

3xLogic Inc

Intelligent Video Surveillance

Vigil Server Software v5.00

User's Guide

October 2007

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1 Introduction

This guide describes the installation and operation of 3xLogic's Vigil Server Software (Vigil Server). This version of the User's Guide is current to Version 5.00 of Vigil Server.

Vigil Server is a powerful, yet easy-to-use, software package for viewing and saving video footage.

3xLogic (www.3xlogic.com) produces enterprise class DVRs and state-of-the-art surveillance software.

2 System Requirements

The following table outlines the minimum and recommended platforms for running Vigil Server.

| PC Feature | Minimum | Recommended |
|--|---|---|
| Operating System | Windows 2000 | Windows 2000 SP4 Windows XP Professional SP2 |
| CPU | 2.0GHz | 3.0GHz |
| RAM | 512MB A minimum of 768MB of RAM is recommended for 32 camera systems, or systems with audio recording. A minimum of 1GB of RAM is recommended for 8 or more hi-definition IP camera systems A minimum of 1.5GB of RAM is recommended for 32 channel Proseries capture cards. | 1GB |
| Video Card Memory | 64MB A 128MB video card is required for more than 16 video channels or more than 8 hi-definition IP cameras | 128MB |
| Hard Drive Space for Installation | 210MB | 1GB |
| Hard Drive Space for Saved Media | 10GB | 250GB |
| HDD Transfer Rate | DMA 66MHz | DMA 133MHz, SATA I/II |

3 Software Features

This section describes some of the features of Vigil Server.

| Feature | Details |
|--|--|
| Individual Camera Settings | Configure each camera independently: brightness, contrast, sharpness, hue, resolutions, and more. |
| Configurable CODEC Settings | Change CODEC settings for each camera such as compression, quality, noise reduction, and more. |
| IP Camera Support | Vigil Server supports up to 32 IP hi-resolution cameras without the need for an installed capture card. |
| Live Viewer | View live video as it is being recorded for up to 16 video feeds at once or view a single full screen and full resolution video. |
| Built-in Playback | Scan through previously recorded footage using the built-in player. |
| Full Video Search Capabilities | Retrieve a list of stored footage for specified cameras from a start date/time to an end date/time and a variety of other available search criteria. |
| Exporting/Saving Video and Images | Powerful export capabilities enable you to save video footage in AVI or MJPG formats. Save individual frames in JPEG or BMP formats. |

4 Installation

4.1 Windows Installation Notices



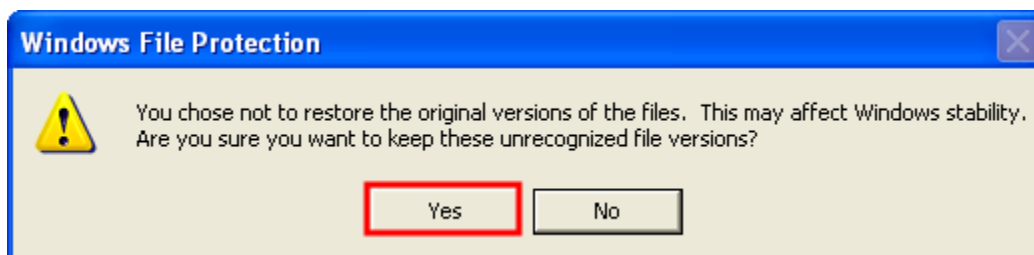
Warning: During the installation you may get a Windows File Protection and/or a Windows Logo testing notice. Please follow the following instructions when this happens. Failure to do so can result in a non-functioning software installation.



Click "Continue Anyway"



Click "Cancel"



Click "Yes"



Click "Yes"

4.2 Installation

If you downloaded your install kit for Vigil Server, navigate to where you saved the file using Windows Explorer and double-click the EXE file that you downloaded to begin installing.



Note: To update an existing version of Vigil Client, use the Vigil Client update (VGL) file instead of the Vigil Client install package (EXE).

If you are installing from CD, load it in your CD-ROM drive and run the EXE on it.

| Install Step | Details |
|----------------------------------|---|
| Setup Language | Select the language you want the installation program to use. Available options are English (default) or Spanish. |
| Welcome | Loads the InstallShield install wizard. |
| License Agreement | Requires you to either accept or reject the terms of the end-user license agreement. To install or use the software, you must accept the agreement. |
| Customer Information | The user name and company information that will be used when registering the software. |
| Install Location | Select where you wish to install the software. The default location is C:/Program Files/Vigil |
| Select Your Capture Board | Select the capture board that is currently installed. If there are no capture boards installed, select "NVR (No Capture Card)". |
| Select Program Options | Select the options for the install process. You cannot deselect required options. |

| | |
|---------------------------|--|
| Ready to Install | Summarizes installation settings and gives you one more chance to abort the installation. |
| Installation | The actual install process. Copies necessary files, creates shortcuts, installs registry information, media drivers and CODECS, database and scripts, and any other optional software. Adobe® Acrobat (used for viewing the PDF User's Guide) and Remote Administrator (used to remotely administrate your computer) have their own install processes. |
| Install Completion | Once the install is complete, you will be prompted to restart your computer. Upon the next boot up, the database scripts will be executed, as well as the required services. Vigil Server will auto start up by default. |



Note: Remote Administrator is only a 30-day trial version of the software. Visit <http://www.famatech.com/> to obtain software information and purchase licenses.

4.3 Updating

To upgrade Vigil Server from previous version, go to:

"Start Menu | Vigil| Update"

This will open the "Local Update Utility" window. Browse to the upgrade file that you downloaded or saved (Upgrade files use a VGL file extension) and click "Open". Click "Update" to begin the update process. The update process requires you to restart your computer. Please allow it time to perform the update completely.

4.4 Uninstalling

To uninstall Vigil Server, go to "Add/Remove Programs" located in the Windows Control Panel

Click "Remove" by the entry "Vigil Server". Follow the prompts to perform the removal process.

4.5 Initial Setup

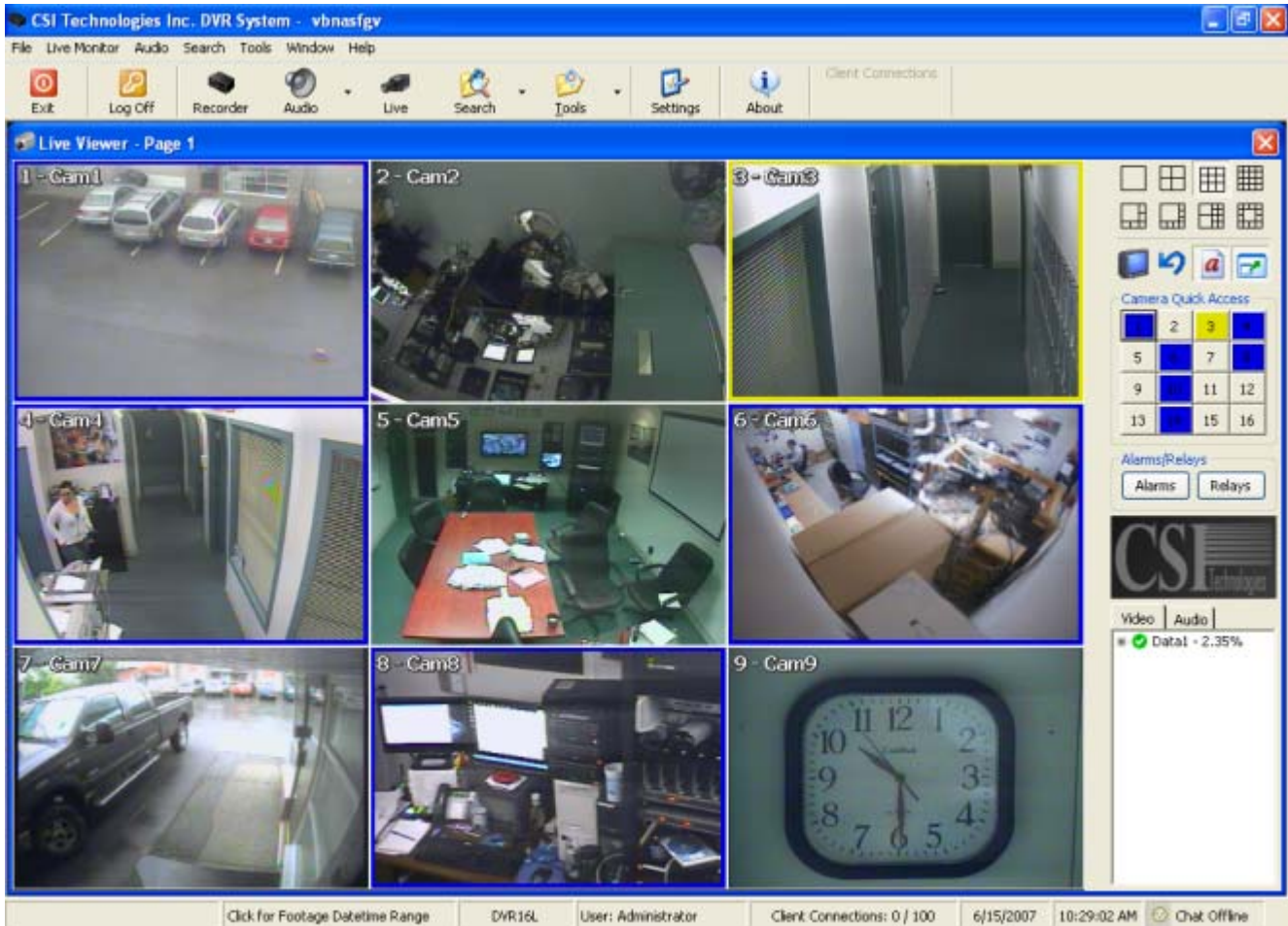
When you first run Vigil Server, review the following list to ensure that your system is properly configured:

1. Set up Camera Recording - enable recording and review recording setup. For each camera input:
 - a. In the Vigil Server "Settings" screen, select the "Camera Setup" tab. Select the camera from the dropdown list to view its recording settings.
 - b. By default, the recording speed is set to "Recording Disabled". Select "Enable Recording" from the dropdown list.
 - c. Set up camera controls – If Vigil Server is to be used to control cameras, select the "Camera Control" sub-tab and then select the camera configuration. Select the "COM Ports" tab to specify COM port settings for the camera controls.
2. Set up Media Drives
 - a. In the Vigil Server Settings screen, in the "Media Drives" tab, set up "Video Storage Drives", "Alternate Video Storage Drives" and "Video Still/Motion Export Destinations".
3. Set up Data Terminals
 - a. When using Vigil Server to record POS or other data, select the "Data" tab to configure the incoming data terminals.

- b. Select the data terminal type from the dropdown list and select its configuration information.
- c. Select the "COM Ports" tab to specify COM port settings for the data terminals.

1 Operation




This section details the general usage of Vigil Server software.










This is the normal view that will appear after the program has finished loading. Notice that the program will automatically load at Windows start-up, automatically log on, and open the "Live Viewer" window. These options can be changed if desired.

1.1 Main Toolbar

This table is a quick listing of the main toolbar buttons and their usage. We will get into detail of each corresponding window in later sections.

| | |
|---|---------------------------------------|
|  Exit | Opens the "Exit Confirmation" window. |
|  Log Off | Logs off the current user. |
|  Recorder | Opens the "Recorder Controls" window. |

| | |
|--|---|
|  Audio | <p>Opens the "Live Audio Settings" window.</p> <p>Clicking the ▾ button opens the context menu which can open the "Audio Recorder Controls" window.</p> |
|  Live | <p>Opens the "Live Viewer" window.</p> <p>If "Hardware Rendering" has been enabled and is supported by your capture card, you can click the ▾ button. This opens a context menu allowing selection of either "Software Rendered Cams" or "Real Time Cams".</p> |
|  Search | <p>Opens the "Search" window.</p> <p>Clicking the ▾ button opens the context menu which allows you to open the "Custom Search" window.</p> |
|  Tools | <p>Resets window positions.</p> <p>Clicking the ▾ button opens the context menu which allows you to open the several other windows. These include "Live Data", "Alarms", "Export File Browser", and more. The button also changes its icon and function to the last used tool item. For example, if I clicked ▾ and selected "Live Data", not only would it open the "Live Data" window, but also it would replace the reset icon with the icon for the "Live Data" window.</p> |
|  Settings | <p>Opens the "Settings" window. This is the main configuration page for Vigil Server.</p> |
|  About | <p>Opens the "About 3xLogic DVR System" window. Contains information such as trial period remaining, registration information, and software version.</p> |
|  Client Connections | <p>A basic graph that lets you know how many clients have connected to Vigil Server. You can hover the mouse pointer over this section to get the exact number or double-click it and open the "Client Connections" window.</p> |

1.1.1 Menu Toolbar

The menu toolbar has nearly the same functions as the graphical main toolbar. The "Settings" menu item has a few more options such as "Network Log Analyzer", "Register DVR" and a few more.

1.2 Live Viewer Window



By default, the "Live Viewer" window will open once the program has loaded. If "Auto Logon" is disabled, you must log in before the "Live Viewer" window is opened.

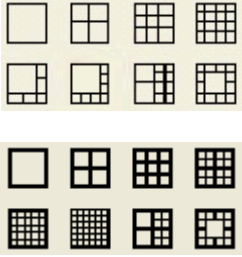


Note: The Live Viewer window may be slightly different depending on the capture card that is installed, the rendering mode enabled (hardware vs. software), and the number of supported video channels. See section 5.2.6 for details.

The "Live Viewer" window can be in either software rendered mode or hardware rendered mode. If your capture card supports hardware rendered mode, it can be enabled by going to "Settings" window | "DVR Settings" tab | "Live" tab and selecting the Live Viewer mode with the available radio button.

| | |
|--------------------------|--|
| Software Rendered | <ul style="list-style-type: none"> • Cannot display camera footage at full frame rates • More CPU usage • Able to display up to 32 camera feeds, 16 simultaneously • Able to display network camera feeds • Information overlays such as recording status and people counting • Zooming displayed camera feeds • TV output and analog multiplexing |
| Hardware Rendered | <ul style="list-style-type: none"> • Able to display up to 16 camera feeds at full frame rates • Less CPU usage • Cannot display network camera feeds (but footage can still be recorded and is accessible by the search function) • Cannot display information overlays • Cannot zoom displayed camera feeds • Does not support TV output and analog multiplexing |

1.2.1 Changing Live Viewer Camera Layout



Use the buttons in the top section of the “Live Viewer” side toolbar to select the viewing style. If you have more cameras enabled than can be displayed by the current view settings, you can right click on the layout icon and select a page of cameras to display.

Available viewing options (left to right, top to bottom):

Single view mode (1 camera), 2 x 2 mode (4 cameras), 3 x 3 (9 cameras), 4 x 4 (16 cameras)

Large w/5 cameras, large w/7 cameras, 2 medium w/8 cameras, medium w/12 cameras

With 32 channel systems, available viewing options are:

Single view mode (1 camera), 2 x 2 mode (4 cameras), 3 x 3 (9 cameras), 4 x 4 (16 cameras)

5 x 5 (25 cameras), 6 x 6 (36 cameras), 2 medium w/8 cameras, medium w/12 cameras

To arrange the cameras within the current view style, right click on a camera position in the “Live Viewer” window and select a desired camera to be displayed from the context menu. Since you cannot display a camera in more than one location, if you selected a camera that is already displayed, it will simply stop the camera feed.

To remove a camera from the “Live Viewer” window, right click that particular camera feed and select “Stop”.



Note: Stopping and changing camera feeds in the “Live Viewer” window does not affect the recording settings.

A number of options are available from a context menu when right clicking on a camera feed:

| | |
|-------------------------|---|
| Copy | Copy a frame from the video feed on the selected camera display to the Windows clipboard. |
| Full Screen | Enlarge the live images to fill the entire PC screen. |
| Quick Search | Quickly review recently recorded footage for the selected camera. Select from One, Five or Ten Minutes. Clicking on a Quick Search option automatically searches footage from the requested camera during the requested time and opens the Playback window. |
| Zoom | Open the zoom control. Left click on an image to zoom in and right click to zoom out. |
| Stop | Stops the video feed from the selected camera display, but does not stop recording. |
| Reset to Default | Resets all camera displays/feeds to their default camera layouts. |
| Cam # | Changes the current video feed on the selected camera. If that video feed was on another camera display, it will stop that video feed. |

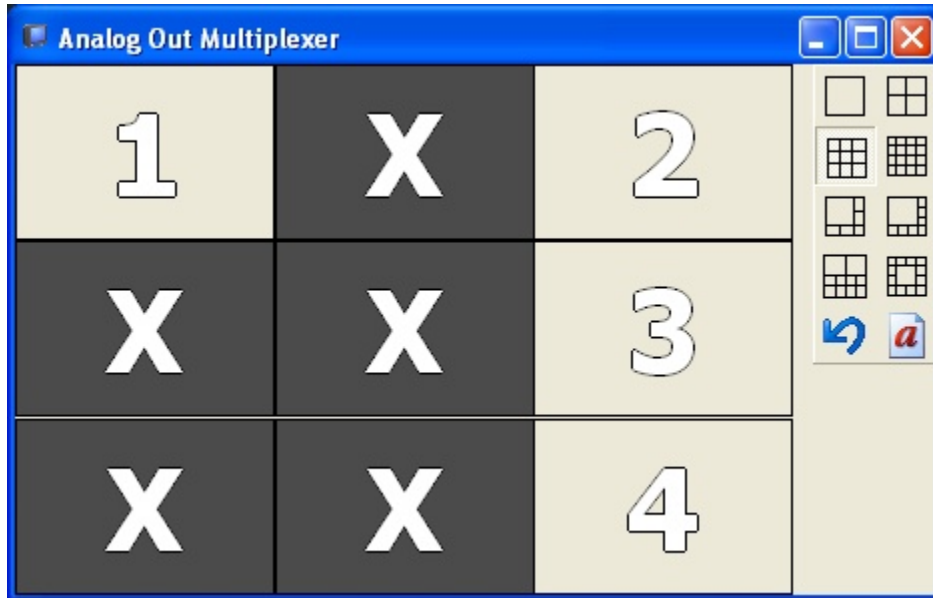
1.2.2 TV Output Switch

Vigil Server can display two video feeds to analog monitors. With the XECAP series video capture cards, one of these feeds can be configured as a multiplexed video output similar to the "Live Viewer".



Click to change the camera displayed on the monitor by selecting the camera number.

On capture boards supporting Mux/Analog Out, you can also select the "Setup Analog Out Multiplexer" menu item, which opens the "Analog Out Multiplexer" window.



To arrange cameras within the selected display grid, right click on a particular position and select a camera. Cameras positions are configured separately for each grid style. Cameras may be repeated if desired.



Undoes any layout changes that have been made since the "Analog Output Multiplexer" window was last opened.



Toggle captions on the Analog Out Multiplexer on and off.

1.2.3 Restore Original Display Layout



Undoes any layout changes that have been made since the "Live Viewer" window was last opened.

To reload default Window sizes and locations for all screens, select "Tools" | "Reset Screen Layouts to Default" from the menu, or select "Reset" from the Tools button dropdown.

1.2.4 Enabling/Disabling Captions



Toggles captions on the "Live Viewer" video feeds.



Note: Captions are not included in the recorded footage.

1.2.5 Expanding Screen Size in Single View Mode



Toggles the display size of the camera when in (single view) display mode.

1.2.6 Hardware Rendered Mode Buttons

When in hardware rendered mode, some of the buttons are changed slightly as they do not function in this mode. The layout buttons are slightly different, but are used the same. Also, the right-click context mode is different as well, with the only options being "Copy", "Full Screen", and "Quick Search". Buttons in sections from 5.2.2 to 5.2.5 are not shown; instead, these buttons are used:

PAGE ▾

Allows you to change between pages of cameras when using layouts that cannot display all the cameras at once. For example on a 16 camera system, using the 2x2 layout, page 1 would have cameras 1 – 4, page 2 would have 5-8 and so on. Pressing ▾ allows you to select a page directly.



Toggles captions on the "Live Viewer" video feeds.



Turns off/on all video feeds. Does not affect recording.

Certain capture cards like the XED series capture cards can change between hardware and software rendered modes. Instead of using the Settings window, you can press the arrow beside the Live button on the main toolbar to select between each of the modes.

1.2.7 Camera Quick Access



To quickly select a camera for single view display mode, click its corresponding number. It also provides a simple way to check which cameras are recording.

Green: "Constant" recording mode and is **recording**

Blue: "Motion" recording mode and is **recording** (motion detected)

Red: "Motion Alarm" recording mode and is **recording** (motion detected). If POS data alarms are configured, it can also mean a POS data alarm.

Yellow: Set to a motion recording mode and is **recording** (motion currently not detected and will stop after the "Post Motion Record" time has elapsed)

Uncoloured: Camera is currently **not recording**, but is enabled

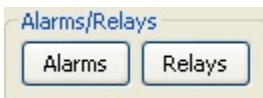
Disabled: Camera is **not recording** and is disabled

1.2.8 Alarms and Relays

Depending on the hardware installed with your DVR unit, you may have access to digital inputs and outputs that can be configured as input alarms or output relays. The number of available alarms and relays is dependent on your hardware, but is nearly limitless with USB digital I/O boards. Please see the contact information at the end of this guide if you are interested in obtaining these devices.

Input alarms can trigger recording of video and/or audio based on an externally tripped circuit. Output relays can be triggered by motion alarms, video loss, POS data, or failure of the DVR.

More information on configuring these devices can be found in the "Settings" section.



Opens the corresponding window, "Live Alarms" or "Relays".

To assist in wiring alarms and relays, the hardware locations of the digital inputs and outputs are indicated by the frame titles on the alarms and relays windows.



The "Live Alarms" window indicates configured input alarms.

Green: Alarm input is enabled

Red: Alarm input is triggered



The "Relays" window indicates configured output relays and allows manual control of relays.

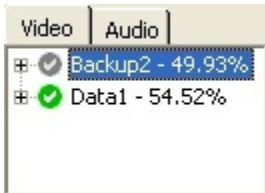
Green: Output relay is enabled and configured

Red: Output relay is triggered

You can manually turn on/off some relays by clicking on their respective button. The 4th relay has been set to stay closed while the application is open and cannot be turned off manually.

1.2.9 Media Drive Information

The "Media Drive Information" section is a live view of the status of the video and audio data storage drives that are configured on the DVR.



The status of the data drive is indicated by its icon:

- : Configured drive
- : Currently recording on this drive
- : Drive error; contact your system administrator
- : Currently recording to an alternate recording device; contact your system administrator

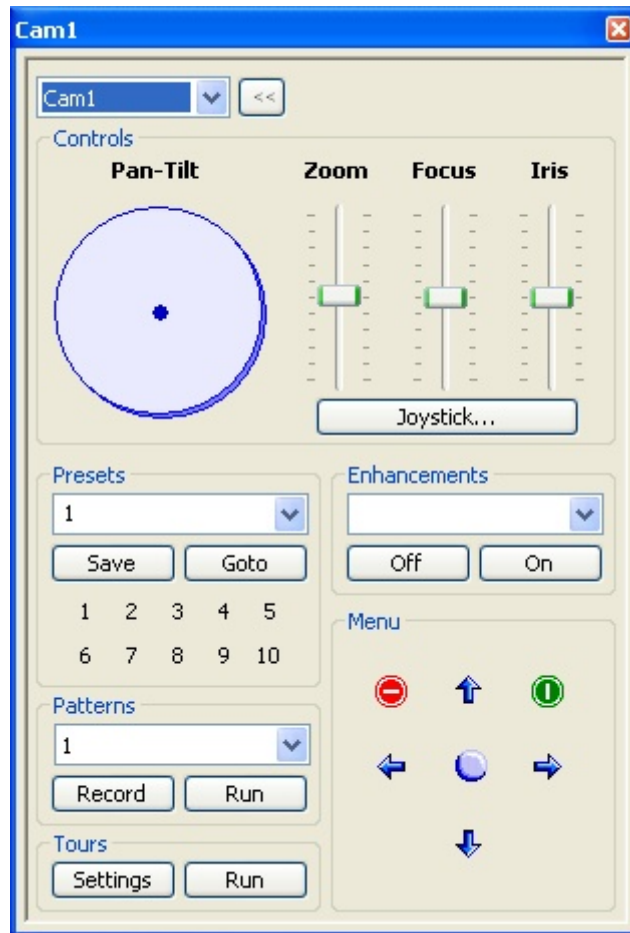
The percentage free space is indicated following the name of a drive.


Further drive information is accessed by clicking the + next to the drive. Here, the path of the drive is shown and the available/total space of the drive.

To view drive information for your audio devices, click the "Audio" tab.

