Software
IP Video Control Center V1.1
User's Maunal

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1 Getting Started

Recommended System Requirements

Mininum recommended system requirement for IP Video Control Center include:

CPU	Pentinum 4 2.4GHz and above
Hard Disk	40 GB or above
Memory	256 MB or above
Operating System	Windows XP / Windows 2000 with SP4 or above
Required Utilities	FFDShow, DirectX 9.0b or later hardware acceleration
Video Resolution	SVGA or XGA with 1024x768 resolution, 32-bit color

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.

NOTE: Required utilities can be accessed in the bundled CD.

Start IP Video Control Center

To start IP Video Control Center™, double-click the IP Video Control Center icon on the desktop.

IMPORTANT: To avoid problems and conflicts in the video subsystem, run only one instance of IP Video Control Center at one time.

Exit IP Video Control Center

To exit IP Video Control Center™, click the button or hit **ESC** key.

Figure 1. Exit IP Video Control Center

Check IP Video Control Center Version

Figure 2. Check IP Video Control Center Version

1. **Click on the Logo**  **to check version**
2. **About US Dialog Box**
3. **Version Number**
4. **Released Date**

2 IP Video Control Center User Interface

IP Video Control Center is designed with a user-friendly interface, and deployed with minimal training.

Understaing the Preview Screen

IP Video Control Center preview screen is consist of several parts.

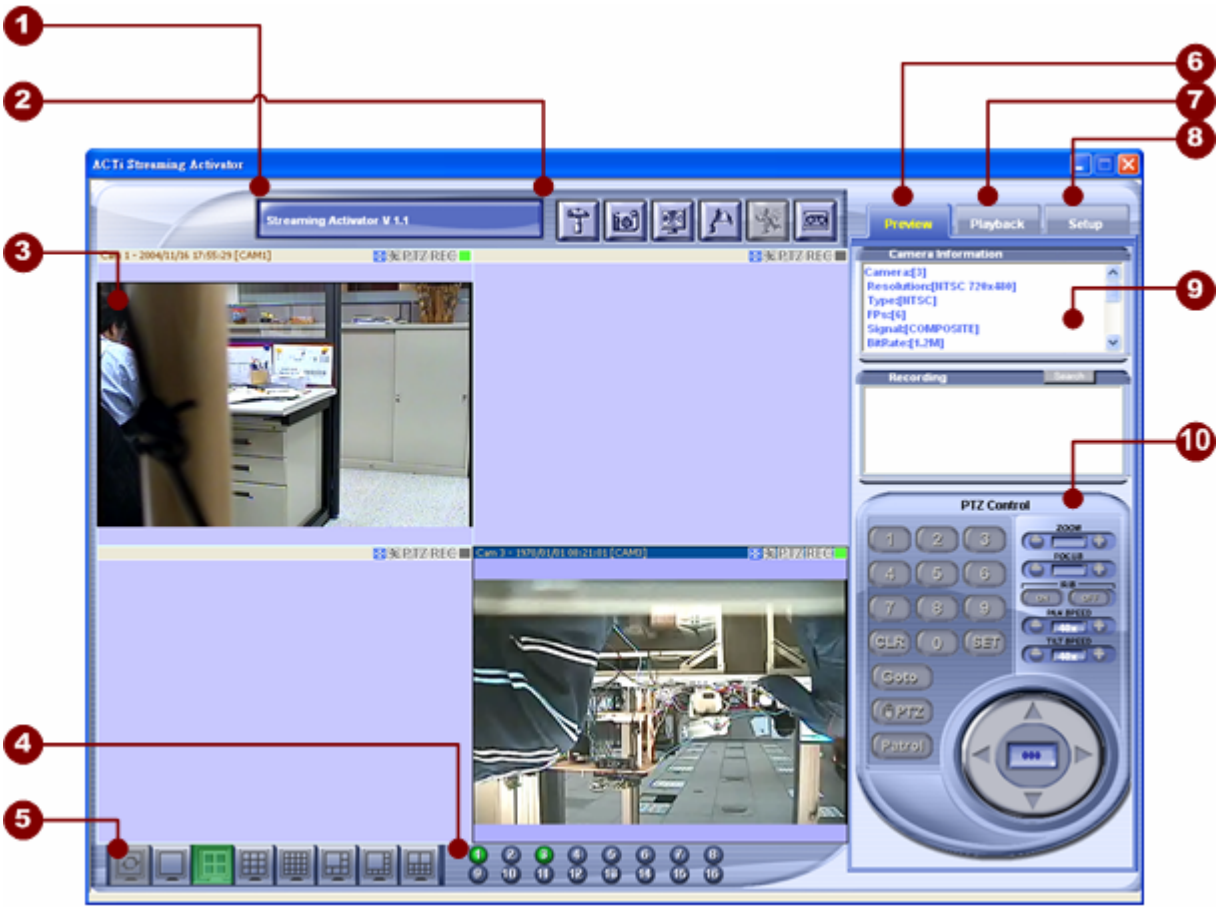


Figure 3. IP Video Control Center Preview Window

1. **IP Video Control Center version**: This panel displays related information on the IP Video Control Center version number.
2. **Active Media Manager**: This panel opeataes on the active media window.
3. **Media Window**: This window links to the media source, including a live video stream

from network or video stream from file.

4. **Media Quick-launch Button**: Indicates the listing of connected media source; by clicking the button, the seleted media source will be activated.
5. **View Manager**: Change different view template.
6. **Preview Panel**: Change to preview mode.
7. **Playback Panel**: Change to playback mode.
8. **Setup Panel**: System configuration and setups.
9. **Camera Information**: Lists the information about the camera Selected.
10. **PTZ Control Panel**: Sends PTZ command to connected device.

Understaing the Playback Screen

IP Video Control Center playback screen is consist of several parts.

Figure 4. IP Video Control Center Playback Window

1. **Thumbnail**: The window lists the thumbnail files user captured.
2. **Bookmark**: This window lists the bookmark files user defined.

> **TIPS:** Alarm/Event includes **Motion Detection Event ➔** , **Digital I/O Event ➔** I/O, **Alarm ➔** , **Bookmark Event ➔** .

3. **Media Playback Panel**: Media playback panel contains normal and advanced operation over media file, including play forward, rewind, play speed, frame-by-frame play forward and rewind.

Operate on Preview/Playback Window with Mouse

Click Left Mouse Key: Activate Window

This action will activate the preview or playback window.

Click Right Mouse Key: Enable / Disable Toolbar

This action will enable or disable the preview window toolbar.

Figure 5. Enable / Disable the toolbar

1. **Enable the Toolbar**
2. **Disable the Toolbar**

Double Click Left Mouse Key: Enlarge Window

This action will enlarge the window or restore the enlarged window to its original size.

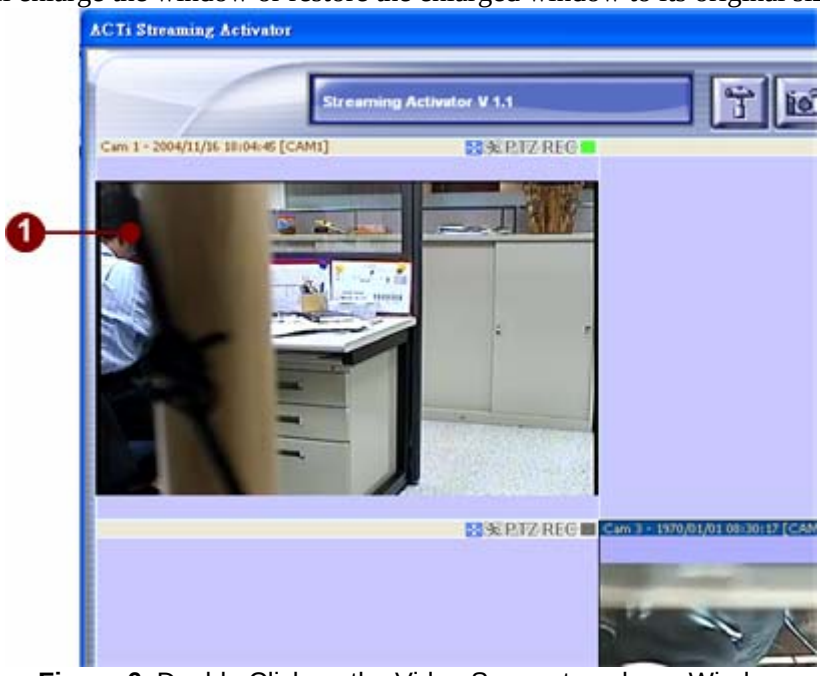


Figure 6. Double Click on the Video Screen to enlarge Window

1. **Click on the video screen to enlarge window**

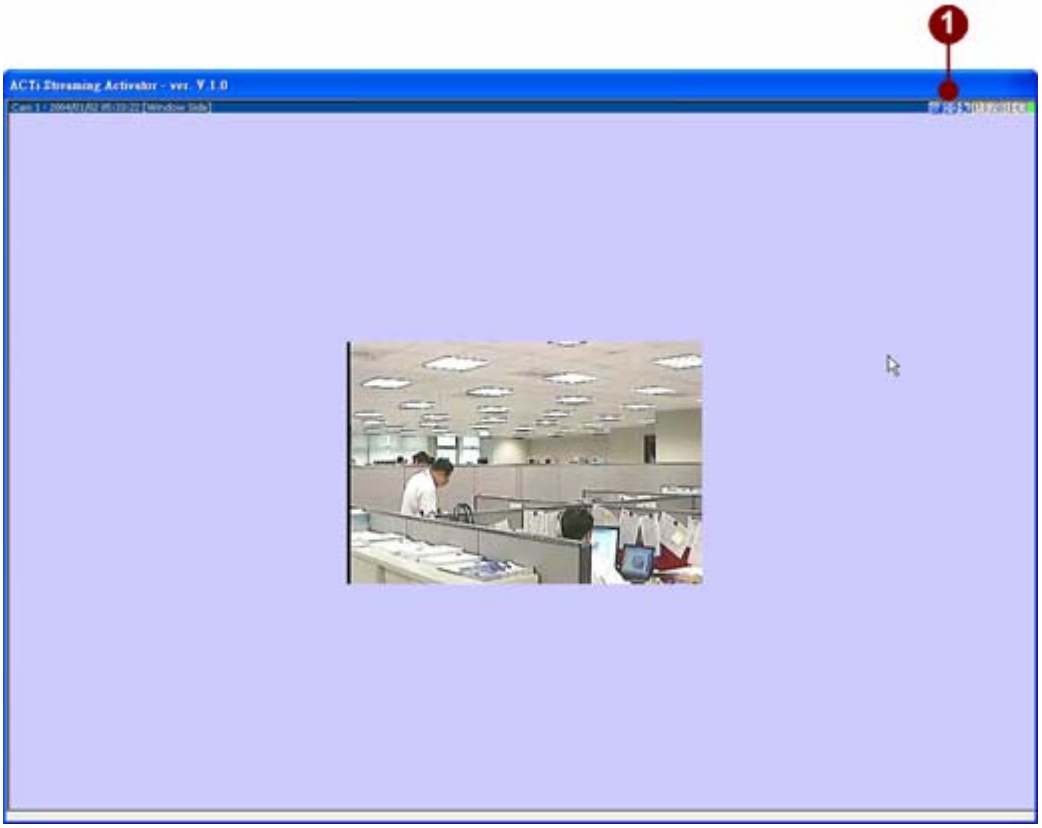


Figure 7. Enlarge Window

2. **Click on the stretch button to strech the video size to fit the window size**

Figure 8. Enlarge and stretched Window

IMPORTANT: When the preview window is stretched and enlarged, the CPU loading will be increased to decode the MPEG-4 stream.

3 Jump-Start IP Video Control Center

Before using IP Video Control Center, the user has to configure the necessary configuration in IP Video Control Center. This section starts with adding a camera.

Assign a camera to a preview window

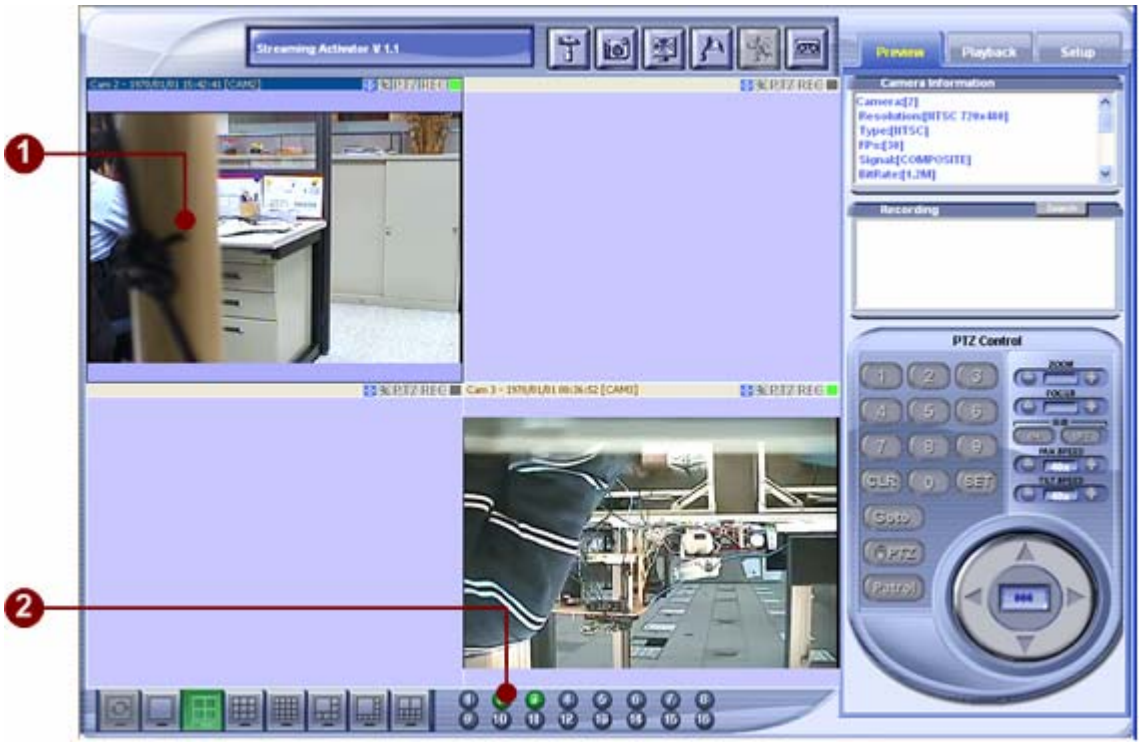


Figure 9. Select preview window and camera

1. Click a preview window
2. Click on the camera number

Camera Connection Status

To check if a preview is connected with a camera, one may check the camera connection status.

