



e-Watch®

SiteWatch™ Situational Awareness Software User Guide

SiteWatch Version 5.1

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e-Watch systems do not prevent crimes from being committed, but are intended to be used to monitor and investigate.

e-Watch components are electronic devices and complex commercial software products. As such, they may fail on occasion. Multiple devices with overlapping zones should be used for redundancy.

e-Watch event notification capabilities must be user programmed and activated prior to use. System reliability is dependent on the underlying network infrastructure and associated communications services that may fail on occasion. The user of the e-Watch system is advised to evaluate risk associated with network failures and operator errors. Routine auditing and preventive maintenance of the system is essential to assure optimum performance.

Event analysis and recreation is subject to system configuration, lighting conditions, environmental conditions, lens and housing cleanliness, distance to subject, operator-invoked control settings, and many other factors.

Read and follow all documentation to assure proper performance.



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The preface describes the purpose, audience, organization, and conventions of this guide. It also provides information on how to obtain related documents.

The preface covers these topics:

- Purpose
- Audience
- Organization
- Related Documentation
- Conventions
- Obtaining Documentation
- Documentation Feedback
- Obtaining Assistance

Purpose

This User's Guide provides instructions for operating the SiteWatch™ Situational Awareness Software. It includes descriptions of procedural tasks to complete when operating the system. It identifies Graphical User Interface (GUI) buttons, menus, and dialog windows and their configuration. Operation of the system consists entirely of executing the commands and options displayed as part of the user interface.

Audience

The SiteWatch User Guide provides operating instructions for users of the e-Watch® Situational Awareness System. Some knowledge of Microsoft Windows® and web browsing is preferred.

Organization

This guide is organized as shown in Table 0-1

Table 0-1. Organization

Part	Description
Part 1	‘User Guide’ Contains information on using the SiteWatch software from a User’s perspective.
Part 2	‘Appendices’ Glossary, Index and Abbreviations.

Related Documentation

Refer to the following documents for further information about related e-Watch applications and products:

- URG-9119-001—e-Watch® Design Guide
- URG-9110-001—SiteWatch™ Situational Awareness System Administration Guide
- URG-9111-001—e-Watch® Situational Awareness System Quick Start Guide
- URG-9105-001—GateWatch™ Third-Party Integration Software Administration Guide
- URG-9112-001—e-Watch Product Overview

Conventions

This document uses the conventions shown in Table 0-2.

Table 0-2. Conventions

Convention	Description
Boldface font	Commands and keywords are in boldface .
<i>Italic</i> font	Arguments for which you supply values are in <i>italics</i> .
[]	Elements in square brackets are optional.
{x y z}	Alternate keywords are grouped in brackets and separated by vertical bars.

Table 0-2. Conventions

[x y z]	Optional keywords are grouped in brackets and separated by vertical bars.
String	A non-quoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
Screen font	Terminal sessions and information the system displays are in <code>screen font</code> .
Boldface screen font	Information you must enter is in bold-face screen font.
<i>Italic</i> screen font	Arguments for which you supply values are in <i>italic</i> screen font.
^	The symbol ^ represents the key labeled Control - for example, the key combination of ^D in a screen display means hold down the Control key while you press the D key.
-->	This pointer highlights an important line of text in an example.
◊	Non-printing characters, such as passwords, are in angle brackets.

Obtaining Documentation

The following sections provide sources for obtaining documentation from e-Watch Corporation.

World Wide Web

e-Watch documents can be found by going to the e-Watch web site www.e-watch.com.

By Mail

e-Watch Corporation
 7800 IH 10 West, Suite 720
 San Antonio, Texas 78230
 210 349-2000

support@e-watch.com

Documentation Feedback

You can submit technical comments about e-Watch documentation in the following ways:

E-mail your comments to support@e-watch.com

To submit comments by mail, write to the following address:

e-Watch Corporation
7800 IH 10 West, Suite 720
San Antonio, Texas 78230

We appreciate your comments.

Obtaining Assistance

The following sections provide sources for obtaining assistance from e-e-Watch Corporation.

Customer Support

For technical assistance please send requests to support@e-watch.com or your local e-Watch reseller. If you have a software maintenance agreement, call 210-349-2000 and ask for Customer Support.

Sales

For assistance with sales or marketing please call 210-349-2000 and ask for Sales or send requests to sales@e-watch.com.

Introduction

e-Watch® Situational Awareness System is a comprehensive surveillance and monitoring system adapted for transmitting Motion Picture Experts Group (MPEG) video streams, high resolution Joint Photographic Experts Group (JPEG) images, Motion JPEG (MJPEG), and detected event data over both wired and wireless networks (Local Area Network [LAN] and Wide Area Networks [WAN]). Third-party systems, such as access control, alarms, and environmental monitoring can be integrated with your e-Watch system.

The e-Watch system is based on standard networking and Internet technology. Real-time data, as well as archived data, can be viewed from any authorized personal computer (PC) on the LAN, WAN, or the Internet. The archive application tracks and maintains all situational awareness information and provides high-speed access for fast location and display of data related to a specific event.

Wireless monitoring is another important component of the e-Watch system. Hand-held wireless devices allow security officers, administrators, police officers, firefighters, and other response personnel to view full motion video from all cameras on the network at geographical positions not bounded by physical wiring. These hand-held devices may be used inside or outside the facility, based on their configuration.

Automated notification of alarm conditions and other events can be provided to response personnel via dial-up circuits, cellular phones, pagers, e-mail, or via the Internet.

Typical Monitor Station

A typical console-style monitor station is PC-based, running Microsoft® Internet Explorer. It can support unlimited VGA monitors, but the standard configuration is 1 to 4 monitors. One of the monitors is configured as the Primary Screen, and the others are configured as Secondary Screens. The primary screen is used for configuring the system and for viewing selected

images or videos. The primary screen also controls all secondary screens. Secondary screens do not need a floppy drive, keyboard, or mouse. Each secondary screen is capable of displaying selected cameras' video in full screen, or in an array of video panes. A ViewWatch station may also consist of only the primary screen. Figure 1-1 illustrates a typical monitor station.



Figure 1-1. Typical Monitor Station

Logging On

SiteWatch™ software uses the Windows Internet Explorer browser and the ViewWatch™ module to provide the user interface. All monitoring and surveillance activity performed by security personnel is conducted through this interface. Before using the system, the user must log on. After logon, the SiteWatch Server loads a series of HTML pages that provide the entire user interface. It is assumed that the user has been assigned a User ID, password, and level of access. It is also assumed that the system has been properly configured and is ready for use. As described below, there are different user access roles and types of logon methods. Site management will determine the appropriate one for you.

Roles

The system grants access to users at one of three authorization levels, or Roles. The System Administrator determines the role assigned to each user. There are three pre-defined roles: **User**, **Investigator**, and **Administrator**. The System Administrator may create additional custom roles to accommodate special security needs.

User Role

Users who log on with the User Role may perform the following system functions:

- Assign cameras to panes in the primary and secondary monitors
- Control the screen format (number of panes) in any video window
- View cameras
- View zones
- Save and load presets
- Use basic camera controls

Investigator Role

Users who log on with the Investigator Role have User permissions plus permission to Browse and generate Reports.

Administrator Role

Users who log on with the Administrator Role have all system permissions. In addition to User and Investigator permissions, an Administrator may also:

- Configure cameras
- Manage the users and roles
- Adjust the various encoder parameters
- Set up zones
- Set up events
- Set up maps
- Use advanced camera controls

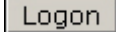
Custom Roles

Users who log on with the Administrator Role can define additional Roles. See below for more details.

Logon Screen

To log on, double click on the **e-Watch** icon located on the PC Desktop. The logon screen as shown in Figure 1-2 will appear.

Figure 1-2. SiteWatch Logon Screen

To log on, enter your User ID and password and click . After logging on, the Primary Screen will display as illustrated in Figure 1-8.

If you check “Load last settings”, the ViewWatch user interface will be restored to the settings in effect the last time you logged off.

If you check “Full screen”, ViewWatch user interface will be opened in a full screen window. Otherwise, the ViewWatch user interface will be opened in a normal window that you can resize.

If Your Desktop Does Not Have An e-Watch Icon:

- To log on locally open **Internet Explorer**, enter the address: **http://<server name or IP Address>/ewatch/logon.asp** and press **ENTER**.
- If you are logging on remotely, open Internet Explorer, enter the address: **http://<server name or IP Address>/ewatch/rlogon.asp** and press **ENTER**. This starts a unicast TCP session.
- If you are logging on to a multi-screen monitor station, open Internet Explorer, enter the address: **http://<server name or IP Address>/ewatch/logon.asp?station=<name>** (<name> is the name assigned to the station) and press **ENTER**.

See Figure 1-3 for an example of the Internet Explorer Address field.

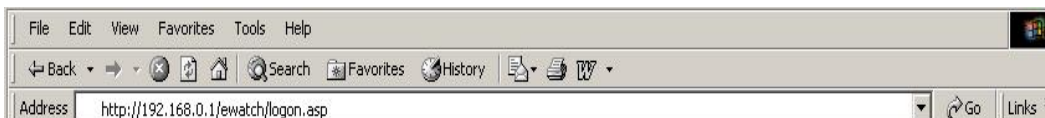




Figure 1-3. Internet Explorer Address Field

The SiteWatch system has three default User IDs that can be used if you have not been assigned a User ID or password. If you have not been assigned a User ID and password, and this is your first time to log on to the

system, enter **administrator** as the User ID and as the password and click . For security reasons, the passwords for these IDs should be changed or the IDs should be deleted after users have been defined. If you wish to log in, but another user has already logged on to the system, click **Logon** in the Actions Menu to display the log on screen.

Logging On Remotely

The SiteWatch system allows users to log on from a remote location. The first time a user logs on, a ViewWatch video filter is downloaded. This process installs the necessary applications to view e-Watch video. The number of video panes is limited by the available bandwidth and stream type. The maximum number of streams is 4.

To log on to SiteWatch from a remote system, open Internet Explorer and type in the address **http://<server name or IP Address>/ewatch/rlogon.asp** and click .

Bandwidth Option

The remote logon screen offers the option of “Low resolution” or “High resolution”. If you select “Low resolution”, only the cameras’ low resolution video streams will be displayed. Use this option for low-bandwidth connections.

Available Bandwidth Option

If you choose the “Low resolution” option, the remote logon screen also offers an “Available bandwidth” option. Choose your available bandwidth from the pulldown list prior to logging on. SiteWatch will attempt to keep the total bit rate of all Motion JPEG streams sent to your remote ViewWatch station below the selected bit rate. This option does not affect the bit rate of QSIF MPEG streams.

Motion JPEG Only Option

If you choose the “Low resolution” option, the remote logon screen also offers a “Motion JPEG Only” option. To use this option, the registry value AllowAutoMjpeg on the SiteWatch Server must be set to **true**. You can use this option to take fullest advantage of the Available Bandwidth option.

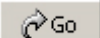
Protocol (TCP or UDP) Option

The remote logon screen offers the choice of using TCP or UDP as the video transport protocol. The TCP protocol is guaranteed to work within Network Address Translation (NAT) firewalls, and is usually the best choice. On the other hand, the UDP protocol requires less network overhead and may be preferable in situations where packet re-tries are frequent or bandwidth is at a premium. If you select UDP, you must also

specify an IP address, usually the IP address of your NAT router, and a port number. You must then configure your NAT router to forward packets addressed to this port to your ViewWatch station's internal IP address. Details of configuring the NAT router are beyond the scope of this document.

Using Local Cache

Normally, e-Watch pages are downloaded from the server each time a user logs on. This guarantees that the latest pages are always used. For users who have a very slow connection or who experience frequent network interruptions, better performance may be obtained by using Internet Explorer's local cache.

To log on to SiteWatch from a remote system and use the local cache, open Internet Explorer and type in the address **http://<server name or IP Address>/ewatch/rlogon.asp?cache** and click .

Single Pane Logon

The Single-Pane logon enables a user to logon with only a single video pane displayed. This type of logon might be used when video streaming is only available over low bandwidth, such as via a satellite link. Attempting to view more than one pane of video over low bandwidth could cause system errors. To log on to SiteWatch with only a single video pane, open Internet Explorer and type in the address **http://<server name or IP Address>/ewatch/logon.asp?station=lbw** and click



Auto Logon

Auto logon (autologon.asp) enables a user to logon without going through logon security. A password is not required and all users are logged on with the Administrator Role. Automatic logon is designed for users who are already considered secure, perhaps operating from within a secure location. Before using Auto logon, it must be enabled at the server. When the auto logon feature is disabled, automatic logon is not possible.

Dual-Head Logon


Dual head logon is a special feature that allows a full screen secondary window to run on the same computer as the primary window. This allows the station to have both a primary interface control system and a full screen monitor station at the same time.

Before the system can run in dual head mode you must prepare your computer as a named station. You must create a new station with one

secondary monitor. Enter your computer's IP address as both the primary and secondary IP. Refer to the previous chapter for details.

To log on to SiteWatch as a dual-head station, open Internet Explorer and type in the address:

**http://<server name or IP Address>/ewatch/
logon.asp?station=<station name>&DualHead=true**

and click .

Additional URL Parameters

Additional parameters can be appended to the URL of the logon screen to accommodate special situations. A question mark must precede the first additional parameter, and an ampersand must precede the second and subsequent special parameters (Figure 1-4).

