

Software
IP Video Control Center
v1.37.03

User's Manual

Table of Contents

<i>Getting Started</i>	<i>1</i>
Recommended System Requirements	1
Start IP Video Control Center	2
Exit IP Video Control Center	3
Check IP Video Control Center Version	4
<i>User Interface</i>	<i>5</i>
Understanding the Preview Screen	5
Understanding the Playback Screen	7
Operate on Preview/Playback Window with Mouse	8
<i>Jump Start IP Video Control Center</i>	<i>12</i>
Assign a camera to a preview window	12
Camera Connection Status	13
Camera Disconnection Status	14
Camera Video Loss Status	15
Configure a camera	16
Camera Configuration	18
Motion Detection Setting	21
PTZ Control Setting	22
Disconnect the camera	23
<i>Preview Mode</i>	<i>24</i>
Preview Window	24
Activate the Media Window	25
Operations over preview window	26
Preview Window	28
Media Indicator	28
IP Quad preview display	30
Stretch Video Size to Fit Preview Window	31

Capture Screenshot _____	32
Advanced Preview _____	33
Arrange preview window with cameras _____	35
View Manager Panel _____	36
<i>Record Mode</i> _____	37
Record Mode _____	37
Manual Record Operation _____	38
Background Record Operation _____	39
Schedule Record Operation _____	41
Repeat Recording Operation _____	42
<i>Playback Mode</i> _____	43
Playback Panel _____	43
Open Video File _____	44
Media Control Panel Operations _____	45
Media Playback Window _____	47
Capture Playback Screenshot _____	48
Search Playback Files by Events _____	49
Event Search List _____	50
Remote Event Search List _____	51
<i>PTZ Control Panel</i> _____	53
Pan, Tilt, Zoom Operation _____	53
PTZ Preset Position Operation _____	55
Add New PTZ Protocol _____	57
<i>Motion Detection</i> _____	60
Motion Detection Setup, step by step _____	60
Normal IP cam/Video server _____	60
IP Quad _____	61
Example A: A correct Motion Detection Setup _____	66
Indoor _____	66
Outdoor _____	68
Examples B: Motion Detection III Setup Correctly _____	70

<i>Remote Function Via NVR</i>	72
Remote Preview	72
Remote Playback	74
<i>Setup IP Video Control Center</i>	77
Setup Dialog	77
Setup Category	78
Setup Category Dialog Box	79
Camera Setup Dialog Box	80
Camera Setup Dialog Box in Video Server/IP cam	83
Quad OSD Setup Dialog Box	86
PTZ Setup Dialog Box	87
Recording Dialog Box	90
Schedule recording	92
Digital I/O Dialog Box	93
Motion Detection Dialog Box	95
Normal IP camera/video server	95
IP Quad	98
Notification Dialog Box	99
User Account Dialog Box	101
System Dialog Box	103
<i>Appendix-A PTZ protocol</i>	105

Table of Figures

Figure 1. Input User ID and Password	2
Figure 2. Exit IP Video Control Center.....	3
Figure 3. Check IP Video Control Center Version.....	4
Figure 4. IP Video Control Center Preview Window.....	5
Figure 5. IP Video Control Center Playback Window	7
Figure 6. Enable / Disable the Toolbar.....	8
Figure 7. Double Click on the Video Screen to Enlarge Window.....	9
Figure 8. Enlarge Window.....	10
Figure 9. Enlarge and Stretched Window.....	11
Figure 10. Select Preview Window and Camera	12
Figure 11. Camera Connection Status	13
Figure 12. Message Indicates Disconnection Status.....	14
Figure 13. Message Indicates Video Loss	15
Figure 14. Click Configure Camera Button.....	16
Figure 15. Please Setup Camera Information First.....	17
Figure 16. Ask User to Load Setup Page.....	17
Figure 17. Camera Setup Dialog Box.....	18
Figure 18. Preview Window Toolbar	20
Figure 19. Motion Detection Indicator Enabled.....	21
Figure 20. Motion Detection Indicator Enabled.....	21
Figure 21. PTZ Indicator On	22
Figure 22. Disconnect the Camera	23
Figure 23. Preview Window Operation.....	24
Figure 24. Activate a Preview Window.....	25
Figure 25. Active Media Manager.....	26
Figure 26. Preview Window Indicators.....	28
Figure 27. Preview Window Indicators.....	30
Figure 28. Stretch Video Window to Fit Preview Window.....	31
Figure 29. Capture Screenshot.....	32
Figure 30. Camera Setup	33
Figure 31. Advanced Preview Window.....	34
Figure 32. Assign a Camera to a Preview Window.....	35
Figure 33. Preview Mode	36
Figure 34. Manual Recording Operation	38
Figure 35. Background Recording Operation.....	39

Figure 36. Schedule Recording Operation	41
Figure 37. Repeat Recording Operation	42
Figure 38. Playback Panel	43
Figure 39. Open Media File	44
Figure 40. Media Control Panel	45
Figure 41. Media Playback Window	47
Figure 42. Capture Playback Screenshot	48
Figure 43. Search Event.....	49
Figure 44. Event Search List	50
Figure 45. Remote Event Search List.....	51
Figure 46. PTZ Control Panel.....	53
Figure 47. PTZ Preset Panel	55
Figure 48. Add New PTZ Protocol Setup.....	57
Figure 49. Input New PTZ Protocol Name.....	57
Figure 50. Choose the New PTZ Protocol	58
Figure 51. Go to Preview Mode and Test New PTZ Protocol.....	59
Figure 52. Normal IP camera/ Video server motion Detection Setup Box	60
Figure 53. IP Quad Motion Detection Setup Box.....	61
Figure 54. Save Successfully.....	62
Figure 55. Motion Detection Setting is saved to Firmware.....	63
Figure 56. Motion Detection Preview	64
Figure 57. Motion Detection Function Running.....	65
Figure 58. Enable Indoor Full Screen Motion Detection Function	66
Figure 59. Enable Indoor Regional Motion Detection Function	67
Figure 60. Enable Outdoor Motion Detection Function.....	68
Figure 61. Regional Motion Detection Function Running	69
Figure 62. Enable Regional Motion Detection I and II	70
Figure 63. Enable Regional Motion Detection III	71
Figure 64. Remote Preview Setup.....	72
Figure 65. Remote Event Search button	74
Figure 66. Remote Event Search List.....	75
Figure 67. Remote Playback Function	76
Figure 68. Setup IP Video Control Center Parameters.....	77
Figure 69. Setup Category.....	78
Figure 70. Setup Dialog Box Operation	79
Figure 71. Camera Setup Dialog Box.....	80
Figure 72. Camera Setup on Video Server Dialog Box.....	83
Figure 73. IP Quad OSD setup Dialog Box.....	86

Figure 74. PTZ Setup Dialog Box.....	88
Figure 75. Recording Setup Dialog Box	90
Figure 76. Schedule recording Dialog Box	92
Figure 77. Digital I/O Dialog Box.....	93
Figure 78. Normal IP camera /video server Motion Detection Setup Dialog Box.....	95
Figure 79. Full Screen Motion Detection Setup	97
Figure 80. IP Quad mtion Detection Setup Box.....	98
Figure 81. Notification Setup Dialog Box	99
Figure 82. User Account Dialog Box	101
Figure 83. Default Permission Control.....	102
Figure 84. System Dialog Box	103

1

Getting Started

Recommended System Requirements

Minimum recommended system requirement for IP Video Control Center include:

CPU	Intel Pentium-4 3.0G or above (FSB 800)
RAM	≥1 GB DDR2-533 Memory
Motherboard	915 chip set or above
VGA Display Card	ATI PCI-Express Card (128MB on board, ATI MX300 GPU)
LAN Card	10/100 Mbps (Intel Chip Set)
OS	Windows XP SP2 Windows 2000 with SP4 or above
IDE HDD	Seagate 40 GB 7200 RPM
CD-ROM	32X
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 IP Video Control Center at a time. Do not run multiple IP Video Control Center's concurrently.

After double-clicking IP Video Control Center icon on the desktop, you will see a message, please input User ID and Password to login.

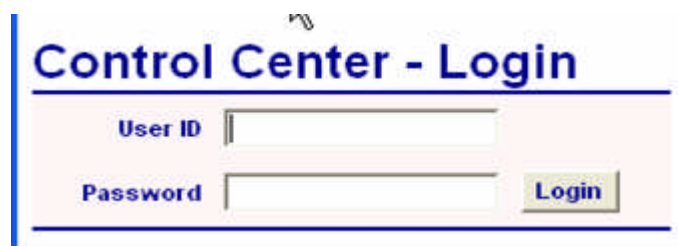

A screenshot of the 'Control Center - Login' dialog box. It has a title bar with the text 'Control Center - Login'. Below the title bar, there are two input fields: 'User ID' and 'Password'. To the right of the 'Password' field is a 'Login' button. The dialog box has a blue border.

Figure 1. Input User ID and Password

1. Please input the User ID and Password to login. Default User ID is **Admin**, password is **123456**.

Exit IP Video Control Center

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

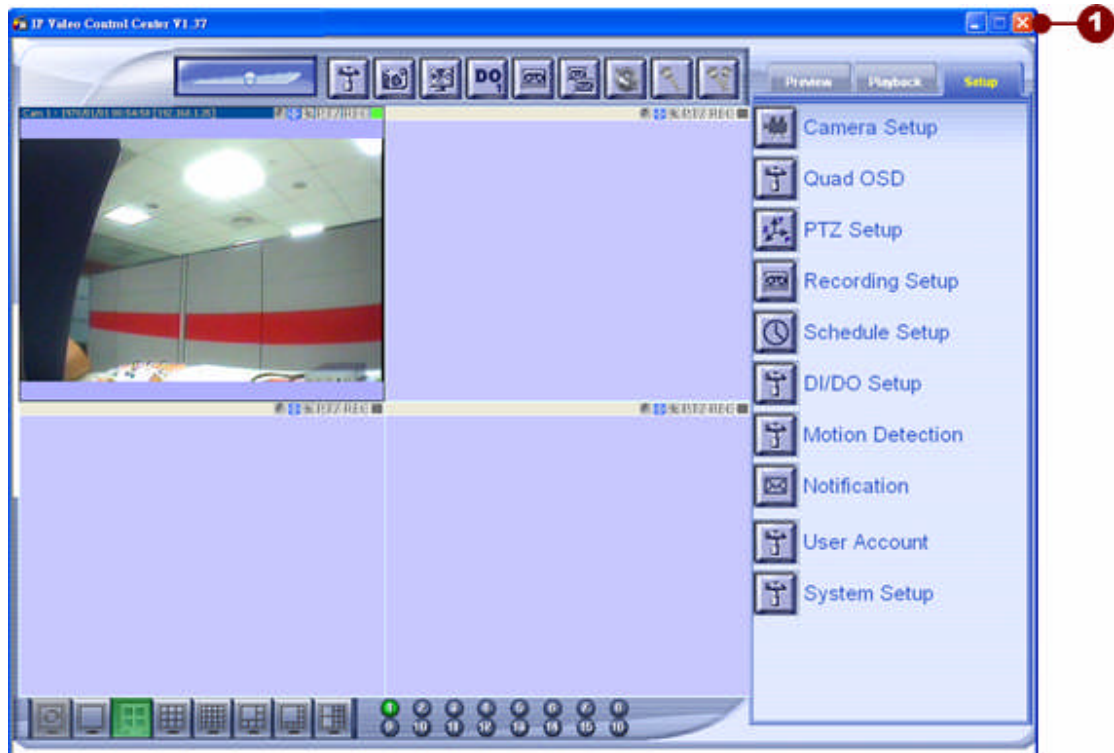


Figure 2. Exit IP Video Control Center

Check IP Video Control Center Version

It's important to know your Control Center version. You can use this version number and find out its function and limitation of this version. Beside, be sure to give your technical contact your software version number any time you report a problem.

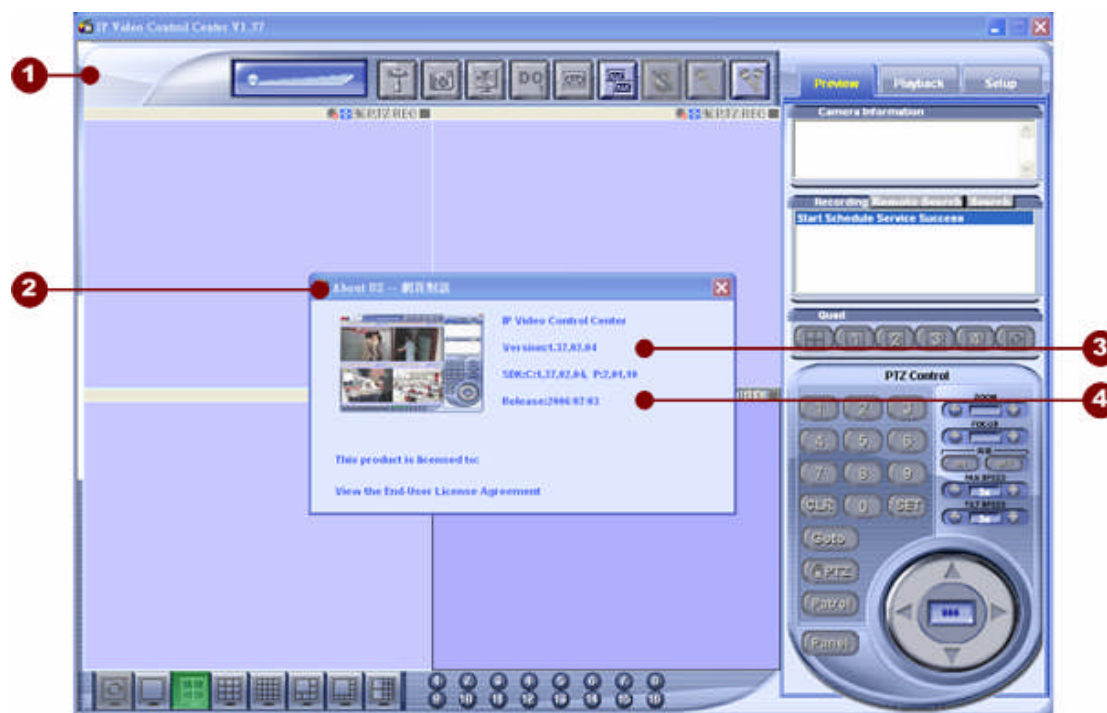


Figure 3. Check IP Video Control Center Version

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

2

User Interface

IP Video Control Center is designed with an user-friendly interface, and deployed with minimal training. It is consisted 3 different screen: Preview screen, playback screen and setup screen. You can select these screen from the at the upper right corner of Control Center.

Understanding the Preview Screen

IP Video Control Center preview screen consists of several items.

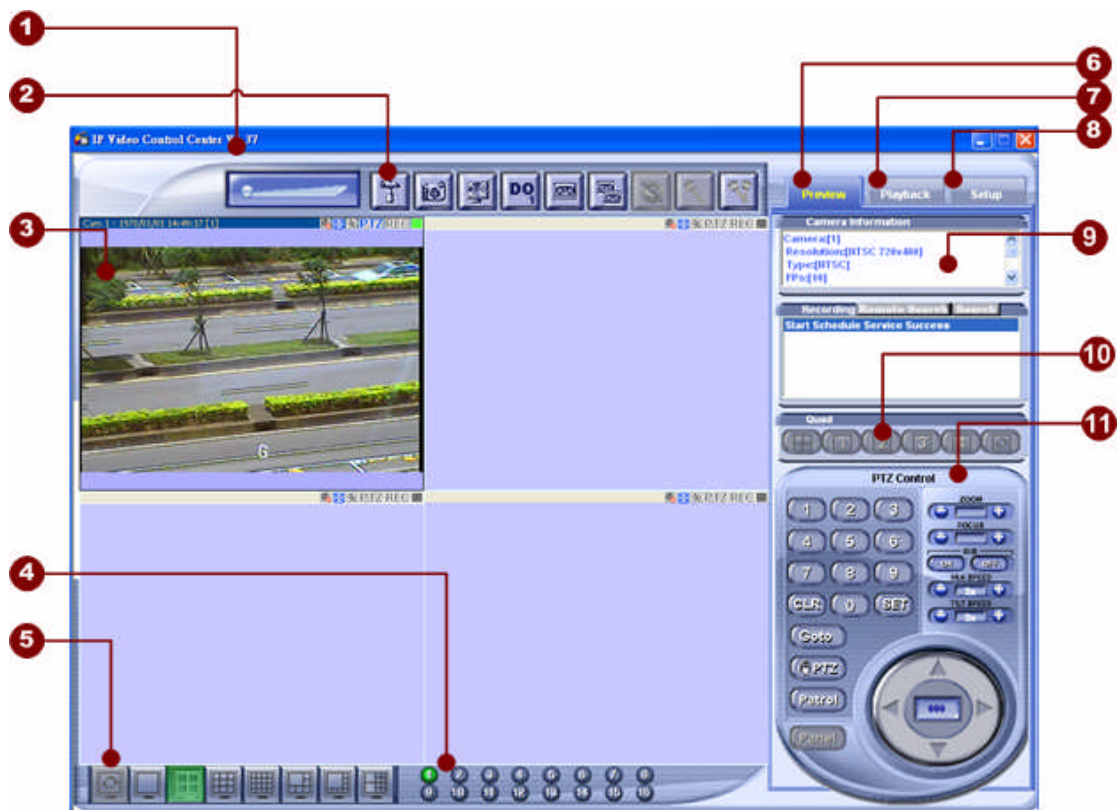


Figure 4. IP Video Control Center Preview Window

1. **IP Video Control Center version:** This panel displays related information on the IP Video Control Center version.
2. **Active Media Manager:** This panel operates 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 selected 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. **Quad Control Panel:** When connected to an IP Quad server, you can use this panel to control the video display.
11. **PTZ Control Panel:** Sends PTZ command to connected device.






Understanding the Playback Screen

IP Video Control Center playback screen consists of several parts.



Figure 5. IP Video Control Center Playback Window

1. **Thumbnail:** The window lists the thumbnail files captured by the user.
2. **Bookmark:** This window lists the bookmark files defined by the user.
3. **Media Playback Panel:** Media playback panel contains basic and advanced operation over media file, including play forward, rewind, play speed, frame-by-frame play forward and rewind.

 **TIPS:** Alarm/Event includes **Motion Detection Event** → , **Digital I/O Event** → , **Alarm** → , and **Bookmark Event** → 

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 6. 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 7. Double Click on the Video Screen to Enlarge Window

1. Click on the video screen to enlarge window

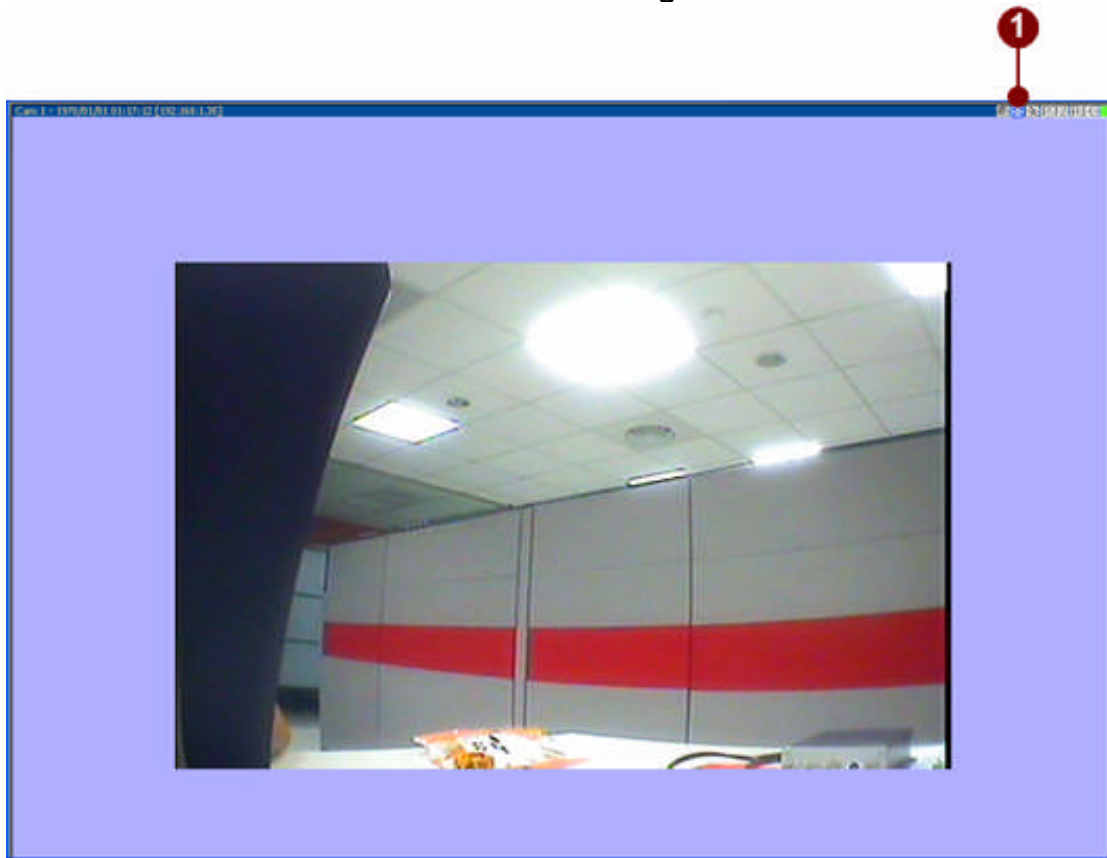


Figure 8. Enlarge Window

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

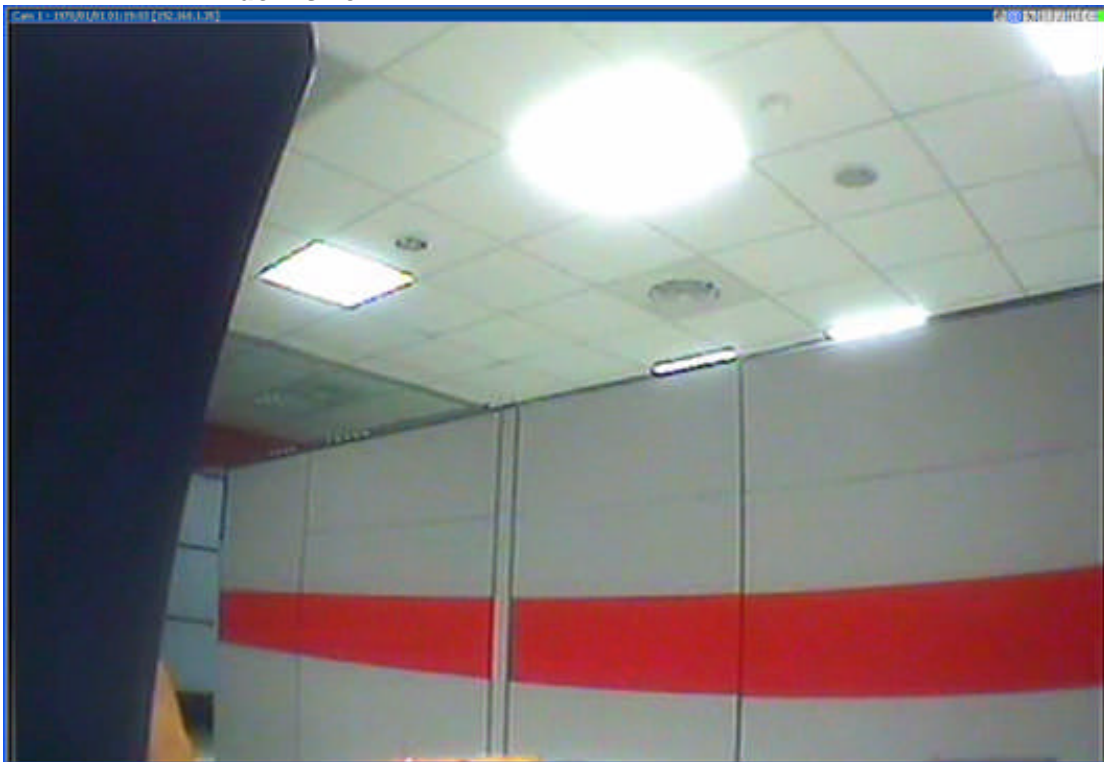


Figure 9. Enlarge and Stretched Window



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 setup the necessary configurations in IP Video Control Center. This section starts with adding a camera.