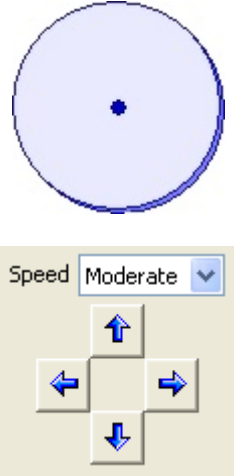
1.2.10 PTZ Camera Controls

Pan/Tilt/Zoom (PTZ) cameras can be set up in Vigil Server and can be controlled from the "Live Viewer" window. To open the camera controls window, you can double click the particular PTZ camera or change the display layout to single view mode with the PTZ camera. Details on configuring your PTZ camera can be found in the "Settings" section.




| | |
|---|--|
| Dropdown selection box | Changes the selected PTZ camera. |
|  | Shows/hides the extra PTZ camera controls. |

Controls


| | |
|---|---|
|  | <p>Use the mouse to click and drag the blue dot in the middle of the Pan-Tilt control in the desired direction. The speed at which the camera moves increases as the dot is dragged closer to the edge of the circle.</p> <p>The alternate directional controls are displayed when the selected PTZ camera doesn't support a full range of motion (i.e., it cannot pan and tilt at the same time)</p> |
|---|---|

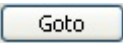

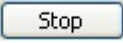
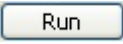
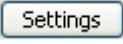
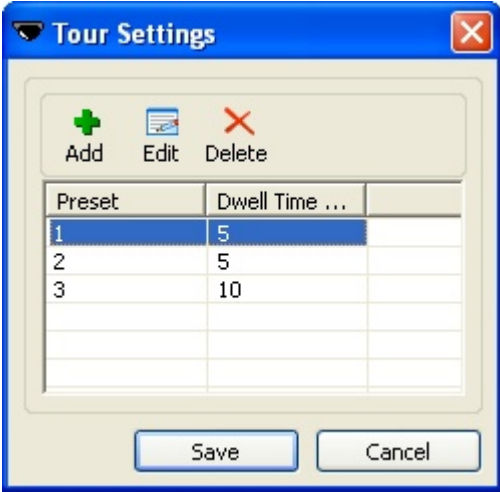



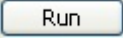
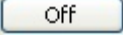
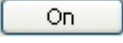


| | |
|------------------------|--|
| Zoom/Focus/Iris | Click and drag the appropriate slide bar up to increase or down to decrease. The speed at which the camera is adjusted increases as the bar is moved farther from the center of the control. |
|------------------------|--|



| | |
|--|---|
|  | If a USB PTZ joystick is attached, this button will be available. Once clicked, it opens the "Joystick Customization" window. |
|--|---|

|  <table border="1" data-bbox="131 1041 824 1640"> <thead> <tr> <th></th> <th>Action</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>1: Button Down</td> <td>Change Camera</td> <td>Next</td> </tr> <tr> <td>1: Button Up</td> <td>Change Camera</td> <td>Prev</td> </tr> <tr> <td>2: Button Down</td> <td>Menu Show</td> <td></td> </tr> <tr> <td>2: Button Up</td> <td>Menu Hide</td> <td></td> </tr> <tr> <td>3: Button Down</td> <td>(No Action)</td> <td></td> </tr> <tr> <td>3: Button Up</td> <td>(No Action)</td> <td></td> </tr> <tr> <td>4: Button Down</td> <td>(No Action)</td> <td></td> </tr> <tr> <td>4: Button Up</td> <td>(No Action)</td> <td></td> </tr> </tbody> </table> | | Action | Value | 1: Button Down | Change Camera | Next | 1: Button Up | Change Camera | Prev | 2: Button Down | Menu Show | | 2: Button Up | Menu Hide | | 3: Button Down | (No Action) | | 3: Button Up | (No Action) | | 4: Button Down | (No Action) | | 4: Button Up | (No Action) | | <p>This window allows for customization of each of the joystick buttons. Use the dropdown selection boxes to assign actions to each button.</p> <p>To determine which button is which, go into the Windows Control Panel and select "Game Controllers". The device should be listed. Select it and click "Properties". Press any button on the joystick and the button number should be highlighted on in the resulting window.</p> |
|---|---------------|--------|-------|----------------|---------------|------|--------------|---------------|------|----------------|-----------|--|--------------|-----------|--|----------------|-------------|--|--------------|-------------|--|----------------|-------------|--|--------------|-------------|--|---|
| | Action | Value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1: Button Down | Change Camera | Next | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1: Button Up | Change Camera | Prev | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2: Button Down | Menu Show | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2: Button Up | Menu Hide | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3: Button Down | (No Action) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3: Button Up | (No Action) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4: Button Down | (No Action) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4: Button Up | (No Action) | | | | | | | | | | | | | | | | | | | | | | | | | | | |

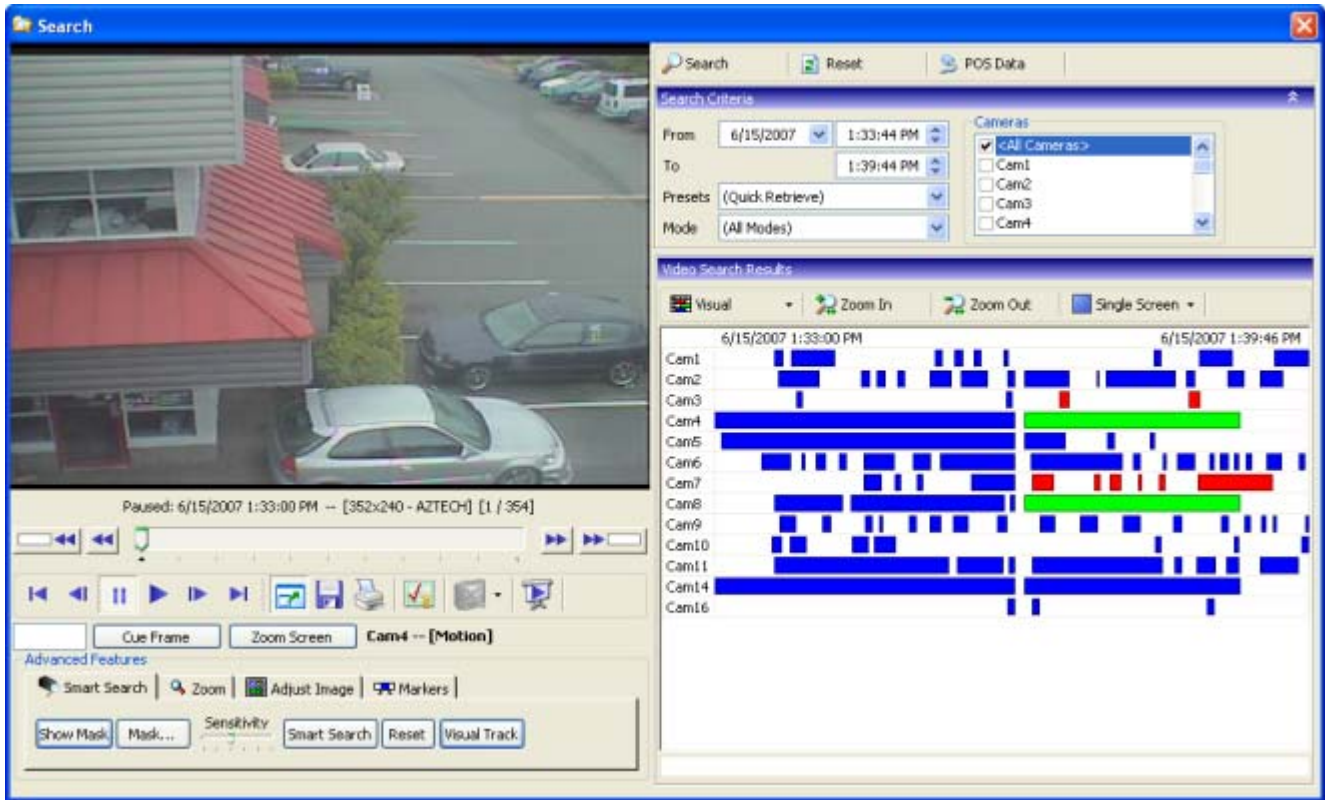
Presets
Presets are stored fixed locations that the camera can view.

| | |
|---|--|
|  | To save a preset, move the camera to the desired preset location, select the preset number from the dropdown list and click "Save". This will overwrite any presets saved to that number before. |
|---|--|

| | |
|---|--|
|  | To move the camera to an existing preset, select a preset from the dropdown list and click "Goto", or click the button with the preset number on it. |
| Patterns Controls the saved pattern of movement of the selected camera. Camera patterns are stored within the camera. | |
|  | Select a pattern from the dropdown selection box (this will overwrite the existing saved pattern) and click "Record". Use the other control buttons to move the camera in the desired pattern. Once finished, click "Stop" |
|  | Stops recording the current pattern. |
|  | Select a pattern from the dropdown selection box and click "Run" to begin the saved pattern. |
| Tours A tour is a sequence of camera presets run through Vigil Server. Tour settings are stored within Vigil Server. | |
|  | Opens the "Tour Settings" window. |
|  | Each preset is displayed for the number of seconds specified in the "Dwell Time" section. |
|  | Adds a preset to the tour. |
|  | Edits a preset in the tour. |
|  | Deletes a preset in the tour. |
|  | Runs the selected tour. |
| Enhancements Enhancements are settings on the camera that can be toggled on/off. These include: color, sensitivity, backlight, white balance, and auto focus. | |
|  | Turns off the selected enhancement. |
|  | Turns on the selected enhancement. |
| Menu Some camera's have built-in menus that can be accessed and configured via this tool. | |
|  | Displays the camera's menu (this may take a moment to appear) |
|  | Exits the camera's menu. You can also navigate to the "Exit" menu option displayed and click the "Select" button. |

| | |
|---|---------------------------------|
|  | Camera menu navigation buttons. |
|  | Camera menu select button |




1.3 Searching and Playing Back Recorded Video



Vigil Server offers a robust set of tools for searching and rapidly identifying video footage and Point of Sale (POS) data of interest. To open the search screen, either click "Search" on the main window toolbar or select "Search | Search Footage and Data" from the menu.

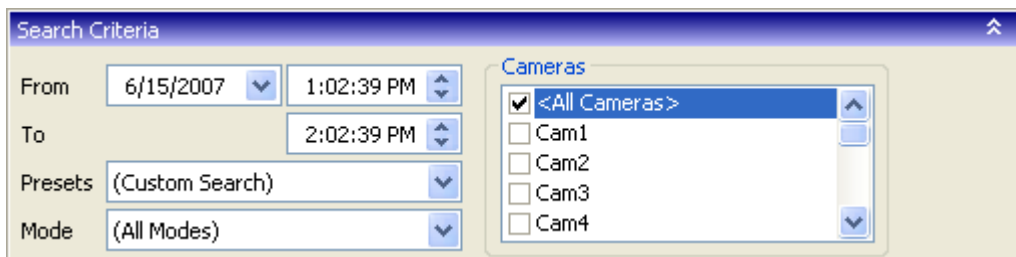
The "Search" window is divided into two major portions: the left side being the playback half and the right side is the searching half.

Each of the search bars, "Search Criteria", "POS Data Filter", "Video Search Results", and "Data Search Results" are expandable and collapsible. To do this, click anywhere on the bar.

| | |
|--|--|
|  Search | Begins a search based on the current criteria. |
|  Reset | Resets all search criteria and POS data filters to their default values. The default From/To time is an hour back from the current time. |
|  POS Data | If a POS data connection has been configured, this button will open the POS data filter and data search results dropdowns. |

1.3.1 Searching for Video Footage

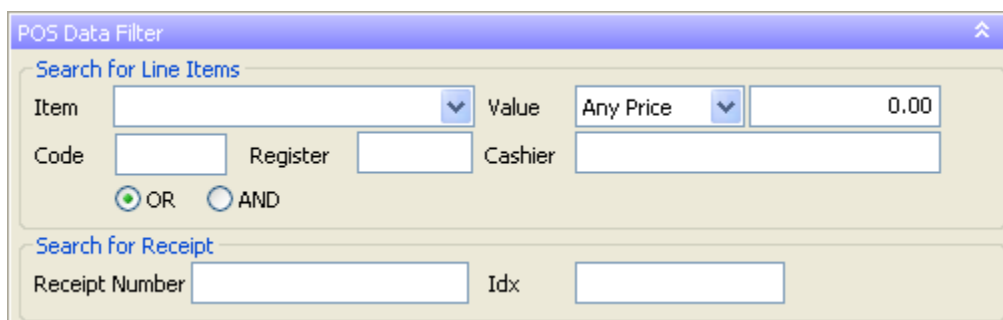
When first opened, the "Search" window defaults to a search of all cameras, recording in all modes, from the last hour. Clicking the "Search" button immediately will retrieve all footage meeting these criteria.



| | |
|------------------|--|
| From / To | You can specify the starting date/time and end date/time of your search. By default, Vigil Server limits your search to be within a single day. This can be changed in the software settings. |
| Presets | This drop down includes preset search intervals in hourly increments from 1 hour up to 8 hours. Additionally, selections for 15 and 30 minutes can be added by checking "Quick Retrieve Short Intervals" the "Search" settings. When a selection is made, the From/To times are adjusted appropriately. By selecting Custom Search it will open the Custom Search window that will allow you to save and run custom searches that are used frequently. |
| Mode | In addition to the other criteria, you may filter your results by a specific recording mode. Making a selection from this drop down will restrict the returned footage to only the selected type: Constant, Motion, Alarm, or All Types. |
| Cameras | This allows you to restrict your search to a limited set of cameras. By default, all cameras will be searched. |

1.3.2 Using the POS Data Filter

To open the POS data filter, you must configure and setup a POS terminal connection to your DVR. For this information, please review section regarding the Data tab later in this manual.



Search for Line Items

When searching for line items, be aware that the normal search criteria is used as well (i.e., to and from date/times, selected cameras, etc.)

| | |
|-----------------|--|
| Item | This field allows you to type in text that will match the Item column in the received POS data. It also has a dropdown selection box that will remember your last 10 searches. |
| Code | Matches results in the Code column. |
| Register | Matches results in the Register column. |

| | |
|-----------------|---|
| Or / And | Logical operators that will assist in searching with multiple criteria. By default, this is the OR operator, which will match any results, in any of the POS data criteria fields. The AND operator will only match results that have the same POS data criteria, in all the used fields. |
| Value | Matches results in the Code column. By default, any price is selected. If you wish to match a certain value, select an operator and input a value. The ">=" means "more than or equal to" the value that you input. For example, if I use >= with the value of \$20.15, any POS data with the value of 20.15 and higher will be returned. The "<=" operator means "less than or equal to", while the = operator simply means an exact same value. |
| Cashier | Matches results in the Cashier column. |

Search for Receipt

This type of search does not use the other criteria as it looks for a particular unique line item or receipt number. Date and times are not used.


| | |
|-----------------------|---|
| Receipt Number | Searches for a matching receipt number. |
| IDX | Searches for an IDX based on the value you used. If the IDX contains a receipt number, the POS data returned will be that receipt number and all IDX values corresponding to it. If there is no receipt number for the searched IDX value, the returned results will be based on the timestamp of that IDX. The net results will be +/- 10 seconds from that timestamp. |



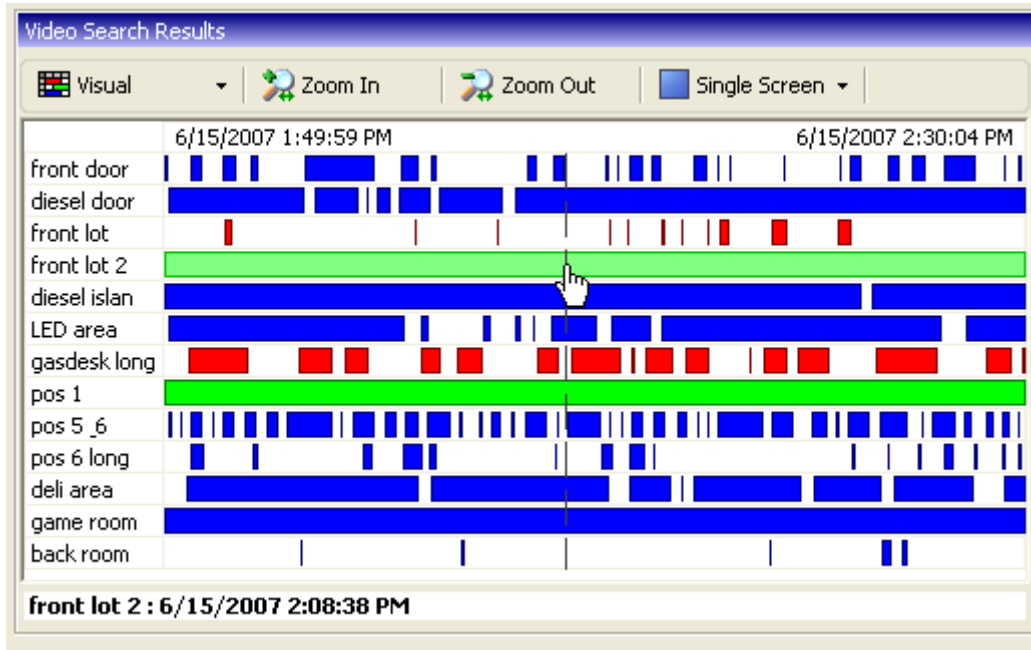
Note: Depending on the recording configuration of your cameras, there may be no saved footage matching your search criteria.

| | |
|----------------------|--|
| Visual Search | This check box enables the graphical representation of retrieved footage that allows quick identification of the recorded time blocks and the recording mode of the footage. If this is unchecked, a list style result is presented with start and end times of the footage, but does not indicate gaps. |
| Data | This check box enables searching of Point of Sale data records in addition to the video footage. POS data can be filtered by any of the recorded fields. A table of POS results will appear below the video footage results. |

Playback Options

| | |
|---|--|
| Playback Options | While not search criteria, the playback options allow you to control how your results will be played back. Selecting "Single Screen" will display one camera at a time during playback. Selecting "Synchronized Multi-Screen" will play back up to four cameras at the same time. You can add more cameras to the playback screen by selecting additional cameras as you normally would. |
|  | The results chart can be zoomed in and out by using these controls. |

1.3.3 Video Search Results



After completing a search, the video results are displayed in the Video Search Results pane. This pane is also expandable/collapsible.

| | |
|---------------|--|
| Visual | This button allows you to change between the visual search and a simpler tabular search. |
| Zoom In | Allows you to zoom in and out in the Video Search Results pane to allow you to select footage with greater precision. |
| Zoom Out | |
| Single Screen | Changes the playback window from a single screen layout to a 2 x 2 layout. This mode is used to view playback multiple cameras during the same time frame. |

When Visual Search is selected, the search results are displayed in colour-coded, visual format. The visual footage chart displays the period of time searched with footage recorded displayed as blocks of colour representing the recording mode: Constant, Motion or Alarm.

| | |
|--------------|--|
| Blue | Footage was recorded by motion detection. |
| Green | Footage was recorded constantly. |
| Red | Footage was recorded in alarm mode. |
| White | No recording during this period. For cameras set to record motion, this indicates no motion was detected during that time. |

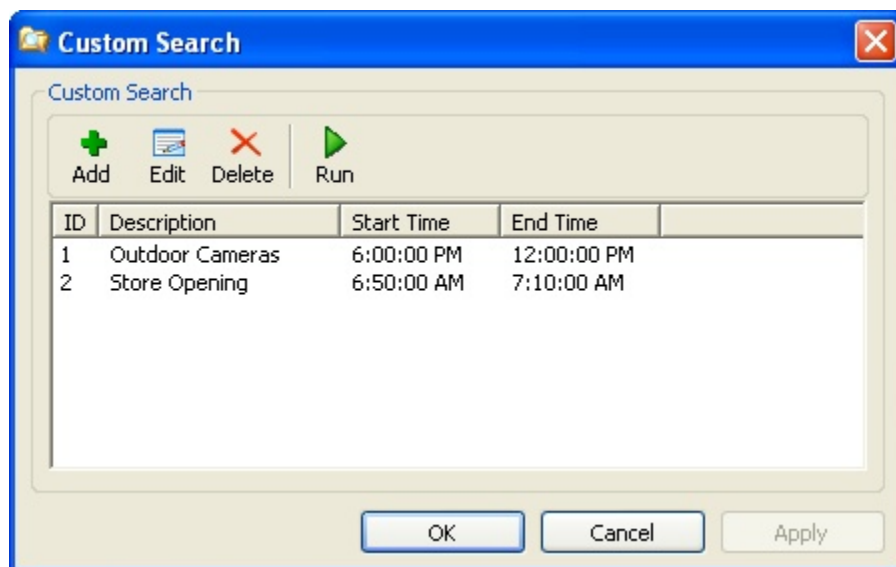
To playback footage, click the desired camera name to begin playback at the start of the time interval. When the mouse is moved within the chart, a line will be drawn indicating the point in time under the cursor. The exact time under the cursor is displayed just above the visual chart. Clicking within the chart will begin playback of the selected camera at the indicated.





| Camera | Started | Finished | |
|--------------|----------------------|----------------------|--|
| front door | 6/15/2007 1:50:00 PM | 6/15/2007 2:29:53 PM | |
| diesel door | 6/15/2007 1:50:08 PM | 6/15/2007 2:30:03 PM | |
| front lot | 6/15/2007 1:52:44 PM | 6/15/2007 2:21:55 PM | |
| front lot 2 | 6/15/2007 1:50:00 PM | 6/15/2007 2:30:03 PM | |
| diesel islan | 6/15/2007 1:50:00 PM | 6/15/2007 2:30:03 PM | |
| LED area | 6/15/2007 1:50:08 PM | 6/15/2007 2:30:02 PM | |
| gasdesk long | 6/15/2007 1:51:04 PM | 6/15/2007 2:30:03 PM | |
| pos 1 | 6/15/2007 1:50:00 PM | 6/15/2007 2:30:03 PM | |
| pos 5 & 6 | 6/15/2007 1:50:12 PM | 6/15/2007 2:29:45 PM | |
| pos 6 long | 6/15/2007 1:51:12 PM | 6/15/2007 2:29:53 PM | |
| deli area | 6/15/2007 1:51:01 PM | 6/15/2007 2:30:03 PM | |
| game room | 6/15/2007 1:49:59 PM | 6/15/2007 2:30:04 PM | |
| back room | 6/15/2007 1:56:20 PM | 6/15/2007 2:24:35 PM | |

The tabular search simply shows a table with the start and end dates of the available video footage. It cannot display gaps in video footage.

1.3.4 Creating and Running a Custom Search

If you find yourself making the same search regularly, a "Custom Search" can be saved. The "Custom Search" window can be accessed from the "Quick Retrieve" dropdown. It can also be opened from the menu ("Search | Custom Search"). When selected, the "Custom Search" window will appear.

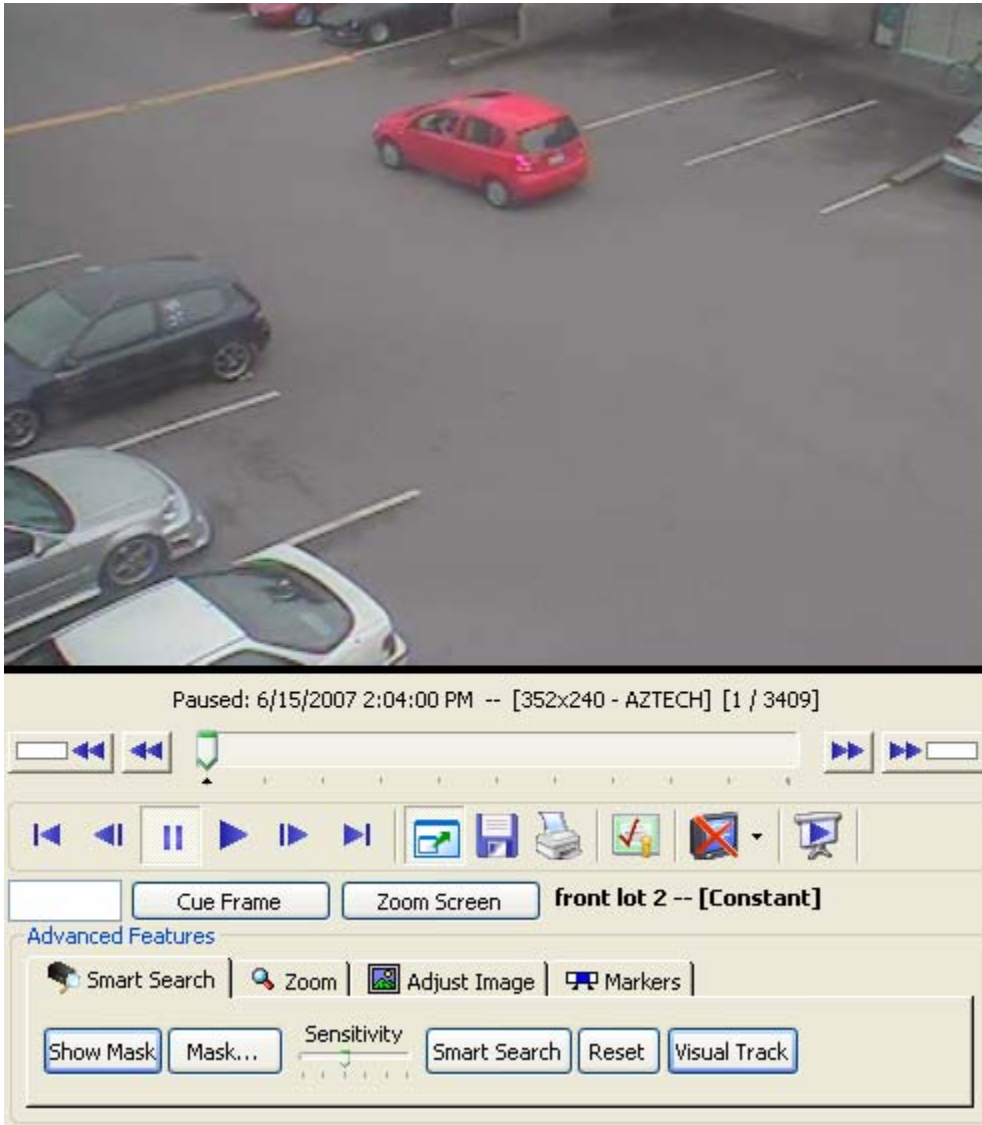


| | |
|---|--|
|  Add | Opens the "Create Custom Search" window |
|  Edit | Opens the "Edit Custom Search" window (looks the same as the "Create Custom Search" window) for the selected search. |
|  Delete | Deletes the selected search. |
|  Run | Runs the selected search. |

| | |
|--------------------|--|
| Description | The name for your search that will appear in the “Custom Search” list. |
| Time Filter | The start time and end time to be searched. |
| Cameras | Select the cameras to search, or select “All Cameras” |
| Data | The custom search will include the POS data criteria specified. |

Once you’ve completed inputting the search information you would like to save, click “OK”. The window will close and bring you back to the “Custom Search” window. You can either use the “Run” button to begin searching with your selected custom search or by going into the “Search” window and in the “Quick Retrieve” dropdown box, select the name of the custom search.

1.3.5 Video Playback



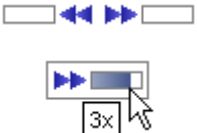












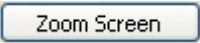
Once footage has been selected for playback it will be loaded in the playback portion of the "Search" window. Footage information is displayed below the playback window.

Playing: 6/7/2006 1:03:12 PM -- 1 fps [352x240 - AZTECH] [227 / 1078] [Sub range]

This information includes the playback status, the date and time of the footage, the nominal frame rate if currently playing, the resolution and recording codec of the footage, the current frame of the footage, and if the zoom feature has been used then [Sub range] will be displayed.

A camera can be removed from the playback window by right clicking on the playback and selecting "Remove". You can also copy a still shot to the Windows clipboard by right-clicking the playback and selecting "Copy".