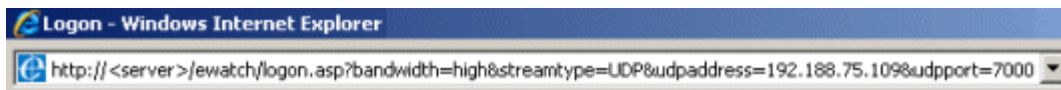


Figure 1-4. Additional URL Parameters

Station Parameter

Named ViewWatch stations can use advanced features such as multiple video monitors and automatic report scheduling. Named stations are defined in the ViewWatch *Define Sites, Stations and Servers* dialog. See the SiteWatch Administration Guide for details. To run ViewWatch as a named station, use the station parameter as shown below:

http://<server>/ewatch/logon.asp?station=mainstation

Streamtype URL Parameter

ViewWatch normally receives multicast video packets produced by e-Watch cameras. In some cases, it may not be possible for the network to route multicast packets from the cameras to the ViewWatch station. In these cases, ViewWatch can receive TCP or UDP unicasts from the e-Watch server. If you use the streamtype=UDP parameter, you can also specify your IP address (usually your router's external IP address if you are behind a NAT firewall) and a port number (the default is 50000). For example:

http://<server>/ewatch/logon.asp?streamtype=TCP

http://<server>/ewatch/logon.asp?streamtype=UDP

**http://<server>/ewatch/
logon.asp?streamtype=UDP&udpaddress=192.188.75.109&udpport=
7000**

If you use `streamtype=UDP` and view more than one video, then ViewWatch will use the specified port number for the first video and increment the port number by 1 for each additional video (e.g. 50000, 50001, 50002, etc.). You must program your NAT router to forward each of these port numbers to your ViewWatch station's IP address.

Bandwidth URL Parameter

ViewWatch normally displays high resolution video when configured with four or fewer video panes, and low resolution video when configured with more than four video panes. You can use the bandwidth URL parameter to make ViewWatch display high resolution video or low resolution video regardless of the number of video panes. For example:

`http://<server>/ewatch/logon.asp?bandwidth=HIGH`

`http://<server>/ewatch/logon.asp?bandwidth=LOW`

Maxpanes URL Parameter

ViewWatch normally allocates resources for up to sixteen video panes. If you have a powerful computer and wish to display more than sixteen video panes, use the maxpanes URL parameter to have ViewWatch allocate the necessary resources. For example:

`http://<server>/ewatch/logon.asp?maxpanes=32`

Combining URL Parameters

You can combine URL parameters by using an ampersand (&) between the parameters. For example:

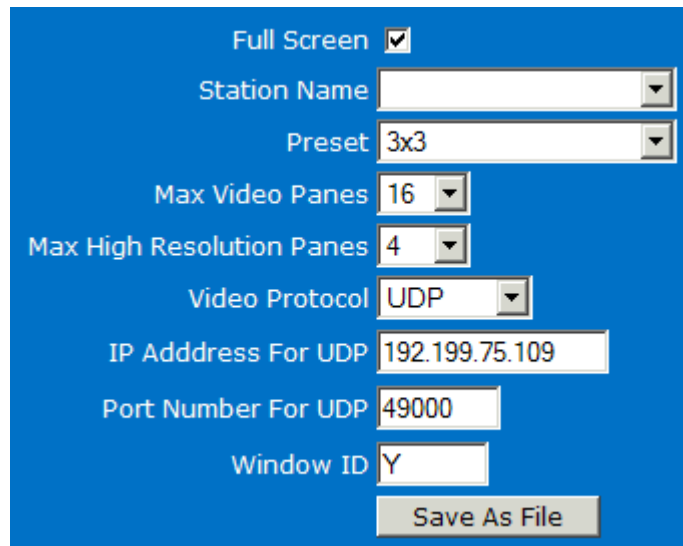
**`http://<server>/ewatch/logon.asp?streamtype=TCP
&bandwidth=LOW&maxpanes=32`**

Interactive Logon

The logon methods described above are ideal for launching ViewWatch using a desktop shortcut. ViewWatch also offers a logon screen that allows you to select ViewWatch options interactively. To display the ViewWatch interactive logon screen, enter the following address in the Internet Explorer address field:

`http://<server>/ewatch/default.asp`

After you log on, your selections are automatically saved for the next log on. The interactive logon screen includes the following selectable options:



Full Screen

Station Name

Preset 3x3

Max Video Panes 16

Max High Resolution Panes 4

Video Protocol UDP

IP Address For UDP 192.199.75.109

Port Number For UDP 49000

Window ID Y

Save As File

Figure 1-5. Interactive Logon Options

Full Screen

If you check “Full screen”, ViewWatch user interface will be opened in a full screen window. Otherwise, the ViewWatch user interface will be opened in a normal window that you can resize.

Station Name

Select a station name from the pull-down list to run ViewWatch as a named station. Named ViewWatch stations can use advanced features such as multiple video monitors and automatic report scheduling.

Preset

Presets store all of the ViewWatch settings, including video pane configuration, loaded sites, map display, etc. You can save presets using the ViewWatch *Manage Presets* dialog. If you select a preset in this list, then the preset will be loaded into ViewWatch after you log on. There is a special preset in this list, *Last Log Off*. Select this preset to restore the ViewWatch user interface to the settings in effect the last time you logged off.

Max Video Panes

While ViewWatch is loading, system resources are reserved for a fixed maximum number of video panes. The default maximum is 16 video panes, but you can select a larger number from this list. Selecting a larger number will allow you to configure more video panes, but it will take ViewWatch slightly longer to load.

Max High Resolution Panes

To help conserve bandwidth and system resources, the default behavior of ViewWatch is to automatically switch from high resolution video to low resolution video when there are more than this number of video panes. You can adjust the default behavior to suit your computer and operating environment by selecting a different number from this list. If you select zero, then low resolution video will be displayed in all video panes. Remember that you can always select low or high resolution video in each video pane individually.

Video Protocol

Select the network protocol to be used for delivering video streams to the ViewWatch video panes. The default is Multicast, which is best for conserving bandwidth but requires special network configuration. If Multicast does not work, you can select either of the two unicast protocols, UDP or TCP. UDP works well on local networks but will not work on a wide area network without special router configuration. TCP requires the most network overhead but will work on any network and the Internet.

IP Address For UDP Port Number For UDP

If you select UDP as the video protocol you may have to enter an assigned IP address and port number. Consult your network administrator for guidance.

Window ID

This option is used to give ViewWatch unique window names for use on computers with multiple video monitors and is not normally required. See the SiteWatch Administration Guide for details.

Save As File

This button is provided as a convenience for saving your selections as a file on the e-Watch server. Saved selections can be used to auto-launch ViewWatch. See the SiteWatch Administration Guide for details.

Internet Explorer Security

When you open the SiteWatch Logon Screen for the first time, you may see an Internet Explorer information bar and the ViewWatch installation message shown in Figure 1-6. Click **OK**, then click the information bar to install the ViewWatch components

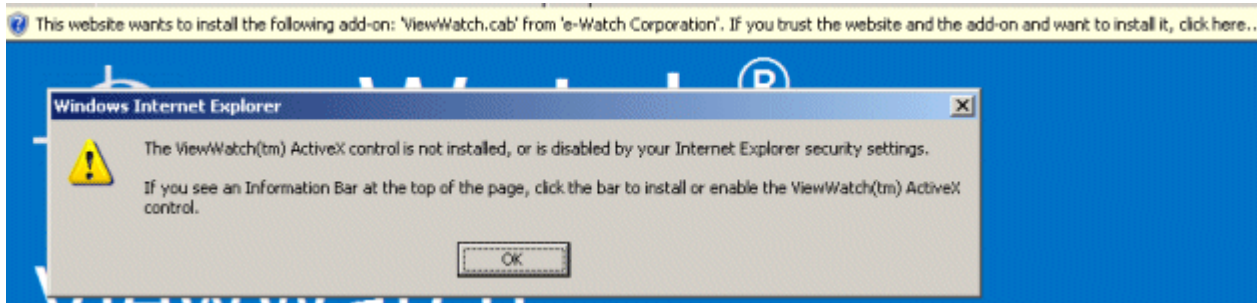


Figure 1-6. ViewWatch Installation Message

Windows will display the Security Warning shown in Figure 1-7. Click the Install button install the ViewWatch components.



Figure 1-7. IE Security Warning

The next time that the logon screen is displayed, you may see the ViewWatch Trusted Site message shown in Figure 1-8. Click **Yes** to make the e-Watch server a Trusted Site.

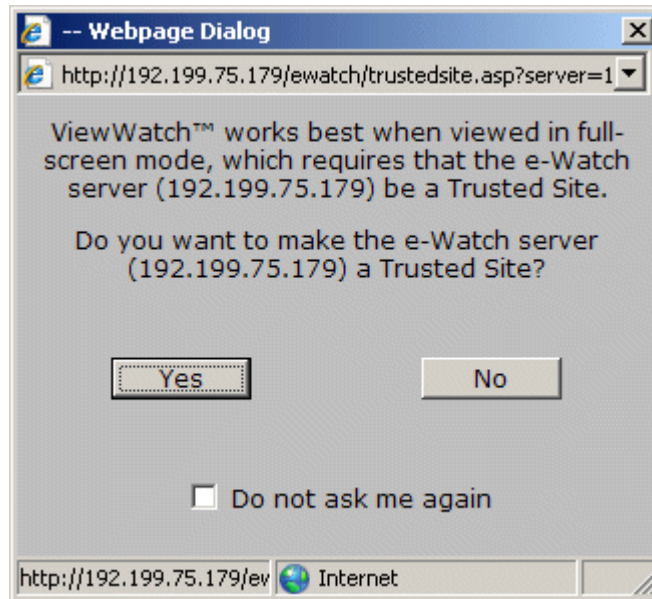


Figure 1-8. Trusted Site Message

Remote Server

This feature allows you to view and access a remote server as if it were part of the local server. This is different from logging on to a remote server as described earlier. The difference is that you simply log on to your normal server and from there view and control the remote server. This feature has the benefit of using almost all the capabilities of the ViewWatch™ system. Remote servers must be pre-configured by the system administrator. Please see the administrator guide for details. You will notice a server drop down list on some screens as you go along and use the ViewWatch™ system. That is your indicator that a remote server is connected. To use the remote server, simply select the name of the remote server and the features of the screen will change to control the remote server. As we go along in this user guide you will see a server drop down list on some images, don't worry if you don't see it on your screen.

The Primary ViewWatch™ Screen

After logging on, the **Primary Screen** will display similar to Figure 1-9.

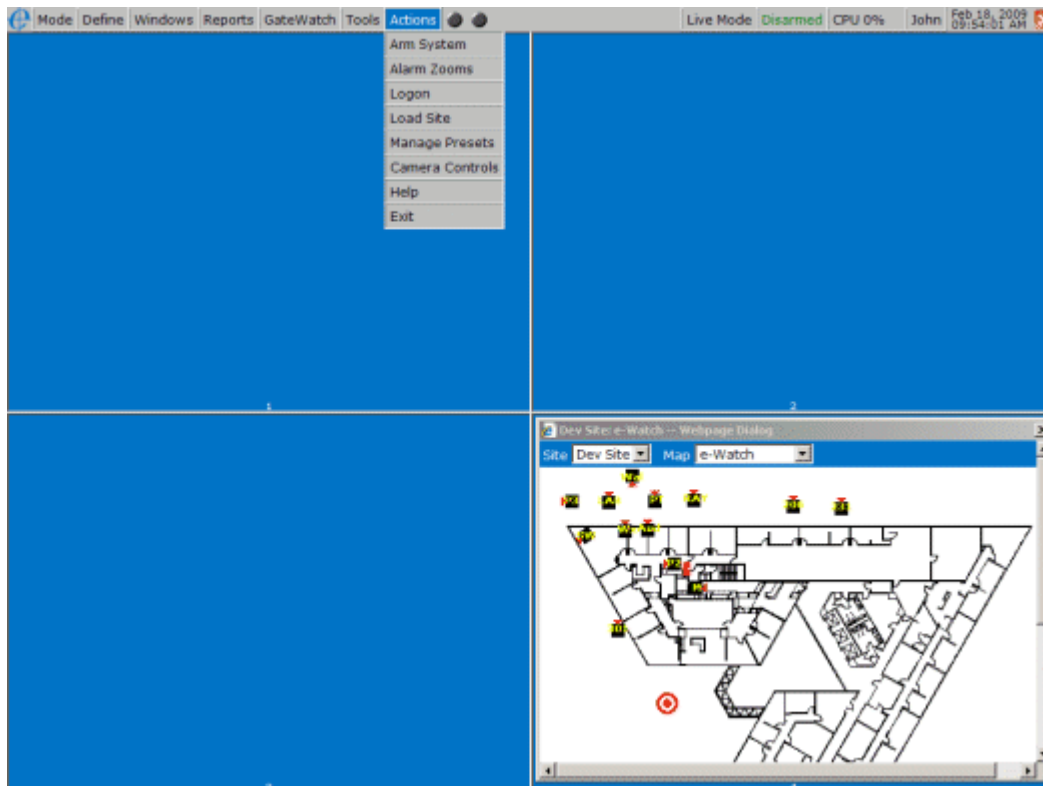


Figure 1-9. The Primary ViewWatch™ Screen

From this screen, you can control all functions of the SiteWatch system. The screen is divided into three sections: Map Window, Video Window and Menu Bar.

The Map Window

The Map Window is a floating window that contains a map of the facility. it can be moved to any convenient position on the desktop, resized, or closed. The map source is an image file stored on the server. There may be a series of maps stored on the server if the facility has multiple locations, or if the facility is too large to be displayed conveniently on a single map.

Each map contains icons representing cameras within the facility and showing their location on the map. Camera icons indicate the direction the camera is pointed. Figure 1-10 illustrates a facility map with camera icons.