Assign a camera to a preview window



Figure 10. 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, please check the camera connection status.

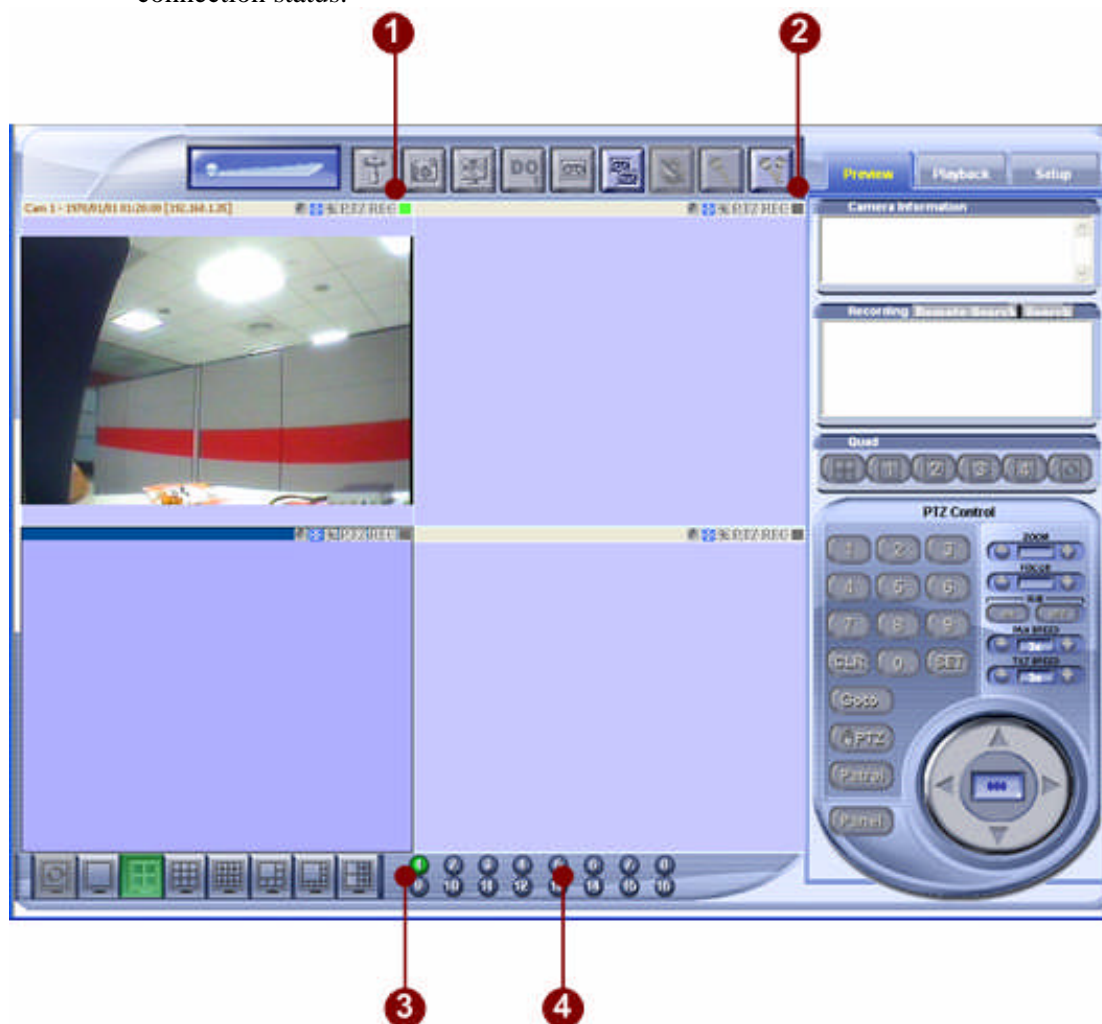






Figure 11. Camera Connection Status

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 camera
4.  indicates that the preview window is not connected to a camera

Camera Disconnection Status

If the network loses when previewing, a message will be at the top of the preview shown indicating the status.



NOTE: System will try to reconnect to Video Server after 20 sec, if failed, System will continue to reconnect every 20sec..



Figure 12. Message Indicates Disconnection Status

Camera Video Loss Status

If Video loss occurs, an indication message will be shown.



NOTE: System will try to check video every 20 sec before the video is back.



Figure 13. Message Indicates Video Loss

1. Title bar displays **Video Loss Detect**.
2. The **Video Loss** event is triggered and logged.

Configure a camera

This section shows you how to configure the camera information.

Click Configure Camera Button

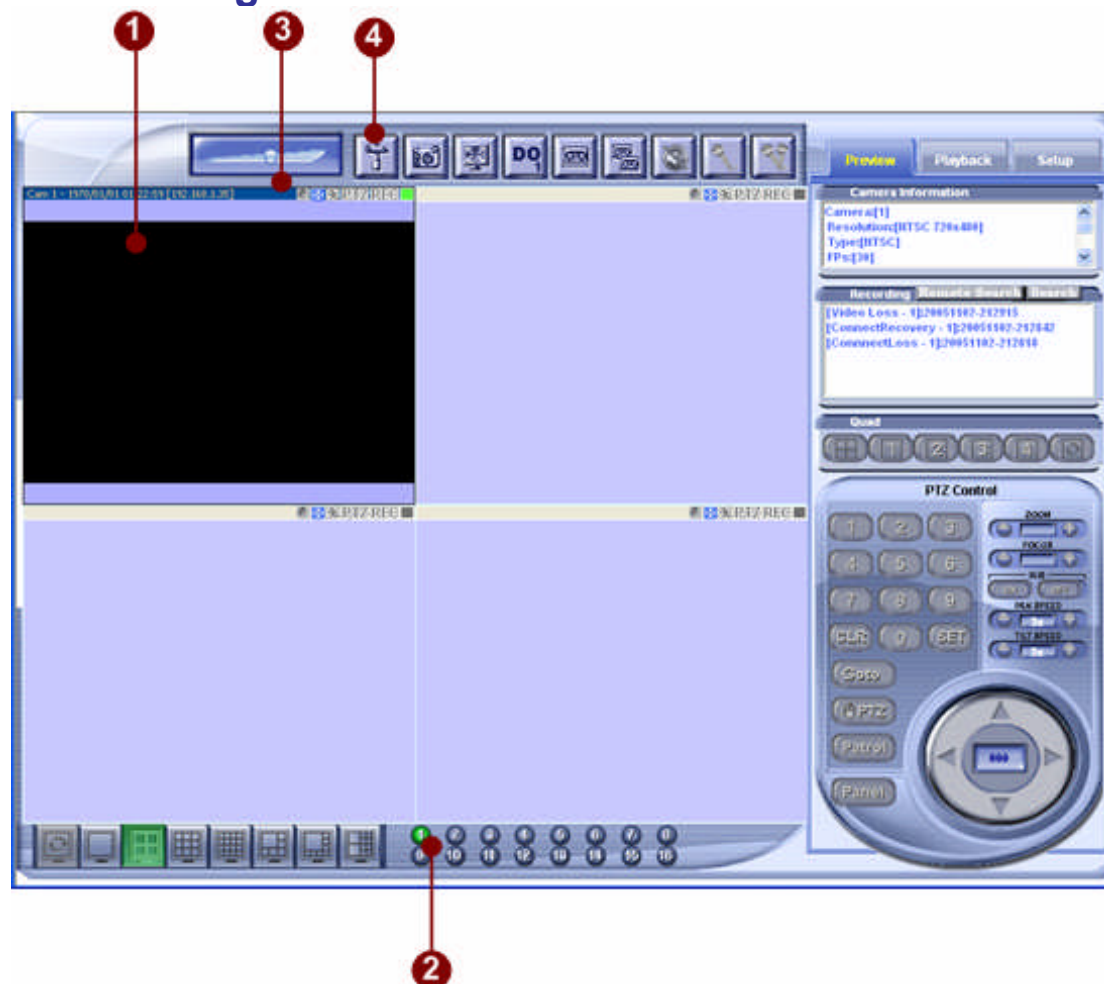


Figure 14. Click Configure Camera Button

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

TIPS: Active preview window:



Cam 1 - 2004/01/02 02:06:42 [Window Side]

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 load Setup Page.



Figure 15. Please Setup Camera Information First



Figure 16. Ask User to Load Setup Page

Camera Configuration

This chapter describes how to change basic camera settings in the setup window. For advanced setup, please refer to Chapter 9 for more information.

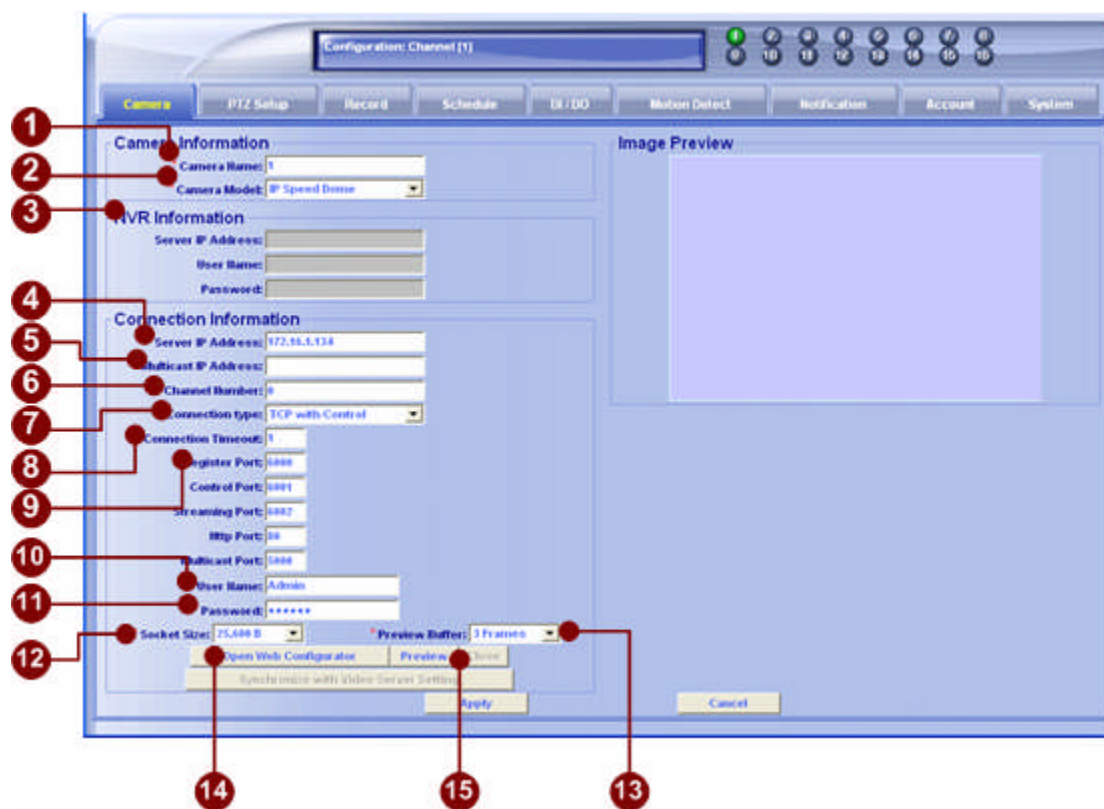


Figure 17. Camera Setup Dialog Box

1. ***Camera Name:** Input a camera name or description to describe the



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

- camera.
2. ***Camera Model:** Choose the camera model within a selection list; featuring:
 - Video Server
 - IP Camera
 - IP Speed Dome
 - IP Quad
 - Streaming Engine
3. **NVR Information:** Connect to the Streaming Server with unicast (TCP)
 - **Server IP Address:** Input the IP Address of Streaming Engine Server.
 - **User Name:** Input the login User Name.default is Admin.

- **Password:** Input the password.default is 123456.

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.domain.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 users.

6. **Channel Number :** Input you want to see video channel on multi-channels video server.
7. **Connection Type :** Choose the connection type.
 - **TCP with Control**
 - **Multicast with Control**
8. ***Connection Timeout :** set the timeout value to connect the IP device. If we set it to 3 seconds, then, the maximum timeout value is 3 seconds.



NOTE: During the timeout period, the application will hang. We suggest that you set it to 1 second for the timeout.

9. **Port Setup :** the port number to be authorized by the video server
10. **User Name:** the account to be authorized by the video server
11. **Password:** the password to be authorized by the video server
12. **Preview Buffer:** select the video preview buffer size; the unit is number of frames. Default is 3 frames.



NOTE: If you set this value to a larger value, then the video display will be smoother; however, the video latency will enlarge.

13. **Socket Size:** choose the network transport socket size, if your network is very busy or you use the wireless network, you can choose the socket size to let our software get package to be better performance. Default is 25,600 Byte.



NOTE: If the network bandwidth is not stable, please set the socket size to a smaller one, say 1000 bytes. In this case, the packet will be transmitted faster and will not re-send by the TCP protocol layer.

14. **Open Web Configurator** button: click this button to open video server's Web Configurator directly
15. **Preview** button: click this button to see the preview window and adjust frame rate and video quality.



Figure 18. Preview Window Toolbar

Motion Detection Setting

1. **Enable Motion Detection:** Enable or disable the motion detection function



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



Figure 19. Motion Detection Indicator Enabled



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



Figure 20. Motion Detection Indicator Enabled

PTZ Control Setting

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



NOTE: When the PTZ function is enabled, the media 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: For advanced PTZ control, please refer to chapter 53

For advanced PTZ setup, please refer to chapter 86



NOTE: Now, we support the user defined PTZ Protocol.



Figure 21 . 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 22. 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 modes by selecting on preview mode buttons.

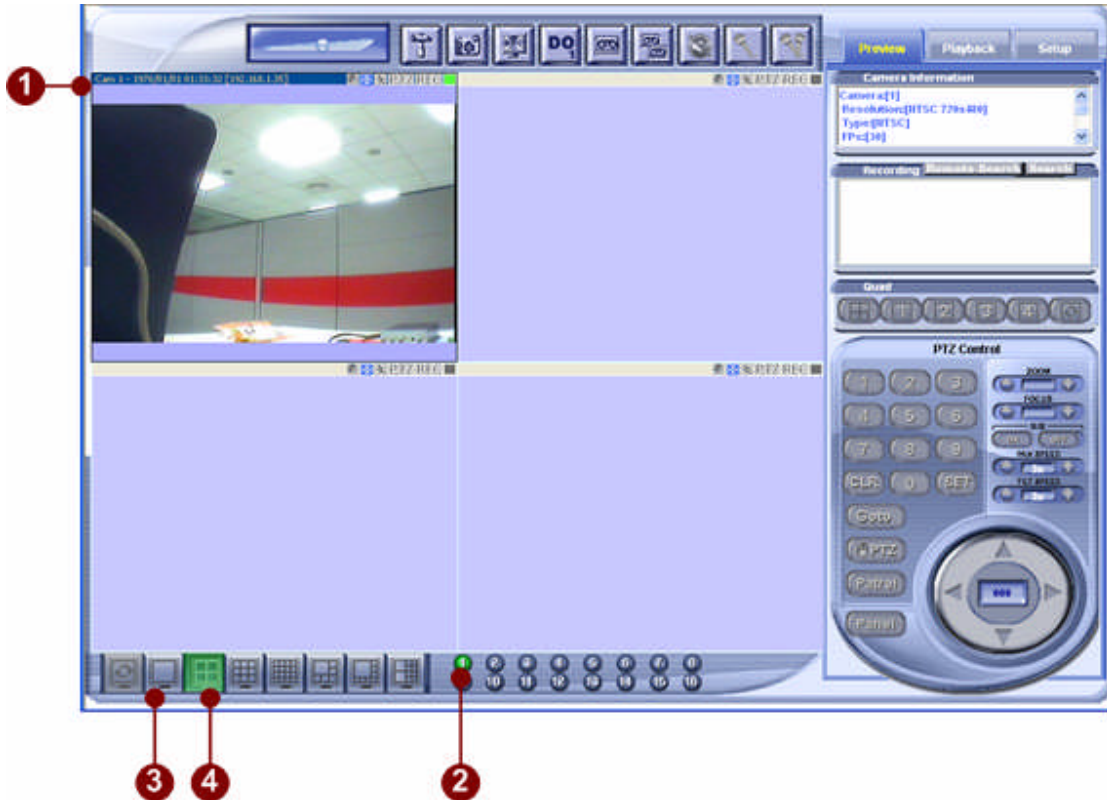




Figure 23. Preview Window Operation

1. When a channel is activated, the preview window will be displayed with **blue** title bar
2. The camera ID **1** will be displayed in **green** color **1**
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 display 4-channel at the same time

Activate the Media Window

To operate over a media window, you have to activate the media window first. The operations can be applied in the media window are: **Volumn adjust, Media Setup, Create Snapshot, Zoom Media Window; Send DOI, 1-channel Recording; multi-channels Recording; Mute; Enable microphone and audio broadcast.**

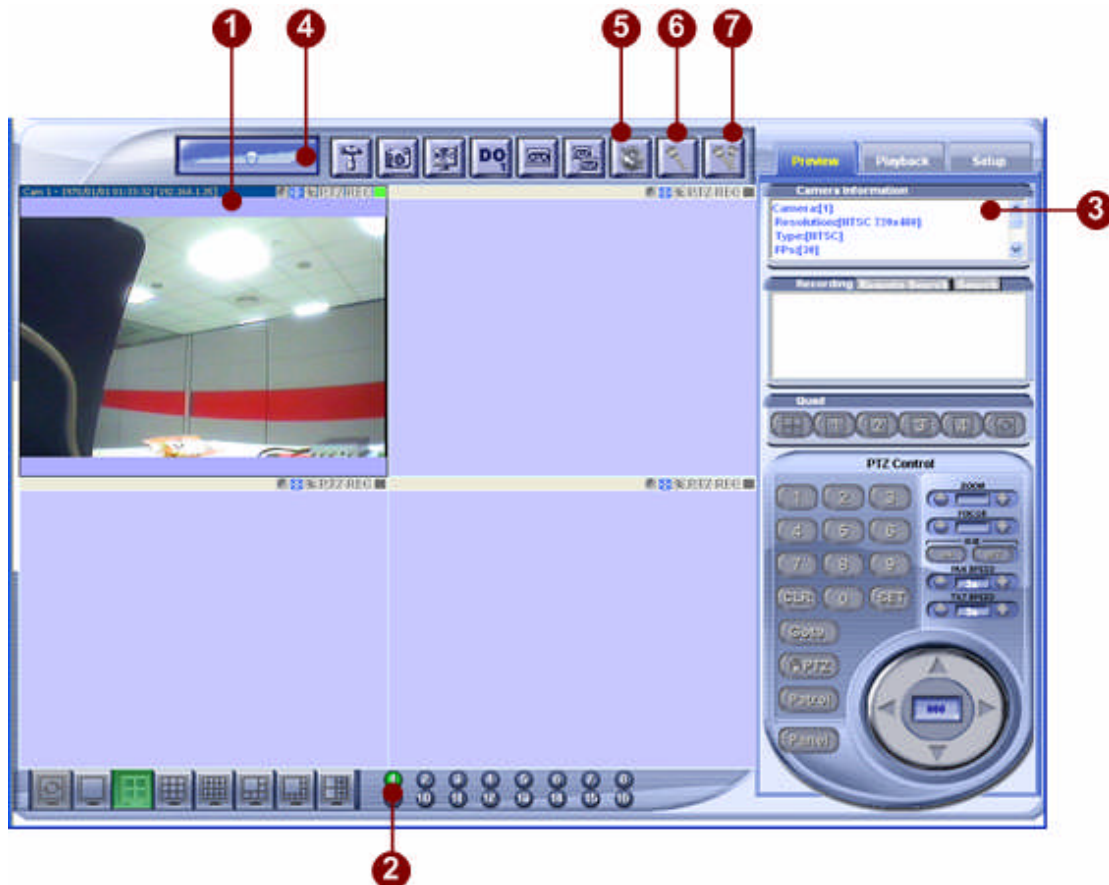


Figure 24. Activate a Preview Window

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. **1** 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



There are many function button on the Active Media panel. Click on these button will activate some certain functions. Please refer to the introduction below.



