

Management Software  
**Control Center**

**User's Manual**

(EN Rev 3.6)

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# **Control Center**

## **Installation and Operation Manual**

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This user guide is explaining usage of Control Center.

Please be informed of this user guide before use of the product.

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**Contents of this manual could be different based on software upgrade and product design along with specification can be subject to be changed without any pre-notice to users.**

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# Product Overview

## Basic Information

Control Center is managing software that can control max 1,024 units installed in remote area.

It provides functions such as real-time monitoring, search and backup of recorded image and setting. It also supports dual monitor with 144 split screen and can monitor max 288 channels simultaneously. It can be done with designated motion area, and text search is also possible.

Multichannel video can be optimally monitored using multi-streaming. It can automatically select a stream to fit on the partitioned screen.

It has the function to automatically select the stream according to the divided screen, taking advantage of products that support multi-streaming to enable optimal monitoring even in multi-channel monitoring. This function allows you to display HD (1080p, 720p) ~ 4K UHD (2160p) streams in single screen mode or SD stream (nHD, D1, Half, CIF) in multi-division screen mode. It is a function that helps reduce the consumption of network resources and efficiently uses CPU resources. Since this function works automatically, you do not have to set or wait for the video transmission.

Through this technology is applied in the distributed connection management, and it uses less CPU and network load, real-time management of many units.

Hardware decoding allows real-time monitoring of 25 channels HD streams or 64 channels nHD streams. If the performance of PC is instantaneously lacking by other program, frame rate of minimum number of channels are decreased to guarantee system stability. When the performance is restored, it automatically returns to the original monitoring frame rate and always provides optimal monitoring environment.

There are several way to notified and able to cope the situation that occurs in the registered units in real time, it also provides the ability to store and retrieve the events that occurred and when an event occurs, it pops-up the related video.

The Control Center vides Viewset and Map grouping function to efficiently and conveniently managing the number of units.

Viewset function is to let user wish to select the channels with a new name from several units.

And the Map feature is to placing the camera, sensor, MIC and relay in the map to managing the units and you can operate each device icon to view the image and control.

In addition, since it supports dual monitor, so you can monitor and control units at the same time, and also you can check the units status in real-time such as event, alarm log.

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# Main Features

## Support FULL HD Video

This product supports normal image of SD CIF/HALF/D1 along with live monitoring and playback/backup for high quality picture of UHD 2160p(3840x2160), QHD 1440p(2560x1440), HD 1080p(1920x1080), 720p(1280x720), nHD(640x360). Also it supports live monitoring on the camera supporting RTSP protocol.

- ✓ **Support 4K (UHD) and 4M (QHD) with 30fps in live real-time monitoring**
- ✓ **Support up to 25ch at 1080p with 30fps each channel in live real-time monitoring**
- ✓ **Support up to 64ch at nHD with 30fps each channel in live real-time monitoring**

## Live Monitoring

Support various monitoring screen and high quality image display without delay for each channel.

- ✓ **2 Monitors connection support**
- ✓ **Supports various screen split for monitoring "1/4/6/7/8/9/10/13/16/25/36/49/64/81/100/121/144"**
- ✓ **Full Screen Mode**
- ✓ **Can add the image to the desired position by drag-and-drop operation with mouse**
- ✓ **Function for management of group viewset**
- ✓ **Layered map function**
- ✓ **Auto Sequential switcher, Event Pop-up**
- ✓ **Real-time audio output**
- ✓ **Support Mic**

## Playback

Support convenient function for search and playback.

- ✓ **Support 64 split screen playback simultaneously**
- ✓ **Full Screen Mode**
- ✓ **Search by Calendar/time line/text/smart/thumbnail/bookmark**
- ✓ **Playback by time, date, channel**
- ✓ **Playback by event image separately**
- ✓ **Support various speed playback (Max. 64x)**
- ✓ **Support watermark check**
- ✓ **Support image adjustment by channel**
- ✓ **Digital Zoom In/Out**
- ✓ **Playback/Search/Backup by direct connect DVR's HDD to PC**

## Recording and Back-up

Support the function to store the image recording or real-time video monitoring, schedule and real-time backup unit's recorded data.

- ✓ **Support Quick Recording and Image saving of monitoring's video**
- ✓ **Real-time backup of unit's recorded image**
- ✓ **Auto backup via schedule backup**
- ✓ **Event log record/search/backup**

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## Others

- ✓ Support manufacturer's all IP Camera, SD DVR, HD DVR, NVR, WinDvrS, WinRDS
- ✓ Interfacable to Thermal detection camera, Flame detection camera.
- ✓ Supports interface with TLS unit.
- ✓ Support Remote DVR
- ✓ RTSP streaming support
- ✓ Max. 1024 units can be connected
- ✓ Support user rights, user operating limitation and user log-in
- ✓ Support saving of unit's setting information
- ✓ Import/Export setting information
- ✓ Support Keyboard hotkey and joystick
- ✓ Support Jog/Shuttle device for playback
- ✓ MAX 64 channels Real-time monitoring
- ✓ Max 288 channels simultaneous monitoring

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# Installation

## System Requirements

Recommended system requirements for running Control Center.

Items	Recommended
CPU	Intel(R) Core(TM) i7-6700 CPU @ 3.40GHz
Main Memory	8GB or higher
Video Memory	4GB or higher
Display	Intel(R) HD Graphic 530 or higher
Network	100/1000 Ethernet NIC
OS	Windows 7(x64) / Windows 8(x64) / Windows 10(x64)
Browser	Internet Explorer 8 or higher
Others	DirectX 9.0 or higher

## Notice before installation

Control Center is optimized for Microsoft Windows 7(x64) / Windows 8(x64) / Windows 10(x64) operating system. It is highly recommended to install Windows Update and virus detection program so that you can protect a virus and serious security code.

The PC's resource will be decreased due to a large amount of event occurred by registered device in Control Center. In order to improve the PC's performance, you need to change the unit's setting to prevent unwanted event occurs.

In case of using the basic video driver which is provided from Microsoft, the display in user's screen could be seriously flickering and the graphic performance can be decreased. So, do not use DirectX (Toolbar – Setting – Display – DirectX Draw – Off), or update the driver to the most recent version which is provided from the video card manufacturing company.

### <Note>

1. The PC user who has no permission to set the path to the folder that cannot write.
2. May not work properly if two or more users through the transition from one system to run the program from the account. It is recommended that only one account to use to install the program.
3. When you upgrade from version v3.x or below, the sub log storage method is changed. And when you first log after the upgrade, the search time will take longer time.
4. In order to avoid a conflict with the program that is used in the PC, close all programs that are running and encouraged to proceed with the installation.
5. Exit all program or web viewer provided by manufacturer before installation.

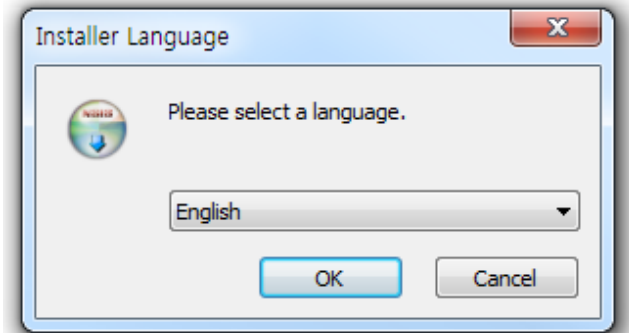
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# Installation Program

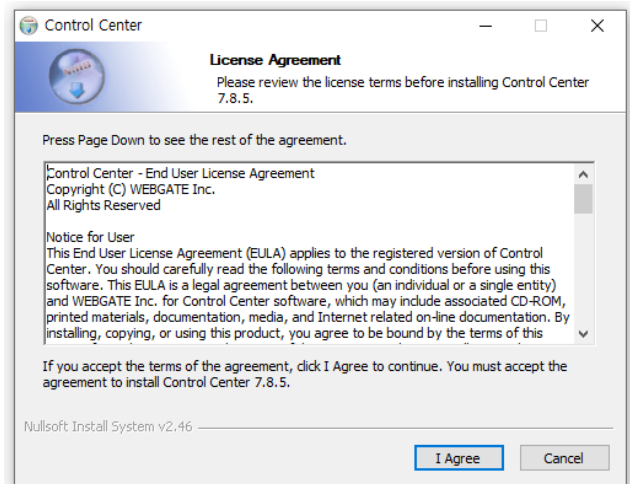
## Installation

Execute the install program to installing Control Center in PC.

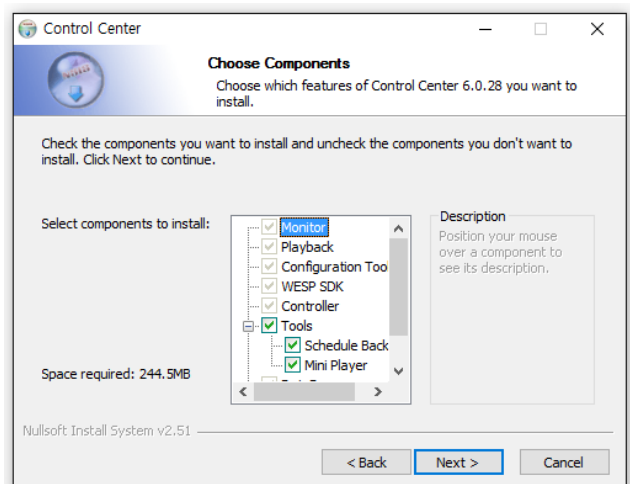
- 1) Run "Control Center x.x.x.x Setup.exe" file from the Control Center Setup CD or PC.
- 2) Select the language that you wish to install and click [OK] button.



- 3) Click [I Agree] button to continue to do installation.



- 4) Select the additional program that you wish to install with default program and click [Next>] button.

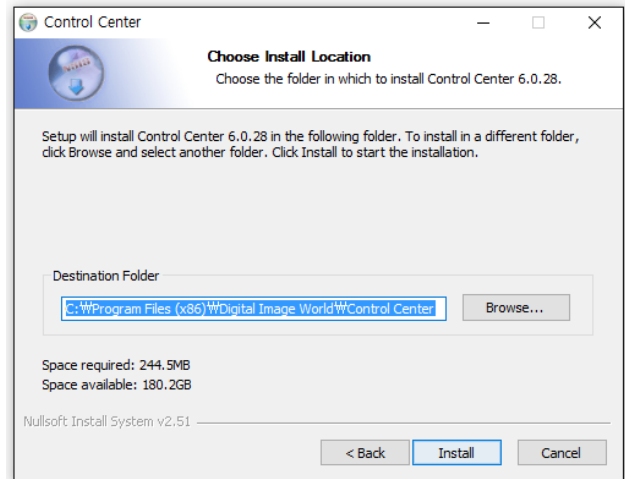




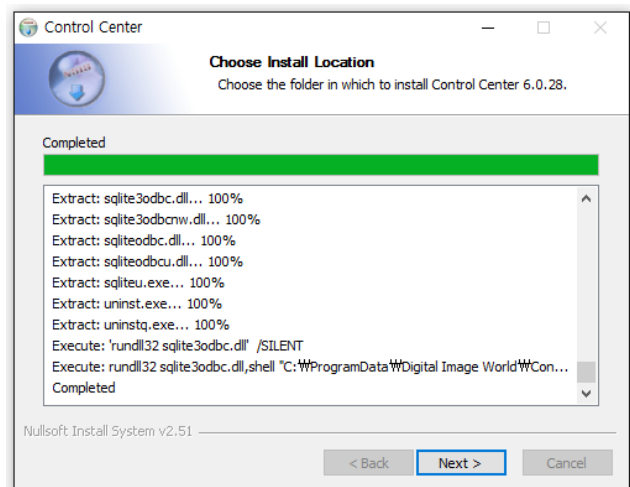
5) Select folder and click [Install] button.

<Note>

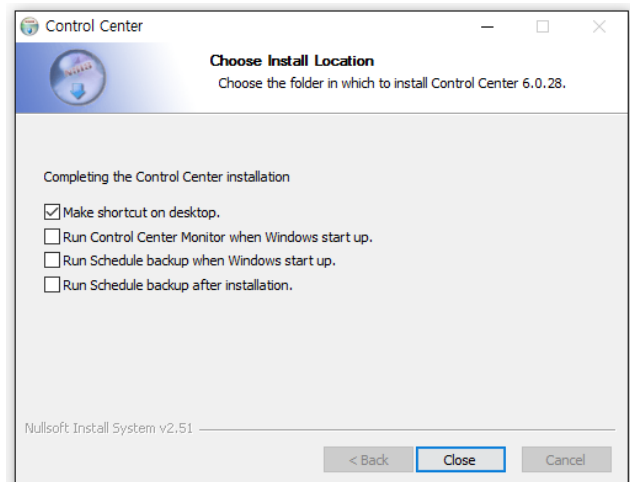
Installation at the default folder is recommended.



6) Click [Next>] button once installation completed.



7) Select additional options and click [Close] button to complete the installation.



## Upgrading

In case the Control Center already installed on your PC, upgrade directly without going through the process of deleting the program file to run the program, the upgrade is possible.

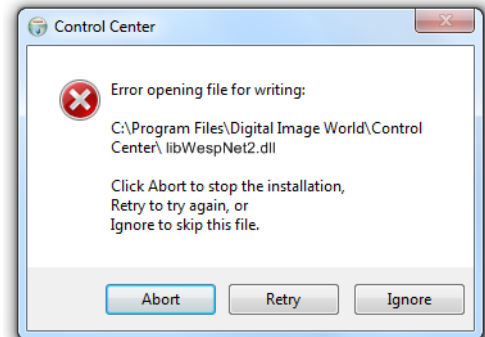
The installation process is same as "new install" and it will keep exist setting during the program upgrading.

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## How to solve the problems that has occurred during installation

Other programs are being used in PC, the installation will be stopped and an error occurs in the process of installing the Control Center. Process and conflict management in the Windows system can be generated, at this time follows the progress of the installation process terminates and normally you can proceed with the installation.

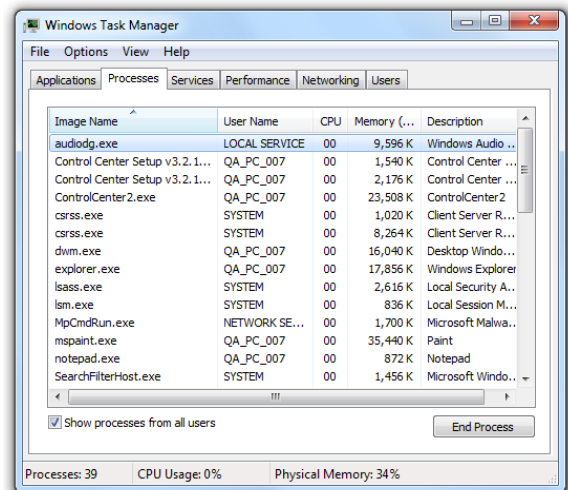
- 1) Do not click **[Abort]** or **[Ignore]** when you get the error as shown in the picture and open the "Windows Task manager".



- 2) Select "display all users' process" option from bottom of the Windows Task Manager.
- 3) Select "ControllerService.exe" and "Controller.exe" and click **[End Process]** to close process.
- 4) Click **[Retry]** to continue to do installation.

<Note>

If Control Center cannot be installed after closing processes, please reboot the PC and try installation again.



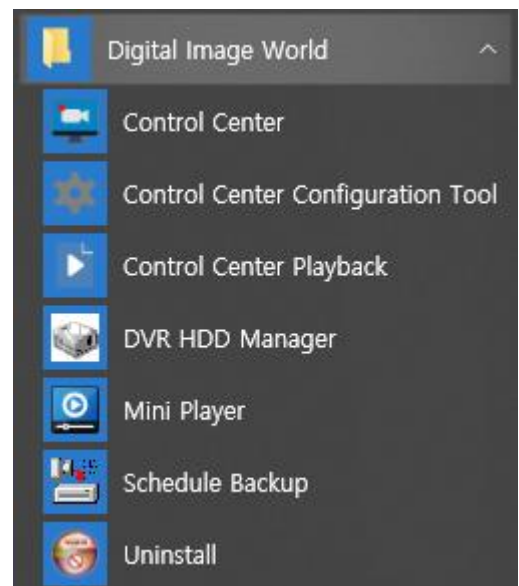
## To verify the results of the installation

To check whether Control Center installed in properly after completed the installation.

- 1) Go to Start → All program.
- 2) If the Control Center installed in proper way, you will notice the "Digital Image World" folder with "Control Center" and other related programs.
- 3) The programs under the Tools folder which you selected during the installation.

<Note>

It can be shown differently according to the version of Windows.



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# Getting Started

## Running Program/Log-in


Please double click on "Control Center" icon installed on main screen of PC.

## Unit Registration

All products of manufacturer, such as SD DVR, IP cameras, NVR, WinRDS and so on, can be added in Control Center Monitor. Monitoring, searching (playback) and configuration can be achieved in this program.

### Add Unit

There are 4 methods to add units to Control Center Monitor program. Monitoring, Playback, Configuration can be achieved after unit registration is done.

1. Click on add unit icon  located in tool bar at the top
2. Click right button of mouse on the unit to be registered then click [add unit]
3. Select unit in "unregistered unit" list. Drag this to "registration unit"
4. Select unit in "unregistered unit" list. Click right button of mouse then select [add unit]

#### <Warning>

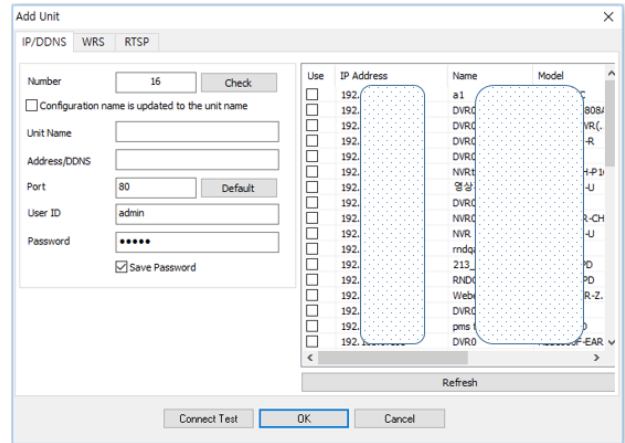
1. Default account for user's name and password.
  - 1) User's name : **V3 – Administrator / V4 or more – admin**
  - 2) Password : **admin**
2. Please DO NOT USE "Auto login" option if any other user except Administrator can access the PC.
3. If "Auto login" in [setting-option-display] menu is not selected, login window will run whenever program starts.
4. Since default password is very weak for security, it is highly recommended that user has to change the password at the first time and change the password periodically. The problems caused by using default password are the responsibility of the user.
5. It is highly recommended to install Windows Update and virus detection program so that you can protect a virus and serious security code.

## URL Address Add Unit

- 1) Select 'IP/DDNS' tab after running 'Add Unit'.
- 2) Enter the unit name, IP address or DDNS address, port number, user ID and password for the unit. And click **[Connect Test]** button. (Format of 'Address/DDNS': "192.168.0.100" or "aaa.mycam.to")
- 3) Click [OK] after "Connecting Success" message is popped up.
- 4) Registered unit will be displayed on site tree.

<Note>

1. If units are located in the local area network, click **[Refresh]** button to automatically discover units.
2. After clicking **[Connect Test]** button, if the popup message is "Failed to Login", please check the network connection status of PC or the unit.

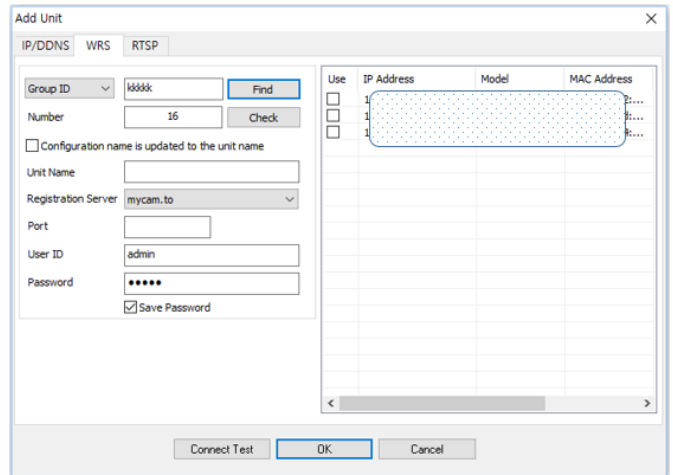


## Server(WRS) Add Unit

- 1) Select 'WRS' tab after running 'Add Unit'.
- 2) Select 'Group ID' and enter the WRS group ID. Or select 'Serial Number' and enter the serial number of the unit. Then, click **[Find]** button.
- 3) The related units which have the same group ID or the related unit which have the same serial number will be listed on the right table. Select one of units to register.
- 5) Selected unit information will be automatically entered.
- 6) Enter user ID and password. Click **[Connect Test]** button.
- 7) Click [OK] after "Connecting Success" message is popped up.
- 8) Registered unit will be displayed on site tree.

<Note>

1. You can use DDNS server, [www.mycam.to](http://www.mycam.to).
2. After clicking **[Connect Test]** button, if the popup message is "Failed to Login", please check the network connection status of PC or the unit.

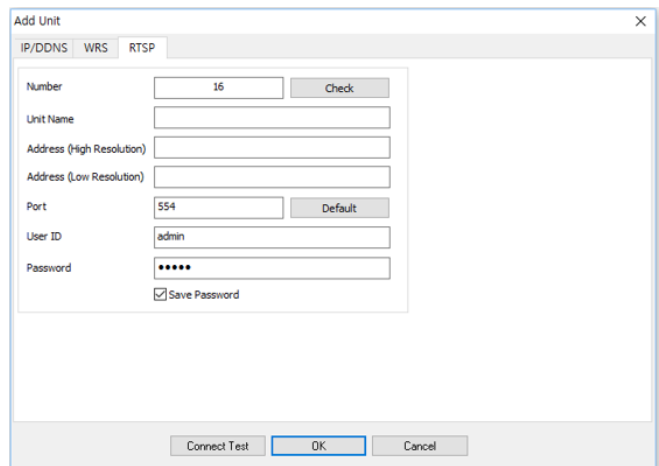


## RTSP Add Unit

- 1) Select 'RTSP' tab after running 'Add Unit'.
- 2) Enter RTSP address of the unit according to high/low resolution.
- 3) Enter user ID and password. Click **[Connect Test]** button.
- 4) Click [OK] after "Connecting Success" message is popped up.
- 5) Registered unit will be displayed on site tree.

<Note>

1. After clicking **[Connect Test]** button, if the popup message is "Failed to Login", please check the network connection status of PC or the unit.




# Unit Monitoring

There are 4 methods for unit monitoring, Unit's live images are shown in image window located at right side.

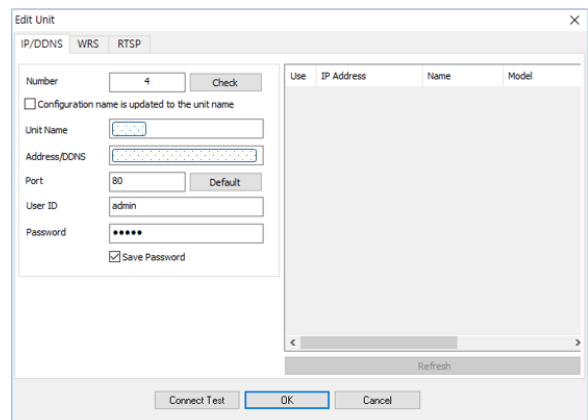
1. Click on "unit icon" of "registration unit" list.
2. Double click on "unit name".
3. Click on unit's name then drag it to image window.
4. Drag and drop camera icon which is shown under registration unit when list is in unfold status.




# Edit Unit

You can edit the number, unit name, IP address, port number, user ID & password, and RADIUS key of the unit that is registered in the "Registered Units". If you click the  **[Edit unit]** icon item from the tool bar, or if you place the mouse cursor on the name of unit on the "Registered Units" and select **[Edit unit]** menu after clicking the right button of mouse, then "Edit Unit" window will be shown.

- 1) Edit the information that you wish to change and click **[OK]** button.
- 2) The edited information will be saved to the unit.



# Delete Unit

You can delete the unit in the "Registered Units" list. And you can re-add deleted unit again without any limitation. To delete the unit, click the  **[Delete Unit]** icon, or place the mouse cursor on the name of unit in "Registered Units" and select **[Delete Unit]** from menu after clicking the right button of mouse. Click **[Yes]** to confirm delete or click **[No]** to cancel.

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## RADIUS Key

In case you wish you use RADIUS Key then you need to have separate server that has installed RADIUS software. And after that you need to log-in by entering the ID & PW, Shared Key that has registered on the RADIUS server grants received from the administrator of the RADIUS Key and check the items you wish to log-in using a RADIUS authentication server. But in that case the unit must support RADIUS function and it should be turned to be ON.

### <Remarks>

1. RADIUS (Remote Authentication Dial-In User Service) is client/server protocol software that the RAS (Remote Access Server) connect through a dial-up modem to authenticate users and to grant access to the requested system or service to them to be able to communicate with central server.

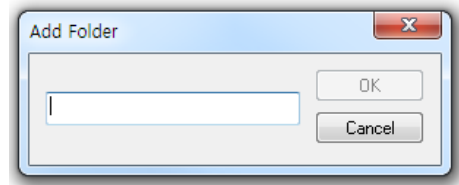
## Update Unit Information

You can use  icon from tool bar or place the mouse on the unit item window and click right button of mouse and select **[Refresh]** option to update unit information. You can use it for edit information or checking the network status.

## Add Folder

Place the mouse on the "Registered Units" and click right button of mouse and select **[Add Folder]** option.

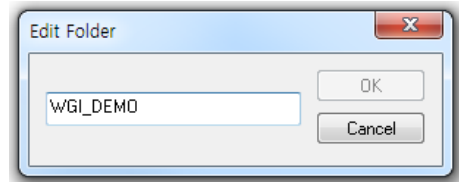
- 1) Type in folder name and click OK button to add the folder.
- 2) The folder will be shown in the "Registered Units".



## Edit Folder

You can edit the folder name by select the folder and click right button of mouse and select **[Edit Folder]** option.

- 1) Edit the name of folder and click OK button.
- 2) The folder name changed shown in the "Registered Units".