A number of controls have been provided to make navigation and advanced features more accessible:

| | |
|---|---|
|  | <p>Click and drag the variable speed playback slider to change how fast the footage is played back. Playback up to every fifth second of footage. The "Variable Speed" playback tool tip displays the number of times faster the variable speed playback is than the "Fast Backward" or "Fast Forward" buttons.</p> |
|  | <p>Click and hold down the "Fast Backward" or "Fast Forward" button to playback as quickly as possible without skipping any frames.</p> |
|  | <p>Skips to the very beginning/very end of the video clip.</p> |
|  | <p>If clicked while playing the clip, skips one 10th of the clip. While paused or stopped, click to playback frame by frame.</p> |
|  | <p>Pauses/plays the video clip.</p> |
|  | |
| <p>The scroll bar can be used to quickly move to a different portion of the selected video. Simply click and drag the pointer.</p> | |
| <p>Clicking the scroll bar once and then using the scroll wheel on your mouse will advance or rewind the video 1/50th of the footage time with each click of the mouse wheel.</p> | |
|  | <p>Stretches the playback image to fill the playback window. Footage is automatically displayed in the resolution at which it was recorded. Footage recorded in 704x480 mode is scaled down to fit the playback window.</p> |
|  | <p>Click to save a still image in JPG or BMP format, or to save a video clip in AVI or MJPG format. If audio recording has been configured on the DVR, this button also allows for audio exports.</p> |
|  | <p>Click and select "Print Still Image" to print the current frame, or select "Print Data" to print the currently displayed POS data in the Data Search Results pane.</p> |
|  | <p>Click to authenticate the currently selected video clip. For more information on authentication, see the section located further in the manual.</p> |
|  | <p>Click to toggle the "Data On Screen Display" feature.</p> |
|  | <p>Click to play in full screen mode. Double-click on the image to return to the standard playback screen.</p> |
|  | <p>To cue the video to a specific frame, enter the frame number in the box beside the "Cue Frame" button and click "Cue Frame".</p> |
|  | <p>Resizes the playback window to "Zoom Screen" mode. When in "Zoom Screen" mode, click the "Normal Screen" button to return to the regular sized screen.</p> |

1.3.6 Synchronized Multi-Screen Playback



Select Multi-Screen to playback up to four cameras simultaneously. The playback window will be divided into quadrants. Quadrants are filled in clockwise order beginning in the top left.

To add a camera to the playback, click on its name or some point within its timeline. If all quadrants have cameras loaded, clicking a new camera will replace one of the initial cameras. Footage will play back from all loaded cameras simultaneously.

During playback if any camera is missing footage, its video will pause with an overlay stating, "No frames were found". Remaining cameras will continue to play. When the playback time reaches a point where the paused camera again has saved footage, its playback will resume. When there is no footage for any camera, the playback skips to next time where footage exists for at least one camera.

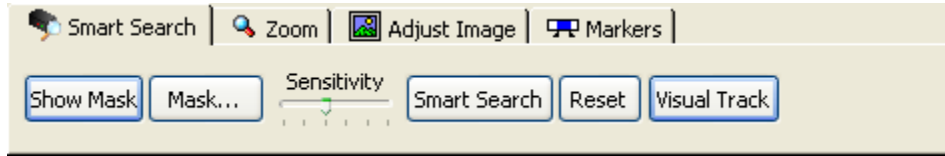
To remove a camera from playback, first select its quadrant by clicking on it and then right click in its quadrant and select "Remove".

A still shot from a camera can be copied to the Windows clipboard by selecting its quadrant, right clicking, and selecting "Copy".

At any time, you may revert to single camera playback by selecting "Single Screen" from the search controls. This will continue playback of the camera from the currently selected quadrant in single screen mode.

1.3.7 Using the Smart Search

Smart searching allows you to further refine your video search by performing a custom motion detection search within a specified region of the loaded footage.



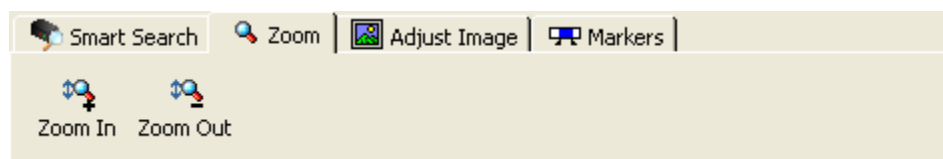
To perform a smart search, first select the “Smart Search” tab from the “Advanced Features” bar. To define the motion search region, simply click and draw within the playback window. A mask pattern will be overlaid on the playback window. Any time you click on a clear area, you are expanding the mask. If you start drawing on a masked area, the mask will be removed.



| | |
|--------------------|---|
| Show Mask | Shows/hides the smart search masking area. |
| Mask... | Offers some quick options for modifying the mask area. Clear – Completely clears the mask. Select All – Sets the mask to cover the entire footage. Invert - Swaps clear and masked areas. |
| Sensitivity | This slider controls the sensitivity of the motion detection algorithm used by smart search function. To the left is less sensitive, requiring more definite motion; to the right is more sensitive, detecting smaller movements. |
| Smart Search | Begins the smart search based on the current mask area. |
| Reset | Restores the originally loaded footage and removes all smart search masks. |
| Visual Track | Enables/disables the “Visual Tracking” feature that highlights moving objects by drawing corners around the object as it moves. |

1.3.8 Zooming During Playback

You can zoom in on any footage being played back by selecting the “Zoom” tab from the “Advanced Features” section.



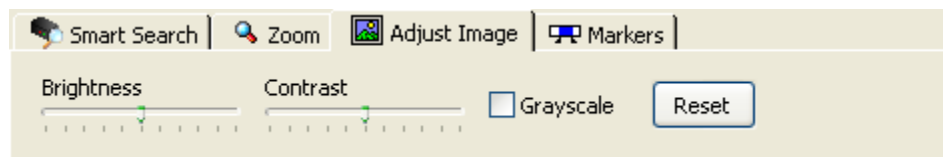
When the cursor is moved over the playback window, a zoom outline will be displayed to indicate the region that will be magnified. Left clicking zooms in and right-clicking zooms out of the image.



The magnification factor is displayed in the upper right-hand corner of the playback window. You can also use the “Zoom In” and “Zoom Out” buttons on the “Advanced Features” toolbar.

1.3.9 Adjusting the Image

When playback is paused, you can adjust the image by selecting the “Adjust Image” tab from the “Advanced Features” section. This can be useful for adjusting an image prior to printing or saving.



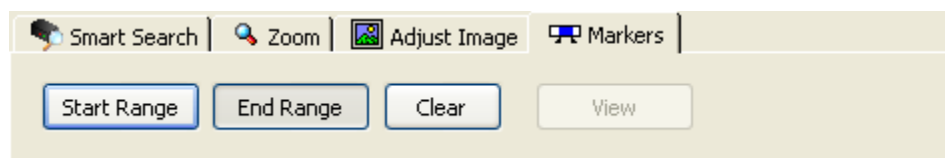
Here you can adjust the brightness and contrast of the displayed frame. Checking the “Grayscale” box will toggle between a grayscale and colour image. Clicking the “Reset” button will return the image to its default values.



Note: You can only adjust a paused image; adjustment of footage during playback is too CPU intensive. Any adjustment you have made will be reapplied when footage is paused again.

1.3.10 Using Markers to Create a Sub-Range

During playback, if only a sub-section of the loaded footage is of interest, it can quickly be selected by using "Markers". To use markers, select the "Markers" tab from the "Advanced Features" section.



Position the footage navigation slider at the beginning of the desired footage and click the "Start Range" button. You will notice a small marker appear below the starting point. Next, navigate to the end of the desired footage and click the "End Range" button.



When you are ready, click the "View" button to display the marked footage. The playback information will indicate that a sub-range is currently displayed. All of the playback controls will operate on only the sub-range of footage.

If you are playing footage in multi-screen mode, each camera can have a different sub-range marked and displayed, independent of the other cameras.

When exporting footage, only the sub-range will be saved.

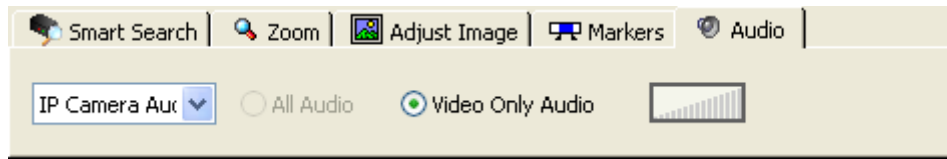


Note: To export a sub-range, you must have clicked the "View" button; otherwise, the entire footage will be exported.

To return to the full footage, click the "View" button again or "Clear" to remove the markers.

1.3.11 Audio Playback

If audio hardware is enabled for your DVR, you can also have recorded audio play back at the same time as video footage. To control audio playback, select the "Audio" tab from the "Advanced Features" section.



Select the desired audio channel to playback from the “Channel” dropdown.

| | |
|--------------------------------|---|
| <p>All Audio</p> | <p>Plays back recorded audio from the selected channel, regardless of whether there is recorded video at the same time.</p> |
| <p>Video Only Audio</p> | <p>Plays back recorded audio from the selected channel, only when there is corresponding recorded video at the same time.</p> |

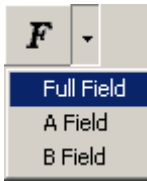


Note: The “All Audio” option is not available when using visual search. To enable this option, disable “Visual Search” from the search options.

An audio level meter indicates the signal strength of the currently playing audio.

1.3.12 Frame De-Interlacing

Frame De-interlacing applies only to DVR480 Series DVRs running Vigil Server version 2.03.0000 and higher, recording at resolution 704x480.



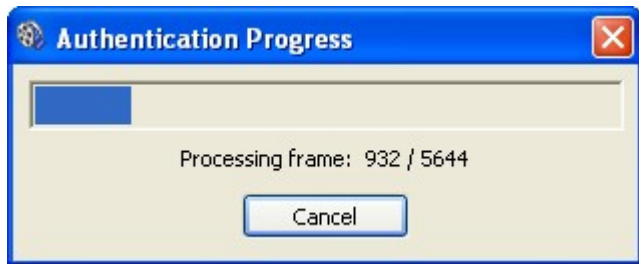
When paused in the Vigil Server playback screen, use the “Frame De-interlacing” feature to toggle between “F” - Full Field, “AF” – A Field, and “BF” – B Field. Click on the “F” button to toggle between frame types or use the dropdown arrow to select the frame type.

1.3.13 Authenticating Recorded Video

Vigil Server embeds a security key in saved footage for each video frame. These keys can be easily checked to verify that the footage is authentic and has not been tampered with.



Begins the authentication process. A window opens displaying the progress of the authentication. Depending on the length and location of the video footage (network or USB), authentication may take several minutes to complete. You can cancel the authentication at any time by clicking the “Cancel” button. Any frames that were processed prior to canceling have been authenticated.



If the video has been tampered with, the authentication will halt at the first damaged frame and provide an error message with the problem frame number.



If "Real-Time Authentication" (in "DVR Settings | Search tab") is enabled, during playback if a frame does not pass authentication a large red X is displayed over the frame.

1.3.14 Printing, Saving, or Copying POS Data

To print data to the default printer, right click on the data records and select "Print". You can also select the printer button and select "Print Data" from the context menu.

To save data to a preset destination, right click on the data records and select "Export". Select the destination folder and enter a file name, then click "Save". Export destinations are set in the DVR settings under "Media Drives". You can also select the export button and select "Data" from the context menu.

To copy the currently selected POS data record to the Windows clipboard, right click on the data playback section and select "Copy Line".

1.3.15 On-Screen POS Data Display

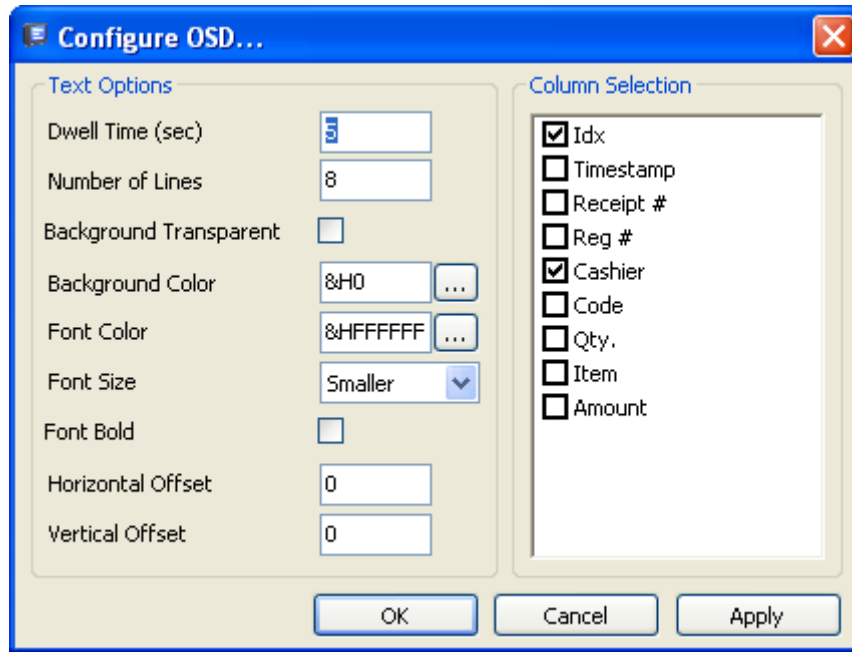


In addition to displaying POS records in the data table, you can enable the "On-Screen Display" (OSD) feature, which will overlay records directly on the video playback. The OSD is also present in full-screen playback when the data table is hidden.



Enables/disables the OSD of POS data.

Opens the OSD menu, allowing you to select open the "Configure OSD" window



| | |
|-------------------------------------|--|
| Dwell Time | The number of seconds a data record will remain on-screen. |
| Number of Lines | The maximum number of records to display at a time. |
| Background Transparent/Color | Change the text background color/transparency. |
| Font Color/Size/Bold | Change the font color/size/boldness. |
| Horizontal/Vertical Offset | The number of characters to offset the text from the left/top side. |
| Column Selection | Specify which columns you wish to have displayed. Unchecked columns will not be displayed. |

When you are finished configuring the OSD, click the "OK" button to apply your changes and return to the playback window.

1.4 Exporting/Saving Video Footage

Video footage can be saved either as a single frame still shot, or as video file. This process is referred to as "Exporting".




Note: To export footage you must have at least one "Export Destination" configured.

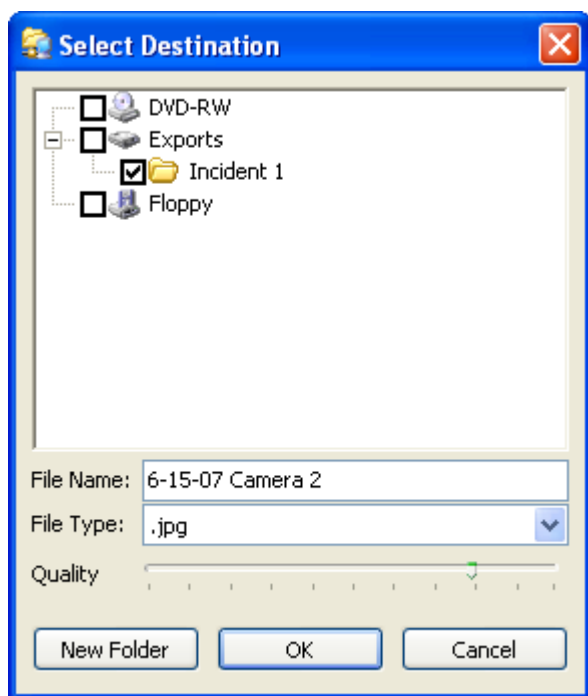


Note: If "Export Auditing" is enabled, required information must be entered before selecting the destination folder for both images and video exports.

1.4.1 Exporting Images

Single frame shots can be saved in either Bitmap (BMP) or JPEG (JPG) format. BMP images retain all of the original image detail, but are typically much larger than JPG images as a result. JPG images are compressed but typically are indistinguishable from the original image with a quality of 70 or greater.

| | |
|--|---|
|  | Click to open the Export sub-menu. Select which type of media you wish to export. |
| BMP | Saves the still image as a BMP image. Select the export destinations and enter a filename. Click "Save" when finished or "Cancel" to exit without saving. |
| JPG | Saves the still image as a JPG image. Select the export destinations and enter a filename. Additionally, you may select a quality setting for the JPG image by adjusting the slider. Closer to the left side means a lower quality, smaller sized file; further to the right means a higher quality, larger sized file. For the most part, the default compression setting is the best choice. Click "Save" when finished or "Cancel" to exit without saving. |



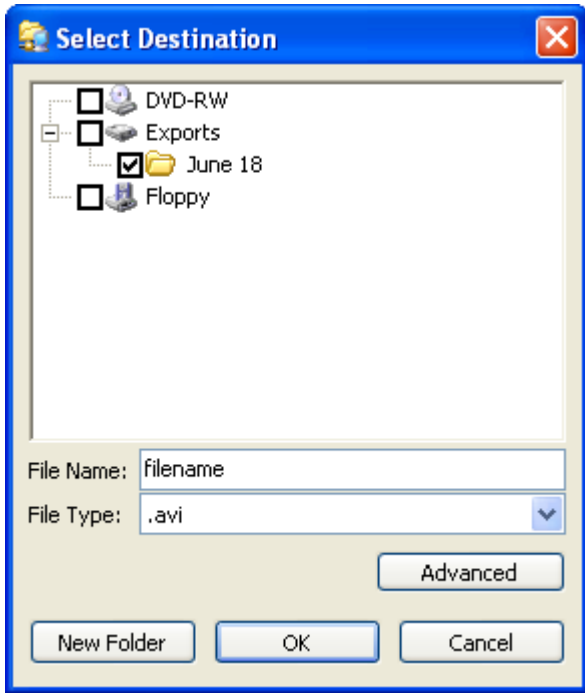
Select which destination you wish to save the image to. You can select multiple destinations, as well as create subdirectories by using the New Folder button.

1.4.2 Exporting Video

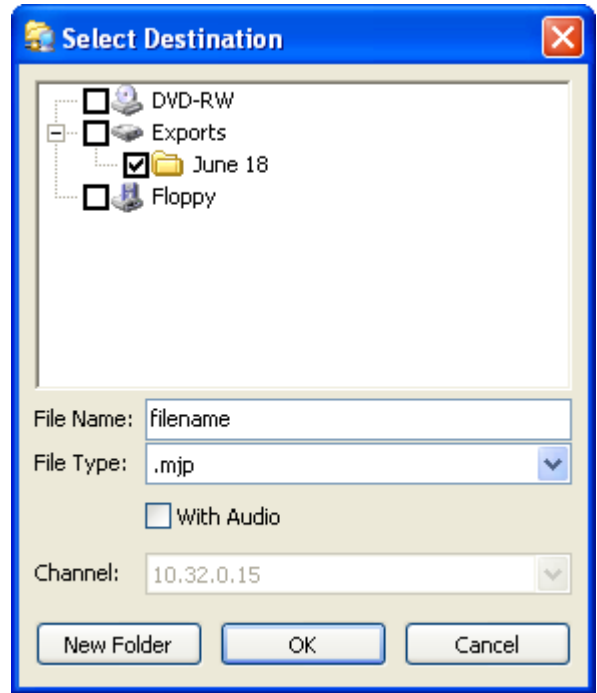
Video footage can be exported in Microsoft AVI or Motion JPEG (MJPEG) formats. The AVI format is widely supported on Microsoft Windows operating systems. However, the file size is typically much larger than files exported in MJPG format. Vigil Server allows video exports to include the Vigil DV player to ensure playback software is available for MJPG exports.

| | |
|---|---|
|  | Click to open the Export sub-menu. Select which type of media you wish to export. |
|---|---|

| | |
|--------------------------|---|
| <p>AVI</p> | <p>Saves the current video footage as an AVI video. Select the export destinations and enter a filename.</p> <p>Clicking the "Advanced" button will open the "CODEC Settings" window that allows you to select and configure the CODEC used during the encoding process.</p> <div data-bbox="609 283 1198 625" data-label="Image"> </div> <p>Click "Save" when finished or "Cancel" to exit without saving.</p> |
| <p>MJPEG</p> | <p>Saves the current video footage as a MJPEG. Select the export destinations and enter a filename. Click "Save" when finished or "Cancel" to exit without saving.</p> |
| <p>With Audio</p> | <p>When selected, also exports any audio on the selected channel with the video file.</p> |

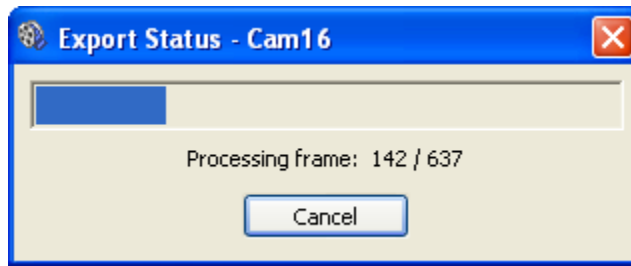


AVI export with no audio configured



MJEG export with audio configured


Select which destination you wish to save the footage to. You can select multiple destinations, as well as create subdirectories by using the New Folder button.



If you are exporting from multi-screen playback, when choosing to export video, you will have the option of exporting the “Selected Camera” or “All Cameras”. Choosing “Selected Camera” will export only the currently selected camera footage. Choosing “All Cameras” will export footage from all currently displayed cameras to separate files. The files will have the camera name appended to the filename you enter.

1.4.3 Printing a Still Image

In addition to exporting still shots to disk, an image can be sent directly to the Windows default printer.

| | |
|---|---|
|  | <p>After navigating to the video frame you wish to print, click this button to begin printing to the default printer.</p> |
|---|---|



Note: The image will be sent to the default Windows printer only. If one has not been configured an error message will inform you of this.

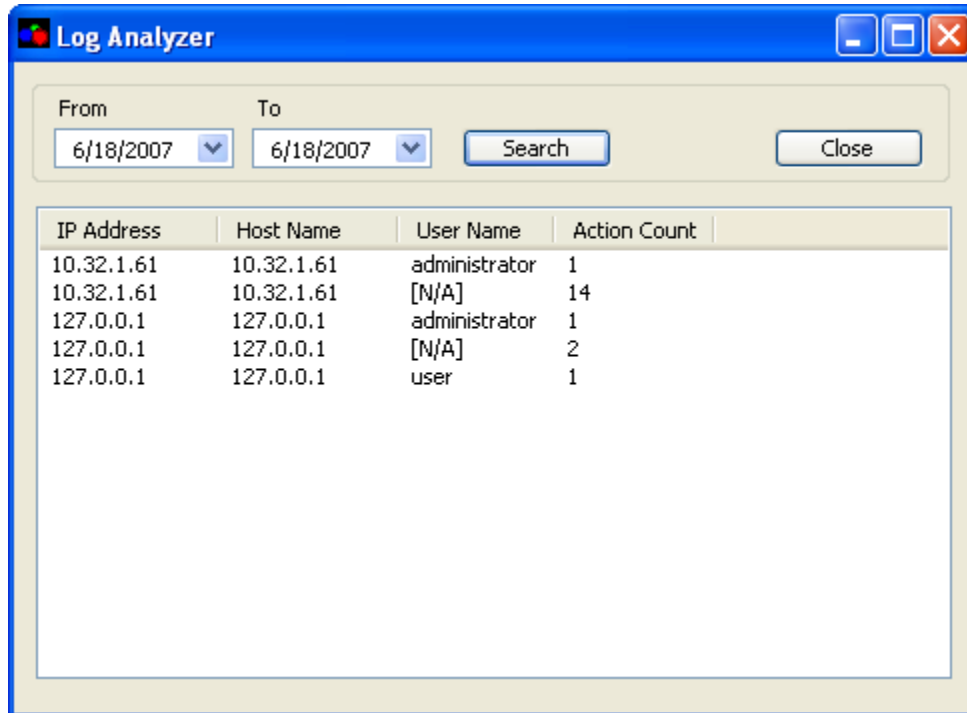
1.5 Tools

Several tools are included with Vigil Server to make accessing all the information gathered by your DVR possible. The following tools are accessible by clicking on the “Tools” drop-down from the toolbar of the main window. You can also access these tools from the menu bar.

| | |
|-------------------------------|---|
| Live Data | A live viewer of received POS data. |
| Alarms | A listing of alarm events that allows you to rapidly replay footage from the time of the event. |
| Export File Browser | A thumbnail browser interface to the export destinations. |
| Reset Window Positions | Resets all windows to their original sizes and locations. |
| Sequence | Enables and disables a configured camera sequence. |
| Client Connections | A list of client systems currently connected to the DVR. |
| People Counting | An hourly summary of entrance and exit events for cameras configured with people counting. |
| Recorder | Opens the Recorder controls window. |
| Settings | Opens the Settings window. |
| Network Log Analyzer | Opens a utility program called the Network Log Analyzer. See below for more details. |
| Audit Log Analyzer | Opens a utility program called the Audit Log Analyzer. See below for more details. |

| | |
|--------------------------|--|
| V-POS | If the V-POS software program is installed, this option simply provides a quick way to load the application. It is especially useful if <i>Vigil</i> is configured for Kiosk mode and the normal Start menu is disabled. |
| Update... | Opens the Local Update Utility that provides a small program to perform software updates for DVR applications. |
| Automatic Updates | Opens the Update Service window. More information about this utility can be found later in this manual. |
| Register DVR | Opens the Registration window to allow you to register your <i>Vigil</i> software. More information about this procedure can be found later in this manual. |

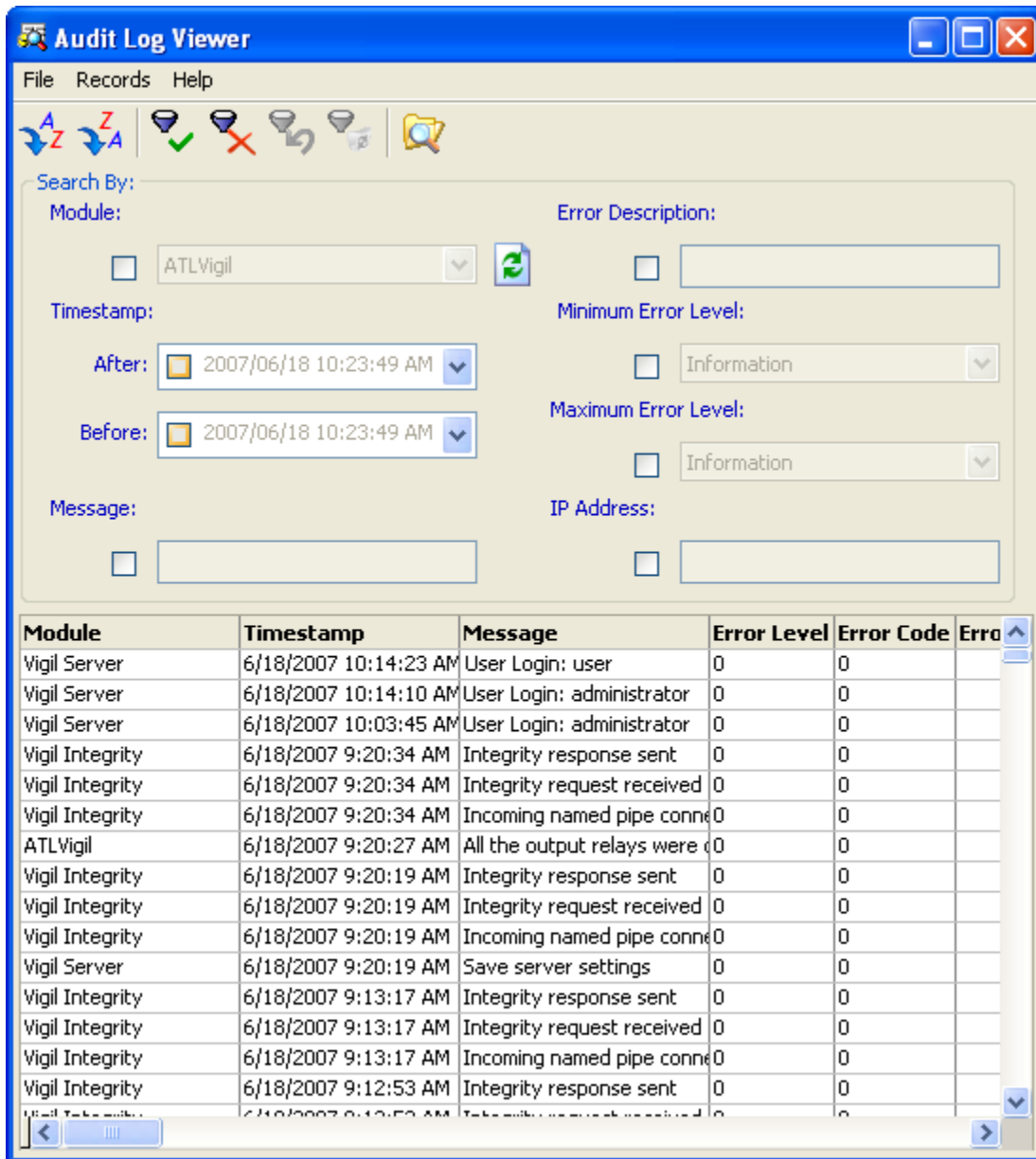
1.5.1 Network Log Analyzer



The Network Log Analyzer provides a simple way to check for network activity with *Vigil* software. It will log IP addresses and user names of all connections made. More advanced ways of checking network logs are available. If required, please contact technical support for more information.

