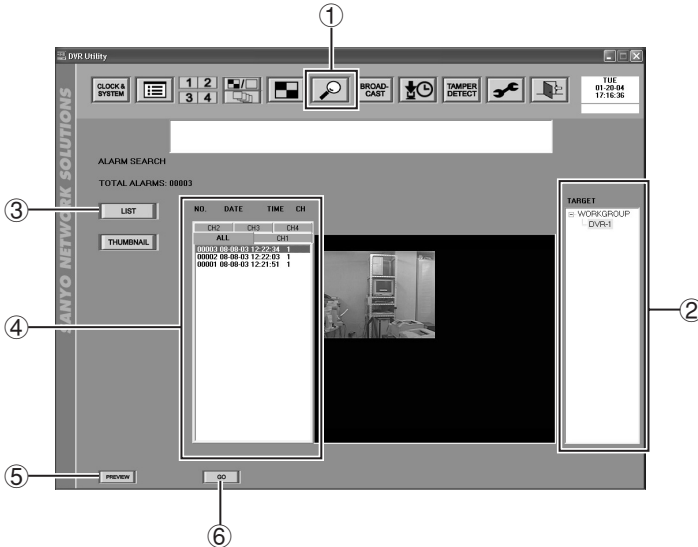
1 **Click ⌕ (①) on the toolbar.**
The "ALARM SEARCH" window will be displayed.

2 **Click the DVR to be searched in the "TARGET" window (②) to select it, and then click | LIST | (③).**

Alternatively, double-click the desired DVR in the "TARGET" window and click [Yes] in the confirmation dialog box.
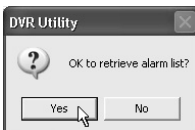
3 **Display the alarm list.**
The alarm recordings will be displayed in the alarm list window (④) in order starting from the latest recordings.

If you click the tab index at the top of the list, you can display a list for only the specified channel (channel 1 to channel 4).

Display items:

- **NO.:** Alarm number
- **DATE:** Alarm recording date
- **TIME:** Alarm recording time
- **CH:** Alarm detection channel

- **The maximum number of alarms that can be displayed is "19,999".**
- **Old alarms before the 20,000 most recent alarms are deleted from the list. Use Time/Date search to search these deleted alarms.**

4 **Select the alarm to be played back from the alarm list.**

The selected alarm will change to blue.

5 **Click** PREVIEW **(⑤).**

A still image for the selected alarm will be displayed in the preview window.

The display window will vary depending on the "Alarm List" tab selection.

- **ALL:** Images for all channels are displayed in a 4-screen display.
- **CH1–CH4:** Only the alarm detection channel is displayed in a large window.

You can skip the preview step for checking images if you wish.

6 **After checking the images in the preview window, click** GO **(⑥).**

The display will change to the main window and playback of alarm images will start in the FULL screen from the point where the alarm occurred.

> **Images from a channel that has the mask setting active will not be displayed in the preview or playback window, and a "MASK" message will be displayed instead.**

■ Alarm Thumbnail Search

All alarm recordings made by the selected DVR are displayed as thumbnail (compressed images) in the "ALARM SEARCH" window. This method of searching lets you select alarms to be played back by referring to the thumbnails.
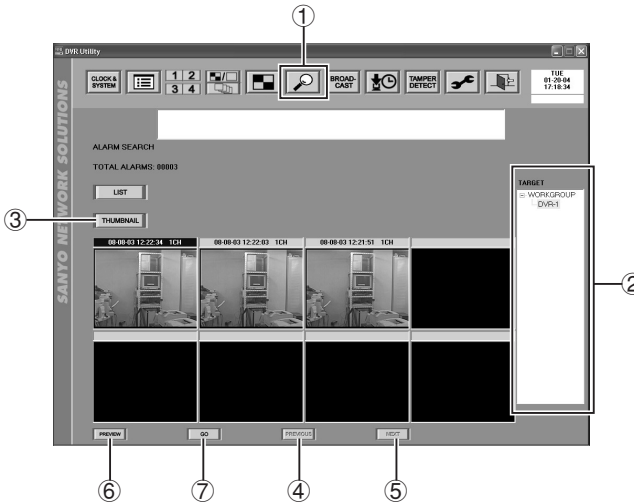
1 **Click** 🔍 **(①) on the toolbar.**
The "ALARM SEARCH" window will be displayed.

2 **Click the DVR to be searched in the "TARGET" window (②) to select it, and then click** THUMBNAIL **(③).**
If you would like to search for a DVR while the thumbnail window is already being displayed, you can also double-click the desired DVR in the "TARGET" window and click [YES] in the confirmation dialog box.

3 **Display the thumbnail images.**
The alarm recording dates for the selected DVR will be displayed in the title bar of the thumbnail window in order starting from the latest recordings.

> **Up to eight thumbnails can be displayed in a single window. You can click** PREVIOUS **(④) or** NEXT **(⑤) to switch to windows containing the thumbnails immediately before or immediately after the currently-displayed thumbnails.**

4 **Click** PREVIEW **(⑥).**
The first still images from the very start of each alarm recording will be displayed in the 8 thumbnail windows.

You can skip the preview step for checking images if you wish.

5 **Click the title bar for the thumbnail to be played back.**
The selected title bar will change to blue.

6 **Click** GO **(⑦).**
The display will change to the main window and playback of alarm images will start in the FULL screen from the point where the alarm occurred.

