

Server Application

NVR

v2.2

User's Manual

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1. Overview

Introduction

This material covers NVR overview on the overall framework, architecture, deployment and functions.

This section introduces NVR functionalities, architecture and the relationship between modules, so that user may have better understanding how to fully utilize its functions and deploy with right solution

NVR Edition Notice

This section describes the differences between Enterprise edition and Professional edition. This materials cover both edition. User need to check the related section for these editions.

	NVR	
	Enterprise Edition	Professional Edition
Maximum Number of Channel	64	64
Free License	16	64
Deployment	Client-Server	Single-Server
Active Monitor	v	v
Active Player	v	v
Active Map	v	v
Active Setup	v	v
NVR Web Client	v	n/a
Get video from other NVR	v	n/a
Stream video to other NVR	v	n/a
Can be managed by CMS	v	n/a

* Please note that NVR Professional version DOES NOT support NVR Web Client.

Application Modules







NVR Server is consist of following application modules: NVR Server, NVR Workstation, Web Client and Utility suite.

NVR license is mandatory in NVR Server if there are more than 16 channels. Valid license number is 32, 49 and 64. There is no limitation on the number of ACT NVR Web Client and NVR Workstation installed.

NVR Server

NVR Server is consist of Win32 Service, running in the background of the operating system. Win32 Services start running when the system boot up even Administrator has not login to Windows system. NVR Server's configuration is done by NVR Workstation or NVR Web Client Setup program.





NVR Server Components:

Icon	Name	Description
	ActiveEventManager.exe	Event handling and management, running as Win32 Service
	ActiveMessageEngine.exe	Message engine handles messages and pass to multiple clients running message client
	ActiveSchedulerService.exe	Scheduler handling system and recording schedules, running as Win32 Service
	ActiveServiceManager.exe	Service manager manages NVR Server's services, acting Watch Dog. Service Manager will starts other Win32 Service if those services are down. Running as Win32 Service
	ActiveStorageManager.exe	Storage manager manages many hard-disk capacities in the system, running as Win32 Service
	ActiveStreamingService.exe	Streaming engine handles connection to IP devices and copy video stream to multiple clients

NVR Workstation

NVR Workstation is consist of ActiveMonitor, ActivePlayer, ActivMap and ActiveSetup. NVR Workstation can be installed in the same machine with NVR Server or installed and running on another computer and control different NVR Server.

NVR Workstation Components:

Icon	Name	Description
	Acti veMoni tor. exe	Live view, PTZ, IP Joystick, system log monitor, event panel, Pre-defined layout, Tour
	Acti vePal yer. exe	Archive player, synchronous playback, snapshot viewer, file export
	Acti vMap. exe	Map viewer, tour
	Acti veSetup. exe	System, camera and map setup




NOTE: NVR Workstation is free and can be installed on multiple machines.

NVR Web Client

NVR Web Client is running with web browser and does not have to install any program on local machine. ActiveX Control will be downloaded to the local machine when connected to the NVR Server at the first time.

NVR Workstation Components:

Icon	Name	Description
	IEplorer.exe	Live view, PTZ, IP Joystick, system log monitor, event panel, Pre-defined layout, Tour
		Archive player, snapshot, synchronous playback, file export
		Map viewer
		System and camera setup



NOTE: NVR Web Client only supports Microsoft Internet Explorer v6.0 and v7.0. Please upgrade Internet Explorer v6.0 to SP2.









NOTE: ActiveX Control include `nvUnifiedControl.ocx` and `nvUtility.dll`.

Utility Suite

Utility Suite is consist of IP Utility, Streaming Explorer, Archive Player, Backup Wizard, Media Converter and FFDSHOW.

Utility Suite Components:

Icon	Name	Description
	IPUtility.exe	Search and manage devices, firmware upgrade, configuration backup and restore
	Explorer.htm	Web browser application to configure PTZ settings.
	ArchivePlayer.exe	Standalone archive player, create snapshots, display time code on the video window directly. Able to play .RAW format
	BackupWizard.exe	Backup and restore NVR v2.0, NVR v2.1
	MediaConverter.exe	Converts .RAW data format to .AVI format. Note that in order to play the .AVI file converted with Microsoft Windows Media Player, user need to install FFDSHOW on the client machine.
	FFDSHOW.exe	MPEG-4 DirectShow filter. This is necessary if user wants to play .AVI file with Microsoft Windows Media Player.

Architecture

The role of NVR Server is a non-stop Win32 Service connecting to IP cameras and devices; while NVR Workstation and Web Client connecting to NVR Server to operate.

Single Site Deployment

With single site deployment, cameras are all located in one site, NVR Server and NVR Workstation can be run at the same PC machine as well; NVR Web Client can be executed on any other machines that may connect to the NVR Server.

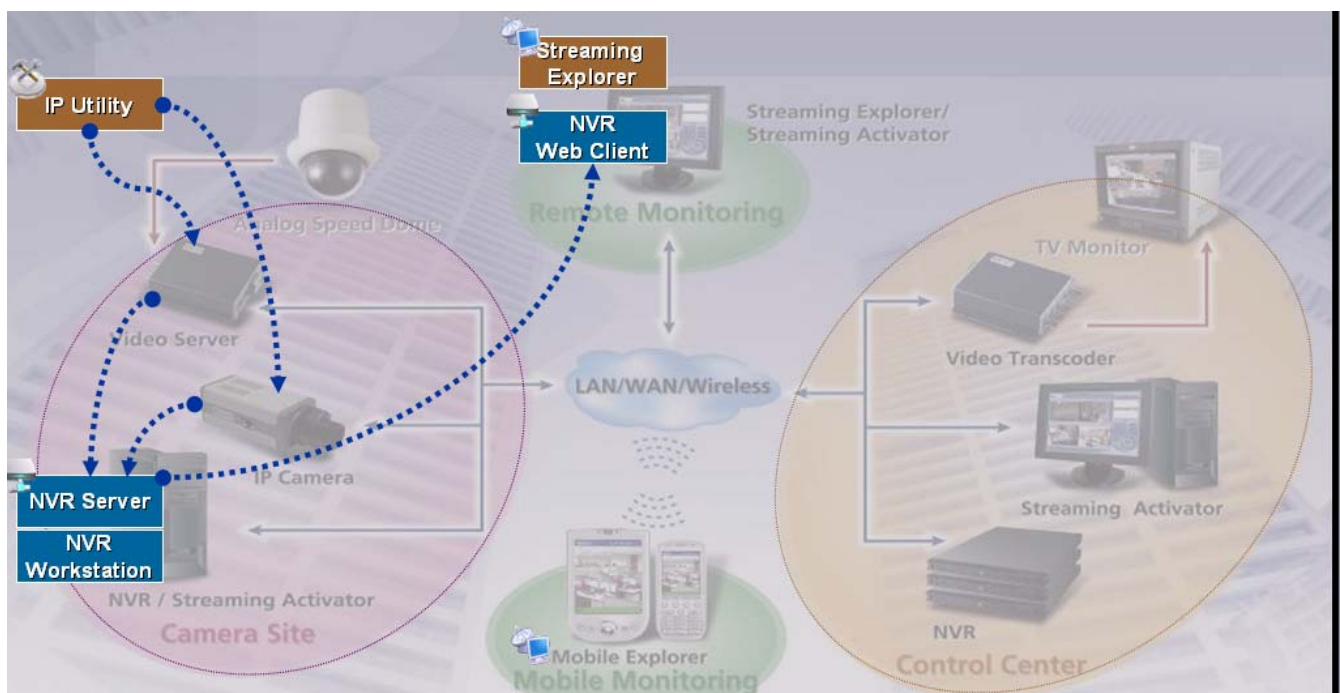


Figure 1-1 Single Site Deployment

Multiple Site Deployment

When there are multiple camera sites, server-to-server backup features may let you deploy a multiple-site architecture; camera sites may record in full frame rate while control center site may connect to the NVR located in camera sites and record in lesser frame rate.

With multiple site configuration, user may setup NVR Server in camera sites, and setup NVR Server on the Control Center site connecting to other NVR Server in camera sites; it may backup video streams from camera sites to the NVR Server in Control Center site. Users in Control Center may just login to the NVR Server in Control Center site as well. In this way, the bandwidth between camera site and control center site can be minimized.

NVR Workstation may connect to different NVR Servers on different site with IP address or host name specified.

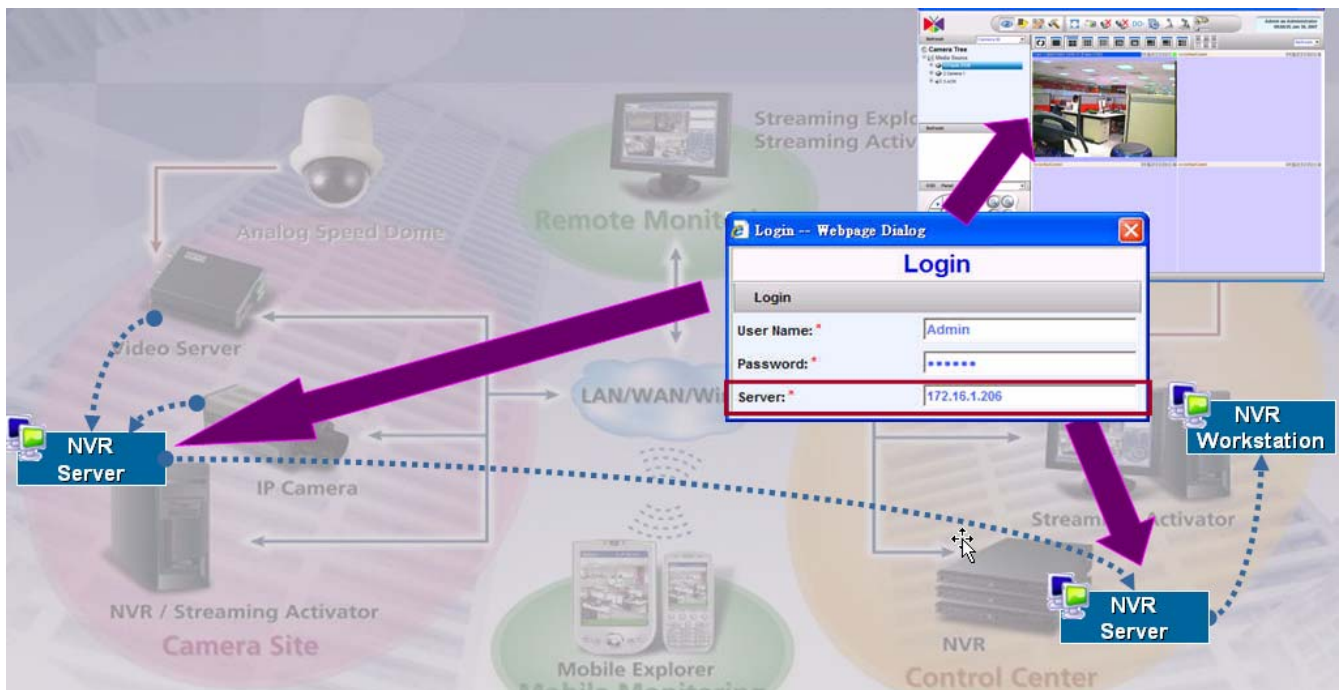


Figure 1-2 Multiple Site Deployment

System Requirements

Supported Operating System and Browser

Operating System Supported

Operating System	Comments
Windows XP	Windows XP SP2 or most updated patch
Windows 2003	Windows 2003 Server, WSS 2003
Windows Vista	Windows Vista Business Edition and Enterprise Edition

Web Browser Supported

Operating System	Comments
Microsoft Internet Explorer v6.0 SP2	IE 6.0 with most updated service pack. IE 6.0 with SP2 is minimal requirement
Microsoft Internet Explorer v7.0	IE 7.0 with most updated service pack

Operating System not Supported

Operating System	Comments
Windows XP Home Edition	Windows XP Home Edition not supported
Windows 2000	Windows 2000 not supported
Windows Vista Home Edition	Windows Vista Home Edition not supported



NOTE: Windows 2000 are not supported.

Recommended PC Specification – 16 channels

Supported PC Specification with 16-channel:

Item.	Specification
CPU	Intel Core 2 Duo 2.4 GHz
Memory	1 GB
HDD	250 GB

Recommended PC Specification – 32 channels

Supported PC Specification with 32-channel:

Item.	Specification
CPU	Intel Core 2 Duo 2.66 GHz
Memory	2 GB
HDD	250 GB

Recommended PC Specification – 48 channels

Supported PC Specification with 48-channel:

Item.	Specification
CPU	Intel Core 2 Quad 2.66 GHz
Memory	4 GB
HDD	250 GB

Recommended PC Specification – 64 channels

Supported PC Specification with 64-channel:

Item.	Specification
CPU	Intel Core 2 Quad 2.66 GHz
Memory	4 GB
HDD	250 GB



NOTE: AMD chip and X64 series are not tested.

Keyboard Shortcuts

NVR v2.2 supports keyboard shortcuts to increase security operator's productivity. These keyboard shortcuts apply to all applications, including Active Monitor, Active Player, Active Map and Active Setup.

Keyboard Shortcut	Description
F5	Refresh. This will restart the application session, and starts from login page.
Ctrl +F7	Create snapshot
Ctrl +F8	Toggle start / stop tour.
Ctrl +F9	Show / hide left tree panel
Ctrl +F10	Cancel auto-logout mode
Ctrl +F11	Show / hide title bar
Ctrl +F12	Toggle full-screen mode
ESC	Cancel full-screen mode; return to normal mode. This function key only valid under full-screen mode



NOTE: When running NVR Web Client, some shortcut key does not work properly.

Technical Support

When contacting Technical Support, please provide following information:

1. NVR version number: Double-click on the logo for detail
2. Devices Model Number and Firmware Version
3. NVR log and database information: Please use Backup Wizard to backup the database

What's New in v2.0

System Enhancements

The following lists the enhancements in current version

1. Supports 64-channel with D1@30 FPS with 3 Mbps
2. Tree directory
3. Client / Server architecture
4. Supports NVR Server, NVR Workstation and Web Client

Active Monitor Enhancements

The following lists the enhancements in current version

1. Video layout mode supports 1, 4, 6, 8, 9, 10, 16, 25, 36, 49, 64 split window mode
2. Supports full screen mode; the video layout is displayed in full-screen mode
3. Tree Display Panel: the user may use drag-and-drop to drag a video source to the layout manager for preview
4. Patrol mode: Switches and displays each preview window accordingly. Pre-defined layout can be set to patrol mode as well
5. 2-Way Audio: Supports 2-way audio. User may have 1-to-1 speak function or 1to many audio broadcast to multiple devices at the same time
6. Create Snapshots: Create snapshot on the fly and as an event index for search later on
7. Advanced Preview Mode: Maximum 64-channel preview at the same time with different frame rate adjusted automatically
8. Layout Manager: Setup pre-defined video layout to group certain cameras in the same layout. Layout manager can be displayed in full-screen mode.
9. Hot-spot Window: The channel with an event will be switched to the hot-spot window.

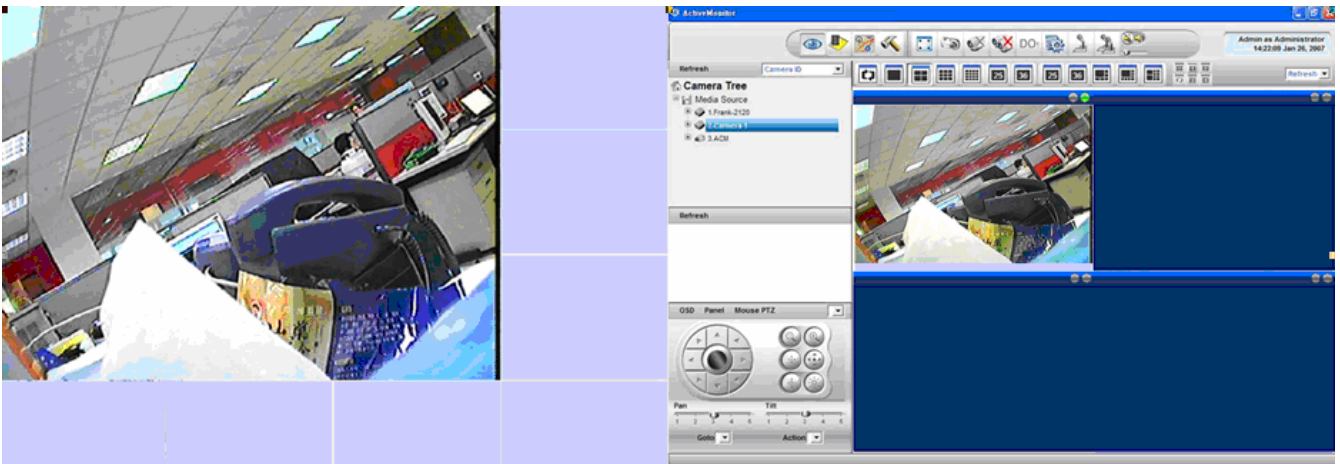


Figure 1-3 Dual Monitor – Live View + Live View

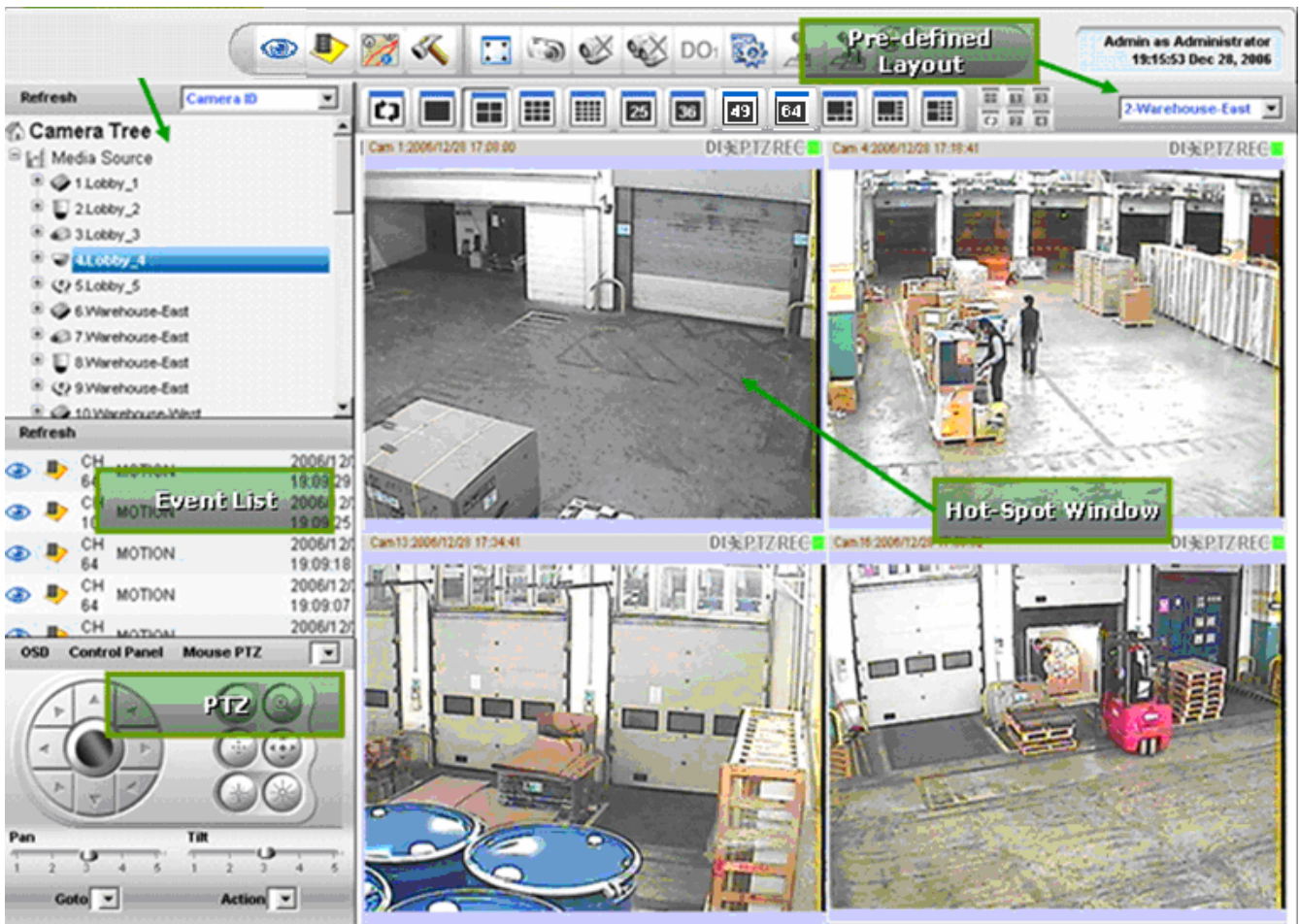


Figure 1-4 Active Monitor Features

PTZ Control Enhancements

The following lists the enhancements in current version

1. PTZ Control: Manages PAN, Tilt, Zoom operation with speed control
2. Protocols Supported: Pelco-P, Pelco-D, Dynacolor, Messoa, Lilin, Dynacolor, Samsung, Kampro, Sony Visca, Panasonic protocol supported
3. Preset Position: Maximum 32 preset positions supported
4. PTZ Patrol: Patrol preset positions with user-defined dwell time
5. Expandable PTZ Command: User-defined PTZ command to support additional PTZ protocols
6. Mouse PTZ: On-screen 8-direction PTZ with mouse operation. Full-screen mode supported.
7. IP Joystick on PC: Connects joystick on the PC via USB port to control speed dome directly
8. Control Panel on PC: Connects control panel on the PC via COM port to control speed dome directly

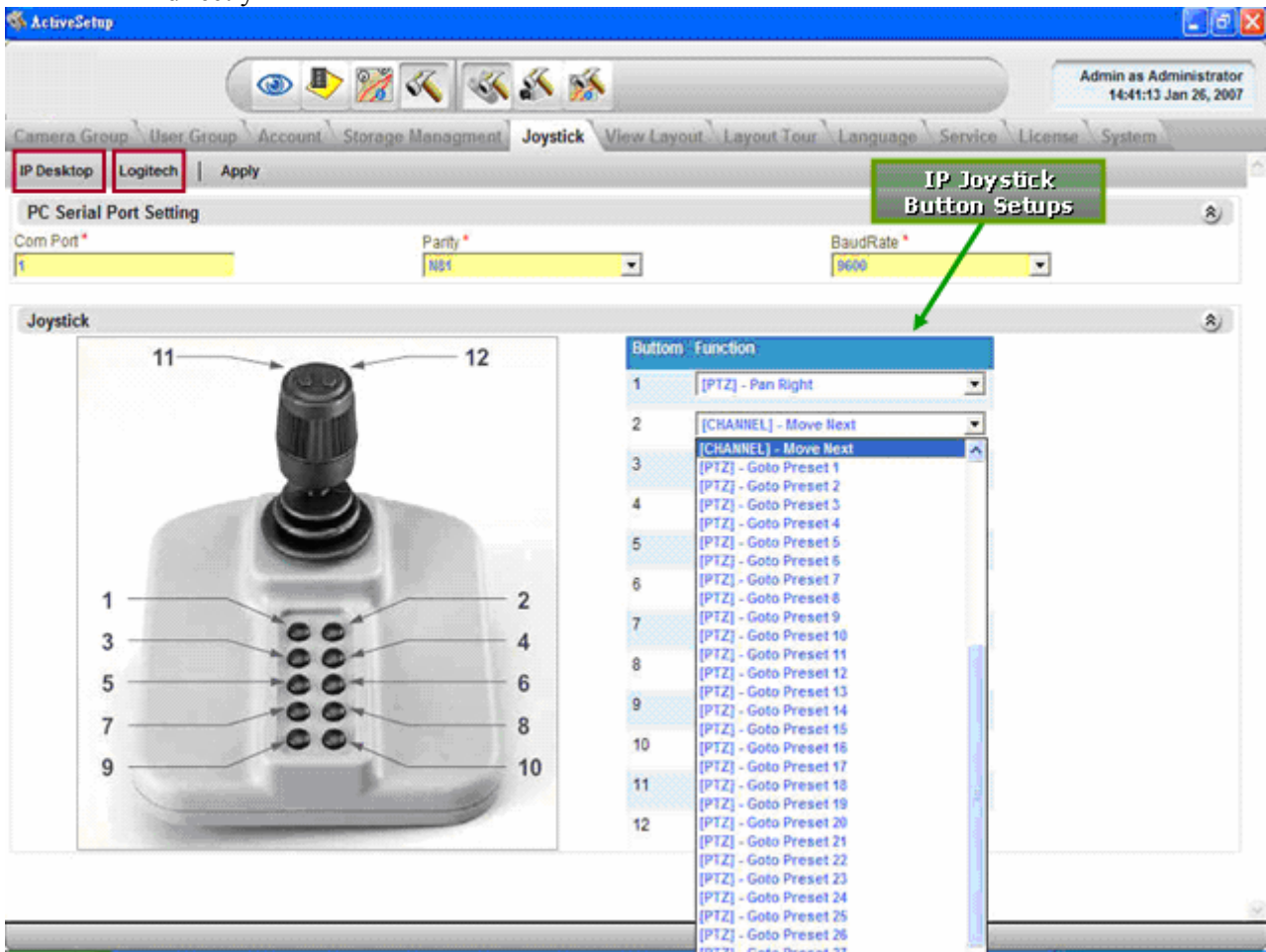


Figure 1-5 USB IP Joystick Support and Customization

Event Manager Enhancements

The following lists the enhancements in current version

1. Event Types: Handles motion detection, alarm, video loss, network disconnect events
2. Trigger Digital Output: May trigger digital output when an event occurs
3. Hot-spot Window: Activate and switch the channel with event to the hot-spot window. The original video in the hot-spot window will then be switched over
4. Pop-up Window: Mini-preview window will be pop-up when event occurs. Pop-up window will be dismissed when user-defined dwell time elapsed
5. E-Mail Notification: E-Mail notification with snapshot image
6. FTP Notification: FTP captured snapshot to the FTP server
7. Play audio file: Play user-defined audio file or beep on the machine
8. Operate PTZ Control: A triggered event may request another channel to execute a PTZ Goto Preset position command
9. Execute Command: User-defined execution command will be executed

Recording Enhancements

The following list the enhancements in current version

1. Format: Supports standard 14496-2 MPEG-4 video+audio format. Compatible with FFmpeg, XviD, DivX
2. Recording Mode: Supports schedule recording, alarm recording and motion recording
3. Pre-event Recording: User-defined time period to record before a certain event occurs. Maximum 30 seconds.
4. Post-event Recording: User-defined time period to record after a certain event occurs. Maximum 2 hours.
5. Number of drives: Supports up to 23 drives in one single machine
6. House Keeping Methods: Supports Keep certain days, recycle recording and Keep Total Space methods.

Active Player Enhancements

The following lists the enhancements in current version

1. Time-based Search: Search video clips with date, time, channel
2. Event Search: Search motion detection, digital input, snapshot event with specified date, time and channel
3. Snapshot Viewer: Preview on snapshot created and link to archive player
4. Status Event Search: Search events on video loss / recovery, network disconnect / reconnect, user login / logout, database log with specified date, time and channel
5. Archive Player: Stand-alone archive player
6. Player mode: Play, Pause, Stop, Fast Forward, Fast Rewind, Play Backward, Play frame-by-frame, 1 / 2 / 4 / 8 speed control
7. Create Snapshots: Create snapshot images on-the-fly and can be searched as an event
8. Export Video: Export a MPEG-4 raw data file into a AVI file
9. Record while Playback: Recording to MPEG-4 raw data file while playback a file. This function is useful to extract part of a video clip to another archive file.
10. Synchronous Playback: 4-channel synchronous playback at the same time

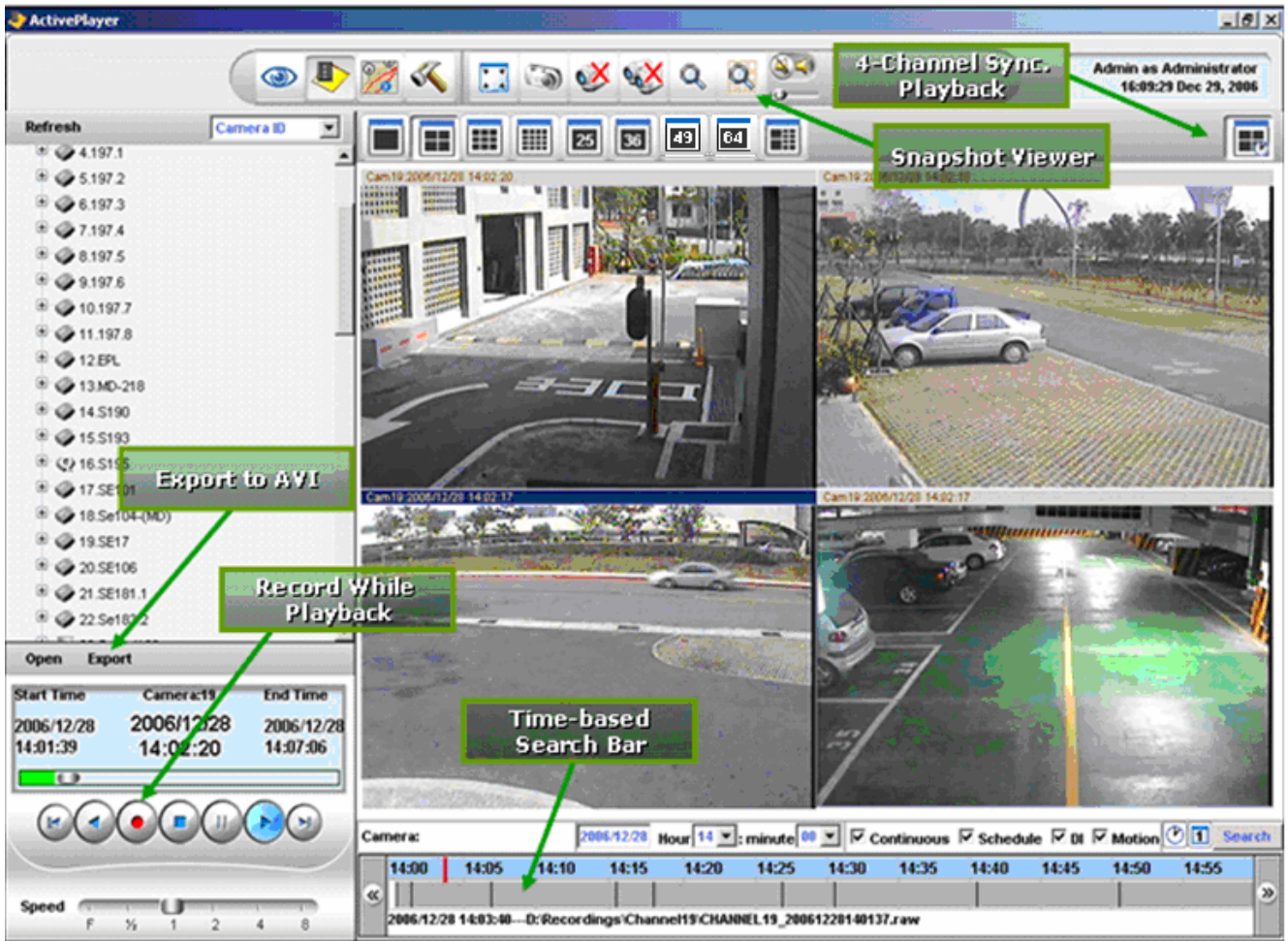


Figure 1-6 Active Player Features

Active Map Enhancements

The following lists the enhancements in current version

1. Map Manager: Map configuration and management
2. Map Monitor: Creates alarm when an event occurs on a certain camera in Map
3. Preview-all Mode: With this mode, all cameras in the associated map will be displayed with QCIF@1FPS preview. When double-click on the preview window, the original video window will be brought up with its original resolution and frame rate
4. Map Patrol: Maps can be patrolled and displayed one-by-one with user-defined dwell time.

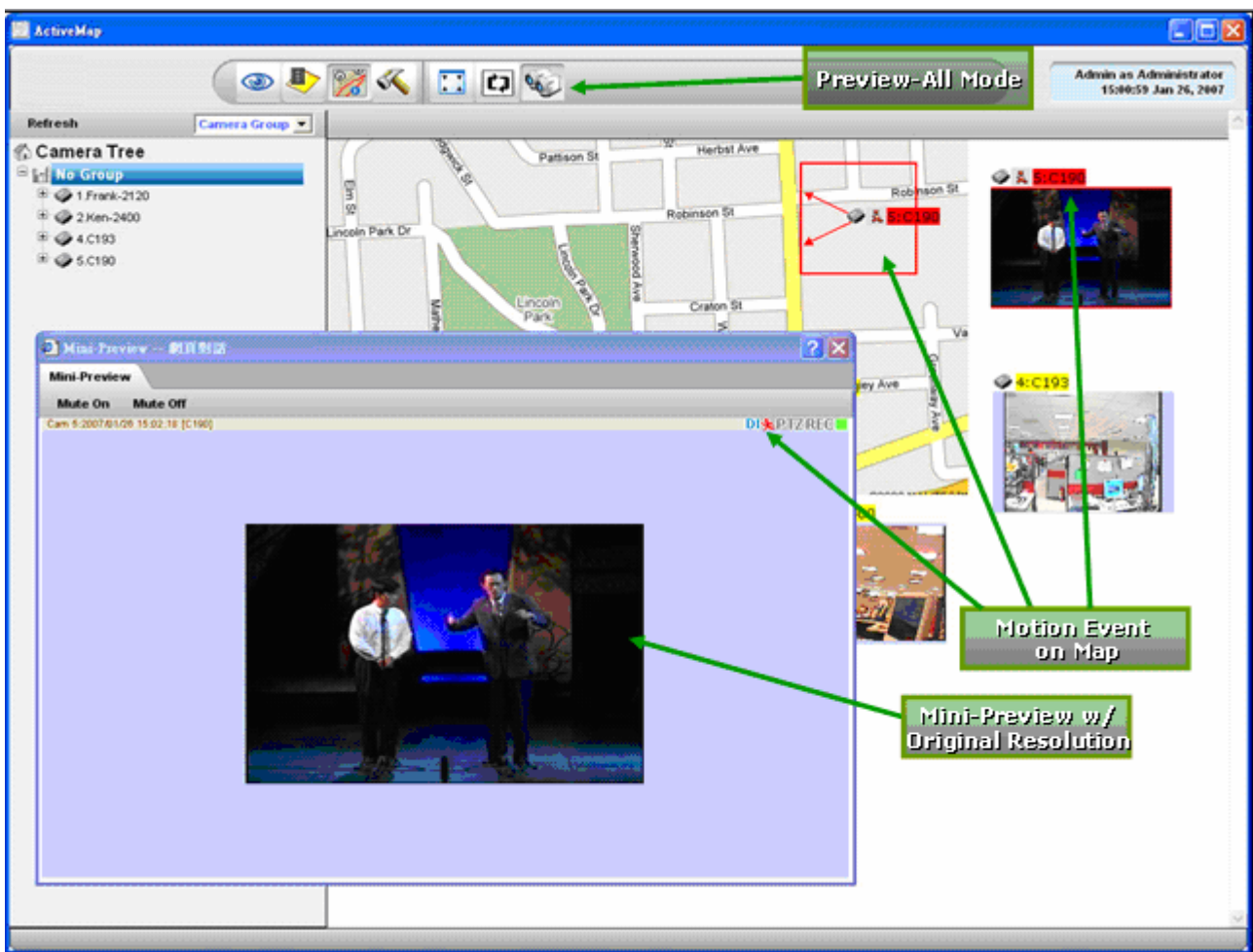


Figure 1-7 Active Map Features

NVR Web Client Enhancements

The following lists the enhancements in current version

1. Remote Preview: Supports 1, 4, 9-channel preview
2. Remote Playback: Supports 1, 4, 9-channel playback mode and playback operations.
3. Remote Map: Runs map on Web.
4. Remote Setup: Functionalities are the same as ActiveSetup.

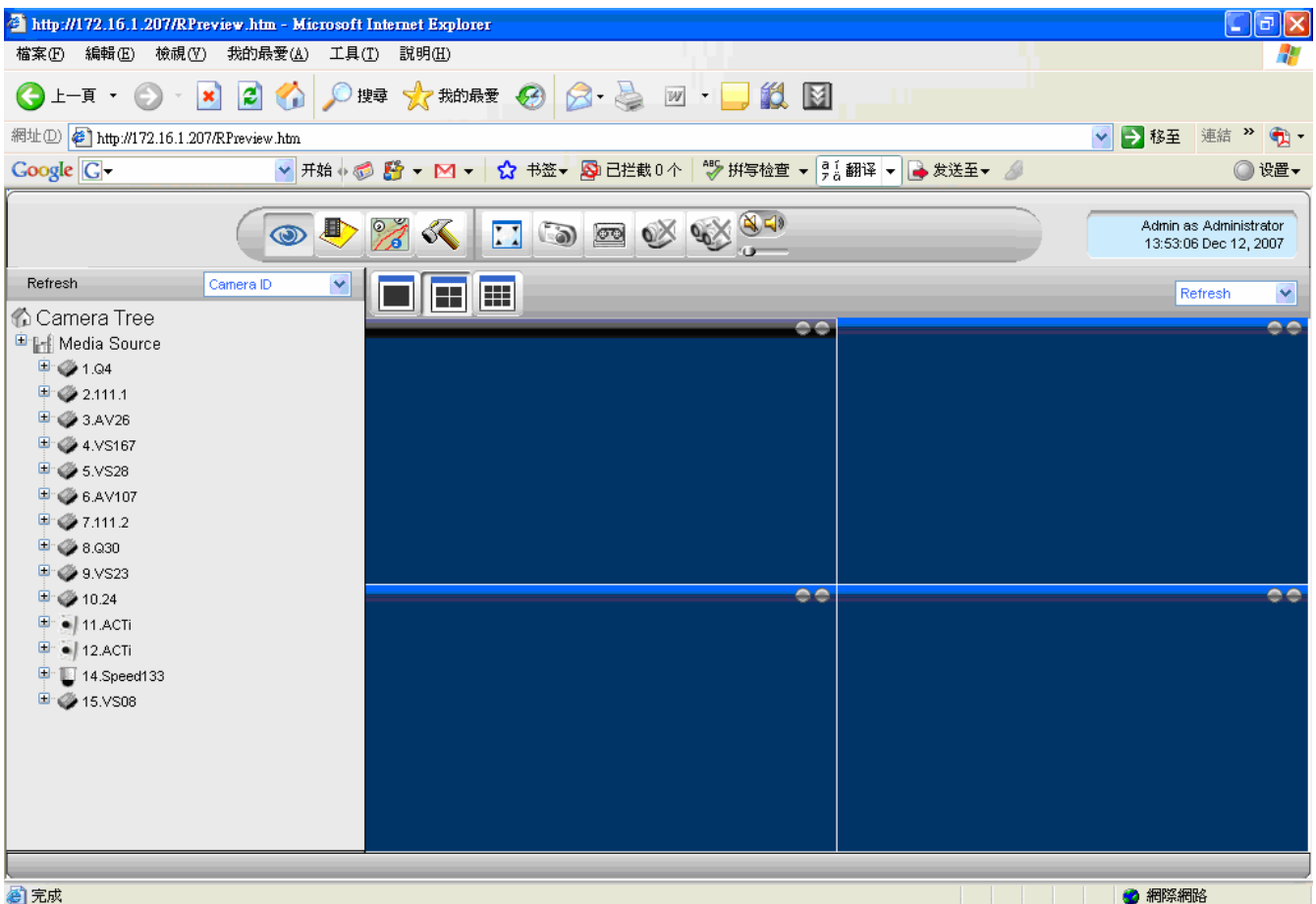


Figure 1-8 NVR Web Client Features

What's New in v2.2

System Enhancements

The following lists the enhancements in current version

1. “Save & Reboot” button is added in NVR Camera Setup
2. Add support to Windows XP Service Pack 3
3. Enhance the scale of PTZ speed control to 1,3,5, instead of 1, 2, 3.
4. Improve installation process. For doing upgrade from NVR 2.1 series or later versions, user doesn't need to backup existing database beforehand.
5. Add support to Videotec_Macro and VIDO_B02 PTZ protocol.



NOTE: NVR v2.2 supports Windows XP SP2, SP3, Windows 2003, Windows Vista. NVR v2.2 does not support Windows 2000.

Active Monitor Enhancements

The following lists the enhancements in current version

1. New ActiveX Control
2. Supports Megapixel MPEG-4
3. Supports Digital Zoom function
4. Auto login and load first pre-defined layout
5. Change language setting on login page
6. Supports Absolute Position

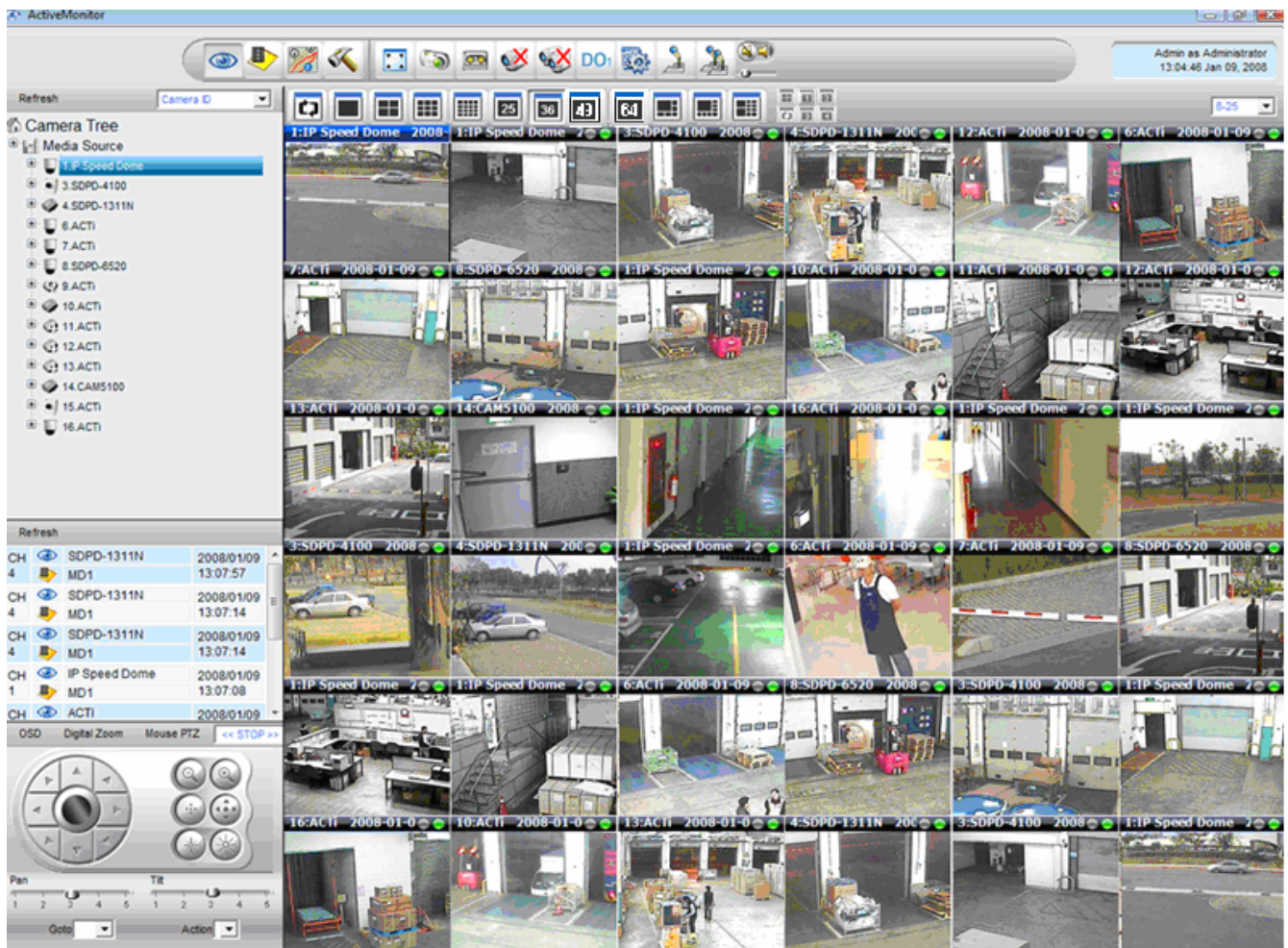


Figure 1-9 New ActiveX Control

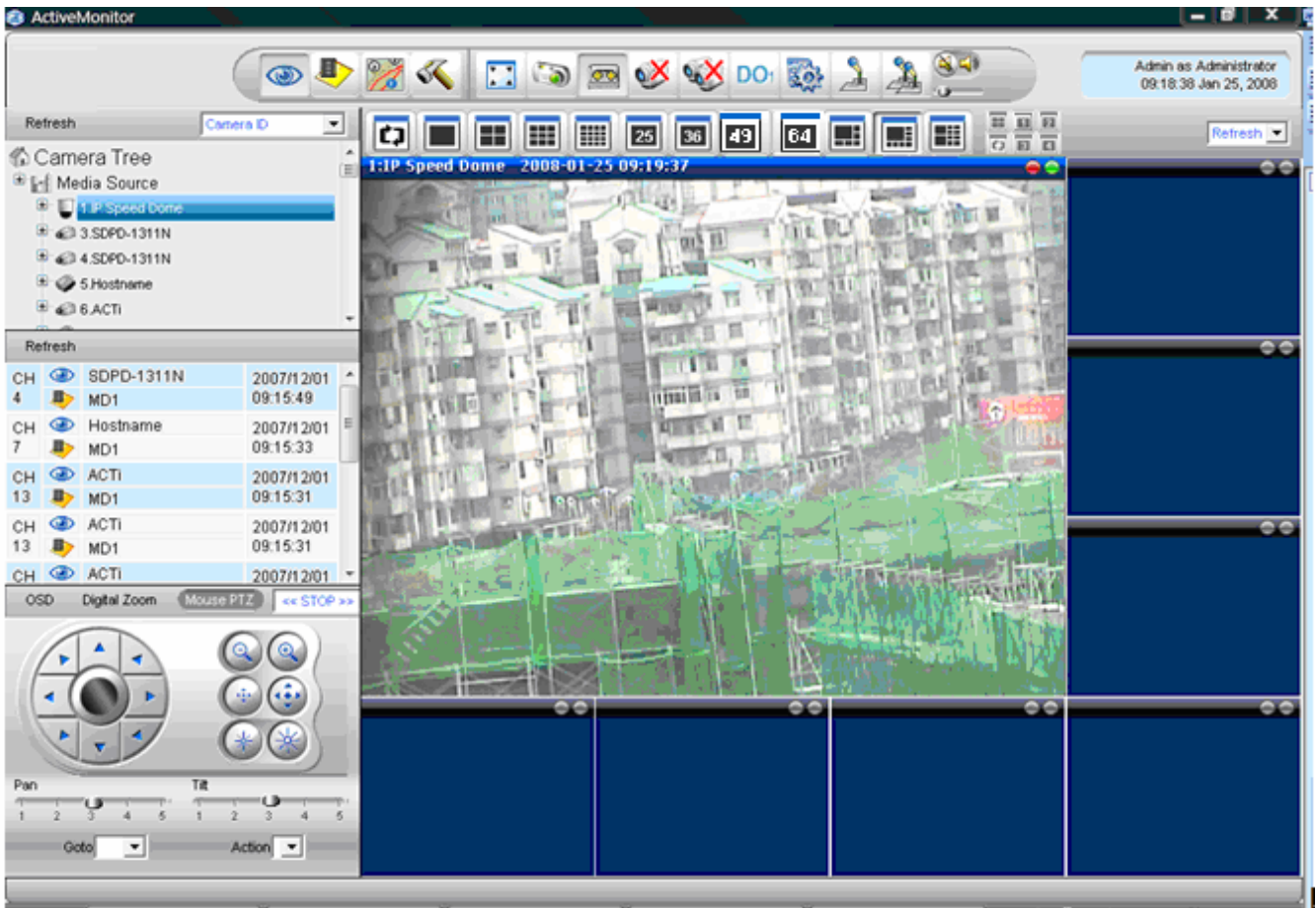


Figure 1-10 Manual Record



NOTE: Manual Record function records video archives on local PC, and cannot be searched via NVR.

The screenshot shows a web-based login interface with a blue header containing the word "Login". Below the header, there are five input fields and a checkbox, all with yellow backgrounds. The fields are: "User Account *" with the text "Admin"; "Password *" with five blue dots; "Server IP Address *" with the text "localhost"; "Language *" with a dropdown menu showing "English (United States)"; and "Auto login with this account" with an unchecked checkbox. Below these fields is the text "Use CTRL+F10 to cancel auto-login mode." At the bottom right of the form is a "Login" button.

Figure 1-11 Auto login and Change Language



TIP: With auto-login mode, NVR Workstation or NVR Web Client login with current login account/password if login successfully. First pre-defined layout will be bring up automatically.



TIP: Press **CTRL+F10** to cancel auto-login mode.

Active Player Enhancements

The following lists the enhancements in current version

1. New ActiveX Control
2. Supports Megapixel MPEG-4
3. Supports Digital Zoom function
4. Download video archive

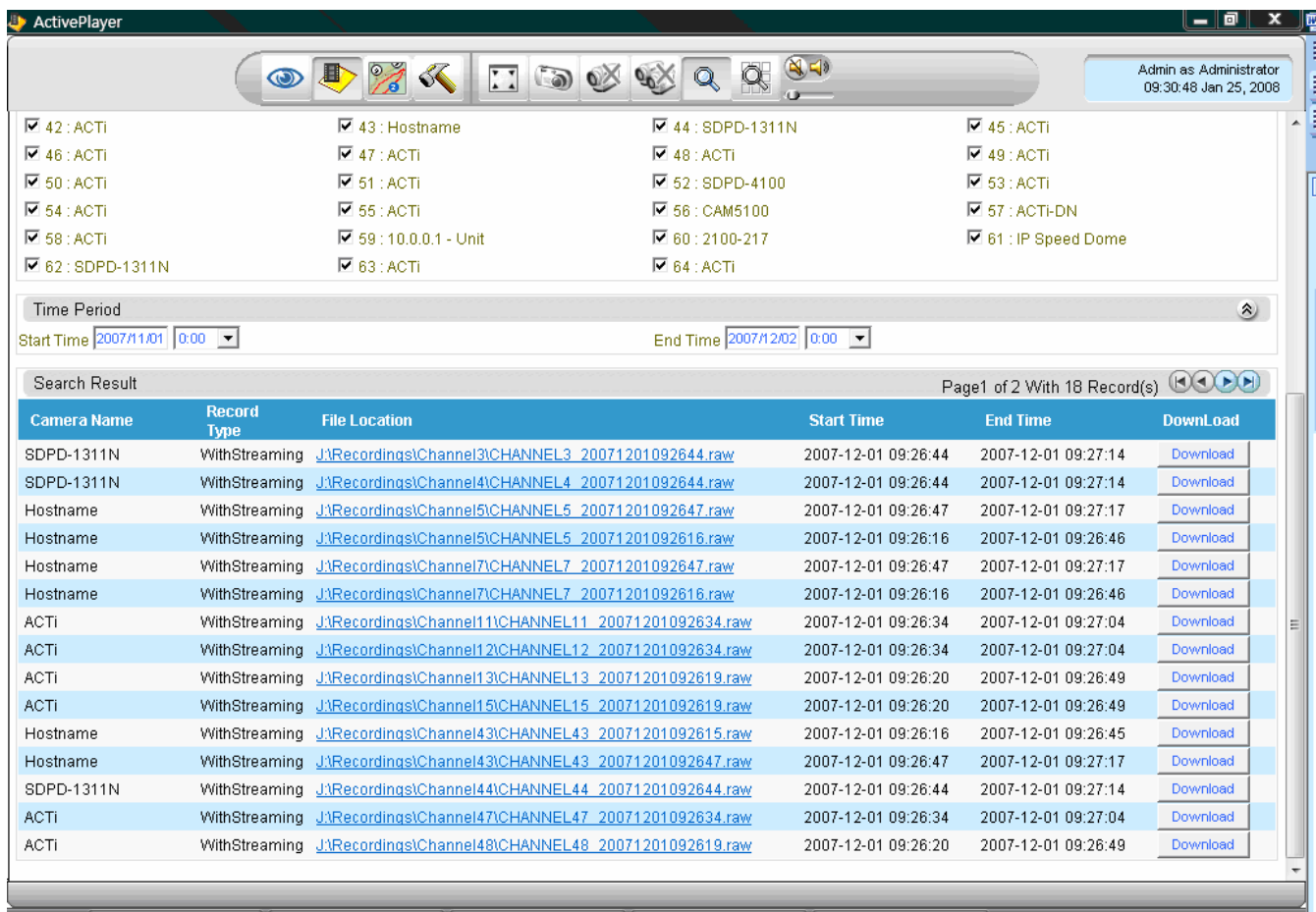


Figure 1-12 Download video archive

Active Map Enhancements

The following lists the enhancements in current version

1. 3 preview window size
2. Mini-preview with PTZ function

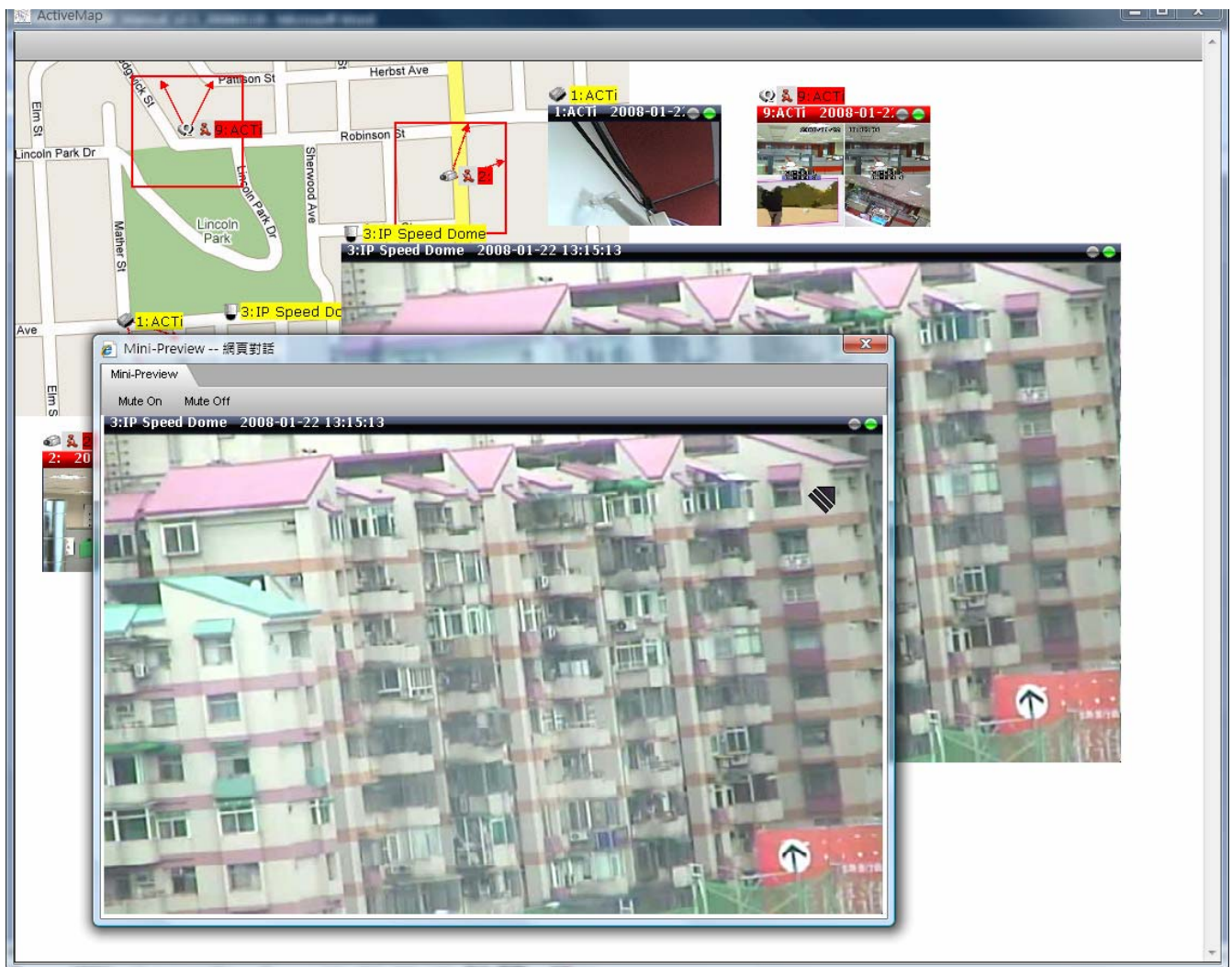


Figure 1-13 3 Preview Window size and PTZ function enabled automatically

Active Setup Enhancements

The following lists the enhancements in current version

1. Simplified camera setup flow

Event Management Enhancements

The following lists the enhancements in current version

1. Event will be passed to NVR Workstation and NVR Web Client installed on other machine

NVR Web Client Enhancements

The following lists the enhancements in current version

1. Advanced Mode

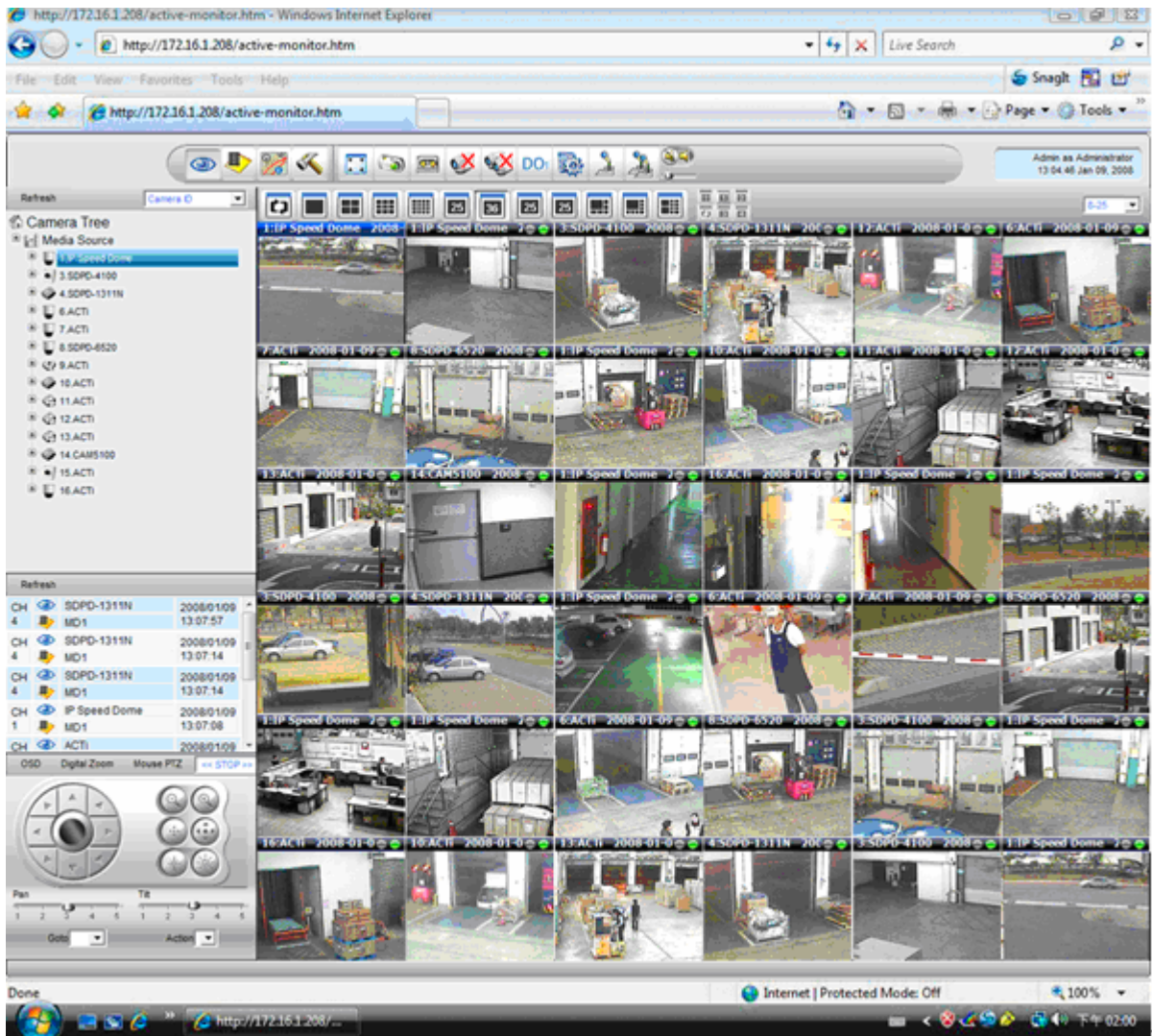


Figure 1-14 NVR Web Client Advanced Mode

Function Mapping in NVR v2.2

Condition	Running with NVR Server	NVR Workstation		NVR Web Client	
		Yes	No	Yes	No
Active Monitor	Manual Record	\$RECORDINGS\Channel<ID>* .RAW	\$NVR\IP Control Center\Recordings\Channel<ID >*.RAW	\$RECORDINGS\Channel<ID>* .RAW	C:\Recordings\Channel<ID>*.R AW
	Snapshot	\$RECORDINGS\Channel<ID>* .JPG	\$NVR\IP Control Center\Recordings\Channel<ID >*.JPG	\$RECORDINGS\Channel<ID>* .JPG	C:\Recordings\Channel<ID>*.J PG
	Event -> Play audio file	v	not working	not working	not working
	Event Panel	v	v	v	v
	Talk	v	v	N/A	N/A
	Broadcast	v	v	N/A	N/A
Active Player	Play frame-by-frame	v	disabled	disabled	disabled
	Manual Record	\$RECORDINGS\Channel<ID>* .RAW	\$NVR\IP Control Center\Recordings\Channel<ID >*.RAW	\$RECORDINGS\Channel<ID>* .RAW	C:\Recordings\Channel<ID>*.R AW
	Snapshot	\$RECORDINGS\Channel<ID>* .JPG	\$NVR\IP Control Center\Recordings\Channel<ID >*.JPG	\$RECORDINGS\Channel<ID>* .JPG	C:\Recordings\Channel<ID>*.J PG
	Search Manual Record	N/A	N/A	N/A	N/A
	Search Snapshot	N/A	N/A	N/A	N/A
	Export to AVI directly	v	N/A	N/A	N/A
	Open File then Export to AVI	v	v	v	v
Active Map	Full Function	v	v	v	v
Active Setup - System	Storage Management	v	v	v	v
	Service License	v	hide	hide	hide
Active Setup - Camera	Full Function	v	v	v	v
Active Setup - Map	Map Setup Button and Functions	v	hide	hide	hide

Figure 1-15 NVR Workstation and NVR Web Client Function Mapping

2. Getting Started

Administrator's Check List

Objective: To guide the administrator through the system setup.

Description: Please go through the checklist below for what items should be set.

NOTE: You can find the Quick Installation Guide and User Manual in the CD of the package.

No	Status	Description	Main Category	Reference
Pre-install				
1	<input type="checkbox"/>	Check PC requirement	To ensure the software running well, please make sure the PC spec is compatible with the software.	<u>Quick Installation Guide</u> Ch 1-Administrator's Check List
2	<input type="checkbox"/>	Prepare Software license	Our software has 16CH/32CH/49CH/64CH packages. Our software is free for 16CH. For 32CH/49CH/64CH please refer to license section for details.	<u>Quick Installation Guide</u> Ch 1-Administrator's Check List
Install				
1	<input type="checkbox"/>	Install Software	Please follow the installation guide step by step to install the software.	<u>Quick Installation Guide</u> Ch 2-Installing the Software
2	<input type="checkbox"/>	Check installation	After installation, please also check the below items before you move to next step.	<u>Quick Installation Guide</u>
			1. License input	<u>Quick Installation Guide</u> Ch 3-License Management
Setup				
1	<input type="checkbox"/>	Create Camera Group and add cameras	NVR camera channel management is based on camera groups. Start by creating camera groups and adding cameras. Ex: There are 4 floors in this system. You can start by creating 1F, 2F, 3F, 4F, 4 groups. When adding every single camera, you can select the group which it belongs to.	<u>User Manual</u> Ch 7 ActiveSetup
2	<input type="checkbox"/>	Configure Camera Setup	Set some camera settings, like PTZ setting, bit rate.	<u>User Manual</u> Ch 7 ActiveSetup
3	<input type="checkbox"/>	Configure Scheduling	Set the recording schedule for every single camera.	<u>User Manual</u> Ch 7 ActiveSetup

4	<input type="checkbox"/>	Configure Event handling	Set the action related to different events	User Manual Ch 7 ActiveSetup
5	<input type="checkbox"/>	Configure Storage	Set the HD arrangement and recording delete rule for storage	User Manual Ch 7 ActiveSetup
6	<input type="checkbox"/>	Configure Preview layout	Set the preview layout during preview	User Manual Ch 7 ActiveSetup
7	<input type="checkbox"/>	Configure E-map (Option)	Set the E-map.	User Manual Ch 7 ActiveSetup
8	<input type="checkbox"/>	Configure Accounts	Set the you accounts and select authentication level	User Manual Ch 7 ActiveSetup

Operator Check List


Objective: To guide the operator through the operation.

Description: Please go through the checklist below for what items should operator know.





NOTE: You can find the Quick Installation Guide and Operation Manual in the package of the CD.

No	Status	Main Category	Description	Reference
Setup				
1	<input type="checkbox"/>	Live Preview	Operator should be able to see the live preview and to do basic operations.	<u>User Manual</u> Ch 3 Active Monitor
2	<input type="checkbox"/>	PTZ control	Operator should be able to control the PTZ	<u>User Manual</u> Ch 3 Active Setup
3	<input type="checkbox"/>	E-map Preview	Operator should be able to launch the E-map preview and to do basic operations.	<u>User Manual</u> Ch 5 Active MAP
4	<input type="checkbox"/>	Search & Playback	Set the action related to different events	<u>User Manual</u> Ch 4 Active Player
5	<input type="checkbox"/>	Web-client Access operation	Set the action related to different events	<u>User Manual</u> Ch 6 Web-Client

Start NVR

To start NVR v2.2, simply click  on the desktop.

NVR Workstation Components:

Icon	Name	Description
	ActiveMonitor.exe	Live view, PTZ, IP Joystick, system log monitor, event panel, pre-defined layout, layout tour
	ActivePlayer.exe	Archive player, search, synchronous playback, snapshot viewer, file export
	ActiveMap.exe	Map viewer, tour
	ActiveSetup.exe	System, camera and map setup

Login NVR

When starting NVR, a login message box prompts as follow:

The screenshot shows a 'Login' dialog box with a blue header. It contains several input fields and a checkbox. Red circles with numbers 1 through 7 are placed to the left of the fields, with lines pointing to them. The fields are: 'User Account *' with 'Admin' entered; 'Password *' with seven dots; 'Server IP Address *' with 'localhost' entered; 'Language *' with a dropdown menu showing 'English (United States)'; and 'Auto login with this account' with an unchecked checkbox. Below the fields is a line of text: 'Use CTRL+F10 to cancel auto-login mode.' At the bottom right is a 'Login' button. A red line connects the number 7 to the 'Login' button.

Figure 2-1 NVR Login

1. **User Account:** Type in user's account
2. **Password:** Type in user's password
3. **Server IP Address:** Type in NVR Server's IP Address. The format can be IP address or host name.
4. **Language:** You may change desired local language immediately.
5. **Auto login with this account:** When this option is checked, this PC will use the account / password to login automatically. There will be no user login prompt appear.
6. **Use CTRL+F10 to cancel auto-login mode:** In order to cancel auto-login mode, user has to use CTRL+F10 key. Next time, when user open NVR Workstation, user need to key in account / password again.
7. **Login:** Click Login button to login to NVR Workstation system.

Default Administrator Account / Password

Default Administrator Account: **Admin**

Default Administrator Password: **123456**

Default Server: **local host**



NOTE: In the Server field, the user may type in different IP addresses or hostname; in this case, the NVR Workstation will connect to the IP address or hostname specified.



NOTE: If the IP address is not valid, the login page might hang for a period of time, could be 5 seconds to 30 seconds.



TIP: When user login successfully with correct account and password, following fields will be remembered in the PC, and next time when user use the same PC to login, these fields will be brought up automatically. This may save some repeat key-in efforts. These fields are: **User Account, Server IP Address, Language**

Change Password

Clicking on the profile section brings up the Personal Setting page. The user may easily change the password and preferred Language. Click Apply to confirm the setting.

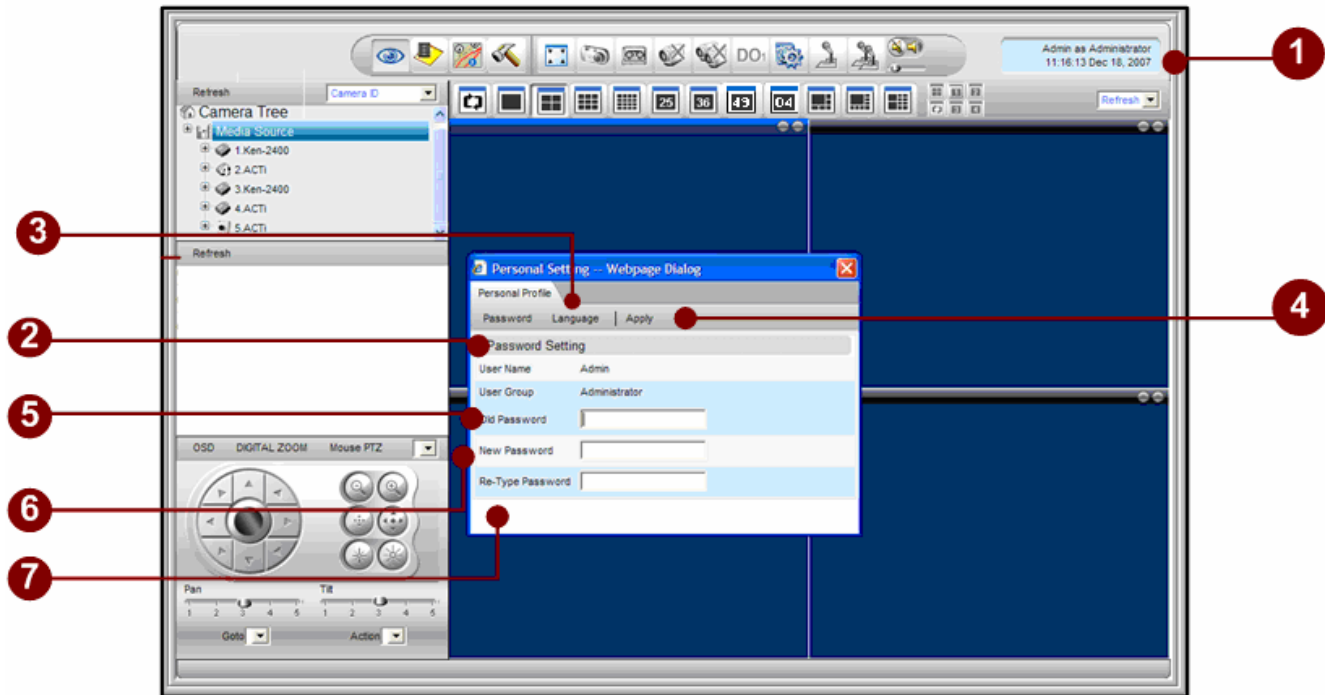


Figure 2-2 Change User's Password

Figure 2-2 Change User's Password

1. **Personal Profile:** Click on this section brings up Personal Profile setting; user may change password and select preferred Language.
2. **Password Button:** Click on this button to change user's password.
3. **Language Button:** Click on this button to select preferred Language.
4. **Apply Button:** Apply this setting.
5. **Old Password:** Input old password.
6. **New Password:** Input new password.
7. **Re-Type Password:** Re-type new password.