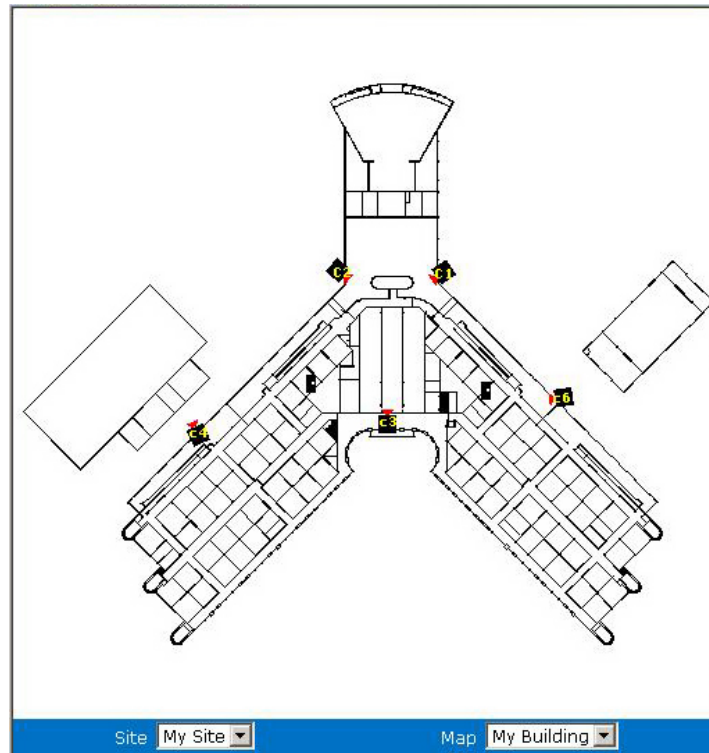


Figure 1-10. Facility Map with Camera Icons

When the mouse pointer dwells over a camera icon for a brief interval, a text box appears showing the friendly camera name. Each camera has a unique alphanumeric Camera ID used to control the camera. The server maintains this unique ID, regardless of the friendly camera name. The ID cannot be changed by the user through the user interface. Figure 1-11 shows an example of a friendly camera name.



Figure 1-11. Text Box Showing Friendly Camera Name

Map Icons For Third-Party Devices

Third-party devices may be integrated with the e-Watch system through the optional GateWatch™ Third-Party Integration Software. These devices may include third-party access keypads, smoke alarms, and perimeter security implements. These devices are represented on the map by a door

icon. The icon blinks in color when the device triggers an alarm. Right-clicking on the icon displays a menu for displaying the popup alert status or the Devices menu.

Map Window Actions

When the camera icon on the map is double-left clicked, the camera's video appears in the Video Window in an expanded video pane. If the icon is right-clicked, a menu box appears with choices for further operations: based on your authority level. Hovering the mouse over an active video pane causes the camera icon to be highlighted. Hovering the mouse over the icon displays its friendly name.

The user may "drag and drop" the camera icon into any used or unused pane in the Video Window. The "drag and drop" operation causes the selected camera's video to appear in the selected pane. The position of the map icon is not affected by the "drag and drop" operation.

Two pull-down lists are located above/beneath the map image, labeled **Site** and **Map**. The Site pull-down list contains a list of sites. It also keeps track of all of the site maps the user visits during the current session. The Map pull-down list contains all maps associated with the site selected. The pull-down lists may or may not contain more than one site or map, depending on the user's requirements.

The Video Window

The Video Window covers the entire desktop, except for the Menu Bar. It is used to display video streams from the selected e-Watch camera(s), and to control the secondary screens. Figure 1-12 illustrates the Video Window configured as four video panes.



Figure 1-12. Video Window Configured As Four Video Panes

The Video Window may be configured as a single large video pane, or may be subdivided into multiple rows and columns. The number of video panes is limited only by the computer's processing capability. Special icons may or may not be visible under the running video. These icons will be covered in more detail later in this chapter. The Video Pane Label is positioned immediately under the video pane. For inactive panes, the pane number is displayed in the label. For active panes, the map tag, camera name, and video stream type are displayed.

The Setup Video Panes dialog can be opened by clicking **Setup Video Panes** in the Tools Menu. Figure 1-13 shows the Setup Video Panes dialog.

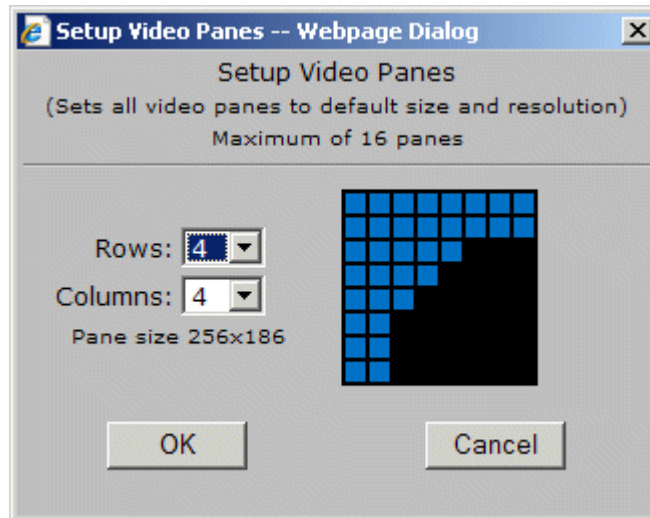


Figure 1-13. Setup Video Panes Dialog

The user can select how many video streams to display by selecting the desired number of video pane rows and columns, using either the pulldown lists or the graphical control. In all cases, the aspect ratio is maintained at the original aspect ratio produced by the camera. Since the video panes may have a different aspect ratio, black borders may appear. The friendly camera name is displayed directly under the appropriate pane. When the Video Window is configured as four or fewer panes, SiteWatch displays a high-resolution video stream. When configured as more than four panes, SiteWatch displays low-resolution video streams. These defaults can be changed by using URL parameters on the logon screen, by clicking Video Resolution in the Tools Menu, and by clicking the video resolution icon in each video pane. Figure 1-14 shows the Video Window configured as nine video panes.



Figure 1-14. Video Window Configured As Nine Video Panes

Video Window Actions

To display a camera's video stream, left-click on the desired camera icon on the map and "drag and drop" it into the video pane.

When a video stream is displayed, you can:

- Double-click the video pane to expand the size of the video pane.
- Right-click the video pane to display a context menu. The context menu includes:
 - > Camera friendly name
 - > Motion alarm status (when appropriate)
 - > Panic Button status (when appropriate)
 - > Video Properties - display video properties
 - > Wireless Status (if camera is wireless)
 - > Wireless Receive Statistics (if camera is wireless)
 - > Wireless Transmit Statistics (if camera is wireless)
 - > Events - Admin Only
 - > Zones - Admin Only
 - > Cameras - Admin Only
 - > Buffer Size

- > Camera Controls - displays Camera Controls dialog window
- > Full Screen - covered in more detail later in this chapter
- > Stop - removes the video from the video pane
- > Merge Video Panes — merges selected panes into one large pane
- > Select Video Resolution
- > Hide or Show icons
- > Hide or Show camera name

The border surrounding any individual video pane blinks when an Event associated with the camera is detected.

To remove a video from a pane, left-click on the video pane, hold the mouse button down, and "drag" the video anywhere outside the Video Window. Or, right-click the video pane and click Stop in the context menu.

To move a video stream from its original pane to another pane, initiate a "drag and drop" by placing the pointer on the video pane or on the camera name and pressing and holding the left mouse button. The "drag and drop" operation causes the selected camera's video to be removed from the original pane and to appear in the newly selected pane.

If a video stream is "dropped" into a video pane where a video stream is already playing, the new video stream replaces the old video stream.

Video Window Icons

One or more icons may appear along the bottom of the video pane to provide quick access to commonly used functions.





-  Clicking this icon causes ViewWatch to switch to browse mode, and to display the most recent high-resolution JPEG image.
-  This icon is displayed only if the camera has a defined motion detect mask that excludes some of the field of view from causing a motion alarm. Clicking this icon pauses the video and displays the motion detect mask as a translucent gray overlay.
-  This icon is displayed only if the camera has an audio card. Clicking this icon toggles the audio between audible and muted. Right-click the icon to display the audio controls dialog, shown in Figure 1-15.
-  Clicking this icon allows you to select the video resolution.



Figure 1-15. Audio Controls Dialog

The Mute All button will mute the audio in all video panes.

Selecting Video Resolution

When the Video Window is configured as four or fewer panes, SiteWatch displays a high-resolution video stream. When configured as more than four panes, SiteWatch displays low-resolution video streams. You can change these defaults if you wish.

To change the video resolution in a specific video pane, right-click the pane and click Select Video Resolution in the context menu, or click the Video Resolution icon. To change the video resolution in all video panes, click **Video Resolution** in the Tools Menu. The Change Resolution dialog appears (Figure 1-16).

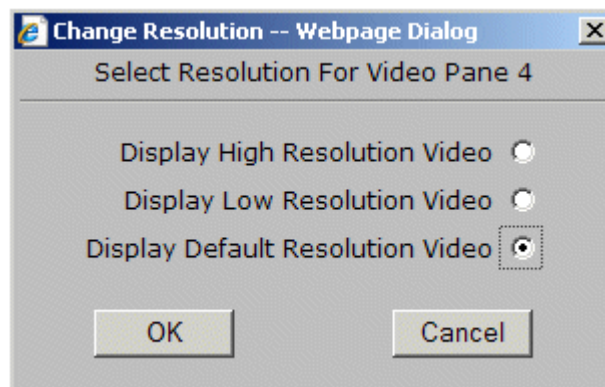


Figure 1-16. Change Resolution Dialog

Click **Display High Resolution Video** or **Display Low Resolution Video** to always display that resolution in the selected video pane(s). Click **Display Default Resolution Video** to display the default video resolution described above.

A “H” or “L” is appended to the pane number in the video pane label for inactive panes if the resolution is set to either high or low resolution.

Resizing Video Panes

You can resize the video panes in any row or column. Move the mouse pointer over a pane border and the mouse pointer will change to a row-resize pointer \updownarrow or a column-resize pointer $\leftarrow\rightarrow$. Press and hold the left mouse button, then move the mouse to “drag” the border. The border will move to resize all of the video panes that share the selected row or column. When you have finished, release the left mouse button.

One hundred pixels is the minimum size for any video pane. If any video pane is reduced to the minimum size during a resize operation, no further resizing is possible in that direction.

Resizing requires a large amount of computer resources. Resizing is possible while videos are playing. However, the operation is easier if the panes are resized while there are no active video panes.

Merging Video Panes

If you wish, you can merge video panes to create a single large video pane. Right-click a video pane and click Merge Video Panes in the context menu. The Merge Video Panes dialog appears (Figure 1-17).

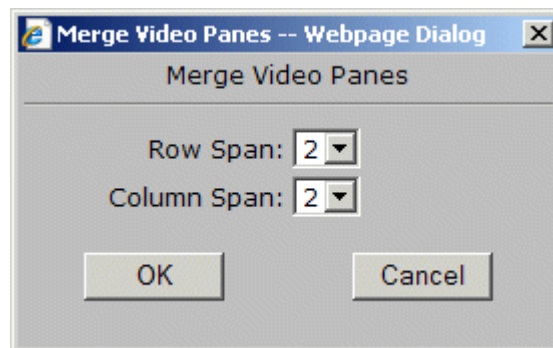


Figure 1-17. Merge Panes Dialog

Select the number of video pane rows and columns to be spanned. The selected video panes are highlighted (Figure 1-18).

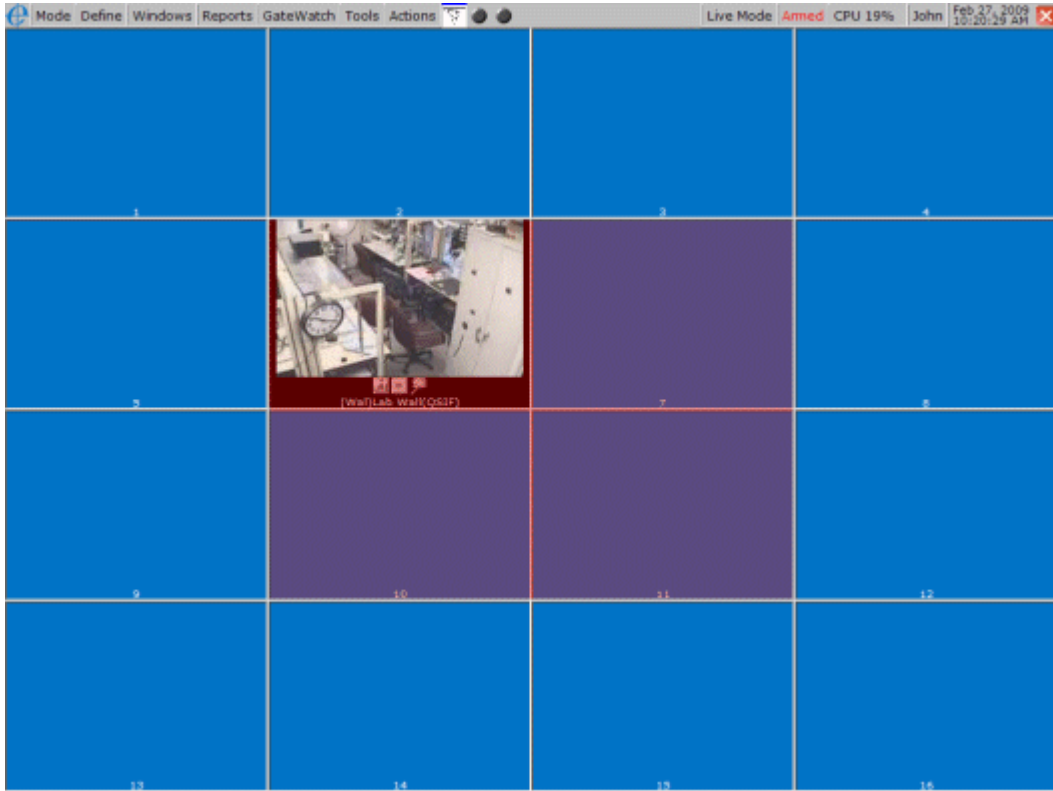


Figure 1-18. Video Pane Rows And Columns Selected For Merge

Click the OK button to merge the selected video panes. The camera's video is displayed in high resolution in the newly expanded pane (Figure 1-19).