## Delete Folder

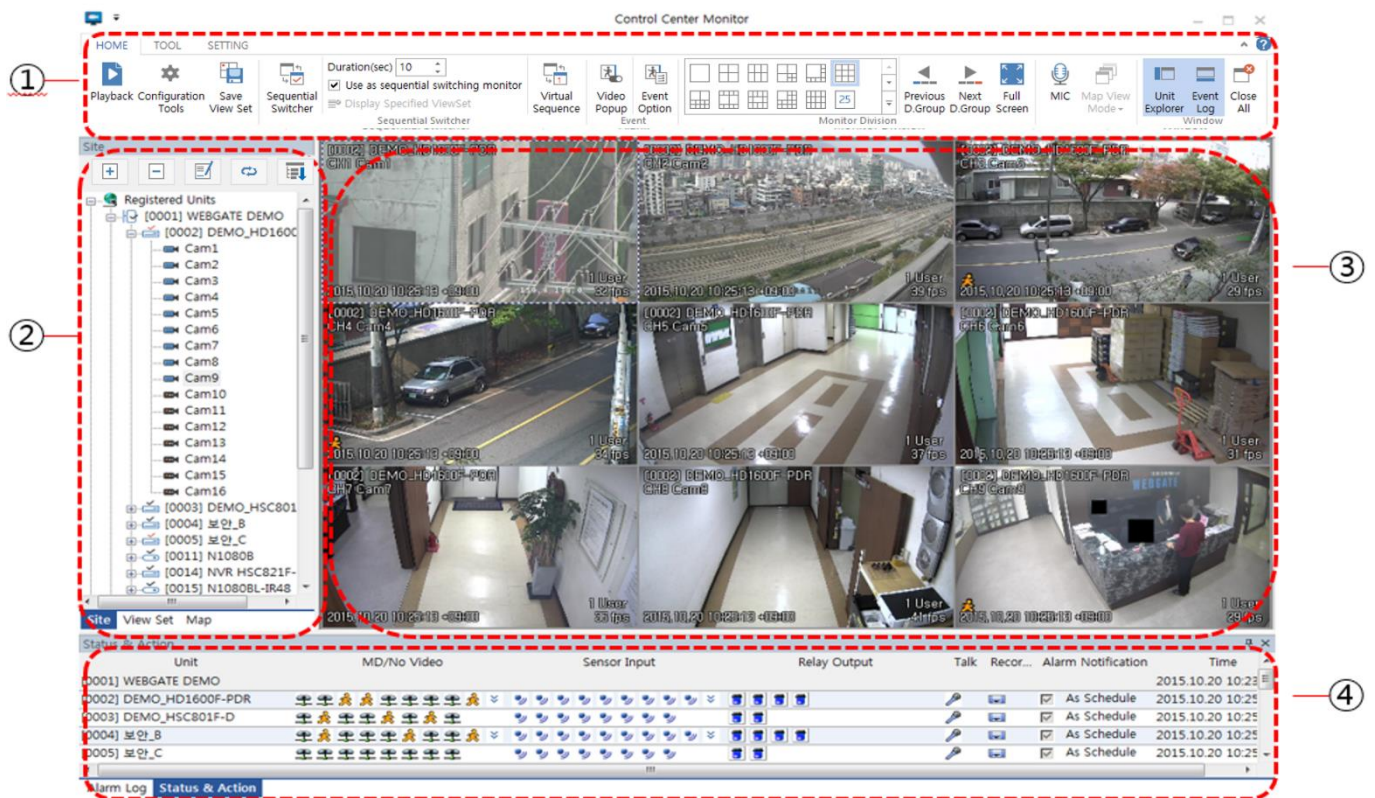
User can delete folder registered in "Registered Units". Please be noted that if folder is deleted, units registered in sub folder will be deleted together. Deleted folder will be removed from list and it can be registered with no limit later on at any time. Choose folder with mouse then click on right button to select **[Delete Folder]** to run confirmation window of folder delete. Click **[Yes]** to delete folder and to cancel delete, please click **[No]**.

# Live Viewer (Monitor)

Monitor program of Control Center can enable user to monitor real time image of connected unit and manage site or user. Also it is possible to check real time event information and system log along with supporting convenient and easy operation with external device such as keyboard joystick and other external device.

## Screen structure and name of functions

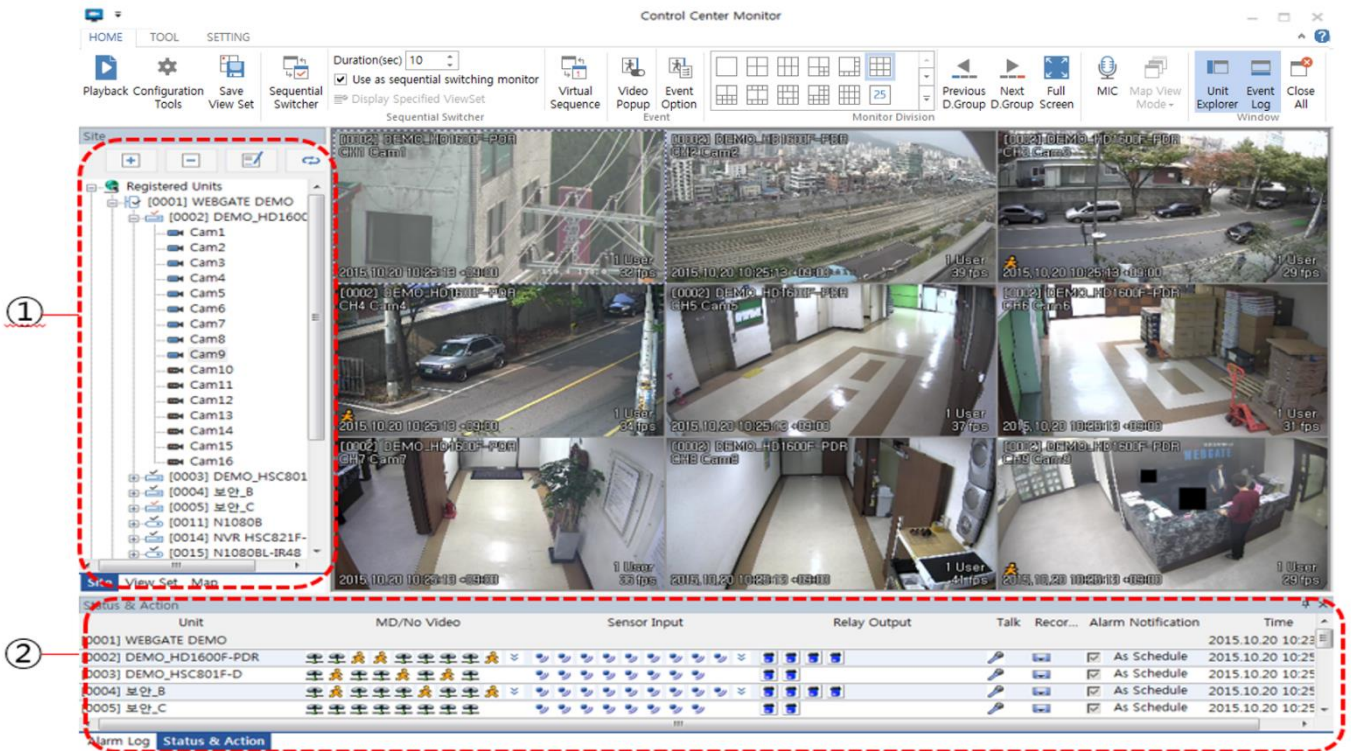
### Screen structure



Item	Description
1	Menu/Toolbar This is menu and function button used in program
2	Unit list window 1. Unit can be added/deleted/modified, unit lists can be refreshed. 2. This indicates unit/viewset/map registered in program. User can click on the list to show image
3	Image window This indicates live monitoring image
4	Status & Action window This indicates status of unit, event information and alarm log

# Move control panel location

Control Center supports dynamic UI for each control which can be moved and docked using mouse. So user can composite the most optimized screen by changing internal structure of live viewer.

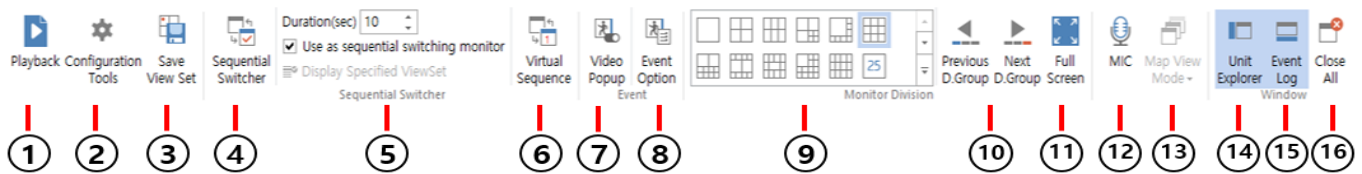


- 1) If user drag control title bar of ①, ②, there will be docking guide icon comes up and drop title bar on the icon to move and locate control.
- 2) The moving position in live viewer program will be up/down/left/right and it can be separated out of viewer program to be positioned individually.



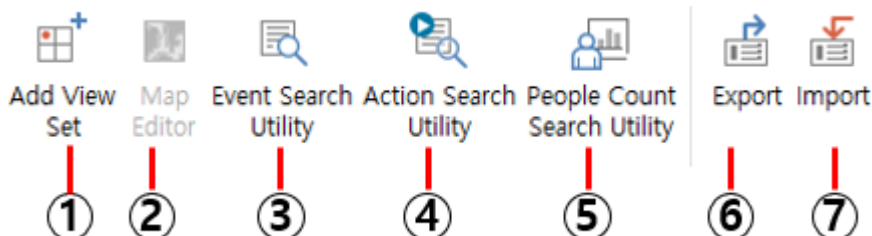
# Icon function explanation

## Tool bar - HOME



Item	Description
1	Run Control Center Playback
2	Execute the unit's Config
3	Save current monitoring status in viewset
4	Turn on and off auto sequential feature
5	1. Duration (sec): To setup duration (sec) on auto sequential feature. 2. Use switching : To set if monitor will be used for auto sequential feature or not in case multi Monitors are in use. 3. Display specified viewset: To setup auto sequential under viewset mode.
6	Sequentially display all channels in selected viewset at the selected channel. If user clicks this icon, popup will be displayed to select the viewset for virtual sequence.
7	Turn on / turn off the video popup function.
8	Set video popup options and event options such as alarm sources, event log preservation duration, buzzer, Flame/Thermal Detection overlay, disconnected sensing time, etc.
9	Monitor screen division control 1/4/6/7/8/9/10/13/16/25/36/49/64/81/100/121/144 division. Multi-division includes current selected channel.
10	Move to previous or next division group at multi-division mode. For example, if current selected channel is ch6 and 4 division mode is selected, then ch5~ch8 is shown. ch1~ch4 will be shown by clicking 'Previous D. Group' and ch9~ch12 will be shown by clicking 'Next D. Group'.
11	Full screen of PC monitor.
12	Send the PC's MIC sound to speaker of current selected emergency bell IP camera.
13	It is activated in map mode, map can be shown in vertical, horizontal angle.
14	Hides unit list window.
15	Hides event viewer window.
16	Closes monitoring connection or map, windows.

## Toolbar - Tool



Item	Description
1	Viewset add window runs. Images of registered units are free to be configured and this configured status can be saved in viewset.
2	Runs in map mode. Supports map add, editing, deletion.
3	Saved events are searched in date, unit, and category.

4	Action Search Utility	Saved events are searched in Action Log.
5	People Count Search Utility	Search the people count information by date, channel (unit or viewset) and save the people count information.
6	Export	Export setting of Control Center Monitor.
7	Import	Import setting of Control Center Monitor.

## Toolbar - Setting





Item	Description
1	Monitor View
2	Color Space
3	Color
4	Font Size
5	Resolution
6	Display

Item	Description
1	Full: Image shown in full size. 2. Ratio: Image shown fit in image's ratio. 3. Caption area: Watch mode including caption area.
2	Select color expression between YUV/RGB. (YUV is recommended).
3	Color of letter shown in image window can be changed.
4	Size of letter shown in image window can be adjusted.
5	1. Auto: The best optimized resolution will be shown automatically analyzing size of image, network status, FPS and so on. 2. High resolution: Image shown fixed in high resolution. 3. Low resolution: Image shown fixed in low resolution.
6	You can make settings related to the display. 1. Using DirectX Draw: It is a function to render DirectX Draw image. (Default: ON) 2. Deinterlace: This function is used to convert the interlaced video of analog signal into a non-interlaced format. (Default: OFF) 3. Auto Login: This function is executed without login screen when starting Control Center. (Default: ON) 4. Authenticate before program termination: Only the authorized user can exit the Control Center. (Default: OFF) 5. Using RADIUS Shared Key: This function is used to authenticate the user through RADIUS server. (Default: OFF) 6. Using Watchdog: It is the function to restart automatically when the Control Center terminates abnormally. (Default: OFF) 7. Connect to the responded IP address by discovery: This function automatically connects to the address that was found when the IP of the unit was changed. (Default: OFF) 8. Using hardware decoding 1) It is a function to show video using decode performance of graphics card (GPU). When using hardware decoding, you can monitor more channels in real time (full frame). (Default: OFF) 2) Control Center V7 32bit a. Up to 58 channels of hardware decoding are supported for low-resolution images. b. Up to 16 channels of hardware decoding are supported for high-resolution images. 3) Control Center V7 64bit

		<p>a. Up to 64 channels of hardware decoding are supported for low-resolution images</p> <p>b. Up to 25 channels of hardware decoding are recommended for high-resolution images.</p> <p>&lt;Note&gt;</p> <ul style="list-style-type: none"> <li>- If GPU's allowable memory is 4GB or less, normal operation may not be possible.</li> <li>- When hardware decoding is ON, the color space is fixed to YUV and disabled.</li> <li>- Hardware decoding function works properly on Intel (R) Core (TM) i7-6700 CPU @ 3.40GHz or higher, Intel® HD Graphics 530 or higher, and RAM 8GB or higher. (Non-Intel graphics cards will be supported later.)</li> <li>- When using graphics card other than Intel graphics card, the picture may not be displayed if hardware decoding is ON.</li> <li>- If the hardware decoding performance is exceeded, the remaining channels automatically switch to software decoding.</li> </ul> <p>9. Buffering: It is a function to save the image for a set time and show it evenly for smooth displaying. (Default ON, 200ms)</p> <p>10. Bandwidth Adjustment: It is a function to set the network usage performance. Under auto mode, it is automatically adjusted according to the network conditions. The low-bandwidth mode is used in environments with slow network speeds. Under off mode, it uses the maximum network without bandwidth adjustment. (Default: Auto)</p> <p>11. Restart periodically: Restart the Control Center at the set time.</p> <ol style="list-style-type: none"> <li>1) 30 seconds before restarting, a popup window is shown. <ol style="list-style-type: none"> <li>a. Restart Now : Click to restart immediately</li> <li>b. Postpone : A popup window is shown after the time set in 'Remind me in ...' (5 minutes/10 minutes/30 minutes/1 hour/2 hour).</li> <li>c. Cancel : Restarting is canceled until next periodic time.</li> <li>d. If no action is taken, restart after 30 seconds.</li> </ol> </li> </ol> <p>12. Caption: If check the unit name, time, hardware decoding, channel number, event, channel name, transmission speed, time zone, number of login users, or text input, people count, each checked item is displayed on the image.</p> <p>13. Display Caption of Service Channel: It shows the caption of service channel image. (Default ON)</p> <p>14. Auto Shutdown: It is the function to shut down the Control Center after the set time. (Default is OFF)</p> <p>15. PTZ option (default mode): You can set the default mode when PTZ is activated. (Default: Normal PTZ mode)</p>
7	Recording	File saved path setup when record and image save features are achieved and other various setup.
8	Layout	Can setup for Control Center Monitor's monitor configuration.
9	Action Log	<p>You can select the items to be recorded in the Action Log.</p> <p>The selected items are shown in the Action Log and can be searched through the action search utility.</p> <p>If you do not select items to be recorded in the action log, Action Log will show nothing.</p>
10	User Account	Add, edit and delete for Control Center Monitor's user.
11	Instant player option	Set the start and end play time of video for instant player.

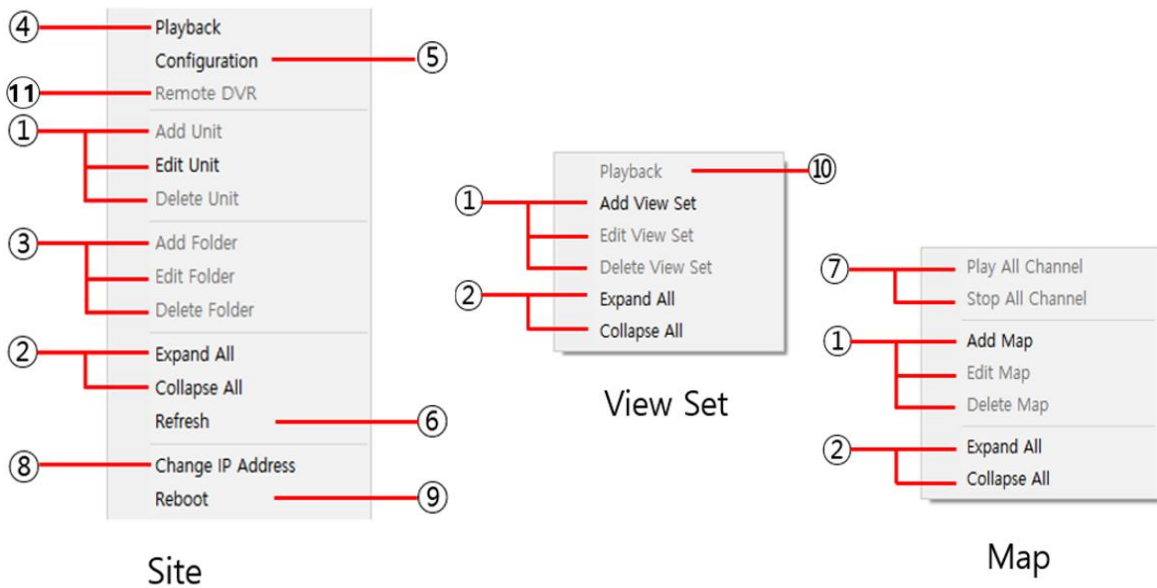
## Unit list window

Icon	Description
	It is registration unit folder managing unit.
	Shows units not registered in "Registered Units" even though they are found on local network.

	Registered unit can be managed in sub-folder.
	Connection fail status with unit (connection fail).
	Communication with unit is possible but login fails. (login fail)
	Success in login.
	Blinks during 5 seconds once alarm comes in.
	All video channels of unit are under monitoring.
	WinDVRs, WinRDS unit.
	Video channel.
	Sensor
	Relay out
	Audio out (talk)
	View Set
	Map
	Sub folder of map (channel, relay, sensor, audio out)

### Description of unit list window popup

Click right button of mouse on each unit list window of site / viewset / map mode to popup menu. It is possible to register, edit, delete unit and folder management, open unit list functions can be used.



Item		Description
1	Add Unit/View set/Map	Registration status of each device used in site / viewset / map mode can be managed
	Edit Unit/View set/Map	
	Delete Unit/View set/Map	
2	Expand All	Open tree of all devices registered in unit list window
	Collapse All	Close tree of all devices registered in unit list window
3	Add Folder	Create folder to manage unit in group in site mode for management
	Edit Folder	
	Delete Folder	
4	Playback	Run Control Center Playback program
5	Configuration	Execute the unit's Config
6	Refresh	Refresh on unit list window

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7	Play All channel	Images of all channels registered in map are shown through live viewer
	Stop All channel	Close all images registered in map and shown in live viewer
8	Change IP Address	Change the IP address of the selected unit.
9	Reboot	Reboot the selected unit.
10	Playback	Play the selected viewset.
11	Remote DVR	Remote DVR will be activated when the DVR's service streaming is selected as 'Remote DVR'

# Site mode


## Site connection

If you click a "Unit Icon" in the "Registered Unit's" list, or double-click a "Unit Name", you can get the live video from the unit. By default, split-screen will be shown so as to show all channels of the DVR. You can select channels individually, and also you may use drag-and-drop of "Unit Icon" or "Camera Icon". Such an operation, it may be same with viewset and map mode



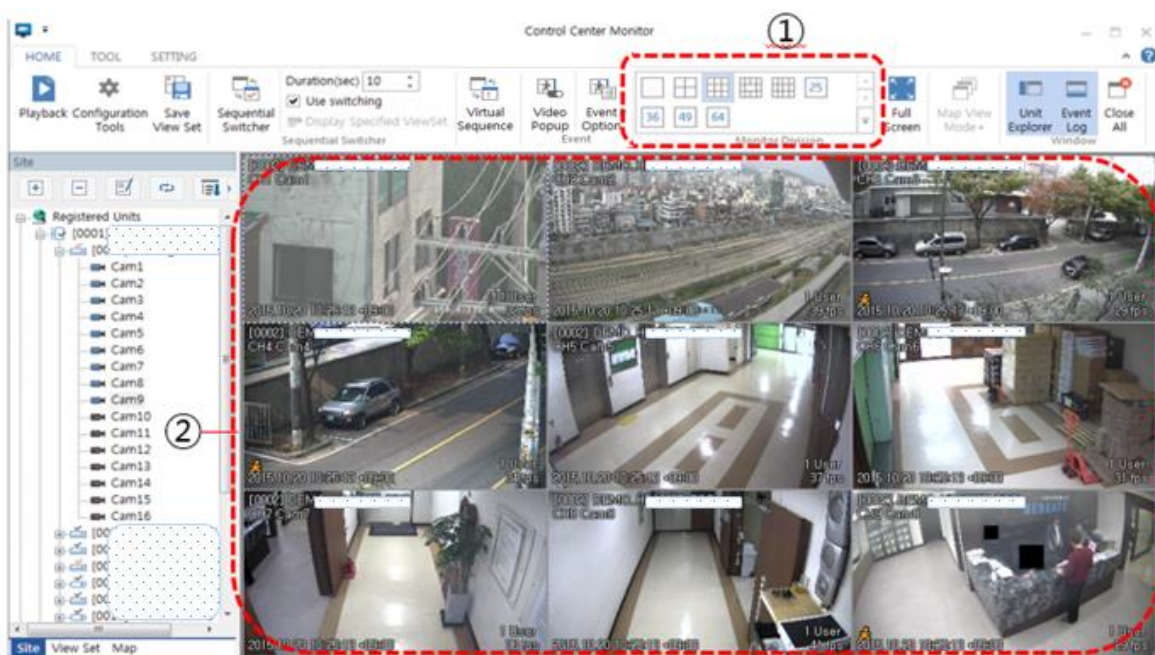
Like above, click or dragging ① unit to the ② area, video are shown in the video window.

## Video connection end

Click  icon to end connection.


## Video split mode change

Split mode is 1~64 split and switch the channel by clicking the split mode icon or double clicking the video window.



Like above, click to ① split mode icon or double click to ② video window to switch single or multi channels.

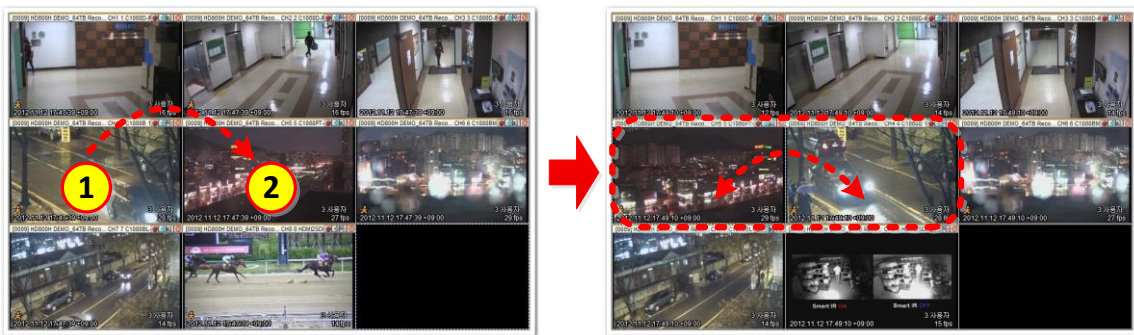
## Full screen mode

it supports full split screen that hides Control Center's control, Click  [Full Screen] to execute full screen mode and finish full screen mode by [ESC] key.



## Move image position

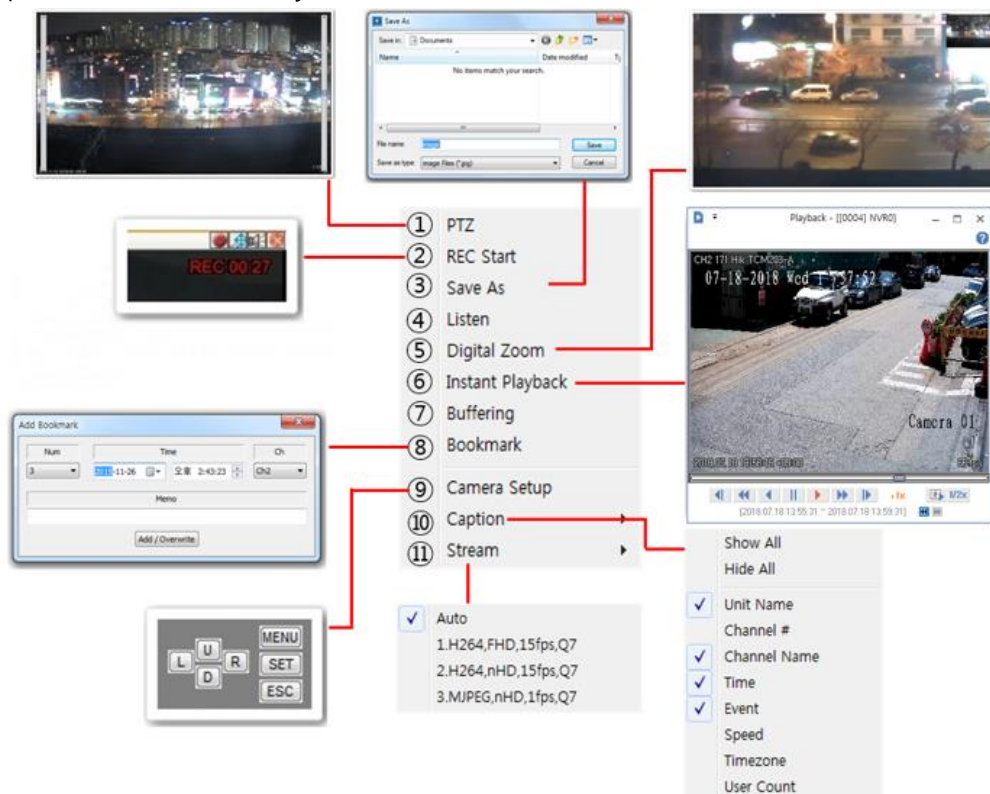
To move image position, it drags the image and drop it where you want on mouse and it can move it freely at different monitor image. .



Like above, drag ① to ② position, ① and ② picture position is shown interchangeably.

## Video window pop-up menu

The mouse on the image and click right to see pop-up menu and it can use main function quickly on the video, this function applies to the channel only.



Item		Description
1	PTZ	Entering to PTZ control mode where PTZ can be controlled with mouse.
2	Record start	Real-time video is recorded in RE4 format and stored in C:\WCCQuickRecording folder
3	Save image	Real-time image can be saved in JPEG, BMP format.
4	Listen audio	Audio output On/Off
5	Digital zoom	'SETTING' > 'Display' > 'Use DirectX Draw' should be checked and the screen mode should be single channel mode to use digital zoom. User can zoom the video using mouse control. Overall video is shown in mini map and user can move zoom area by clicking mini map area.
6	Instant playback	Instant player window will be opened and user can playback the selected channel's video according to the setting of 'Instant player option'.
7	Buffering	If monitoring video is unnatural due to slow network, buffering can help that the video can be shown naturally.
8	Bookmark	Save Bookmark on time, channel and menu. (Enabled only in DVR supporting bookmark feature).
9	Camera setup	Popup control menu to configure camera menu.
10	Caption	Configure the caption items which is shown on image. When the video is re-connected, caption configuration is cleared to default setting.
11	Stream	Change stream of image. When the video is re-connected, stream is automatically selected based on size of image window.

