



SMS (Server Management Software)

Digital Video Recorder

User's Manual

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1 — Introduction

1.1 About this manual

This manual describes the functions and provides a step by step guide in operating SMS (Server Management Software), a software used to remotely monitor and manage a DVR (Digital Video Recorder).

1.2 Configuration

The SMS package consists of the SMS, Live Viewer, and Search Viewer programs.

- SMS: Main Management Program
- Live Viewer: Remote Monitoring and Auxiliary Video Play Program
- Search Viewer: Remote Search Program

1.3 SMS Functions

- Checks and reports the status of a DVR system from a remote site
- Reports the detection of an event from a remote site
- Remotely monitors a real-time video
- Searches and plays recorded images by time and event
- Features E-MAP function
- Provides a variety of backup tools from a remote site
- Allows recording and remote setting of a camera
- Upgrades a DVR firmware from a remote site

1.4 Product Information

- SMS Software User Guide
- SMS Installation CD-ROM (1 diskette)

1.5 System Requirements

- OS: Microsoft Windows 2000 or higher
- CPU: Intel Processor 1.3GHz or higher (Pentium 4)
- Memory: 512MB or higher
- Graphic: 64MB or higher

2 — SMS Installation

2.1 How to install

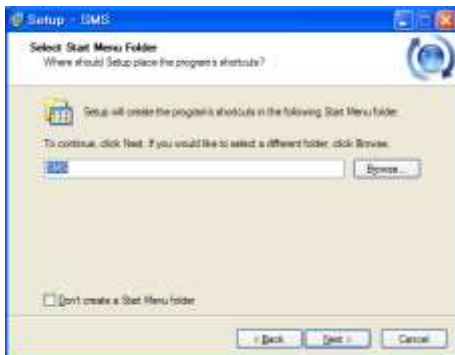
- ① Set the Installation CD on the CD-ROM drive.
- ② Browse the content of the CD and click on the “Setup.exe” file.
- ③ On the SMS Setup Wizard dialogue box that is displayed, click on the “Next” button.



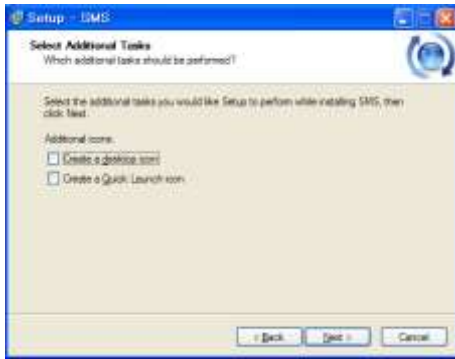
- ④ Set the installation path, and click “Next”.



- ⑤ Set the name of the Start Menu folder, and click “Next”.



⑥ Select the additional tasks to be performed by marking the appropriate options, and click “Next”.



⑦ Check the installation settings, and click “Install” to proceed with the installation.



⑧ When the window below is displayed, click on the “Finish” button to complete the installation.



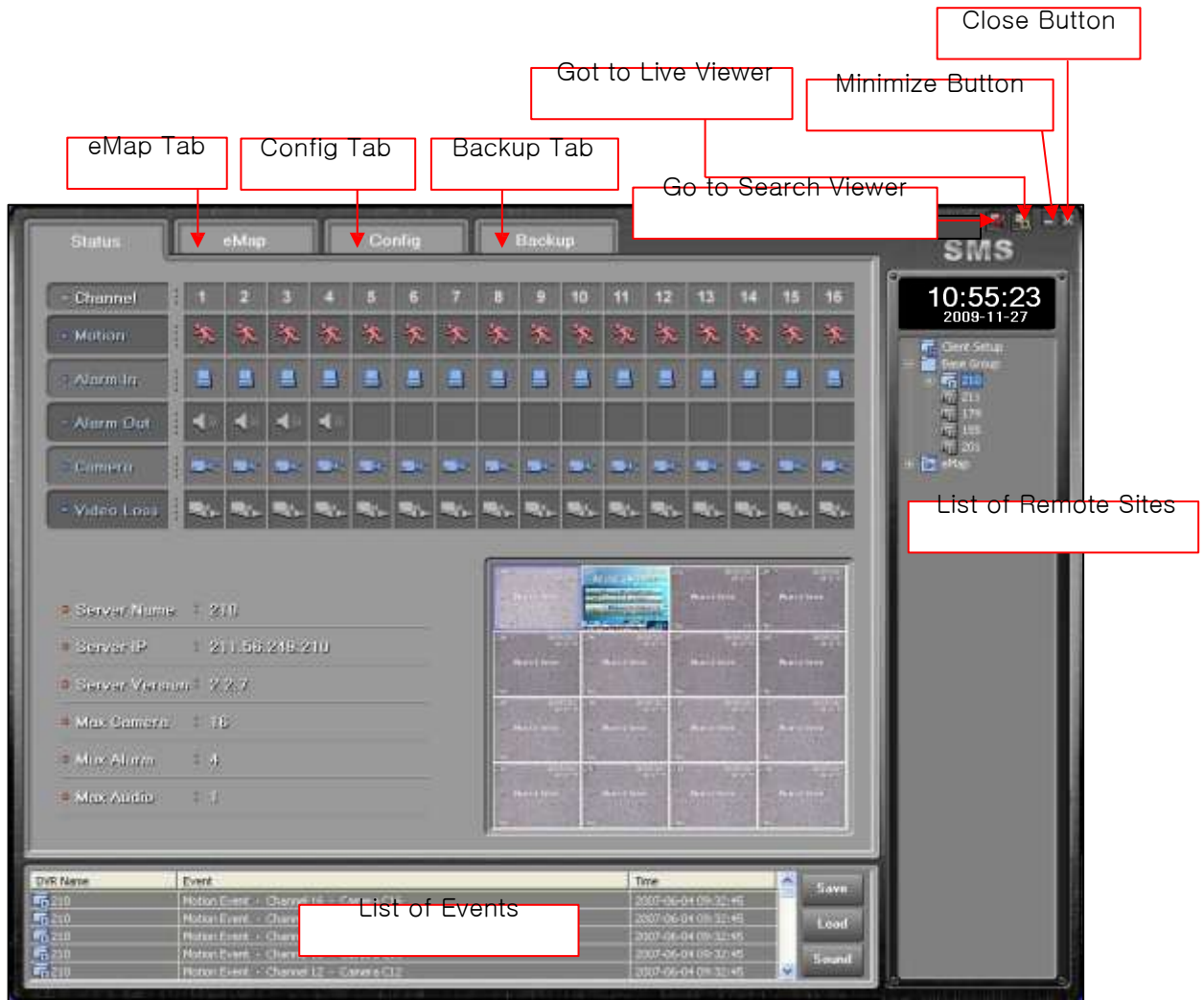
3 — SMS

3.1 General

SMS is an integral software that can control the DVR system status management, real-time video monitoring, e-Map, DVR system setting, and DVR backup from a remote site.

3.2 SMS Configuration

The SMS window features the List of Remote Sites and List of Events sections found at the right side and bottom of the window. It has the following tabs, Status, e-Map, Config, and Backup, as shown below:



3.3 SMS Functions

3.3.1 Remote Site List

SMS software can register multiple DVRs as a list and connect them to use.

3.3.1.1 DVR Group

The List of Remote Sites manages DVR items as a group; the Base Group is created during initial installation.

① Create Group

From the hot menus of the List of Remote Sites, select “Add Group”.



NOTE : Hot menus are displayed when right-clicking on a corresponding item.

When the Add Group window appears, specify the name of the group and click on the OK button to add the corresponding group to the List. Specify a Group name, if desired, to easily manage the List.



② Edit Group

Right-click on the group to be edited, and select “Modify Group” from the hot menus.

When the Modify Group window appears, the corresponding group name can be edited. The editing can be done in the same way as it is done for Add Group.

③ Delete Group

Right-click on the group to be deleted, and select “Delete Group” from the hot menus to delete the corresponding group and the DVR list registered to the group.

NOTE : If any DVRs, which are included in the DVR lists registered to the corresponding group, are connected, the group cannot be deleted.

