Speco-NVR

User Guide

speco technologies

Contents

Notice – Must be read before you start Speco-NVR!!

- Dedicated HDD is needed for the recording of the video data.
  - Add HDD solely for recording the data or make a partition on the HDD
  - The HDD or the partition for the recording should not contain data other than the data recorded by Speco-NVR.
- Avoid following conditions to prevent System Crash or Reboot
  - Automatic Windows Upgrade Setting
    - If you specify the time for the automatic upgrade of your windows operating system, the automatic upgrade can cause reboot or system halt.
    - Automatic upgrade of the windows operating system is not recommended.
  - Multi monitor device driver for the NVIDIA video chip set can cause reboot or system halt. We do not recommend to use video cards using NVIDIA chip sets.
- Recommended settings of the frame rate and data bit rate.
  - D1 size video : set the frame rates less than 15FPS.
  - CIF size video : make sure to set the summation of the bit rates from all video channels less than 50Mbps.

1. Introduction

- Speco-NVR is a PC application program package targeted for use on a centralized real time video monitoring and recording system based on network cameras, video servers.

- Speco-NVR needs a high performance PC. It is recommended to install Speco-NVR on a highly reliable hardware platform such as workstation. And Windows XP is recommended for the OS.
  - Speco-NVR shows the maximum stability and the performance when the PC is running no other application programs.
  - Basic screen of Speco-NVR includes up to 16 videos.

- Speco-NVR supports all network cameras supplied by Speco.

- The key features of Speco-NVR are :
  - Supports up to 64 channels
  - Live monitoring, Recording, Remote management of the network cameras.
  - Various recording modes : Schedule, Manual, Alarm, Motion triggered
  - A separate playback screen that can handle up to 16 simultaneous playback without interrupting real time monitoring.
  - Separate Event Log management
  - Integrated Pan/Tilt/Zoom control.

1. Introduction

- The basic display screen of Speco-NVR consists of up to 16 video windows. Up to 4 basic display screens can be launched simultaneously to support up to 64 channels.

- These screens can be shown on a single large screen or can be displayed on multiple display monitors. When using multiple monitors, make sure to install sufficient graphic card on your PC.

1.1. Introduction – Important Notice

- Time reference of Speco-NVR
  - Speco-NVR includes the features that need time reference. Speco-NVR refers to the time set on the PC for the operation. It is very important to keep the clock of the PC precise.
  - The time which is displayed beneath each screen in white color for real time connection is the time information sent from the network camera.
- Do not change the parameters related with network configuration while the Speco-NVR has a video connection with corresponding device.
- Do not run application programs other than Speco-NVR on the same PC.

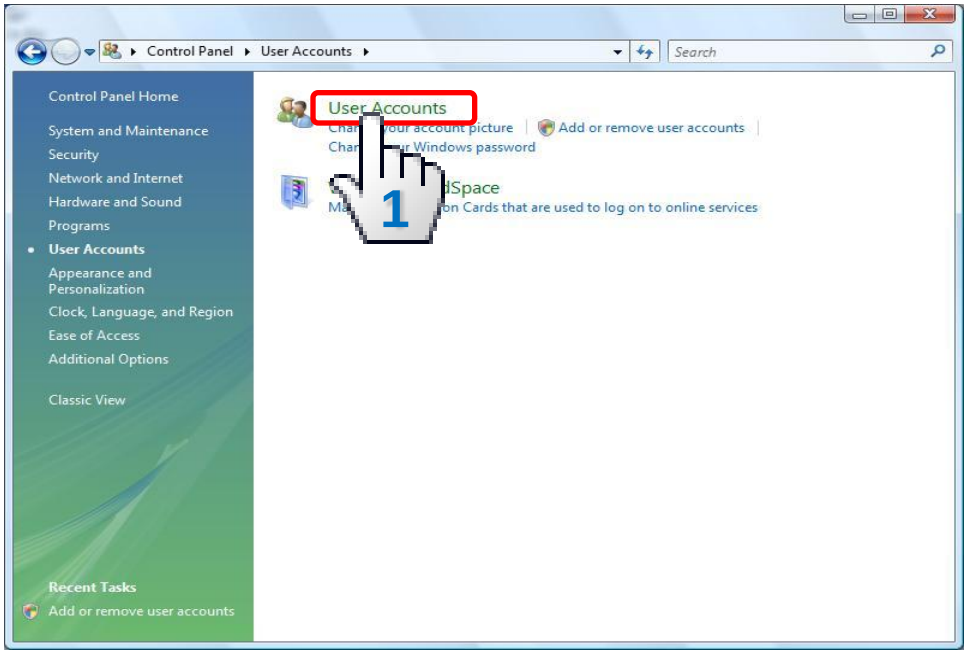
  This can cause instability and performance degradation of the Speco-NVR.

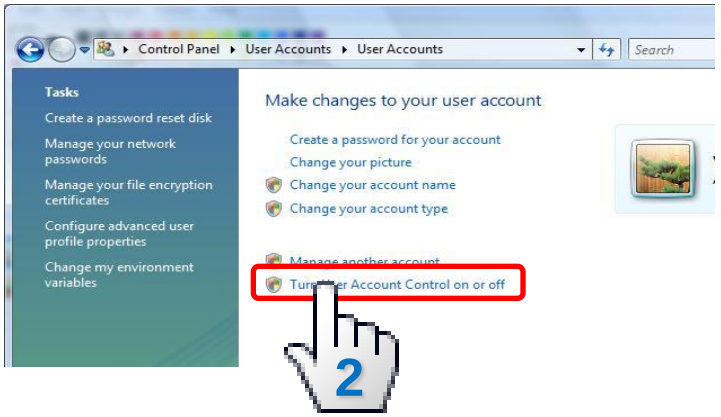
1.1. Introduction – for Windows Vista

Windows Vista and Windows 7 users need to configure UAC (User Access Control) and Privilege Level for proper recording and still video capture in Speco-NVR and Web Viewer. Follow through the details in this document to ensure the setting.

<Windows Vista>

1. UAC (User Access Control) configuration
   1) Double-click “User Accounts” in control panel
   2) Double-click “Turn User Account Control on or off”
   3) Uncheck “Use UAC to help protect your computer”





1.1. Introduction – for Windows Vista

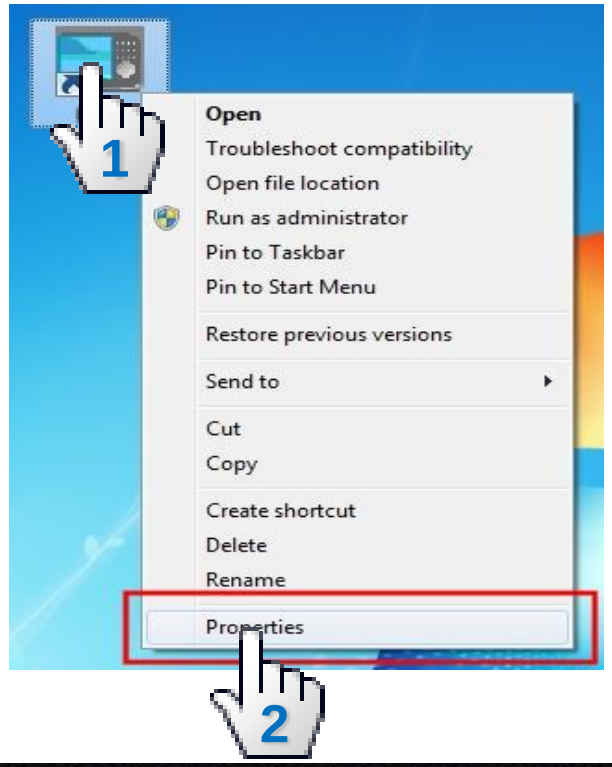
<Windows Vista>

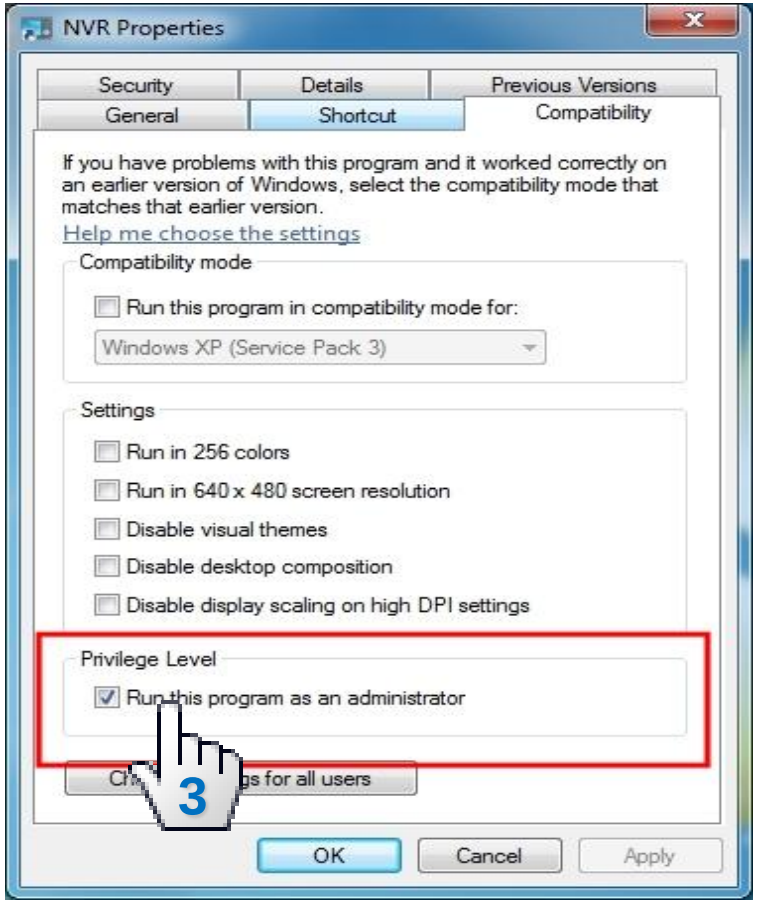
2. Privilege Level Control

1) Select “Speco-NVR” icon on the desktop

2) Click right mouse button and select “Properties”

3) Check “Privilege Level” in “Compatibility” tab

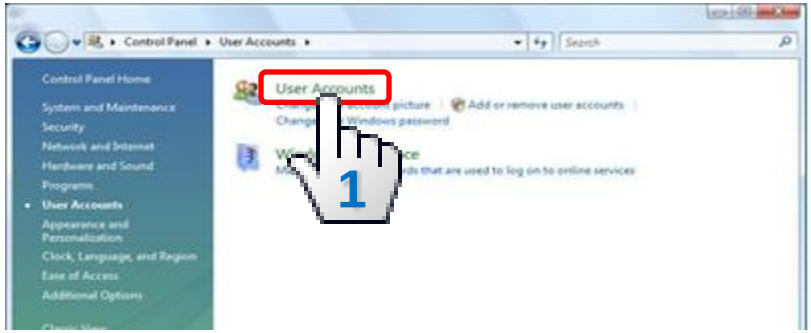


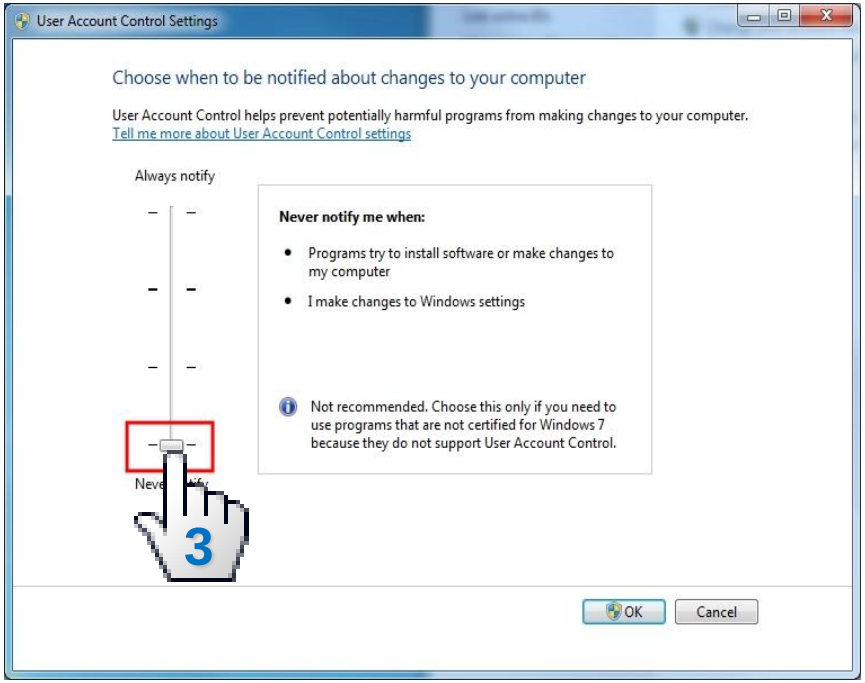


1.1. Introduction – for Windows 7

<Windows 7>

1. UAC (User Access Control) configuration
   1) Double-click “User Accounts” in control panel
   2) Double-click “Change User Account Control setting”
   3) Set to “Never notify”





1.1. Introduction – for Windows 7

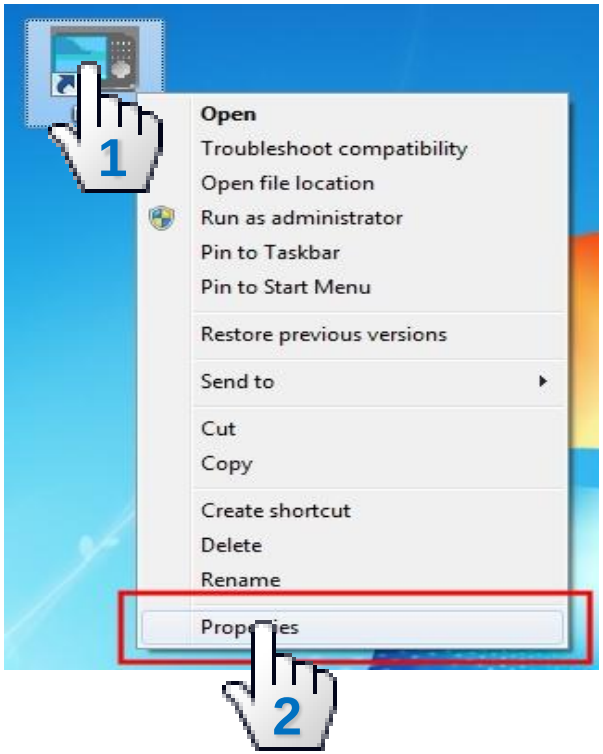
<Windows 7>

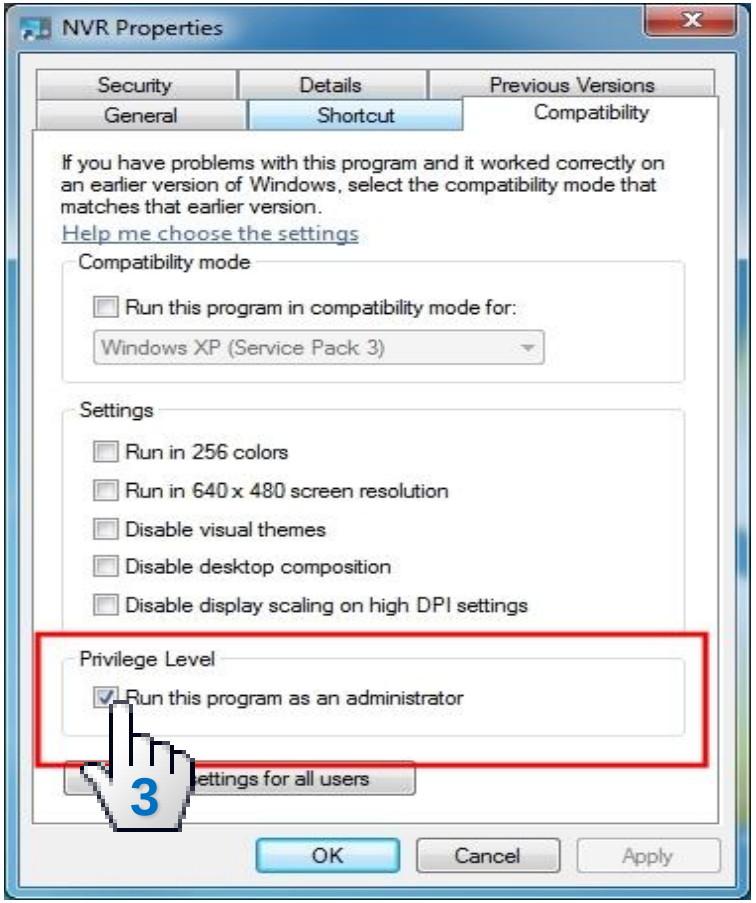
2. Privilege Level Control

1) Select “Speco-NVR” icon on the desktop

2) Click right mouse button and select “Properties”

3) Check “Privilege Level” in “Compatibility” tab





2. Installation of Speco-NVR

- Install “**Speco-NVR**” S/W from the material CD.
- Program installation will continue automatically and after the installation a launcher icon  will be created on your desktop.
- To play the recorded video file in Event Log Window, “icfPlayer” program will be installed automatically upon the installation of Speco-NVR.
- For the sake of stability and improved performance, Speco-NVR is designed to use dedicated HDDs for recording the AV data.
- Never use the HDD assigned for recording the AV data in Speco-NVR to save other files or programs.

  Speco assumes no responsibility caused by failure of observing this restriction.

3.1. Screen – Functional Buttons and Indicators

Clone Window ON/OFF Button

Channel Status Indicator

Display Ratio Swap

Change Channels Displayed

Screen Lock

Full Screen Display

Screen Configuration

Remote Relay On / Off

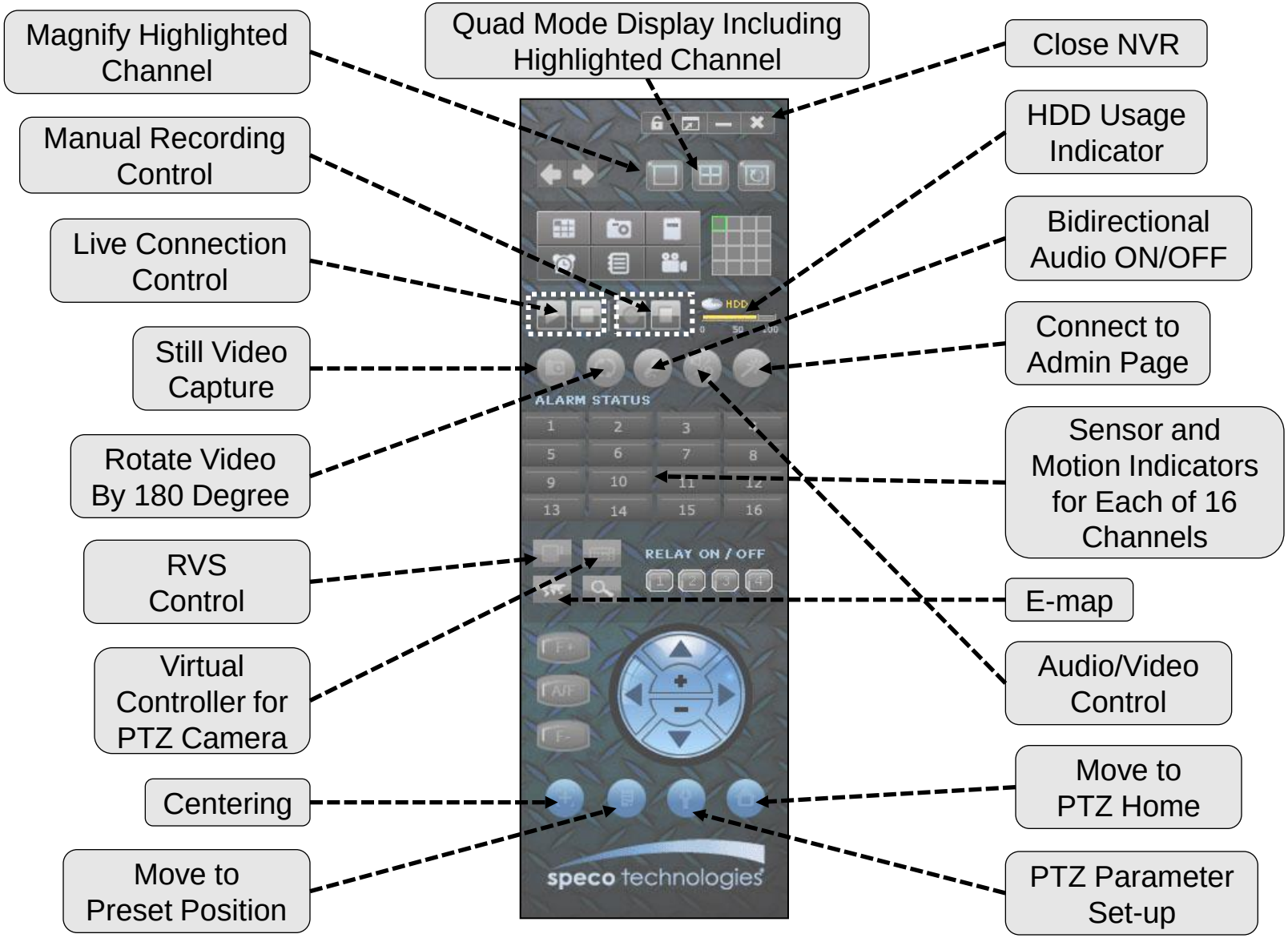
Display Unit (DU).
The smallest DU is called MDU (Minimum display Unit). This can be called as Channel when connection information is set up

Focus Control

Pan / Tilt Control

Zoom Control

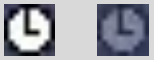
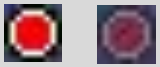
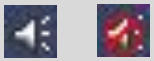
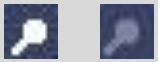
3.2. Screen – Functional Buttons and Indicators



3.2. Screen – Video Display Window

- Video display window is an area that displays video sent from the locations being monitored. The window can be divided into 16 sub-screens called Display Unit (DU). Each DU has video display area and status indicator area.

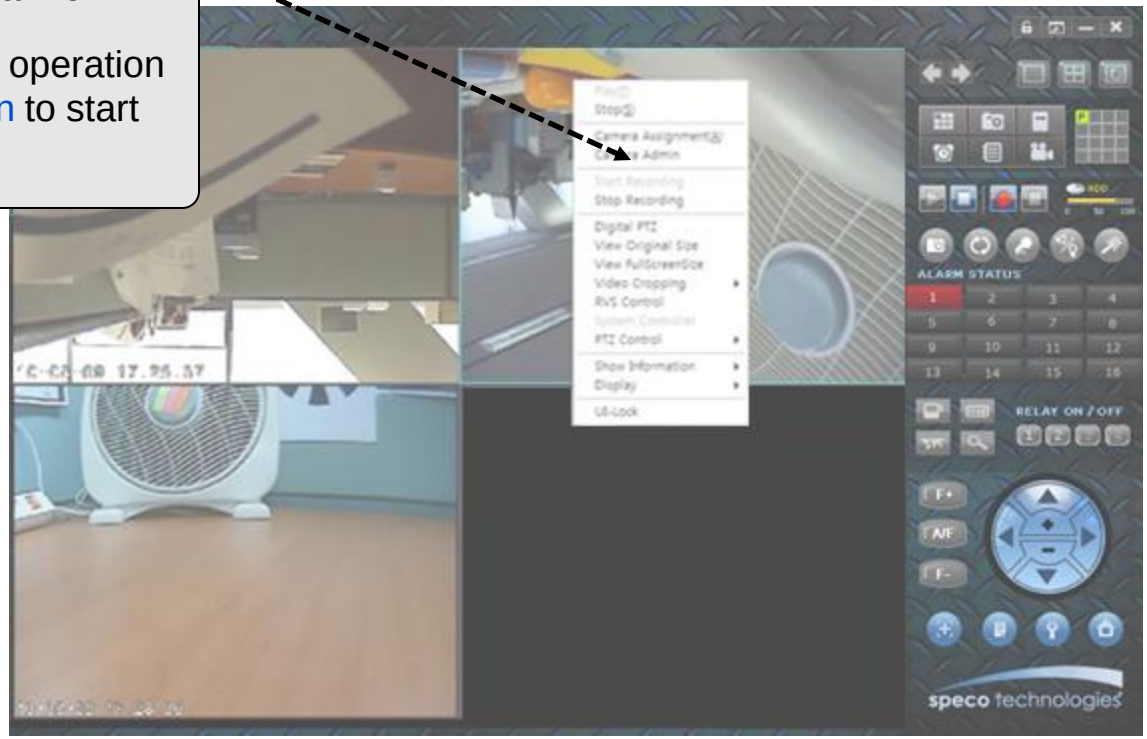
- Channel Status Indicator

	Indicates the presence of recording schedule. YES (), NO ()
	Recording in progress () / Recording stopped()
	Indicates whether audio is enabled () or Not ().
	Indicates whether bidirectional audio is enabled () or Not ().
	Indicates the presence of new event() or no new event ()
	Indicates number of connected users

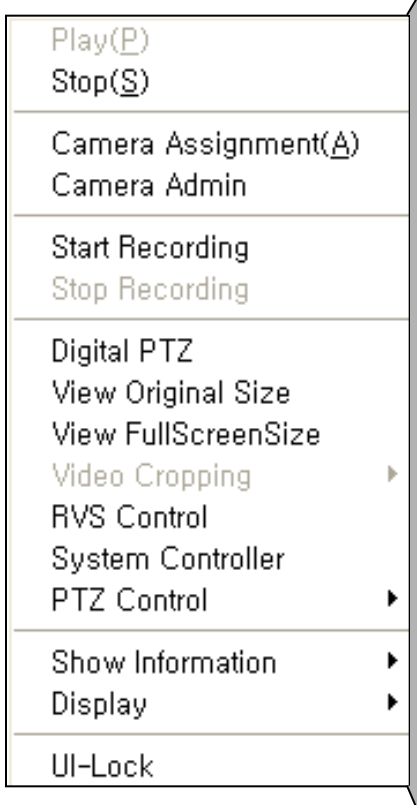
- Messages
  - When there is no live connection, the message area indicates whether connection information is programmed or not (Assigned / Not Assigned).
  - When the channel is in live connection, the message area displays time and channel description. The time displayed in the message area is the time set on the device sending the video. Remember that this time can be different from the time set on the PC.
  - The size of the video is displayed in QCIF to UXGA.