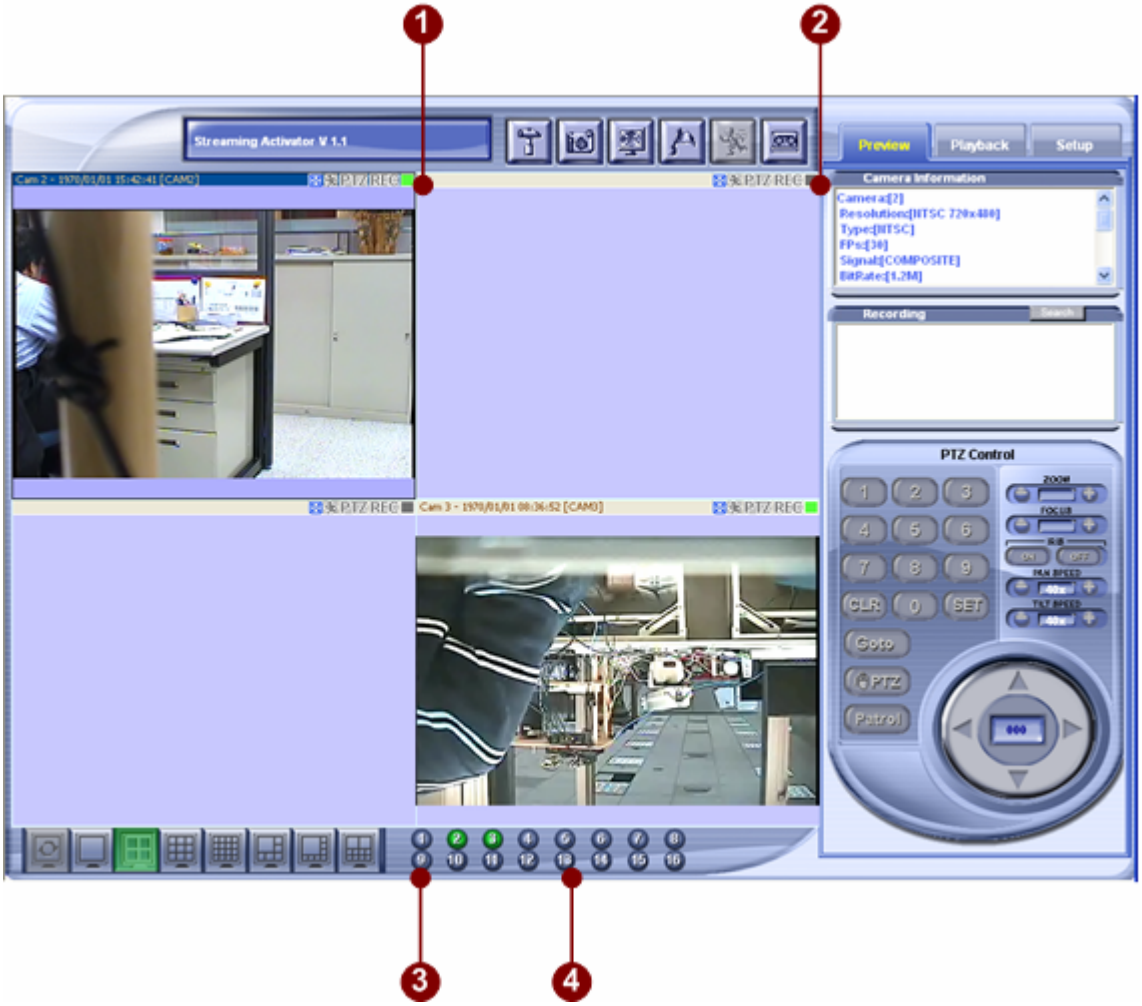


Figure 10. Camera Connection Status

1. indicates that the preview window is connected to a window
2. indicates that the preview window is not connected to a window
3. indicates that the preview window is connected to a window
4. indicates that the preview window is not connected to a window

Camera Disconnection Status

If network lose the preview window will show the message to indicate disconnection.

NOTE: System will try to reconnect to Video Server each 90 secs.

Figure 11.Message indicates Disconnection Status

Camera Video Lose Status

If Video lose the preview window will show the message to indicate video lose.

> **NOTE:** System will try to check video each sec.

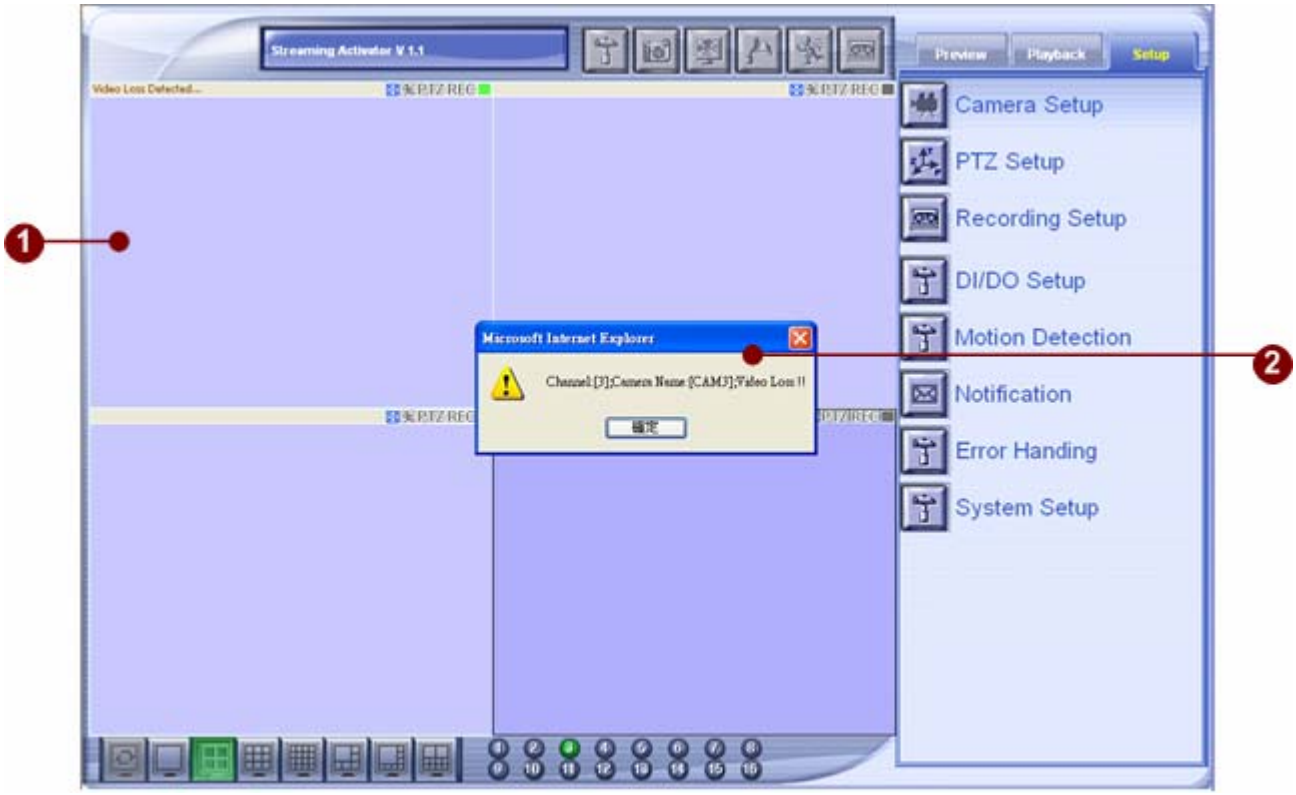


Figure 12.Message indicates video lose

1. Window in Video lose Status.
2. MessageBox indicates video lose.

Configure a camera

This section shows you how to configure the camera information.

Click Configure Camera Button

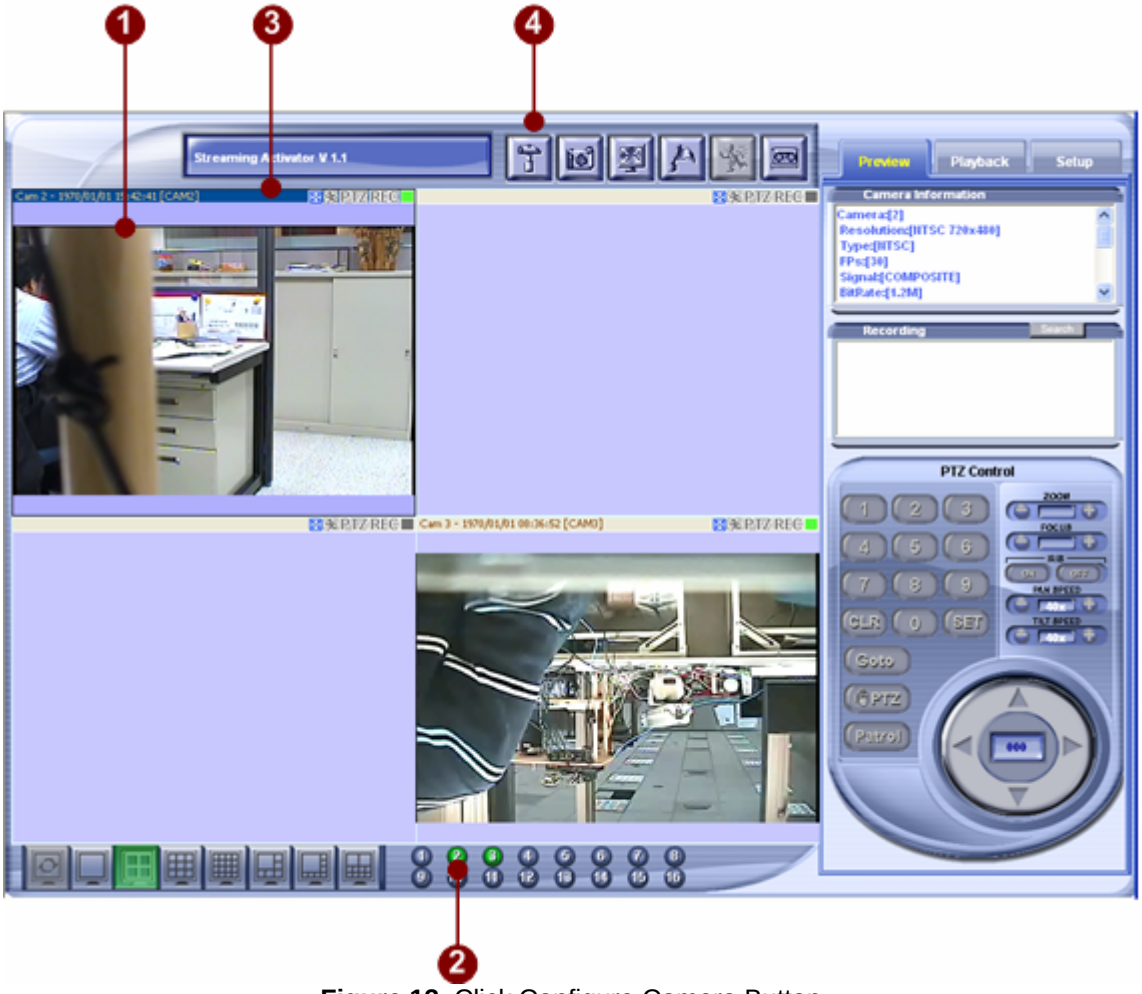
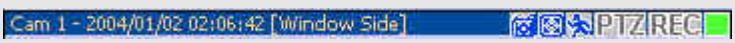


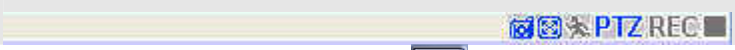
Figure 13. Click Configure Camera Button

1. Activate a preview window by click on the preview window
2. Click on the camera number  to activate the preview window
3. When the preview window is activated, the toolbar will be displayed in blue color

TIPS: Active preview window:



Non-active preview window:



4. Click on the Configure Camera button  to configure the camera information

TIPS: If no camera is selected, then a pop-up window will displayed and ask user to input camera ID.

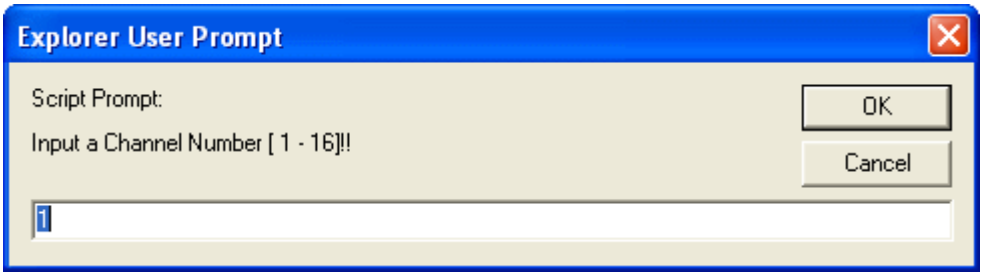


Figure 14. Input Channel Number to Setup

Camera Configuration

This chapter describes how to operate in a setup dialog box.