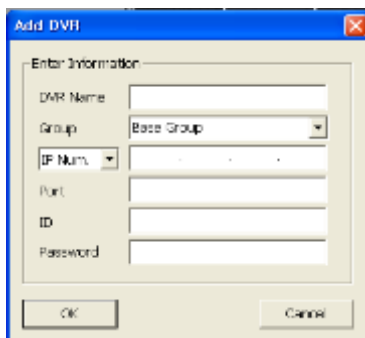
3.3.1.2 DVR List

① Add DVR List

Right-click on the relevant group, and select “Add DVR” from the hot menu.



When the Add DVR window appears, specify the network information of the DVR and specify the DVR name as desired.



NOTE : The initial network information of the DVR is: 7000 for port, remote for ID, and 1111 for password.

② Edit DVR List

Right-click on the DVR to be edited, and select “Modify DVR” from the hot menu.

When the Modify DVR window appears, edit the network information of the DVR. The edit procedure is the same as that of Add DVR.

③ Delete DVR List

Right-click on the DVR to be deleted, and select “Delete DVR” from the hot menu.

NOTE : If the DVR is connected, it cannot be deleted.

④ Move DVR List

To move the DVR item into a different group, simply drag and drop the DVR item into the desired group.

NOTE : Drag-and-drop is the action of clicking on an item using the left mouse button and dragging it to a different location.

⑤ Connect DVR

Right-click on the DVR to be connected, and select “Connect” from the hot menu, or double-click on the DVR to be connected with another DVR.

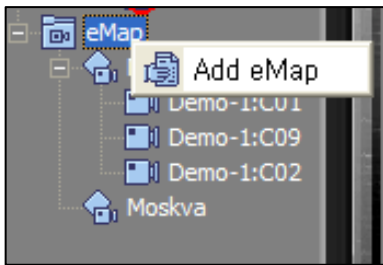
⑥ Disconnect DVR

Right-click on the connected DVR, and select “Disconnect” from the hot menu to have the DVR disconnected.

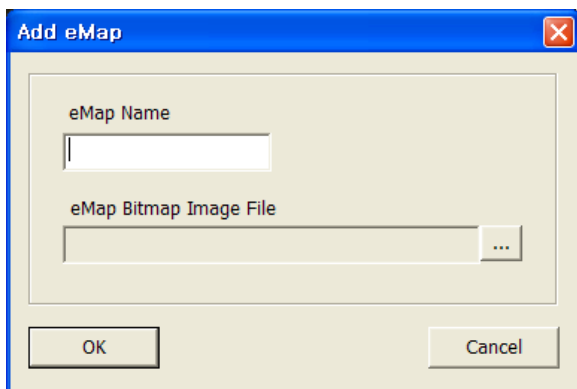
3.3.1.3 eMap

① Add eMap

Right-click on the eMap group in the remote site list, and select “Add eMap” from the hot menu.



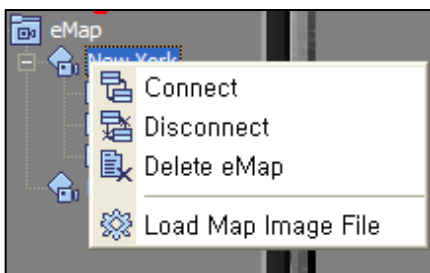
When the Add eMap window appears, specify the eMap name and identify the map bitmap image to be used. Specify the eMap name, if desired, to facilitate remote monitoring.



NOTE : SMS only supports a bitmap image to be used as eMap.

② Change eMap Image

From the hot menu of the eMap registered in the eMap group, select “Load Map Image File”, and select the image file to be changed.

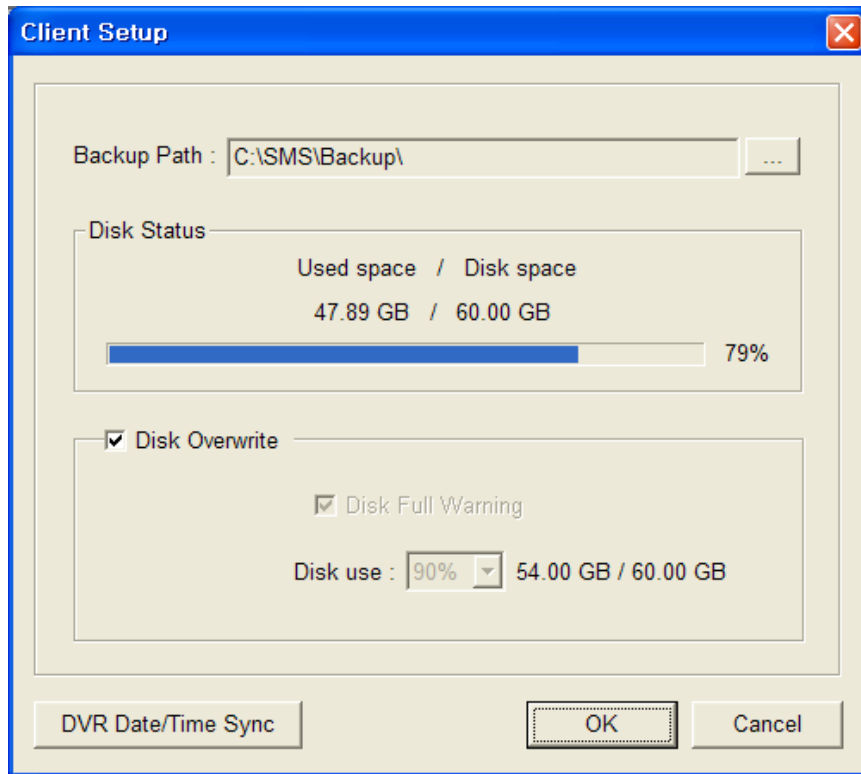


③ Delete eMap

Right-click on the eMap to be deleted, and select “Delete eMap” from the hot menu.

3.3.1.4 Client Setup

When the Client Setup item at the top of the remote site list is double-clicked, the following window appears:



The backup path can be changed by clicking the button, and the disk status is displayed on the client setup window. The Disk Overwrite function can also be toggled on/off from the same window. When the Disk Overwrite function is not used, a warning before a disk is full can be received by setting the "Disk use %". Select the percentage from the dropdown list.

If you click the DVR Date/Time Sync button, you can change the time setting of DVR according to NTP Server / Time Zone / User Input.

NOTE : To apply the changes of the Client Setup, a separate password is required. This password is used commonly throughout the SMS software. The password is set to 1234 by default.

3.3.2 Event List

Event List displays events that occurred from DVRs that are connected in a list.

DVR Name	Event	Time	Buttons
Demo2	Video Loss Event - Channel 16 - Camera C16	2009-12-04 09:36:51	Save Load Sound
Demo2	Video Loss Event - Channel 15 - Camera C15	2009-12-04 09:36:51	
Demo2	Video Loss Event - Channel 14 - Camera C14	2009-12-04 09:36:51	
Demo2	Video Loss Event - Channel 13 - Camera C13	2009-12-04 09:36:51	
Demo2	Motion Event - Channel 12 - Camera C12	2009-12-04 09:36:51	

① Save Event List

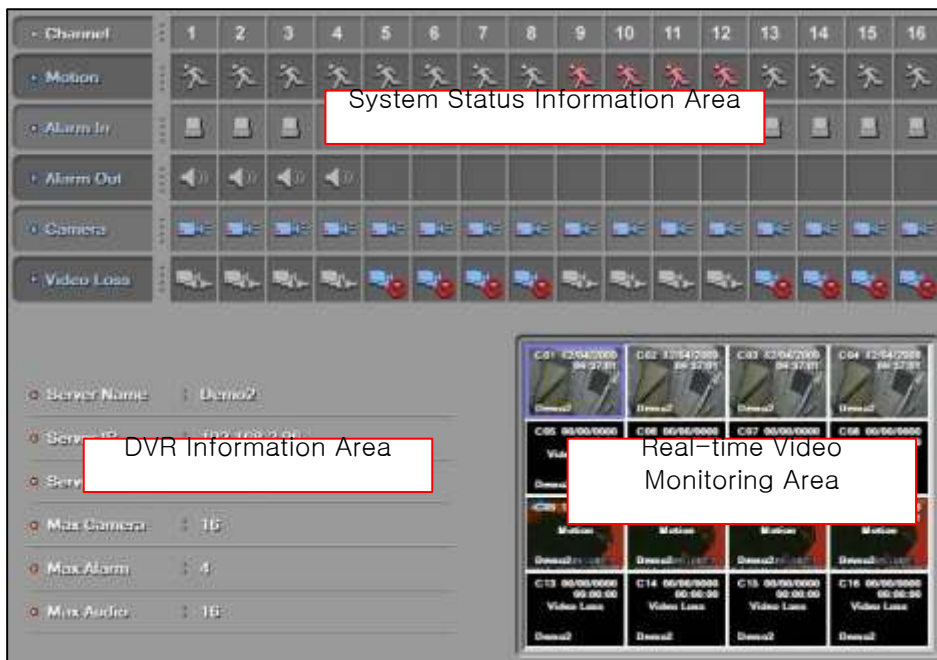
Click the Save button to save the event information displayed in the current event list to the Log folder that is created as the Backup Path during the Client Setup.