**<caution>**

1. Transmission frame rate can be reduced at low system requirements. Uncheck caption Options or the image of the pop-up menu, in this case, uncheck caption of the popup menu, you can see better transmission frame rate.

## PTZ control

### Normal PTZ mode

Select the channel supporting PTZ and select "PTZ" in the popup menu after clicking right button of mouse. User can control pan, tilt by clicking the mouse during cross mark is displayed. Pan is controlled by clicking left/right direction at the center, and tilt can be controlled by clicking up/down. Pan / tilt will be faster if you click more away position from the center.

### Zoom In mode

Under normal PTZ mode, click the right button of mouse and select "Zoom In mode" in the popup menu. If the camera does not support zoom in mode, "Zoom In mode" menu is not be shown in the popup menu.

If "Zoom In mode" is selected, a dotted box will be displayed at the center. When user clicks and drags the mouse on the video region which user wants to see with zoom-in, zoom operation will be done.

The mode will temporarily be changed to normal PTZ mode during pressing the shift key. Choose "Normal PTZ mode" at popup menu to change the control mode.



### Zoom, Focus control

Move mouse cursor to the left or right edge of the view window. Control bar for zoom, focus will be shown.

Z – Zoom in, zoom out control

F – Focus control

Z0 - Immediate moving to maximum zoom out state.

### Goto Preset

If you select a preset list, camera angle will move to the selected preset position.



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## Preset Setup

Set – Preset will be stored in selected preset list.

Clear – Clear the selected preset list.

## Auxiliary

When preset is set, "Auxiliary" menu is displayed on the pop-up menu. Select the appropriate action and the action will be performed.

## Audio listening

If the audio is associated in the video channel, "listen" is activated at popup menu. Choose "Listen" to listen the audio. You can get mixed multiple channel audio.

## Sequential Switcher


Sequential switcher function can be ON/OFF by clicking 'Sequential Switcher' icon. Also, check 'Use as sequential monitor' box to use current monitor as sequential monitor. If sequential switcher is ON, all registered units in the site tree is sequentially monitored after duration time.

This function can be also used at viewset mode and map mode.

## Video popup

It may see a pop-up video of each monitor channel alarm occurred.

Site / viewset / map mode and can be used both in the pop-up when an event occurs in the channel has been registered by the appropriate mode operation.

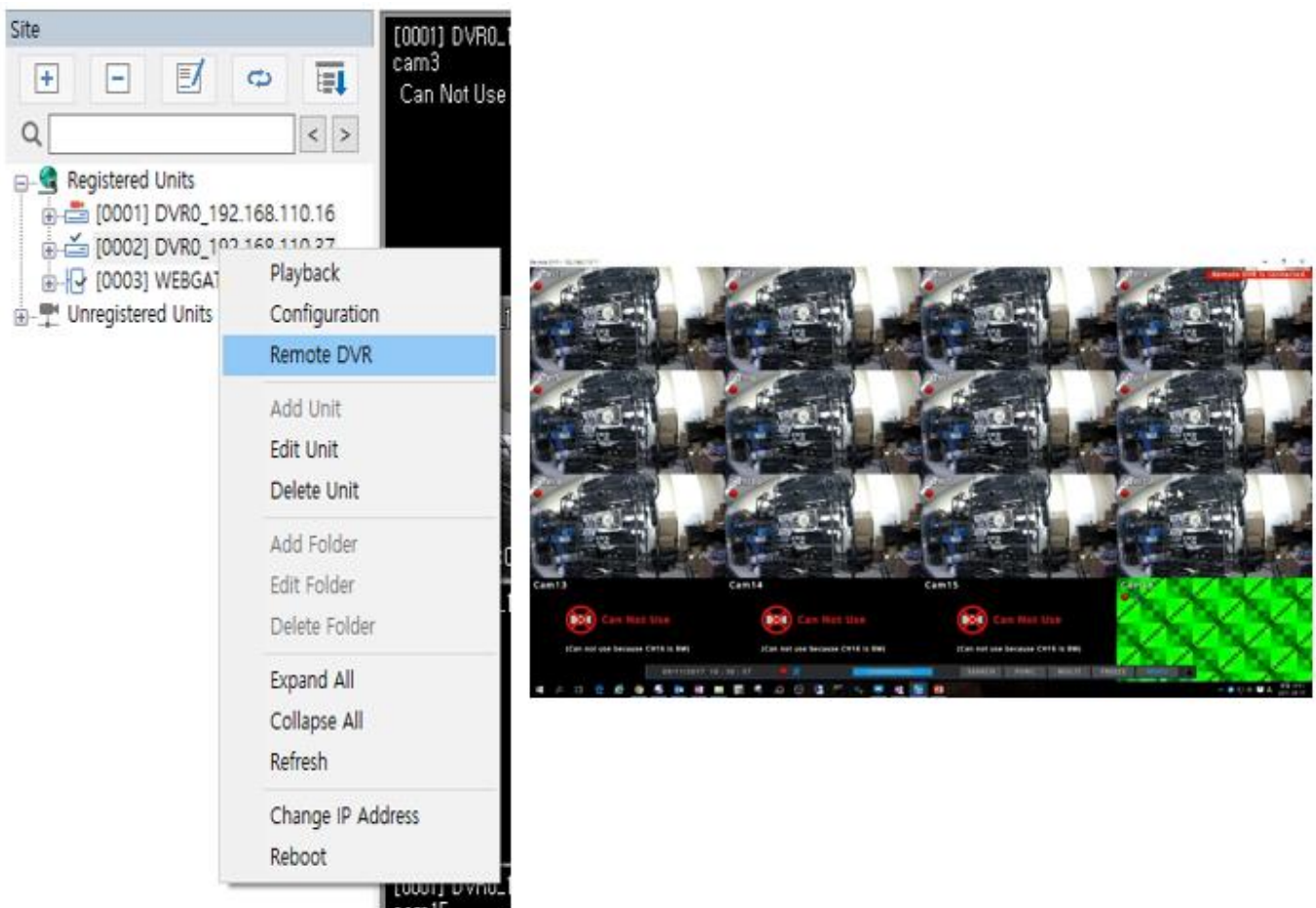
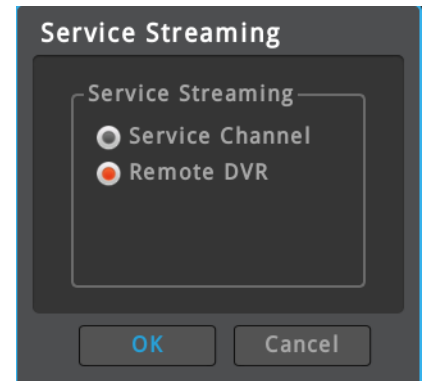
- 1) Select [Video Popup On/off] for the monitor to be used in Sequential switcher mode. Without this selection, the monitor will not be working in Event popup option. (Being used as Event popup monitor will be activated in case total number of monitors in use are 2)
- 2) Click  [Video Popup On/Off] icon, Video popup will start, is shown the channel that event occurred. When the event occurred at event list of Event popup option, the Video popup will be operated by "duration time"
- 3) If the alarm of other channel has occurred during Video popup operation, that video channel will be added in screen it'll be shown added video with legacy video, the duration time is fitted by the last alarm time.

## Remote DVR

User can control the DVR from remote location by using Remote DVR function which is similar to remote desktop of PC. Control Center SW is required. User can see DVR's main monitor output on PC (Control Center) and mouse control is possible.

Please follow below steps to use Remote DVR function.

1. Go to [Menu – Network – Service Streaming] and select 'Remote DVR'.
2. Register the DVR on Control Center.
3. Click the right mouse button on the registered unit and select [Remote DVR] menu.
4. Popup window for Remote DVR will be shown and user can see the DVR's main monitor output and control the DVR.



<Caution>

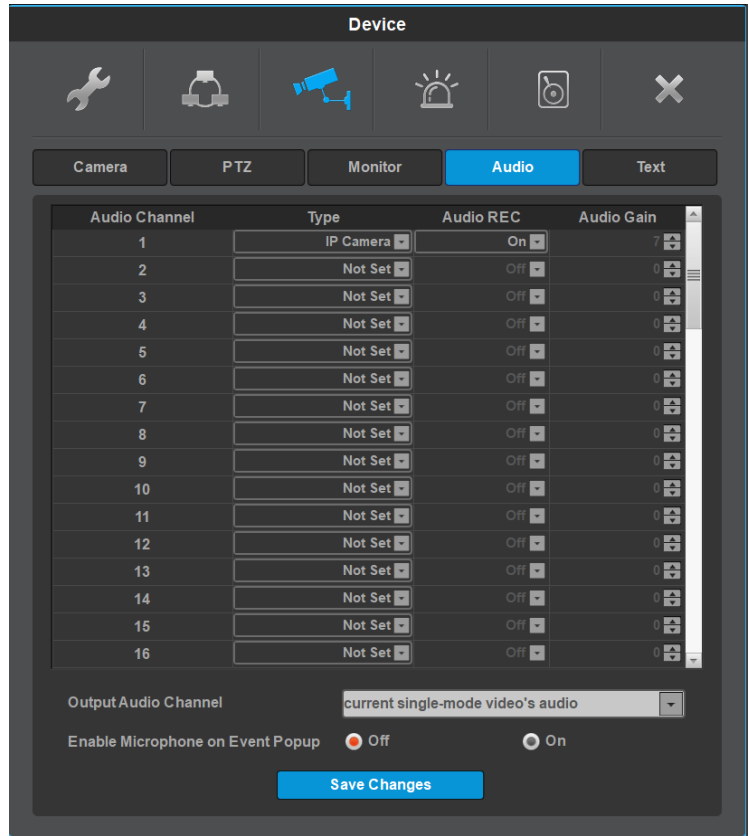
1. To use 'Remote DVR', please use Control Center 6.6 or above.
2. DVR must support 'Remote DVR'.
3. The DVR's service streaming must be set as 'Remote DVR'.

# Emergency bell

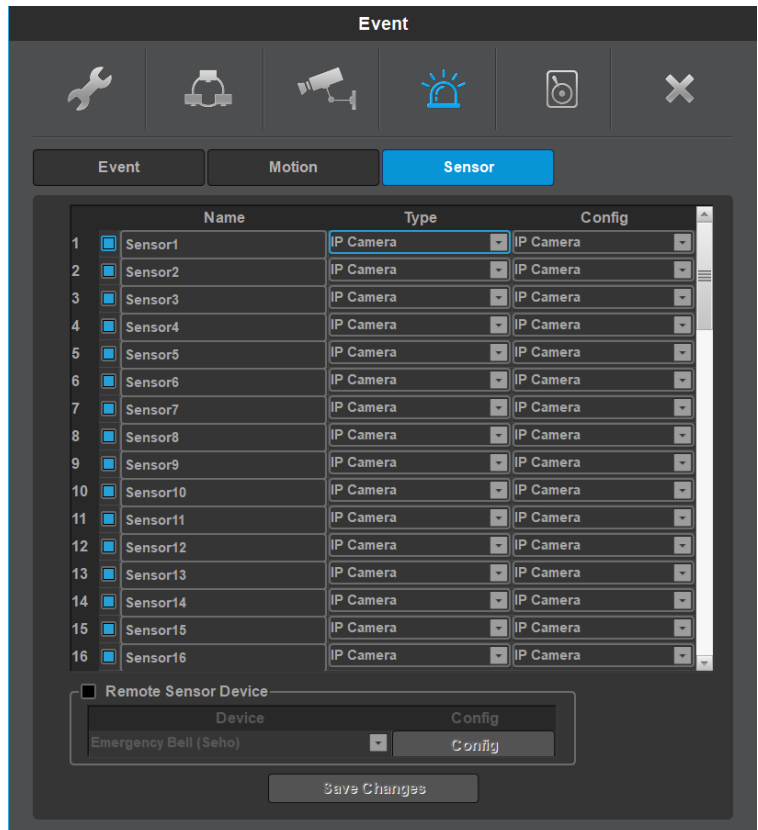
The audio input from the emergency bell camera's microphone is output to the control center speaker, and the audio input from the control center's microphone is output to the emergency bell camera's speaker.

## DVR Settings

1. Emergency Bell Camera Change the registered channel's audio to IP camera.



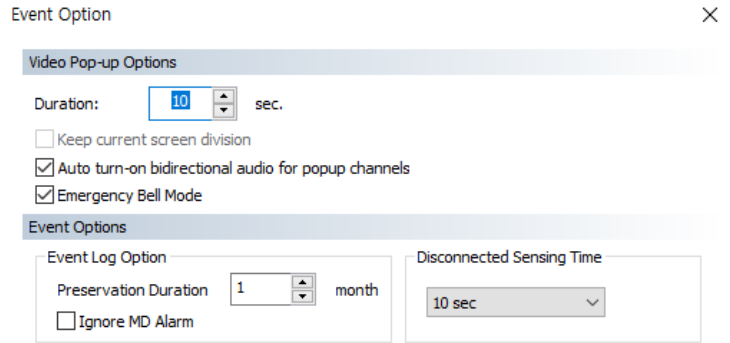
2. Emergency Bell Camera Changes the registered channel's sensor to IP camera.



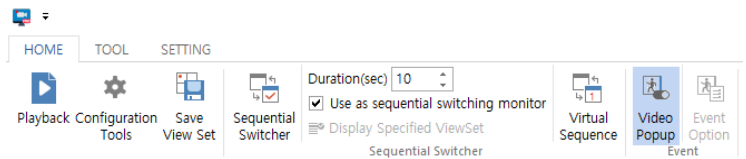
## Control Center Settings

1. Set the emergency bell in the event options

Auto turn-on bidirectional audio for popup channels	ON
Emergency Bell Mode	ON



2. Video Popup Enable



<Reference>

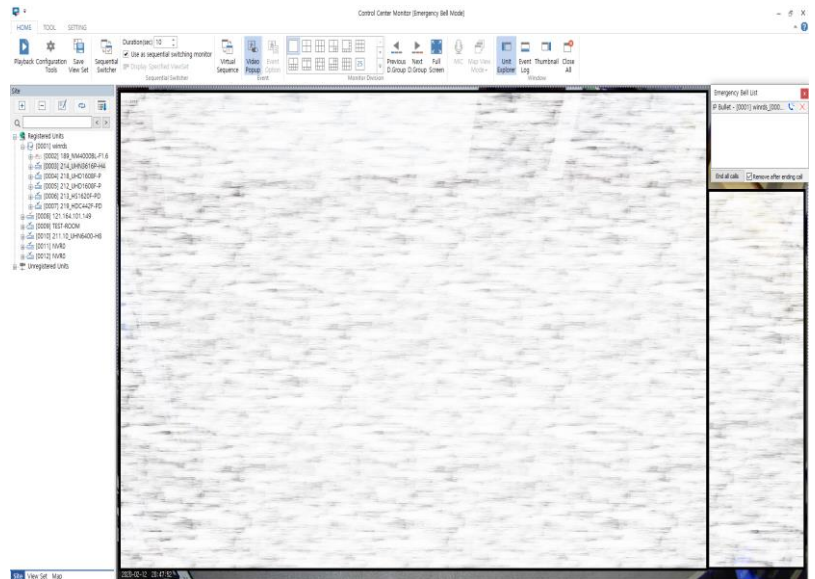
1. To use the emergency bell function, a microphone and speaker must be connected to the PC.

2. The emergency bell camera supports "SC-ECS30CW" model.

### Emergency bell operation

1. If you press the emergency bell button of the emergency bell camera, the channel where the emergency bell camera is registered is popped up and you can see the emergency bell list.

2. You can connect or disconnect the audio through the icon in the alarm bell list.



<Reference>

1. When the emergency bell is popped up and an additional emergency bell is pressed during the two-way audio operation, the alarm bell is automatically added to the emergency bell list.

2. Ending all calls ends all emergency bell calls on the emergency bell list.

3. If the delete function is turned off after the call is terminated, the emergency bell list remains in the emergency bell list even if the call is terminated.

## FishEye Camera

The FishEye camera expresses the actual image in a circular form due to the nature of the lens, which has a lot of video information. The image correction function that straightens out circular images is called dewarping.

### Original image of FishEye Camera

You can select a display method between the original image and the dewarped image of the FishEye camera.

The default is the circular original image of the FishEye camera.



### Dewarping

If you dewarp the FishEye camera image, you can get the typical rectangular image.

■ Setting : FishEye channel > Click right button of Mouse > Fisheye > Dewarp

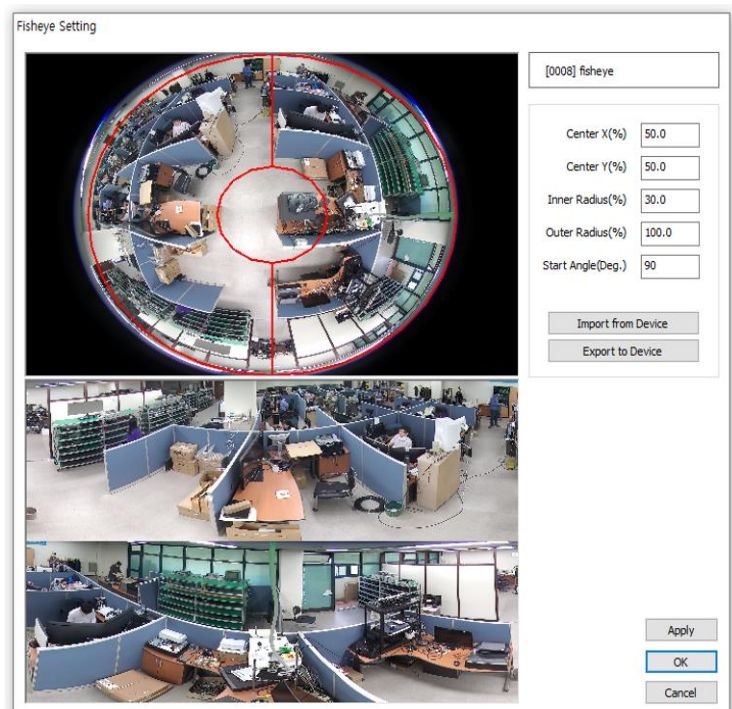


### Fisheye Setting

- Center X : Set the X axis coordinates.
- Center Y : Set the Y axis coordinates.
- Inner Radius : Set internal circle size.
- Outer Radius : Set the external circle size.
- Start Angle : Set the starting angle for Dewarping.
- Import from device : Import the NVR's Dewarping settings into Control Center.
- Export to Device : Export the Dewarping setting set by Control Center to NVR.


<Note>

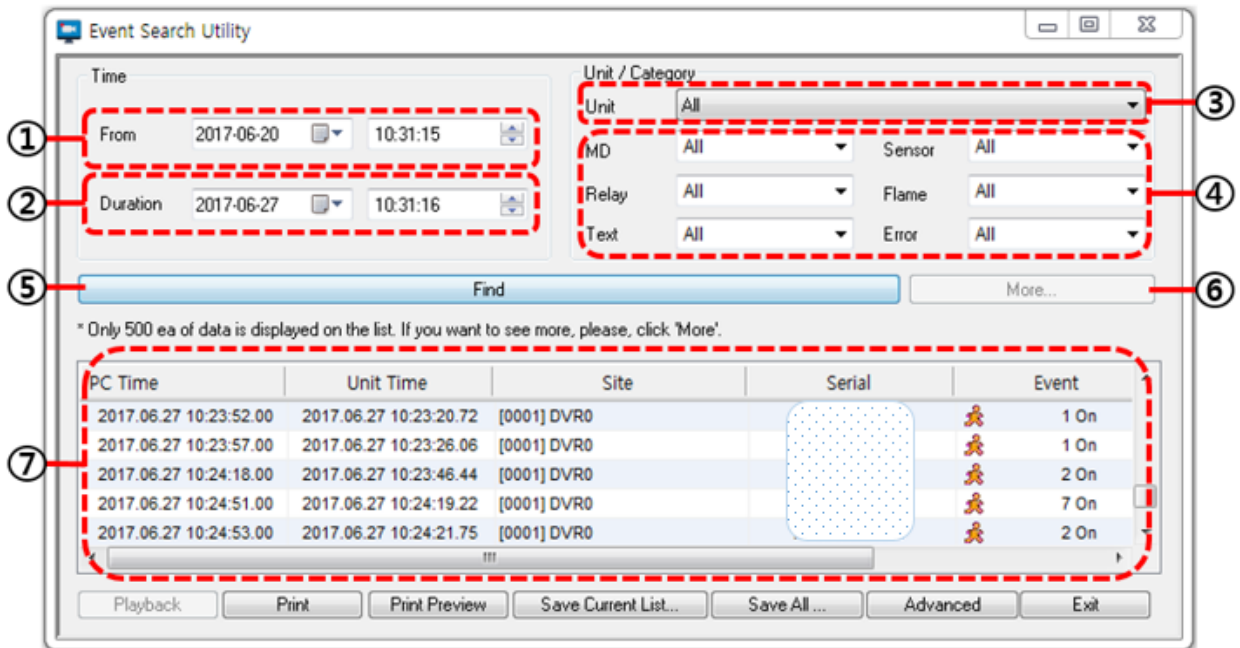
1. If dewarping is enabled in Control Center Monitor, Playback will also show you the dewarped images.
2. Also Control Center Playback supports On/Off setting of Dewarp function.



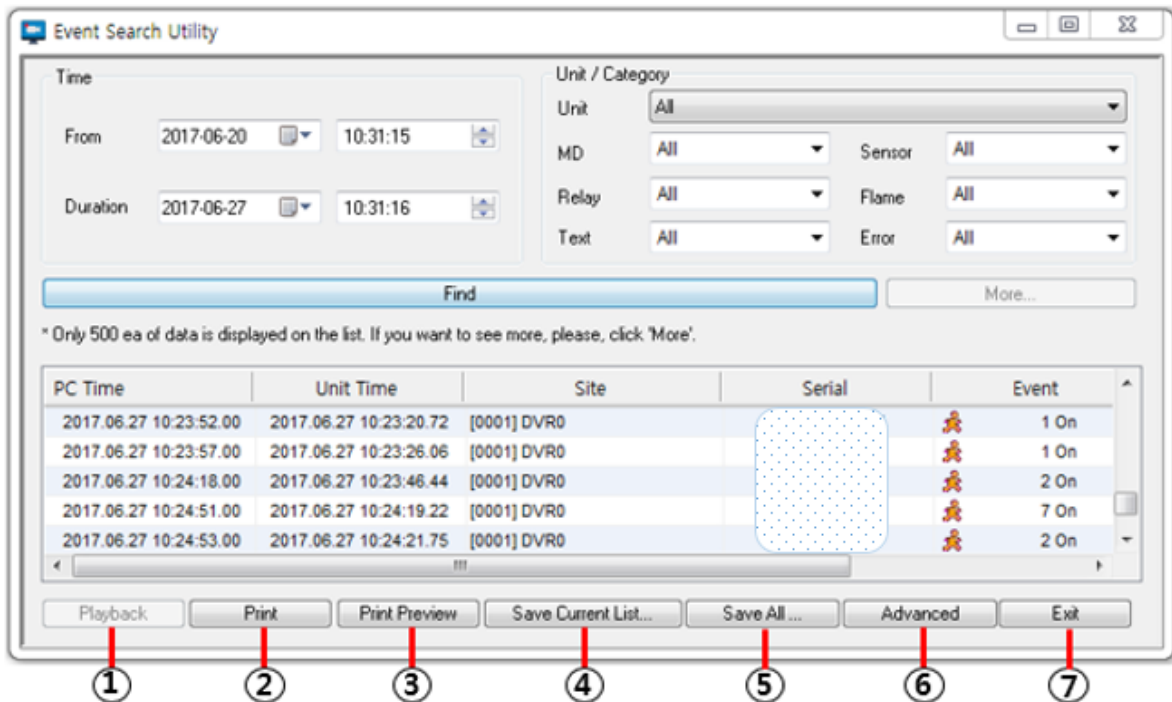
## Event search

Event logs can be searched using the event search utility... Search by selecting a specific unit or classification and search results can be printed or saved.

Click  **[Event Search Utility]** or choose "Event Search Utility" at tool tap.



- 1) In the "Event Search Utility", select ① start time, ② duration, ③ unit and ④ event category.
- 2) All the information is set to search, click ⑤ **[Find]** to start the search. Search cancel while the search is in progress, showing the search progress window appears
- 3) After search is completed, you can see the ⑦ search results. The search result is listed 40 each and click ⑥ **[More]** to check another results.




Item	Description
1	Playback will be executed for the selected video.
2	Print out the results.

3	Print Preview	Preview the results.
4	Save Current List	Save current searched list (max. 500ea) to CSV file.
5	Save All	Save all searched list to CSV file.
6	Advanced	Log delete (all / section / MD delete only) and print set is available.
7	Exit	Finish event search utility

## People Count Search

Control Center can search the people count information of people count IP camera channel by 'People Count Search Utility'.

Click [People Count Search Utility] icon  to execute 'People Count Search Utility'. People count search utility searches the people count information of a specific channel by time. Note that the channel must be a people count camera channel. Select channel by unit or viewset to search the people count. The result of people count is shown as a list and bar graph. Also, user can save the list and the graph.

Time	Enter	Leave
2019-07-25 14:00	7	7
2019-07-25 15:00	13	10
2019-07-25 16:00	12	14

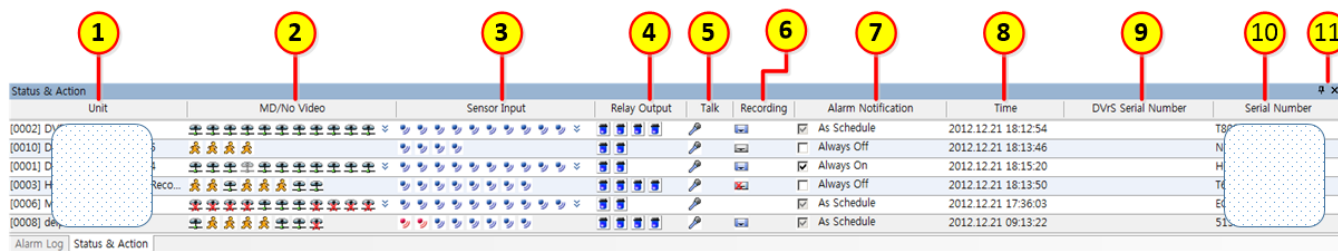
- 1) Displays the people count information as ① hourly, daily, or monthly.
- 2) Sets ② start time (from) and end time (to). Also, select ③ people count IP camera channel of unit or viewset and click ④ [Find].
- 3) Searching result is displayed as ⑤ a list and ⑥ a bar graph.
- 4) Click ⑦ [Save List] to save the ⑤ list as a csv file. Click ⑧ [Save Graph] to save the ⑥ graph as a png file.
- 5) Click ⑩ [Close] to close the people count search utility.

**< caution >**

1. The People count search is available on DVR / NVR v10.0 or later, Control Center Std v7.2 or later.
2. People count information can be incorrect during 1 hour after registering DVR / NVR unit including people count IP camera.

## Status & Action

It can check the status and action of units that are registered on the "Registered Units". In addition, it can schedule using the microphone and alarm notification.