> **Images from a channel that has the mask setting active will not be displayed in the preview or playback window, and a "MASK" message will be displayed instead.**

SAVING STILL IMAGES (User Level: ID2 or higher)

Still images that are displayed during playback can be saved on the computer's hard disk in JPEG format.

1 **Playing back images in the main window**
Select the DVR in the "TARGET" window and then click the play button in the playback control panel.

2 **Still playback at the image to be saved.**
Click the still button in the playback control panel.

3 **Click [JPEG] in the saving control panel.**
A dialog box asking you to confirm the save will be displayed, so click [OK]. The "Save As" dialog box for specifying the saving destination will then be displayed.
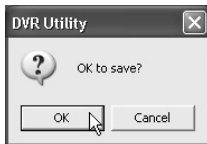
4 **Specify the filename and folder to use for saving the file and then click [Save].**
The selected image will be saved in JPEG format in the specified destination on the computer's hard drive.
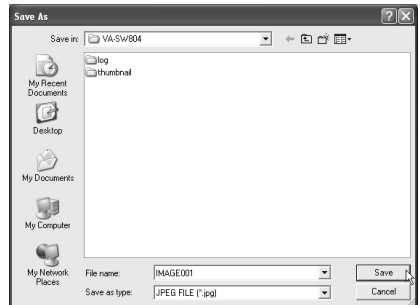
- **The [Save] button will be locked and cannot be used unless a still image that can be saved is currently being displayed.**
- **There may be a difference between the actual image saved and the image specified, depending on the system environment. When saving images, be sure to re-check the image before clicking [OK].**

English **59**

DOWNLOAD

Recorded images can be downloaded to the computer or some other device.

Download operation permissions for user levels 2 and 3 will be set to the default settings.

■ Specifying the Image Range

Follow the procedure below to specify the range of images to be downloaded, and then change to the download window.

1 **Display the live images for the DVR to downloaded from in the main window.**
Double-click the DVR to be selected in the "TARGET" window.

2 **Click [DOWNLOAD START POINT] in the saving control panel.**
The spin buttons will be unlocked, so specify the starting point for the recorded images to be downloaded. The current date and time at the point when you click will be displayed briefly in the title bar.

- Top: Month/Day/Year
- Bottom: Hour/Minutes/Seconds (The actual date and time order will be according to the Windows environment settings.)

3 **Click "DOWNLOAD END POINT".**
Specify the ending point in the same way as for the starting point.

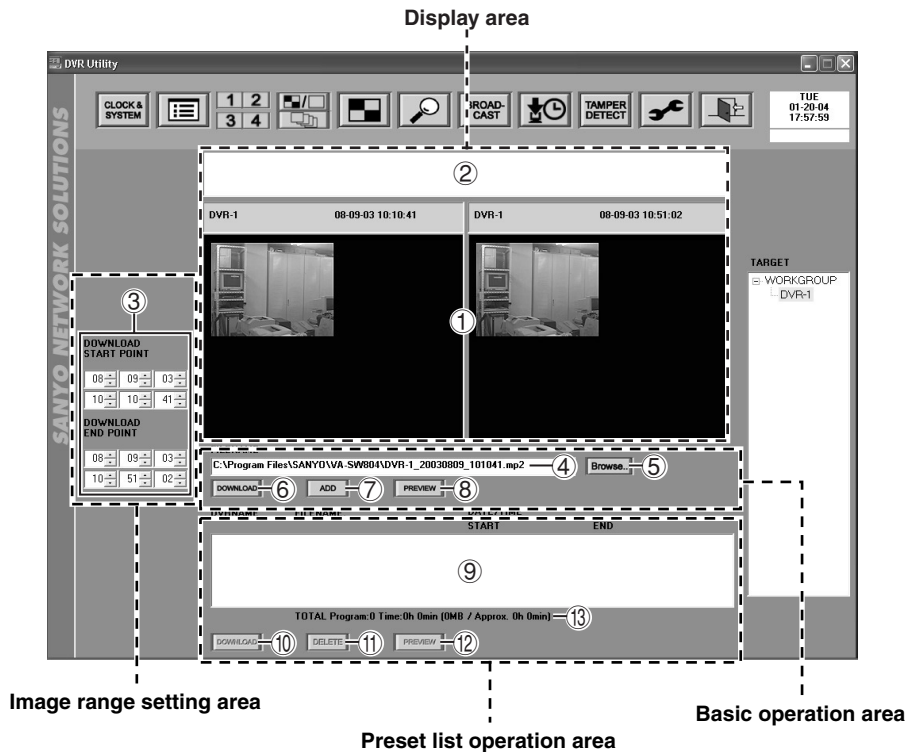**Example:** To set the start point to 11:30:20 on July 7, 2003

Example: To set the end point to 10:30:20 on July 8, 2003

4 **Click** 🔽 **on the control panel.**
The download window will be displayed and the images at the download start point and download end point will be displayed as thumbnails.

■ **Functions of Each Download Window Element**

Display area

Image range setting area

Preset list operation area

Basic operation area

<Display area>

① **Preview window**
This shows thumbnail images of the still images at the start point (left) and end point (right) for the specified image files.

② **Log window**
This shows the results of download operations in the order that they are carried out.

<Image range setting area>

③ **DOWNLOAD START POINT/DOWNLOAD END POINT**
This shows the date and time for the start point and end point of the range of images to be downloaded.

The date and time from the saving control panel in the main window is initially displayed at the time when the download window is first displayed, but you can change this in the download window.

<Basic operation area>

The following commands can be used on the currently-selected image file.