3.3. Screen - Quick Control Pop-Up Menu

- Locate the cursor on each DU and press right mouse button to enable pop-up menu.
- Simple controls indicated on the right can be initiated for each channel.
- Move the cursor to desired operation and press left mouse button to start the operation.

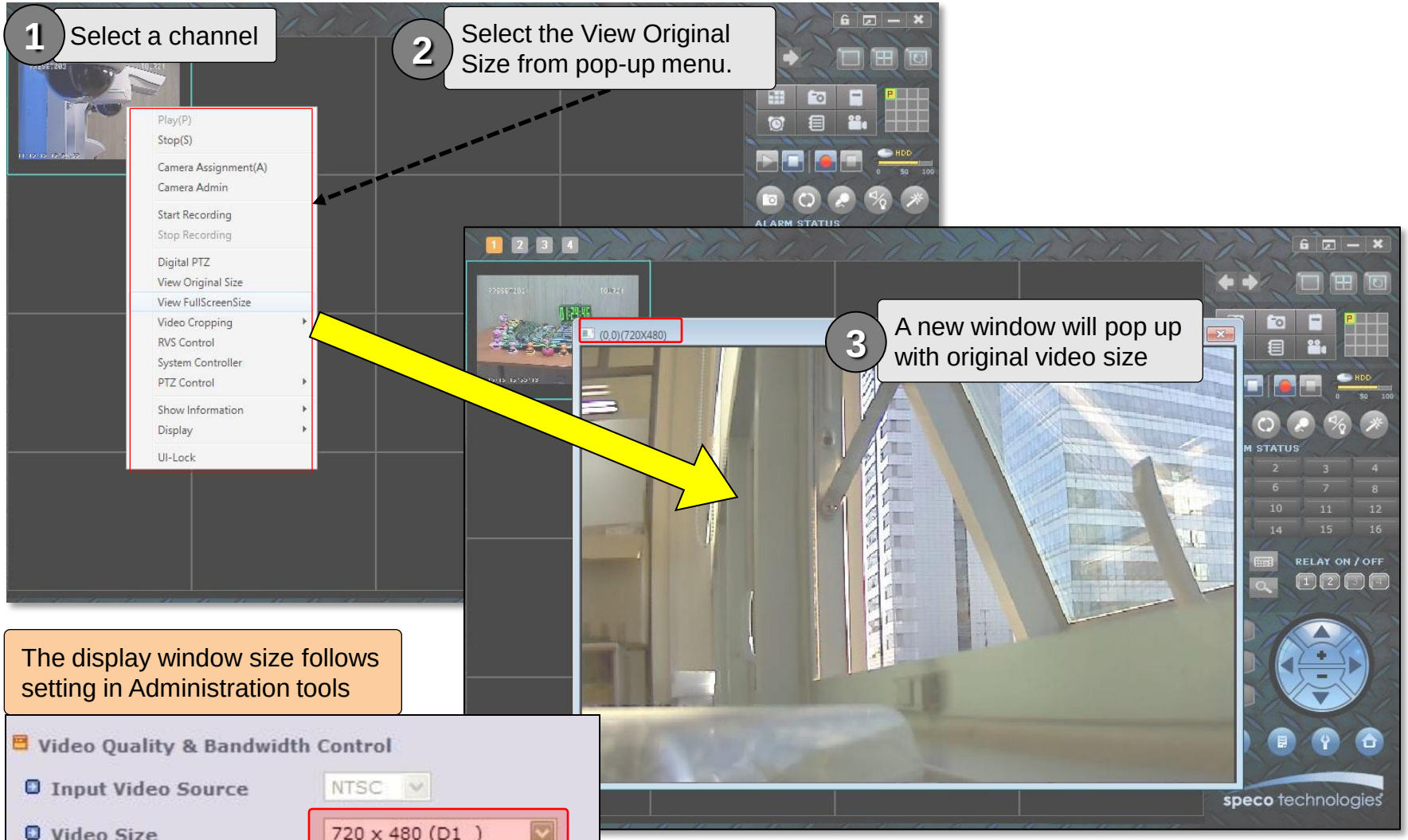


3.3.1. Screen – Summary of Quick Controls



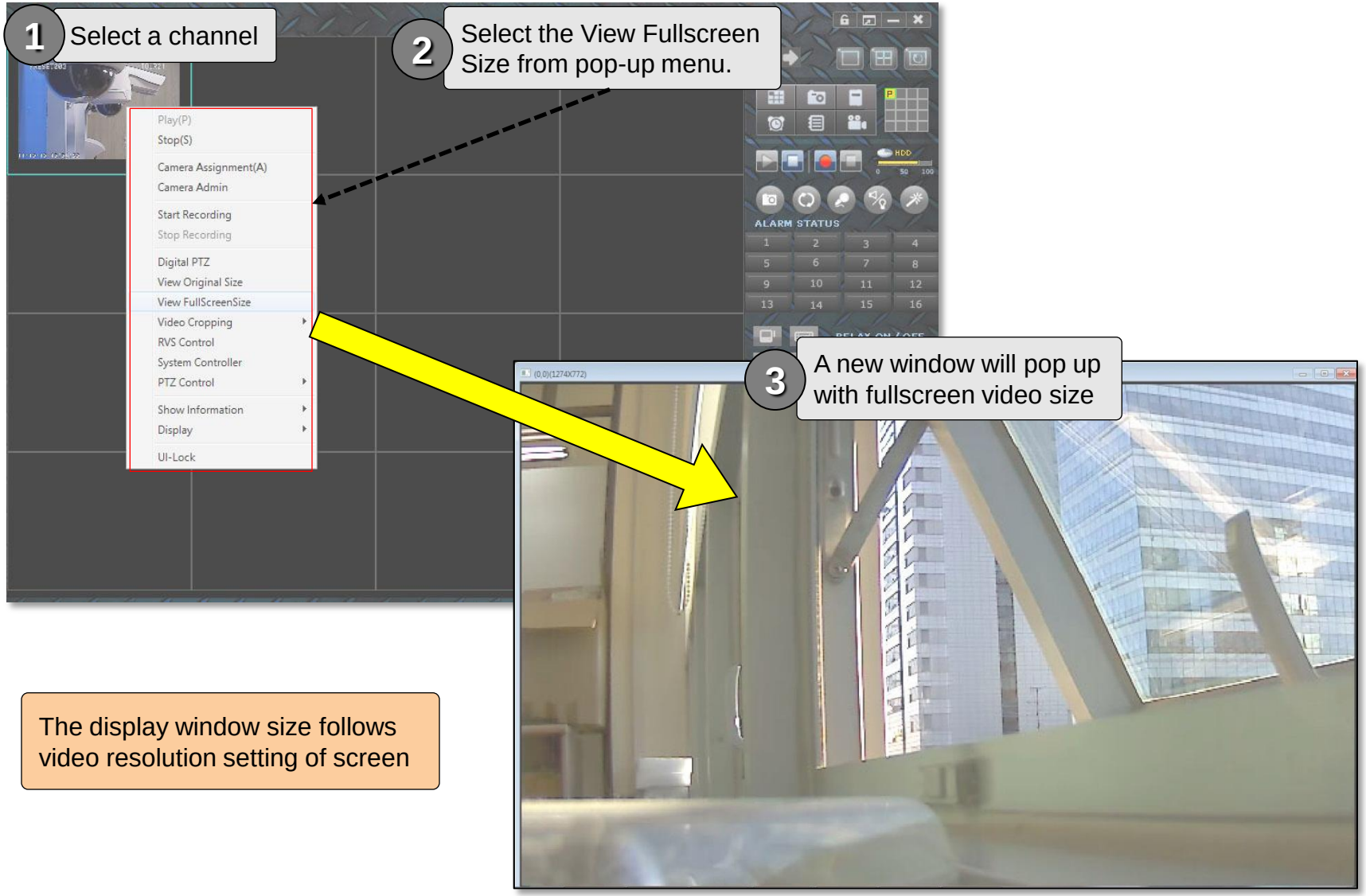
Menu		Description
Play		Make connection with selected network camera.
Stop		Disconnect selected network camera.
Camera Assignment		Modify information of selected network camera.
Camera Admin		Run Administration Tools of selected network camera.
Start Recording		Start recording from selected Display Unit.
Stop Recording		Stop recording of selected Display Unit.
Digital PTZ		Toggle digital PTZ function in selected Display Unit.
Video Cropping		Select region size of video cropping.
RVS Control		Run RVS control.
System Controller		Run virtual keyboard controller.
PTZ Control		Run additional PTZ actions.
Show Information	Session Count	Display number of connections that connected with network camera.
	Packet Loss Ratio	Display packet loss ratio of network connection between PC with network camera.
	Frame Rate	Display average frame rate per second of network camera.
Display	Original Ratio	Toggle the display ratio as original and fit.
	Show Status Bar	Toggle the display status bar on and off
UI-Lock		Lock up NVR control interface to prevent unsecured access

3.3.2. Screen – Quick Controls (View Original Size)



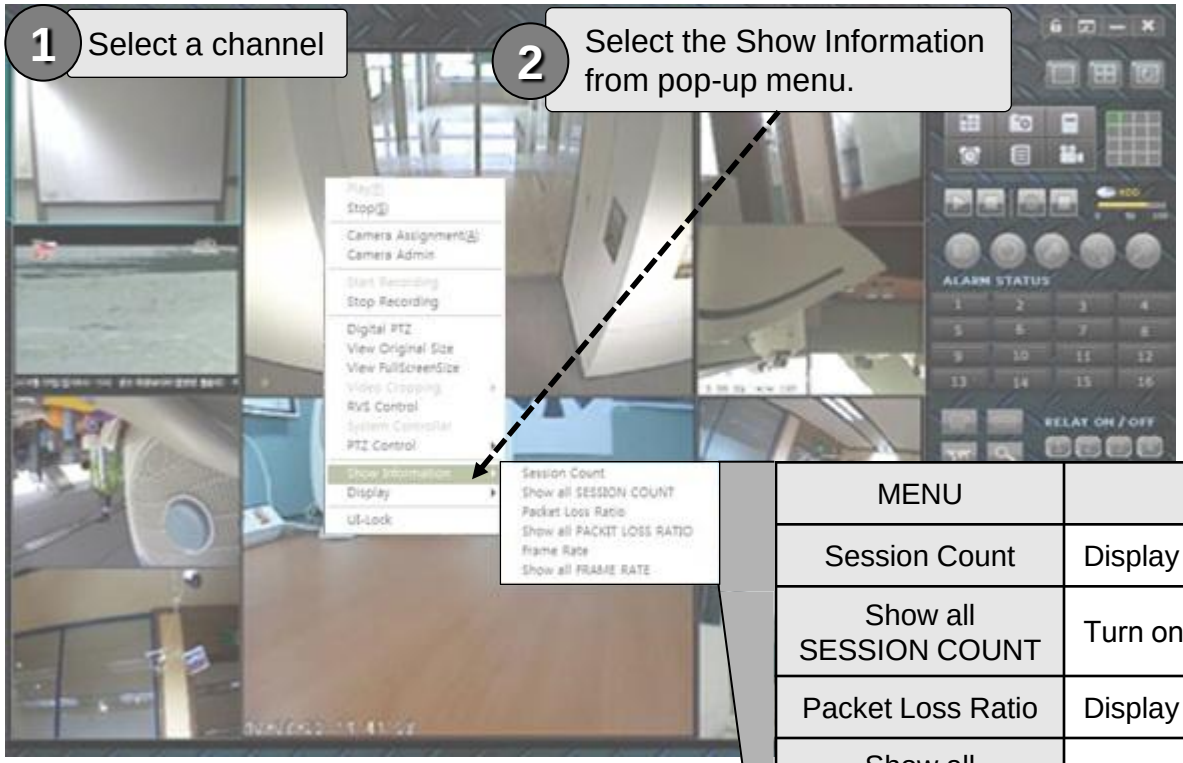
The display window size follows setting in Administration tools

3.3.2. Screen – Quick Controls (View fullscreen size)



The display window size follows video resolution setting of screen

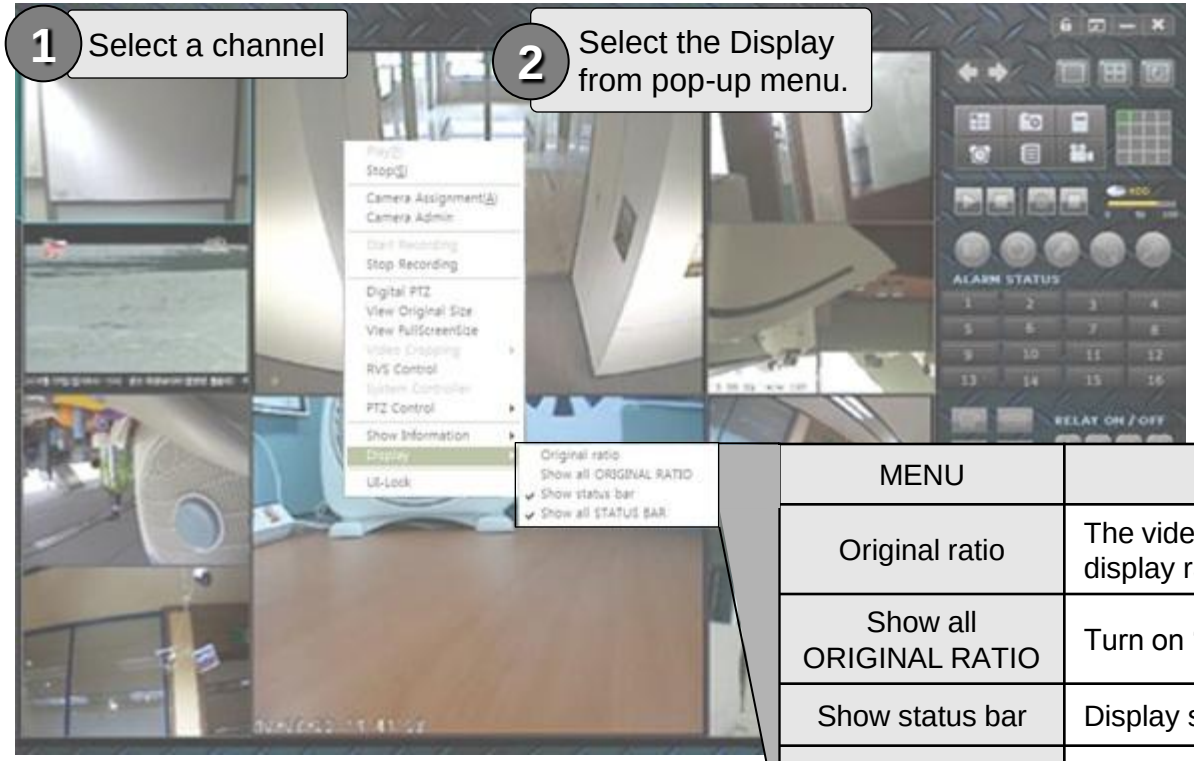
3.3.2. Screen – Quick Controls (Show Information)



MENU	Description
Session Count	Display how many connection made with camera.
Show all SESSION COUNT	Turn on ‘session count’ on all channel in screen.
Packet Loss Ratio	Display the ratio of network packet loss.
Show all PACKET LOSS RATIO	Turn on ‘packet loss ratio’ on all channels in the screen.
Frame Rate	Display the average frame rate per second.
Show all FRAME RATIO	Turn on ‘frame ratio’ on all channels in the screen.

The feature display the informations that related with video streaming from connected network camera

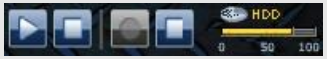
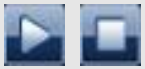
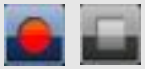
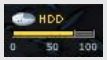
3.3.2. Screen – Quick Controls (Display)



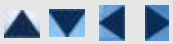
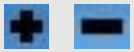
MENU	Desciption
Original ratio	The video image in selected DU keep original display ratio. The video image will not fit to DU size.
Show all ORIGINAL RATIO	Turn on ‘original ratio’ on all channels in screen.
Show status bar	Display status bar on bottom of DU.
Show all STATUS BAR	Turn on ‘status bar’ on all channels in screen.

The feature display the informations that related with video display from connected network camera

3.4. Summary of Buttons

		Magnify the highlighted channel to occupy entire display area.
		Display the highlighted channel and the following 3 channels in 2 x 2 mode.
		Return to original screen layout.
		Display former 1 or 4 channels in the display area following the settings of the display.
		Display next 1 or 4 channels in the display area following the settings of the display.
		Connect (and view) or disconnect to the entire channels which are configured.
		Start or stop recording of A/V data from all connected channels.
		Show the percentage of the HDD usage.
		Capture a still video of the highlighted channel.
		Flip the video of the highlighted channel.
		Enable/Disable bidirectional audio communication for the highlighted channel.
		A control window for the audio and video adjustment is launched.
		Connect to the admin page of the highlighted channel.

3.4. Summary of Buttons

		If the highlighted channel product have internal storage, a new window for the control of the HDD is launched.
		Virtual controller for controlling PTZ camera is launched. This is applicable only for OPTZ36XI, OPTZ36XO.
		When this button is activated, the camera center is moved to the point where the mouse click is made.
		Displays preset positions. If one of the list is selected, the camera moves to selected preset position.
		A new control window for setting various PTZ parameters is launched.
		Move the camera to home position.
 * These controls are available when the channel is equipped with proper PTZ features.		Move the camera to UP/DOWN/LEFT/RIGHT.
		Zoom In or Zoom Out.
		Move the focus to near position.
		Automatic focus adjustment
		Move the focus to far position.

3.4. Summary of Buttons

		On/Off the relay of the highlighted channel. In the text area name of the relay is shown.
		On/Off control of clone windows 2,3,4.
		Screen Lock. When the screen is locked all the controls except for the display will be locked. Enter the ID and password to unlock the screen.
		Enlarge the screen to fill the monitor.
		Minimize Speco-NVR.
		Terminate the program. ID and password are required to terminate the program.

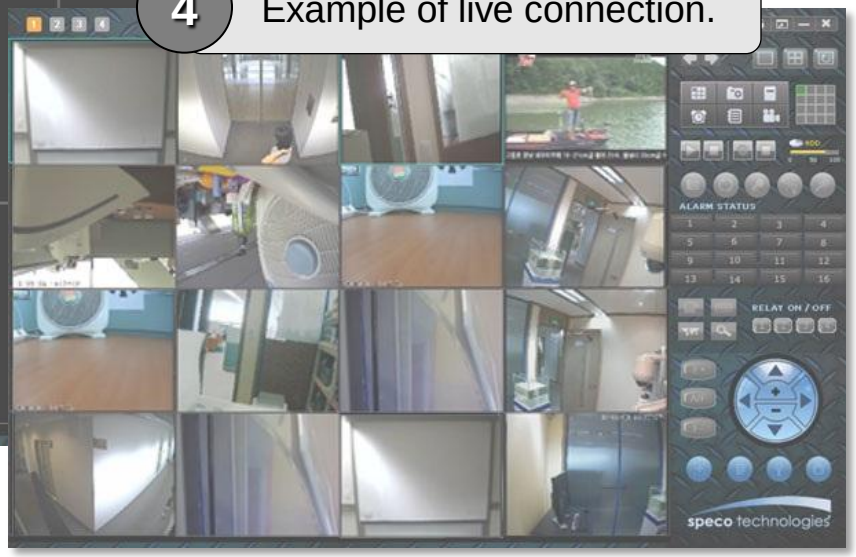
4. First Connection to Live Video

1. Install Speco-NVR and connect your PC to the network.

2. Set-up IP information for the connection.

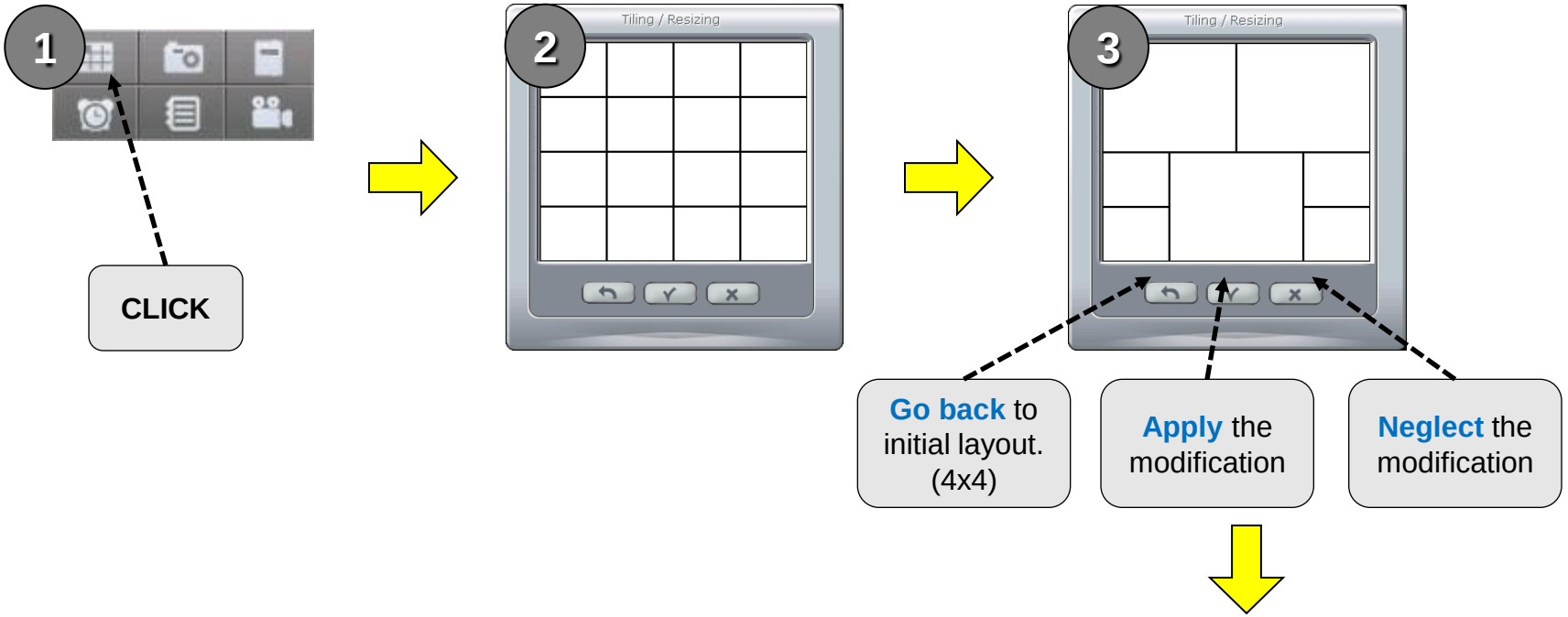
3. Click on Play Button.

4. Example of live connection.



5. For further information, please refer to the remaining part of the manual.

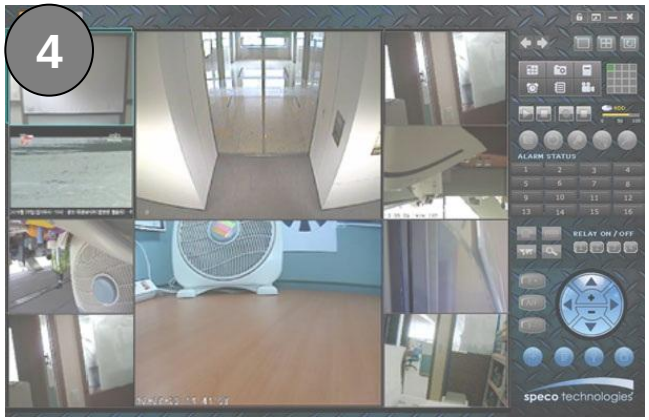
5.1. Detailed Description - Screen Layout



1. Combine adjacent MDUs from 4 x 4 screen to create larger Display Area (DU).

2. Click on the corresponding MDU and move the cursor in diagonal direction while the mouse button is pressed.

3. Release the mouse button when desired number of MDUs are merged to create a new Display Unit (DU).



<Example of a screen having 7 DUs>

5.1. Detailed Description - Screen Layout

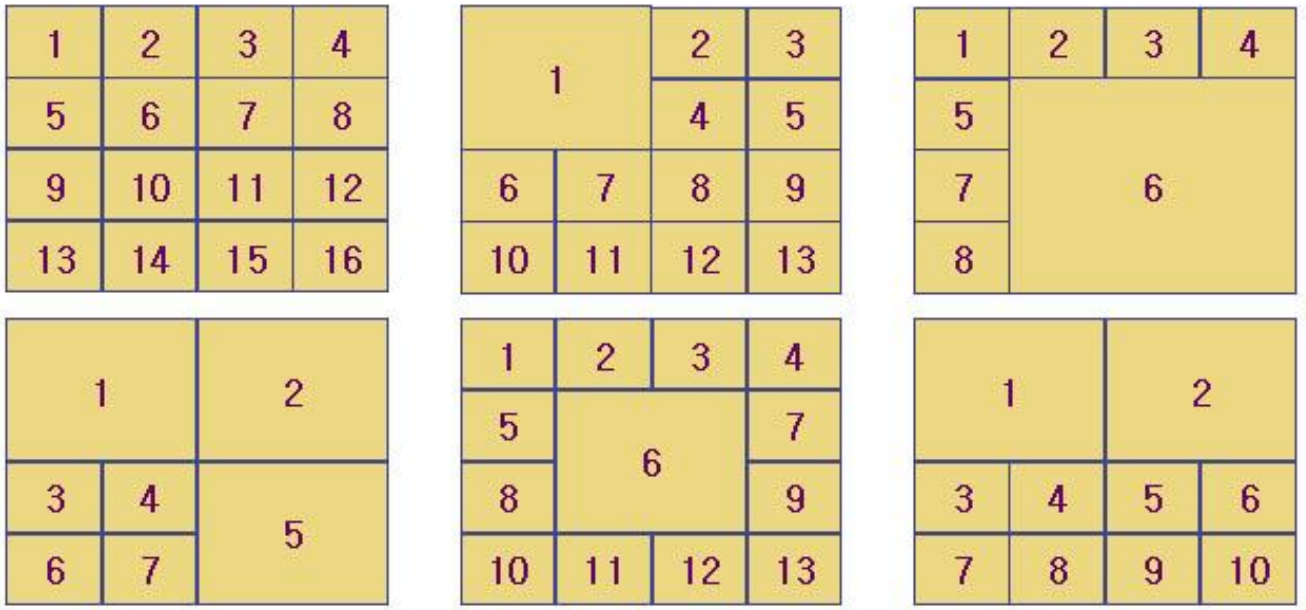
Assigning sequence numbers to the DUs.