Start a Camera Live View

Select a Camera from Camera Tree

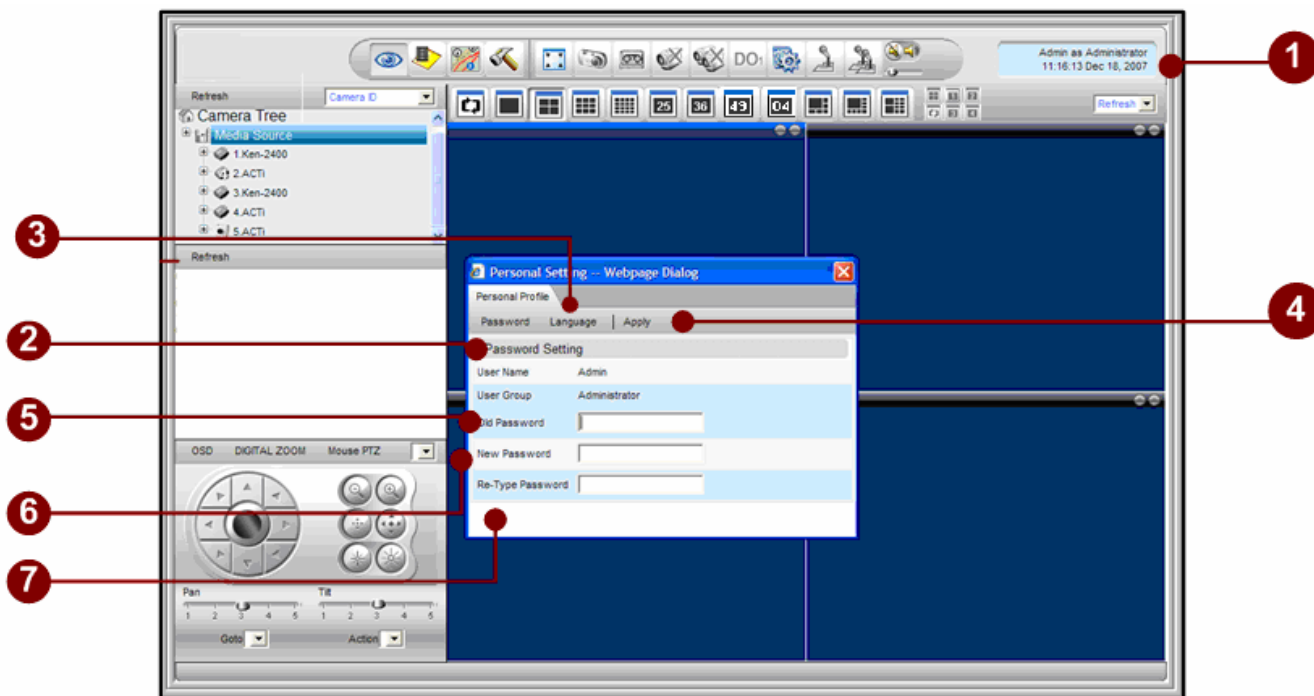



Figure 2-3 Preview Window

1. **Camera Tree:** Choose a Camera from camera tree. When you click on the camera name, the blue bar will be displayed
2. **Active Window:** Click on any window, the active window will contain blue title bar, like the following picture: 

Double Click on the Camera

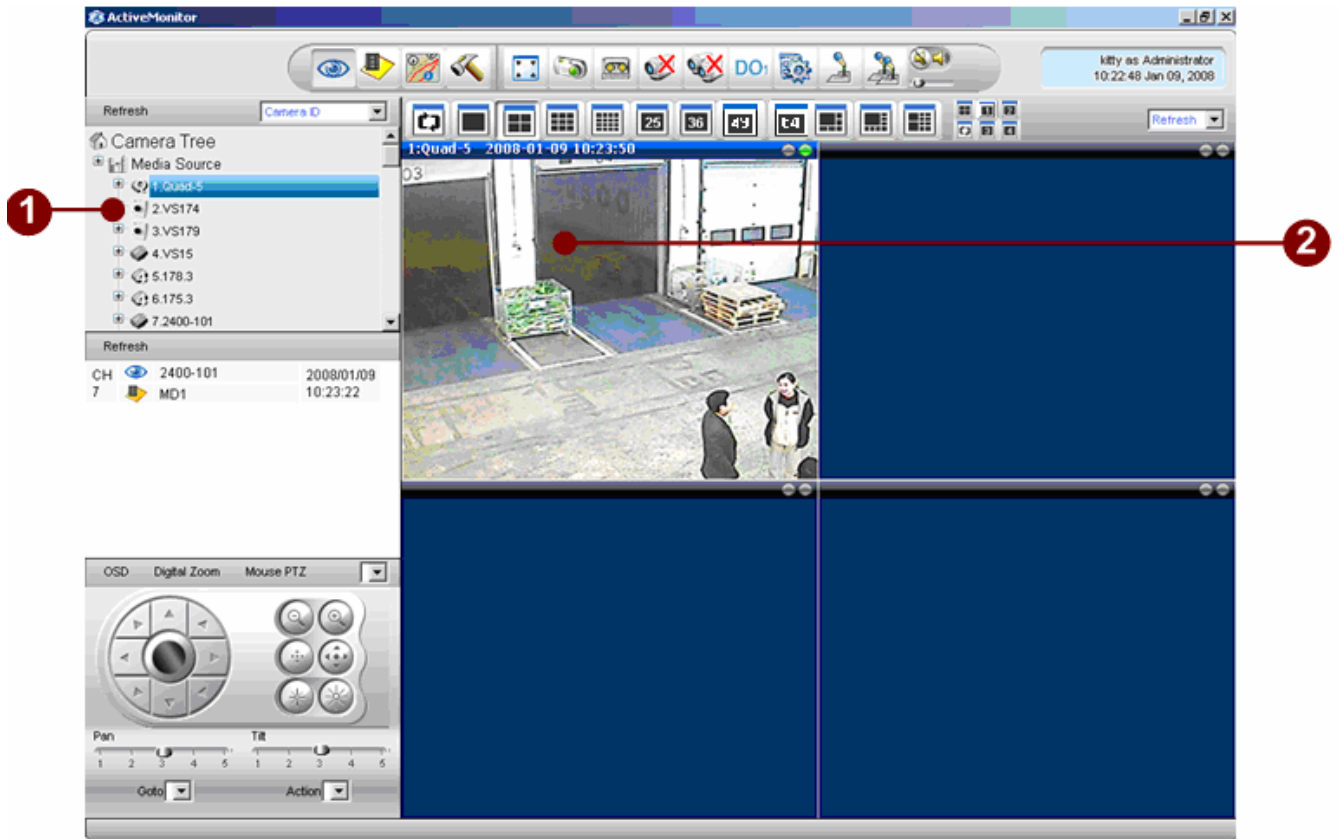


Figure 2-4 Double click on a camera to preview

1. **Camera Tree:** Double click on the camera icon that user wants to preview.
2. **Active Preview window:** User can see the video screen on the active preview window.

Drag-n-Drop a Camera

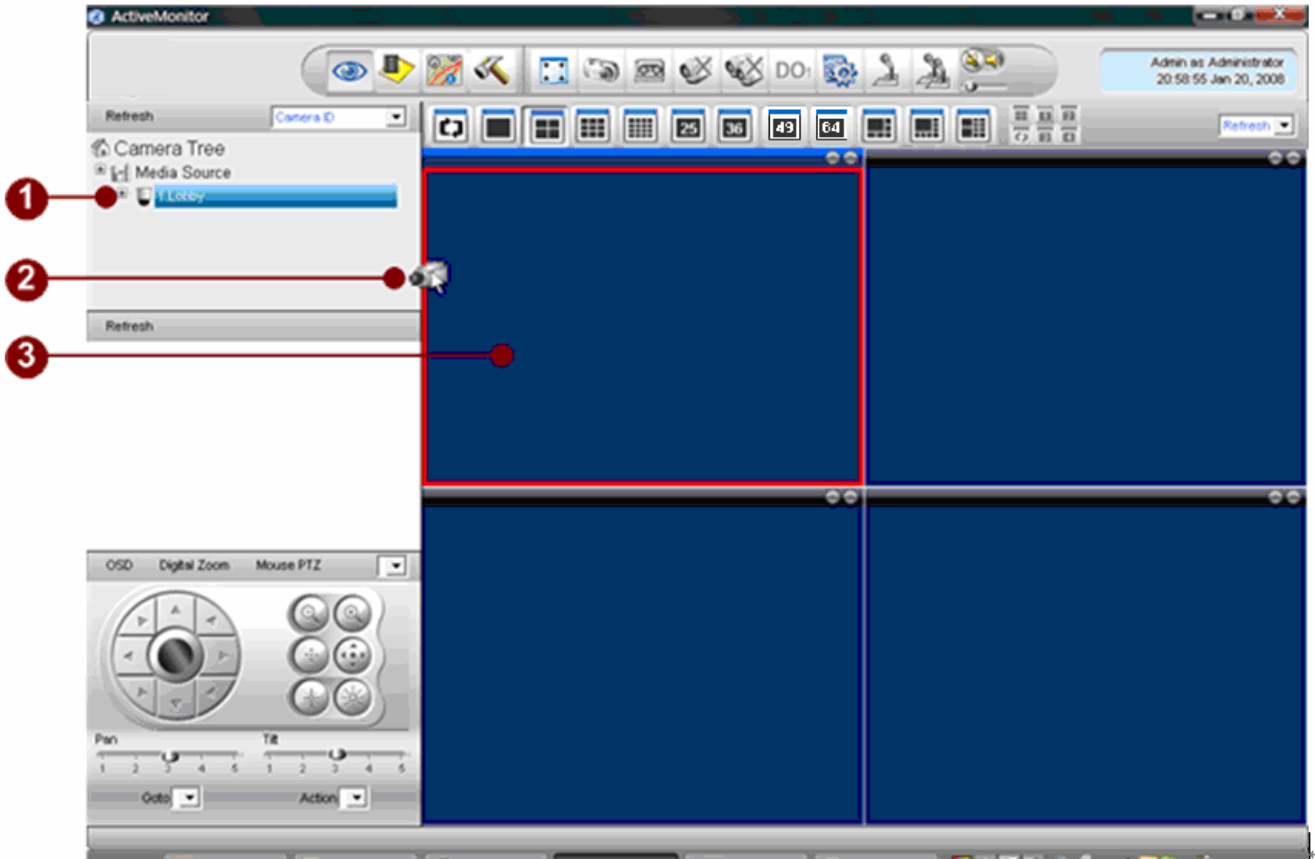
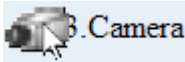
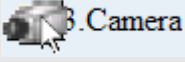


Figure 2-5 Drag and Drop a camera

1. **Camera Icon:** Click on the camera icon to be previewed with left mouse key, then hold left mouse key and drag the camera to the desired display window.
2. **Drag icon:** When dragging a camera, the icon display as .
3. **Display window:** The window with red bar will display video on the camera selected



TIP: When you drag the camera icon, a new cursor (with camera name) will be displayed. The cursor looks like: 

Stop a Camera Live View

Close Camera Live View

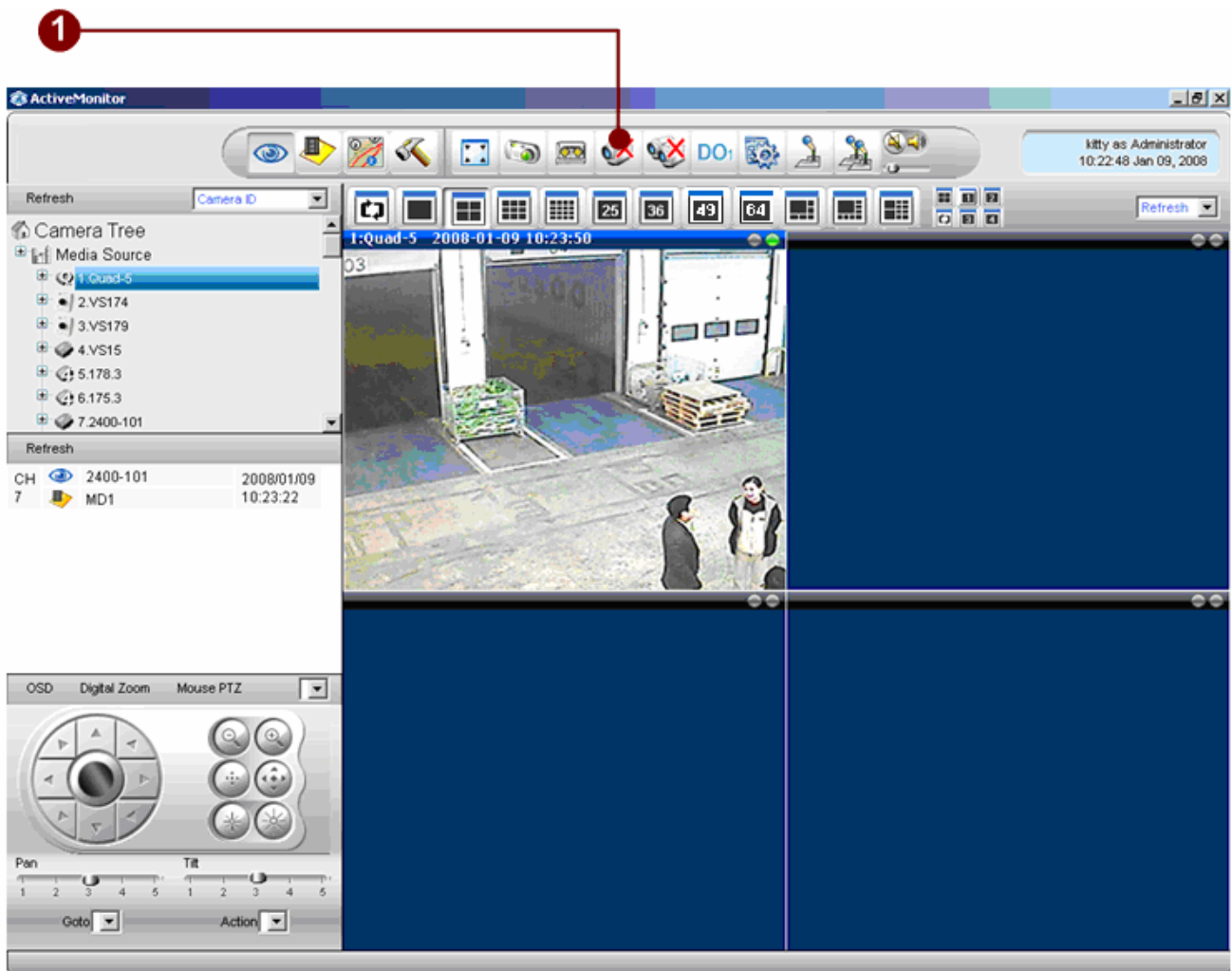



Figure 2-6 Disconnect a Channel

1. **Disconnect A Channel:** Click once to stop video streaming for the selected window.



TIP: The selected window is the active window which display with blue title bar like follow: 

Start Other Application

Start Active Player, Active Map and Active Setup









Figure 2-7 Active Program Tool Bar

1. **Active Monitor Button:** Click this button to start Active Monitor program.
2. **Active Player Button:** Click this button to start Active Player program.
3. **Active Map Button:** Click this button to start Active Map program.
4. **Active Setup Button:** Click this button to start Active Setup program.
5. **System Setup Button:** Click this button to start System Setup program.
6. **Camera Setup Button:** Click this button to start Camera Setup program.
7. **MAP Setup Button:** Click this button to start Map Setup program.

Start Utility

You can go to “START→Program Files→ NVR” to find Utility Suite.

Utility Suite Components:

Icon	Name	Description
	IPUtility.exe	Search and manage devices, firmware upgrade, configuration backup and restore
	Explorer.htm	Web browser application to configure PTZ settings.
	ArchivePlayer.exe	Standalone archive player, create snapshots, display time code on the video window directly. Able to play .RAW and .MP4 format
	BackupWizard.exe	Backup and restore NVR v2.1/v2.2
	MediaConverter.exe	Converts .RAW data format to .AVI format
	FFDSHOW.exe	MPEG-4 DirectShow filter. This is necessary if user wants to play .AVI file with Microsoft Windows Media Player.

Quit NVR

Simply click on  to quit NVR v2.2.

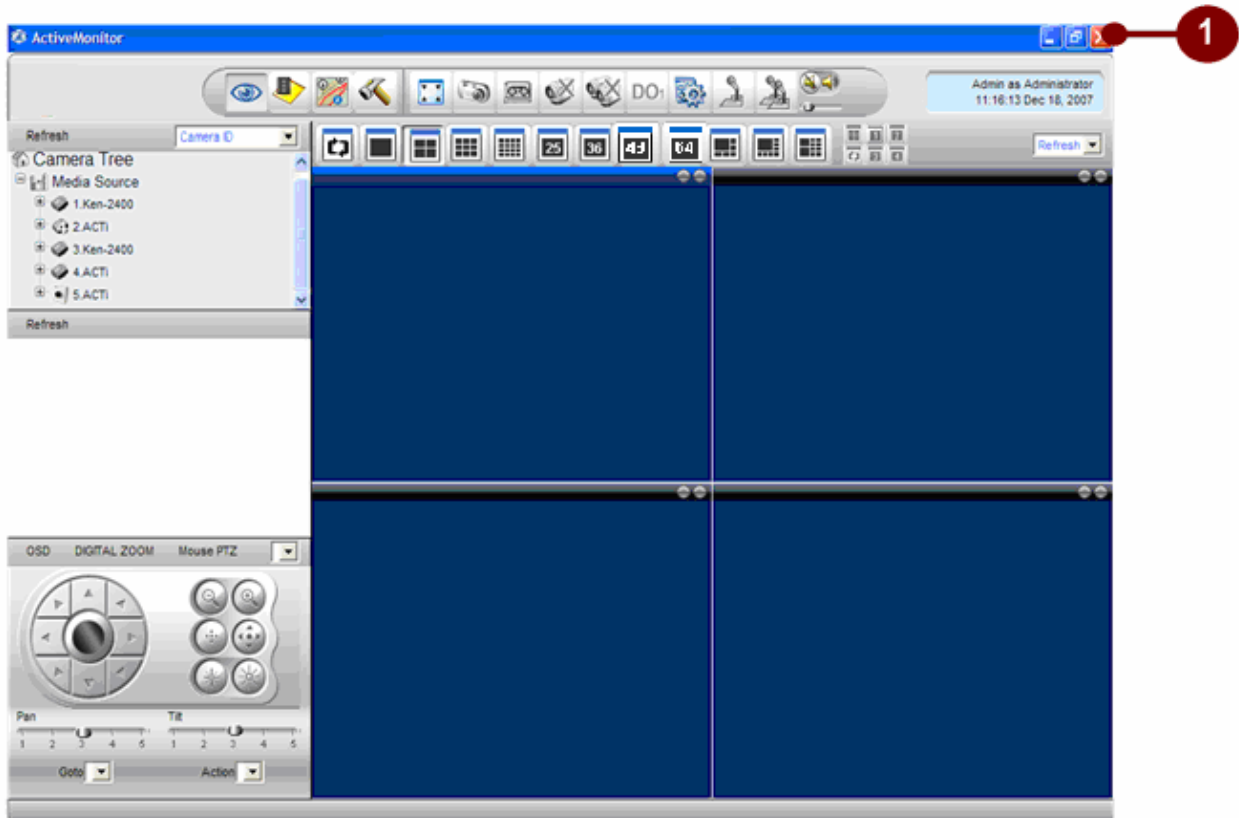


Figure 2-8 Quit NVR

3. Active Monitor

Introduction

The Monitor Console (Active Monitor) is the application designed to perform live preview for installed devices. It allows up to 36 concurrent video preview windows, including a variety of preview modes.

Advanced features of the Monitor Console include event logs, talk, broadcast, manual digital output to device, automatic layout touring, PTZ control, system monitor and many more. This section explains the interface in detail, as well as gives instructions for using these advanced functions.

Overview

The section describes NVR Active Monitor functions, including camera preview

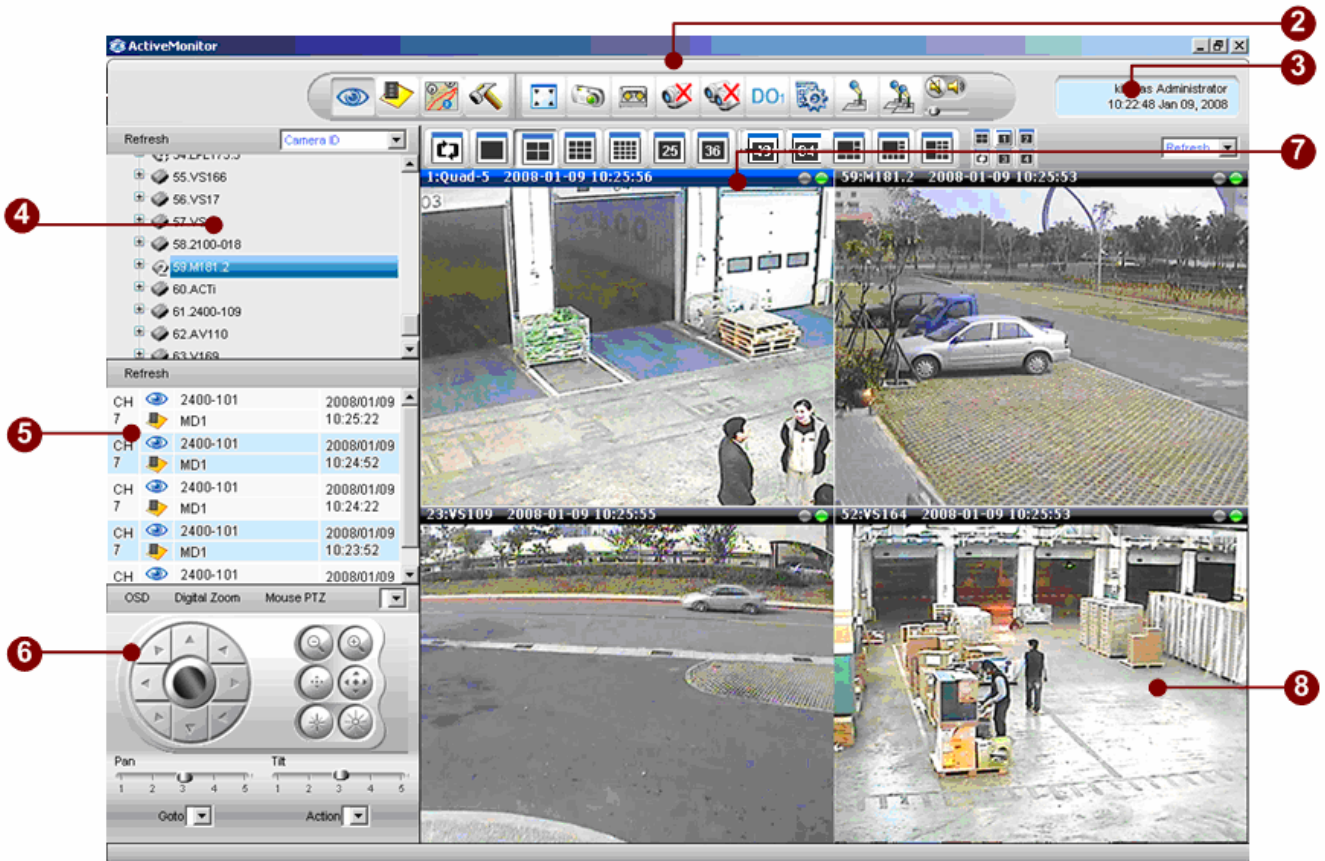


Figure 3-1 User Interface

1. (omitted)
2. **Active Monitor Toolbar:** Contains buttons to operate in Active Monitor application
3. **Personal Profile:** Click on this section brings up Personal Profile setting; user may change password and select preferred Language.
4. **Camera Panel:** Displays camera tree.
5. **Event Panel:** Displays event generated, including motion detection, alarm input, camera date/time is not correct and video loss events. User may click on each item to see further details.
6. **PTZ Panel:** PTZ operations
7. **Layout Manager:** Controls the various window layout
8. **Video Window:** Each video window displays live view from one video source from camera panel.

Live View Operation

Channel Live View

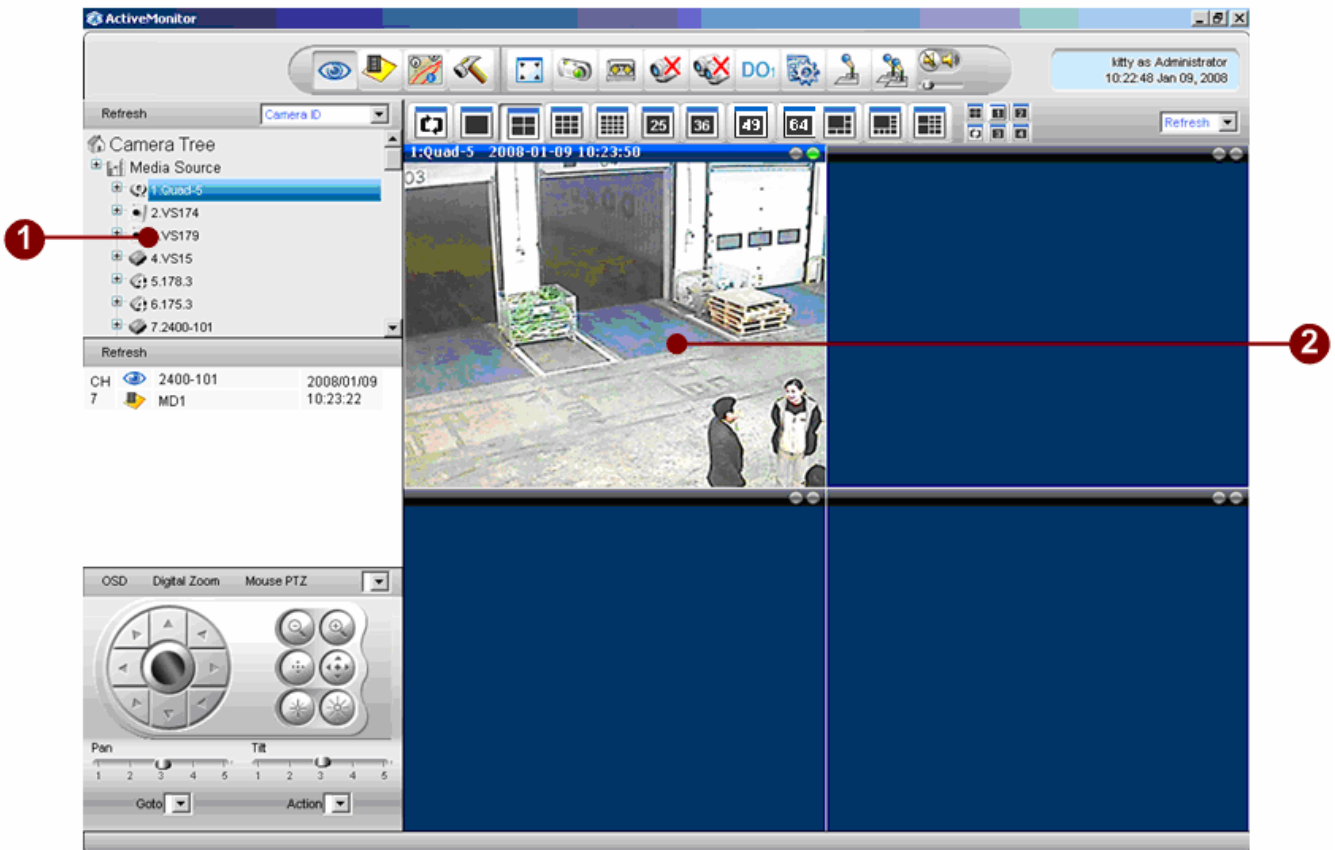


Figure 3-2 Preview Window

1. **Camera Panel:** Displayed camera information in tree directory.
2. **Preview Window:** Click on any window once to select it and enable functions for this specific camera (PTZ, snapshot, close camera, etc.)



TIP: To preview a channel, first click on a video window in layout manager, then double-click on the camera in the Camera panel, or drag the camera into the video window in the layout manager.

Double Click on the Camera

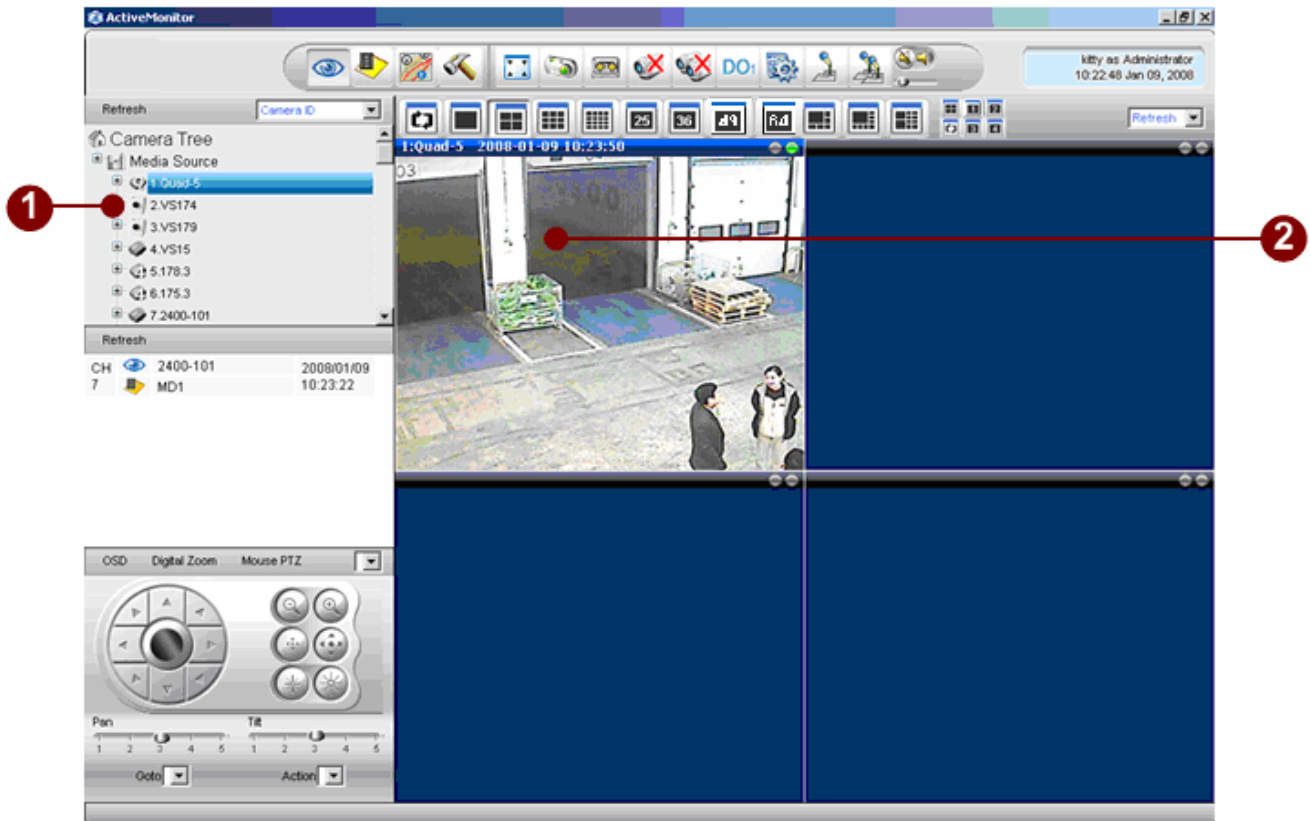


Figure 3-3 Double click on a camera to preview

1. **Camera Tree:** Double click on the camera icon that user wants to preview.
2. **Active Preview window:** User can see the video screen on the active preview window.

Drag-n-Drop a Camera

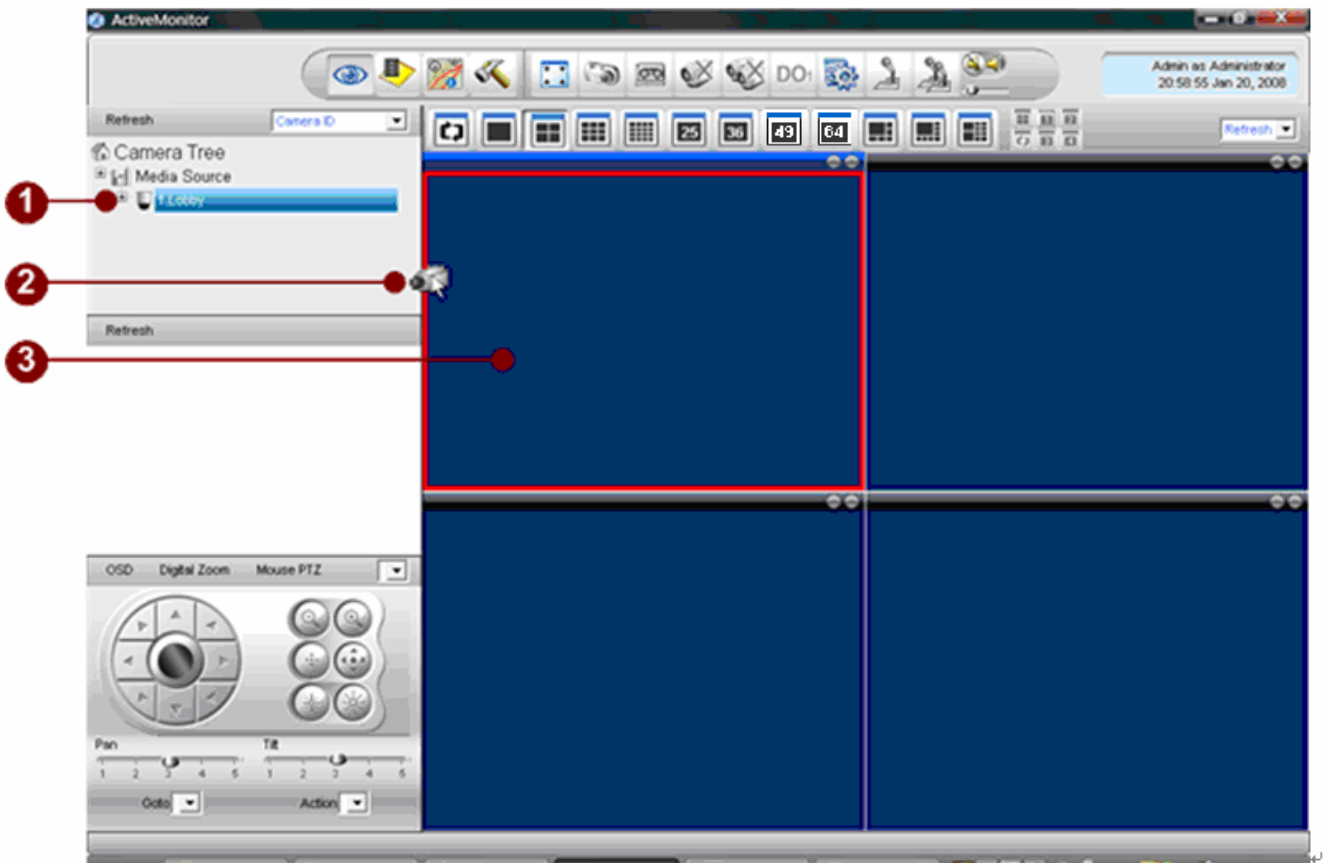
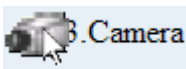
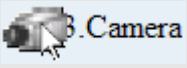


Figure 3-4 Drag and Drop a camera

1. **Camera Icon:** Click on the camera icon to be previewed with left mouse key, then hold left mouse key and drag the camera to the desired display window.
2. **Drag icon:** When dragging a camera, the icon display as .
3. **Display window:** The window with red bar will display video on the camera selected



TIP: When you drag the camera icon, a new cursor (with camera name) will be displayed. The cursor looks like: .

Active Monitor Toolbar



Figure 3-5 Active Monitor Toolbar

1. **Active Monitor:** Click on this button to go to the Active Monitor application.
2. **Archive Player:** Click on this button to go to the Archive Player application.
3. **Active Map:** Click on this button to go to the Active E-Map application.
4. **Active Setup:** Setup the System, Camera and E-Map.
5. **Full Screen:** Click to bring the video into full-screen mode. To bring the controls back, press ESC.
6. **Create Snapshot:** Takes a single screenshot at maximum resolution for the selected video only. The screenshot is saved as an JPG file in the Recording Path defined in the Recording of Camera Setup. Please refer to the [Recording](#) section for details. The snapshots will be stored on local machine and cannot be searched by NVR Server.
7. **Manual Record:** Click on this button will create recording immediately. The recording will be stored on local machine and cannot be searched by NVR Server.
8. **Disconnect A Camera:** Click once to stop video streaming for the selected window.
9. **Disconnect All Camera:** Click once to stop video streaming for all preview windows.
10. **Trigger DO1:** Click once to trigger DO1 of the selected camera.
11. **System Monitor:** Click on this button to brings up system log.
12. **Speak:** Pressing this icon enables audio transmission to the selected video device; un-pressing it disables the transmission.
13. **Broadcast:** Pressing this icon enables audio transmission to all video devices that appear in this layout; un-pressing it disables the transmission.
14. **Volume Control:** turn on/off and adjust the volume.



NOTE: If you start another application from the toolbar, say Active Map, and you cannot find it, please go check the task bar.

Full Screen Mode (CTRL+F12)

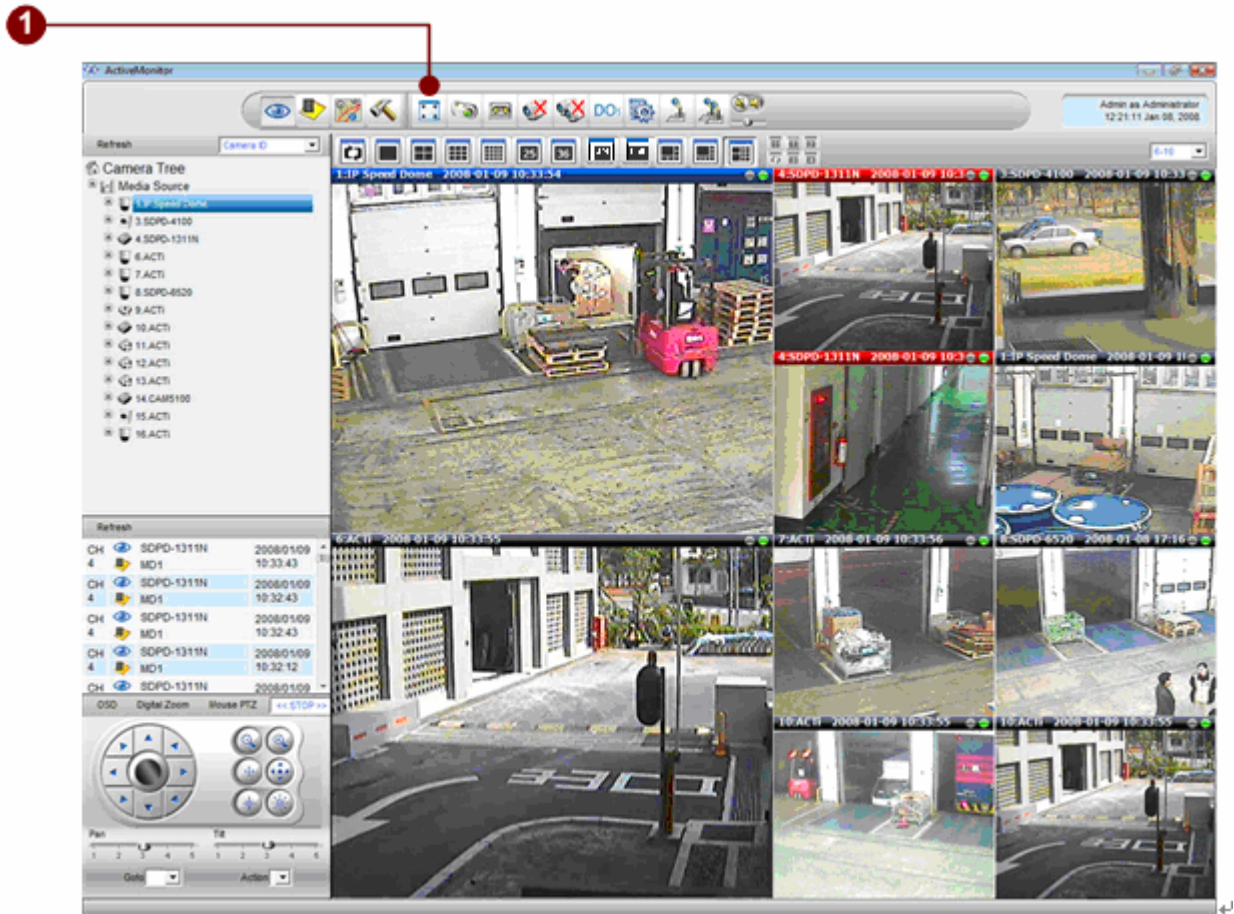


Figure 3-6 Full screen button

1. **Full-screen:** Click to bring the video into full-screen mode. To bring the controls back, press **ESC** or press **CTRL+F12** again.



NOTE: Full-screen maximizes the entire layout of videos instead of just the selected window. It will also not expand the video should the size of the window exceeds the maximum resolution of the video.



TIP: The user can also use **CTRL+12** to invoke this function. To show/hide the toolbar, user can press **FTRL+F11** function key to toggle this function.



Figure 3-7 Full Screen Mode



TIP: When in full screen mode, Preview tour and Mouse PTZ can still operate properly. Digital Zoom is disabled.

Create Snapshot (CTRL+F7)

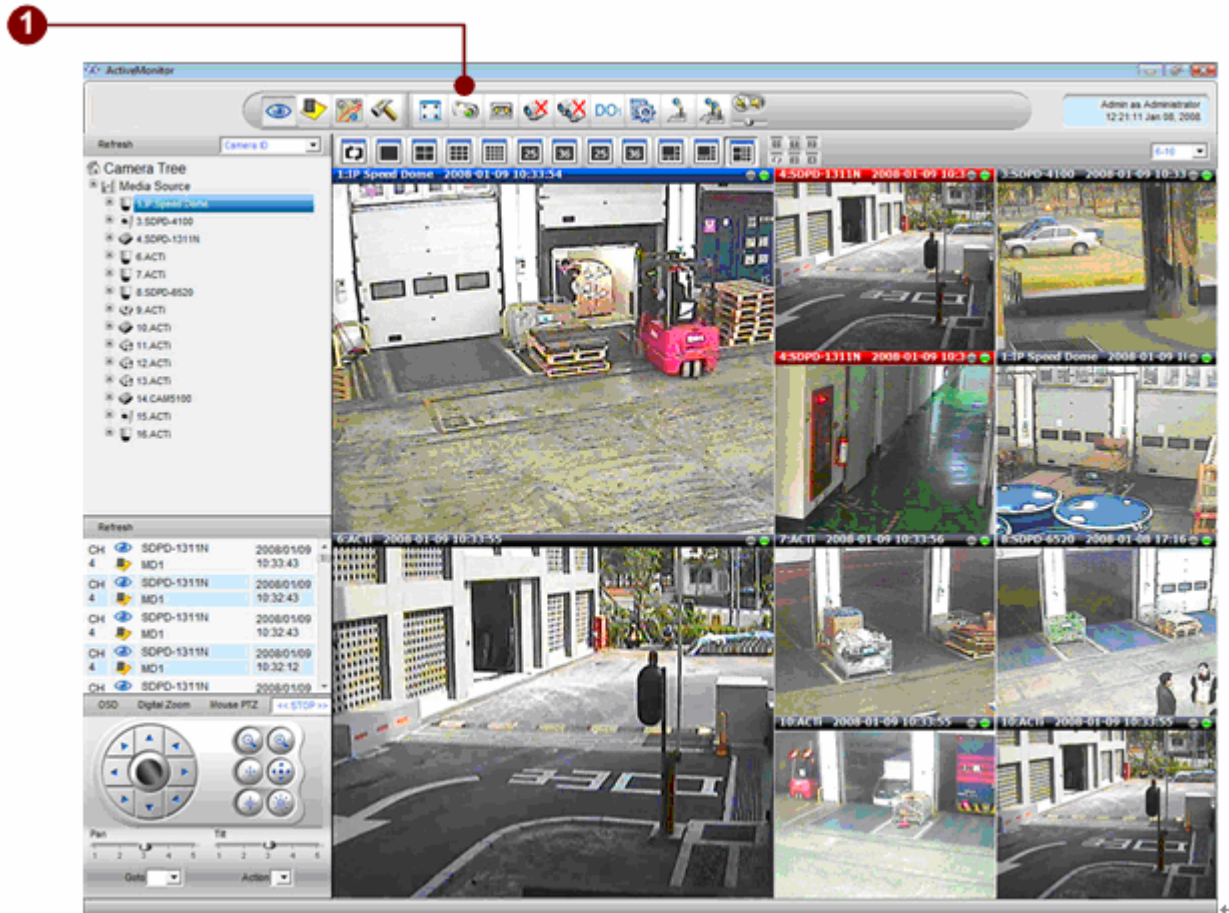


Figure 3-8 Create Snapshot

1. **Snapshot:** Takes a single screenshot at maximum resolution for the selected video only. The screenshot is saved as an JPG file in the Recording Path defined in the Recording of Camera Setup. Please refer to [Recording](#) section for details.



NOTE: The snapshot taken will be stored in local PC, and cannot be searched by NVR Server.

Manual Record

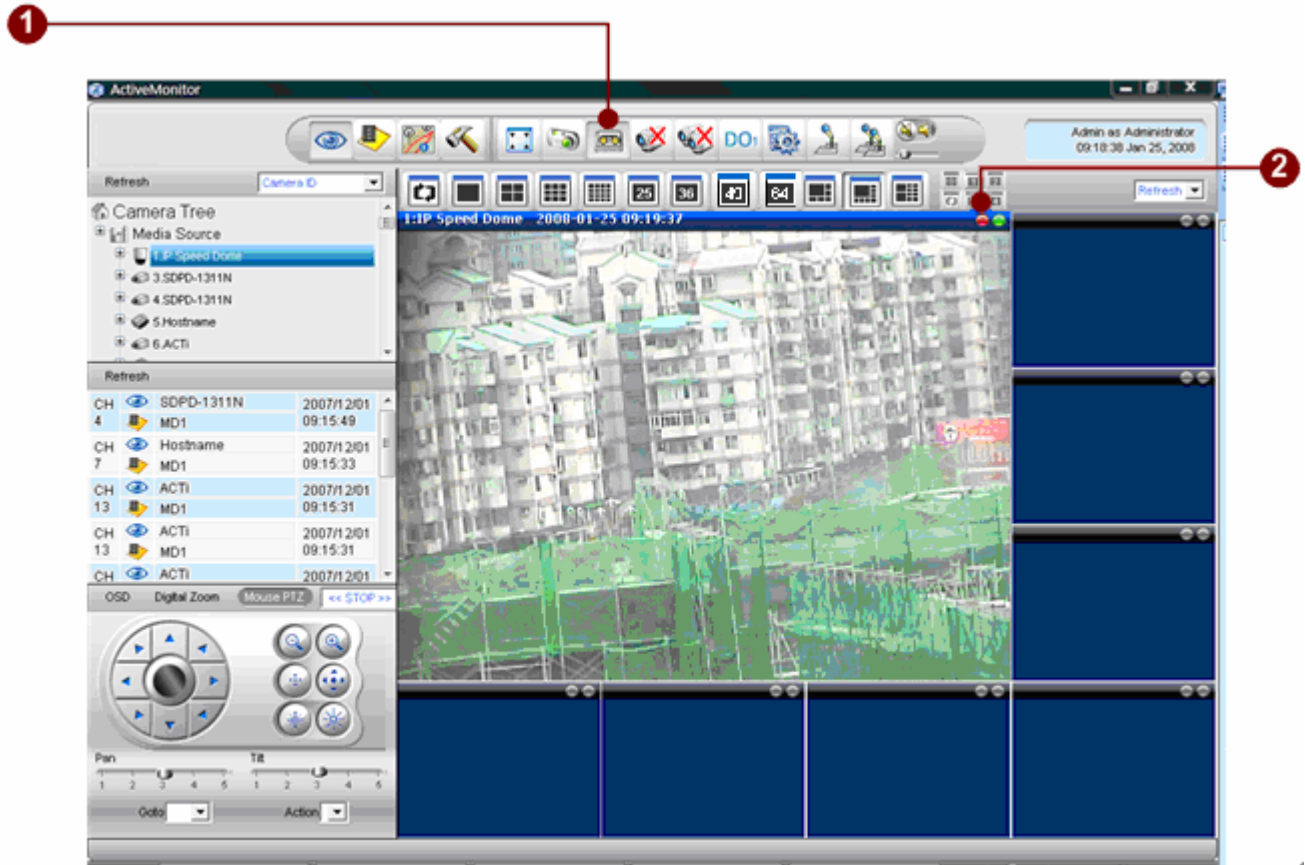


Figure 3-9 Create Snapshot

1. **Manual Record:** Click on this button to start manual record. Please refer to [Recording](#) section for details.
2. **Manual Record Indicator:** When the video channel is under manual recording mode, the red light will flashing.



NOTE: Video archive is recorded on local PC, and cannot be searched via NVR.

Condition	Running with NVR Server	NVR Workstation		NVR Web Client	
		Yes	No	Yes	No
Active Monitor	Manual Record	\$RECORDINGS\Channel<ID>* .RAW	\$NVR\IP Control Center\Recordings\Channel<ID >* .RAW	\$RECORDINGS\Channel<ID>* .RAW	C:\Recordings\Channel<ID>* .RAW
	Snapshot	\$RECORDINGS\Channel<ID>* .JPG	\$NVR\IP Control Center\Recordings\Channel<ID >* .JPG	\$RECORDINGS\Channel<ID>* .JPG	C:\Recordings\Channel<ID>* .JPG

Disconnect a Channel

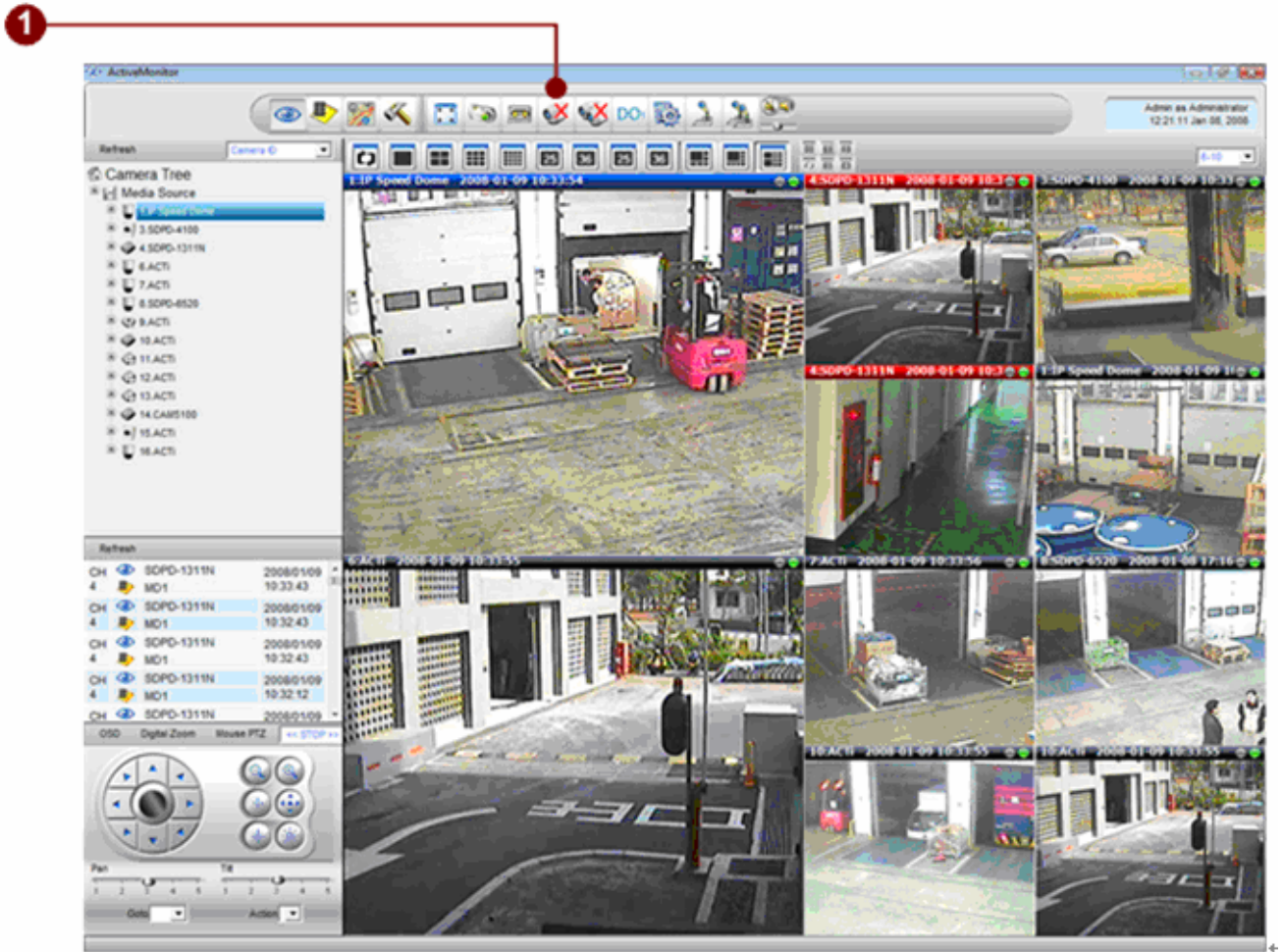
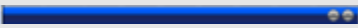


Figure 3-10 Disconnect a Channel

1. **Disconnect A Channel:** Click the button to stop video streaming on the active window.



TIP: The selected window is the active window which display with blue title bar like follow: 

Disconnect All Channels

1

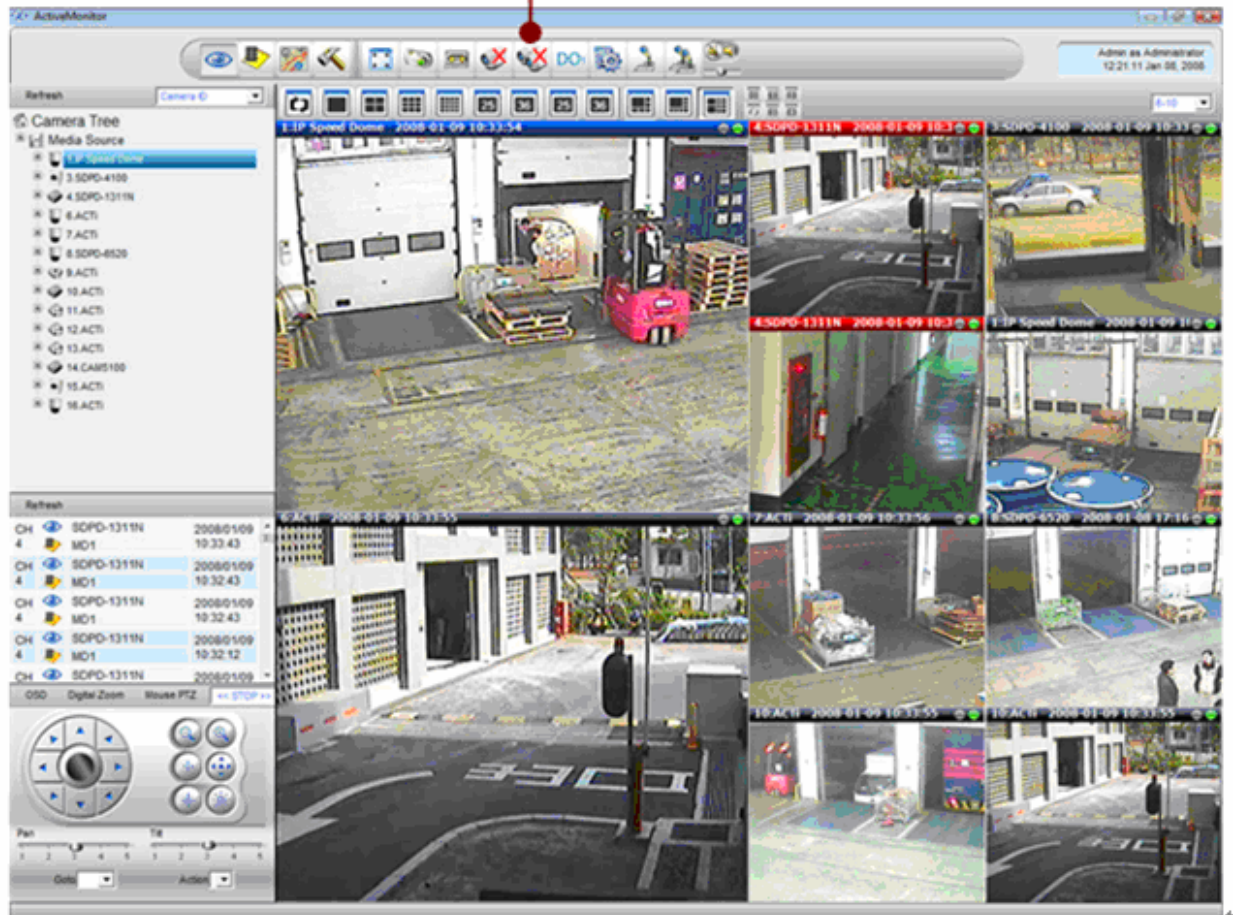


Figure 3-11 Disconnect all Channel

1. **Disconnect All Channels:** Click once to stop video streaming for all preview windows.

Trigger DO1 (Toggle)

1

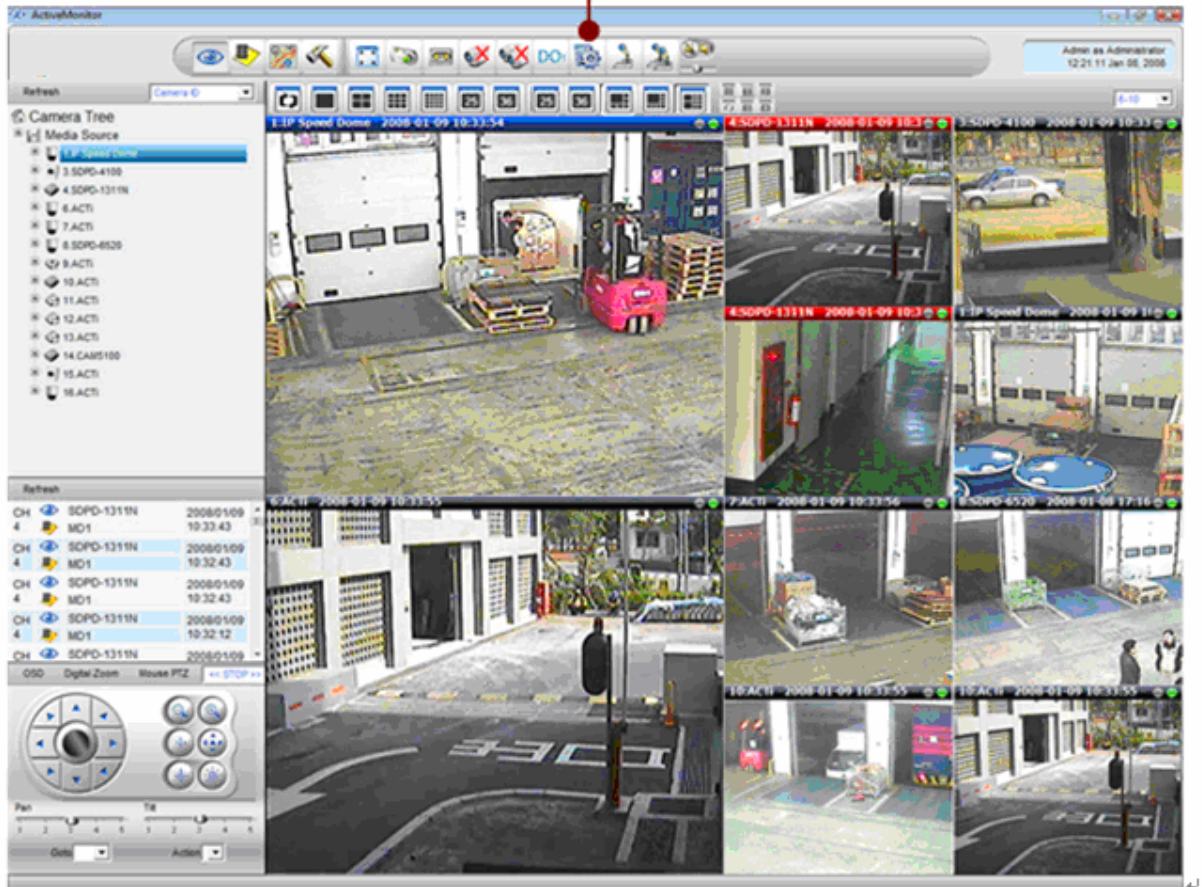


Figure 3-12 Trigger DO1

1. **Trigger DO1:** Click this button to trigger DO1 of selected camera.



NOTE: Note that, when you click on this button, the DO will be triggered to high until you click this button again to trigger the DO status to low.

System Monitor

1

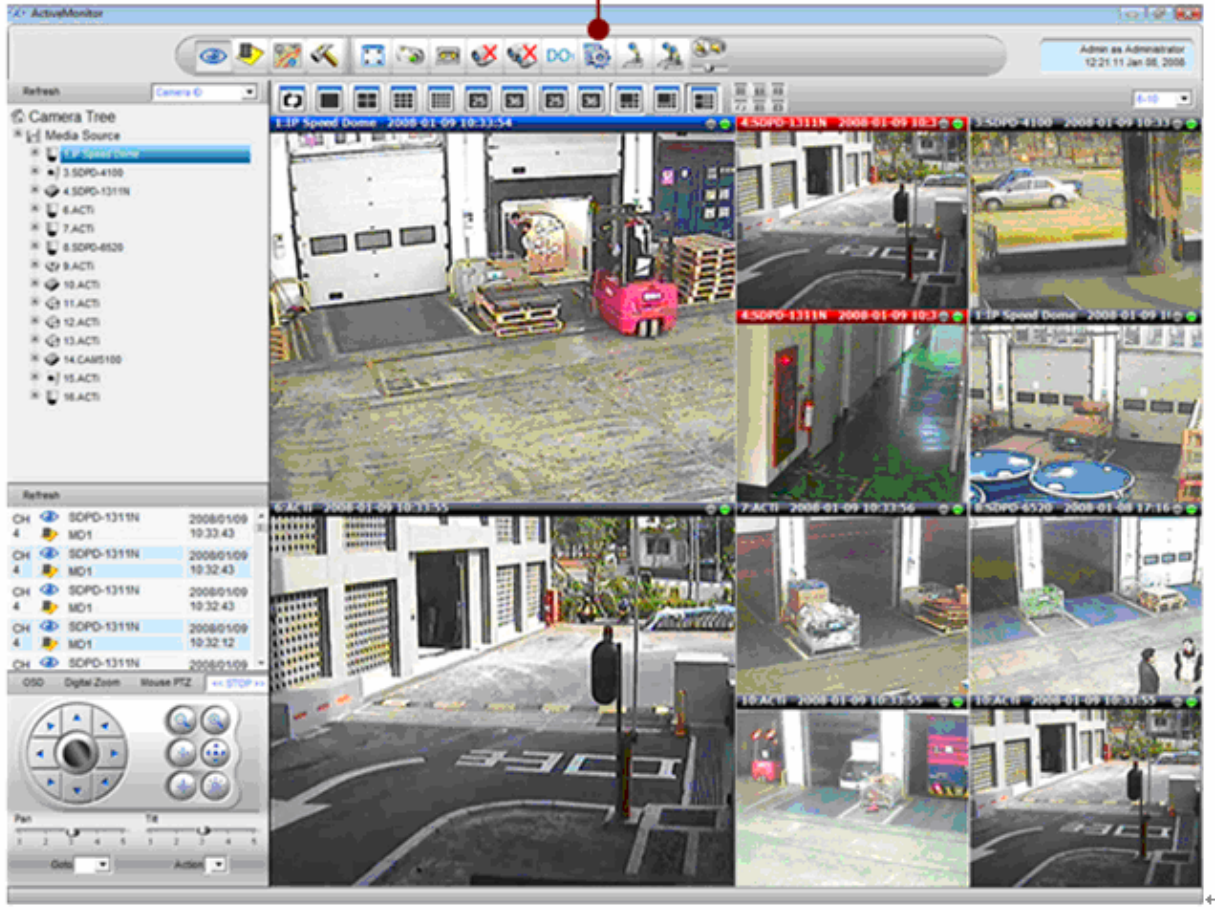


Figure 3-13 System Monitor Button

1. **System Log:** Click on  button brings up system log.

System Monitor Listing

System Monitor contains the following information:

1. **Recorded:** Recording information
2. **Deleted:** Deletion information, including database and archive file
3. **Alarm:** Alarm information, including digital input 1 and 2
4. **Motion:** Motion detection information
5. **Network Loss/Recovery:** Network loss or recovery information
6. **Video Loss/Recover:** Video loss or recovery information
7. **User Operation:** User login/logout and operation information



NOTE: System monitor display with a pop-up window; this may not work under NVR Web Client if the pop-up window is blocked by Microsoft Internet Explorer pop-up window setup.