④ **FILENAME**

This sets the path for the download destination and the filename. Normally the settings that are assigned automatically should be used.

⑤ **Browse..**

This displays the "Save As" dialog box. This is used when you would like to change the download destination path and filename.

⑥ **DOWNLOAD**

This is used for individual downloads when no downloads has been preset.

⑦ **ADD**

This presets files to be downloaded without actually downloading them. Image files that are preset in this way are added to the download preset list (⑨), and they can be downloaded all at once later.

⑧ **PREVIEW**

This displays still images of the images at the start point and end point of the image range that has been specified by "DOWNLOAD START POINT/DOWNLOAD END POINT" in the preview window. This is used for purposes such as checking the images when the image range is changed.

<Preset list operation area>

⑨ **Download preset list**

This lists the image files that have been preset for downloading using the [ADD] button.

Details displayed: DVR name, filename, start point date and time, end point date and time

⑩ **DOWNLOAD**

This is used to download all image files that have been added to the preset list.

⑪ **DELETE**

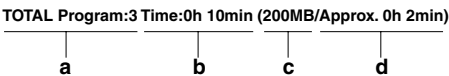This deletes specified image files from the preset list.

⑫ **PREVIEW**

This specifies image files in the preset list and displays the images at the start point and end point in the preview window.

⑬ **Total display**

This shows details for all of the files in the preset list as a reference.

Display example:

TOTAL Program:3 Time:0h 10min (200MB/Approx. 0h 2min)
  a   b   c   d

a. Number of files

b. Total playback time (Units: Hours, minutes)

c. Total data size (Units: MB)

d. Total estimated time for downloading all files (Units: Hours, minutes)

■ Basic Downloading Operations (Individual Download)

When the download window is displayed, continue the download operations by following the procedure given below.
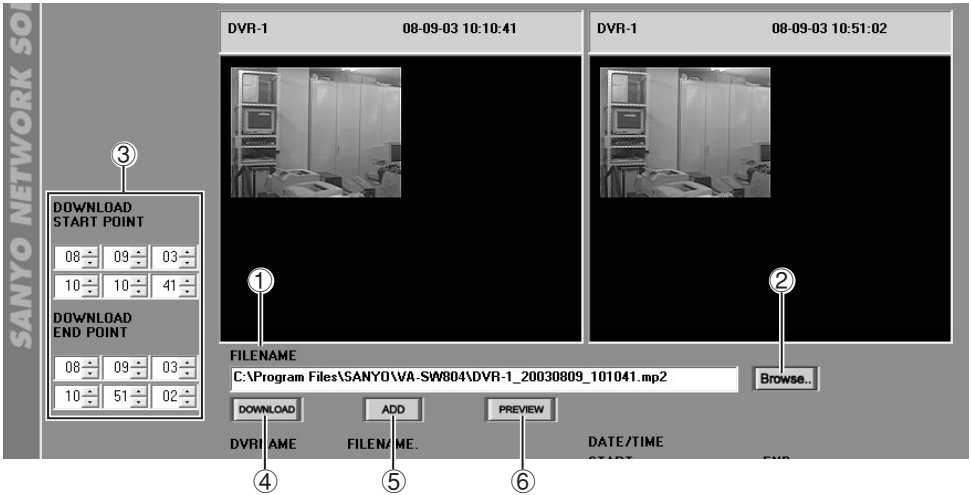
1 **Specify the download destination and the filename.**
The download destination path and the filename are assigned automatically. The default name setting that appears in the "FILENAME" box (①) does not need to be changed unless you prefer to use a different filename.

Filename structure:

(DVR name)_(Start date)_(Start time).mp2

> **If the DVR name includes "/.*", this will be replaced with "+".**

If you would like to change the download destination or the filename, click **Browse..** (②) and type in the new settings in the "Save As" dialog box.

2 **If you would like to change the image range, make the changes using the "DOWNLOAD START POINT" and "DOWNLOAD END POINT" scroll buttons (③).**
You can click **PREVIEW** (⑥) in the basic operation area to check the still images at the new start point and end point in the preview window.

3 **If you would like to preset the images for downloading without downloading them immediately, click **ADD** (⑤) in the basic operation area.**
The specified image file will be added to the download preset list. The image files that have been added to this list can be all downloaded at the same time later.

4 **If you would like to download the file individually without presetting it, click** DOWNLOAD **(④) in the basic operation area.**

The specified image file will then be downloaded immediately.

While the download is in progress, a dialog box containing a download progress bar will be displayed so that you can check the progress of the download and other necessary information.
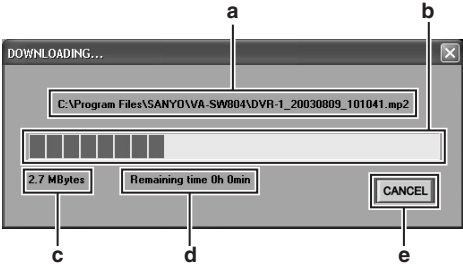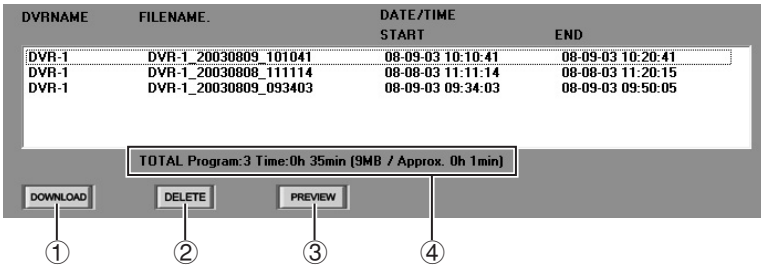

a. Download destination path and filename

b. Progress bar

c. Data size of image file being downloaded

d. Estimated time required until download is complete (sequentially updated)

e. Download cancel button

5 **Completion of download**

When the download is complete, the display will return to the original main window that was displayed before the download operation was started.