② Read Event List

Click the Load button to read the event list from the Log folder.

3.2.3 Status

The following is the first screen that can be seen when the SMS is executed. This screen shows the real-time video monitoring of DVR and the system status information.



① System Status Information Area

Displays the movement detection, alarm input/output, camera connection status, and video loss information.

② DVR Information Area

Displays the basic information of the connected DVR.

③ Real-time Video Monitoring Area

Enables the real-time monitoring of the connected DVR.

NOTE : When multiple connected DVRs are selected from the remote site list, their information and real-time video can be monitored.

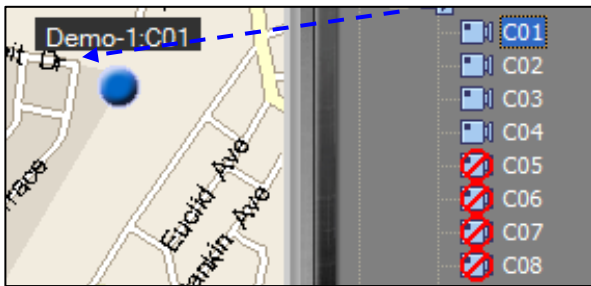
3.3.4 e-Map

By placing a camera at a virtual map and monitoring the video real-time, e-Map enables a user to remotely monitor more intuitively the location via video of the camera.



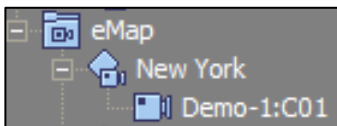
① Place Camera

Drag-and-drop the camera of the connected DVR into a desired location on the map.



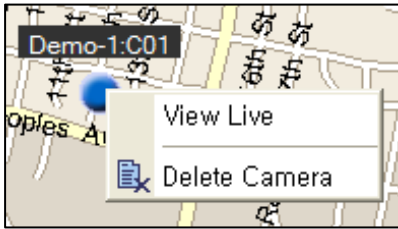
NOTE : The positioned camera is displayed in gray, if not connected; blue, if normal; and red, if an event is occurring. The camera cannot be relocated once positioned, but the video viewer is movable.

The positioned camera is automatically added to eMap as shown below:



② Delete Camera

From the hot menu of the positioned camera, select “Delete Camera”.



Once the camera is deleted, it is deleted from the eMap of the remote site list as well.

③ Video Viewer

Select “View Live” from the hot menu of the positioned camera or double-click on the camera to display a viewer window as shown below:



To close the viewer window, reselect “View Live” from the hot menu or double-click on the camera.

④ Hot Menu

The hot menu functions of the video viewer are as follows:

- X1/4 View, X1 View, X4 View : Sets the size of the viewer.
- Event Popup : If checked, the viewer is enlarged to X4 when an event occurs and an alarm sound is generated.
- Zoom In, Zoom Out : Enlarges or reduces the video digitally.
- Live Audio : If an audio input is connected, plays audio.
- Live Quality : Sets the play quality of video. (SLT model not supported)
- PTZ : In case of P/T/Z camera, enables the P/T/Z control.
- OSD Setup : Sets text information displayed on video.
- Print & Save : Captures a video image to print or save it as an image file
- Live Record : Saves videos on the PC real-time. The save folder is the “Live” folder created as the Backup Path.
- Delete : Closes the viewer window.

3.3.5 Config

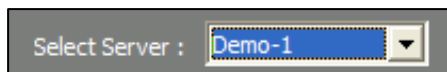
The Config function changes the DVR setup remotely and its screen configuration is similar to that of the DVR menu.



NOTE : For the DVR setup from Config, refer to the DVR manual.

① Import the DVR Setup

Select the currently connected DVR from the DVR selection item to import the corresponding DVR setup data.



② Save the Setup

Click the Save button and select a save path in the PC where the currently set data is to be saved.

③ Read the Setup

Click the Open button and select the saved setup file to read the saved setup data.

④ Apply the Setup

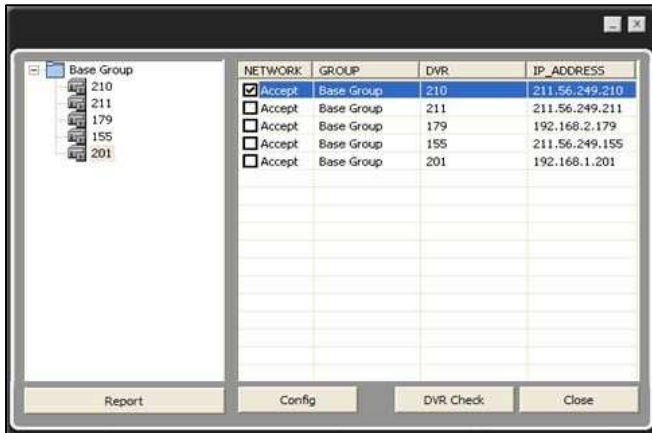
Click the Setup Servers button to apply the setup to DVR.

⑤ Upgrade the DVR Firmware

Click the S/W Upgrade button to upgrade the DVR firmware.

3.3.5.1 Apply the Setup

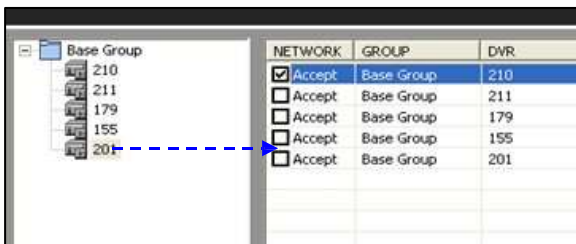
When the Setup Servers button is clicked to apply the setup to DVR, the setup application window appears.



NOTE : Before the setup application window appears, you will be prompted to enter a password. The password is the same as the one used for the Client Setup.

① Add DVR List

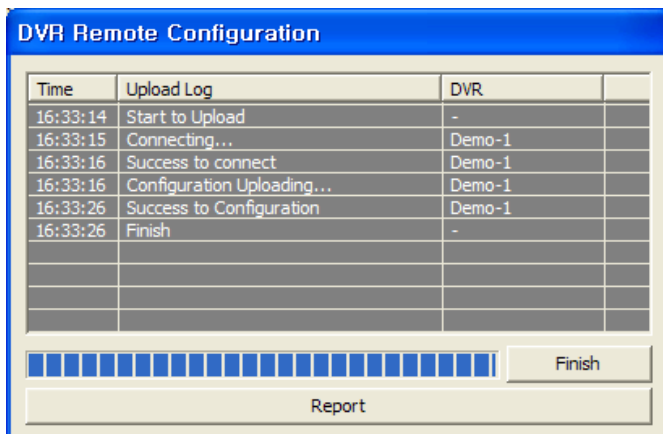
If a DVR item to be applied with the setup is added from the remote site list on the right by drag-and-dropping or double-clicking it, the DVR item is added to the list on the left. If multiple DVRs are added, the same setup is applied to all the added DVRs.



NOTE : If NETWORK Accept is checked, the network setup is also applied. If the same network setup is applied to multiple DVRs, there may be problems caused by IP address conflict.