To assign set up parameters to the DUs for the new layout, each DU is assigned with a number following the rule below.

DU at the top of the leftmost location has number 1.

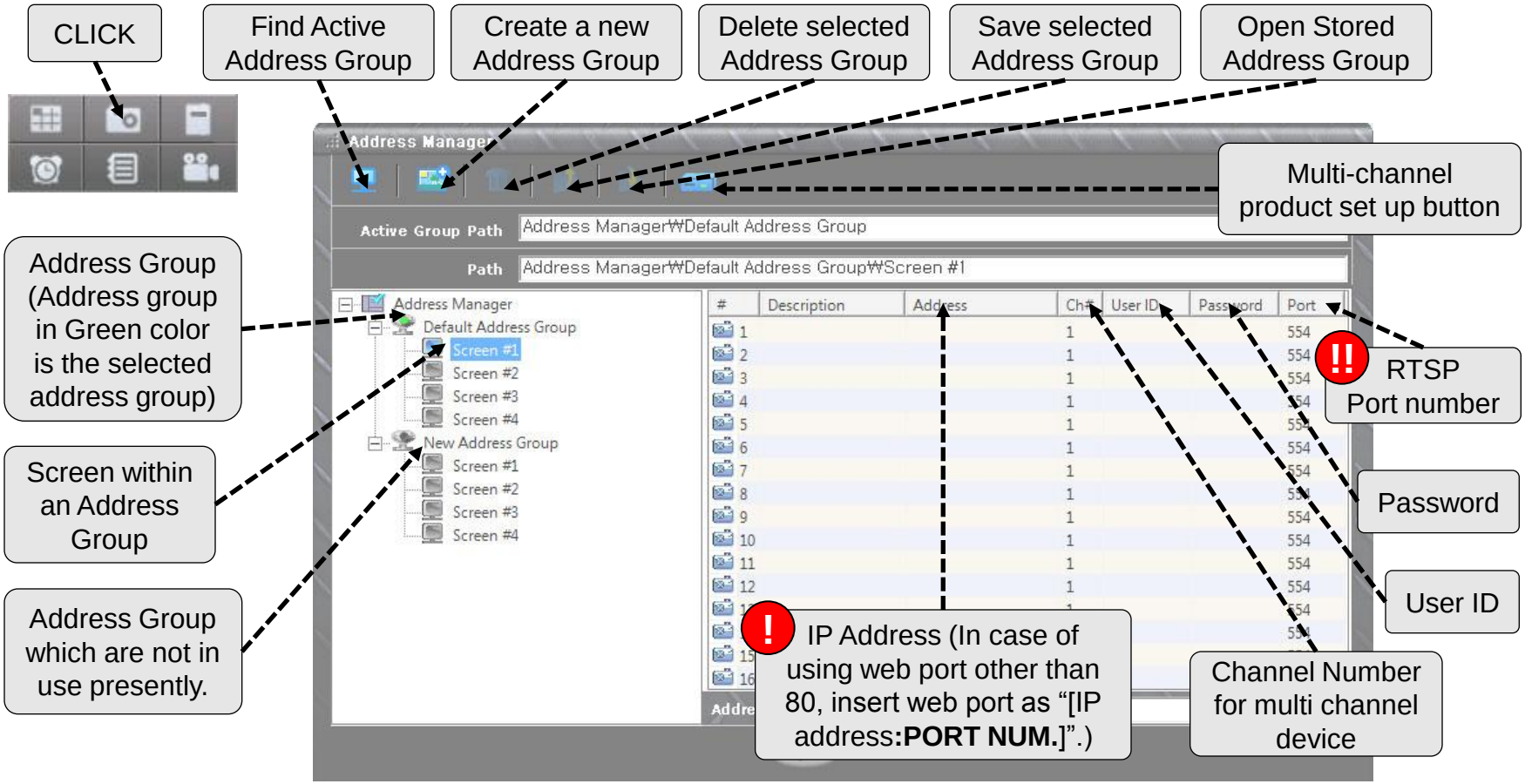
Number is increased as we move to the right and to the bottom.

Reference position for the location is the top-left corner of each DU.



5.2. Detailed Description – IP Set Up

Input parameters needed for the connection.

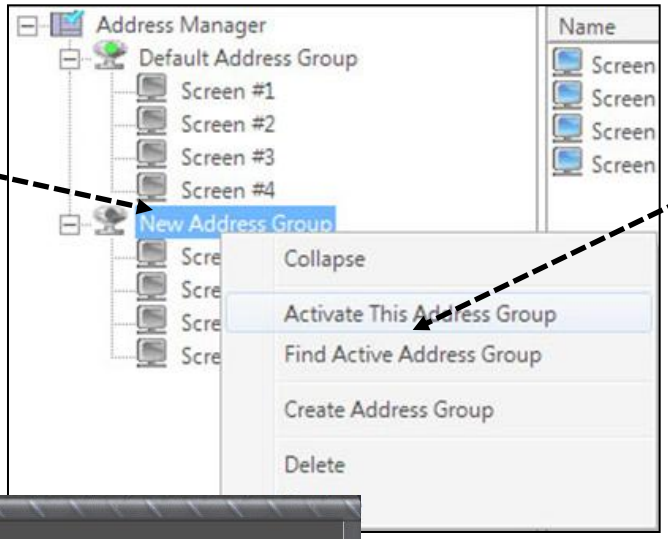


! IP can be replaced with host name when the device is registered with the DDNS server.

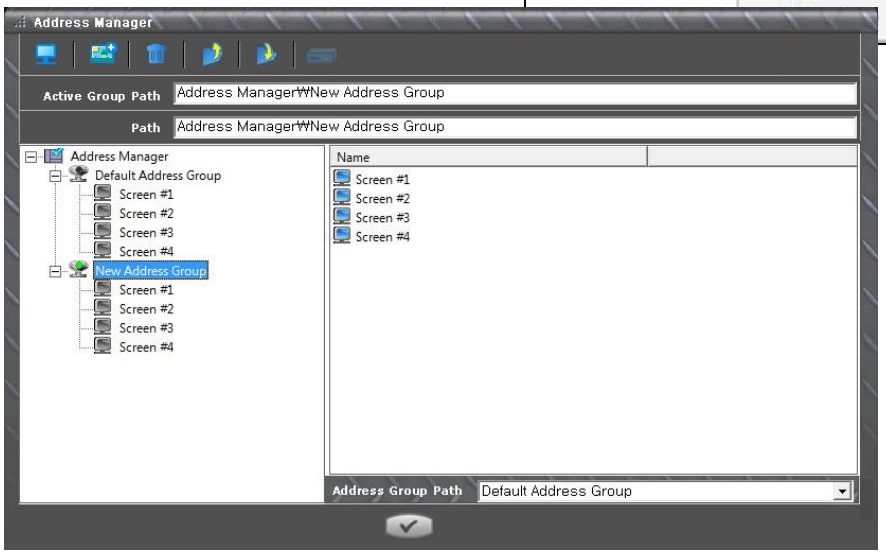
!! Input RTSP port number when port forwarding is enabled using IP sharing device

5.2.1. Detailed Description – IP Set Up – Selecting Address Group for the Connection

1 Locate the cursor on top of the corresponding Address Group and press right mouse button.



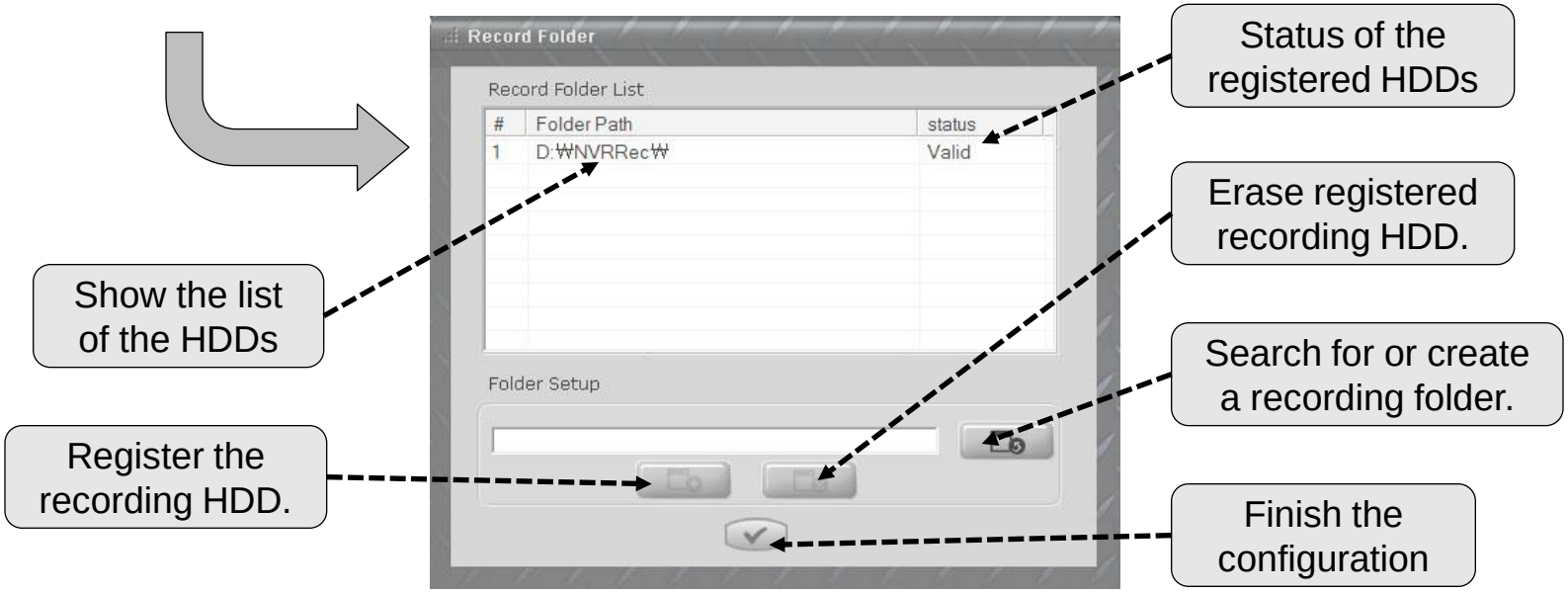
2 Select "Activate This Address Group" from the Pop-up menu.



3 Go back to the main screen. Stop all connection and connect again.

5.3. Detailed Description - Hard Disk Configuration

- Assign or de-assign HDD to store video.
- The overwriting function is enabled as default, it will work when HDDs are full. NVR will delete records from the oldest date.

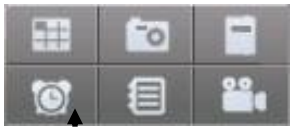


! 1 HDD is equivalent to one folder. And the total capacity of the HDD is assigned as the size of folder.

!! Never use the HDD assigned for recording the AV data in Speco-NVR to store other files. Speco assumes no responsibility caused by failure of observing the restriction.

!!! Do not use the HDD having OS as the HDD for recording.

5.4. Detailed Description - Alarm Recording



CLICK

Set alarm schedule for each channel in 1 hour resolution.

Click on corresponding time to control recording.
Selected time zone is indicated as a box having different background color.

- The selection is applied for single channel.
- The selection is applied for multiple channels.
- The selection is applied for all channels.

Set the duration for alarm recording.

Click on the desired screen.
Selected screen is shown in yellow color.

Place the cursor on top of a time slot.
The tool tip will show the channels having schedules on the time slot.

Select desired channel.
You can select multiple channels.
Only the schedules entered after the channel selection are applied.

Apply the change and return to the previous menu.

Neglect the change and return to the previous menu.

Erase the programmed schedule.
You must select channels before erasing the schedule.

Caution :
For addition or changing of the schedule, make sure to select channels before the operation. Only the changes made after the channel selection are applied.

5.5. Detailed Description – Recording Schedule

CLICK

Set recording schedule for each channel in 1 hour resolution.

Click on corresponding time to control recording.
Selected time zone is indicated as a box having different background color.

- The selection is applied for single channel.
- The selection is applied for multiple channels.
- The selection is applied for all channels.

Click on the desired screen.
Selected screen is shown in yellow color.

Place the cursor on top of a time slot.
The tool tip will show the channels having schedules on the time slot.

Select desired channel.
You can select multiple channels.
Only the schedules entered after the channel selection are applied.

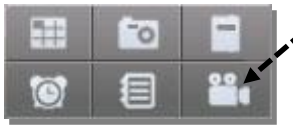
Apply the change and return to the previous menu.

Neglect the change and return to the previous menu.

Erase the programmed schedule.
You must select channels before erasing the schedule.

Caution :
For addition or changing of the schedule, make sure to select channels before the operation. Only the changes made after the channel selection are applied.

5.6. Detailed Description - Playback



CLICK

Mark this button to select corresponding page.

If there is recorded file on the date, types of the video files are summarized in 4 different colors.

Channel Selection filter.

Data Type filter.

If there is recorded file on the date for the selected screen page, this circle is shown in red color.

Search condition input field when data type is other than “All Data”.

Filter for selecting search method

Start Search

Check to select all in the list.

Search List. Check the box at the left to select.

Check to enable playback of multiple channels

Rotate video by 180 degree

Check during playback to display in original size.

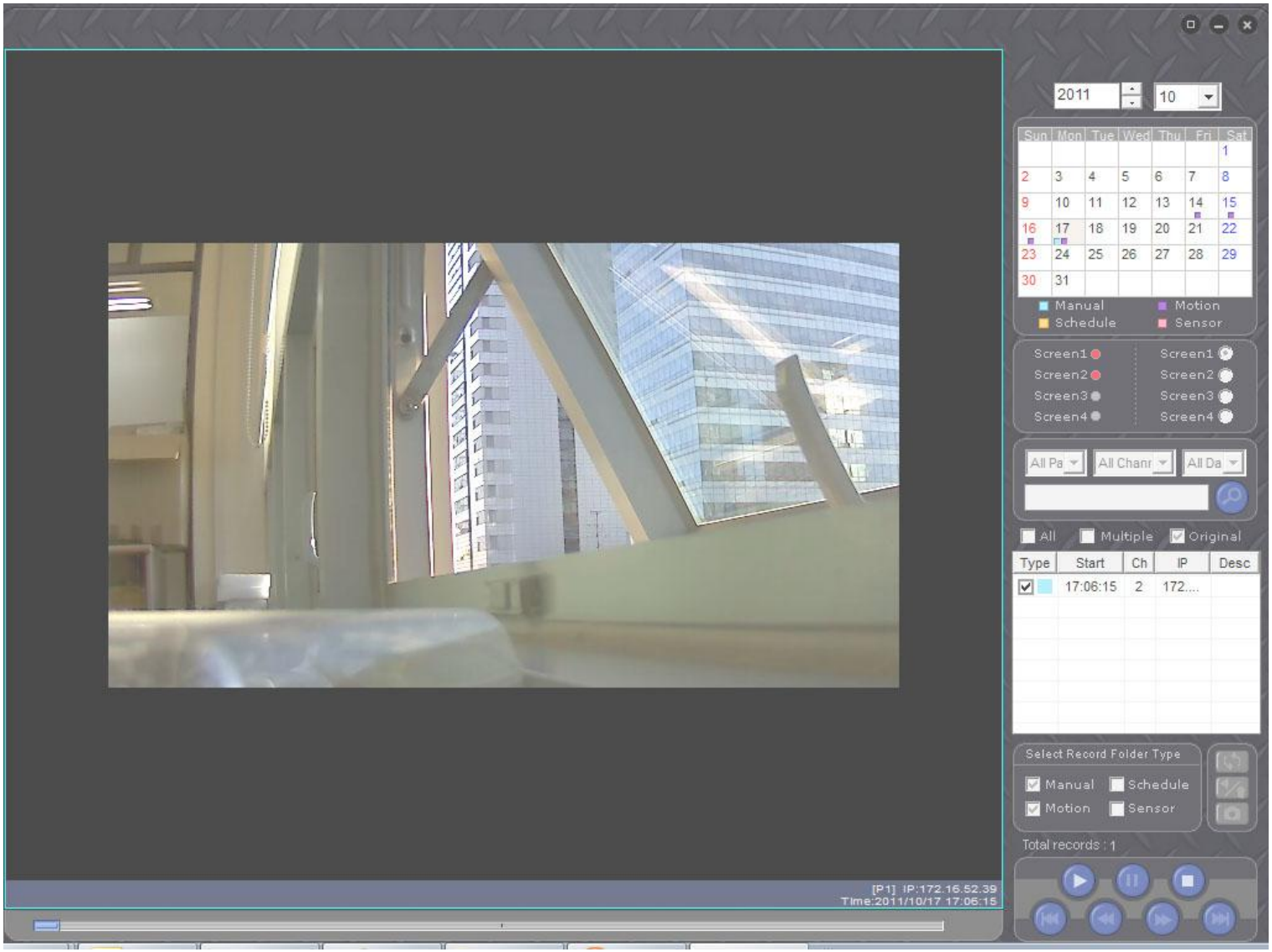
Adjust audio and video

Time indicator

Record file type filter

Capture still video

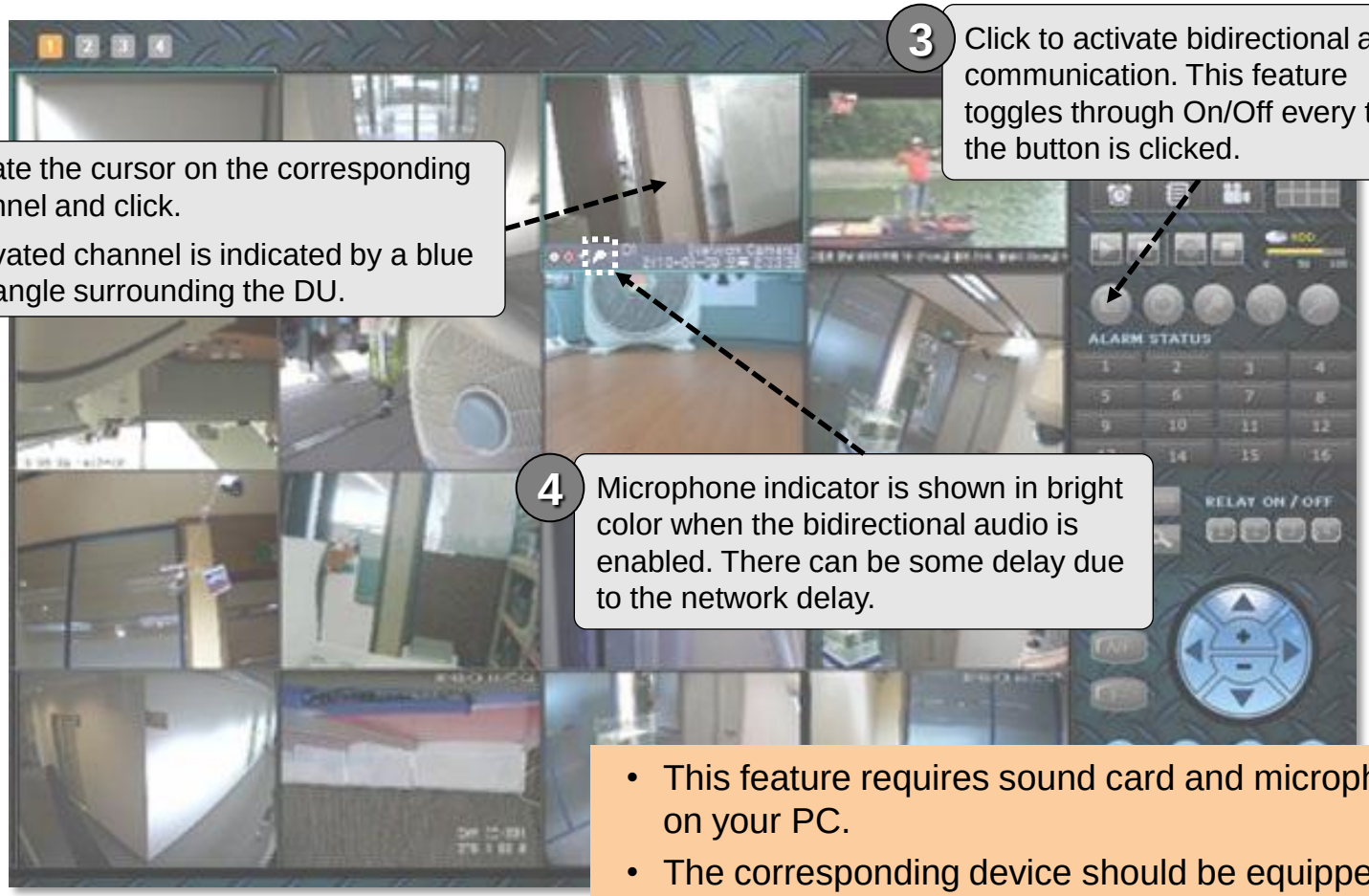
5.6.1. Detailed Description - Playback Screen



5.7. Detailed Description – Live Connection and Recording

5.8. Detailed Description – Bidirectional Audio

A feature enabling bidirectional audio communication with corresponding device.

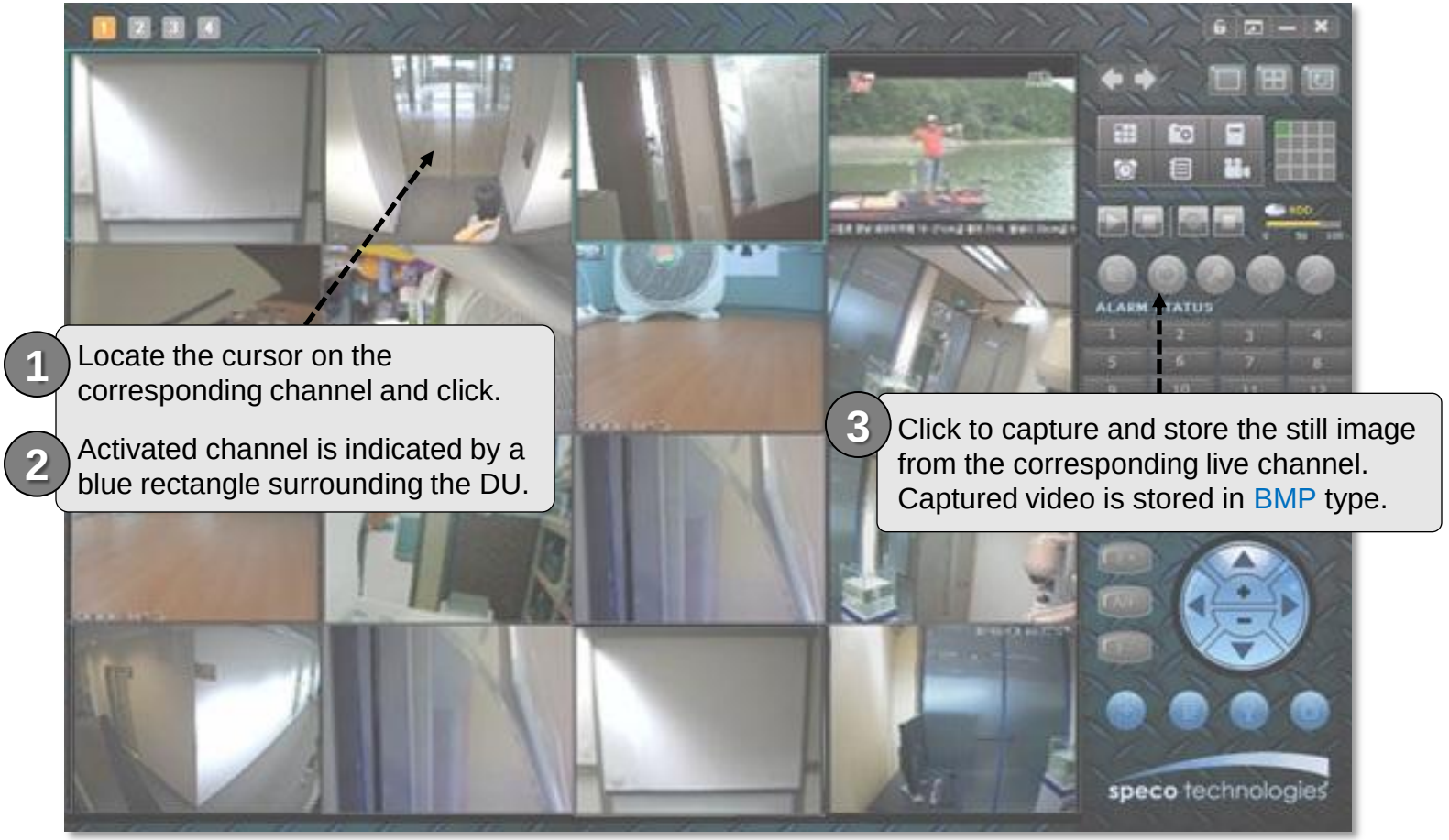


1. Locate the cursor on the corresponding channel and click.
2. Activated channel is indicated by a blue rectangle surrounding the DU.
3. Click to activate bidirectional audio communication. This feature toggles through On/Off every time the button is clicked.
4. Microphone indicator is shown in bright color when the bidirectional audio is enabled. There can be some delay due to the network delay.