	Item	Icon status	Description
1	Unit		It displays unit name in the unit list window.
2	MD/No Video	(Camera connect) (Video loss) (Camera inactivated) (Motion detected)	It displays video channels that supports at unit It displays all the units that are supported by the video channel and channel to display the connection status, and motion detection.
3	Sensor Input	(Sensor off) (Sensor on) (Flame off) (Flame on) (Thermal off) (Thermal on)	It displays units that are supported by the sensor and sensor operating status. If flame detection camera is connected, icon will be changed to flame icon.
4	Relay Output	(Relay inactivated) (Relay off) (Relay on)	It displays units that are supported by the relay and relay operating status, it can control the relay clicking the icon.
5	Talk	(Microphone off) (Microphone on)	It can send audio on audio output by pressing microphone icon.
6	Recording	(Not recording) (No error, Recording) (No error, Not recording) (Error, recording)	It displays unit HDD status.
7	Alarm notification	<input checked="" type="checkbox"/> As Schedule <input type="checkbox"/> Always Off <input checked="" type="checkbox"/> Always On	It can set alarm notification action status and depending on setting, it works audio alarm and monitor display
8	Time		It displays current date and time.
9	DVRs Serial Number		It displays series number of DVRs / WinRDS
10	Serial Number		It displays serial number of unit.
11	Auto Hide / Close		It can set or close auto hide mode of window.

### Video view

Double click to the Status & Action list, then all channels of the unit are monitored. According to the number of channels of the unit, screen mode is automatically selected. When map mode, monitoring window will be popped-up.

### Alarm notification setup

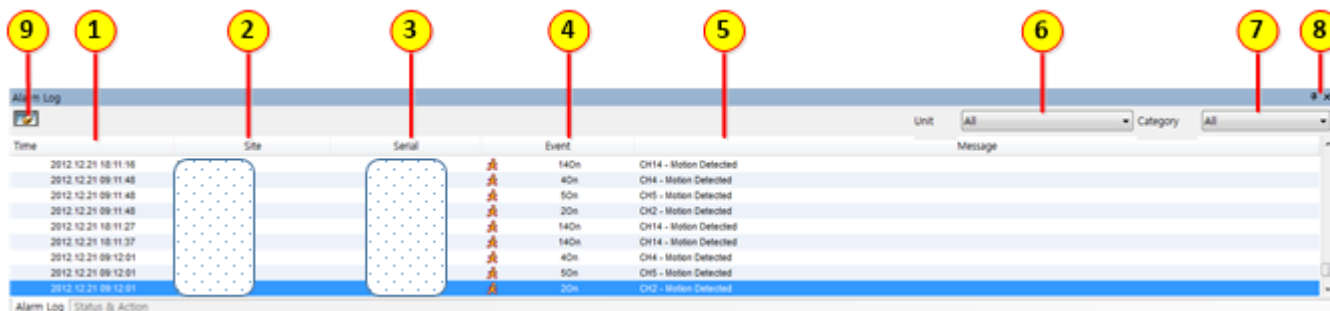
Alarm notification method can be set by clicking the right-most "alarm notification" column. "Schedule Applies,"



"Always On" and "Always Off" can be selected. Set the alarm notification and schedule at [Toolbar > Home > Event Option > Event Option]

## Alarm log

"Registered Units" are registered on the list can check alarm log of the unit... it displays real time log and can set to see only the information that users may want.



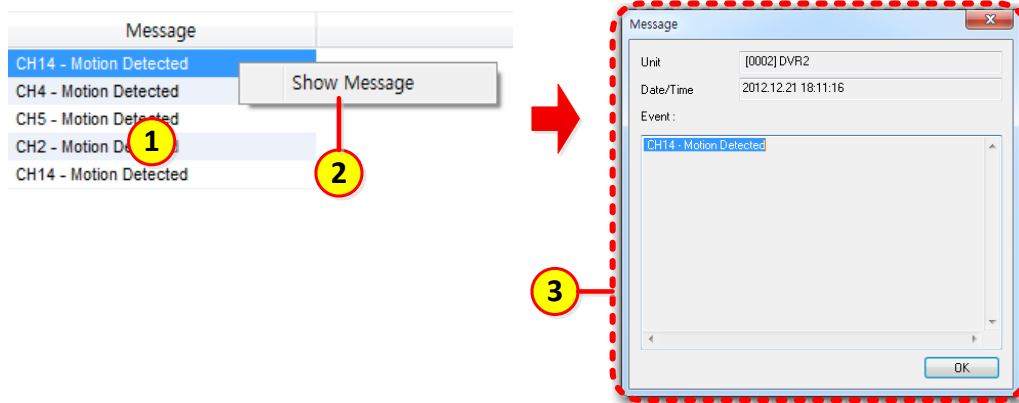
Item	Icon Status	Description
1	Time	It displays alarm occurred date and time
2	Site	It displays alarm occurred unit name.
3	Serial	It displays serial number of alarm occurred unit.
4	Event	It displays icon and number on alarm occurred information.
	(Motion detected) (Sensor off/on) (Flame off/on) (Thermal off/on) (Relay off/on) (Video connect/disconnect) (Text input) (Login fail) (Setup changed)	
5	Message	It displays message on alarm occurred information
6	Unit	Alarm log can be sorted by unit, Select only one unit can be selected, and all are registered in all units of the alarm log can be shown.
7	Category	Alarm log can be viewed by selecting the event, error, status, text. Select only one unit can be selected, and all are registered in all units of the alarm log can be shown.
8	Auto Hide / Close	It can setup or close auto hide mode of window
9	List fix	It can fix updated alarm log list and keeps the fixed list even the new alarm information comes.

## Video view

Double click the list, it'll be monitoring the channel of unit which occurred event. In case of motion detection, it is monitoring the channel that detected motion only. In case of sensor or relay, is playback whole channel of the unit, will change split channels belongings. The selected channel is already being monitored, this unit will change monitor focus. In case of map mode, will pop up the monitor window

## Message view in detail

In case of long message, only printed a part of the message, if want to get whole message, you can get from "message view"



In the ① list, click right mouse for ② **[Show Message]**, it will be shown ③ message window.

## Action Log

Time	Category	Action	Site	Serial	Message	Login User	Program
2015.11.26 11:01:01	Program	Login			Monitor - admin	admin	Monitor
2015.11.26 15:08:41	Change	Options			Change Options	admin	Monitor

Checked item in action log option will be shown in action log.

### <Note>

If no items to record in action log are checked, no record will be made in action log history.

## Config information export/import

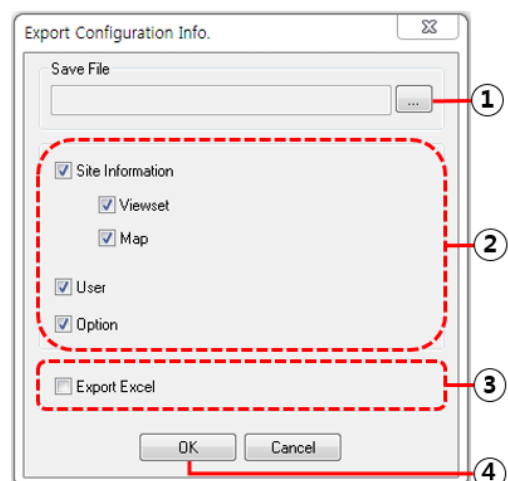
It can export/import the configuration information of Control Center.

### export

- 1) Select [Toolbar – Tool – Export]. Set ① save file path, name, and choose ② options.
- 2) ③ Save configuration information to CSV file when [Export Excel] option is checked.
- 3) Click ④ **[OK]** to save it on zip file.

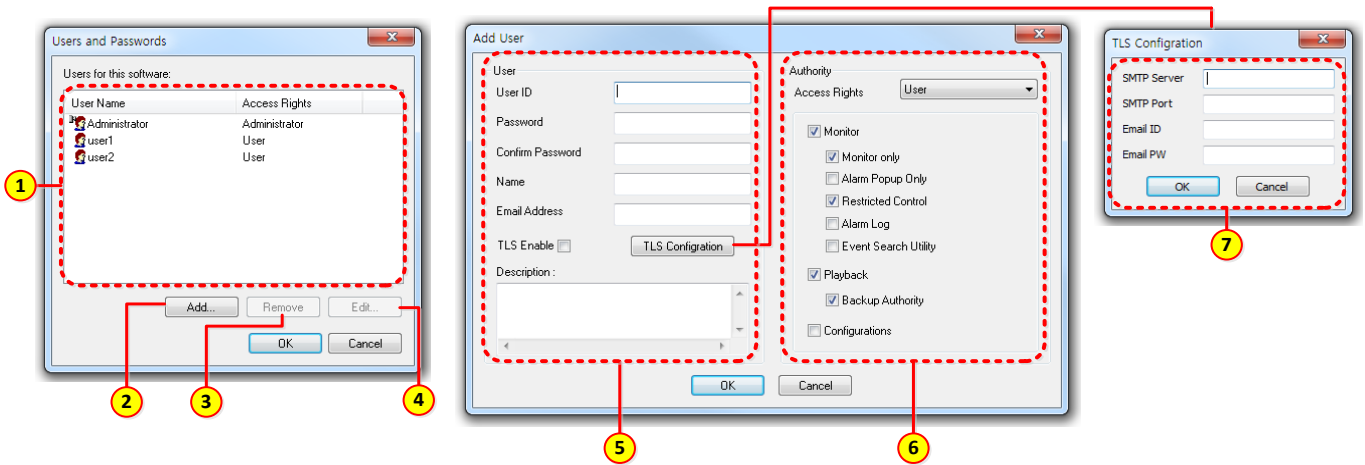
### import

Select [Toolbar – Tool – Import]. The window is executed, choose the saved zip file and click **[Open]** then confirmation window will appear to restart the program. Click **[OK]** to complete the import.



# User set

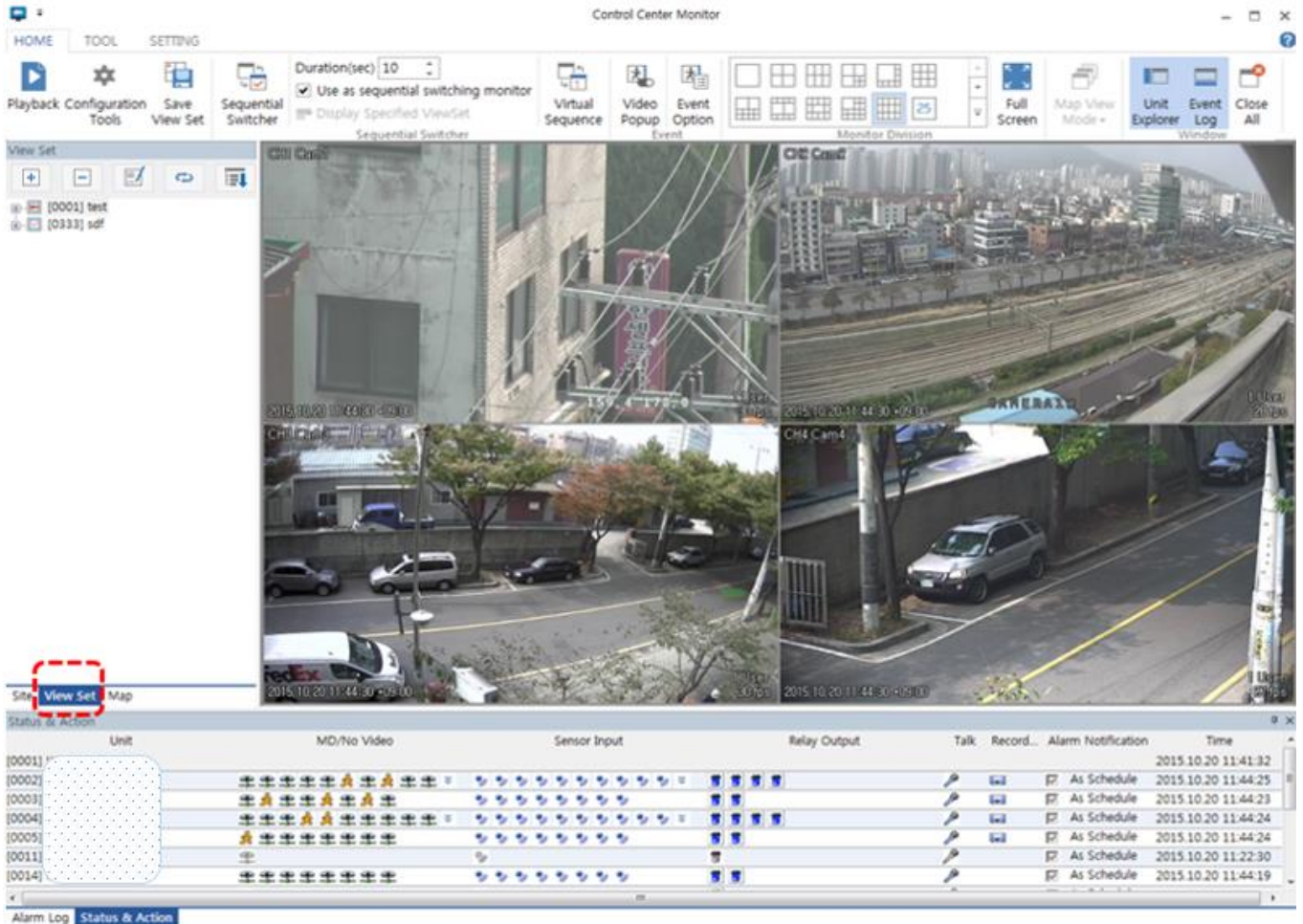
Registered users can use the program to change the administrator or management information can be used. Select [Toolbar – Setting – User Account], then below window will be appeared.




Item		Description	
1	Users for this software	It displays user list registered at program, the default admin can't delete and change the user account information	
2	Add	User added window is appeared, input user information to add account of the user and it's up to 100 account available...	
3	Remove	Choose user list and click button to delete the user.	
4	Edit	Choose user list and click button to show edit window, edit user information and save it to get updated one	
5	User	It sets user's account information, the confirmation of user ID, PW, PW confirmed should be required, if not, you can't register account.	
6	Authority	Access rights	It can choose User and Administrator, if choose Administrator, it would be registered admin account with all right
		Monitor	It can execute Control Center monitor program.
		Monitor only	It can't change layout badge, using admin's site' view set/ map list
		Alarm Popup Only	It can use alarm popup function only.
		Restricted Control	It can use a same unit information with administrator.
		Alarm log	It displays alarm log information at alarm log window.
		Event Search Utility	It can execute to use event search utility
		Playback	It can execute Control Center Playback program.
6	Authority	Backup Authority	It can backup recorded data.
		Configurations	Control Center Configuration Tools program can be run.
7	TLS Configuration	TLS security server and account security server information	

# Viewset mode


You can switch to the Viewset mode by clicking 'viewset tap' shown in below figure. You can add and manage any channels of registered units on the viewset group. Also, you can monitor and playback by unit of viewset group.



## Viewset registration

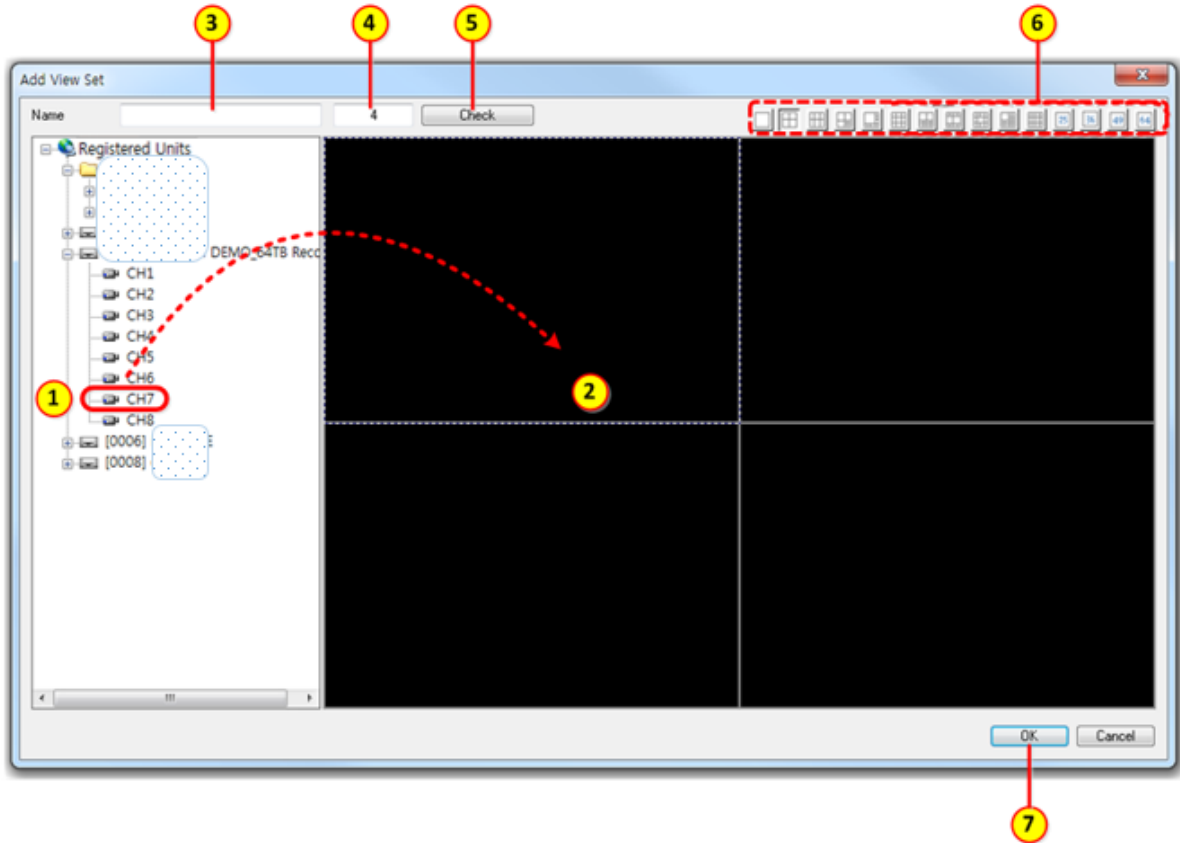
In the viewset mode, click  [add] icon or click right button of mouse then select [add viewset] for viewset registration.











### Viewset registration at site mode

At site mode, select "Monitor Division" and click the channels you want. Click  icon for registering as a viewset.


### Register at viewset mode

In the viewset mode, click the  icon or click the **[Add Viewset]** at the popup menu (mouse right click).

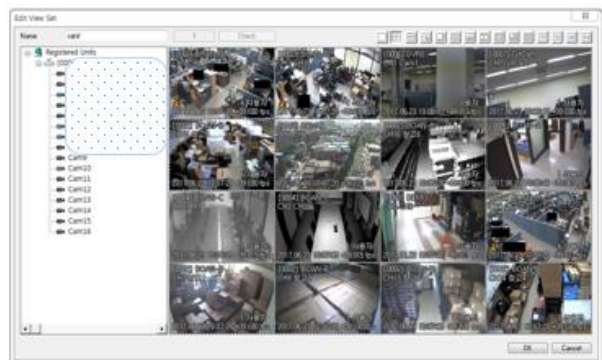


- 1) In the "Add View Set" window, click  icon to determine monitor division mode. Click the video window  and choose the camera  to be displayed in the video window. Also, you can drag the  camera and drop to the  window.
- 2) After registration of camera, write the viewset name to  and click  **[Check]** to check the availability of name of  and number of .
- 3) Click  **[OK]** to save at viewset list window. To cancel the registration, click **[cancel]**.


### Viewset edit

Choose viewset list. Click  icon or choose the [viewset edit] in the popup menu after clicking mouse right button. Then, you can edit the viewset.

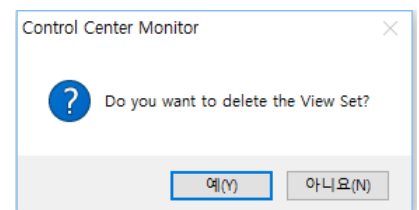
In the "Edit View Set" window, you can change the name of viewset, monitor division mode, and allocation of video channel for each position. This edit operation is the same way with viewset registration.



### Viewset delete

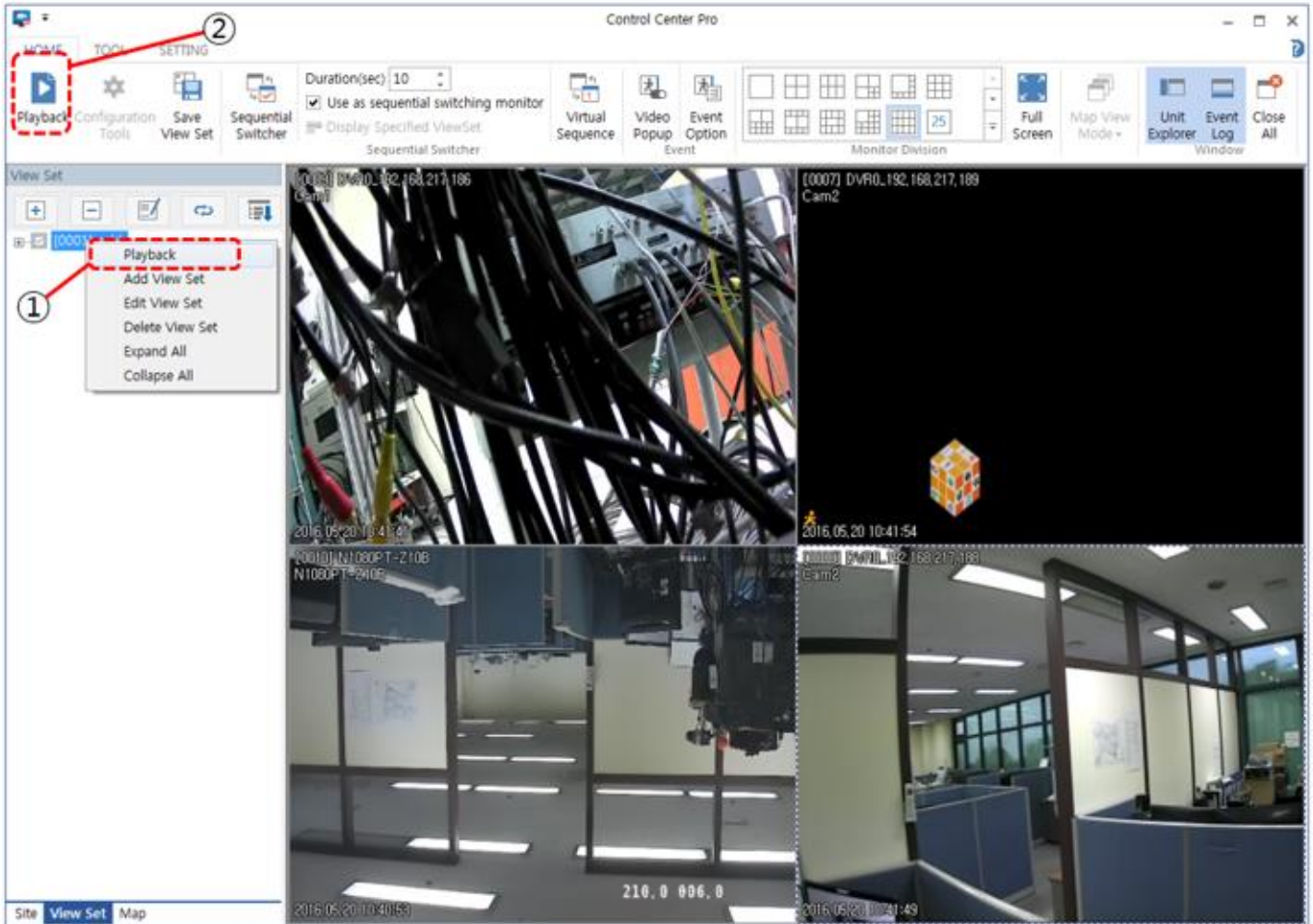
Choose viewset list to delete. Click  **[delete]** icon or choose [viewset delete] after clicking the mouse right button. Then you can delete the viewset.

In the viewset delete confirm window, click **[Yes]** to delete viewset in the list, click **[No]** to cancel the delete.



## Viewset Playback

User can register the various DVR's channels on a single viewset. Since viewset playback can play and search the channels on a viewset, user can play and search the various DVR's channels at once. This is a powerful function increasing user's experience.



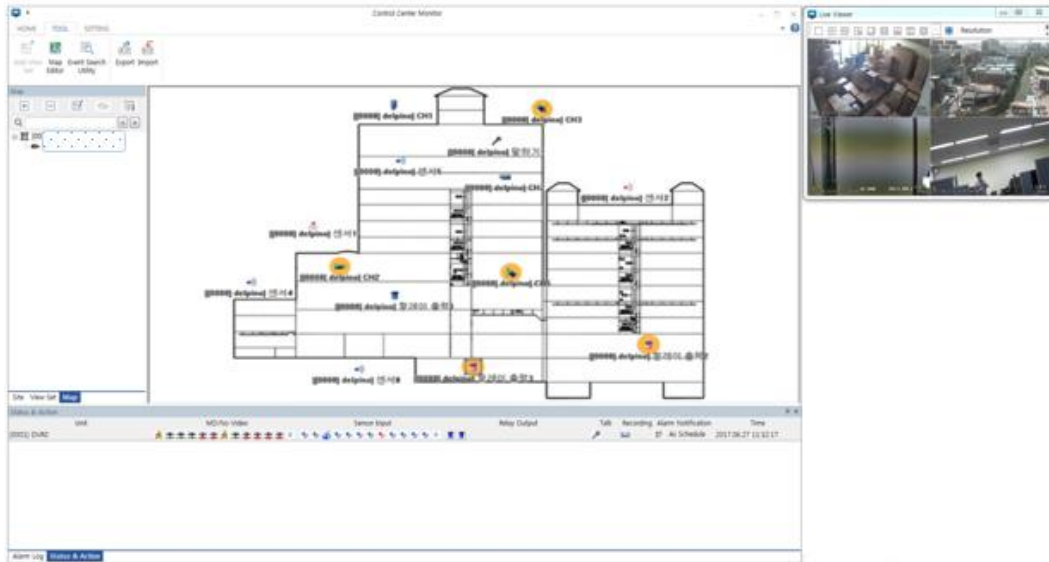
To do viewset playback, ① mouse right-click on viewset list and choose 'playback'. Or select viewset list and click ② 'Playback' icon.

### <Cautions>

1. If the channel on viewset is not recorded (DVR's channel and/or IP camera channel), that channel cannot be played.
2. In case of viewset playback, Control Center performs 'preloading' to download the each channel's video before playback.
3. Viewset playback does not support more than 17 channels. To play the viewset, please make sure that the number of channels of viewset is 16 or less.
4. If the number of connected users of DVR exceeds the maximum allowed users, the channels which is contained in that DVR cannot be played.