System Monitor - Recorded

System Monitor						
Recorded Deleted Alarm Motion Network Loss/Recovery Video Loss/Recovery User Operation						
Camera	Stream	File	Start Time	End Time	Duration	
Hostname	WithStreaming	J:\Recordings\Channel7\CHANNEL7_20080120220347.raw	2008-01-20 22:03:47	2008-01-20 22:04:16	31	
Hostname	WithStreaming	J:\Recordings\Channel5\CHANNEL5_20080120220347.raw	2008-01-20 22:03:47	2008-01-20 22:04:16	31	
ACTi	WithStreaming	J:\Recordings\Channel46\CHANNEL46_20080120220342.raw	2008-01-20 22:03:42	2008-01-20 22:04:11	33	
Hostname	WithStreaming	J:\Recordings\Channel43\CHANNEL43_20080120220335.raw	2008-01-20 22:03:36	2008-01-20 22:04:05	31	
ACTi	WithStreaming	J:\Recordings\Channel8\CHANNEL8_20080120220332.raw	2008-01-20 22:03:33	2008-01-20 22:04:02	33	
ACTi	WithStreaming	J:\Recordings\Channel10\CHANNEL10_20080120220330.raw	2008-01-20 22:03:31	2008-01-20 22:04:00	33	
ACTi	WithStreaming	J:\Recordings\Channel64\CHANNEL64_20080120220319.raw	2008-01-20 22:03:20	2008-01-20 22:03:49	31	
ACTi	WithStreaming	J:\Recordings\Channel13\CHANNEL13_20080120220319.raw	2008-01-20 22:03:20	2008-01-20 22:03:49	31	
ACTi	WithStreaming	J:\Recordings\Channel48\CHANNEL48_20080120220319.raw	2008-01-20 22:03:20	2008-01-20 22:03:49	31	
ACTi	WithStreaming	J:\Recordings\Channel15\CHANNEL15_20080120220319.raw	2008-01-20 22:03:20	2008-01-20 22:03:49	31	
Hostname	WithStreaming	J:\Recordings\Channel7\CHANNEL7_20080120220317.raw	2008-01-20 22:03:17	2008-01-20 22:03:46	31	
Hostname	WithStreaming	J:\Recordings\Channel5\CHANNEL5_20080120220316.raw	2008-01-20 22:03:17	2008-01-20 22:03:46	31	
ACTi	WithStreaming	J:\Recordings\Channel46\CHANNEL46_20080120220312.raw	2008-01-20 22:03:12	2008-01-20 22:03:41	33	
Hostname	WithStreaming	J:\Recordings\Channel43\CHANNEL43_20080120220305.raw	2008-01-20 22:03:06	2008-01-20 22:03:35	31	
ACTi	WithStreaming	J:\Recordings\Channel8\CHANNEL8_20080120220302.raw	2008-01-20 22:03:02	2008-01-20 22:03:32	34	

<< 1 | < Prev | [Next >](#) | [Last Page >>](#) |

Figure 3-14 System Monitor - Recorded

1. **Camera:** Camera Name
2. **Stream:** Recording type, including **Continuous**, **Event With Streaming** and **Schedule**
3. **File:** File location on the disk
4. **Start Time:** Stat time
5. **End Time:** End time
6. **Duration:** Length of the recorded archive
7. **Page Indicator:** Traverse to first, last, previous or next page

System Monitor - Deleted

System Monitor						
Recorded	Deleted	Alarm	Motion	Network Loss/Recovery	Video Loss/Recovery	User Operation
Camera	Stream	File	Start Time	End Time	Duration	
ACTi	WithStreaming	J:\Recordings\Channel22\CHANNEL22_20080120174906.raw	2008-01-20 17:49:06	2008-01-20 17:49:35	14	
ACTi	WithStreaming	J:\Recordings\Channel55\CHANNEL55_20080120174906.raw	2008-01-20 17:49:06	2008-01-20 17:49:35	14	
ACTi	WithStreaming	J:\Recordings\Channel35\CHANNEL35_20080120174906.raw	2008-01-20 17:49:06	2008-01-20 17:49:35	14	
ACTi	WithStreaming	J:\Recordings\Channel8\CHANNEL8_20080120174902.raw	2008-01-20 17:49:03	2008-01-20 17:49:32	33	
ACTi	WithStreaming	J:\Recordings\Channel12\CHANNEL12_20080120174857.raw	2008-01-20 17:48:58	2008-01-20 17:49:27	31	
ACTi	WithStreaming	J:\Recordings\Channel11\CHANNEL11_20080120174857.raw	2008-01-20 17:48:58	2008-01-20 17:49:27	31	
ACTi	WithStreaming	J:\Recordings\Channel63\CHANNEL63_20080120174857.raw	2008-01-20 17:48:58	2008-01-20 17:49:27	31	
ACTi	WithStreaming	J:\Recordings\Channel47\CHANNEL47_20080120174857.raw	2008-01-20 17:48:58	2008-01-20 17:49:27	31	
ACTi	WithStreaming	J:\Recordings\Channel28\CHANNEL28_20080120174856.raw	2008-01-20 17:48:56	2008-01-20 17:49:25	29	
Hostname	WithStreaming	J:\Recordings\Channel7\CHANNEL7_20080120174855.raw	2008-01-20 17:48:56	2008-01-20 17:49:25	31	
Hostname	WithStreaming	J:\Recordings\Channel5\CHANNEL5_20080120174855.raw	2008-01-20 17:48:55	2008-01-20 17:49:24	31	
ACTi	WithStreaming	J:\Recordings\Channel48\CHANNEL48_20080120174853.raw	2008-01-20 17:48:54	2008-01-20 17:49:23	31	
ACTi	WithStreaming	J:\Recordings\Channel15\CHANNEL15_20080120174853.raw	2008-01-20 17:48:54	2008-01-20 17:49:23	31	
ACTi	WithStreaming	J:\Recordings\Channel13\CHANNEL13_20080120174853.raw	2008-01-20 17:48:54	2008-01-20 17:49:23	31	
ACTi	WithStreaming	J:\Recordings\Channel64\CHANNEL64_20080120174853.raw	2008-01-20 17:48:54	2008-01-20 17:49:23	31	

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Figure 3-15 System Monitor - Deleted

1. **Camera:** Camera Name
2. **Stream:** Recording type, including **Continuous**, **Event With Streaming** and **Schedule**
3. **File:** File location in the disk
4. **Start Time:** Stat time
5. **End Time:** End time
6. **Duration:** Length of the recorded archive
7. **Page Indicator:** Traverse to first, last, previous or next page

System Monitor - Alarm

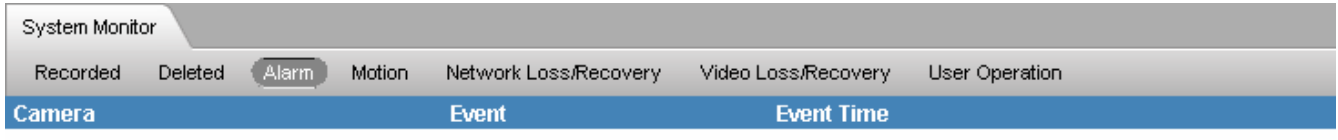


Figure 3-16 System Monitor - Alarm

1. **Camera:** Camera Name
2. **Event:** Alarm type
3. **Event Time:** The time of the occurrence of the event
4. **Page Indicator:** Navigate through the record set, including first page, last page, previous page, next page

System Monitor - Motion

System Monitor						
Recorded	Deleted	Alarm	Motion	Network Loss/Recovery	Video Loss/Recovery	User Operation
Camera	Event	Event Time				
Hostname	Motion	2008-01-20 22:06:37				
Hostname	Motion	2008-01-20 22:06:18				
Hostname	Motion	2008-01-20 22:06:18				
ACTi	Motion	2008-01-20 22:06:09				
ACTi	Motion	2008-01-20 22:06:09				
ACTi	Motion	2008-01-20 22:06:09				
ACTi	Motion	2008-01-20 22:06:09				
ACTi	Motion	2008-01-20 22:06:08				
ACTi	Motion	2008-01-20 22:06:08				
ACTi	Motion	2008-01-20 22:06:08				
ACTi	Motion	2008-01-20 22:06:08				
ACTi	Motion	2008-01-20 22:06:08				
Hostname	Motion	2008-01-20 22:06:07				
Hostname	Motion	2008-01-20 22:05:48				
Hostname	Motion	2008-01-20 22:05:48				
Hostname	Motion	2008-01-20 22:05:36				

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Figure 3-17 System Monitor - Motion

1. **Camera:** Camera Name
2. **Event:** Motion type
3. **Event Time:** The time of the occurrence of the event
4. **Page Indicator:** Navigate through the record set, including first page, last page, previous page, next page

System Monitor – Network Loss/Recovery

System Monitor						
Recorded	Deleted	Alarm	Motion	Network Loss/Recovery	Video Loss/Recovery	User Operation
Camera	Event	Event Time				
ACTi	Network Recovery	2008-01-20 22:07:17				
ACTi	Network Loss	2008-01-20 22:07:16				
ACTi	Network Recovery	2008-01-20 22:07:01				
ACTi	Network Loss	2008-01-20 22:07:00				
ACTi	Network Recovery	2008-01-20 22:06:45				
ACTi	Network Loss	2008-01-20 22:06:44				
ACTi	Network Recovery	2008-01-20 22:06:29				
ACTi	Network Loss	2008-01-20 22:06:28				
ACTi	Network Recovery	2008-01-20 22:06:13				
ACTi	Network Loss	2008-01-20 22:06:12				
ACTi	Network Recovery	2008-01-20 22:05:57				
ACTi	Network Loss	2008-01-20 22:05:56				
ACTi	Network Recovery	2008-01-20 22:05:41				
ACTi	Network Loss	2008-01-20 22:05:40				
ACTi	Network Recovery	2008-01-20 22:05:25				

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Figure 3-18 System Monitor – Network Loss/Recovery

1. **Camera:** Camera Name
2. **Event:** Network status, including **Network Loss** and **Network Recovery**
3. **Event Time:** The time of the occurrence of the event
4. **Page Indicator:** Navigate through the record set, including first page, last page, previous page, next page

System Monitor – Video Loss/Recovery

System Monitor						
Recorded	Deleted	Alarm	Motion	Network Loss/Recovery	Video Loss/Recovery	User Operation
Camera	Event	Event Time				
ACTi	Video Loss	2008-01-20 09:22:33				
ACTi	Video Loss	2008-01-20 09:22:33				
ACTi	Video Loss	2008-01-20 09:22:32				
ACTi	Video Loss	2008-01-20 09:22:32				
ACTi	Video Loss	2008-01-20 00:02:47				
ACTi	Video Loss	2008-01-20 00:02:47				
ACTi	Video Loss	2008-01-20 00:02:44				
ACTi	Video Loss	2008-01-20 00:02:44				
ACTi	Video Loss	2008-01-20 00:02:35				
ACTi	Video Loss	2008-01-20 00:02:35				
ACTi	Video Loss	2008-01-19 00:00:50				
ACTi	Video Loss	2008-01-19 00:00:50				
ACTi	Video Loss	2008-01-19 00:00:50				
ACTi	Video Loss	2008-01-19 00:00:49				
ACTi	Video Loss	2008-01-19 00:00:41				

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Figure 3-19 System Monitor – Video Loss/Recovery

1. **Camera:** Camera Name
2. **Event:** Network status, including **Network Loss** and **Network Recovery**
3. **Event Time:** The time of the occurrence of the event
4. **Page Indicator:** Navigate through the record set, including first page, last page, previous page, next page

System Monitor – User Operation

System Monitor						
Recorded	Deleted	Alarm	Motion	Network Loss/Recovery	Video Loss/Recovery	User Operation
Date Time	Who	CH	Catalog	Category	Description	
2008-01-20 22:04:02	Admin		Login		User Account [Admin] login from [192.168.100.50,192.168.1.3] with auto login [false], display language [en-us]	
2008-01-18 16:07:30	Admin		Login		User Account [Admin] login from [192.168.1.208,172.16.1.208] with auto login [false], display language [en-us]	
2008-01-18 15:08:46	Admin	1	controlpanel		StopFile[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]	
2008-01-18 15:08:27	Admin		controlpanel		Play[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]	
2008-01-18 15:08:27	Admin	1	controlpanel		Change Mute[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]-[Mute 1 to 1]	
2008-01-18 15:08:24	Admin	1	controlpanel		PauseFile[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]	
2008-01-18 15:08:24	Admin	1	controlpanel		Change Mute[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]-[Mute 1 to 1]	
2008-01-18 15:08:19	Admin		controlpanel		Play[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]	
2008-01-18 15:08:19	Admin	1	controlpanel		Change Mute[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]-[Mute 1 to 1]	
2008-01-18 15:08:18	Admin	1	controlpanel		Change Mute[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]-[Mute 1 to 1]	
2008-01-18 15:08:18	Admin	1	controlpanel		PauseFile[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]	
2008-01-18 15:08:14	Admin	1	controlpanel		Change Mute[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]-[Mute 1 to 1]	
2008-01-18 15:08:14	Admin	1	controlpanel		Play[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]	
2008-01-18 15:08:14	Admin	1	controlpanel		Change Mute[J:\Recordings\Channel1\CHANNEL1_20080118115126.raw]-[Mute 1 to 1]	
2008-01-18 15:08:13	Admin		Layout		Change layout window from [0] to [1]	

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Figure 3-20 System Monitor – Video Loss/Recovery

1. **Date Time:** Display date time
2. **Who:** Which user's operation
3. **CH:** Channel number operated
4. **Catalog:** User operation type
5. **Category:** User operation sub-type
6. **Description:** User operation description

Talk and Broadcast

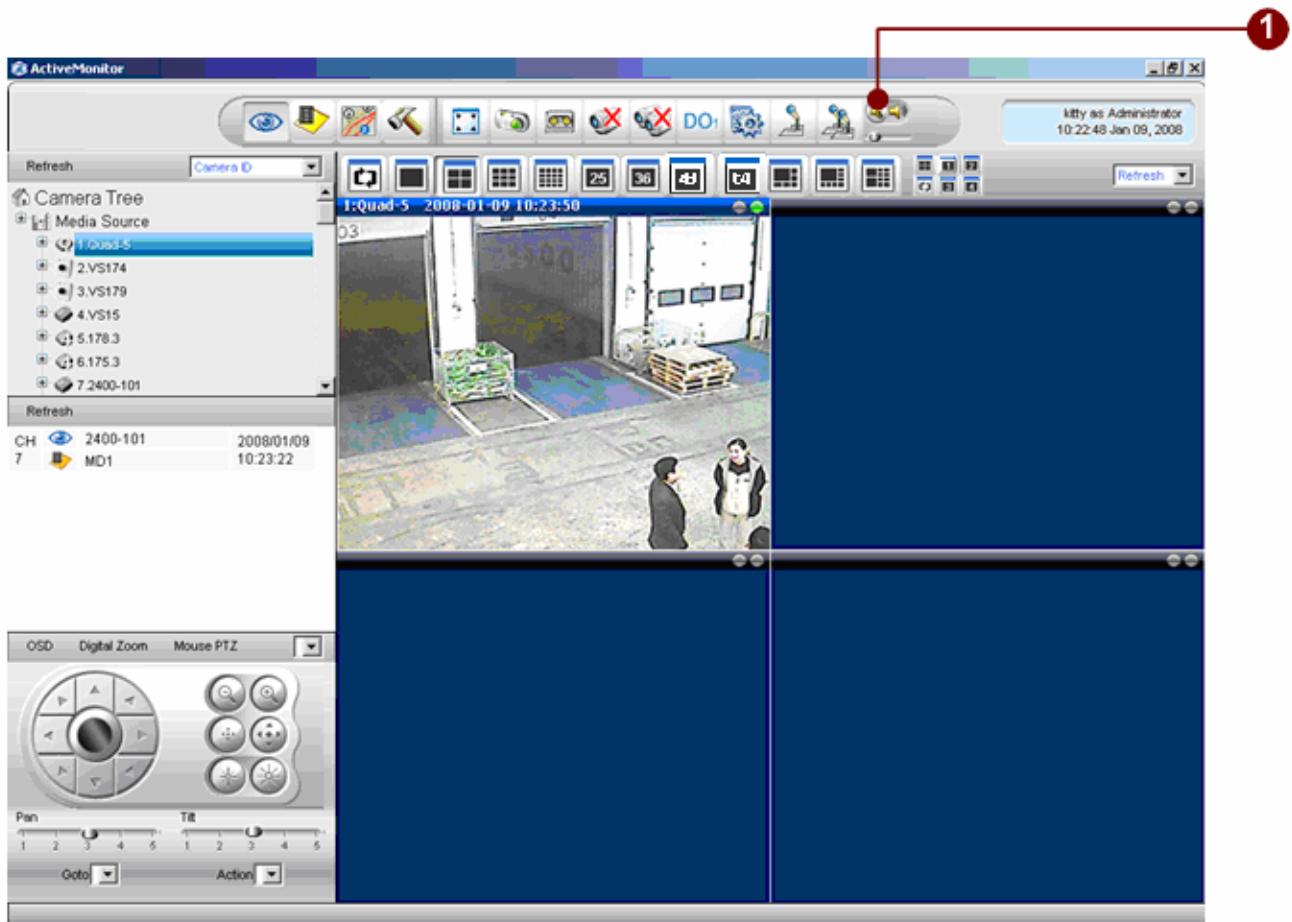


Figure 3-21 Talk and Broadcast button

1. **Talk:** Pressing this icon enables audio transmission to the selected video device; un-pressing it disables the transmission.
2. **Broadcast:** Pressing this icon enables audio transmission to all video devices that appear in this layout; un-pressing it disables the transmission.



IMPORTANT: Note that, in order to enable this function, make sure the device is equipped with 2-way audio function. **Talk** is a 1-to-1 communication while **Broadcast** will transmit the audio to all clients that are connected with live video feed.

Volume Control

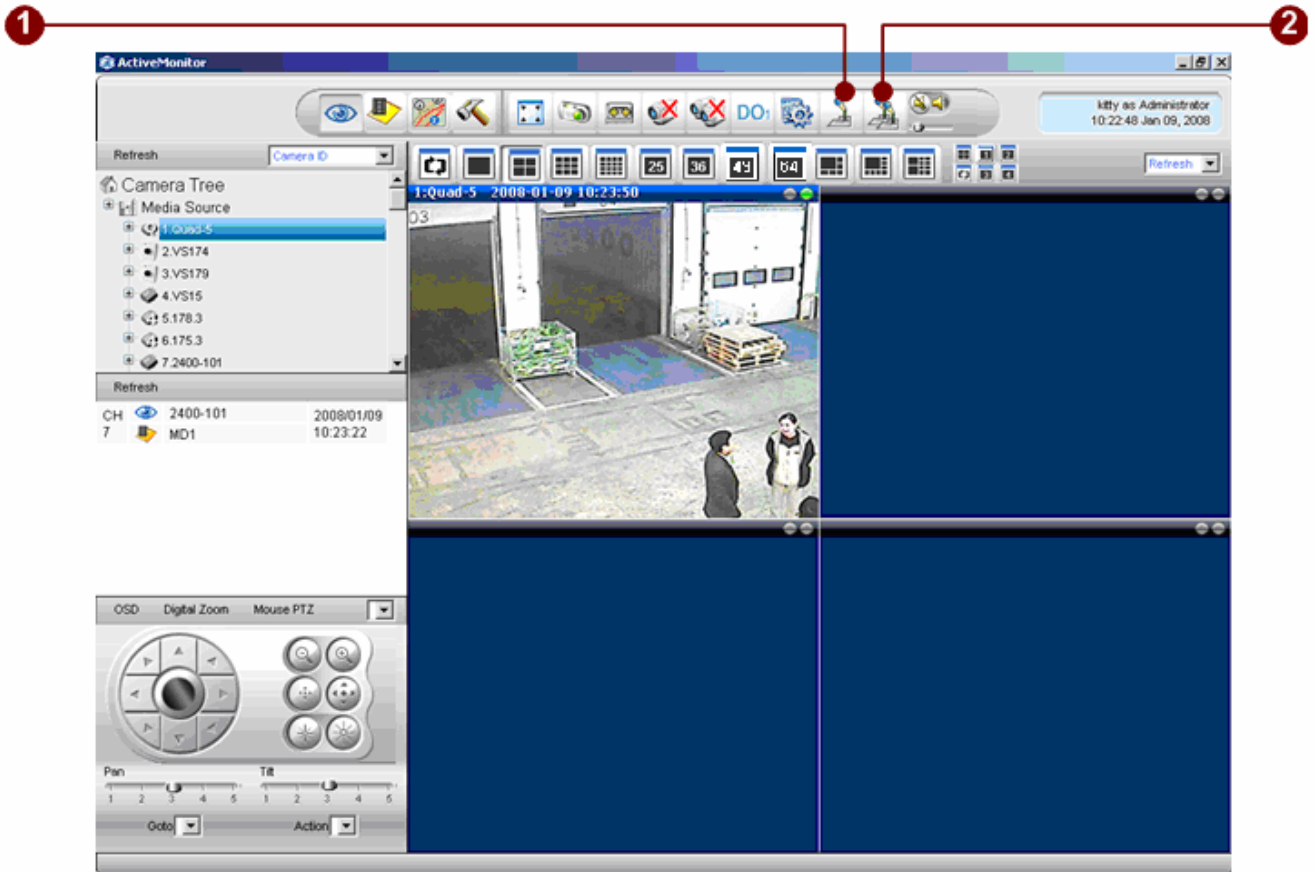


Figure 3-22 Volume Control

1. **Volume Control:** turn on/off and adjust the volume.

Mute On



Figure 3-23 Mute On

Mute Off



Figure 3-24 Mute Off

Adjust Volume



Figure 3-25 Adjust Volume

Camera Panel

Camera List



Figure 3-26 Camera List

1. **Refresh button:** Pressing this button reveals the newest changes made with Active Setup. Closing and re-opening the Active Monitor will have the same effect.
2. **Sort selection:** Sorts the tree in different categories and priorities. User has a choice of Camera ID, Model Name, Group, Resolution, and IP Address.
3. **Camera list:** The Camera List serves two functions:
 - i. Expanding each device shows Camera Information, including Camera ID, Name, Channel ID, FPS, Resolution and Bit-Rate.
 - ii. Clicking and dragging the device icon to a video window on the right shows video from that device.

Channel Layout Manager

Window Layout Selection

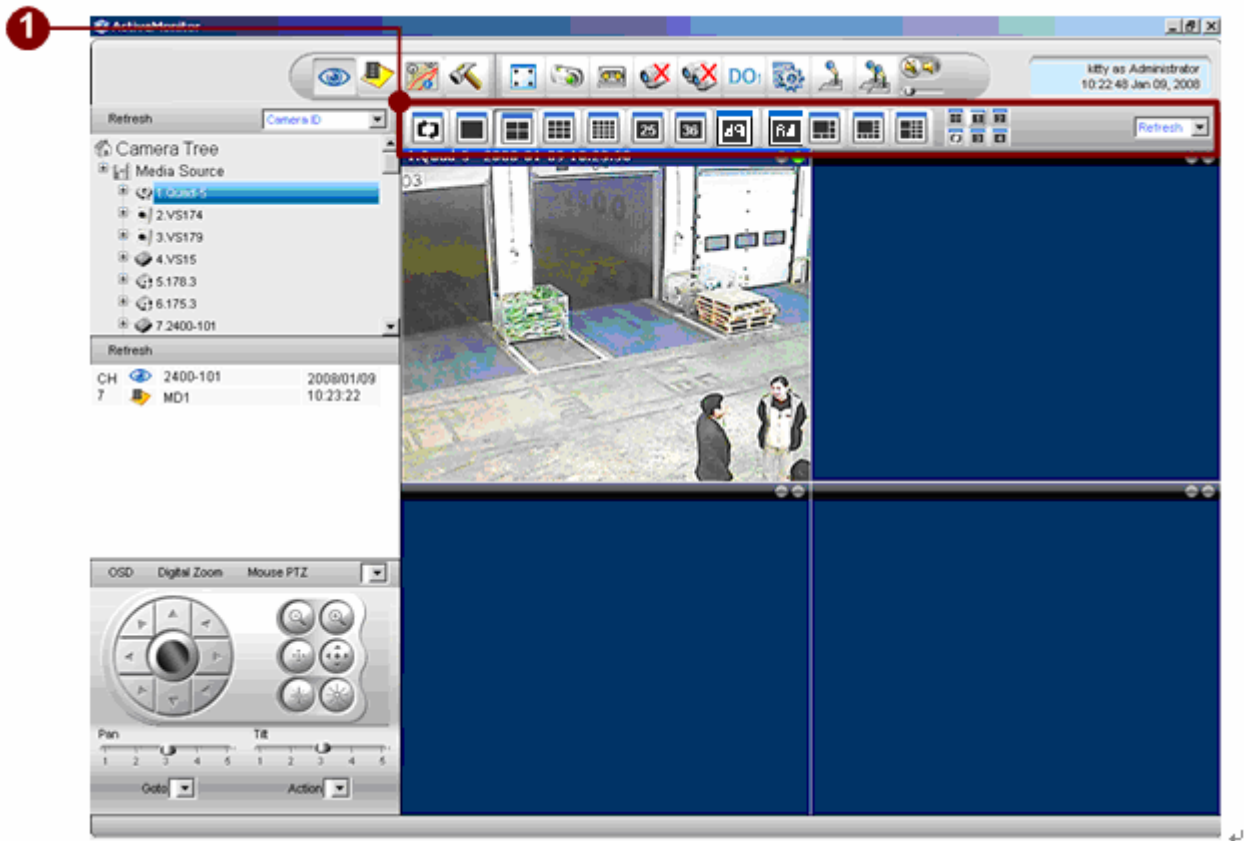


Figure 3-27 Layout bar

1. **Layout selection bar:** These icons manage how the user would like the different video channels to be viewed.

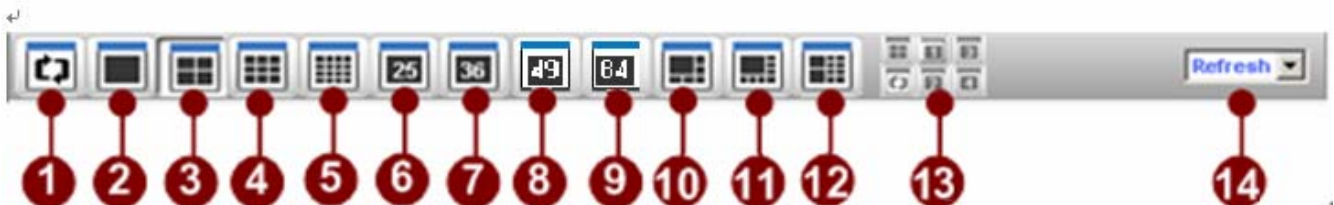


Figure 3-28 Layout Select bar

1. **Patrol:** See [Layout Tour](#) for details.

2. **1-Window View:** Shows a single channel; video is not expanded if maximum resolution of the source video is reached.
3. **4-Window View:** Shows a maximum of 2x2 video channels at once.
4. **9-Window View:** Shows a maximum of 3x3 video channels at once.
5. **16-Window View:** Shows a maximum of 4x4 video channels at once.
6. **25-Window View:** Shows a maximum of 5x5 video channels at once.
7. **36-Window View:** Shows a maximum of 6x6 video channels at once.
8. **49-Window View:** Shows a maximum of 7x7 video channels at once.
9. **64-Window View:** Shows a maximum of 8x8 video channels at once.
10. **6-Window View:** Shows one video channel with a larger view, and 5 others at a lower resolution.
11. **8-Window View:** Shows one video channel with a larger view, and 7 others at a lower resolution.
12. **10-Window View:** Shows two video channels with a larger view, and 8 others at a lower resolution.
13. **Quad setting:** Controls layouts within the Quad Video Server .
14. **Pre-Defined Layout:** Choose the layout that user wants to preview.



NOTE: The Quad setting buttons will only become active if the selected channel is defined as a quad in the camera settings.

Pre-defined Layout

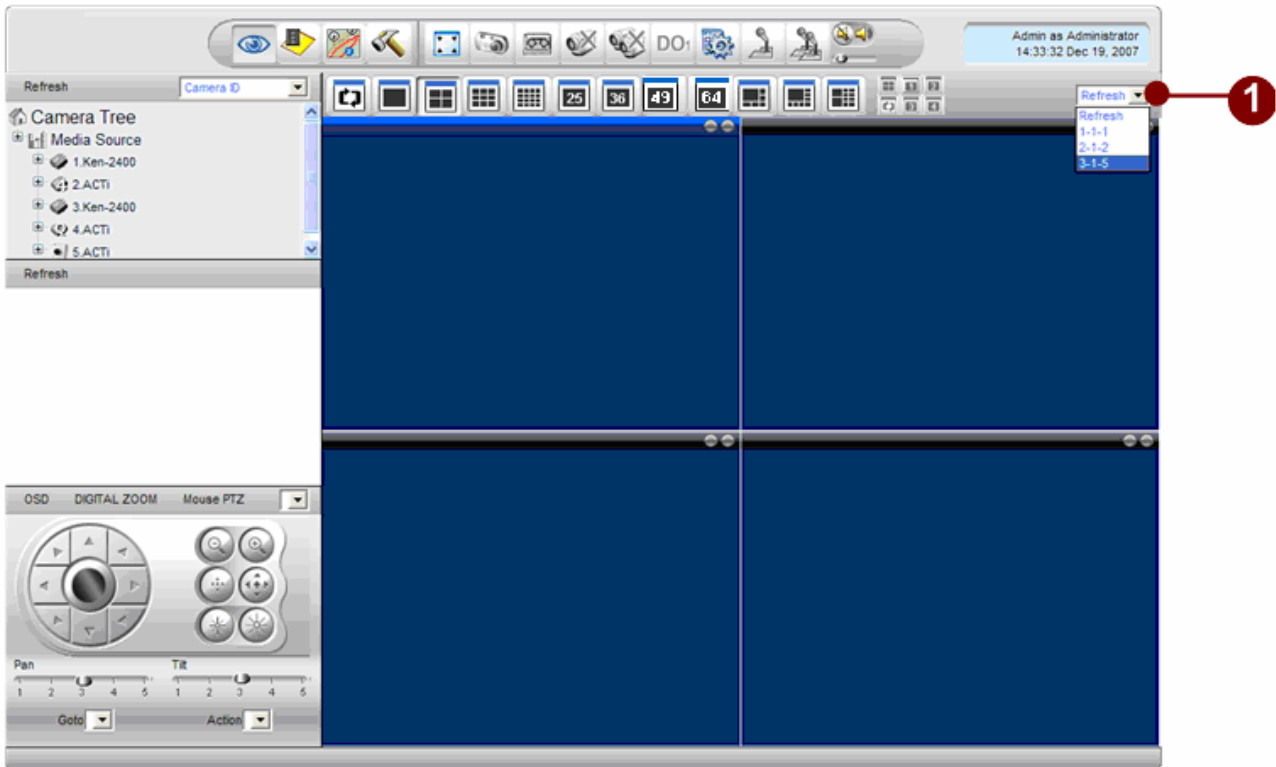


Figure 3-29 Select Predefined Layout

1. **Pre-defined layout options:** If User has pre-defined layouts in System Setup (See [Layout](#) for details), user will find them here. Selecting any one of them automatically brings up the layout as well as all video channels. Selecting “Refresh” will refresh the list should any layouts has been changed with Active Setup.

Hot-spot Window

The hot-spot window is designed to alert security officer for certain events. The security officer may simply double-click on any video window, that window will then be switched over with the one in hot-spot window. Also, user may setup the action to display video on the hot-spot window when certain event occurs.

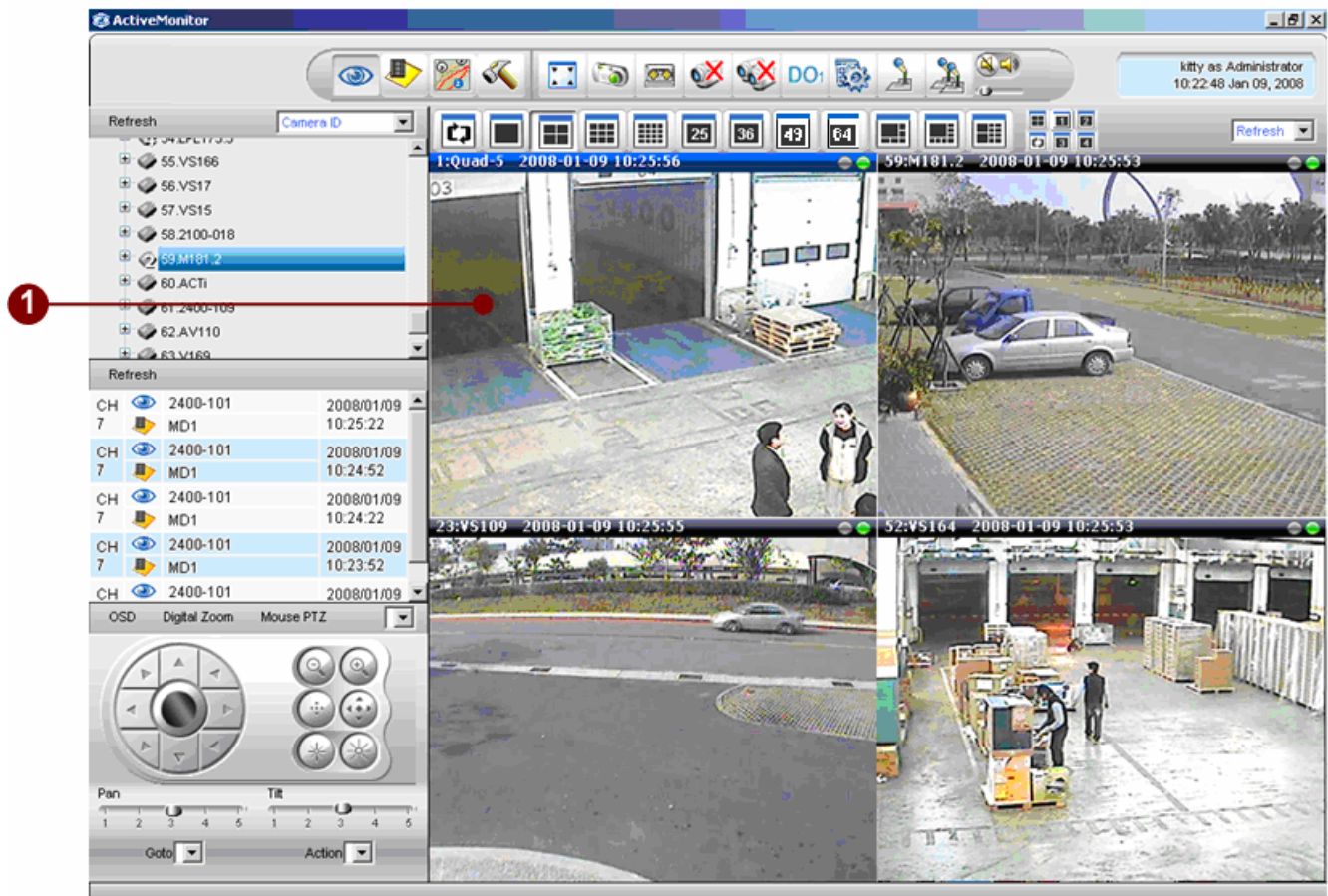


Figure 3-30 Hot-Spot Window

1. **Hot-spot Window:** The upper left window in the Window Layout Manager is defined as the Hot-Spot Window.



NOTE: Double-clicking on another video window swaps video between the hot-spot window and the indicated window.



NOTE: Please refer to [Active Setup] -> [Camera Setup] -> [Event Manager] on how to setup hot-spot window as the event display video window.

Layout Patrol

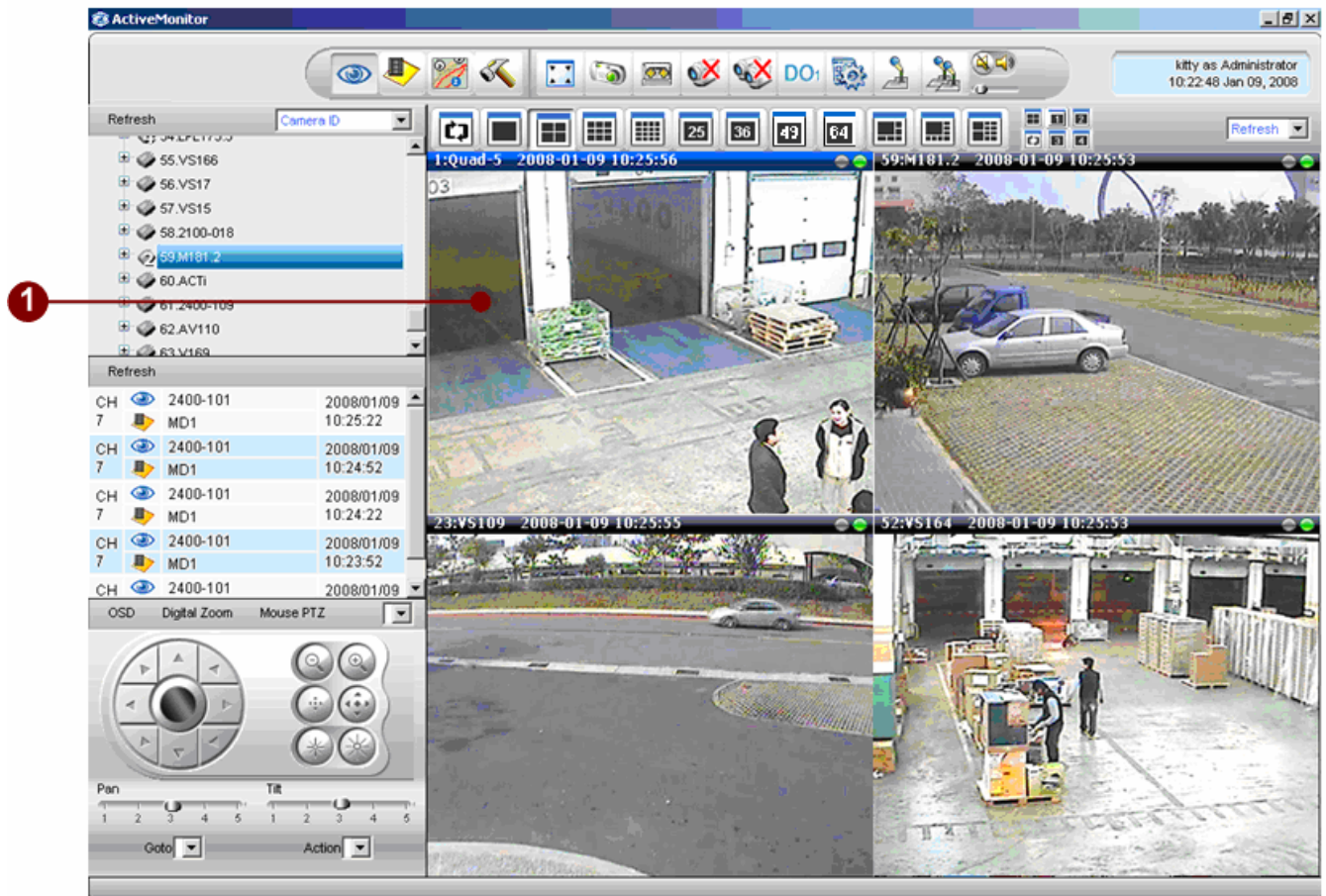


Figure 3-31 Patrol button

1. **Patrol:** Clicking on this icon runs a pre-defined layout patrol sequence. This setting can be found in Active Setup. Clicking on the Patrol button once brings up a sub-menu, which allows user to choose any particular sequence to patrol. Selecting “Cancel” in the sub-menu stops the patrol.



NOTE: Depending on the power of the computer used, patrolling between each layout takes a certain amount of time. While the video channels still load, user will not have access to much of the control, including the ability to Cancel the layout patrol. Please make sure the period between each layout is sufficient for all channels to complete loading, especially when the number of channels in a single layout is large.

Layout Patrol with Full Screen Mode



Figure 3-32 Full Screen Mode with Layout Patrol Function

The user may also perform layout patrol while in full screen mode. To do so, the user simply needs to:

1. Select and run layout patrol by clicking on the patrol button
2. Wait until all channels have completed loading, but before the next layout begins loading
3. Click on the full screen button.

To bring the user interface back out from full screen mode, simply press the **ESC** key.

Event List Panel

Event List

User may find the Event List on the left hand side of the Active Monitor. Events due to different events are displayed on that list: they are Motion detection event, Alarm event, Video Loss event, Video Recovery event, Network Loss event and Network Recovery event



Refresh				
CH		SDPD-1311N		2008/01/09
4		MD1		13:07:57
CH		SDPD-1311N		2008/01/09
4		MD1		13:07:14
CH		SDPD-1311N		2008/01/09
4		MD1		13:07:14
CH		IP Speed Dome		2008/01/09
1		MD1		13:07:08
CH		ACTI		2008/01/09

Figure 3-33 Event List

Check Event Status









Refresh			
CH		SDPD-1311N	2008/01/09
4		MD1	13:07:57
CH		SDPD-1311N	2008/01/09
4		MD1	13:07:14
CH		SDPD-1311N	2008/01/09
4		MD1	13:07:14
CH		IP Speed Dome	2008/01/09
1		MD1	13:07:08
CH		ACTI	2008/01/09


Figure 3-34 Event Status

1. **Event Status:** The events are listed by Channel Number, Type and Time. To view a video clip related to a particular event, click on the “Eye” icon.

Clicking on the  icon brings up video on a pop-up mini-preview window

Clicking on the  icon brings up file information associated with that particular event. If the file has been recorded and saved, the video archive will also be played on a pop-up mini-playback window.



NOTE: User may click on  icon to bring up archive player accordingly. Note that, if you cannot start playback, it might be because the file is still under recording. Default recording period is 10 minutes.

PTZ Panel

PTZ Operation

PTZ controls can be found on the bottom left hand side of the Active Monitor. Most of functions seen below are disabled until PTZ control setup for the particular camera or video server is completed and enabled. Please consult [PTZ](#) for setting up PTZ.

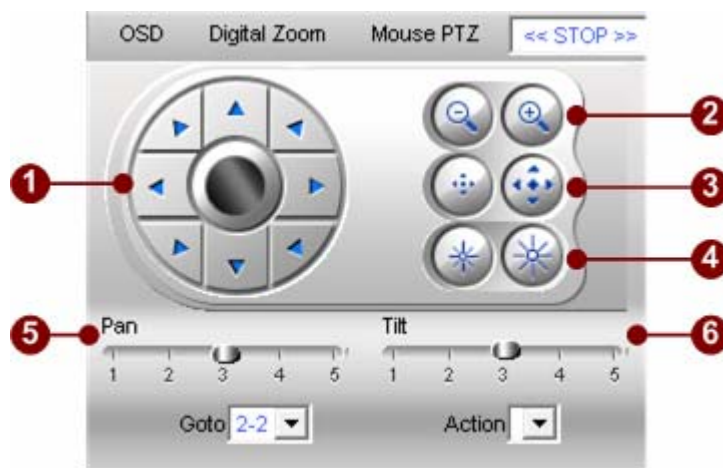








Figure 3-35 PTZ Operation

1. **Pan-Tilt Control:** Contains 8-way Pan-Tilt operation
2. **Zoom Control:** Click  to zoom out. Click  to zoom in
3. **Focus Control:** Click  to focus near. Click  to focus far.
4. **Iris Control:** Click  to set open iris. Click  to set close iris.
5. **PAN Speed:** Adjust PAN speed. Rating 1 to 5. Higher numbers indicate faster Pan speed. The actual angular speed varies from protocol to protocol. Click on a number on the bar to select the desired speed
6. **Tilt Speed:** Adjust TILT speed. Rating 1 to 5. Higher numbers indicate faster Tilt speed. The actual angular speed varies from protocol to protocol. Click on a number on the bar to select the desired speed



NOTE: Different speed dome protocol may vary on the 8-way Pan-Tilt operation.

OSD Operation



Figure 3-36 OSD Operation

1. **OSD:** Click to enable or disable on-screen menu of the PTZ camera, if applicable. Button appears pressed when enabled, and appears released when OSD is disabled. Once enabled, use the arrow keys to operate the menu.

IP Joystick Support

NVR v2.2 also supports IP Joystick connected on the USB port by default. Please refer to [Joystick](#) section on IP Joystick button setup. The option is turned on by default.



IMPORTANT: Note that the IP Joystick needs to be plugged into the USB port *before* NVR v2.2 starts.

Digital Zoom



Figure 3-37 Control Panel Operation

1. **Digital Zoom:** Click to enable or disable digital zoom function. When this function is enabled, use mouse wheel to zoom in (by scrolling forward) or zoom out (by scrolling backward). When the video is in zoom in mode, you can click left mouse key, hold the key and drag the video around.

Mouse PTZ

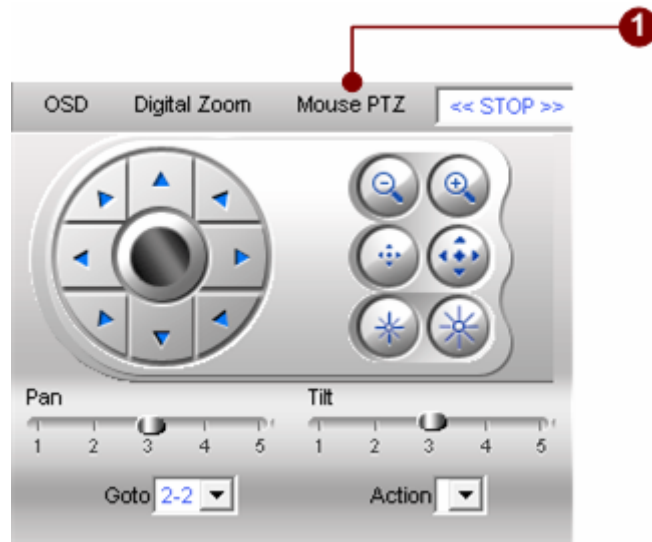


Figure 3-38 Start Mouse PTZ Operation

1. **Mouse PTZ:** Click to enable or disable mouse PTZ for the selected the camera. Button appears pressed when enabled, and appears released when mouse PTZ is disabled. Once enabled, use the arrow keys to operate the menu.



TIP: Mouse PTZ works under full-screen mode as well. Press **CTRL+F12** may enable full screen mode.

Mouse PTZ Operation on Screen



Figure 3-39 Mouse PTZ Operation on Screen

With mouse PTZ function, you can click on the video screen directly to operate PTZ functions.



TIP: Mouse PTZ functions come with speed control as well. If you move the PTZ cursor near the edge of the window, the speed will be 5 (fastest). If you move the PTZ cursor near the center of the window, the speed will be 1 (slowest).

PTZ Preset Tour and Scan

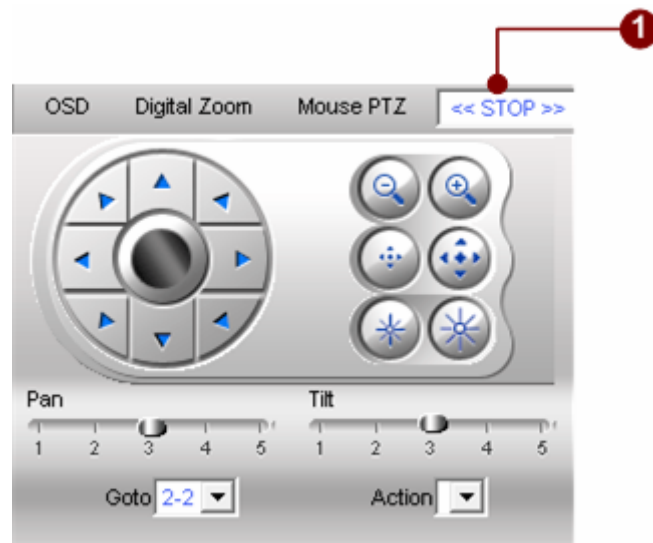
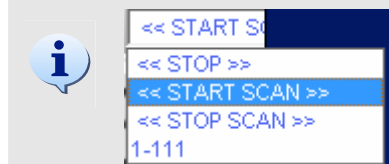


Figure 3-40 PTZ Preset Tour and Scan

1. **PTZ Preset Tour and Scan:** Click to select the PTZ Preset Tour user would like the PTZ to cycle through. Selecting “STOP” as shown in the dropdown menu stops the tour. Please see [Preset Tour](#) for setting up Preset Tours. Under this selection, user can find Auto Scan on and off as well.

TIP: You can also start or stop scan by clicking this option.



Goto Preset Position



Figure 3-41 Goto Preset Position

1. **Goto:** This moves the PTZ camera to a preset point. User may set up the preset points by going to the PTZ Preset page. See [PTZ Preset](#) for more details.



NOTE: The preset position is listed in preset ID + description in the combo box.



NOTE: User may setup up to 32 preset positions.

Run User-defined PTZ Actions

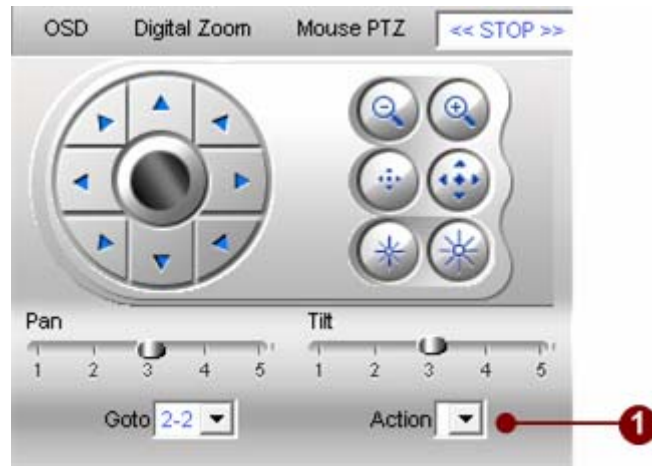


Figure 3-42 Execute user-defined commands

1. **PTZ Action:** Execute user-defined commands. Please refer to [PTZ](#) section for user-defined PTZ command setup.



TIP: User may setup customized commands; the commands will be sent to the devices attached with RS-485 transparently. For example, user may define WASH or WIPE commands in hex format.

4. Archive Player

Introduction

Archive Player plays recorded clips. It allows up to 36 concurrent video window layouts, also comes with a variety of window layout modes.

Advanced features of the Archive Player include time-bar searching, different camera synchronization methods, event searching, backup playback, and many more. This section explains the interface in detail, as well as gives instructions for using these advanced functions.

Overview

The section describes the mechanism on how to search IP surveillance products on network. With this mechanism, user can locate the devices on the network, then use URL commands to operate or manage those devices.

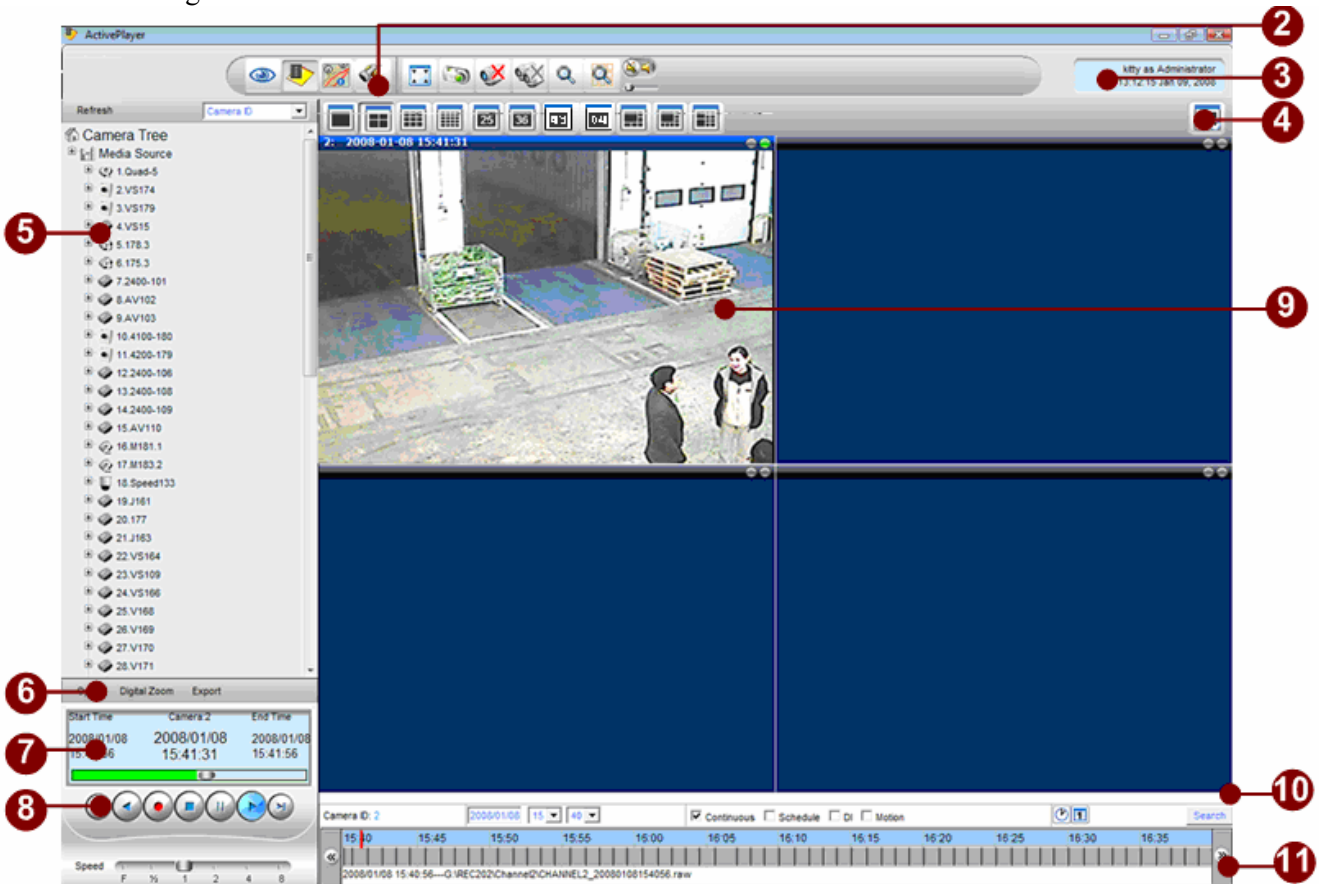


Figure 4-1 Archive Player Interface

1. (omitted)
2. **Archive Player Toolbar:** Contains the buttons to operate in Archive Player application
3. **Personal Profile:** Clicking this section brings up Personal Profile setting; user may change password and select preferred language.
4. **Layout Manager:** Control various window layouts and 4-channel synchronized playback.
5. **Camera Panel:** Displays camera tree
6. **Open/Export Playback File :** Open local file to playback; export or download files to local PC.
7. **Playback Date/Time Information :** Displays begin, end and current date and time of the archive.
8. **Playback Panel:** Playback operations.

9. **Video Window:** Active window that plays recorded archive
10. **Quick Search Bar:** Quick search with channel, date, time, event criteria
11. **Archive Time Bar:** Displays recorded archive status along with time sequence. Archive time bar displays continuous, schedule and event recording archives.

Playback Operation

Execute “ActivePlayer.exe” or click “Playback” icon from the menu bar above other applications to bring up the Playback screen.

Archive Player Toolbar



Figure 4-2 Active Monitor Toolbar

1. **Active Monitor:** Click this button to bring up Active Monitor application.
2. **Archive Player:** Click this button to bring up Archive Player application.
3. **Active Map:** Click this button to bring up Active Map application.
4. **Active Setup:** Click this button to bring up Active Setup application.
5. **Full Screen:** Click to bring the video into full-screen mode. You can also use **CTRL+F12** to operate this operation. To bring the controls back, press ESC.
6. **Create Snapshot:** Takes a single screenshot at maximum resolution for the selected video only. The screenshot is saved as an JPG file in the Recording Path defined in the Recording of Camera Setup. Please refer to [Recording](#) section for details.
7. **Disconnect A Camera:** Click to stop video playback for the selected window.
8. **Disconnect All Camera:** Click to stop video playback for all preview windows.
9. **Search:** Click to search recording files.
10. **Snapshot View:** Click this button to browse snapshot taken by system, and bring up related archive playback.
11. **Volume Control:** turn on/off and adjust the volume.

Full Screen Mode (CTRL+F12)

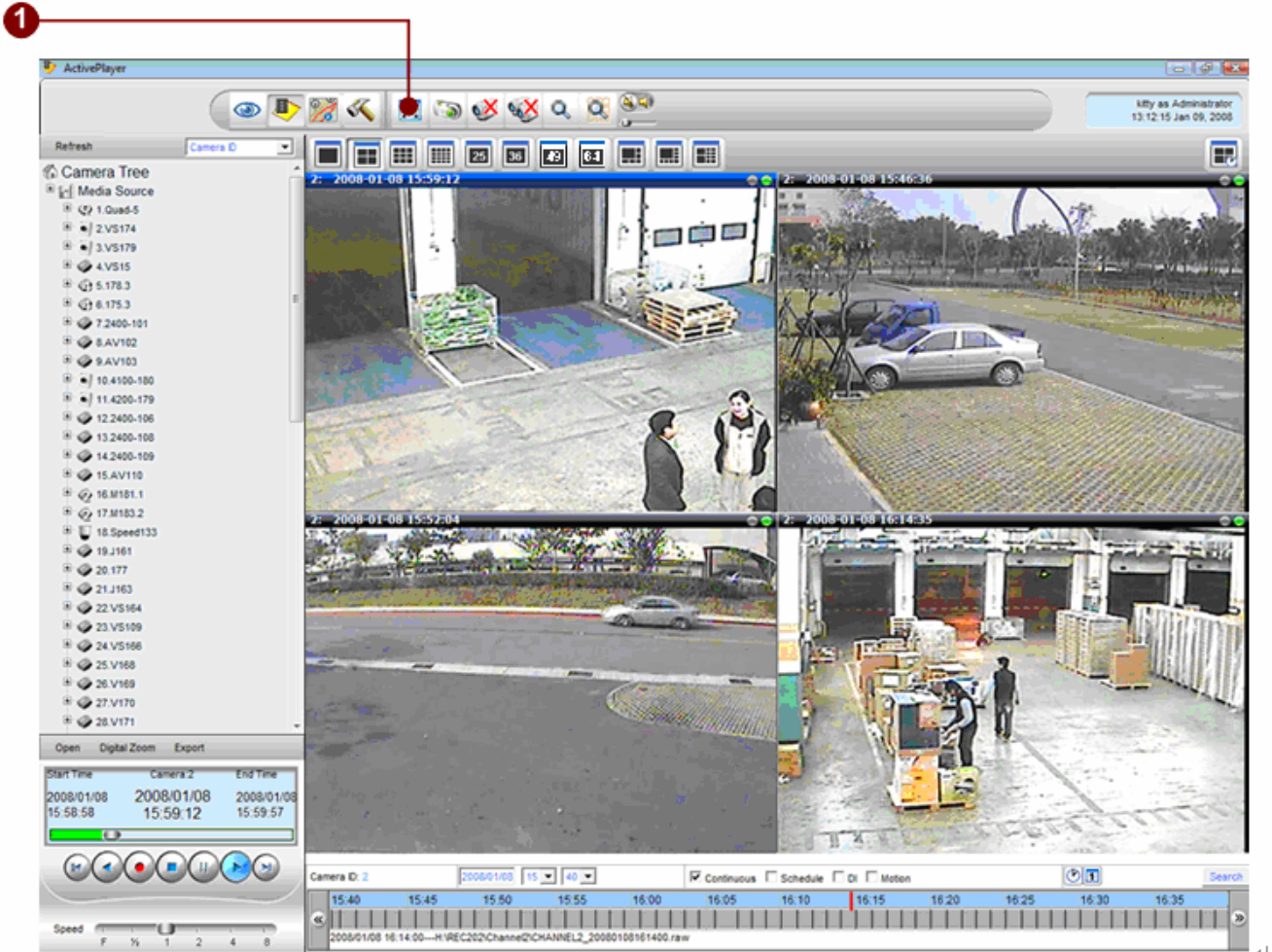


Figure 4-3 Fullscreen button

1. **Full-screen:** Click this button to bring the video into full-screen mode. To bring the controls back, press **ESC**.



NOTE: Full-screen maximizes the entire layout of videos instead of just the selected window. It will also not expand the video should the size of the window exceeds the maximum resolution of the video.



NOTE: User can also use **CTRL+F12** to invoke this function. To show or hide title bar, user can use **CTRL+F11** function key to toggle this function.

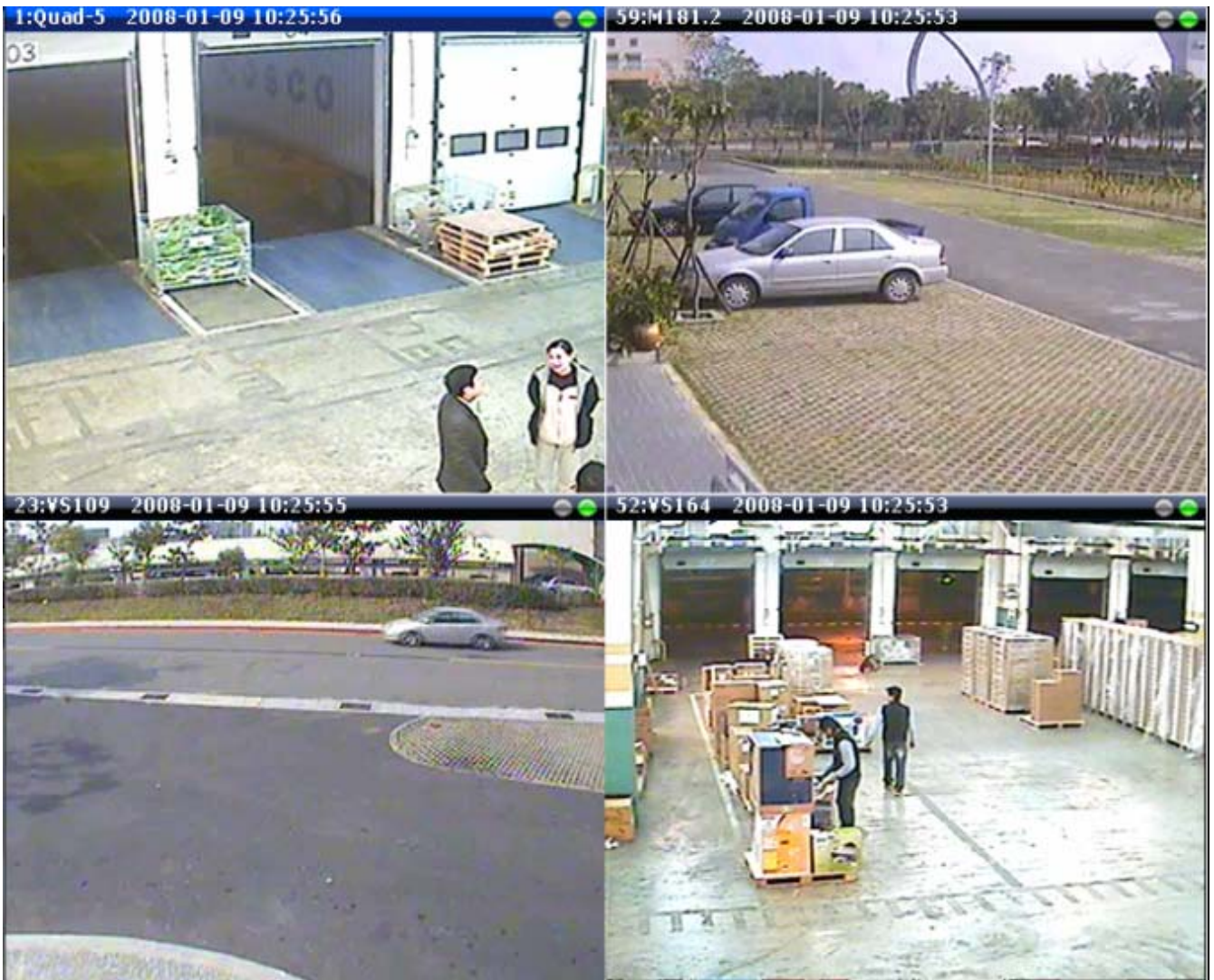


Figure 4-4 Full Screen Window

Create Snapshot (CTRL+F7)

1

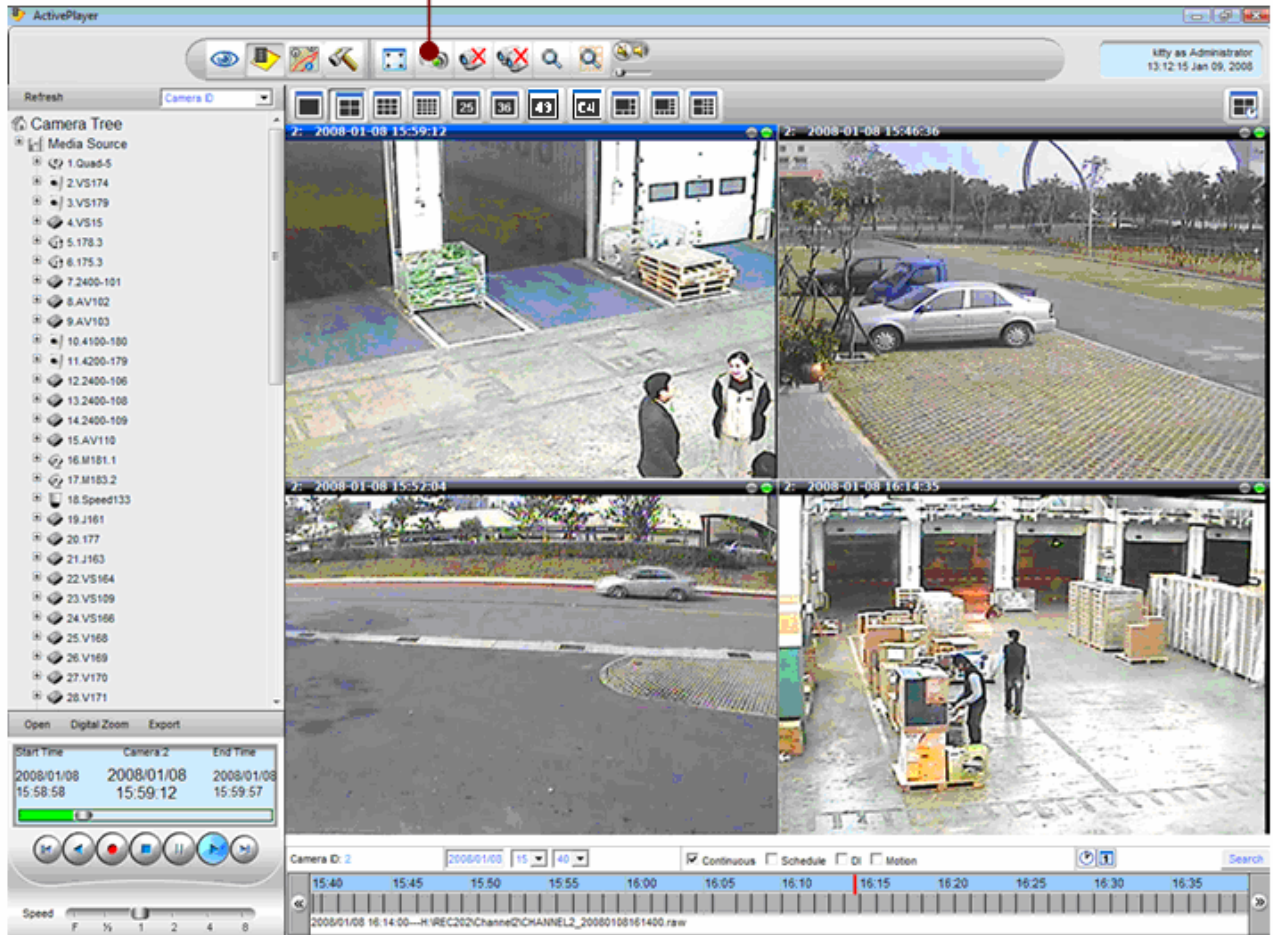


Figure 4-5 Create Snapshot

1. **Snapshot:** Takes a single screenshot at maximum resolution for the selected video only. The screenshot is saved as an JPG file in the Recording Path defined in the Recording of Camera Setup. Please refer to the [Recording](#) section for details.



NOTE: User can also use **CTRL+F7** to invoke this function.

Disconnect a Channel

1

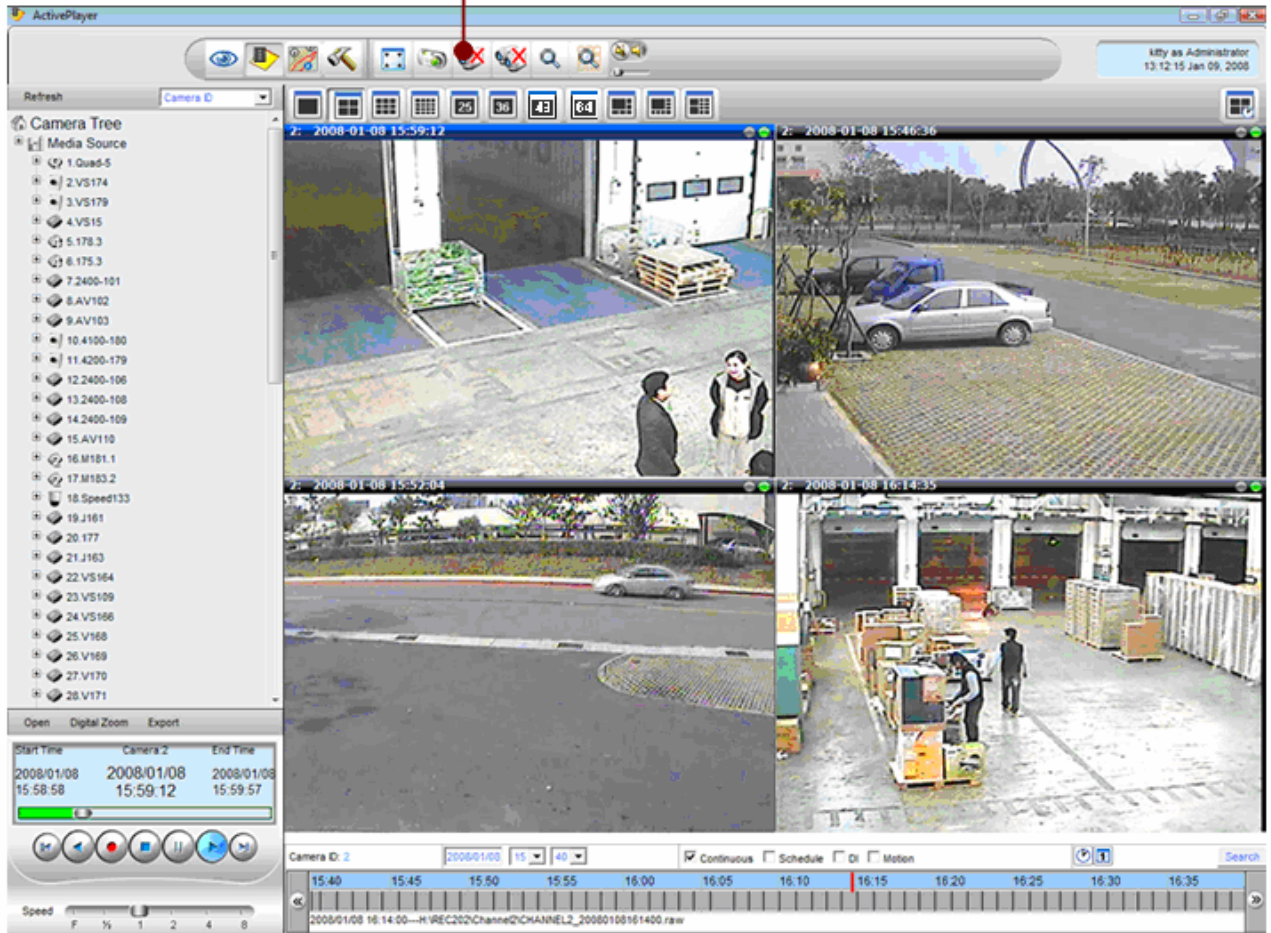


Figure 4-6 Disconnect A Channel

1. **Disconnect A Channel:** Click this button to stop video playback for the selected window.

Disconnect All Channels

1

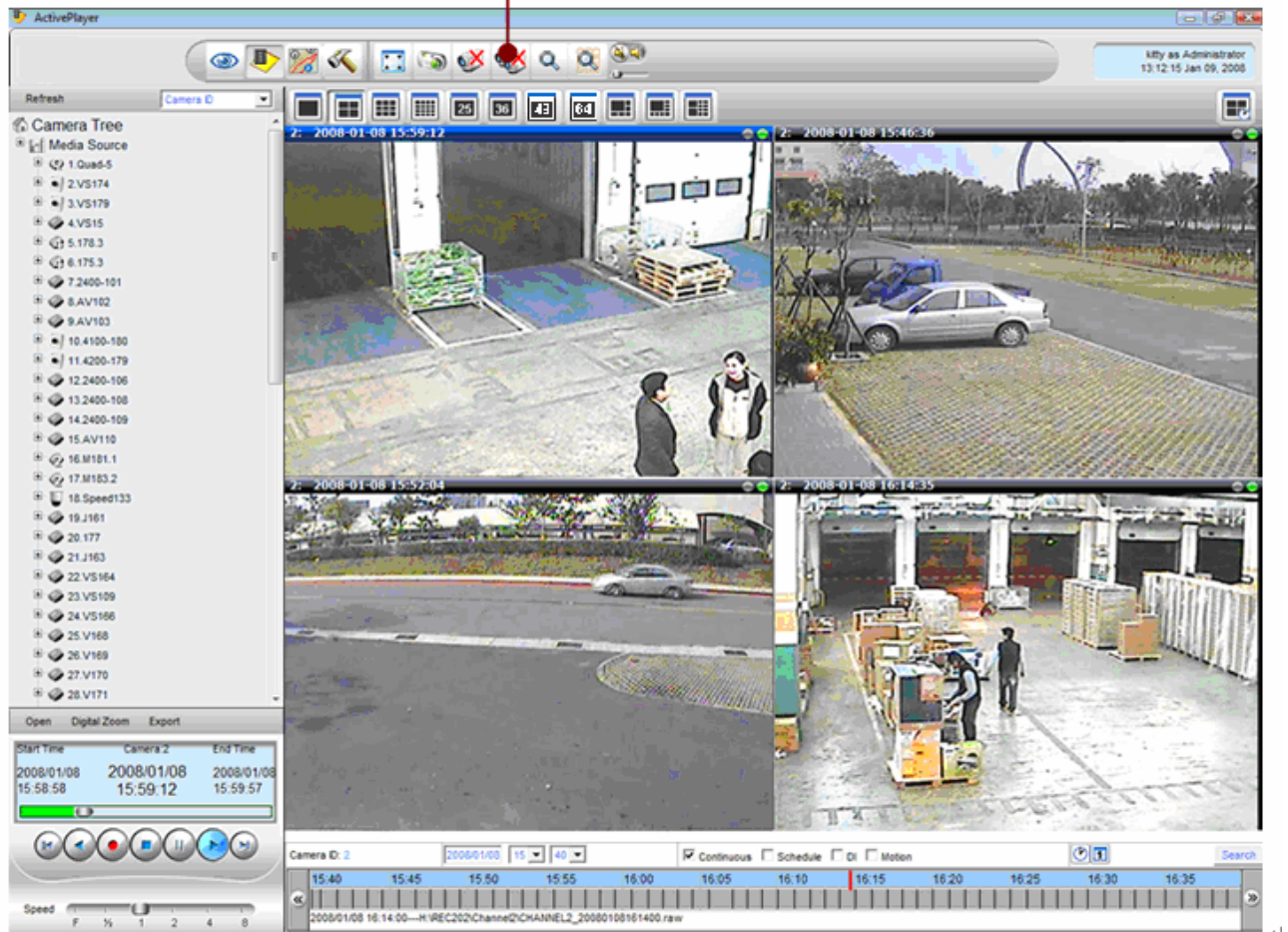


Figure 4-7 Disconnect All Channels

1. **Disconnect All Channels:** Click this button to stop video playback for all window.