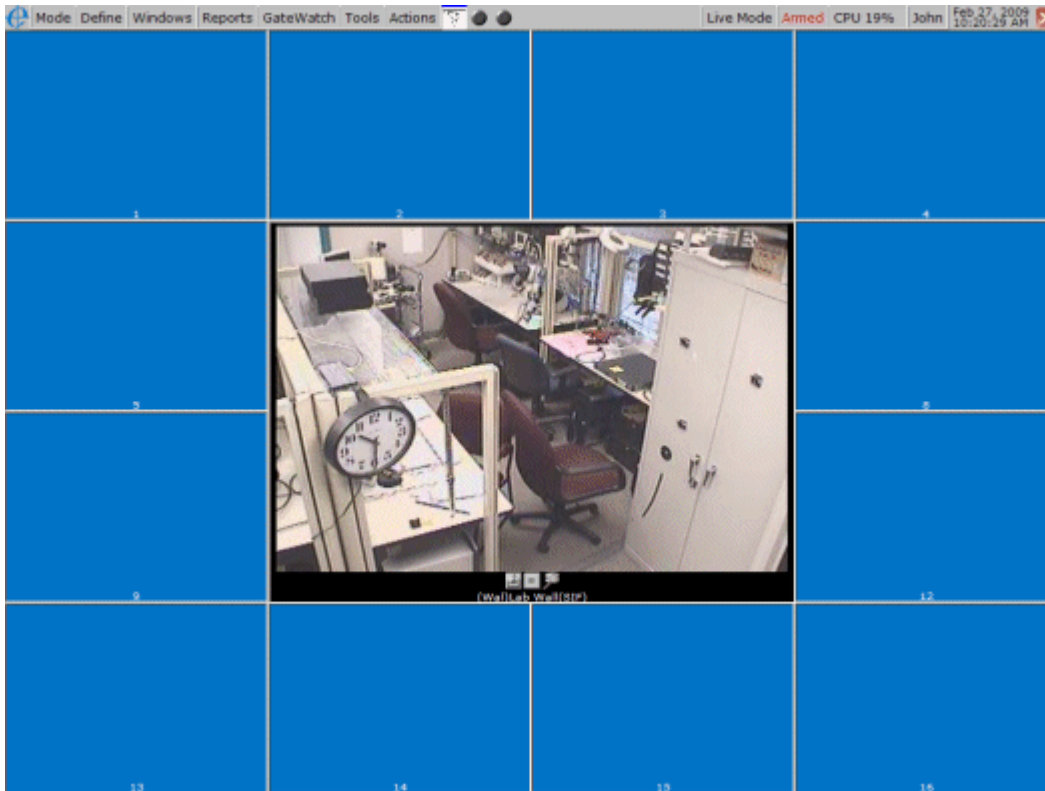


Figure 1-19. Merged Video Panes

To reverse the process, right-click the video pane and click Merge Video Panes in the context menu. In the Merge Video Panes dialog, select Row Span 1 and Column Span 1, then click OK.

Zooming Video Panes


“Zooming” refers to the process of enlarging a video pane and, if necessary, switching the video stream to high resolution. The size of the zoomed video pane is determined by applying the Zoom Factor (see *ViewWatch Options*) to the original size of the camera’s high resolution video stream. A video pane is automatically zoomed if:

1. A motion alarm occurs.
2. Zoom To Alarm is enabled.
3. The system is armed.

You can manually zoom a video pane in three ways:

1. Double-click a camera icon in the Map Window.
2. Double-click an active video pane in the **Video Window**.
3. Press the Control (Ctrl) key, then move the mouse over an active video pane. By holding the Control key and moving the mouse, you

can zoom any number of video panes in succession.

To restore a zoomed video pane to its original size and resolution, click the un-do icon  in the Menu Bar, or double-click the zoomed pane.

Resetting Video Panes

If video panes have been changed by resizing, as described above, you may wish to restore the video panes to their original sizes. To accomplish this, click **Reset Video Panes** in the Tools Menu. Click OK in the verification dialog. Merged panes and selected video resolutions are not affected. If you wish to stop all video, remove all merged video panes and restore all video panes to the default resolution, then click **Setup Video Panes** in the Tools Menu instead.

The Menu Bar

The Menu Bar is located across the top of the ViewWatch screen. The right side of the bar contains the following menus:

- Mode
- Define
- Windows
- Reports
- GateWatch - only if the GateWatch module is installed
- Tools
- Monitors - only if there are secondary monitors
- Actions

To the right of the menus are action icons. The action icons are displayed only when necessary.



Click to display the Map Window



Click to display the Browse Controls Window



Click to un-do a zoom operation



Click to perform a customizable action

The right side of the Menu Bar contains:

- Mode indicator - Live or Browse
- Secondary monitor indicator - only if there are secondary monitors
- Armed status indicator
- CPU utilization display
- Current user name
- Real-time clock

The Mode Menu contains menu items labeled **Live** and **Browse**. Clicking **Live** places the ViewWatch screen in Live Mode. Clicking **Browse** places it in Browse Mode. The Mode Menu is visible only if you have the Investigator or Administrator Role. Figure 1-20 shows the Menu Bar when in Live Mode.

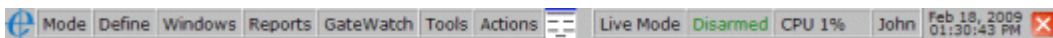


Figure 1-20. Menu Bar In Live Mode with Admin Role

To the right of the Mode Menu is the Define Menu. The Define Menu contains menu items used to launch definition dialogs: Define Events, Define Zones, Define Cameras, Define Maps, Define Sites, and Define Permissions. These will be discussed in detail later. The Define Menu is visible only if you have the Administrator Role.

The next menu is the Windows Menu. The Windows Menu contains menu items used to view the Map Window, and to list all servers, cameras and zones at the site.

The next menu is the Reports Menu. The Reports Menu contains menu items used to produce all of the ViewWatch reports.

The next menu is the GateWatch Menu. The GateWatch Menu contains menu items used to define third-party security devices, and to produce GateWatch reports. This menu is visible only if the optional GateWatch module is installed.

The next menu is the Tools Menu. The Tools Menu contains menu items used to control the configuration of the video panes, set various options, and perform image export operations.

The next menu is the Actions Menu. The Actions Menu contains menu items used to arm and disarm the system, control alert responses, logon, load sites, manage presets, and control cameras. The Actions Menu also contains menu items for Help and Exit.

ViewWatch Options

The ViewWatch Options dialog provides an interface for setting various ViewWatch station options. Click **Options** in the Tools Menu to display the ViewWatch options dialog, shown in Figure 1-21.

The figure shows three sequential screenshots of the 'OPTIONS' dialog box in ViewWatch software. Each screenshot has a title bar 'OPTIONS' and three tabs: 'VIDEO BUFFERS', 'POPUP MESSAGES', and 'OTHER OPTIONS'.

First Screenshot (Video Buffer Size): The 'VIDEO BUFFERS' tab is selected. The title is 'Video Buffer Size'. The text reads: 'Smaller buffers offer lower latency but a greater chance of video interruptions or jitter. Use smaller buffers with faster networks. These settings are used for all cameras on this ViewWatch station for which the buffer size is set to default.' There are three dropdown menus: 'SIF Video Buffer Size' set to '500 (default) milliseconds', 'QSIF Video Buffer Size' set to '800 (default) milliseconds', and 'Motion JPEG Video Buffer Size' set to '1000 (default) milliseconds'. An 'OK' button is at the bottom.

Second Screenshot (Popup Messages): The 'POPUP MESSAGES' tab is selected. The title is 'Popup Messages'. The text reads: 'You can enable or disable selected popup messages.' There are five dropdown menus: 'Motion Alarms' (Enabled), 'Audio Alarms' (Enabled), 'Device Alarms' (Enabled), 'Panic Button Alarms' (Enabled), and 'Camera Temperature Alarms' (Enabled). 'System Error Messages' is set to 'Disabled'. An 'OK' button is at the bottom.

Third Screenshot (Preload Camera Controls): The 'OTHER OPTIONS' tab is selected. The title is 'Preload Camera Controls'. The text reads: 'Preloading camera controls increases time required to load a site but eliminates the time required to setup the camera controls. Preload camera controls if you have a fast computer and network connection, or few cameras.' There is a dropdown menu for 'Preload Camera Controls' set to 'Use Default (Background)'. Below this is the 'Pelco Dome Camera Pan/Tilt Sensitivity' section with text: 'Modify this parameter to adjust Pelco dome camera pan/tilt sensitivity. Smaller numbers will make pan/tilt more sensitive, but may increase latency. Larger numbers may decrease latency, but will make pan/tilt less sensitive.' and a dropdown menu for 'Pelco Dome Sensitivity' set to '5'. The 'Zoom Factor' section has text: 'Double-clicking a video pane will expand the pane to this factor times the video source resolution.' and a text input field for 'Zoom Factor' containing '1.5'. The 'Startup Event Schedule' section has text: 'The selected event schedule will be activated when this ViewWatch station is started.' and a dropdown menu for 'Startup Event Schedule'. An 'OK' button is at the bottom.

Figure 1-21. ViewWatch Options Dialog

Video Buffer Size

The video buffer size option sets the default video buffer sizes to use with each type of video stream. SIF MPEG, QSIF MPEG and Motion JPEG.

Smaller buffers offer lower latency but a greater chance of video interruptions or “jitter”. You can use smaller buffers with faster, more reliable networks. If you experience video “jitter”, try using larger buffers. The default settings work well for most networks.

The video buffer size can be set for individual video streams by right-clicking the Video Window, then clicking Buffer Size in the context menu.

Popup Messages Options

The Options Dialog allows you to control which popup messages appear on your ViewWatch station. You can individually enable or disable the following messages:

- Motion Alarms
 - Audio Alarms
 - Device Alarms
 - Panic Button Alarms
 - Camera Temperature Alarms
- System Error Messages

Pre-load Camera Controls

This option determines whether camera control data is pre-loaded when you load a site. The choices are:

1. Default - use the default setting provided by your System Administrator
2. Always - camera controls are always pre-loaded
3. Never - camera controls are never pre-loaded
4. Background - camera controls are loaded in the background after a site has been loaded

Pre-loading camera controls eliminates any delay when you open the Camera Controls window. However, if you have a very large number of cameras, pre-loading camera controls can cause a significant delay when opening the main ViewWatch page. In this case, you may wish to use the *Background* option. If you seldom use the Camera Controls window, choose the *Never* option.

Pelco Dome Camera Pan/Tilt Sensitivity Option

The Pelco Dome Camera pan/tilt control in ViewWatch provides a way to pan and tilt the camera from a ViewWatch station. The sensitivity option provides a way to tune the control for best performance on your network. Sensitivity values range from 5 to 20. Lower values make the control more sensitive but may cause latency or delay, or even faulty operation, on busy

networks. Higher values reduce latency and can correct faulty operation, but make the control less sensitive.

Zoom Factor

When you double-click on a video pane, or when an alertable event occurs related to a camera, the affected video is displayed in high resolution and the video pane is enlarged. The new size of the video pane is determined by applying the Zoom Factor to the original size of the high resolution video image. By adjusting the Zoom Factor option, you can control how much the video pane is enlarged.

Startup Event Schedule

You can specify which event schedule, if any, should be activated when you log on to ViewWatch. See Chapter 5 for details on setting up Events and Schedules.

Setting The Buffer Size For A Specific Camera

Video buffer size can be set for a specific camera. The setting is in effect only for that specific camera at that specific ViewWatch station. The setting remains even when ViewWatch is stopped and restarted. Figure 1-22 shows the buffer size dialog box.

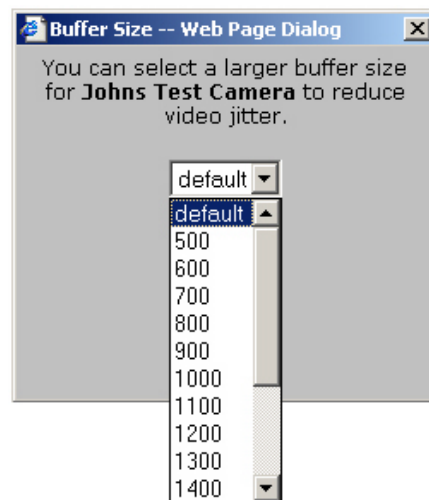


Figure 1-22. Specific Camera Buffer Size Dialog

Full Screen Mode

This mode is single video full screen as shown in Figure 1-23. This feature will set a selected video to full screen. To activate this feature right click on a running video. Select Full Screen from the menu. To deactivate full screen, simply click on any part of the running video



Figure 1-23. Full Screen Mode

Video

To display live video from a camera, first click **Live Mode** in the ViewWatch Mode Menu. If you are logged on with User authorization, live mode is the default and the Mode Menu will not be present. The desktop area of the ViewWatch screen is used to display video from the selected camera(s).

To View Video

Basics

- a. Click on a camera icon in the Map Window and "drag and drop" the camera to a video pane. When the mouse pointer is placed over a camera icon, it changes to the shape of a hand with pointing finger. If left to dwell for a brief moment, a text box will appear with the friendly camera name. As you hold the mouse button down and drag the camera off the map, the hand changes to a four-sided cross. As you continue to drag the camera, it changes back to a hand when you enter the video pane. At this point, drop the camera. Live video from the camera will display. Drag and drop other cameras as desired until all selected video panes are filled. The same camera's video may be displayed in more than one video pane at the same time. The drag and drop operation may be terminated any time prior to dropping the camera in the video pane.
- b. Alternatively, click **List Cameras** in the Windows Menu to display the list of cameras for your site. Click and drag any camera from the list to a video pane. If video is already playing in the pane, the new camera's video will replace the old. You can also double-click a camera in the list to display the camera's video in the first empty video pane.
- c. Alternatively, click **List Zones** in the Windows Menu to display the list of zones.

Details

In **Live** mode, the Video Window displays real time surveillance information. Video may be displayed on one or more additional (secondary) monitors. The primary screen is used to control the secondary monitors. You can switch between the primary screen and the secondary monitors by making the appropriate selection in the Monitors Menu (Figure 2-1).

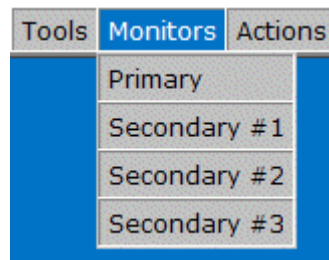


Figure 2-1. Monitors Menu


Each monitor may be configured to display video from a different number of cameras. To change the monitor being controlled, click on the menu item corresponding to that monitor in the Monitors Menu (Figure 2-1). The primary screen will display the video panes from the monitor selected. To change the number of panes displayed, click **Setup Video Panes** in the Tools Menu.