- This feature requires sound card and microphone on your PC.
- The corresponding device should be equipped with the speaker and microphone.

5.9. Detailed Description – Still Image Capture

A feature to capture and record still image from a live channel.



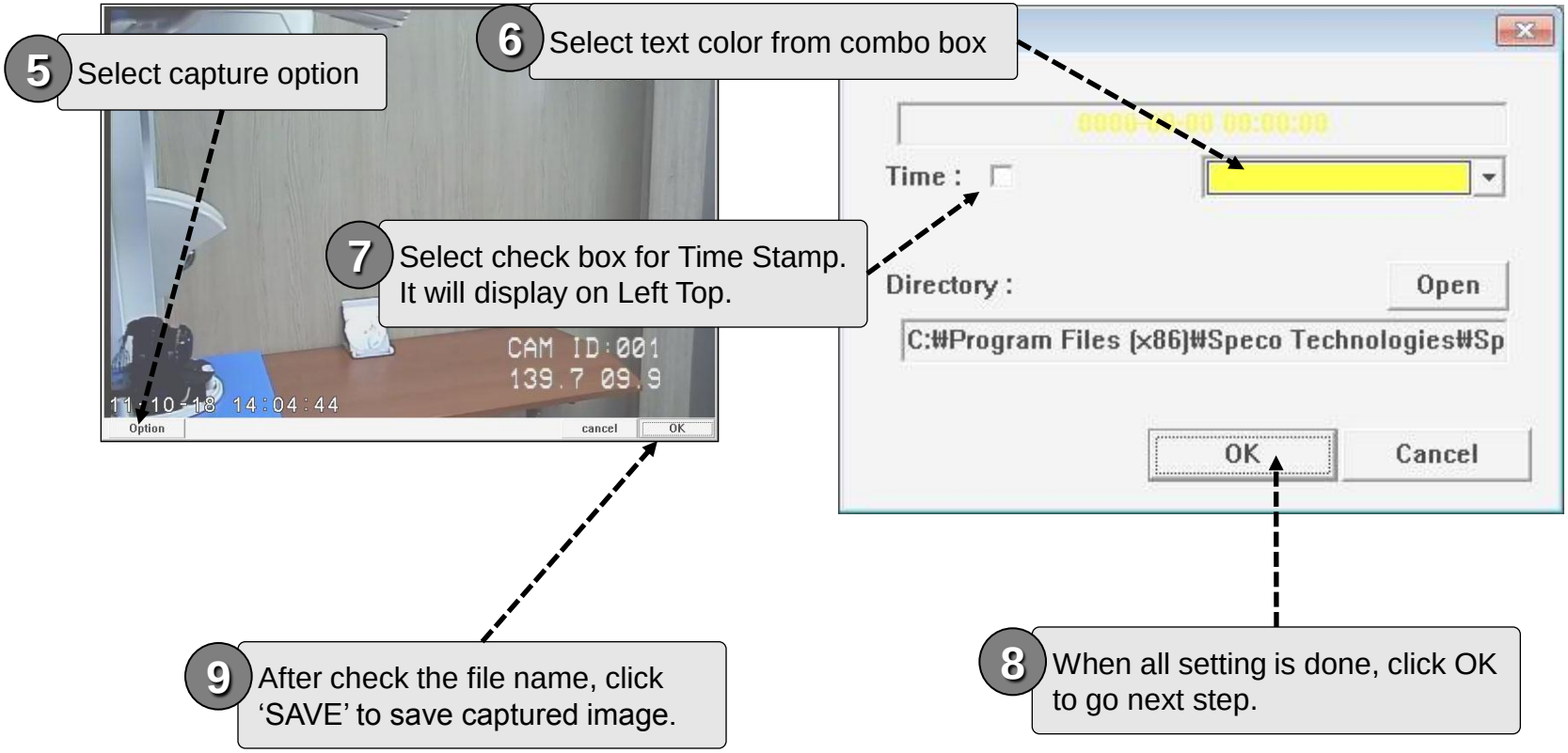
1. Locate the cursor on the corresponding channel and click.
2. Activated channel is indicated by a blue rectangle surrounding the DU.
3. Click to capture and store the still image from the corresponding live channel. Captured video is stored in BMP type.

5.9. Detailed Description – Still Image Capture

A feature to capture and record still image from a live channel.

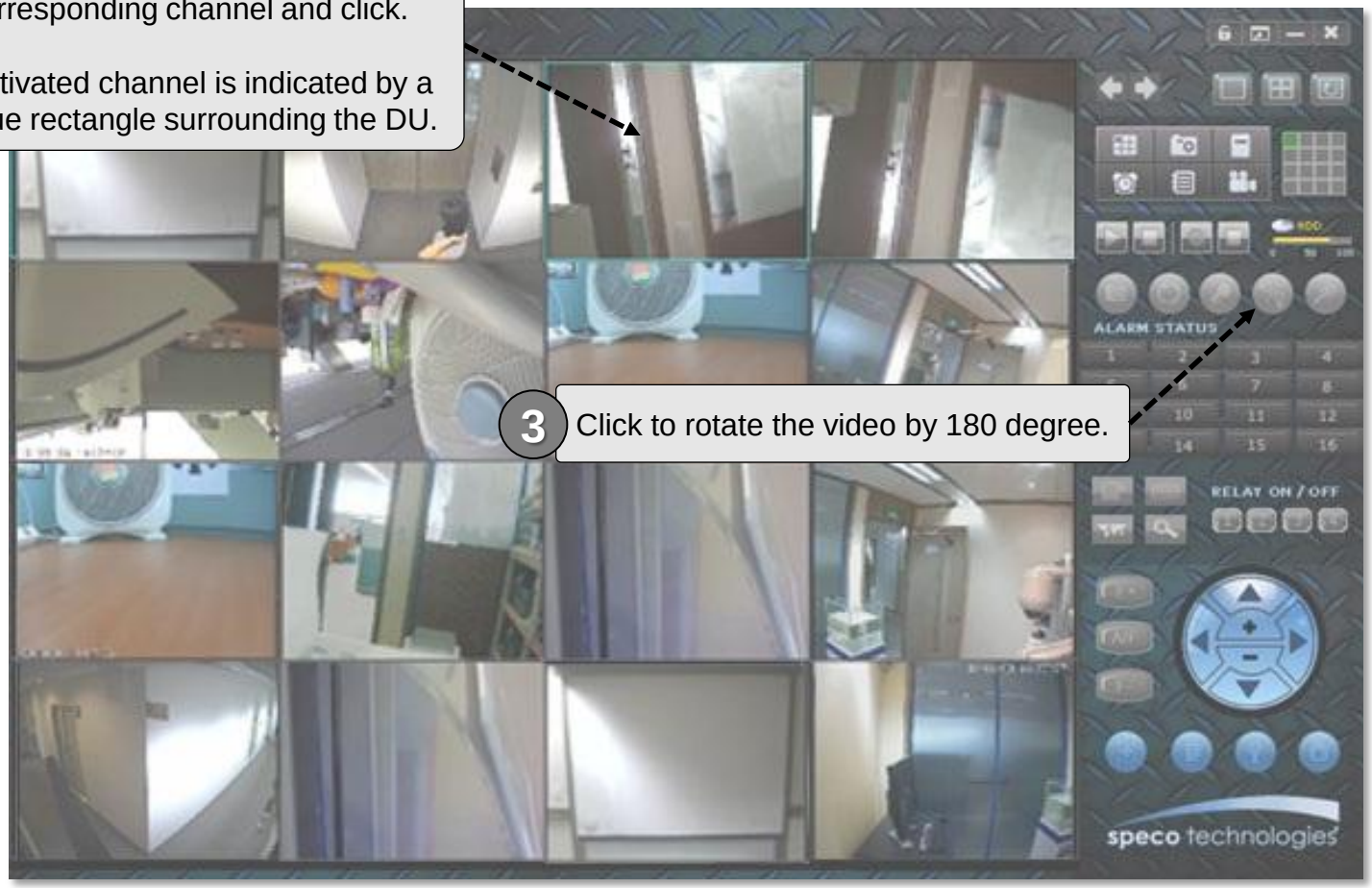
5.9. Detailed Description – Still Image Capture

A feature to capture and record still image from a live channel.



5.10. Detailed Description – Rotating the Video

1. Locate the cursor on the corresponding channel and click.
2. Activated channel is indicated by a blue rectangle surrounding the DU.



This feature will not give any effect to recorded video.

5.11. Detailed Description – Remote Management

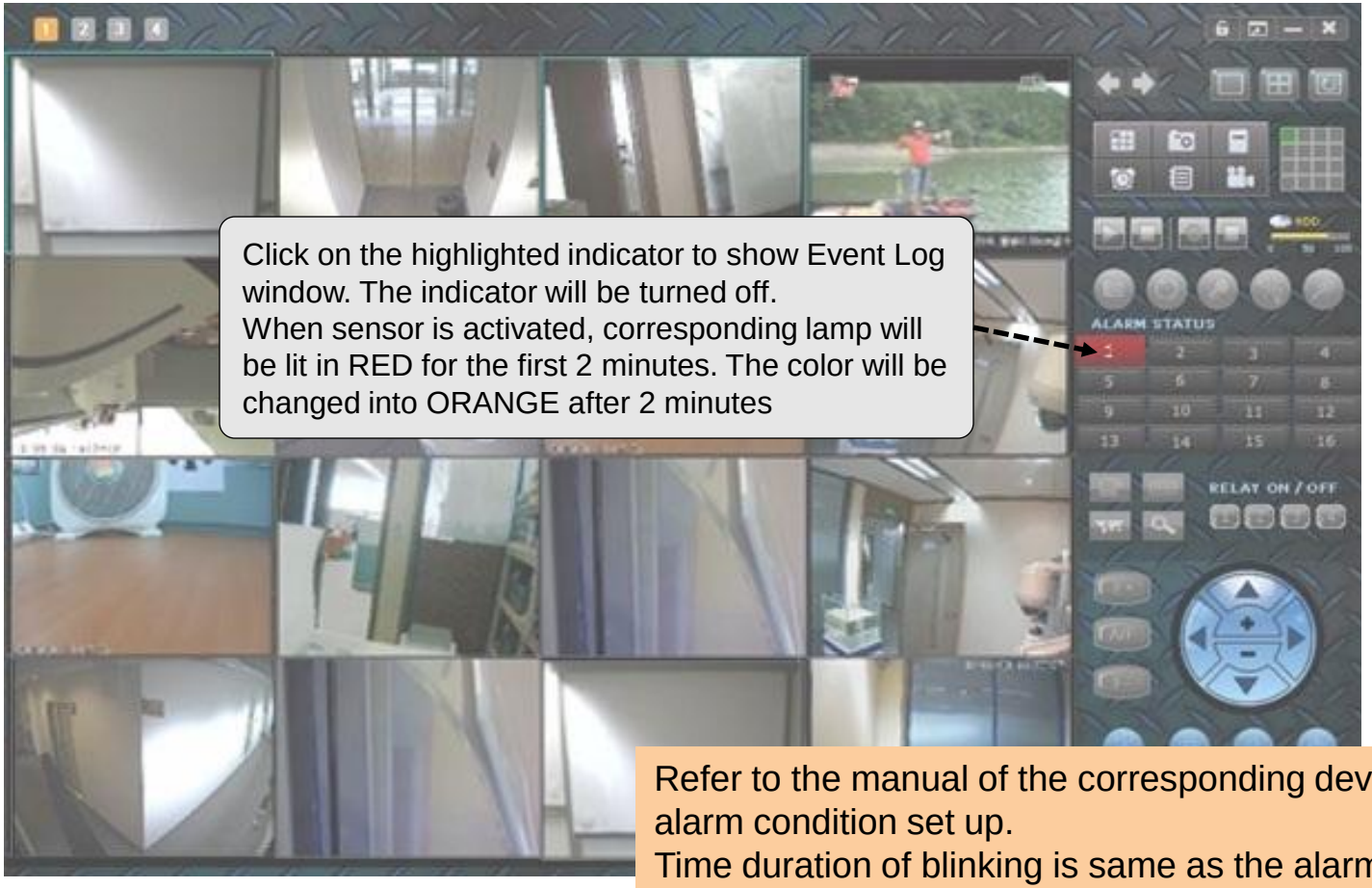
A feature to manage the corresponding device over the network

1. Locate the cursor on the corresponding channel and click.
2. Activated channel is indicated by a blue rectangle surrounding the DU.
3. Click to connect to the admin page of the corresponding device.
4. You are connected to the admin page through the web browser. You need the user ID and password of the administrator.

Refer to the user manual for the detailed information about administration page of variable devices.

5.12. Detailed Description – Sensor and Motion Alarm Indication

If connected device generates alarm by sensor or motion detection, the alarm condition is transmitted to the Speco-NVR and state is shown on alarm status panel

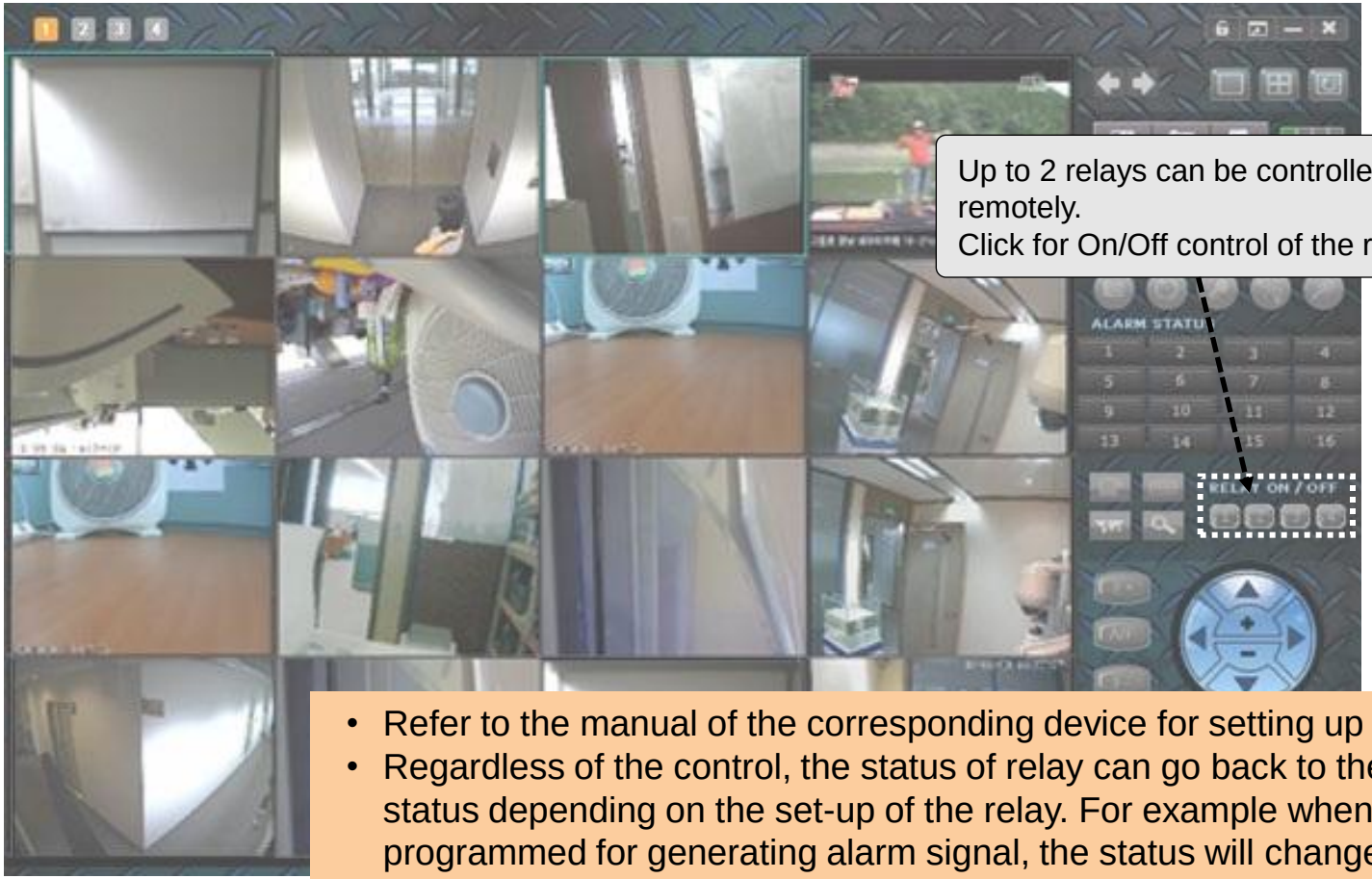


Click on the highlighted indicator to show Event Log window. The indicator will be turned off.
When sensor is activated, corresponding lamp will be lit in RED for the first 2 minutes. The color will be changed into ORANGE after 2 minutes

Refer to the manual of the corresponding device for alarm condition set up.
Time duration of blinking is same as the alarm recording time duration.

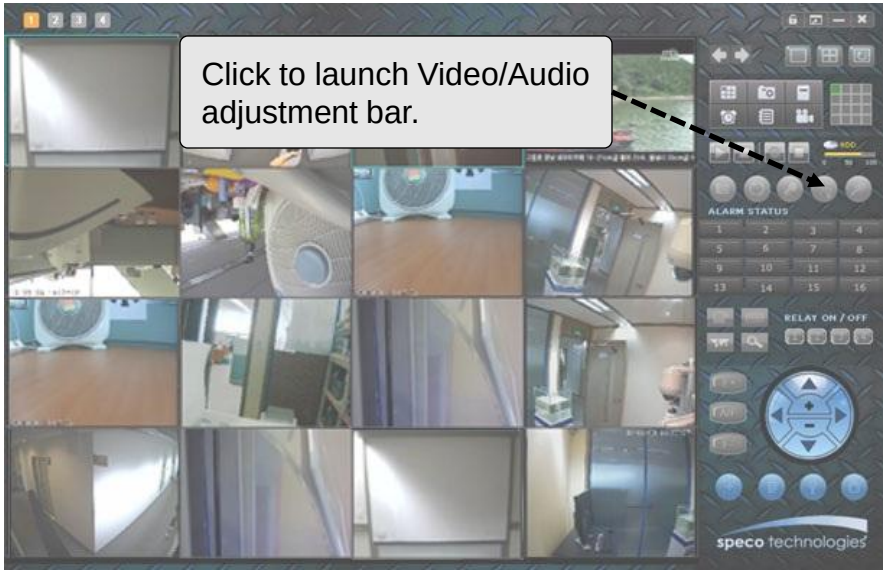
5.13. Detailed Description – Remote Relay On/Off

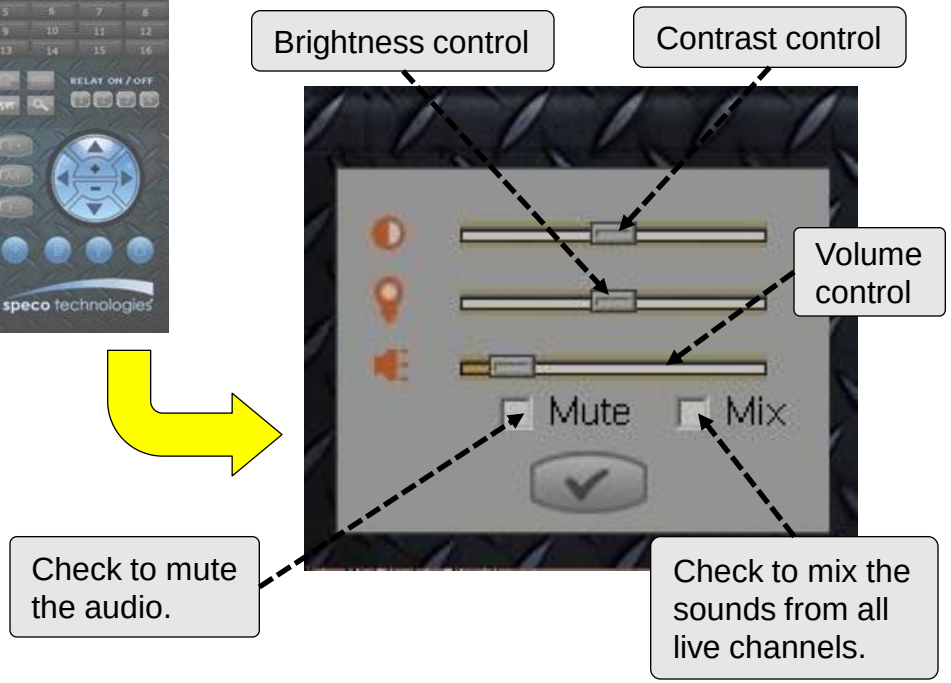
A feature for On/Off control of the relay remotely.



- Refer to the manual of the corresponding device for setting up the relay.
- Regardless of the control, the status of relay can go back to the former status depending on the set-up of the relay. For example when relay is programmed for generating alarm signal, the status will change spontaneously upon alarm condition.
- There can be delay caused by the network.

5.14. Detailed Description – Video and Audio Adjustment

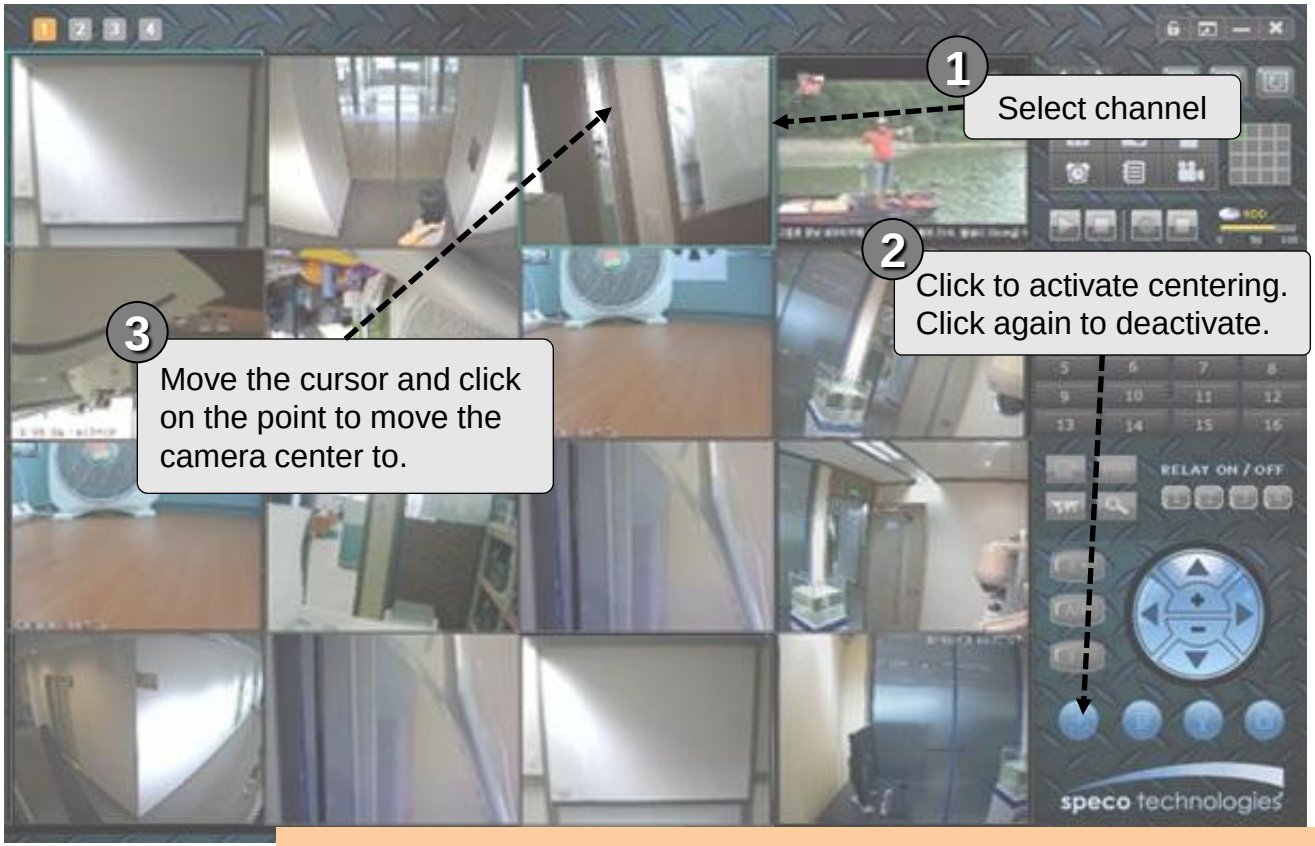




- Audio will be available only when the corresponding device is programmed to enable the audio.
- Refer to the manual of the corresponding device.