Search Event

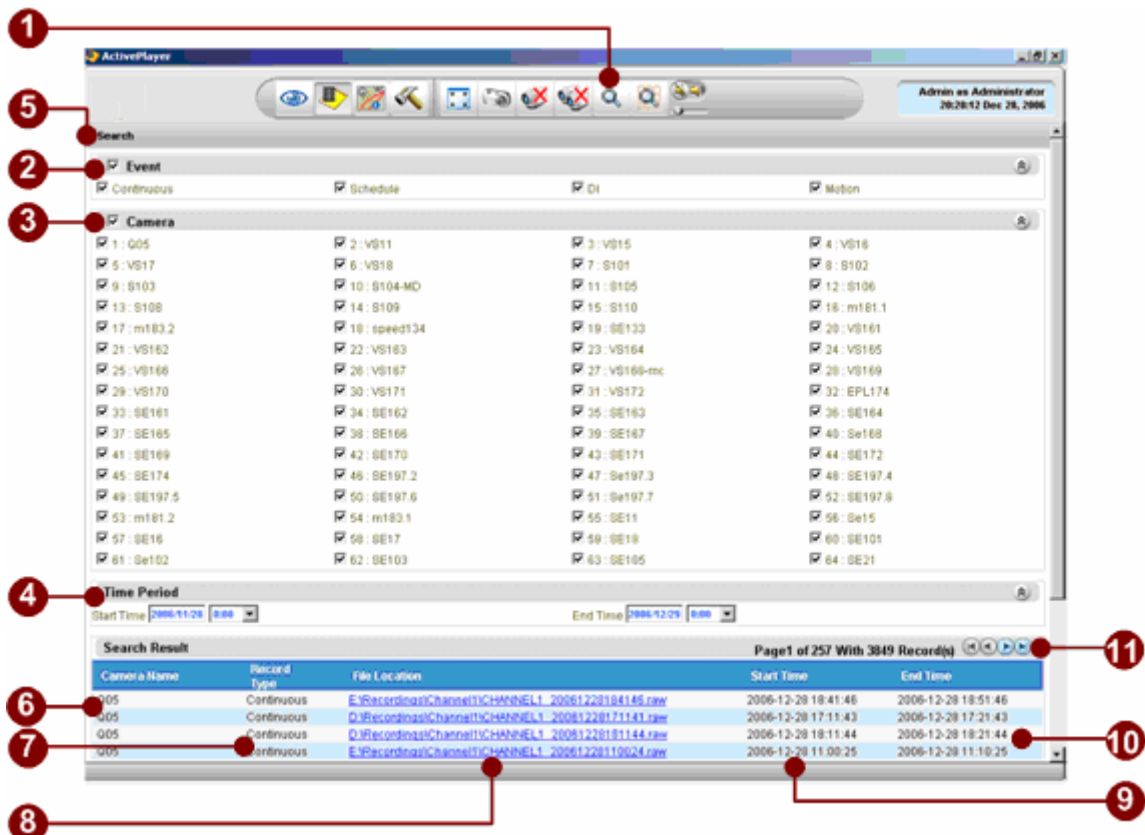


Figure 4-8 Search Event Listing

1. **Event Search Icon:** Click to show search function.
2. **Choose the Event Type:** After selecting the types of events, cameras, and the search begin and end time, clicking on the **Search** button shows all that can be found on the database. Clicking the link found plays that file as a whole.
3. **Choose the Camera:** Click to show the manual search page.
4. **Time Period:** Start date / time and end date / time
5. **Search Button:** Click to search video archives according to the criteria provided
6. **Camera Name:** Displays the camera name that matches the search criteria
7. **Recording Type:** Displays the recording type. This value can be Continuous, Schedule, Event.
8. **File Location:** Displays physical file location in NVR Server.
9. **Start Time:** Displays start date/time of the video clip that matches the search criteria
10. **End Time:** Displays end date/time of the video clip that matches the search criteria
11. **Page Indicator:** User may traverse the listing to first, last, previous or next page.

Play Archive from Search Page

After clicking the link from the search page, user can see the file information on the screen first, and it will auto playback when the file status is ready.

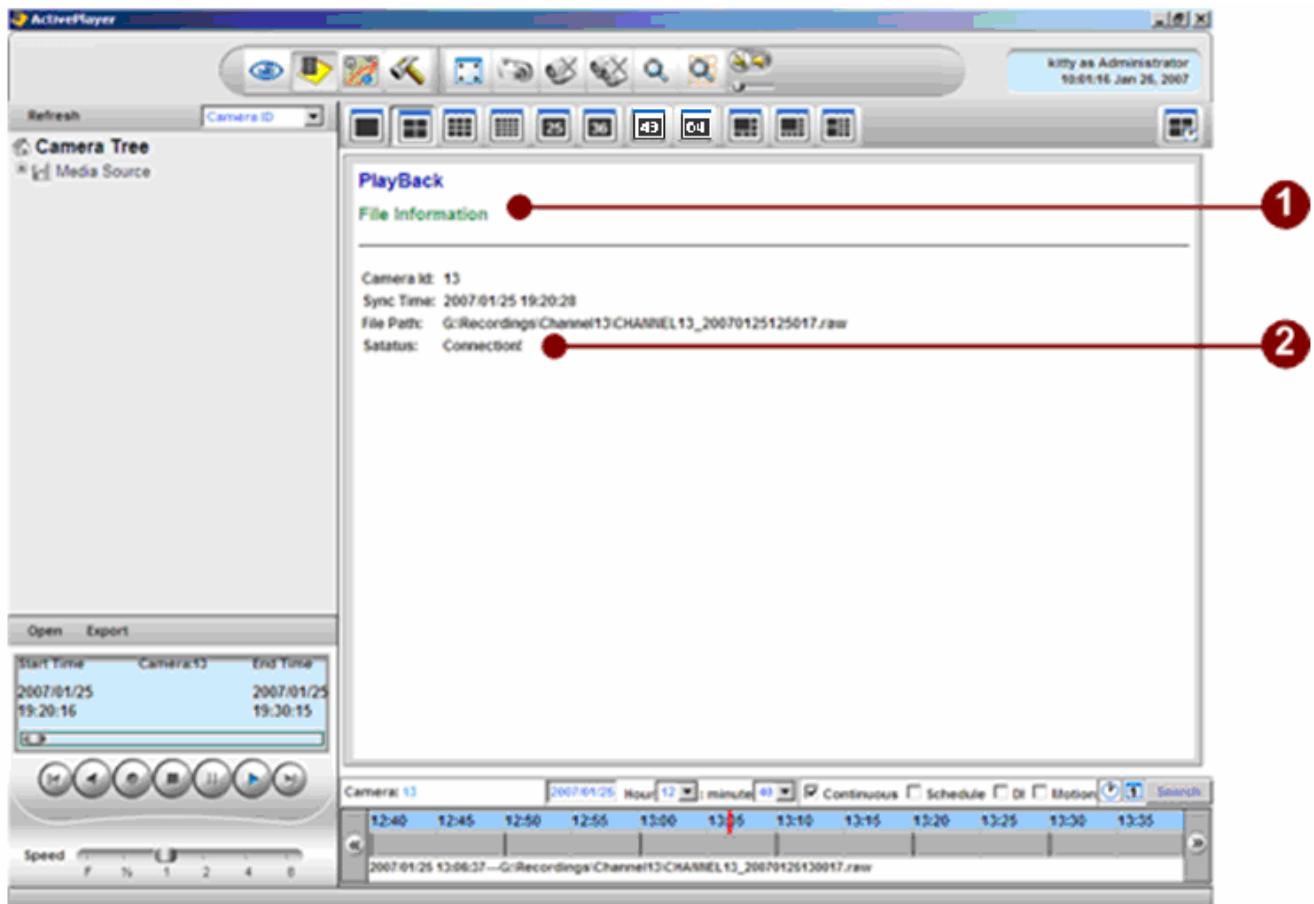


Figure 4-9 File Information

1. Title Column: Title
2. **Recorded Archive Information:** Displays recorded archive file information.

Snapshot Viewer

Search Snapshot Images

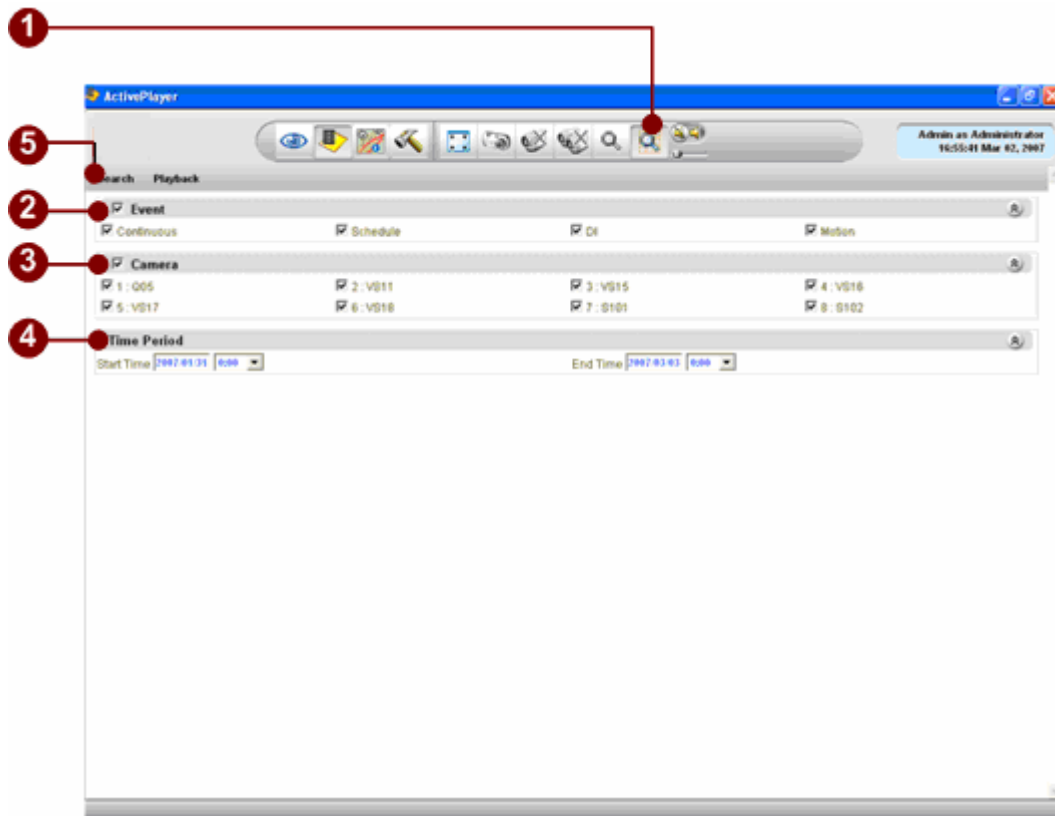


Figure 4-10 Snapshot Viewer Search Result

1. **Snapshot Viewer:** Click on snapshot viewer button to start the application
2. **Event Type:** Search event type
3. **Camera List:** Select camera list
4. **Time Period:** Specify start date time and end date time
5. **Search:** Click on Search button to view thumbnail image listing

Snapshot Preview Mode

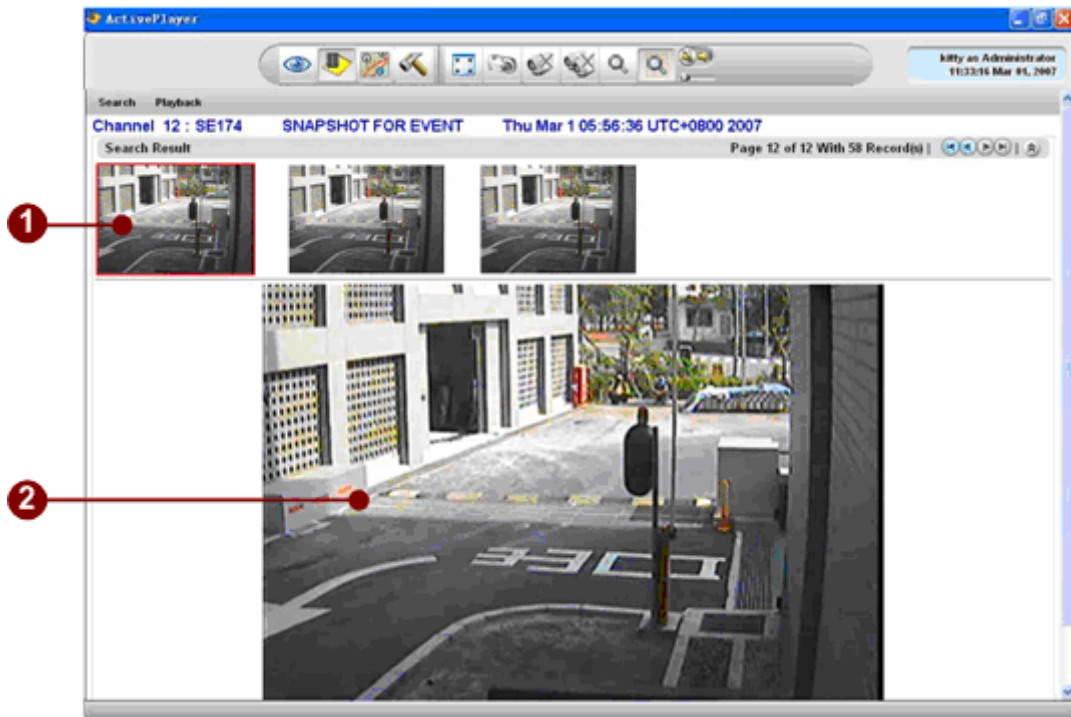


Figure 4-11 Snapshot Viewer with Thumbnail Images

1. **Thumbnail View List:** thumbnail preview on the snapshot created
2. **Snapshot View:** When clicking on thumbnail preview image the original snapshot preview image with correct resolution will be displayed. When user click on the **Playback** button, the archive player interface will be brought up and starts playback the archive from the date / time the snapshot is created.

Volume Control

1

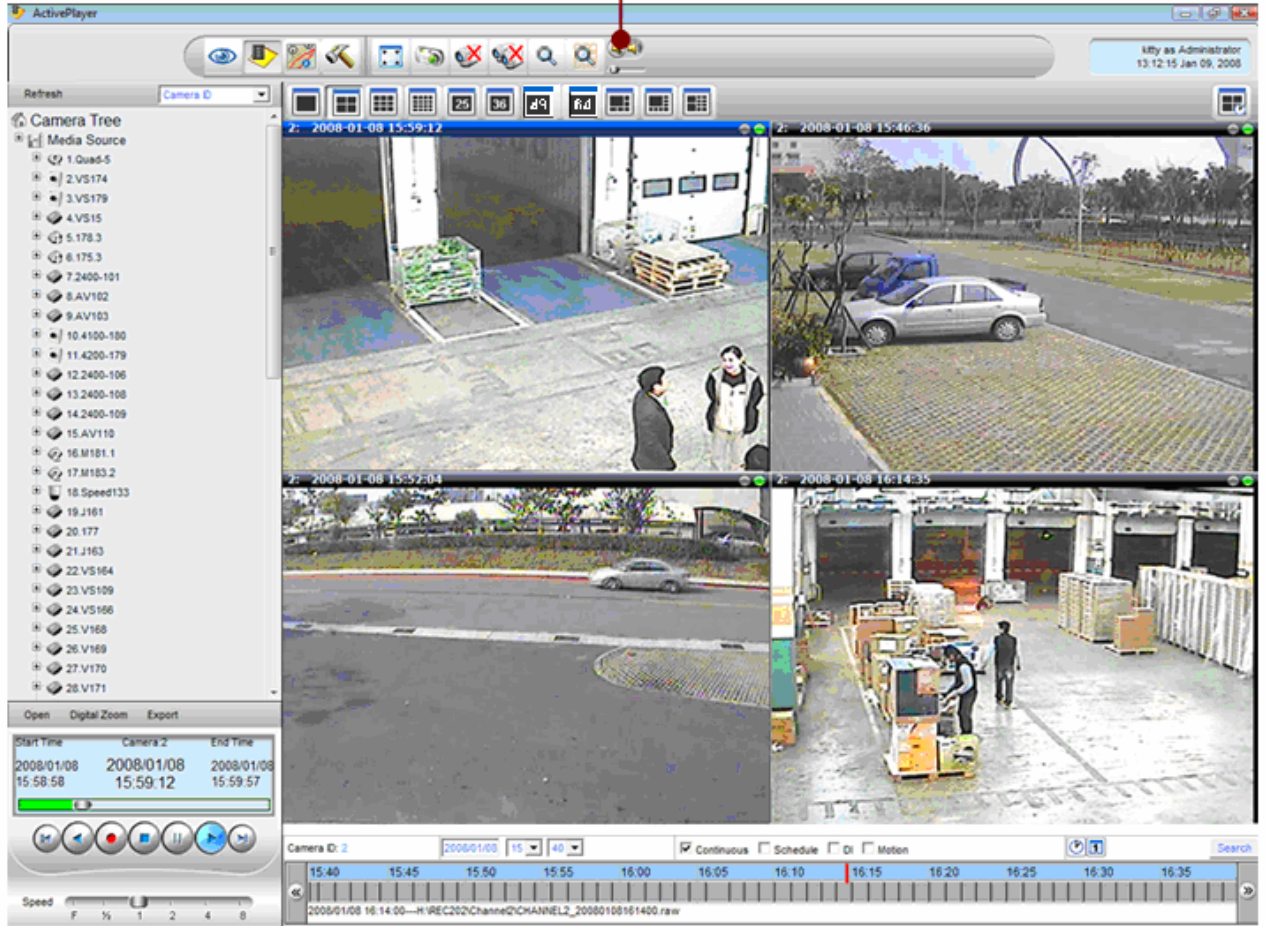


Figure 4-12 Volume Control

1. **Volume Control:** turn on/off and adjust the volume.

Mute On



Figure 4-13 Muto On

Mute Off



Figure 4-14 Muto Off

Adjust Volume



Figure 4-15 Adjust Volume

Playback Control Panel

Playback Operation

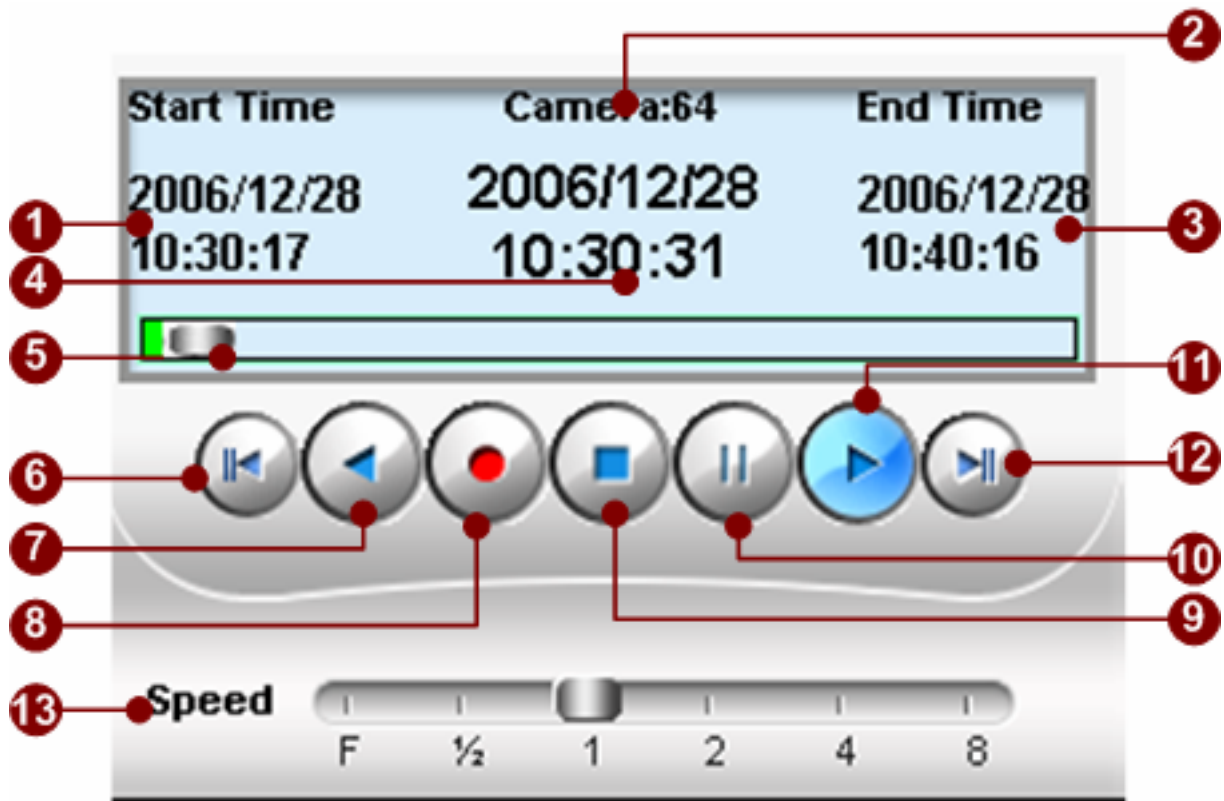


Figure 4-16 Playback Control Panel

1. **Start Time:** Displays start time of the archive.
2. **Camera ID:** Displays camera ID.
3. **End Time:** Displays end time of the archive..
4. **Current Playback Time:** Displays current playback date, time in the recorded archive.
5. **Playback Time Indicator:** The indicator displays current position within the recorded archive. User can click on any position in the playback time bar to seek to the location desired.
6. **Move to previous recording:** Click this button to play previous recording archive
7. **Play backward:** Click this button to play backward.
8. **Manual Record:** Click this button to manual record to a file. Click again to stop recording. This file locates in local PC, and cannot be search from NVR.
9. **Stop:** Click this button to stop playback.
10. **Pause:** Click this button to pause playback.
11. **Play:** Click this button to play forward.

12. **Move to the next recording:** Click this button to move to the next recording.
13. **Speed bar:** This bar shows how fast this recording is being played. User can click the button on this bar to play this recording faster or slower.



NOTE: Manual recording function records archives on local PC; there will be no records in NVR Server; user cannot search manual record video clips.



NOTE: Frame-by-frame playback only valid when NVR Workstation runs on the same machine with NVR Server.

Play, Play Backward

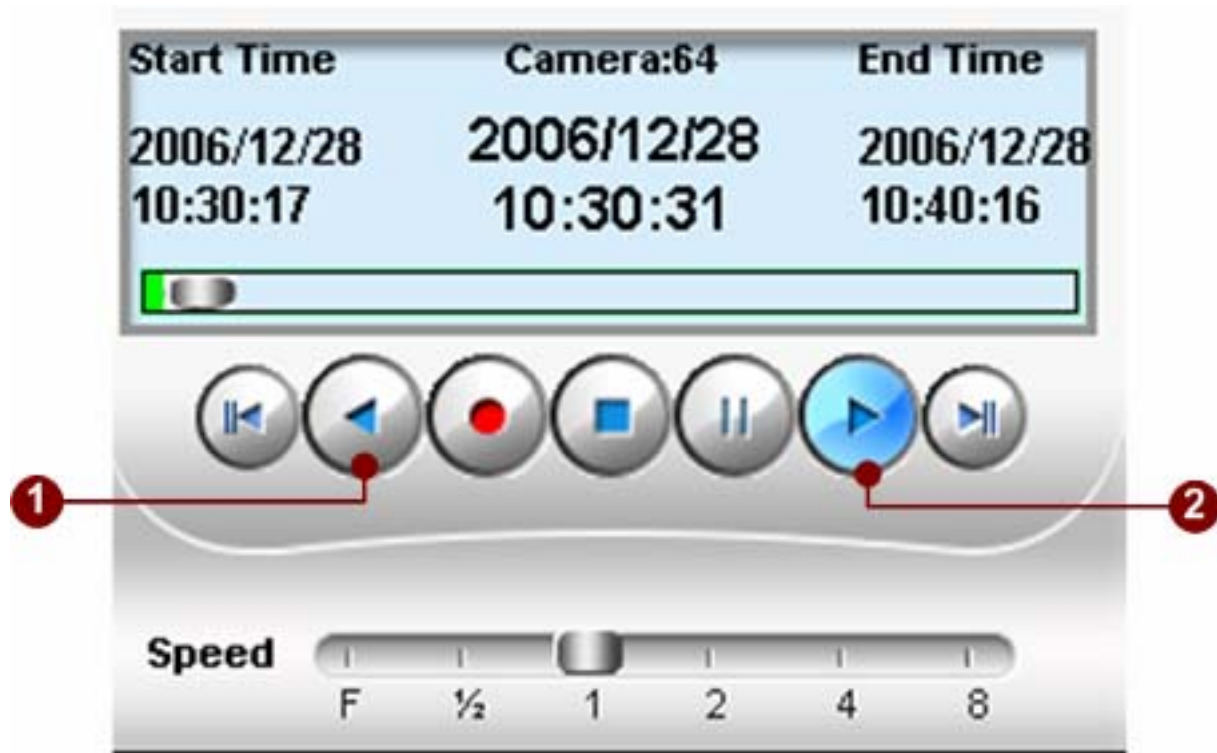


Figure 4-17 Play and Play Backward

1. To play backwards, click the **Play backward** button. There is no need to click **Pause** button.
2. To play forward, click the **Play** button. There is no need to click **Pause** button.

Speed Setting

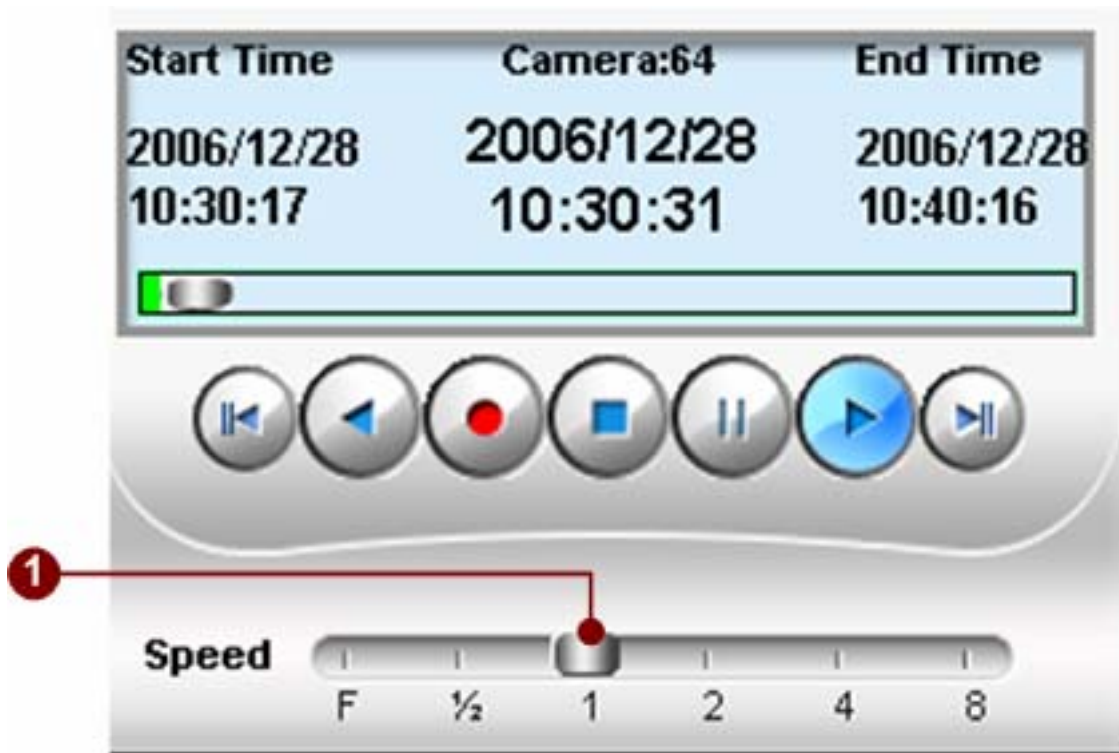


Figure 4-18 Speed Setting

F Speed : Frame By Frame to playback. This function only working on NVR Workstation runs on the same machine with NVR Server.

1/2 Speed: After selecting the speed types to “F”, the Pause Button will be enable.

1 Speed: Click Play button to Frame By Frame playback.

2 Speed: After selecting the speed type to “2”, the recording will be played with 2-time speed.

4 Speed: After selecting the speed type to “4”, the recording will be played with 4-time speed.

8 Speed: After selecting the speed type to “8”, the recording will be played with 8-time speed.



TIP: When user wants to change play speed, please click on the numbers; do not drag the button on the bar.



NOTE: Frame-by-frame playback only valid when NVR Workstation runs on the same machine with NVR Server.

Frame-by-frame Play



Figure 4-19 Frame By Frame Play

1. **Speed Setting:** Click the speed button to “F”.
2. **Pause Button:** After selecting the speed types to “F”, the Pause Button will be enabled.
3. **Play Button:** Click the Play button to Frame By Frame playback.



NOTE: Frame-by-frame playback only valid when NVR Workstation runs on the same machine with NVR Server.

Jump to a new location in the file



Figure 4-20 Playback Time Bar

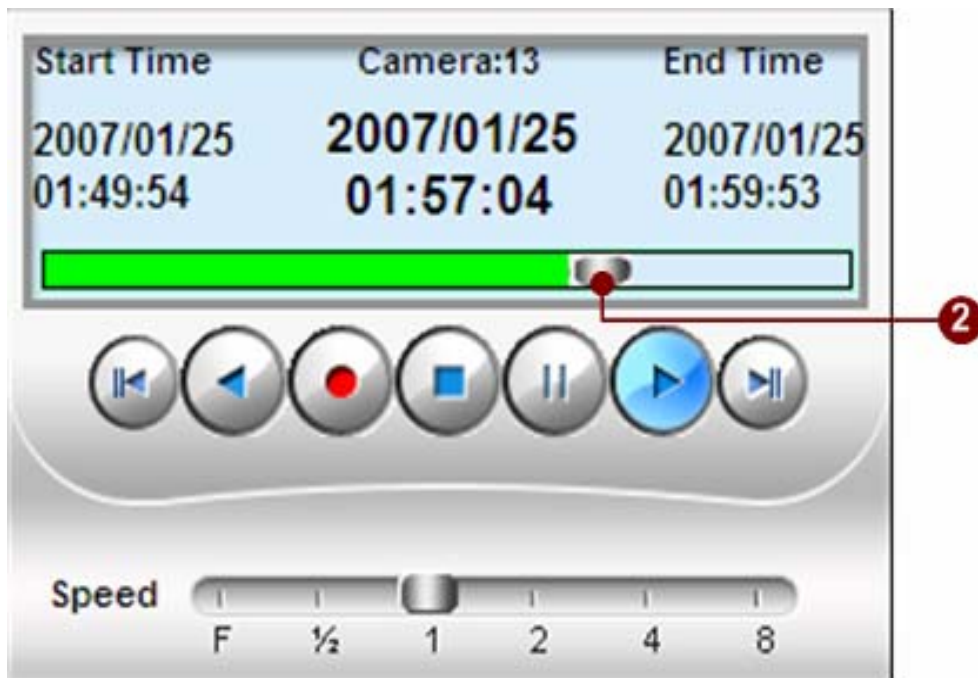


Figure 4-21 Click Time Bar to Playback

Playback maybe skipped to a certain point by dragging this bar forward and backward.

Jump to Next / Previous Recorded Archive

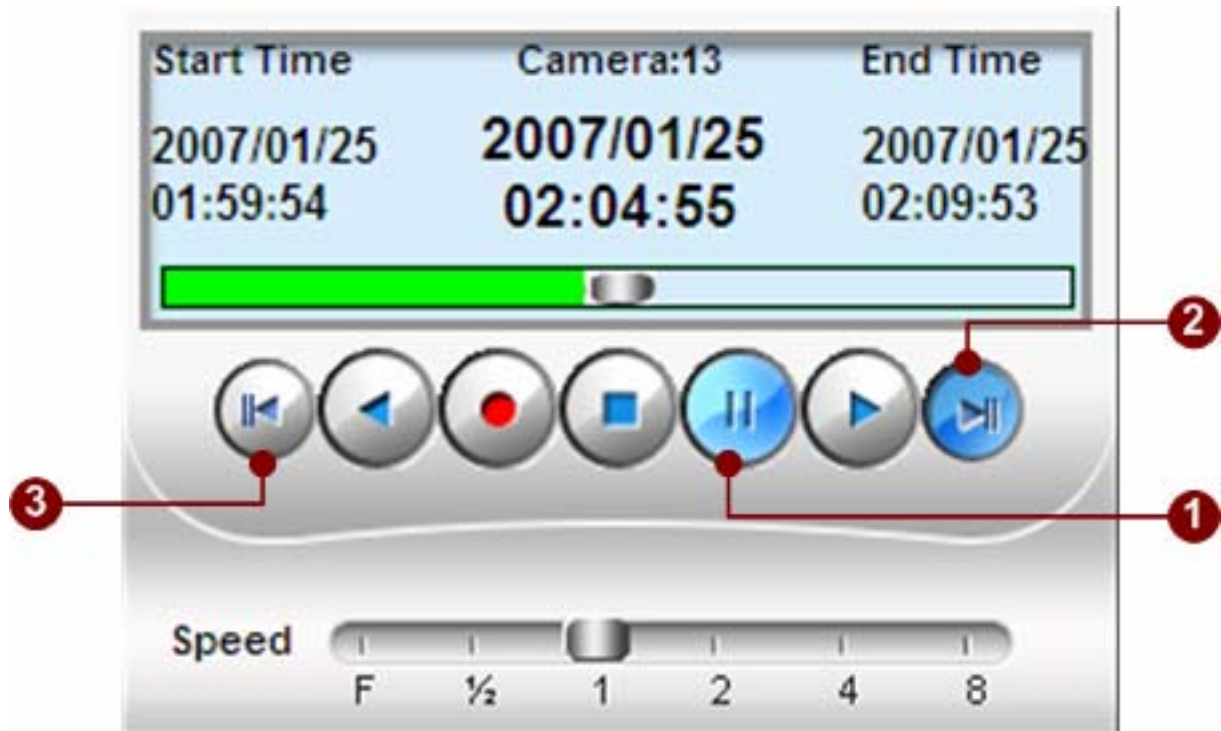


Figure 4-22 Jump to Next or Previous Recorded File

User can play the previous or next recorded file by clicking **Move to the next recording** and **Move to the previous recording** buttons.

Record part of the Archive to a new Archive

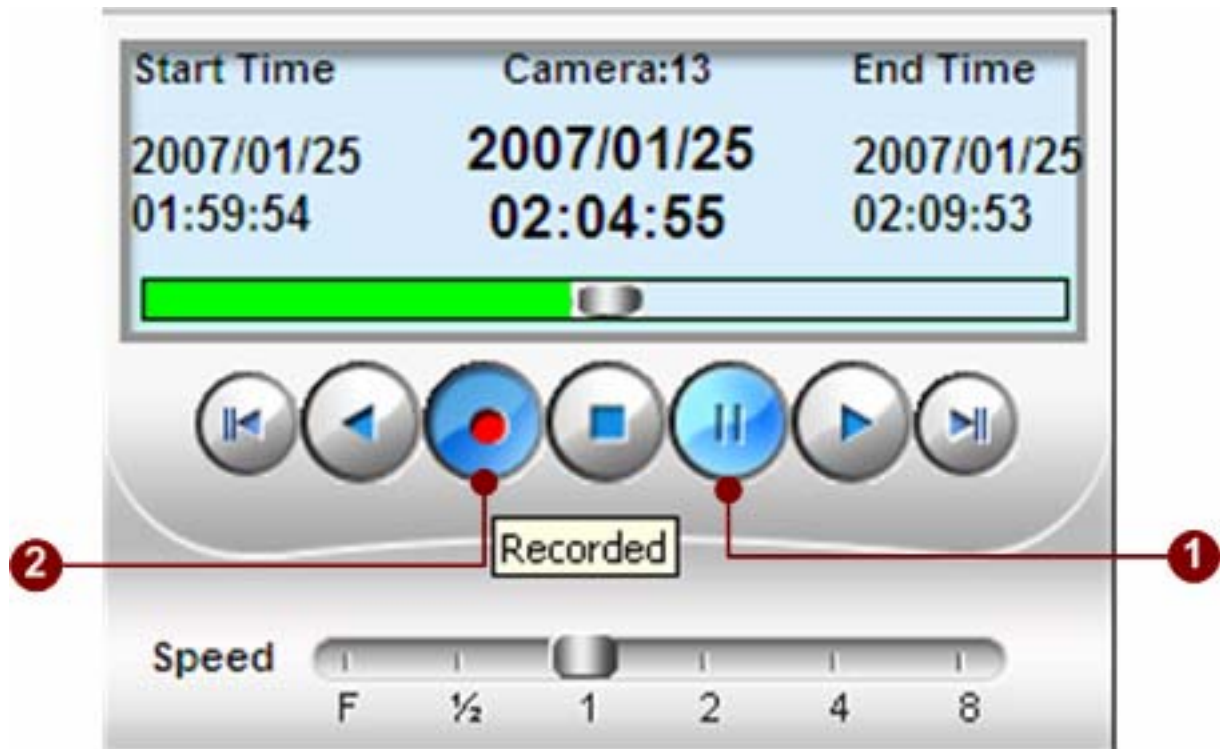


Figure 4-23 Record Part of the Archive to a new Archive

This record button enables the user to select which section user wants. To do so, click the Pause button and then click Record button. The previous recording will be neglected, then a new recording will be created at this moment; click this record button again to close this new recording. The new recording will be stored in the same folder as the original file.



NOTE: Manual recording files locates in local PC, and cannot be searched via NVR and Search functions.

Open Video Archive File

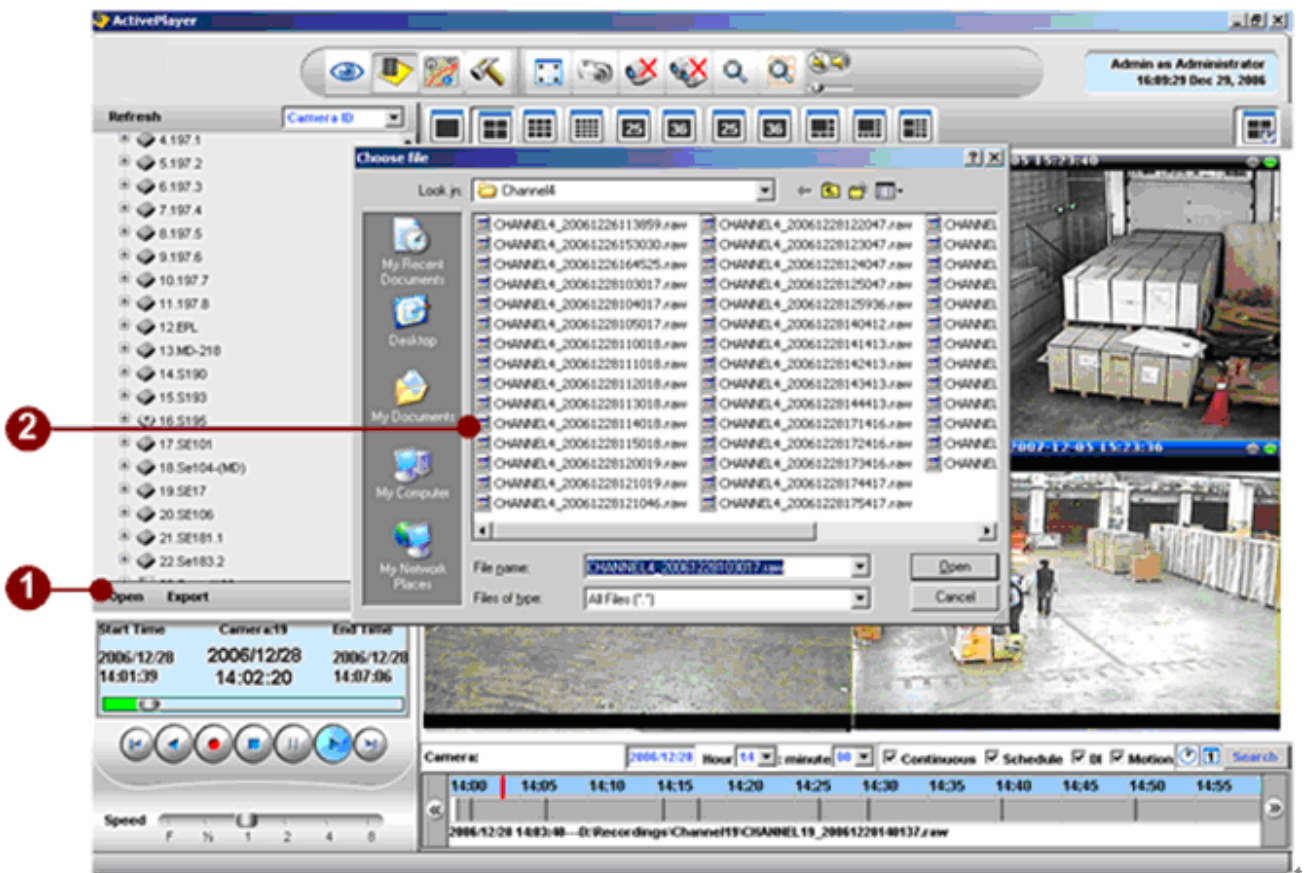


Figure 4-24 Open playback file

1. **Open file button:** Opens a particular RAW file manually.
2. **Open file dialog:** This standard open file dialogue box appears when the “Open” button is pressed. User may browse for the file user would like to play normally.



NOTE: Archive Player supports playback .RAW file only.

Export Video Archive

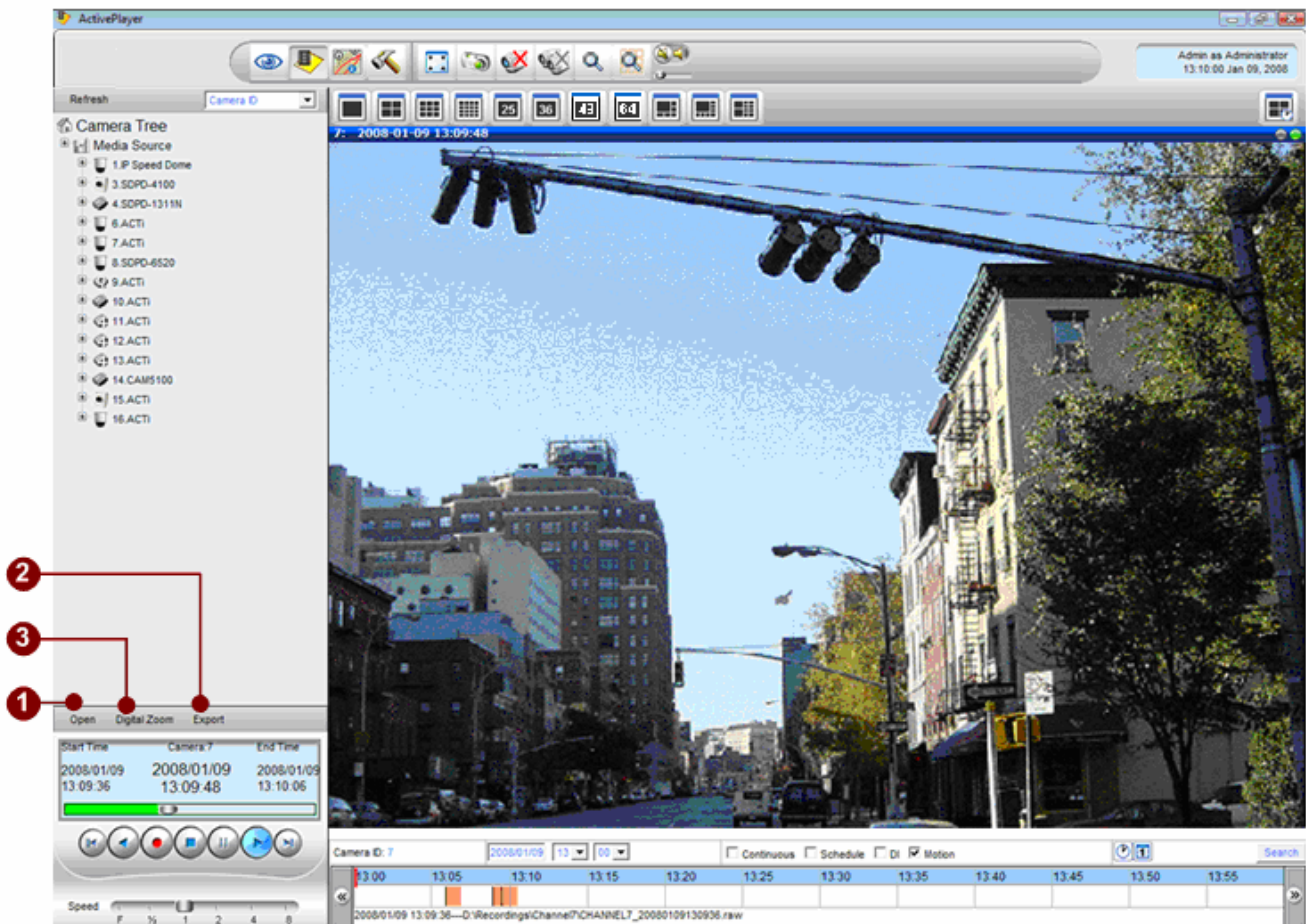


Figure 4-25 Export to avi file

1. **Open A Playback File:** Open file to be exported.
2. **Digital Zoom:** Click to enable digital zoom function
3. **Export Button:** Click the Export button.
4. **Export file path:** Change where the AVI file is to be exported if necessary.
5. **Apply:** Start exporting.
6. **Close:** Close export.



NOTE: User must have the FFDSHOW or DivX codec installed in your computer to play the converted video in Windows Media Player. FFDSHOW can be found on Internet or web site.

Time-based Search Bar

Search Archive

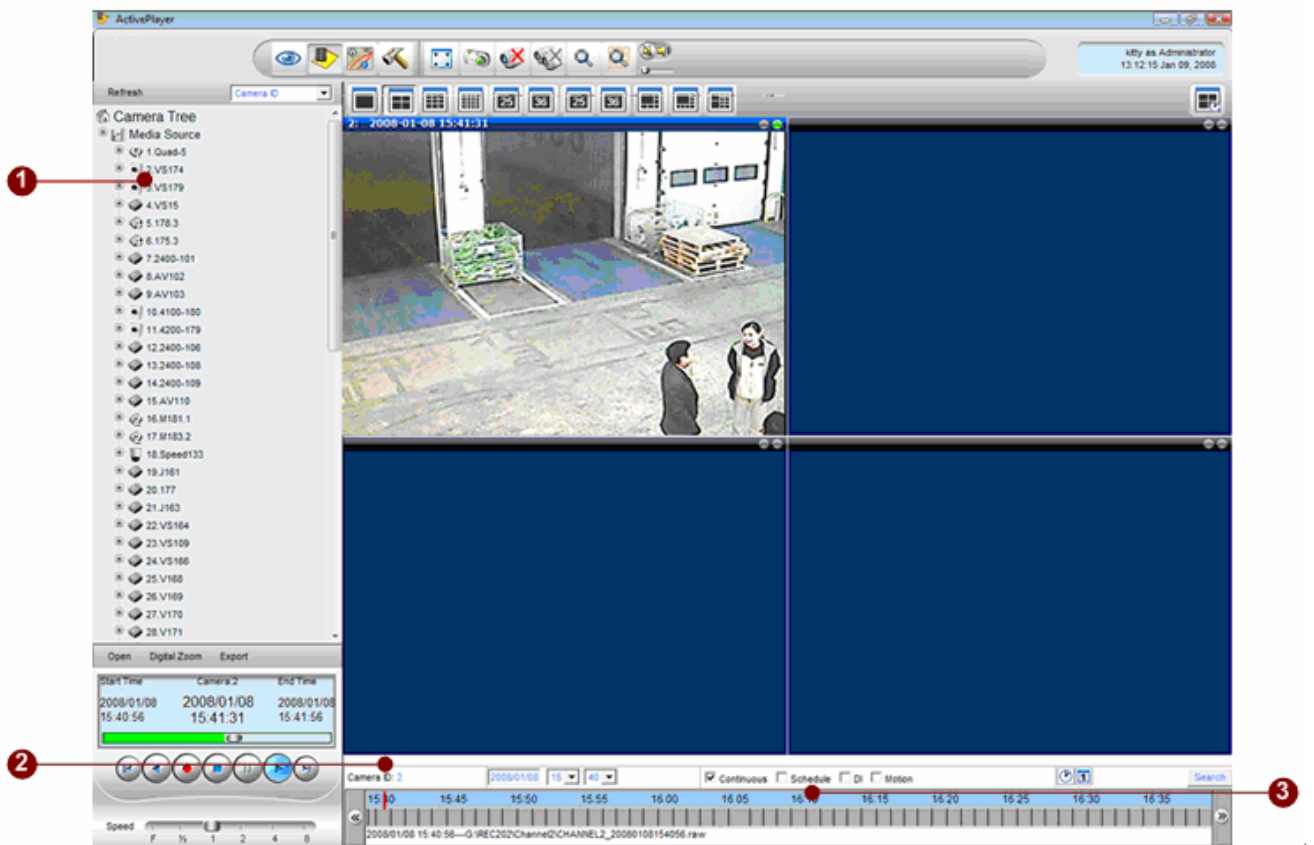


Figure 4-26 Select Channel

1. **Camera nodes:** Choose the camera node that user wants to playback.
2. **Selected camera:** This shows the camera node.
3. **Time bar:** This red bar shows time that this video clip is play.

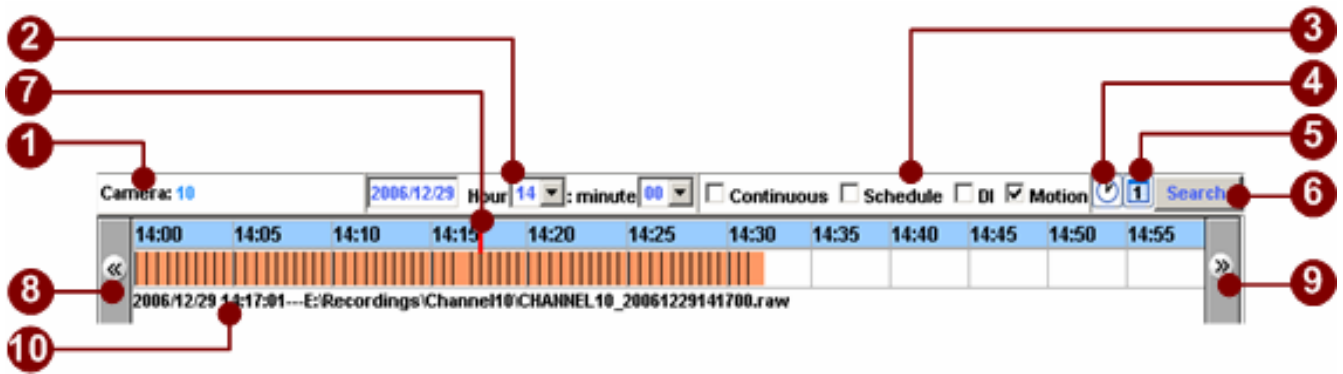


Figure 4-27 Time-based search bar

1. **Camera ID:** Shows the camera currently being displayed. To select the camera, click the camera name on the device tree.
2. **Search time:** Search and select where user wants your video to be played in the entire video. This time is relative to the device clock instead of the computer clock.
3. **Search event:** Search for different types of event recorded in that period of time.
4. **View-by-hour button:** Change the scale of the time bar to one hour.
5. **View-by-day button:** Change the scale of the time bar to 24 hours.
6. **Search button:** Search for the events in the entire video.
7. **Time bar:** Show where the video is being played in time table.
8. **Show previous section:** Go to the previous section.
9. **Show next section:** Go to the next section.
10. **File Information:** Shows the recorded path and date/time of the recording file.

Search Criteria (Channel, Date, Time, Event)

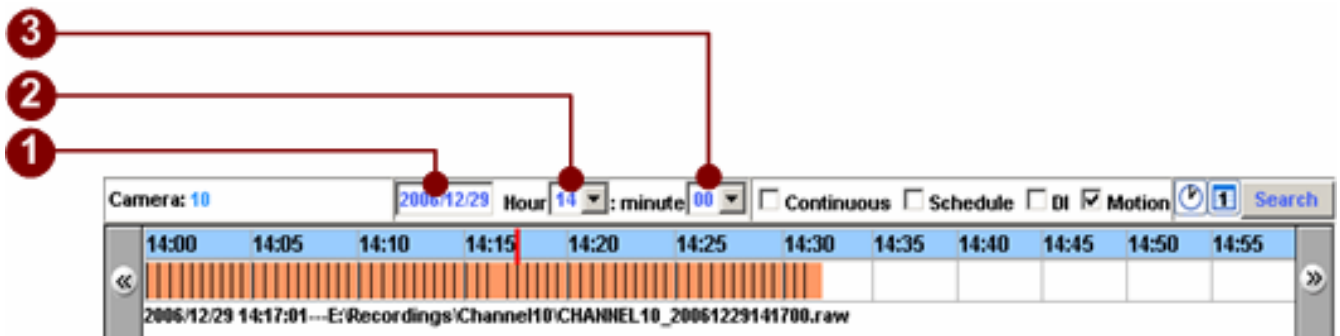


Figure 4-28 Search criteria

1. **Select by date to Search:** Show what date the video starts. User can key in a specific date and the video of date will be displayed.
2. **Select by Hour to Search :** Show what hour the video starts. User can key in a specific hour, and the video of that hour will be displayed.
3. **Select by Minute to Search:** Show what minute the video starts. User can key in a specific minute, and the video of that minute will be displayed.



NOTE: This time is relative to the device clock instead of the computer clock.

View by Hour

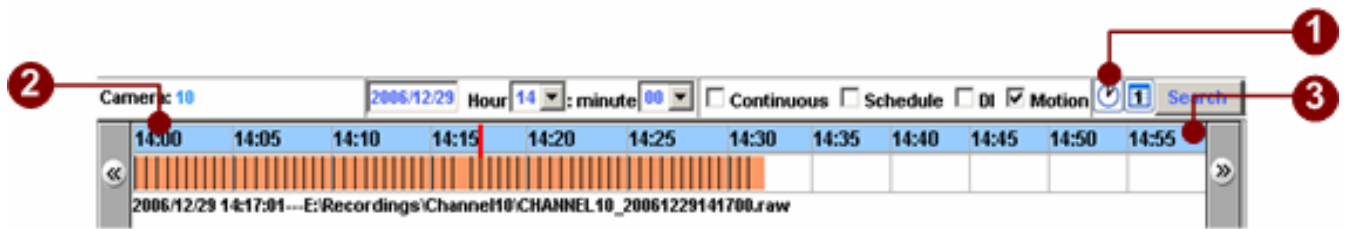


Figure 4-29 View by hour

1. **View-by-hour button:** Click this button to change to view by hour.
2. **Start time:** This shows when this recording starts.
3. **End time:** This shows when this recording ends.

View by Day

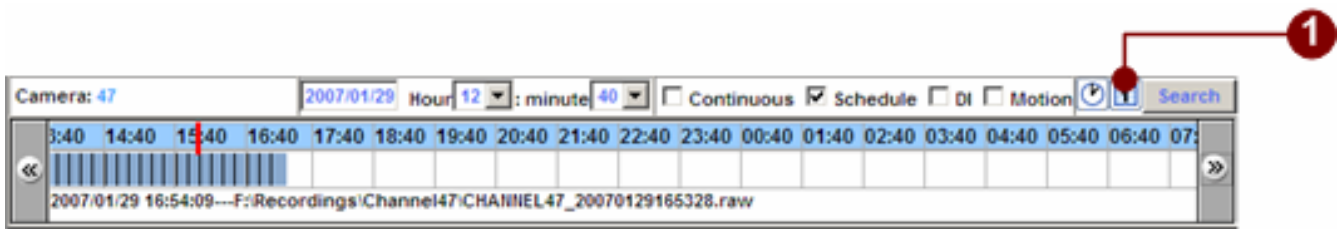


Figure 4-30 View by day

1. **View-by-day button:** After clicking this button, user will see a day which is divided into 23 sections by hour.

Continuous Recording

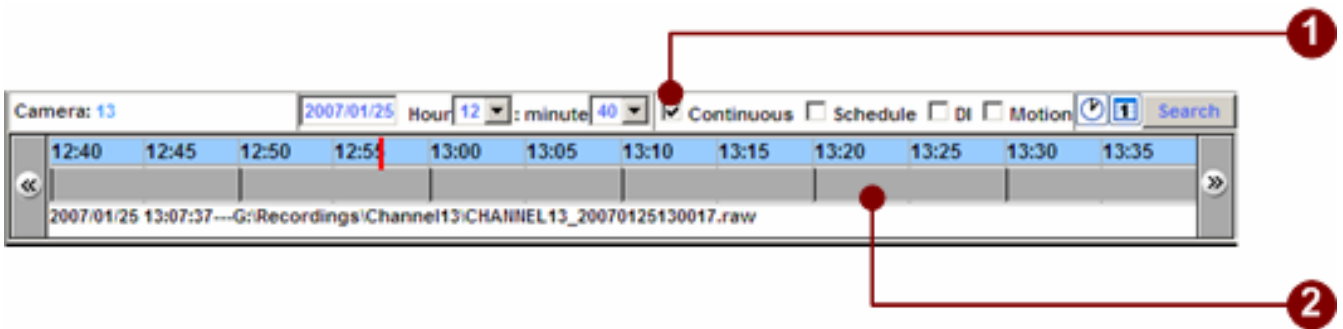


Figure 4-31 Continuous Recording

1. **Continuous Recording Selection:** Check to select continuous recording search criteria
2. **Continuous recording:** After enabling this checkbox, the time bar will only show continuous recording. User can see the entire time bar become gray.

Schedule Recording

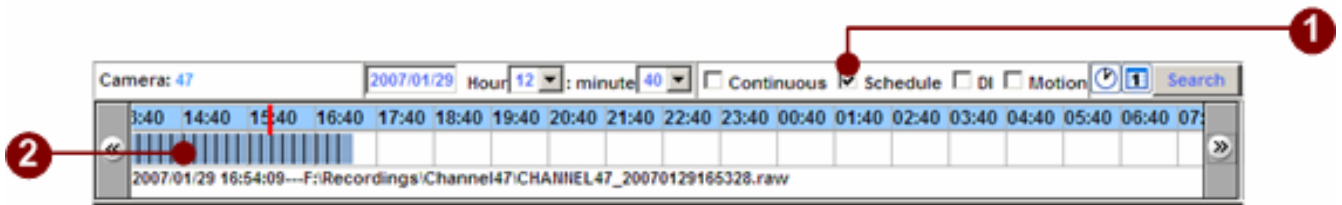


Figure 4-32 Schedule Recording

1. **Schedule Recording Selection:** Click to set Schedule Recording criteria
2. **Schedule recording:** After enabling this checkbox, the time bar will only show scheduled recording. User can see the entire time bar become blue

Event Recording

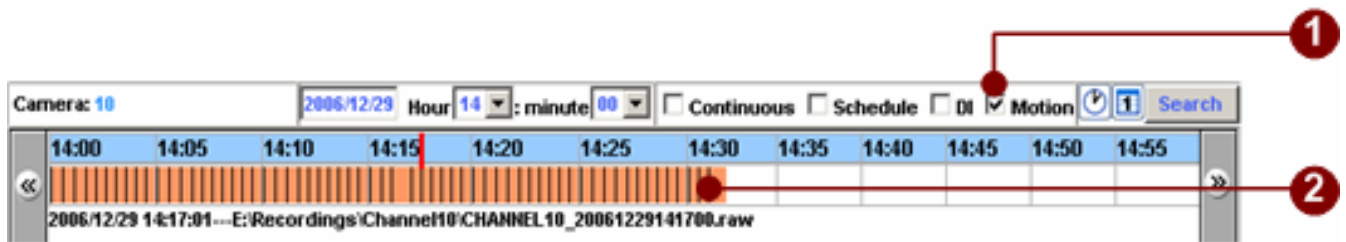


Figure 4-33 Event Recording

1. **Event Recording Selection:** Event recording criteria including DI (alarm) or Motion event
2. **Event recording:** After enabling this checkbox, the time bar will only show event recording. User can see the entire time bar become orange

Navigate Time-based Search Bar

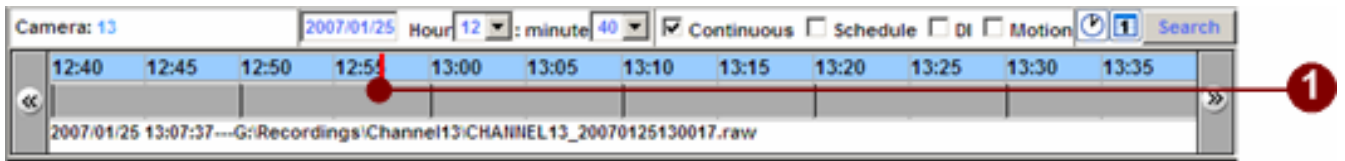


Figure 4-34 Navigate Time-Based Search Bar

User can choose which section he wants to play by clicking on the time bar.

Scroll Previous Button

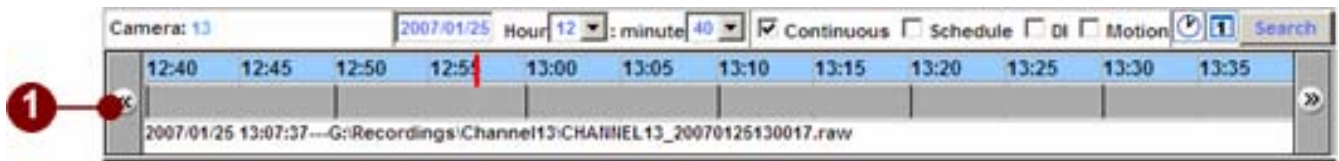


Figure 4-35 Scroll Previous Button

1. **Scroll Previous button:** user can move to previous section in this recording by clicking this button.



TIP: Under hour mode, clicking on this button will scroll back to previous hour; under day mode, click on this button will scroll forward to previous day.

Scroll Next Button

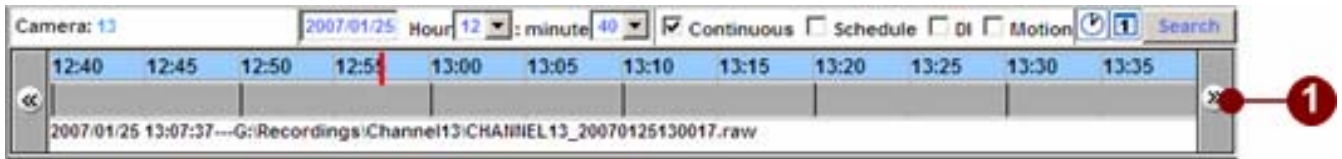


Figure 4-36 Scroll Next Button

1. **Scroll Next button:** User can move to the next section in the recording by clicking this button.



TIP: Under hour mode, clicking on this button will scroll back to next hour; under day mode, click on this button will scroll forward to next day.

Channel Layout Manager

Window Layout Selection



Figure 4-37 Layout bar

1. **1-Window View:** Shows a single channel; video is not expanded if maximum resolution of the source video is reached.
2. **4-Window View:** Shows a maximum of 2x2 video channels at once.
3. **9-Window View:** Shows a maximum of 3x3 video channels at once.
4. **16-Window View:** Shows a maximum of 4x4 video channels at once.
5. **25-Window View:** Shows a maximum of 5x5 video channels at once.
6. **36-Window View:** Shows a maximum of 6x6 video channels at once.
7. **49-Window View:** Shows a maximum of 7x7 video channels at once.
8. **64-Window View:** Shows a maximum of 8x8 video channels at once.
9. **6-Window View:** Shows one video channel with a larger view, and 5 others at a lower resolution.
10. **8-Window View:** Shows one video channel with a larger view, and 7 others at a lower resolution.
11. **10-Window View:** Shows two video channels with a larger view, and 8 others at a lower resolution.
12. **Synchronous Button:** 4-channel synchronized playback



TIP: The Synchronous Button will be enabled when there are playback files in the ActivePlayer system.

Change Window Layout

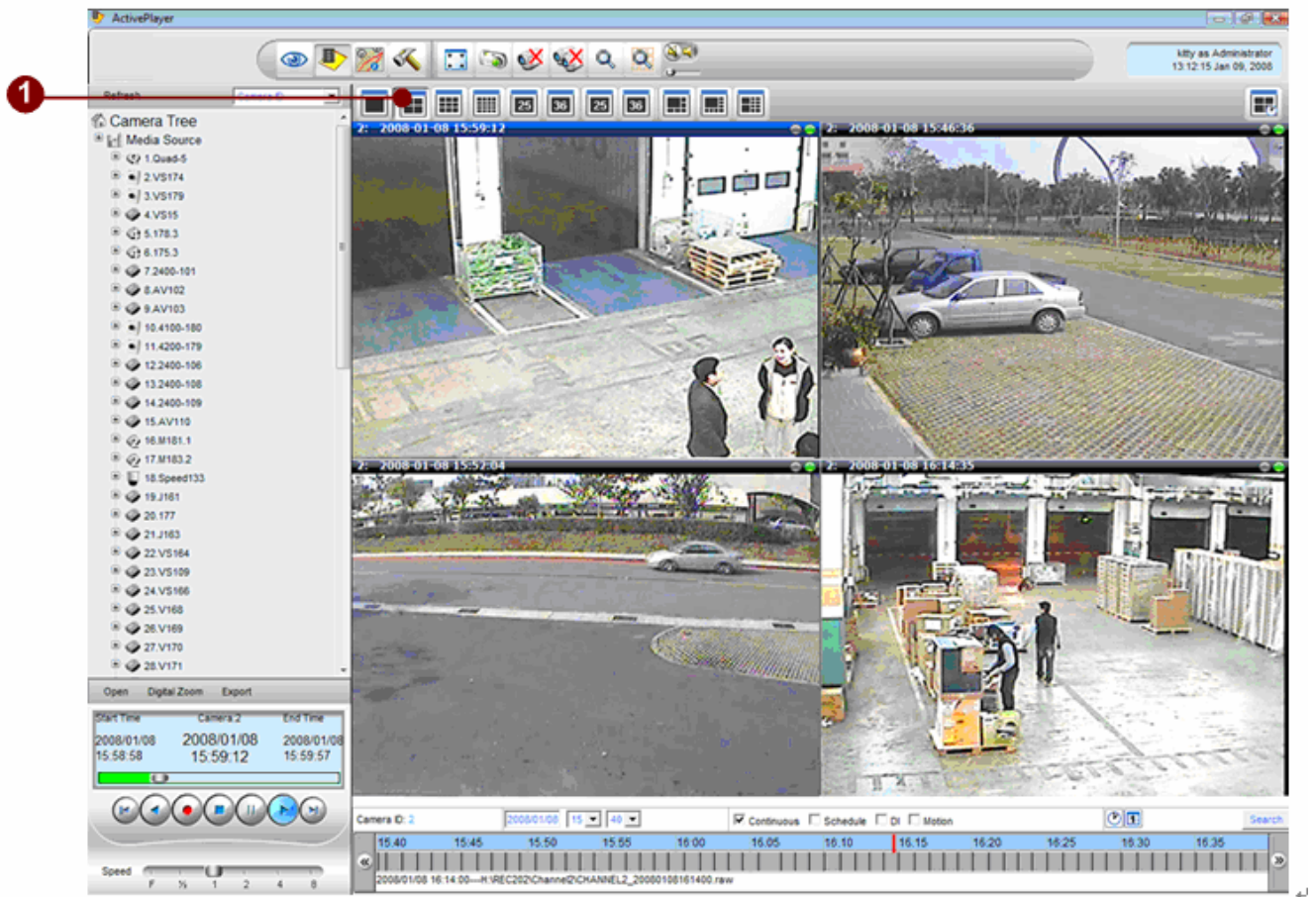


Figure 4-38 4-Channels Window Layout Playback

Single Channel Video Clip Playback of Different Time Frame

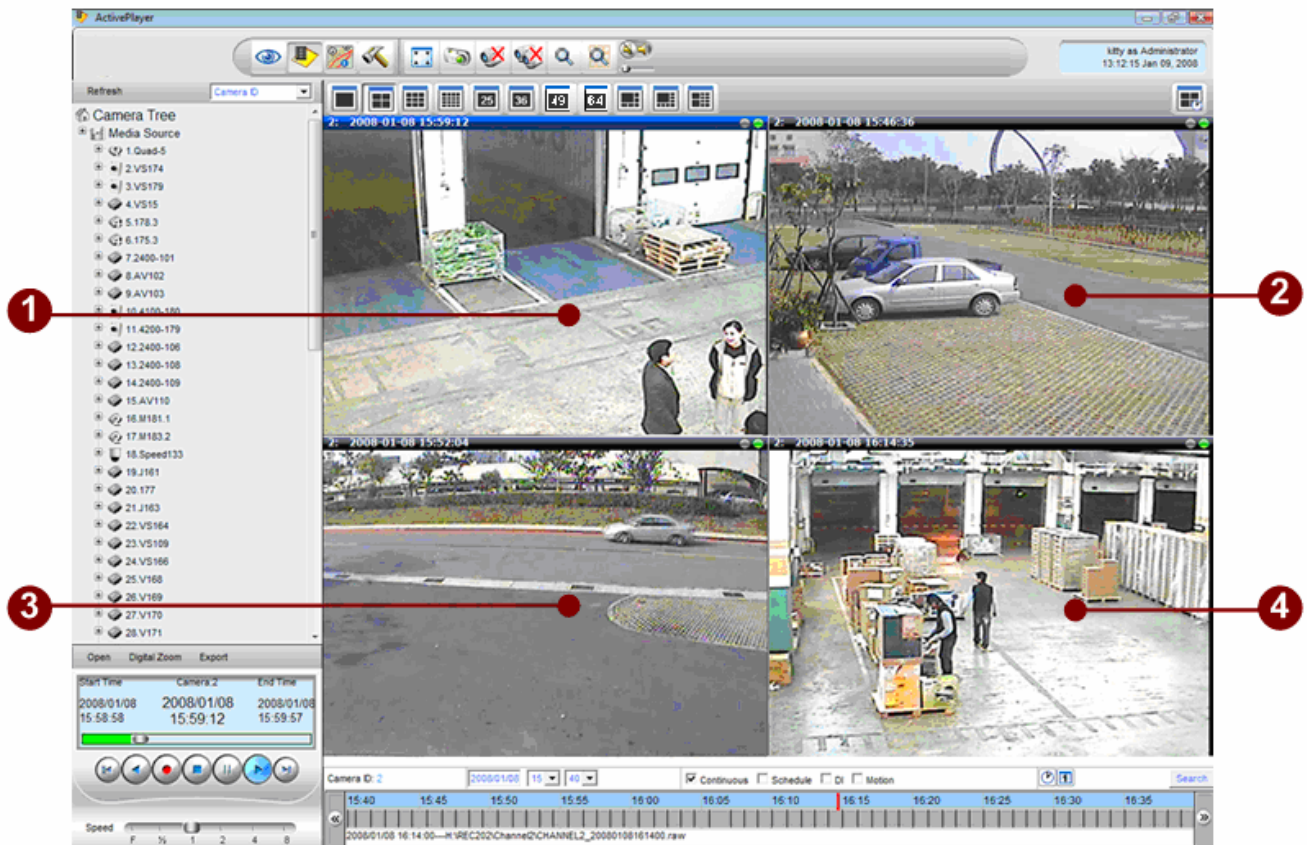


Figure 4-39 Different Time To Playback

This function allows user to play 4 different sections in one recording. User may find 4 different window and click on 4 different time in the time-based search bar, this may displays the same channel with 4 different date / time in different video window separately.