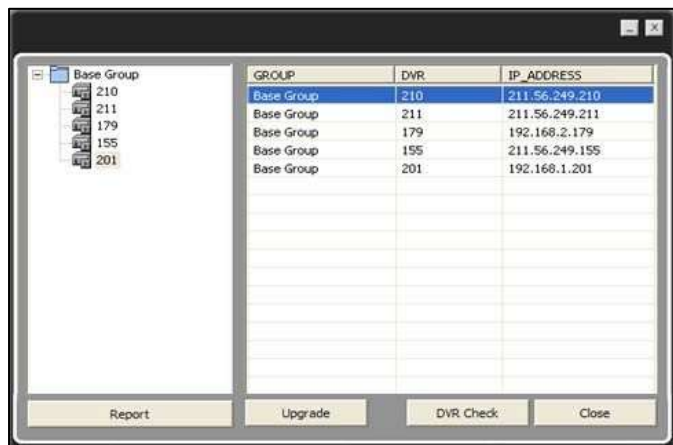
② Apply the Setup

When the Config button is clicked, the setup is applied sequentially to the added DVRs and the application process is displayed.



3.3.5.2 Upgrade the DVR Firmware

To upgrade the firmware, click the S/W Upgrade button, select the upgrade file, and the upgrade window then appears.



NOTE : The procedure for adding DVR list is the same as that from the setup application.

① Execute the Upgrade

Click the Upgrade button to sequentially upgrade the firmware for the added DVRs and to display the upgrade process.

② Report the Upgrade

Click the Report button to see the process and result of the firmware upgrade.

③ Confirm the Upgrade

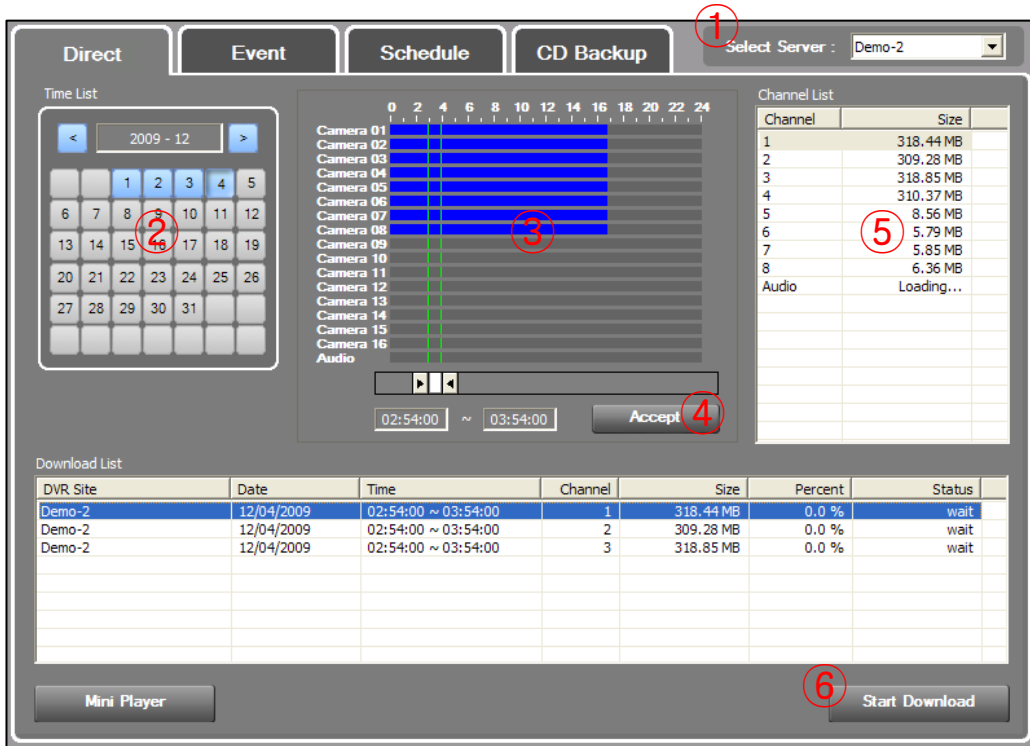
Click the DVR Check button to confirm if the firmware is correctly upgraded for the DVRs added to the list.

3.3.6 Backup

SMS Backup supports four modes: Direct, Event, Schedule, and CD Backup.

3.3.6.1 Direct Backup

Direct Backup can directly backup based on date and time.



Direct Backup is processed in the following order:

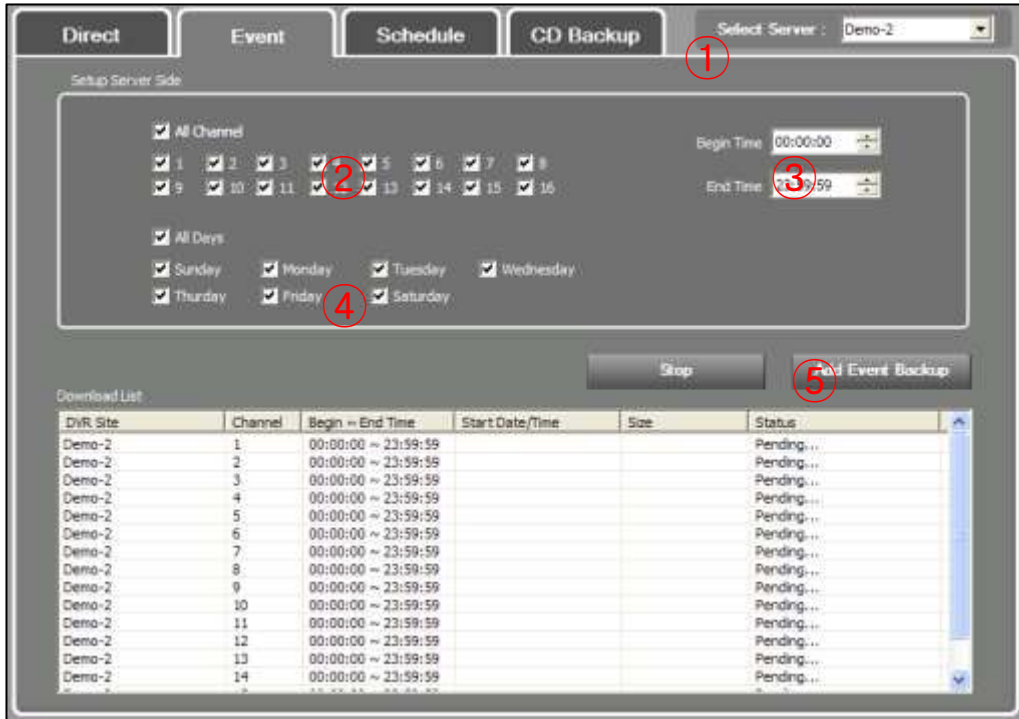
- ① Select DVR: Select a DVR from the DVR selection item as it is done for Config.
- ② Select Date: The date with recorded video is activated in blue. Click the activated date.
- ③ Select Time: Recorded videos are displayed by camera. Select the start and end times for backup.
- ④ File Information: Click the Accept button to import file information of the channel recorded at the selected time.
- ⑤ Select Channel: Check the channel and information of the recorded video and double-click the channel to backup.
- ⑥ Start Backup: Click the Start Download button to start the Direct Backup.

If the backup is completed, double-click on a corresponding item to play a video being coupled with a DVR player.

NOTE : The play of the video with its backup completed can be done using Live Viewer and Search Viewer as well.

3.3.6.2 Event Backup

The Event Backup function backs up a video with an event that occurred at a specified time.



NOTE : From the event setup operation of the DVR menu, the video transmission function should be activated.

Event Backup is processed in the following order:

- ① Select DVR: Select a DVR from the DVR selection item as it is done for Direct Backup.
- ② Select Channel: Select an Event Backup channel.
- ③ Select Time: Select the start and end times for Event Backup.
- ④ Select Day: Select a day when the Event Backup is activated.
- ⑤ Start Backup: When the Add Event Backup button is clicked, the set item is added; when an event occurs, Event Backup is started automatically.

The playing of the video backed up is done in the same way as it is done for Direct Backup.

NOTE : The time and day being set for Event Backup is based on the default settings of the user's PC.

3.3.6.3 Schedule Backup

The Schedule Backup function backs up the specified recorded video at a specified time.