TIPS: The Active Media window will enable only function at the preview window you currently selected.




Figure 25. Active Media Manager

1. **Volume Adjustment Bar:** If the selected channel is equipped with audio capability, then user may use this volume adjustment bar to adjust the volume.
2. **Camera Setup:**  Setup the camera-related information, including IP address, FPS, Bit-Rate, recording settings, etc.
3. **Create Snapshot:**  IP Video Control Center creates snapshot image on-the-fly. This will also create a “**Manual-Thumbnail**” event to the system.








NOTE: Current snapshot images support **BMP** file format. The file location is configured in “Recording Setup” button.

4. **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.

5. **Send DO1:**  Use this button to trigger DOI manually.
6. **Toggle 1-channel Recording:**  Starts or stops recording manually. When the active window is recording, this button will become .
7. **Toggle Multi-channels Recording:**  Starts or stops recording manually. When the active windows are recording, this button will become .



NOTE: When user clicks Multi-channels Record button, the channels in the setup window will be recorded. For example, if user setup channel 1, channel 3, channel 5 in the camera setup, then these three channels will be recorded.

8. **Mute Button:** Click on this  button will turn audio off directly.
9. **Speak Button:** Click on this  button to transmit audio to the remote device.
10. **Broadcast Button:** Click on this  button to transmit audio to all remote devices that is currently connected and in preview mode.



NOTE: Speak and Broadcast button only valid on 2-way audio devices. Broadcast button only take effect when the channel is connected and under preview mode.

Preview Window

Media window is the essence of the IP Video Control Center system. Media window can serve as the live video stream from a video server or the media playback device from storage.

Media Indicator

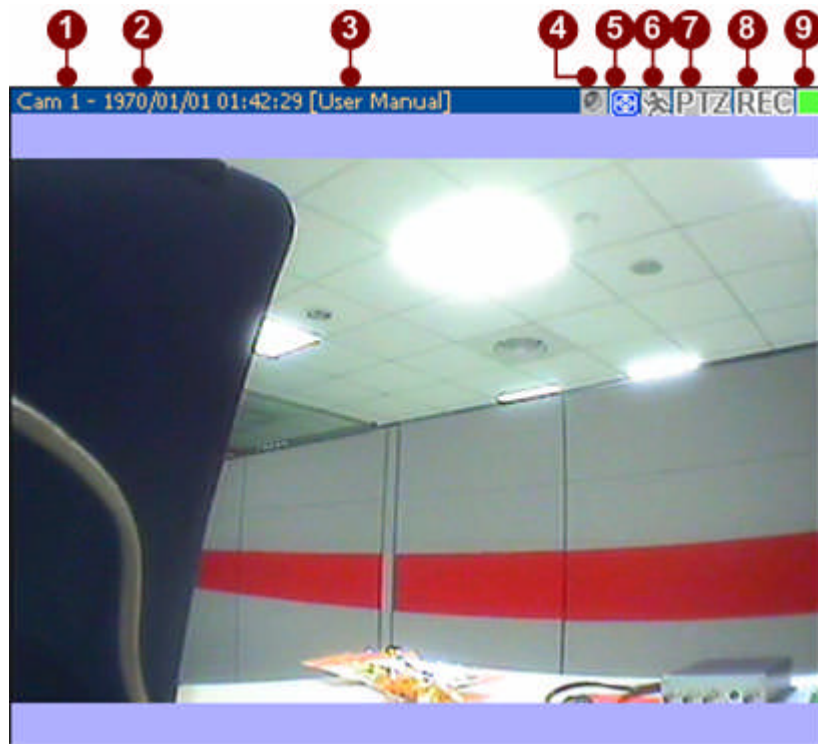





Figure 26. Preview Window Indicators

1. **Camera ID:** Indicates current camera ID
2. **Digital Time Code:** Displays 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. **Audio Indicator:** Indicates current audio status; either audio mute or audio enabled status.
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 enlarged 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 (Blue) 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:**  icon (Blue) indicates that this camera is setup with PTZ control.  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:**  icon (Red) indicates that this camera is recording.  icon indicates that this camera is not recording.
9. **Connection Status Button:**  icon (Green) 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.

IP Quad preview display

The preview of the IP quad is different from others. Please refer to the picture and description below.

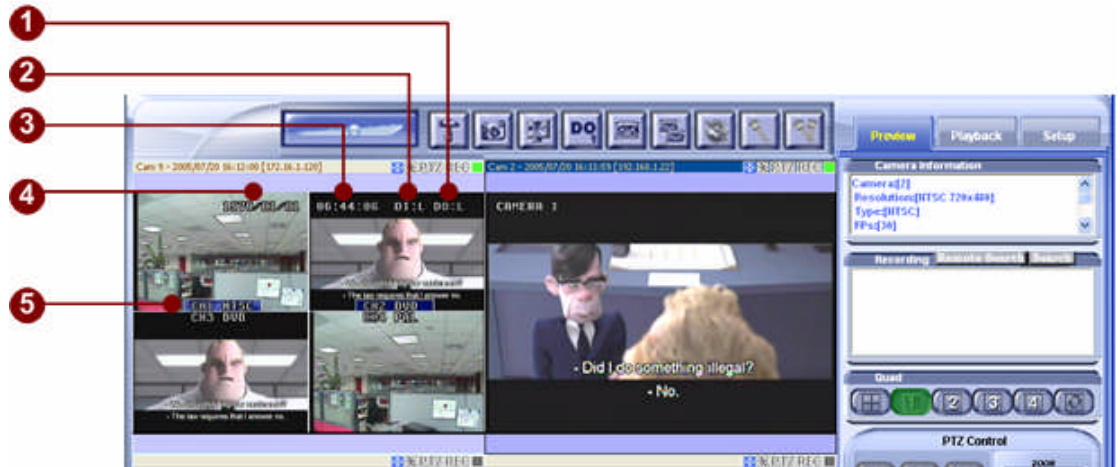


Figure 27. Preview Window Indicators

1. **DO status:** Indicates the current DO status of IP quad.
2. **DI status:** Indicates the current DI status of IP quad.
3. **Time:** Indicates the time settings of the IP quad.
4. **Date:** Indicates the date settings of the IP quad.
5. **Camera name:** Displays the camera name of IP quad channel. Whenever there is an event, the camera name will be covered by a blue square.

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 28. 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 Screenshot

Following method may let users to capture screenshots:

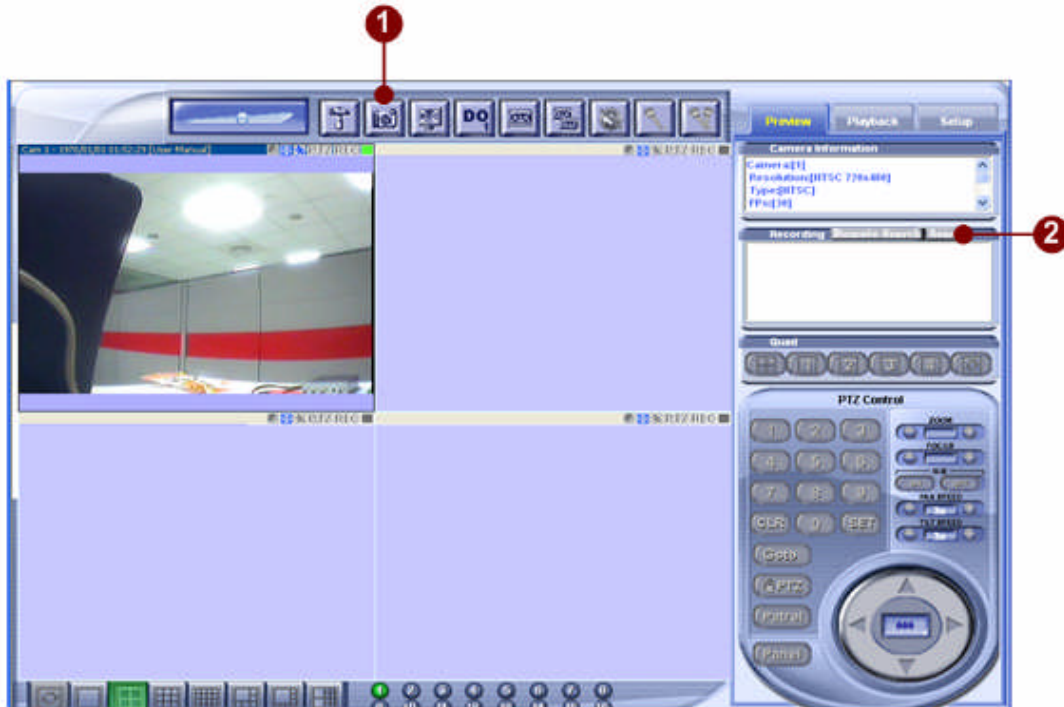





Figure 29. Capture Screenshot

1. **Capture Screen Button:** Click on the  button to capture active preview window into an 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.

Advanced Preview

If you want to view more than 3CH D1 images at the same time, you have to select “Auto frame” at each channel. Then you will preview 30fps image at one channel (the one currently clicked by your mouse) and preview 1fps for all other channels. This is due to the PC’s CPU computing power limitations.

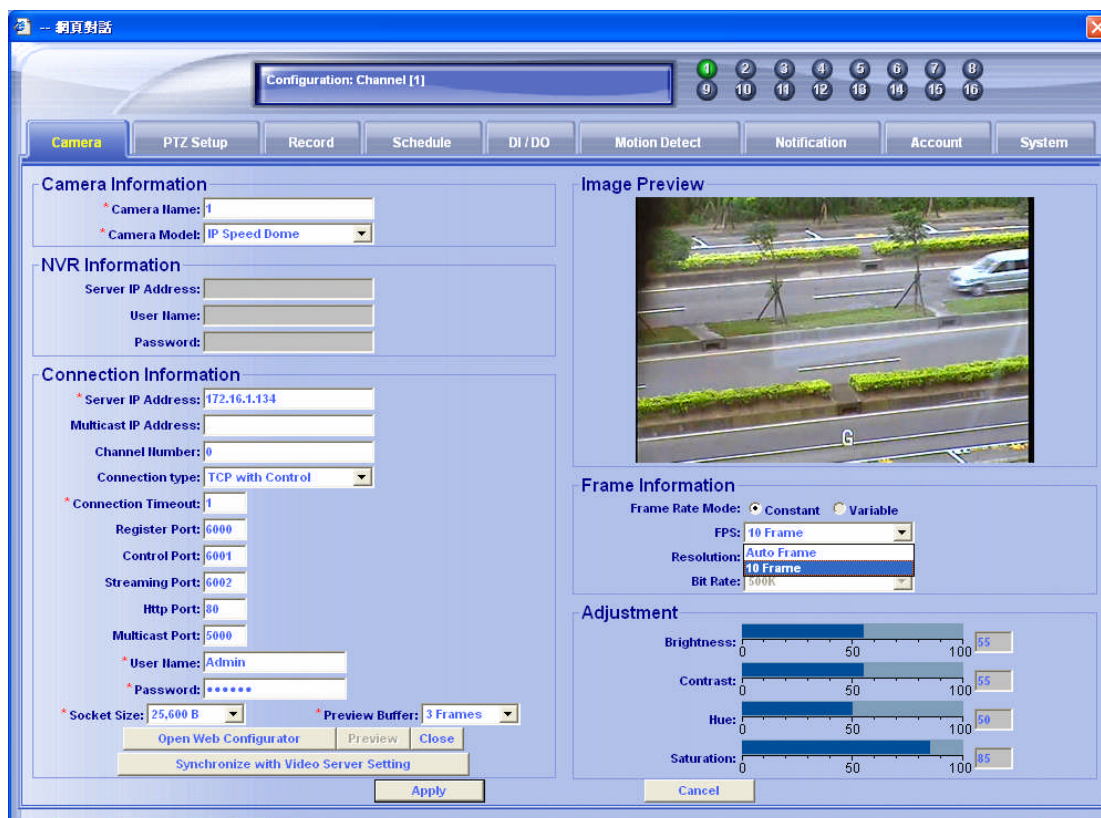


Figure 30. Camera Setup

1. Click on Camera Setting.
2. Input camera name, camera model, server IP address, user name, password and then click on “Preview” button.
3. On the FPS column, choose “Auto Frame”. (You can choose Auto Frame on Constant and Variable frame rate mode.)
4. Click on “Apply” button.
5. Choose other camera number, set it as same as this.



Figure 31. Advanced Preview Window

1. Go to Preview Mode, and then click on the camera number to preview.
2. Choose the video screen, it has the active mode, and has 30 FPS to preview.
3. The unselect video screen is 1 FPS to preview.

Arrange preview window with cameras

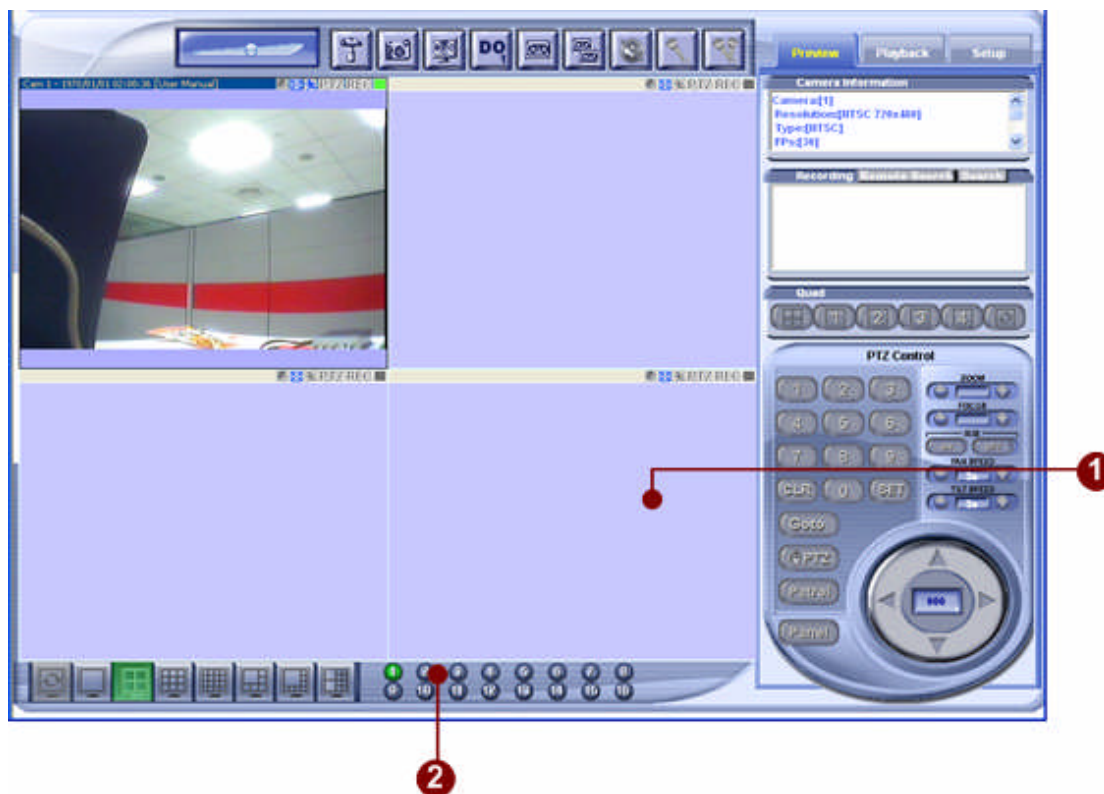



Figure 32. Assign a Camera to a Preview Window

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, but without preview.









NOTE: If the camera has not been connected yet, e.g. , 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 33. 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 become . Click on this button again to stop patrol preview function.
2. **1-window preview Mode:** Click on this button  to set the whole window tiled with 1 preview window.
3. **4-window preview Mode:** Click on this button  to set the whole window tiled with 4 preview window.
4. **Reconnect to connected Camera :** Click on this button  to reconnect this camera in existing or new window.
5. **Connect to unconnected camera :** Click on this button  to connect this camera in existing or new window.

5

Record Mode

This chapter describes the operations on the playback panel. Playback panel operates with search function closely as well.

Record Mode

In this release, there are four recording modes, including Manual Recording, Background Recording, Schedule Recording and Repeat Recording.

Manual-recording is the mode that user may click to start and stop manually.

Background-recording is the mode that let user to record channels without preview them. This recording will save a lot of CPU loading comparing with manual recording.

Schedule-recording is the mode that user may setup several independent schedules, and when the scheduled time reached, background recording will start recording and stop recording according to the schedule setup.

Repeat-recording is the mode that user may specify a threshold, so that when the hard disk space is not enough, older files will be deleted.

Manual Record Operation

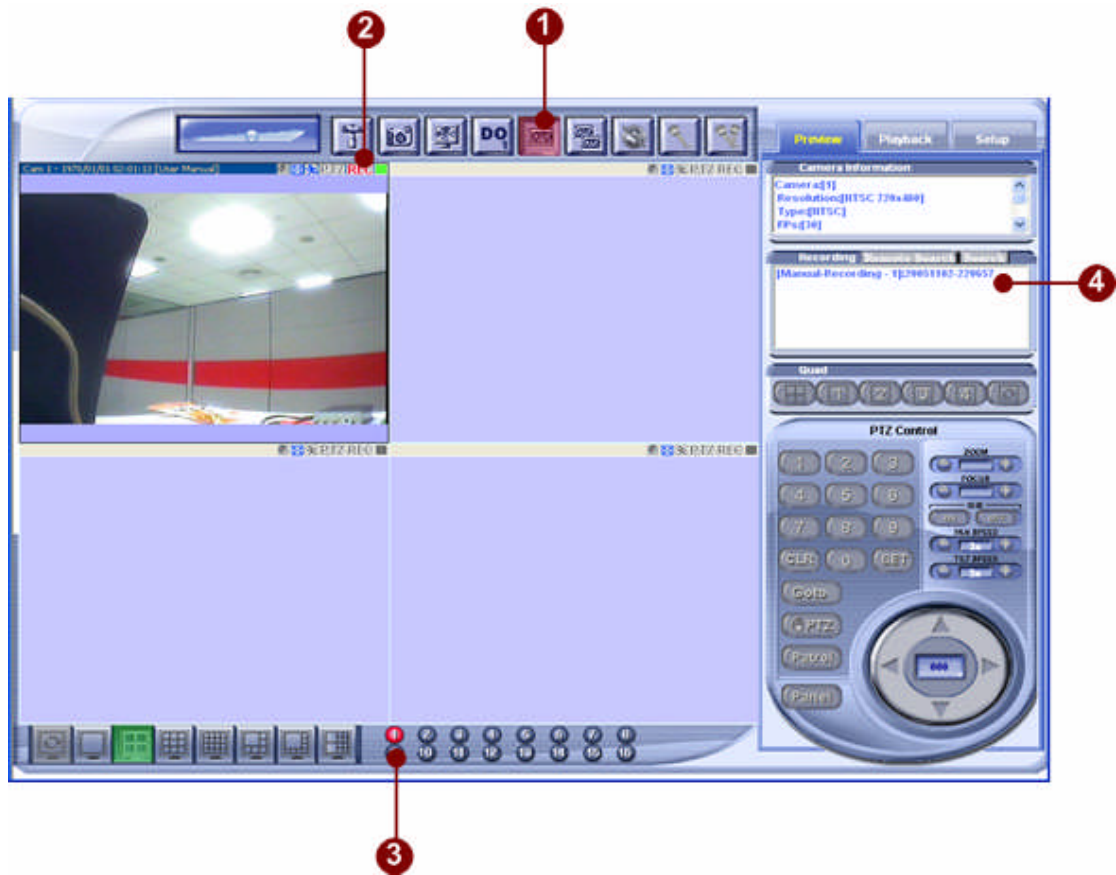






Figure 34. Manual Recording Operation

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

Background Record Operation

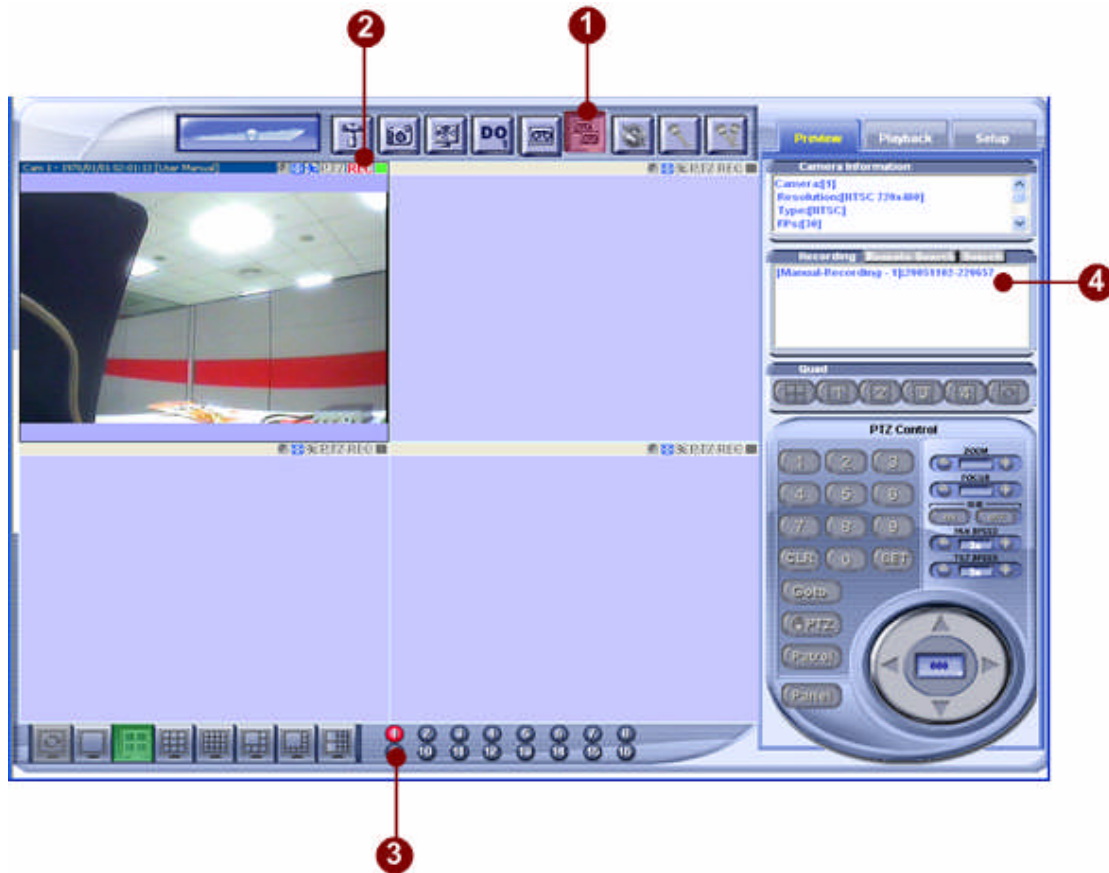




Figure 35. Background Recording Operation

1. Click record all toggle button  to start or stop background-recording.
 indicates that the specified cameras are background-recording at this moment.