■ Preset List Operations (Batch Downloads)

Image files that have been registered using the [ADD] button in the basic operation area are added in order to the download preset list. (Up to a maximum of 20 files can be preset at any time.) The image files that have been added to the preset list can all be downloaded at the same time.

```
DVRNAME       FILENAME.                DATE/TIME
                                       START              END
DVR-1         DVR-1_20030809_101041    08-09-03 10:10:41  08-09-03 10:20:41
DVR-1         DVR-1_20030808_111114    08-08-03 11:11:14  08-08-03 11:20:15
DVR-1         DVR-1_20030809_093403    08-09-03 09:34:03  08-09-03 09:50:05

          TOTAL Program:3 Time:0h 35min (9MB / Approx. 0h 1min)

[DOWNLOAD]    [DELETE]       [PREVIEW]
    ①            ②              ③                    ④
```

● **Deleting a preset file**

Select the file to be deleted by clicking on it in the preset list, and then click [DELETE] (②) in the preset list operation area. The specified file will then be deleted from the preset list.

● **Checking images**

Select the file to be checked by clicking on it in the preset list, and then click [PREVIEW] (③) in the preset list operation area. Still images of the start point and end point for the specified file will be displayed in the preview window.

● **Checking the list totals**

The value totals for all files in the preset list (number of files, playback time, data size and time required for downloading) are displayed in the total display area (④) underneath the preset list. (P.62)

● **Downloading all preset files**

Click [DOWNLOAD] (①) in the preset list operation area to download all image files in the preset list.
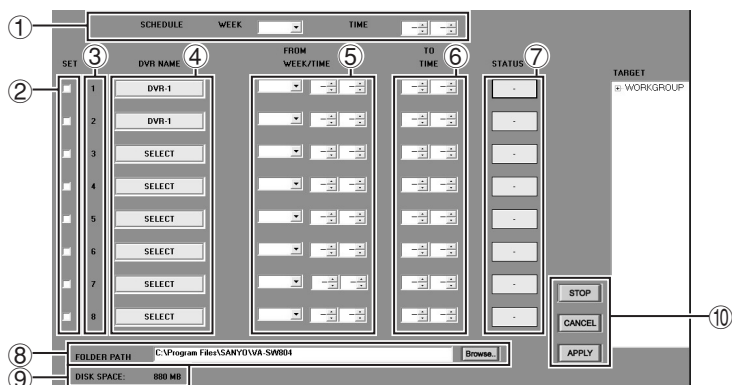
When the download starts, a dialog box that is similar to the individual file dialog box containing a download progress bar will be displayed, and when the download is complete, the display will return to the original main window that was displayed before the download operation was started.

- **The maximum size for a single downloaded file is approximately 600 MB. If a file is larger than this, it will be automatically split into multiple files and downloaded.**
- **If the image area being downloaded contains alarm recordings, the file will also be automatically split into multiple files and downloaded.**
- **When files are downloaded, two files with the same filename and different extensions (".mp2" and ".idx") are created automatically. The .idx file is required for playing back saved images and also for checking for tampering, so do not store the two files in separate folders from each other.**

TIMER DOWNLOAD   (User Level: ID2/3 or higher)

A timer reservation can be used to automatically download images recorded by a DVR. If you specify the download range (starting point and ending point) for each DVR, the recorded images from the specified range will be downloaded automatically at the specified time

Click [icon] on the toolbar to display the "TIMER DOWNLOAD" window.

① **SCHEDULE**

Set the weekday and time for the download to start.

- **WEEK:** Select from the drop-down list box. SUN, MON, TUE, WED, THU, FRI, SAT DLY: Downloads occur every day. (P.70, 71)
- **TIME:** Use the spin buttons to set the hour and minutes.

② **SET**

If you select the check box, the timer download function will operate based on the set conditions.

③ **NO.**

Shows the download priority order.

④ **DVR NAME**

Specifies the name of the DVR to download from.

⑤ **FROM WEEK/TIME**

Sets the starting point (weekday/time) for images to be downloaded. The setting method is the same as ①.

> **When the 'WEEK' setting for 'SCHEDULE' is set to 'DLY', select the corresponding day (previous day or same day) for the images to be downloaded in the 'FROM WEEK' columns.**
>
> **Available settings:**
> - **PREV:**
>   Image data from the day before the download is to be carried out will be downloaded.
> - **APPT:**
>   Image data from the same day as the download is to be carried out will be downloaded.

⑥ **TO TIME**

Sets the ending point (time) for images to be downloaded.

66 English

⑦ **STATUS**

Shows the latest download results or the current status.

- **OK:** Download successful
- **NG:** Download failed
- **DL:** Download in progress
- **–:** Not set

If you click the button, the download log will be displayed showing the download history. (P.73)

⑧ **FOLDER PATH**

Click [Browse..] and specify the download destination folder.

⑨ **DISK SPACE**

This shows the available disk space that can be used for the download destination folder.