When the number of panes on a monitor is increased, the new panes will be blank. The Map Window contains several icons representing cameras. To display the video from a camera in a monitor's pane, drag the map icon for that camera to the pane in which you would like the video displayed. The video from that camera will appear in the pane. The text description of that camera's location will appear below the display.

To view a list of cameras available, click **List Cameras** in the Windows Menu. You may also view video from a camera by dragging it from this list to the desired pane.

Example: You would like to display 16 panes on Monitor #3, and you want the video from Camera #8 to be displayed in the first pane.

1. Click on **Secondary #1** in the Monitors Menu.

2. Click on **Setup Video Panes** in the Tools Menu.
3. In the Setup Video Panes dialog, select 4 rows and 4 columns, then click the OK button.
4. Drag camera #8  from the map to the first pane of the video display. Video from camera #8 will display in the first video pane (upper left) as shown in Figure 2-2.

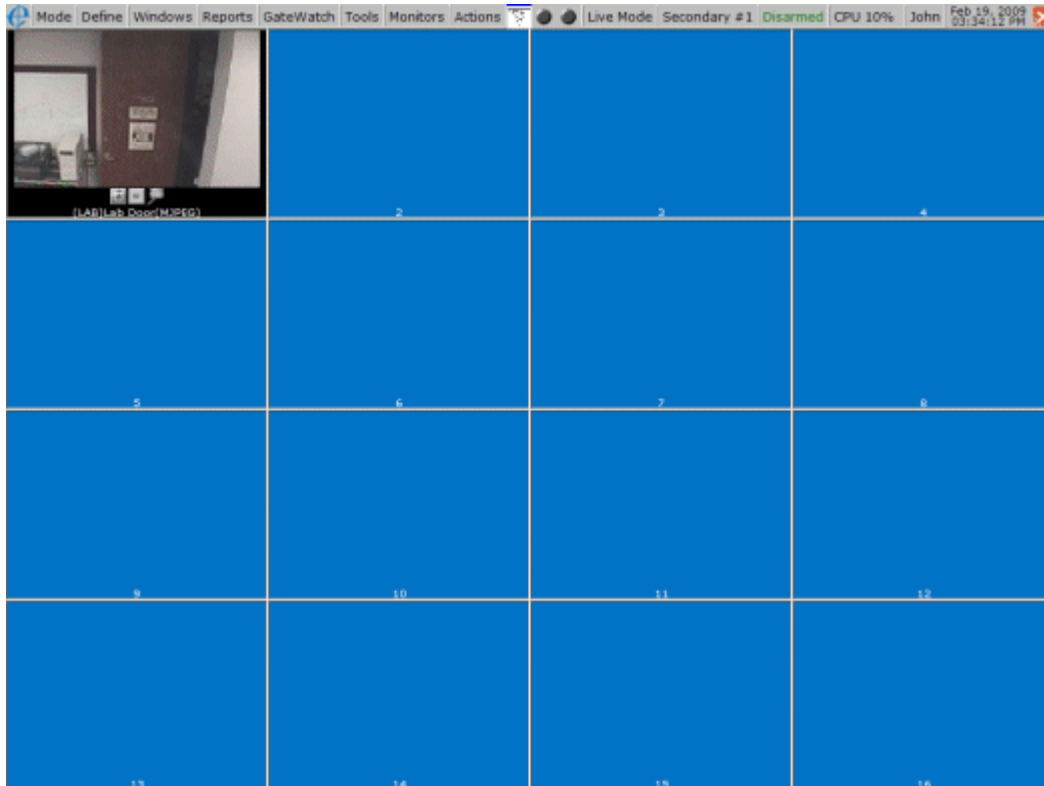


Figure 2-2. 16 Video Panes Display

Viewing Video From Other Servers, Maps, and Sites

e-Watch is designed to allow surveillance of multiple facilities or campuses. Through use of Site and Map selections, it is possible to view cameras and security device locations at any site. The controls to manipulate the sites and maps are located at the top of the Map Window as shown in Figure 2-3.



Figure 2-3. Site And Map Controls

Sites

The **Site** menu lists all sites under surveillance by your e-Watch system. To view the list, click on the pull-down **Site** menu. To view a map of a site, click on the name of that site. To access a site from this menu, it must first be loaded.

To load a site, click **Load Site** in the Actions Menu. Highlight the desired site and click the Load button. If you wish to clear all loaded sites, click

Clear current settings. Click **Load** to load the site. Figure 2-4 shows an example of how to select a site from the Site pull-down menu when several sites are loaded onto an e-Watch system.

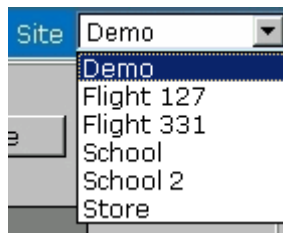


Figure 2-4. Several Sites Loaded On An e-Watch System

Maps

Each site comprises one or more maps. For example, one site may be a three-floor building with a map for each floor. To view different maps for a site, click on the pull-down Map menu and click the name of the map you desire to see, as shown in Figure 2-5.



Figure 2-5. Selecting a Map from the Pull-Down Menu

Once a site and map have been selected, that site's video may be monitored in the Video Window as previously described. Cameras from any position on any map may be monitored from one location.

Servers

If remote servers are connected you can switch to the sites from those remote servers and view their sites and maps. To do this, click **Load Site** in the Actions Menu. Notice the sites window came up. If you see a Server drop down list, you have remote servers connected. From the server list select the server that you want to view. Notice when you select the server, the sites changes to show the sites in that server. Now follow the procedure for sites and maps described earlier.

Camera Controls

e-Watch cameras can be controlled from the Primary Screen via the floating Camera Controls window.. Click **Camera Controls** in the Actions Menu to open the Camera Controls Window, or right-click an active video pane and select *Camera Controls* from the context menu.

Different cameras support different sets of video controls. Some cameras may have more capabilities than others. The system will display the available controls for that specific camera. If **Auto** is engaged on any controls, the manual control for that feature is inoperative. Figure 2-6 shows the Cam Controls window and Table 2-1 describes the controls.

Note: Administrative level users have access to more advanced camera controls.

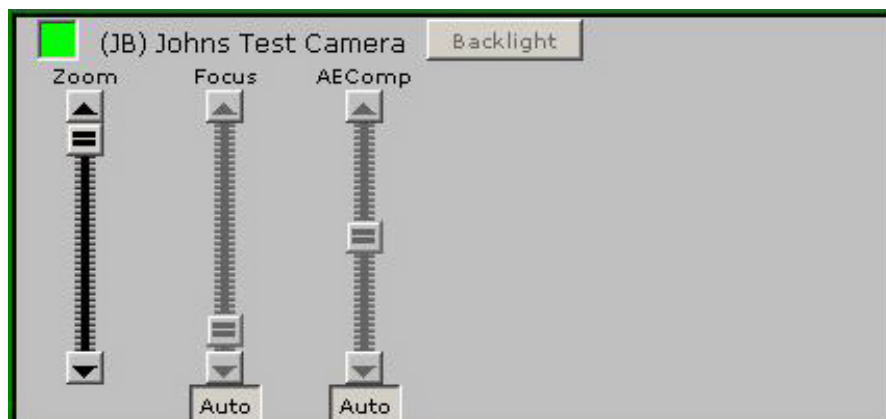


Figure 2-6. Cam Controls Window

Table 2-1. Explanation of Camera Controls

Control	Function
Zoom	Controls the camera's zoom in/zoom out feature
Focus	Controls the camera's focus
Auto AE Comp	The reference level for the auto exposure

Control	Function
Backlight	Compensates for a high degree of illumination which obscures an image

Pan/Tilt

Some cameras are capable of pan/tilt action. Depending on the type of camera the pan/tilt can be controlled from a joystick or from the user interface. This allows the camera to move left/right, up/down, enabling the user to view different portions of a room or area. The user interface pan/tilt controls are split into two versions. The first version only has direction controls. The second version is for devices with proportional controls such as the Pelco Spectra devices.

Pan/Tilt Version One

This version of the pan/tilt control does not have variable speed (Figure 2-7). This version of the control will appear with the camera controls of a pan/tilt camera that does not have variable speed. To use it simply click on one of the arrows for the direction you want the camera to move to. This version of the control does not work with the joystick.



Figure 2-7. Pan/Tilt Control Without Variable Speed

Pan/Tilt Version Two

The second version of the pan/tilt control has added functionality for variable speed cameras (Figure 2-8). The red dot in the center represents center point at 0 speed. To move the camera click and drag the dot in the direction you want the camera to move. Release the mouse button when the camera has reached the desired position. Pay attention to the distance you drag the dot from the center. As the dot goes out further the camera will increase its speed. This control also has zoom in and out capabilities.



Figure 2-8. Pan/Tilt Control With Variable Speed

Both Pan/Tilt controls are located on the Camera Controls Window and only display when a camera with Pan/Tilt capability is selected. Figure 2-9 shows the Camera Controls Window with the Pan/Tilt control

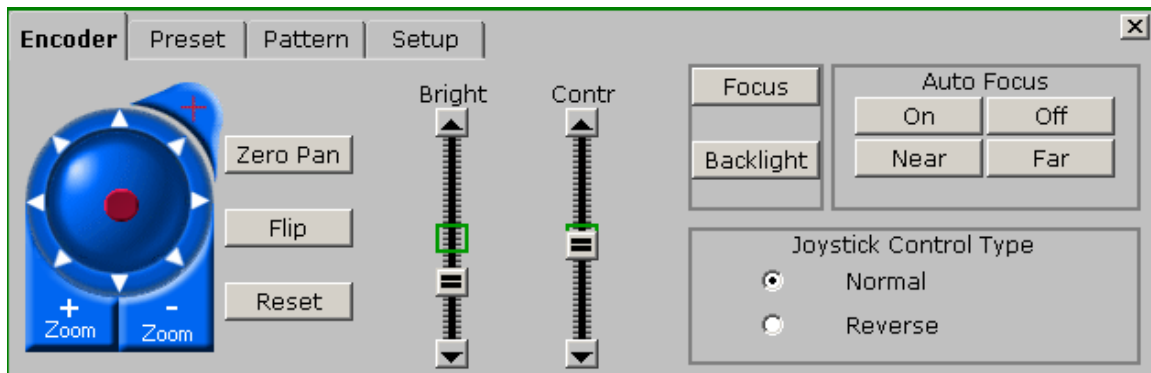



Figure 2-9. Camera Controls With Pan/Tilt

Note: This tab may not be visible.  This is part of the advanced pan/tilt/zoom controls and will be covered later in this chapter.

Pelco Spectra Controls

1. Encoder. The Encoder tab (See Figure 2-9) allows the user to set the camera brightness, contrast, focus, backlight compensation, and other parameters. Table 2-3 explains each encoder control and function.

Table 2-3. Encoder Controls

Control	Function
Zero Pan	Resets the camera to its pan starting point.
Flip	Flips the camera view from current view to obverse view.
Reset Cam	Resets camera to starting point.
Zoom +	Zooms the camera in.

Table 2-3. Encoder Controls

Control	Function
Zoom -	Zooms the camera out.
Bright	Controls the brightness of the video displayed from the camera.
Contr	Controls the contrast of the video displayed from the camera.
Focus	Allows Focus to be turned on or off and determines the depth of focus. If Near is selected, the camera focuses on points near the camera, whereas it focuses on points further away when Far is chosen.
BC (Backlight Compensation)	Allows backlight compensation to be turned on or off.

2. Preset. The Preset tab allows the user to setup preset camera views. Up to 20 presets can be created. Figure 2-10 shows the Preset window.

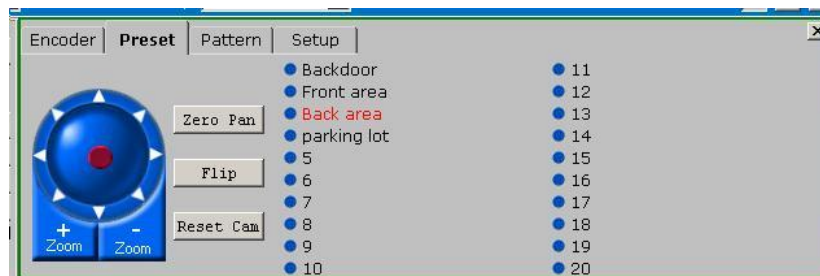


Figure 2-10. Preset Window

To create a preset, follow the steps below:

- Click on the Preset tab.
 - Click on the red pan/tilt control dot and move the camera to the desired object or scene.
 - Right-click on one of the numbered available blue preset dots to display the preset name dialog box. Accept the default preset name or enter a new name and click on Set Preset. Now, click on any preset blue dot to direct the camera to that preset position. The preset name changes to red when selected, indicating that the camera is set to that preset view. When the camera is moved using either the joystick or pan/tilt control, any preset name displayed in red font is reset to black font.
3. Pattern. A pattern is a memorized, repeating series of pan, tilt, zoom and preset functions that can be recalled. It allows the user to setup a viewing pattern that can be used over and over. For example, a user may want to scan a parking lot beginning at one end and slowly pan

to the other end. Once set, the pattern can be run over and over until stopped. Figure 2-11 shows the Pattern setup window.