NOTE: When user clicks Record All button, the channels successfully set in the setup window (please refer to page 80 for camera setup) will be recorded. For example, if you have successfully setup channel 1, channel 3 and channel 5 in the camera setup, then these three channels will be recorded during background-recording.




NOTE: Due to the CPU performance, and network connection time, there will have 5 seconds initialization time, before all channels start recording.



NOTE: The files recorded by background-recording locate at the same directory as the file path recorded by manual-recording.

2. The **REC** indicator is displayed, and it is not in **red** color during background-recording mode.

3. When the preview window is background-recording, the channel indicator  will be displayed in **green** color, it will not change into **red** color.
4. Recording event list: In the event list; there will be all background-recording channels for recording event.

Schedule Record Operation

User may specify several schedules independently on each channel. IP Video Control Center will perform background-recordings according to the schedules. (Please refer to page 90 for recording setup details)



Figure 36. Schedule Recording Operation

1. Click on the camera number.
2. Input the schedule
3. Click on “Save” button to save and click “New schedule” to input new.
4. All schedules are listed here.



NOTE: Schedule-recording function will only work when the IP Video Control Center is on. If the IP Video Control Center is not on, nothing will be recorded even if it's in the recording schedule.

Repeat Recording Operation

In this release, there is a new option in the recording setup. User may specify the lowest hard disk space threshold, if the threshold is reached, then some older files will be deleted according to your choice. Please refer to Page 90 for setup details.

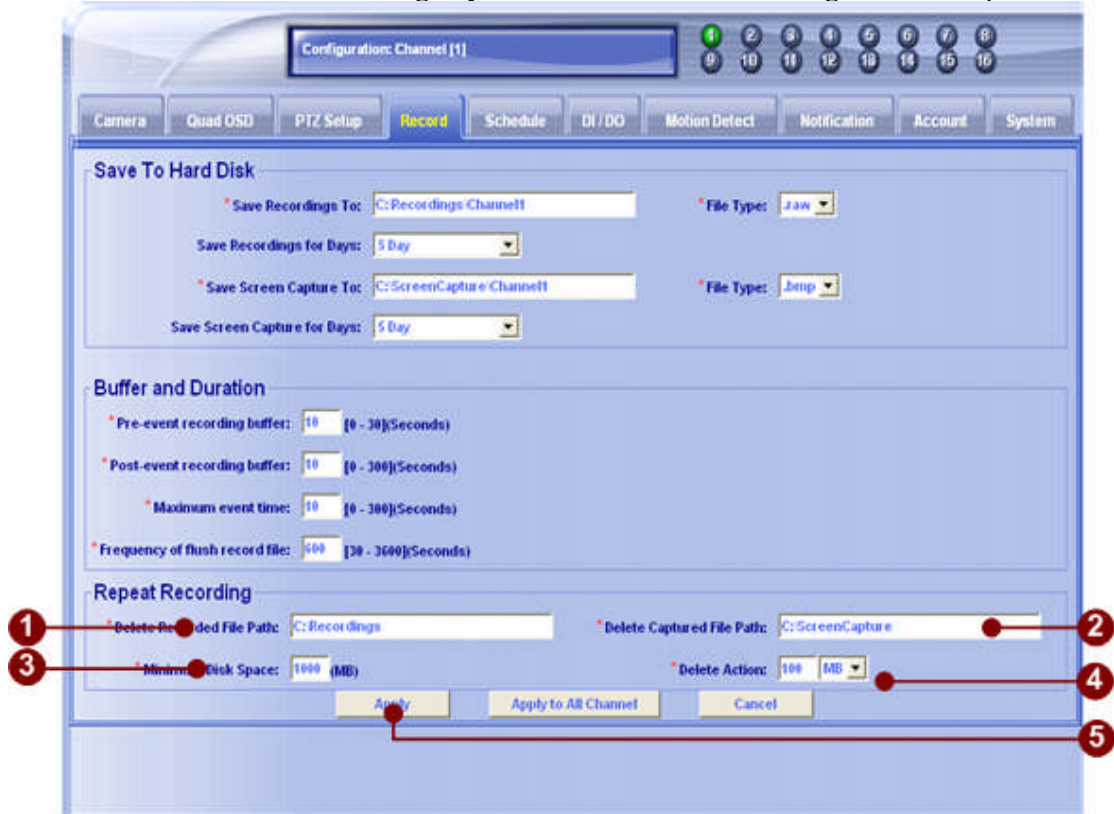


Figure 37. Repeat Recording Operation

1. Delete File Path: The IP Video Control Center will start to delete files in this folder and the subfolders of this folder.



NOTE: All sub-directories under this directory will be enlisted, and older files will be deleted.

2. Minimum Disk Space: the minimum disk space threshold.
3. Delete Action: when the Minimum Disk Space is reached, it will start to delete according to your setup here. the action will be taken



NOTE: Repeat Recording works with Manual Record Mode, Background Record Mode and Schedule Recording.

4. Click on “Apply” button to save...

6

Playback Mode

This chapter describes the operations over playback panel. Playback panel operates with search function.

Playback Panel

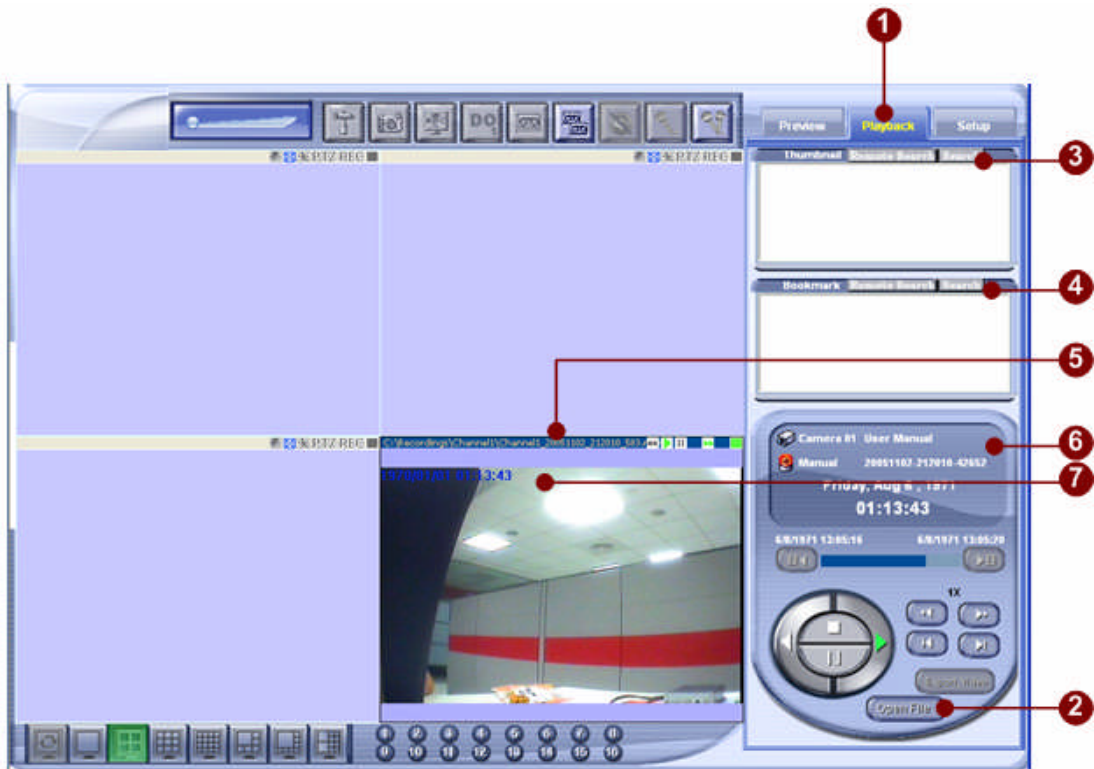







Figure 38. Playback Panel

1. **Playback Tab:** Click on the playback tab to invoke the playback mode
2. **Open File Button:** Click on the  button to open a dialog box to open a recorded file.
3. **Thumbnail:** Click on the  or  button to display Event Search window.
4. **Bookmark:** Click on the  or  button to display Event Search window.
5. **Active Playback window:** This window displays the playback video files
6. **Media Playback Panel:** Operates playback mode 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.

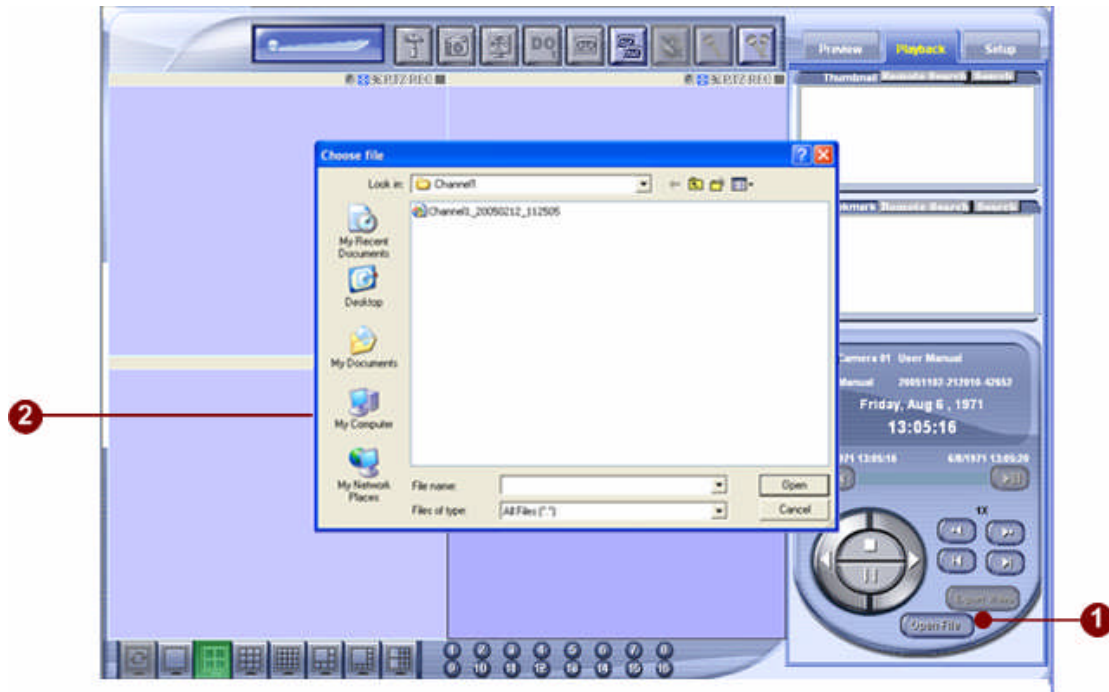


Figure 39. Open Media File

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

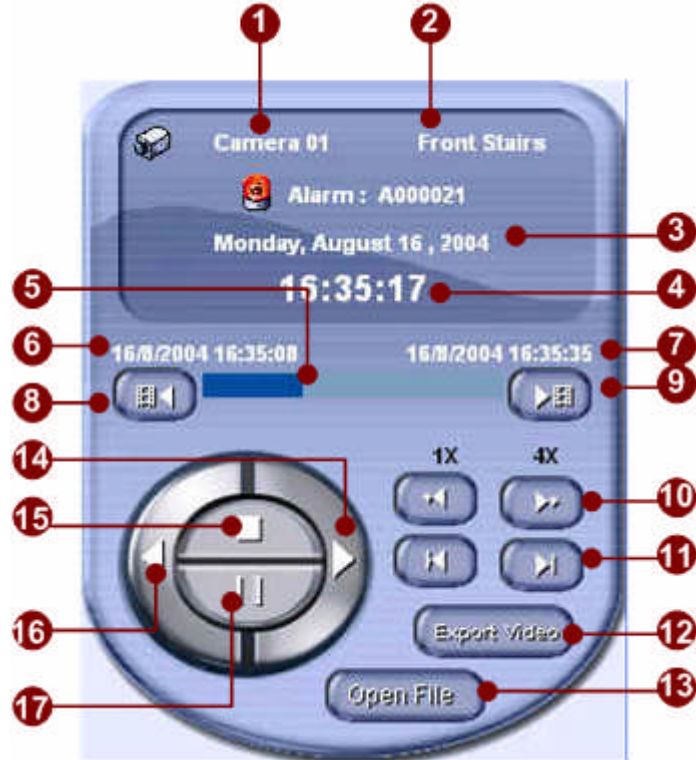




Figure 40. Media Control Panel

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 media file first.

10. **Fast forward:** Fast forward , available speed are: 1X, 2X, 4X,
11. **Go to 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 can be operated and controlled by Media Control Panel as well.



Figure 41. 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 Screenshot

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

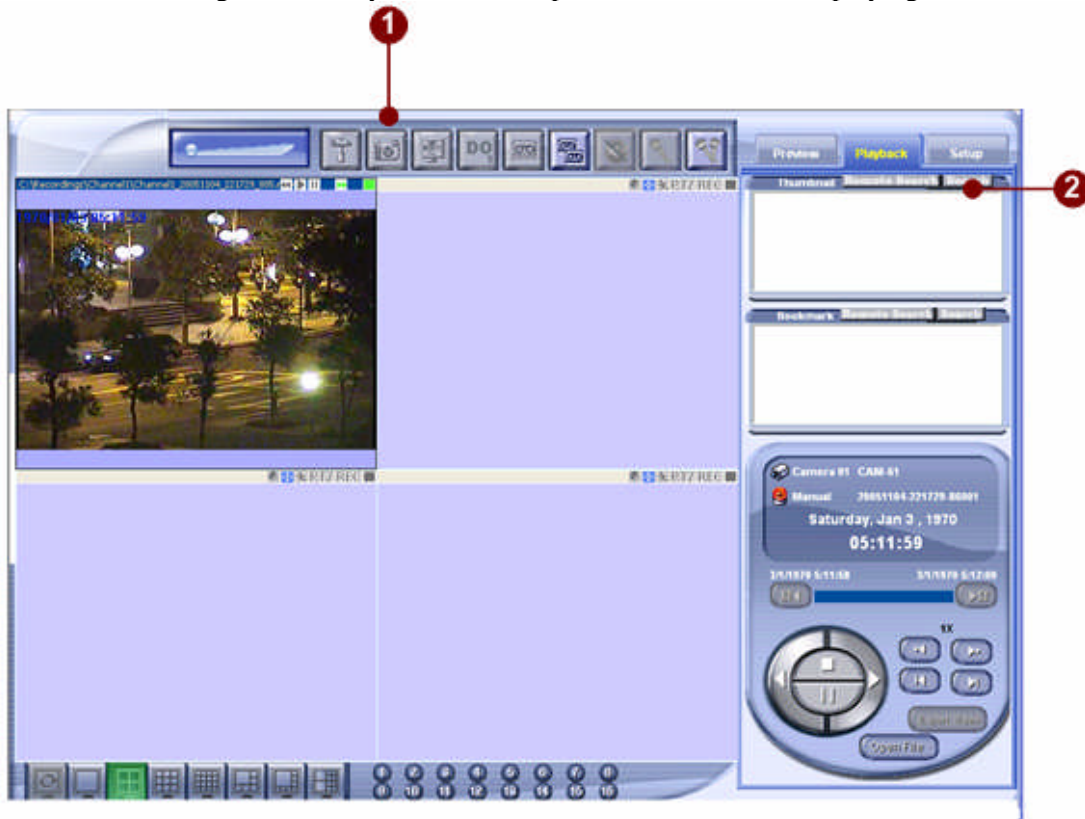







Figure 42. Capture Playback Screenshot

1. **Capture Screen Button:** Click on the  button to capture active preview window into an 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, 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 recorded 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 file by date, time and event lists.



Figure 43. Search Event

Event Search List

Event Search dialog box looks like following:

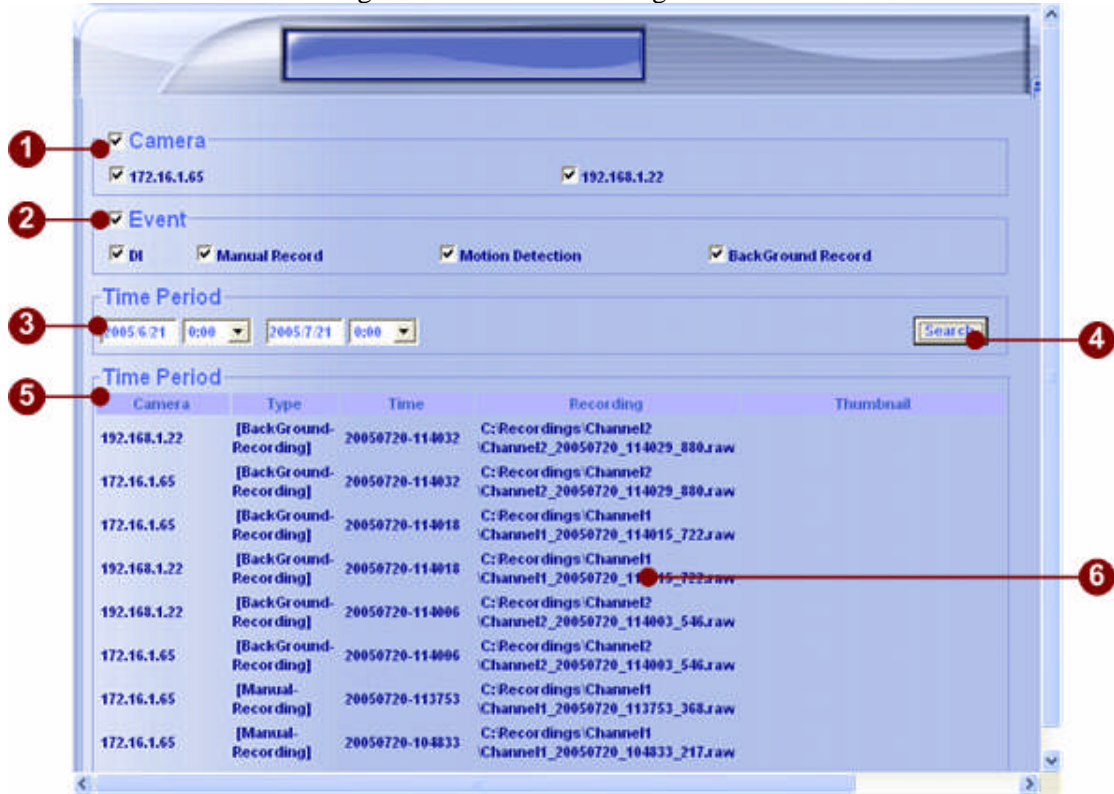


Figure 44. Event Search List

1. **Camera:** Lists the cameras connected. Click on **Camera** check box to select or de-select all cameras.
2. **Event:** Lists the Event list for search. Available events are **DI**, **Manual Record**, **Motion Detection**, and **Background Record**. Click on **Event** check box to select or de-select all events.
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 match the criteria.
6. **Event Detail:** Click on the event detail to start playing video.

Remote Event Search List

Remote Event Search dialog box looks like following:

The screenshot shows the 'Remote Event Search' dialog box. It features a 'Remove Search' button at the top. The 'NVR Information' section (1) contains a 'Server IP' field with '172.16.1.203' and a 'Get Camera List' button (2). The 'Camera' section (3) displays a grid of 64 camera options, each with a checked checkbox. The 'Event' section (4) has checkboxes for 'Continuous', 'Schedule', 'DI', and 'Motion'. The 'Time Period' section (5) shows date and time pickers for '2006.5.24 0:00' to '2006.6.24 0:00' and a 'Search' button (6). The 'Search result' table (7) lists search findings with columns for Camera, Type, File Location, Start Time, and End Time. A 'Hex' button (8) is located at the bottom of the table.