⑩ **Operation buttons**

- STOP : Cancels all current downloads and reserved downloads.
- CANCEL : Cancels a timer setting and returns the setting to the point before [APPLY] was clicked.
- APPLY : Saves the timer settings.

> - **Changing the timer download settings and using the [CANCEL] and [APPLY] buttons are not possible while a download is in progress.**
> - **Use single byte characters for the folder path name. Do not use double byte characters, otherwise the characters will become corrupted.**

● **Timer download procedure**

Set the timer download settings as follows.

1   Set the download starting time.
Use [SCHEDULE] to set the weekday and time for starting the download.

2   Specify the DVR to be downloaded from.
With [SELECT] against [DVR NAME] selected, double-click the DVR name in the "TARGET" window. The DVR name will be displayed in [DVR NAME].

Up to a maximum of 8 DVRs can be selected.

3   Set the image range for downloading for each DVR.
• **If the "WEEK" setting for "SCHEDULE" is set to something other than "DLY":**
Set the image start point (weekday and time) in the "FROM WEEK/TIME" columns.
Set the end point (time) for the images in the "TO TIME" columns.

• **If the "WEEK" setting for "SCHEDULE" is set to "DLY":**
Select the corresponding day (previous day or same day) and the start point for the images to be downloaded in the "FROM WEEK/TIME" columns.
• **PREV:** Image data from the day before the download is to be carried out will be downloaded.
• **APPT:** Image data from the same day as the download is to be carried out will be downloaded.
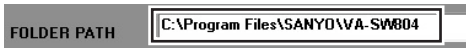Set the end point (time) for the images in the "TO TIME" columns.

4 **Specify the download destination folder.**
The download destination path and the filename are assigned automatically. The default name setting that appears in the "FOLDER PATH" box does not need to be changed unless you prefer to use different settings.

If you would like to change the download destination or the filename, click [Browse..] and type in the new settings in the "Browse for Folder" dialog box. You can create a new folder by clicking "NEW FOLDER" in the dialog box.

5 **Timer download standby**
Select the [SET] check box.
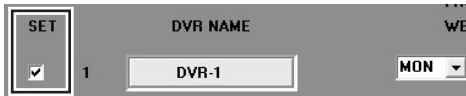
6 **Click** APPLY **.**
The setting details will be saved and the timer download function will operate according to the setting conditions.

The timer download reservation and operation status will be displayed momentarily underneath the time display at the top of the window.

- **Program (orange display):**
  Download timer reservation set
- **Downloading (red display):**
  Download in progress
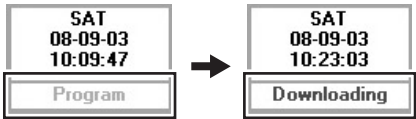
● **Image range setting for downloading**

• When setting the image range, the end point time (TO TIME) should be later than the start point time (FROM TIME). If the start point time is later than the end point time, an error message will be displayed when you click [APPLY].

• If the end point time is set to "00:00", it will mean "midnight the following day". Accordingly, you can download recorded images for a full 24-hour period by making the settings shown below.

• If the weekday that has been set using "FROM WEEK" is the same as the weekday that has been set for "WEEK" in the "SCHEDULE" setting, images from one week before will be downloaded.

• If the "WEEK" setting for "SCHEDULE" is set to "DLY" and "FROM WEEK" is set to "APPT", a condition for the download to be carried out is that there must already be images that have finished been recorded on the same day as the download when the time for the download start point is reached. The end point for the range of images to be downloaded must be earlier than the download start time. If the end point for the range of images to be downloaded is set to be later than the download start time, an error message will be displayed.

  • **Example of correct setting:**
    Download start time: **22:30**
    Download range: 6:00 – **22:00**

  • **Example of incorrect setting**
    Download start time: **18:00**
    Download range: 6:00 – **22:00**

● **Timer download setting example**

<If the "WEEK" setting for "SCHEDULE" is set to something other than "DLY">

① **Images that were recorded every Sunday between 1:00 to 10:00 will be downloaded the following day (Monday) at 12:00.**

② **A download will occur at 12:00 every Monday, but because this is the same setting as the "WEEK" and "FROM WEEK" settings for "SCHEDULE", the images that are downloaded will be those that were recorded between 12:00 and 20:00 on Monday a week ago.**

③ **Every Monday at 12:00, recorded images from the whole of the Tuesday (00:00 to 00:00 the next day) immediately preceding that Monday will be downloaded.**

<If the "WEEK" setting for "SCHEDULE" is set to "DLY">

① **Every day at 20:00, the images recorded between 4:00 and 18:00 on the previous day will be downloaded.**

② **Every day at 20:00, images from the whole of the proceeding day (00:00 to 00:00 the following day) will be downloaded.**

③ **Every day at 20:00, already-recorded images from between 4:00 and 18:00 on that same day will be downloaded.**

④, ⑤ **For both settings, recording of the images that have been specified for that day will not be complete by the download start point of 20:00, so these timer download settings are not possible. The "FROM WEEK" setting should be changed from "APPT" (same day) to "PREV" (previous day), or the end time for the download range should be changed so that it is earlier than the download start point.**

● **Basic timer download operation and specifications**

- When the download start time specified in [SCHEDULE] is reached, the downloads will be carried out in order starting from no. 1.

- Timer downloads require images to have been recorded during the image recording time specified.

  If there is no data to be downloaded from during the time range specified, an error will occur, that download number will be skipped and the download operation will proceed to the next number. The details of the error can be checked in the "Download Log" mentioned later on.