5.15.1. Detailed Description – PTZ Control (Centering)

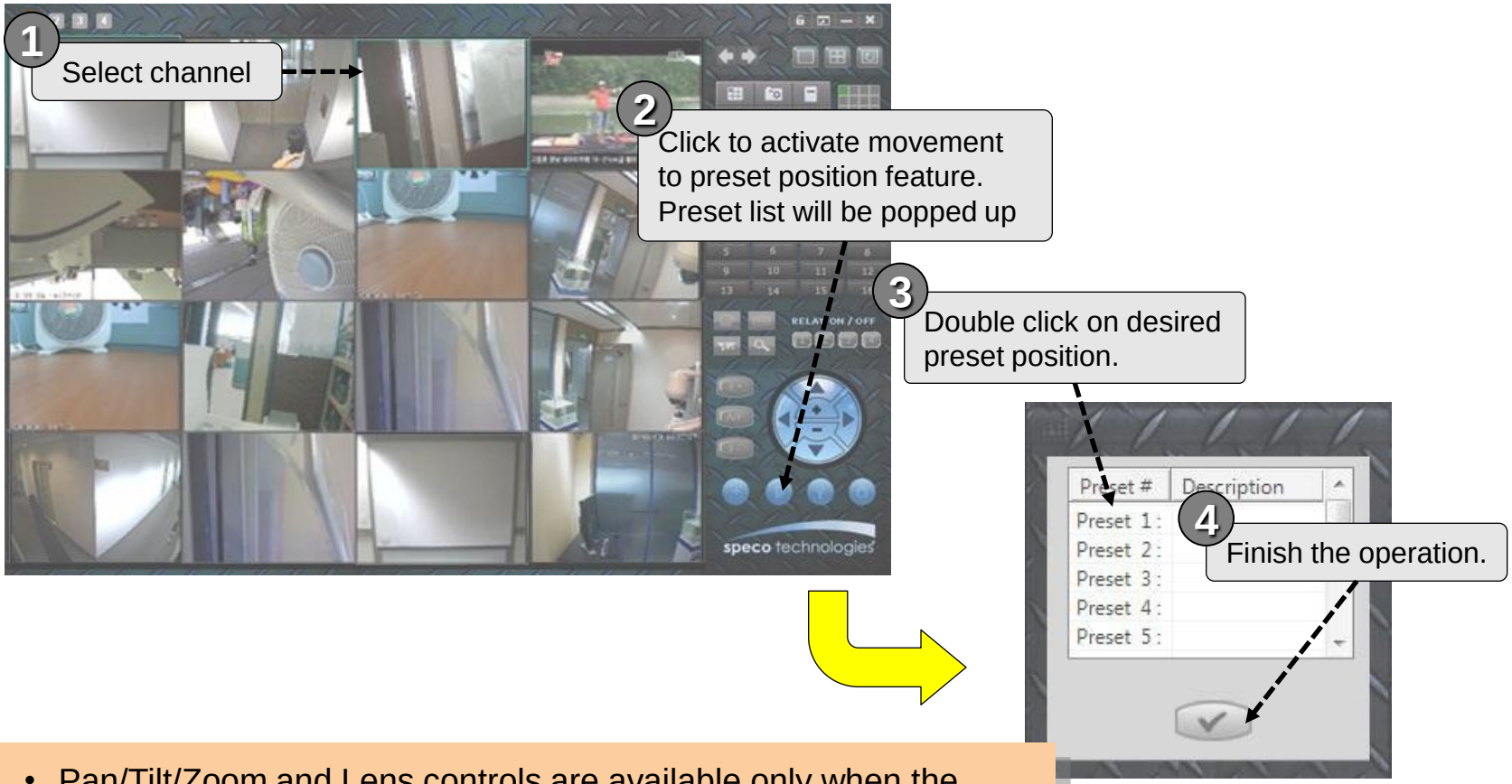
A feature to move the center of the camera to the point of cursor.



- Pan/Tilt/Zoom and Lens controls are available only when the corresponding device is equipped with such feature.
- Refer to the manuals of the corresponding device for the details.

5.15.2. Detailed Description – PTZ Control (Preset Position)

A feature to move the view point of the camera to pre-defined position.



- Pan/Tilt/Zoom and Lens controls are available only when the corresponding device is equipped with such feature.
- Refer to the manuals of the corresponding device for the details.

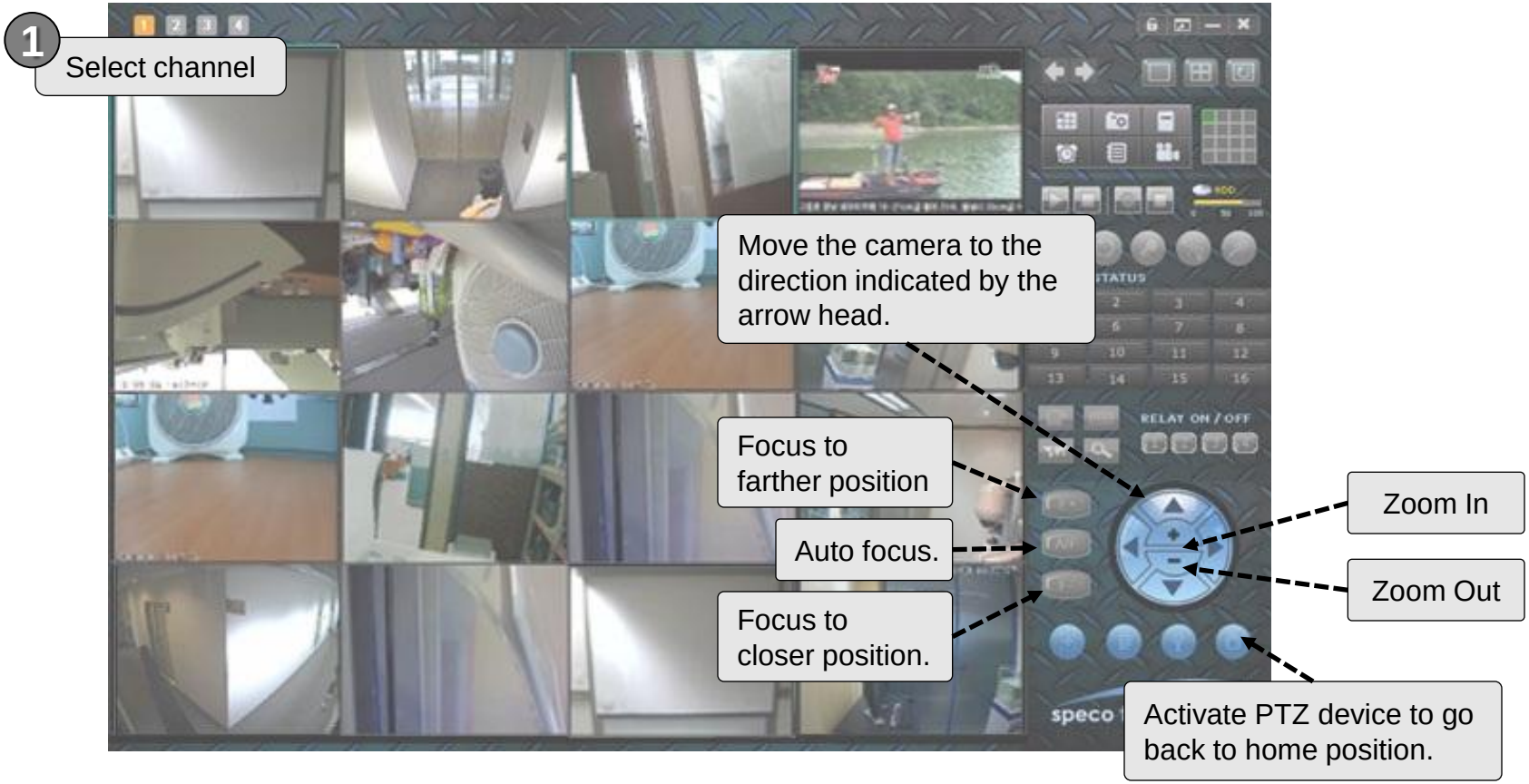
5.15.3. Detailed Description – PTZ Control (Parameter Set Up)

A feature to set up parameters for PTZ and Lens control.

- Pan/Tilt/Zoom and Lens controls are available only when the corresponding device is equipped with such feature.
- Refer to the manuals of the corresponding device for the details.

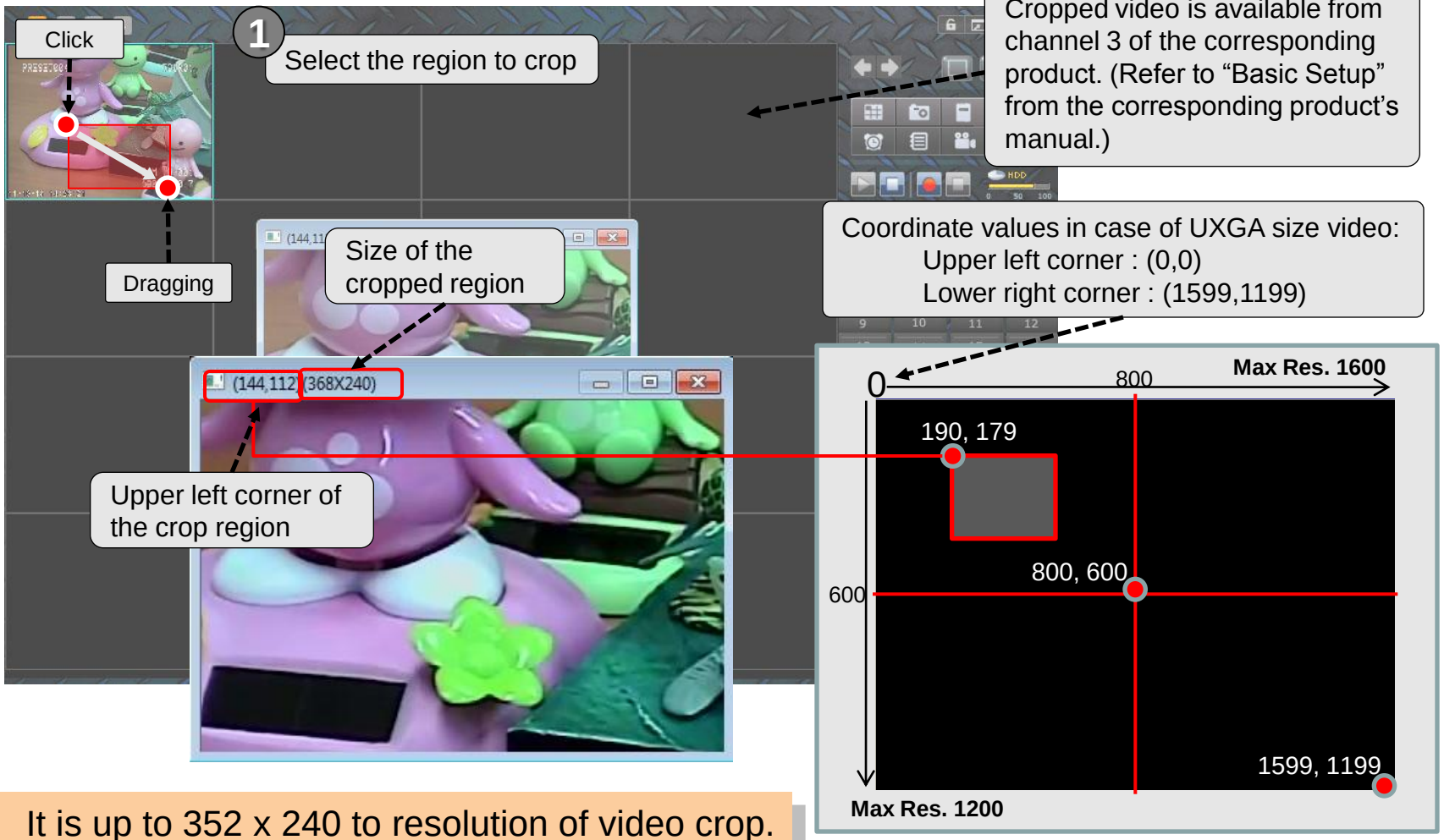
5.15.4. Detailed Description – PTZ Control (PTZ and Lens)

A feature to control the PTZ and Lenz manually for the selected channel.



- Pan/Tilt/Zoom and Lens controls are available only when the corresponding device is equipped with such feature.
- Refer to the manuals of the corresponding device for the details.

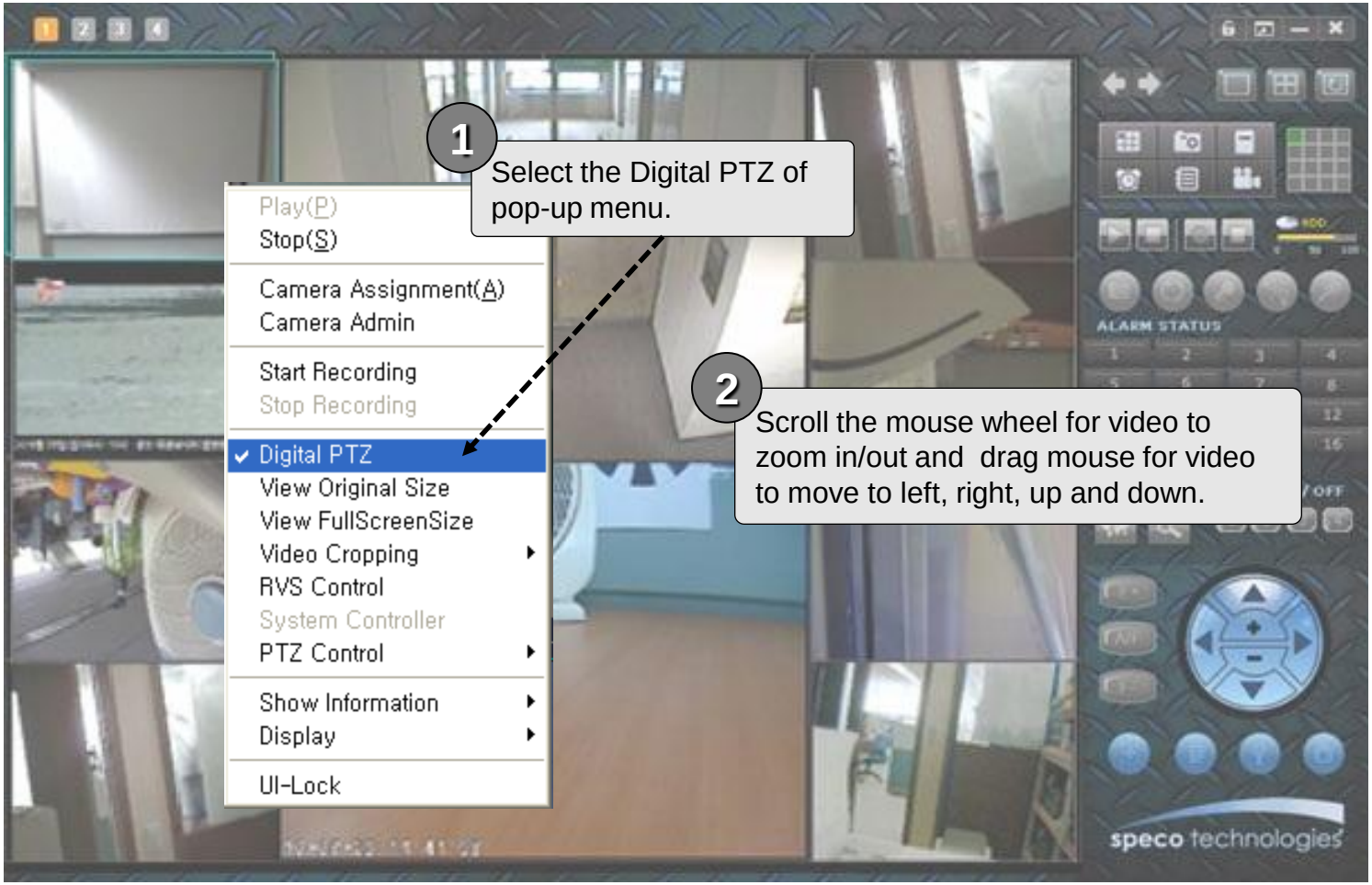
5.16. Detailed Description – Video Crop



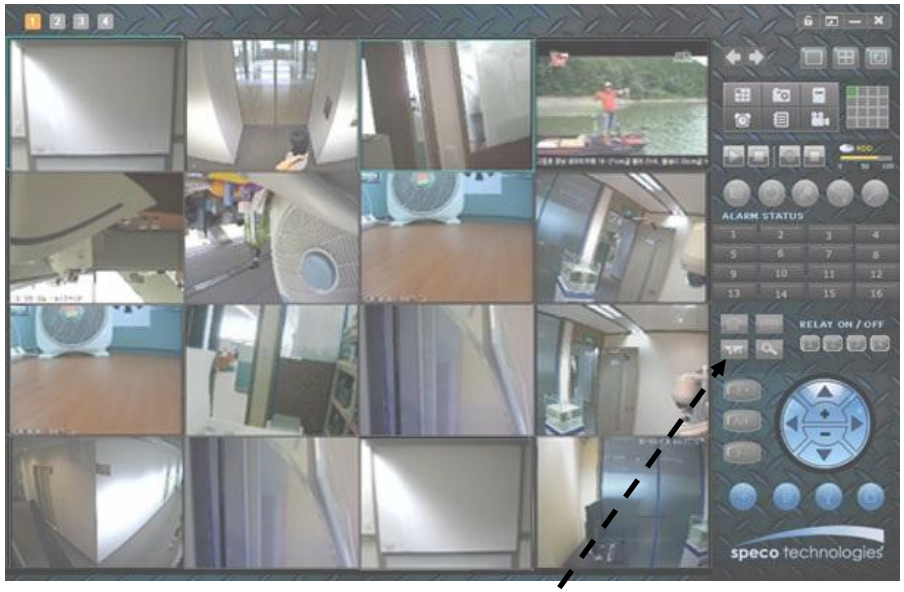
It is up to 352 x 240 to resolution of video crop.

5.17. Detailed Description – Digital PTZ

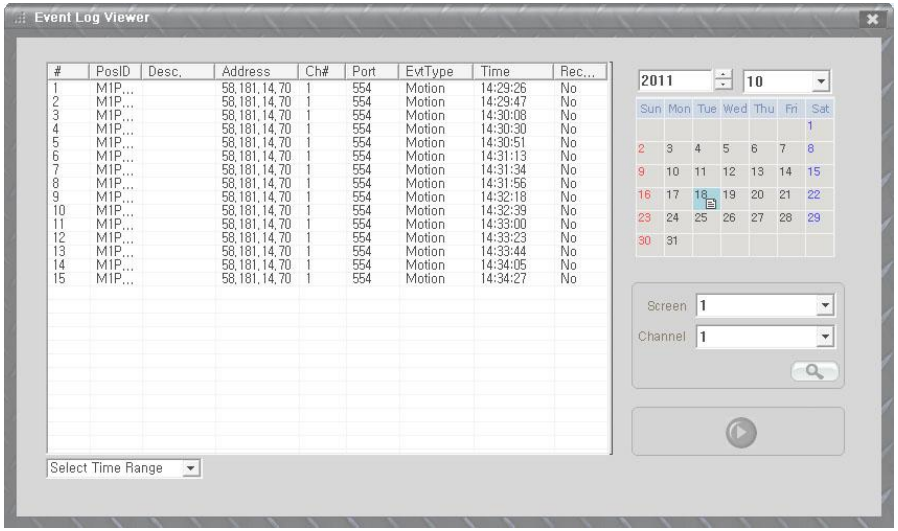
Digital PTZ is feature that moves for video to left, right, up and down or zoom in/out by mouse control.



6. Event Log Management

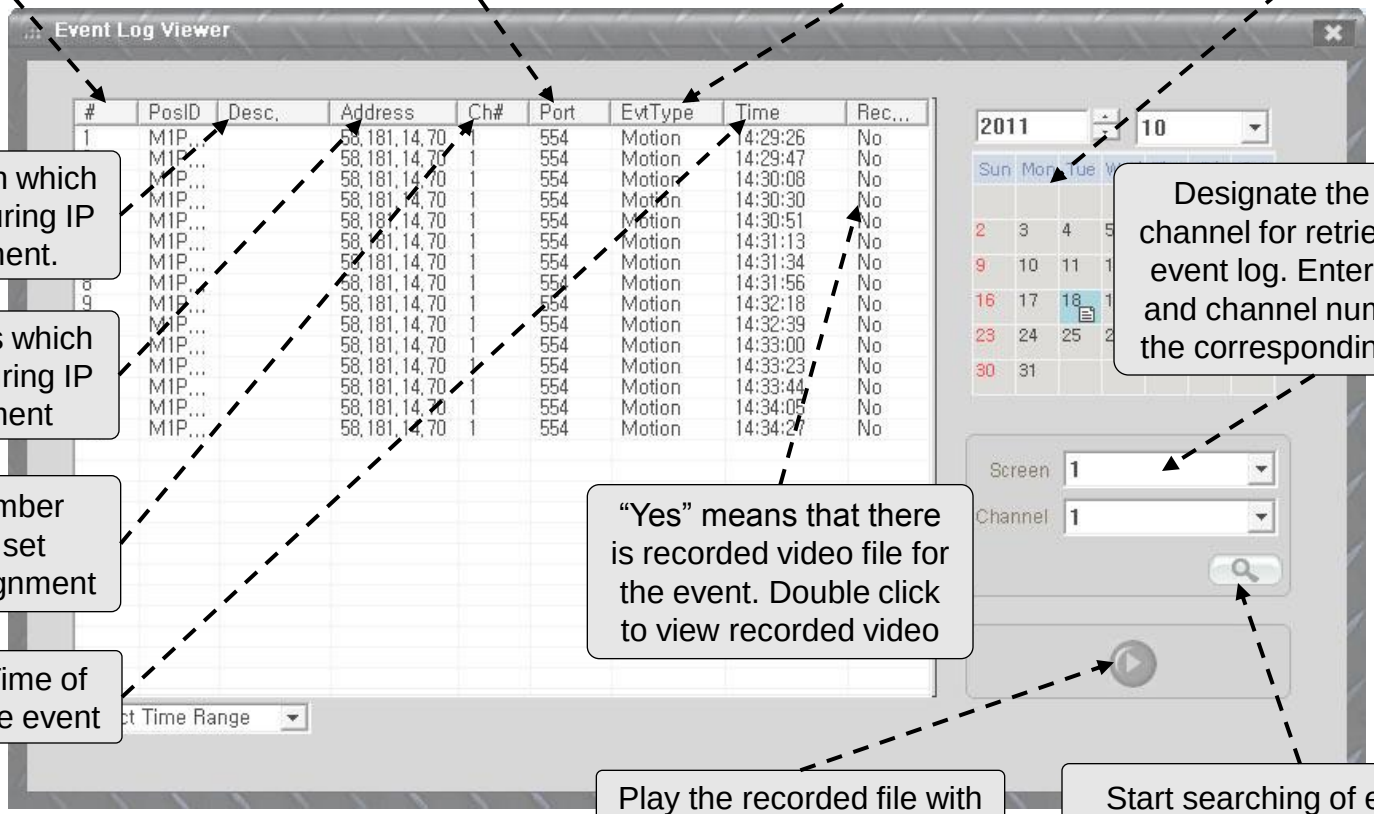


Event Log Window



Event indicator is highlighted upon event (Sensor, Motion, No Video, and Video Recovered)
Click on the highlighted indicator to show Event Log Window.

6.1. Even Log Window



Position of video channel at Speco-NVR screen

RTSP port which was set during IP assignment.

Event type : Motion, Sensor-1,2,3,4, No Video, Video Recovery

Highlighted when there is event log on the date.

Description which was set during IP assignment.

IP Address which was set during IP assignment

Channel number which was set during IP assignment

Time of the event

"Yes" means that there is recorded video file for the event. Double click to view recorded video

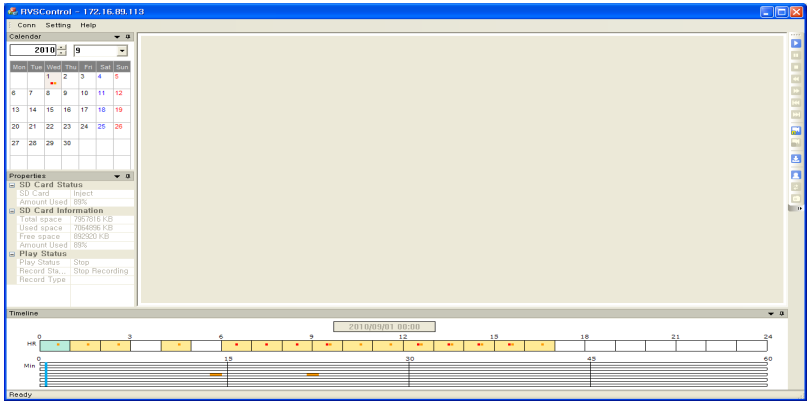
Designate the video channel for retrieving the event log. Enter screen and channel numbers.in the corresponding fields.

Play the recorded file with the icf player program.

Start searching of event log for the specified video channel

icfPlayer program is necessary to play the recorded video file at Event Log Window

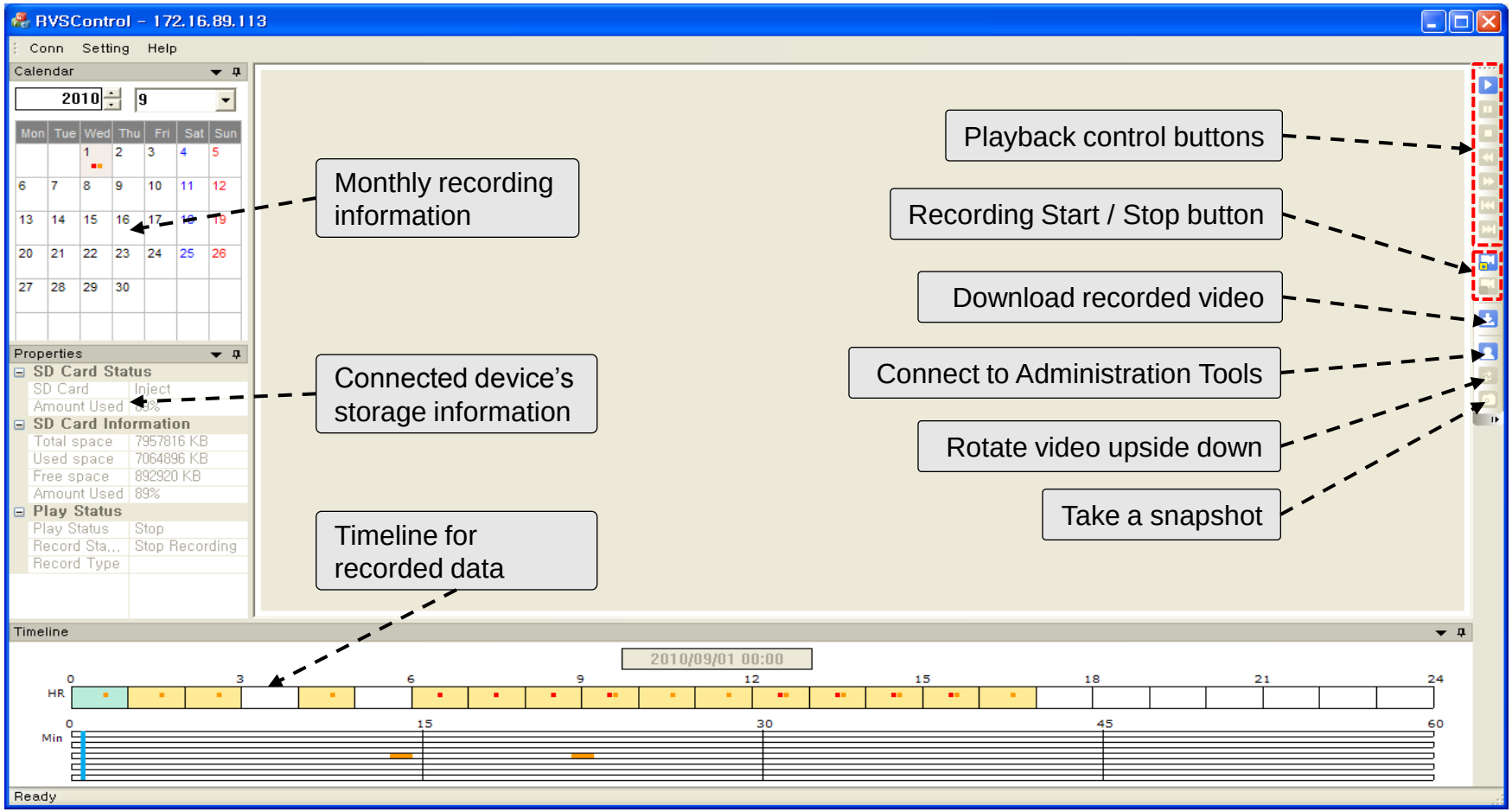
7. Remote Video Storage (RVS) Management



Target Application
- Management of video storage in IP Camera and Video Server.