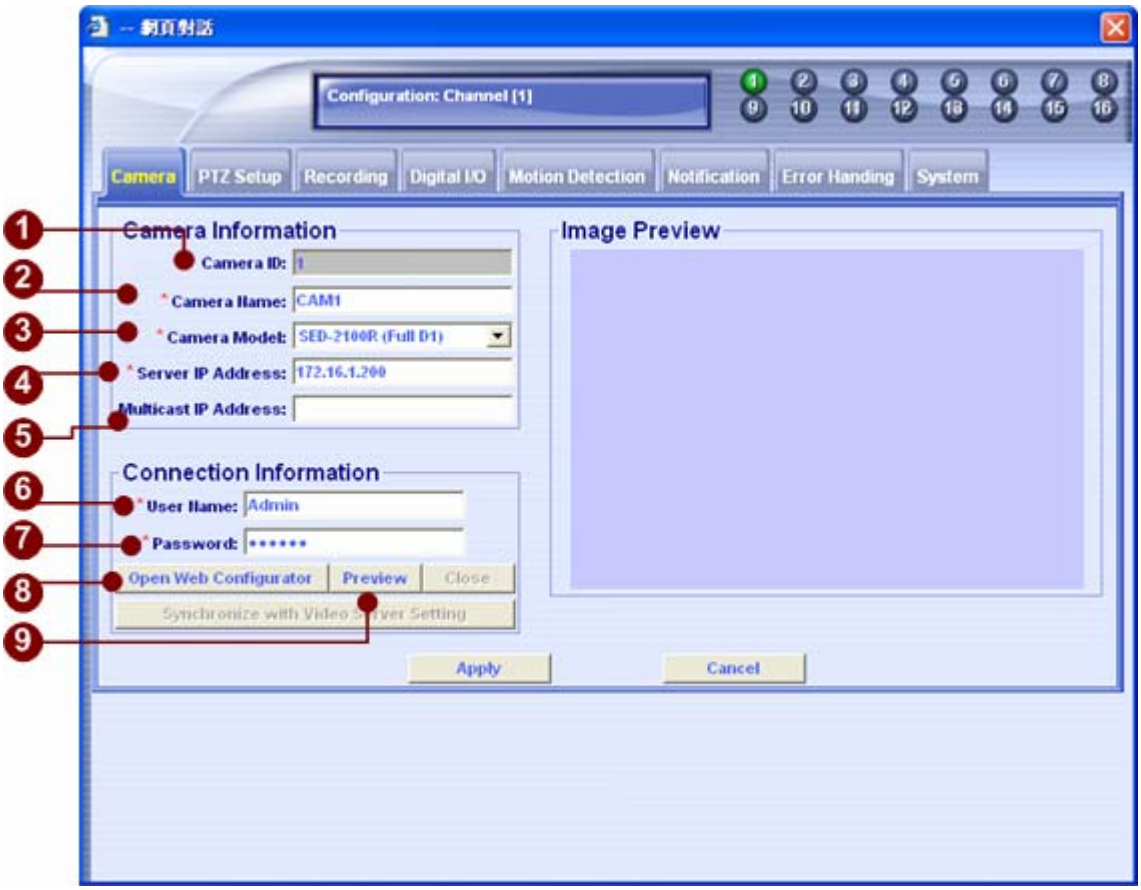


Figure 15. Camera Setup Diaglog Box

1. **Camera ID**: System will generates an unique ID for this camera. This ID is assigned the same channel number it is assigned.
2. **Camera Name***: Input a camera name or description to describe the camera.

> **NOTE:** The content of the camera name will be displayed on top of the preview media window.

3. **Camera Model***: Choose the camera model within a selection list; including:
   - **Video Server – D1 (Full-D1 Video Server)**
   - **Video Server - CIF (CIF Video Server)**
   - **IP Camera**
   - **IP Speed Dome**
4. **Server IP Address***: Connect to the video server with unicast (TCP) connection

NOTE: You may enter host name address in this field as well. Make sure the host name can be resolved by DNS (Domain Name Server) in your network environment. This operation can also be verified by using ping command:

```
C:\>ping hostname.company.com
```

5. **Multicast IP Address**: Subscribe to a multicast network to retrieve video packets.

NOTE: If Multicast IP address is entered without Server IP address, then the preview window can only perform preview function.

If Multicast IP address and Server IP address are keyed in, then the preview window can perform preview and Digital I/O and PTZ operations. The limit of concurrent connection is 15.

6. **User Name**: the account to be authorized by the video server
7. **Password**: the password to be authorized by the video server
8. **Open Web Configurator** button: click this button to open video server's Web Configurator directly
9. **Preview** button: click this button to see the preview window and adjust frame rate and video quality.

Figure 16. Preview Window Toolbar

Motion Detection Setting

1. **Enble Motion Detection**: Enable or disable the motion detection function
2. **Sensitivity**: Set the sensitivity level for the motion detection event. The level can be set from 1 to 100.

NOTE: When the motion detection function is enabled, the media window's MD indicator will display in blue color.

Figure 17. Motion detection indicator enabled

NOTE: When the motion detection function is actived, the media window's MD indicator will display in Red color.

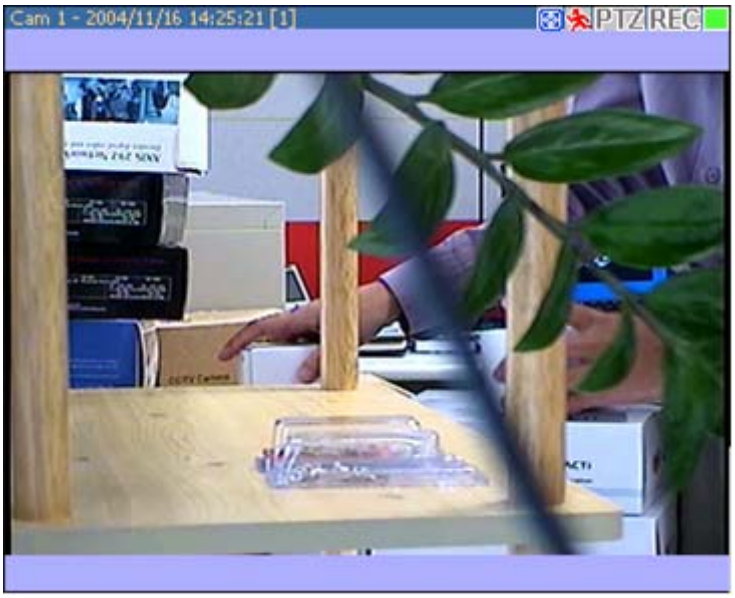


Figure 18. Motion detection indicator enabled

PTZ Control Setting

1. **Enable PTZ**: Enable or disable PTZ function

NOTE: When the PTZ function is enabled, the meia window's PTZ indicator PTZ will display in blue color. PTZ

2. **Baud Rate**: Select the baud rate to communicate with PTZ devices. The default value is set to 9600 bps.

3. **Protocol**: Pelco-P protocol is supported.

NOTE: Pelco-D protocol and other protocols will be supported in later updates.

Figure 19. PTZ Indicator On

Disconnect the camera

To disconnect the connection to the camera, click on the connection status button on the active preview window

Figure 20. Disconnect the camera

1. **Click on the connection status button**: Click on the connection status button to disconnect the camera. The preview will be terminated as well, and the connection status button will become .

4 Preview Mode

Preview Window

User may switch different preview mode by clicking on preview mode buttons.

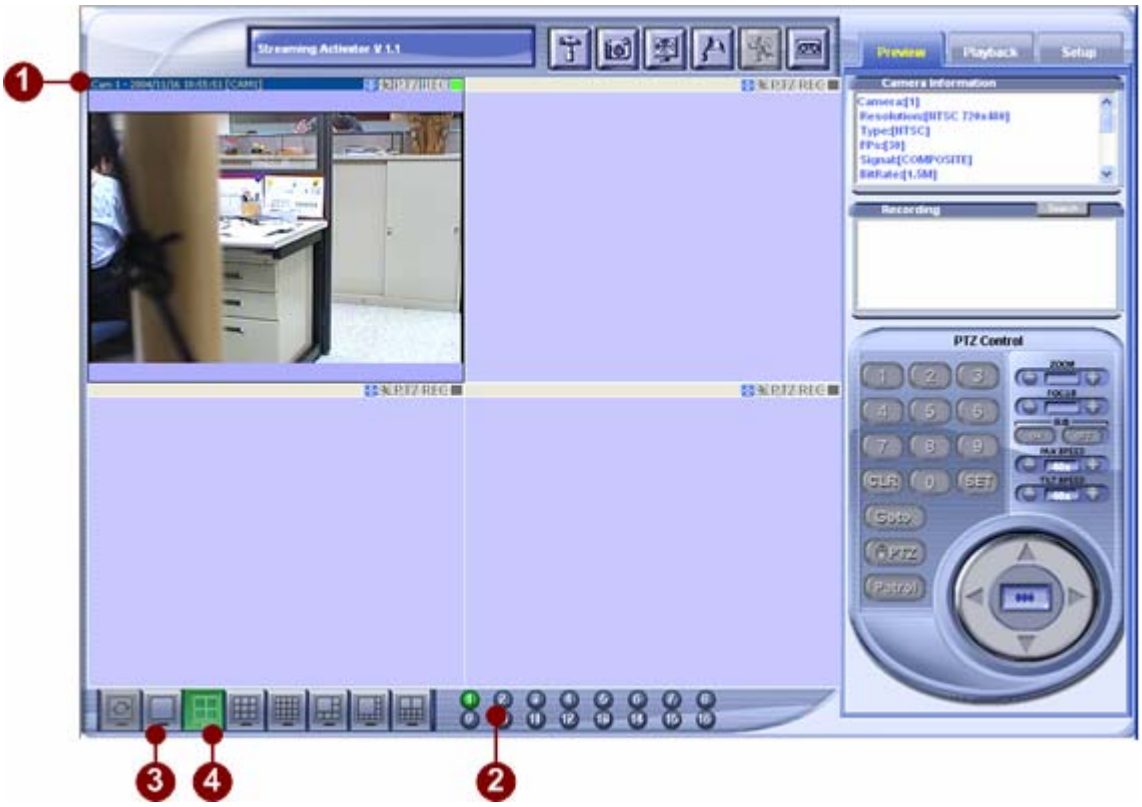


Figure 21. Preview Window Operation

1. When a channel is activated, the preview window will be displayed with **blue** title bar
2. The camera ID  will be displayed in **green** color 
3. Click on 1-channel preview  , IP Video Control Center will enlarge the active window to maximum size
4. Click on 4-channel preview  , IP Video Control Center will displasy 4-channel at the same time

Activate the Media Window

To opereate over a media window, you have to activate the media window first. The operations can be applied in the media window are: **Media Setup, Create Snapshot, Zoom Media Window, Motion Detection Settings, Create Bookmark and Recording**.

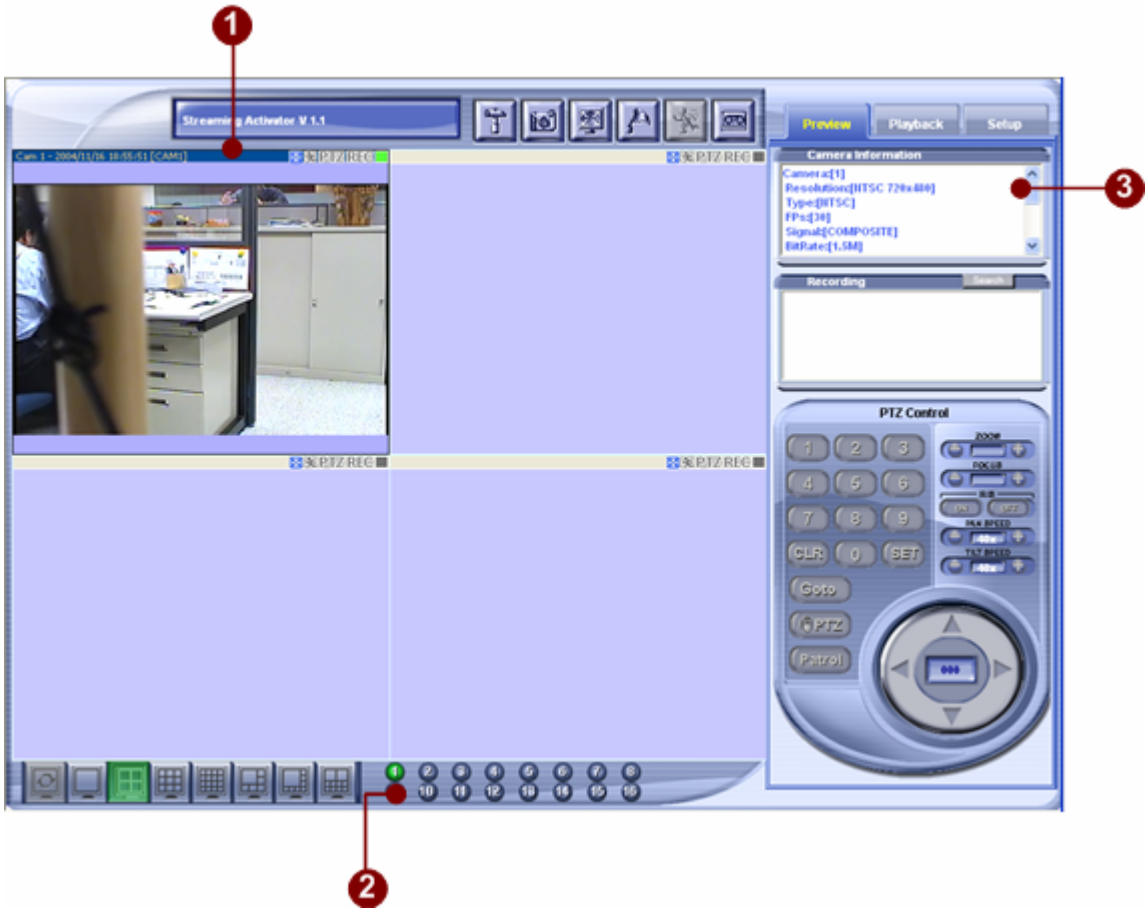


Figure 22. Activate a preview window

There are two ways to activate a media window:

1. Click on the media window in the video panel. When a media window is activated, the media window will be displayed with **blue** title bar
2. Click on the channel number in the "**Media Quick-Launch Button**", click the one with green light.  will bring up the video stream from connected camera.
3. **Camera Information Window**: This window displays current camera configuration, including camera ID, camera name, video resolution, FPS, etc.

Operations over preview window

Active Media Manager performs functions on the active media window.

TIPS: Click on the media window to activate that media source.