1.5.2 Audit Log Analyzer

The Audit Log Analyzer provides way to analyze, search, and monitor various errors and general information for the *Vigil* software.



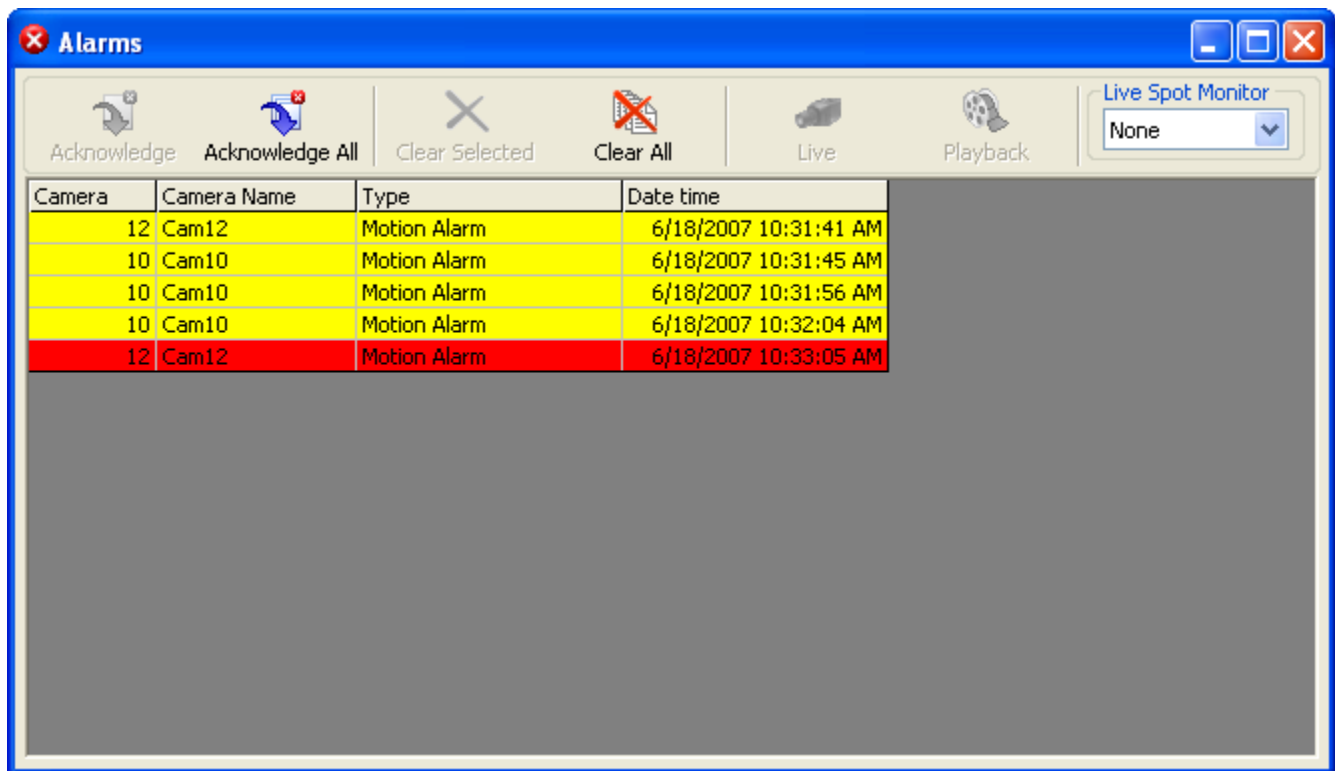
This program is for advanced users as a lot of the returned information may be cryptic or confusing for some. Essentially the program allows you to search the logs by using a variety of criteria such as date/time, error codes, IP address, or for a particular module.

1.5.3 Alarms Window







The alarms tool provides a listing of alarm events and allows quick playback of alarm footage. To open the alarm tool, select "Alarms" from the tools drop-down of the main window toolbar.



Note: The Alarms tool may also appear as a response to an alarm event depending on the local notification settings.

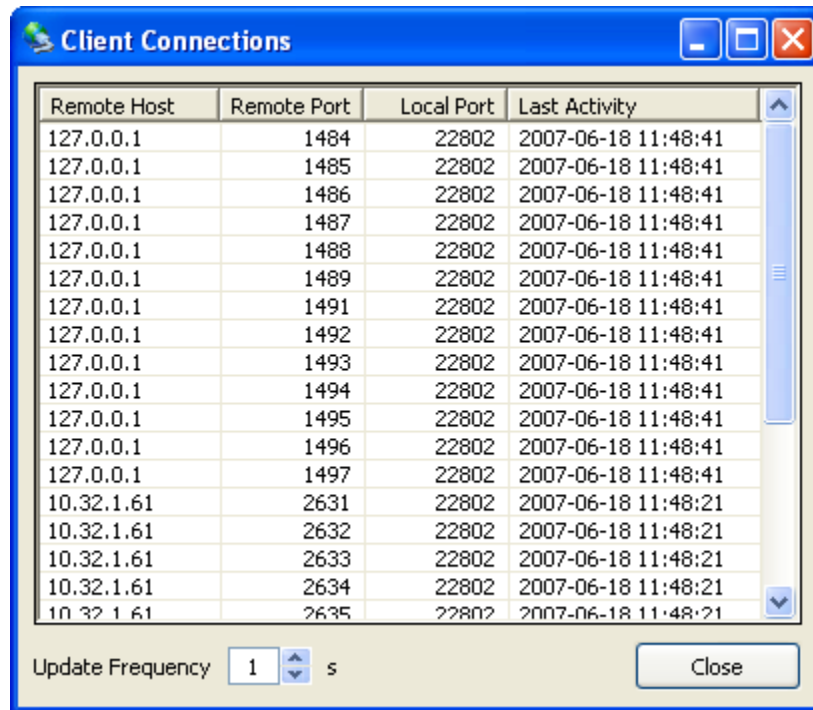


Alarms are listed in a tabular form with the camera number, camera name, type of alarm, and date and time of the alarm. New alarms that have not yet been acknowledged are shown in red. Acknowledged alarms are displayed in yellow.

| | |
|---|---|
|  | Acknowledges the selected alarm and changes its highlighted color to yellow. |
|  | Acknowledges all visible alarms and changes their highlighted color to yellow. |
|  | Clears selected alarm from the "Alarms" window. |
|  | Clears all alarms from the "Alarms" window. |
|  | Changes to a live display of the selected alarm's camera. |
|  | Opens the playback window and begins playing at the time of the selected alarm event. |
| Live Spot Monitor | If you have a spot monitor connected to your DVR, you can select a monitor and click on an alarm event to change the spot monitor to the same camera as the selected event. |

1.5.4 Client Connections Window

The "Client Connections" window displays a list of the currently connected Vigil Clients. To open the "Client Connections" window, select the "Clients" option from the "Tools" drop-down in the main window toolbar. You can also double click "Client Connections" status bar in the top toolbar.



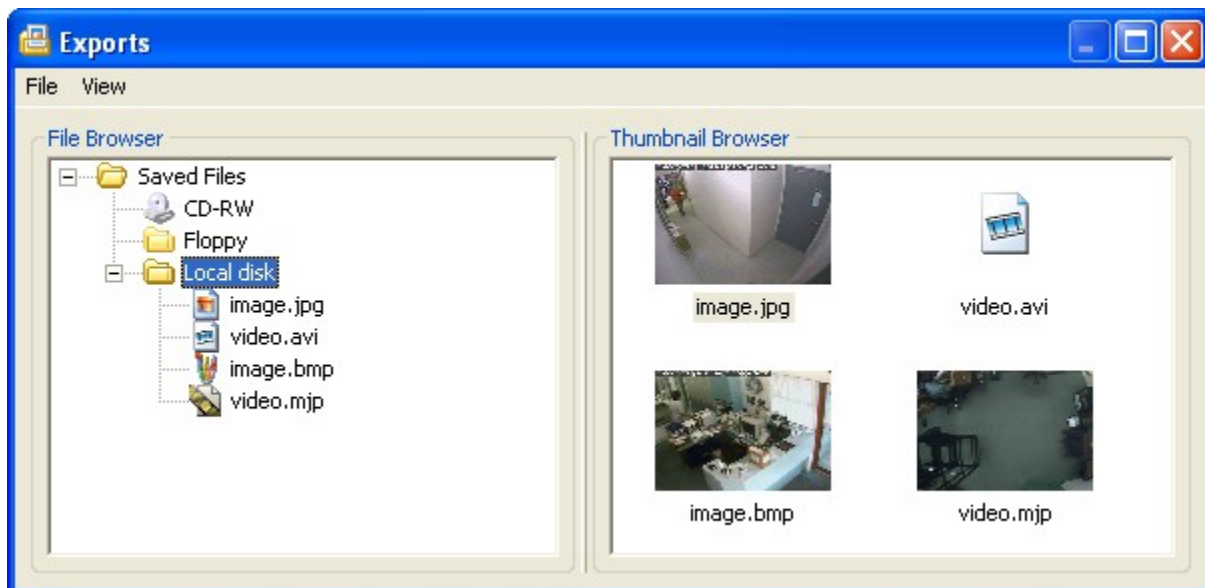
The table includes information of the client's remote host name or IP address, the remote host connection port, the locally connected port, and the last activity time of the connection.

The update frequency of the table can be adjusted by selecting a number of seconds from the "Update Frequency" drop-down box.

1.5.5 File Exports Browser

The export file browser provides a thumbnail file browser for exported footage and still shots. File navigation is similar to Windows explorer.

To open the "Exports" window, select the "Export File Browser" option from the tools drop-down of the main window toolbar.



For export folders to show in the browser, they must have been configured in the Vigil Server settings.

| | |
|----------------------|---|
| Open a File | Double-click the desired file in either the "File Browser" or "Thumbnail Browser" screens. This will open the file using the standard Windows assigned program. |
| Delete a File | Right-click the desired file, in either the "File Browser" or the "Thumbnail Browser" screens, and select "Delete". You can also select the file and use the menu by going to "File Delete File" as well as selecting the file and pressing the Delete key. |
| Copy a File | Right-click the desired file, in either the "File Browser" or the "Thumbnail Browser" screens, and select "Copy". The "Select Destination" window opens up and allows you to save another copy of the file to another export destination. You can also select the file and use the menu by going to "File Copy File". |

1.5.6 Live POS Data Window

Live POS data refers to point of sale (POS) records generated by compatible register system and received by Vigil Server in real-time. To open the Live POS Data window, select "Live POS Data" from the "Tools" button drop-down of the main window toolbar. The Live POS Data window displays live data from all POS registers.



Note: Some types of data terminals do not support all of the fields that are available.

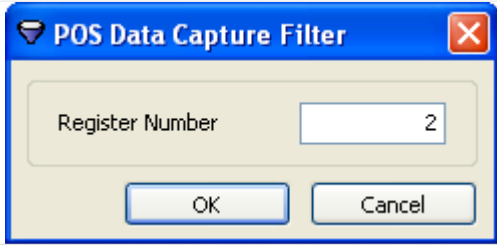
| Idx | Timestamp | Receipt # | Reg # | Cashier | Code | Qty. | Item |
|-------|----------------------|-----------|-------|---------|------|------|----------------------|
| 00270 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Order 1048605 Selec |
| 00269 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Adjust Payment Chec |
| 00268 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Start Time: 11:26:45 |
| 00267 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Clock in Drawer 1 |
| 00266 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Payment Authorizati |
| 00265 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Order 1048605 Selec |
| 00264 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Check 1048605 Close |
| 00263 | 6/18/2007 1:29:23 PM | | 1 | 1 | TT | | Total Due |
| 00262 | 6/18/2007 1:29:23 PM | | 1 | 1 | TX | | Tax |
| 00261 | 6/18/2007 1:29:23 PM | | 1 | 1 | ST | | Subtotal |
| 00260 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Order 1048605 Selec |
| 00259 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Order 1048605 Selec |
| 00258 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Check #1048605 Ad |
| 00257 | 6/18/2007 1:29:23 PM | | 1 | 1 | TK | | Open Ticket 104860E |
| 00256 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Order 1048604 Selec |
| 00255 | 6/18/2007 1:29:23 PM | | 1 | 1 | II | | Order 1048604 Selec |

The Live POS Data window presents POS data in tabular form with columns including:

- **IDX** – A unique identifier to quickly identify and find POS data line items.
- **Timestamp** – The time at which the Point of Sale event occurred.
- **Receipt #** – The receipt number of the current receipt.
- **Reg #** – The cash register number.
- **Cashier** – The cashier currently logged into the data terminal.
- **Code** – The transaction type code identifies the type of transaction.
- **Qty.** – The quantity of the item purchased.
- **Item** – The item purchased.
- **Amount** – The price of the item purchased.

The column headers are all able to be resized as well as moved around within the window. Simply drag and move the column header to the desired location. You can reset the column locations by right-clicking in the Live POS Data window and selecting "Reset Column Order".

1.5.6.1 Filter Live POS Data



To filter POS data by register number, right-click on the "Live Data" window and select "Data Filter"

Enter the register number, or leave it blank to view POS data from all data terminals, and click "OK".

1.5.6.2 Saving Live POS Data

POS data can be saved in one of three ways: exported to a text file, printed, or copied to the Windows clipboard.

| | |
|--------------------|---|
| Copy data | Right-click the desired POS record and select "Copy Line". This copies only the selected data record to the Windows clipboard. |
| Export data | Right-click the desired POS record and select "Export". This opens a "Select Destination" window where you choose an export destination. After making your selection, the "POS Export Settings" window opens. |



Select the time periods you wish to export or select "Export All" to export all POS data records. Once complete, click "OK" and the export process will begin.

| | |
|-------------------|---|
| Print data | Right-click in the Live POS Data window and select "Print". This sends the current POS data to the Windows default printer. |
|-------------------|---|

1.5.7 People Counting

When at least one camera has been configured for "People Counting", the "People Counting" window will be available by selecting "People Counting" from the tools drop-down of the main toolbar.

| Camera | From | To | In | Out |
|-----------|---------------------|---------------------|----|-----|
| 05 - Cam5 | 2006-06-19 15:49:27 | 2006-06-19 15:49:35 | 1 | 1 |
| 05 - Cam5 | 2006-06-19 15:48:48 | 2006-06-19 15:49:18 | 5 | 7 |
| 06 - Cam6 | 2006-06-19 15:48:48 | 2006-06-19 15:49:31 | 3 | 2 |
| 05 - Cam5 | 2006-06-19 15:48:18 | 2006-06-19 15:48:42 | 3 | 2 |
| 06 - Cam6 | 2006-06-19 15:48:18 | 2006-06-19 15:48:42 | 0 | 1 |
| 05 - Cam5 | 2006-06-19 15:47:15 | 2006-06-19 15:47:51 | 5 | 4 |
| 06 - Cam6 | 2006-06-19 15:47:15 | 2006-06-19 15:48:13 | 1 | 2 |

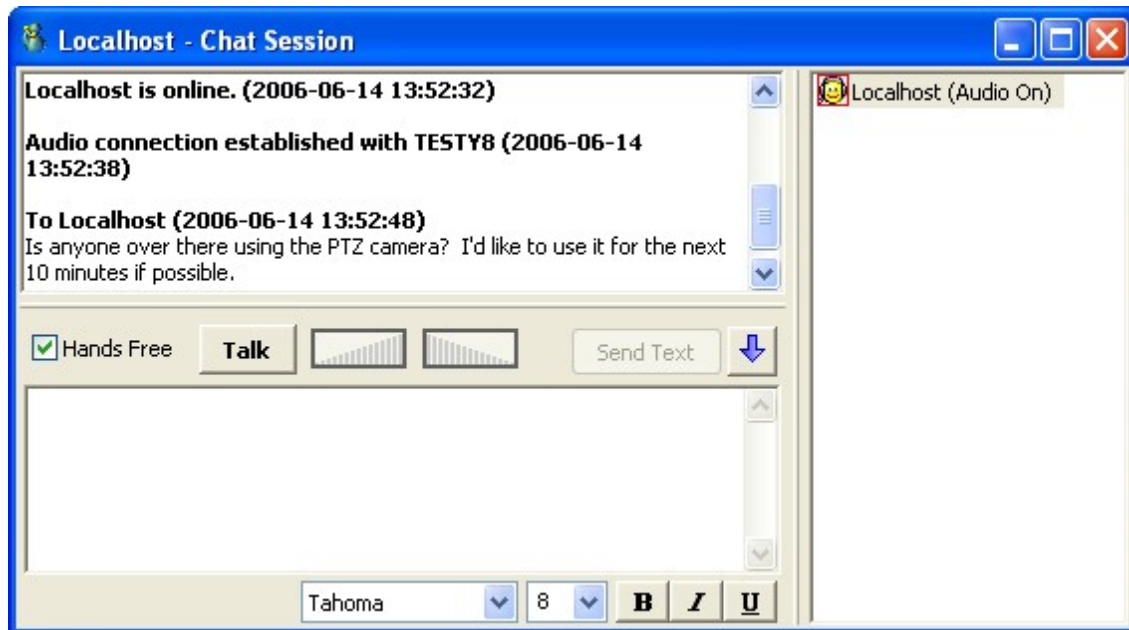
The "People Counting" window presents in and out hourly summaries for all cameras configured for "People Counting". The columns include:

- **Camera** – The camera number and name.
- **From** – The start of the counting interval.
- **To** – The end of the counting interval.
- **In** – The number of entrances during the interval.
- **Out** – The number of exits during the interval.

| | |
|---------------|---|
| Search | Right-click the desired counting log and select "Search". This will open the "Search" window for the selected camera and time period. |
| Export | Right-click in the "People Counting" window and select "Export". This opens a "Select Destination" window where you choose an export destination. |
| Print | Right-click in the "People Counting" window "Print". This sends the current log data to the Windows default printer. |


1.6 Chat

Vigil Server and Client include a chat feature to speak or write back and forth between Vigil Clients connected to Vigil Servers. The chat session is initiated by the Vigil Client only and can be used to communicate vocally or in writing.




Note: For voice chat to be available and function correctly, audio settings for chat must be configured correctly in the Vigil Client "Settings" window.

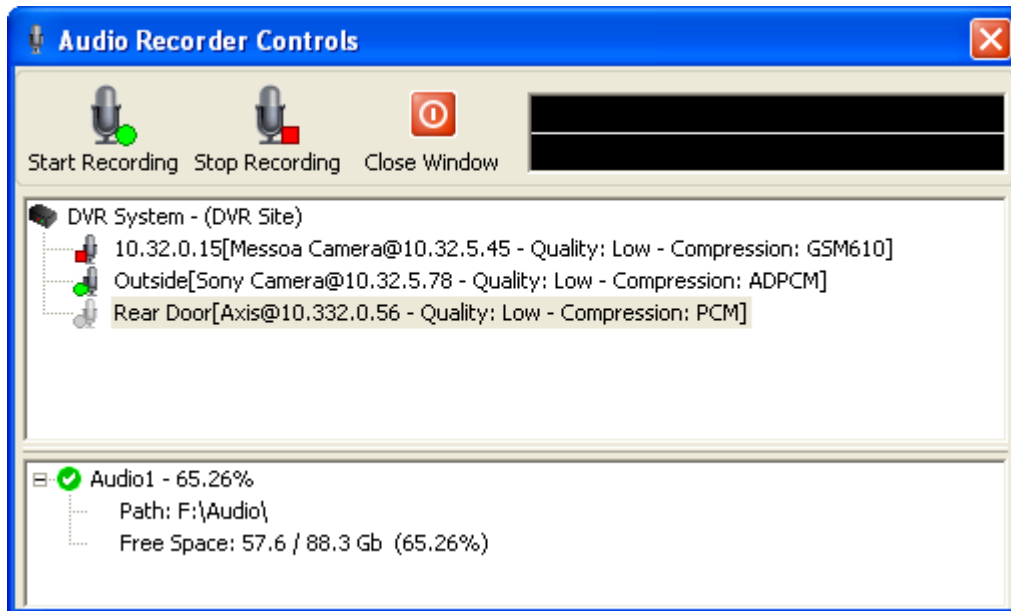
| | |
|---------------------------------------|---|
| Enabling Audio | Right-click on the site name and select "Audio". This will initialize the audio for the chat session. Uncheck "Audio" to stop all audio. |
| Disconnecting the chat session | Right-click on the site name and select "Disconnect". This will end the chat session. Closing the "Chat" window will also end the chat session. |
| Hands Free | Tick "Hands Free" for Vigil Chat to automatically detect the volume level and only send voice when sound reaches a specific volume. Un-tick "Hands Free" to use the |

| | |
|--|---|
| | "Talk" button to manually start and stop sending voice data. |
| Talk | When "Hands Free" is unchecked, click "Talk" to send voice data. Unclick "Talk" to stop sending voice data. |
| Voice Detection Graphs  | The voice detection graphs provide a visualization of voice data detected in chat session. |
| Send Text | Type text into the textbox and then click "Send Text". |
| Sensitivity | Use the ↓ button to expand the controls section. Use the slide bar to adjust the chat audio sensitivity. |




1.7 Audio Recorder Controls


The "Audio Recorder Controls" window is used to view audio channel status, and to manually stop or start the recording of specific audio channels.





| | |
|--|---|
|  Audio | Opens the "Live Audio Settings" window. To open the "Audio Recorder Controls" window, select the ▾ next to the button to open the audio menu. You can also "Audio Audio Recorder Controls" from the menu. |
|--|---|



The icon to left of each channel indicates that channel's recording status:


| | |
|---|--|
|  | Channel is currently recording audio. |
|  | Channel is in record mode, but is not currently recording audio. |
|  | Audio recording has been stopped on this channel. |

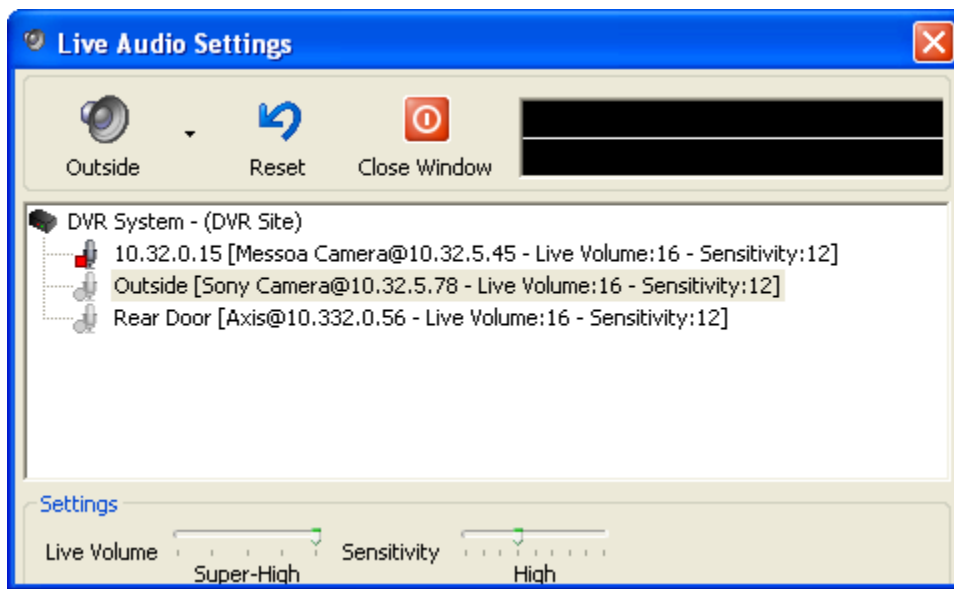
| | |
|--|---|
|  Start Recording | Starts recording audio on the selected channel. |
|--|---|



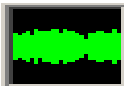
| | |
|--|---|
|  <p>Stop Recording</p> | <p>Stops recording audio on the selected channel.</p> |
| <p>Drive Information</p> | <p>The drive information section is a live view of the status of the configured audio storage drives:</p> <ul style="list-style-type: none">  - Configured drive  - Currently recording on this drive  - Drive error, contact your system administrator |

1.7.1 Live Audio Settings

The “Live Audio Settings” window is used to adjust recording levels and monitor live audio.