- The timer download function will not operate if this software is not running.

- If the target DVR is being controlled by another computer, an error will occur when the download starting time is reached.

- If the download starting time is reached while the DVR is currently being controlled by the same computer, a confirmation dialog box with the message "START DOWNLOADING?" will be displayed.
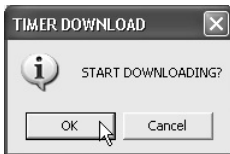

  If [OK] is selected: Downloading will start.

  If [Cancel] is selected: Monitoring will be interrupted and all downloads that have been reserved will be canceled.

  If no response to the confirmation dialog box is received after about 15 seconds, the window will close automatically and the download that has been reserved will start.

- The filename for the saved data will be "(DVR name)_(Starting date)_(Starting time).mp2".

  Example: DVR-1_20030623_1500.mp2

  If the DVR name contains "/" or "*" characters, these will be replaced by "+".

> **The timer download function cannot be used if you are simultaneously viewing four input screens that are being controlled by the same PC, or if some other PC is connected to the target DVR.**
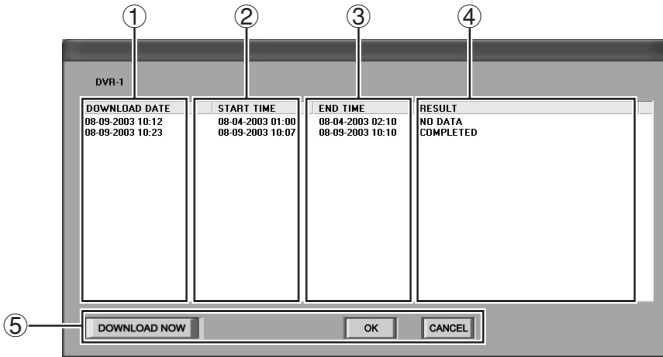
● **Download Log**

If you click on "STATUS" in the "TIMER DOWNLOAD" window, the download log will be displayed, and you can then check the download history details for each DVR.

① **DOWNLOAD DATE**
Download date and time

② **START TIME**
Starting date and time for saved images

③ **END TIME**
Ending date and time for saved images

④ **RESULT**
The following download results are displayed.

- **COMPLETED:**
  Download completed normally.

- **NO DATA:**
  No image data was found within the specified time range.

- **COMMUNICATION ERROR:**
  A problem occurred with communication.

- **CONTROL BUSY:**
  Control permission was denied.

- **PC HDD FULL:**
  The computer's hard disk is full.

- **USER CANCELED:**
  The operation was canceled using the [STOP] button.

- **DOWNLOAD TIMEOUT:**
  The current download did not finish before the next download time was reached.

- **DOWNLOAD TIME CHANGED:**
  The download range was changed because no data existed between the starting time and ending time specified.
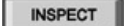
⑤ **Operation buttons**

- **DOWNLOAD NOW** : This button is used for preset files that could not be downloaded normally. If you specify files that appear in the log and then click this button, the display will change to the normal "Download" screen, the images from the day and time that are to be downloaded will be displayed in the preview window, and the download status will switch to standby. You can then click [DOWNLOAD] to start the download. (P.63)

- **OK** : Closes the dialog box (→ Status is returned to not set).

- **CANCEL** : Closes the download box (→ Status remains as displayed).
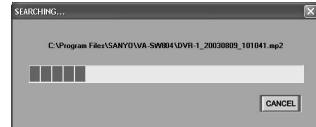
TAMPER DETECTION

(User Level: ID2 higher)

This function lets you check whether images that have been downloaded from a DVR to an external storage device are the original downloaded images, or whether they have been modified or added to in some way. Click on [TAMPER DETECT] in the toolbar to display the "TAMPER DETECTION" window.

1 Enter the filename of the file to be checked in the "FILENAME" box.

Click [Browse..], specify the file to be checked, and then click [Open]. The path and filename for the specified file will be displayed in the "FILENAME" box.

Click [CLEAR] to cancel the entered details.
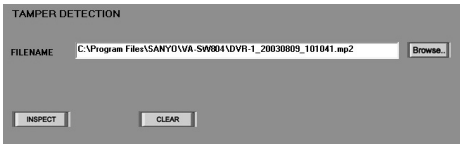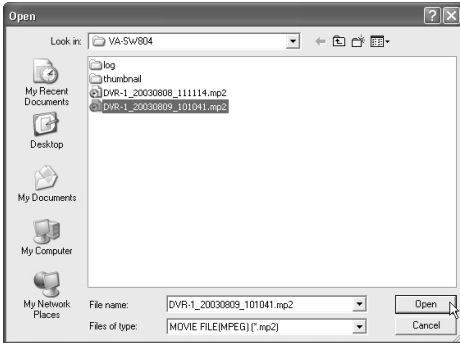
> ⚠ **The file cannot be loaded unless there are two files with the same filename and extensions of ".mp2" and ".idx" present in the same folder. (P.65)**

2 Click [INSPECT].

The tamper detection operation will start, and the progress bar in the dialog box will show the detection progress.

You can click [CANCEL] to cancel tamper detection while it is in progress.

3 Displaying detection results

The detection results will be displayed in the "ALTERED" window.

- **If no tampering was detected**
  The window will be blank.
- **If tampering was detected**
  The dates and times of the tampering will be displayed in the window in a list.

4 Checking tampered images

If tampering has been detected, you can display thumbnails of the tampered images by clicking the tampering date and time in the "ALTERED" window.