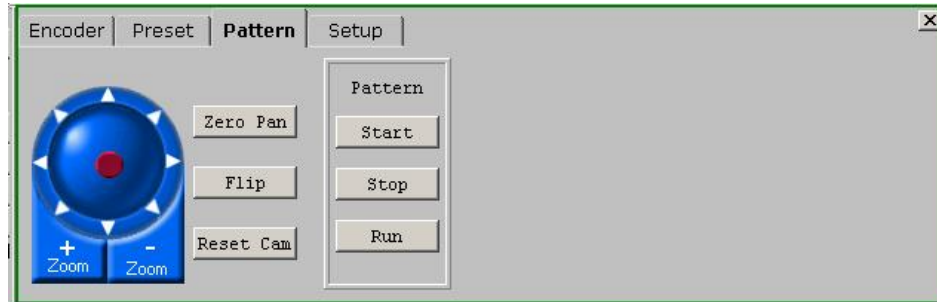


Figure 2-11. Pattern Window

To setup and run a pattern, follow the steps below:

- Click on the Pattern edge tab.
 - Click the Start button. This starts the recording of the pattern.
 - Click on the red dot pan/tilt control and pan the camera over the area desired.
 - Click the Stop button when you have finished panning the desired pattern.
 - Click the Run button to run the pattern just created. The pattern will continue to run until stopped.
 - Click the Stop button to stop the pattern.
4. Setup. The Setup tab allows the user to open the camera menu for setting the camera parameters. These are detailed settings that are normally setup by administrator or system configuration personnel. Our discussion will be limited to a brief overview of the buttons and controls. For detailed information, please refer to the camera manufacturer's technical manual. Figure 2-12 shows the Setup Window

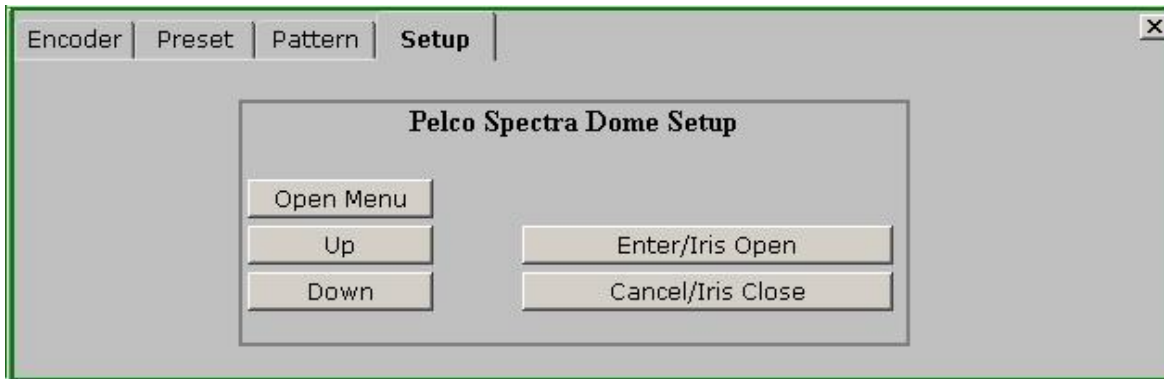


Figure 2-12. Setup Window

To configure Setup, follow the steps below:

- Click on the Setup tab.
- Click Open Menu. An overlay text menu will appear on top of the camera video.
- Use the Up and Down button to select the desired menu item.
- Click the Enter/Iris Open button to enter the submenu for the selected item. Click the Up or Down button to make submenu selections.
- Click Cancel/Iris Close button to exit submenus or cancel current operation.
- After making desired parameter changes, use the Up and Down buttons to move the cursor to Exit.
- Click Enter/Iris Open to exit the menu and close the text from the video.
- Text. The Text control enables the user to overlay informational text on the video display. This capability is not available on the Pelco III. To overlay text:
 - Click on the Textbox edge tab to display the text box.
 - Type desired text into text box.
 - Click the Send button. The text will overlay the video.
 - Click Clear to remove the text.

Joystick Control of Pelco Spectra Camera

A joystick may be used to control the Pelco Spectra camera. The joystick is active when the Camera Control Dialog is visible for a Pelco Spectra dome camera. Moving the joystick causes the camera to pan and tilt in the same direction as the joystick. The pan and tilt speed is proportional to the

distance the joystick is moved from the center position. If equipped, pressing the right joystick thumb button causes the camera to zoom in. Pressing the left joystick thumb button causes the camera to zoom out.

Note

This feature was developed and tested on a Microsoft SideWinder joystick. Other joysticks may be compatible. Please verify the joystick is properly installed and configured with your operating system.

Joystick Crosshairs

This feature is for the Pelco Spectra III and above with firmware version 1.22 and higher. Please note the firmware requirement is for the Pelco dome and not for the e-Watch encoder. Please refer to [Pelco](#) for firmware upgrade procedures for the Pelco Spectra. Microsoft Windows XP is also required to operate the joystick crosshairs.


The joystick crosshairs will only activate if the controls dialog for a Pelco Spectra is open. To activate it, click the thumb button on the joystick. This will cause red crosshairs to appear on the video. Move the joystick around while still holding the thumb button. Once you have the cross hairs on a spot, release the thumb button. This will cause the dome to center on whatever you selected with the crosshairs.



Figure 2-13. Joystick Crosshairs

Advanced Pelco Spectra Pan/Tilt/Zoom Controls

Advanced pan/tilt/zoom controls are available for the Pelco Spectra III and above with firmware version 1.22 and higher. Please note the firmware requirement is for the Pelco dome and not for the e-Watch encoder. Please refer to [Pelco](#) for firmware upgrade procedures for the Pelco Spectra. Microsoft Windows XP is also required to operate the advanced Pelco Spectra Controls.

You can enable the advanced controls by clicking the  tab that is located on top of the pan/tilt control. The advanced controls include the Field Of View Pan/Tilt, Click To Pan/Tilt, Mousewheel Zoom, Follow The Mouse, and Pan/Tilt/Zoom To Box controls.

Field Of View Pan/Tilt

This feature allows you to pan and tilt the camera one field of view at a time. When the advanced controls are enabled, red arrows appear on each side of the video pane. Click on one of the red arrows to have the camera move one field of view in the direction of the arrow.



Figure 2-14. Field Of View Pan/Tilt Control

Click To Pan/Tilt

This feature allows you to pan and tilt the camera using the computer mouse when the advanced controls are enabled. Left-click anywhere in the video pane, and the camera will pan and tilt to center on the clicked position.

Mousewheel Zoom

This feature allows you to zoom the camera using the computer mouse when the advanced controls are enabled. Roll the mousewheel forward to zoom in, or roll the mousewheel back to zoom out.

Follow The Mouse

This feature allows you to control the camera interactively using the mouse when advanced controls are enabled. Press and hold the Control (Ctrl) key. The mouse pointer will automatically move to the center of the video pane. Move the mouse pointer way from the center of the video pane, and the camera will pan and tilt in that direction. The pan and tilt speed will be proportional to the distance from center of the video pane to the mouse pointer. With a little practice, you can “lead” a moving object with the mouse pointer, and the camera will follow the object.

Pan/Tilt/Zoom To Box

This feature allows you to pan, tilt and zoom the camera using the mouse when advanced controls are enabled. Press and hold the Alt key. Position the mouse pointer in the Video Window, press and hold the left mouse button, then drag the mouse pointer to draw the box. When you release the left mouse button, the camera will pan and tilt to the center of the box, then zoom in so that the box fills the video pane. If you have made a mistake you can release the Alt key before releasing the left mouse button, and the operation will be cancelled. See Figure 2-15.




Figure 2-15. Pan, Tilt And Zoom To Area Of Interest

The Browse Function

In addition to providing real-time video surveillance, the SiteWatch™ system archives video received from system cameras. Video may be archived as still images, which are saved in JPEG format when motion is detected, as an MPEG video file or as a Motion JPEG file. Archived files are stored on the SiteWatch server. Archive parameters for a camera can be set up using the Camera Definition window. This is discussed in more detail in the SiteWatch Administration Guide.

Browse Controls

To view archived surveillance data, click **Browse Mode** in the Mode Menu. The floating Browse Controls Window will appear as shown in Figure 3-1. This feature is only available to users with Investigator or Administrator privilege. If the Browse Controls Window is not visible, click  in the Menu Bar to display the window.

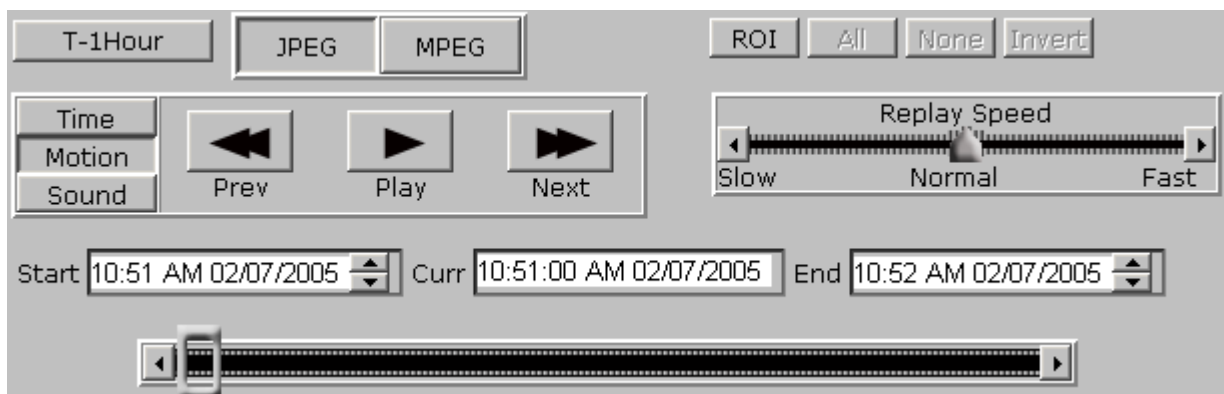


Figure 3-1. Browse Controls Window

Table 3-1 describes the video playback controls.

Table 3-1. Description of Video Playback Controls

Button or Function	Description
T-1 Hour	Provides option to quickly select the current day and the immediately preceding hour.
JPEG	Selects JPEG mode where captured JPEG images will be replayed.
MPEG	Selects MPEG mode where MPEG or Motion JPEG video clips will be replayed.
Region of Interest (ROI) Filter	Defines an ROI within a video pane where only motion detected in the ROI is replayed.
All	Select the entire video region with motion detection.
None	Deselect the entire video region with motion detection.
Invert	Invert ROI selections.
Time	Replays images in real time, even during periods of no motion or sound.
Motion	Replays images during periods of detected motion.
Sound	Replays images during periods of detected sound.
Play/Pause	Enables images or video clips to be displayed, or pauses the display.
Prev (Previous)	Displays the immediately preceding image. Only active during Play mode under JPEG selection.
Next	Displays the immediately succeeding image. Only active during Play mode under JPEG selection.
Replay Speed control	A slider bar regulating how rapidly images are displayed, ranging from Slow to Fast. The Normal position in the center of the slider bar corresponds to "real-time" speed. Only active during play mode under JPEG selection.
Video Size control	Permits MPEG video clips to be replayed in original size (1x), double size (2x), or full size (Full). This control is only available when MPEG is selected. It replaces the Replay Speed control.
Start, Curr (Current), End Fields	Allows user to manually enter the Start and End date and time. When the Play button is activated, the Curr (Current) field shows the actual date and time of the displayed image or video clip.

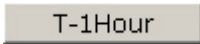
Button or Function	Description
Progress Control	Located below the Replay controls, this slider bar graphically represents the date and time of the image displayed in the Video Window relative to the Start and End times. The slider can be "grabbed" with the mouse and then "dragged" by moving the mouse to any desired position on the bar. The image associated with the new position of the slider will be displayed in the Video Window.

Typical Browse Example

The following steps illustrate how to perform a replay of archived video.

1. Click **Browse** in the Mode Menu.
2. Click **Setup Video Panes** in the Tools Menu to display four video panes in the Video Window. More than four may be selected, but for this example, four will suffice.
3. From the Map window, select a camera and drag it to video pane 1. A progress bar will appear showing the video frames being loaded from the server. While loading, a Cancel Load button will appear. Left-clicking on the Cancel Load button cancels the current load process.
4. Manually enter the Start and End dates and times, or click the T-1 Hour button to select the immediately preceding hour.
5. Click the JPEG button to replay captured JPEG images for the selected time frame. Double clicking on a displayed JPEG images causes the image to be loaded into a new window. Right-clicking on the image in the new window opens a context menu for saving the image, e-mailing the image, etc.
6. Click the MPEG button to replay video clips for the time frame selected. The highest resolution MPEG available will be displayed. If no MPEG video is available, Motion JPEG will be displayed. If no MPEG or Motion JPEG video is available, JPEGs will be displayed.
7. Select Time or Image.
8. Click the **Play** button. Archived video for the selected camera will be displayed in the Video Window. To stop the replay, click the **Pause** button.
9. Click and hold the shuttle on the slider bar at the bottom and move the mouse right to advance to any section of the video instantly, or move to the left to regress.

Tips

You may select any time interval to view by manually setting the **Start** and **End** settings. **Curr** indicates the time at which the video you are currently viewing was recorded. Clicking  will set the start time exactly one hour prior to the current time.

The video will appear in the Video Window of the Primary Screen. If you have secondary screens, they will continue operation as previously set up. You may view synchronized archived video from different cameras in all video panes on the primary screen.

The **JPEG/MPEG** switch controls the playback media.

- **JPEG** mode displays images taken at intervals. It also activates the **Replay Speed** control and the **Prev** and **Next** controls. The **Replay**

- Speed** controls the rate at which the video is played back. The **Prev** and **Next** controls will skip to the previous or next recorded image.
- In **MPEG** mode, **Prev**, **Next**, and **Replay Speed** disappear and **Video Size** appears. Setting the **Video Size** to Full allows the video playback to fill the entire video pane. The video size dialog control only appears on the single-pane ViewWatch station. Selections are 1x, and full as shown in Figure 3-2.

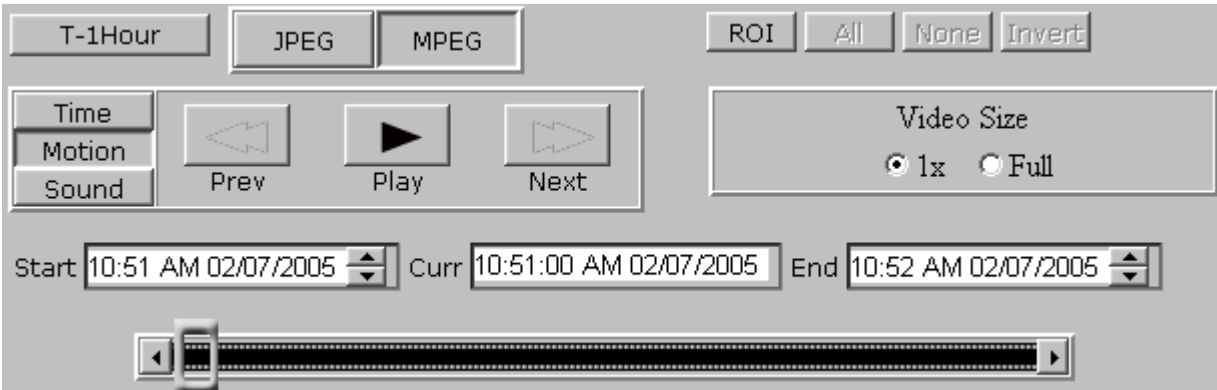



Figure 3-2. Browse Window Showing Video Size Dialog Box

The **Time/Image** switch controls the playback mode. In **Time** mode, the system displays recorded video in real time from the **Start** to the **End** time. In **Image** mode, the system only displays video in which activity occurs between the selected times. If there is no activity recorded for a certain amount of time, the playback will skip to the next time with activity.