| | |
|--|--|
|  <p>Audio</p> | <p>Opens the “Live Audio Settings” window. You can also “Audio Live Audio Settings” from the menu.</p> |
|--|--|

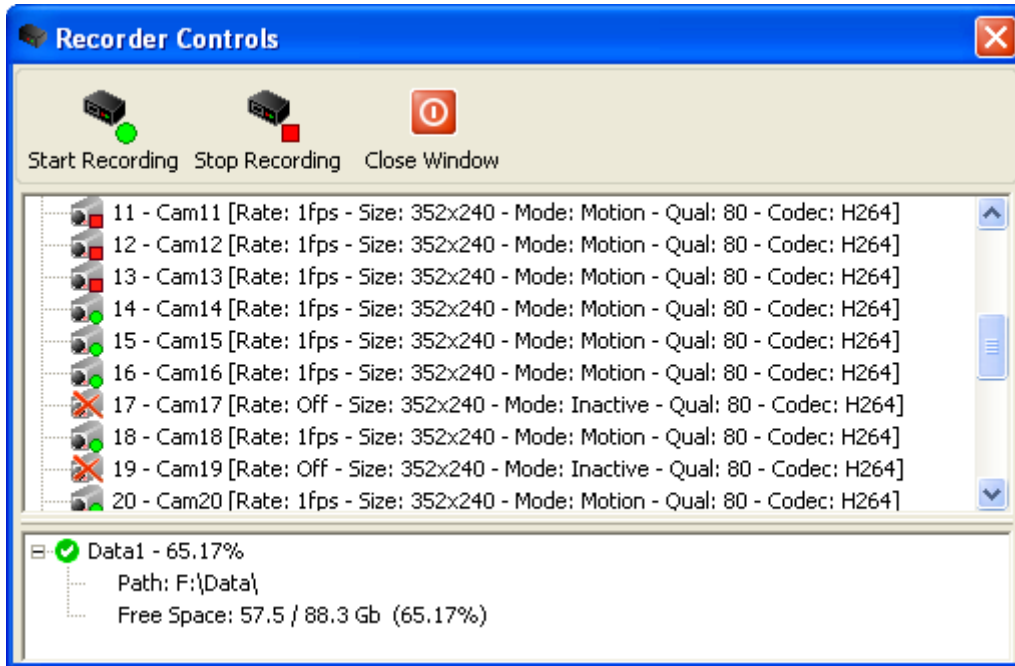


| | |
|---|--|
|  <p>Channel1</p> | <p>Cycles through the available audio channels to monitor live audio. Use the ▾ button to directly select a channel. You can also select which channel to monitor by selecting the channel directly on the list underneath the DVR System. To disable live monitoring, select the Stop Monitor option or select the DVR System root item in the audio device tree.</p> |
|  <p>Reset</p> | <p>Resets volume and sensitivity levels for the selected live audio channel.</p> |
|  | <p>The audio visualization graph provides a visual representation of the audio information currently being recorded. Keep an eye on this graph while modifying audio sensitivity and live volume settings.</p> |
| <p>Live Volume</p> | <p>Use the slide bar to adjust the live volume of the currently selected audio channel.</p> |
| <p>Sensitivity</p> | <p>Controls the sensitivity of the audio detection. Higher sensitivity will trigger audio recording at the slightest noise while lower sensitivity will only trigger audio recording with louder sounds.</p> |

1.8 Video Recorder Controls






The “Recorder Controls” screen allows you to control which cameras are recording footage and provides a quick summary of the camera configuration. To open the Recorder Controls screen, click the “Recorder” button on the main window toolbar.

| | |
|---|--|
|  | Opens the “Recorder Controls” window. You can also “Tools Recorder” from the menu. |
|---|--|



The icon to left of each camera indicates that camera’s recording status:

| | |
|---|--------------------------------|
|  | Camera is currently recording. |
|  | Camera is currently stopped. |
|  | Camera is disabled. |

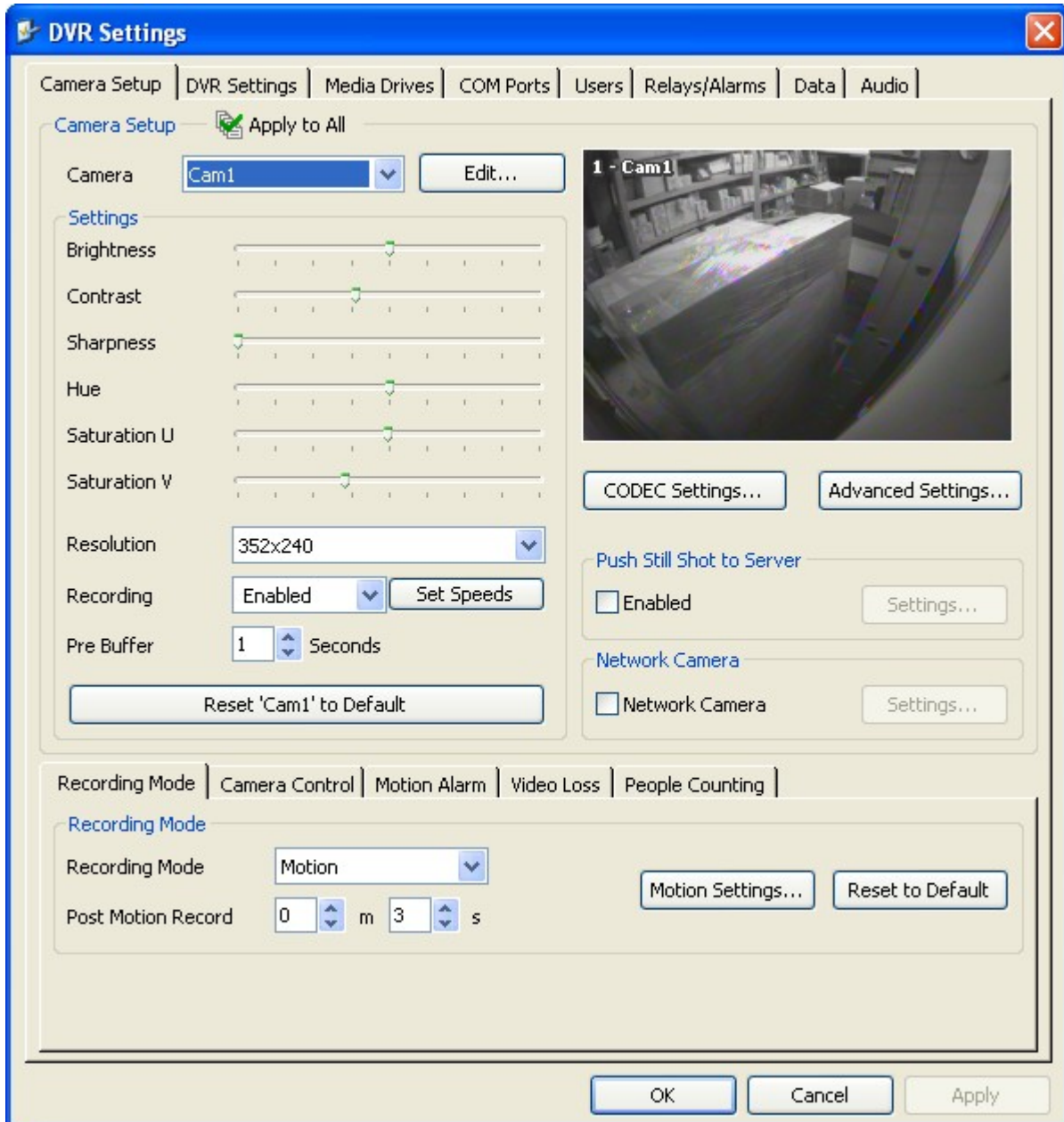
| | |
|---|---|
|  | Starts recording footage on the selected camera. |
|  | Stops recording footage on the selected camera. |
| Drive Information | <p>The drive information section is a live view of the status of the data drives that are configured on the DVR. Information presented includes the percentage free-space, the physical path of the drive, and the physical space of the drive. The icons the left of the drives indicate their status:</p> <ul style="list-style-type: none">  - Configured drive  - Currently recording on this drive  - Drive error, contact your system administrator |

2 Settings

Vigil Server is a complex software application that interfaces with a wide variety of hardware configurations. Every effort has been made to present a comprehensive set of customization controls to configure your DVR to match your needs. The following chapter will describe in detail all of the settings available. Feel free to skip those sections that don't apply to your configuration.



Opens the "DVR Settings" window. You can also "Tools | Settings" from the menu. When making changes, click the "Apply" button to save and continue making changes, or click the "OK" button to save and return to the main window. Click the "Cancel" button to close and discard unsaved changes.

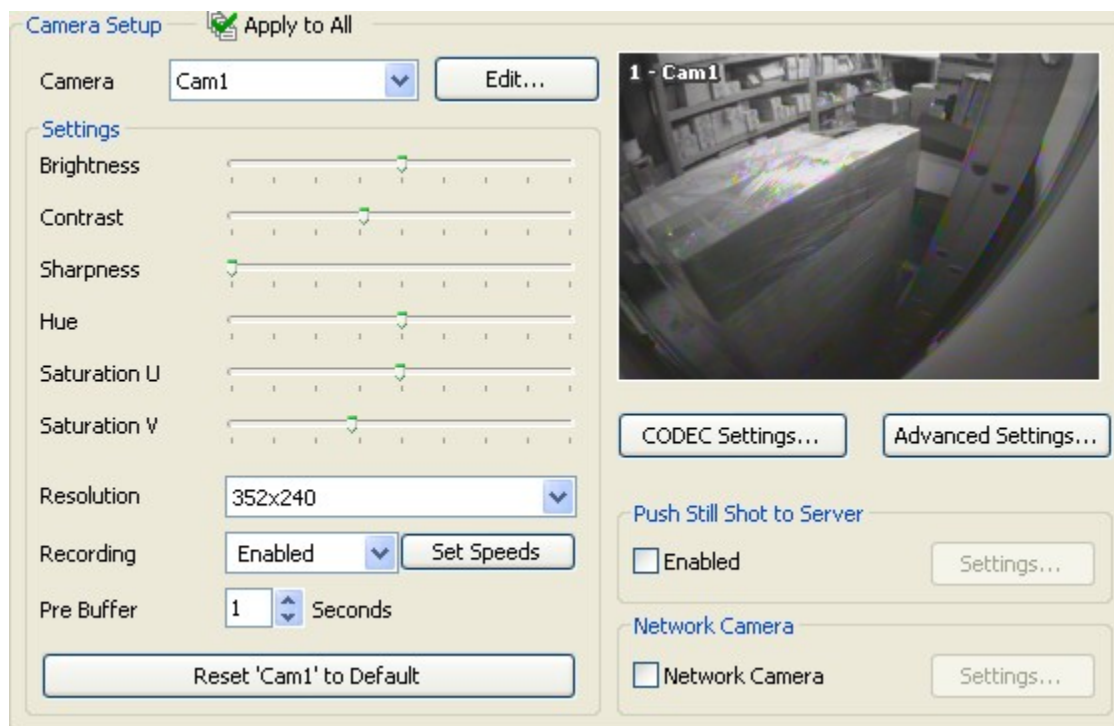


2.1 Camera Setup Tab

The “Camera Setup” tab provides all of the settings for configuring DVR-controlled cameras. The settings are divided into two sections: general camera setup and a series of tabs controlling recording options.

2.1.1 Camera Settings and Setup

The camera setup settings allow configuration of the camera image, resolution, recording speed, buffering, and recording codec. Network cameras are also enabled here.



Camera Setup



If you wish to apply the same settings to all cameras, click the “Apply to All” button at the top of the window. Settings that will be applied to all cameras will be indicated by **BOLD** headings. Only changes made after clicking “Apply to All” will be applied to every camera.

Camera Drop-down

This drop-down box lets you select which camera you wish to change the settings.

Edit...

Allows you to change the name of currently selected camera. Camera names can be up to 12 characters in length.

Settings

Brightness

Adjusts the brightness of the recorded image.

Contrast

Adjusts the contrast of the recorded image.

Sharpness


Adjusts image sharpening, to the right is increased sharpness.

Hue

Adjusts the colour of the image.

Saturation U and V

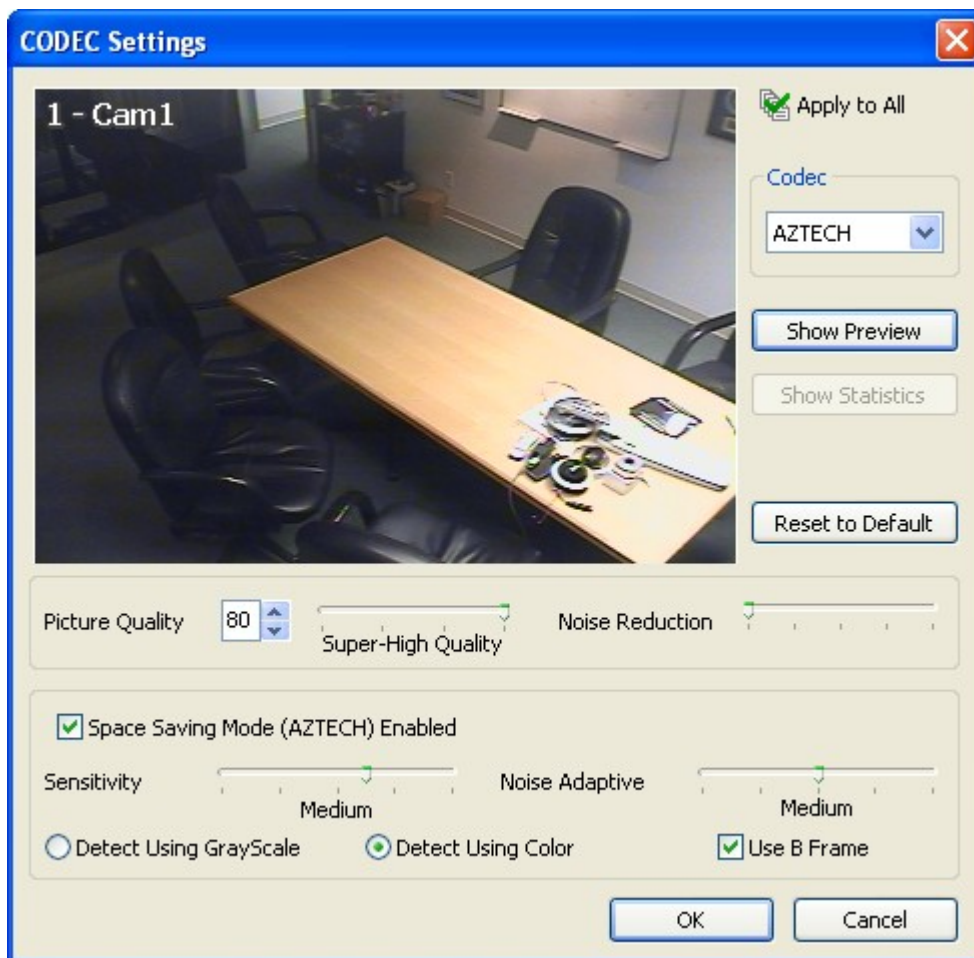
Adjusts the U and V colour difference signals used in YUV colour format. Note that not all cameras use a YUV colour format, in which case, adjusting the Saturation U slider will adjust the colour saturation while the Saturation V slider will have no effect.

| | |
|--|--|
| Resolution | Select the desired recording resolution from the drop-down list. |
| Recording | Enable or disable recording of the selected camera. |
| Pre Buffer | The number of seconds of footage to be recorded prior to a motion detection or alarm event. |
| <p data-bbox="94 514 264 552">Set Speeds</p> | <p data-bbox="310 310 1550 407">Opens the “Recording Speed” window. You can set a different recording speed for each recording type: Constant, Motion, and Alarm. Use the dropdown list to select the desired number of frames per second.</p>  <p>The image shows a 'Recording Speed' dialog box with a blue title bar and a close button (X). It contains three rows of settings: 'Constant' with a dropdown menu set to 'Per 15 Seconds', 'Motion' with a dropdown menu set to '1 FPS', and 'Alarm' with a dropdown menu set to '1 FPS'. At the bottom are 'OK' and 'Cancel' buttons.</p> |
| <p data-bbox="102 789 342 827">Reset 'Cam1' to Default</p> | Returns the settings of the selected camera to default values. |

2.1.2 CODEC Settings

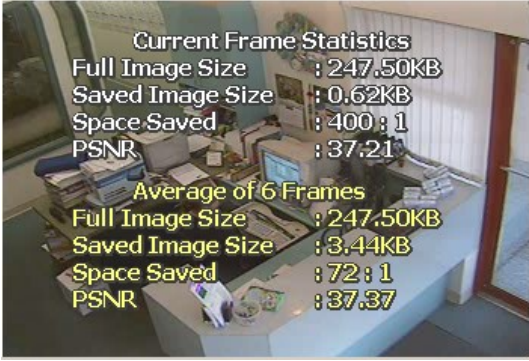
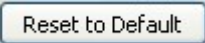
The CODEC Settings allow advanced configuration of the recording codec used for storing video footage.

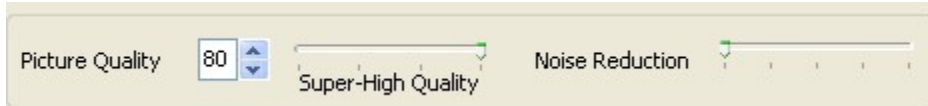
| | |
|-------------------|------------------------------------|
| CODEC Settings... | Opens the "CODEC Settings" window. |
|-------------------|------------------------------------|



Two video encoding CODECS are currently available for recording video footage: AZTECH and MPEG4 CODECS. Depending on your DVR model, it may use H264 recording. This cannot be changed to another codec and has slightly different customization options.

| | |
|------------------------|---|
| | If you wish to apply the same CODEC settings to all cameras, click the "Apply to All" button at the top of the window. Settings that will be applied to all cameras will be indicated by BOLD headings. Only changes made after clicking "Apply to All" will be applied to every camera. |
| CODEC drop-down | Select between AZTECH and MPEG encoding for the selected camera. |
| Show Preview | Encodes the preview window with the new settings as you make adjustments. |
| Show Statistics | If show preview is enabled, you can also click "Show Statistics" to display a compression statistics overlay on the preview window. |

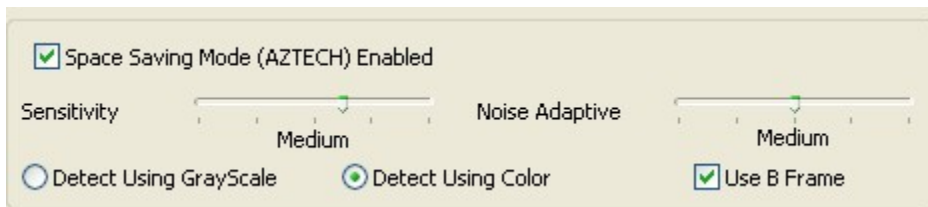
| | |
|--|---|
| |  |
|  | Resets CODEC settings to their default values for the selected camera. |



| | |
|------------------------|---|
| Picture Quality | Adjusts picture quality of the recorded images. Higher quality video will occupy more space on disk. You can use the slider or the text box to change the values. |
| Noise Reduction | Adjustment used to reduce video noise on grainy video. |

2.1.2.1 AZTECH CODEC Settings

The AZTECH CODEC is the default codec used for recording video footage. To change to the AZTECH CODEC, select "AZTECH" from the CODEC drop-down box.

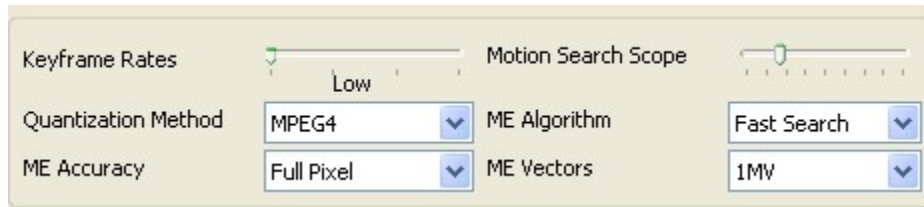


| | |
|---|---|
| Space Saving Mode (AZTECH) Enabled | Enables advanced compression technology to decrease the file size of recorded footage. Caution: This is a CPU intensive setting. |
| Sensitivity | Threshold used by the codec to identify areas of change between frames. The higher the sensitivity, the smaller a change is encoded. |
| Noise Adaptive | Noise threshold used by the comparison algorithm when determining whether a block contains a change. When this value is increased, more noise is allowed in the block without triggering change for that block. This feature does not decrease noise in an image. |
| Detect Using GrayScale/Color | Determines whether grayscale or color will be used to detect changes. Use color when it is necessary to detect a change in color such as a warning light. Color detection requires more processing power, therefore grayscale is recommended for both color and black and white cameras unless necessary. |

| | |
|--------------------|---|
| Use B Frame | <p>Uses bi-directional frames to decrease the file size of recorded footage</p> <p>Caution: This is a CPU intensive setting.</p> |
|--------------------|---|

2.1.2.2 MPEG4 CODEC Settings

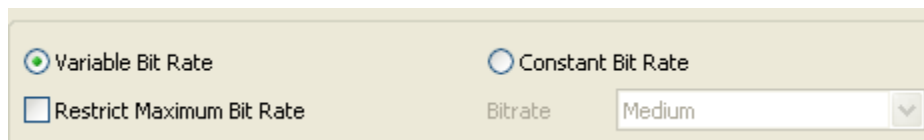
To switch the recording CODEC to MPEG4, select the "MPEG4" option from the CODEC drop-down box.



| | |
|----------------------------|--|
| Keyframe Rates | Sets the number of keyframes recorded per second. The higher the value, the greater the data space needed for recording, but the higher the quality of the video. |
| Motion Search Scope | Changes the size of the regions used to detect motion. |
| Quantization Method | Selects the type of compression. H263 offers higher compression than MPEG4 but requires more CPU usage. |
| ME Accuracy | Motion estimation accuracy. Full pixel checks for motion comparing differences of full pixels. Half pixel will check for motion using an interpolation method. Although half pixel will detect finer movements, it is also very CPU intensive. |
| ME Algorithm | Changes the shape of the area used for motion detection. Fast search will save CPU time but full search is more accurate. |
| ME Vectors | Sets the number of vectors tested for motion from 1 to 4. The greater the number, the more CPU processing is required. |

2.1.2.3 H.264 CODEC Settings

Depending on your DVR model, it may use H264 recording. This cannot be changed to another codec and has slightly different customization options.

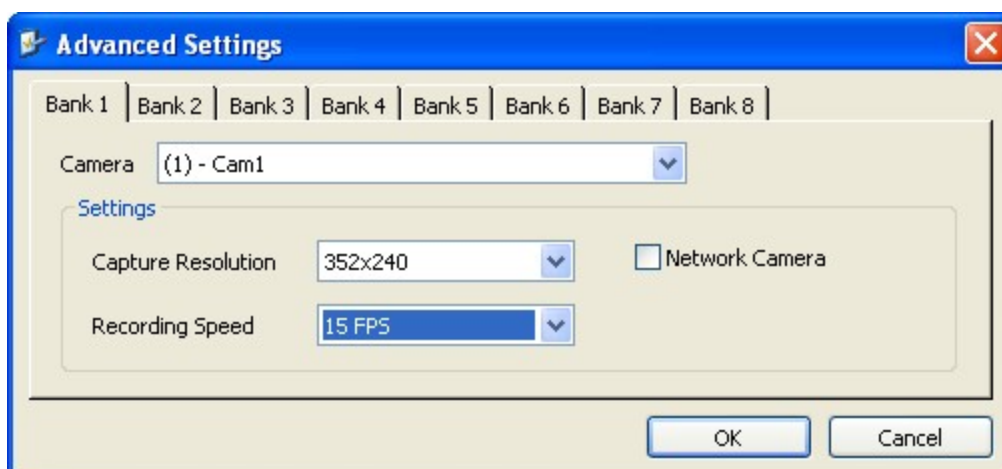


| | |
|----------------------------------|---|
| Variable Bit Rate | The default setting of variable bit rate allows the encoder to change its recording bit rate automatically as required. This option offers the best trade off of file size and visual quality. |
| Restrict Maximum Bit Rate | This sets a hard limit on the maximum quality that can be recorded. Options are Low, Medium, High, and Super-high. |
| Constant Bit Rate | Instead of a variable bit rate, this option will make it constant. A setting of constant, super-high bit rate will provide the maximum video quality settings, at the expense of storage space. |

2.1.3 Advanced Settings

In the "Advanced Settings" window, the cameras are grouped into "Bank" tabs that represent the physical camera banks in the DVR. This allows the user to maximize the capture resolution and recording speeds for each camera bank. When the number of FPS is changed in the "Advanced Settings" window, it is applied to all recording modes.

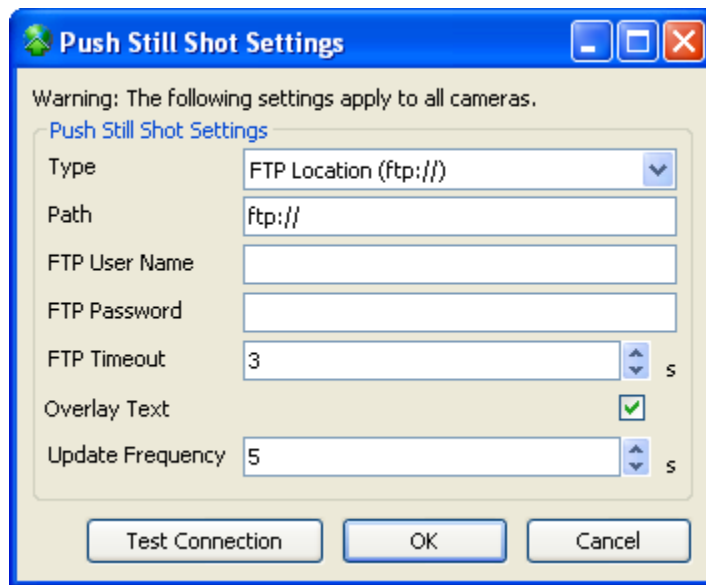
| | |
|---------------------------|--|
| Camera Drop-down | Select a camera number within the selected bank tab. |
| Capture Resolution | Select the desired recording resolution from the drop-down list. |
| Recording Speed | Use the dropdown list to select the desired number of frames per second. Each bank has a set amount of FPS that can be set its cameras. Values will change depending on the other recording speeds for the other cameras within the same bank. |
| Network Camera | Designates the selected camera as a network camera and will disable the camera feed. Network camera speeds are independent of other cameras and do not change the total amount of FPS in a camera bank. |



Note: The number of banks and the cameras in each bank is determined by the capture card installed and cannot be configured. There are many possible different layouts of banks and channels per bank.