1 Select Server : 210

Setup Server Side

All Channel

1 2 3 4 5 6 7 8

9 10 11 12 13 14 15 16

Begin Time 00:00:00

End Time 08:00:00

Setup Local Side

All Days

Sunday Monday Tuesday Wednesday

Thursday Friday Saturday

Download Start Time 13:41:13

Stop Add Schedule Backup

Download List

DVR Site	Date	Begin ~ End Time	Start Time	Ch...	Down / Total	Percent
210	00/00/0000	00:00:00 ~ 08:00:00	13:41:13	1	Pending...	
210	00/00/0000	00:00:00 ~ 08:00:00	13:41:13	2	Pending...	
210	00/00/0000	00:00:00 ~ 08:00:00	13:41:13	3	Pending...	
210	00/00/0000	00:00:00 ~ 08:00:00	13:41:13	4	Pending...	
210	00/00/0000	00:00:00 ~ 08:00:00	13:41:13	5	Pending...	
210	00/00/0000	00:00:00 ~ 08:00:00	13:41:13	6	Pending...	
210	00/00/0000	00:00:00 ~ 08:00:00	13:41:13	7	Pending...	
210	00/00/0000	00:00:00 ~ 08:00:00	13:41:13	8	Pending...	
210	00/00/0000	00:00:00 ~ 08:00:00	13:41:13	9	Pending...	
210	00/00/0000	00:00:00 ~ 08:00:00	13:41:13	10	Pending...	

Schedule Backup is processed in the following order:

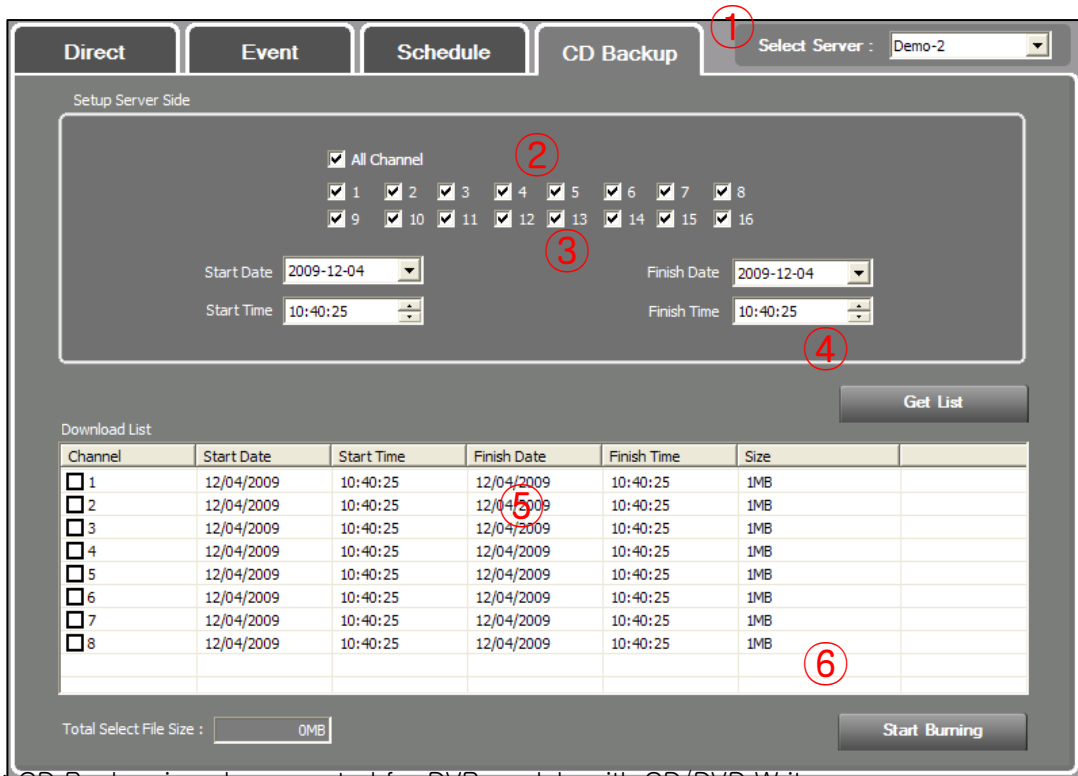
- ① Select DVR: Select a DVR from the DVR selection item as it is done for Direct Backup.
- ② Select Channel: Select a Schedule backup channel.
- ③ Set Remotely: Select the start and end times for the backup of recorded video.
- ④ Set Time: Set a day and time during which the Schedule Backup is to be activated.
- ⑤ Start Backup: When the Add Schedule Backup button is clicked, the set item is added. And when the set day and time is reached, Schedule Backup is automatically activated to backup the recorded video.

The play of the backed up video is done in the same way as it is done for Direct Backup.

NOTE : "Set Remotely" should be done based on a DVR at a remote site, and "Set Time" should be based on the default settings of the user's PC.

3.3.6.2 CD Backup

The CD Backup function is used to remotely backup recorded video on a CD-ROM in DVR.



NOTE : CD Backup is only supported for DVR models with CD/DVD Writer.

CD Backup is processed in the following order:

- ① Select DVR: Select a DVR from the DVR selection item as it is done for Direct Backup.
- ② Select Channel: Select a CD Backup channel.
- ③ Set Time: Select the start and end times for the backup of recorded video.
- ④ File Information: Click the Get List button to import the file information of the recorded video set.
- ⑤ Select List: Check the channel and information of the recorded video and select an item to backup.
- ⑥ Start Backup: Click the Start Burning button to start the CD Backup of the recorded video of the set item.

The backed up video is backed up to the CD-ROM in the DVR.

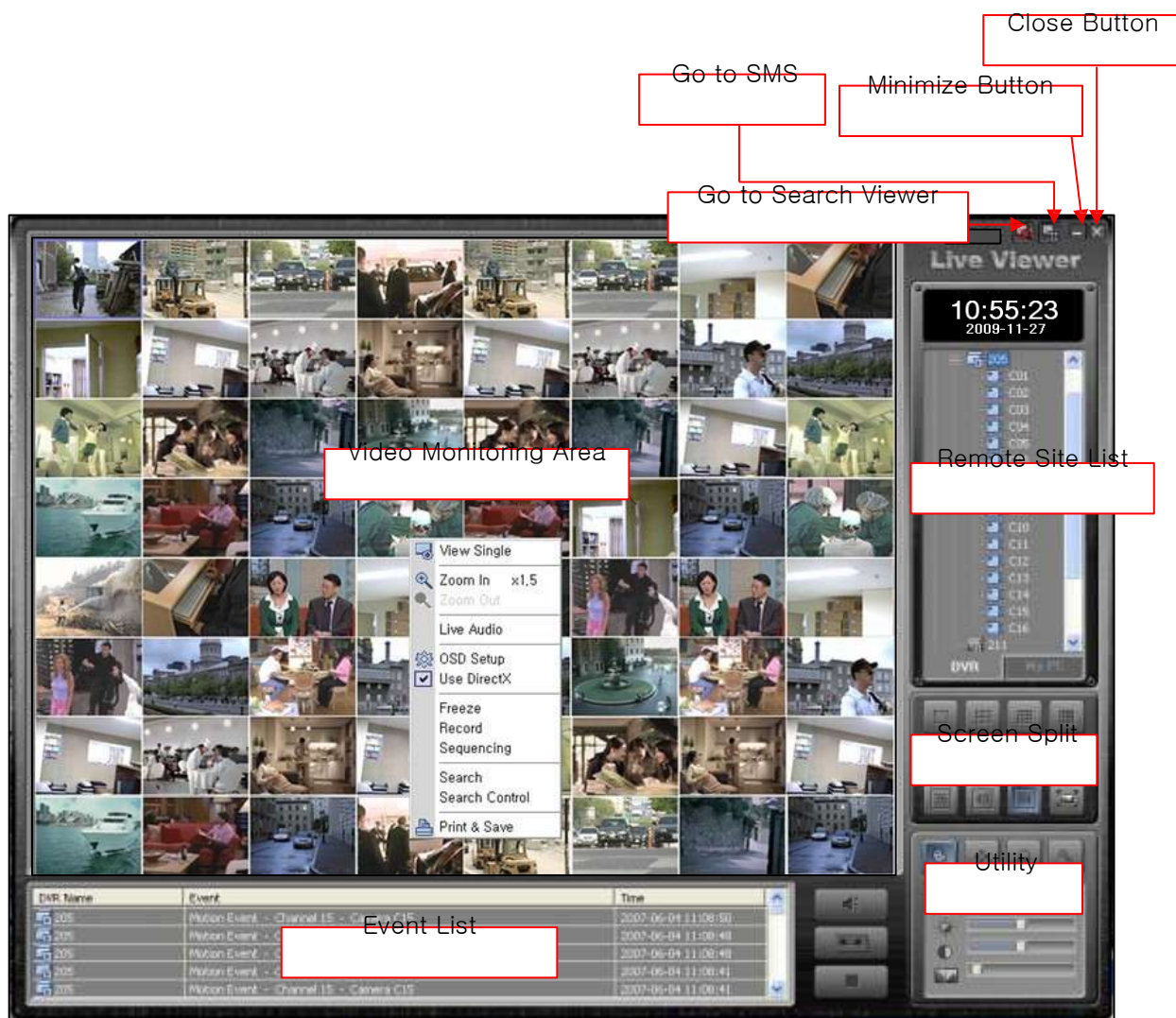
4 — SMS Live Viewer

4.1 General

Live Viewer is a robust and stable remote monitoring software. By being connected to multiple DVRs, it can play real-time and recorded videos, and monitor up to 64 channels of videos. It can also display event information when an event occurs at a remote site to help a user search related video.