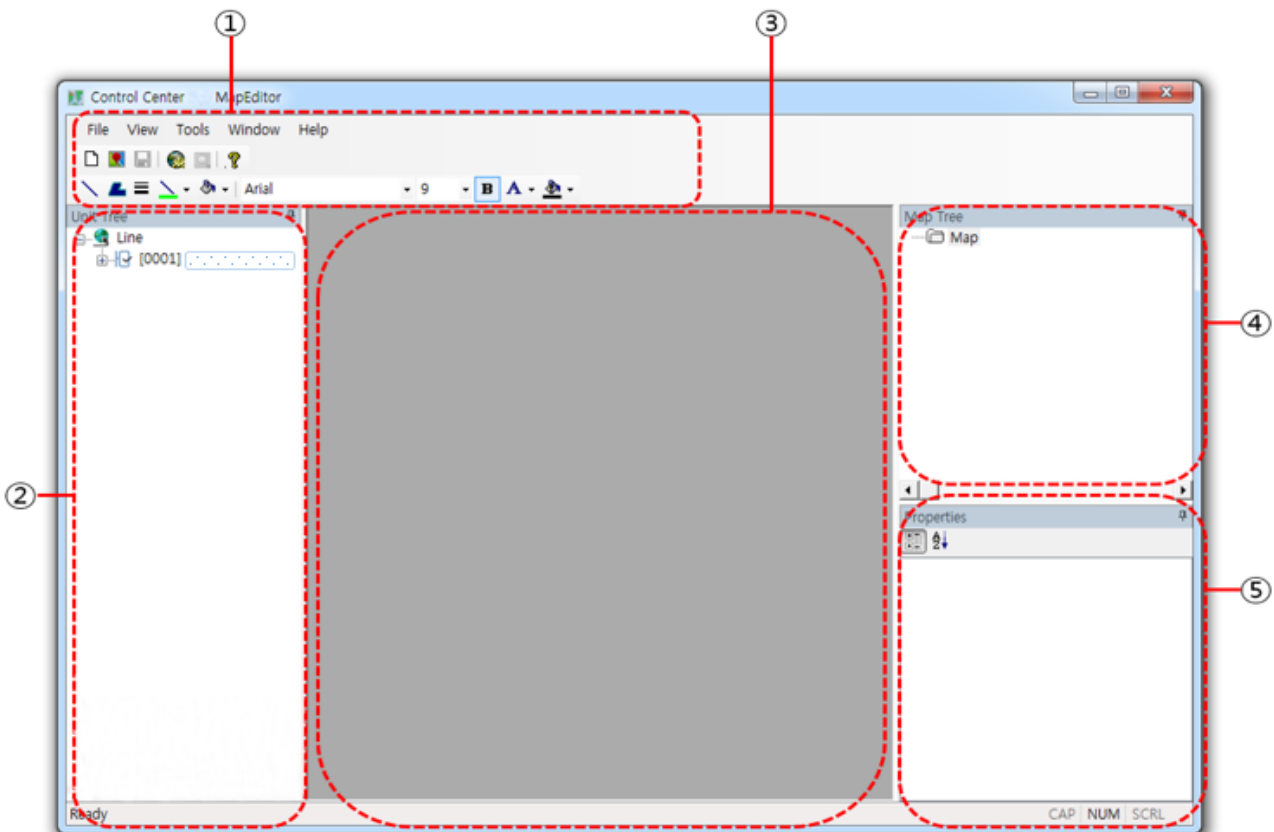
# Map mode

You can change into the MAP MODE by click the "MAP" tap on the bottom of the unit list window. In the MAP MODE, you can register and control the camera, audio out, relay out, sensor, and microphone on the map, and it offers the convenience by registering the smaller map and extending it to the layer type. The operation status and the occurrences of event are displayed on the map. Thus, the administrator can check the status of the registered units in real time.




## Map editor

Select the toolbar of Tools > [Map Editor] in the MAP MODE, and it is possible to add, edit or delete the map through "Map Editor".



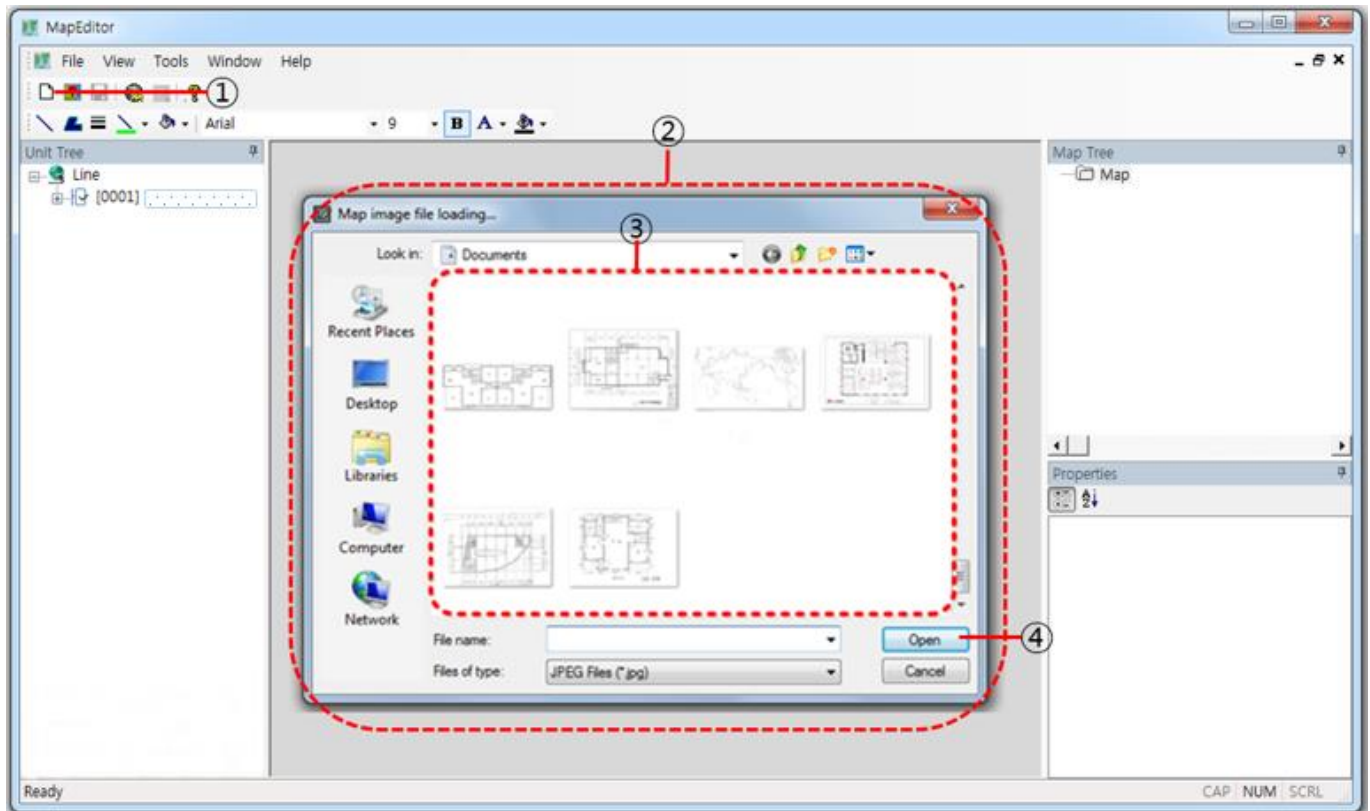
Item	Description
1	Menu/tool bar
2	Unit list window
3	Map window
4	Map Tree window
5	Properties window

## MAP ADDITION

In the Map mode, when you click  **[Add]** icon or select the **[Add Map]** on menu by clicking with the right mouse button, the map editor runs. You can add the new map through map editor.

### Add new map on Map Editor

To add new map please open map file saved on the PC. Please locate and register camera, sensor, relay, and mike over the map.



- 1) In the map editor, when you click the icon ①, it displays "Map image file loading" window, you select the route that has a map, ③ select the map file, ④ click **[Open]** button and make it display the map you want to use on the map window.

### Adding new GIS map

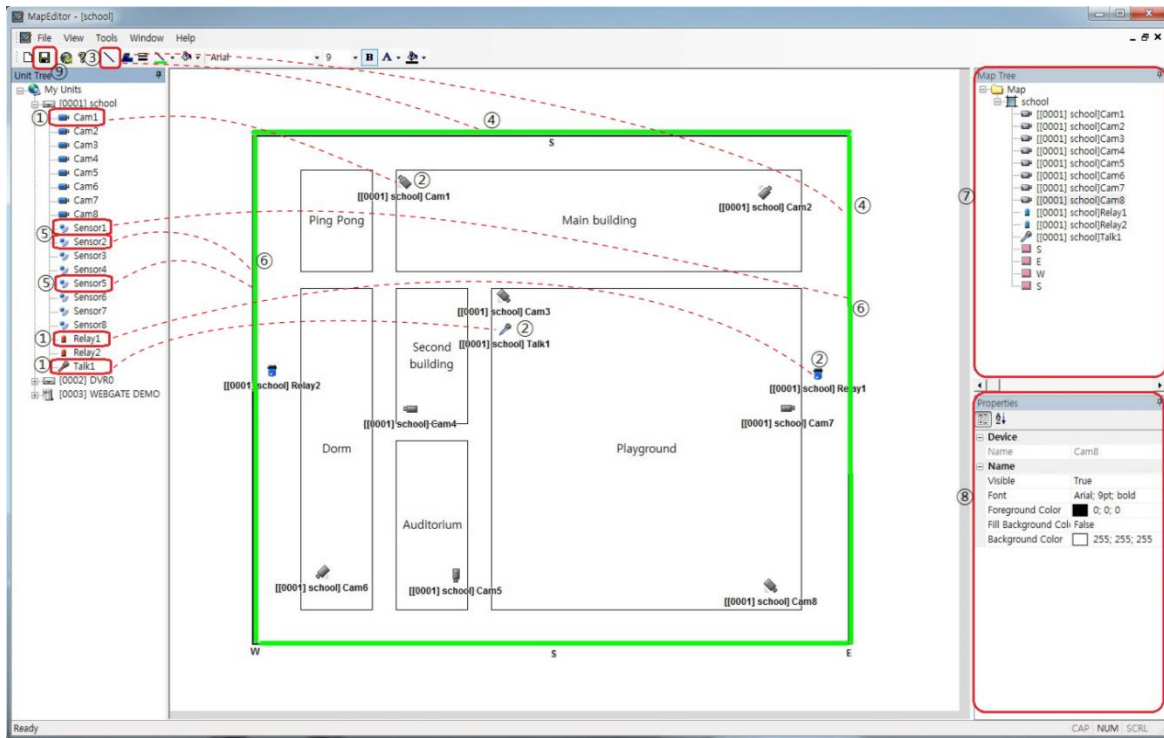
To add GIS map please connect to GIS server and read map file then locate and register camera, sensor, relay, mike and so on over the map.

<Note>

GIS map supports only Korean map.

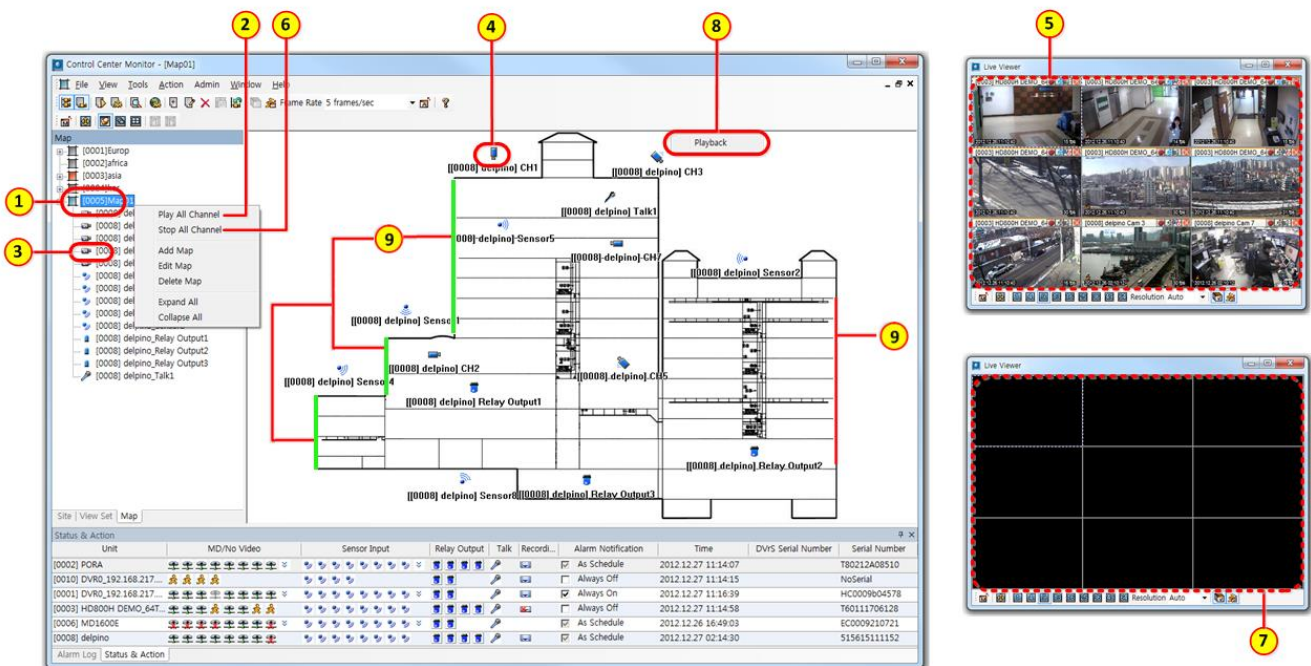


## Add device at new map



- ① Drag-and-drop icons (Camera, Relay, Mic) to the Map window.
- ② Camera, Relay and Mic will be registered.
- ③ Click Zone icon on the toolbar.
- ④ Add a zone (Green rectangle) on the Map window.
- ⑤ Drag-and-drop a sensor icon inside the Zone(Green rectangle)
- ⑥ The sensor will be added, and you can add several sensors in the same way.
- ⑦ Registered devices will be shown on the "Map tree".
- ⑧ You can change zone name and its color, color when an event occurred, background color, etc.
- ⑨ If all devices are registered, please click [Save] icon to save a map.

## See the Map Image



- ① Select a map
- ② Click right-button of mouse on the map, and select [Play All channel]
- ⑤ Video from all channels will be shown at Live Viewer
- ③ ~④ If you click camera or camera icon on the map, you can see video from the camera.
- ⑥ Click right-button of mouse on the map, and select [Stop All channel]
- ⑦ All video at Live Viewer will be disconnected.
- ⑧ Select a camera icon, and execute [Search] by clicking right-button of mouse. Control Center Playback will be executed and it will connect the selected unit automatically to play the recorded video.
- ⑨ If sensor works, zone's color will be changed from green to red.

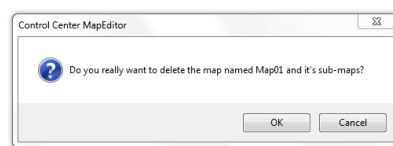
## Map editor

In the popup of map list window, choose **[Map editor]** or click **[Editor]** icon, it executes "Map editor", how to edit is same operation with map addition.

## Map delete

To delete map, it should execute map editor. In the map editor map list, click right mouse to popup menu and click **[delete]**.

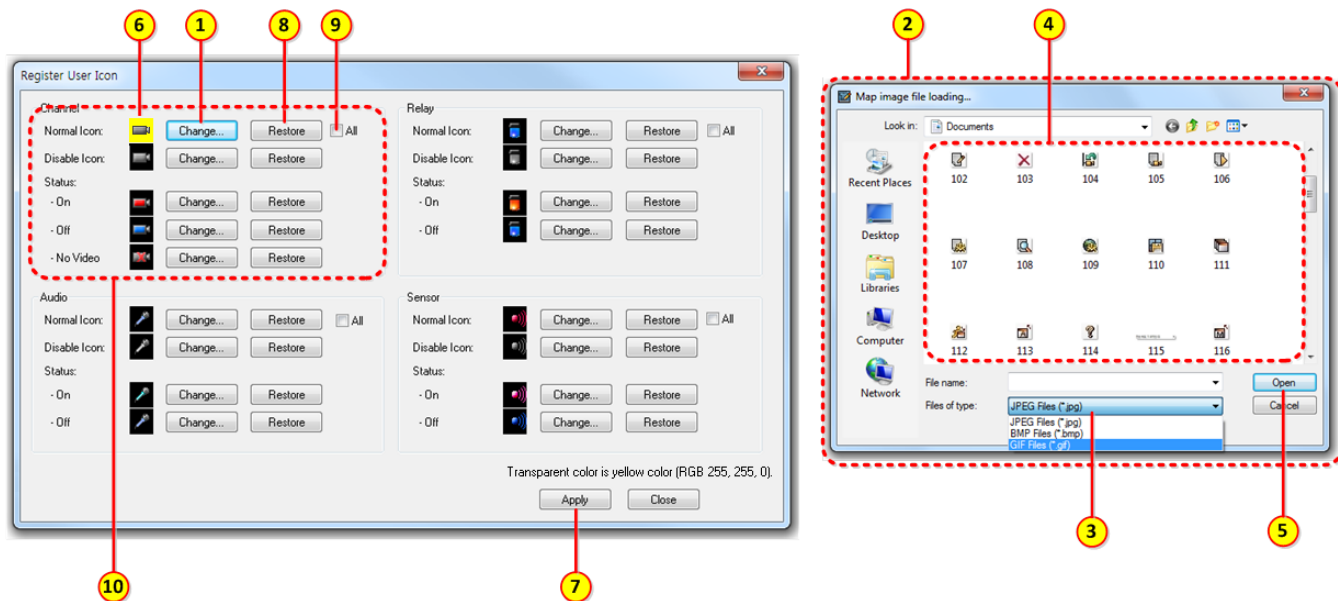
In the map delete confirmation window, click **[Yes]** to delete the map at the list, click **[No]** to cancel the delete.



## USER ICON REGISTRATION

You can register and use the installation icon that is registered on the map as you want.

Select the **[Register User Icon]** on the menu toolbar, and "Register User Icon" window pop-ups.



- 1) In User icon registration, ① click the **[Change]** button, ② It pop-ups "Map image file loading" window, ③ select the type of file
- 2) Among the file of designated type ④ Select the file, ⑤ click the **[Open]** button, ⑥ icon is set up to new one. ⑦ When you click the **[Apply]** button below, it is applied to these items.
- 3) ⑧ When you click the **[Restore]** button, it returns to the default icon, ⑨ when you select **[All]**, ⑩ all icons in a group are set up to new ones.

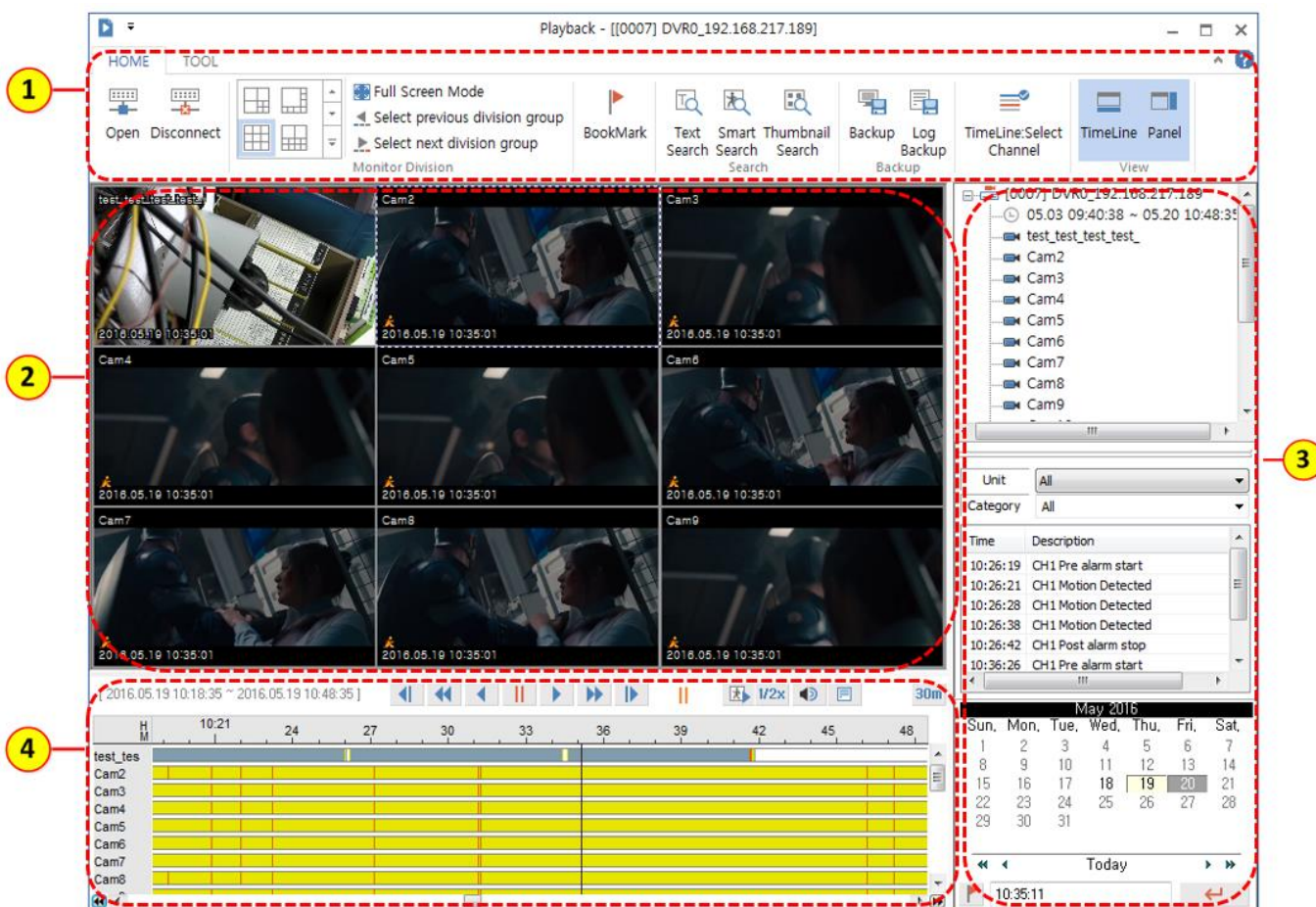
<Note>


If you assign Yellow (RGB 255.255.0) to an icon, the icon will be treated as transparent. That is, if you assign grey to a camera icon and assign Yellow (RGB 255.255.0) to the background, camera icon will be shown on the transparent background.

# Playback Viewer

## Screen Composition and Function name

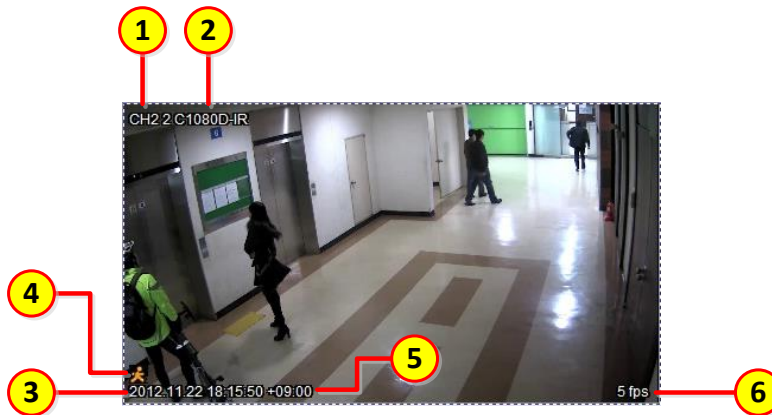
### Screen structure



Item	Description
1	Menu/Toolbar Display menu and function button.
2	Video window Display playback video
3	Log viewer Display log related to the loaded timeline section.
	Disk info Display disk use information and whole recording section
	Channel selection Select channel for playback
	BookMark (  ) Display the Bookmark (channel, time, memo) saved on DVR
4	Calendar / Time search Select the date from calendar and search the data.
	Playback control button Control playback function using button.
	Timeline Display saved information of unit and search time line.

# Video window display information

Configure display information on playback video via caption configuration



Item	Description
1	Channel number
2	Channel name
3	Time
4	Event
5	Time Zone
6	Speed

# Icon function

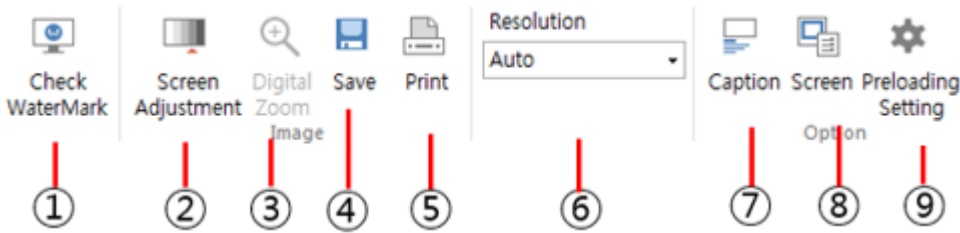
## Toolbar – HOME



Item	Description
1	Open
2	Disconnect
3	Division
4	Full Screen
5	Select previous division Group Select next division Group
6	Bookmark
7	Text Search
8	Smart Search
9	Thumbnail Search

		video by using thumbnail images.
10	Backup	Backup the video by connecting the registered unit.
11	Log Backup	Backup the event log by connecting the registered unit.
12	Timeline: Select Channel	When this icon is ON, the channels which are not selected as playback channels are not displayed on the log and timeline window. When OFF, all channels which are not selected as playback channels are displayed on the log and timeline window.
13	Timeline	Display the timeline or not.
14	Panel	Display the channel selection, the log and the calendar window or not.


## Toolbar - TOOL



Item	Description	
1	Check Watermark	Check the watermark to find out the forgery compared with original image.
2	Screen Adjustment	Adjust the brightness, contrast and deinterlace of screen.
3	Digital Zoom	'SETTING' > 'Display' > 'Use DirectX Draw' should be checked and the screen mode should be single channel mode to use digital zoom. User can zoom the video using mouse control. Overall video is shown in mini map and user can move zoom area by clicking mini map area.
4	Save	Save the current image as JPEG or BMP file. You can select and save the caption, name, and date/time and event information in that image file.
5	Print	Print the current image. Basically, caption memo inserted by user, channel name, saved date and event information are printed together.
6	Resolution	You can choose the resolution of video. High quality original resolution can be selected in normal case, lower quality resolution can be selected under slow network environment. This feature can be supported at the model which supports only two or more resolutions.
7	Caption	<ul style="list-style-type: none"> <li>- Caption: Channel number, channel name, time, event, time zone, transmission speed, highlight Flame/Thermal detection, text input, hardware decoding can be displayed or not by selecting.</li> <li>- Select all: All captions are selected.</li> <li>- Unselect all: All captions are unselected.</li> <li>- Font color: User can change the color of font.</li> </ul>
8	Screen	<ul style="list-style-type: none"> <li>- Automatically adjust split screen mode for number of channels: Whenever user selects channels, screen mode automatically adjust split division up to 16 channels.</li> <li>- Color Space: YUV and RGB are supported.</li> <li>- Viewer Mode: Select the aspect ratio of video, full or original aspect ratio.</li> </ul>
9	Preloading Setting	<ul style="list-style-type: none"> <li>- Drive: Set the HDD to store preloading data. It is inactivated during playback. To activate this setting, please set Home &gt; Disconnect.</li> <li>- File Path: File Path for preloading data.</li> <li>- Remaining Disk Size: Set the remaining disk size. For example, if user set 10GB, preloading data will be stored on HDD until the remaining disk size is 10GB.</li> </ul>

# Unit connection and File Open

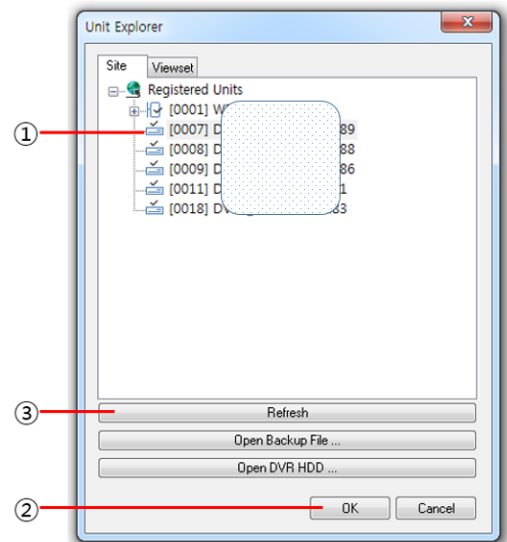
Using search playback viewer, user can access to the registered unit and playback the recording video. Also, user can open backup file and recording video in DVR HDD directly connecting to PC.