2.1.4 Push Still Shot to Server

The "Push Still Shot to Server" settings allow a still shot from the camera to be copied periodically to another location. To enable this feature for the selected camera, check the "Enabled" box. Click the "Settings..." button to configure the destination for the still shots.



| | |
|-----------------------------------|---|
| Type | The type of storage location. Options are FTP Location, Windows Network Share, and Local Drive. |
| Path | The path where the image files will be uploaded (can only use pre-existing directories). Local Directory: "C:\images" Network Directory: "\\ComputerName\SharedFolder" FTP site: "ftp://ftpserver/folder" |
| FTP User Name and Password | Enter the user name and password, if required, for the path. |
| FTP Timeout | The time to wait in seconds before a timeout occurs. |
| Overlay Text | Check this to have an overlay of the camera name, date and time on the still shot. |
| Update Frequency | The frequency, in seconds, at which the image file is uploaded. |
| Test Connection | Tests the connection using the parameters you are using. A window will display informing you if the connection is working or not. |

2.1.5 Network Camera Settings

Vigil Server is able to receive video from one or many network cameras connected to the LAN or WAN. If you are configuring a network camera, check the "Network Camera" check box. The "Network Camera Settings" window will appear. If you would like to change the settings of an existing network camera, click the "Settings..." button.

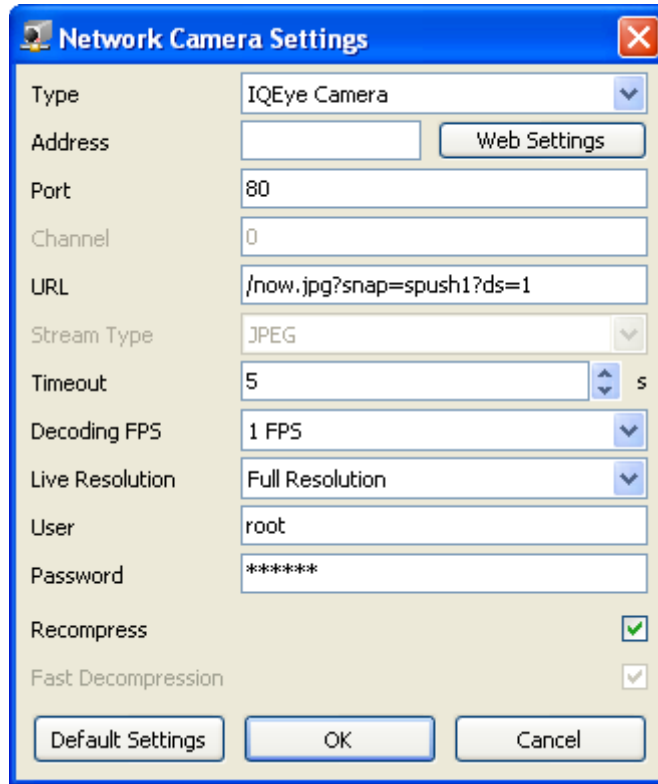


Note: The Network Camera feature disables the physical camera input on the video capture card.




Warning: Due to the substantial overhead associated with HTTP, attempting to record HTTP camera feeds over the Internet is not recommended. High speed LAN or WAN configurations are recommended for HTTP camera use. If the network bandwidth is insufficient, the message "Signal Loss" will be displayed in place of the live feed.

Vigil Server currently supports several types of network cameras, including HTTP cameras, Acti, IQeye, Panasonic, Sanyo, other Vigil Server DVRs, and more.

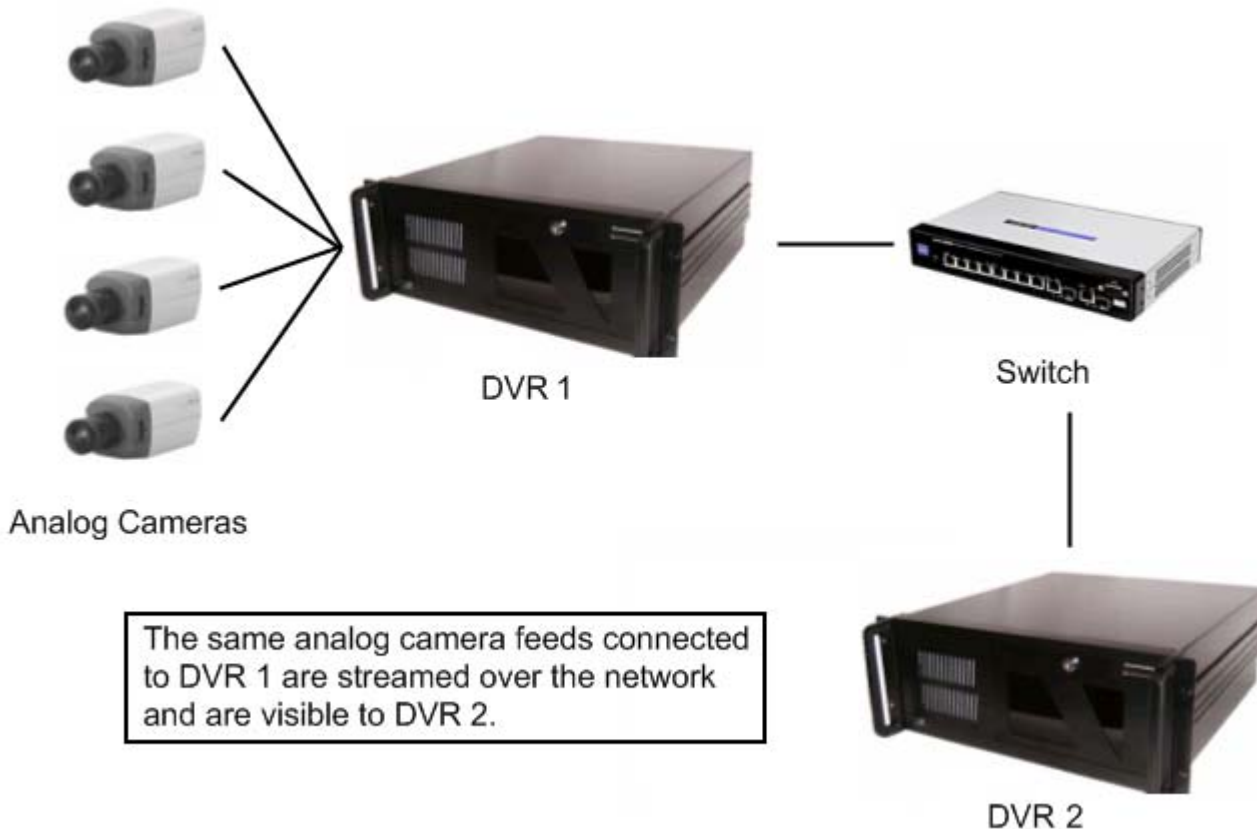


| | |
|----------------------------|---|
| Type | The type of network camera. See section 15 Supported Network Cameras for a complete list of all supported network cameras and recommended settings configurations. |
| Address | The camera address of the IP camera, or if this is an HTTP camera, the HTTP address of the camera (do not include "http://" at the beginning of the address). |
| Web/Camera Settings | Connects to the camera's web interface to make changes to the camera's internal settings. |
| Port | The network port to connect with the camera. |
| Channel | This option is used for connecting to other Vigil Server DVRs. The channel refers to which camera to use. Channel 0 means the first video input on the DVR, channel 1 means the second video input, etc. |
| URL | Set this to the camera URL, if used. |
| Stream Type | Sets the video stream type of the camera. Note that for some cameras; only one type of stream is available at a time. |
| Timeout | The number of seconds to attempt to connect to the camera before timing out. If the timeout is reached, "Signal Loss" is displayed in the live screen. |
| Decoding FPS | This is the number of frames that is displayed in the live viewer. It is also the number of frames that will be tested per second for motion. This is a CPU intensive feature, use with caution. For most applications leave this setting at 1 FPS. |

| | |
|---------------------------|---|
| Live Resolution | This is the resolution of the image that will be displayed on the Live Viewer. If you are connecting to a 3MP IP camera, the resolution is much higher than your monitor is capable of displaying, so it makes sense to reduce the resolution to minimize CPU usage. |
| User / Password | The user name and password to connect to the camera. The default values are automatically entered. |
| Recompress | This will recompress the image using our AZTECH codec and resize the image to 352x240 before saving. This is an extremely CPU intensive setting. The change of resolution may impact the detail of the original picture. |
| Fast Decompression | <p>If the JPG image provided by the HTTP camera supports fast decompression, select this option to significantly reduce the number of CPU cycles needed for rendering the network camera feed.</p> <p> Warning: Not all network cameras support fast decompression. Disable "Fast Decompression" if the image does not display or appears distorted when this feature is enabled.</p> |

2.1.5.1 DVR Network Camera Type

You can connect to another DVR in the same way you would connect to an IP camera and display any camera that it currently receives. This allows you to relay analog video from one recording DVR to a second recording DVR.



To set up this configuration, select the Network Camera Type *Vigil DVR*. The recommended settings for this setup are:

Address: IP Address of the Vigil Server DVR

Port: Live Video Port, default 22802

Camera Number: The camera input number on the remote DVR to be used

Timeout: Number in seconds before connection time

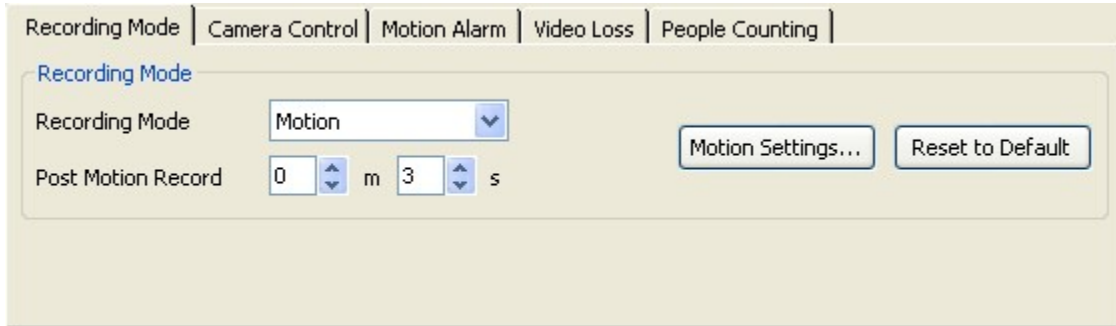
Decoding FPS: The Decoding FPS should be set to a value equal to or greater than the recording key-frame rate on the remote DVR camera input. Use the *All Frame* setting for camera inputs with low key-frame recording (i.e. AZTech)

Live Resolution: Select desired resolution

User and Password: The username and password used to log into the remote DVR

2.1.6 Recording Mode Tab

Now that the cameras have been configured, we move on to the advanced recording options. The first of these is the recording mode.

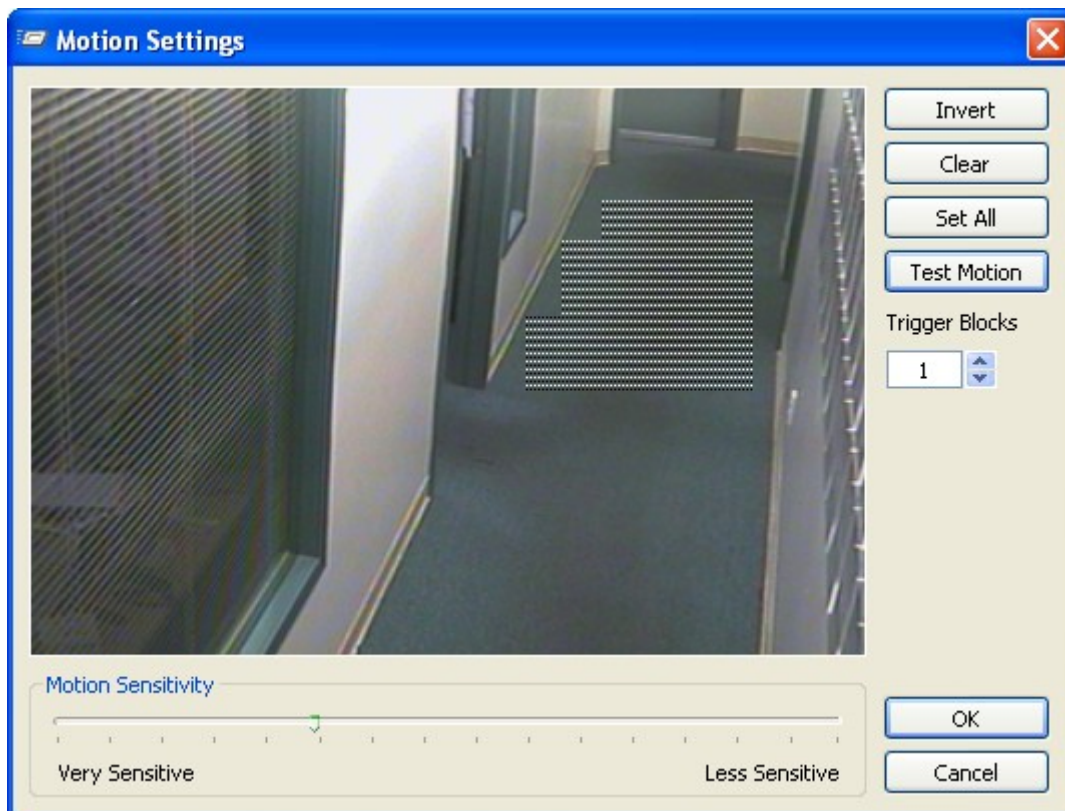


There are four modes encompassing a full range recording possibilities. These modes are accessible by selecting the appropriate option from the "Recording Mode" drop-down.

| | |
|--------------------------|--|
| Constant | Always recording, 24 hours 7 days a week. |
| Motion | Records only when motion is detected. Full configuration over motion area, amount of motion, size of motion, and post motion recording time makes this a very customizable recording mode. |
| Schedule | Records based on a schedule. The easy to use graphical interface provides a full overview of an entire week's schedule in 15-minute intervals. This mode offers full control over recording times and any combination of constant or motion controlled recording types. |
| Motion Alarm Only | Records only when a motion alarm is detected. Motion alarms use a much more sophisticated control algorithm for detecting motion. It also has its very own scheduling feature. If this mode is not selected, then "Motion Alarm" is available in conjunction with the other modes. |

2.1.6.1 Motion Recording Settings

When recording in Motion mode, click the "Motion Settings..." button to access the "Motion Settings" window.



Here you configure which regions of the video image are to be used for motion detection. To do this, simply draw on the video window. A semi-transparent overlay will be drawn over top of the video. This marks the motion detection region. To clear motion detection regions, click and draw on them and they will be removed.

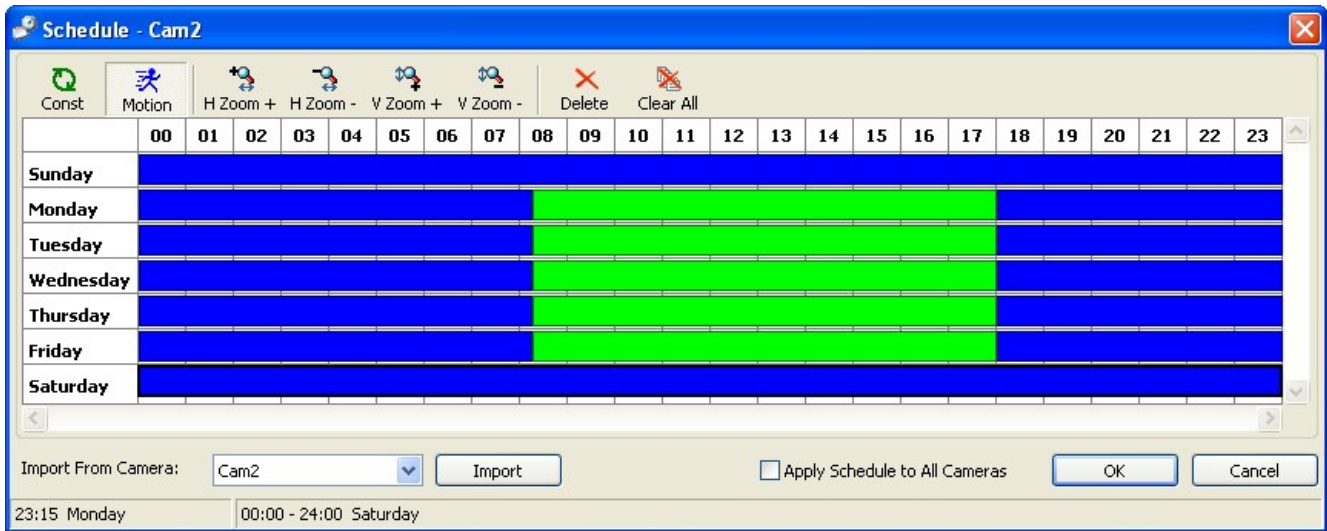
| | |
|--------------------|--|
| Invert | Swaps masked and clear regions. |
| Clear | Clears all masked areas. |
| Set All | Masks the entire image for motion detection. |
| Test Motion | The preview window will display the motion detection blocks and their real-time motion values. Values highlighted in yellow with red text have met your motion detection settings. You can use the motion detection values reported to tune the "Motion Sensitivity" slider. |





| | |
|---------------------------|--|
| Trigger Blocks | Determines how many blocks of the image must change to count as motion. |
| Motion Sensitivity | Adjust the "Motion Sensitivity" slider to control the amount of motion required to trigger recording. Use a very sensitive setting to detect almost all motion, or a less sensitive setting to require only very large movements to trigger recording. |

2.1.6.2 Scheduled Recording

If you selected Schedule from the "Recording Mode" drop-down list, the "Schedule" window will appear. To edit an existing schedule click the "..." button to open the "Schedule" window.



To modify the schedule, click the appropriate recording type button then click and drag across the desired time slot. Areas that are blank (no color) have no recording modes defined for that time and will not record any footage.

| | |
|--|---|
|  Const | Sets or changes section to constant recording mode. Time periods are coloured green when set to constant record. |
|  Motion | Sets or changes section to motion recording mode. Time periods are coloured blue when set to motion record. |

| | |
|--|---|
|  | Expands and contracts the time graph horizontally. This allows for better precision in setting your time periods. |
|  | Expands and contracts the time graph date graph vertically. |



Note: The smallest time interval that can be used is 15 minute periods.

| | |
|---|--|
| Moving a time period | Click and hold the "Shift" key and click-and-drag the section. |
| Copying a time period | Click and hold the "Ctrl" key and click and drag the section. |
| Changing record mode of a time period | Select the section by clicking on it and then click the appropriate button to select the desired recording type. |
| Changing the start or end time of a period | Select the section by clicking on it and then click and drag the right or left edge of the section. |
| Importing a schedule from another camera | Select the camera from the "Import From Camera" dropdown box list and then click "Import". |



Note: Importing the schedule of another camera will overwrite the schedule of the current camera.

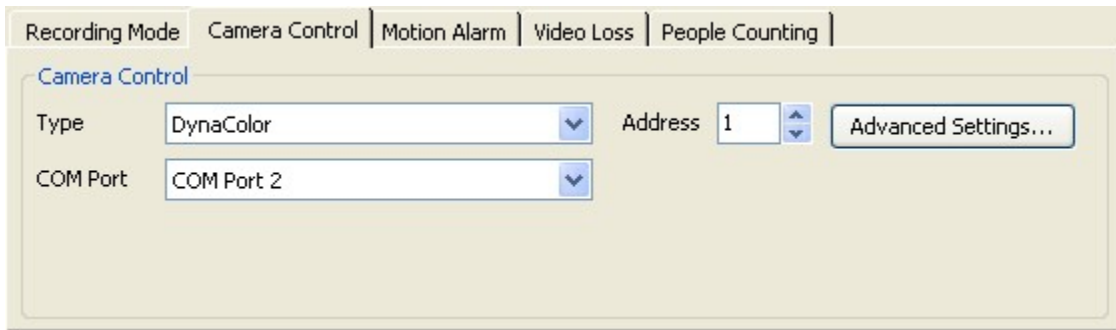
| | |
|---|--|
| Viewing the start and end times of a section | <p>Select the section by clicking on it. The start and end time of the selected section are displayed near the bottom left corner of the "Schedule" window.</p> <p>You can also mouse over the any part of the section and the time will be displayed near the bottom as well.</p> |
| Deleting a time period | Select the section by clicking on it and then click "Delete". |
| Deleting a schedule | Click the "Clear All Button" to delete the entire schedule. |
| Apply Schedule To All Cameras | When marked, this checkbox will apply the created schedule to all cameras that have been set to "Schedule" recording mode. |

2.1.6.3 Motion Alarm Only

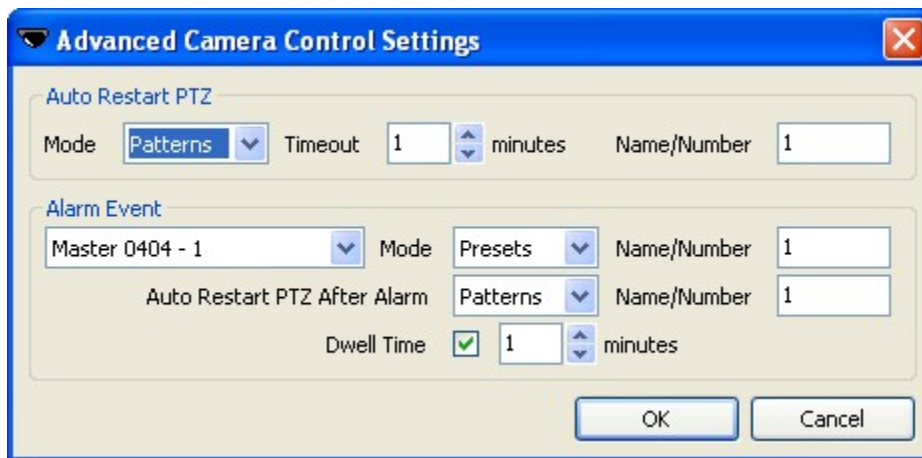
You can specify that a camera record in motion alarm mode only by selecting the "Motion Alarm Only" option from the Recording Mode drop-down. This will open the "Motion Alarm" configuration window. Motion Alarms can also be configured independently from the other recording modes by using the "Motion Alarm" tab.

2.1.7 Camera Control Tab

Some PTZ cameras can be operated remotely by Vigil Server. To configure a camera for remote control, select the "Camera Control" tab. Select the camera type, the COM port and the address. These settings are determined by the camera itself and the COM port on your DVR that the camera is connected.



| Camera Control | |
|--------------------------|--|
| Type | The type of PTZ camera that is connected to your DVR. |
| COM Port | The COM port that the PTZ camera is connected to your DVR. If a message titled "CONFLICT" appears below the camera type drop-down, then there is another camera or data terminal that is set up to use that COM port or the address specified. The name of the conflicting camera or data terminal is displayed at the end of the message. Determine which device is connected to the specified COM port and address and modify the camera settings appropriately. |
| Address | The address of the camera when multiple cameras are attached via the COM port. See your camera's user manual for this information. |
| Advanced Settings | Opens the "Advanced Camera Controls" window. |



| Auto Restart PTZ | |
|---|---|
| Enable Auto Restart PTZ for Vigil Server to automatically restart the pattern, preset or tour after the PTZ has been moved manually. | |
| Mode | Selects which action to apply after the timeout has been reached. Available options are "Patterns", "Presets", and "Tours". |
| Timeout | The number of minutes to wait after manual camera movement has stopped before the automatic restart. |
| Name/Number | Enter the name or number of the pattern, preset, or tour to automatically restart after the timeout period has elapsed. |
| Alarm Event | |

Allows you to set up a pattern, preset, or tour after an alarm input has been triggered. Can be used to turn a PTZ camera to a specific doorway for example. You must first assign the input to the specific PTZ camera in the "Alarms/Relays" tab in the "Settings" window.

| | |
|-------------------------------------|---|
| Input dropdown | Select which digital input to use as the trigger event. |
| Mode | Selects which action to apply after the alarm event has been triggered. Available options are "Patterns", "Presets", and "Tours". |
| Name/Number | Enter the name or number of the pattern, preset, or tour to apply on the alarm event. |
| Auto Restart PTZ After Alarm | After the alarm event is over, allows you to select a pattern, preset, or tour to run. |
| Dwell Time | If enabled, this time must elapse before the camera will auto restart its selected pattern, preset, or tour. |

2.1.8 Motion Alarm Tab

Motion Alarms allow you to configure powerful motion detection alerts that include full control over motion quantity, size, area, speed, and direction of motion. In addition to the alarm itself, a wide variety of alarm notification settings are available. To configure Motion Alarms, select the "Motion Alarm" tab from the camera settings screen. Motion Alarms can be used in addition to any other recording mode.



Note: If you have configured a camera for Motion Alarm Only recording, this is where you go to edit the settings.