Figure 23. Active Media Manager

1. **Camera Setup**: Setup the camera-related information, including IP address, FPS, Bit-Rate, recording settings, etc.
2. **Create Snapshot**: Activator creates snapshot image on-the-fly. This will also creates a "**Manual-Thumbnail**" event to the system.

NOTE: Current snapshot images support **JPG, BMP, GIF** file format. The file location is configured in "Recording Setup" button.

3. **Toggle Full-screen Mode**: The active media window will be stretched up to the full window, when clicked a second time, the active media window will be reset to normal proportion of the video window.

NOTE: The stretched-up video will be distorted; it may not comply with correct proportion of original video setting.

4. **Create Bookmark:** Activator creates a bookmark at the current time stamp. User may search bookmark to locate the right time stamp of the video clip. This will also creates a "**Bookmark**" event to the system.

NOTE: Bookmark only works when the media window is recording.

5. **Motion Detection Setup:** Setup the motion detection parameters, including 3 regional motion detection areas.
6. **Toggle Recording:** Starts or stops recording manually. When the active window is recording, this button will become .

Preview Window

Media window is the essential to Activator system. Media window can be the live video stream from video server or the media file from the storage.

Media Indicator

Figure 24. Preview Window Indicators

1. **Camera ID**: Indicates current camera ID
2. **Digital Time Code**: Display the timestamp from the video server. This format is digital time code embedded in video stream.

> **NOTE:** Digital time code is embedded in the video stream, and can be applied as watermark of the video stream.

3. **Camera Name**: Indicates current camera name. This value is setup in the camera name in camera configuration by clicking 
4. **Create Snapshot Button**: Click this icon  to create snapshot immediately. The time code will also be print in the saved picture.

> **NOTE:** The snapshot image is stored in **JPG, BMP, GIF** format.

5. **Enlarge Screen Button**: Click this icon  to stretch and enlarge current window. After the window is enlarged, click this icon  to restore to its original size.

NOTE: You may also double-click on the left mouse key to enlarge the preview window. Another double-click on the left mouse key may restore the enlaged preview window to its original size.

IMPORTANT: When the preview window is stretched and enlarged, the CPU loading will be increased to decode the MPEG-4 stream.

6. **Motion Detection Indicator**: icon indicates that this camera is setup with motion detection function. Icon indicates that this camera is not setup with motion detection function. This value is setup in the camera name in camera configuration by clicking
7. **PTZ Indicator**: PTZ icon indicates that this camera is setup with PTZ control. PTZ Icon indicates that this camera is not setup with PTZ control. This value is setup in the camera name in camera configuration by clicking
8. **Recording Indicator**: REC icon indicates that this camera is recording. REC icon indicates that this camera is not recording.
9. **Connection Status Button**: icon indicates that this preview window is connected. icon indicates that this preview window is not connected.

NOTE: When click on this button, the connection to the camera will be closed.

Stretch Video Size to Fit Preview Window

Following methods may let users to enlarge the preview window:

- Click on the button to enlarge preview window
- Double click on the left mouse key

Figure 25. Stretch Video Window to Fit Preview Window

IMPORTANT: When the preview window is stretched and enlarged, the CPU loading will be increased to decode the MPEG-4 stream.

Following methods may let users to restore the preview window to its original size

- Click on the button to enlarge preview window
- Double click on the left mouse key

Capture Scrneeshot

Following method may let users to capture screenshots:

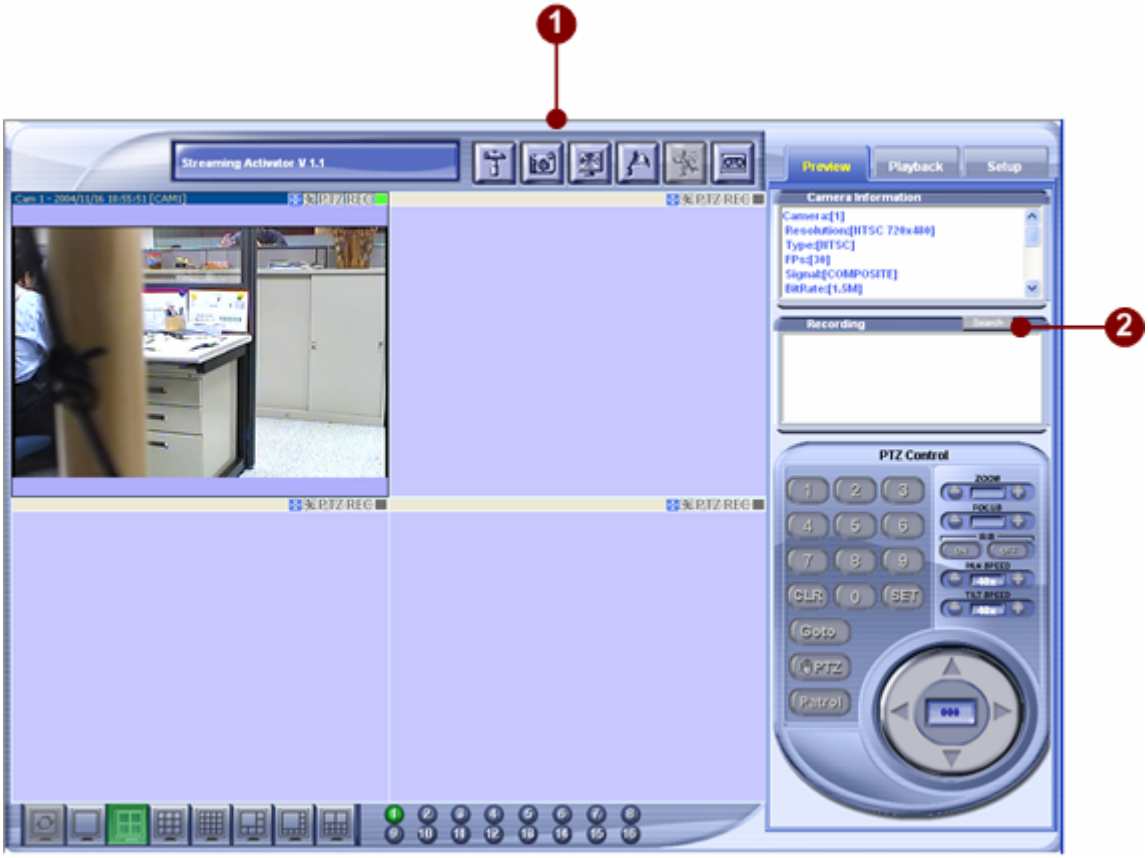


Figure 26. Capture Screenshot

1. **Capture Screen Button**: Click on the  button to capture active preview window into a image file.
2. **Event List**: Event list will display the screen-capture event as **Manual-Thumbnail** event.

IMPORTANT: If you want to capture the original size, click  button or click  button or double click on left mouse key to enlarge the video size before capture the screen shot.

Arrange preview window with cameras

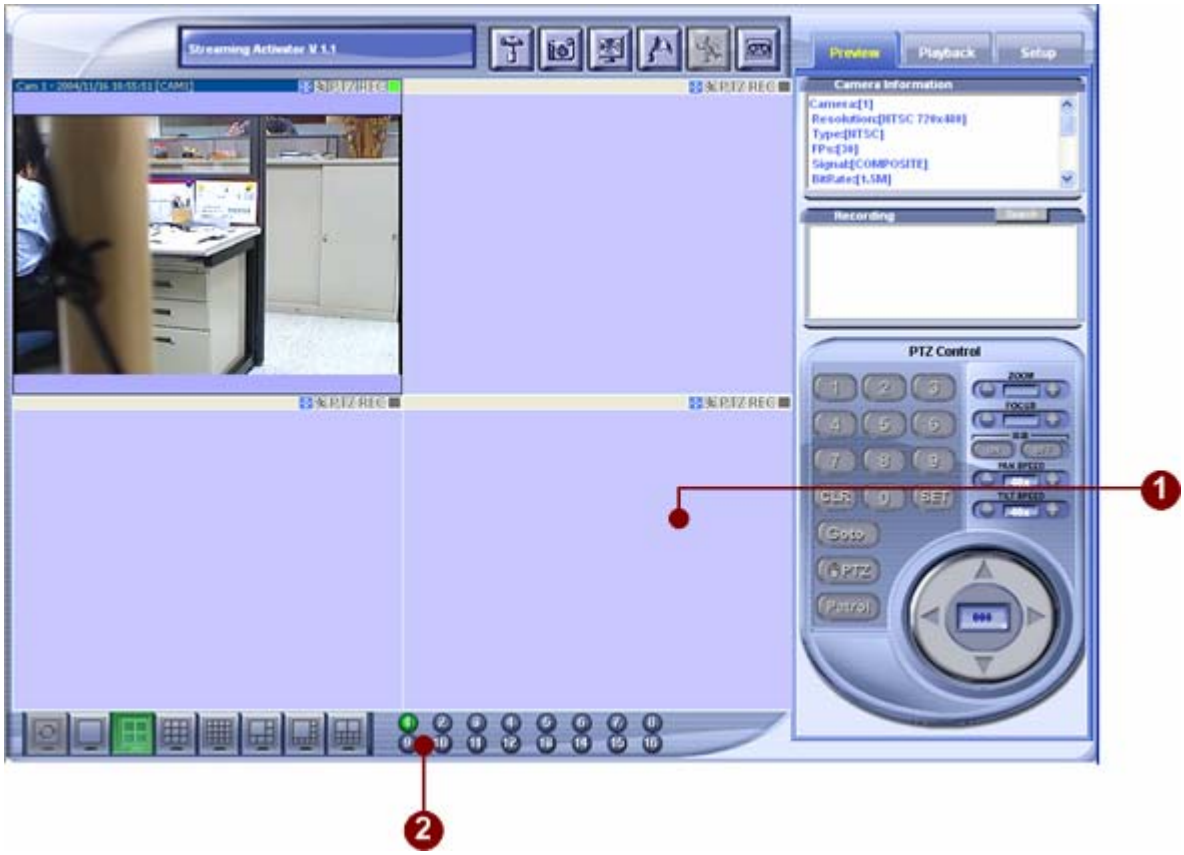


Figure 27. Assign a camera to a preview window

1. **Select a preview window**: Use mouse to select a preview window.
2. **Select the camera**: Then select the camera to be assigned to the preview window

NOTE: If user assigns a camera to a preview window that is already connected with a camera, then that preview window will be re-connected to the new camera ID assigned. The previous camera will still be connected without preview.

NOTE: If the camera has not been connected yet, eg. 3 , then the camera configuration page will be displayed for user to setup the camera configuration.

View Manager Panel

This section describes the preview mode available in preview functions.

Figure 28. Preview mode

1. **Patrol Preview Toggle Button:** To enable or disable patrol preview function. Click on this button  start patrol preview function, and the button will becomes  . Click on this button again to stop patrol preview function.
2. **1-window preview Mode**: Click on this button  to set the whole window with 1 preview window.
3. **4-window preview Mode**: Click on this button  to set the whole window with 4 preview window.
4. **Jump to Camera 1**: Click on this button  jump to a camera that is connected already. Camera 1 will be displayed in the active preview window with 1-window preview mode.
5. **Jump to Camera 4**: Click on this button  jump to a camera that is connected already. Camera 4 is not connected yet, a Camera Configuration setup dialog box will be displayed. Camera 4 will be displayed in the active preview window with 1-window preview mode.

PTZ Control Panel

Pan, Tilt, Zoom Operation

IP Video Control Center's PTZ control follows **Pelco-P** protocol. User may operate PTZ Control panel to operate the PTZ devices with Pelco-P protocol.

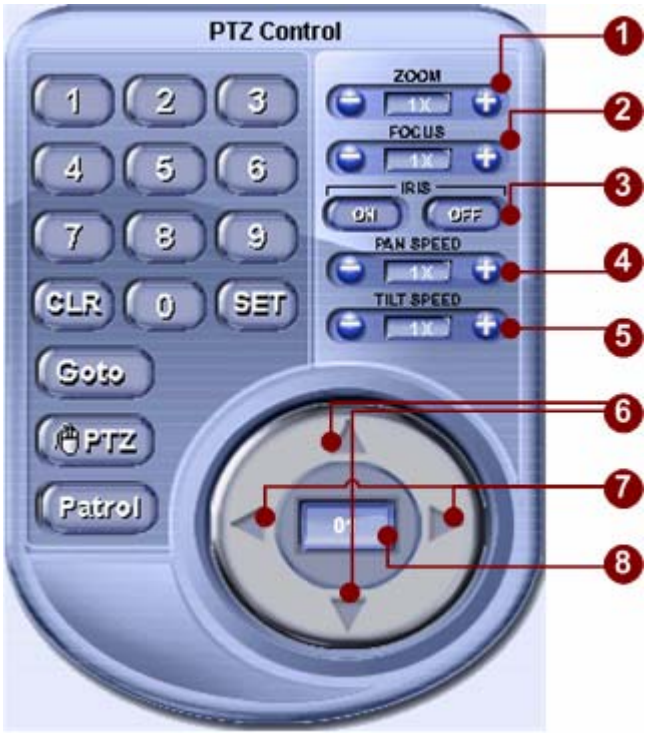


Figure 29. PTZ Control Panel

1. **Zoom function**: click to zoom in the view; click to zoom out the view
2. **Focus function**: click to sharpen the focus on the view; click to loosen the focus on the view
3. **IRIS function**: click to open the IRIS; click to close the IRIS
4. **PAN Speed function**: click to increase the speed of pan operation; click to decrease the speed of pan operation
5. **TILT Speed function**: click to increase the speed of tilt operation; click to decrease the speed of tilt operation
6. **Tilt operation function**: click to tilt up; click to tilt down
7. **Pan operation function**: click to pan right; click to pan left

8. **Camera indicator**: indicates current active camera ID

PTZ Preset Position Operation

IP Video Control Center's PTZ control has following functions on preset position operation:

- Save position
- Clear position
- Goto position
- Patrol on preset position
- Mouse PTZ function

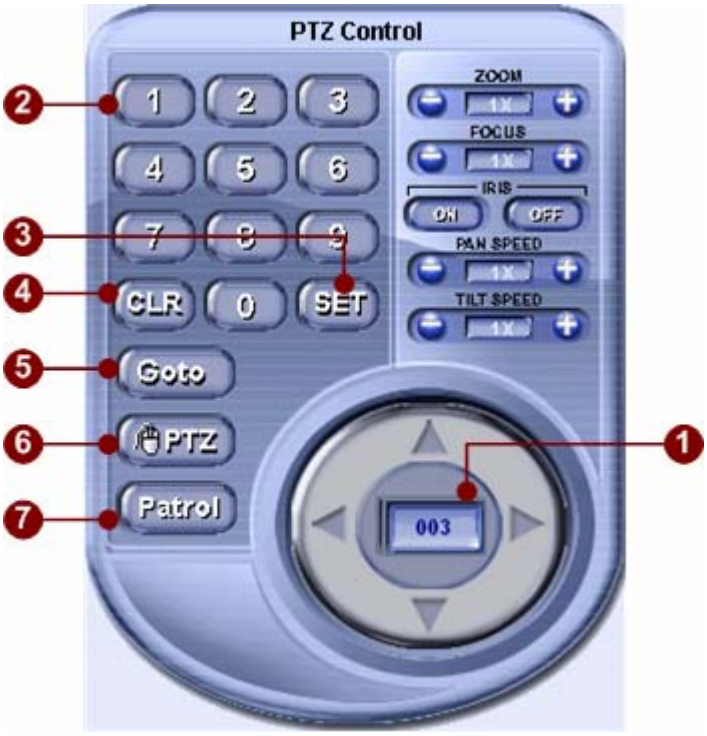


Figure 30. PTZ Control Panel

1. **Position Indicator**: indicates current position
2. **Key Pad**: click on the number key pad to set the position indicator. Position indicator are formed in 3-digit number.
3. SET **button**: save the position to the position indicator
4. CLR **button**: clear the position set in current position indicator
5. Goto **button**: goto the position set in current position indicator
6. PTZ **button:** toggles mouse PTZ mode. With mouse PTZ mode, user may click on the screen to do pan and tilt operation

7. Patrol **button:** toggles patrol mode. By clicking this button, IP Video Control Center will starts patrol with preset positions.