Click "PREVIOUS" or "NEXT" to display the previous or next image recorded on the tampering date. The tampered image display will also change.

MP2 Viewer

The MP2 Viewer is a special playback software application that is used for the DSR-M804/800 series. It can be used to play back image data in MPEG2 format that has been saved from the DVR onto a recording medium such as and computer's hard disk drive, a CompactFlash card or a CD-R.

■ Main Functions

1. Plays back saved images data (sound cannot be played back).
2. Saves still playback images as JPEG files.
3. Prints still playback images.
4. Detects image tampering.

■ Operating Environment

The following operating environment is required in order to use MP2 Viewer.

	Minimum	Recommended
CPU	Pentium III, 800MHz	Pentium 4, 1.7GHz
Memory	128MB	256MB
Display	XGA (1024 × 768 pixel), 16-million color or greater	
	AGP graphics card for hardware overlay	
	Or motherboard with onboard graphics chip*1	
OS	Windows 98 Second Edition	Windows XP Professional

*1 Latest driver with 100% DirectX 8.1 compatibility is required.

■ Installation/Saving Location

When the VA-SW804 DVR utility software is installed, the MP2 Viewer program is installed at the same time.

Path to saving location: C:\Program Files\ SANYO\VA-SW804

■ Starting

When image data is downloaded from a DVR, MP2 Viewer is also saved automatically from the computer into the download destination folder. If you double-click MP2 Viewer, the program will start and you can then load the desired image files that are saved in the folder, so that the images can be played back regardless of where the storage medium is taken to and used.

> **The MP2 viewer should only be used by itself. If you use it at the same time as you are using other MPEG playback software, it may not operate correctly.**

■ Window Structure and Functions of Each Part

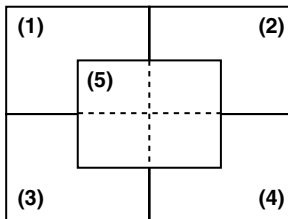The MP2 Viewer window structure and control menus are as follows.
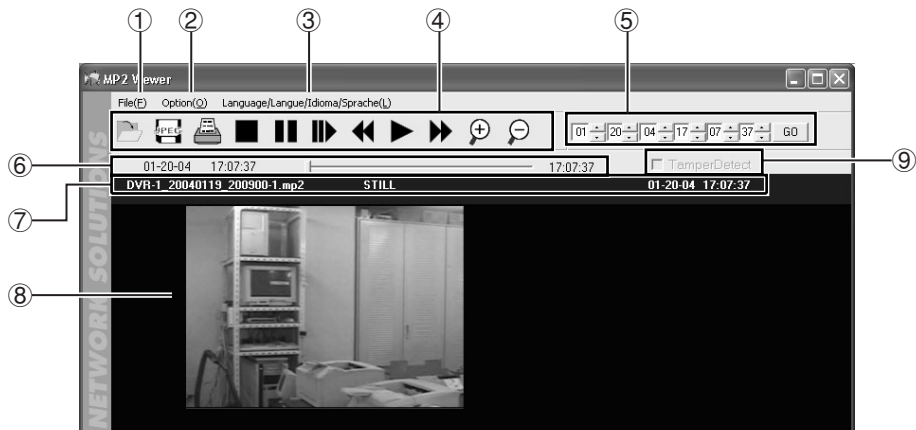
① **File menu**
- **Open(O):** Opens a file.
- **Save As(A):** Saves an image.
- **Print(P):** Prints an image.
- **Exit:** Exits the program.
- **About:** Version display.

② **Option menu**
- **ZOOM IN:** Increases the image display size.

  The image display size increases in the order (1) → (2) → (3) → (4) → (5) → (1) → .... each time the [ZOOM IN] button is clicked.

- **ZOOM OUT:** Returns to the original display size.
- **Full Screen:** Displays only the playback image area. (Press the [Esc] to return to normal display.)

③ **Language selection**
   (Default setting: English)
   This lets you select the screen display language. Select the check mark to the left of the language that you would like to use for displays.

Available languages:

English, French, Spanish, German

④ **Toolbar**

This contains command buttons that are used most frequently. You can carry out the following operations by clicking these buttons.

Opening files

Saving images

Printing images

Stop

Still

Slow play

Review

Playback

Cue

Zooming in on images

Zooming out from images

⑤ **Search panel**

Specify a date and time for images to search for.

⑥ **Slide bar**

Move the position of the slide knob to the left or right by a margin corresponding to elapsed playback time.

You can also change the playback point by dragging the slide knob.

The image dates for the starting point and ending point for the open file are displayed at each side.

⑦ **Title bar**

Shows information for the displayed image.

- **Filename**
- **Playback mode**

  PLAY: SLOW x 1/8, x 1/4, x 1/2

  CUE: PLAY ▶▶, ▶▶▶, ▶▶▶▶, ▶▶▶▶▶

  REVIEW: PLAY ◀◀, ◀◀◀, ◀◀◀◀, ◀◀◀◀◀

- **Recording date and time**

  MM-DD-YY HH:MM:SS

  (The display order for the date and time will follow the Windows settings.)

⑧ **Playback image display area**

Shows the images being played back.

If you right-click the mouse in the playback image area, the following drop-down menu will be displayed, and you can use it to run the same commands that are in the toolbar (④).

|	
Open(O)…	Ctl+O
Save As(A)…	
Print(P)…	Ctl+P
STOP	
PLAY	
STILL	
FRAME	
SLOW	
CUE	
REVIEW	
Full Screen	Ctl+F

⑨ **Image tamper detection**

Select the check box if you would like to use the tamper detection function for the images.