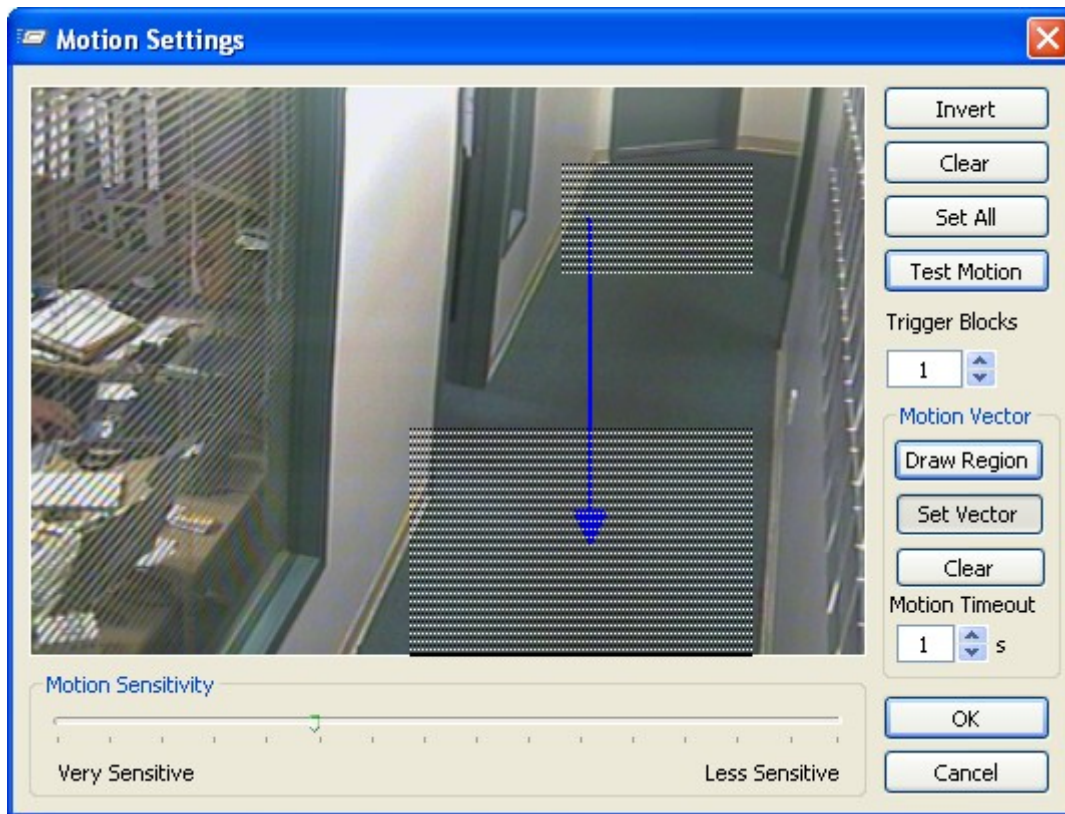


| | |
|--------------------------|--|
| Enabled | Enables a motion alarm for the current camera and opens the "Motion Alarm Settings" window. |
| Motion Settings | Opens the "Motion Alarm Settings" window that allows you to edit an existing alarm. |
| Advanced Settings | Opens the "Advanced Settings" window that allows you to configure notifications, trigger relays, schedule recording times, and more. |

When a motion alarm is detected, the DVR will record in alarm mode regardless of any other recording mode defined and an alarm event will be triggered.

2.1.8.1 Motion Alarm Settings

The “Motion Alarm Settings” window is an advanced version of the already discussed “Motion Settings” window. In addition to standard motion detection, the motion alarms add direction and speed sensitivity. This is accomplished by defining a motion vector with a timeout setting.



A motion vector is composed of two or more motion detection regions and one vector. A motion vector represents an object moving through specific areas of the image in a specific direction. If motion is detected in two of the regions in the general direction indicated by the vector arrow, the motion alarm will be triggered.

| | |
|-----------------------|--|
| Draw Region | Draws a motion detection region. An alternative to using the mouse and drawing by hand. |
| Set Vector | Allows you to draw a vector direction by clicking and dragging the mouse in the direction that will trigger the motion alarm. An arrow will be drawn on the preview screen. |
| Clear | Removes the applied motion vector. |
| Motion Timeout | Determines the speed required to trigger the alarm motion. Motion must be detected in two or more of the regions in the desired direction within this time. If the object moves so slowly that it does not move from one region to the next within the “Motion Timeout” period, then a motion alarm will not be triggered. |



Note: Regions with sides that are touching or overlapped are detected as one region. To use a motion vector, you must have at least 2 motion regions that do not border each other.



Note: If there is no motion vector arrow specified, any of the selected regions will trigger a motion alarm.



Motion vector regions with motion detected are identified with a **red** square. If the camera is set to record "Motion Alarm Only", then the camera will not record individual motion vector regions that are detected, or multiple regions that are detected but not in the correct order.

If the camera is set to record "Motion", it will record using the motion settings set up in the "Recording Mode" tab.



When the motion alarm is triggered, the camera records in alarm mode and the motion vector regions are not displayed.

2.1.8.2 Advanced Settings

Motion alarms also include the ability to schedule the alarm recording period, trigger a relay, and notify operators locally, remotely, or by e-mail. To access the advanced settings for motion alarms, click the "Advanced Settings" button from the "Motion Alarm" Tab.

2.1.8.2.1 General Tab

Schedule

Enabled

Check the “Enabled” box to record a schedule in which the motion alarm can only be triggered. Click the “...” button to open the “Schedule” window or edit an existing motion alarm schedule.

Output Relay

Output Relay

When an output relay is selected, the relay is triggered when the motion alarm criteria is met.

Trigger

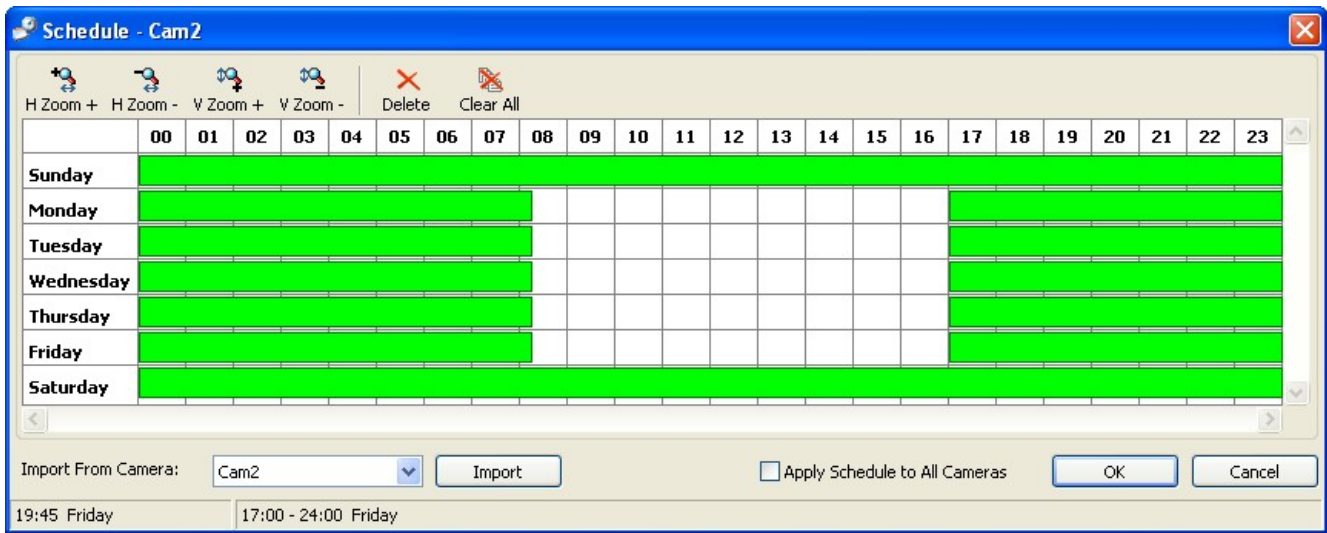
There are two trigger types: a momentary trigger of 2 seconds or a latched trigger which will stay triggered until motion stops.

Post Motion Record

The length of time that the camera continues to record after the motion alarm has stopped being detected.



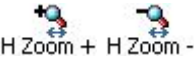
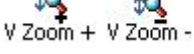
Note: Creating or modifying the motion alarm schedule will not affect the schedule created by cameras in recording mode “Schedule”. They are both independent of each other.



To add a time period where the motion alarm is enabled, click and drag across the desired time slot. Areas that are blank (no color) will disable the motion alarm event for those time periods.



Note: Blank areas will not trigger a motion alarm, however, depending on the recording mode, they will still record footage. This schedule only affects the motion alarm itself.

| | |
|---|---|
| Motion Alarm Enabled | Sections that have motion alarm enabled are colored green . |
|  | Expands and contracts the time graph horizontally. This allows for better precision in setting your time periods. |
|  | Expands and contracts the time graph date graph vertically. |



Note: The smallest time interval that can be used is 15 minute periods.

| | |
|---|---|
| Moving a time period | Click and hold the "Shift" key and click-and-drag the section. |
| Copying a time period | Click and hold the "Ctrl" key and click and drag the section. |
| Changing the start or end time of a period | Select the section by clicking on it and then click and drag the right or left edge of the section. |
| Importing a schedule from another camera | Select the camera from the "Import From Camera" dropdown box list and then click "Import". |

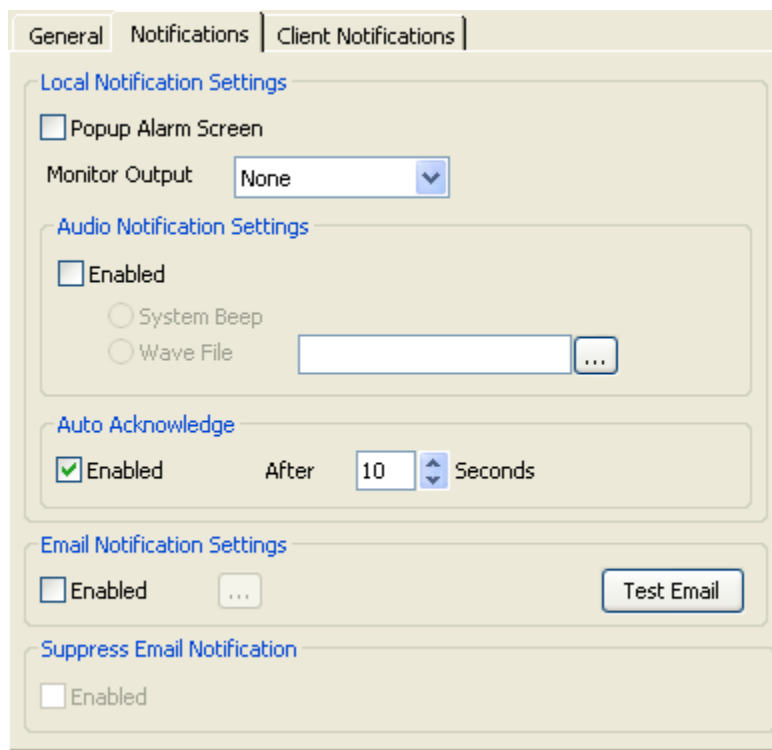


Note: Importing the motion alarm schedule of another camera will overwrite the schedule of the current camera.

| | |
|---|---|
| Viewing the start and end times of a section | Select the section by clicking on it. The start and end time of the selected section are displayed near the bottom left corner of the "Schedule" window. You can also mouse over the any part of the section and the time will be displayed near the bottom as well. |
| Deleting a time period | Select the section by clicking on it and then click "Delete". |
| Deleting a schedule | Click the "Clear All Button" to delete the entire schedule. |
| Apply Schedule To All Cameras | When marked, this checkbox will apply the created schedule to all cameras that have schedule motion alarm recording enabled. This will not affect other cameras that have disabled the schedule for motion alarm. |

2.1.8.2.2 Notifications Tab

Allows you to configure various notifications, locally or via email, when a motion alarm is triggered.



Local Notification Settings

A local notification is popup alarm screen that is displayed locally on the DVR.

| | |
|---------------------------|---|
| Popup Alarm Screen | Select this option to have the "Alarm" window automatically displayed when a motion alarm is triggered. |
| Monitor Output | Select an analog output monitor to display the triggered camera at the time of the motion alarm. |

Audio Notification Settings

Enable

Enables audio notification when a motion alarm is triggered. Two audio notification types are available:

- **System Beep** - Plays a system beep
- **Wave File** – Click the “...” button to select a WAV file that will be played.

Auto Acknowledge

Enable

Enables to automatically acknowledge motion alarm notifications after the specified number of seconds.

Email Notification Settings

When email notification is enabled, an email is sent to all recipients informing them that a motion alarm has occurred.

Enabled

Enables email notification. Click the “...” button to configure the email settings and email notification recipients.

Test Email

Sends a test email based on your notification settings and email configuration.

Email Settings

Email Header Options

From (Name): From (Address):

Subject:

Email Body:

Attach Still Shot

Recipients | CC | Bcc

Recipients

+ Add Edit Delete

Address

admin@website.com

OK Cancel

Email Header Options


From (Name)

The name of the entity that will be sending the emails.

| | |
|--------------------------|--|
| From (Address) | The email address of the entity that will be sending the emails. |
| Subject | This text will be the subject line of the emails. |
| Email Body | This text will be included in the body of the emails. |
| Attach Still Shot | Allows a still image from that camera to be attached to the outgoing email. The image is from the beginning of the motion alarm event. |

Recipients

These are the lists of recipients who will receive motion alarm notifications. There are three lists of recipients, direct recipients, carbon copied recipients, and blind carbon copied.

| | |
|---------------|--|
| Add | <p>Allows you to add another email address to the recipient list.</p>  |
| Edit | Edits the selected email address. |
| Delete | Prompts to remove the selected email address from the recipients list. |

Suppress Email Notification

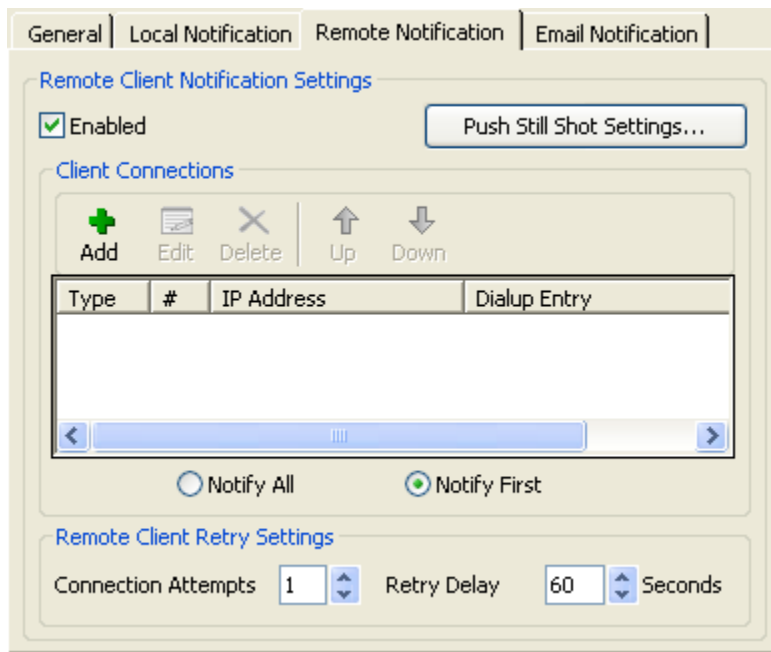
| | |
|----------------|---|
| Enabled | This option, which will only work in conjunction with enabling Popup Alarm Screen, will prevent a flood of email alerts being sent out. It will only send out one email alert until the alerts have been acknowledged on the Popup Alarm screen. If alerts have been set to auto acknowledge, it will send out an email after each period of auto acknowledgement has passed. |
|----------------|---|



Note: For email to function properly, a valid SMTP Server must be configured in the "DVR Settings" tab.

2.1.8.2.3 Client Notifications Tab

Client notification sends motion alarm notifications to specified Vigil Client(s).



Remote Client Notification Settings

| | |
|------------------------------------|---|
| Enabled | Enables remote client notification. |
| Push Still Shot Settings... | When configured, a still shot from the selected cameras will be uploaded to the locations specified when a motion alarm is detected. Please see section 6.1.4 Push Still Shot to Server for more information. |

Client Connections

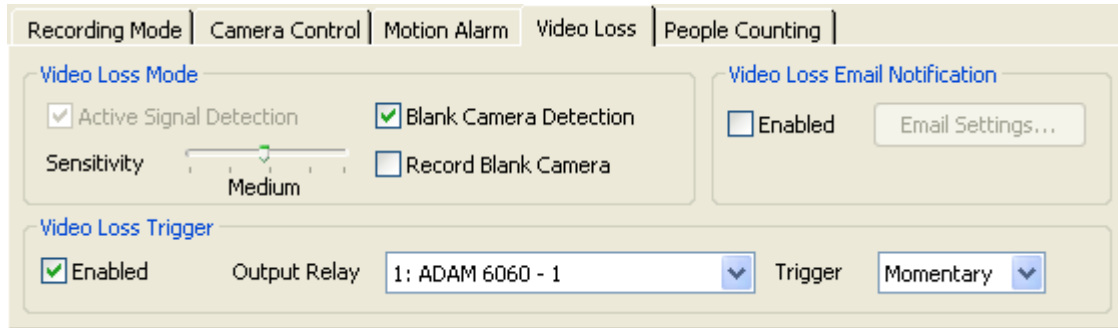
A list of remote computers running Vigil Client

| | |
|------------------|--|
| Add | <p>Allows you to add another remote client to the notification list. To use the dialup feature, the dialup connection must be created in Windows.</p> |
| Edit | Edits the selected client connection allowing you to change the IP address or dialup connection. |
| Delete | Prompts you if you wish to deletes the selected client connection. |
| Up / Down | Moves the selected client connection up or down. This is useful to set which client receives the motion alarm notifications when "Notify First" is selected. |

| | |
|----------------------------|---|
| Notify All / First | Allows you to select if all client connections receive motion alarm notifications or only the client connection at the top of the list. |
| Connection Attempts | The number of attempts to retry sending a motion alarm to a client connection. |
| Retry Delay | Number of seconds to wait between retries. |

2.1.9 Video Loss Tab

If the video signal is lost from an enabled camera, you can specify an action to take in the "Video Loss" tab.

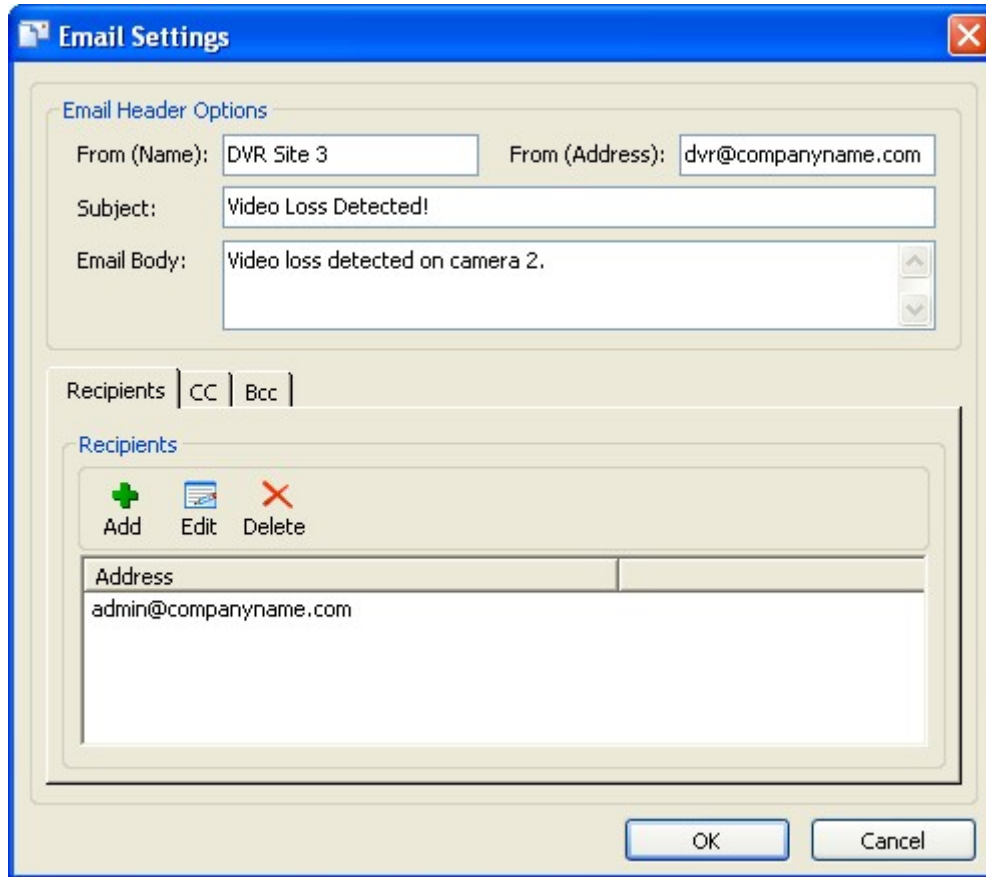



| Video Loss Mode | |
|--------------------------------------|--|
| Active Signal Detection | Enables hardware signal loss detection if the capture card has support for this feature. |
| Sensitivity | Allows adjustment of the software signal loss detection algorithm. |
| Blank Camera Detection | Enables software signal loss detection. Can be used in addition or in place of hardware signal loss detection. |
| Record Blank Camera | Enables the DVR to continue recording during signal loss detection events. Normal operation turns off recording for video feeds with no signal detected. |
| Video Loss Email Notification | |
| Enabled | Enables email notification for video loss events for the selected camera. Click "Email Settings..." to configure email settings and email notification recipients. |
| Video Loss Trigger | |
| Enabled | Enables an output relay to be triggered when a video loss is detected for the selected camera. |
| Output Relay | Specifies which detected relay to trigger. |
| Trigger | There are two trigger types: a momentary trigger of 2 seconds or a latched trigger which will stay triggered until video feed is recovered. |

2.1.9.1 Video Loss Email Notification

When enabled and live video is lost for the selected camera, email is sent to recipients specified in the Email Settings.

Click the "Email Settings" button to open the Email Settings screen. In the Email Settings section, enter the details for the email that will be sent.



| Email Header Options | |
|---|---|
| From (Name) | The name of the entity that will be sending the emails. |
| From (Address) | The email address of the entity that will be sending the emails. |
| Subject | This text will be the subject line of the emails. |
| Email Body | This text will be included in the body of the emails. |
| Recipients | |
| These are the lists of recipients who will receive video loss notifications. There are three lists of recipients, direct recipients, carbon copied recipients, and blind carbon copied. | |
| Add | <p>Allows you to add another email address to the recipient list.</p> <div style="text-align: center;">  </div> |
| Edit | Edits the selected email address. |

Delete

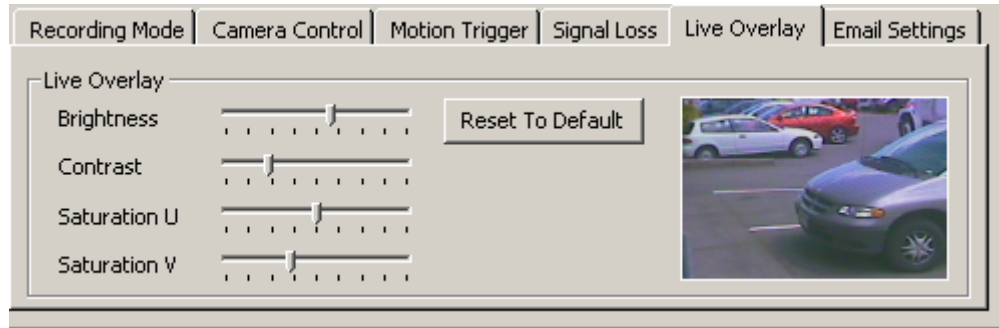
Prompts to remove the selected email address from the recipients list.



Note: For email to function properly, a valid SMTP Server must be configured in the “DVR Settings” tab.

2.1.10 Live Overlay Tab

For live overlay DVR systems, live overlay camera settings are available. These settings modify the appearance of the live overlay image.



Live Overlay

| | |
|-------------------------|---|
| Brightness | Increases/decreases the brightness of the image recorded. |
| Contrast | Increases/decreases the contrast of the image recorded. |
| Saturation U / V | Use the Saturation U and Saturation V slide bars to adjust the U and V colour difference signals used in YUV colour format. |
| Reset to Default | Resets live overlay values to default. |

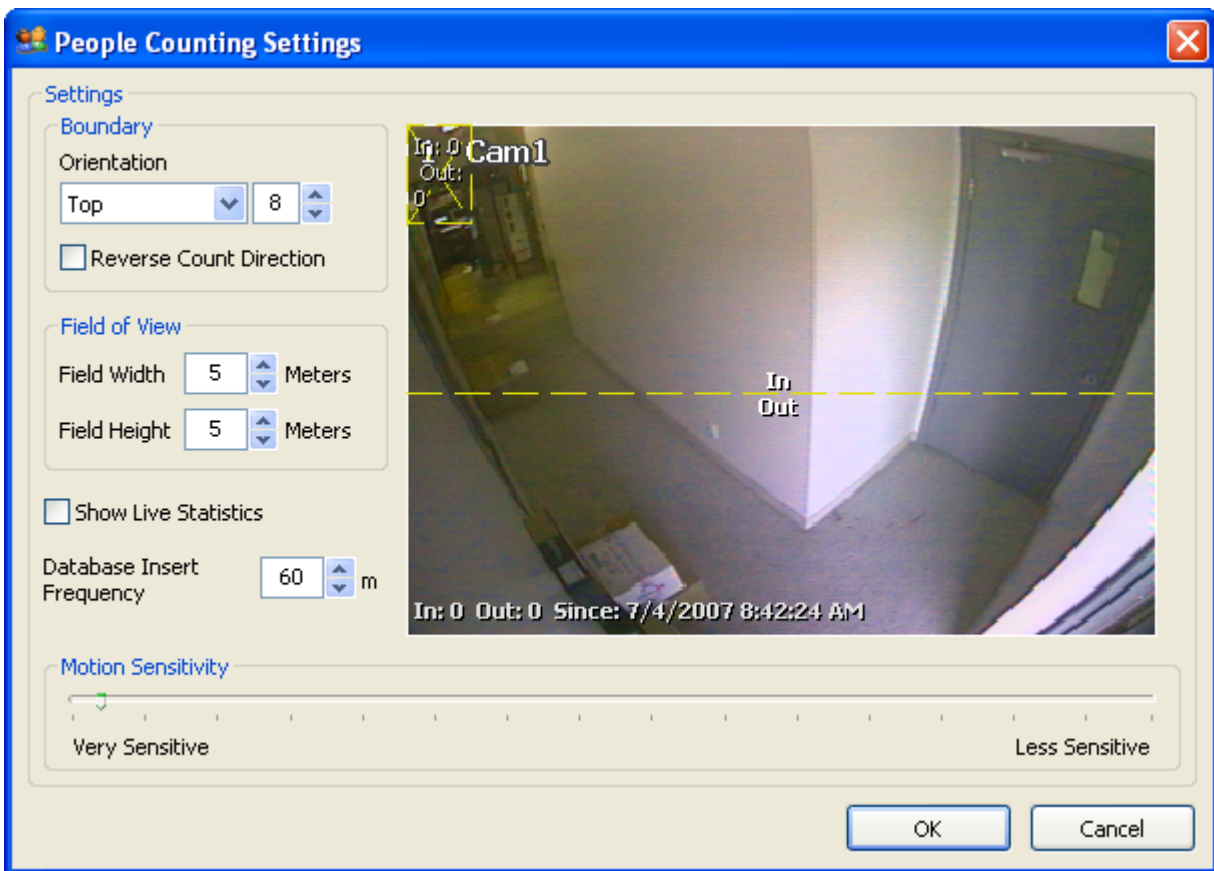
2.1.11 People Counting Tab

A motion detection feature allows entities crossing a threshold to be counted.