4.2 Live Viewer Configuration

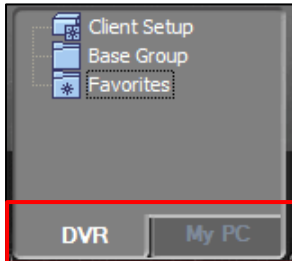
Live Viewer consists of the Video Monitoring Area, Remote Site List, Event List, and Utility.



4.3 Live Viewer Functions

4.3.1 Remote Site List

The Remote Site List of Live Viewer is divided into two tabs: the DVR tab for the management of DVR list and the My PC tab for the management of video list stored on a user's PC.



4.3.1.1 DVR

The management of DVR list and the Client Setup can be done in the same way as those of SMS. The Live Viewer has an additional function called "Favorites", which can manage up to 64 camera configurations being monitored from the Video Monitoring Area at the moment.

① Connect DVR

Right-click on the DVR to be connected, and select "Connect" from the hot menu that is displayed, or double-click on the DVR to get it connected. When the connection is completed, a window showing the connection completion appears as shown below:



From the connection completion window, select "All Camera View" to see all camera videos of the connected DVR via the Video Monitoring Area; select "Custom View" to see the camera videos when needed.

② Disconnect DVR

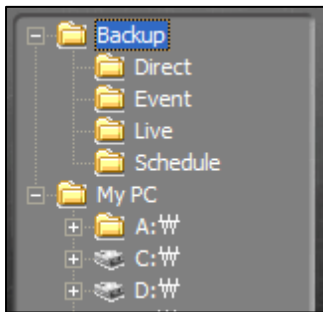
Right-click on the connected DVR, and select "Disconnect" from the hot menu to disconnect the DVR.

③ Favorites

This function is used to save up to 64 camera lists being monitored through the Video Monitoring Area. These lists can be added/modified/deleted using the hot menu commands of the Favorites.

4.3.1.2 My PC

Using the Backup or Real-time Recording function of SMS, the video lists saved on a user's PC can be searched easily, and the Windows Explorer-like structure helps find saved videos.



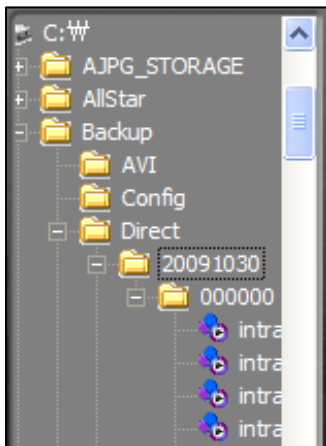
① Backup

The Backup items are the lists contained in the Backup Path set through Client Setup, and each list refers to:

- Direct : Video saved through Direct Backup of SMS
- Event : Video saved through Event Backup of SMS
- Live : Video saved through real-time recording
- Schedule : Video saved through Schedule Backup of SMS

② My PC

My PC can find saved videos through the list of storage devices of a user's PC.



4.3.2 Video Monitoring Area

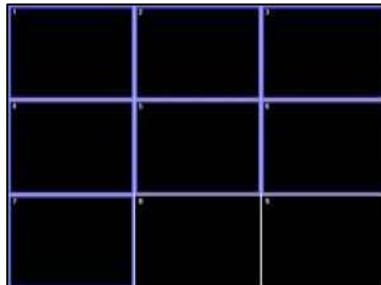
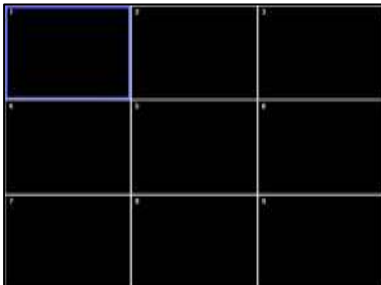
Video Monitoring Area can monitor real-time videos of up to 64 cameras, and provide various functions via the hot menu and utility.



4.3.2.1 Select Video Area

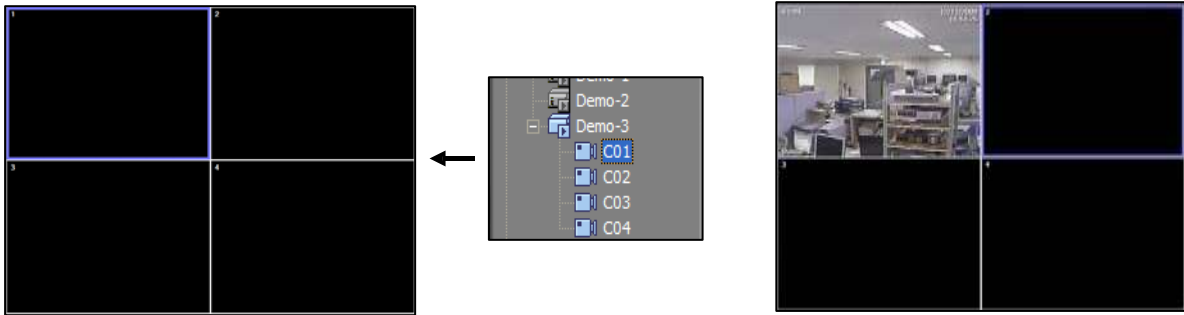
The operation of each video area can be independent. To do this, video area can be selected in three different ways. The selected video area is turned into blue.

- ① General Selection: Click the left mouse button on the selected video area.
- ② Simultaneous Selection: To select No. 1 to 7 video areas at the same time, select the No. 1 video area via General Selection and then click the left mouse button on the No. 7 video area while pressing the Shift key.
- ③ Arbitrary Selection: Click the left mouse button on the video area selected arbitrarily while pressing the Ctrl key. Multiple selection of arbitrary video areas is possible.

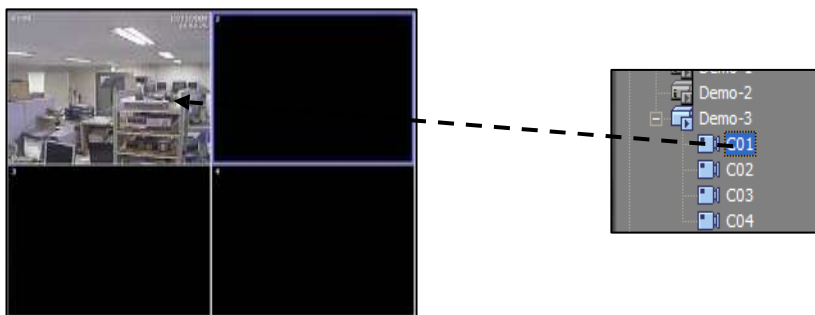


4.3.2.3 Play Camera Video

Select a video area to play and double-click on a camera item on the remote site list.



Or, drag-and-drop a camera item into a video area to play the corresponding camera video.



4.3.2.4 Hot Menu

If one or multiple video areas are selected, hot menu functions are applied to all selected video areas. The hot menu functions are as follows:

- View Single: Changes selected video area to one screen mode.
- Zoom In, Zoom Out: Enlarges or reduces video digitally.
- Live Audio: If an audio input is connected, plays the audio.
- Live Quality: Sets the play quality of video. (SLT model not supported)
- OSD Setup: Sets text information displayed on video.
- Use DirectX: Sets the use of DirectX for the playing of the video.
- Freeze: Temporarily pauses the playing of the video.
- Record: Saves video real-time to PC. The storage folder is the "Live" folder created as the Backup Path.
- Search: Remotely plays recorded video of the channel currently playing the video.
- Print & Save: Captures a video image to print or save it as an image file.