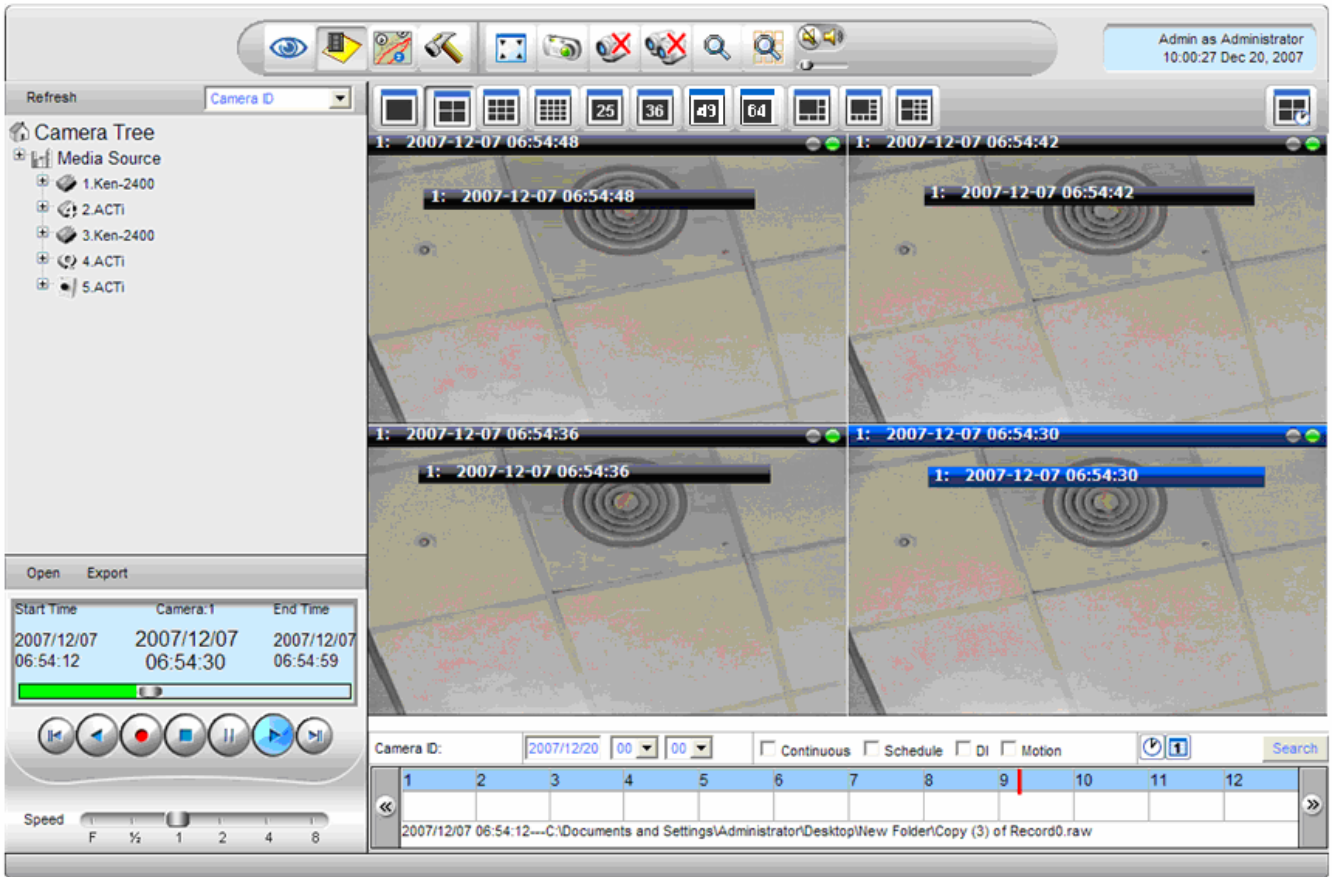


Figure 4-40 Check the Date/Time

According to Figure 4-42, there are 4 different windows showing 4 different sections of one video recording.

Window 1 displays **1:2007/12/07 06:54:48**

Window 2 displays **1:2007/12/07 06:54:42**

Window 3 displays **1:2007/12/07 06:54:36**

Window 4 displays **1:2007/12/07 06:54:30**

Synchronous Playback

4-channel synchronous playback function allows user to play different recordings at the same time.

Drag 4 channels first, then Synchronize them with Baseline Time Frame

1. Select Channel on Active Window

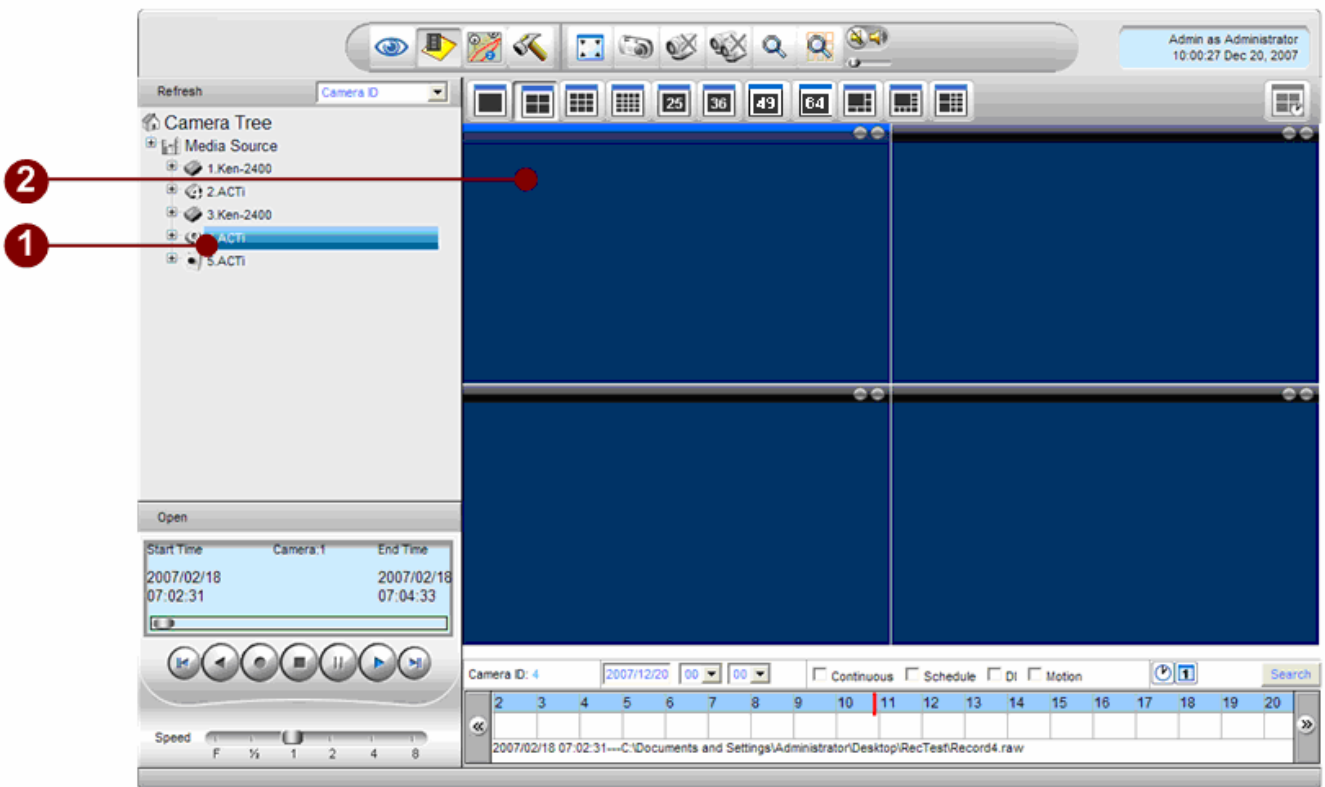


Figure 4-41 Choose 4-channel playback file

1. **Choose Camera ID:** Choose four channels camera ID that user wants to playback, user can Drag and Drop the camera to video screen.
2. **Choose Video Screen:** Drop the camera ID to Select video screen. After choose 4-channels, the video screen still is blue.

2. Search recording

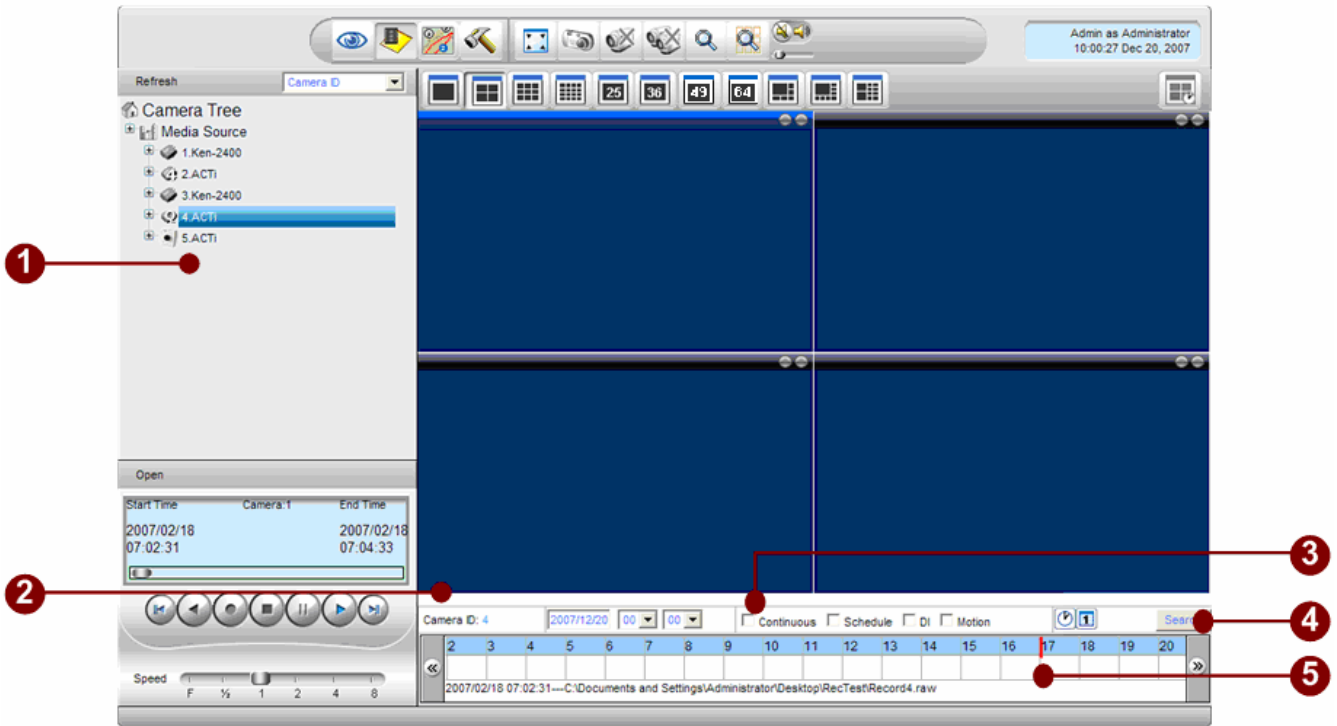


Figure 4-42 Search the Active window playback

1. **Choose the active camera:** Click the active camera, then user can see the camera name on the Time bar.
2. **Camera Name:** Show the selected camera.
3. **Search By Date/Time and Recording Type:** select the rules that user wants to playback.
4. **Search Button:** Search for events.
5. **Playback Time Bar:** Choose the time that user wants to playback, then Click the time bar to start playback.

3. Select different recording for different windows

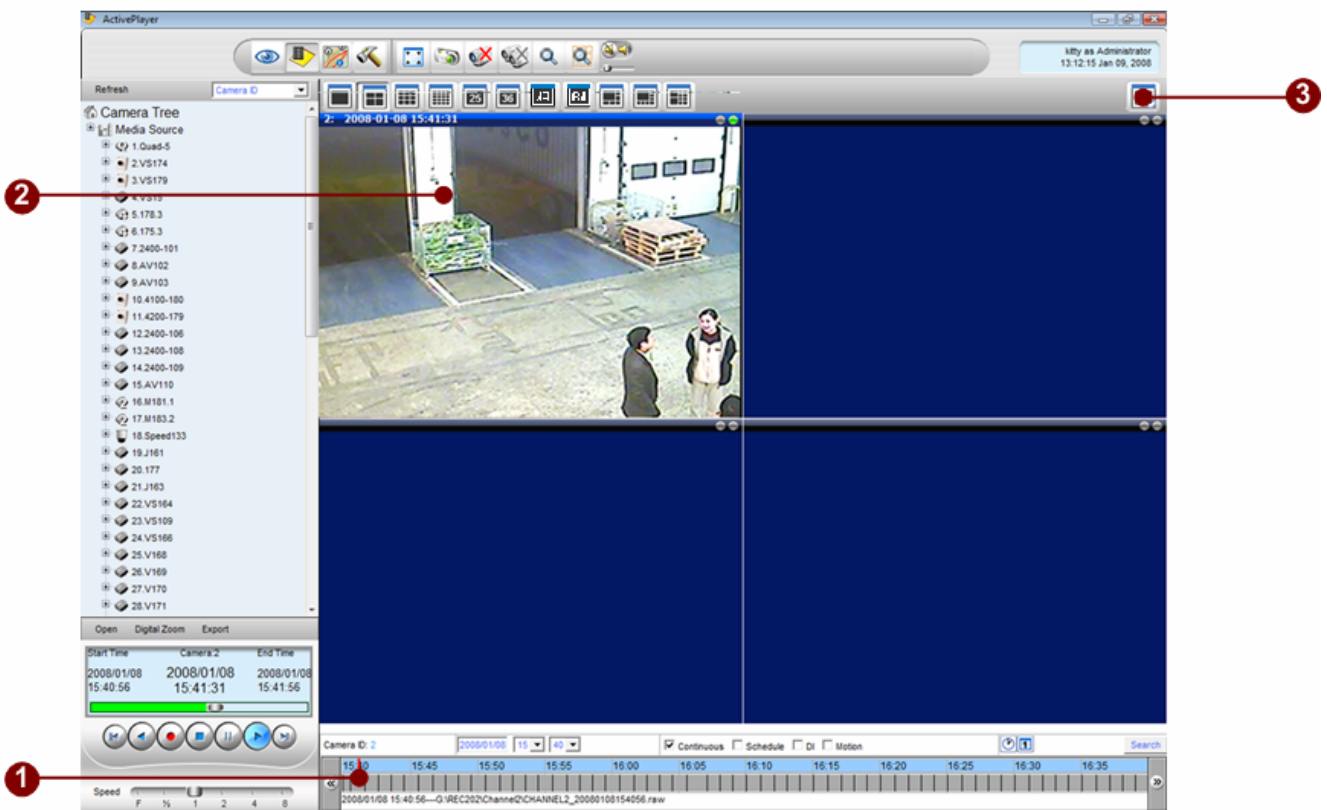


Figure 4-43 Synchronous Playback

1. **Choose the active camera:** Click the active camera, then user can see the camera name on the Time bar.
2. **Camera Name:** Show the selected camera..
3. **Search By Date/Time and Recording Type:** select the rules that user wants to playback.

4. Show different windows' information

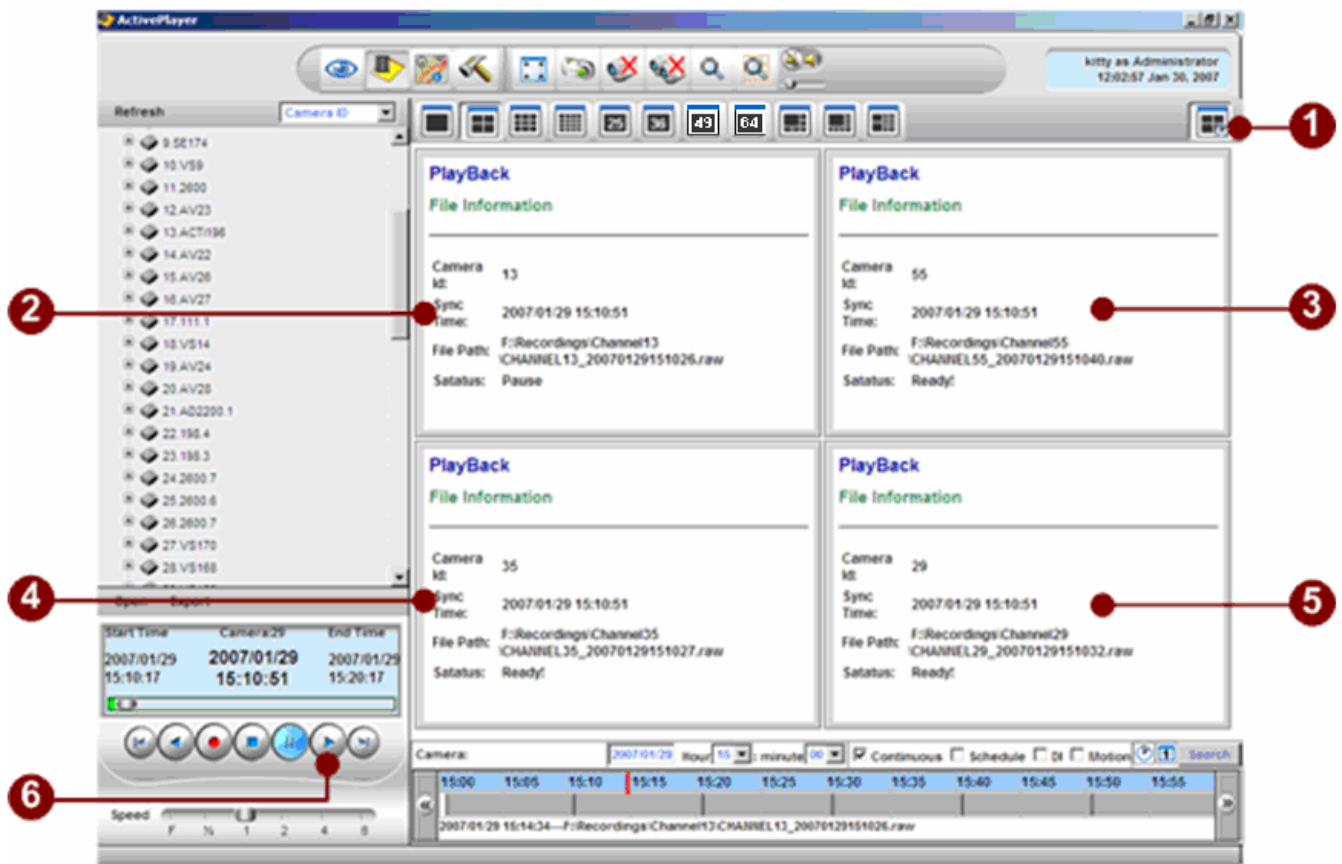


Figure 4-44 Synchronous Playback Time

1. **Synchronous Button:** Click this button, user can see that the file status is pause on the active channel . And others are Ready.
2. **Active Window:** User can see the file synchronous Time in active window and the file status is pause.
3. **Second camera window:** User can see the file synchronous Time in second window and the file status is Ready.
4. **Third camera window:** User can see the file synchronous Time in third window and the file status is Ready.
5. **Fourth camera window:** User can see the file synchronous Time in fourth window and the file status is Ready.
6. **Play button:** After all channel file is Ready, user can click this button to start synchronous playback.

5. Synchronize different windows

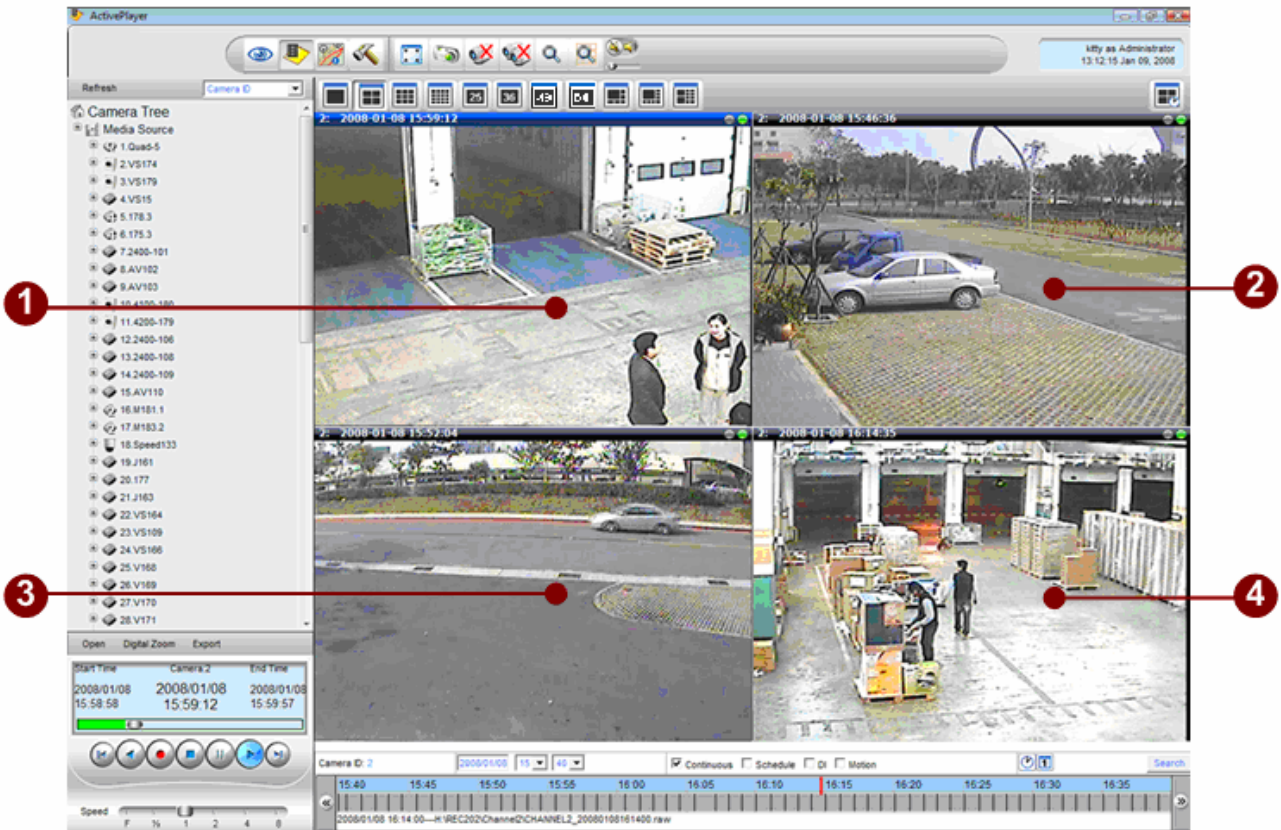


Figure 4-45 Synchronous Playback Mode 1

1. **Synchronous Button:** Click this button, user can see the file status is pause on the active channel . And others are Ready.
2. **Active Window:** User can see the file synchronous Time in active window and the file status is pause.
3. **Second camera window:** User can see the file synchronous Time in second window and the file status is Ready.
4. **Third camera window:** User can see the file synchronous Time in third window and the file status is Ready.

Playback 4 Different Archives, then Synchronize them to the same time frame

1. Select an active window

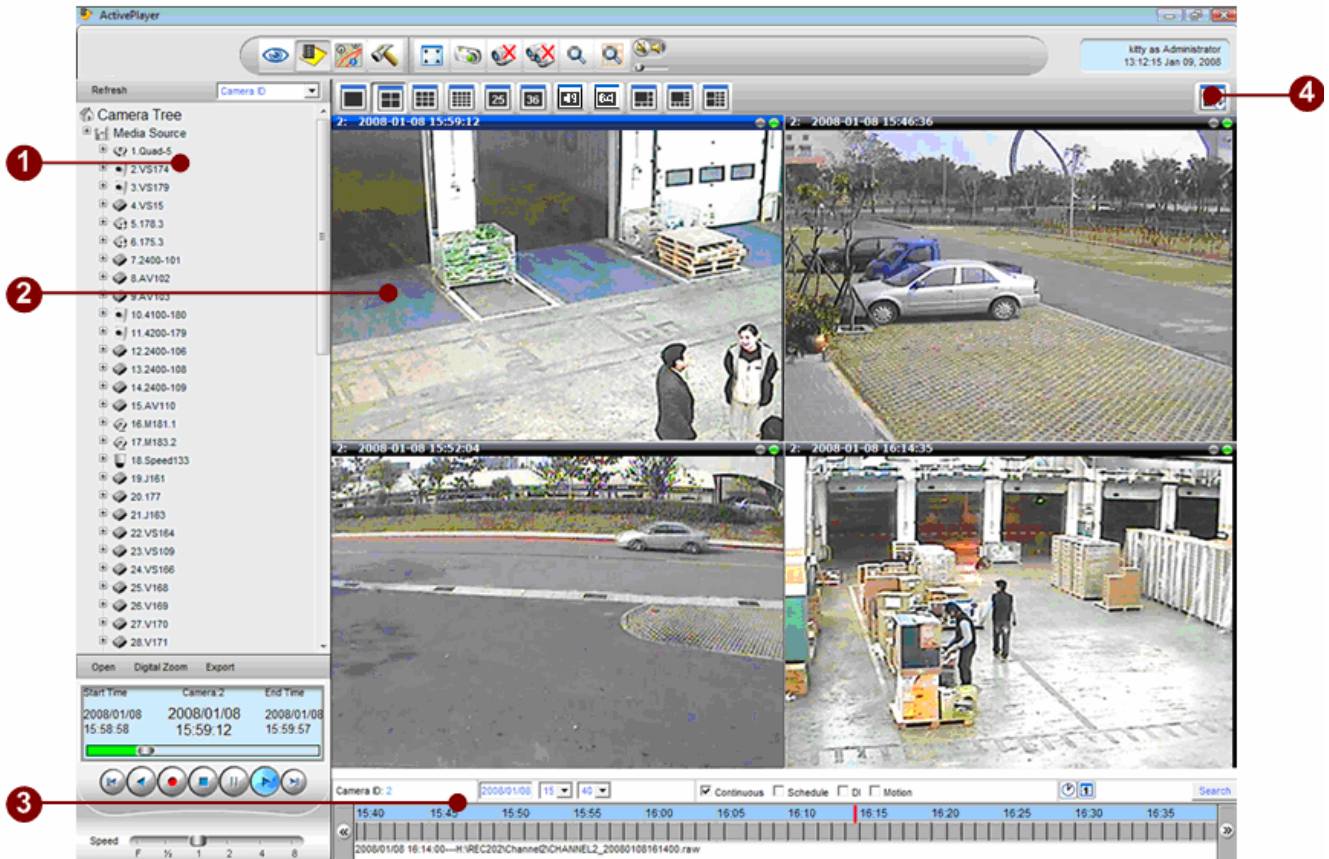


Figure 4-46 Choose 4-channel playback file and set active window

1. **Choose the Camera ID:** Click anyone video screen to set active window.
2. **Set Active Window:** Click anyone video screen to set active window.
3. **Time Bar:** Click this button to synchronize 4-channel playback.
4. **Synchronous button:** Click this button to synchronize 4-channels playback.

2. Show different windows' information

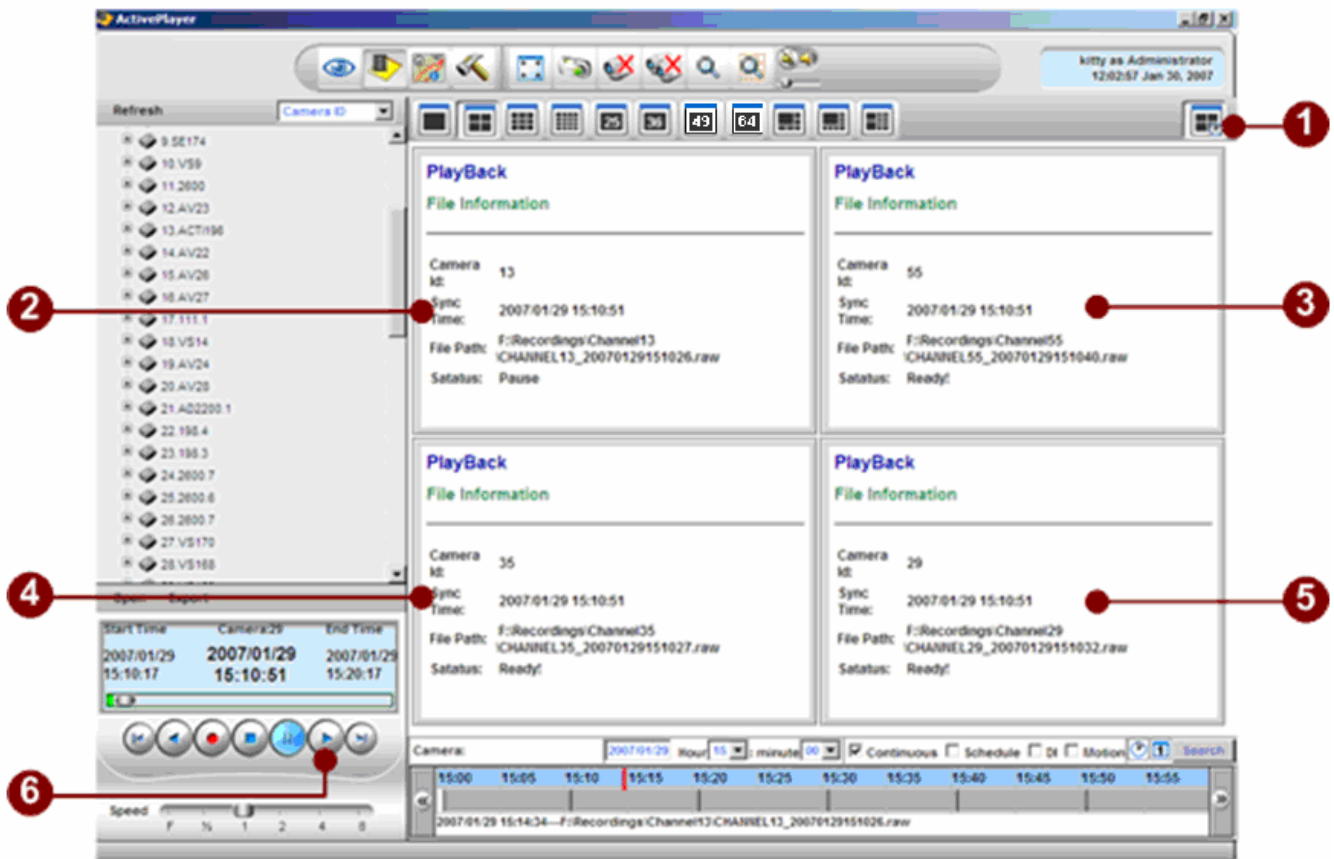


Figure 4-47 4-Channel Synchronous Playback Time

1. **Synchronous Button:** Click this button, user can see the file status is paused on the active channel .
2. **Active Window:** User can see the file synchronous Time in active window and the file status is pause.
3. **Second camera window:** User can see the file synchronous Time in second window and the file status is Ready.
4. **Third camera window:** User can see the file synchronous Time in third window and the file status is Ready.
5. **Forth camera window:** User can see the file synchronous Time in fourth window and the file status is Ready.
6. **Player button:** After all channel file status is Ready, user can click this button to start synchronous playback.

3. Synchronize different windows

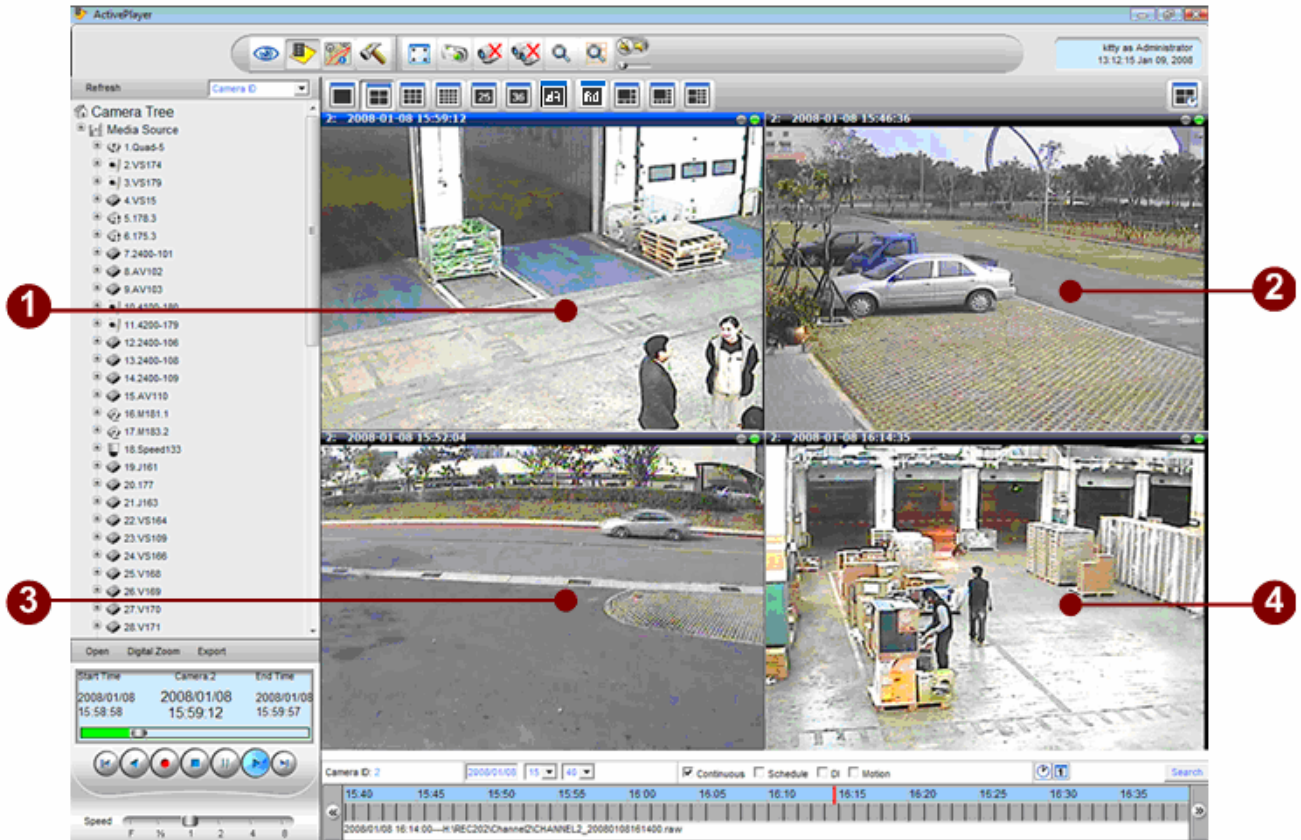


Figure 4-48 4-channel Synchronous Playback Mode 2

User can play four different recordings through 4 different windows.

Playback Archive First, then Search for other Channels at the same time frame

1. Select an active window

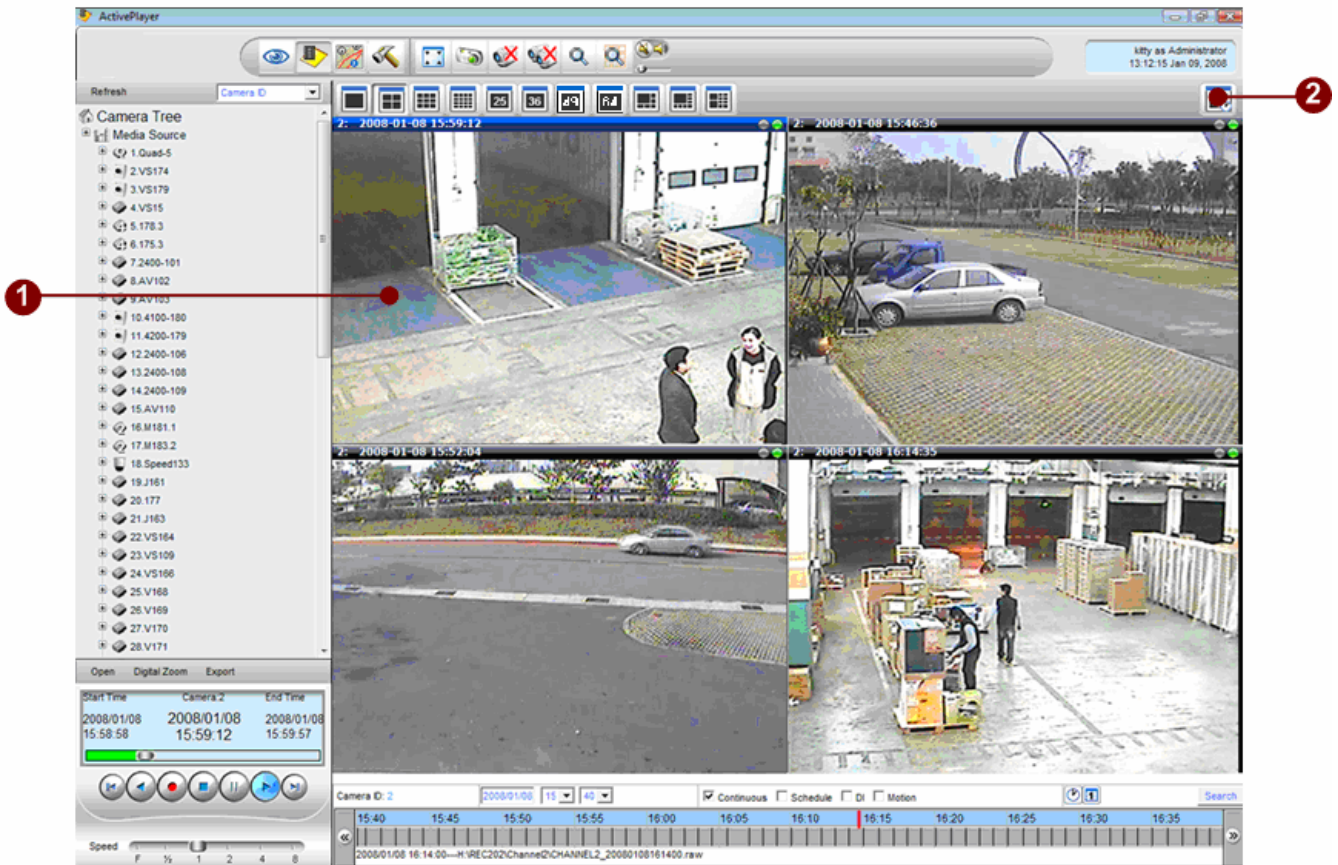


Figure 4-49 4-channel playback file and set active window

1. **Set Active Window:** Click anyone video screen to set active window.
2. **Synchronous button:** Click this button to synchronize 4-channel playback.

2. Show different windows' information

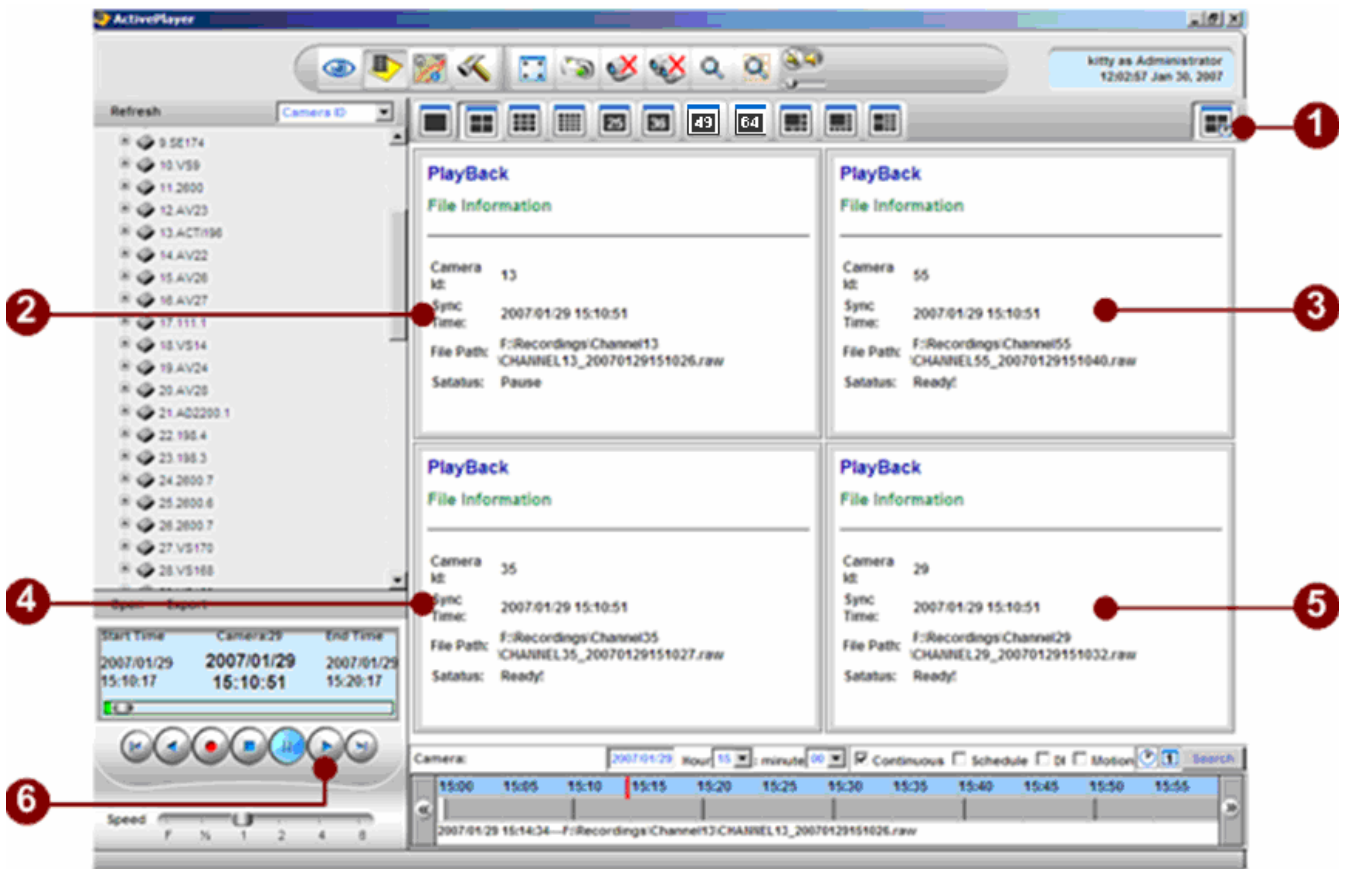


Figure 4-50 4-Channel Synchronous Playback Time

1. **Synchronous Button:** Click this button, user can see the file status is pause on the active channel.
2. **Active Window:** User can see the file synchronous Time in active window and the file status is pause.
3. **Second camera window:** User can see the file synchronous Time in second window and the file status is Ready.
4. **Third camera window:** User can see the file synchronous Time in third window and the file status is Ready.
5. **Fourth camera window:** User can see the file synchronous Time in fourth window and the file status is Ready.
6. **Play button:** After all channel file status is Ready, user can click this button to start synchronous playback.

3. Synchronize different windows

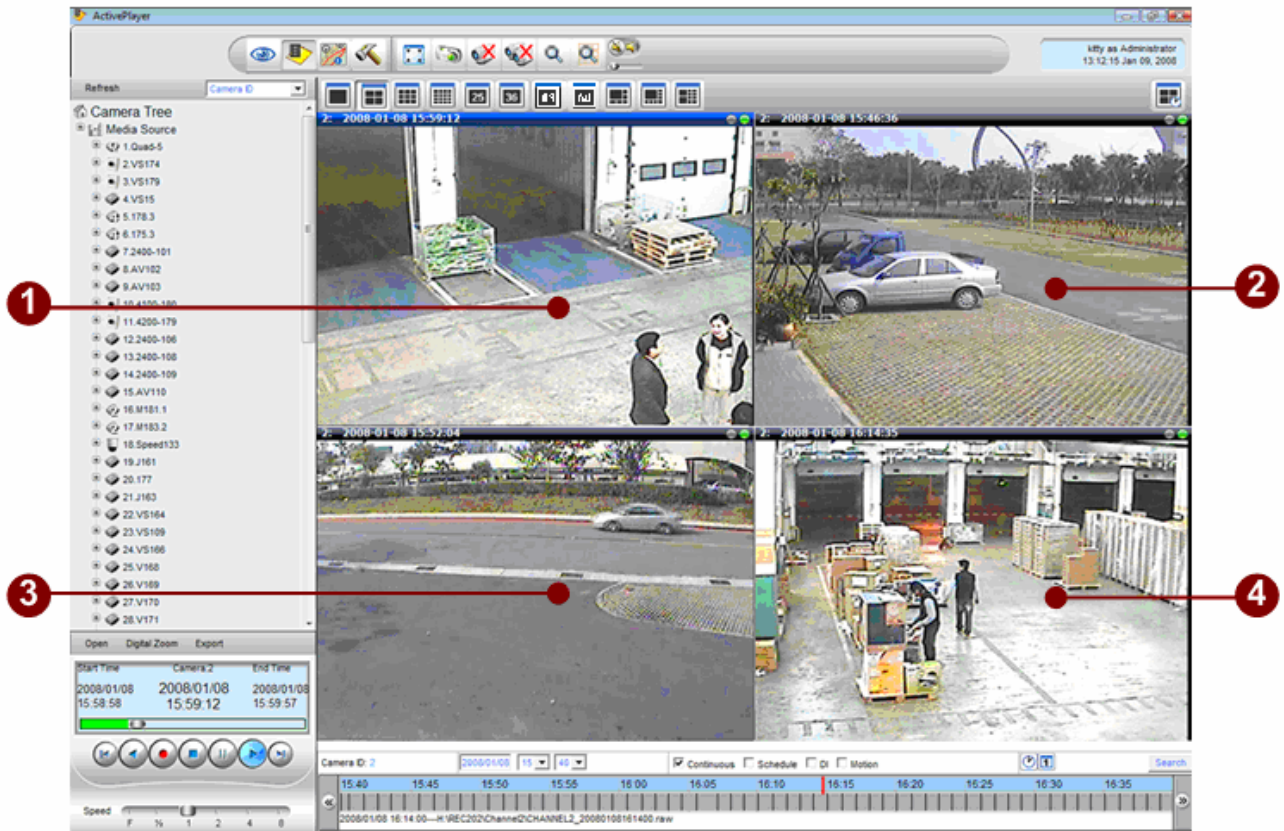


Figure 4-51 4-channel Synchronous Playback Mode 3

5. Active Map

Introduction

Active Map viewer is an interface for user to see images in map view. It can help customers to have more visualized control on surveillance system. This Chapter aims to guide user through the Map viewer operation

Active Map Viewer contains functions of 1. Active Map live view, 2. Active Map tree directory.

Relations with other chapter: Active Map viewer operation relies on correct setup during “Quick-installation-Guide: Software installation” and “Chapter 7: Active Setup”.

Active Map Viewer is the application designed to perform live preview for installed devices on a variety of imported maps or floor plans. It allows for a number of different maps, with different camera previews on each map, as well as touring between layouts. This section explains the interface in detail, as well as gives instructions for using these advanced functions.

Overview

Below are the main page of Map viewer. It contains several sections as below.

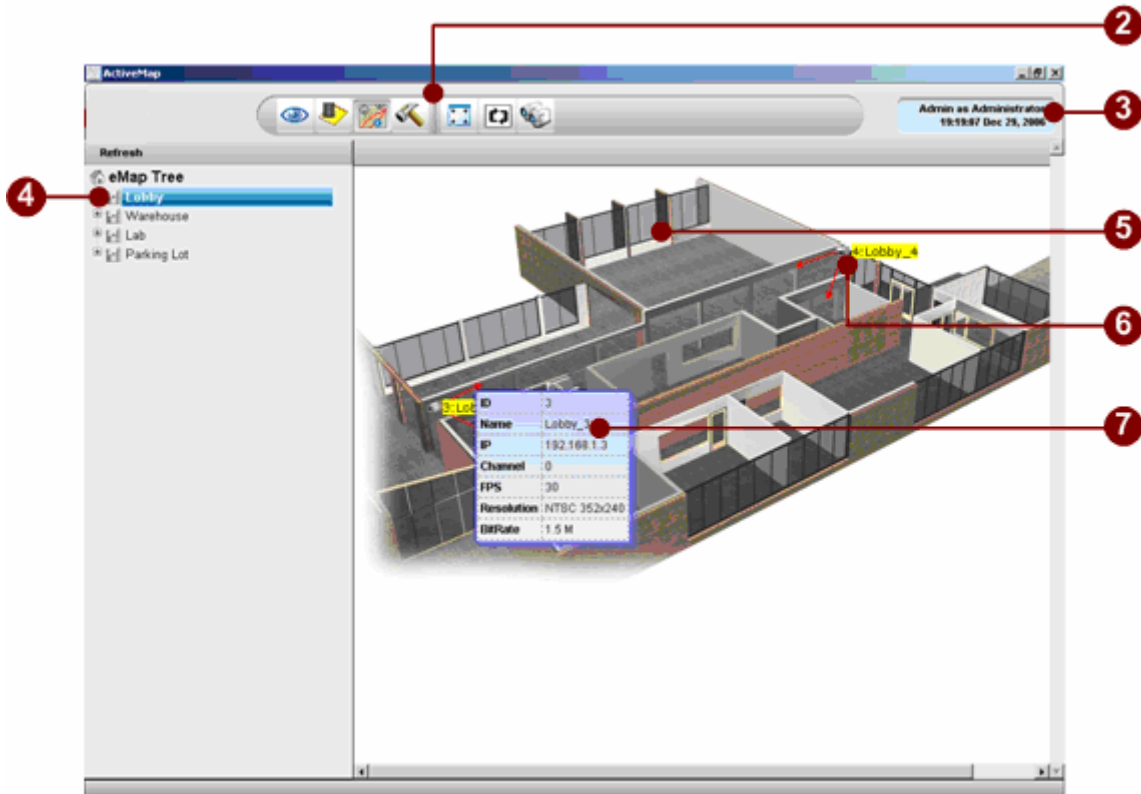


Figure 5-1 Active Map Viewer

1. (omitted)
2. **Active Map Toolbar:** Click to open various NVR applications.
3. **User Information:** Click to show user information and password change.
4. **Active Map Camera Tree:** Click this button to stretch the Active Map viewer to full screen.
5. **Active Map :** Click this button to enable/disable the auto patrol function of Active Map viewer. When auto patrol function is enabled, Active Map viewer will switch between your selected maps with programmable dwell time later section for more details.
6. **Camera Icon:** Click this button to open/close all mini-preview map on the Active Map viewer. Please refer to later section for more details.
7. **Camera Information Panel:** This panel displays camera information.

Active Map Viewer

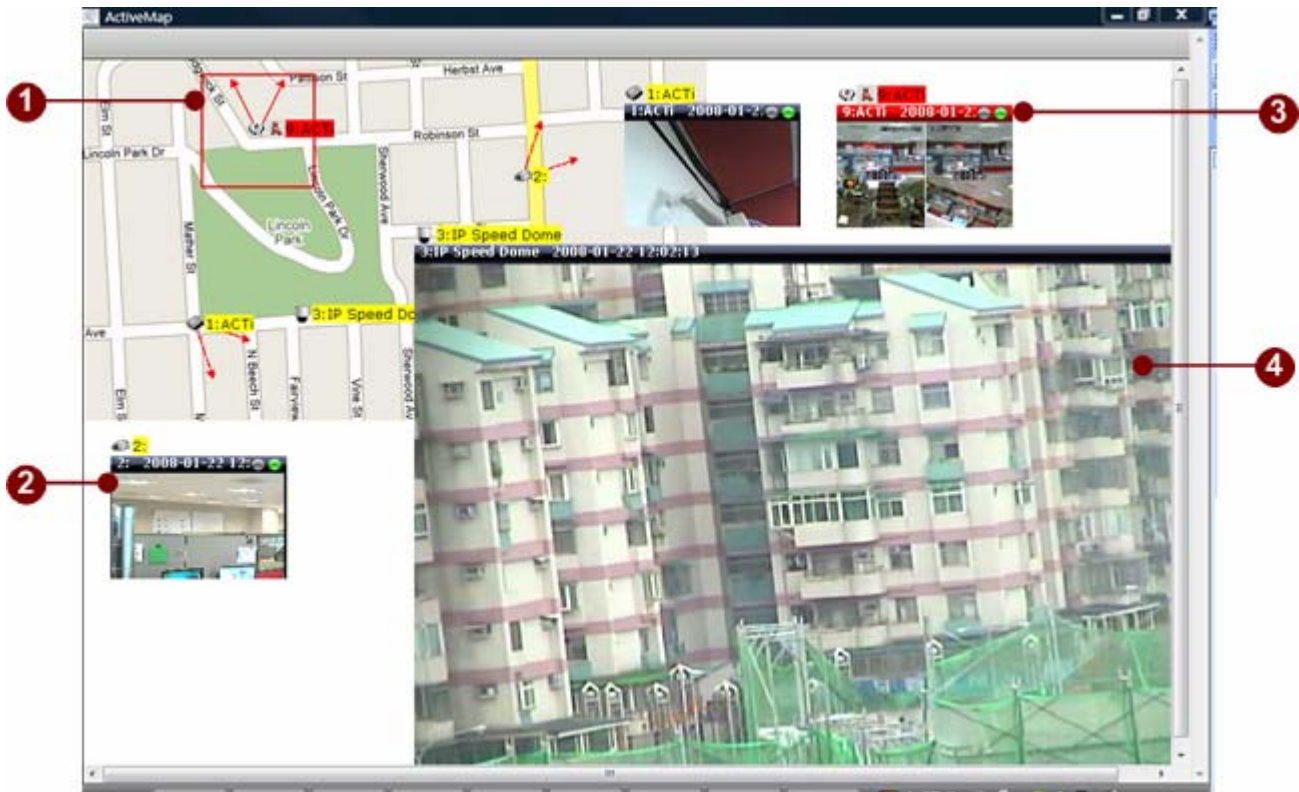


Figure 5-2 Active Map Viewer

1. **Camera Icon:** Click this button to open the Active Monitor in another browser window. Icons with red border displays events occurring.
2. **Live View Window:** Displays instant live view
3. **Live View Window with Events:** Live View window with events will change title color to red color
4. **Live View Window with Large Display:** User may setup different size of live view window. Size can be small, medium and large.



TIP: Camera icons with  means there is a motion detection event occurring.

Active Map Operation

Archive Player Toolbar



Figure 5-3 Active Map Toolbar

1. **Active Monitor:** Click this button to bring up Active Monitor application.
2. **Archive Player:** Click this button to bring up Archive Player application.
3. **Active Map:** Click this button to bring up Active Map application.
4. **Active Setup:** Click this button to bring up Active Setup application.
5. **Full Screen:** Click to bring the map into full-screen mode. To bring the controls back, press **ESC** key.
6. **Map Tour:** Click on this button toggles map tour functions.
7. **Preview All Mode:** Click to bring all camera preview on the screen.



TIP: User can also use **CTRL+12** to invoke this function. To stretch the video to fit the window, user can use **CTRL+11** function key to toggle this function.

Full Screen Mode (CTRL+F12)

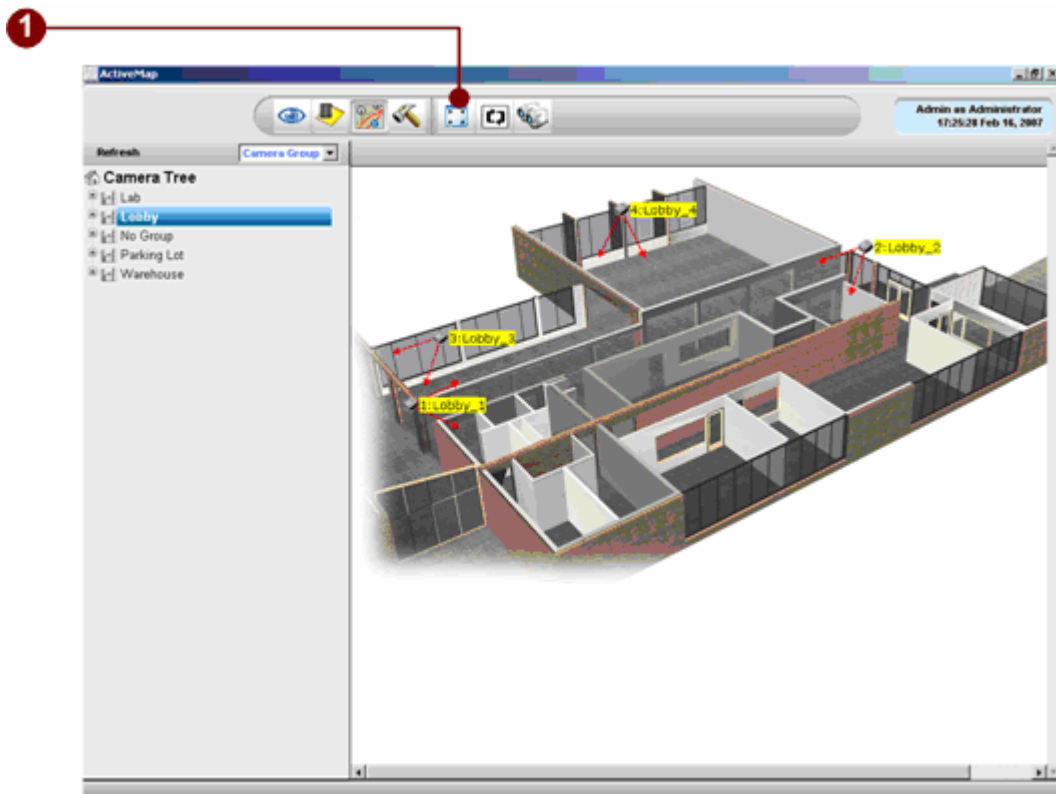


Figure 5-4 Full Screen Button

Full-screen: Click to bring the map into full-screen mode. To bring the controls back, press **ESC** key.



TIP: Full-screen maximizes the entire layout of videos instead of just the selected window. It will also not expand the video should the size of the window exceeds the maximum resolution of the video.



TIP: User can also use **CTRL+12** to invoke this function. To stretch the video to fit the window, user can use **CTRL+11** function key to toggle this function.

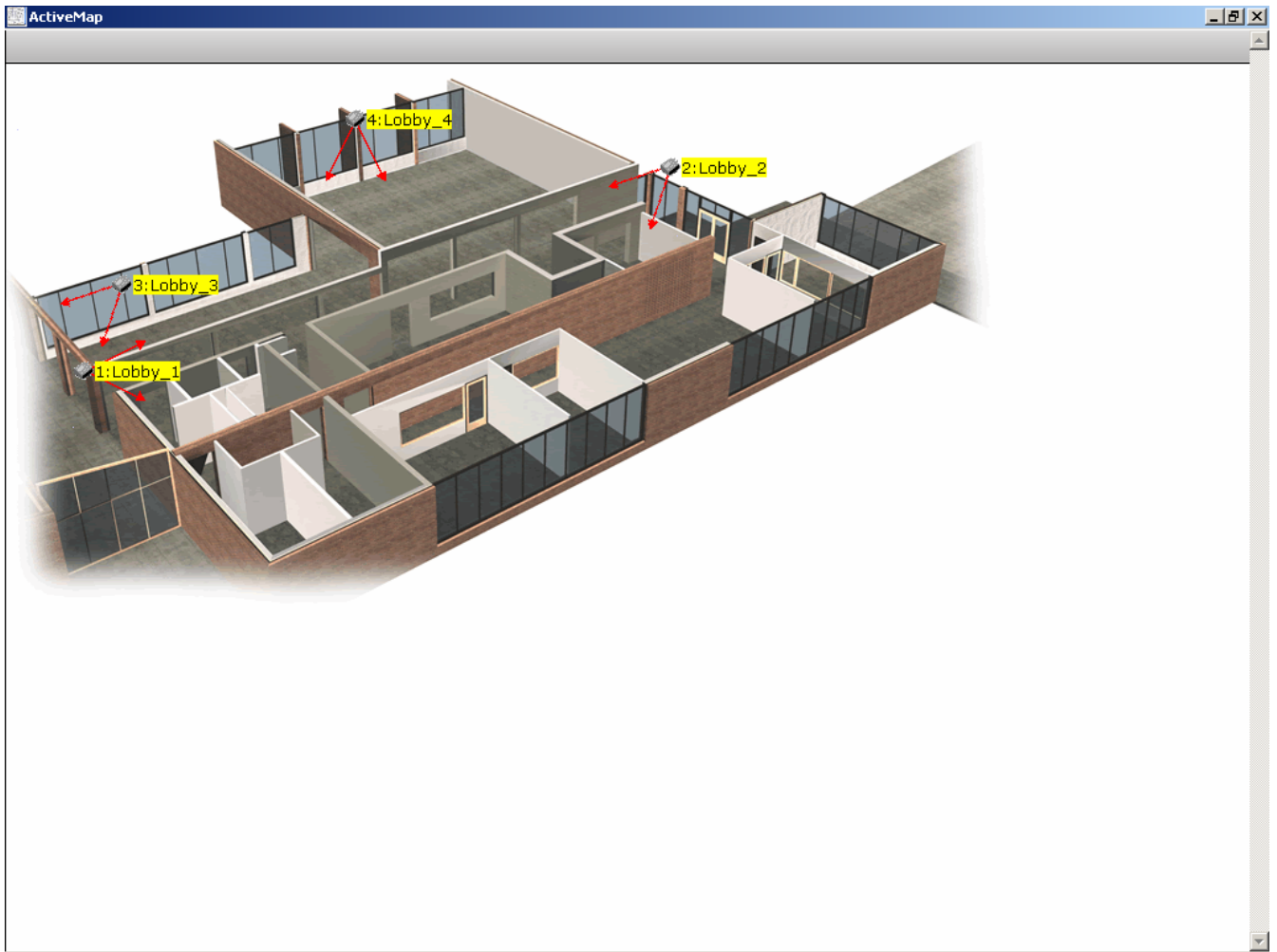


Figure 5-5 Full Screen

Map Tour

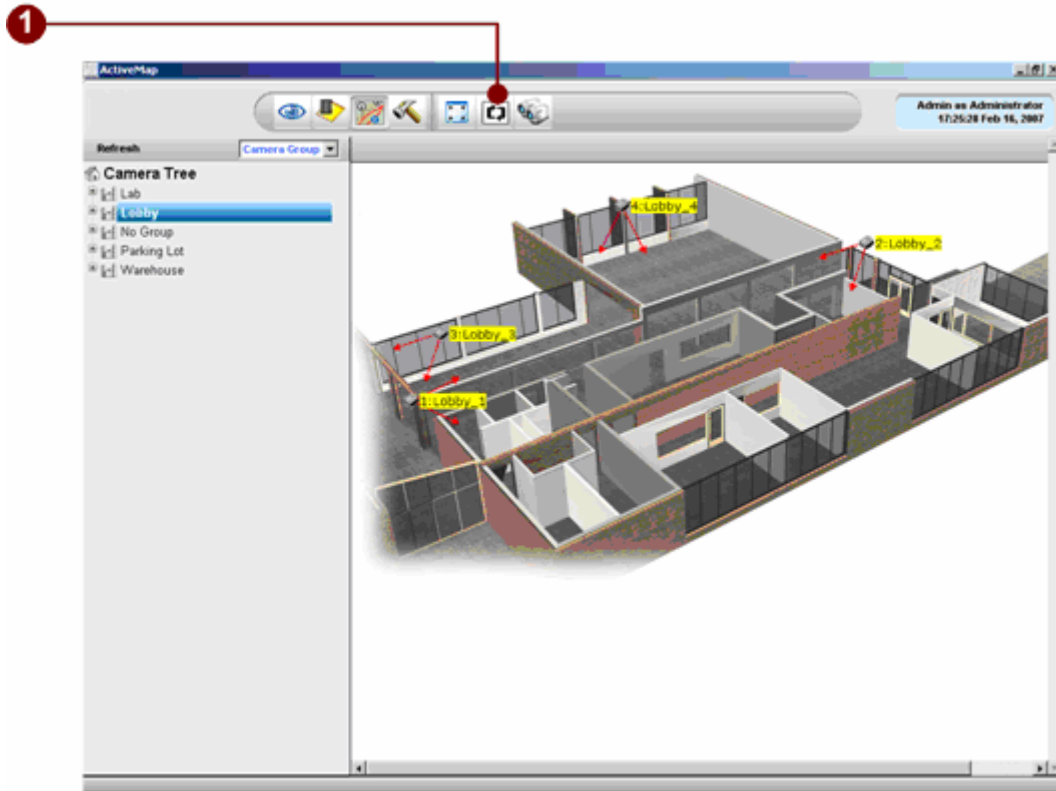


Figure 5-6 Map Tour

1. **Map Tour:** Click to start/stop map tour. Each map will be displayed with dwell time setting in Map Setup.

Preview All Mode

If user press the “Preview All” button, user will see the mini-display window of each camera in this e-map as below.

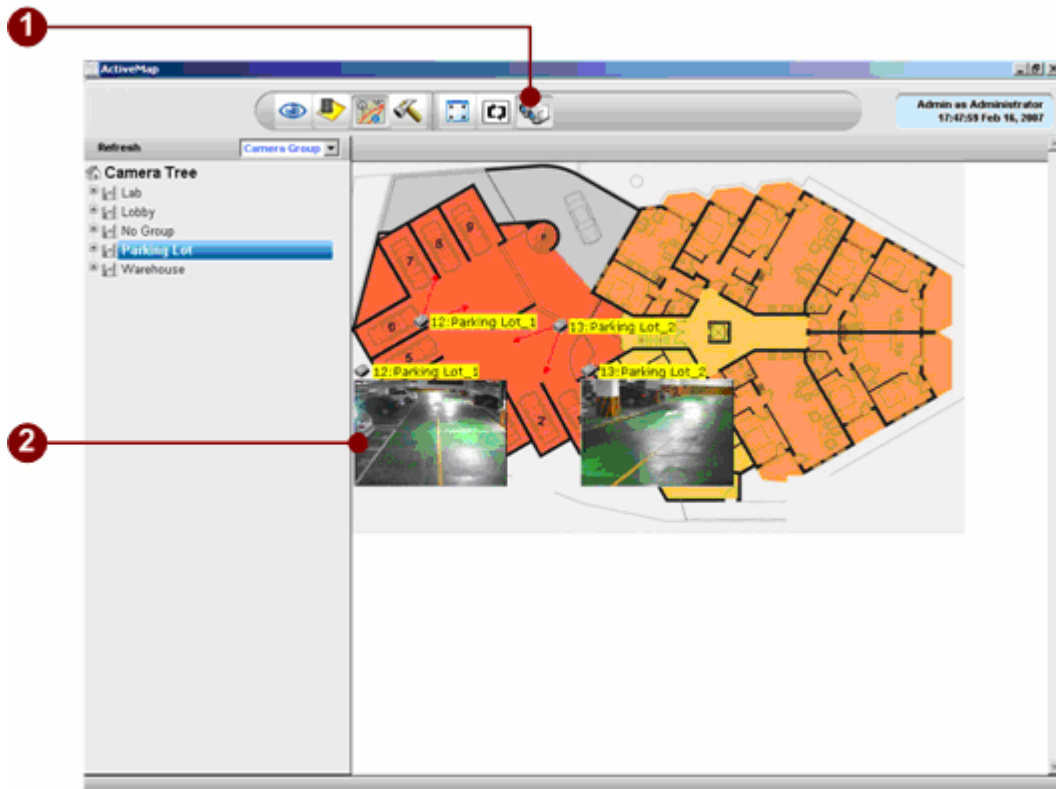


Figure 5-7 Preview All Mode

- 1. Preview-All Button**
Click this button to open/close all mini-preview map on the Map viewer.
- 2. Mini-preview Window**
Each mini-preview window contains
 - **Camera Type:** Different device icon indicates different device type.
 - **Camera Channel:** It indicates the channel number of the camera.
 - **Camera Name:** It indicates the camera name of the camera. User can easily know where the image is.
 - **Camera Images:** User can see the camera images.