NOTE: Number of preset position is depend on the speed dome's specification.

NOTE: To setup the position for Pelco_P or Pelco_D as follow:

Move to the point →Keyin the NO → SET

NOTE: To setup the position for Linlin as follow:

Keyin the NO → Goto **→ Move to the point →** SET

PTZ Speed Fast Setup

1. **Speed Lable**: click on the speed label to popup setup window.
2. **Popup Window**: used to setup new speed for pan or tile.

5 Record Mode

This chapter describes the operations over playback panel. Playback panels operate with search function closely as well.

Record Operation

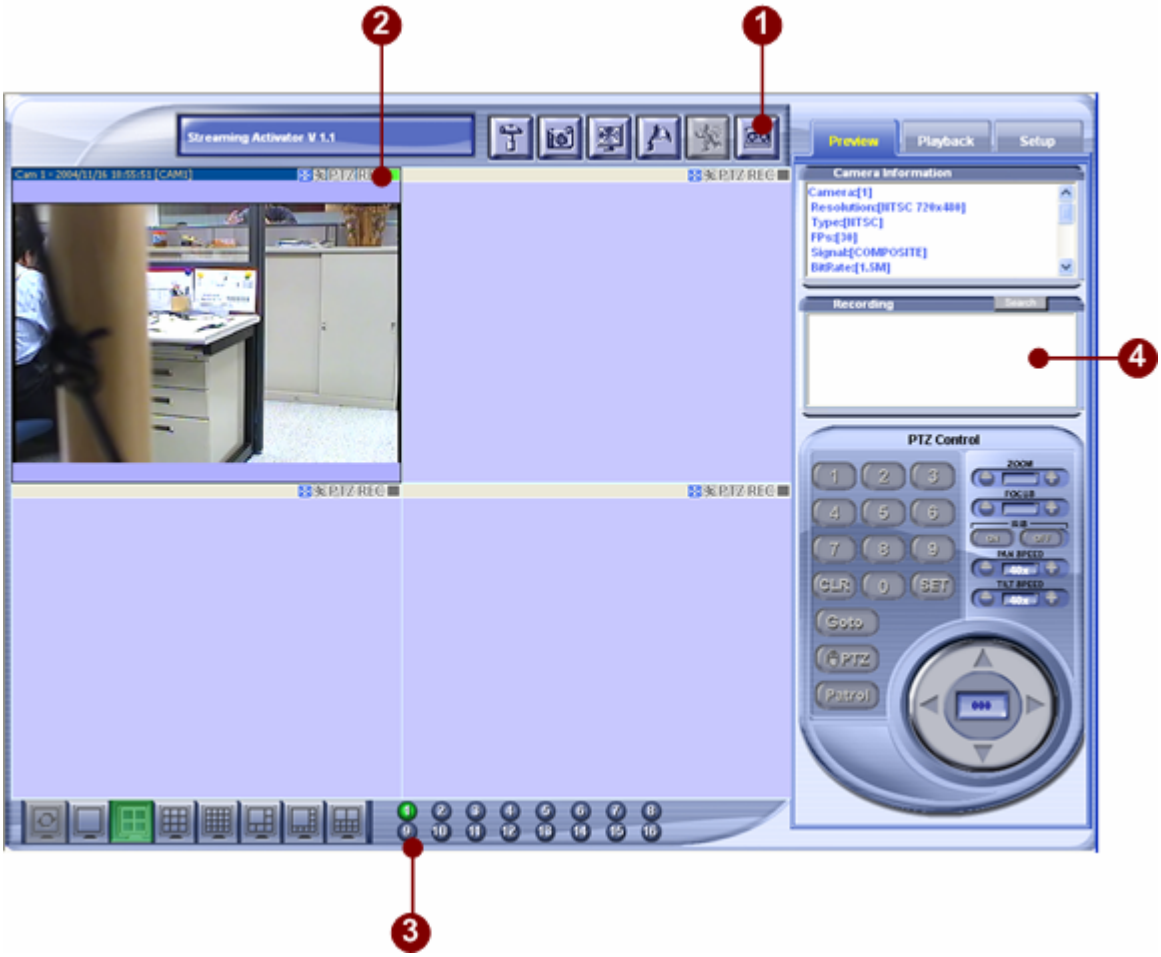


Figure 31. Record operation

1. Click recording toggle button  to start or stop recording.  indicates that the specified camera is recording at this moment.
2. When  indicator is displayed (in **red** color), it indicates that this preview window is recording.  Indicates that current window is not recording.
3. When the preview window is recording, the channel indicator  will be displayed in **red** color

4. Recording event list: In the event list, there will have a new record for recording event.

6 Playback Mode

This chapter describes the operations over playback panel. Playback panels operate with search function closely as well.

Playback Panel

Figure 32. Playback Panel

1. **Playback Tab**: Click on the playback tab to invoke the playback mode
2. **Open File Button**: Click on the Open File button to open a dialogbox to open a recoded file.
3. **Thumbnail**: Click on the Search button to display Event Search window.
4. **Bookmark**: Click on the Search button to display Event Search window.
5. **Active Plyaback window**: This window displays the playback video files
6. **Media Playback Panel**: Opereates playback modes on the active playback window

Open Video File

The fastest way to start playback a media file is to use open file function. By clicking the Open File button, a “Open File Dialog Box” will pop up.

Figure 33. Open Media File

1. **Open File**: Click on the Open File button to open a pop-up file-browse window
2. **Browse File Button**: Click on the Browse File button to browse and select the media file to be played.

Media Control Panel Operations

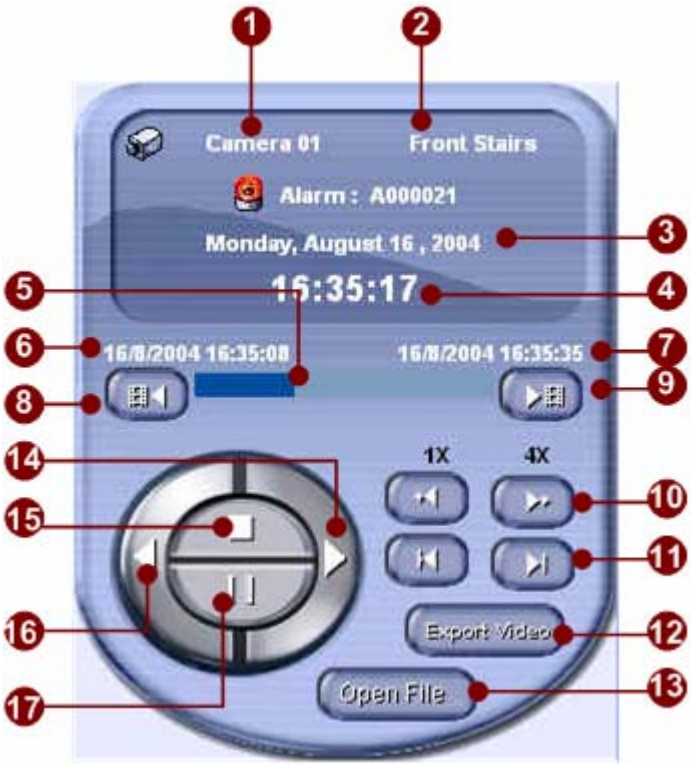


Figure 34 Media Control Panel

1. **Camera ID**: Displays the camera ID
2. **Camera Name**: Displays the camera name or camera description
3. **Date Stamp**: Displays the date stamp.
4. **Time Stamp**: Displays the time stamp
5. **Play Status Indicator**: Indicates current play indicator

> **NOTE:** By clicking on the play status bar, you may reset the position to the point you click.

6. **Media Start Time Stamp**: Displays the starting time stamp of the media
7. **Media End Time Stamp**: Displays the ending time stamp of the media
8. **Play frame-by-frame in backward direction**: Play previous frame
9. **Play frame-by-frame in forward direction**: Play next frame

> NOTE: `If you want to play frame by frame you must pause the file first.`

10. **Fast forward**: Fast forward , available speed are: 1X, 2X, 4X, 8X, 16X, 32X

11. **Goto End of File**: Click the  button to jump to end of file, and click the  button to jump to begin of file.
12. **Export Video**: If you select multiple files, then you may click the button to merge multiple files into one AVI file.
13. **Open File Button**: Click the 

button to open a media file
14. **Play**: Click the button to play a media file
15. **Stop**: Click the button to stop playing a media file
16. **Play Backward**: Click the button to play a media file in backward direction
17. **Pause**: Click the button to pause playing a media file

Media Playback Window

Media playback window displays current media files. This window also can be operated and controlled by Media Control Panel as well.

Figure 35 Media Playback Window

1. **Media File Name**: Indicates the media file name to be played
2. **Enlarge / Shrink Window Button**: Click this button to enlarge and stretch the video size to fit the playback window size. Click this button again to reset the enlarged video size to its original size.

Capture Playback Scrneeshot

Following method may let users to capture screenshots when playing file:

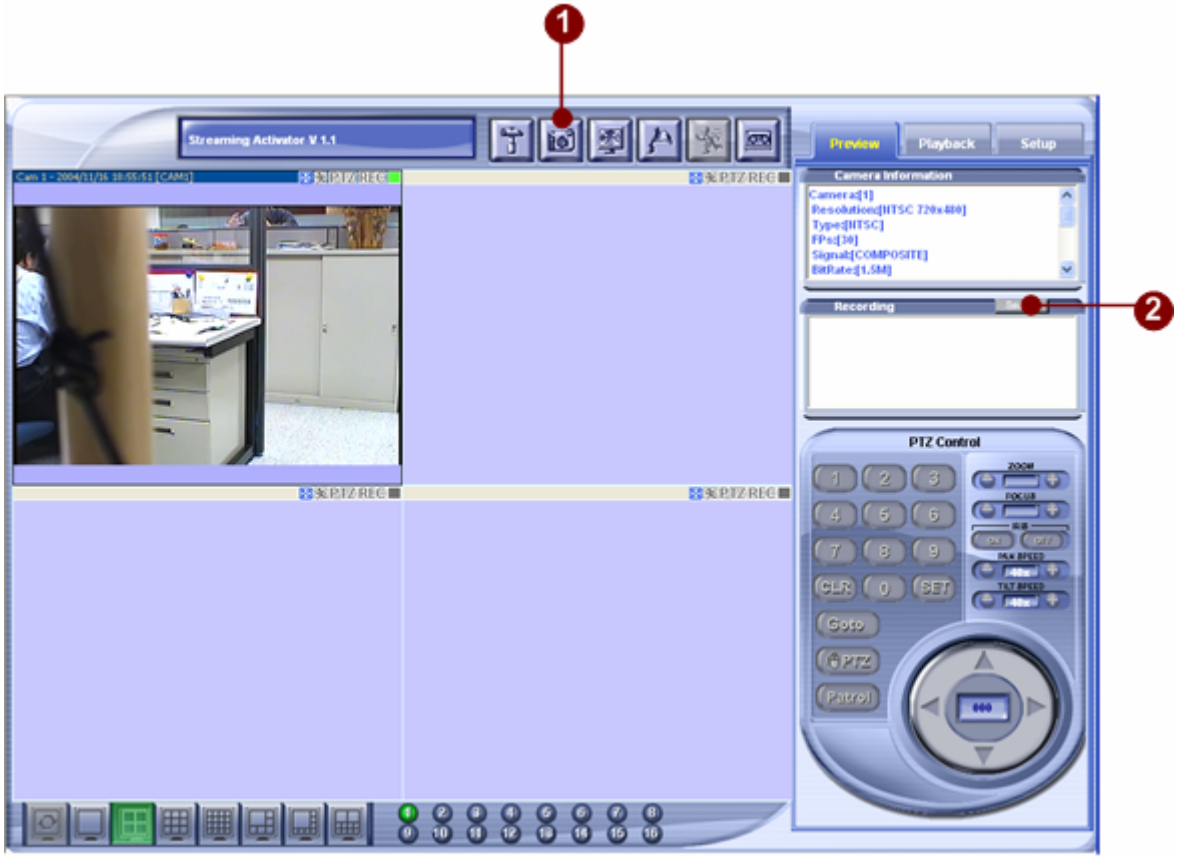


Figure 36. Capture Playback Screenshot

3. **Capture Screen Button**: Click on the  button to capture active preview window into a image file.
4. **Event List**: Event list will display the screen-capture event as **Manual-Thumbnail** event.