4.3.3 Utility

Utility provides a variety of convenient functions, which facilitate more diverse monitoring of the video.

4.3.3.1 Screen Split

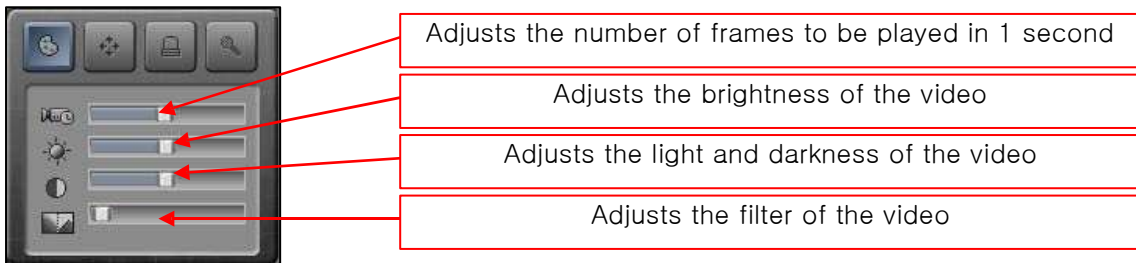
Live Viewer supports 11 screen split modes as well as overall screen mode.



When the current screen split mode is 4 screen split mode and if 4 screen split mode is reselected, a new 4 screen mode with the next 4 videos is displayed. When the video area is double-clicked, the area is converted to 1 screen mode, and when the area is double-clicked again, it is converted to the mode prior to the conversion to 1 screen mode.

4.3.3.2 Video Adjustment Control

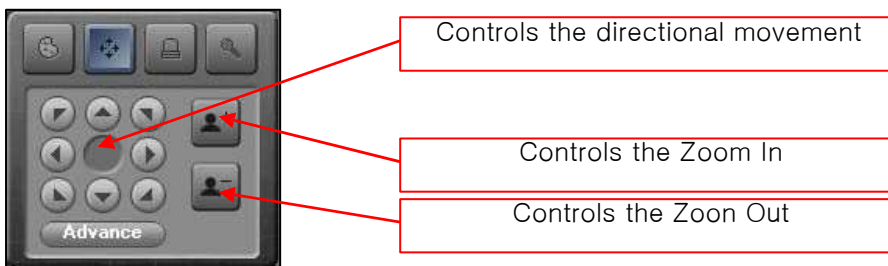
Using the slide type control, the video of the selected video area can be adjusted.



NOTE : SLT model does not support the number of frames played per second and the video filter.

4.3.3.3 P/T/Z Control

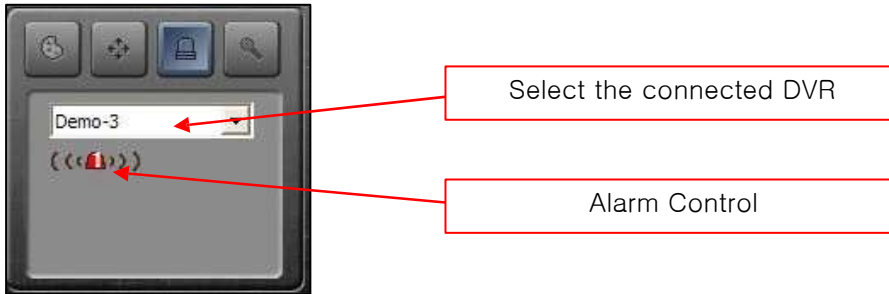
If a camera of which a video is played is P/T/Z camera, P/T/Z control is enabled.



Click on "Advance" for the Preset, Pattern and other expanded P/T/Z controls.

4.3.3.4 Alarm Control

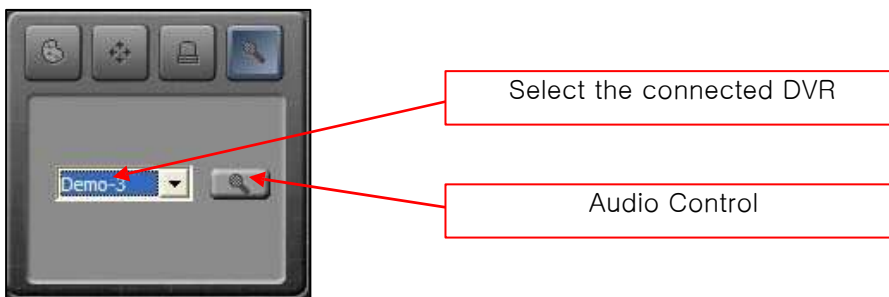
This function enables the control of alarm output devices such as emergency light and siren that are connected to the DVR.



Based on the number of alarm output devices supported according to DVR model, the control appears.

4.2.3.5 Audio Control

Using the microphone connected to a user's PC, the remote transfer of audio to a corresponding DVR is possible.



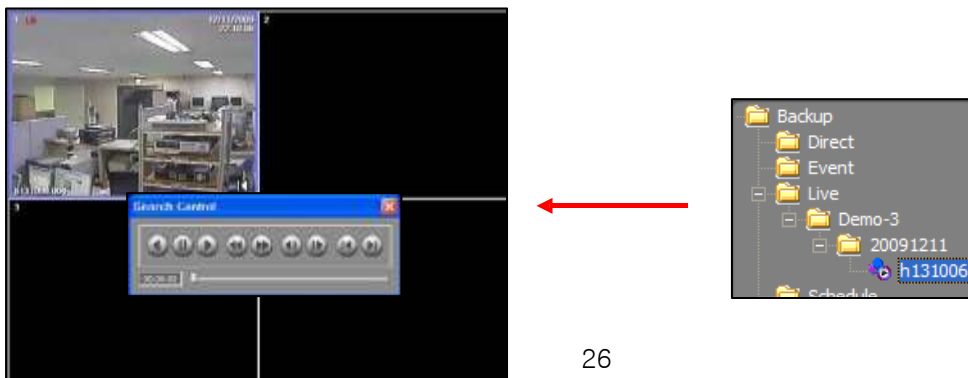
NOTE : The transferred audio can only be played with DVR and cannot be saved into it.

4.3.4 Search

Live Viewer provides the Search function that can play videos real-time and videos recorded to DVR and saved on a user's PC.

4.3.4.1 Local Search

To play a video saved on a user's PC, double-click it from the My PC tab of the Remote Site List. The video is then played at the selected video area. It can also be played using drag-and-drop action.



4.3.4.2 Remote Search

The Remote Search function is used to remotely play recorded video to DVR.

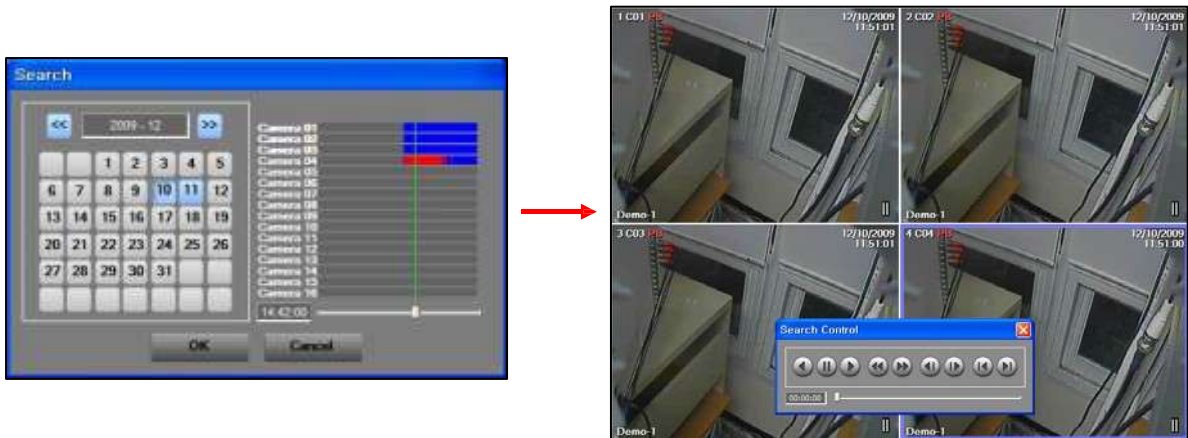
① Single Search

Single Search enables the playing of the video through the hot menu of video area being played real-time.