Quick Preview Mode

Mini-Preview

Double-click on Live View Window

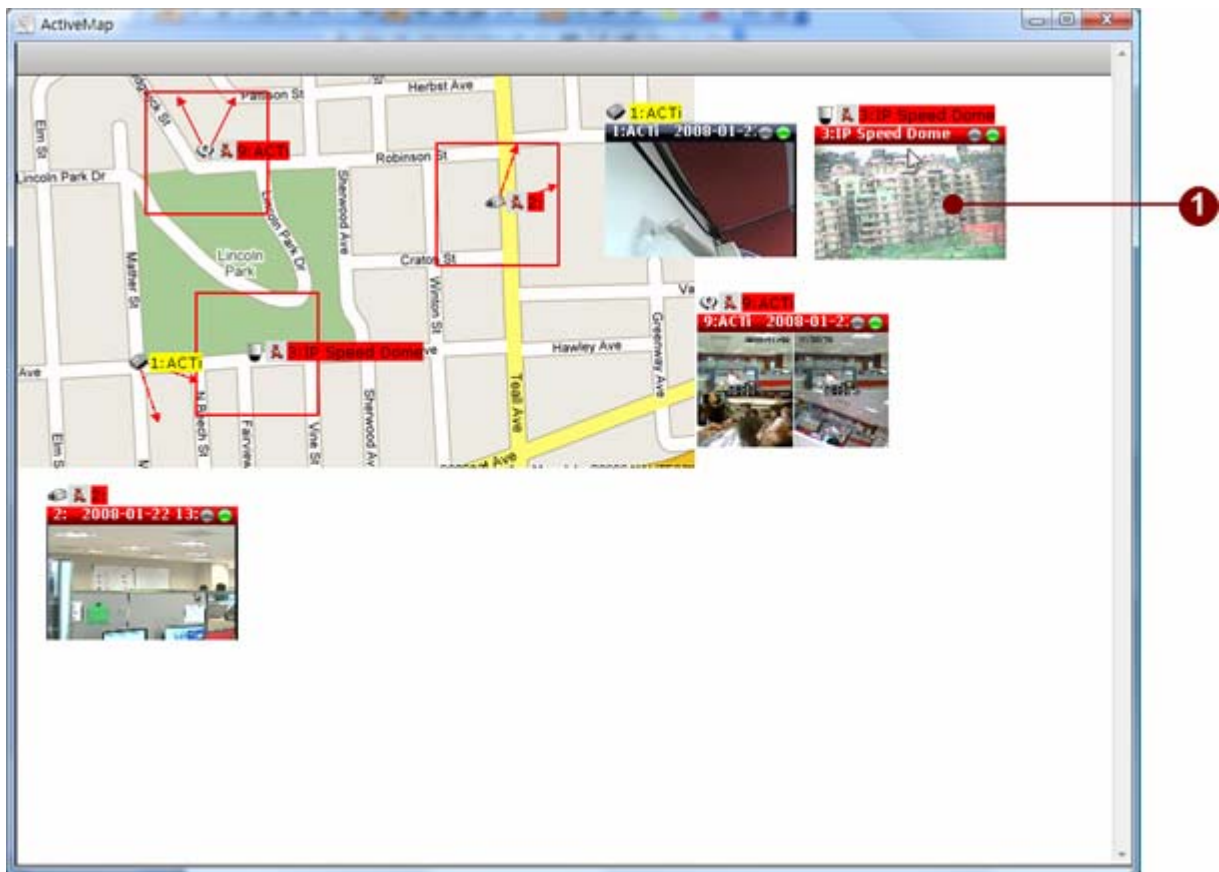


Figure 5-8 Double-Click Preview Window

1. **Original Live View:** When double-click on the preview window, the mini-preview window will be brought up; the original resolution and frame rate will be played.

Mini-Preview Window with PTZ Feature

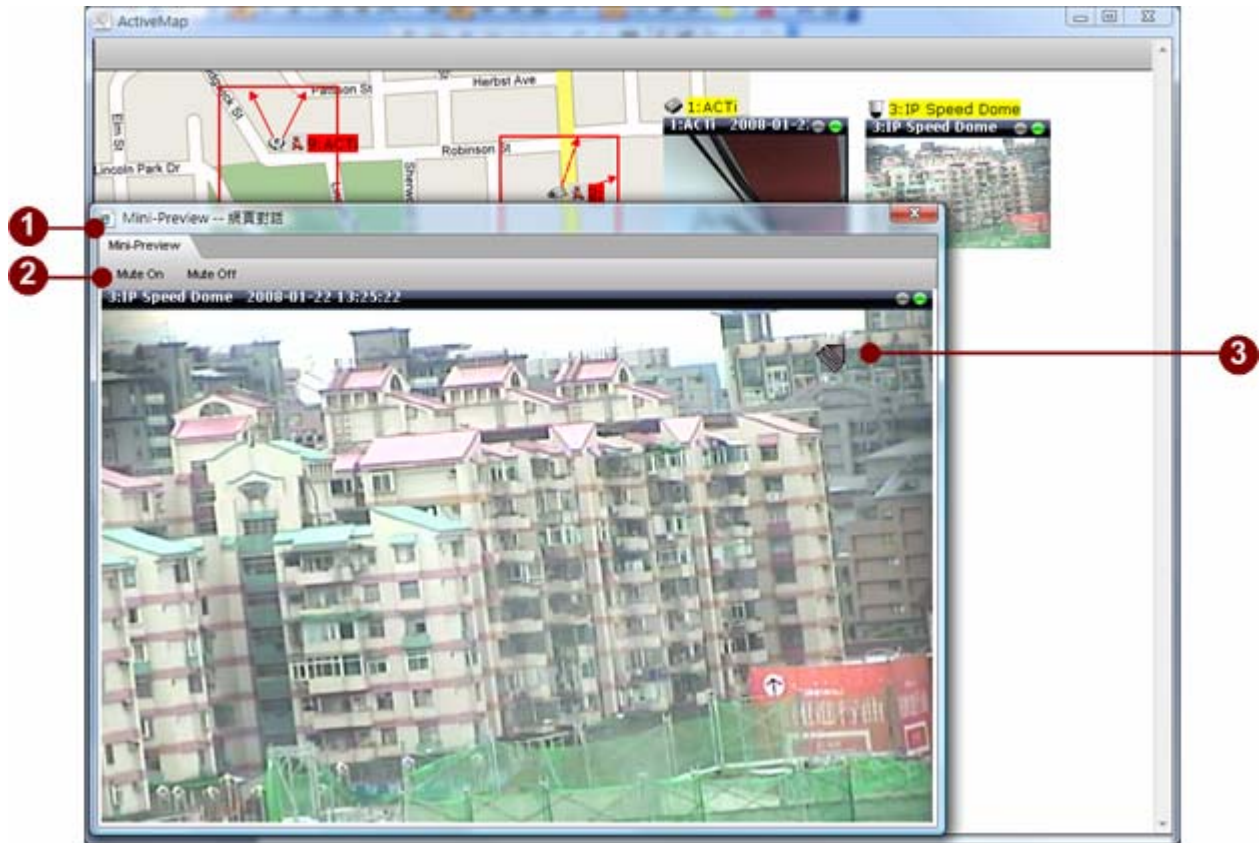


Figure 5-9 Mini-Preview Window with PTZ Feature

1. **Mini-Preview Window:** Mini-preview window displays with larger display window
2. **Audio Control:** User may turn on/off audio volume
3. **PTZ Operation:** Mini-preview window comes with on-screen Mouse PTZ control

6. NVR Web Client

Introduction

NVR Web Client (Remote Application) is the application designed to perform all functions included in NVR 2.0 in an Internet Explorer environment. This allows the user to connect to the recording server anywhere on the network without the necessity to install an the NVR application on each PC being used. This section explains the features of the NVR Web Client and procedure to operating it.



IMPORTANT: Only Microsoft Internet Explorer v6.0 SP2 and v7.0 is supported. Latest updates should be applied.



IMPORTANT: For security reason, the operating system has to be patched with latest security updates. Refer to <http://www.microsoft.com/security> for latest security updates.



IMPORTANT: User need to install Microsoft IIS (Internet Information Server) by themselves.

Web Server Installation

In order to run NVR Web Client, the Web Server has to be installed in the NVR Server machine.

NVR Server v2.0 only supports Microsoft IIS (Internet Information Server) as the Web Server offering.

Please refer to [Quick Installation Guide](#) on how to setup IIS and configuration under IIS.

Install GdiPlus.dll Package

After clicking on the link, a setup program will be prompted. Please install it directly. GdiPlus.dll will be installed and copied to Windows directory..

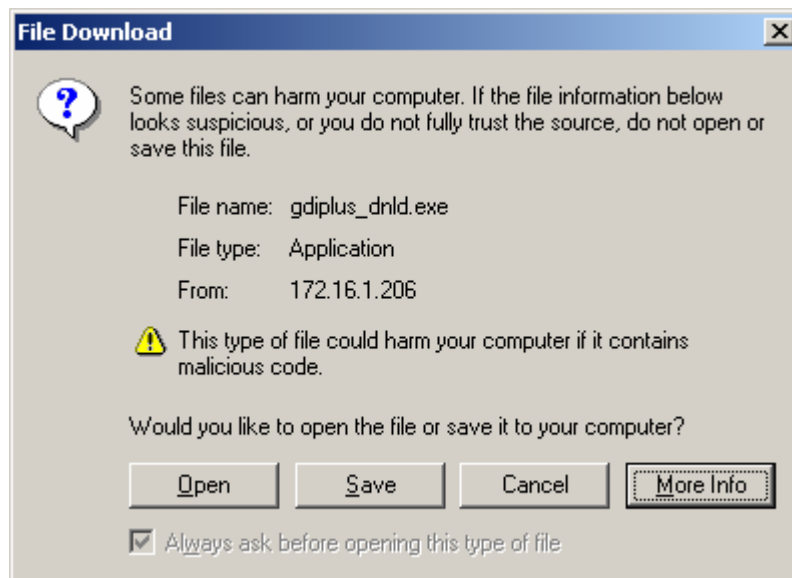


Figure 6-1 Click Open to install GdiPlus.dll in C:\Windows

Close NVR Web Client and Start it Again

After installing GdiPlus.dll to C:\Windows, please close NVR Web Client and start the application again.

Microsoft Internet Explorer Security Notice

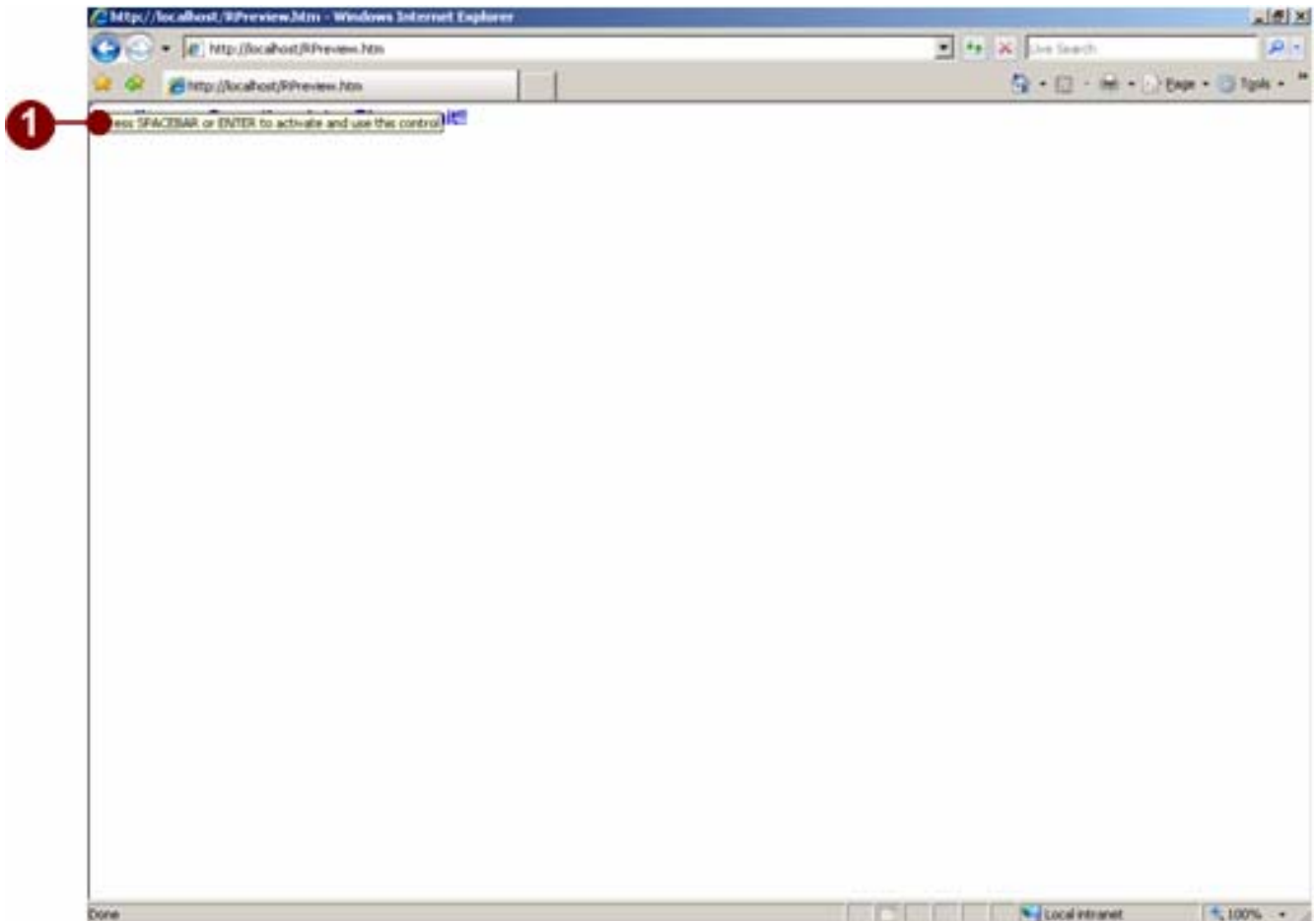


Figure 6-2 Press SPACEBAR or ENTER to activate and use the content

1. **SPACEBAR or ENTER:** Hit Enter key to continue

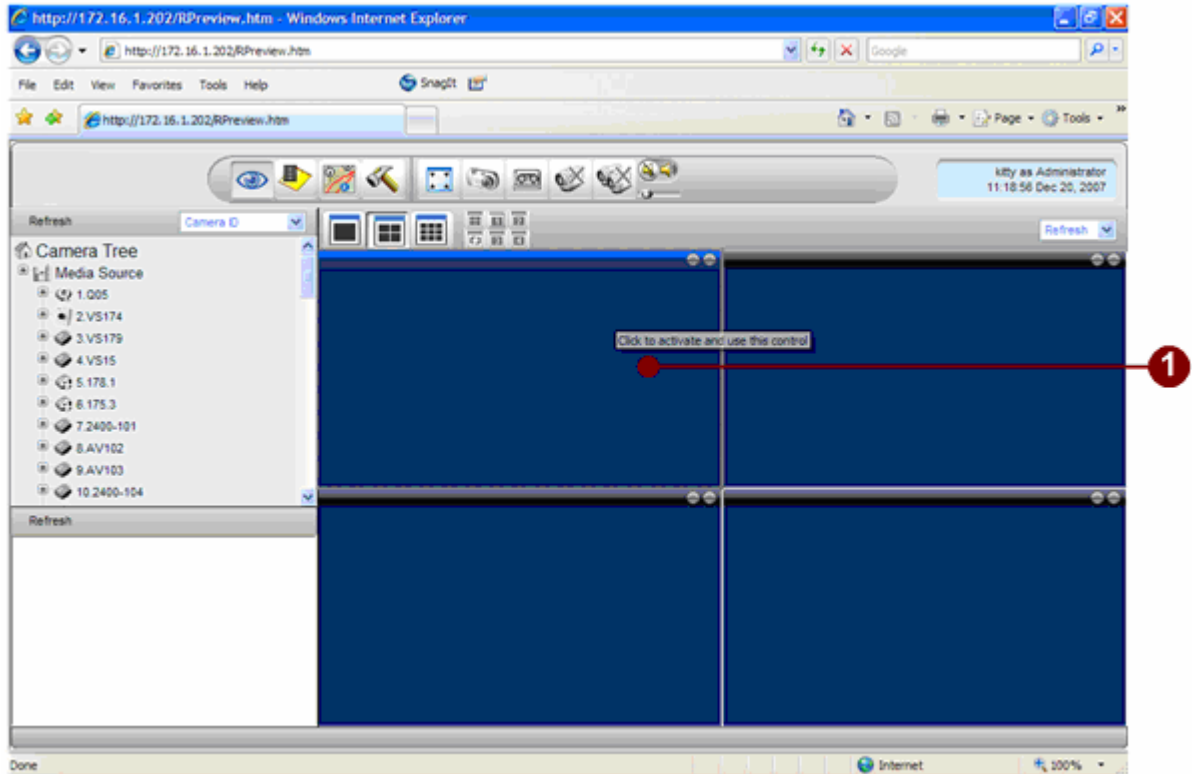


Figure 6-3 Click to activate and use the content

1. **Click:** Click to activate and use the content. For security reason, Microsoft Internet Explorer will display this information when the system starts. Please click on the window before using the system.



IMPORTANT: Due to Microsoft's security policy, user has to click on the control one by one before using the system.

NVR Web Client Advanced Mode

Login

User Account * Admin

Password *

Server IP Address * 172.16.1.208

Language * English (United States)

1 Mode: * Basic Advanced

Auto login with this account

Use CTRL+F10 to cancel auto-login mode.

Login

Figure 6-4 NVR Web Client Modes

1. **Mode:** NVR Web Client provides **Basic** and **Advanced** Mode.

NVR Web Client Basic Mode

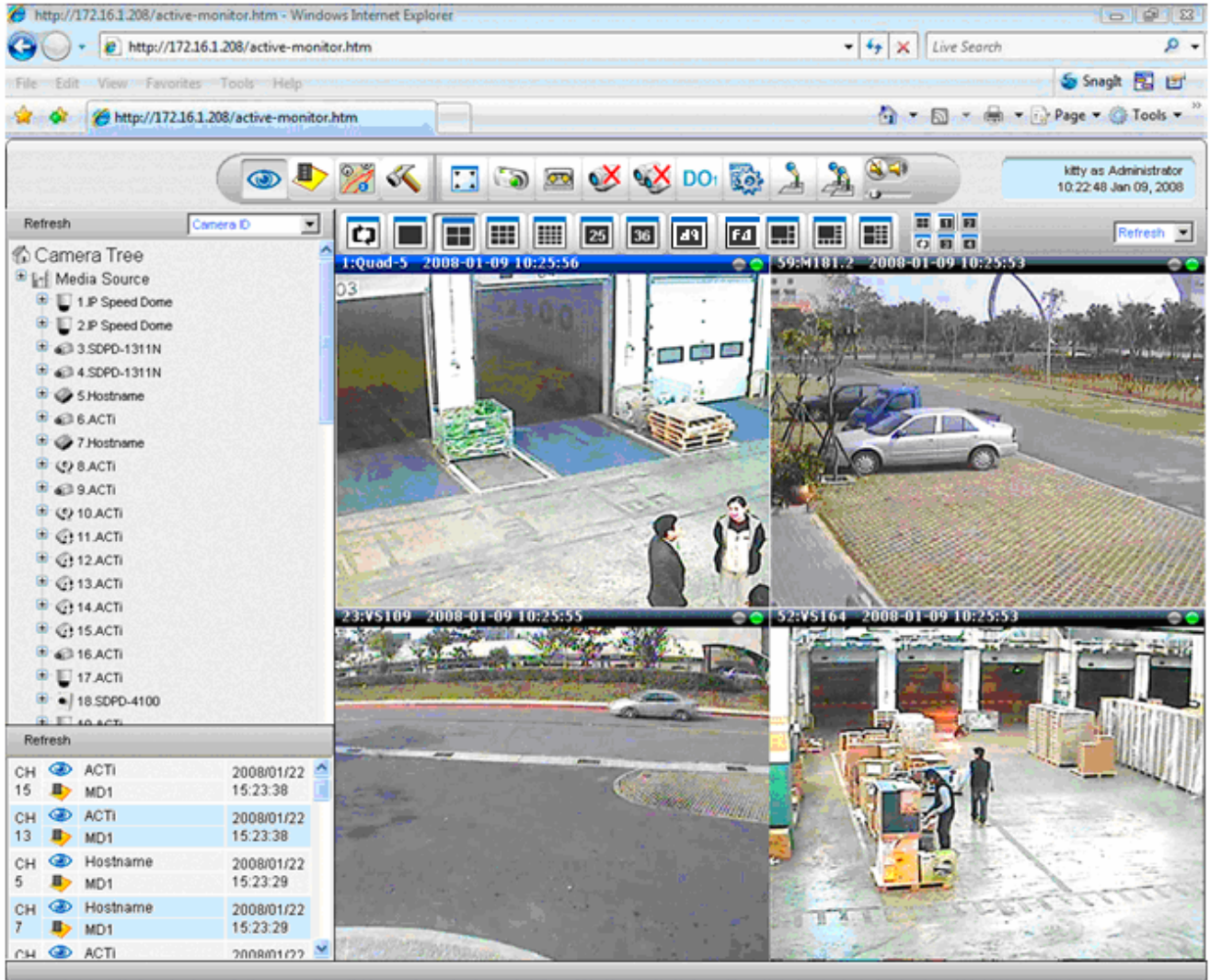


Figure 6-5 NVR Web Client Basic Mode

NVR Web Client Advanced Mode

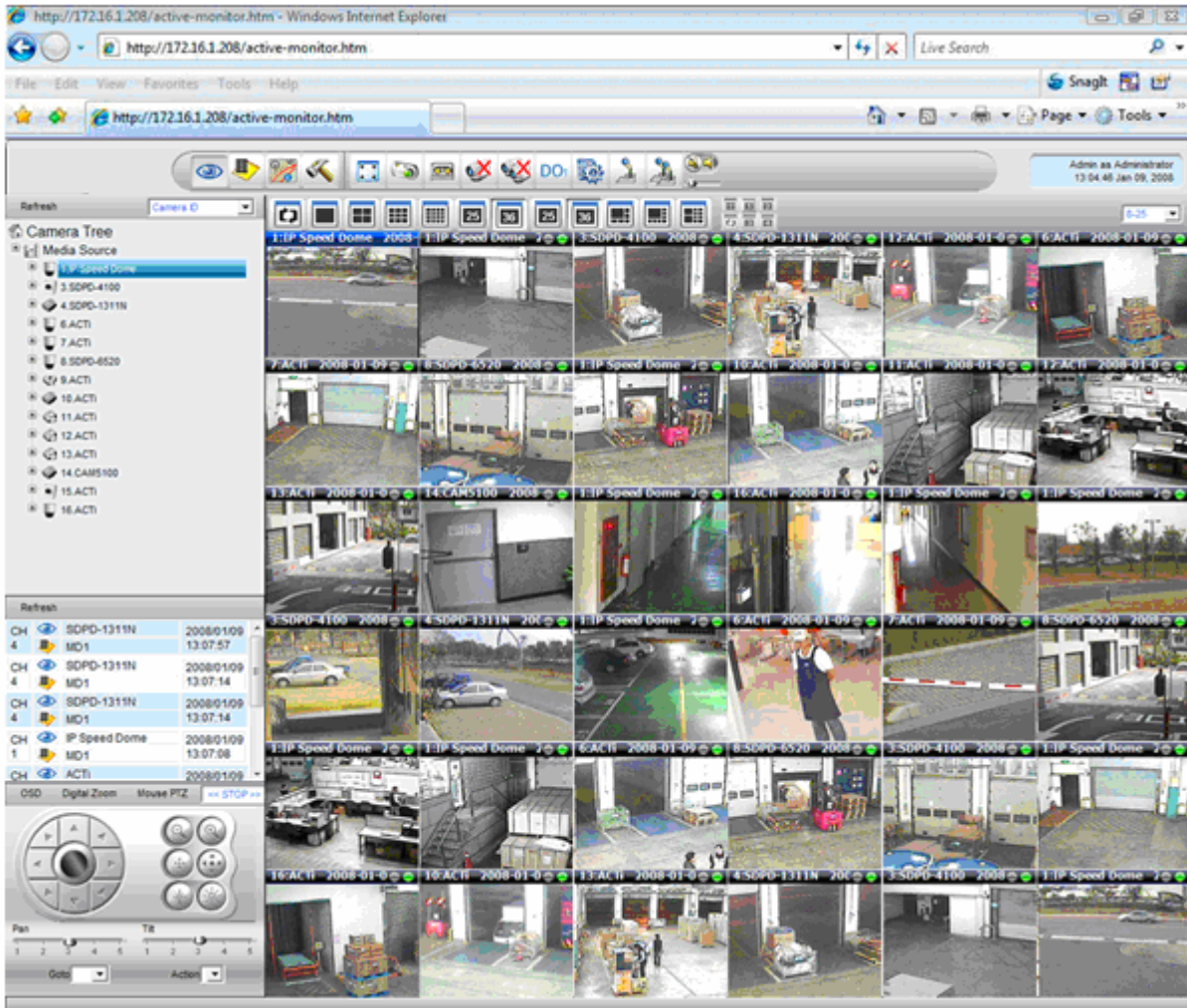


Figure 6-6 NVR Web Client Advanced Mode



NOTE: NVR Web Client Advanced Mode runs the same program sets as NVR Workstation; it will load a lot of pictures; please make sure you run NVR Web Client Advanced Mode under LAN environment with sufficient bandwidth.

Web Monitor

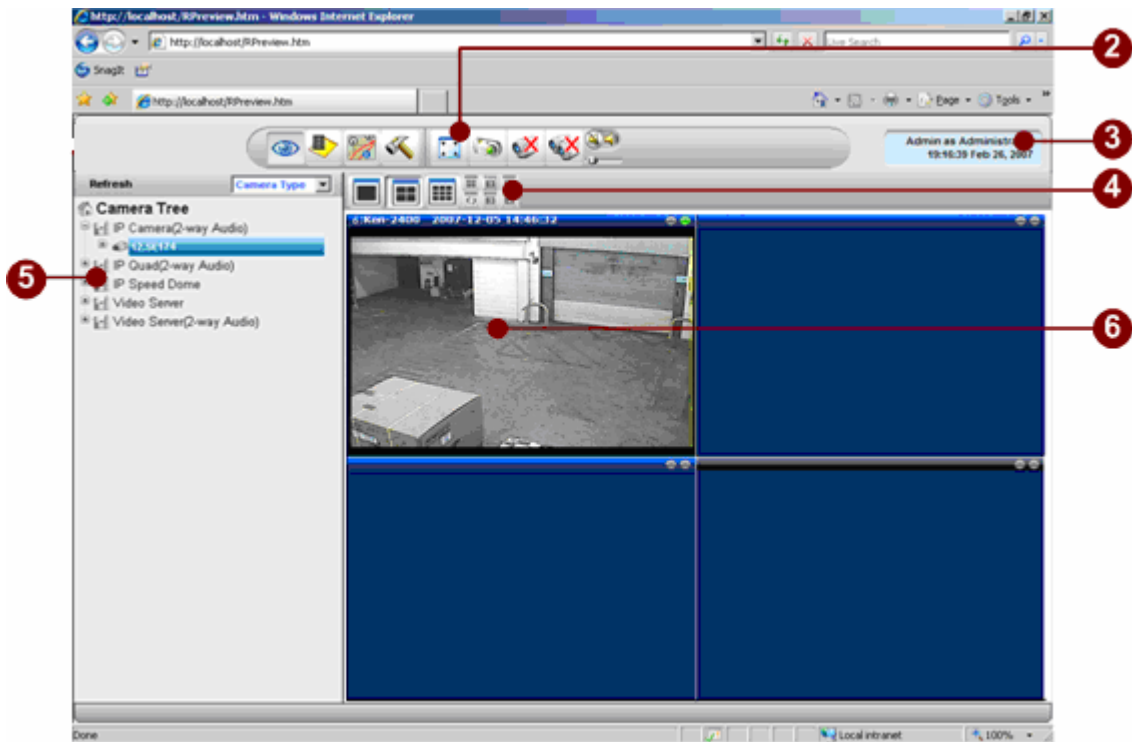


Figure 6-7 Web Preview Interface

1. (omitted)
2. **Function Bar:** Click each of these icons to perform related tasks. Refer to [Active Monitor Toolbar](#) to see a similar display and descriptions. Note that the Web Client only has a limited number of selections compared to the actual application.
3. **User Information:** Click to bring up the Personal Profile screen. Refer to [Change Password](#) to see a similar display and descriptions.
4. **Layout Manager:** Click various icons to bring video to respective multiplexed modes. Refer to [Window Layout Selection](#) for further details. Note that the Web Client only has a limited number of selections compared to the actual application.
5. **Camera Tree:** Shows information for each of the cameras on the camera tree. Refer to [Camera List](#) for further details.
6. **Preview Layout:** Shows information for each of the cameras on the camera tree. Refer to [Camera List](#) for further details.
7. **Active Preview window:** Shows the current camera live preview. To see preview, the window must be clicked once, then the camera needs to be dragged from the camera tree to the window.

Web Player

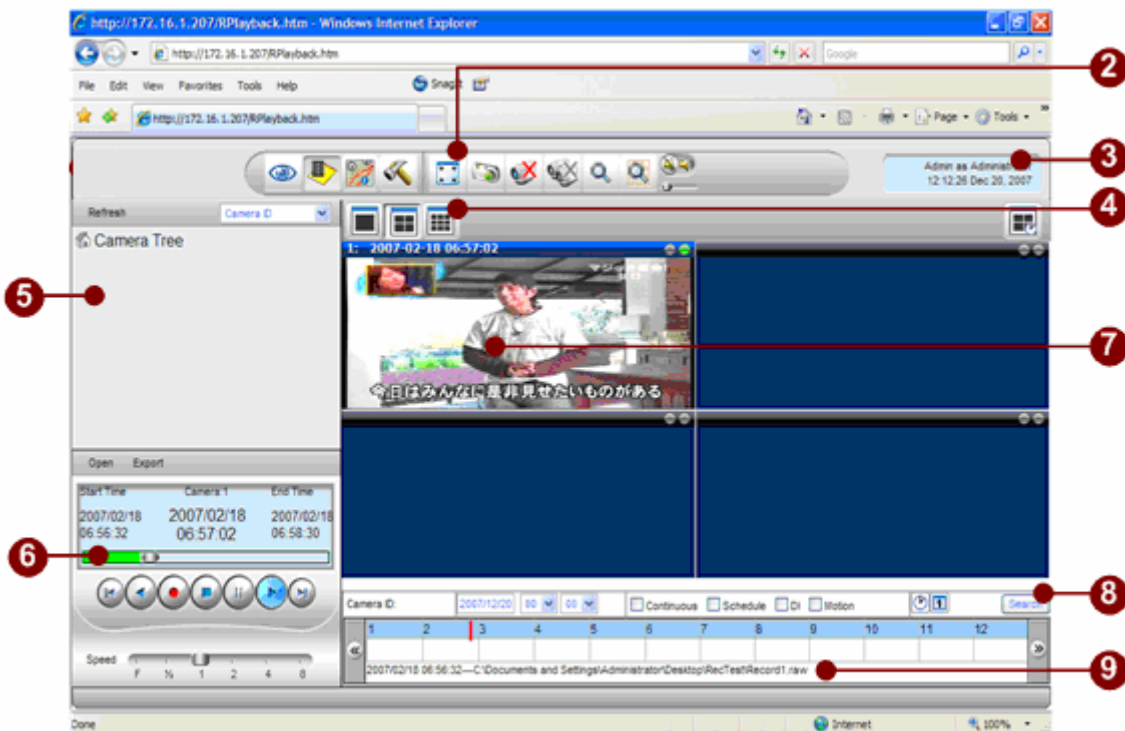


Figure 6-8 Web Player Interface

1. (omitted)
2. **Function Bar:** Click each of these icons to perform related tasks. Refer to [Archive Player Toolbar](#) to see a similar display and descriptions. Note that the Web Client only has a limited number of selections compared to the actual application.
3. **User Information:** Click to bring up the Personal Profile screen. Refer to [Change Password](#) to see a similar display and descriptions.
4. **Layout Manager:** Click various icons to bring video to respective multiplexed modes. Refer to [Window Layout Selection](#) for further details. Note that the Web Client only has a limited number of selections compared to the actual application.
5. **Camera Tree:** Shows information for each of the cameras on the camera tree. Refer to [Camera List](#) for further details.
6. **Playback Panel:** Shows playback information and playback controls. Refer to [Playback Operation](#) for further details.
7. **Active Preview window:** Shows the current camera playback.
8. **Search Panel:** Shows and allows playback search using time bar. See [Time-based Search Bar](#) for further details.
9. **Playback File Information:** Shows the file information of the file currently being played.

Web Search

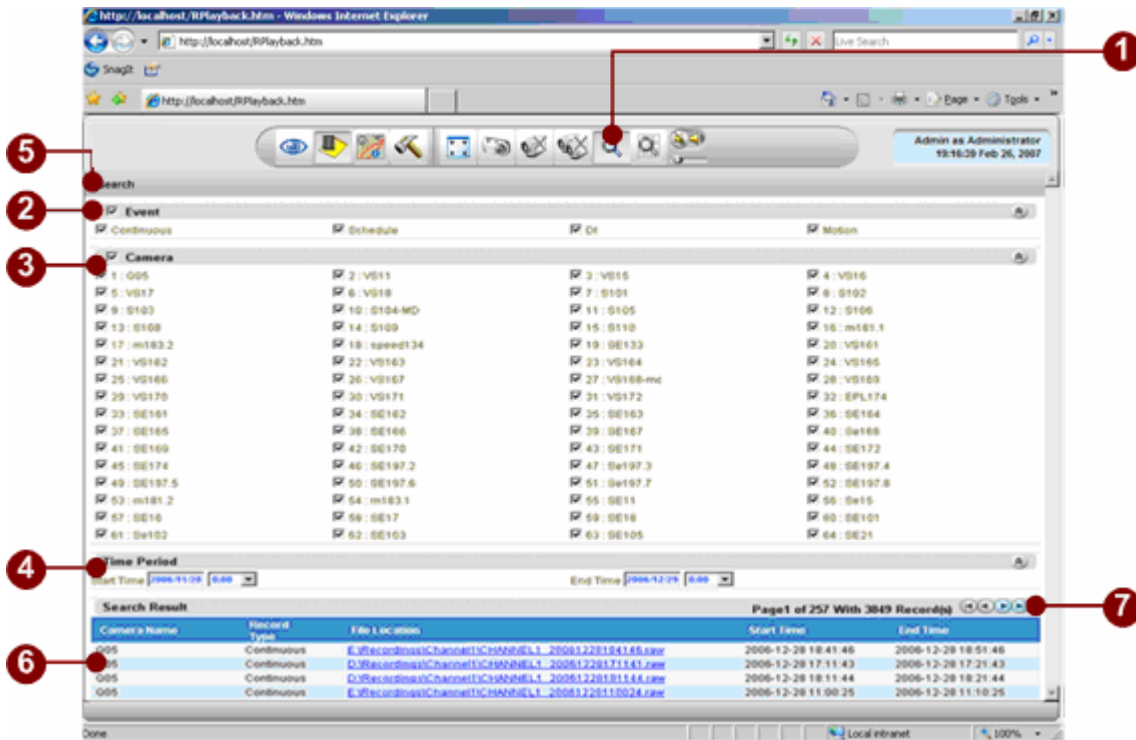


Figure 6-9 Web Search

Most of Web Search is identical to the [Search Event](#). Please refer to that section for further details.

1. **Event Search Icon:** Click to show the manual search page.
2. **Choose the Event Type:** After selecting the types of events, cameras, and the search begin and end time, clicking on the Search button shows all that can be found on the database. Clicking the link found plays that file as a whole.
3. **Choose the Camera:** Click to show the manual search page.
4. **Time Period:** Start date / time and end date / time
5. **Search Button:** Click to show the manual search page.
Search Listing of Camera Name:
6. **Camera Name:** Displays the camera name that matches the search criteria
7. **Page Indicator:** User may traverse the listing to first, last, previous or next page

Web Map

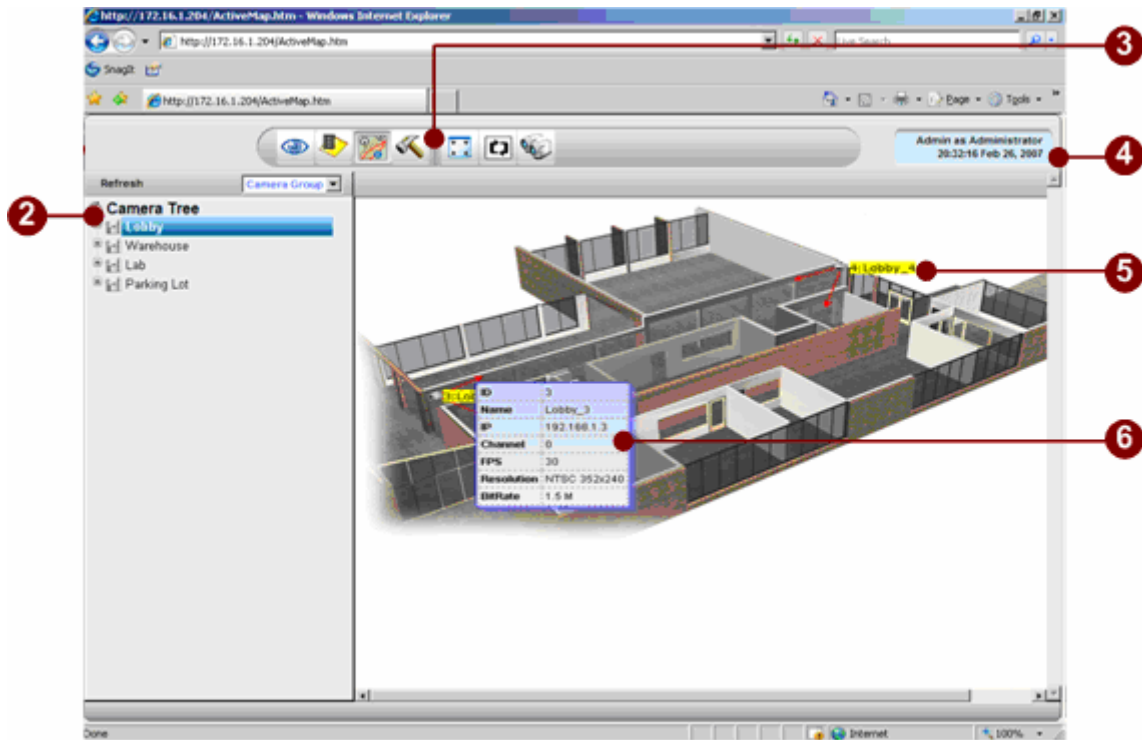


Figure 6-10 Web e-Map

Most of Web e-Map is identical to the [Active Map](#). Please refer to that section for further details.

1. (omitted)
2. **Camera Tree:** Click this button to stretch the Map viewer to full screen.
3. **Function Tools Bar:** Click to move to different Web Client applications.
4. **User Information:** Click to bring up user information
5. **Camera Icon:** Click this button to open/close all mini-preview map on the Map viewer. Please refer to later section for more details.
6. **Camera Information:** This panel shows the information of the user current using the Map viewer. The information includes 1. user name, 2. user authentication level.

Web Setup

NVR Web Client Setup v.s. Active Setup

Due to security reason and user friendliness, following lists the comparison on the functions that supported on NVR Web Client Setup and NVR Workstation Setup. For those functions that supported under NVR Web Client Setup, the functionalities are the same as the ones under NVR Workstation Setup.

Please refer to ActiveSetup section for detailed operations.



IMPORTANT: Due to security reason and user friendliness, some features are not supported under NVR Web Client Setup

System Setup:

<i>Functionalities</i>	<i>NVR Web Client</i>	<i>NVR Workstation</i>
<i>Camera Group</i>	Yes	Yes
<i>User Group</i>	Yes	Yes
<i>Account</i>	Yes	Yes
<i>User Group</i>	Yes	Yes
<i>Account</i>	Yes	Yes
<i>Storage Management</i>	Yes	Yes
<i>Joystick</i>	Yes	Yes
<i>View Layout</i>	Yes	Yes
<i>Layout Tour</i>	Yes	Yes
<i>Language</i>	Yes	Yes
<i>Service</i>	No	Yes
<i>License</i>	No	Yes
<i>System</i>	Yes	Yes

Camera Setup:

<i>Functionalities</i>	<i>NVR Web Client</i>	<i>NVR Workstation</i>
<i>Camera</i>	Yes	Yes
<i>Record Path</i>	Yes	Yes
<i>Schedule</i>	Yes	Yes
<i>Alarm</i>	Yes	Yes
<i>Motion</i>	Yes	Yes
<i>PTZ</i>	Yes	Yes
<i>PTZ Preset</i>	Yes	Yes
<i>Preset Tour</i>	Yes	Yes
<i>Event Manager</i>	Yes	Yes

Map Setup:

<i>Functionalities</i>	<i>NVR Web Client</i>	<i>NVR Workstation</i>
<i>Map Manager</i>	No	Yes
<i>Map Tour</i>	No	Yes

Web System Setup

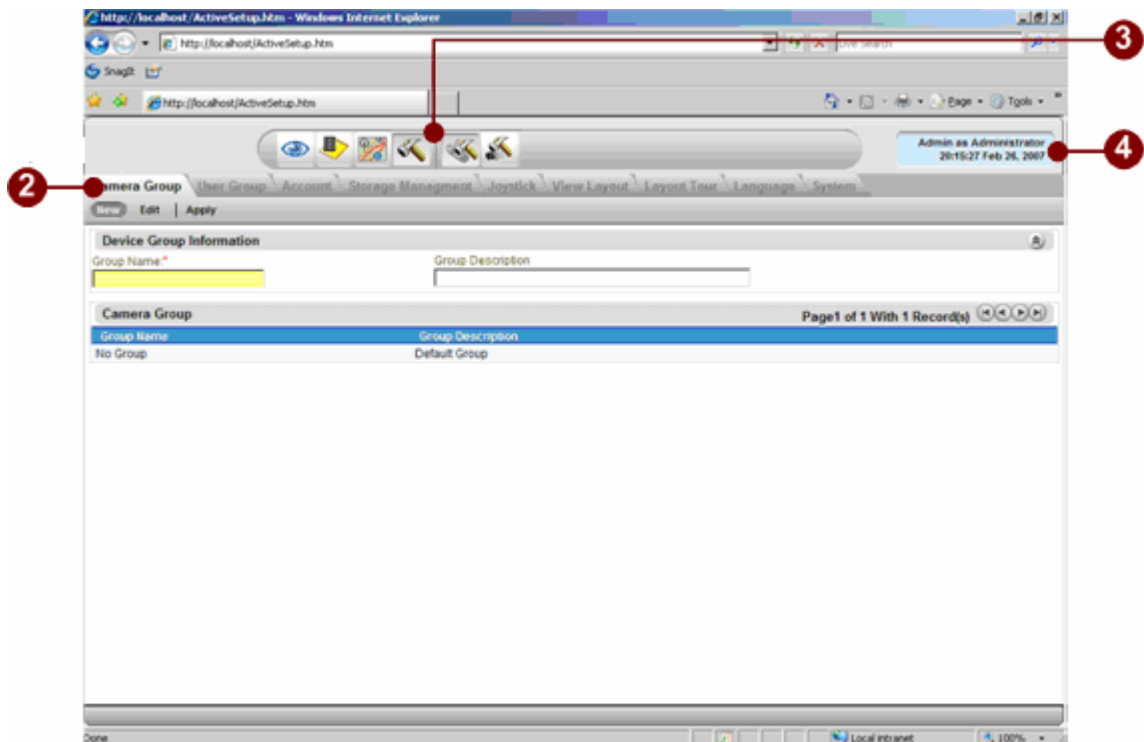


Figure 6-11 Web System Setup

Most of Web System Setup is identical to the [Setup Overview](#). Please refer to that section for further details.

1. (omitted)
2. **Function Setup:** User can select different setting menus by switching at this toolbar.
3. **Function Tools Bar:** User can configure different function by selecting different icon at this toolbar.
4. **User Information:** This button is for changing password and user interface (UI) language.

Web Camera Setup

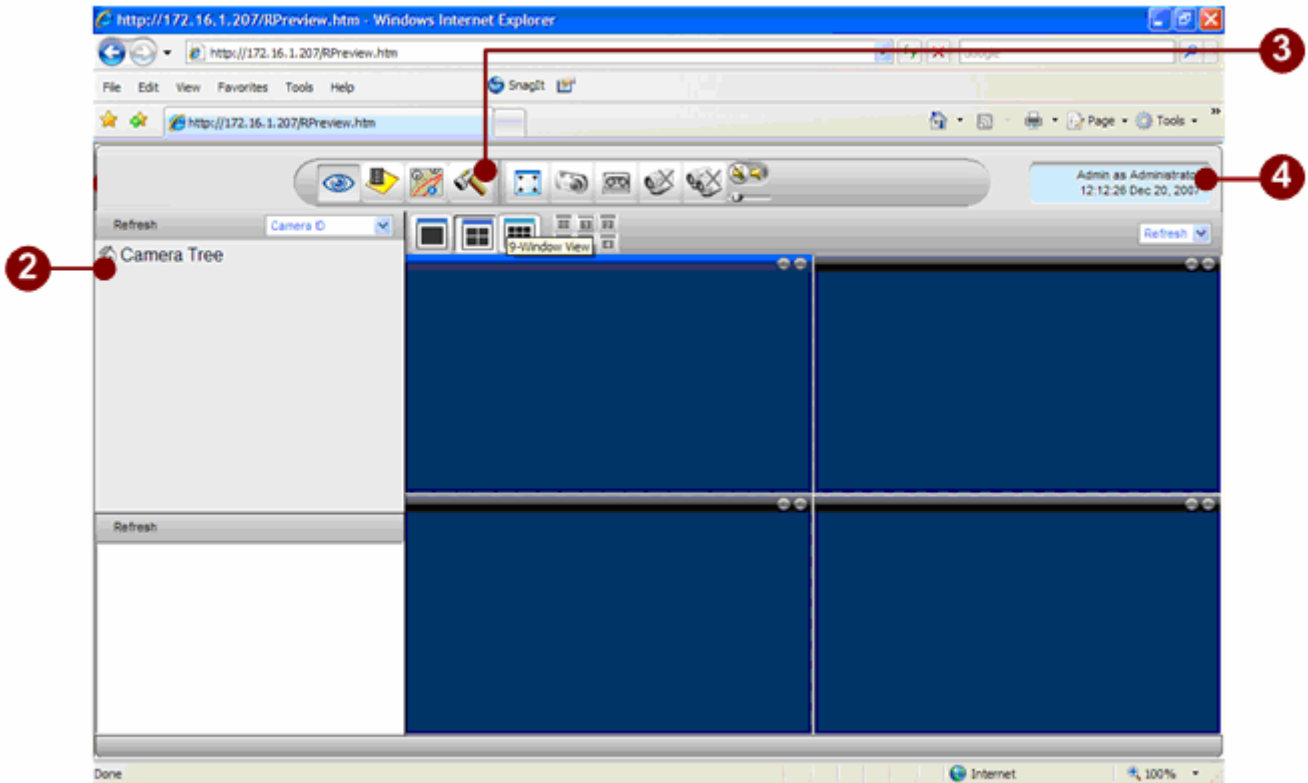


Figure 6-12 Web Camera Setup

Most of Web Camera Setup is identical to the [Camera Setup](#). Please refer to that section for further details.

1. (omitted)
2. **Function Setup:** User can select different setting menus by switching at this toolbar.
3. **Function Tools Bar:** User can configure different function by selecting different icon at this toolbar.
4. **User Information:** This button is for changing password and user interface (UI) language.

7. Active Setup

Introduction

Description: This Chapter is more important than other chapters. This Chapter is to teach users how to configure all setting correctly.

This chapter includes settings for system, camera and map setup.

Relations with other chapter: This setting bases on correct setup during “Quick-installation-Guide: Software installation” chapter.

Active Setup is the application designed to complete settings for the NVR 2.2. It includes all setups necessary for the NVR, such as ActiveSetup, ActivePlayback, and ActivMap. This section explains the interface in detail, as well as advanced functions explained in previous sections.

Setup Operation

There are three groups of setup in the ActiveSetup including [System Setup] , [Camera Setup] and [MAP Setup]. User should configure [System Setup]=> [Camera Setup]=> [Map Setup] in order.

1. [Active Setup]: this setup includes
 - i. [System Setup]: system setting.
 - ii. [Camera Setup]: camera and camera group setting.
 - iii. [Map Setup]: Map settings.



IMPORTANT: Please configure System Setup first

These three groups can be switched by using the button at upper tool bar. Please see the picture below.

Setup Overview

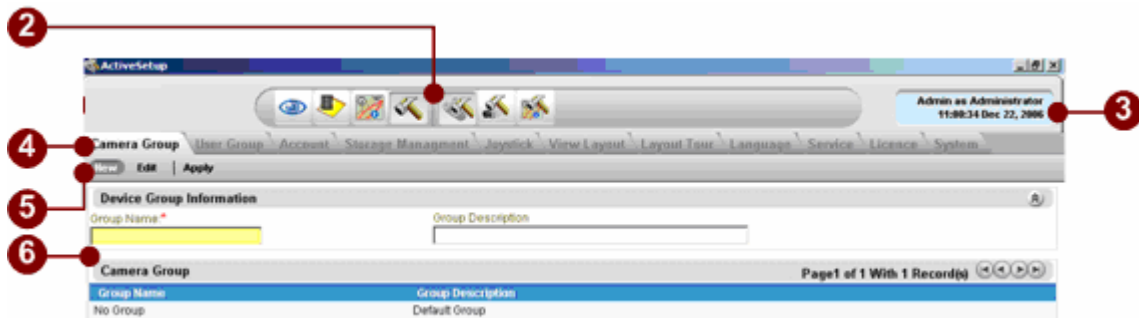


Figure 7-1 User Interface

1. (omitted)
2. **Active Setup Toolbar:** User can configure different function by selecting different icon at this toolbar.
3. **Personal Profile:** This button is for changing password and user interface (UI) language.
4. **Setting Toolbar:** User can select different setting menus by switching at this toolbar.
5. **Modify Button:** User can create or edit setting in this section.
6. **Setting Information:** all setting information will be shown in this section, user can update all setting and see all information here.

Active Setup Toolbar



Figure 7-2 ActiveSetup Tool Bar

1. **Active Monitor Button:** User can click this button to bring up Active Monitor program.
2. **Active Player Button:** User can click this button to bring up Active Player program.
3. **Active Map Button:** User can click this button to bring up Active Map program.
4. **Active Setup Button:** User can click this button to bring up Active Setup program.
5. **System Setup Button:** User can click this button to switch to System Setup.
6. **Camera Setup Button:** User can click this button to switch to Camera Setup.
7. **Map Setup Button:** User can click this button to switch to Map Setup.



IMPORTANT: Map Setup only valid when NVR Workstation running on the same machine as NVR Server. If user is running NVR Web Client or NVR Workstation running on different machine than NVR Server, Map Setup button and function will be hidden and disabled.

System Setup

[System Setup] lets user setup the NVR system settings including camera group, user group, account management, storage management, monitor layout, language setup, service setup, license management and system information. Please refer to the sections below for details.

Camera Group

Camera Group lets user setup camera groups. User may categorize cameras into camera groups. It will affect Map setup, camera setup and user permission.

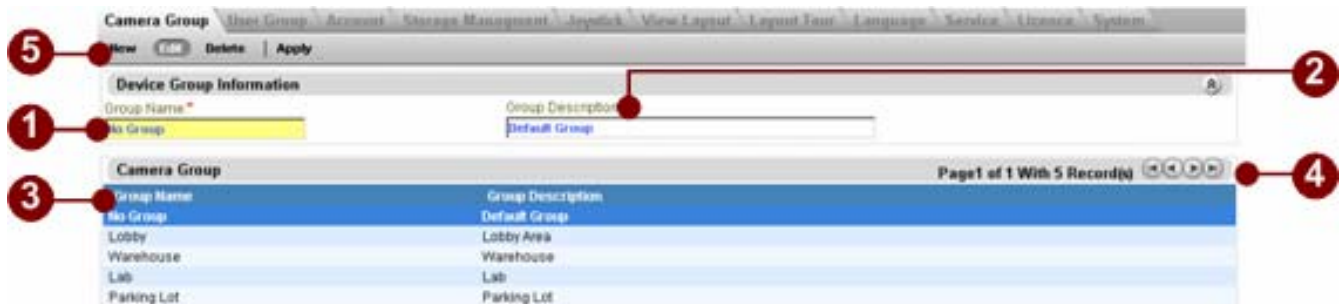


Figure 7-3 Camera Group Setup

1. **Group Name:** Enter the camera group name for a new camera group or modify existing camera groups.
2. **Group Description:** Enter the description of this camera group.
3. **Group List:** User can see all the group created here.
4. **Panel Control of Group List:** User can use this control to switch between pages of camera group list.
5. **Modify button:** Click these buttons to modify camera group. It includes:
 - New button:** Click this to create a new camera group.
 - Edit button:** Click this button to edit the existing camera group selected in the group list.
 - Delete button:** Click this button to delete a camera group.
 - Apply button:** Click this button to save current settings.



NOTE: User permission, Layout management and Map setup is based on Camera Group. It is important that user design correct Camera Group in advance.



TIP: There is no limitation on the number of Camera Groups.



TIP: One camera can be categorized into different Camera Groups.

User Group

To ensure all functions will work perfectly in NVR 2.2 user has to

- Step1. Create different user groups
- Step2. Assign user permission to each user group
- Step3. Assign each user to a user group

This section lets user do step1 and step2. Step3 is done at the later section of “Account”.

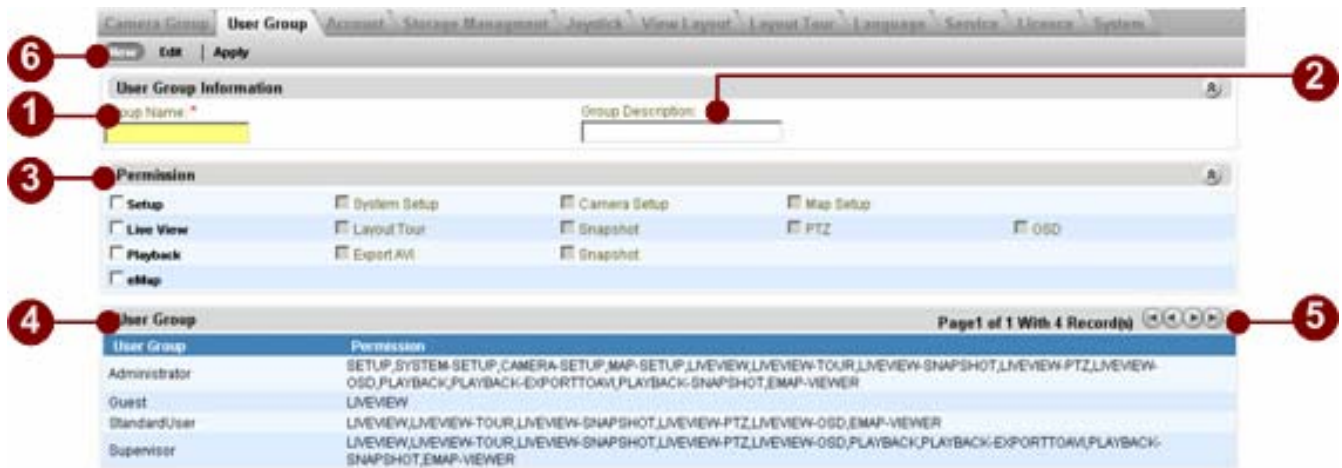


Figure 7-4 User Group Setup

1. **Group Name:** Enter the user group name for a new camera group or to modify existing user group.
2. **Group Description:** Enter the description of this user group.
3. **Permission Selection Panel:** In this panel, administrator can authorize any functions for each group.
4. **User Group List:** User can see all the group created here. And see each group’s authorization level.
5. **Panel Control of User Group List:** User can use this control to switch between pages of user group list.
6. **Modify button:** Click these buttons to modify camera group. It includes:
 - New button:** Click this to create a new camera group.
 - Edit button:** Click this button to edit the existing camera group selected in the group list.
 - Apply button:** Click this button to save current settings



NOTE: User may create new User Group with different permission control. User account then associated with User Group on certain functions



IMPORTANT: Please do not change default User Group. Default User Groups are: Administrator, Guest, Standard User and Super User.

Account

To ensure all functions will work perfectly in NVR 2.2 user has to

- Step1. Create different user groups
- Step2. Assign user permissions to each user group
- Step3. Assign each user to a user group

This section lets user do step3. The step1 and step2 are done at the previous section of “User group”.

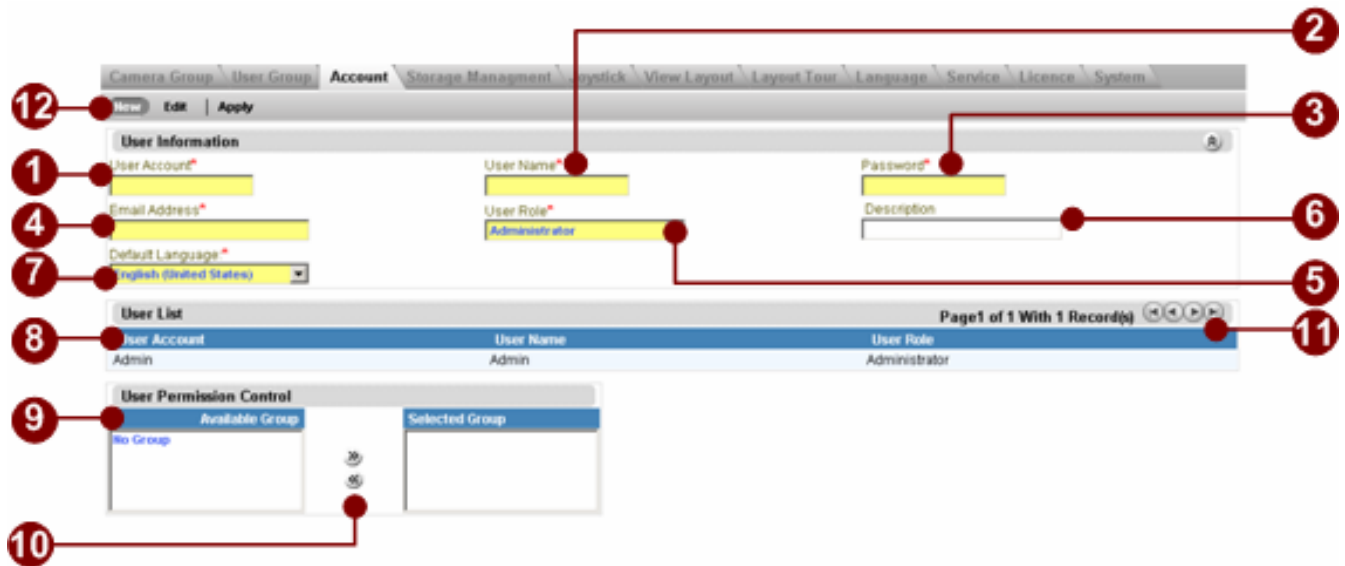


Figure 7-5 Account Setup

1. **User Account:** Enter the user account name for a new user or modify an existing user. This user account name will be used for this user to login the NVR system.
2. **User Name:** Enter the user name of this account. This name is a reference data for this account and will NOT be used for user to login NVR in the future.
3. **Password:** Enter the password for this user account to login NVR system.
4. **E-mail Address:** Enter the E-mail address for this user. It can be used for administrator to contact this user in the future.
5. **User Role:** Select user group which this user belongs to. The user group settings is set in previous section of [User Group].
6. **User Description:** Enter the description of this user.
7. **Default Language:** Select a language of the user-interface when this user login the NVR.
8. **User List:** User can see all the existing user here.
9. **User Permission Control panel:** In this panel, user can select which camera group is available to this user. The user can only see cameras available to them.
10. **Select/Deselect button:** Click to move/remove a camera group available to this user.
11. **Panel Control for User list:** user can use this panel to switch between different pages of user list.

12. **Modify button:** Click these buttons to modify user account. It includes:
- New button:** Click this to create a new user account.
 - Edit button:** Click this button to edit the existing user account selected in the user list
 - Apply button:** Click this button to save current settings.



IMPORTANT: Please assign correct Camera Group to the user account created..

Storage Management

This section shows how recording setup is done. It includes:

Path for storing recording.

Hard drive for storing recording.

The cycling rule of the recording /snapshots

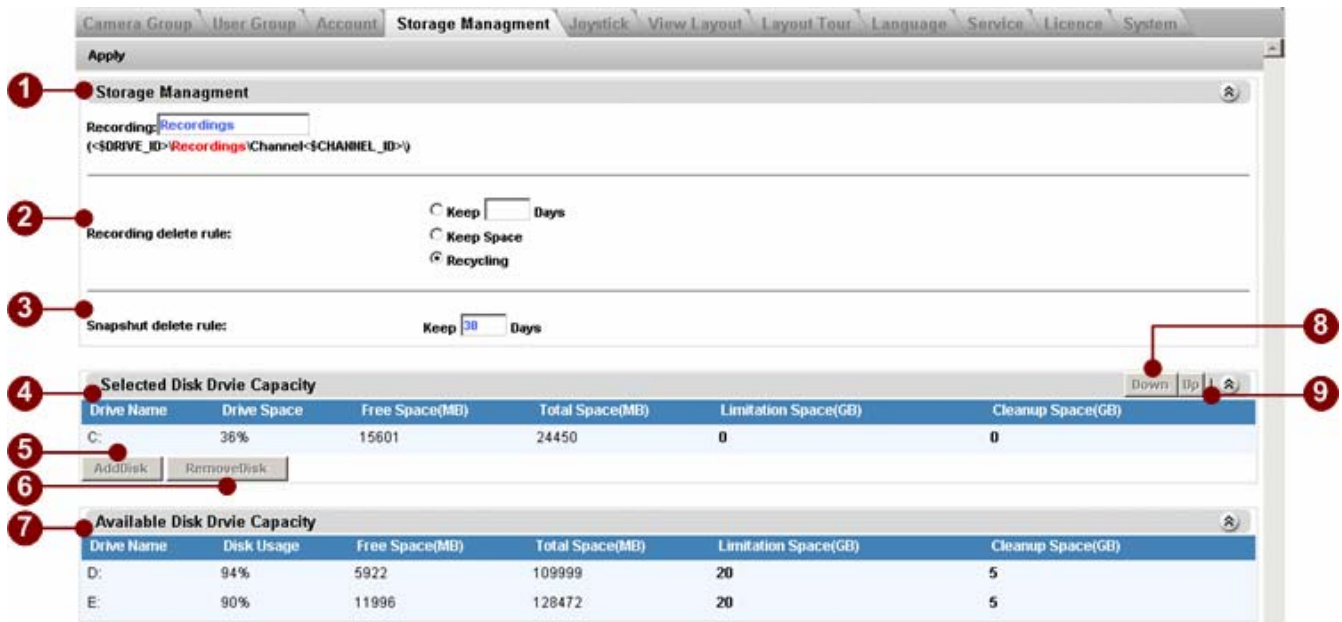


Figure 7-6 Storage Management

1. **Recording Path:** Enter the main folder name for the recording on one hard drive. NVR will automatically create a folder with the same name on the hard drive, and store all recording on it. Moreover, NVR will create sub-folders for each channel to store the recording.
2. **Recording Delete Rule:** Select the recording rule. There are 3 rules, see below for details.
3. **Keep ? Days :** When it is selected, user must enter a number. NVR will save for the period which user chooses, and when the period expires, the recording will be delete gradually and automatically.
4. **Keep Space :** When it is selected, NVR will reserve some space for recording storage/delete mechanism. If there no sufficient space left, system will starts to delete the oldest recordings.
5. **Recycling :**When it is selected, NVR will reserve some space for recording storage/delete mechanism. If there no sufficient space left, system will starts to delete the oldest recordings.
6. **Snapshot Delete Rule:** Select the number of days for which the snapshots will be kept. Snapshots will be kept for a period of time and after this period of time expires, NVR will delete snapshots gradually and automatically.
7. **Selected Disk List & Capacity:** User can see the recording hard drive list. Recordings will be

saved onto hard drives on this list.

8. **Add Disk:** Click this button to add a hard drive to the recording hard drive list.
9. **Remove Disk:** Click this button to remove a hard drive from the recording hard drive list.
10. **Available Disk List & Capacity:** This list shows other drives available for recording.
11. **Priority down button:** Click this button to lower disk priority for recording. The lower Hard drive priority is, the later the hard drive will be used to store recording..
12. **Priority up button:** Click this button to move selected disk priority higher. Hard drives with higher priority will be recorded first.



TIP: If there's not enough space left in the hard drive for recording, the NVR will automatically delete the oldest recordings.



IMPORTANT: NVR does not support NAS.

Storage Management Rules with Examples

This section shows storage management deletion rule with examples:

	Keep N Days	Keep Space (default value) Minimal Space (10GB) Delete Space (5GB) Drives (C: D: E:)	Recycle Minimal Space (10GB)
Trigger Time	Every 5 minutes	Every 1 minute	When a channel starts record, the process starts every 20 seconds
Condition	Check database	If all drives (C: D: E:) all ALL smaller than minimal space (10GB)	If Minimal space (10GB) reaches
Action	Delete all files older than N days	1. Delete oldest files with total 5GB 2. Note that the default size in Storage Manager is 5GB, and cannot be changed in NVR v2.0 SP2	Delete 2 oldest files from current recording channel
Side Effect	1. If HDD available space is not enough to store all video archives for N days, then it will get disk full 2. Check database will cause database loading high	1. If the HDD capacity is not enough for the recording archives within 1 minute, then it will get disk full	1. If the file size is small, then it might be deleted more than other channels with larger file size

Joystick

This section is for user to configure the joystick or analog control panel. If not using any joystick or control panel, user can skip this section. NVR's PTZ function can be controlled by either a joystick or an analog control panel at a time. Analog control panel and joystick will not work the same.



TIP: For analog control panel, NVR will forward all serial command to remote cameras. For Joystick, the NVR receives joystick signal and operates an action according to user defined actions (P/T/Z, Trigger DI/DO... and etc.)

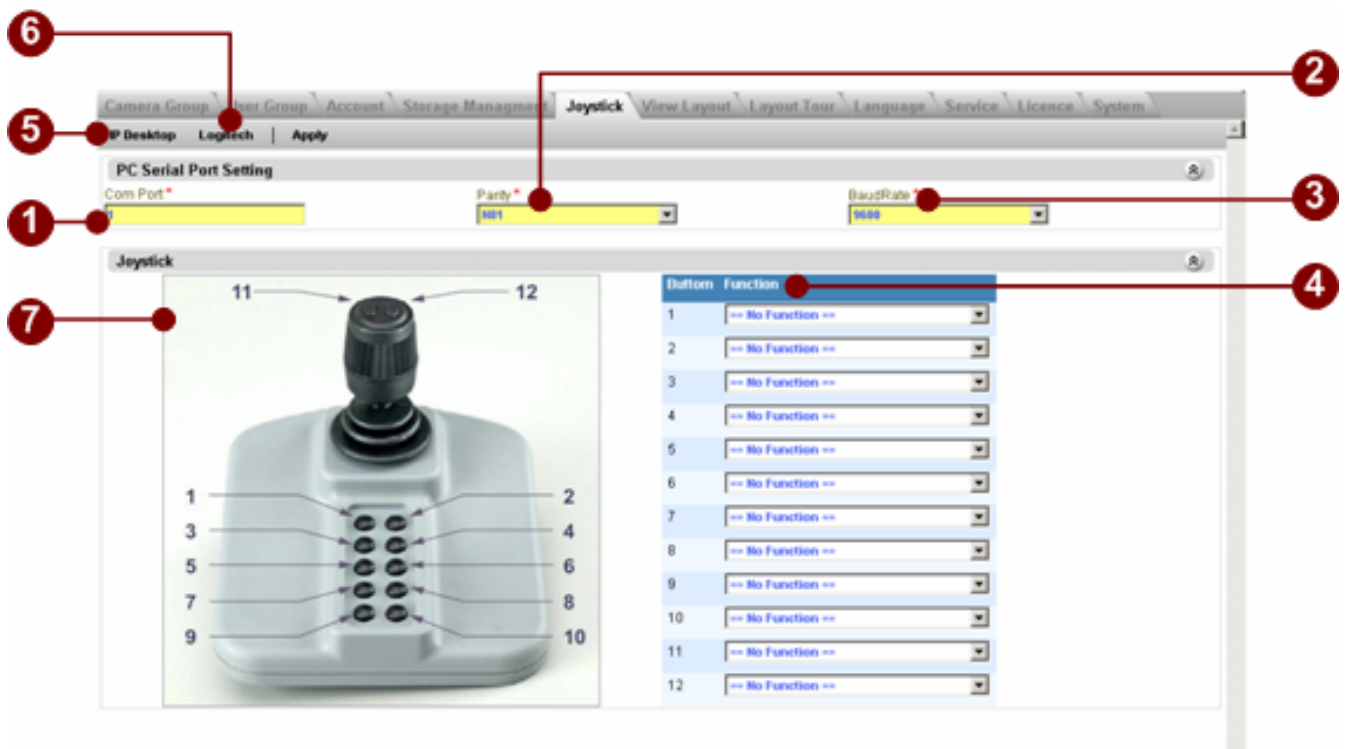


Figure 7-7 Joystick Setup

1. **Com Port** : Enter a com port number which the control panel connects to the PC of the NVR.
2. **Parity** : Enter the parity type of the control panel serial connection. This has to be exactly the same as the control panel, otherwise the PTZ command will not work.
3. **Baud Rate** : Enter the baud rate of the control panel serial connection. This has to be exactly the same as the control panel, otherwise the PTZ command will not work.
4. **Joystick Function Setting**: User can assign different function to different buttons, User-defined functions can make joystick a powerful and friendly tool to control PTZ functions.
5. **Select joystick of IP Desktop**: There are two joysticks (IP desktop/Logitech) supported by

NVR. Please select the correct model.

6. **Select joystick of Logitech:** There are two joysticks (IP desktop/Logitech) supported by NVR. Please select the correct model.
7. **Joystick Picture:** When any joystick is selected, user can see the picture of the joystick there.



NOTE: USB IP Joystick shown here can be found at: <http://www.chproducts.com>



NOTE: Other IP Joystick are also supported, including game joysticks from Logitech. Game joystick does not support 3-dimensional operation, user need to define buttons for zoom in and zoom out.

View Layout

This section is for user to select different types of view layouts. These preset layouts can be later selected by guards to fast switching different groups to monitor in ActiveMonitor. For example, User can have two preset groups of camera, one is Entrance (camera 1~16) and the other is Hall way (camera 17~32). Simply selecting the hall way/entrance view layout, guards can switch camera groups from 1~16 to 17~32.