IMPORTANT: If you want to capture the original size, click  button or click  button or double click on left mouse key to enlarge the video size before capture the screen shot.

IMPORTANT: You may only capture the screen from specific files, that is the files must be recoreded in the database. If you want to upgrade your software, please don't forget to backup your database file.

Search Playback Files by Events

Users may find a recorded files by date, time and event lists.

Figure 37 Search Event

Event Search List

Event Search dialog box looks like following:

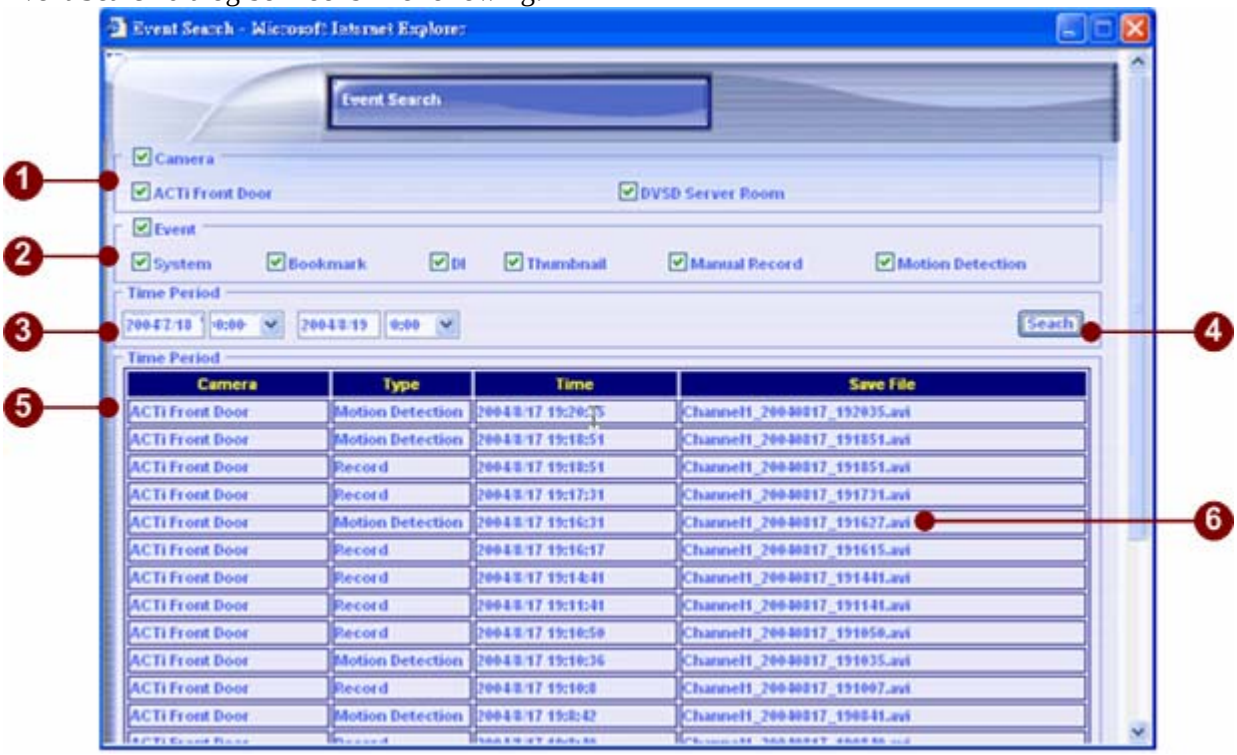


Figure 38 Event Search List

1. **Camera**: Lists the camera listing connected. Click on **`Camera`** check box to select or de-select all cameras.
2. **Event**: Lists the Event list for search. Available events are **`Bookmark, DI, Thumbnail, Manual Record, Motion Detection`**. Click on **`Event`** check box to select or de-select all evetns.
3. **Time Period**: Select a start and end time period.
4. **Search Button**: Click this button to start search events
5. **Event Search List**: This list displays the recorded files that matches the criterias.
6. **Event Detail**: Click on the event detail to start playing video.

7 Setup IP Video Control Center

This chapter describes the setup procedures in IP Video Control Center.

Setup Dialog

To setup the parameters in IP Video Control Center, click on the Setup tab.

Figure 39 Setup IP Video Control Center Parameters

Setup Category

IP Video Control Center setup parameters are categorized into following categories.

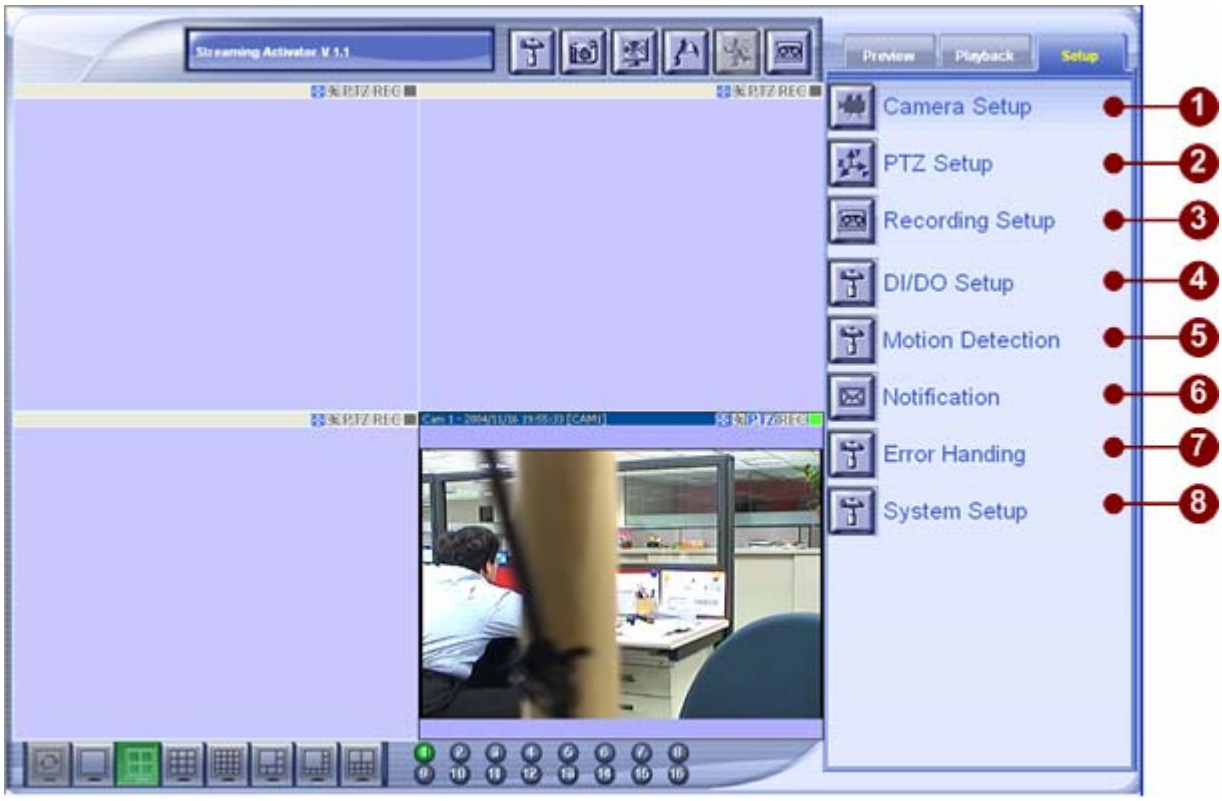


Figure 40 Setup Category

1. **Camera Steup**: Click on this button to setup camera information
2. **PTZ Steup**: Click on this button to configure connected PTZ devices
3. **Recording Steup**: Click on this button to setup recording parameters
4. **DI/DO Steup**: Click on this button to configure digital input and digital output devices
5. **Motion Detection Steup**: Click on this button to setup motion detection information
6. **Notification Steup**: Click on this button to setup event notification mechanism
7. **Error Handling Steup**: Click on this button to setup error handling mechanism
8. **System Steup**: Click on this button to setup system overall parameters

Setup Category Dialog Box

This chapter describes how to operate in a setup dialog box.

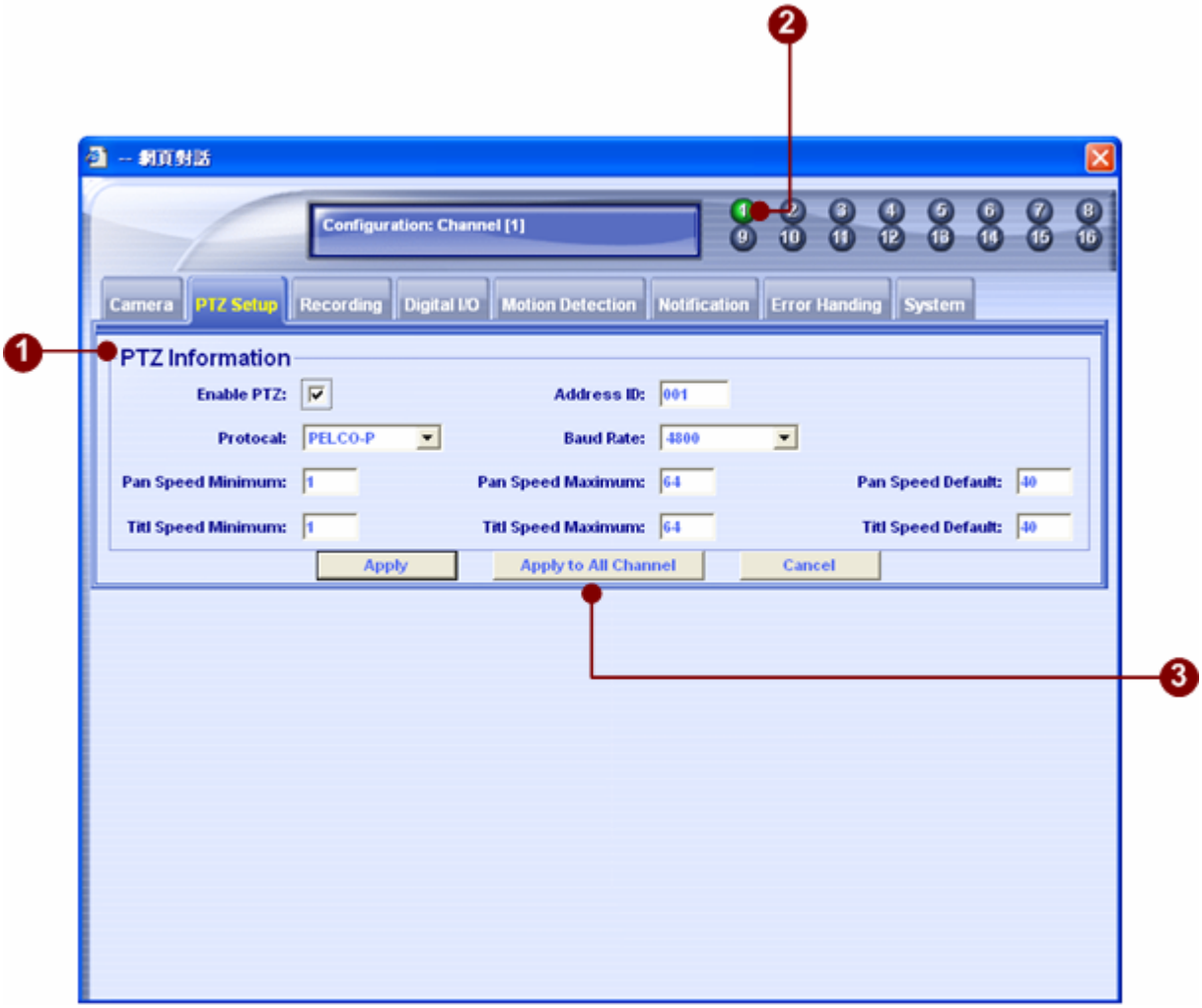


Figure 41. Setup Dialog Box Operation

1. **Function Category Tab**: Click on tab to choose the category of function for setup
2. **Channel Selection**: Click on channel number to switch to any channels directly
3. **Apply to All Channel button**: Click on **`Apply to All Channel`** button to apply this settings to all channels at the same time

Camera Setup Dialog Box

This chapter describes how to operate in a setup dialog box.

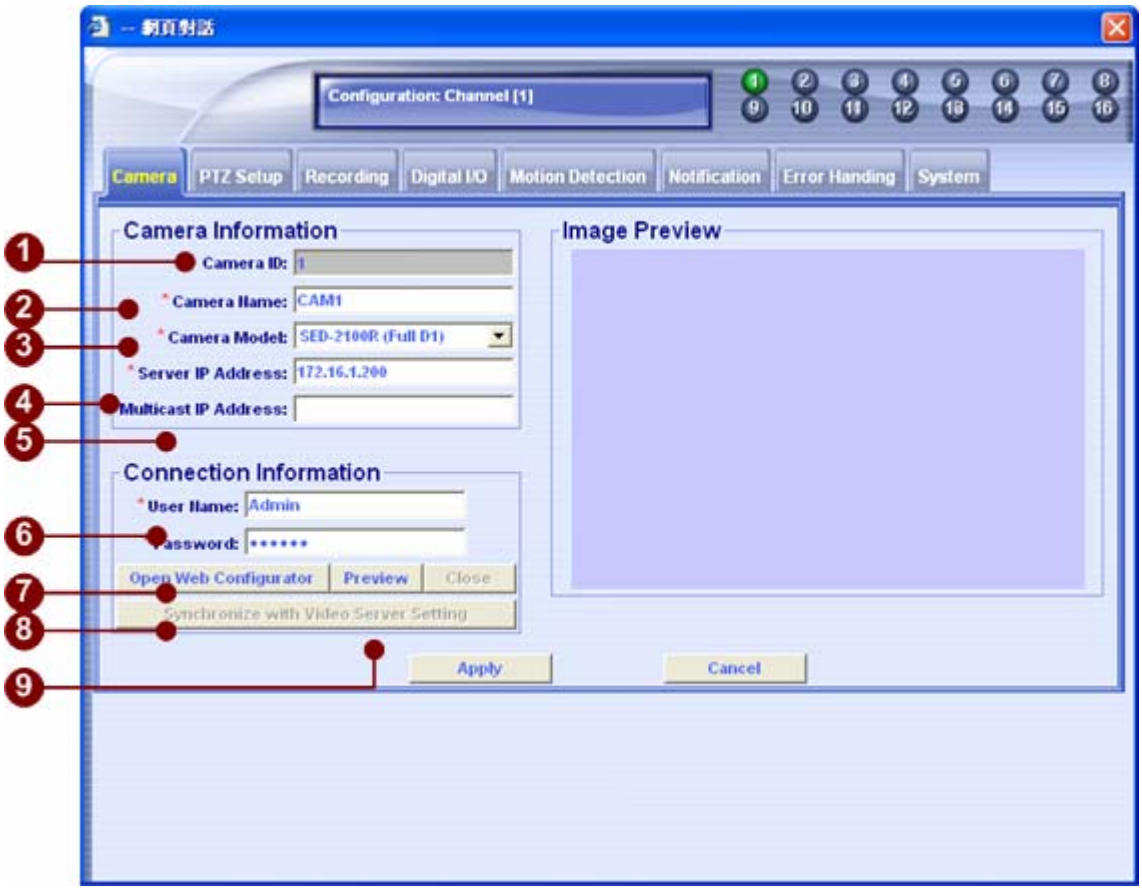


Figure 42. Camera Setup Diaglog Box

10. **Camera ID**: System will generates an unique ID for this camera. This ID is assigned the same channel number it is assigned.
11. **Camera Name***: Input a camera name or description to describe the camera.