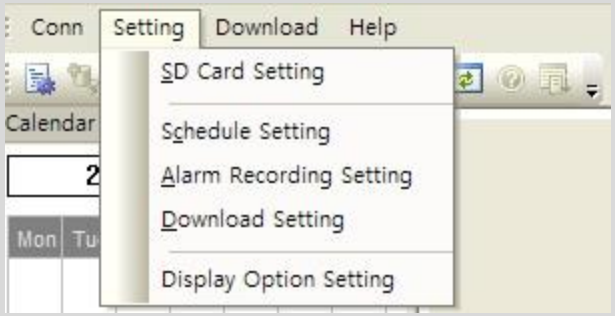
7.1. RVS Control - SD Card (H.264 series)

This feature is targeted to control H.264 cameras & servers having its own SD card.



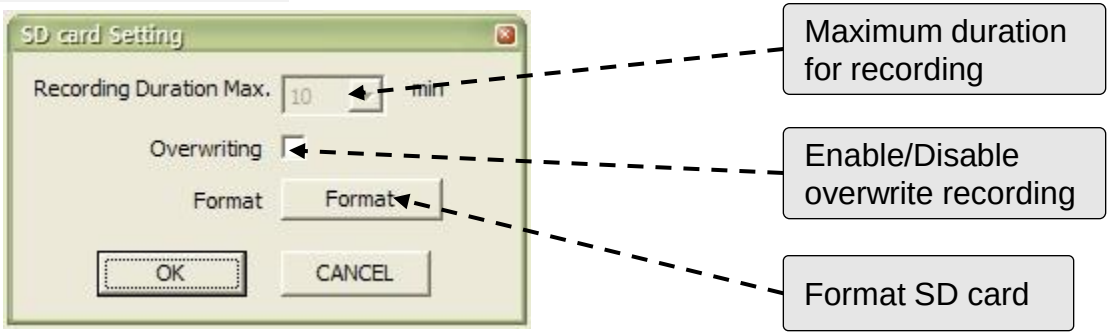
RVS Control screen

7.2. RVS Control - Menu

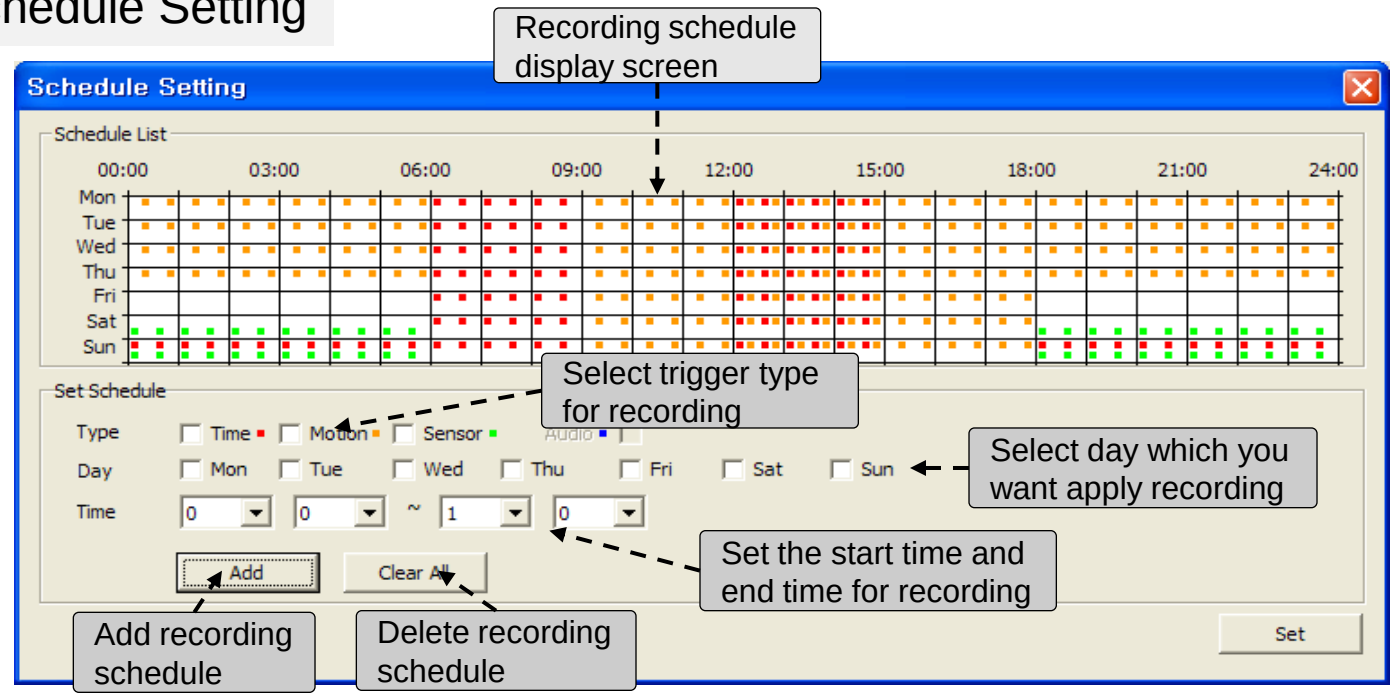
Menu	Sub menu	Description
	Exit	Close RVS control.
	SD Card Setting	Set recording options.
	Schedule Setting	Set recording schedule.
	Alarm Recording Setting	Set alarm recording duration.
	Download Setting	Set the download folder and file format.
	Display Option Setting	Control contrast & brightness and audio volume for playback.

7.3. RVS Control - Setting

SD card Setting

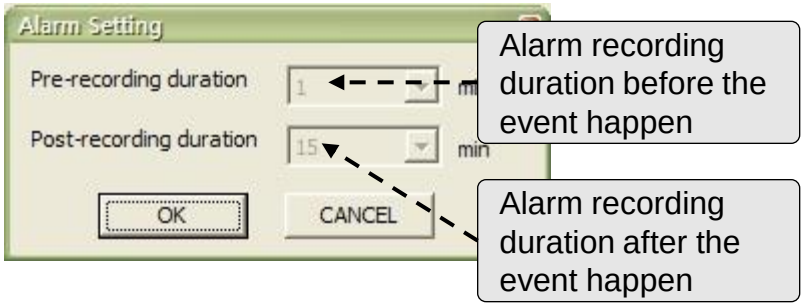


Schedule Setting

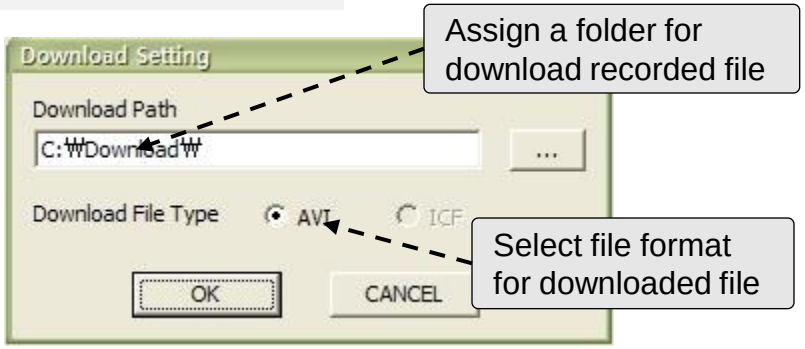


7.4. RVS Control - Setting

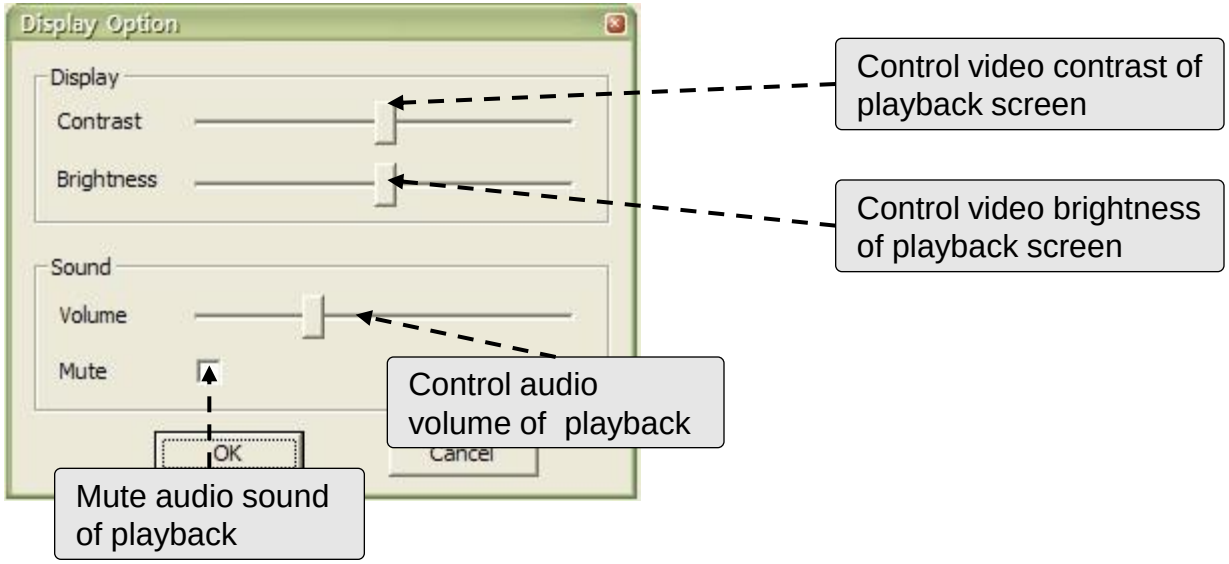
Alarm Setting



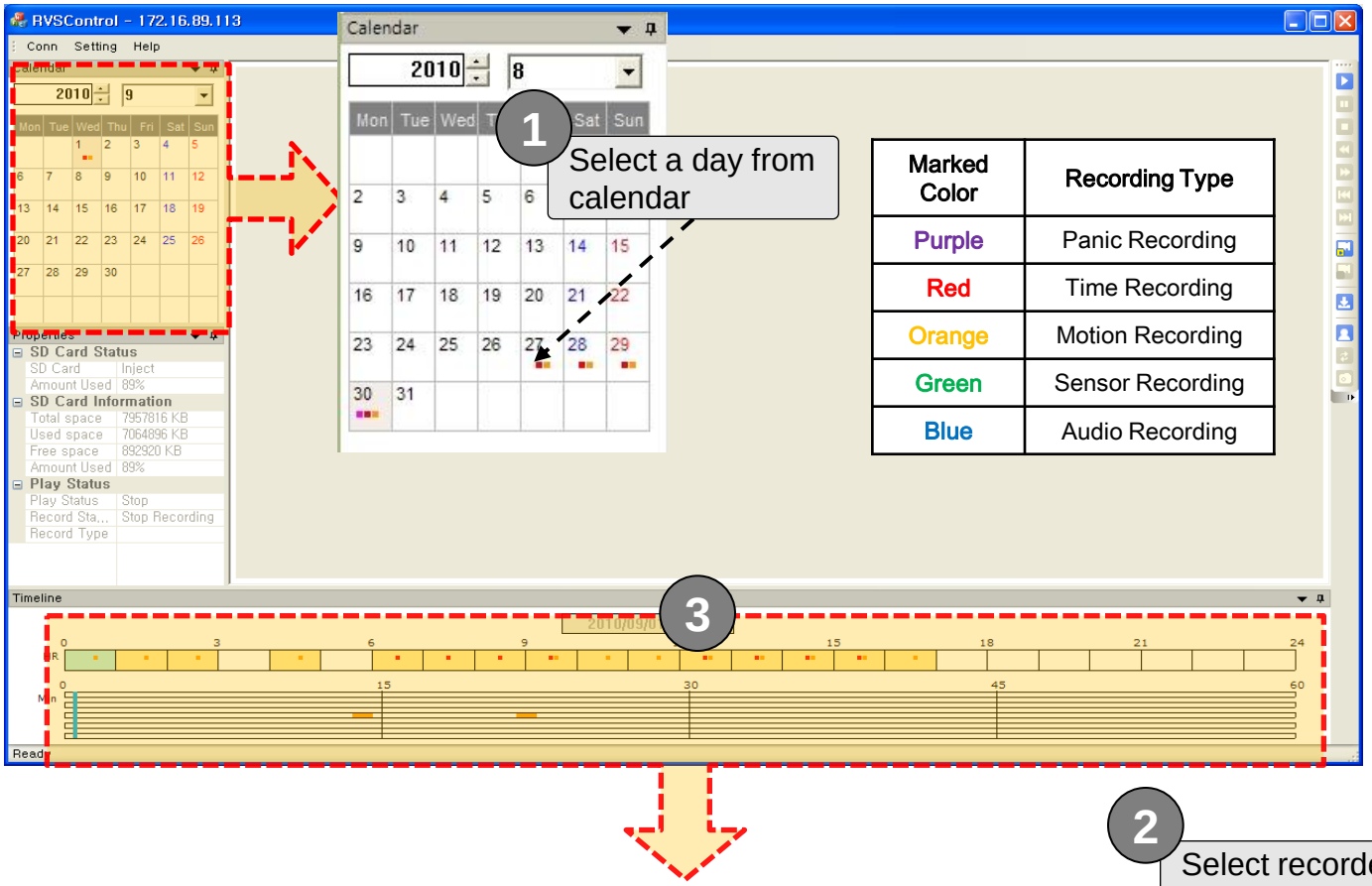
Download Setting



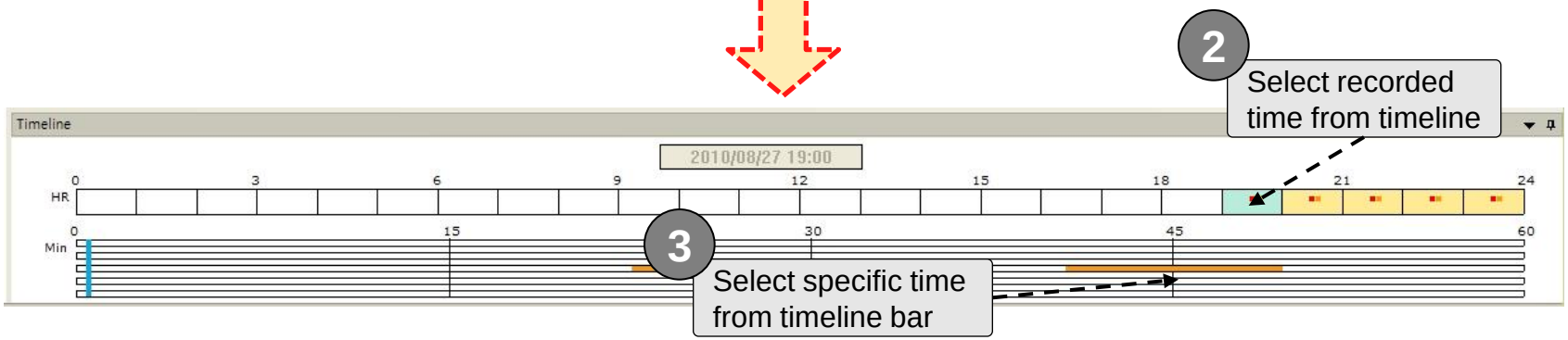
Display Setting



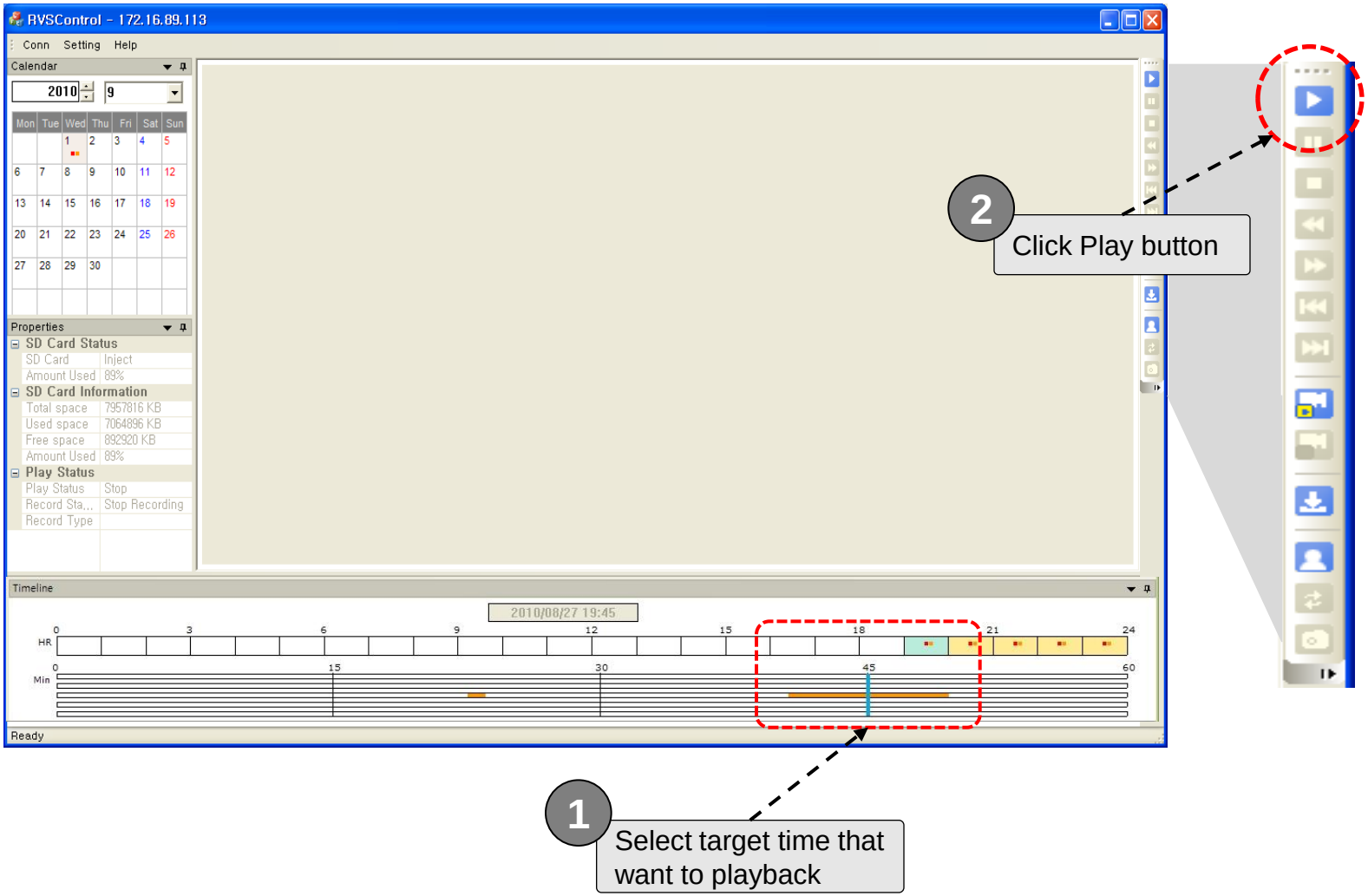
7.5. RVS Control – Search



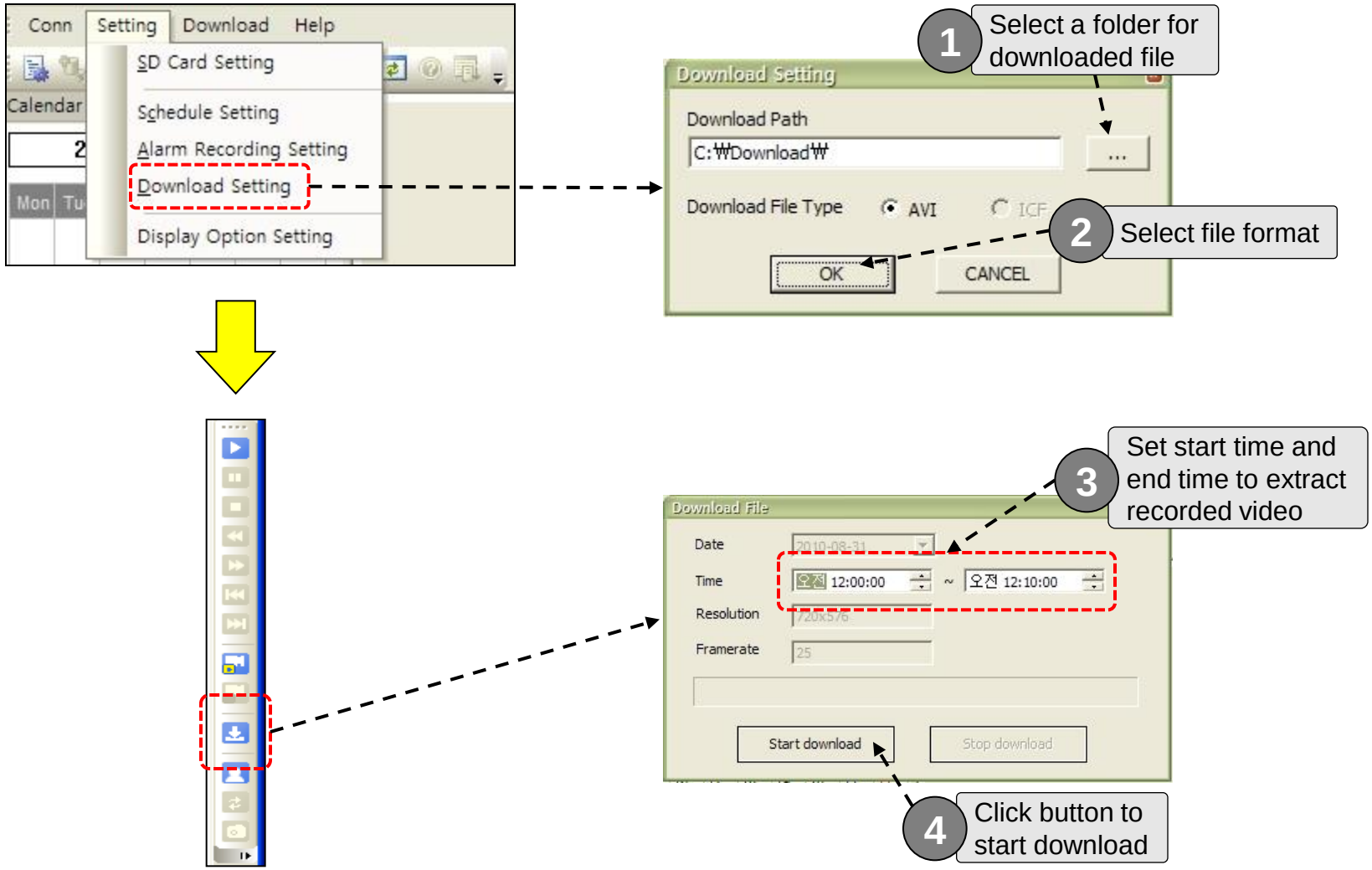
Marked Color	Recording Type
Purple	Panic Recording
Red	Time Recording
Orange	Motion Recording
Green	Sensor Recording
Blue	Audio Recording



7.6. RVS Control – Playback

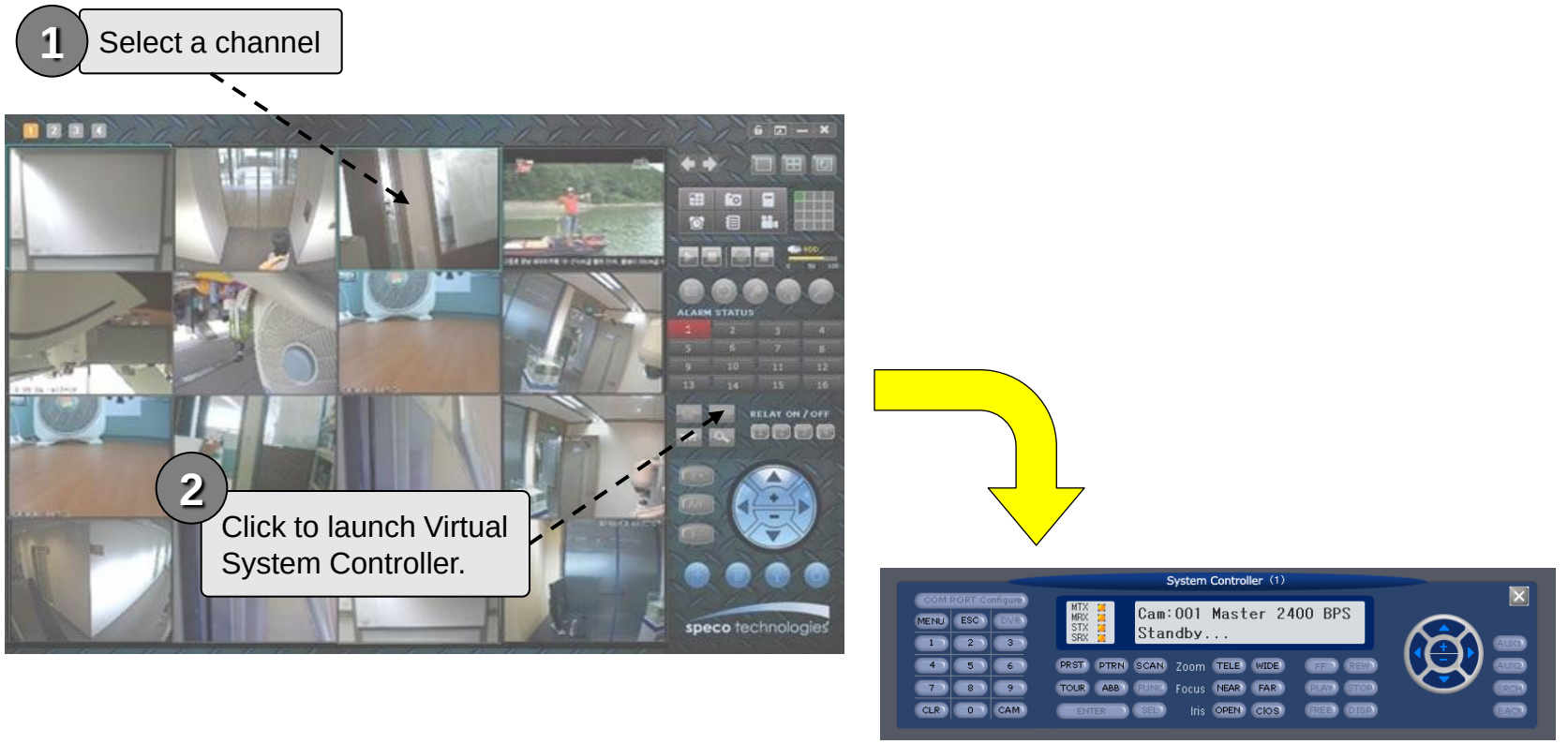


7.7. RVS Control – Download



8. Virtual System Controller

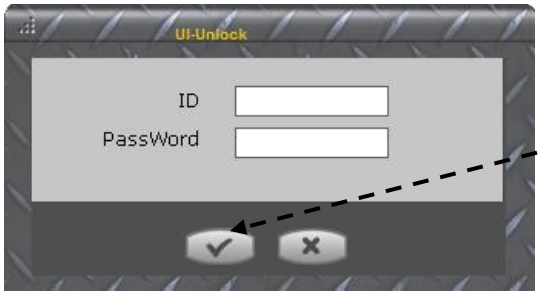
Virtual System Controller is a program module that emulate keyboard controller for PTZ cameras. This feature is supported OPTZ36XI. OPTZ36XO.