To execute "Unit Explorer", click [Toolbar – Home – Open] or  icon shown in tool bar.

## Unit Connection

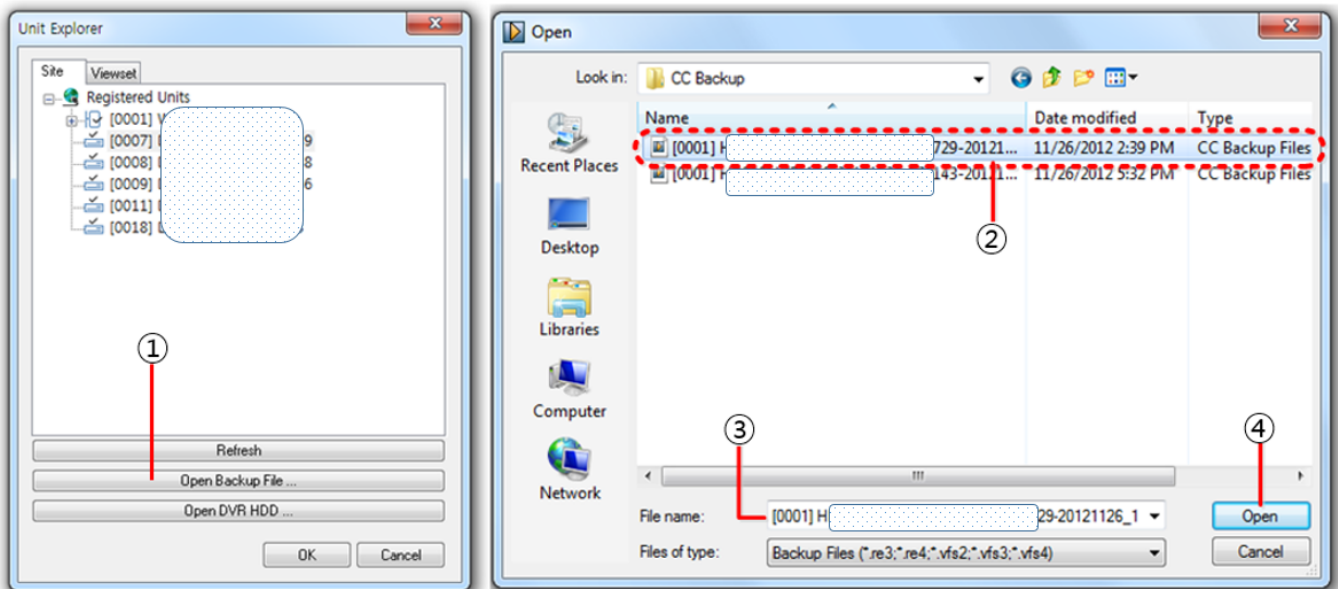
User can playback after accessing to the unit registered in 'Registered Units'.

- 1) Select Unit ① and click ② **[OK]** or double clicking ① unit in 'Registered Units'. If then, saved recording information and log information will be shown and user can playback the recorded video on that unit.
- 2) click ③ **[Refresh]** button for unit list refreshing.



## File Open

User can playback recorded video with opening backup file. Available backup file are "re3, RE4/EXE, vsf2, vsf3, vsf4" and other format is not supported. User can see all the same information like direct unit connection.



- 1) if clicking ① **[Open Backup File]** in Unit explorer, search window will be shown. In the selected folder, if selecting ② file and ③ file name will be shown.
- 2) If clicking ④ **[Open]** button, recording information and log information will be shown and user can playback the backup file. Or drag the backup file and drop the file on the playback window, then you can playback the backup file.

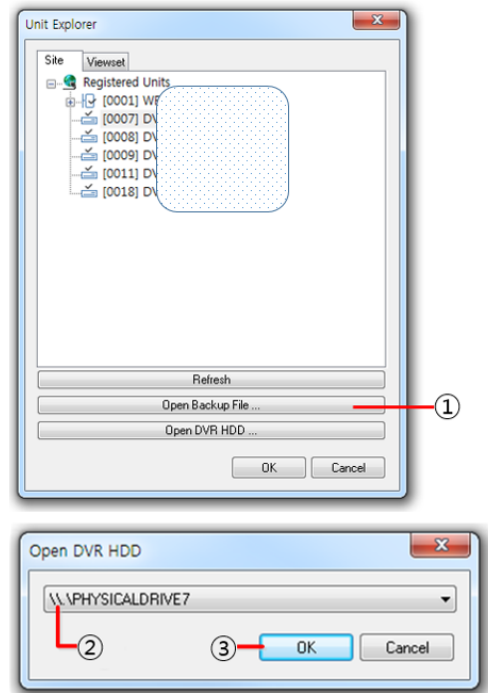
## DVR HDD Open

DVR HDD can be connected directly to PC and user can playback the recorded video in DVR HDD. You can play the recorded data and check DVR logs like you connect a DVR directly.

- 1) In Unit explorer, if clicking ① **[Open DVR HDD]**, user can select DVR HDD.
- 2) In DVR HDD list, if selecting ② HDD and clicking ③ **[OK]** button, recording and log information will be seen.

<Note>


You must execute Control Center Playback as administrator's authority to open DVR HDD.



### <Caution>

1. DVR HDD open can be available over H.264 SD DVR v2.14.10 and all HD DVR. But MPEG SD DVR is not supported.
2. Do not format or edit DVR HDD partition or factory default. After DVR HDD connection, run search playback viewer program and 'DVR HDD open'.
3. HDD which is set as Raid cannot be opened.

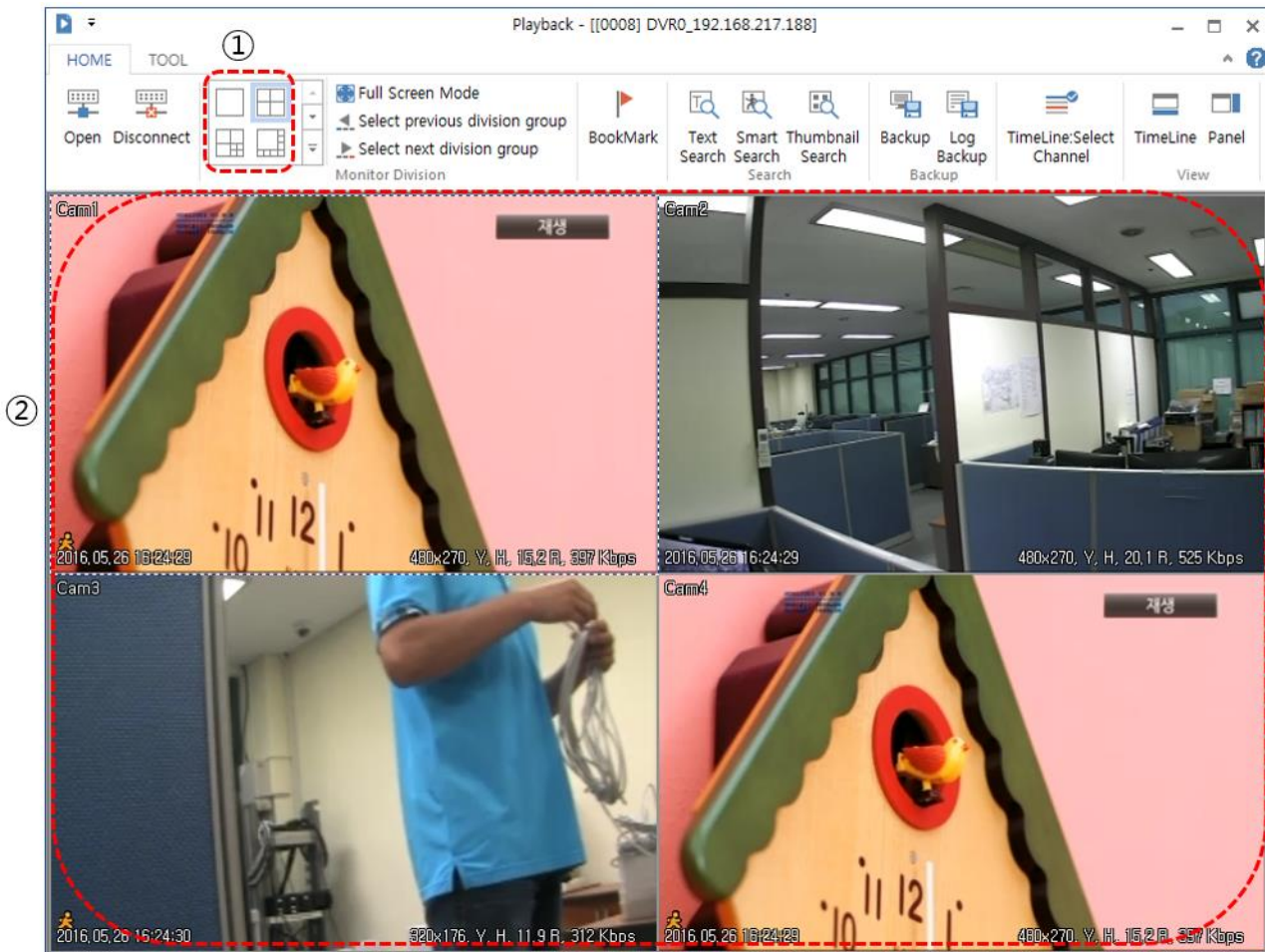
## Connection termination (Disconnect)

If clicking  **[Disconnect]** icon in top toolbar, user can close DVR HDD connection or unit or backup file.

# Basic control

## Screen division mode change

It supports 1~64 split screen division and user can change the screen division mode by clicking ① icon or by double clicking the specific channel.

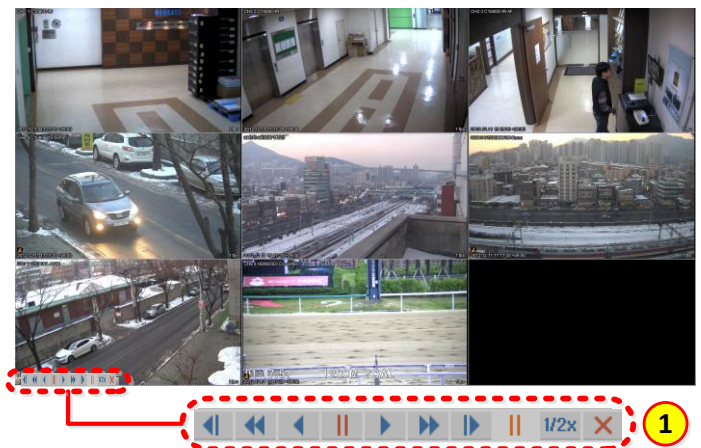


If clicking ① division icon, multi division mode will be shown. If ② double clicking the specific channel, single mode will be shown. When you double click again, the division mode will be changed to previous mode.

## Full screen mode

If clicking [Full Screen Mode] icon, user can run full screen mode and close it with [ESC] button.

Using ① playback control button displayed on left button of full screen mode, user can control playback speed. If clicking [X] button, Full screen mode will be closed.





## Video position change

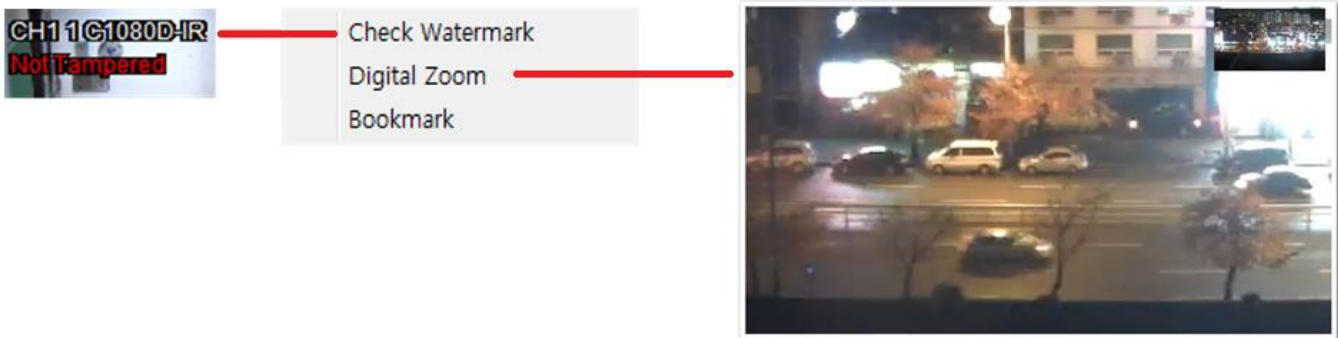
To move video position, select video with mouse and drag it to the position user wants. Position change in between different monitor is also possible.



- 1) Do mouse dragging ① video to ② position, ① and ② will be changed each other.

## Video window popup menu

If pushing mouse right button on the video, menu will be shown and user can use major function. This action is only applied to the selected video only.




Item	Description
1	Check Watermark Display if original data is damaged or not.
2	Digital Zoom 'SETTING' > 'Display' > 'Use DirectX Draw' should be checked and the screen mode should be single channel mode to use digital zoom. User can zoom the video using mouse control. Overall video is shown in mini map and user can move zoom area by clicking mini map area.
3	Bookmark Bookmark saving time, channel, and memo can be checked. (Bookmark will be inactivated during viewset playback.)

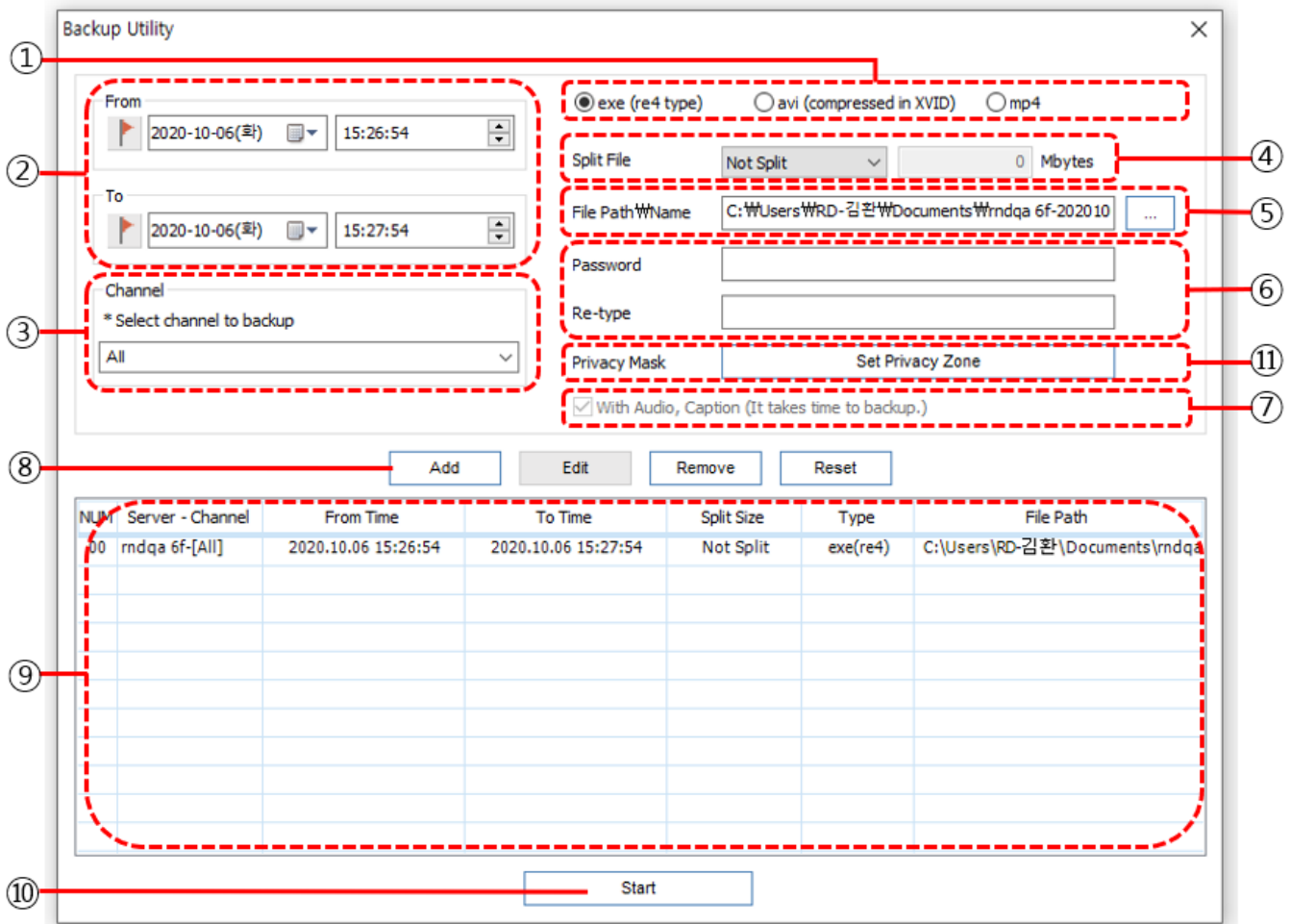
## Backup

Access to registered unit in search, playback viewer then back up recorded data or log information. Also open backup file or file of DVR's HDD then select specific section for back up.

### Image backup

There are 2 types of backup, EXE(RE4), AVI and MP4 type. EXE(RE4) type support multi channels backup along with backup for event information and other information. AVI, MP4 backup support playback in widely used player, only single channel using. Click on  **[Backup]** icon in control panel on the left side of program to execute "Backup utility".

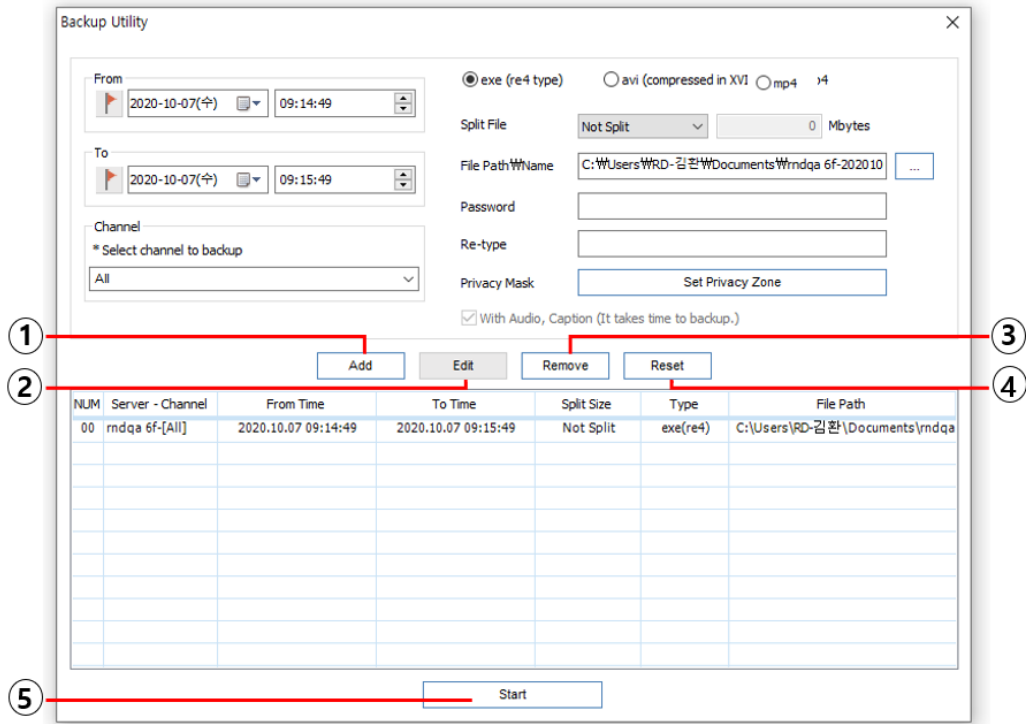
## Backup Utility



- 1) Select backup file type as ① **[EXE], [AVI], [MP4]**. ② Set the start time and end time for backup. End time cannot precede start time. When user inputs wrong time, end time will be automatically set to the future than the start time.
- 2) ③ Select the channels to backup. If backup file type is AVI, MP4, only one channel can be selected.
- 3) ④ Select the file size to split. If backup file size comes larger than split file size, backup file will be splitted.
- 4) ⑤ Click [...] Icons to change file path and file name. Default file path is "My Documents" and file name is "unit number-unit name-backup start time-backup end time".
- 5) ⑥ It is possible to encrypt the file. Max. 14 letters can be set as password.
- 6) ⑦ When AVI backup, it is possible to backup with audio and caption (for channel name, date and time).
- 7) After finish the setting, click ⑧ [Add] button to add this backup to ⑨ backup list. At the backup list window, backup number, server-channel, from time, to time, split size, backup file type and file path are displayed.
- 8) Click ⑩ [Start] button to start backup. During backup, red box will be overlapped to the current backup list which is in processing to notice the backup progress status. Completed backup list will be changed to green box. After finish all backup, popup windows will be displayed.
- 9) ⑪ If you set the privacy area, the area that must be hidden is masked in black in the backup image.


### <Note>

1. Bookmark list will be shown by clicking  icon and user can select one of bookmark time.
2. Privacy mask can only be set up on one channel.

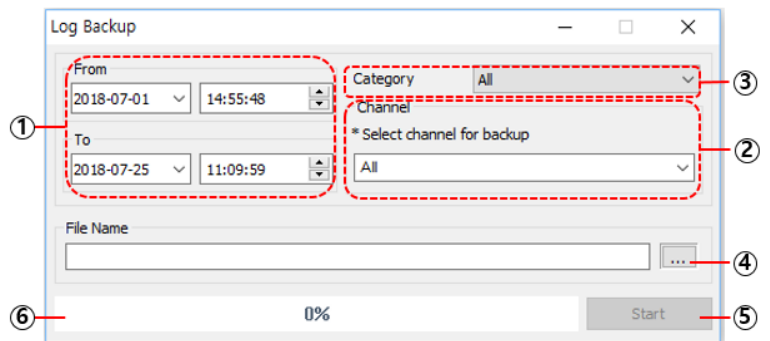


Item	Description	
1	Add	Add currently set backup to backup list.
2	Edit	Select backup list and modify the backup configuration. After click [Edit] button, modified backup configuration will be applied.
3	Remove	Select backup list to remove and click [Remove] button to remove.
4	Reset	Click [Reset] button to initialize backup configuration for selected backup list. All configuration except 'from time' and 'to time' will be initialized.
5	Start / Stop	Click [Start] button to start backup. During backup, this button is changed to [Stop]. Click [Stop] button to stop backup.

## Log Backup

Log backup can be done per channel preferred and selected by user in CSV file. Run "backup utility" by click on  [Log Backup] icon in control panel located on the left side of program.

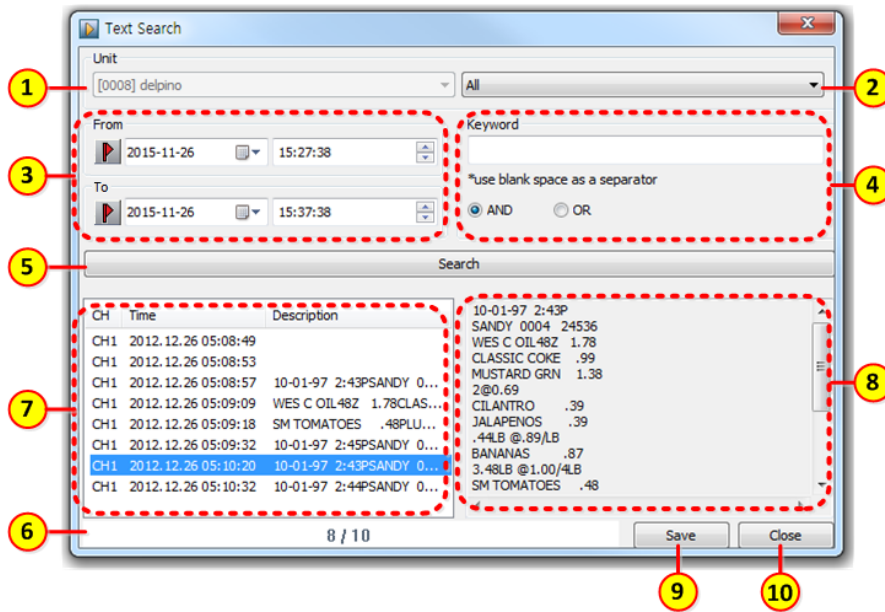
- 1) Set ① start and end time for backup section in log backup window. Start time must not be set later than end time. If wrong time setting by user, program will automatically adjust time in order end time is later than start time.
- 2) Select ② backup channel and item (all, event, pre/post alarm, text) in ③ classification menu.
- 3) If click on ④ [...], "save in other name" winder come up then enter location and file name and click on [Save] button to close window and confirm file save location and name.
- 4) Log file is saved in CSV format. Click on ⑤ [Start] button to start backup. ⑥ Backup process is shown as %.



# Search

Various search modes are supported in search and playback viewer for user to search quickly and with ease. Text search can search test recorded in specific time, Smart search can detect image of motion detected and Thumbnail search can be made on specific search section set by user.