The shuttle slider bar allows you to quickly skip to any section of the video.

Audio Control

If there is archived audio for the camera, an audio control icon  will appear at the bottom of the Video Window. Clicking the audio control icon toggles the audio between audible and muted.


Region of Interest Filter

A feature of the Browse function is the **Region of Interest filter**. This allows selection of an area of interest for video replay narrowing the search for event recreation. This function is only available when in **Image** mode. When this filter is enabled, only video containing activity within the selected Region of Interest will be played back. To activate the ROI filter, follow the steps below:

1. Click on the **Image** button.
2. Click on the **ROI** Button.
3. Click on the video spots, where you want ROI. You can have more than one.




Figure 3-3. ROI Selected

4. Click **Play**  and the system will play back only the portions of the recorded video containing movement in this area.

Example: You know an item was stolen from your inventory between 11:30 and 11:45 PM on 3/25/2002. It was stolen from an area monitored by camera #14.

Drag camera #14 into the Video Window.

1. Set the **Start** time to 11:30 PM 03/25/2002 and the **End** time as 11:45 PM 03/25/2002 by using the arrows  to the right of these windows.
2. Click on **ROI**, and click on the item in question.
3. Click **Play**. The system plays back video that contains any activity that occurred in the selected area between 11:30 and 11:45.

Alarms and Alerts

Overview

Alarms

An **Alarm** is generated in response to a **motion** or an **event** detected by the system. This means that when an Alarm has been defined and is turned on, a motion or an event defined by the alarm profile will generate an Alarm that can be used to alert response personnel. An Alert is sent in response to an Alarm. Each defined alarm has an associated status, which may be set to "On" or "Off." If an alarm is detected, but that alarm's status is "Off," no alerts will be sent.

Motion

Motion alarms are defined by selecting a Camera and a Profile. Motion detected on the selected camera during time periods defined by the Profile will generate an Alarm and send an Alert.

Audio

Audio alarms are defined by selecting a Camera and a Profile. Audio detected on the selected camera during time periods defined by the Profile will generate an Alarm and send an Alert.

Panic Button

Panic Button alarms are triggered by pressing a button on a Panic Button fob. Pressing a Panic Button will always generate an Alarm and send an Alert.

Event

Event alarms are triggered by a security device setup in your system through the optional GateWatch™ Third-Party Integration Software. These devices may include third-party access keypads, smoke alarms, and perimeter security implements. Events detected on the selected device

during time periods defined by the Profile will generate an Alarm and send an Alert.

Temperature

Temperature alarms are triggered by e-Watch cameras or encoders. They are triggered when the device exceeds its optimum operating temperature.

Alerts

Alerts are sent in response to alarms. The system can send ViewWatch popup alerts, pager calls, and e-mail messages. Once defined, alerts may be set to "On" or "Off." If an alarm is detected, but the alert's status is Off, that alert will not be sent.

ViewWatch Popup Alerts

When an alarm is detected, and the system is Armed, a popup window will display on the ViewWatch screen with a description of the event and sound an audible alarm. Additionally, a colored border will blink around the video pane of the camera that detected the motion event. The respective camera icon on the Map Window will also blink. The blinking border color can be selected and setup at the server. ViewWatch can display up to ten popup windows. If ten popup windows are displayed and another alert is received, the oldest popup window will close and the new alert will display. When the system is Disarmed, the camera icon and camera video border will blink, but the popup alert will not appear. The popup alert only appears when the system is Armed. If a camera has both a Motion alarm and a Panic Button alarm, the Panic Button alarm takes precedence.

Acknowledging And Clearing Alarms

The popup window contains an Acknowledge button, a Clear button and a Close button, as shown in figure 4-3. Clicking the Acknowledge button stops the audible alarm. Clicking the Clear button clears the alarm and resets the device to un-alarmed status. Clicking the Close button closes the popup window. If the popup window is closed but the device is still alarmed, the popup windows can be restored. Right-click on the map icon or video pane, then select the alarm from the context menu as shown in figures 4-1 and 4-2.

Panic Button Alarms

The e-Watch® Situational Awareness System can be configured to interface with optional "panic button" devices. Panic button devices usually consist of a transmitter that sends a signal to a receiver connected to an e-Watch camera. Signals can be sent over hard-wired systems or via

infrared wireless. When the camera receives the signal, an alarm is displayed at the ViewWatch station as described above. Some transmitter devices are in the form of a “fob.” For example, many automobile keys now contain a wireless fob that allows the owner to lock and unlock the car doors and turn on/off the alarm. Most fobs are programmable, allowing different buttons to be set for different activities. When an alarm is triggered by panic button, the camera’s video pane displays a blinking colored border. The border color corresponds to the number of the Panic button that was pushed. If the camera has both Motion and Panic Button alarms, the Panic Button alarm takes precedence. In addition to the effects described above, clicking the Acknowledge button in a Panic Button Alert popup window will cause the blue LED on the e-Watch camera to flash continuously, thereby informing on-site personnel that the alarm was acknowledged. Clicking the Clear button causes the camera LEDs to return to normal operation.

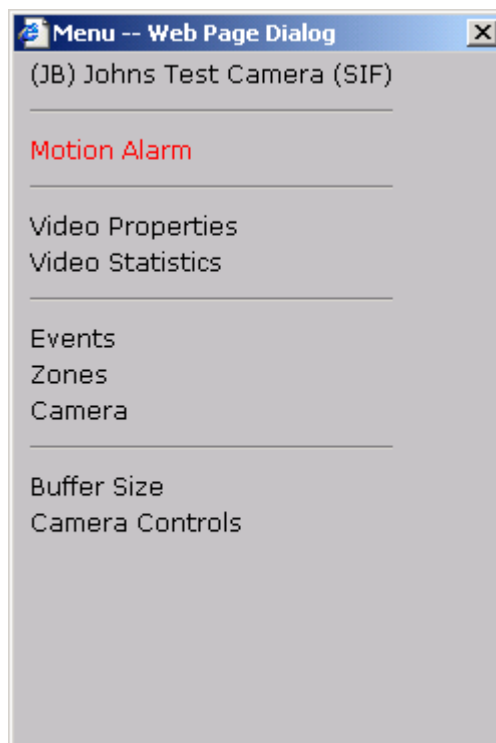


Figure 4-1. Motion Alarm

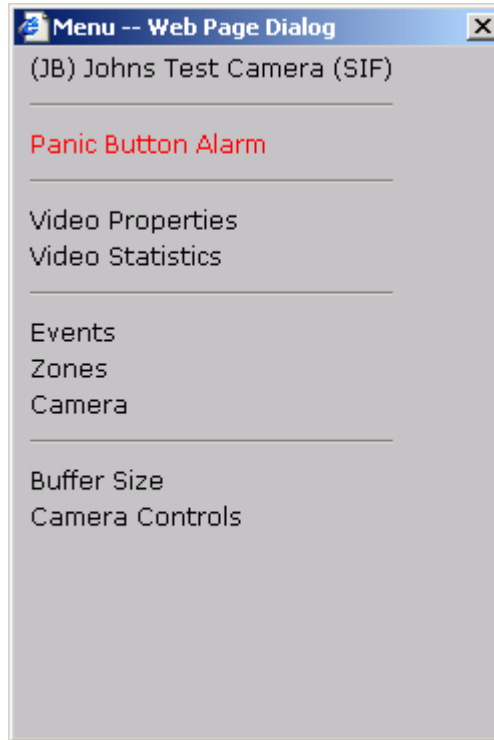


Figure 4-2. Panic Alarm



Figure 4-3. Motion Alarm Dialog Window

Pager Calls

A pager call is defined by entering a dial string and the name of the pager's owner. When an alarm is detected, the system will dial the number string, thus notifying the pager owner of the alarm.

e-Mail Messages

E-mail messages are defined by entering the e-mail address and name of the recipient. When an alarm is detected, the system will send a message to the e-mail address that includes a description of the event.

Arming The System

A display in the Menu Bar indicates when the system is disarmed or armed. See Figure 4-4.

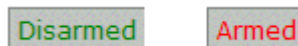


Figure 4-4. Disarmed/Armed Indicator

After alarms and alerts have been defined, click **Arm System** in the Actions Menu. This will activate the defined alarms and alerts. Once a motion alert is sent, further alerts for motion will not be sent until the number of minutes setup in the registry have elapsed. Disarming and re-arming the system resets the alert suppress feature and causes new events on already alarmed cameras to trigger alerts. Clearing the alarm by clicking the Clear button in the popup alert window also resets the alert suppress feature. Alerts for other alarms (Devices and Panic buttons) will always be sent. To disarm the system, click **Disarm System** in the Actions Menu.

When the system is disarmed, defined alarms will cause icons in the Map Window and video pane borders to blink red, but no alerts will be sent. The Zoom to Alarm feature is also disabled.

Zoom To Alarm

Click **Alarm Zooms** in the Actions Window to open the Alarm Zooms window (Figure 4-5). The Alarm Zooms window contains three checkboxes that determine how ViewWatch responds when an alarm occurs.



Figure 4-5. Alarm Zooms Window

When **Zoom To Alarm** is checked, e-Watch automatically displays the area where an alarm is triggered.

When a camera triggers a motion alarm, the video stream from the alarmed camera will be displayed in an expanded video pane.

If your system includes a GateWatch interface to other security devices and an alarmed event occurs at a security device other than a camera, the Video Window is re-configured to four panes (2x2), displaying the video from the four cameras closest to the device triggered.

When **Play Audio On Zoom To Alarm** is also checked, the audio from the camera will also be played through the ViewWatch station's speakers.

When **Play Audio On Alarm** is checked, e-Watch automatically plays the audio from a camera when an alarm is triggered, but ViewWatch does not zoom to the camera. Play Audio On Alarm and Play Audio On Zoom To Alarm cannot both be checked.

Configuring ViewWatch™

Presets

Presets are used to save a ViewWatch setting or to load a previously saved setting. A Preset remembers all ViewWatch settings, including loaded sites, maps, and the number of panes displayed on the monitors.

To save or delete presets, click **Manage Presets** in the Actions Menu. This will open the Presets And Schedules window as shown in Figure 5-1.

To load a previously created preset, select the desired preset and click the **Load** button. If you wish to delete a preset, select that preset and click the **Delete** button.

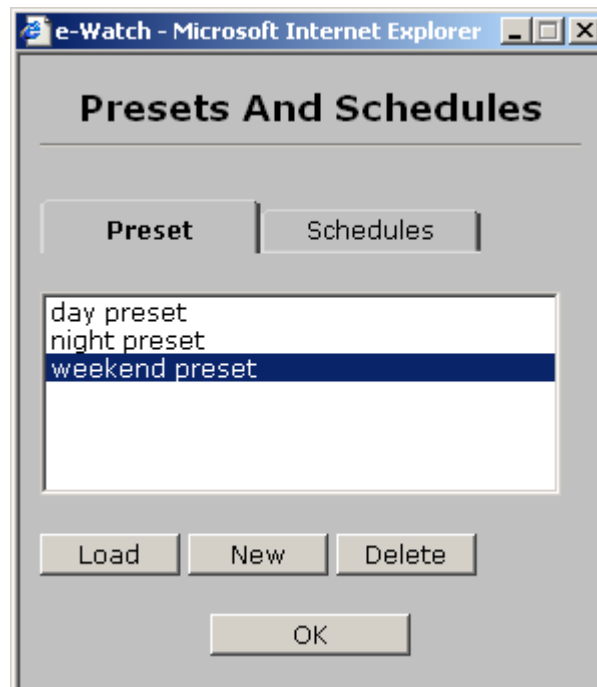


Figure 5-1. Presets And Schedules Window

To save the current ViewWatch settings as a new preset, click the **New** button. Enter a name for the new preset. then click the **OK** button. If you do not wish to save, click the **Cancel** button.

Scheduling Presets

To schedule presets, click the Schedules tab in the Presets And Schedules window as shown in Figure 5-2.

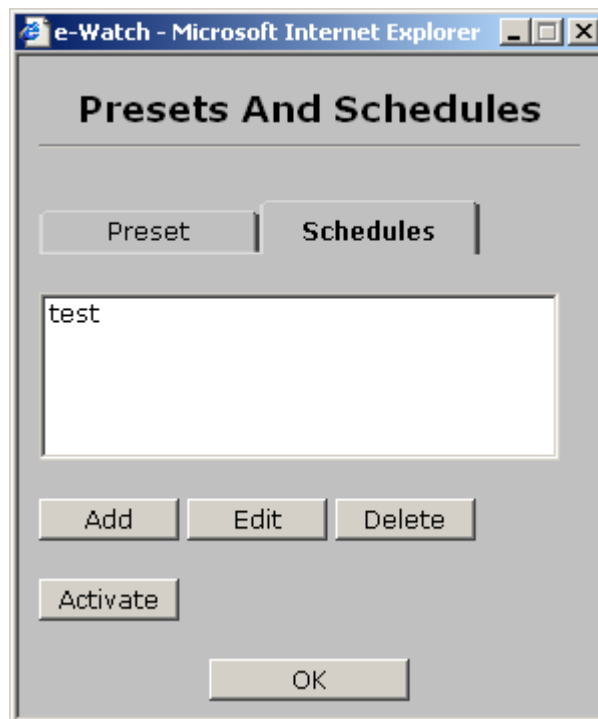


Figure 5-2. Schedules Tab

Presets can be scheduled to be automatically loaded on selected days at selected times. Your lunch preset can be scheduled to be automatically loaded each weekday five minutes prior to the beginning of the lunch period. Follow these steps to create a Scheduled Event that loads a preset.