There are many powerful features supported by Virtual System Controller. Please refer to “Virtual System Controller User’s Manual” for the details.

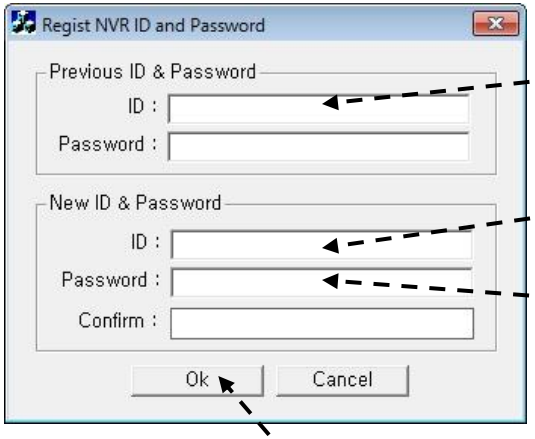
9. Screen Lock & Unlock

The program can be terminated only after the valid ID and password are entered.



Default value is empty.
Just click on the this button to initiate the termination.

To assign new ID and password run ‘program files>NVR->RegistNVRIDPwd”.



Existing ID and password. Skip this upon initial setting.

New ID.

Enter password for new ID and confirm

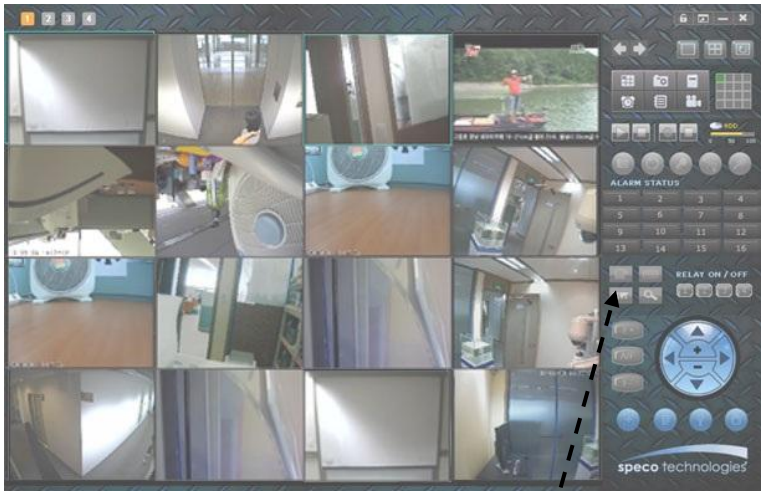
Click OK to finish the setting.

9. Screen Lock & Unlock

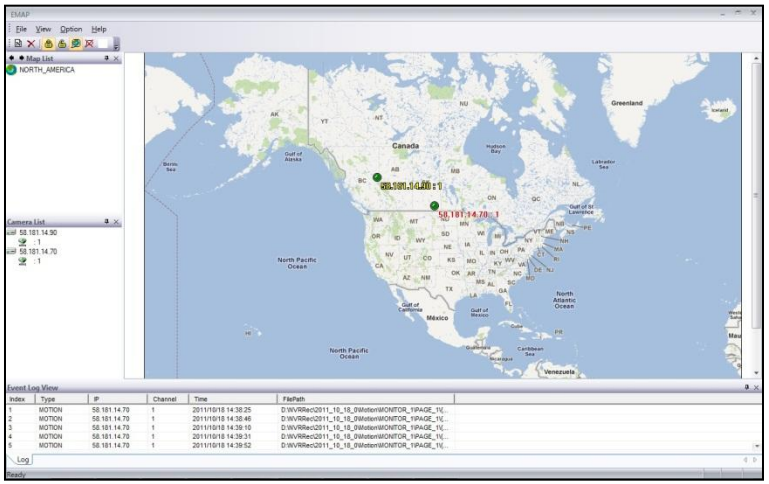
1. Click  to lock the program. The icon will be changed to  .
2. When  is clicked after the program is locked, Speco-NVR will ask for ID and password to unlock the program.
3. The icon will be changed to  after unlock.

10. E-MAP

E-Map is a feature to position the cameras and video from them on map images.



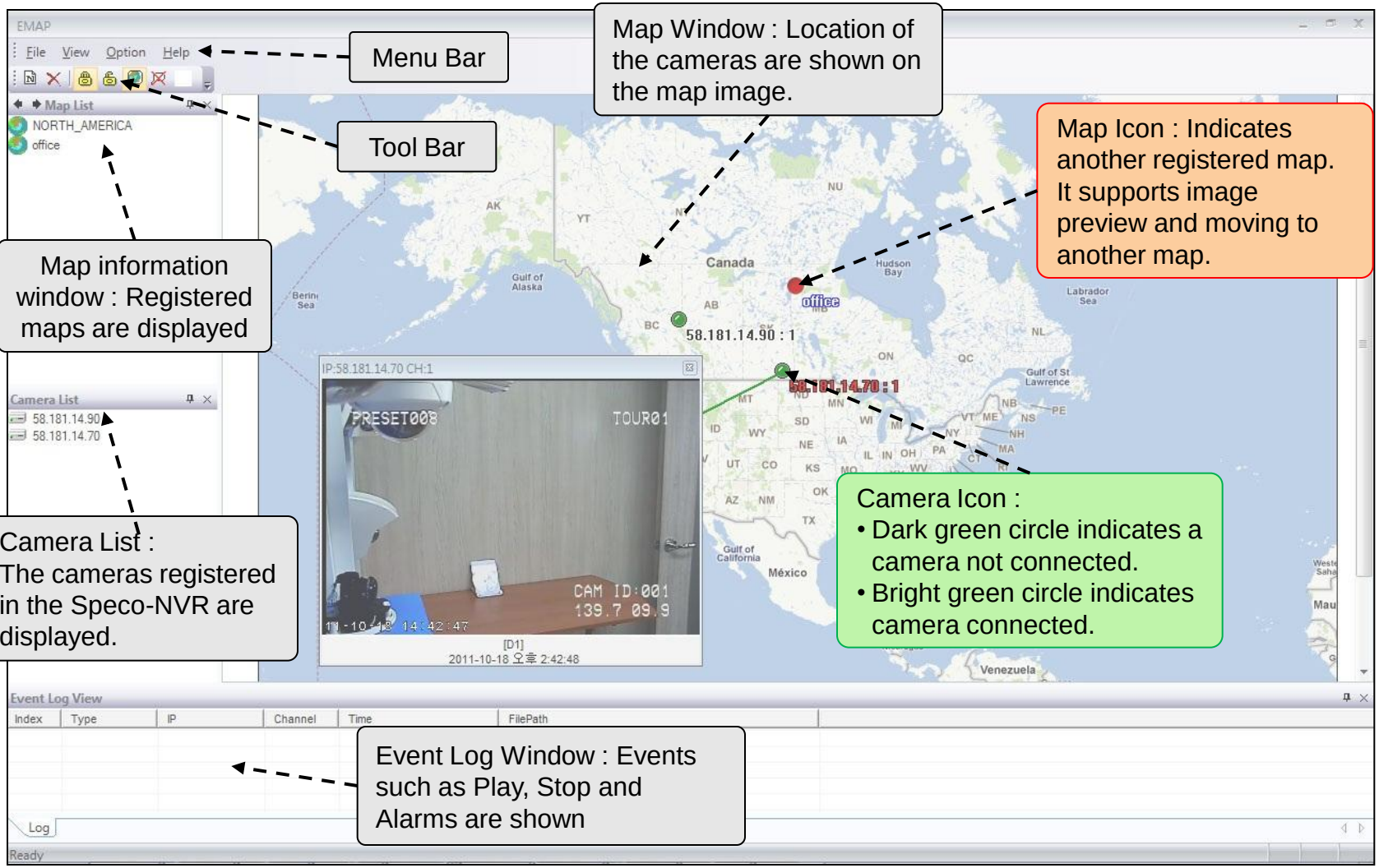
Initiate E-Map



E-Map Controller

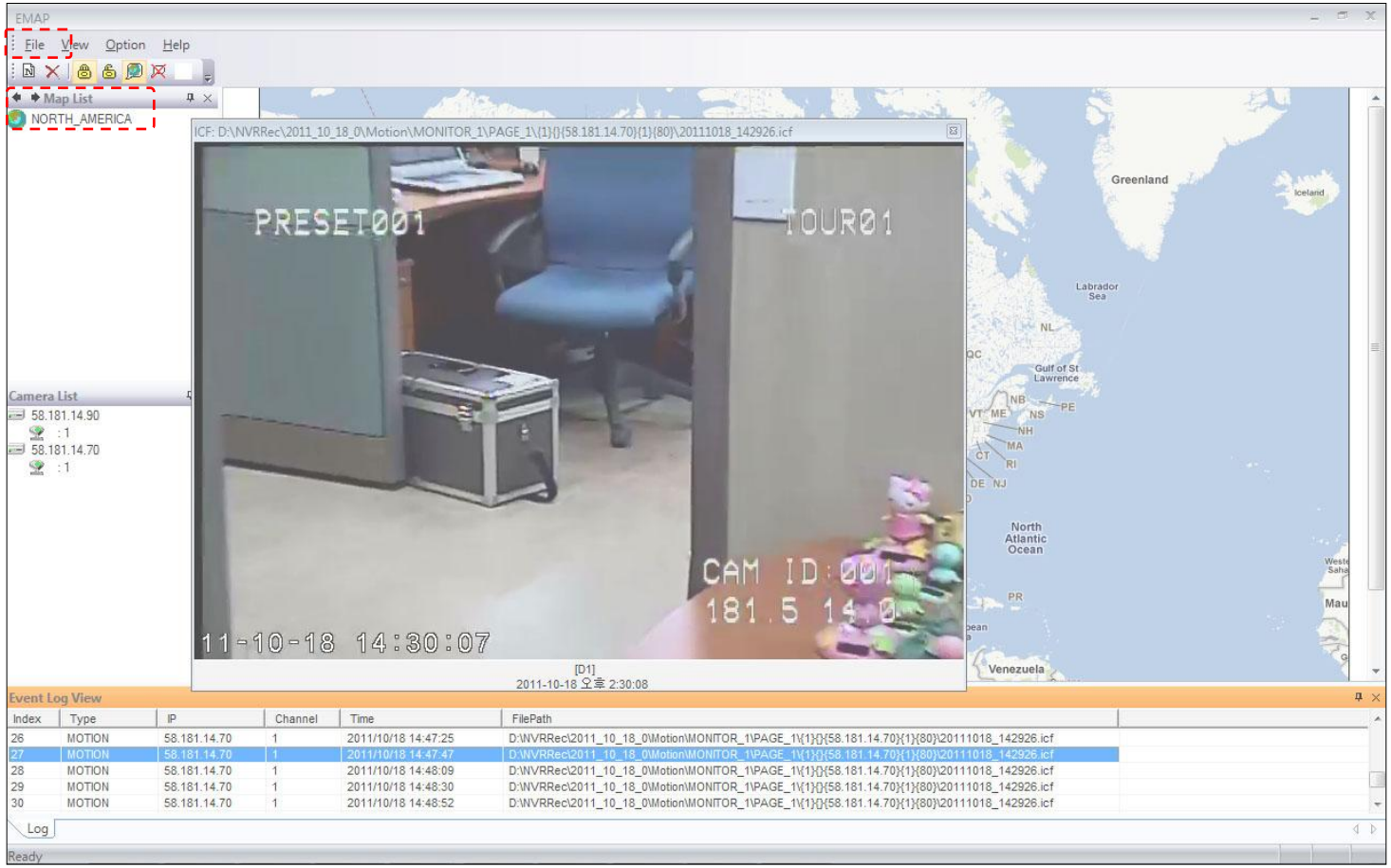
Map Data is not provided.
Mad data should be provided by the installer.

10.1. E-Map – GUI


Menu Bar
Tool Bar
Map Window : Location of the cameras are shown on the map image.
Map Icon : Indicates another registered map. It supports image preview and moving to another map.
Map information window : Registered maps are displayed
Camera List : The cameras registered in the Speco-NVR are displayed.
Camera Icon :
• Dark green circle indicates a camera not connected.
• Bright green circle indicates camera connected.
Event Log Window : Events such as Play, Stop and Alarms are shown
EMAP
File View Option Help
Map List
NORTH_AMERICA
office
Camera List
58.181.14.90
58.181.14.70
58.181.14.90 : 1
58.181.14.70 : 1
IP:58.181.14.70 CH:1
PRESET008
TOUR01
CAM ID:001
Event Log View
Index Type IP Channel Time FilePath
Log
Ready

10.2. E-Map – Addition and Deletion of Map Image

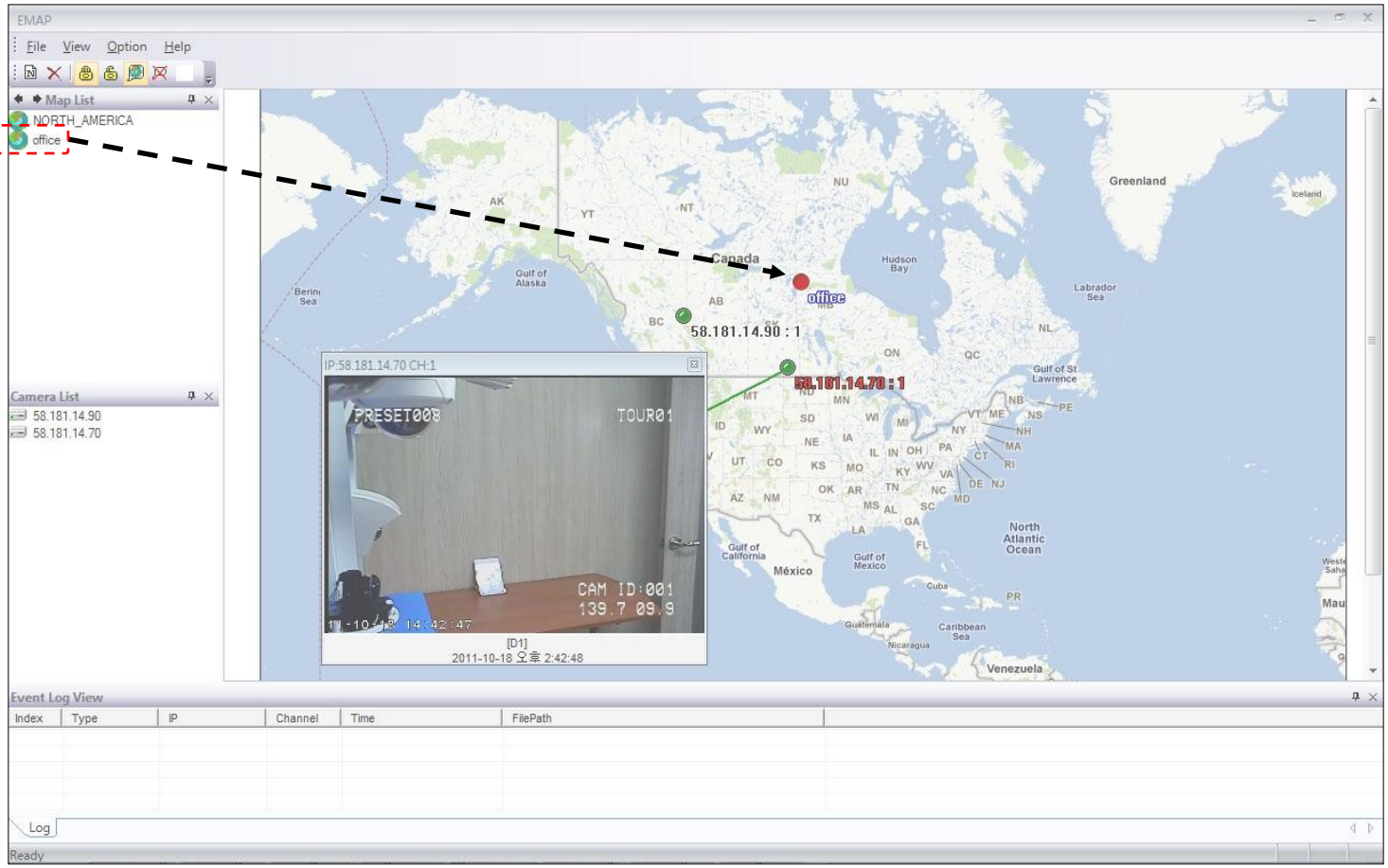
1. Move to other map : Double click on the map data.
2. Addition and deletion of map
   : Select a map to add or delete and choose Menu -> File -> New Map or Delete Map.
3. Map file support BMP format.



10.3. E-Map – Placing Map Icon

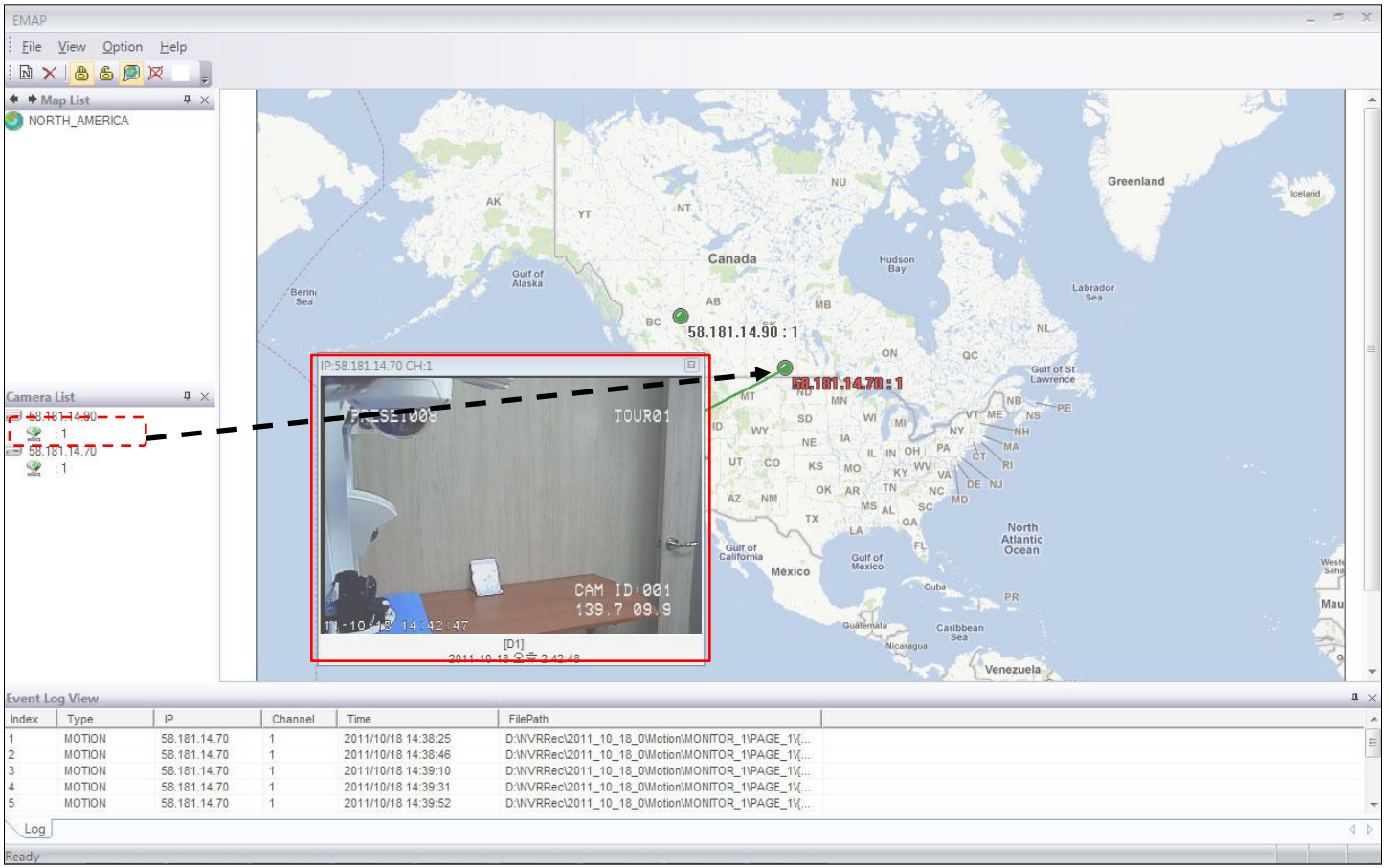
Multi-Map : Select a map data from the map information window and then perform Drag & Drop to place a Map Icon on the Map window.

The Map Icon can be double clicked to move to the map.



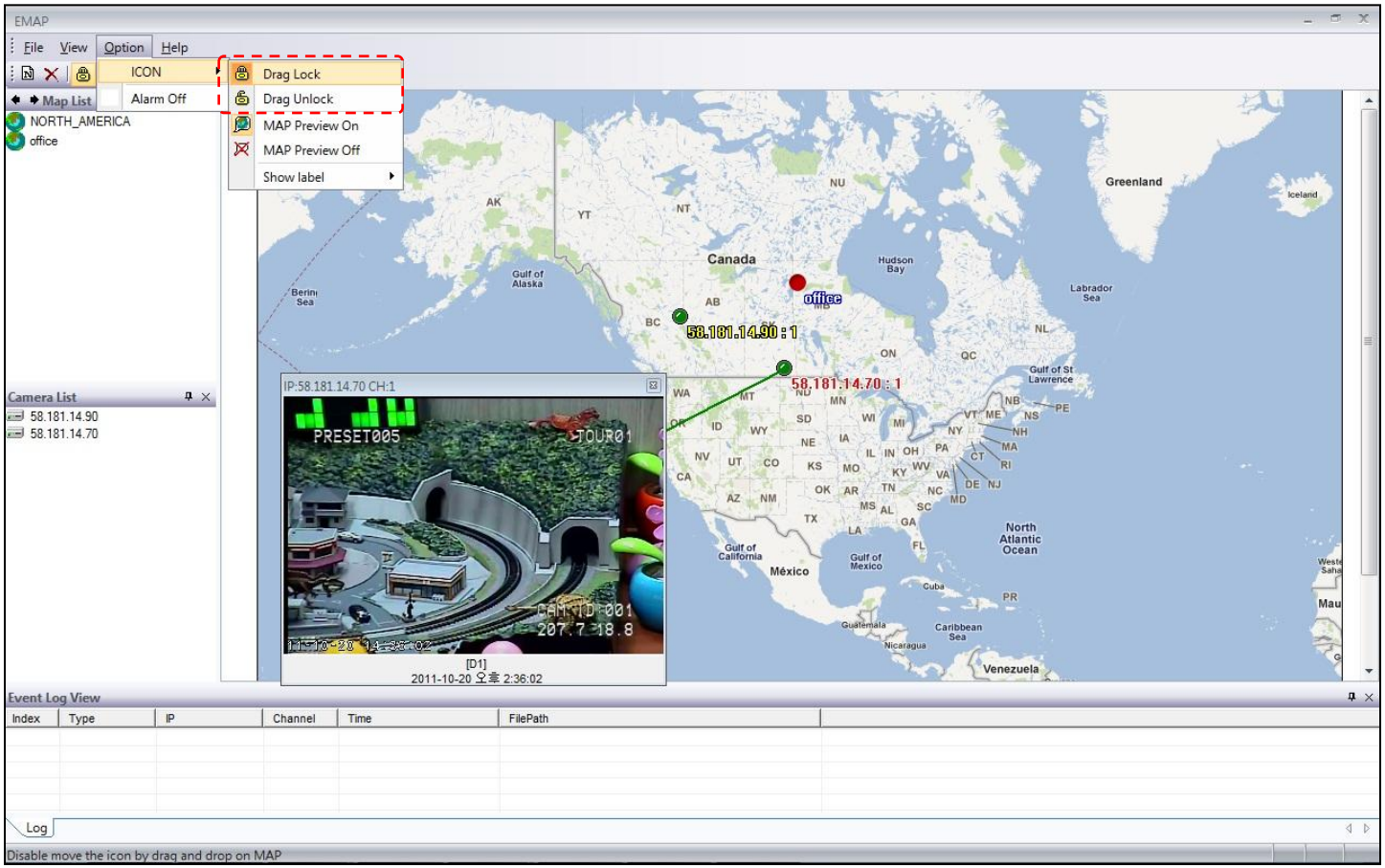
10.4. E-Map – Placing Camera Icon

Select a camera data from the camera list and then perform Drag & Drop to place a camera Icon on the Map window.