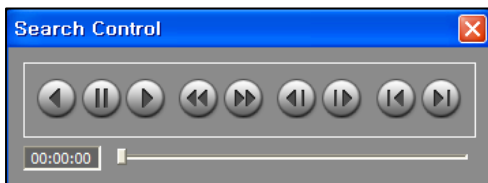
② Multi Search

Multi Search enables the playing of the video through the hot menu of DVR item in the Remote Site List.



4.3.4.3 Search Video Control

This controls the playing of the searched video. It can control searched videos in the selected video area in the same direction and can also control the videos in each video area independently.



5 — SMS Search Viewer

5.1 General

Search Viewer is a software dedicated for the playing of recorded videos. It searches videos recorded to DVR or the ones saved to a user's PC. It plays up to 16 videos and provides various play controls for each video.

5.2 Search Viewer Configuration

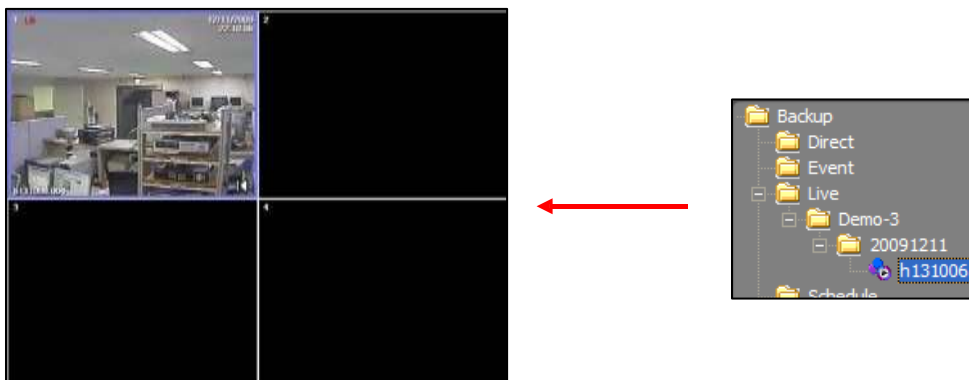
Search Viewer consists of the Remote Site List, Search Video Area, Time Search Area, and Utility.



5.3 Search Viewer Functions

5.3.1 Local Search

The Local Search function is used to search and play video files saved on a user's PC. The procedure for searching and playing video files saved on a user's PC is the same as that of the Live Viewer.

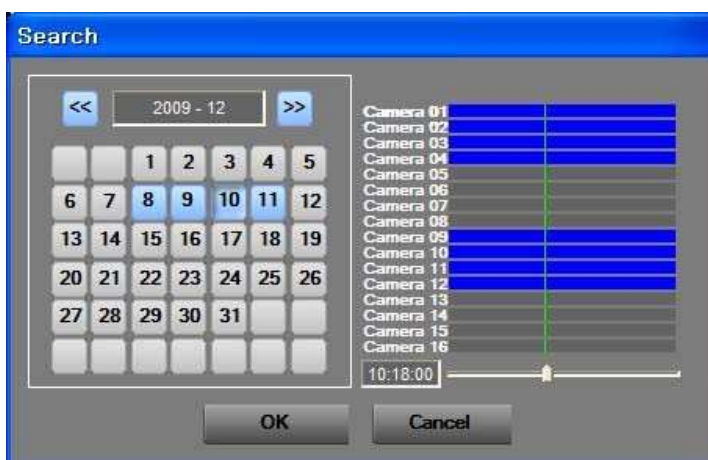


5.3.2 Remote Search

The Remote Search function is used to remotely play video recorded or saved to DVR, and is available through the connection via Remote Site List.

5.3.2.1 Video Search

When the connection to DVR is completed via Remote Site List, the video search window appears.

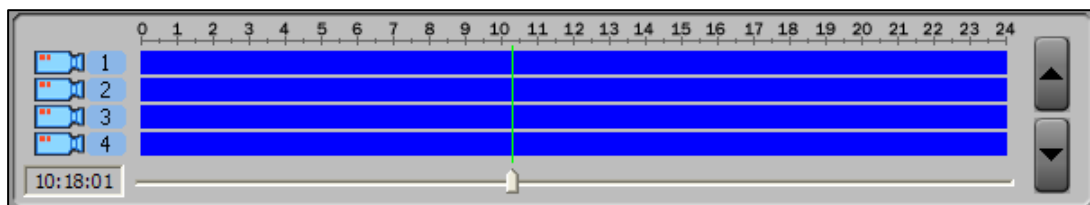


When the date recorded to the connected DVR and the play start time are selected, the searched video is played at the search video area.

NOTE : In Search Viewer, only one DVR can be connected; multiple connection of DVRs is not supported.

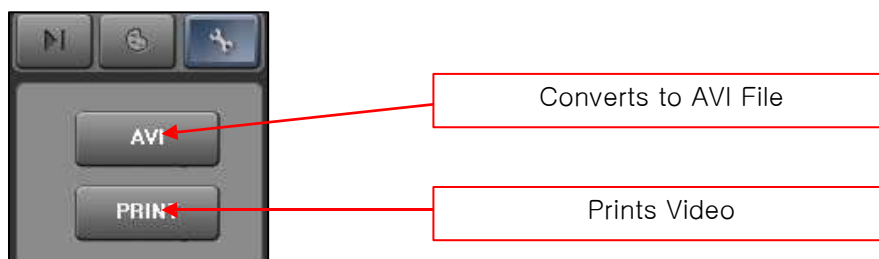
5.3.2.2 Time Search

It is possible to move a video part searched through Video Search to another video part at specific time through Time Search. When a video part is moved to a section where no recording is performed, the movement to a video part close to that section is made.

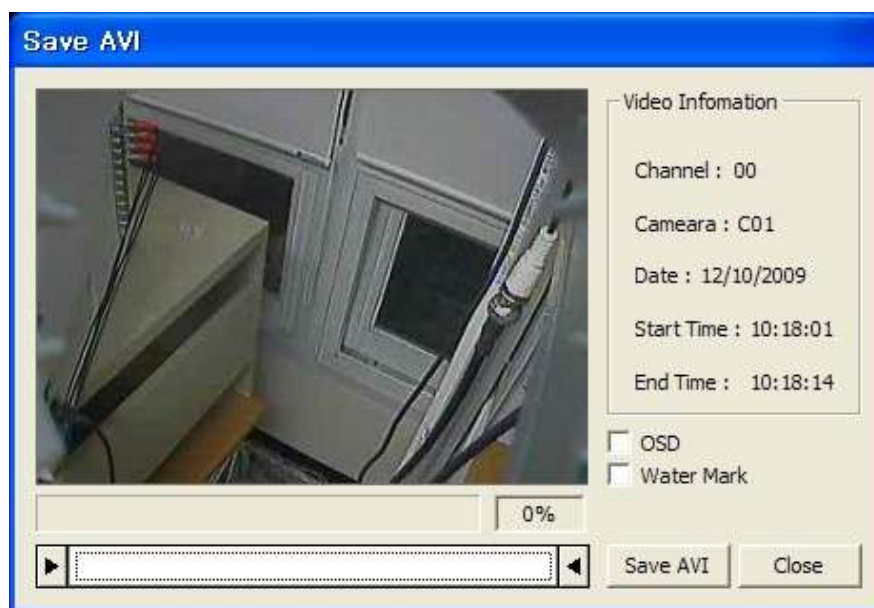


5.3.3 AVI File Conversion

AVI file conversion is used to convert a video saved on a user's PC to an AVI file, which can be played by commercially available video playing programs.



Select a search video area and select "AVI" from the Utility; the AVI file conversion window then appears.



6 — DVR Player

6.1 General

DVR Player is a software that is used for playing video files saved on a user's PC. While backing up using USB or DVD/CD from DVR, video files are saved together. Thus, video files saved on a user's PC can be played without installing the SMS software separately.



6.2 DVR Player Functions

DVR Player functions are the same as those of the Local Search of the Search Viewer.