1. Click **Manage Presets** in the Actions Menu.
2. Click the **Schedules** tab.
3. Click the **Add** button to create a new schedule.
4. Enter a name for the schedule, then click the **Continue** button to display the scheduling calendar as shown in Figure 5-3.

5.

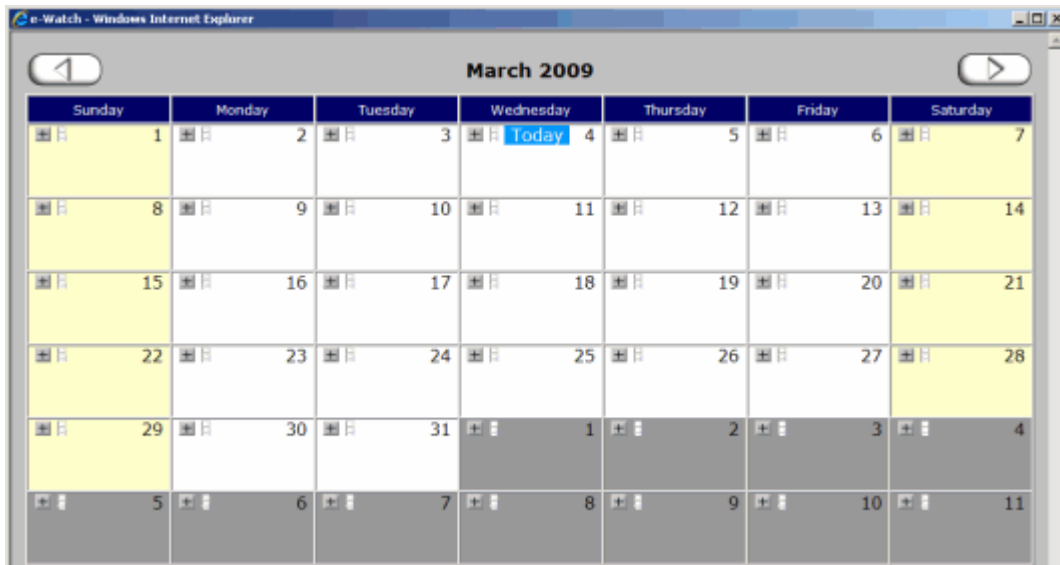


Figure 5-3. Preset Scheduling Calendar

6. On the selected day, click the “plus” icon to display the **Scheduled Event** screen.
7. Enter a name for the event.
8. Click the “calendar” icon to select a different **Date**, if necessary.
9. Click the “clock” icons to select the **Start** and **Stop** times.
10. Click the “arrows” icon to select a **Recurrence**, if desired.
11. Select a priority from the **Priority** pulldown list.
12. Click the Add button to display the **Event Action** screen.
13. Select “Presets” in the **Available** pulldown list.
14. Click the preset in the **Available** window to highlight it.
15. Click the “left” (“<”) icon to move the preset from the **Available** window to the **Scheduled Action** window.
16. Click the **Continue** button.
17. In the Scheduled Event window, click the **Continue** button.
18. Verify that the new schedule appears on the calendar on the correct days.
19. Click the “close” (“x”) icon in the upper right corner of the **Scheduled Action** window to close the window.

Scheduling Multiple Presets

You can follow the procedure described above to create Scheduled Events that load a preset on multiple days, or that load multiple presets at different times on the same day.

If you schedule multiple presets to be loaded on the same day, the order in which the presets are loaded is determined by the Scheduled Events' start times. The preset with the earliest Scheduled Event start time will be loaded, and will remain loaded until the Scheduled Event expires or the ViewWatch interface is changed manually. When that Scheduled Event expires, the preset with the next earliest Scheduled Event start time is loaded, etc.

You can modify the order in which presets are loaded by setting the Scheduled Event's priority.

1. Click **Manage Presets** in the Actions Menu.
2. Click the **Schedules** tab.
3. Click the schedule name to select it.
4. Click the **Edit** button.
5. In the calendar view, click the Scheduled Event name to display the **Scheduled Event** screen.
6. Select a new priority from the Priority pulldown list.
7. Click the **Continue** button.

A preset is always loaded at the Scheduled Event's start time, unless a preset with the same or higher priority Scheduled Event is already loaded.

List Cameras

In addition to dragging cameras from the site map, camera video can be viewed by selecting a camera from a list of all available cameras.

1. Click **List Cameras** in the Windows Menu to display a list of available cameras.
2. Select a local or remote server (if connected).
3. Click on a camera from the list and drag it to a pane in the Video Window, or double-click a camera. See Figure 5-4.

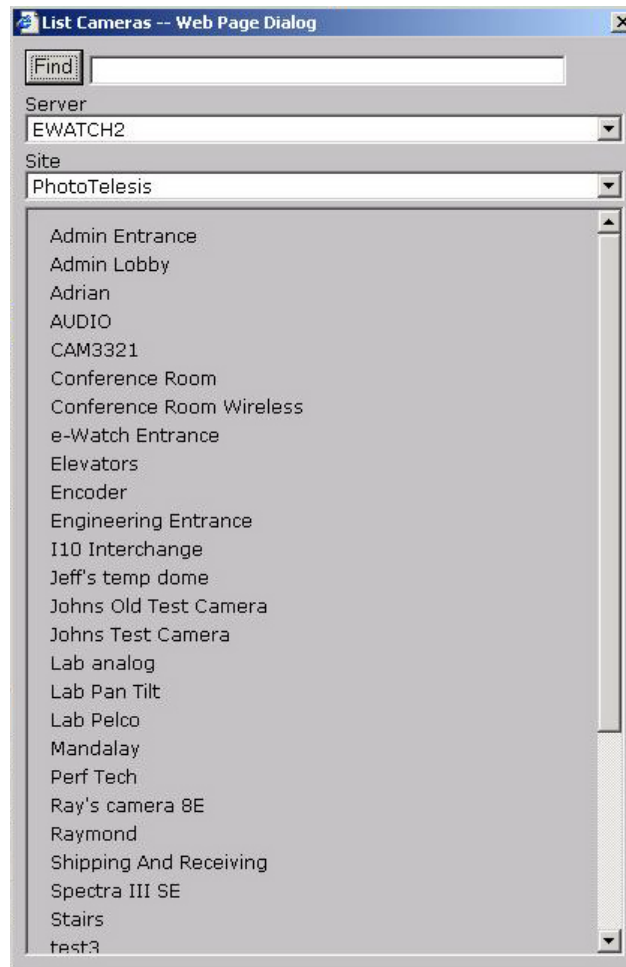


Figure 5-4. List Cameras

Note: if remote servers are not connected then the server list will not be visible.

List Zones

A Zone is a predefined collection of cameras. When a zone is assigned to a video pane, the video streams from the cameras in the zone are displayed one at a time at a predetermined frequency. Any user with Administrator authority may define and create a zone. There are three ways to access the Define Zones window:

1. Click **Define Zones** in the Define Menu.
2. Right-click on a camera icon on the Map Window, and select Zones from the menu.
3. Right-click on a live video pane and select Zones from the menu.

Once a zone has been created, it can be accessed by clicking **List Zones** in the Windows Menu. This window displays a list of available zones. The user may then "drag and drop" any zone from the list into any pane in the Video Window.

Viewing a Zone

To view a zone, follow the steps below:

1. Click **List Zones** in the Windows Menu to display the List Zones window as shown in Figure 5-5.

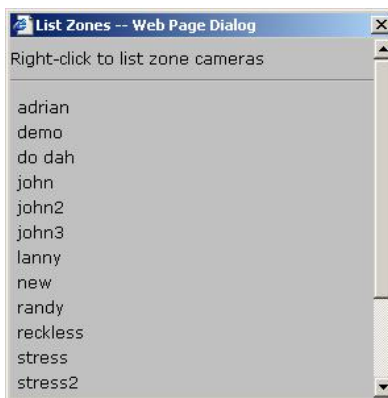


Figure 5-5. List Zones Window

2. To view cameras comprising a zone, right-click on the zone name. A window will display showing the cameras that are in that zone.
3. To view a zone, select and "drag" it to any video pane. The cameras in that zone will start streaming their video and changing from camera to camera according to the cycle rate set for the zone.

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Acronyms and Abbreviations

APER	Aperture
AUX	Auxiliary
CAM	Camera
CGMP	Cisco Group Management Protocol
CONTR	Contrast
DSL	Digital Subscriber Line
ID	Identification
IGMP	Internet Group Management Protocol
IP	Internet Protocol
JPEG	Joint Photographic Expert Group
LAN	Local Area Network
MPEG	Motion Picture Expert Group
PC	Personal Computer
P/T/Z	Pan/Tilt/Zoom
QSIF	Quarter Standard Interchange Format
ROI	Region of Interest
SAT	Saturation
SHUT	Shutter
SIF	Standard Interchange Format
VGA	Video Graphics Array/Adapter
VLAN	Virtual Local Area Network
VPN	Virtual Private Network
WAN	Wide Area Network

Glossary

Activity Gated Storage™ Module

A method of reducing overall archive storage requirements by only storing video when the camera or encoder detects activity with its field of view.

Alarm

An event that the system will detect, e.g., motion. Alarms can be defined for different cameras at different times, enabling alerts to be sent when a motion alarm is detected. Each defined alarm can be set to On or Off. If an alarm is detected but that alarm's status is Off, no alert will be sent.

Alert

An alert is a response to an alarm. Alerts may be in the form of a ViewWatch popup, pager call, or e-mail that contains a description of the event.

Authorization Level

Authorization levels at which the system grants privileges and access to users by the use of a User ID and Password. The four levels are: Administrator, Investigator, User, and Restricted.

Browse Mode

When in Browse Mode, the system displays a variety of controls for reviewing archived still images or MPEG video clips. Archived video for a specific date and time can be recalled and played back on the Video Window.

Camera Controls

A series of controls that enable the user to control and adjust camera parameters such as zoom, pan, tilt, focus, hue, saturation, brightness, contrast, etc.

Menu Bar

One of three main areas of the ViewWatch screen, the other two being the Video Window and the Map Window. The Menu Bar, located across the top of the screen, contains all functions for configuring and using the system.

e-Mail Message

An alert generated in response to an alarm. E-mail messages are defined by entering the name of the recipient and the recipient's e-mail address. When an alarm is detected, the system will send an e-mail message that includes a description of the event alarm.

Event Report

A report generated to reflect activity from cameras or other security devices. A camera report displays the camera name and average number of motion events, represented by a line of colored dots. Time periods with no events are represented by a black dot, while blue and red dots represent time periods of few and many events, respectively. By clicking on a dot, the user can recall and playback the motion events during the specified time period.

Events

Event settings determine what kind of events the system will detect and what actions it will take in response to a detected event. Detected events are called alarms. System responses are called alerts. When motion, or another event is detected, the system will execute an alarm and send an alert to interested personnel. The system must be armed for alerts to be sent.

Exported Images

High resolution JPEG images and full motion video files that have been copied from the SiteWatch database and prepared for transfer to removable media. Exported images can be viewed using the Export Viewer.

Export Viewer

An e-Watch program that is included with exported images and provides viewing and event reconstruction features.

GateWatch™ Third-Party Integration Software

GateWatch is an additional software package that allows the e-Watch system to interface with third-party access control and alarm systems, such as access keypads, smoke alarms, or perimeter security implements. It allows third-party devices to be added to maps and monitored in ways similar to e-Watch cameras.

List Cameras

A screen accessed from the Windows Menu that displays a list of cameras for a specific site.

List Zones

A screen accessed from the Windows Menu that displays a list of zones for a specific site.

Map Window

One of three main areas of the ViewWatch screen, the other two being the Video Window and the Menu Bar. The Map window, located in the upper left of the screen, is used to set up and display facility maps. The maps contain icons representing cameras or other security devices. The user is able to "drag and drop" cameras from the map to video panes to monitor the cameras' video.

Pager Call

An alert generated in response to an alarm. Pager calls are defined by entering the name of the pager's owner and a dial string. When an alarm is detected, the system will dial the pager number.

Popup Alert

An alert that pops up on the ViewWatch screen in response to a defined Alarm, containing a description of the event and sounding of an audible alarm. The audible alarm may be manually disabled.

Presets

A preset is a collection of all of the system's application settings, which include: sites, maps, video screen formats, video streams displayed, and primary or secondary screen selected. The Presets window enables the user to save the current application settings as a named preset. When a preset is loaded, existing application settings are discarded and replaced by the settings in the preset.

Primary Screen

A PC running Windows 98/2000 and Windows Internet Explorer, connected to a network, and configured with SiteWatch system software, used in an e-Watch Situational Awareness System. The Primary Screen controls all aspects of the e-Watch system.

Profile

A profile is a setting of days and times during which alerts are to be sent in response to alarms. This feature allows alerts to be sent or suppressed according to a predefined schedule. The system can be armed or disarmed through the Profiles Screen. If the system is disarmed, alarms will be detected but no alerts will be sent.

Region of Interest

A rectangular area drawn on the Video Window which defines a Region of Interest (ROI). When ROI is enabled, only video containing motion in the ROI will be played back.

Secondary Screens

Additional screens to supplement the Primary Screen, used only for viewing video from selected cameras. Secondary screens do not have a mouse or user interface, and are controlled from the Primary Screen.

SiteWatch™ Situational Awareness Software

The software used to manage and use your e-Watch system. This package includes the SiteWatch server, ViewWatch module, MotionWatch module, EventWatch module and DecisionWatch module.

Video Window

One of three main areas of the ViewWatch screen, the other two being the Map Window and the Menu Bar. The Video Window, located in the upper right of the screen, is used to display streaming video from the system's cameras. The Video Window can be configured as multiple video panes.

ViewWatch™ module

The software used to view video.

Zones

A predefined collection of cameras. The video streams from the cameras are displayed one at a time on a rotating basis at a predetermined rate.

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