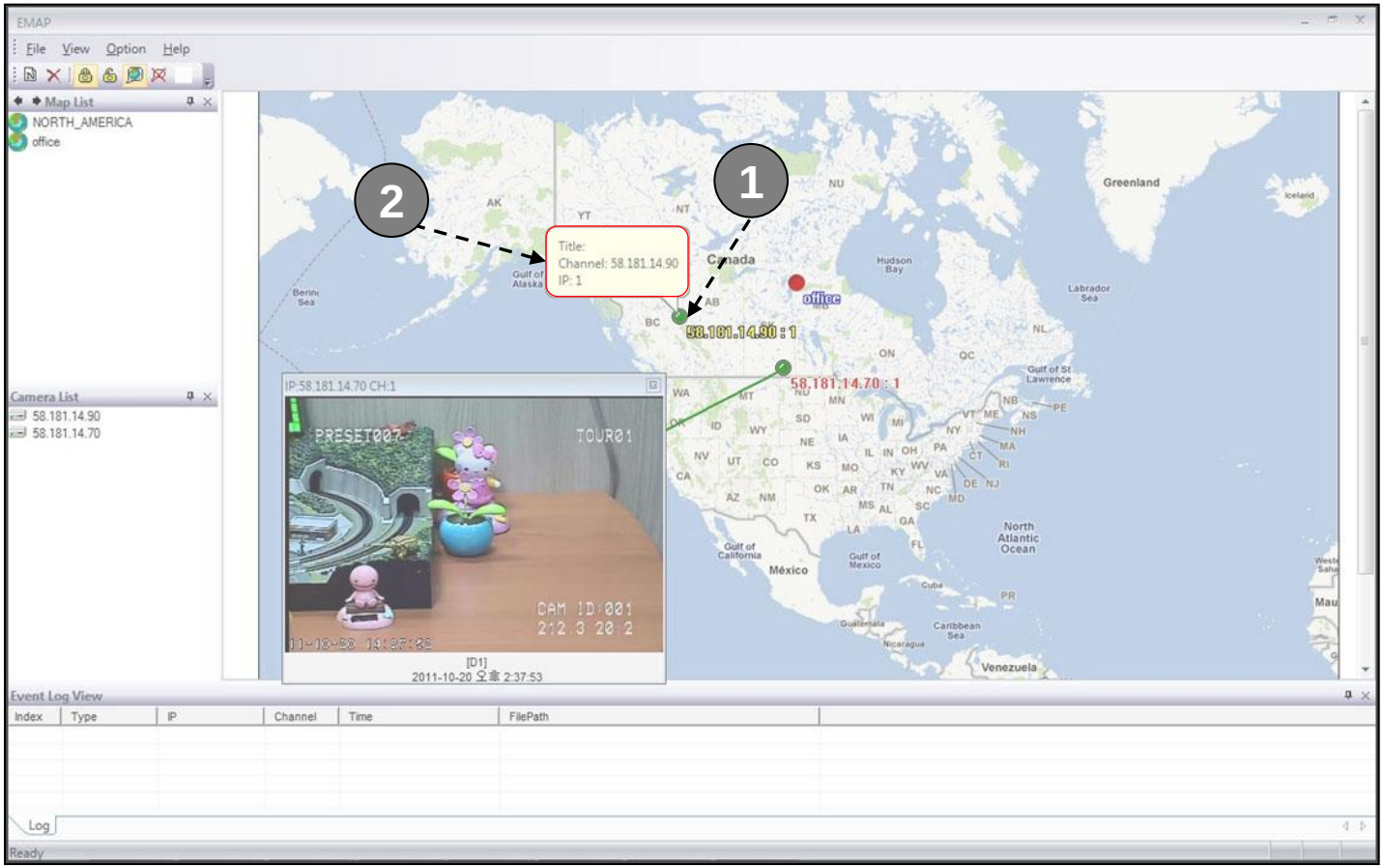
10.5. E-Map – Locking/Unlocking the locations of the Icons

Select Drag Lock or Drag Unlock from Menu -> Icon to lock or unlock the location of the icons.



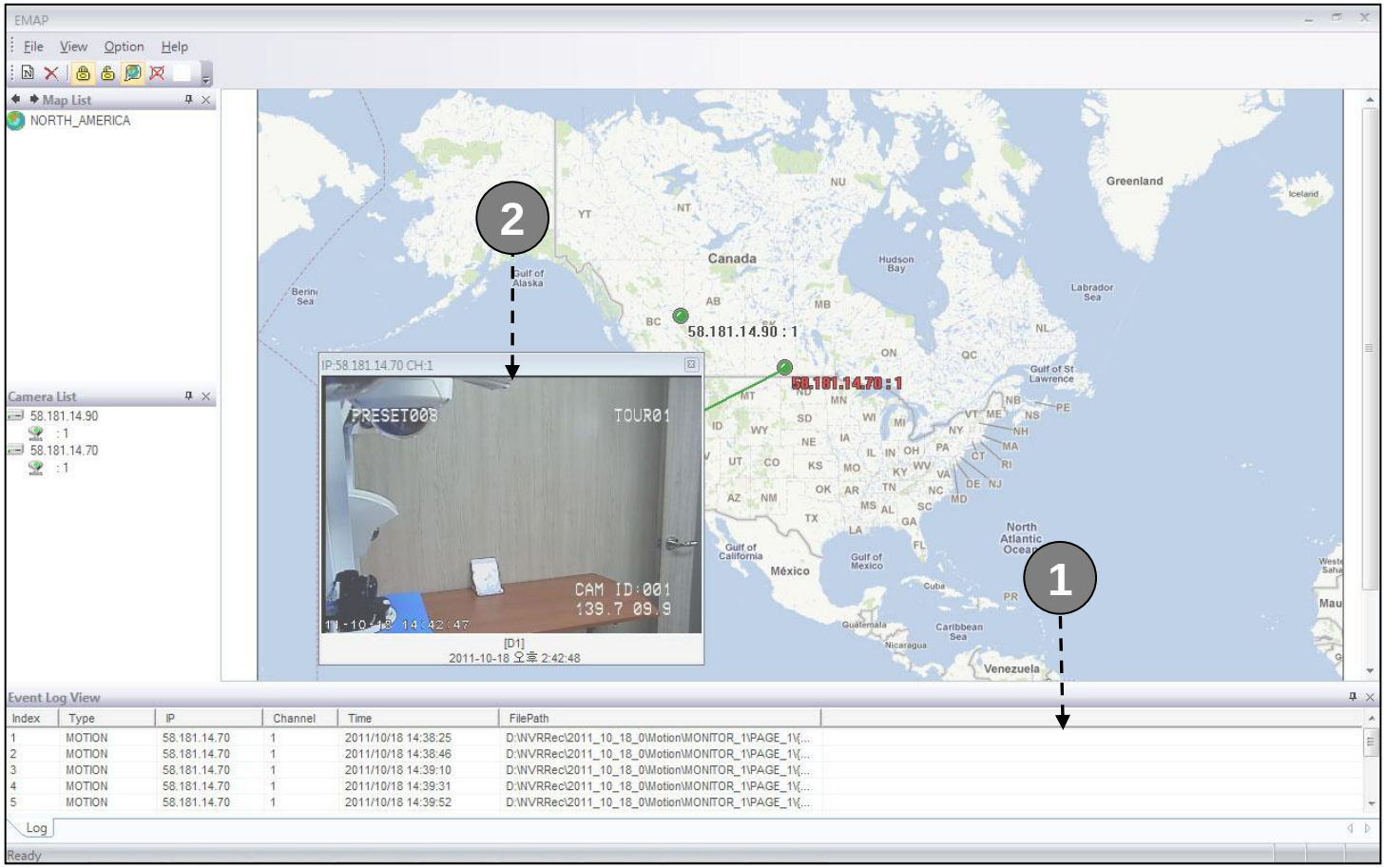
10.6. E-Map –Msp and Camera Status Indication

1. Camera status : Dark Green circle indicates a camera not connected. Bright green circle indicates a camera connected.
2. Information Display : Locate the cursor on top of the Icon to show the address, channel and description of the camera.



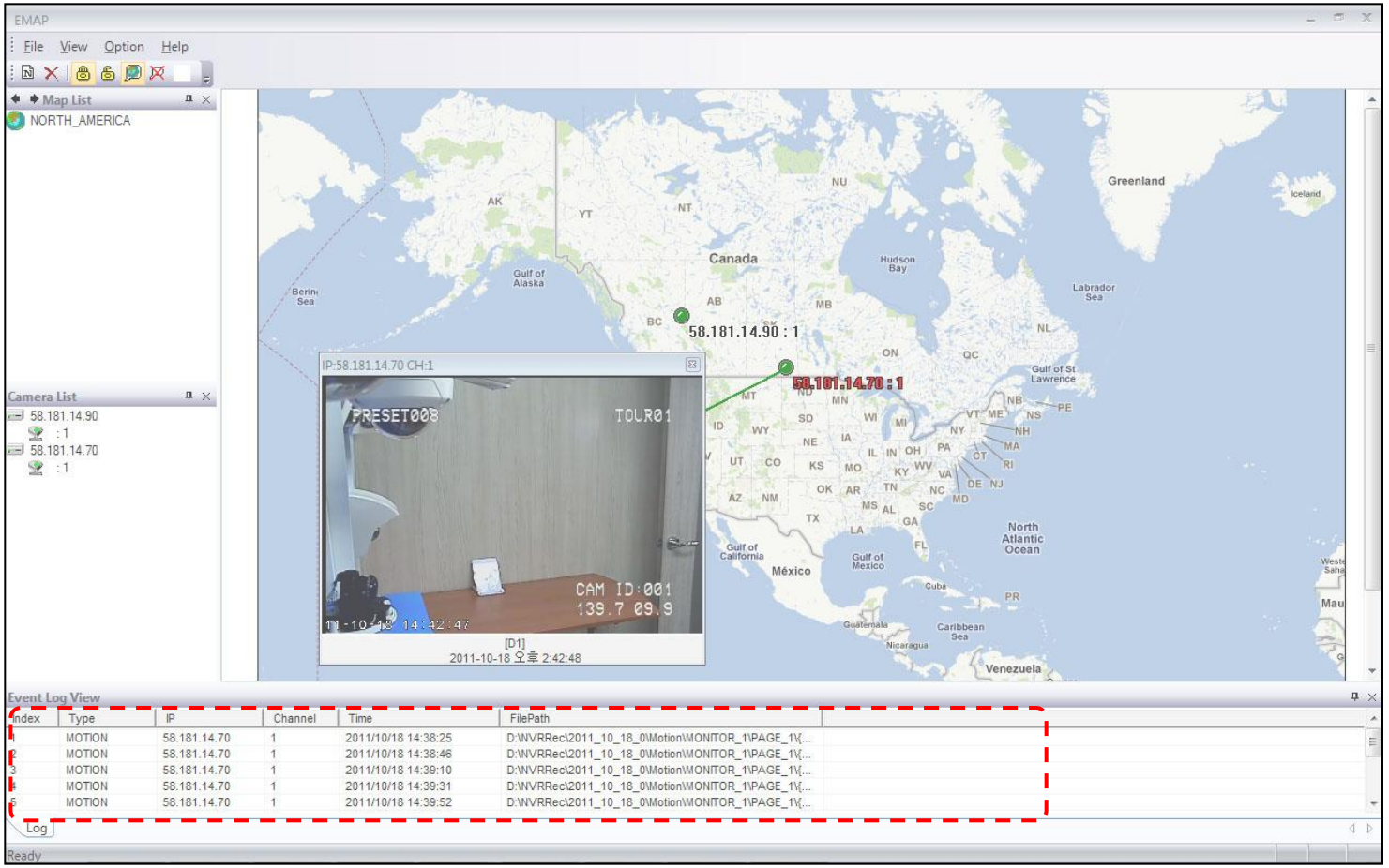
10.7. E-Map – Connection to the Camera for Live View

1. Pop-up menu : Clink on the right button after placing the cursor on the Camera Icon for the pop-up menu.
2. Live Pop-up : Double click the Camera Icon or select View from the pop up menu to show live streaming data from the camera.



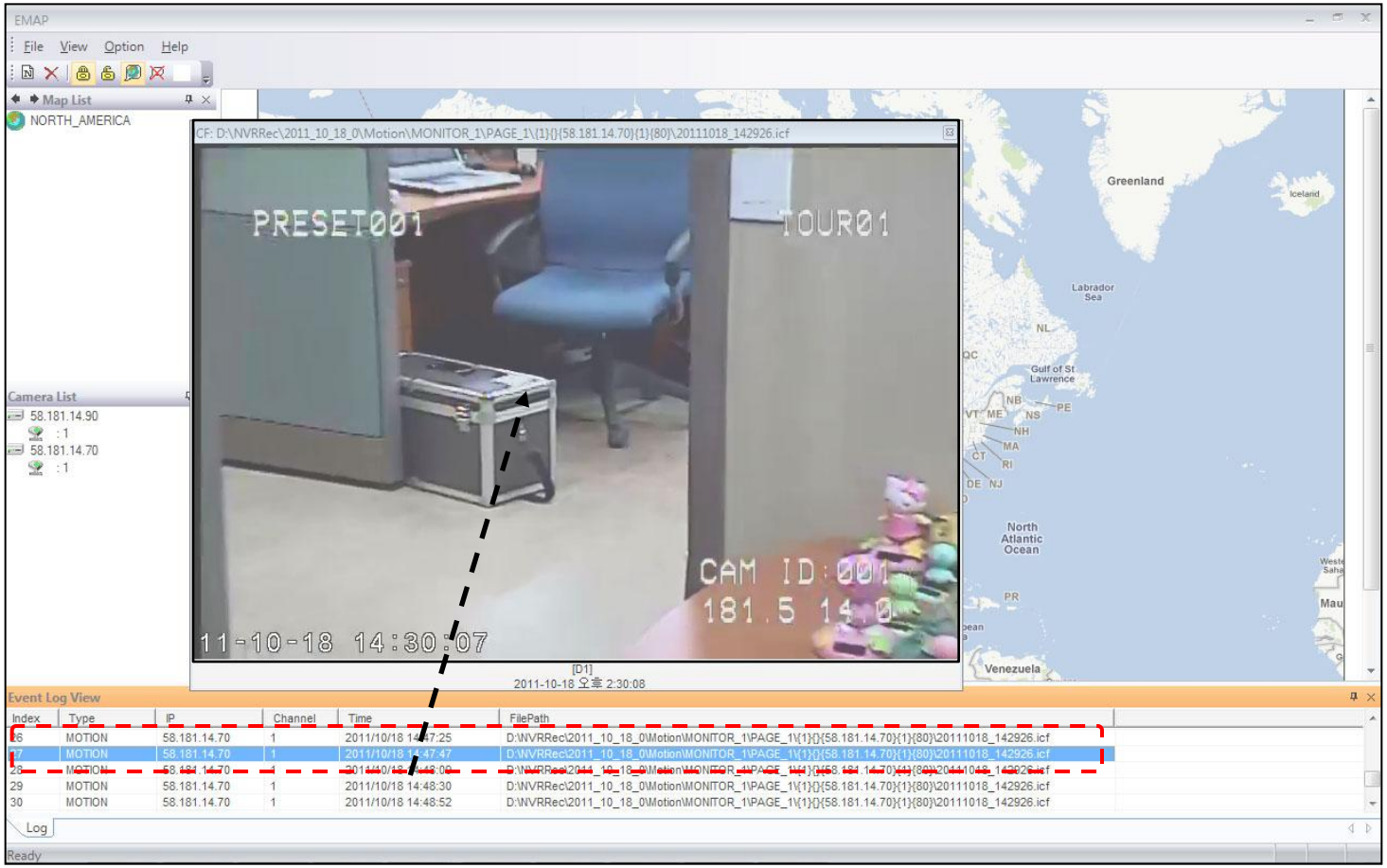
10.8. E-Map – Event Display

The list of events are displayed in this window.



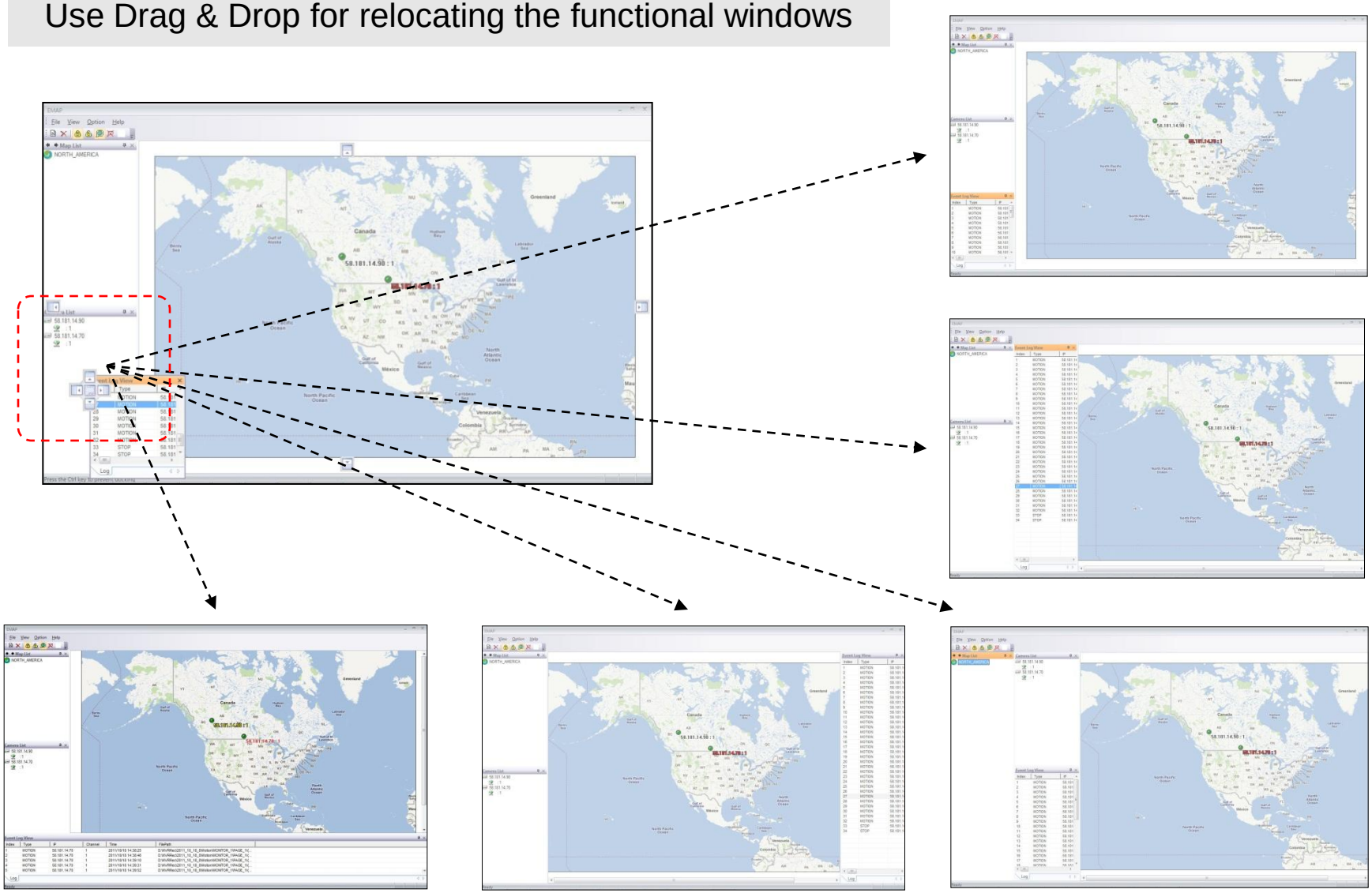
10.8. E-Map – Event Display

1.Double click on the file path to playback the alarm event on a pop-up window
2.Up to 1000 events are stored and the oldest event will be removed to record new event.



10.9. E-Map – Relocating the Functional Windows

Use Drag & Drop for relocating the functional windows



Appendix A. – Recommended CPU/Graphics Card Spec.

CPU

CPU	Resolution	Video rate / frame rate	Max Ch	RAM
i7 2600	1600x1200	4M / 15fps	16	4GByte or Above
	1280x720	3M / 30fps	20	
	704x480	1M / 30fps	64	
i5 2500	1600x1200	4M / 15fps	12	
	1280x720	3M / 30fps	16	
	704x480	1M / 20fps	64	
i3 2100	1600x1200	4M / 15fps	8	
	1280x720	3M / 30fps	11	
	704x480	1M / 30fps	32	

Graphics Card

Use Graphics Card which is based on ATI Radeon Chipset

Appendix B. - HDD Space Calculation

Use storage calculator in selection guide for calculation of the space.

1CH Digital Video Data Storage Requirement (iCanView200/300 Series or 1Ch Video Server)

Data Input Fields		
Cameras	**1**	**Cameras**
Average Video Rate	**1024**	**Kbps**
Average audio Rate	**32**	**Kbps**
Total	1056	**Kbps**

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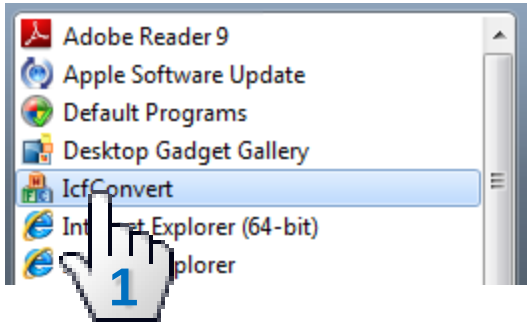
Calculated Results Fields														
Data Bandwidth	1,056	Kbits/S												
	1.03125	Mbits/S												
Storage Requirements	132	KBytes/S												
	464	MBytes/Hr		0.453186	GB/Hr									
	11,138	MBytes/Day		10.876465	GB/Day									
	77,963	MBytes/Week		76.135254	GB/Week									
Storage Days	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Storage Size (Gbytes)	10.9	21.8	32.6	43.5	54.4	65.3	76.1	87.0	97.9	108.8	119.6	130.5	141.4	152.3
Storage Weeks	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Storage Size (Gbytes)	76.1	152.3	228.4	304.5	380.7	456.8	532.9	609.1	685.2	761.4	837.5	913.6	989.8	1,065.9
Storage Size (Tbytes)	0.08	0.15	0.23	0.30	0.38	0.46	0.53	0.61	0.69	0.76	0.84	0.91	0.99	1.07
Storage Months	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Storage Size (Gbytes)	329.9	659.8	989.8	1,319.7	1,649.6	1,979.5	2,309.4	2,639.4	2,969.3	3,299.2	3,629.1	3,959.0	4,289.0	4,618.9
Storage Size (Tbytes)	0.33	0.66	0.99	1.32	1.65	1.98	2.31	2.64	2.97	3.30	3.63	3.96	4.29	4.62

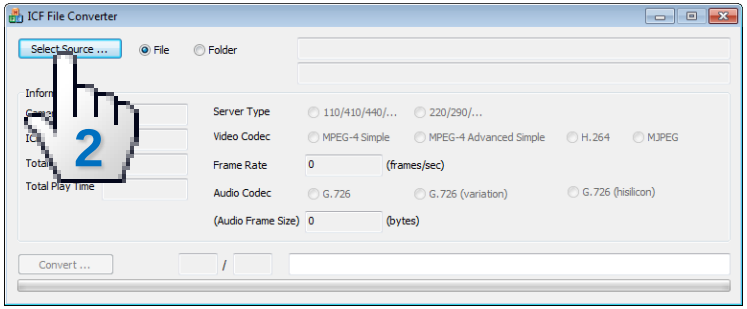
Appendix C. – Converting ICF file to AVI file

Procedure

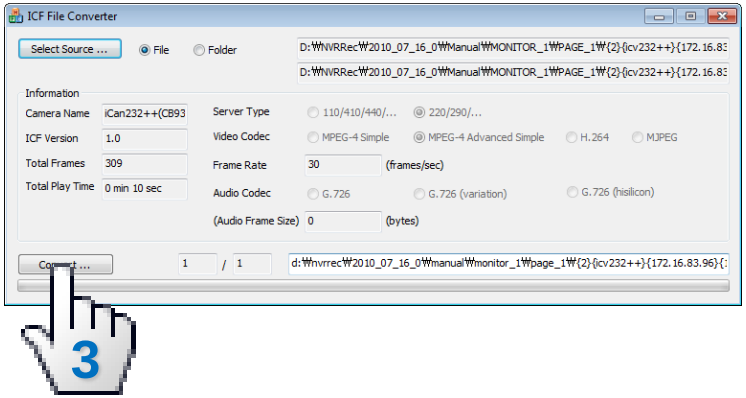
1. Click START and Run IcfConverter from program menu.



2. Click ‘Select Source’ and select ICF format file.



3. Click ‘Convert’ button to convert file format to AVI.



4. When the converting is complete, a window pops up. Click OK and check the converted AVI file.