Camera	Type	File Location	Start Time	End Time
C109	Continuous	E:\Recordings\Channel43 Channel43_20060623_110446_155.raw	2006-06-23 11:04:45	2006-06-23 11:37:53
C-131	Continuous	E:\Recordings\Channel45 Channel45_20060623_110738_655.raw	2006-06-23 11:07:38	2006-06-23 11:40:49
C108	Continuous	E:\Recordings\Channel42 Channel42_20060623_110744_499.raw	2006-06-23 11:07:44	2006-06-23 11:40:57
AV109	Continuous	E:\Recordings\Channel11 Channel11_20060623_110756_858.raw	2006-06-23 11:07:56	2006-06-23 11:19:01
M190	Schedule	E:\Recordings\Channel62 Channel62_20060623_111120_155.raw	2006-06-23 11:11:21	2006-06-23 11:21:39
M189	Schedule	E:\Recordings\Channel61 Channel61_20060623_111250_670.raw	2006-06-23 11:12:53	2006-06-23 11:23:53
VS-177	Continuous	E:\Recordings\Channel53 Channel53_20060623_111310_670.raw	2006-06-23 11:13:19	2006-06-23 11:24:21
EP100	Continuous	E:\Recordings\Channel24 Channel24_20060623_111421_160.raw	2006-06-23 11:14:21	2006-06-23 11:17:08
VS-178	Continuous	E:\Recordings\Channel54 Channel54_20060623_111427_292.raw	2006-06-23 11:14:27	2006-06-23 11:25:28
CH37-103	WithStreaming	E:\Recordings\Channel37 Channel37_20060623_111545_858.raw	2006-06-23 11:15:45	2006-06-23 11:15:59
VS-16	Continuous	E:\Recordings\Channel32 Channel32_20060623_111558_499.raw	2006-06-23 11:15:57	2006-06-23 11:26:56
M184	Continuous	E:\Recordings\Channel59 Channel59_20060623_111600_483.raw	2006-06-23 11:16:00	2006-06-23 11:26:58
M181	Continuous	E:\Recordings\Channel57 Channel57_20060623_111605_577.raw	2006-06-23 11:16:05	2006-06-23 11:27:03
C172	Continuous	E:\Recordings\Channel49 Channel49_20060623_111605_499.raw	2006-06-23 11:16:07	2006-06-23 11:27:05
VS132	Continuous	E:\Recordings\Channel14 Channel14_20060623_111612_374.raw	2006-06-23 11:16:12	2006-06-23 11:27:10

Figure 45. Remote Event Search List

1. **NVR information:** please input the ip address that you want to search NVR Machine.
2. **Get Camera List:** get all cameras listing.
3. **Camera:** Lists the cameras connected. Click on **Camera** check box to select or de-select all cameras.
4. **Event:** Lists the Event list for search. Available events are **DI, Manual Record, Motion Detection, and Background Record**. Click on **Event** check box to select or de-select all events.
5. **Time Period:** Select a start and end time period.
6. **Search Button:** Click this button to start search events
7. **Event Search List:** This list displays the recorded files that match the criteria.
8. **Next Button:** Click on to go to next page.

7

PTZ Control Panel

This chapter describes the operations over PTZ Control panel and how to add new PTZ Protocol.

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.

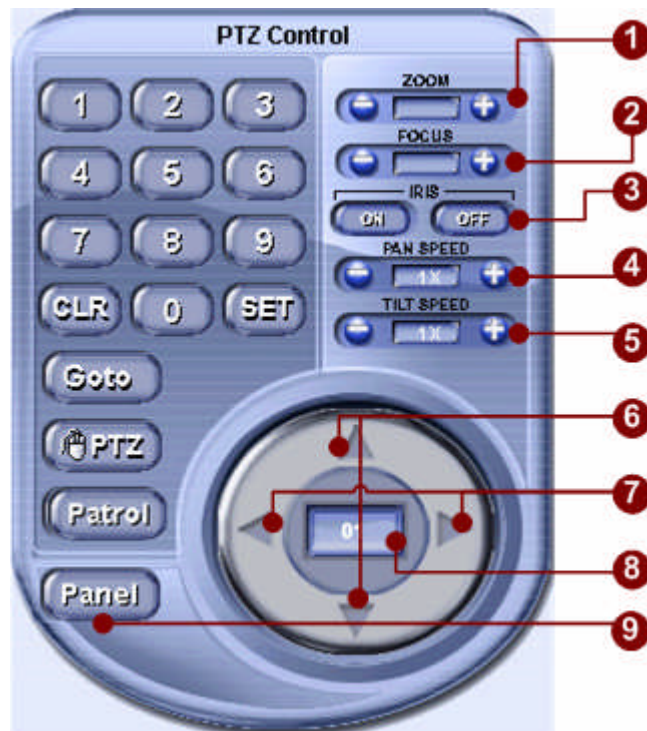








Figure 46. PTZ Control Panel

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
9. **Remote control panel function:** Click this button to enable the remote control panel function. Remote control panel function transmits the control data from a control panel (connected to this PC) to the remote PTZ device (ex: IP speed dome or any PTZ device connected video server).

PTZ Preset Position Operation

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

- Save position
- Clear position (This function is currently reserved)
- Go to position
- Patrol on preset position
- Mouse PTZ function

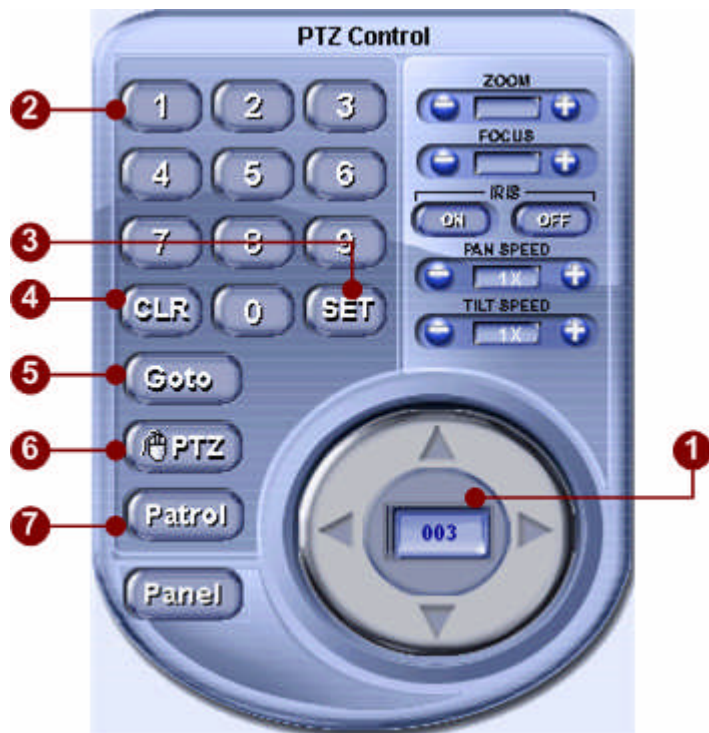




Figure 47. PTZ Preset Panel

1. **Position Indicator:** indicates current position
2. **Key Pad:** click on the number key pad to set the position indicator. Position indicator is 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:** go to 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.  **button:** toggles patrol mode. By clicking this button, IP Video Control Center will start patrol with preset positions.
8.  **button:** Click this button to enable the remote control panel function. Remote control panel function transmits the control data from a control panel (connected to this PC) to the remote PTZ device (ex: IP speed dome or any PTZ device connected video server).



NOTE: Maximum number of preset positions is 8





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

Move to the point → **Key in the NO** → 



NOTE: To setup the position for Linlin as follows:

Key in the NO →  → **Move to the point** → 

Add New PTZ Protocol

IP Video Control Center's PTZ control supports user defined PTZ Protocol. There are 3 steps required. First: Add a new PTZ protocol. Second: Select the protocol for specified camera. Third: Go to preview mode and control.



Figure 48. Add New PTZ Protocol Setup

First: Add a new PTZ protocol.

1. First, add a protocol.ptz file (ex. samsung.ptz).
2. Click on PTZ Setting.
3. Click on "Add Protocol" button.

About the protocol.ptz file, you can see the Appendix-A at page 105 for details.

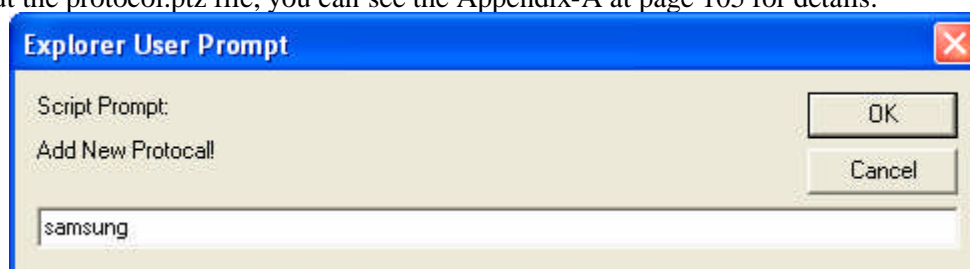


Figure 49. Input New PTZ Protocol Name

1. You can see this message.
2. Input the new protocol name (ex.samsung).
3. Click on “OK”

Second : Select the protocol for specified camera.

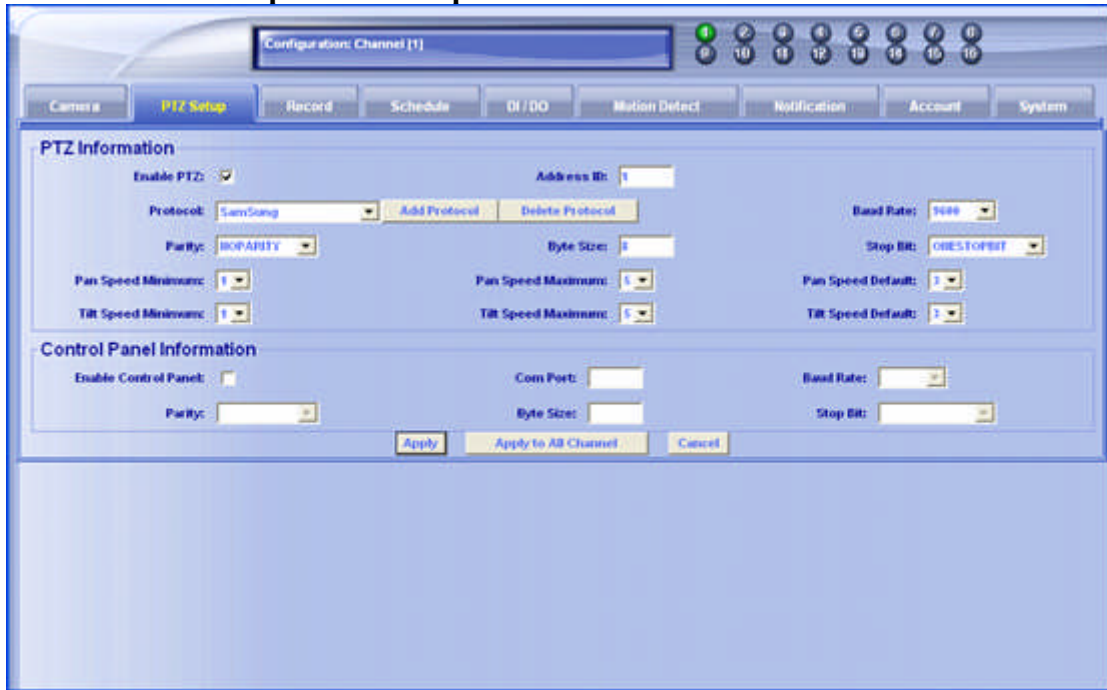


Figure 50. Choose the New PTZ Protocol

1. Copy the Samsung.ptz file to C:\Program Files\IP Video Control Center\
2. Run IP Video Control Center software, and Go to PTZ Setting.
3. Enable PTZ, then you can see Samsung protocol.
4. Setup the PTZ information. Pan speed minimum, maximum, default; Tilt Speed minimum, maximum, default; address ID, Baud Rate.
5. After input, Click on “apply” button.

Third: Go to preview mode and control

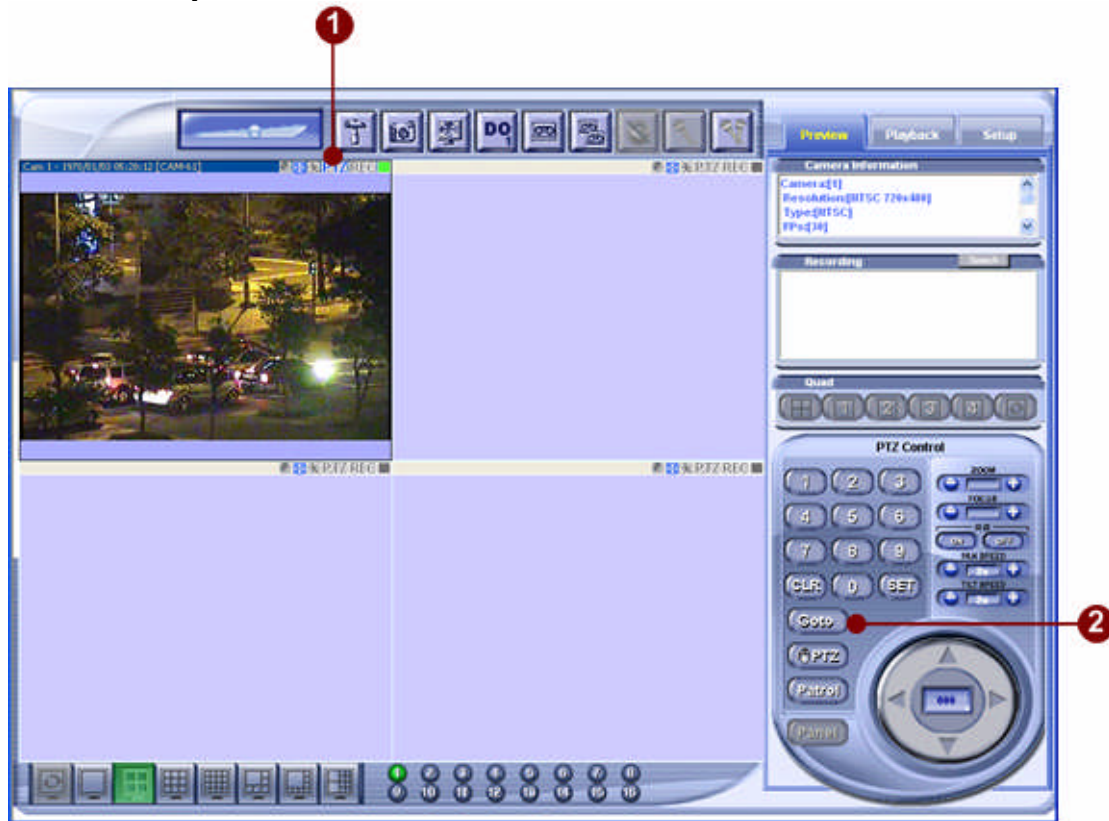


Figure 51. Go to Preview Mode and Test New PTZ Protocol

1. Go to Preview mode. You will see the PTZ indicator is on.
2. Reconnect to the camera by clicking on the camera number. Then you can use the PTZ function.

8

Motion Detection

This chapter describes the operations over Motion Detection Setup. There are two types of setup page, one is for IP quads, the other is for Normal IP cams and video servers. Please follow the procedure below to setup.

Motion Detection Setup, step by step

Normal IP cam/Video server

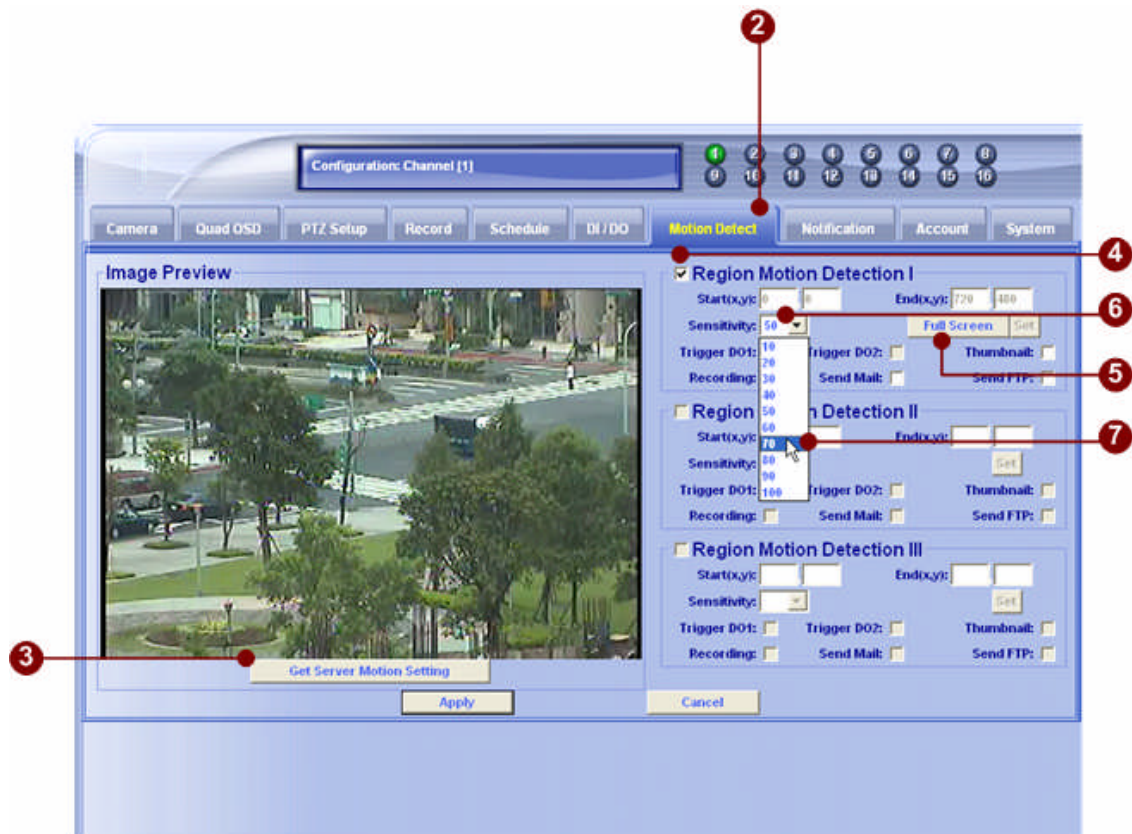


Figure 52. Normal IP camera/ Video server motion Detection Setup Box

1. Before you start the setup. Please **disconnect all preview channels**.
2. Select Motion Detection to Setup
3. Press “Get Server Motion Setting” button to image preview
4. Enable the Regional Motion Detection I
5. Then Click “Full Screen” button
6. Auto-Enter the sensitivity numbers.
7. Change sensitivity setting (Default is 50).

8. After a successful setup, you will see the video screen with a red frame.
9. Select the response action once the Motion Detection is triggered. (Ex: Trigger DO1, Add Thumbnail, Start Recording, Send an E-mail, Send file to FTP)
10. Click on the Apply button.



IMPORTANT: If the video image does not show up, it means that this video server cannot be connected correctly or the account / password to access this video server is not correct.

IP Quad



Figure 53. IP Quad Motion Detection Setup Box

1. Before you start the setup. Please **disconnect all preview channels**.
2. Select Motion Detection to Setup
3. Press “Get Server Motion Setting” button for image preview
4. Enable the Regional Motion Detection
5. Select the sensitivity numbers.
6. Select the response action once the Motion Detection is triggered. (Ex: Trigger DO1, Add Thumbnail, Start Recording, Send an E-mail, Send file to FTP)

7. Click on the Apply button.



IMPORTANT: If the video image does not show up, it means that this video server cannot be connected correctly or the account / password to access this video server is not correct.

1. “Save successfully” message will appear on the screen.



Figure 54. Save Successfully

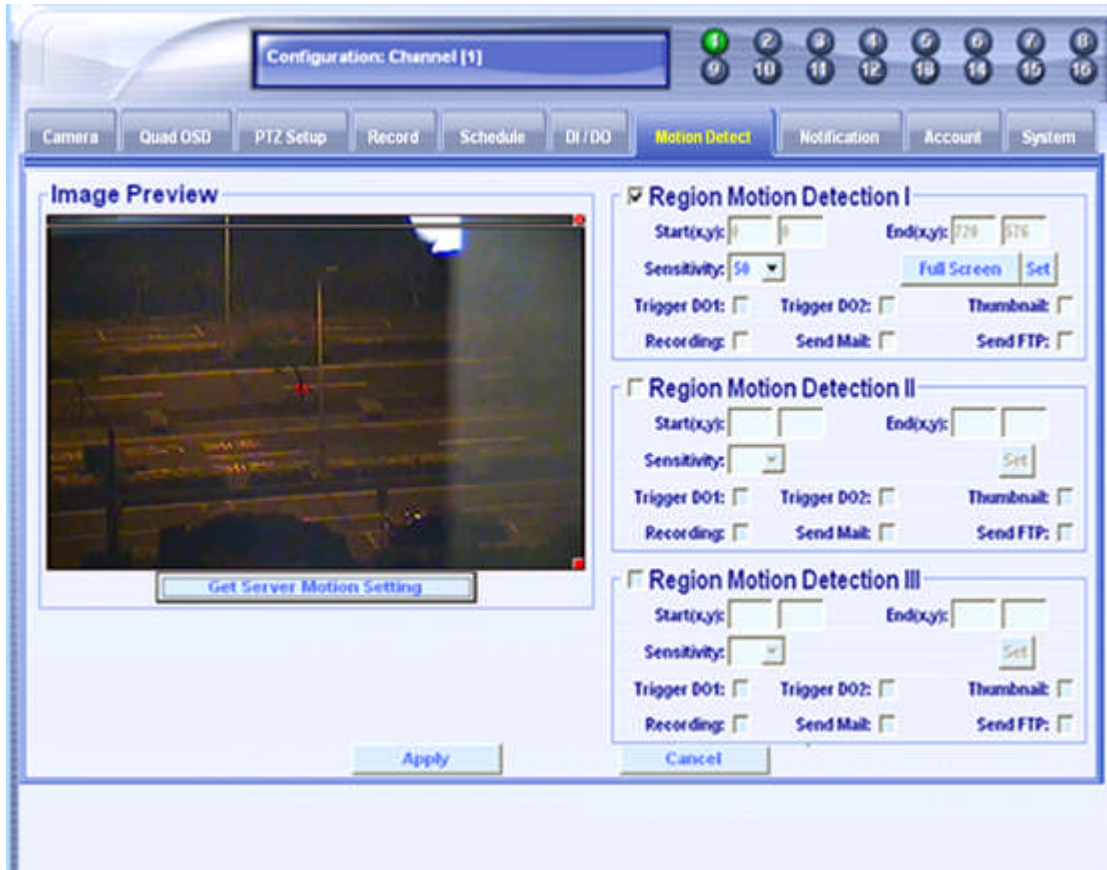


Figure 55. Motion Detection Setting is saved to Firmware

1. Our Motion Detection setting is saved to the firmware.



Figure 56. Motion Detection Preview

1. Go to preview.
2. Click on the camera.
3. You can see the blue icon on the bar.

When the Motion Detection function runs, you can see a **red frame** on video screen, and the little icon will be change to **red**.