## Text Search



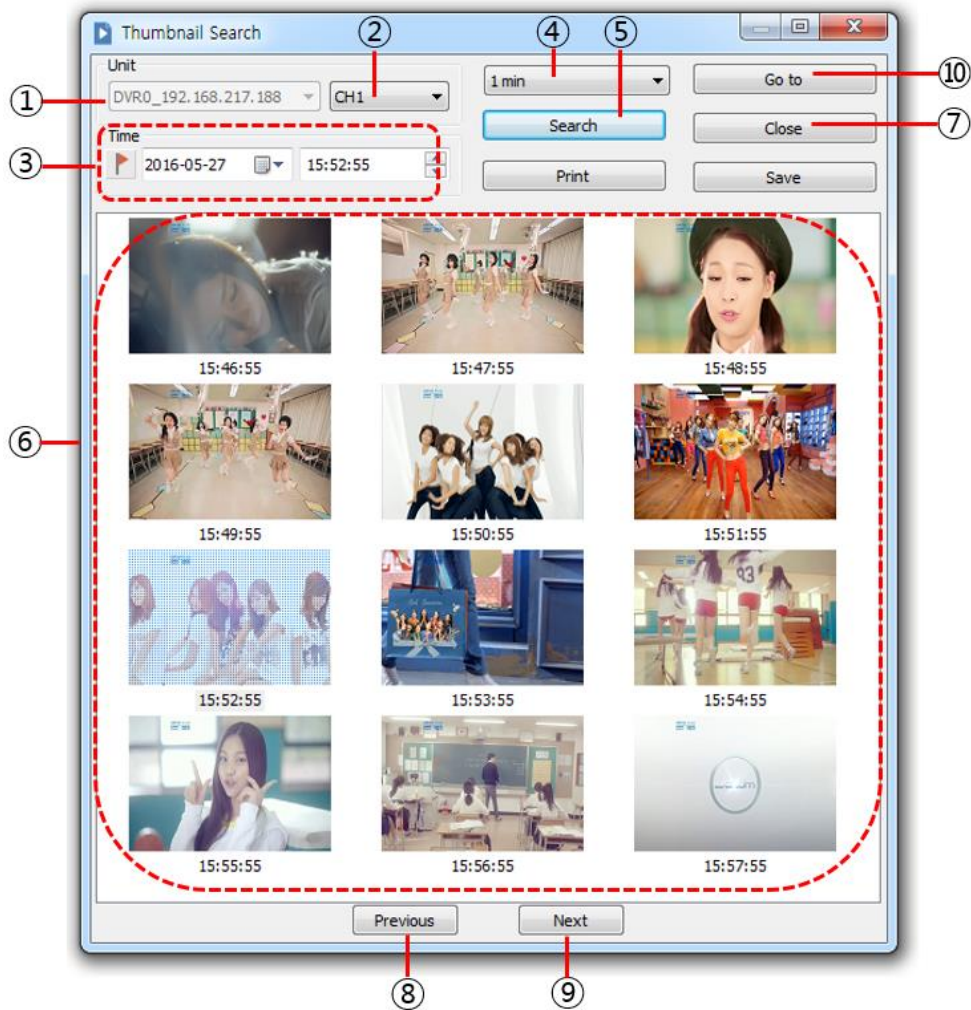
- 1) Shows ① connected unit name in text search window.
- 2) Select ② search channel then set ③ start and end time for search section. At this time, Start time must not be set later than end time. If wrong time setting by user, program will automatically adjust time in order end time is later than start time.
- 3) ④ Keyword search is possible, if user doesn't want keyword search, just leave this space empty then click on ⑤ **[Search]** button. There will be ⑥ status bar showing search status and ⑦ searched text lists will be shown once search is done.
- 4) Select text list to see ⑧ text description. Double click on the lists to move to the timeline and show image related with text.
- 5) Click on ⑨ **[Save]** button to save searched text in TXT file format then click on ⑩ **[Close]** button to complete text search and close window.

# Smart Search



- 1) ① indicates connected unit name.
- 2) Select ② search channel and set ③ start and end time for searching. At this time, start time must be set earlier than end time. If user sets wrong time, program will automatically adjust time in order that the end time is later than start time.
- 3) ④ Search interval can be set. If select "The 1st of consecutive images", it will search motions for all images (frames) and show the 1st image among consecutive images. If select "1st image for every second(s) selected", it will search motions at every configured second(s) and show the 1st motion detected image.
- 4) Select ⑤ the area to detect motion. Only the images having motions at that area will be detected. It is very helpful feature to increase the searching speed.
- 5) Click ⑥ **[Clear]** button to clear all area or click ⑦ **[Set All]** button to select all area as motion detection area.
- 6) Start search by clicking ⑧ **[Search]** button and ⑨ search status will be shown in progress bar. Number of searched image frames will be shown in progress bar after the search is done.
- 7) Searched images will be shown in ⑪ as thumbnail images. If click a specific thumbnail image, it will be shown in ⑩ window. If double click ⑪ thumbnail image, the time of playback window goes to the time of that thumbnail image.
- 8) Click on ⑫ **[Close]** button to complete smart search and close search window.

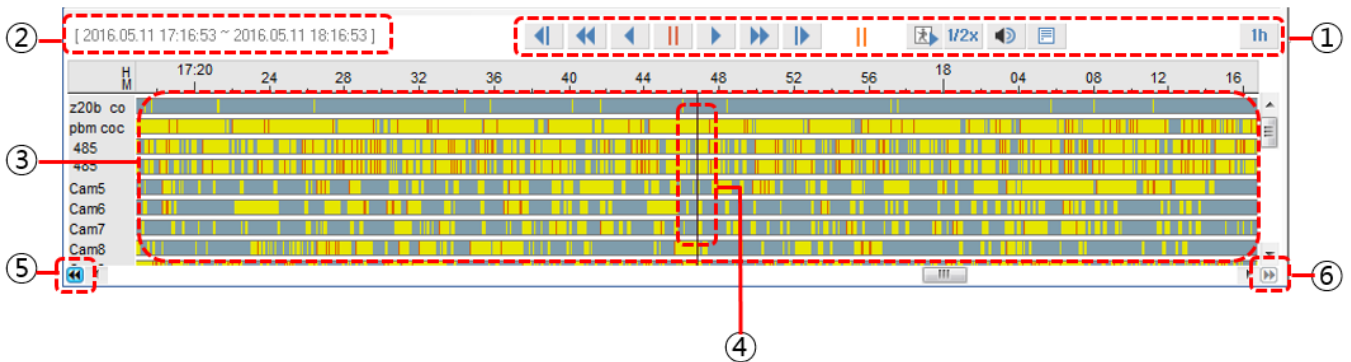
## Thumbnail Search



- 1) It shows ① connected unit name in thumbnail search window.
- 2) Select ② the channel to search, then set ③ start time for searching.
- 3) Set ④ interval time between thumbnails, then click on ⑤ **[Search]** button to start search. Once search is done, ⑥ thumbnail images will be displayed according to the setting.
- 4) Search results (thumbnail images) are displayed on ⑥ the search result window as much as it can be shown. Click ⑧ **[Previous]** and ⑨ **[Next]** button to continue searching.
- 5) If user double clicks the thumbnail image or clicks the thumbnail image and click ⑩ **[Go to]** button, the time of playback window goes to the time of that thumbnail image.
- 6) Click on ⑦ **[Close]** button to complete thumbnail search and close search window.

# Timeline

Timeline viewer support graphical indication for normal recorded and event recorded section. User can select preferred section using mouse and user can select various function and control related to playback in this timeline window.



- 1) Image playback control can be done using ① playback control buttons in timeline viewer. Please refer to below table to know description of playback control buttons.
- 2) It indicates date/time information for searching section shown in ② timeline.
- 3) Timeline is shown in ③ graph and playback is enabled by selecting search section using ④ slide bar. The log properties of timeline are classified in different color (Grey: normal record, Yellow: motion detection, Red: sensor input, Orange: event pre/post, Wine: text).
- 4) Click on ⑤ button to maintain search time with one day back, ⑥ button with one day forward.
- 5) Timeline will re load and show information about time of moved date.

## Description on playback control button

Button	Description
	Shows one step back image
	Playback image in reverse
	Stop playback.
	Playback image in forward.
	Shows one step forward image
	Set the playback mode, 'event only' or 'all video'. Click this icon to toggle the playback mode.
	Set the speed of playback, 1x, 2x, 4x, 8x, 16x, 24x, 32x, and 64 x.
	- ALL: Play all frames of video at the maximum speed. The speed of playback depends on the performance of PC and the speed of network. - 1/2: Play the video at 1/2 speed. - 1/4: Play the video at 1/4 speed.
	Section (10min, 30min, 1hour, 3hour, 6hour, 12hour, and 24hour) to be shown in timeline can be selected. There will be popup window marking record section of selected time on the timeline and showing loading status of log. User can cancel this while timeline log is loading.

## Use of Jog & Shuttle and Shortcut Key

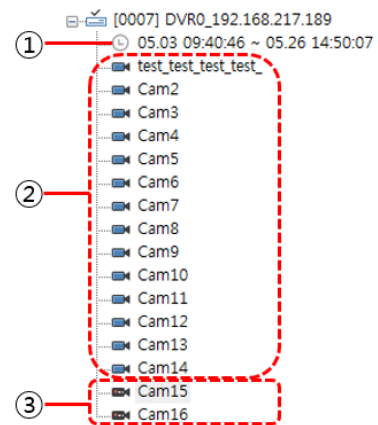
Control Center Playback supports external controller such as Jog & Shuttle keyboard and supports shortcut key. Thus, user can easily control the playback function. Also, external controller which supports shortcut key can be used for easy playback control by mapping the shortcut key.

Key map			
Input	Value	Action	Key Value
Jog	Clockwise	Forward Frame Play	Alt+Shift+Right
	Counter-clockwise	Backward Frame Play	Ctrl+Shift+Left
Shuttle	Move and center	1x Backward Play	Ctrl+Shift+`
	Left1	2x Backward Play	Ctrl+Shift+1
	Left2	4x Backward Play	Ctrl+Shift+2
	Left3	8x Backward Play	Ctrl+Shift+3
	Left4	16x Backward Play	Ctrl+Shift+4
	Left5	32x Backward Play	Ctrl+Shift+5
	Left6 or over	64x Backward Play	Ctrl+Shift+6
	Move and center	1x Forward Play	Alt+Shift+`
	Right1	2x Forward Play	Alt+Shift+1
	Right2	4x Forward Play	Alt+Shift+2
	Right3	8x Forward Play	Alt+Shift+3
	Right4	16x Forward Play	Alt+Shift+4
	Right5	32x Forward Play	Alt+Shift+5
	Right6 or over	64x Forward Play	Alt+Shift+6
Buttons	Leftmost	Backward Frame Play	Alt+Shift+Left
	Left	Backward Play	Alt+Shift+<
	Center	Pause	Alt+Shift+?
	Right	Forward Play	Alt+Shift+>
	Rightmost	Forward Frame Play	Alt+Shift+Right

## Recording interval and channel display

Shows the recording interval and activated channels for currently connected disk. Only selected channels will be played.

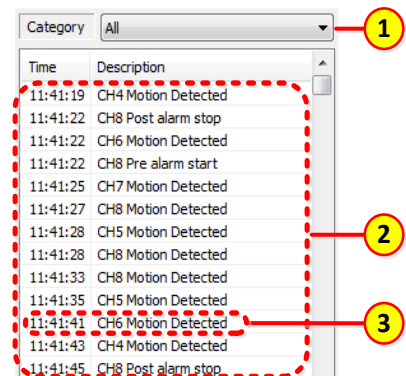
- ① Shows the start and end time of recorded video.
- ② Shows selected channels to play.
- ③ Shows unselected channels to play.



## Log Viewer

There are log lists for searching section loaded on time line in the log viewer. Log information for selected channel will be shown and user can select classification to classify them. Double click on log in the log list to move to recorded data of the log to check its recorded image.

- 1) There are log lists ② for loaded section on timeline in log viewer window.
- 2) Select All/ Pre/post alarm /Text/Motion/Sensor/Flame/Video status/Recording status in classification ① to classify and see preferred log data.
- 3) Double click on log list ③ to move to playback section of the log to see recorded image for the log.

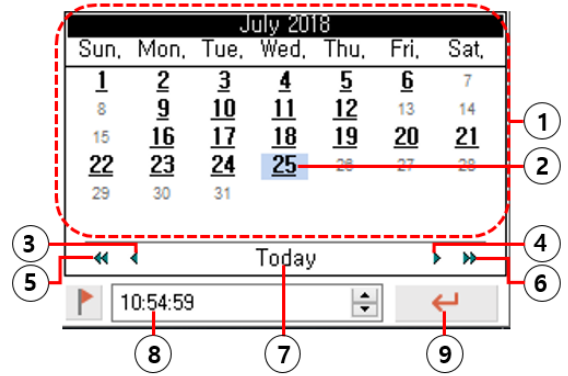




## Calendar Search

It indicates recorded date. Selecting date or enter time to search recorded data directly.

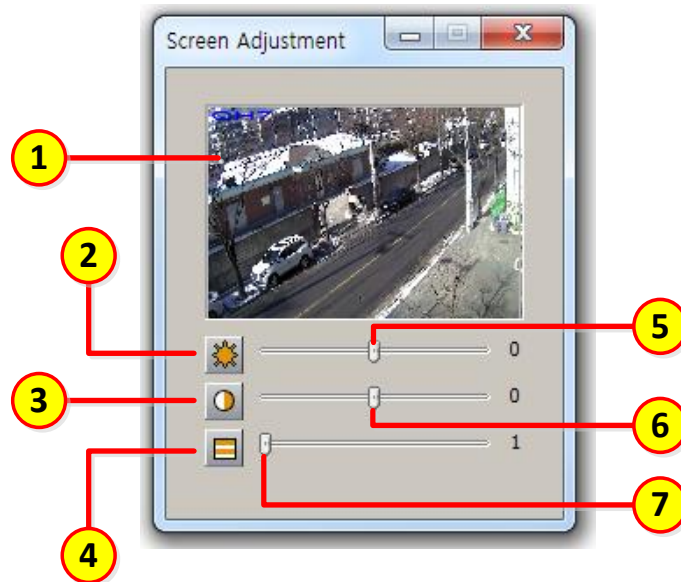
- 1) Calendar is shown and recorded date is marked as ① bold / underlined. Selected date is marked as ② blue shadow.
- 2) Move to ③ previous year. Move to ④ next year. Move to ⑤ previous month. Move to ⑥ next month. Move to ⑦ today's calendar. ⑧ Enter the time in selected date for search.
- 3) Click on ⑨ the button to search based on entered time then show it on timeline.



<Note>

Please use bookmark icon (  ) to move to bookmark time.

## Image Control



Item	Description
1	Video View It displays the selected video channel.
2	Default Brightness Brightness turns to the default value. Default value is 0.
3	Default Contrast Contrast turns to the default value. Default value is 0.
4	Default Deinterlace Deinterlace turns to the default value. Default value is 1. (This feature is activated only when the input video is the interlaced video.)
5	Brightness Control Bar It controls the brightness of video. Available range is -100 to 100.
6	Contrast Control Bar It controls the contrast of video. Available range is -1000 to 1000.
7	Deinterlace Control Bar It controls the use of deinterlace function. 0 means de-interlace off, and available range is 0 to 100.

## Example of Image control

	Item	Description
Default	 <p>Default image control interface showing three sliders: Brightness (0), Contrast (0), and Saturation (1).</p>	 <p>Default image description showing a street scene with cars and trees. Metadata: CH7/C1030EL-IR43, 2012.11.04.15:37:52-09:00, 1fps.</p>
Brightness	 <p>Image control interface with Brightness slider set to 100, Contrast (0), and Saturation (1).</p>	 <p>Image description showing the same street scene with increased brightness. Metadata: CH7/C1030EL-IR43, 2012.11.04.15:37:52-09:00, 1fps.</p>
	 <p>Image control interface with Contrast slider set to -100, Brightness (0), and Saturation (1).</p>	 <p>Image description showing the same street scene with decreased contrast. Metadata: CH7/C1030EL-IR43, 2012.11.04.15:37:52-09:00, 1fps.</p>
Contrast	 <p>Image control interface with Contrast slider set to 1000, Brightness (0), and Saturation (1).</p>	 <p>Image description showing the same street scene with increased contrast. Metadata: CH7/C1030EL-IR43, 2012.11.04.15:37:52-09:00, 1fps.</p>
	 <p>Image control interface with Contrast slider set to -1000, Brightness (0), and Saturation (1).</p>	 <p>Image description showing the same street scene with decreased contrast. Metadata: CH7/C1030EL-IR43, 2012.11.04.15:37:52-09:00, 1fps.</p>

De-Interlace



Control panel for the top-left video window, featuring three sliders with icons: a sun icon with a value of 0, a yellow circle icon with a value of 0, and a square icon with a value of 1.



Control panel for the bottom-left video window, featuring three sliders with icons: a sun icon with a value of 0, a yellow circle icon with a value of 0, and a square icon with a value of 0.



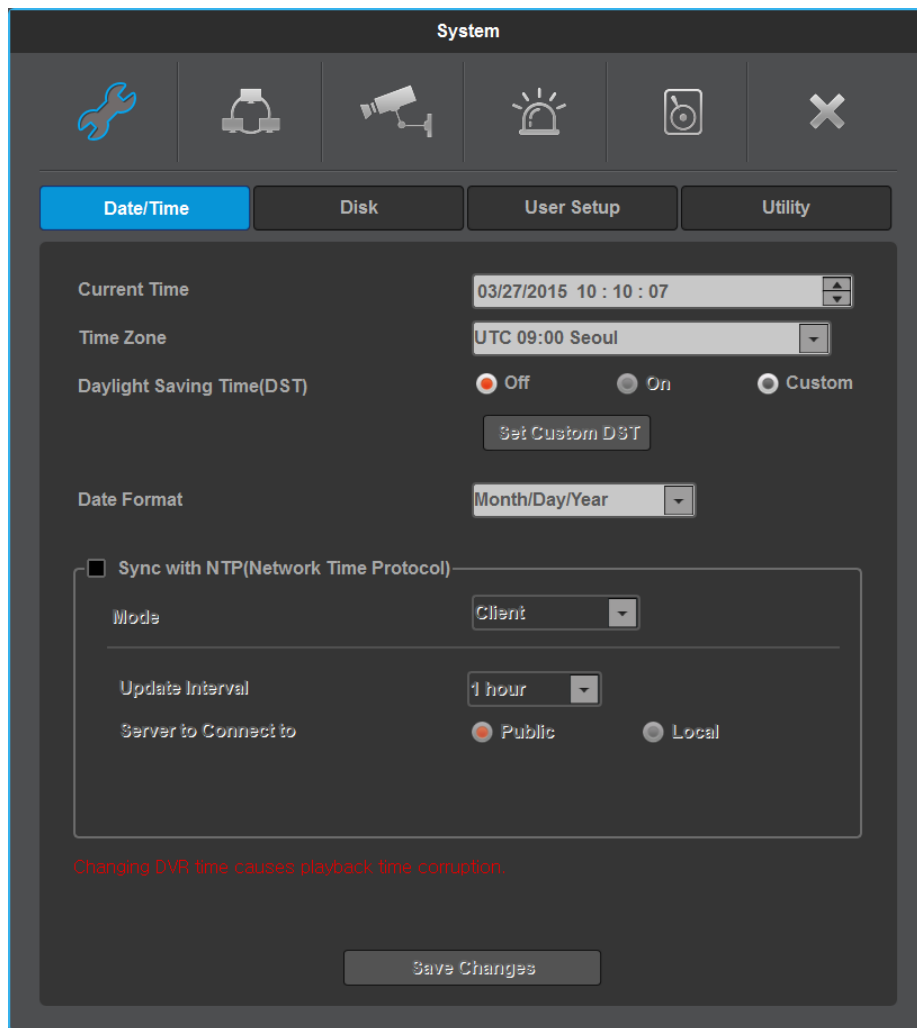
---

# Configuration Tools

Registration on Control Center or configuration on unit connected via local network is possible. It can be used for all units having WESP protocol supporting effective and integrated management.

## Screen Composition

Select a unit and click 'Configuration Tools' icon in toolbar to execute CONFIG.



Configuration menu is the same with DVR/NVR. Please refer the DVR/NVR's manual about this configuration. Additional plug-in for Config is automatically downloaded and installed when user connect to the DVR.

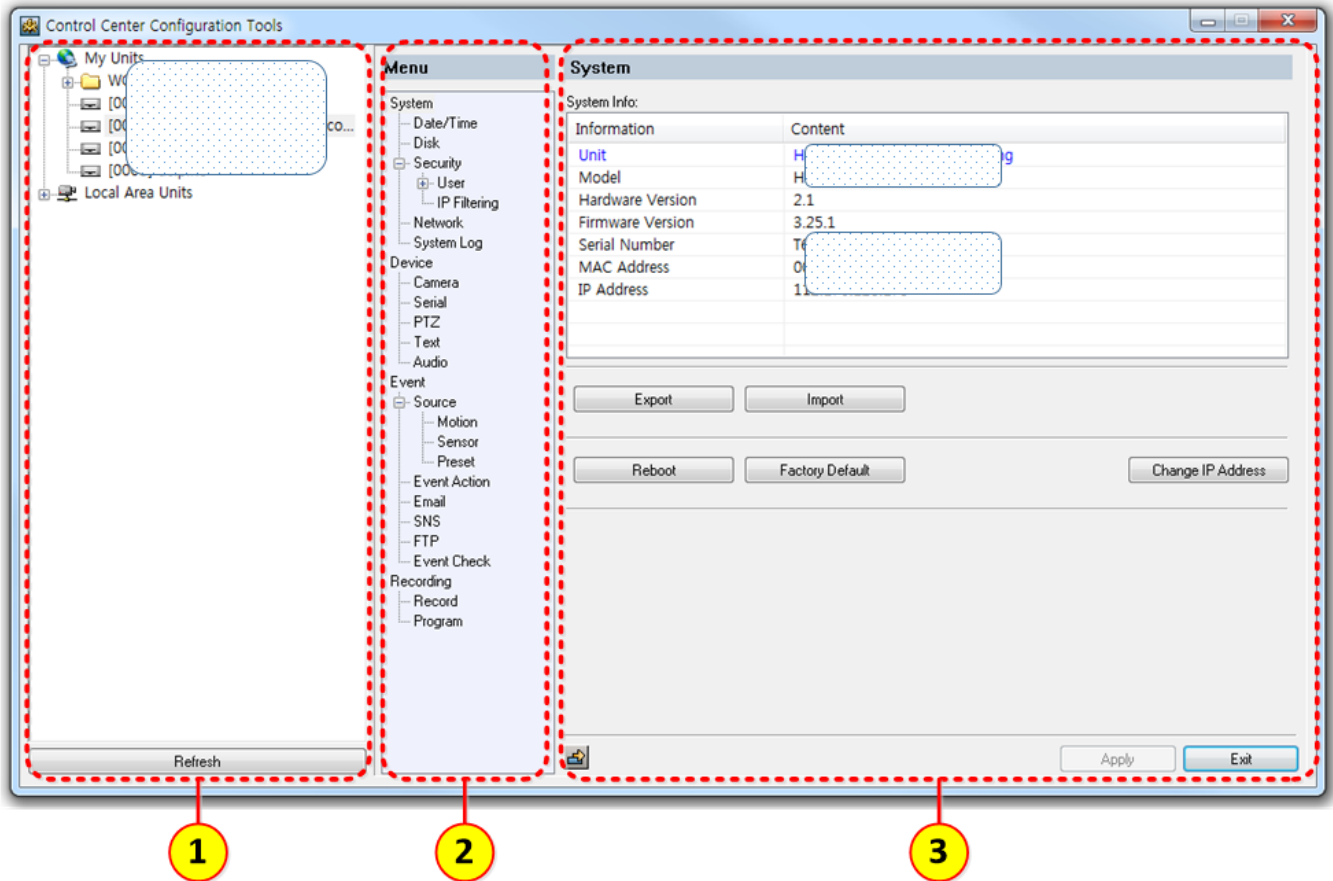
### < Refer >

1. This UI is supported from FW version v4.x or later.
2. If UI cannot be executed, remove files and folders under "C:\ProgramData\Digital Image World\Control Center\config" and try again.

# Older Model Configuration

If the unit has the firmware version V4.x or earlier, the following UI is provided for 'Configuration Tools'.

## Screen Composition

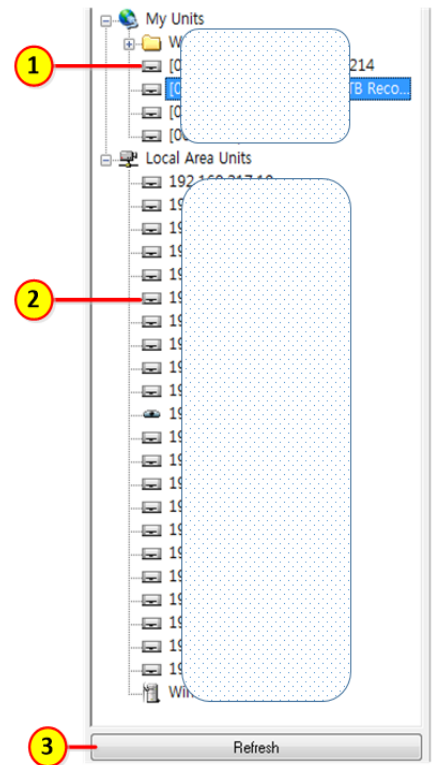


Item	Description
1	Unit list window It shows units registered in user's account. Click on unit to access to it.
2	Menu window It shows list of menu. Click on it to connect to the menu. Menu will be shown differently based on connected model.
3	System window It shows configuration information of selected menu and user can change configuration value. For configuration details on each item, please refer to user guide of each model.

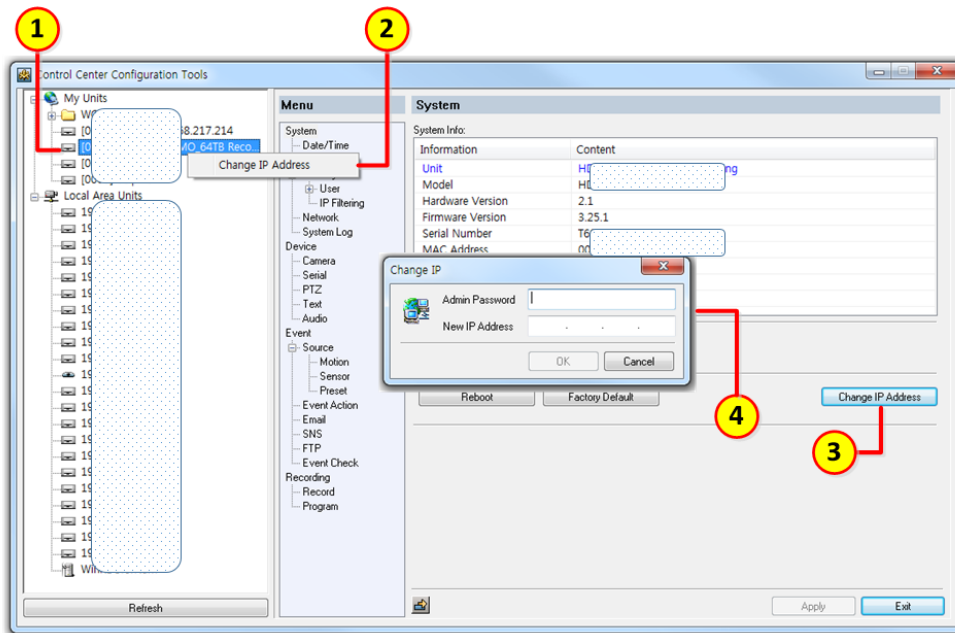
## Unit Connection

It shares unit list registered in "Registered Units" of live viewer. When connect to the unit not registered in "Registered Units", authorization process is required for use.

- 1) If user select unit already registered in "Registered Units" in unit list window, user can access to unit. If user select unit registered in "Unregistered Units", the window asking manager password will pop up and user can access to the unit once entered password is authorized.
- 2) Once user access to the unit, the menu of the unit will be shown in menu window.
- 3) Click on ③ **[Refresh]** button to update unit list.