> **NOTE:** The content of the camera name will be displayed on top of the preview media window.

12. **Camera Model***: Choose the camera model within a selection list; including:
    - **Video Server – D1 (Full-D1 Video Server)**
    - **Video Server - CIF (CIF Video Server)**
    - **IP Camera**
    - **IP Speed Dome**
13. **Server IP Address***: Connect to the video server with unicast (TCP) connection

> **NOTE:** You may enter host name address in this field as well. Make sure the host name can be resolved by DNS (Domain Name Server) in your network environment. This operation can also be verified by using ping command:
> `C:\>ping hostname.company.com`

14. **Multicast IP Address**: Subscribe to a multicast network to retrieve video packets.

NOTE: If Multicast IP address is entered without Server IP address, then the preview window can only perform preview function.

If Multicast IP address and Server IP address are keyed in, then the preview window can perform preview and Digital I/O and PTZ operations. The limit of concurrent connection is 15.

15. **User Name**: the account to be authorized by the video server
16. **Password**: the password to be authorized by the video server
17. **Open Web Configurator** button: click this button to open video server's Web Configurator directly
18. **Preview** button: click this button to see the preview window and adjust frame rate and video quality.

Camera Setup Dialog Box in Video Server

This section describes the detail operations on Frame information and Video adjustment.

Figure 43. Camera Setup on Video Server Dialog Box

1. **Open Web Configurator** button: Click this button to open browser and connects to the video server via Web Configurator directly

> **IMPORTANT:** The updated settings only effective while the video server is on. If the video server is reboot, then the settings will be gone and original settings on the video server will be set.
>
> To make the changes permenant, one has to open Web Configurator on the video server, change the settings, and click on Save and Reboot link to make it effective permenantly.

2. **Synchronize with Video Server Setting** button: Click this button to synchronize and retrieve related frame rate and video adjustment settings from video server.
3. **Frame Raet Mode**: Indicates **`Constant`** frame rate or **`Variable`** frame rate; this is the setting from video server.

> **NOTE:** Constant frame rate indicates all connections accepts the same frame rate specified by Video Server.

Variable frame rate indicates that each connection may have different frame rate

4. **FPS**: You may set the number of frame per second displayed. This will update the setting in Video Server directly.
   - Available FPS for constant frame rate (NTSC): 30, 15, 10, 7, 6, 5, 4, 3, 2, 1
   - Available FPS for constant frame rate (PAL): 25, 12, 8, 6, 5, 4, 3, 2, 1
   - Available FPS for variable frame rate (NTSC): 30, 6, 3, 1
   - Available FPS for variable frame rate (PAL): 25, 5, 3, 1

TIPS: By adopting variable frame rate, the connections to the same video server may have different frame rate.

5. **Resolution**: Displays the resolution set on the video server
6. **Bit Rate**: Displays the bit rate set on the video server
7. **Brightness:** Sets the brightness value
8. **Contrast:** Sets the contrast value
9. **Hue:** Sets the Hue value
10. **Saturation:** Sets the saturation value

PTZ Setup Dialog Box

This section describes how to setup PTZ configuration.

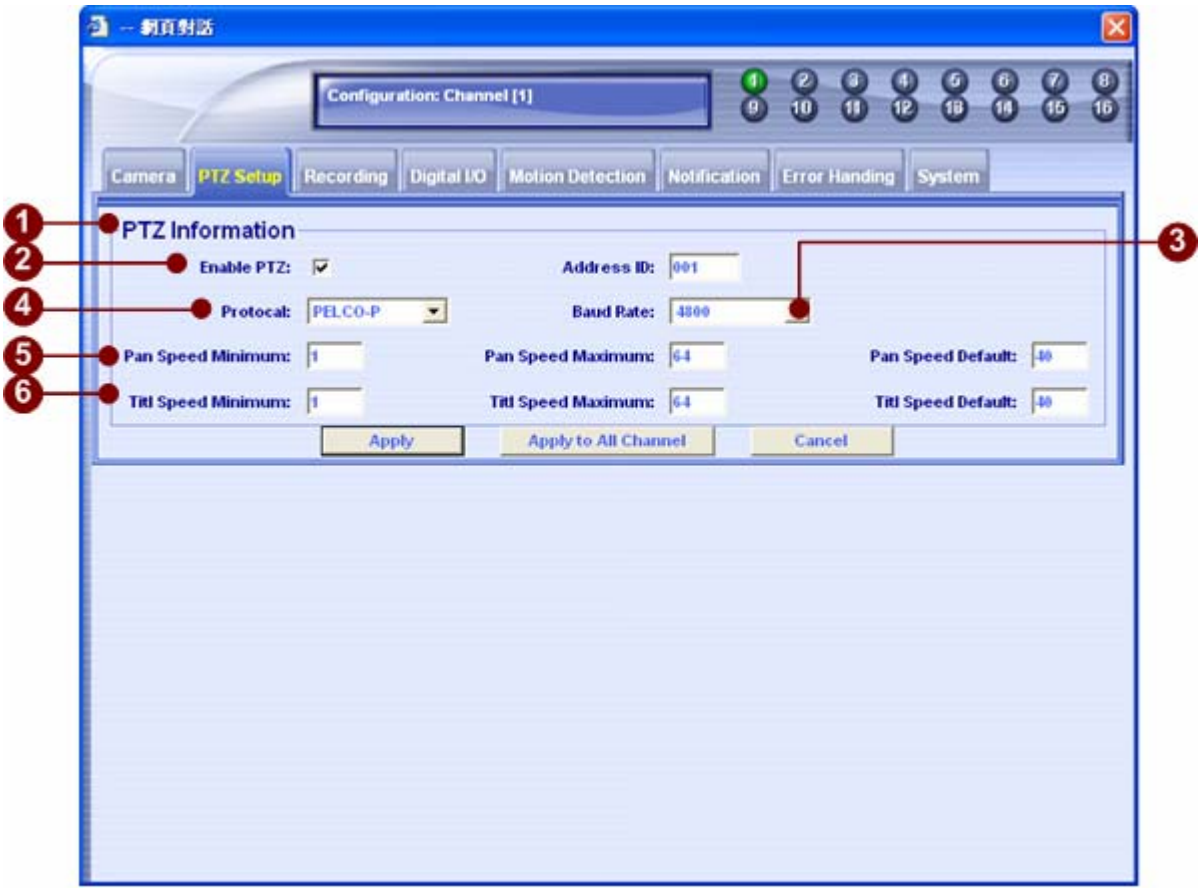


Figure 44. PTZ Setup Dialog Box

1. **Enable PTZ**: Enable or disable PTZ control function on this camera.
2. **Protocol**: Supported PTZ protocols are **`Pelco-P`**, **`Pelco-D`** and **`Lilin`** now.
3. **Baund Rate**: Supports different baud rate.
4. **Pan Operation Settings:** Setup minimum, maximum and default pan speed
5. **Tilt Operation Settings:** Setup minimum, maximum and default tilt speed.

Recording Dialog Box

This section describes recording related setup.

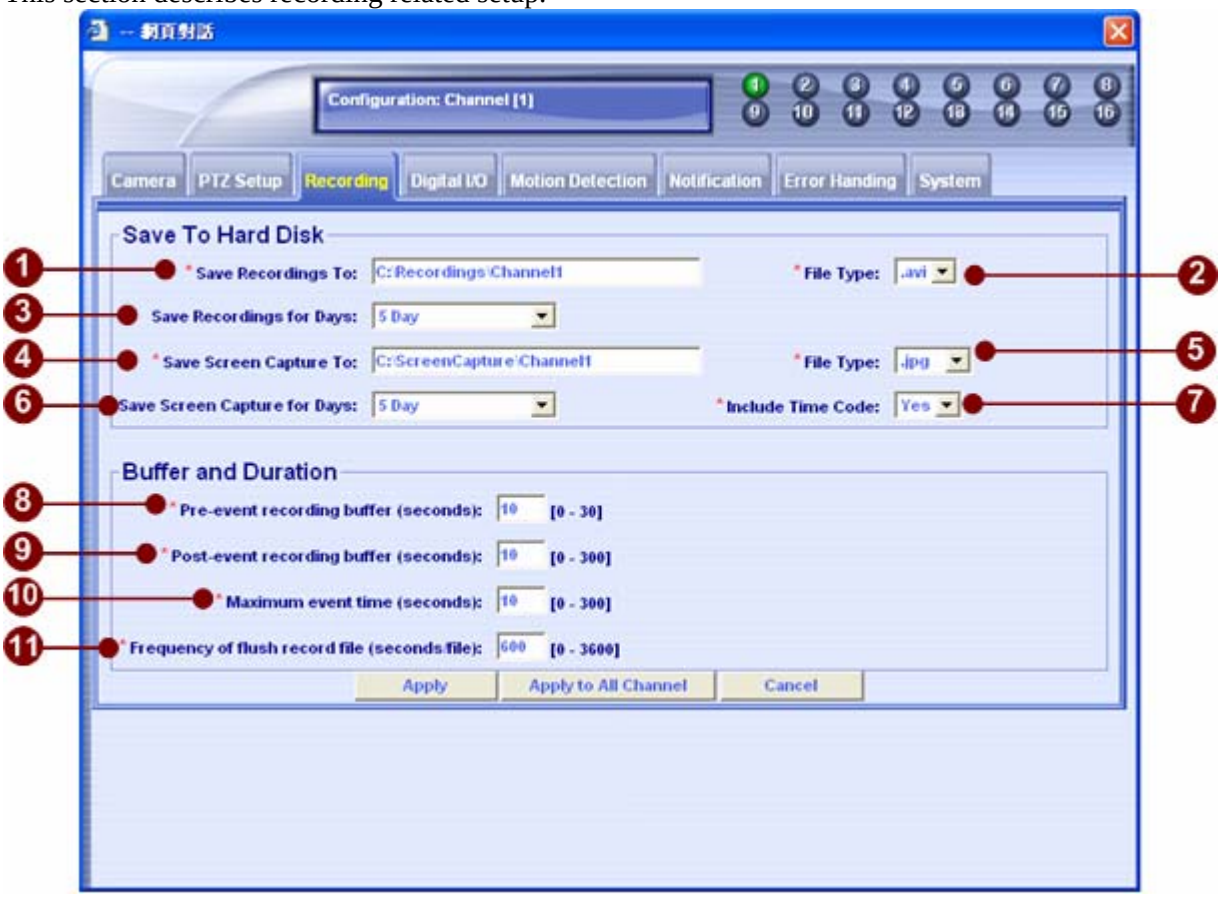


Figure 45. Recording Setup Dialog Box

1. **Save Recordings To**: The directory to save the recorded files.

> **NOTE:** If you choosing "Apply to All Channel", all the recording files will be saved in the same directory.

> **NOTE:** The directory can be a local hard-disk, RAID storage, NAS storage or mounted storage linked with NetBEUI. Following command is a sample to link a virtual drive with NetBEUI.
>
> `C:\>net use G: \\nas-server\D$\Recording`

2. **File Type**: Supported file type are **`AVI`** now.

> **NOTE:** The content of the AVI format is standard MPEG4 raw data. In order to view this AVI file, on the local machine, user has to install FFDSHOW (MPEG4 Codec for DirectX platform) which can be retrieved from the bundled CD.

3. **Save Recordings for Days**: The aged recording files will be removed after the number of days specified in this field. If this field is left as blank, then the aged files will not be removed.
4. **Save Screen Capture To:** The directory to save the screen capture image files. Refer to **`Save Recordings To`** notice for advanced configuration.
5. **File Type:** Specifies the image file type for the screen capture file; supported formats are: **`JPG`**, **`GIF`** and **`BMP`**.
6. **Save Screen Capture for Days**: The aged screen capture image files will be removed after the number of days specified in this field. If this field is left as blank, then the aged files will not be removed.
7. **Include Time Code**: If checked, the date time stamp will be displayed on the saved capture image file.
8. **Pre-event recording buffer (seconds):** Specifies a buffer in number of seconds to keep before a certain event occurs.

NOTE: This value works with motion detection event, digital in event.

9. **Post-event recording buffer (seconds):** Specifies a buffer in number of seconds to keep after a certain event occurs.
10. **Maximum event time (seconds):** This value specifies that within this period of time, all events generated will be ignored.

NOTE: For example, if an event occurs repeatedly in a short period of time, this value is to prevent the system from recording a new event-recording file every second.

11. **Frequency of flush record file (seconds):** This value specifies that a new file will be generated after the amount of time set in this value.

Digital I/O Dialog Box

This section describes how to setup digital I/O and related notification mechanism.