■ Opening Files

After MP2 Viewer opens, follow the procedure below to open the image file to be played back.

1 **Click ▢ on the toolbar.**

Alternatively, select [Open(O)] from the File menu.

2 **Select and open the image file.**

Select the file in the Open dialog box and then click [Open]. The file will open and playback will start automatically.
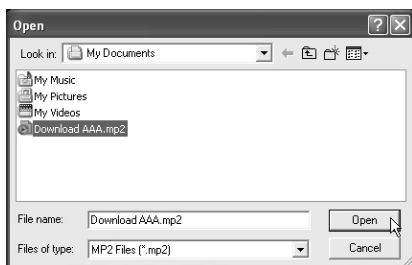
📝 **You can also open an image file by dragging and dropping it directly into the window.**

■ Playback Control

Use the toolbar command buttons for playback operations.
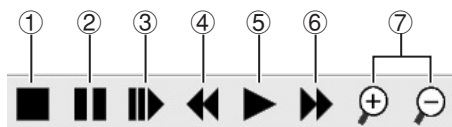
① **Stop button:**

If clicked during playback (including cue/review/slow playback), playback will stop.

② **Still button**

If clicked during playback (including cue/review), playback will be paused and a still image will be displayed. If clicked while the image is paused, frame advance playback starts.

③ **Slow play button**

If clicked during playback (including cue/review), slow playback starts. If clicked while the image is paused, frame advance playback starts.

④ **Review button**

If clicked during playback (including cue), reverse playback starts.

⑤ **Playback button**

If clicked, playback is carried out at the standard speed.

⑥ **Cue button**

If clicked during playback (including review), fast-forward playback starts.

⑦ **Zoom in/Zoom out buttons**

These operate in the same way as [ZOOM IN/ZOOM OUT] in the Option menu.

■ Saves a Still Image

Still image data can be saved in JPEG format onto a different storage medium.

1 **Displays a still image.**
Click ❚❚ while playback is in progress.

2 **Click** 🅹🅿🅴🅶 **on the toolbar.**
Alternatively, select [Save As(A)] from the File menu.

The "Save As" dialog box will be displayed.
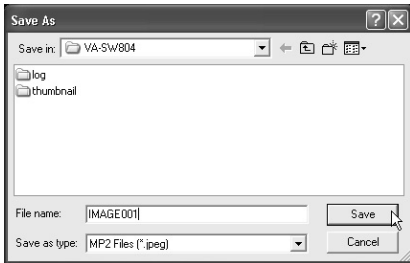
3 **Specify the saving destination folder and filename, and then click [OK].**
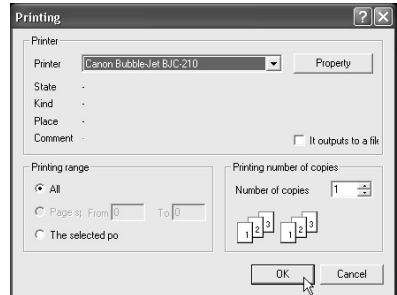The still image will be saved in the destination folder.

A timestamp is added to images when they are saved.
MM-DD-YY HH:MM:SS
(The date and time display order depends on the Windows environment settings.)

■ Prints Still Images

Still images can be printed.

1 **Displays a still image.**
Click ❚❚ while playback is in progress.

2 **Click** 🖨 **on the toolbar.**
Alternatively, select [Print(P)] from the File menu.

The "Printing" dialog box will be displayed.

3 **Select the printing parameters such as the printer and the number of copies, and then click [OK].**
The still image will be printed according to the selected printing parameters.

A timestamp is added to images when they are printed.
MM-DD-YY HH:MM:SS
(The date and time display order depends on the Windows environment settings.)
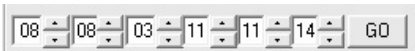
■ Searches for Images

You can specify a date and time within the image file range to search for images.

1 **Specify the date and time for the images to search for.**
Use the spin buttons on the search panel to specify the date and time.

(Month/Day/Year/Hour/Minute/Second)

| 08 ⏶⏷ | 08 ⏶⏷ | 03 ⏶⏷ | 11 ⏶⏷ | 11 ⏶⏷ | 14 ⏶⏷ | GO |

2 **Click "GO".**
Images from the specified date and time will be searched for in the image file and played back.

■ Detecting Tampering of Images

You can check saved images while they are being played back to verify if they have been tampered with or not.

1 **Start the tamper detection function.**
Before opening the image files, select the "TamperDetect" check box.

| 01 ⏶⏷ | 01 ⏶⏷ | 02 ⏶⏷ | 00 ⏶⏷ | 00 ⏶⏷ | 00 ⏶⏷ | GO |
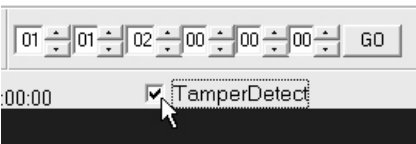
:00:00   ☑ TamperDetect

2 **Start detection.**
The tamper detection will start at the same time as the image files are played back.

3 **Detection result display**
- **Blue:**
  Normal image playback (from start of playback until tampering was detected)
- **White:**
  Point where tampering was detected.
- **Green:**
  Playback after tampering was detected. (Even if only one instance of tampering was detected, a green title bar is displayed for all images after that point regardless of the tampering status detected for those images.)

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