User also can let system switch between these two layouts automatically. Please refer to next section of [Layout tour] for details.

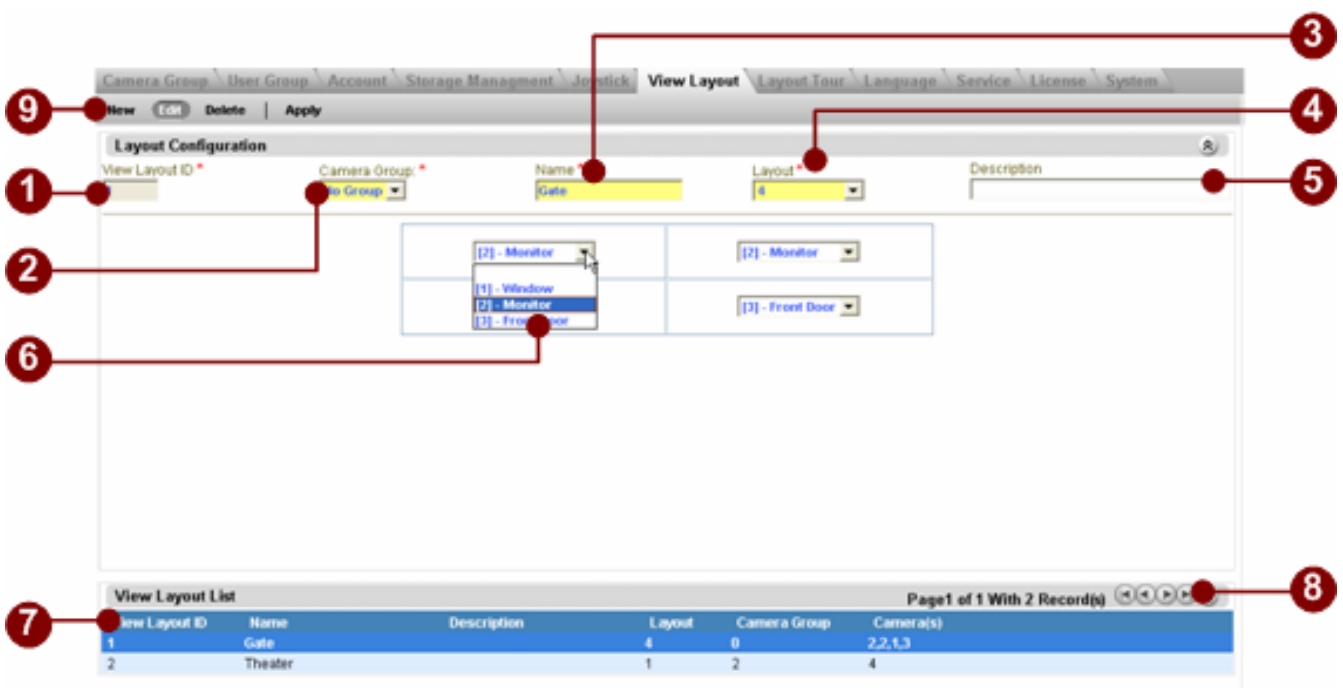


Figure 7-8 View Layout

1. **View Layout ID:** Each view layout has a unique view layout ID stored in the system. The ID column is assigned automatically by the system.
2. **Camera Name:** Select camera group list that user wants to preview.
3. **Layout Name:** Enter the name for a new layout list or to modify an existing view layout list
4. **Layout:** Select the view layout channel number for this view layout.
5. **Description:** Enter the description of this view layout
6. **Layout Setting:** Select the cameras user wants to view in this view layout.
7. **View Layout List:** User can see all the existing view layout list here.

8. **Panel Control of view layout list:** User can use this control to switch between pages of view layout list
9. **Modify button:** Click these buttons to modify View Layout. It includes:
10. **New button:** Click this button to create a new view layout
11. **Edit button:** Click this button to edit the existing view layout tour selected in the group list
12. **Apply button:** Click this button to save current settings.



NOTE: Pre-defined layout is based on the Camera Group selected. For example, if Camera Group A contains channel 1, 2, 3, 4; and if the pre-defined layout is based on Camera Group A, then it can only select cameras from channel 1, 2, 3, 4.



IMPORTANT: If user selects the same channel for many window layout, please make sure the camera selected has capability to stream to that many clients. User may also use **Get video from NVR** in Camera setup so that the video stream can be duplicated from Streaming Engine.

Layout Tour

In previous section of [view Layout], user can set view layouts. This section, user can learn how to switch between different view layouts automatically. This can be an easy way for user to monitor many channels.



NOTE: Previous section [View Layouts] must be configured before user selects them into layout tour in this section.

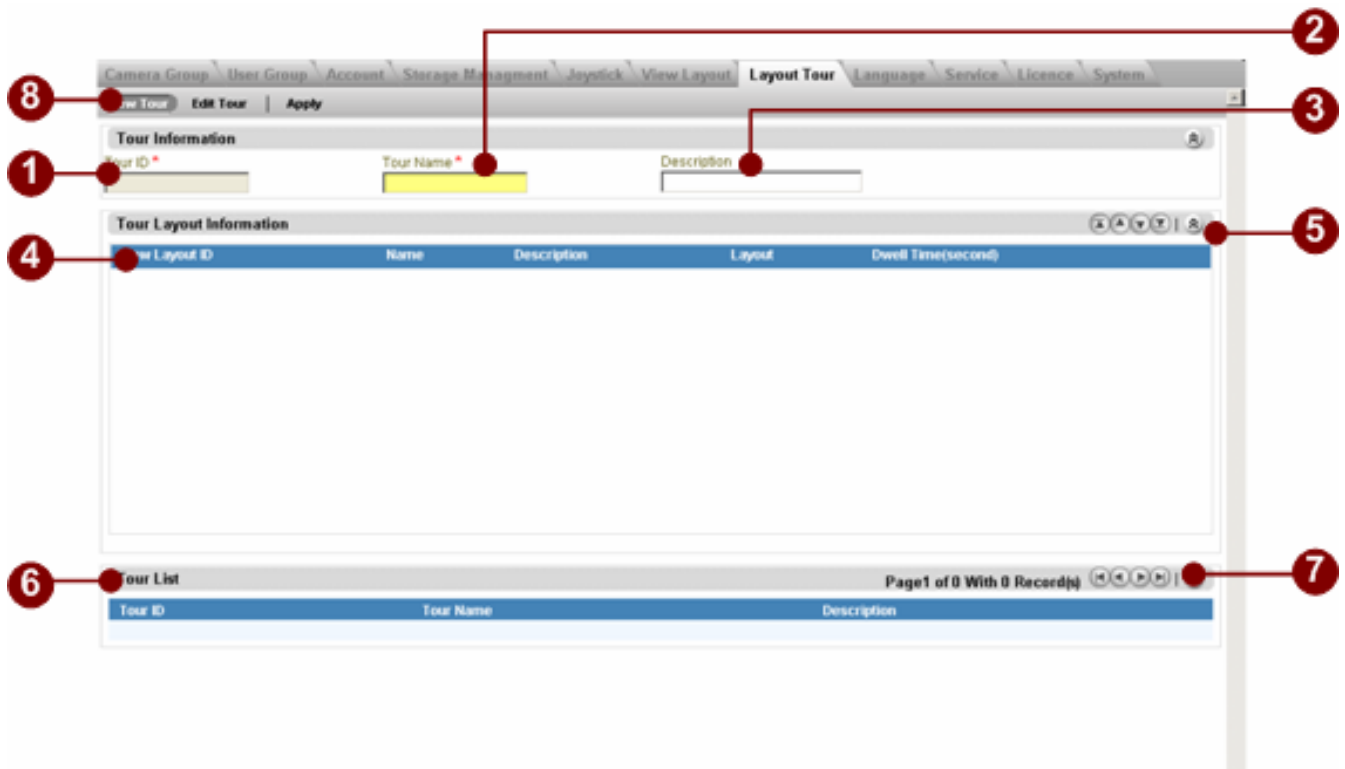


Figure 7-9 Add Layout Tour

1. **Tour ID:** Each layout tour has a unique view layout ID stored in the system. The column ID is assigned automatically by the system.
2. **Tour Name:** Enter the name of this layout tour.
3. **Description:** Enter the description of this layout tour.
4. **Tour Layout:** User can see all the existing view layouts selected in this layout tour. When a new layout tour is created, user needs to add view layouts.
5. **View Layout Sequence Control:** User can use it to move the sequence of the view layouts.
6. **Tour list:** User can see all the existing tour list here.
7. **Modify button:** Click these buttons to modify View Layout. It includes:

8. **New button:** Click this button to create a layout tour
9. **Edit button:** Click this button to edit the existing layout tour selected in the tour list. When user clicks the Edit button, then user will see the picture below.
10. **Apply button:** Click this button to save current settings



NOTE: User needs to edit a new layout tour to add view layouts.



TIP: User may create multiple pre-defined layout tour; for example, user may create warehouse tour which containing window layout with cameras on warehouse, and create parking lot tour which containing window layout with cameras on parking lot..

Editing an existing tour

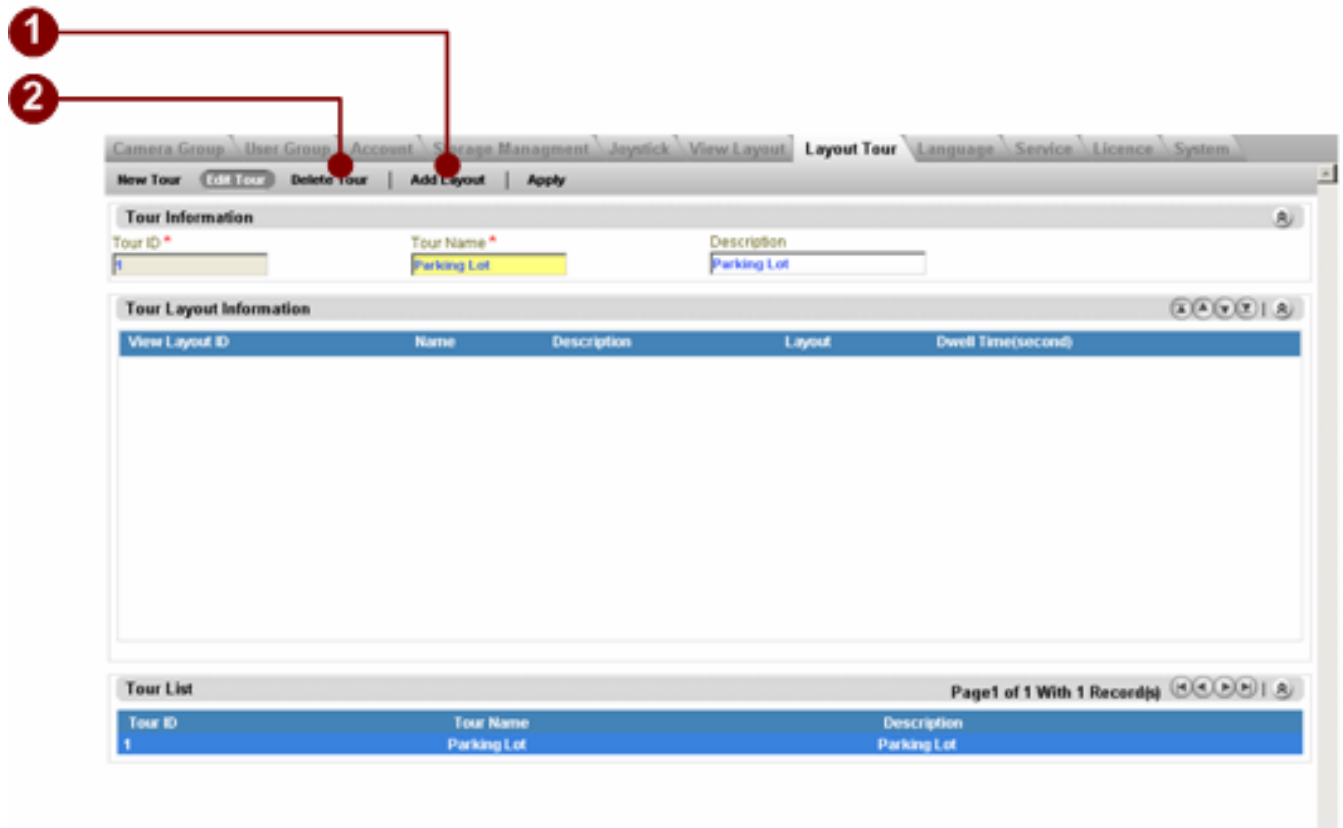



Figure 7-10 Edit Layout Tour

1. **Delete Tour:** Delete current tour
2. **Add layout:** Click this button to add View layouts to this layout tour. When clicking, user will see a pop-up window. Please select the view layouts user want to add. Then click apply.



Figure 7-11 Select Layout

1. **Layout Selection:** Selects pre-defined window layout
2. **Add Button:** Click Add button to add this pre-defined window layout into the Layout Tour

 **IMPORTANT:** If user deletes a camera, the camera selected in the pre-defined layout will not be removed automatically. User needs to edit the pre-defined layout accordingly. If user does not change the setting, the view layout will display a black video.

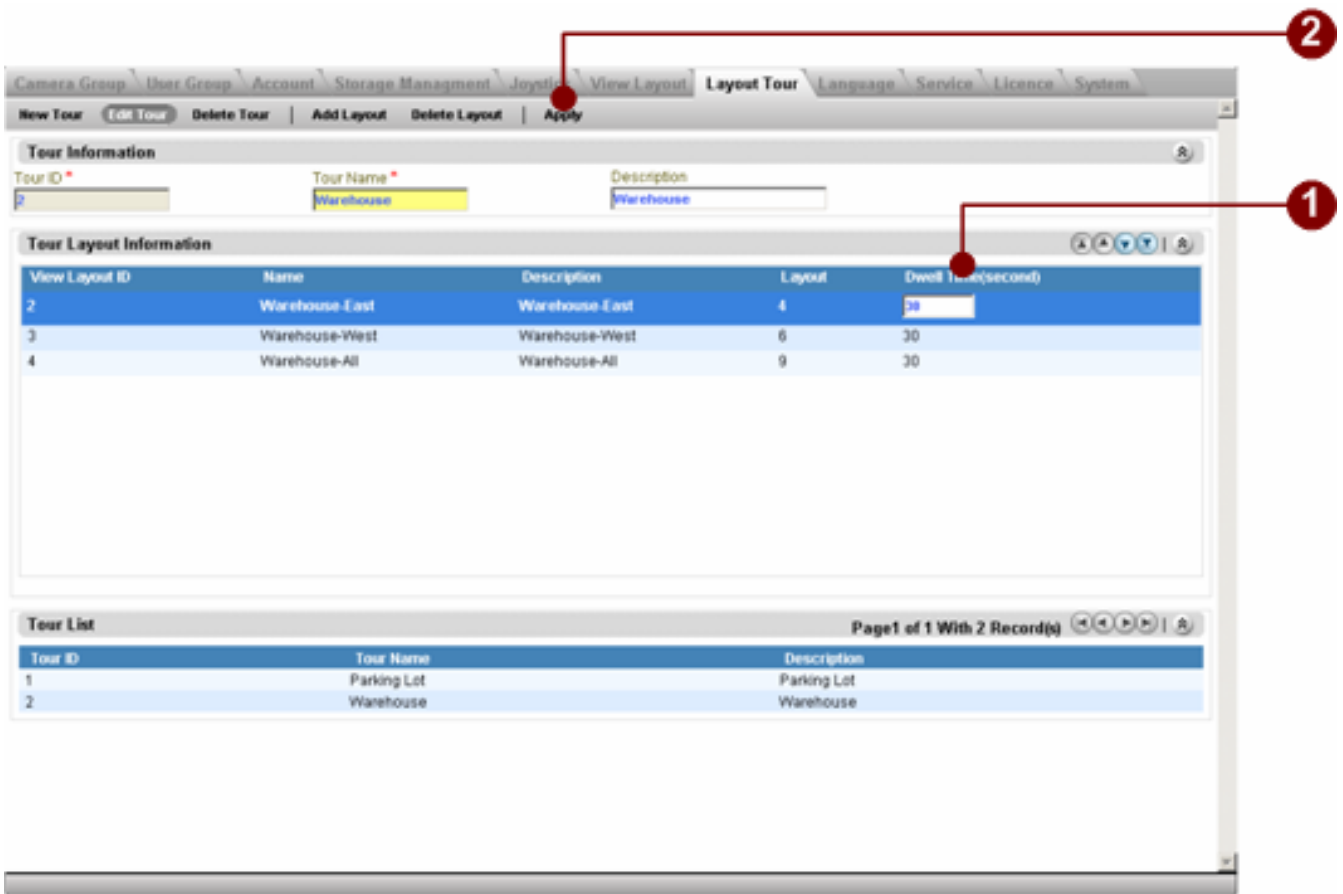


Figure 7-12 Edit Layout Tour

1. **View layout dwell time setup:** User can set the dwell time for system to keep a view layout. Just click the view layout and key in dwell time.
2. **Apply button:** Save all the settings before user exit. Otherwise, the settings will be gone.



NOTE: Default Dwell time is 30 seconds. Please don't set this value to one that is smaller than 15 seconds.

Language

This sections teaches user to select language.

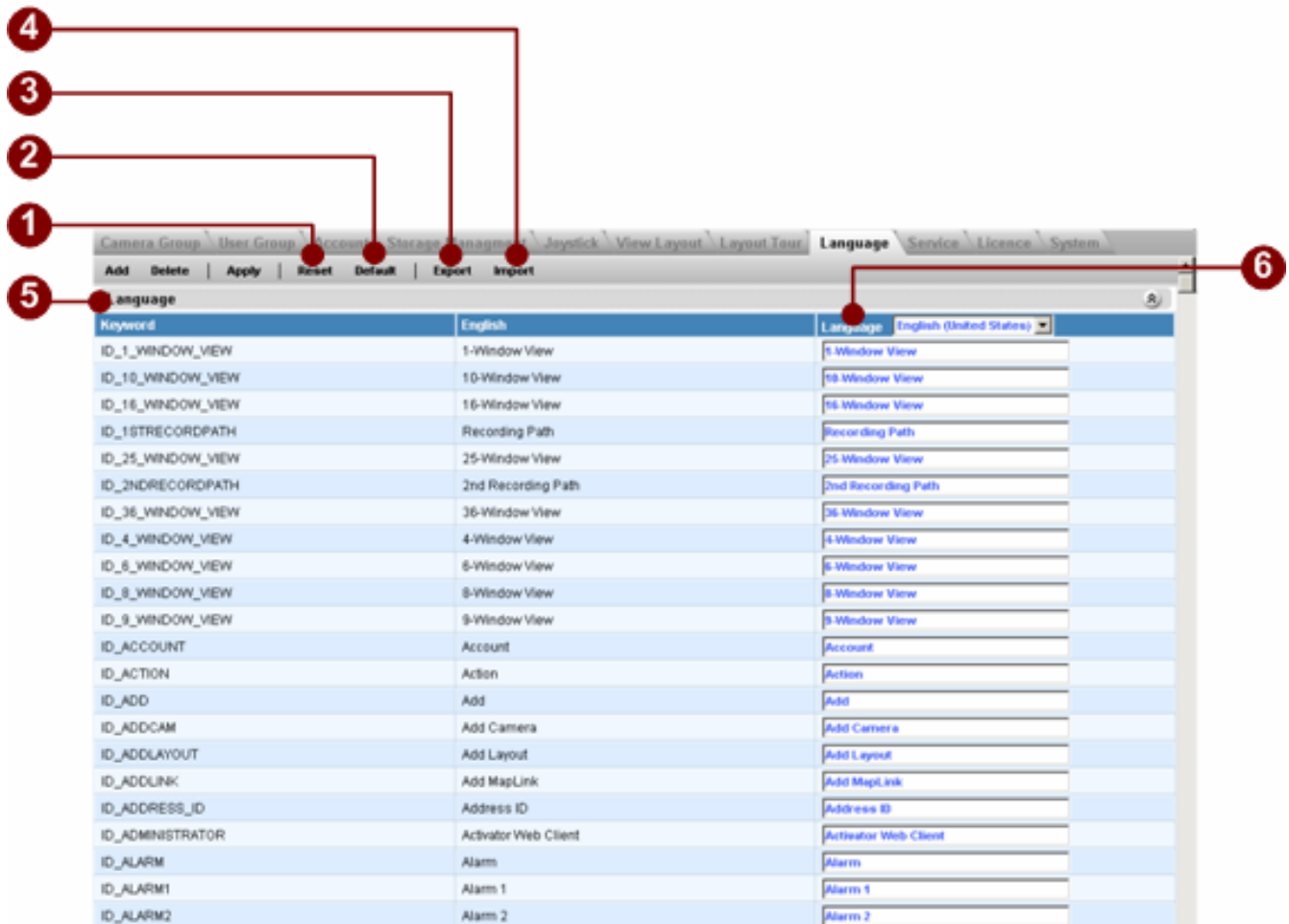


Figure 7-13 Language

1. **Reset to setting before apply:** Reset and the input will be cleared
2. **Restore to Default Setting:** Restore the input fields back to default settings
3. **Export Language setting to File:** Export current language to a **Export_<LANGUAGE_CODE>.XML** file. This file locates at the same directory of NVR. There is also a **ExportFormat.XSL** file, user may edit the language translation by double clicking on the XML file
4. **Import Language setting from file:** Import the translated XML file
5. **Language:** By clicking this button, user may add/remove the supported language set
6. **Select Language to Translate:** Select preferred language to translate.



TIP: User may update the translation, and export it to an XML file, then send the XML file to customers for them to import into NVR system.

Service



Figure 7-14 Service

1. **Refresh:** Click this icon will refresh the status of each service
2. **ActiveEventManager.EXE:** Event manager handles events in background mode
3. **ActiveScheduleService.EXE:** Scheduler handles scheduled events
4. **ActiveServiceManager.EXE:** Service manager runs as a watchdog in background mode. When other services failed, Service Manager will try to start the service again
5. **ActiveStorageManager.EXE:** Storage manager handles capacity and hard disk spaces
6. **ActiveStreamingService.EXE:** Streaming service manages client connections to streaming engine to devices
ActiveMessageEngine.EXE: Sends messages to NVR Workstation and NVR Web Client.
7. **Service Status:** Displays service status, they are **Running, Pending, Stop.**
8. **Start Service:** Starts service
9. **Stop Service:** Stops service



IMPORTANT: For security reason, this operation can only executes in NVR Workstation running on the same machine where NVR Server is installed. This operation is disabled under NVR Web Client and NVR Workstation running on another machine.



NOTE: The operations in this function is the same as the operations that you go to Windows Service → Start / Stop Service .

License

This section describes the license management under NVR. Please refer to Sales Representative if you encountered any issues.

Registration By License Key

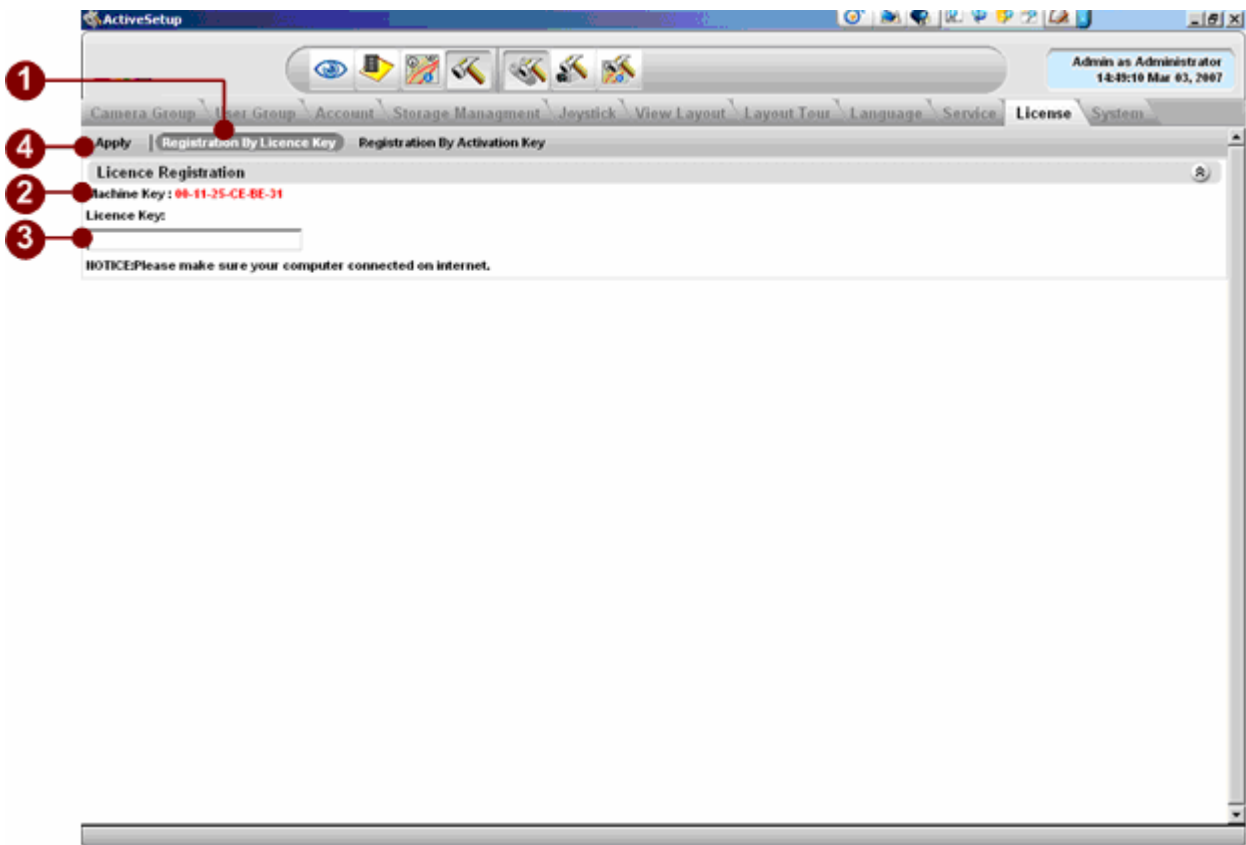


Figure 7-15 Register by License Key

1. **Registration By License Key:** Click this button to register by license key
2. **Machine Key:** MAC Address of the machine running NVR Server. Note that, if there are more than one MAC Address in the machine, only the MAC address with smallest number will be applied.
3. **License Key:** Input License Key provided
4. **Apply:** Click Apply to register the license key to NVR System



IMPORTANT: When using this mechanism to register the license key, NVR Server will connects to Register Server on Internet. Please make sure the machine installing license key has the permission and Internet connection.

Registration By Activation Key

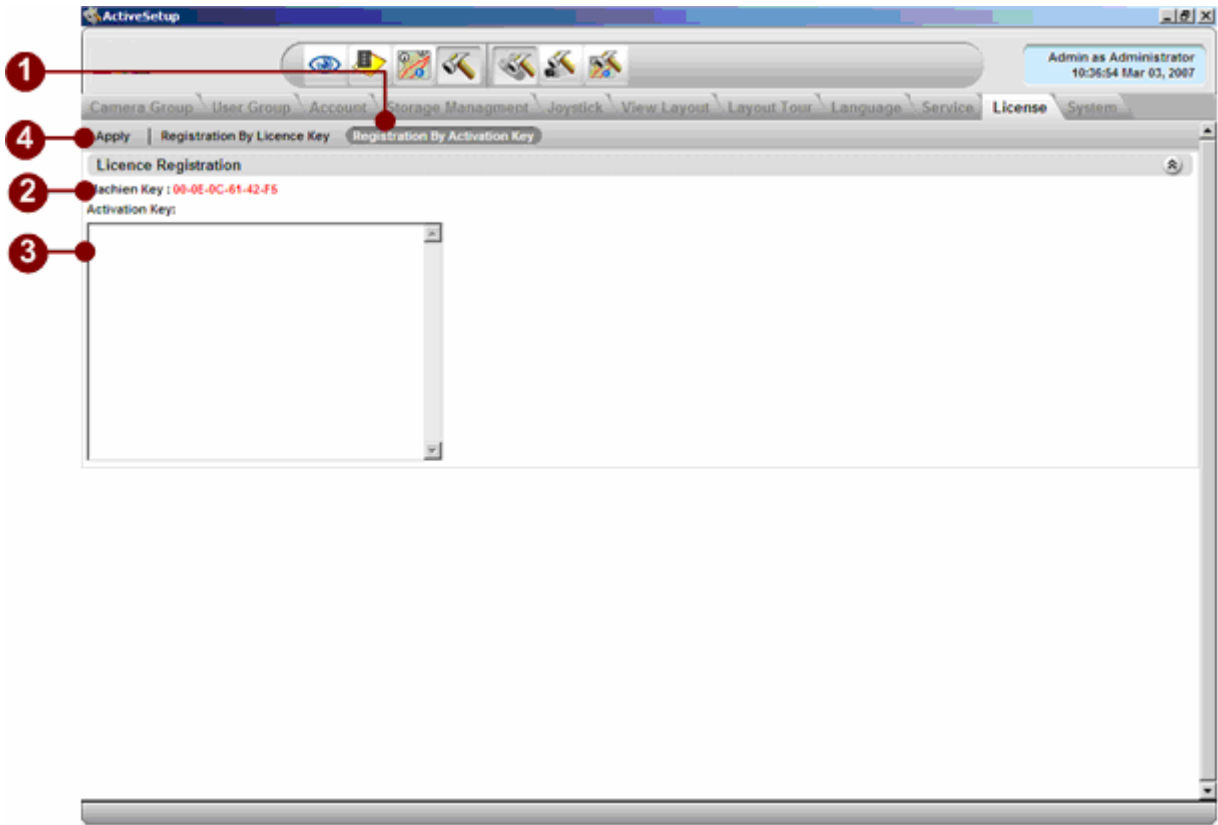


Figure 7-16 Register by Activation Key

1. **Registration By Activation Key:** Click this button to register by Activation key
2. **Machine Key:** MAC Address of the machine running NVR Server. Note that, if there are more than one MAC Address in the machine, only the MAC address with smallest number will be applied.



IMPORTANT: Please make sure you use the **Machine Key** provided in this field to register license on-line.

3. **Activation Key:** Input Activation Key provided . You can simply copy the Activation key and paste it here
4. **Apply:** Click Apply to register the license key to NVR System. The registration status will be displayed



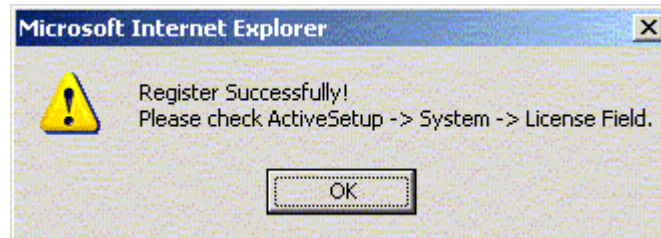
IMPORTANT: When using this mechanism to register the activation key, user need to provide the MAC address of the machine running NVR Server and the License Key. You can go to web site to register yourself



IMPORTANT: If you had problems register license, please contact Sales representative.

License Registration Messages

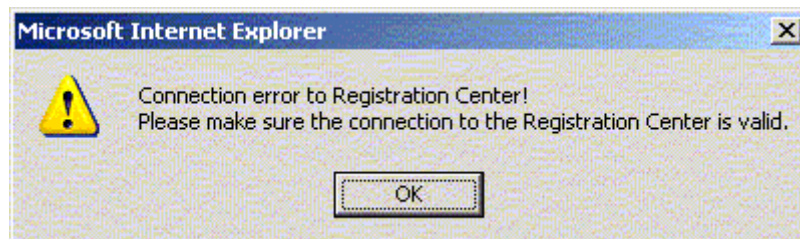
1. **Register Successfully:** Register successfully.



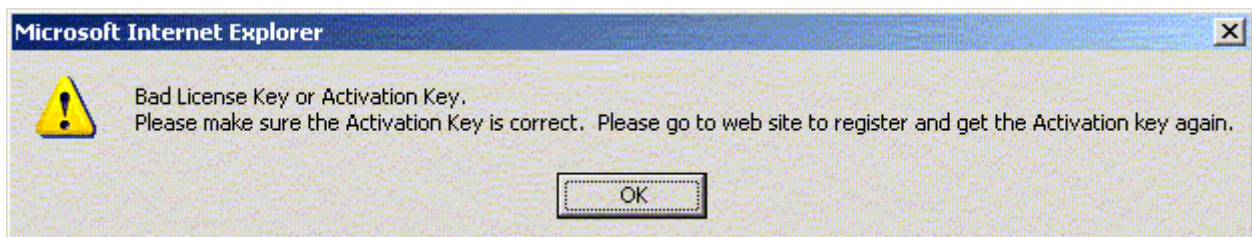
2. **License Key Format not correct:** Go check the license key format. Make sure the “-“ dash are entered in the license key



3. **Connection error to Registration Center:** Please make sure the Internet connection and connection to Registration Center is valid.



4. **Bad License Key or Activation Key:** Make sure the Activation key is correct



- 5 Machine Key (MAC Address) not matched: Possible cause is the MAC address of the associated Activation is not valid. User might have registered the license key with other MAC address (or other PC) already



IMPORTANT: If you still had troubles with license registration, please contact Sales Representative.

System

This section teaches user

1. Setup and see current system info
2. Setup E-mail / FTP accounts for system to send info to upon event.

The E-mail / FTP account will be used for sending events which are trigger by ActiveSetup in [Camera Setup].

The screenshot shows the 'System' configuration window with the following sections:

- 1 System Property:** Includes fields for 'Keep Event Log for (day)', 'Keep Recording Log for (day)', 'Keep System Log for (day)', 'NVR Streaming Port', 'NVR Control Port', 'IIS HTTP port', and 'MessageEngine Port Number'.
- 2 System E-Mail Setting:** Includes fields for 'SMTP Server', 'Sender Email Address', 'Sender Name', 'SMTP AUTHENTICATE', 'SMTP User Name', and 'SMTP Password'.
- 3 System FTP Setting:** Includes fields for 'FTP Server', 'Port', 'Upload Folder', 'User Name', and 'Password'.
- 4 License Information:** Includes fields for 'Product', 'Serial Number', 'Shipping Date', and 'Channel Number'.

Below these sections is a 'Disk Capacity Information' table:

Drive Name	Drive Space	Free Space(MB)	Total Space(MB)
C:	83%	4870	30002

Figure 7-17 System Setup

1. **System Property:** NVR system setup
 - . **Keep Event Log for (day):** Keep event logs for certain days. Default 5 days. Key in a period of time to keep the events on hard drive, after this period of time expires, the events will be deleted gradually and automatically
 - . **Keep Recording Log for (day):** Keep recording logs for certain days. Default 5 days. Key in a period of time to keep the logs on hard drive, after this period of time expires, the log will be deleted gradually and automatically
 - . **Keep System Log for (day):** Keep system logs for certain days. Default 100 days. Key in a period of time to keep the logs on hard drive, after this period of time expires, the log will be deleted gradually and automatically
 - . **NVR Streaming Port:** NVR Streaming Port. Default 6002
 - . **NVR Control Port:** NVR Control Port. Default 6001
 - . **IIS HTTP Port:** IIS HTTP Port. Default 80

NVR Message Engine Port: NVR Message Engine Port. Default 8001



IMPORTANT: User need to get into Microsoft Internet Information Server to change default port number, then update **IIS HTTP Port** in this field manually.

2. **Email Setting section** : User can set an e-mail account for NVR to send notification when events are triggered. The E-mail account setting includes
 - SMTP Server:** Enter the SMTP server address for NVR to send E-mail.
 - Sender E-mail Address:** Enter the E-mail address for NVR to send E-mail.
 - Sender Name:** Enter a name for NVR to send E-mail.
 - SMTP authentication:** Enable this checkbox if the SMTP server requires authentication.
 - SMTP user name:** Enter a SMTP user account for NVR E-mail account.
 - SMTP password:** Enter a password for SMTP user account.
5. **System FTP Setting Section:** This section includes a FTP account for NVR to send notification when events are triggered. The FTP account setting includes
 - FTP Server:** Enter a FTP server address for NVR to send E-mail.
 - Port:** Enter the port number for NVR to upload file to FTP.
 - Upload folder:** Enter the name folder path on the FTP server for NVR to upload file onto.
 - User name:** Enter the FTP user name of the NVR FTP account.
 - Password:** Enter the FTP user name of the NVR FTP password.
6. **License Information:** User can see the software license information.
 - Product:** User can see the product name of this software.
 - Serial number:** User can see the serial number of this software.
 - Shipping date:** User can see the shipping date of this software
 - Channel number:** User can see the channel capacity registered in this software.
7. **Available Disk List and Information:** User can see all hard drives and hard drivers' information on this PC.

Camera Setup

[Camera Setup] is the setup group that lets user to modify settings to each camera. It includes recording, alarm, PTZ, event handling and preview. It is highly recommended to setup [System Setup] before creating settings in [Camera Setup]. Many [Camera Setup] can't be finished without completing [System Setup].

Camera

This section will teach user:

1. how to add camera
2. how to configure the video / time setting
3. how to delete cameras

All settings go with an individual camera. User has to select a camera and start this settings.

Add camera

There are 3 ways to add a camera

1. **Manually input**
2. **Import from search result**
3. **Import from another NVR**

Manually input

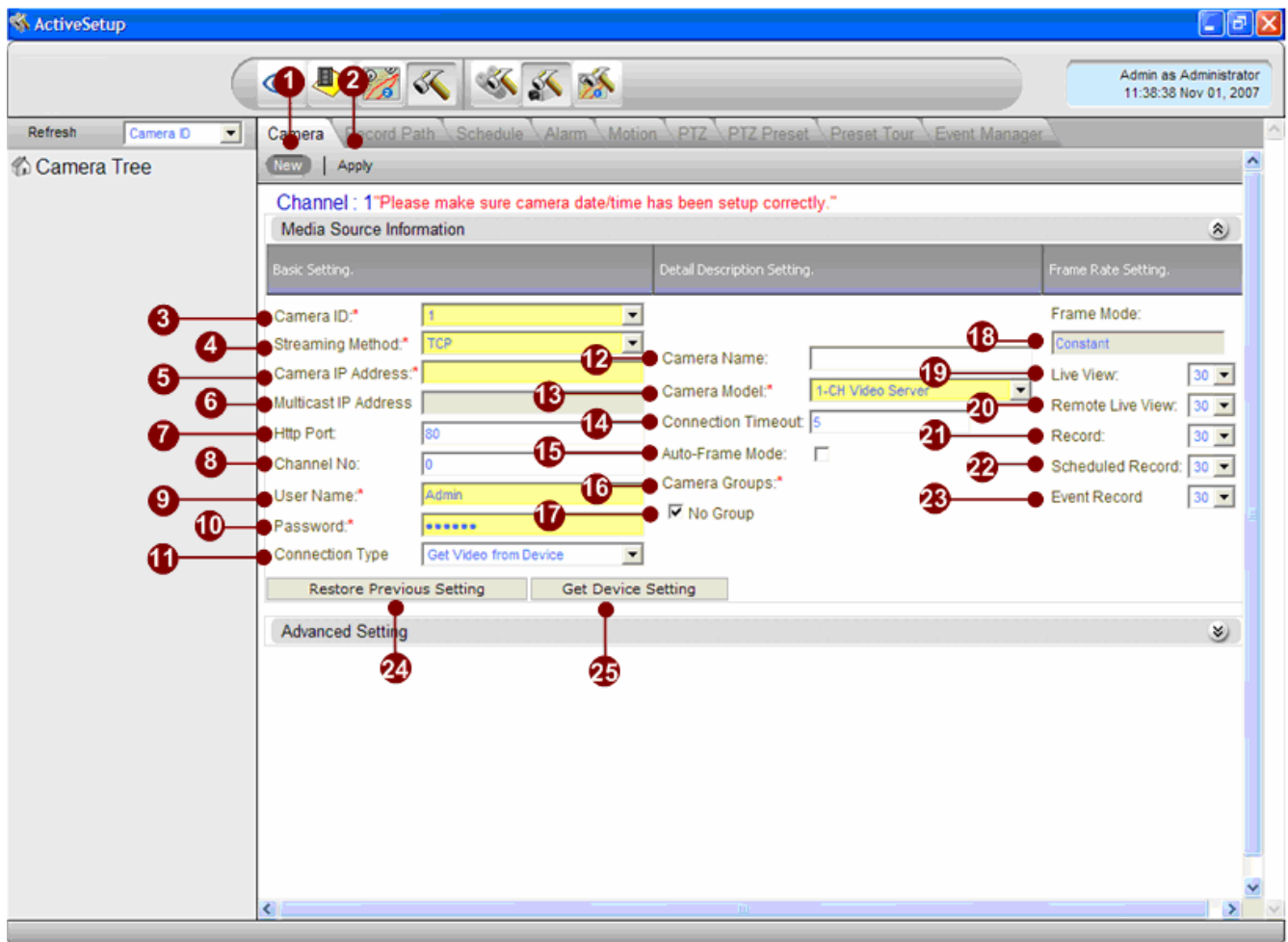


Figure 7-18 Camera Setup

1. **New** : Click the New button to create an new camera settings.
2. **Apply** button: Click the apply button to save the camera settings.
3. **Camera ID**: Select a new camera ID to add a camera; or Select an existing camera ID to edit the camera setting..
4. **Streaming Method** :Select a streaming method when you use TCP or Multicase
5. **Camera IP Address** : Enter the camera's IP address
6. **Multicast IP Address**: User can see the current multicast IP on this IP camera here. To modify it, enter the new one and click the Apply button.
7. **HTTP Port**: Enter the HTTP port for IP cameras/ video servers.
8. **Channel Number** (for Multi-channel video server only): Enter the channel number of the video server. If user is using IP camera or 1-channel video server, please enter 0 here.
9. **User Name**: Enter the user name to login the camera.

10. **Password:** Enter the password to login the camera.
11. **Connection Type:** This is the connection type between NVR and the IP camera / video server. Please refer to below info to select
 - Connect via Streaming Engine: Please select this only if user connects to this IP camera via other NVR.
12. **Camera Name:** Enter the name of the camera.
13. **Camera Model:** Select the device type of the IP cameras / video servers. **NOTE:** User must have the right setting here for many function to work. For example: The PTZ function will not work if user connects to an IP speed dome but selects the camera model to be IP camera. This is the same for Quad and devices with audio.
14. **Connection Timeout:** Enter a period of time (in second) for NVR to connect to this IP camera / video server. NVR will regard the device as not available if the device does not response in this period of time. We suggest user to set different values for different connection from the NVR to the IP camera
 - LAN : 1 second
 - WAN : 1 second
15. **Auto Frame Mode:** Click this to enable auto frame mode. When in auto-frame mode, NVR will decrease the FPS when there are more than 4CHs previewing. This can be useful to decrease the CPU consumption.
 - Connect not via Streaming Engine (Default): Select this if user connects to this IP camera, enable this checkbox. When in auto-frame mode, NVR will decrease the FPS. when there are more than 4CHs previewing. This can be useful to decrease the CPU consumption.
16. **Camera Group :** Please add this camera to camera groups. User can add one camera to multi-camera groups at a time.
17. **Group list :** This shows the groups which are able to be imported from another NVR. User can import any groups.
18. **Frame Mode :**Show the Frame mode Constant / Variable
19. **Live view Button:** When finish setting, click the Live view button to see if the video preview is ok. If yes, the connection setting is done. If not, please check again.
20. **Remote Live View :**Select the FPS number when you use remote web client to live view
21. **Record :** Select the FPS number when you use continuous recording
22. **Scheduled Record :** Select the FPS number when you use schedule recording
23. **Event Record :** Select the FPS number when you use event recording
24. **Restore Previous Setting :** Reset to Factory default.
25. **Get Device Setting :**Get Setting information from device



IMPORTANT: It is highly recommended that user use **Get Device Setting** so that the status of IP Camera can be synchronized to NVR Server.

Import from search result

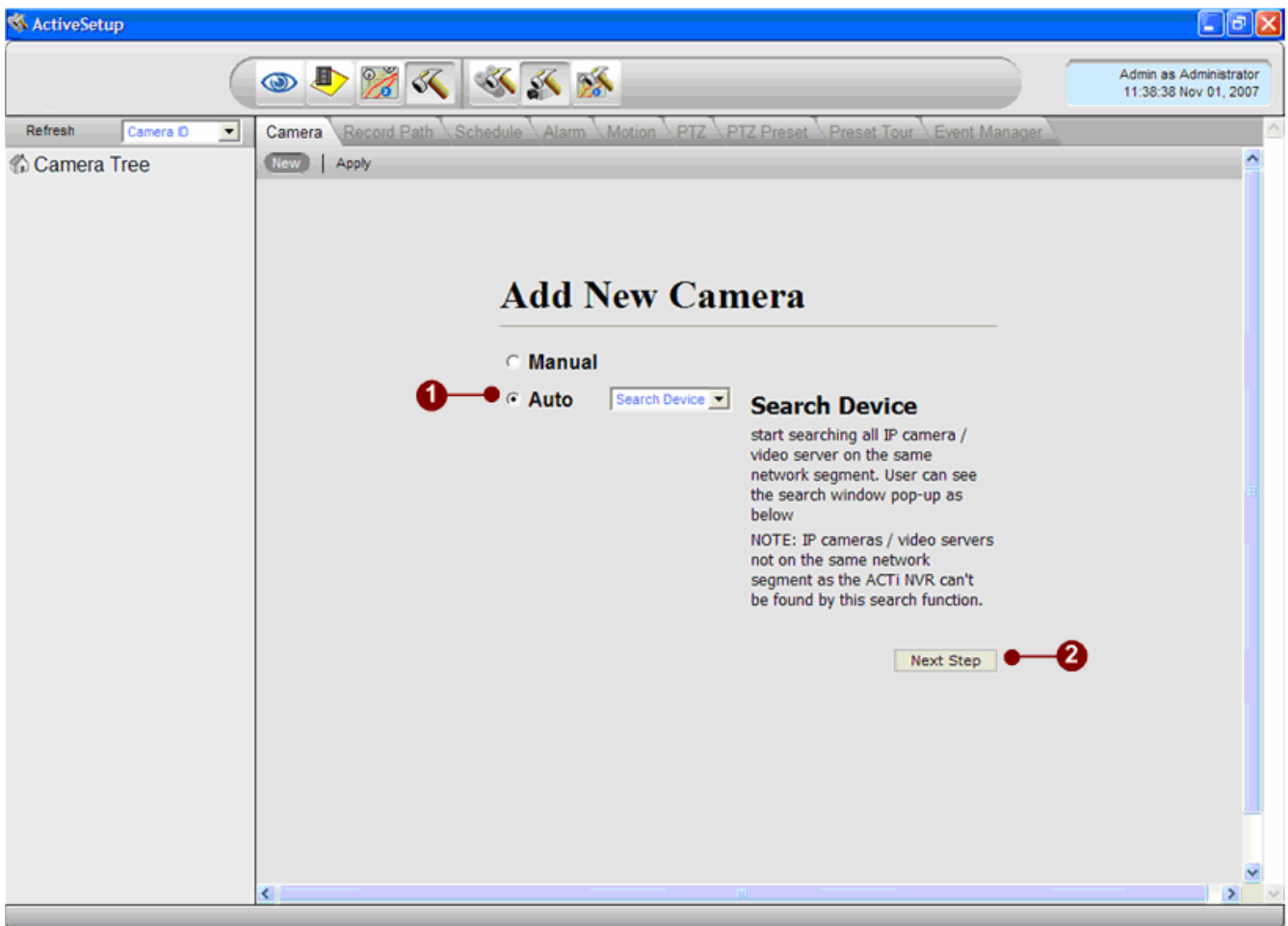


Figure 7-19 Search Button

1. **Search Device option:** Select **Search Device** option.
2. **Next Step** button: Click this button to start search device operation
NOTE: IP cameras / video servers not on the same network segment as the NVR can't be found by this search function.



NOTE: Please make sure the IP Address of the devices are in the same sub-network of NVR Server, otherwise, NVR Server may add those IP cameras into NVR system, but cannot run live view on those IP Cameras .

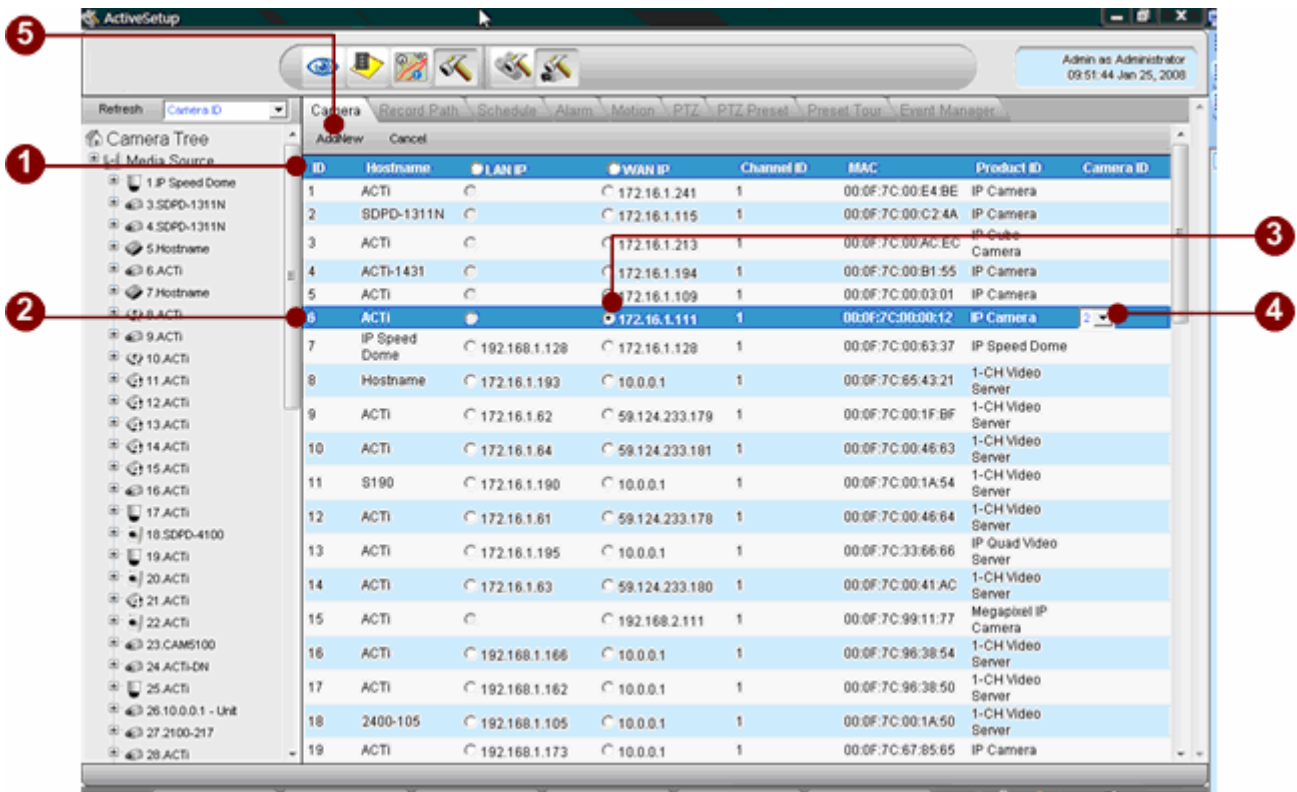


Figure 7-20 Search Camera

1. **Search List** : User can see the list of all the IP cameras / video servers found.
2. **Select Camera**: Click the row of the camera which user wants to add into this system.
3. **Select IP Address**: Select a camera with an IP address.
4. **Select an unused Camera ID** : Click to select an unused camera ID for this camera for NVR.
5. **Add New** button: After selecting all cameras which user wants to import, click this button to add.

Import from another NVR

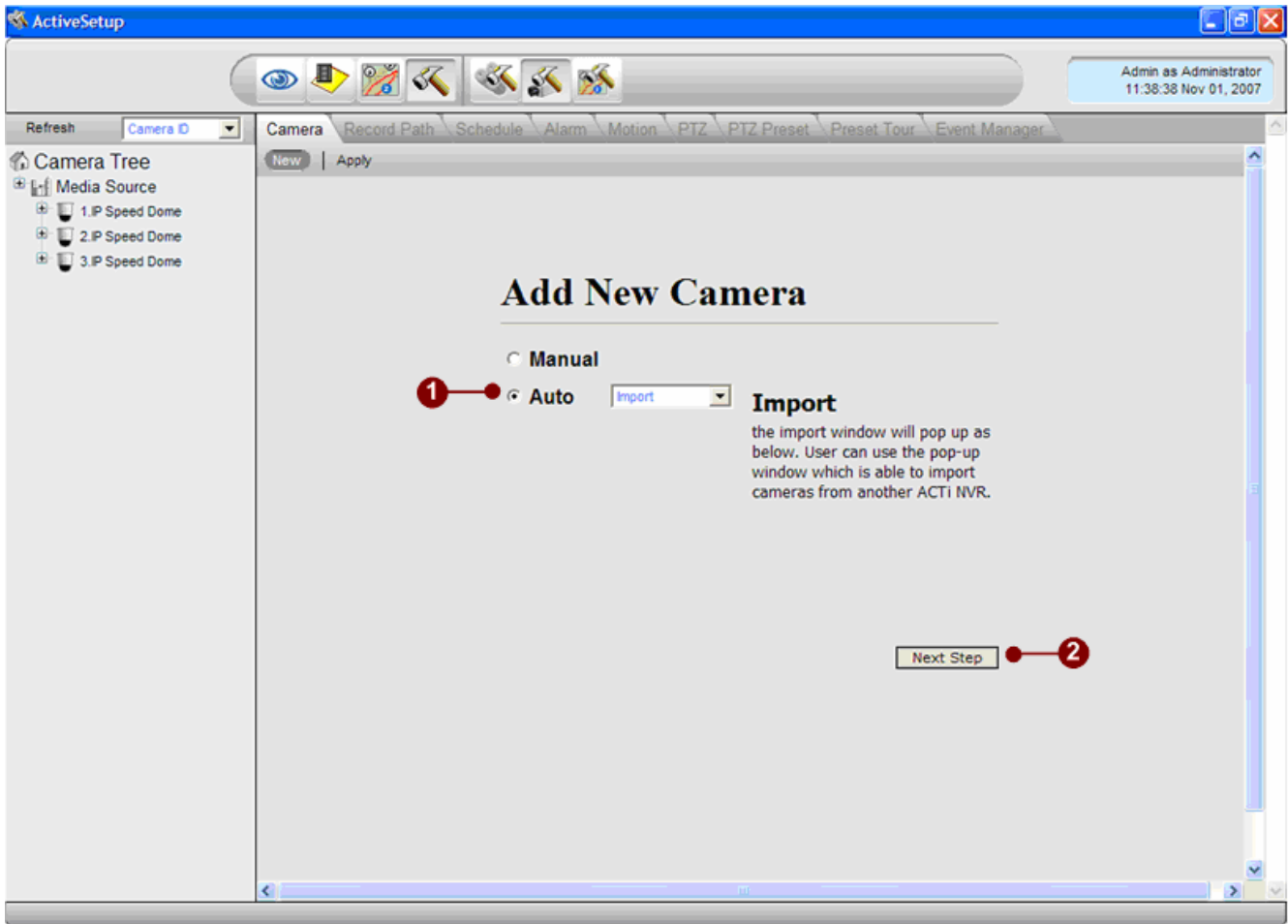


Figure 7-21 Apply Button

1. **Import** option: Click this button, the import window will pop up as below. User can use the pop-up window which is able to import cameras from another NVR.
2. **Next Step** button: Click this button to start Import operation.

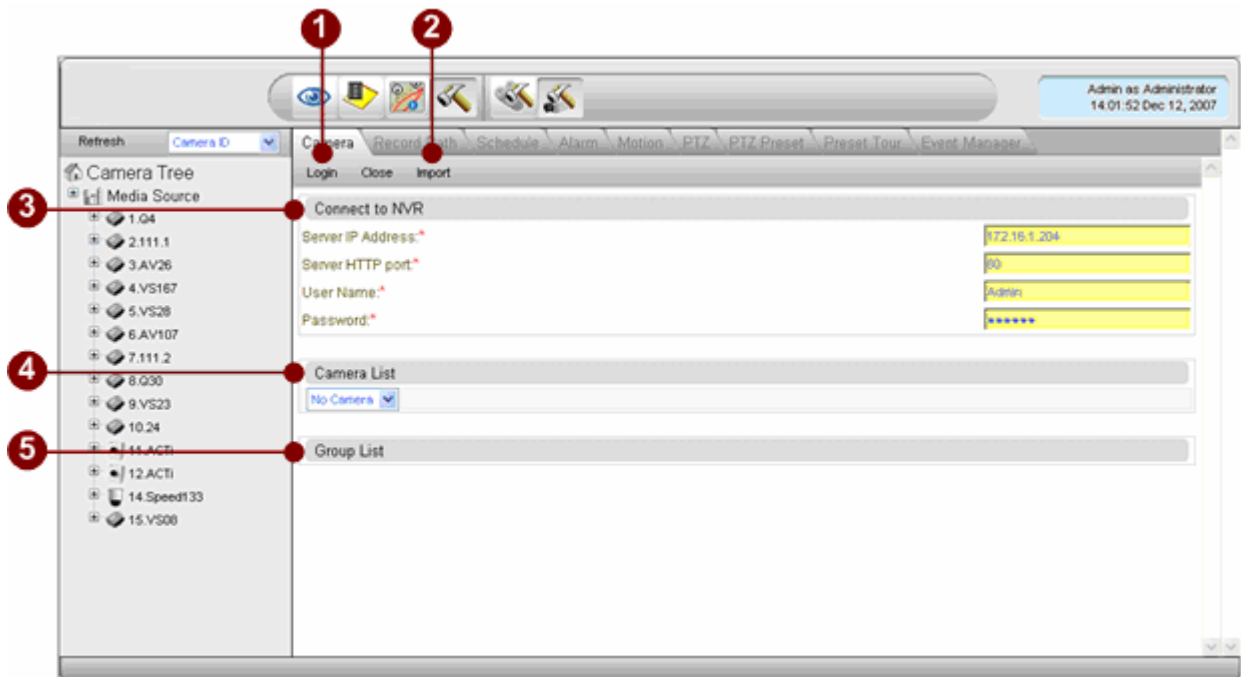


Figure 7-22 Apply Button

1. **Login** button: Click the login button to connect to another NVR. When connection is established, user will see info shown below in camera list and group list.
2. **Import** button: Click this button to import all selected cameras and groups from another NVR.
3. **Connect to NVR**: Enter the connection info for NVR to import camera setting from another NVR. The connection info includes
 - Server IP: The IP of another NVR.
 - User name: The user name to login another NVR.
 - Password: The password to login another NVR.
4. **Camera list** : This shows the cameras which are able to be imported from another NVR. User can import any cameras.
5. **Group list** : This shows the groups which are able to be imported from another NVR. User can import any groups.

Setup the video / time settings

This section teaches user how to setup the video / time settings on cameras. Before configuring this section, user has to set preview setting correctly, otherwise, this configuration will not work.

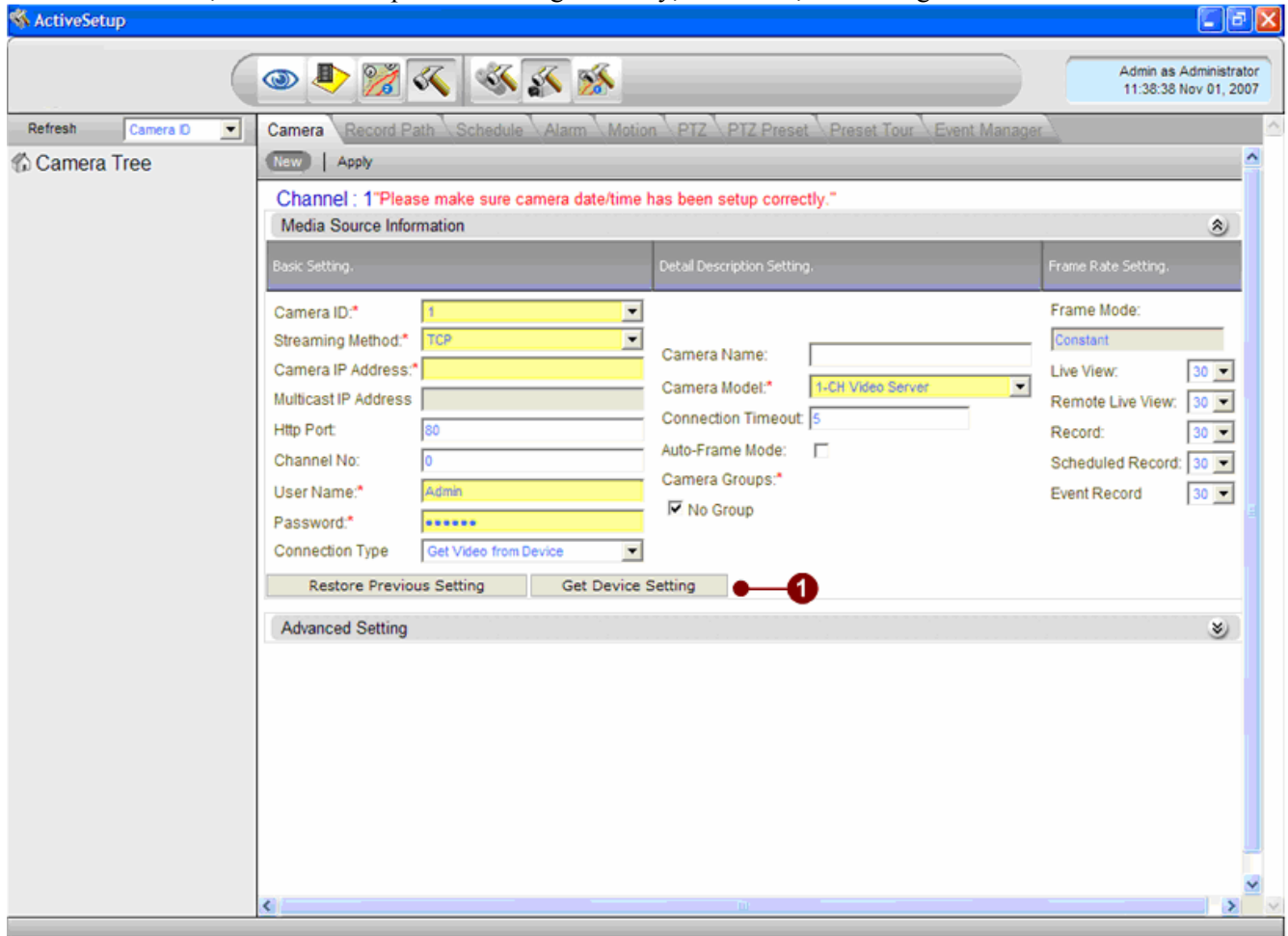


Figure 7-23 Auto Detect

1. **Get Device Setting** button: Click this button to search all current available IP camera / video server's video and Time settings. These information will be shown on the panel below.



IMPORTANT: It is highly recommended that user use **Get Device Setting** so that the status of IP Camera can be synchronized to NVR Server.

Video Quality

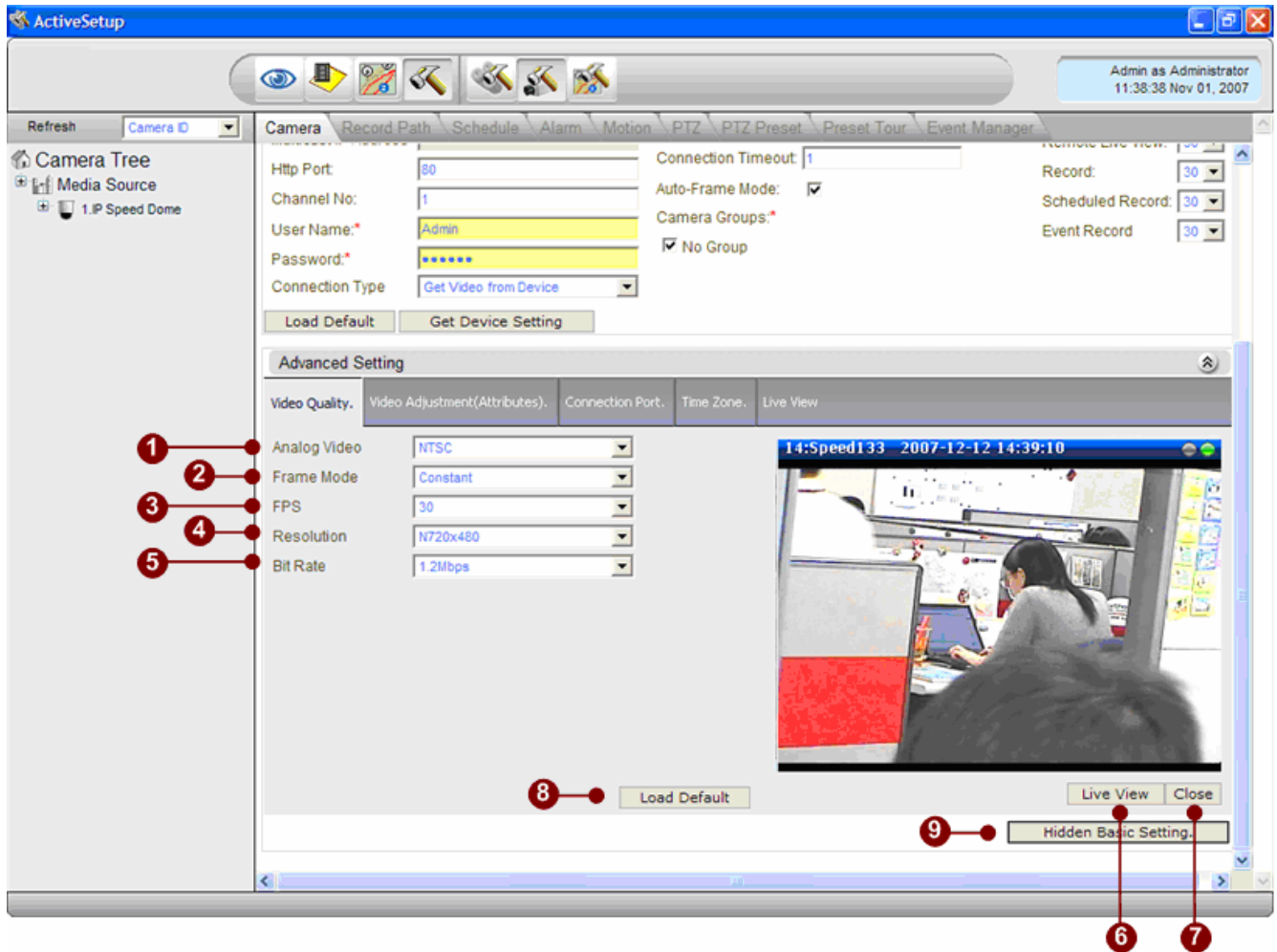


Figure 7-24 Video Quality

1. **Analog Video:** User can see the analog video type on this IP camera here. To modify it, select the right one and click the Apply button.
2. **Frame Mode:** User can see the Frame mode on this IP camera here. To modify it, enter the new one and click the Apply button.
3. **FPS:** User can see the FPS (Frames Per Second) on this IP camera here. To modify it, enter the new one and click the Apply button.
4. **Resolution:** User can see the Resolution on this IP camera here. To modify it, enter desired resolution and click the Apply button.
5. **Bit Rate:** User can see the Bit Rate on this IP camera. To modify it, enter the new one and click the Apply button.

Video Adjustment

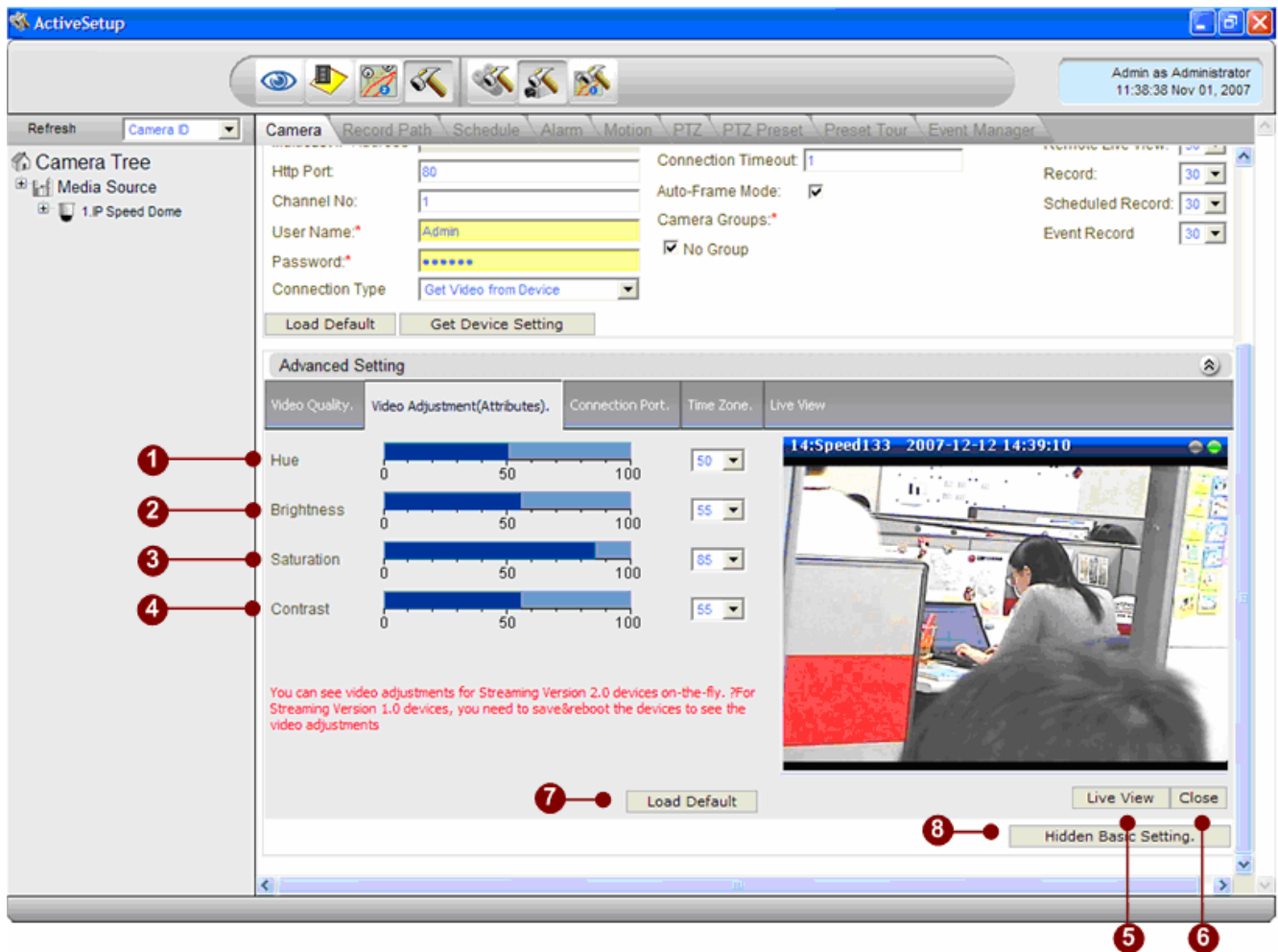


Figure 7-25 Video Adjustment

1. **Video Hue Setting:** User can see the current hue setting or adjust it by selecting the parameter.
2. **Video Brightness Setting:** User can see the current hue setting or adjust it by selecting the parameter.
3. **Video Saturation Setting:** User can see the current hue setting or adjust it by selecting the parameter.
4. **Video Contrast Setting:** User can see the current hue setting or adjust it by selecting the parameter.