Figure 57. Motion Detection Function Running

Example A: A correct Motion Detection Setup

Here are some examples on how to set Motion Detection:

Indoor (TCP Connect): Full Screen / Sensitivity: 50 or higher

Indoor (Multicast Connect): Full Screen / Sensitivity: 70 or higher

Indoor



Figure 58. Enable Indoor Full Screen Motion Detection Function

1. Enable Region Motion Detection I.
2. Press “Full Screen” button.
3. Then click “Apply” button to save.



Figure 59. Enable Indoor Regional Motion Detection Function

4. Or you may set the regional motion detection on the entrance.

Outdoor (TCP Connect): Full Screen / Sensitivity: 60 or higher

Outdoor (Multicast Connect): Full Screen / Sensitivity: 70 or higher

Outdoor

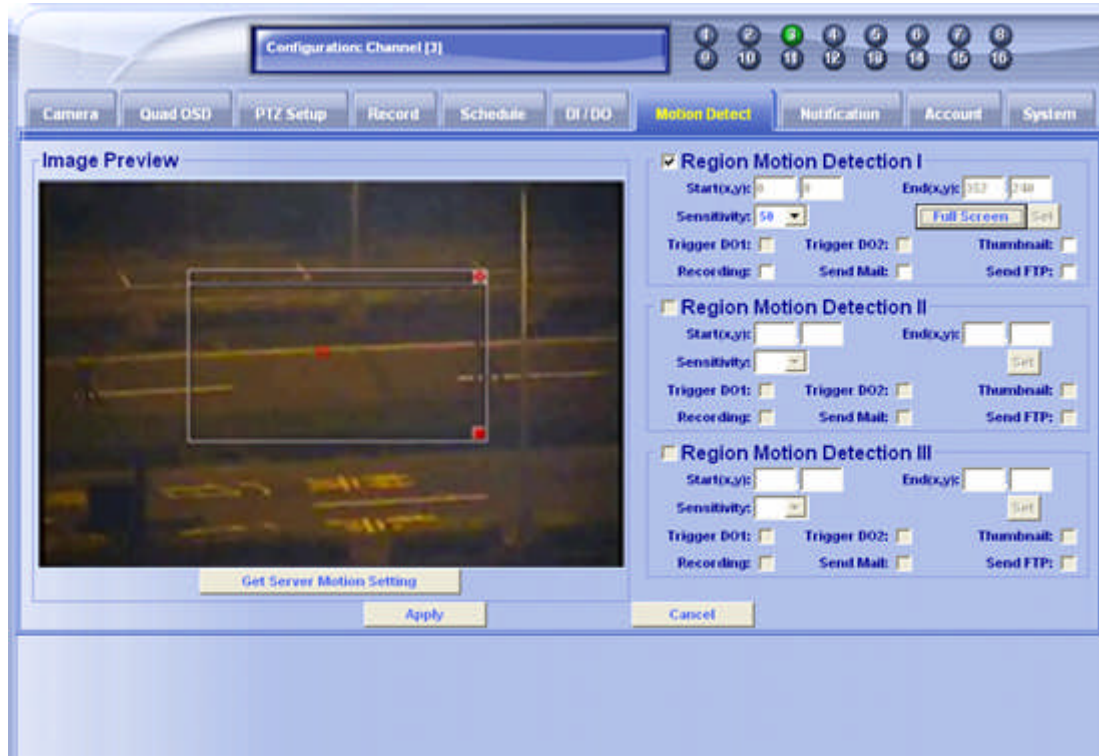


Figure 60. Enable Outdoor Motion Detection Function

1. Enable Region Motion Detection I
2. Press “Set” button
3. Sets the regional motion detection on the entrance
4. then click “Apply” button to save

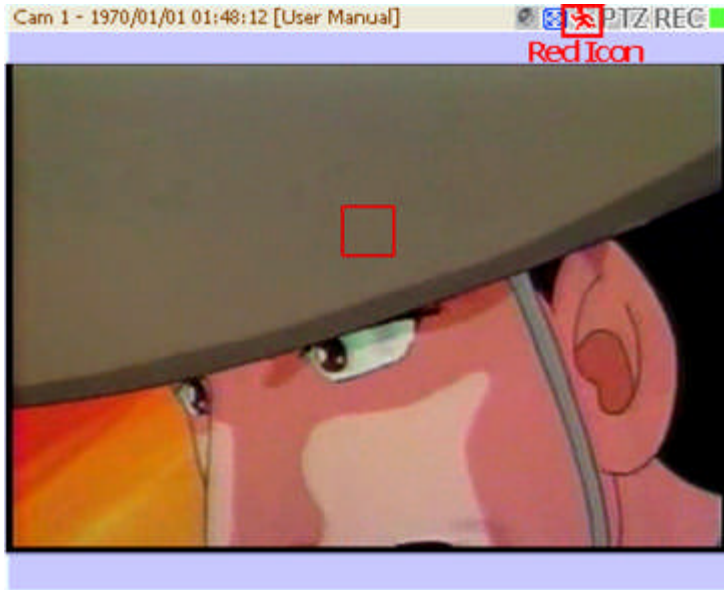


Figure 61. Regional Motion Detection Function Running

Examples B: Motion Detection III Setup Correctly

Indoor (TCP Connect): Full Screen / Sensitivity: 50 or higher

Indoor (Multicast Connect): Full Screen / Sensitivity: 70 or higher

Outdoor (TCP Connect): Full Screen / Sensitivity: 60 or higher

Outdoor (Multicast Connect): Full Screen / Sensitivity: 70 or higher



Figure 62. Enable Regional Motion Detection I and II

1. Select the Motion Detection Setup
2. Click on “Get Server Motion Setting” button to Image Preview
3. Enable Region Motion Detection I, click on “Set” button, and then you will see the first red frame.
4. Enable Region Motion Detection II, click on “Set” button, and then you will see the second red frame.
5. Click on “Apply” button to save.
6. If you can see “Save Successfully” message, your setting is successful.



Figure 63. Enable Regional Motion Detection III

1. Click on “Get Server Motion Setting” Button to check MDI and MDII.
2. Enable Region Motion Detection III, click on “Set” button, and then you will see the third red frame.
3. Click on “Apply” button to save.
4. If you can see “Save Successfully” message, your setting is successful. And it is done.

9

Remote Function Via NVR

This chapter describes the setup remote preview and playback in IP Video Control Center.

Remote Preview

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

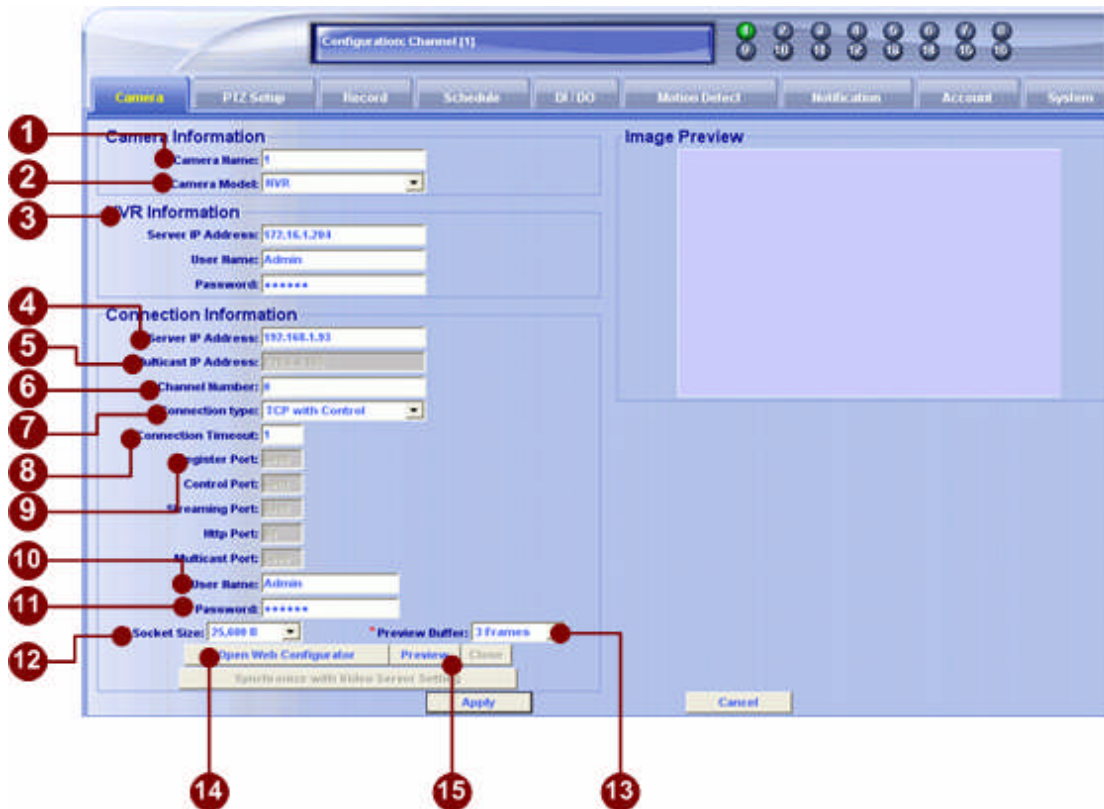


Figure 64. Remote Preview Setup

1. ***Camera Name:** Input a camera name or description for the camera.



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

2. ***Camera Model:** Choose the camera model to NVR; by selecting NVR option, Activator will connects to NVR for remote preview, remote search and remote playback operation.
3. **NVR Information:** Connect to the NVR with unicast (TCP)
 - **Server IP Address:** Input the IP Address of Streaming Engine Server.
 - **User Name:** Input the login User Name.default is Admin.
 - **Password:** Input the password.default is 123456.