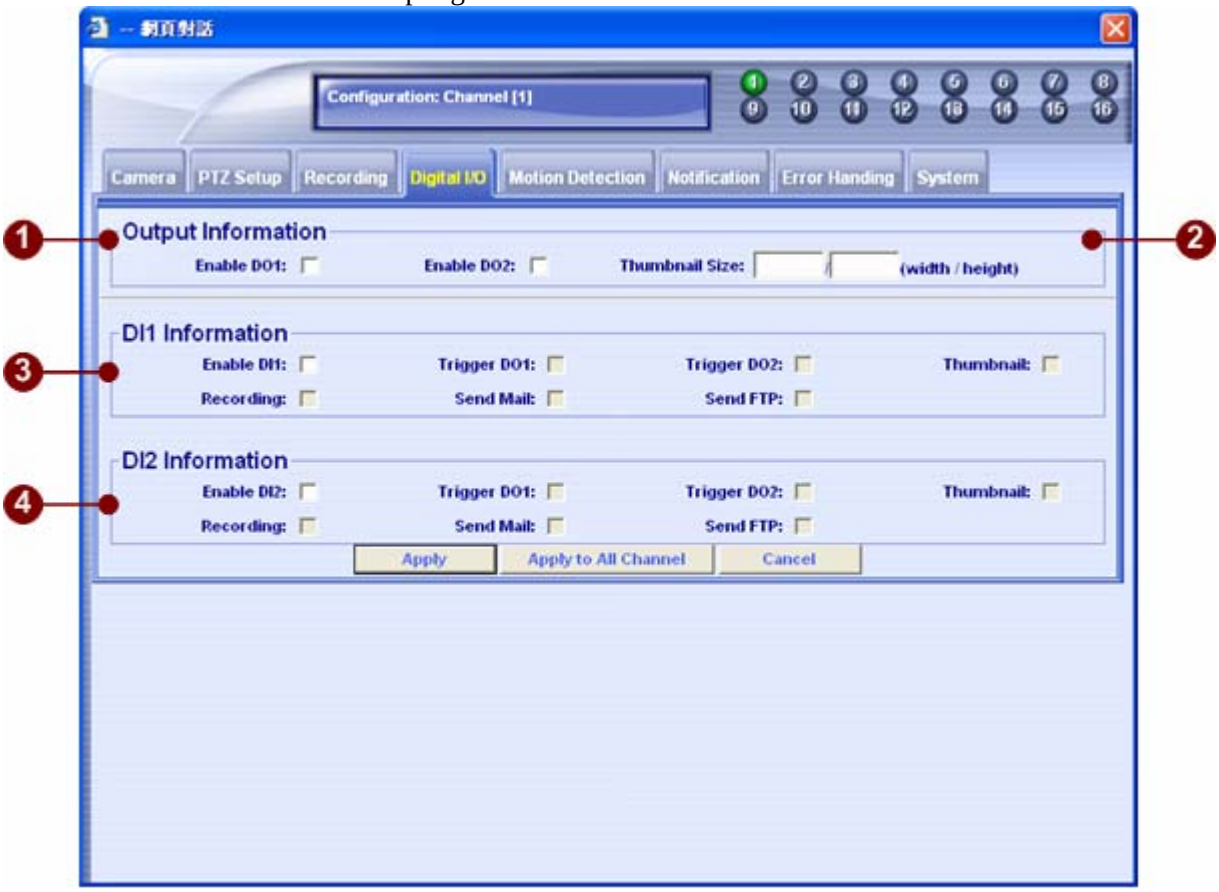


Figure 46. Digital I/O Dialog Box

1. **Output Information:** Enable or disable DO1 and DO2. Thmubnail size specifies the default width and height of the captured image size.
2. **DI1 Information:** Specifies digital IN 1 related information; including options to
   - **`Trigger DO1`**: triggers Digital Output 1 relay when a digital input event occurs
   - **`Trigger DO2`**: triggers Digital Output 2 relay when a digital input event occurs
   - **`Create Thumbnail`**: capture image and resize to a thumbnail; the size of the thumbnail is defined in the **`Thumbnail Size`** in **`Output Informaiton`** section
   - **`Create Recordings`**: record video clips; the **`pre-event`** and **`post-event recording`** buffer is defined in **`Recording Tab`**.
   - **`Send Mail`**: send mail with thumbnail image attached; the SMTP setup is specified in **`Notification Tab`**
   - **`Send FTP`**: FTP the thumbnail image to a FTP server; the FTP setup is specified in **`Notification Tab`**

3. **DI2 Information:** Specifies digital IN 1 related information; refer to DI1 information for the related options

Motion Detection Dialog Box

This section describes how to setup motion detection and related notification mechanism.

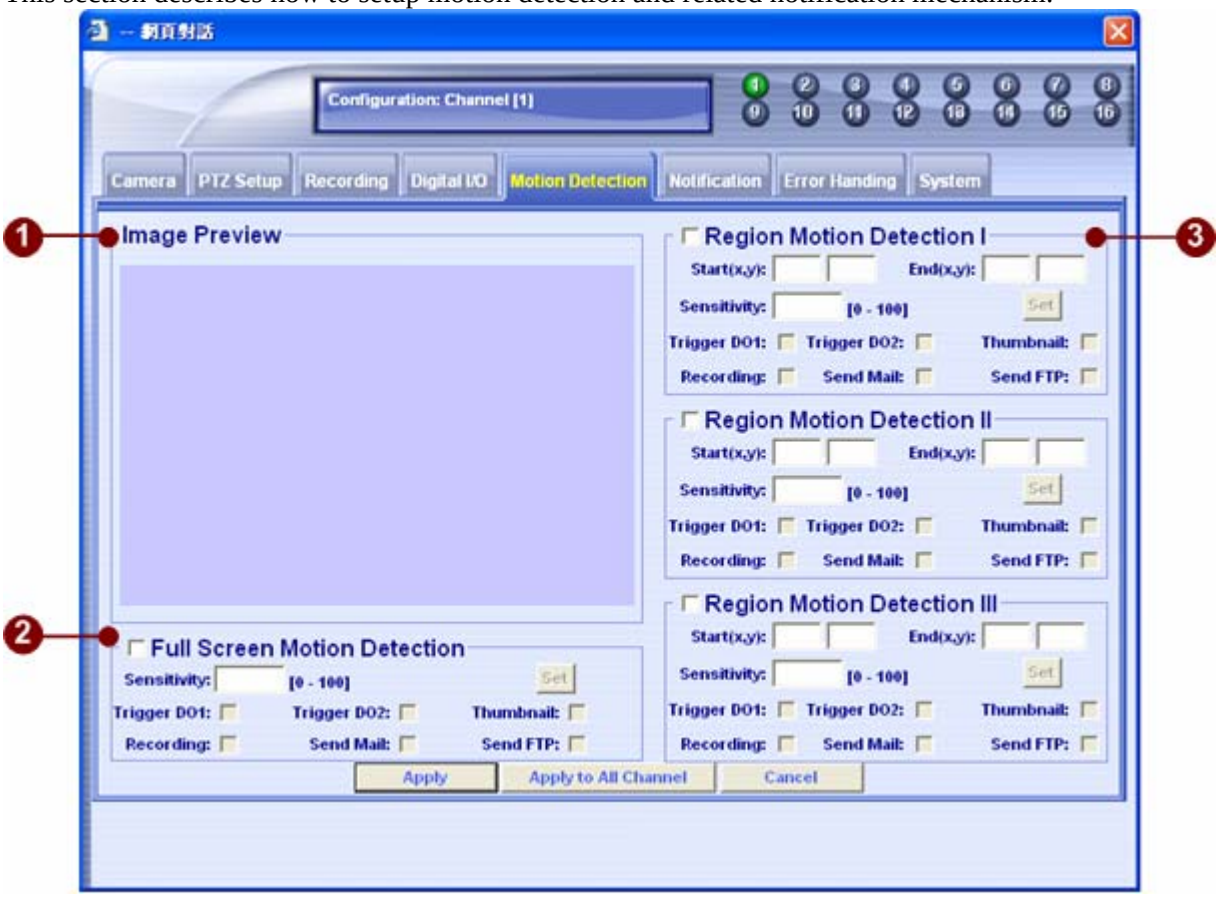


Figure 47. Motion Detection Setup Dialog Box

1. **Image Preview:** Displays current image preview with regional motion detection block.
2. **Full Screen Motion Detection:** If this option is enabled, then the motion detection applies to the whole image screen.
   - **`Sensitivity`**: sets sensitivity on the motion detection algorithm. 100 is very sensitive.
   - **`Trigger DO1`**: triggers Digital Output 1 relay when an motion detection event occurs
   - **`Trigger DO2`**: triggers Digital Output 2 relay when an motion detection event occurs
   - **`Thumbnail`**: capture image and resize to a thumbnail; the size of the thumbnail is defined in the **`Thumbnail Size`** in **`Output Informaiton`** section
   - **`Recording`**: record video clips; the **`pre-event`** and **`post-event recording`** buffer is defined in **`Recording Tab`**.

- **Send Mail**: send mail with thumbnail image attached; the SMTP setup is specified in **Notification Tab**
- **Send FTP**: FTP the thumbnail image to a FTP server; the FTP setup is specified in **Notification Tab**

3. **Regional Motion Detection I – III:** If this option is enabled, then this regional motion detection applies to the whole image screen.
   - **Start X, Y:** indicates starting X, Y position of the region selected
   - **End X, Y:** indicates ending X, Y position of the region selected
   - **Sensitivity**: sets sensitivity on the motion detection algorithm. 100 is very sensitive.
   - **Trigger DO1**: triggers Digital Output 1 relay when an motion detection event occurs
   - **Trigger DO2**: triggers Digital Output 2 relay when an motion detection event occurs
   - **Thumbnail**: capture image and resize to a thumbnail; the size of the thumbnail is defined in the **Thumbnail Size** in **Output Informaiton** section
   - **Recording**: record video clips; the **pre-event** and **post-event recording** buffer is defined in **Recording Tab**.
   - **Send Mail**: send mail with thumbnail image attached; the SMTP setup is specified in **Notification Tab**
   - **Send FTP**: FTP the thumbnail image to a FTP server; the FTP setup is specified in **Notification Tab**

NOTE: To enable the motion detection function you have to check the checkbox. You may also test the function by clicking the r 

button in each block.

Notification Dialog Box

This section describes how to setup motion detection and related notification mechanism.

Figure 48. Notification Setup Dialog Box

1. **Mail Server Information:** Specifies the SMTP server information
   - **`SMTP Server`**: sets to the outgoing mail server address
   - **`UserName`**: the account to login to the SMTP server
   - **`Password`**: the password to login to the SMTP server
   - **`Email Address`**: the E-Mail address of the sender
   - **`Full Name`**: the name of the sender
   - **`Test`** button: click on the button to test if the account/password is authorized correctly
2. **FTP Server Information:** Specifies the FTP server information
   - **`FTP Server`**: sets to the FTP server address
   - **`UserName`**: the account to login to the FTP server

- **Password**: the password to login to the FTP server

3. **DI1, DI2 Notification:** Specifies related information when digital input is triggered
   - **To**: the receiver's E-Mail address
   - **CC**: the cc copy E-Mail address
   - **Subject**: the subject of the E-Mail sent
4. **Full screen, regional motion detection I-III Notification:** Specifies related information when motion detection event occurs
   - **To**: the receiver's E-Mail address
   - **CC**: the cc copy E-Mail address
   - **Subject**: the subject of the E-Mail sent

Error Handling Dialog Box

This section describes how to setup error handling and related notification mechanism.

Figure 49. Error Handling Dialog Box

1. **Streaming Loss:** Specifies the error handling procedure to handle streaming loss error
   - **`Disconnect`**: disconnect this connection when streaming loss error occurs
   - **`Trigger DO1`**: triggers Digital Output 1 relay when a digital input event occurs
   - **`Trigger DO2`**: triggers Digital Output 2 relay when a digital input event occurs
   - **`Create Thumbnail`**: capture image and resize to a thumbnail; the size of the thumbnail is defined in the **`Thumbnail Size`** in **`Output Informaiton`** section
   - **`Create Recordings`**: record video clips; the **`pre-event`** and **`post-event recording`** buffer is defined in **`Recording Tab`**.
   - **`Send Mail`**: send mail with thumbnail image attached; the SMTP setup is specified in **`Notification Tab`**
   - **`Send FTP`**: FTP the thumbnail image to a FTP server; the FTP setup is specified in **`Notification Tab`**
2. **Connection Loss:** Specifies the error handling procedure to handle connection loss error

- **Disconnect**: disconnect this connection when connection loss error occurs
- **Trigger DO1**: triggers Digital Output 1 relay when a digital input event occurs
- **Trigger DO2**: triggers Digital Output 2 relay when a digital input event occurs
- **Create Thumbnail**: capture image and resize to a thumbnail; the size of the thumbnail is defined in the **Thumbnail Size** in **Output Informaiton** section
- **Create Recordings**: record video clips; the **pre-event** and **post-event recording** buffer is defined in **Recording Tab**.
- **Send Mail**: send mail with thumbnail image attached; the SMTP setup is specified in **Notification Tab**
- **Send FTP**: FTP the thumbnail image to a FTP server; the FTP setup is specified in **Notification Tab**

System Dialog Box

This section describesthe steps to customize IP Video Control Center so that it may become customer's own product.

Figure 50. System Dialog Box

You may customize IP Video Control Center in following ways:

1. **System Information:** Specifies the System information
   - **`Load Last Connection`**: Load the last status when start up.(not include recording status).
   - **`Load Last Recording`**: Load the last recording status when start up.
   - **`View Channel`**: Specifies the numbers of channel when start up.
   - **`Patrol Delay Time`**: Specifies the patrol delay time (seconds).
2. **Customization:** Specifies the Customization information
   - **`Language`**: Change the default language.
   - **`Style`**: Change the Application's UI.
   - **`Logo Locatioin`**: Change the logo file. The logo file should be built with transparent gif.

- **`About Us Location`**: Change the the About Us file. This file **`C:\AboutUs.htm`** is compiled in HTML format.
- **`Application Title`**: Change the content on the title bar. The specification of the title bar text file locates at: C:\Title.txt