Connection Port

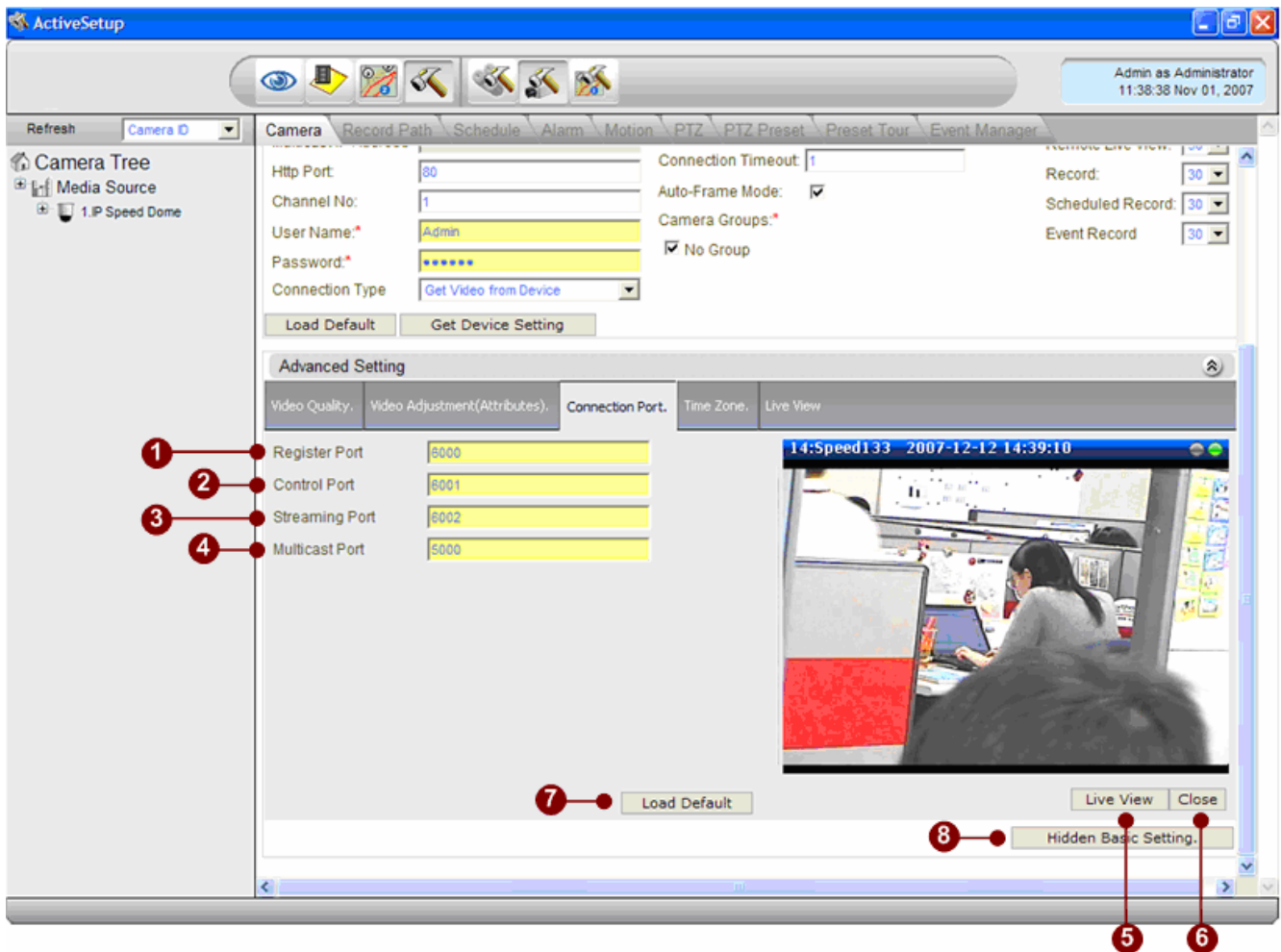


Figure 7-26 Connection Port

1. **Register Port:** User can see the current register port on this IP camera here. To modify it, enter the new one and click the Apply button.
2. **Control Port:** User can see the current control port on this IP camera here. To modify it, enter the new one and click the Apply button.
3. **Streaming Port:** User can see the current Streaming port on this IP camera here. To modify it, enter the new one and click the Apply button.
4. **Multicast Port:** User can see the current multicast port on this IP camera here. To modify it, enter the new one and click the Apply button.

Copy settings from another Camera Setting

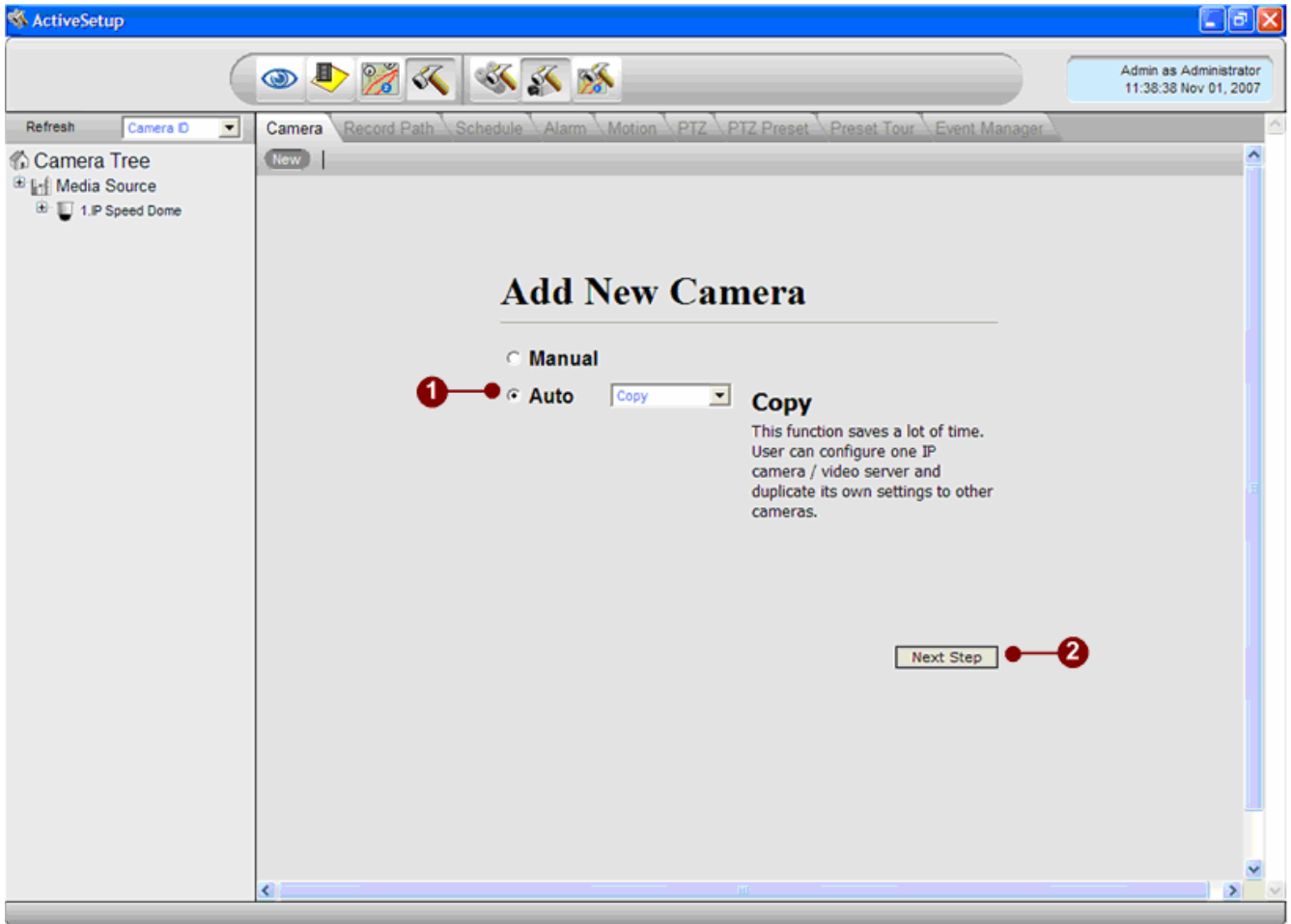


Figure 7-27 Copy Setting

1. **Copy Setting** button: This function saves a lot of time. User can configure one IP camera / video server and duplicate its own settings to other cameras.

Delete Camera

This section teaches user how to delete a camera. There are several options to delete a cameras, please see below for more information. User has to select a camera first and click the Edit button. The camera delete window will pop up.

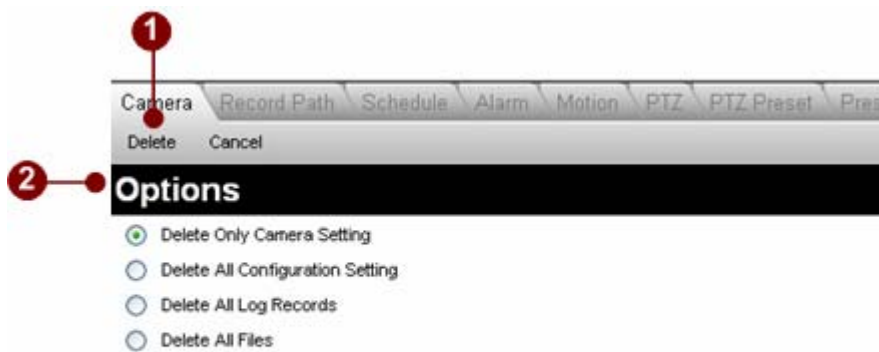


Figure 7-28 Delete Camera

1. **Delete options** : Select the delete options of this camera. Below are a table telling the difference between one another.
2. **Delete button**: Click this button to delete.
Cancel button Click this button to cancel the delete option.

Deletion Options

<i>Option</i>	<i>Camera Setting</i>	<i>All Setting</i>	<i>Log Records</i>	<i>All Files</i>
<i>Delete only camera setting</i>	Deleted	Remain	Remain	Remain
<i>Delete all configuration setting</i>	Deleted	Deleted	Remain	Remain
<i>Delete all log records</i>	Deleted	Deleted	Deleted	Remain
<i>Delete All Files</i>	Deleted	Deleted	Deleted	Deleted

Recording

This section teaches user how to configure the recording on each camera.

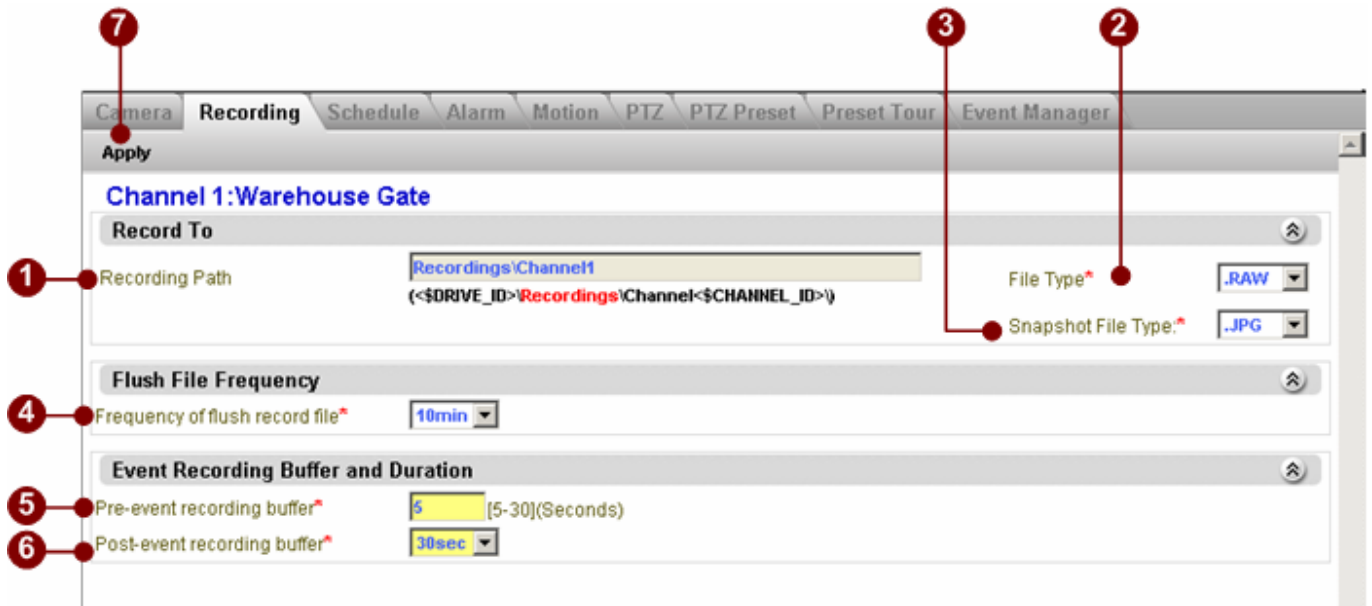


Figure 7-29 Recording Setup

1. **Recording Setup:** This is the path where all recordings are stored. This is only readable, user cannot do any change on it. This can only be changed in [System Setup]
2. **Recording File Type:** Please select the file type which user wants the recording to be. Currently NVR only supports .RAW format.
3. **Snapshot File Type:** Please select the file type which user wants the Snapshot files to be. Currently, NVR supports .JPG and .BMP.
4. **Frequency of flush record file:** Please select the a period of time for recording each file.
5. **Pre-event recording buffer:** Please select the pre-event recording buffer for this camera.
6. **Post-event recording buffer:** Please select the post-event recording buffer for this camera.
7. **Apply button:** Click this button to save the settings.

File Type

<i>Value</i>	<i>Type</i>	<i>Description</i>
<i>.RAW</i>	.raw	raw format recording file.

Snapshot File Type

<i>Value</i>	<i>Type</i>	<i>Description</i>
<i>.JPG</i>	.jpg	JPG format image file.
<i>.BMP</i>	.bmp	BMP format image file.

Schedule

This section teaches user how to configure the recording schedule on the IP camera. The recording schedule is set by

1. **Weekly Schedule:** All recording will be done and repeated weekly.
2. **Special day:** User can set a special schedule for special days. This schedule will overrule user's previous weekly setting.

Also, there are 4 types of schedules available for choose. Please see below for details.

View By Channel

This section teaches user how to configure week-recording schedule. User has to select recording type for 24 hours a day, from Sunday to Saturday.

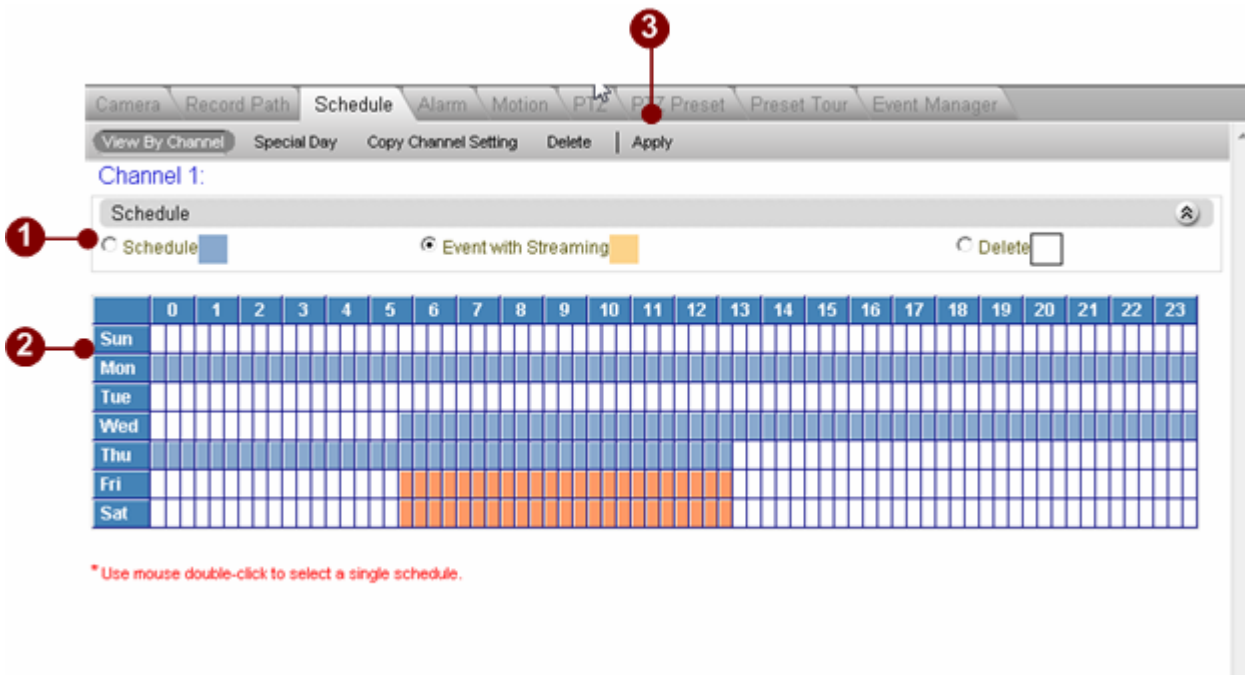


Figure 7-30 Setup by channel

1. **Schedule Type:** User can select the schedule type to apply to the weekly schedule table below. There are 4 schedule types including
 - Continuous: The camera will record continuously for an entire day.
 - Schedule: The camera will record continuously at the time which user wants.
 - Event with Streaming: The camera will record if events are triggered.
 - Delete: The camera will not record and there will be no streaming from the IP camera.
2. **Weekly schedule:** After select schedule type, user can apply it to the weekly table here.
3. **Apply button:** Click this button to save the settings.

Schedule Type

<i>Value</i>	<i>Type</i>	<i>Description</i>
<i>Continuous</i>	Continuous	Continuous recording for all day
<i>Schedule</i>	Schedule	Only record selected day
<i>Event with Streaming</i>	Streaming	Record stream when event trigger
<i>Delete</i>	Delete	Delete selected schedule setting

Special Day

On special days, user can apply a different schedule to overrule other weekly schedule. This can be very useful to manage the recording on special days.

The screenshot shows the 'Special Day' configuration interface. At the top, there is a navigation bar with tabs: Camera, Record Path, Schedule, Alarm, Motion, PTZ, PTZ Preset, Preset, Tour, and Event Manager. Below the navigation bar, there are buttons: View By Channel, Special Day, Copy Channel Setting, Delete, and Apply. The main area is titled 'Channel 1:' and contains several sections:

- Apply to all:** A dropdown menu.
- Today:** A red square.
- Schedule:** A blue square.
- Selected:** A light blue square.
- Calendar:** A calendar for '2008 January' with the 28th highlighted in red.
- Schedule:** A section with radio buttons for 'Schedule', 'Event with Streaming', and 'Delete'.
- Special Day List:** A section with a grid of days from 0 to 23.
- Note:** A red asterisk note: '* Use mouse double-click to select a single schedule.'

Figure 7-31 Setup By Special Day

1. **Schedule Calendar:** User can use it to set special days to Special day schedule.
2. **Schedule Type:** User can select the schedule type to apply to the weekly schedule table below. There are 4 schedule types including.
 - Continuous: The camera will record continuously for an entire day.
 - Schedule: The camera will record continuously at the time which user wants.
 - Event with Streaming: The camera will record when events are triggered.
 - Delete: The camera will record and there will be no streaming from the IP camera.
3. **Special Day schedule:** User can select the recording schedule for this camera on this special day.
4. **Special Days List:** User can see all existing special day schedules here.
5. **Apply** button: Click this button to save the settings.

Alarm

This section teaches user how to configure the alarm description of the camera alarm 1 and alarm 2. It will be very easy for guard to recognize the alarm type in the future.

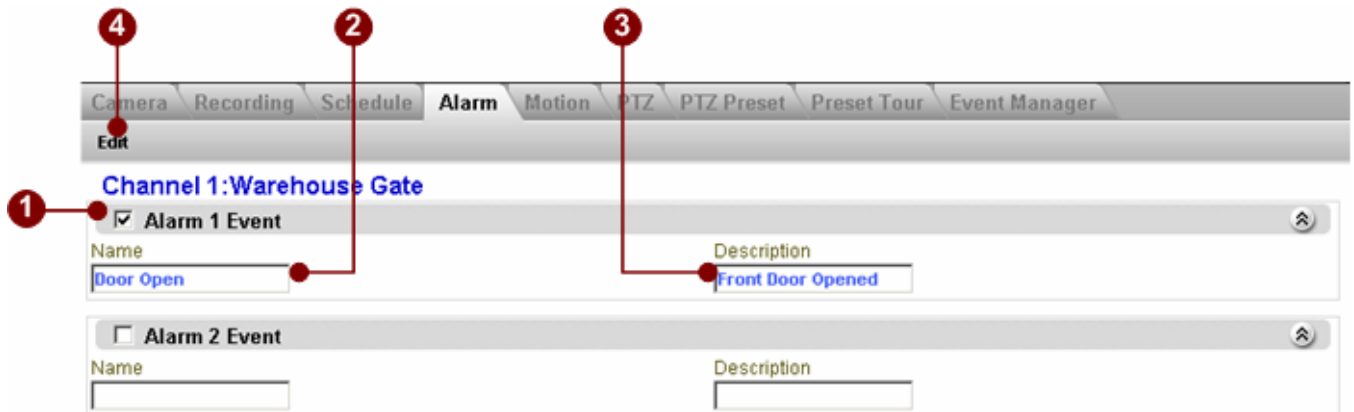


Figure 7-32 Alarm

1. **Alarm Enable/Disable:** Click this button to enable/disable the alarm 1 event of this camera. All the actions (recording, taking snapshots) will be triggered by alarm 1 when alarm 1 is enabled.
2. **Name:** Enter the name of this alarm. It will be easy for guard to recognize in the future:
3. **Description:** Enter the description of this alarm.
4. **Edit** button: Click this button to save the settings.

Motion

This section teaches user how to configure the motion detection of this camera. Before configuring the motion detection, user needs to connect to the IP camera / video server to get server settings.

NOTE: Please make sure current machine IP address is on the same network segment as the IP camera or video server.

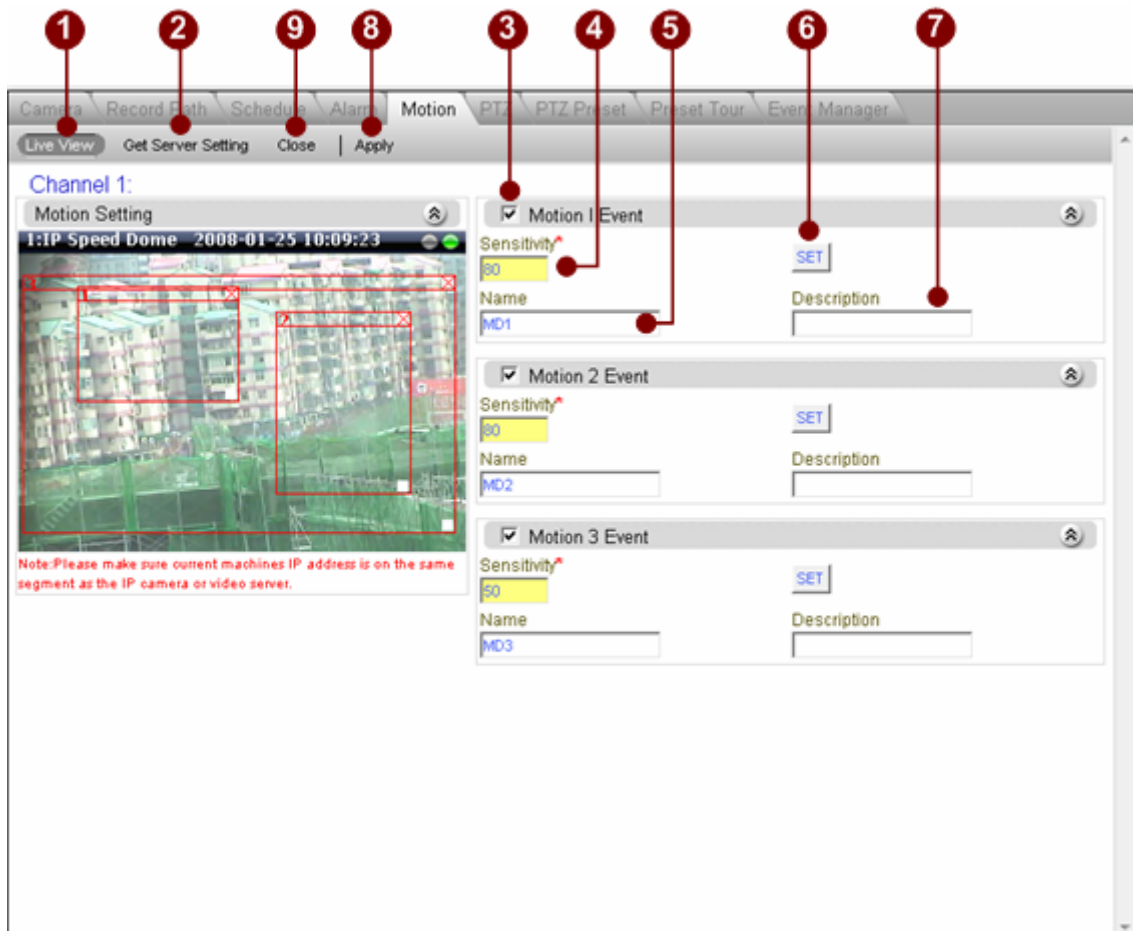


Figure 7-33 Motion Detection Setting

1. **Live view:** Click to bring live view.
2. **Get Sever setting:** Click this button to connect to retrieve motion detection setting from the device
3. **Enable / Disable Motion Detect:** Click this button to enable / disable this motion detection area.
4. **Sensitivity:** Enter the sensitivity level of this motion detection area.
5. **Set Sensitivity:** Click this button after user enters the sensitivity level of this motion detection area, and the sensitivity will be saved to IP camera / video server.
6. **Name:** Enter the name of this motion detection area.
7. **Description:** Enter the description of this motion detection area.

8. **Apply button:** Click this button to save the settings
9. **Close button:** Click this button to stop previewing current camera in live preview window.



NOTE: Range of sensitivity is 0~100.

PTZ

This section teaches user how to set the PTZ (Pan/Tilt/Zoom) actions of this IP camera/video server. This PTZ

NOTE: Please make sure current machine IP address is on the same network segment as the IP camera or video server.

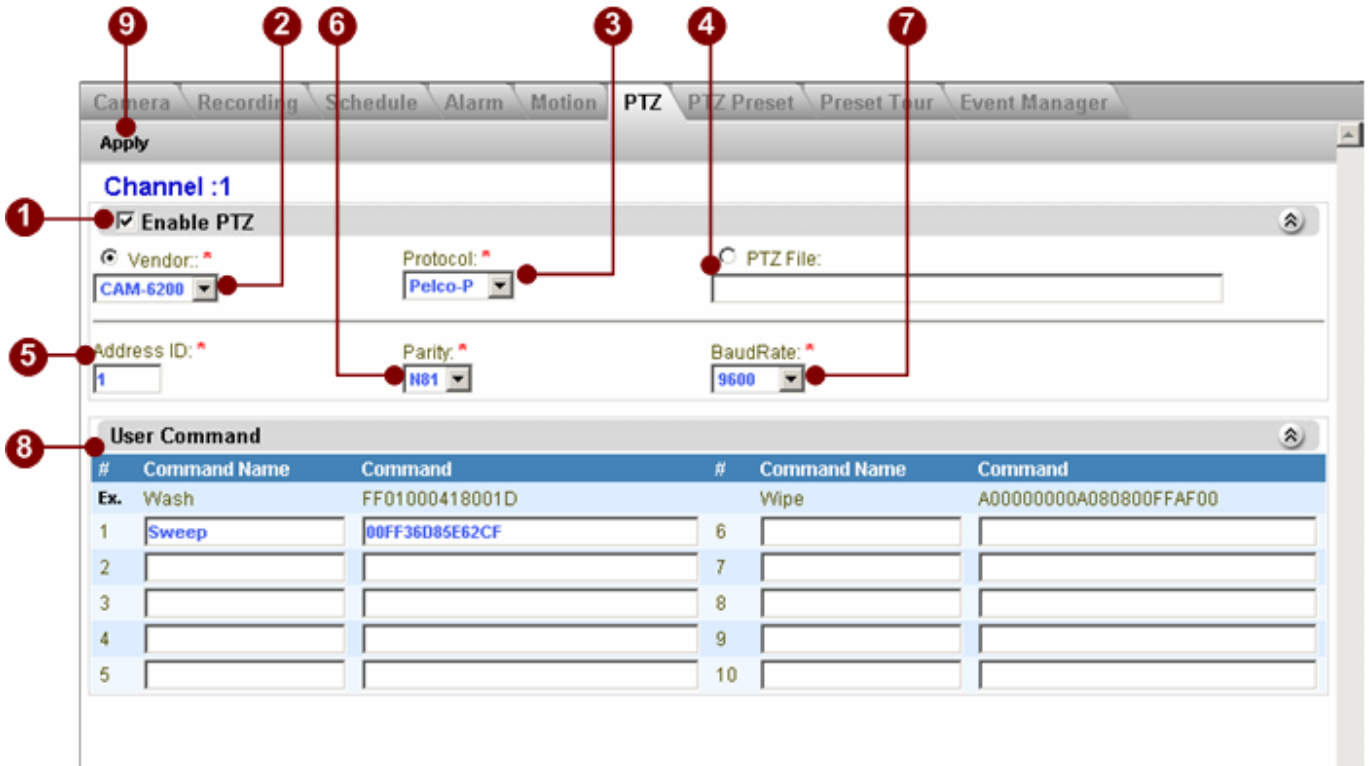


Figure 7-34 PTZ Setup

1. **Enable/Disable PTZ:** Click this to enable or disable the PTZ function of this IP camera / video server.
2. **Vendor:** Select the vendor of the speed dome user wish to control.
3. **Protocol:** Select the protocol of the speed dome.
4. **PTZ File:** If your speed dome's protocol is not integrated by NVR, user can import a new protocol file. For details about the protocol file format, please contact our technical support.
5. **Address ID:** Enter the address ID of the speed dome.
6. **Parity:** Enter the parity of the speed dome.
7. **Baud Rate:** Enter the baud rate of the speed dome.
8. **User Command List:** If your speed dome or PTZ device has a special function not supported in the standard protocol. Ex: Activate the wiper to clean the window of the PTZ. User can manually input the command to activate the wiper for later selectable in PTZ controls.

9. **Apply** button: Click this button to save the settings

Absolute Position with Dynacolor Protocol

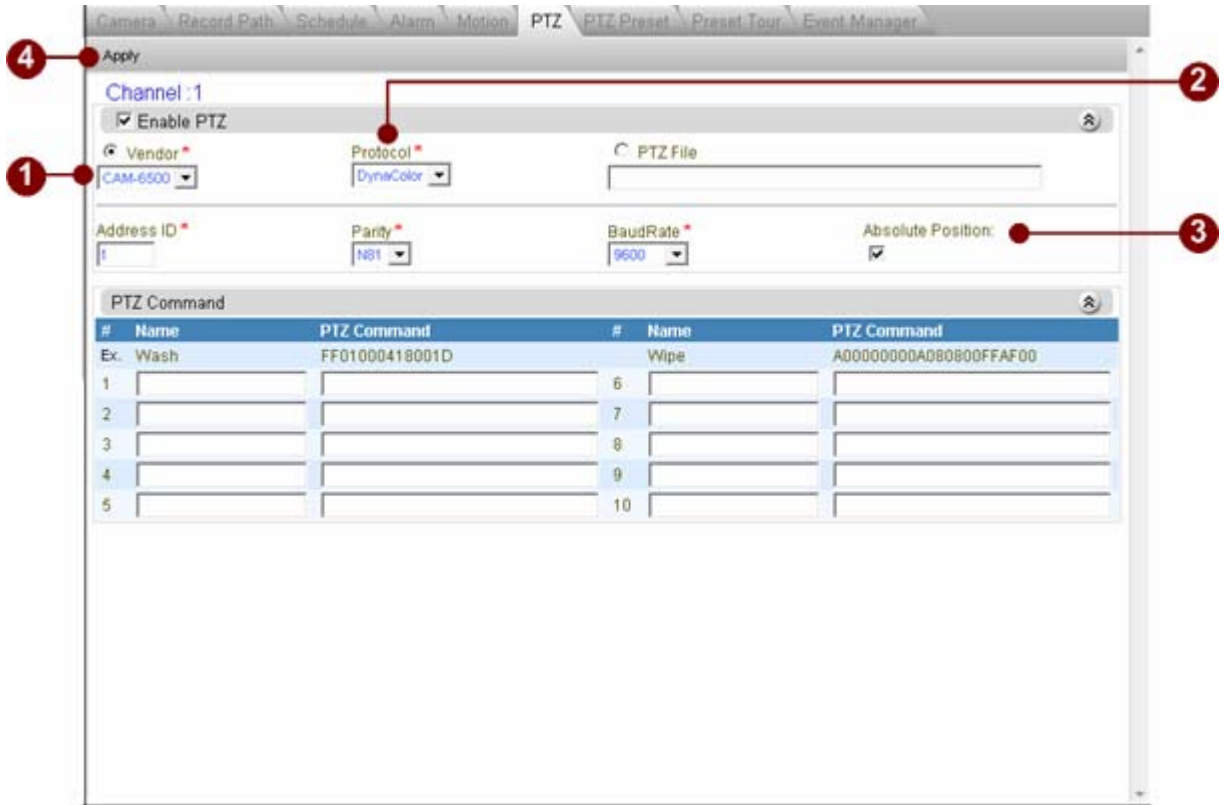


Figure 7-35 Absolute Position Setting

1. **Vendor:** Select the vendor of the speed dome.
2. **Protocol:** Select the protocol of the speed dome. Absolute Position only supports Dynacolor protocol
3. **Absolute Position checkbox:** Check Absolute Position checkbox to enable absolute position under Mouse PTZ mode.
4. **Apply:** Click to save setting.



NOTE: Absolute Position only works under Mouse PTZ mode. User has to click on the video screen to operate Absolute Position. Mouse wheel works for zoom in and zoom operation. PTZ panel works for normal PTZ operation.

PTZ Preset

This section teaches user how to set the preset points, auto scan and the OSD settings of the camera. Some functions might not work if the protocol or your speed dome doesn't support this function.

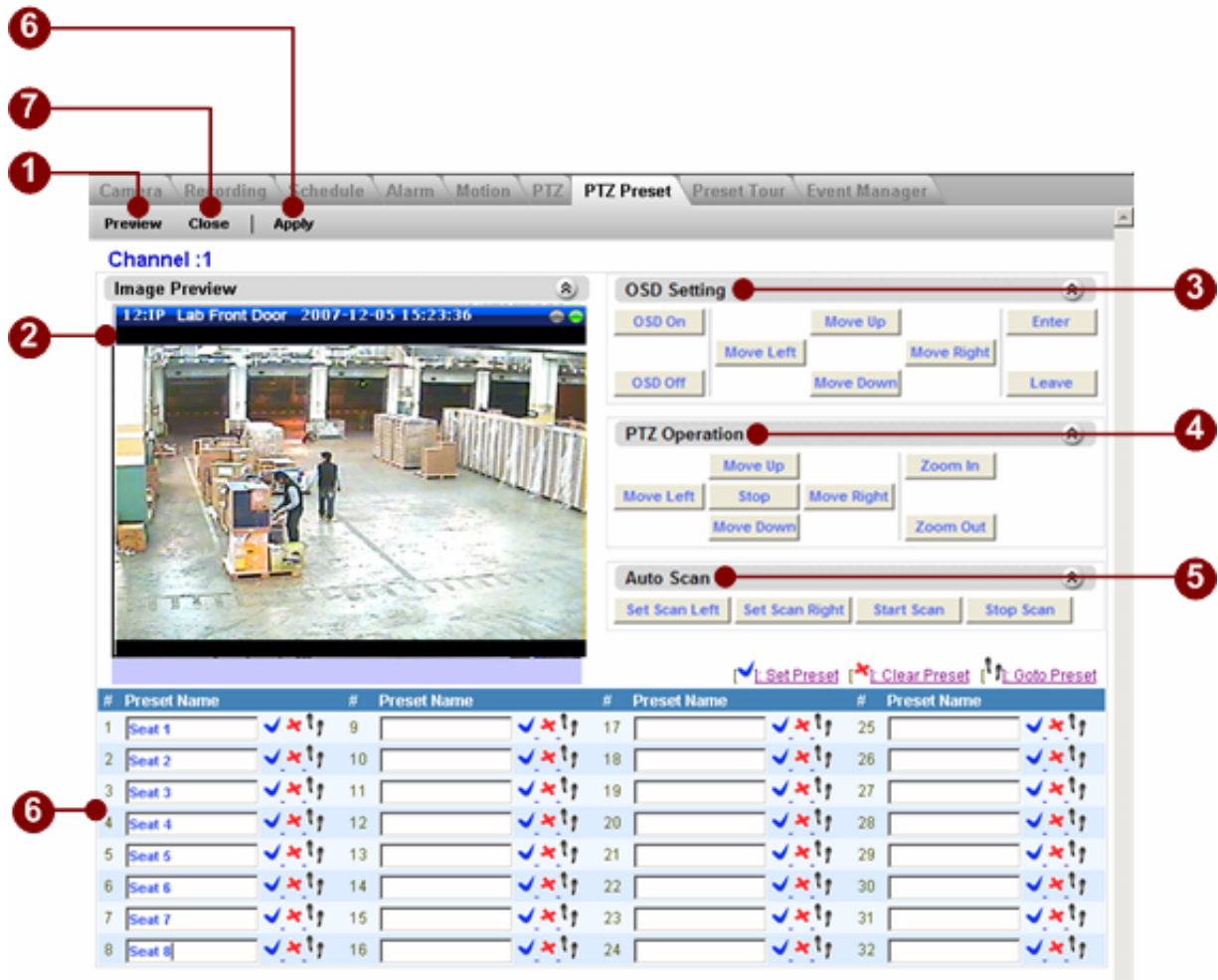


Figure 7-36 PTZ Preset

1. **Preview Button:** Click this button to start to preview the camera.
2. **Preview Screen:** User can see the camera preview here.
3. **OSD Setting Control Panel :** In this panel, user can open the camera OSD and setup OSD settings.
4. **Auto Scan Control Panel :** In this panel, user can setup the auto scans of this speed dome.
5. **Preset Control Panel :** In this panel user can setup preset points, enter preset names, go to preset points and delete preset points.
6. **Apply button:** Click this button to save the settings
7. **Close button:** Click this button to stop previewing current camera in live preview window



IMPORTANT: Under Auto Scan function, the direction and position of Scan Left and Scan Right is from IP Speed Dome's point of view.

Preset Tour

In previous section of [PTZ Preset], user can set preset points. In this section, user can let system to tell speed dome to go to selected preset points in programmable order and dwell at each preset points for programmable time.

NOTE: the previous section [PTZ Presets] must be setup first before user can select them into preset tour in this section.

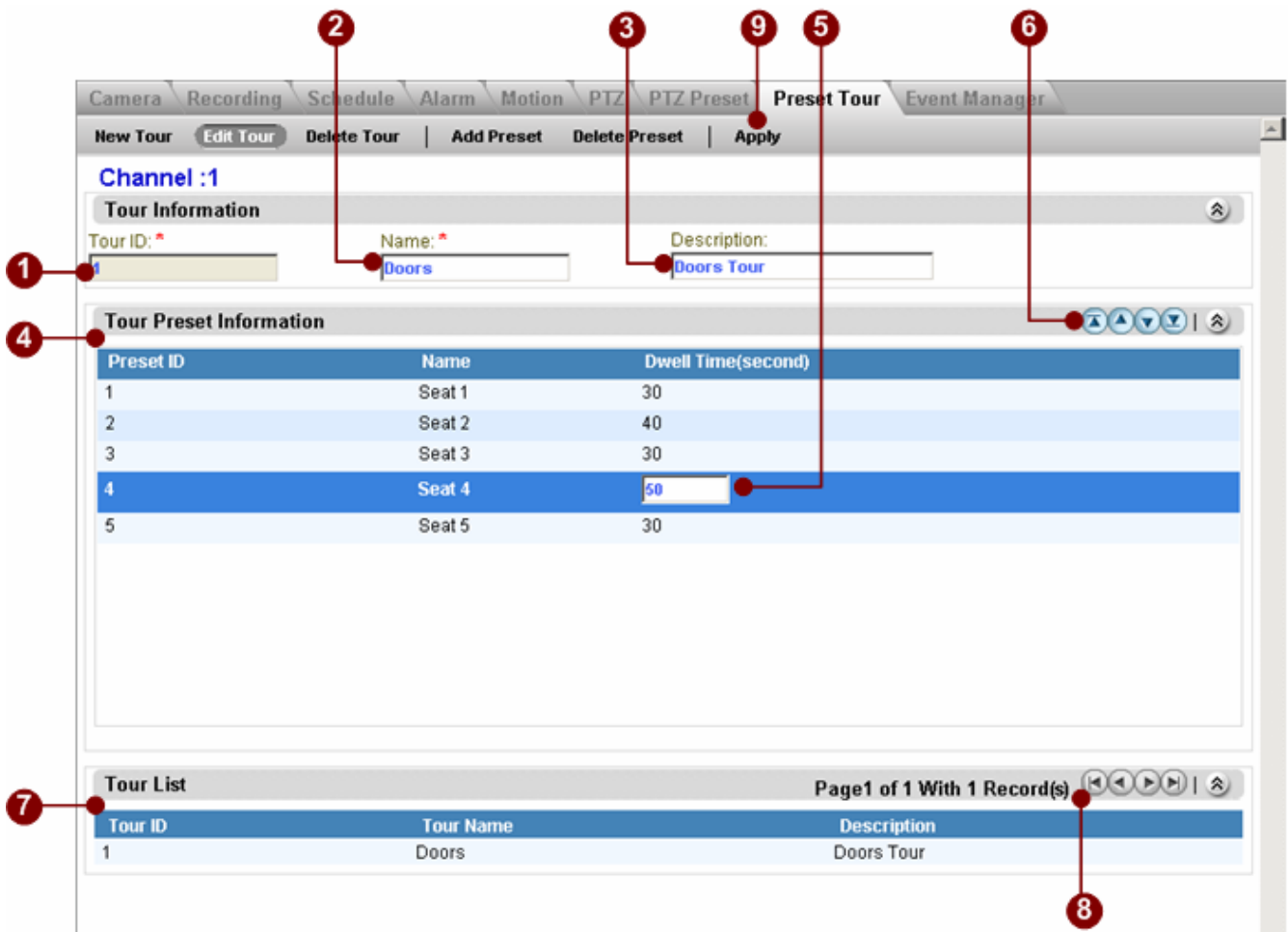


Figure 7-37 Preset Tour

1. **Tour ID:** Each preset tour has an unique preset tour ID stored in the system. The ID column is entered automatically by the system
2. **Name:** Enter the name of this preset tour
3. **Description:** Enter the description of this preset tour
4. **Preset List:** User can see all current preset list here.
5. **Preset Dwell Time Setting:** Setup the dwell time of each preset points
6. **Preset Sequence Control Panel:** User can use it to move the sequence of the view layouts

7. **Tour List:** User can see all the existing tours here.
8. **Control Panel of Tour list:** User can use this panel to switch between pages of tour list.
9. **Apply** button: Click this button to save the settings



NOTE: Default Dwell time is 30 seconds. Please don't set this value to one that is smaller than 15 seconds.

Event Manager

Event manager is for NVR to take actions when there's an event. Example: NVR can start to record images when the motion detection of the camera is triggered. To setup event manager, user needs to

1. First: Define the event that triggers event action
2. Second: Setup the event actions taken when there is an event.

Event type This section lets user selects which event will trigger event actions. Also user can select what event action to take when there's an event.

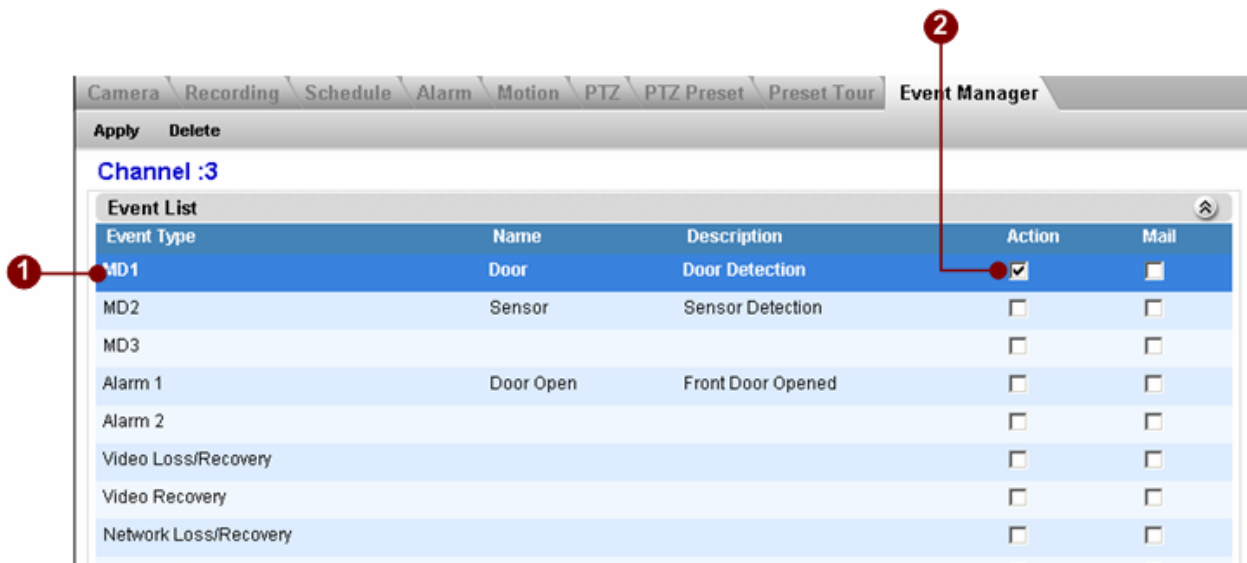


Figure 7-38 Action Setup

1. **Event type:** User can see the list of event type here.
2. **Enable Action:** Click to select which action to take upon such

Event Actions

This section lets user selects which action to take upon event.

The screenshot shows a configuration window for event actions. It features a main 'Action' section and a 'Notification via E-Mail' section. The 'Action' section is expanded and contains several options, each with a checkbox or radio button and associated settings. Red callout numbers 2 through 17 point to specific elements: 2 points to the 'Action' checkbox; 3 to the 'Snapshot' checkbox; 4 to the 'Trigger DO 1' checkbox and its 'Seconds' input; 5 to the 'Trigger DO2' checkbox and its 'Seconds' input; 6 to the 'Beep for' radio button and its 'seconds' and 'times' inputs; 7 to the 'Play Audiofile for' radio button and its 'times' input; 8 to the 'Audio File' text box containing 'C:\WINDOWS\Media\ding.wav'; 9 to the 'Dont Beep' radio button; 10 to the 'Hot-Spot Window Dwell Time' radio button and its 'seconds' input; 11 to the 'Pop-up Window Dwell Time' radio button and its 'seconds' input; 12 to the 'None' radio button; 13 to the 'PTZ Command' checkbox; 14 to the 'Channel' dropdown menu showing '1-Warehouse Gate' and the '[PTZ] - Goto Preset' dropdown showing '4-Seat 4'; 15 to the 'Upload snapshot to FTP' checkbox; 16 to the 'Execute Command' checkbox; and 17 to the 'Execute Command' text box containing 'C:\Alert.exe'. The 'Notification via E-Mail' section is currently unchecked.

Figure 7-39 Action Setup

2. **Action Selection:** Toggle Action selection.
3. **Snapshot:** Click to enable / disable Snapshot when this event occur
4. **Trigger DO1:** Click to enable / disable DO1 when this event occur and enter the period of the DO1 to be triggered..
5. **Trigger DO2:** Click to enable / disable DO1 when this event occur and enter the period of the DO2 to be triggered..
6. **Beep:** Click to enable / disable NVR to Beep upon event. User can also select how many times does it beep and the duration of each beep.
7. **Play Audio File:** Click to enable / disable NVR to play your desired audio file for programmable times.
8. **Audio File Path:** Enter the path of the audio file to be played.
9. **Don't beep:** Click to disable beep function of NVR.
10. **Activate Hot-Spot Window:** Click to enable / disable the video of the camera to be displayed on Hot-Spot window upon event. Also, user can select the duration for video to be displayed on the Hot-spot window.

11. **Activate Pop-Up Window:** Click to enable / disable the video of the camera to be displayed on a Pop-out window upon event. Also, user can select the duration for video to be displayed on the Hot-spot window.
12. **None:** Click to disable active Pop-up window and Hot-Spot window.
13. **Enable PTZ Command:** Upon event, NVR can move specific camera to specific presets. Click this to enable this function.
14. **Camera Channel and Preset number:** Select which camera and which camera presets to go to.
15. **Upload Snapshot File to FTP Site:** Click to enable NVR to upload FTP to a FTP site upon this event.
16. **Enable Command :** Click to enable NVR to execute a certain command upon this event. This is a very power function. User can use it to integrate NVR's event handling with other programs.
17. **Command File Path:** Enter the path of the command to be executed upon event.



IMPORTANT: Options in channel and preset are set in PTZ setting.

Mail Notification Setup

This section lets user setup the E-mail notification.

Notification via E-Mail

Admin Alex White Andrew Davis Colin Robinso

Daniel Thomas Jack Jones Jackson Miller Jacob Smith

James Anderson Jordan Harris Matthew Williams Owen Jackson

Ryan Johnson Thomas Thompson William Taylor

Mail To

Subject:

Message:

Attach Snapshot

Figure 7-40 Mail Notification Setup

1. **Notification via E-Mail:** Toggle selection to send notification via mail or not
2. **E-mail receiver:** Click to select which user for NVR to send E-mail notification upon this event. All these E-mail accounts are from the user of the NVR.
3. **Mail Subject:** Click to select the Mail subject upon event.
4. **Mail Message:** Click to select the message of the E-mail upon event.
5. **Attach Snapshot File :** Click to select whether to send Snapshot in the E-mail upon event.



IMPORTANT: Attach Snapshot option can be enabled when Action and Snapshot are selected

Map Setup

This chapter teaches user how to configure the E-maps to be displayed in the Active Map program. Active MAP is a very user friendly interface for guards to easily control surveillance areas.



IMPORTANT: Map Setup only valid when NVR Workstation running on the same machine as NVR Server. If user is running NVR Web Client or NVR Workstation running on different machine than NVR Server, Map Setup button and function will be hidden and disabled.



TIP: Please use JPG or GIF for map format. This file also need to locate in NVR Server.

Map Manager

This section tells user how to setup a e-MAP. E-map's setting is based on camera groups. Only cameras within the same camera group can be displayed on the same E-map. Before user starts to edit the E-map, be sure to select a camera group first.

Add a New Map

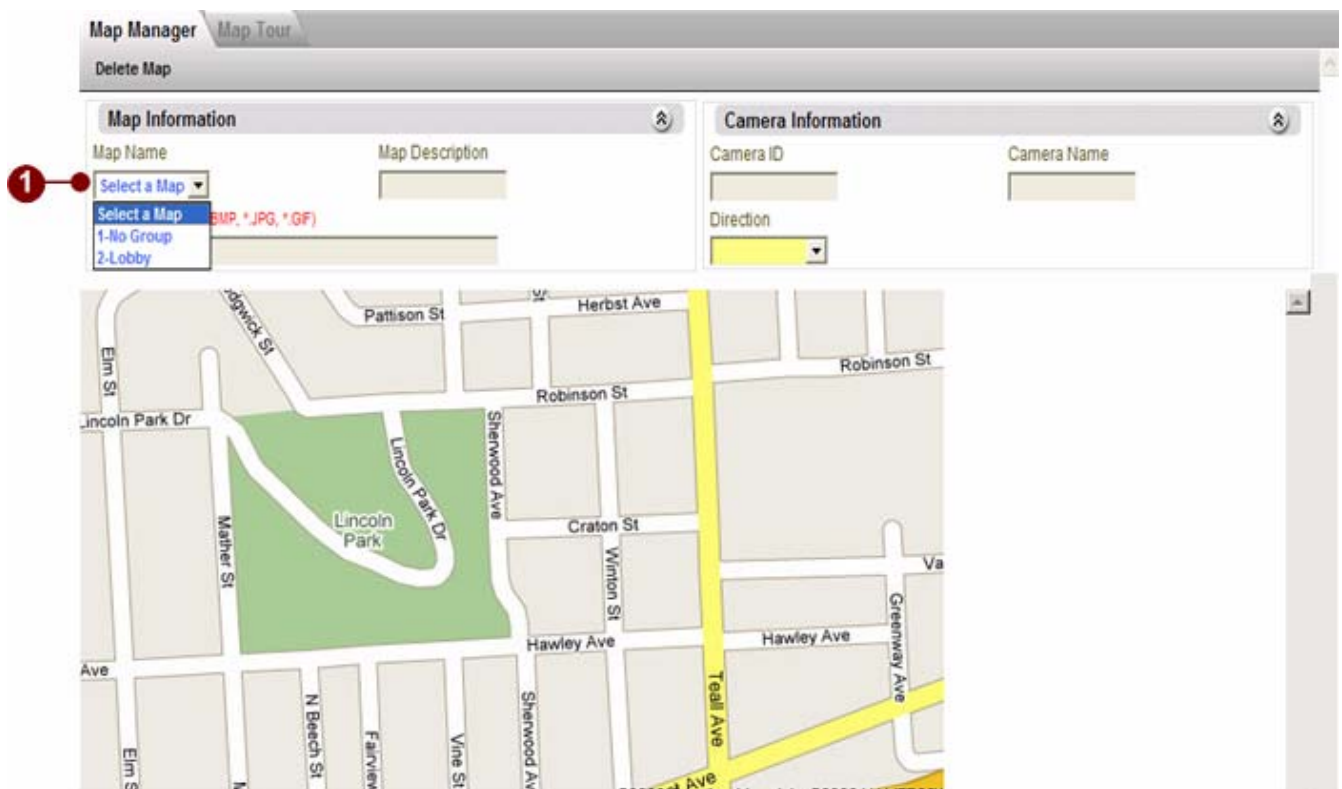


Figure 7-41 Add a new Map

1. **Map Name:** By clicking the Map Name, it displays a list of valid Camera Group.



IMPORTANT: Each Map maps to one Camera Group. In other word, the number of camera group is the same as the number of Map

Add Camera / Delete Camera

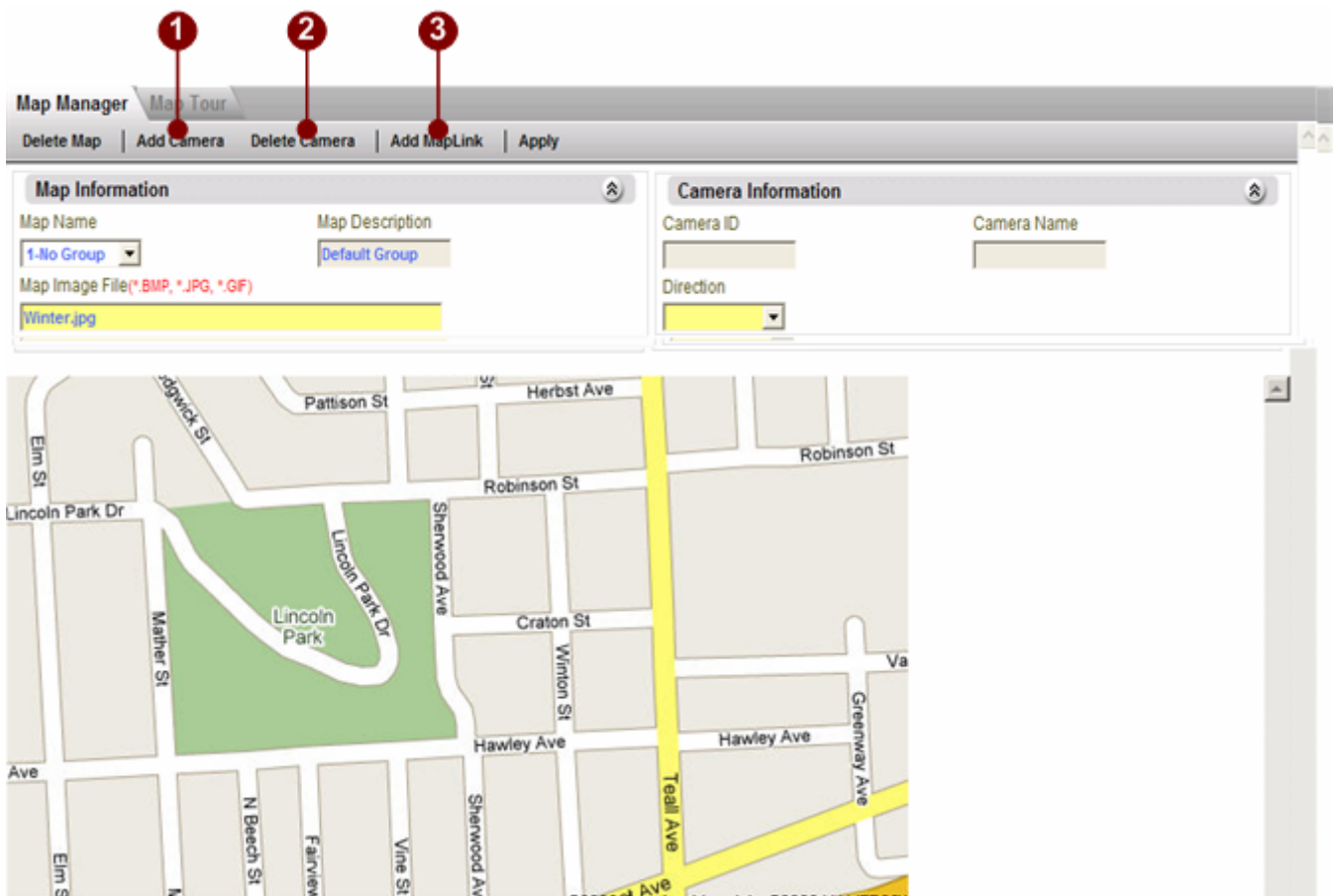


Figure 7-42 Add / Delete Camera, Add Map Link

1. **Add Camera:** Add camera to current map
2. **Delete Camera:** Delete camera from current map
3. **Add MapLink:** Add a map link that links to another map

Add Camera Dialog Box

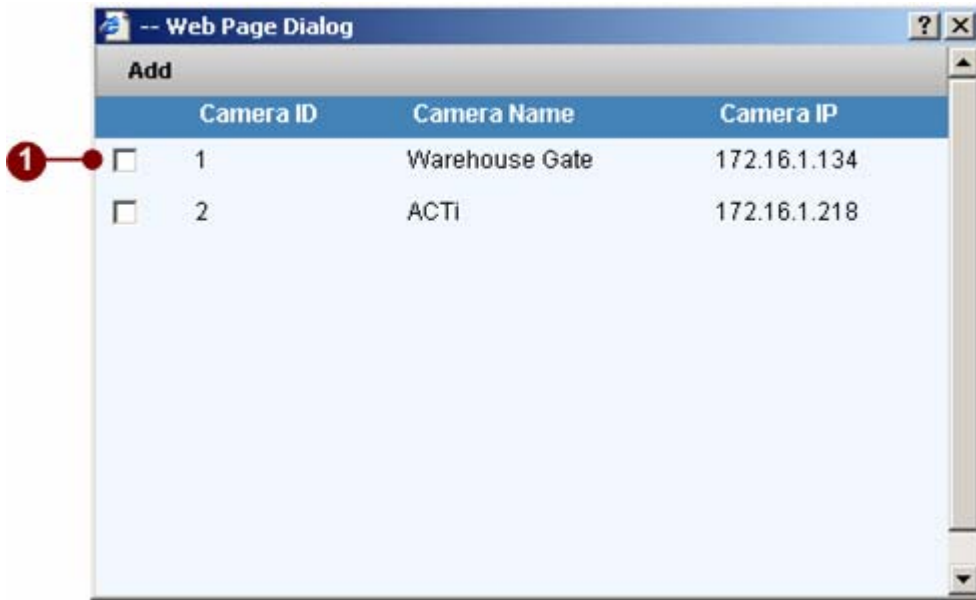


Figure 7-43 Add / Delete Camera Dialog Box

1. **Toggle Selection:** Click to select / de-select the camera into current map



IMPORTANT: This dialog box only displays the cameras that belongs to the same camera group (or map).

Add MapLink Dialog Box

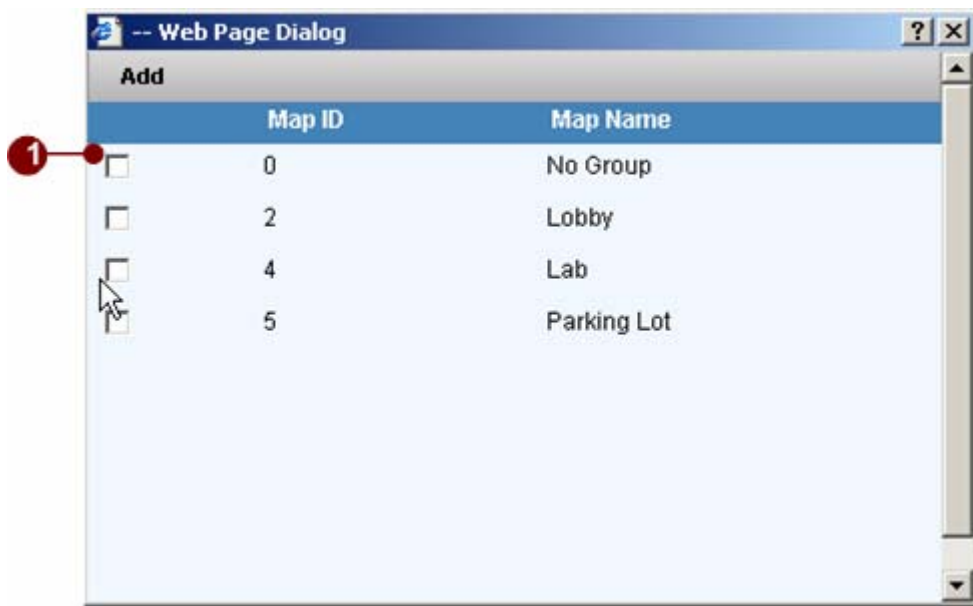


Figure 7-44 Add / Delete Camera Dialog Box

1. **Toggle Selection:** Click to select / de-select the map link into current map.



IMPORTANT: The listing in this dialog box is the listing of valid camera group with map settings already.

Map Management

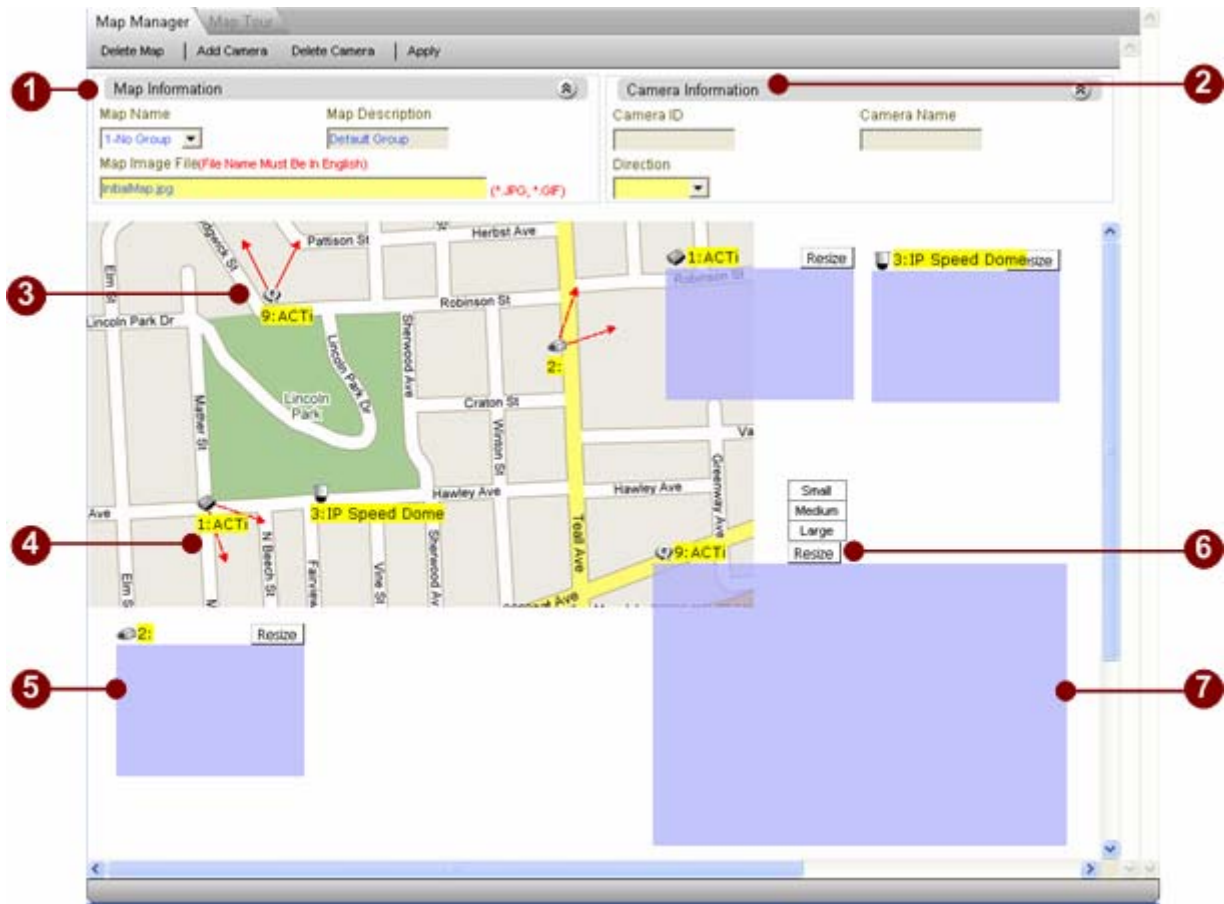


Figure 7-45 Map Management

- 1. MAP information Panel:** In this panel user can find
MAP name: This is based on the name of the camera group.
MAP description: This is based on the description of the camera group.
MAP image file: Click the column to select the MAP image user wish to use for this E-map.
Please use GIF or JPG file format
- 2. Camera Information Panel:** User can find
Camera ID: The ID of the camera user selected
Camera Name: The name of the camera user selected
Camera Shooting direction: Click to select the camera shooting direction shown on the Map.
- 3. Camera Icon:** Displays the camera icon. User may drag the icon and move to any place of the canvas in the map.

4. **Camera Shooting Direction:** User may simply click and drag on the direction icon and move the direction to the correct angle.
5. **Camera Preview Window:** Drag the camera preview window to any place in the E-map.
6. **Resize button:** User may set default display window size.
6. **Resized Preview Window:** New preview window size



NOTE: User can drag and drop to change direction icon, just drag the area near camera icon.

Map Tour

This chapter teaches user how to configure the E-map tour. A E-map tours enable the NVR to automatically switch between selected E-maps and stay for a programmable time. This can be very powerful for Guards to monitor many E-maps.

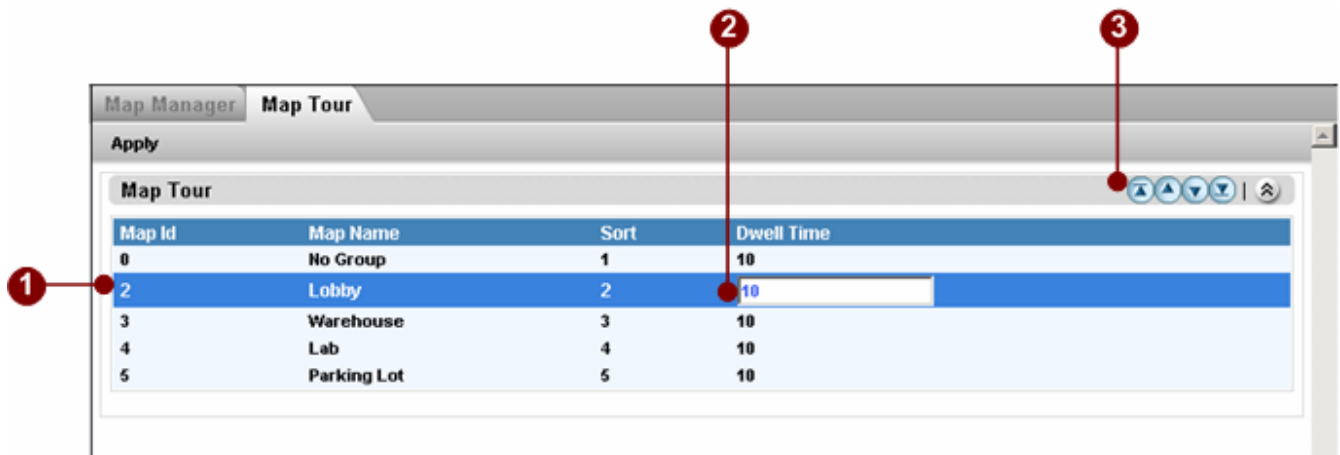


Figure 7-46 Map Tour

1. **E-map List in the MAP tour:** User can see current e-map list to be switched between in a MAP tour.
2. **Dwell Time:** Click to enter the dwell time of each E-map during MAP tour.
3. **Panel control of the E-map sequence:** Use this panel to control the sequence of the MAP tour.
4. **Apply** button: Click the apply button to save the settings.



NOTE: Default Dwell time is 30 seconds. Please don't set this value to one that is smaller than 15 seconds.