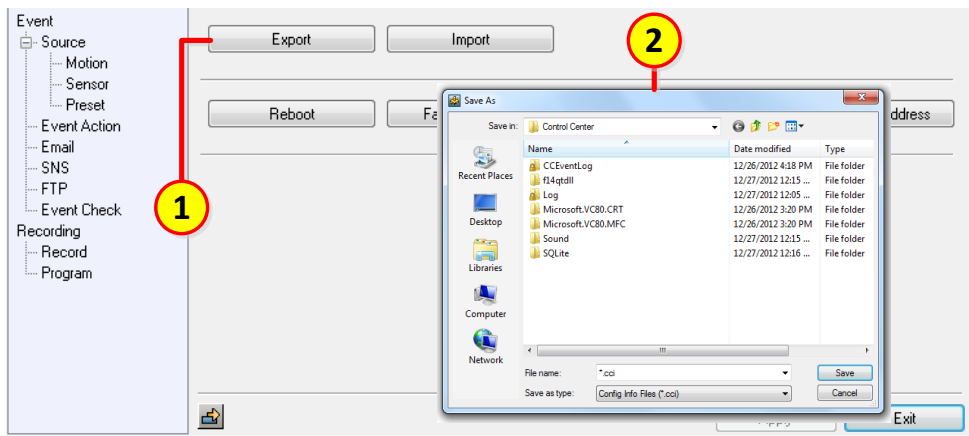


## IP address change



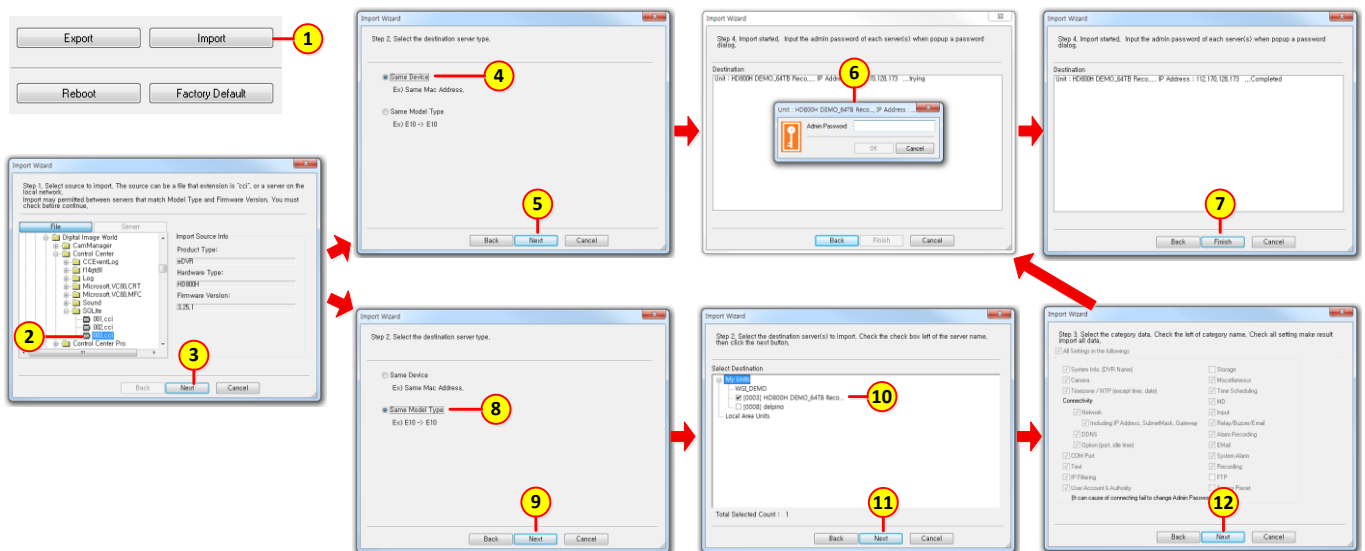
Select ① unit in unit list window and click on ② **[Change IP Address]** in popup menu or ③ **[Change IP Address]** in system information menu of configuration window by right mouse click then ④ Change IP window will pop up. Enter administrator's password and IP address to change then click on **[OK]** button to change IP address.

## Export Unit Configuration



Click on ① **[Export]** button in configuration window and there will be window of ② "save in other name". Select save location, enter file name then click on **[Save]** button to save file in the location.

## Import unit configuration



### Import configuration of same device

- 1) Click on ① **[Import]** button in configuration window to activate import wizard. Select file saved as ② "export" then click on ③ **[Next]** button.
- 2) Select ④ **[Same Device]** in step 2 then click on ⑤ **[Next]** button.
- 3) Turn into step 4, there will be popup window asking ⑥ "admin password". Enter password and click on **[OK]** button to proceed with configuration import.
- 4) Click on ⑦ **[Finish]** button to complete configuration import and the window is closed.

### Import configuration of same product family

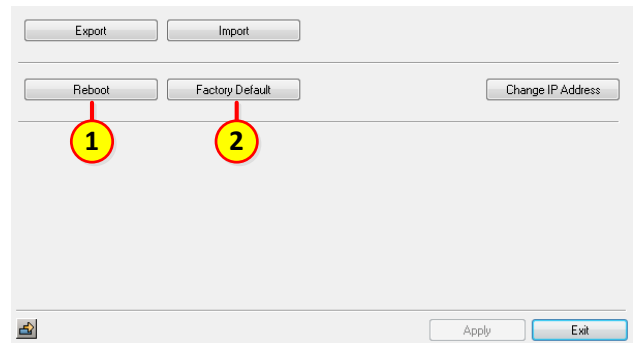
- 1) Click on ① **[Import]** button in configuration window to activate import wizard window. Select file saved as ② "export" then click on ③ **[Next]** button.
- 2) Select ⑧ **[Same Model Type]** in step 2 then click on ⑨ **[Next]** button. Select ⑩ unit to adopt configuration then click on ⑪ **[Next]** button.
- 3) Turn into step 3, there will be items adopting configuration shown. Click on ⑫ **[Next]** to move to step 4.
- 4) There will be ⑬ "admin password" window pops up. Enter password and click on **[OK]** button to activate configuration import.
- 5) Click on ⑭ **[Finish]** button to complete configuration import and window will be closed.

---




## Unit restart and factory default

Unit restart and unit factory default can be controlled in configuration tool. We recommend to save configuration setting value through configuration export feature since all configuration value will not be recovered once factory default is done.

- 1) Click on ① **[Reboot]** button in configuration window then click on **[Apply]** button to restart unit.
- 2) Click on ② **[Factory Default]** button then click on **[Apply]** button to make unit to achieve factory default.



## Hide tree

Click on  icon to hide unit list window and the icon will convert into  icon. Click again  icon to show unit list window again.



# Tools

## Schedule Backup

Recording data of DVR or WinDVRs can be backed up to a PC by Schedule Backup program. Only Administrator account can use the Schedule Backup.

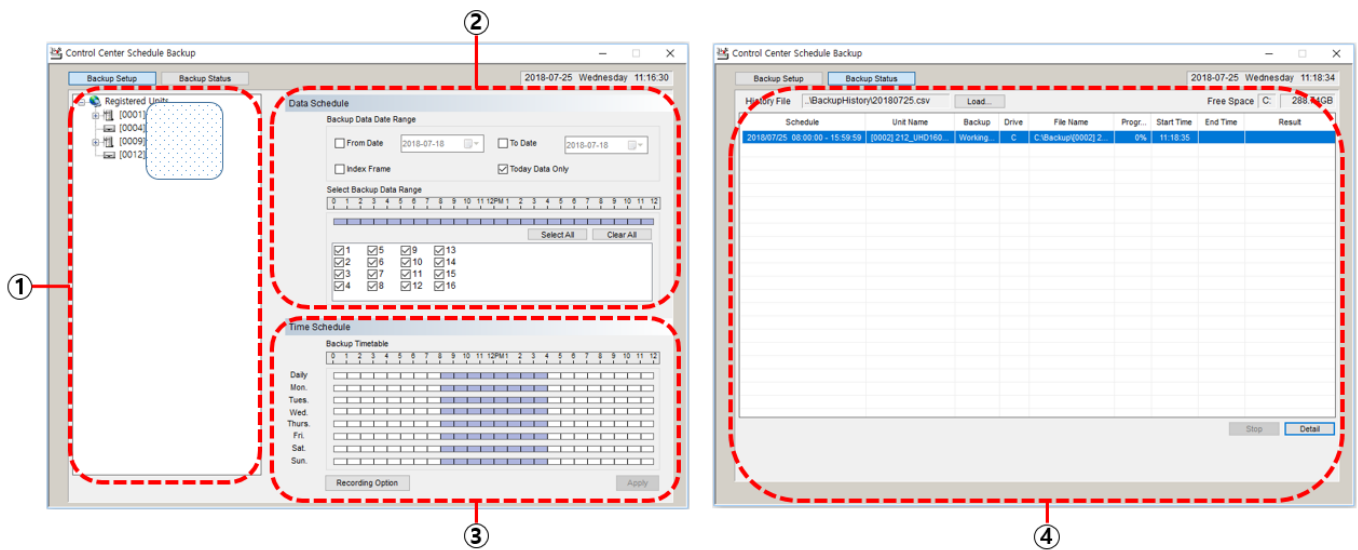
Reservation of Schedule Backup is available and it is automatically executed by reserved schedule. Schedule Backup program should be run at background to execute the backup. If Control Center was properly installed, Schedule Backup is automatically registered and it will be executed after PC booting.

Schedule Backup works at only 1 PC for only 1 unit at the same time, and regarding 1 unit, only 1 Administrator can reserve the backup. Created backup file can be played by Control Center Playback program.

**<Note>**

Schedule backup PC and DVR must have same time zone

## Screen Configuration

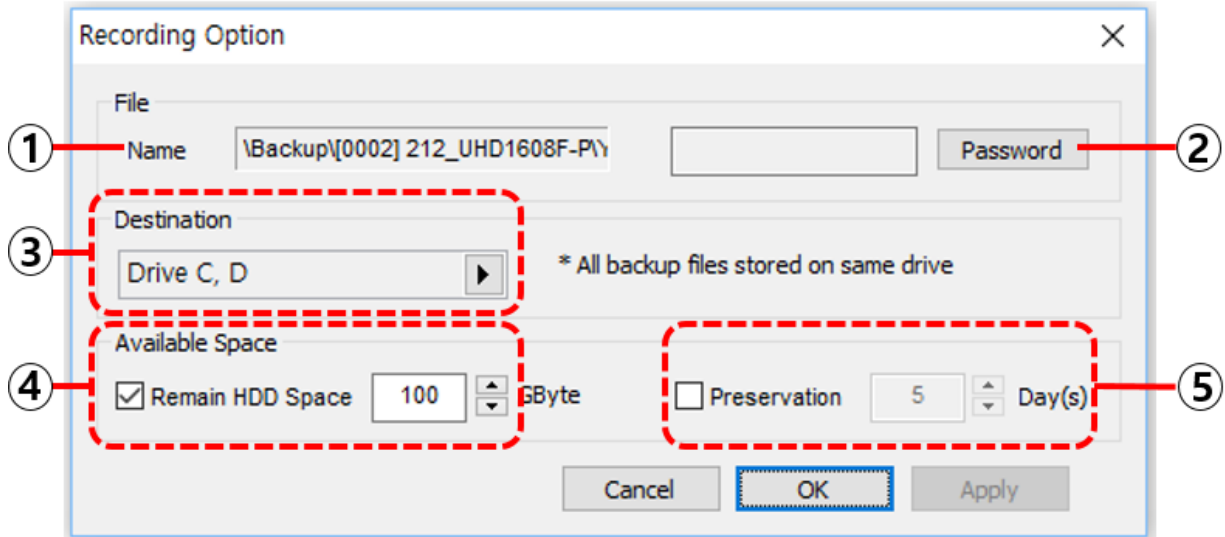


Function	Description
1 Unit List	It displays the unit list, and user can connect the unit by click.
2 Backup Data setting window	Channel to backup, Backup period can be configured.
3 Backup Schedule Setting window	Configures the time schedule. Only 1 unit can be configured at the same time.
4 Backup State Window	It shows Backup progress and completion state. User can open the history file and check the details by date.

# Backup Setting

## Recording Option

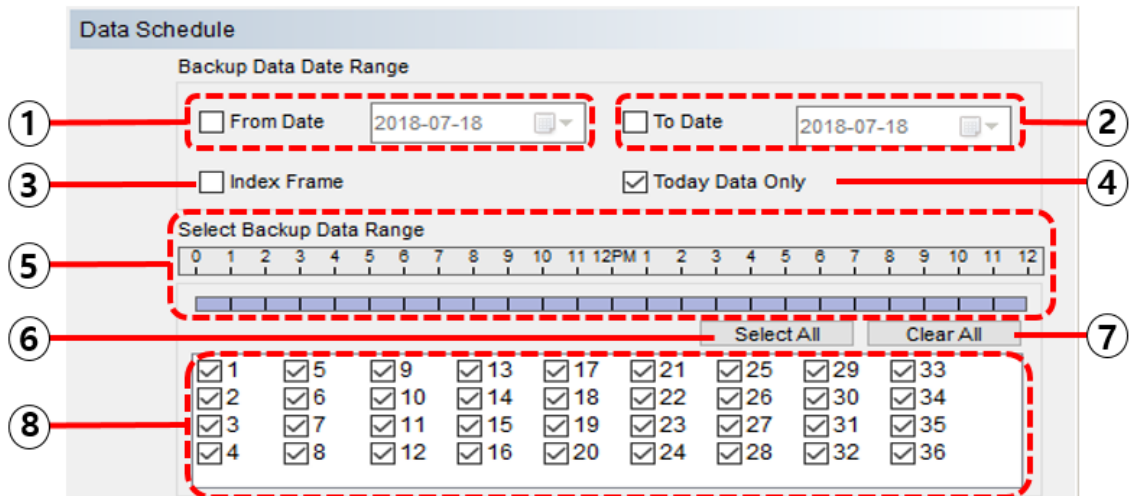
Drive to the backup file, backup file password, conservation of minimum HDD space, retention period of backup file can be configured. Drive setting is applied to all units, but the other settings are applied to each unit separately. If **[Recording Option]** button is clicked, below Recording Option window appears.



Item	Description
1	File Path and Name Backup file name and path is automatically decided and it cannot be altered by user. Recording path is /Backup/Unit name/ and file name is assigned as YYYYMMDD_HH_MM_SS. Be careful that if unit name is changed, it also changes the recording path.
2	Password User can assign a password to the backup file. The default condition has no password, so if you want to make a password then you have to leave the current password as blank. Password protected file can be played after proper password input.
3	Recording Drive User can assign the drive to save the backup file. Selected drive is displayed as "Drive C, D". User can assign more than 1 drive at the same time, and this drive setting is applied to all units.
4	Available HDD Space If there is no enough space, old backup files are automatically overwritten. If user assigns the minimum disk space to keep as GB unit, Backup process will keep the space. Available range is 1~100GB.
5	Preservation User can assign the period to keep the backup file. Period elapsed files will be automatically deleted, and the available range is 1~365 days. Retention period is calculated by first frame's recording time of backup file.

## Setting of Backup data

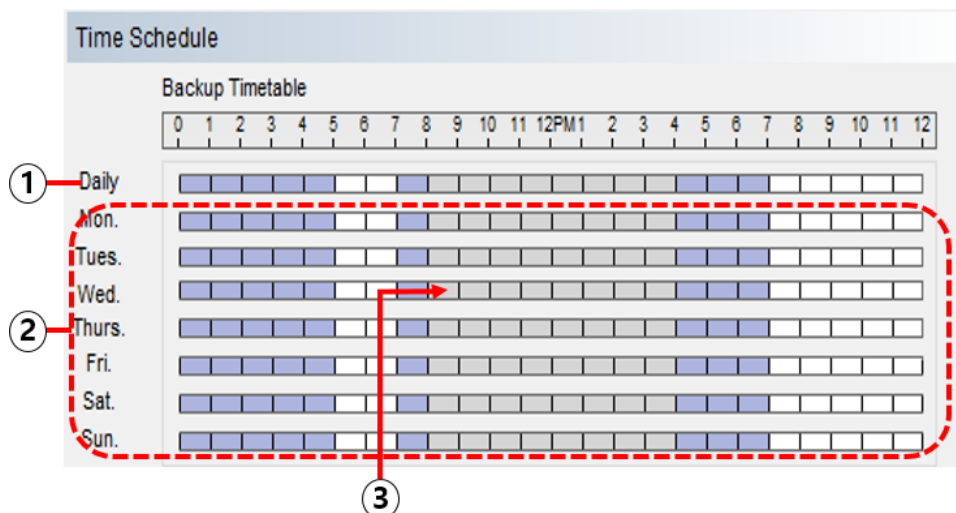
Diverse backup settings can be configured. User can decide the backup period, channels, date, time, and whether to use index frame backup per each unit.



- 1) The backup period is set based on the date which is recorded in the unit. If you check the "From Date" ①, date input box will be enabled, and you can assign the start data of backup.
- 2) If you check the "To Date" ②, date input box will be enabled and backup will be executed to the assigned date. If you check the "Index Frame" ③, only index frames will be backed up. If you check the "Today Data Only" ④, only Today's recording data will be backed up.
- 3) Backup data range can be configured by hour unit. White block means no backup assigned, and if you click the white block, the color changes to blue. Click ⑥ **[Select All]** button to select all channels and click ⑦ **[Clear All]** button to deselect all channels at once.
- 4) ⑧ Only backup available channels will be enabled, and you can check the channels which you want to do backup.

## Setting of Backup Schedule

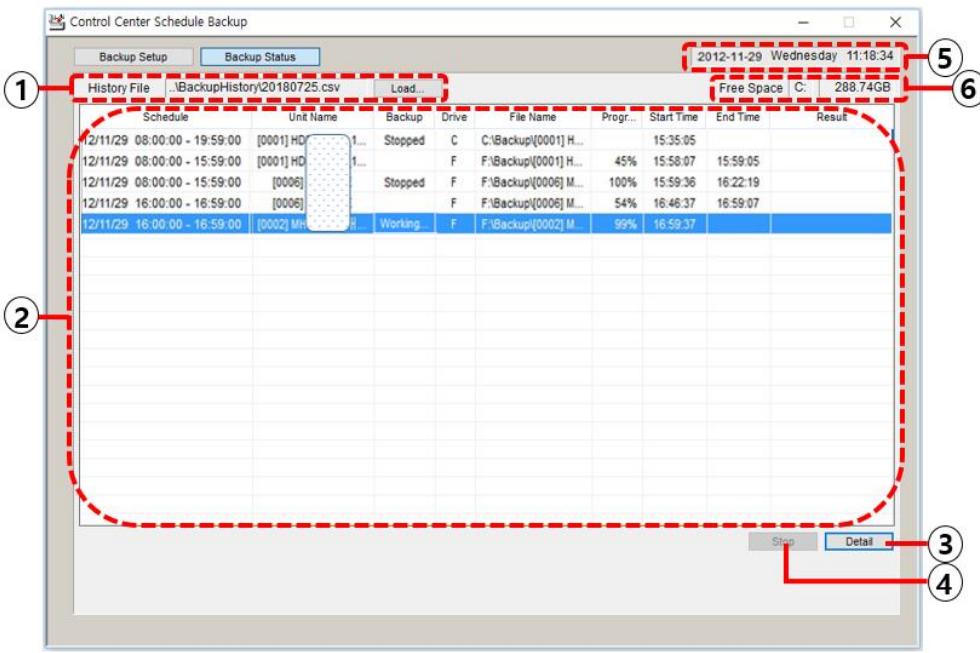
Backup schedule can be configured at PC. If a schedule is already occupied by a unit, the schedule cannot be shared by another unit.

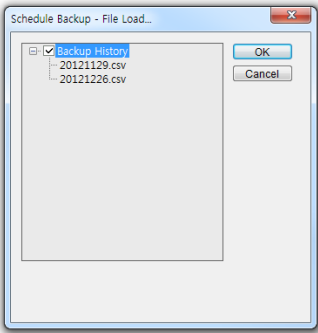
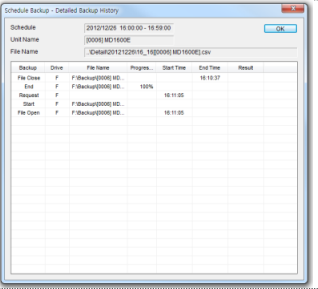


- 1) At Backup time table, white block means no backup is not assigned yet, and blue block means it is assigned for another unit's backup. If you select the white blocks by mouse, they are changed to blue to show the assigned backup schedule.
- 2) If you select ① "Everyday", all days of the week changed at the same time. Instead of that method, you can select hours of each day ②. Already backup assigned blocks are displayed as blue, and if you move the mouse to the block, tooltip shows its unit's name.



# Backup Status

If you click **[Backup state]** button, you can see the backup details. All completed or ongoing backup process is shown, and you can get more details by opening the history file.



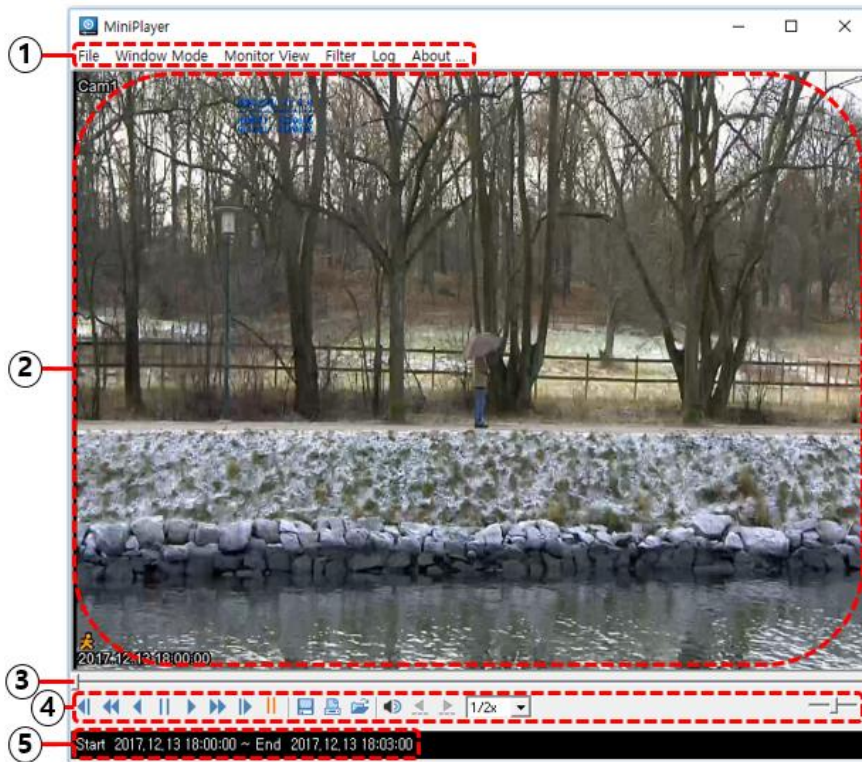
Item	Description
1	<p>History File</p> <p>It shows the file path of history file and its name.</p> <p>By selecting the date, you can get the details.</p> 
2	<p>Backup List Window</p> <p>It shows the backup state of already completed or ongoing backup.</p>
3	<p>Detail</p> <p>By selecting the backup list, you can check the details.</p> <p>It displays Backup schedule, Unit name, File name and you can see the backup progress step-by-step.</p> 
4	<p>Stop</p> <p>It stops backup. If there are another schedules, the next backup will be started.</p>
5	<p>Date/Time</p> <p>It displays Date and time</p>
6	<p>Backup Disk Information</p> <p>It shows backup disk and its free disk space</p>

# Tray Icon

After PC booting, schedule backup program is automatically executed and  icon is displayed at tray window. During the backup progress,  icon shows Red marking. When this icon is in display, schedule backup is run as background program. You can open the popup menu by clicking the right mouse button and you can exit or configure the schedule backup program.

# MiniPlayer

MiniPlayer can play the Re4 file. It is useful when a user could not install the Control Center, so when you made a video backup, this MiniPlayer helps its easy play. After execution of the MiniPlayer, "Open" dialog box will be automatically executed, and you may select a Re4 file which you want to play.

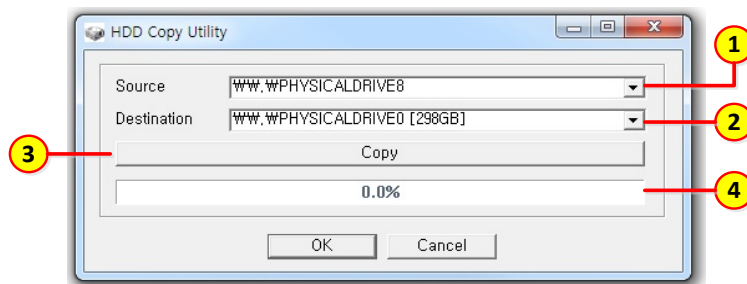


	Item	Description
1	Menu	
	File	You can open a file or exit the program (Open / Exit)
	Window Mode	It changes the split display modes. (1 / 4 / 9 / 16 / 36 / 64 Channel)
	Monitor View	Select the video's ratio. (Full / Ratio)
	Advanced	1. It can enable De-interlace mode. - De-interlace mode only works for playback of D1 resolution video. 2. Using hardware decoding 1) It is a function to show video using hardware decoder of graphics card (GPU). When using hardware decoding, you can monitor more channels in real time (full frame). (Default: OFF) <Note> - If GPU's allowable memory is 4GB or less, normal operation may not be possible. - Hardware decoding function works properly on Intel (R) Core (TM) i7-6700 CPU @ 3.40GHz or higher, Intel® HD Graphics 530 or higher, and RAM 8GB or higher. (Non-Intel graphics cards will be supported later.) - When using graphics card other than Intel graphics card, the picture may not be displayed if hardware decoding is ON. - If the hardware decoding performance is exceeded, the remaining channels automatically switch to software decoding. (Deinterlace / Screen Adjustment / HW Decoding)

		Log	It opens log viewer. Log is recorded along with video image. (Log View)
		About...	It shows the software information like version, copyright.
2	Display window		It plays the video Click the right button of mouse on this window. User can use watermark and D-zoom functions.
3	Time line		You can move the playback position by slider bar.
4	Play, Image save, Print, Audio, Channel change buttons		You can change the play method by clicking buttons. (Step Backward / Reverse fast playback / Play Backward / Pause / Play Forward /Forward fast playback / Step Forward)
			It saves the current image as BMP format. Caption, Name, Date/Time, Event information can be saved optionally.
			It prints the current image. Along with image, Channel name, Recording time, Event information is printed, and you can add memo into caption.
			It shows Open dialog box. You can select a file.
			It turns on or off the audio.
			If there are another channels, this buttons move to previous/next channel.
			It controls audio volume.
5	File recording interval		It shows start and end date/time information of the selected file.

## DVR HDD Manager

DVR's hard disk can be connected to a PC and its data can be copied. You may use this method when you want to do backup the entire disk. This is the fastest method to execute the backup.



Item	Description
1	Source Select a disk where the original source data is saved.
2	Destination Select a disk where the copied data to be saved. The selected disk should have larger free space than original disk.
3	Copy If pressed Copy button, a popup window will appear which asks whether you proceed the copy. And, after you enter the Administrator's password, copy will be started.
4	Progressive bar It shows the progress of copying.

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