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.acti.com
```

Remote Playback

Please follow following steps to run remote playback:

1. Click on the remote search button
2. List the search criteria
3. Retrieve the search result from NVR
4. Click on the desired recorded video clip, and run remote playback



Figure 65. Remote Event Search button

Click on the remote search function:

Remote Event Search dialog box looks like following:

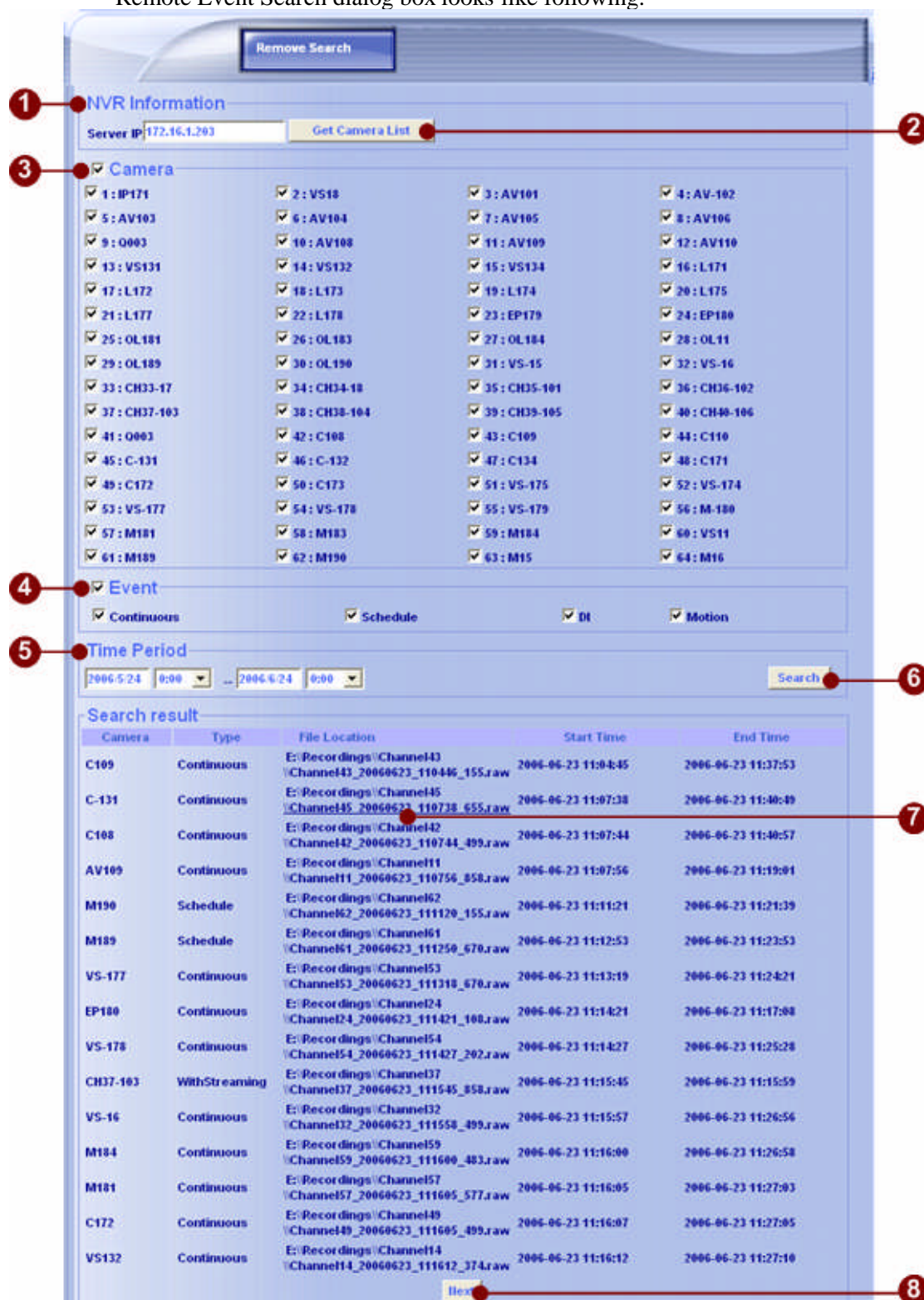


Figure 66. Remote Event Search List

1. **NVR information:** please input the ip address that you want to search NVR Machine.

2. **Get Camera List:** get all cameras listing.
3. **Camera:** Lists the cameras connected. Click on **Camera** check box to select or de-select all cameras.
4. **Event:** Lists the Event list for search. Available events are **DI, Manual Record, Motion Detection, and Background Record**. Click on **Event** check box to select or de-select all events.
5. **Time Period:** Select a start and end time period.
6. **Search Button:** Click this button to start search events
7. **Event Search List:** This list displays the recorded files that match the criteria.
8. **Next Button:** Click on to go to next page.

Following window will pop-up when user click on a recorded video clip link:

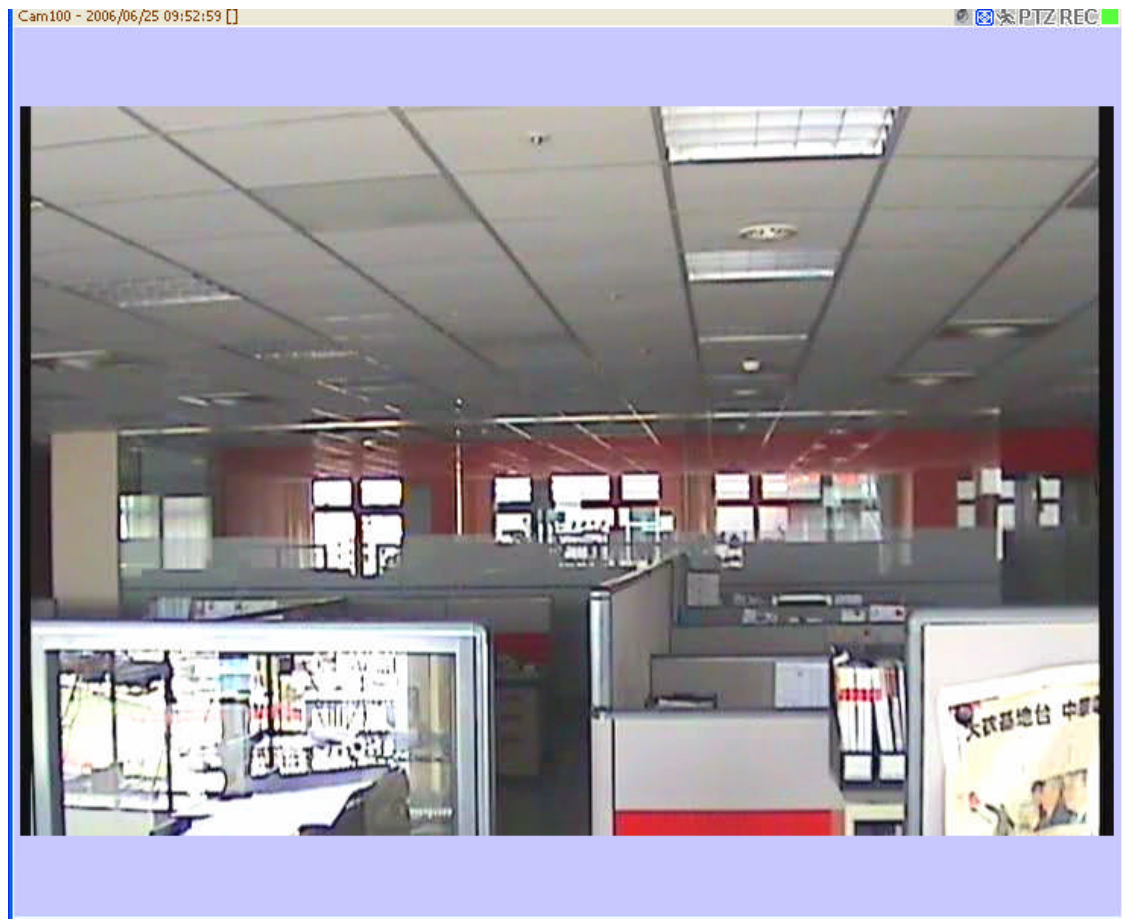


Figure 67. Remote Playback Function



NOTE: Current remote playback function does not come with play speed rate, play direction, pause operations. This will be implemented in later version.

10

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 68. Setup IP Video Control Center Parameters

Setup Category

IP Video Control Center setup parameters are organized into the following categories.

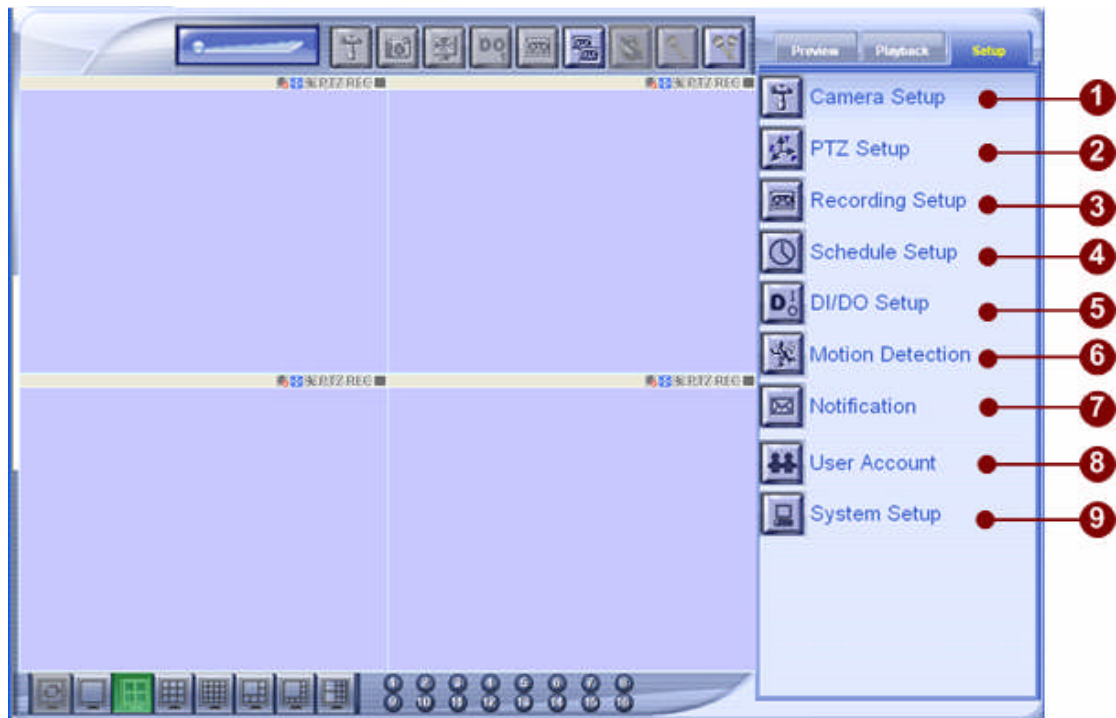


Figure 69. Setup Category

1. **Camera Setup:** Click on this button to setup camera information.
2. **PTZ Setup:** Click on this button to configure connected PTZ devices.
3. **Quad Setup:** Click on this button to configure the quad settings of the IP quad. (This setup works on IP Quad only).
4. **Recording Setup:** Click on this button to setup recording parameters.
5. **Schedule Setup:** Click on this button to setup Schedule recording parameters.
6. **DI/DO Setup:** Click on this button to configure digital input and digital output devices.
7. **Motion Detection Setup:** Click on this button to setup motion detection information.
8. **Notification Setup:** Click on this button to setup event notification mechanism.
9. **User Account:** Click on this button to setup User Account permission.
10. **System Setup:** Click on this button to setup system overall parameters.

Setup Category Dialog Box

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

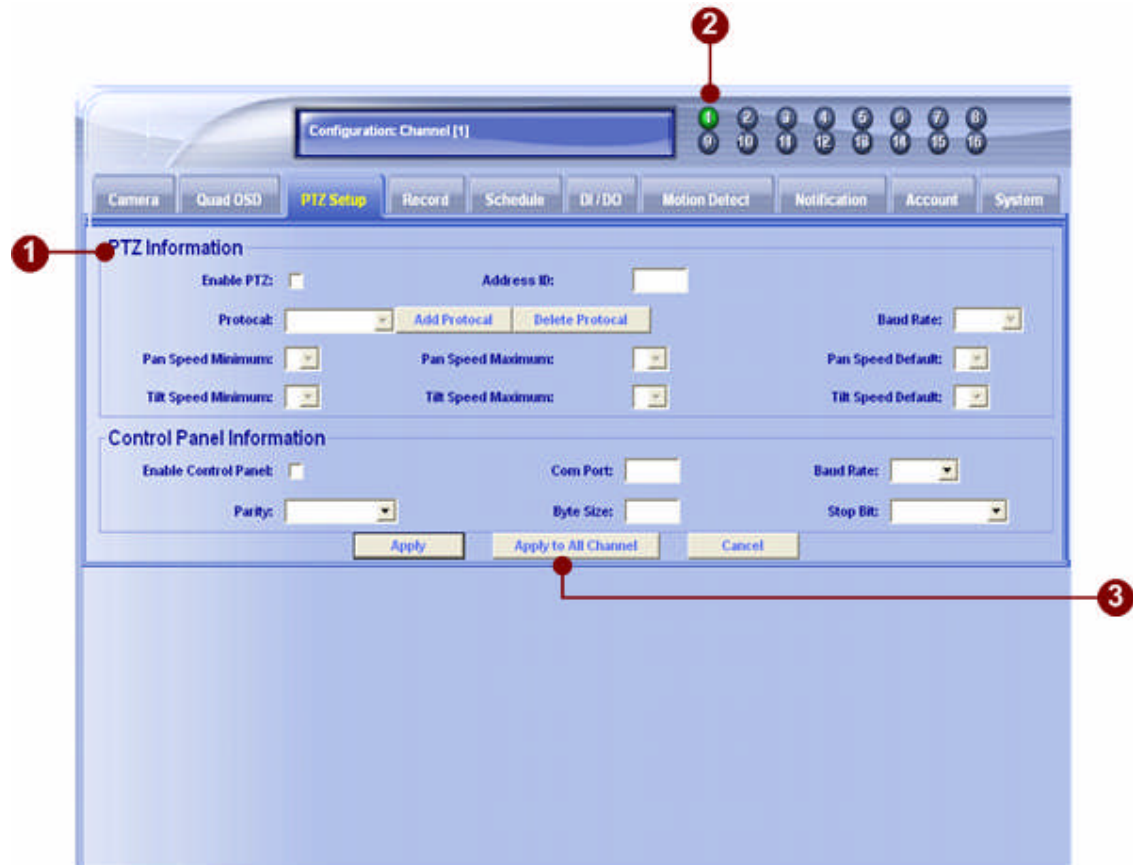


Figure 70. Setup Dialog Box Operation

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.

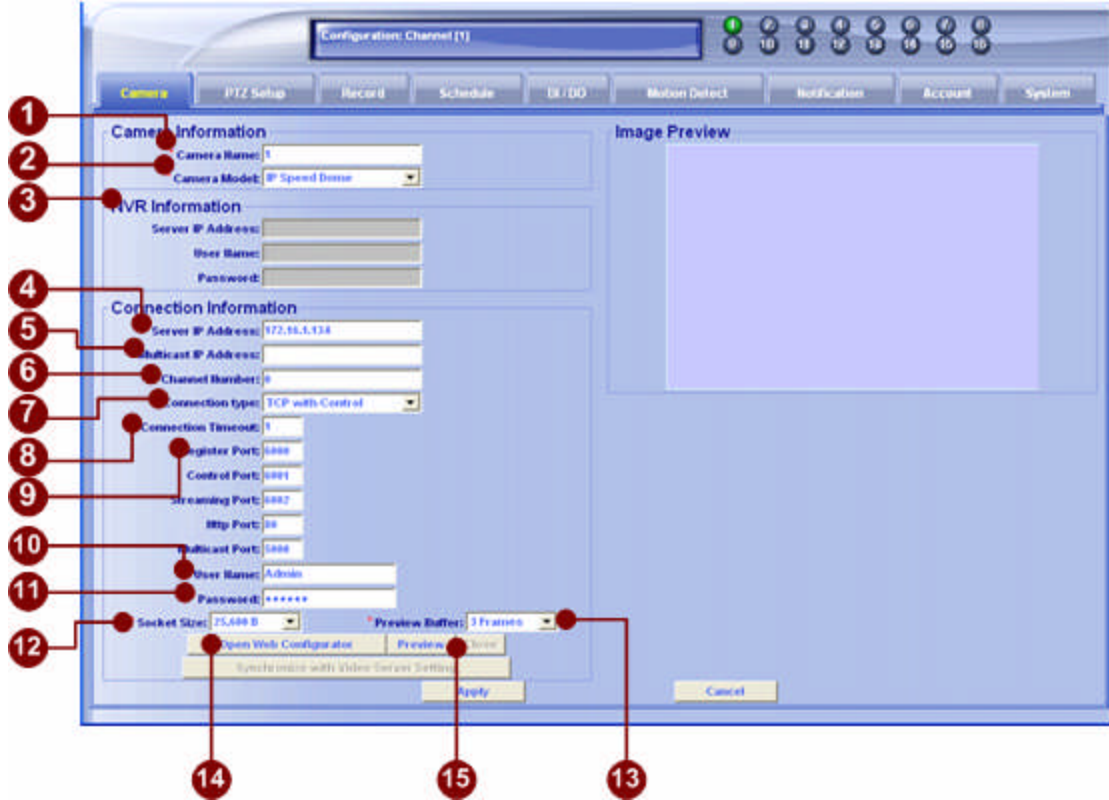


Figure 71. Camera Setup Dialog Box

1. ***Camera Name:** Input a camera name or description to describe the



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

- camera.
2. ***Camera Model:** Choose the camera model within a selection list; featuring:
 - Video Server
 - IP Camera
 - IP Speed Dome
 - IP Quad
 - Streaming Engine
3. **Streaming Engine Information:** Connect to the Streaming Server with unicast (TCP)
 - **Server IP Address:** Input the IP Address of Streaming Engine Server.
 - **User Name:** Input the login User Name.default is Admin.

- **Password:** Input the password.default is 123456.

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.domain.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 users.

6. **Channel Number :** Input you want to see video channel on multi-channels video server.
7. **Connection Type :** Choose the connection type.
 - **TCP with Control**
 - **Multicast with Control**
8. ***Connection Timeout :** set the timeout value to connect the IP device. If we set it to 3 seconds, then, the maximum timeout value is 3 seconds.



NOTE: During the timeout period, the application will hang. We suggest that you set it to 1 second for the timeout.

9. **Port Setup :** the port number to be authorized by the video server
10. **User Name:** the account to be authorized by the video server
11. **Password:** the password to be authorized by the video server
12. **Preview Buffer:** select the video preview buffer size; the unit is number of frames. Default is 3 frames.



NOTE: If you set this value to a larger value, then the video display will be smoother; however, the video latency will enlarge.

13. **Socket Size:** choose the network transport socket size, if your network is very busy or you use the wireless network, you can choose the socket size to let our software get package to be better performance. Default is 25,600 Byte.



NOTE: If the network bandwidth is not stable, please set the socket size to a smaller one, say 1000 bytes. In this case, the packet will be transmitted faster and will not re-send by the TCP protocol layer.

14. **Open Web Configurator** button: click this button to open video server's Web Configurator directly
15. **Preview** button: click this button to see the preview window and adjust frame rate and video quality.

Camera Setup Dialog Box in Video Server/IP cam

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

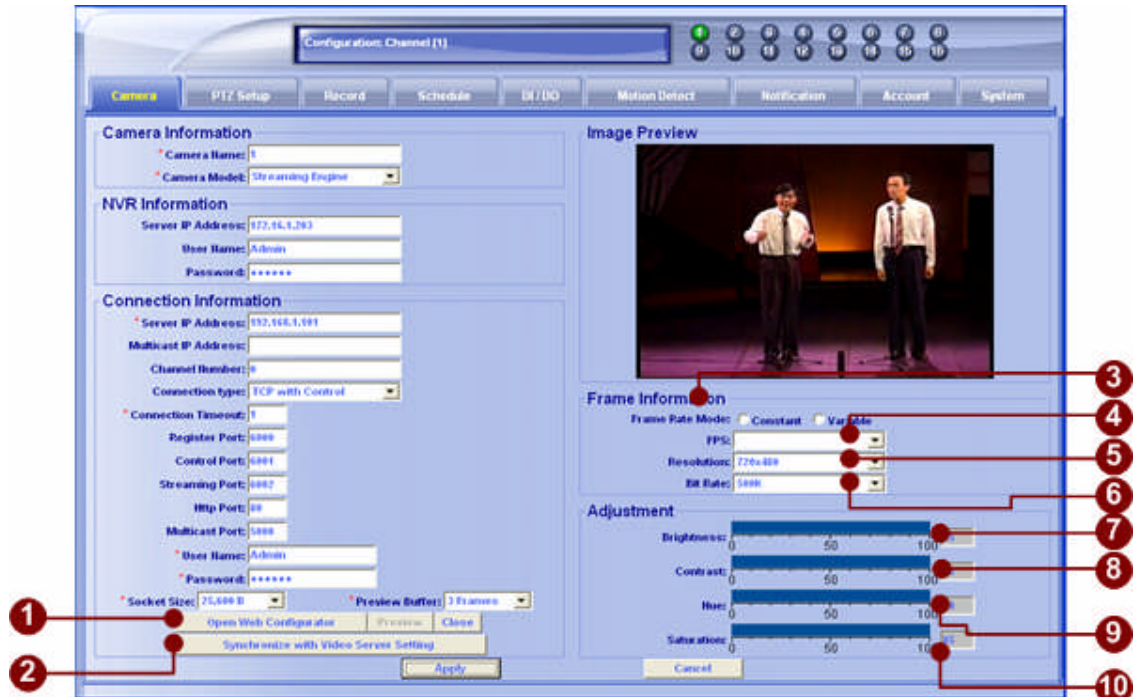


Figure 72. Camera Setup on Video Server Dialog Box

1. **Open Web Configurator** button: Click this button to open browser and connect 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 rebooting, then the settings will be gone and original settings on the video server will be set.



To make the changes permanent, one has to open Web Configurator on the video server, change the settings, and click on Save and Reboot link to make it effective permanently.

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 Rate Mode:** Indicates **constant** frame rate or **variable** frame rate; this is the setting from video server.



NOTE: Constant frame rate indicates all connections accept the same frame rate specified by Video Server.

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

4. **FPS:** The FPS setting works together with the video server. It is related to the FPS you record and display.

Video Server Setting		Auto	a specific number
Constant Frame rate	NTSC:	Record: FPS same with video setting. Display in 4CH: Maximum available FPS Display in 9CH and above: 1CH with maximum available FPS others are 1FPS	Record: FPS same with video setting. Display in 4CH: FPS same with video setting. Display in 9CH and above: FPS same with video setting. *
	PAL	Record: FPS same with video setting. Display in 4CH: Maximum available FPS Display in 9CH and above: 1CH with maximum available FPS others are 1FPS	Record: FPS same with video setting. Display in 4CH: FPS same with video setting. Display in 9CH and above: FPS same with video setting. *
Variable Frame rate	NTSC	Record: FPS same with video setting. Display in 4CH: Maximum available FPS Display in 9CH and above: 1CH with maximum available FPS others are 1FPS	Record: FPS as you set. (30, 6, 3, 1) Display in 4CH: Maximum available FPS Display in 9CH and above: Maximum available FPS *
	PAL	Record: FPS same with video setting. Display in 4CH: Maximum available FPS Display in 9CH and above: 1CH with	Record: FPS as you set. (30, 6, 3, 1) Display in 4CH: Maximum available FPS Display in 9CH and

		maximum available FPS others are 1FPS	above: Maximum available FPS *above: 1CH with maximum available FPS others are 1FPS 25, 5, 3, 1
--	--	--	---

* If your PC doesn't have the computing power to decode and display according to your settings, Activator will auto switch your current record and display settings to Auto.



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

Quad OSD Setup Dialog Box

This section works on IP Quad only. It describes the detail operations on the OSD display of IP quad images.



Figure 73. IP Quad OSD setup Dialog Box

1. **Quad OSD selection:** Click to select which information to be displayed. -
 - **Date Time:** Click to to display the date time of the IP Quad.
 - **Digital IO:** Click to display the DIO status of the IP Quad.
 - **Camera Name:** Click to display the Camera Name of each IP Quad channel.
 - **Motion Event:** Click to display the Motion event.
 - **Video loss:** Click to display the video loss.
2. **Camera name :** Click on each column and input the camera name of each IP Quad channel.



IMPORTANT: These settings only effective while the video server is on. If the video server is rebooting, then the settings will be gone and original settings on the video server will be set.

To make the changes permanent, please open Web Configurator on the video server, change the settings, and click on Save and Reboot link to make it effective permanently.

PTZ Setup Dialog Box

This section describes how to setup PTZ configuration. IP Video Control Center supports two types of PTZ control.

PTZ UI on the IP Video Control Center



IP Video Control Center PTZ setup: This setup has to apply for the PTZ device you want to control..

PTZ UI on the IP Video Control Center



Control Panel setup: This setup has to apply for the control panel connected to the PC.

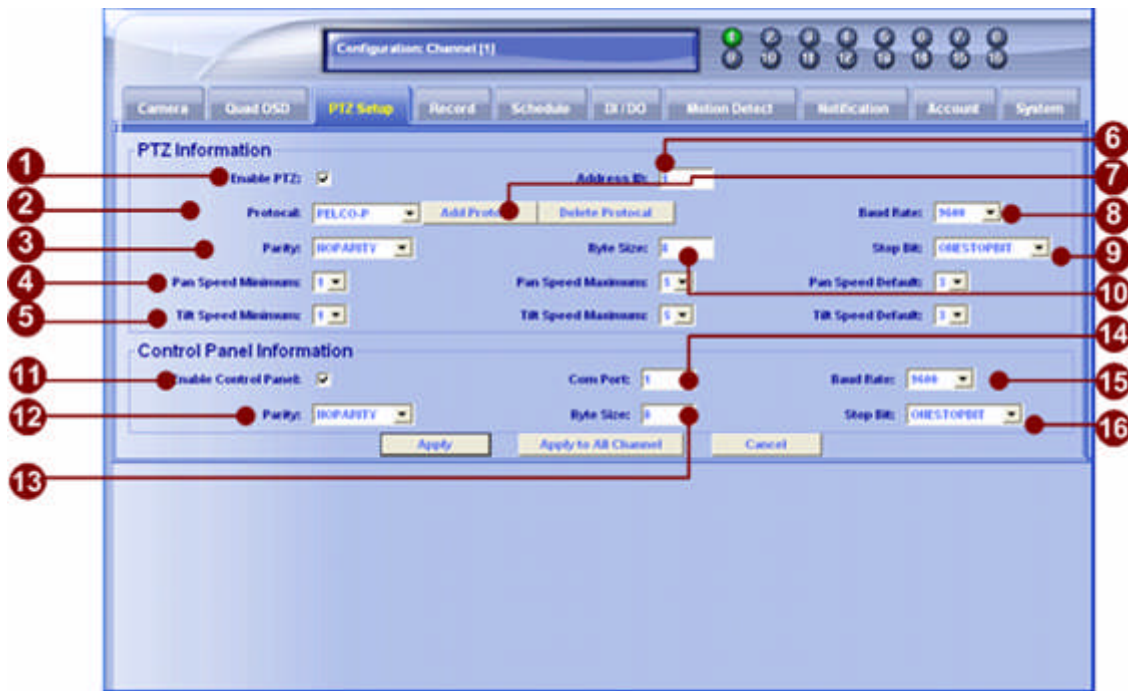


Figure 74. PTZ Setup Dialog Box

IP Video Control Center PTZ setup

1. **Enable PTZ:** Click to enable or disable the PTZ control function on this camera.
2. **Protocol:** Supported PTZ protocols are **Pe1co-P(type1)**, **Pe1co-P(type2)**, **Pe1co-D**, **Videotrec**, **Samsung**, **Eyeview**, **VCL**, **Kampro** and **Dynaco1or**.
3. **Parity:** Select the parity type of your PTZ device command. Please refer to your PTZ device manual. Normally it should be Noneparity.
4. **Pan Operation Settings:** Select your maximum, minimum and default pan speed. The speed varies from 1 (minimum) ~5(maximum).
5. **Tilt Operation Settings** Select your maximum, minimum and default tilt speed. The speed varies from 1 (minimum) ~5(maximum).
6. **Address ID:** Setup Speed Dome Address ID. The Address ID just supports 001.
7. **Add / Delete Protocol:** Supports Customer's defined PTZ Protocol.
8. **Baud Rate:** Select the baud rate of your PTZ device command. Please refer to your PTZ device manual.
9. **Stop pit :** Select the Stop bit of your PTZ device command. Please refer to your PTZ device manual. Normally it should be 1.
10. **Byte length:** Select the Byte length of your PTZ device command. Please refer to your PTZ device manual. Normally it should be 8.

Control Panel setup

11. **Enable control panel:** Click to enable the Control Panel remote control function..
12. **COM port:** Select the com port connected to the control panel..
13. **Parity:** Select the parity type of your control panel command. Please refer to your PTZ device manual. Normally it should be Noneparity.
14. **Baud Rate:** Select the baud rate of your control panel command. Please refer to your PTZ device manual.
15. **Stop pit :** Select the Stop bit of your control panel command. Please refer to your PTZ device manual. Normally it should be 1.
16. **Byte length:** Select the Byte length of your control panel command. Please refer to your PTZ device manual. Normally it should be 8.

Recording Dialog Box

This section describes the setup in relation with recording.

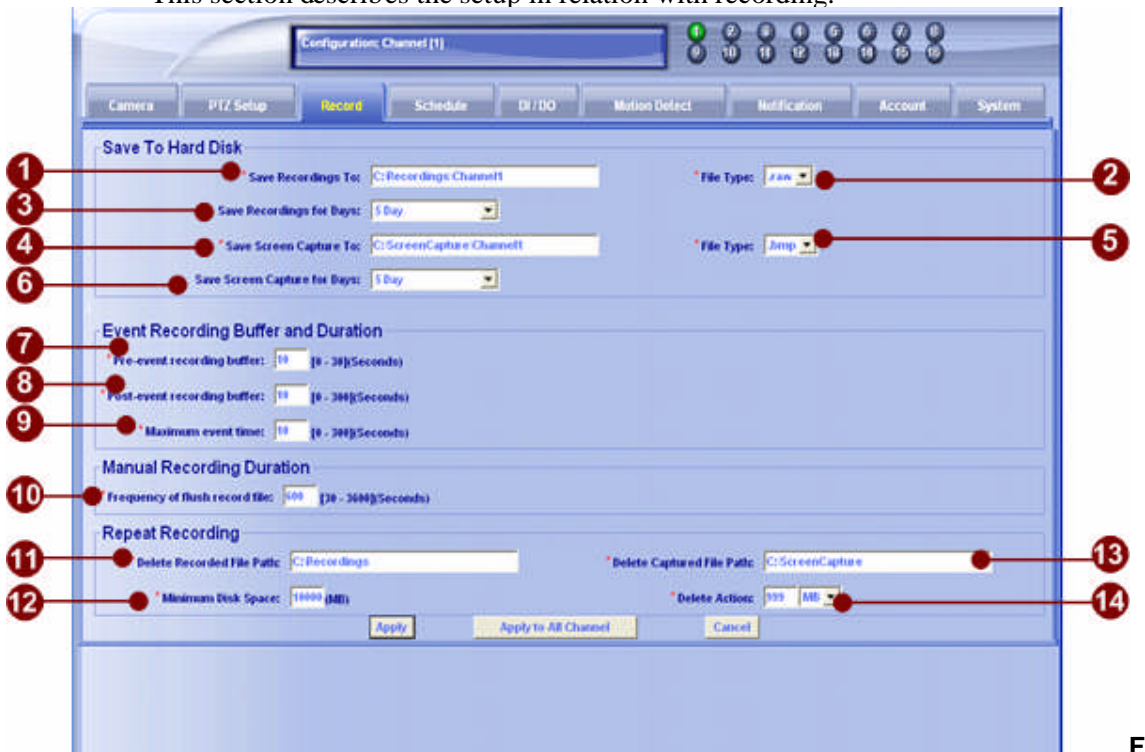


Figure 75. Recording Setup Dialog Box

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



NOTE: If you choose “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 **raw** 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 recorded files will be removed after the number of days specified in this field. If this field is left as blank, then the

recorded 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 format is **BMP**.
6. **Save Screen Capture for Days:** The saved 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 saved files will not be removed.
7. **Pre-event recording buffer (seconds):** Specifies a buffer (seconds) to retain before a certain event occurs.



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

8. **Post-event recording buffer (seconds):** Specifies a buffer (seconds) to retain after a certain event occurs.
9. **Maximum event time (seconds):** This value specifies that within a certain 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 file every second.

10. **Frequency of flush record file (seconds):** This value specifies that a new file will be generated after the amount of time specified in this field.
11. **Delete File Path:** Delete File Path is the path that IP Video Control Center will start to delete files.



NOTE: All sub-directories under this directory will be enlisted, and older files will be deleted.

12. **Minimum Disk Space:** the minimum disk space to be kept in the hard disk.
13. **Delete Captured File Path:** Delete Captured File Path is the path that IP Video Control Center will start to delete files.
14. **Delete Action:** when the Minimum Disk Space is reached, it will delete an amount (size) of previously saved files according to your selection here.



NOTE: Repeat Recording works with Manual Record Mode, Background Record Mode and Schedule Recording.

Schedule recording

This section describes how to setup schedule recording.



Figure 76. Schedule recording Dialog Box

1. **Schedule ID:** This is the schedule ID given by the IP Video Control Center, this number will show up once you input other columns. This ID is not changeable.
2. **Schedule Name:** You can input any words for you to remember this schedule with ease.
3. **Enable:** Click to select True(enable) or False(disable)
4. **Period:** Click to select the start date and the end date of this schedule recording.
5. **Daily schudule:** Click to select the start time and the end time of this schedule recording in a day.
6. **New schedule:** Click to to start a new schedule.
Save: Click to save this schedule.
Delete: Click to delete this schedule.
7. **Schedule List:** Show all schedule listing.



NOTE: Be sure to save your desired schedule. Your schedule will work only after you saved it.

Digital I/O Dialog Box

This section describes how to setup digital I/O and other related notification mechanisms. The functions available on the screen varies from the devices connected. For example: you will see DO1 and DO2 when connected to a video server, but you will only see DI1 and DO1 when connected to a IP quad.



Figure 77. Digital I/O Dialog Box

1. **Output Information:** Enable or disable DO1 and DO2.
2. **Thumbnail Information:**
 - **Thumbnail interval:** input the times for every create thumbnail.
 - **Number of Thumbnail:** input the number of thumbnail.
3. **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 to a thumbnail; the size of the thumbnail is the same as the resolution of the streaming.
 - **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**

8. **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 mechanisms. IP quad's motion detection setup is different from other products. Please refer to the description below for details.

Normal IP camera/video server

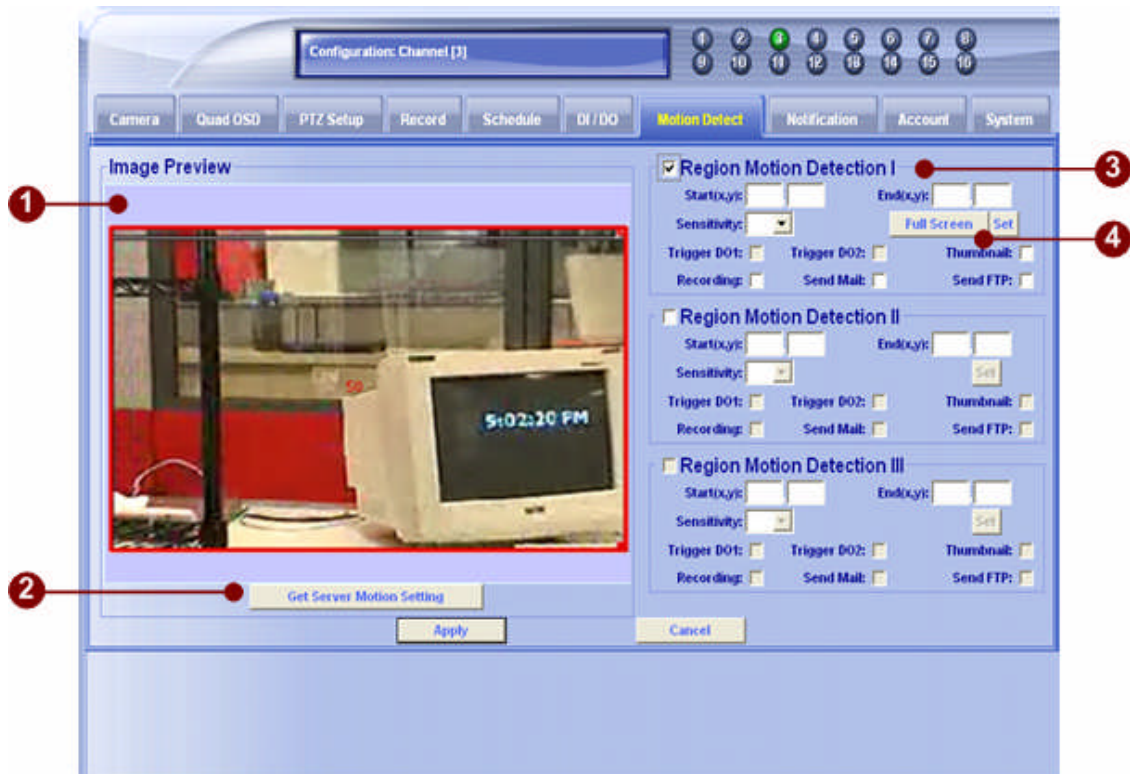


Figure 78. Normal IP camera /video server Motion Detection Setup Dialog Box

1. **Image Preview:** Displays current image preview with regional motion detection block.
2. **Get Server Motion Setting:** get the motion detection setting from video server.
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 Information** 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**
4. **Full Screen:** When you enable the Region Motion Detection I and click on this button, then the motion detection I applies to the whole image screen. And you can not enable Region Motion Detection II, III.
- **Sensitivity:** sets sensitivity on the motion detection algorithm. 100 is maximum sensitivity.
 - **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 Information** section
 - **Recording:** records 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**

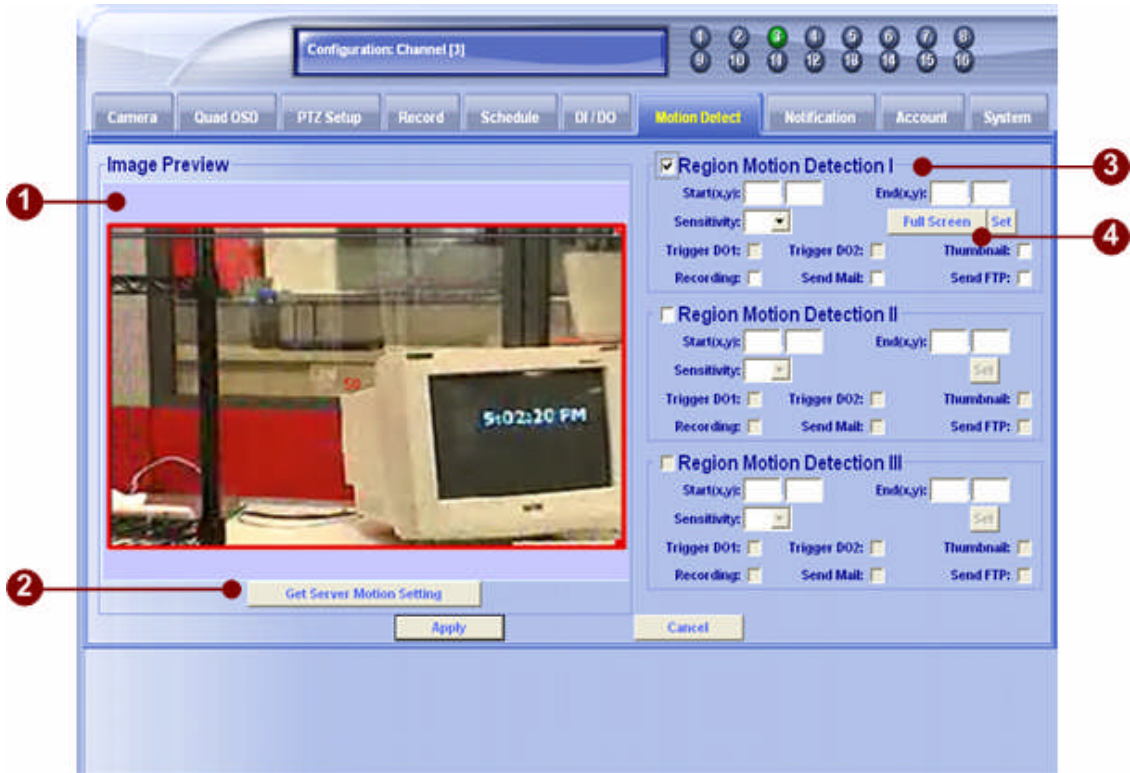


Figure 79. Full Screen Motion Detection Setup



NOTE: To enable the motion detection function you have to check the checkbox. You may also test the function by clicking the **Set** button in each block.



NOTE: Please follow following suggestions on the sensitivity level settings:

1. Indoor (TCP Connection): Sensitivity set to 50 or higher
2. Indoor (Multicast Connection): Sensitivity set to 70 or higher
3. Outdoor (TCP Connection): Sensitivity set to 60 or higher
4. Outdoor (Multicast Connection): Sensitivity set to 70 or higher

IP Quad

For IP Quad motion detection setup, please refer to page66 for more details.



Figure 80. IP Quad motion Detection Setup Box

Notification Dialog Box

This section describes how to setup motion detection and related notification mechanisms. The functions available on the screen vary from the devices connected. For example: you will see DO1 and DO2 when connected to a video server, but you will only see DI1 and DO1 when connected to a IP quad.



Figure 81. Notification Setup Dialog Box

- 1. Mail Server Information:** Specifies the SMTP server information
 - **SMTP Server:** sets 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
- 2. FTP Server Information:** Specifies the FTP server information
 - **FTP Server:** sets the FTP server address
 - **UserName:** the account to login to the FTP server
 - **Password:** the password to login to the FTP server
 - **upload Path:** sets the upload path of 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 recipient's 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 recipient's E-Mail address
 - **subject:** the subject of the E-Mail sent
5. **Test button:** click on the button to test if the account/password is authorized correctly

User Account Dialog Box

This section describes how to setup user account and the permission required.



Figure 82. User Account Dialog Box

1. **Account Information:** about User Account information.
 - **user ID:** input new User ID. When you login, you need to use the ID to login.
 - **User Name:** input new user name. This name will be shown on the preview window.
 - **Password:** input the password.
 - **Description:** simple description about new account.
 - **Active Date:** the user's active date. The format is year/month/day.
 - **ExpireDate:** the user's expire date. The format is year/month/day.
 - **user Role:** appoint account different group.
2. **function button:**
 - **Search Button:** input the user's ID for search, then click to search.
 - **New Account Button:** Clear all information on the column.
 - **Save Button:** save the information about new user account.
 - **Delete Button:** select the account to be deleted.

- **Description:** simple description about new account.
 - **Active Date:** the user's active date.
 - **Expire Date:** the user's expire date.
3. **All account and Group Listing:** show listing about all account and Group.



NOTE: There are three groups on system default, you can not add or delete default groups.

Default Group	Default Permission
Administrator	Can Preview, PlayBack, Setup
Standard User	Preview and PlayBack, not Setup
Guest User	Only Preview

Figure 83. Default Permission Control

System Dialog Box

This section describes the steps to customize IP Video Control Center so that it may become customer's own interface.



Figure 84. 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 number of channels when start up.
 - **Patrol Delay Time:**
 - For IP quad, this parameter affects the patrol delay time of each channel.
 - For other products, this parameter affects the patrol delay time of this channel during patrol display function. (Ex: When you choose Patrol display on the Main window, the specific delay time of each channel).
 - **Trigger DO1:** Enable the Auto Trigger DOI Function.
 - **Trigger DO2:** Enable the Auto Trigger DOII Function.

- **Save log for days:** Input the log save days.
- **Quad Dwell Time:**

For IP quad, this parameter affects the patrol delay time of each channel.

2. **Auto Logon:** Specifies the Logon procedure. This setup will effect each time you login.
 - **Logon manually:** Each time you start IP Video Control Center, you have to manually enter the User ID and Password before you can use it.
 - **Admin:** Each time you IP Video Control Center, it will auto login as an administrator user. Refer to the table below for what administrator can do.
 - **Guest:** Each time you IP Video Control Center, it will auto login as a guest user. Refer to the table below for what administrator can do. Specifies the number of channels when start up.
 - **Standard:** Each time you IP Video Control Center, it will auto login as a standard user. Refer to the table below for what administrator can do.

Default Group	Default Permission
Administrator	Can Preview, PlayBack, Setup
Standard User	Preview and PlayBack, not Setup
Guest User	Only Preview



NOTE: If you choose auto logon as a guest user, you will not be able to change any settings since you can't logon on as an administrator. (Every time you login, system auto login as a guest user, therefore you can't modify anything). To quit always logging on as a guest user, press **F10** key to logout and next time user login will login normally.

3. **Background Record Channels:** Choose you want to record channels on background record.
4. **Customization:** Specifies the Customization information
 - **Language:** Change the default language.
 - **style:** Change the Application's UI.
 - **Logo Location:** Change the logo file. The logo file should be built with transparent gif.
 - **About us Location:** Change the About Us file.
 - **Application Title:** Change the content on the title bar.

Appendix-A PTZ protocol

This sections tells you how to write a PTZ protocol. Please read the instruction below. It is a procedure writing protocol using Pelco-P protocol sample.

Pelco P message structure

Byte	Value	Function
1	\$A0	STX (start transmission)
2	\$00 to \$1F	Address
3	Data byte 1	(see below)
4	Data byte 2	(see below)
5	Data byte 3	(see below)
6	Data byte 4	(see below)
7	\$AF	ETX (end transmission)
8	\$00-\$FF	Check Sum

Byte 1 is always \$A0

Byte 2 is the receiver address, set by DIP switch in the receiver

Byte 3-6, see below

Byte 7 is always \$AF

Byte 8 is an XOR sum of Bytes 1-7

The protocol is "zero indexed" so that the hexadecimal address sent in the protocol for the first receiver is \$00 which corresponds to address 1.

For Pelco P protocol the extended command set will have bit 0 of data byte 2 set and will follow the format in the following table:

Command	Data byte 1	Data byte 2	Data byte 3	Data byte 4
Set Preset XX	00	03	00	01 to FF
Clear Preset XX	00	05	00	01 to FF
Go To Preset XX	00	07	00	01 to FF
Flip (rotate 180°)	00	07	00	21
Zero Pan Position	00	07	00	22
Auto scan	00	09	00	00
Stop auto scan	00	0B	00	00
Remote Reset	00	0F	00	00
Zone Start	00	11	00	01 to 08
Zone End	00	13	00	01 to 08
Write char to screen	00	15	0 to 28	0 to 7F
Clear Screen	00	17	00	00
Alarm Ack	00	19	00	01 to 08
Zone Scan On	00	1B	00	00
Zone Scan Off	00	1D	00	00
Pattern Start	00	1F	00	00
Pattern Stop	00	21	00	00
Run Pattern	00	23	00	00
Zoom Lens Speed	00	25	00	00 to 03
Focus Lens Speed	00	27	00	00 to 03

Our protocol.ptz format is:

(Function);X;Y;Byte1,Byte 2,Byte 3,Byte 4,Byte 5,Byte 6,Byte 7,Byte 8;;;
PANTILT; 0; 0; 0xA0, 0x00 , 0x00 , 0x00 , 0x3F , 0x3F , 0xAF ,0x0F;;;

Example:

Zoom IN:

ZOOM; 1; 0; 0xA0, 0x00, 0x00, 0x20, 0x00, 0x00, 0xAF, 0x2F; ; ;

Zoom Out:

ZOOM; -1; 0; 0xA0, 0x00, 0x00, 0x40, 0x00, 0x00, 0xAF, 0x4F; ; ;

Zoom Stop:

ZOOM; 0; 0; 0xA0, 0x00, 0x00, 0x00, 0x00, 0x00, 0xAF, 0x0F; ; ;

Pan and Titl Move left slowest Speed :

PANTILT; -1; 0; 0xA0, 0x00, 0x00, 0x04, 0x0C, 0x3F, 0xAF, 0x38; ; ;

Pan and Titl Move left fastest Speed :

PANTILT; -5; 0; 0xA0, 0x00, 0x00, 0x04, 0x3F, 0x3F, 0xAF, 0x0B; ; ;

Pan and Titl Move right slowest Speed :

PANTILT; 1; 0; 0xA0, 0x00, 0x00, 0x02, 0x0C, 0x3F, 0xAF, 0x3E; ; ;

Pan and Titl Move right fastest Speed :

PANTILT; 5; 0; 0xA0, 0x00, 0x00, 0x02, 0x3F, 0x3F, 0xAF, 0x0D; ; ;

Example: (pelco_p)

PANTILT; 0; 0; 0xA0, 0x00, 0x00, 0x00, 0x3F, 0x3F, 0xAF, 0x0F; ; ;
PANTILT; -5; 0; 0xA0, 0x00, 0x00, 0x04, 0x3F, 0x3F, 0xAF, 0x0B; ; ;
PANTILT; -4; 0; 0xA0, 0x00, 0x00, 0x04, 0x30, 0x3F, 0xAF, 0x04; ; ;
PANTILT; -3; 0; 0xA0, 0x00, 0x00, 0x04, 0x24, 0x3F, 0xAF, 0x10; ; ;
PANTILT; -2; 0; 0xA0, 0x00, 0x00, 0x04, 0x18, 0x3F, 0xAF, 0x2C; ; ;
PANTILT; -1; 0; 0xA0, 0x00, 0x00, 0x04, 0x0C, 0x3F, 0xAF, 0x38; ; ;
PANTILT; 1; 0; 0xA0, 0x00, 0x00, 0x02, 0x0C, 0x3F, 0xAF, 0x3E; ; ;
PANTILT; 2; 0; 0xA0, 0x00, 0x00, 0x02, 0x18, 0x3F, 0xAF, 0x2A; ; ;
PANTILT; 3; 0; 0xA0, 0x00, 0x00, 0x02, 0x24, 0x3F, 0xAF, 0x16; ; ;
PANTILT; 4; 0; 0xA0, 0x00, 0x00, 0x02, 0x30, 0x3F, 0xAF, 0x02; ; ;
PANTILT; 5; 0; 0xA0, 0x00, 0x00, 0x02, 0x3F, 0x3F, 0xAF, 0x0D; ; ;
PANTILT; 0; 5; 0xA0, 0x00, 0x00, 0x08, 0x3F, 0x3F, 0xAF, 0x07; ; ;
PANTILT; 0; 4; 0xA0, 0x00, 0x00, 0x08, 0x3F, 0x30, 0xAF, 0x08; ; ;
PANTILT; 0; 3; 0xA0, 0x00, 0x00, 0x08, 0x3F, 0x24, 0xAF, 0x1C; ; ;
PANTILT; 0; 2; 0xA0, 0x00, 0x00, 0x08, 0x3F, 0x18, 0xAF, 0x20; ; ;
PANTILT; 0; 1; 0xA0, 0x00, 0x00, 0x08, 0x3F, 0x0C, 0xAF, 0x34; ; ;
PANTILT; 0; -1; 0xA0, 0x00, 0x00, 0x10, 0x3F, 0x0C, 0xAF, 0x2C; ; ;
PANTILT; 0; -2; 0xA0, 0x00, 0x00, 0x10, 0x3F, 0x18, 0xAF, 0x38; ; ;
PANTILT; 0; -3; 0xA0, 0x00, 0x00, 0x10, 0x3F, 0x24, 0xAF, 0x04; ; ;
PANTILT; 0; -4; 0xA0, 0x00, 0x00, 0x10, 0x3F, 0x30, 0xAF, 0x10; ; ;
PANTILT; 0; -5; 0xA0, 0x00, 0x00, 0x10, 0x3F, 0x3F, 0xAF, 0x1F; ; ;
ZOOM; 1; 0; 0xA0, 0x00, 0x00, 0x20, 0x00, 0x00, 0xAF, 0x2F; ; ;
ZOOM; 0; 0; 0xA0, 0x00, 0x00, 0x00, 0x00, 0x00, 0xAF, 0x0F; ; ;
ZOOM; -1; 0; 0xA0, 0x00, 0x00, 0x40, 0x00, 0x00, 0xAF, 0x4F; ; ;
FOCUS; 1; 0; 0xA0, 0x00, 0x01, 0x00, 0x00, 0x00, 0xAF, 0x0E; ; ;
FOCUS; 0; 0; 0xA0, 0x00, 0x00, 0x00, 0x00, 0x00, 0xAF, 0x0F; ; ;
FOCUS; -1; 0; 0xA0, 0x00, 0x02, 0x00, 0x00, 0x00, 0xAF, 0x0D; ; ;
GOTOPRESET; 1; 0; 0xA0, 0x00, 0x00, 0x07, 0x00, 0x01, 0xAF, 0x09; ; ;
GOTOPRESET; 2; 0; 0xA0, 0x00, 0x00, 0x07, 0x00, 0x02, 0xAF, 0x0A; ; ;
GOTOPRESET; 3; 0; 0xA0, 0x00, 0x00, 0x07, 0x00, 0x03, 0xAF, 0x0B; ; ;
GOTOPRESET; 4; 0; 0xA0, 0x00, 0x00, 0x07, 0x00, 0x04, 0xAF, 0x0C; ; ;
GOTOPRESET; 5; 0; 0xA0, 0x00, 0x00, 0x07, 0x00, 0x05, 0xAF, 0x0D; ; ;
GOTOPRESET; 6; 0; 0xA0, 0x00, 0x00, 0x07, 0x00, 0x06, 0xAF, 0x0E; ; ;
SETPRESET; 1; 0; 0xA0, 0x00, 0x00, 0x03, 0x00, 0x01, 0xAF, 0x0D; ; ;
SETPRESET; 2; 0; 0xA0, 0x00, 0x00, 0x03, 0x00, 0x02, 0xAF, 0x0E; ; ;
SETPRESET; 3; 0; 0xA0, 0x00, 0x00, 0x03, 0x00, 0x03, 0xAF, 0x0F; ; ;
SETPRESET; 4; 0; 0xA0, 0x00, 0x00, 0x03, 0x00, 0x04, 0xAF, 0x08; ; ;
SETPRESET; 5; 0; 0xA0, 0x00, 0x00, 0x03, 0x00, 0x05, 0xAF, 0x09; ; ;
SETPRESET; 6; 0; 0xA0, 0x00, 0x00, 0x03, 0x00, 0x06, 0xAF, 0x0A; ; ;
CLEANPRESET; 1; 0; 0xA0, 0x00, 0x00, 0x05, 0x00, 0x01, 0xAF, 0x0B; ; ;
CLEANPRESET; 2; 0; 0xA0, 0x00, 0x00, 0x05, 0x00, 0x02, 0xAF, 0x08; ; ;

```
CLEANPRESET;3;0;0xA0,0x00,0x00,0x05,0x00,0x03,0xAF,0x09;;;
CLEANPRESET;4;0;0xA0,0x00,0x00,0x05,0x00,0x04,0xAF,0x0E;;;
CLEANPRESET;5;0;0xA0,0x00,0x00,0x05,0x00,0x05,0xAF,0x0F;;;
```