People Counting

| | |
|---------------|---|
| Enable | Enables people counting. Click “Settings...” to configure people counting settings for the selected camera. |
|---------------|---|



Moving bodies are outlined by a dashed box on the preview display. An entrance or exit is defined when the centre of the boxes cross from one side of the boundary line to the other. In/out counters are attached to each detected person and total count is displayed at the bottom of the preview window.

| Boundary | |
|----------------------------------|--|
| Orientation | These settings define the location of the boundary line. The boundary line is displayed on the live image as a dashed line. If the centre point of a moving entity crosses this boundary line, it will be counted as an in/out depending on the direction of the crossing. |
| Reverse Count Direction | Changes the way in/outs are counted by reversing the direction across the boundary line. |
| Field Of View | |
| Field Width/Height | The "Field Width" and "Field Height" settings define the physical size of the field of view of the camera. This provides a reference point for the motion detection algorithm to calculate the velocities of objects and distinguish multiple moving bodies. |
| Show Live Statistics | Specifies that the people counting overlays will be drawn on the camera view in the Live Viewer. These overlays are not recorded with the footage. |
| Database Insert Frequency | People counting tracks data for this period of time before writing to the database. Information isn't displayed in the People Counting window until the database has been written to. Certain events will also cause immediate writing to the database, such as closing the application or applying a settings change, even if elapsed time hasn't occurred. |
| Motion Sensitivity | Specifies the motion detection sensitivity. |

2.2 DVR Settings Tab

The DVR Settings tab contains settings related to the software and hardware configuration of Vigil Server.

Camera Setup | DVR Settings | Media Drives | COM Ports | Users | Relays/Alarms | Data | Audio

Site Name

Site Name:

General | Startup | Live | Search | Cameras | Clients | Sequence | Hardware | Proxy | Help Menu

Offsite Backup on Alarm

Enable Offsite Backup

Pre Alarm Backup: Mins

Post Alarm Backup: Mins

Any Alarm Input

SMTP Server

SMTP Server Location:

Requires Authentication

Requires Authentication

User Name: Password:

Central SQL Database

Video/Audio SQL Server Location: Port:

POS Data SQL Server Location: Port:

DVR ID:

| | |
|------------------|---|
| Site Name | The name of the DVR Site where the Vigil Server is located. The site name is included when saving still images and is also displayed in DVR Health Monitor. |
|------------------|---|

Offsite Backup on Alarm


| | |
|--------------------------------|---|
| Enable Offsite Backup | Enables footage to be automatically exported to the specified offsite location when an alarm occurs. Click “...” to browse to a network location where the footage will be saved. Alternatively, you can type in the location directly into the text box in the following format: \\IPADDRESS\ShareName |
| Alarm Input | Select which specific alarm input that will cause the offsite backup to begin. You can also specify for the backup to occur on any alarm input. |
| Pre / Post Alarm Backup | Specifies the number of minutes of footage prior to and after the alarm event to save to the backup location respectively. |

SMTP Server
To send notification emails, Vigil Server needs to connect with a SMTP server.

| | |
|--------------------------------|--|
| SMTP Server Location | The IP address or network name of the SMTP server. |
| Test Email | Opens a window that allows you to test the email functionality to ensure that email notifications will work correctly. |
| Requires Authentication | If the SMTP server requires authentication, enable this setting and enter a valid user name and password. |

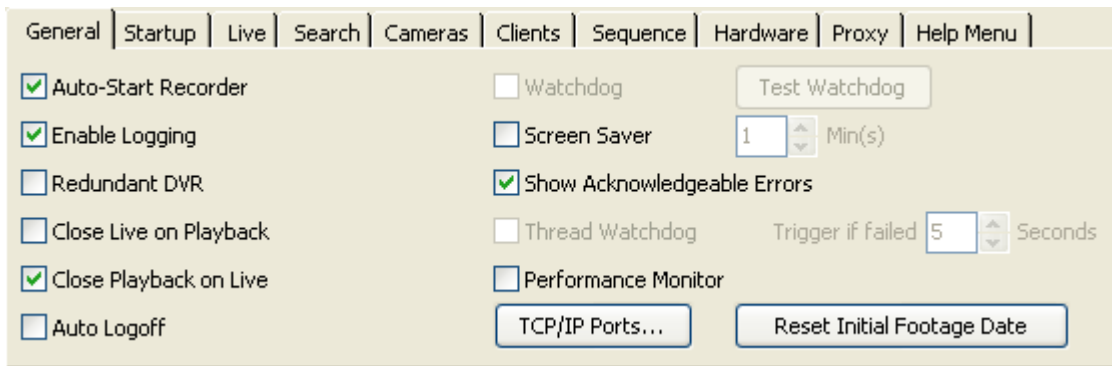
Central SQL Database

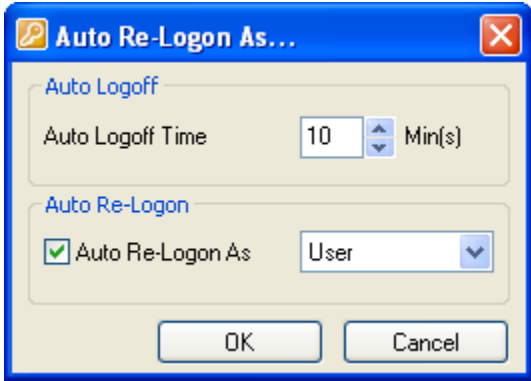
The central SQL database feature is designed for DVRs with extended storage, which can cause the DVRs SQL database to exceed the 2GB limitation of the MSDE version of SQL which is used in Vigil Server.





 **Warning:** Qualified technicians only should modify Central SQL Database settings. Incorrect use of this utility can cause system failure. If the DVR is experiencing database issues, please contact your system administrator or 3xLogic technical support.

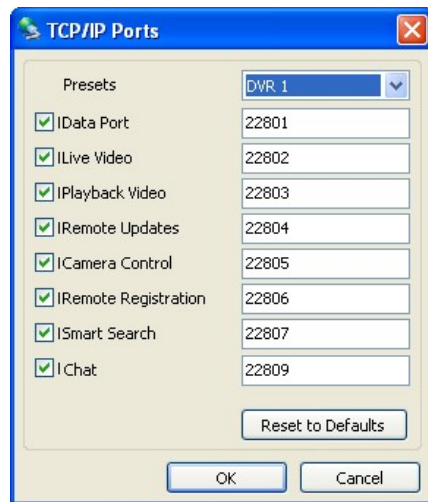
| | |
|----------------------------|--|
| Video/Audio | Enables video and audio information to be stored on a central SQL database. |
| POS Data | Enables POS data information to be stored on a central SQL database. |
| SQL Server Location | The network path of the central SQL database. It is possible to use two different servers for each video/audio and POS data by inputting 2 different server locations. |
| Port | SQL Server port being used on the server running the central SQL database |
| DVR ID | Each DVR connecting to the central SQL database must have a unique DVR ID. |

2.2.1 General Tab



| | |
|-------------------------------|---|
| Auto-Start Recorder | Enables the DVR to start recording footage as soon as the Vigil Server program is launched. If not enabled, the user must manually start the recorder using the "Recording Controls". |
| Enable Logging | Enables Vigil Server log files. |
| Redundant DVR | A redundant DVR is used for backup recording in case of DVR failure. If "Redundant DVR" is enabled, the Sentinel service will not display an error if there is no footage recorded in 24 hours. Redundant DVRs are normally used only in systems set up with DVR Health Monitor configured for failover. Please contact 3xLogic for more information about this feature. |
| Close Live On Playback | When enabled, opening the Search and Playback window will close the Live Viewer window to conserve system resources. |
| Close Playback on Live | When enabled, opening the Live Viewer closes the Search and Playback window to conserve system resources. |
| Auto Logoff | <p>Once enabled, you can configure a time period to automatically log off the current user. You can also setup an auto re-logout for another use account. For example you can login as an Administrator, but if left idle for 10 minutes, the account will be logged in as a regular user level.</p>  |
| Watchdog | When enabled, the watchdog circuit on the video capture card is used to verify that Vigil Server is responsive. If the software becomes unresponsive the watchdog will reboot the DVR. You can test that the watchdog circuit is functioning by clicking the "Test Watchdog" button. The DVR should reboot within a couple of minutes if the watchdog is functioning correctly. |

| | |
|---|--|
| <p>Screen Saver</p> | <p>When enabled, the Vigil Screen Saver is displayed after the specified number of minutes of inactivity on the system.</p> <p> Note: The Vigil Server system will continue to record while the screensaver is displayed.</p> |
| <p>Show Acknowledgeable Errors</p> | <p>When this feature is enabled and an error is recorded in the Audit Log, the “Error Alert” window is displayed until the error has been acknowledged. In the “Error Alert” window, click on “Audit Log Analyzer” to view the error alerts, click “Acknowledge All” to acknowledge the error alerts, or click “Remind Me Later” to have the “Error Alert” window displayed again after the specified number of minutes.</p> <div data-bbox="410 520 1547 888" style="border: 1px solid gray; padding: 10px;">  <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div data-bbox="946 594 1463 653"> <p>Audit Log Analyzer – View the error alerts</p> </div> <div data-bbox="946 657 1463 716"> <p>Acknowledge All – Acknowledges all error alerts.</p> </div> <div data-bbox="946 720 1511 814"> <p>Remind Me Later – The “Error Alert” window will open again after the specified number of minutes.</p> </div> </div> </div> <p> Note: When this feature is first enabled, the error alert screen may be displayed, alerting of errors that have happened in the past. These errors may have already been resolved.</p> |
| <p>Thread Watchdog</p> | <p>For systems utilizing the XECAP, XED, or ZEUS series capture cards, enabling this feature will make Vigil Server monitor video request threads. If a thread stops responding after the configured amount of time, it will be restarted. This can help with video signals that freeze.</p> |
| <p>Performance Monitor</p> | <p>Enables Vigil Server performance monitoring for diagnostic purposes. Continuous use of this function will adversely affect DVR performance.</p> <p> Warning: Do not use the Performance Monitor unless specifically asked to do so by your support associate. Do not turn on the Performance Monitor for an extended period of time.</p> |
| <p>TCP/IP Ports...</p> | <p>Allows the configuration of the TCP/IP ports used by Vigil Server to connect with Vigil Clients.</p> |



Presets – Select a preset from the dropdown list to change all of the ports to that preset.

Change a Port – Type in a port number directly into the text box to set a custom port number.

Disable a Port – Uncheck the box beside the port. If a port is disabled, Vigil Clients connecting to the server will be unable to use the feature corresponding to that port.

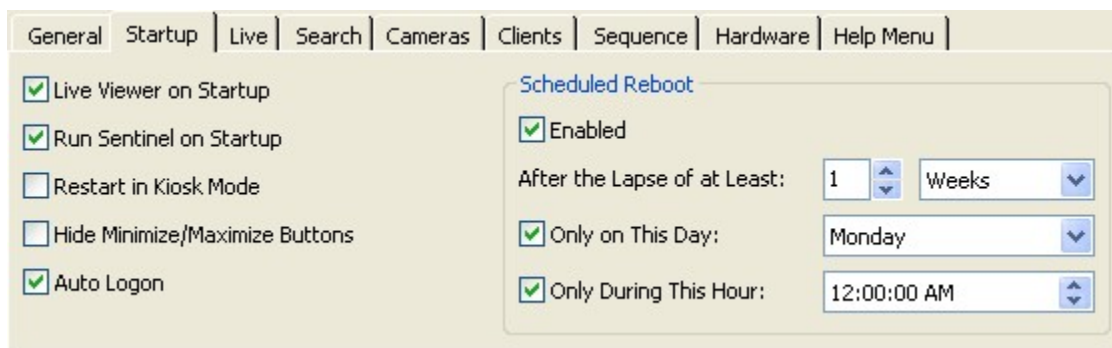
Reset to Defaults – Click to reset the ports to their default settings.

Reset Initial Footage Date

The DVR Health Monitor software uses the initial footage date in Vigil Server to determine if the DVR is recording the proper number of days of video storage. Click the “Reset” button to reset the cached date of the first video footage recorded by the DVR to the oldest footage currently on the DVR. Please refer to the DVR Health Monitor software user’s guide or contact 3xLogic for more information.

2.2.2 Startup Tab

The “Startup” tab configures the behaviour of Vigil Server on startup as well as schedule reboots.



Live Viewer on Startup

When enabled, the Live Viewer window will open as soon as Vigil Server starts.

Run Sentinel on Startup

Enables the Sentinel program to run on startup. The Sentinel program monitors critical drive information and warns the user of the following conditions:

- **No footage recorded in the last 24 hours** – If there is no footage recorded on the data drive in the last 24 hours, the Sentinel displays a warning.
- **Low disk space on data drives** – If there is less than 10MB of space left on the data drives, the Sentinel displays a warning.

Restart in Kiosk Mode

Enables Kiosk mode. In Kiosk mode Vigil Server replaces the Windows shell program so that the Windows desktop, taskbar, Start button and other Windows shell features are not available.

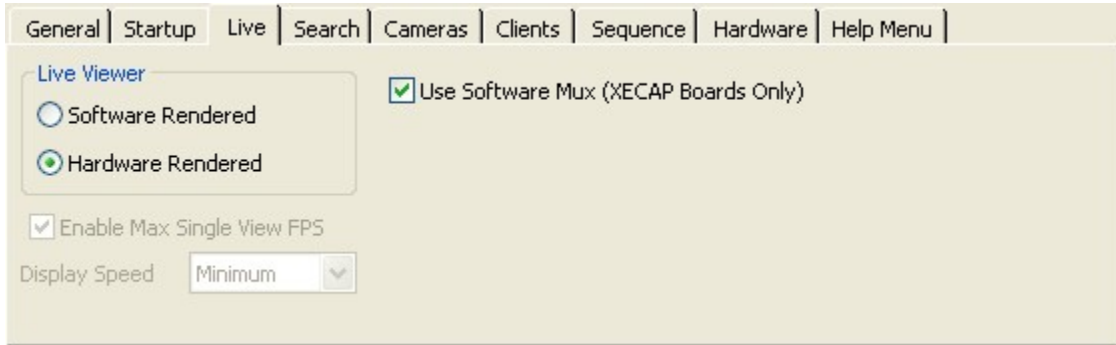
Hide Minimize Maximize Buttons

When selected, both the minimize and maximize buttons on the Vigil Server window are not available.

| | |
|-------------------------|---|
| Auto Logon | When this is enabled, a dialog box prompts for a username and password. The username and password entered will be used to log into Vigil Server automatically when the program is launched. If this is disabled, Vigil Server will prompt for a login every time it starts. |
| Scheduled Reboot | When enabled, the DVR will reboot automatically after the specified time lapse occurred and during the day and time indicated. |

2.2.3 Live Tab

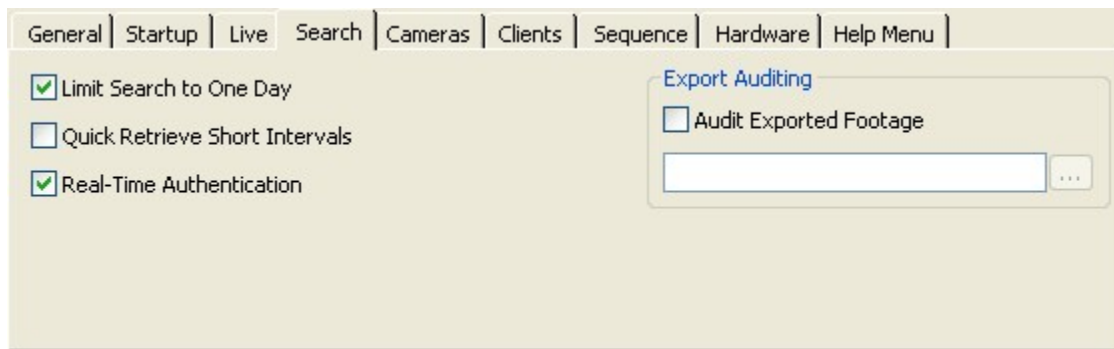
The "Live" tab controls features of the Live Viewer.



| Live Viewer | |
|-----------------------------------|---|
| Software Rendered | <p>This is the default settings for DVRs that are not equipped with a Live Overlay card. When selected, images in the Live Viewer will be rendered through software. The software rendering also displays a number of features not available to the hardware rendering:</p> <ul style="list-style-type: none"> • Display up to 32 camera feeds (up to 16 simultaneously) • Display of network camera video feeds • Information overlays such as recording status and people counting. • Fully configurable Live Viewer camera display • Zooming displayed cameras • TV Output and Analog Multiplexing |
| Hardware Rendered | <p>This is the default setting for Live Overlay equipped DVRs. When selected, images are rendered in real-time, at full camera frame rate in the Live Viewer. When "Hardware Rendering" has been selected, you have the option of displaying either Software or Hardware rendered cameras from the Live Viewer dropdown on the main window toolbar.</p> |
| Enable Max Single View FPS | <p>When enabled and using "Software Rendering", when viewing a single camera in Live Viewer, the display rate will be at the maximum number of frames per second available from the video capture card.</p> |
| Display Speed | <p>Allows the selection of the display speed for "Software Rendered" cameras:</p> <p>Minimum - Displays cameras at 1 FPS</p> <p>Medium – Displays cameras at a frame rate between 1FPS and the maximum setting. The medium setting is CPU intensive.</p> <p>Maximum - Display cameras as fast as the DVR is capable. The maximum setting is very CPU intensive.</p> |
| Use Software Mux | <p>If your DVR is configured with an XECAP video capture card, enabling this setting will allow a multiplexed video signal on the second analog output monitor.</p> |

2.2.4 Search Tab

The "Search" tab includes parameters for modifying the search behaviour of Vigil Server.



| | |
|---------------------------------------|---|
| Limit Search To One Day | When enabled, the "Search" window will be limited to performing searches a single day at a time. To enable multi-day searches, uncheck this box. |
| Quick Retrieve Short Intervals | When enabled, the "Quick Retrieve" dropdown list in the "Search" window displays short intervals of 15 and 30 minutes as well as the regular selection. |
| Real-Time Authentication | When enabled, video footage is checked for authenticity while playing back. |
| Export Auditing | Enables mandatory auditing of all footage exports. Click the "..." button or type in the path where the auditing text files will be saved. |


2.2.5 Cameras Tab

The "Cameras" tab specifies the type of cameras being recorded.

| | | |
|--|-------------------------|---|
| | A/C Cameras | When "A/C Cameras" is enabled, Vigil Server is set up to record footage from A/C powered cameras. If it is disabled, it is set up to record footage from D/C powered cameras. |
| | NTSC/PAL Cameras | Select the appropriate broadcast standard for your cameras |

2.2.6 Clients Tab

The "Clients" tab indicates how Vigil Client connections should be handled.

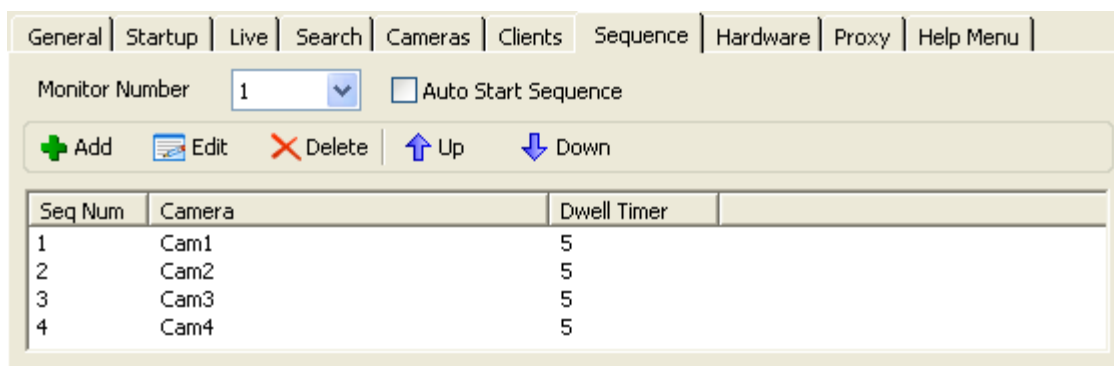
| | | | | | |
|--|--|----------------------------|---|--------------------------------|--|
|  | <table border="1"> <tr> <td data-bbox="673 220 933 388">Resolve Client Name</td> <td data-bbox="950 220 1542 388">When enabled, the IP addresses of clients who log in remotely to the Vigil Server are queried to find the computer name of the remote client.</td> </tr> <tr> <td data-bbox="673 388 933 514">Max Network Connections</td> <td data-bbox="950 388 1542 514">Sets the maximum number of remote connections allowed to access Vigil Server at the same time.</td> </tr> </table> | Resolve Client Name | When enabled, the IP addresses of clients who log in remotely to the Vigil Server are queried to find the computer name of the remote client. | Max Network Connections | Sets the maximum number of remote connections allowed to access Vigil Server at the same time. |
| Resolve Client Name | When enabled, the IP addresses of clients who log in remotely to the Vigil Server are queried to find the computer name of the remote client. | | | | |
| Max Network Connections | Sets the maximum number of remote connections allowed to access Vigil Server at the same time. | | | | |



Note: Each Live Viewer window, playback window, and settings screen takes up one or two "connections" to the Server. A minimum setting of 20 is recommended.

2.2.7 Sequence Tab

The "Sequence" tab configures the camera display sequences for the analog output monitors. Only analog video feeds can be added to a sequence. This is due to hardware limitations on the capture cards.




| Seq Num | Camera | Dwell Timer | |
|---------|--------|-------------|--|
| 1 | Cam1 | 5 | |
| 2 | Cam2 | 5 | |
| 3 | Cam3 | 5 | |
| 4 | Cam4 | 5 | |

| | |
|----------------------------|--|
| Monitor Number | Selects which analog output monitor to create or modify its sequence. |
| Auto Start Sequence | When enabled, the sequence for the selected analog output monitor is started automatically when Vigil Server starts. |
| Add | Adds a new camera to the sequence with a specified dwell (display) time. |
| Edit | Allows you to modify the dwell time of the selected camera. |
| Delete | Removes the selected camera from the sequence |
| Up / Down | Moves the selected camera up / down in the sequence. |

2.2.8 Hardware Tab

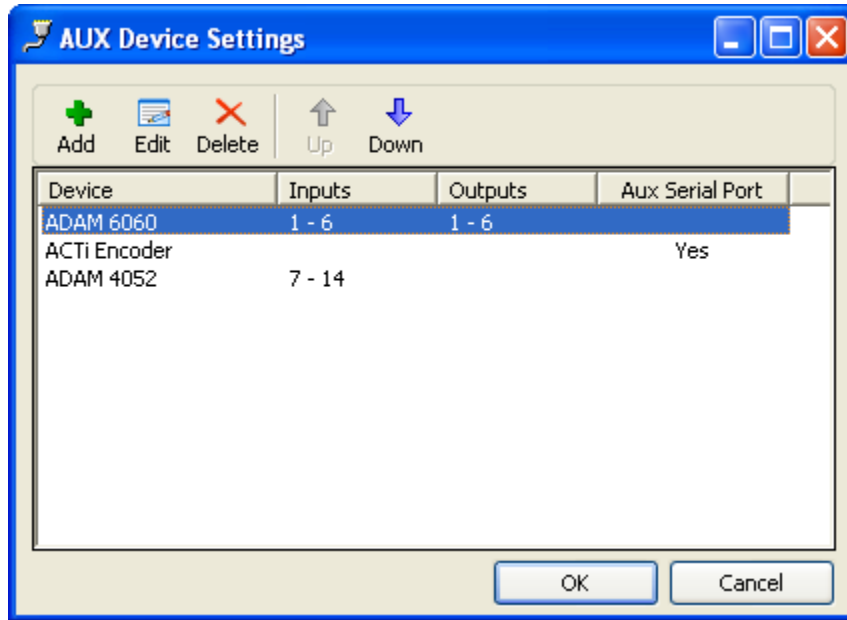
The "Hardware" tab informs Vigil Server of the specific hardware you may have installed as well as configures the automated time synchronization.

| <p>Max Allowed PCI Bandwidth</p> | <p>This setting restricts the amount of data the video capture card is allowed to push through the PCI bus. The default setting is 20 or 22.5 MB/s, depending upon the capture card. Setting this too high will result in poor performance of the DVR.</p> <p> Warning: If this setting is changed, undesired side effects may result. Please consult 3xLogic technical support for more information before changing this setting.</p> | | | | | | | | | | | | |
|---|--|----------------|------------|----------|---------------|---------------|-------------|------------------|--------------|----------------|------------------|----------------|-------------|
| <p>Max Total IP Camera FPS</p> | <p>Restricts the combined total frame rate for all network cameras. The default setting is 64 FPS. Setting this too high will result in poor performance of the DVR.</p> | | | | | | | | | | | | |
| <p>Keyboard Settings</p> | <p>Allows you to add, edit, or remove a special camera control keyboard, such as the Pelco KBD300A.</p> | | | | | | | | | | | | |
| <p>AUX Settings</p> | <p>Opens the AUX Device Settings window for configuring other attached devices such as DIO boards or encoders.</p> | | | | | | | | | | | | |
| <p>Synchronize Clock With</p> | <p>Vigil Server can connect to a time server to synchronize the DVR time. When enabled, you can select to sync with either an NTP server or to another PC that can respond to a NET TIME request. You must specify which NTP or NET TIME PC to synchronize with.</p> <p>Here are some suggested NTP servers to utilize:</p> <table border="1" data-bbox="397 1430 1544 1682"> <thead> <tr> <th>DNS Name</th> <th>IP Address</th> <th>Location</th> </tr> </thead> <tbody> <tr> <td>time.nist.gov</td> <td>192.43.244.18</td> <td>Boulder, CO</td> </tr> <tr> <td>time-nw.nist.gov</td> <td>131.107.1.10</td> <td>Washington, DC</td> </tr> <tr> <td>time.windows.com</td> <td>207.46.232.189</td> <td>Redmond, WA</td> </tr> </tbody> </table> | DNS Name | IP Address | Location | time.nist.gov | 192.43.244.18 | Boulder, CO | time-nw.nist.gov | 131.107.1.10 | Washington, DC | time.windows.com | 207.46.232.189 | Redmond, WA |
| DNS Name | IP Address | Location | | | | | | | | | | | |
| time.nist.gov | 192.43.244.18 | Boulder, CO | | | | | | | | | | | |
| time-nw.nist.gov | 131.107.1.10 | Washington, DC | | | | | | | | | | | |
| time.windows.com | 207.46.232.189 | Redmond, WA | | | | | | | | | | | |
| <p>Test NTP / Sync Now</p> | <p>Attempts to synchronize the time on the DVR system immediately. It may take a few minutes to complete the request.</p> | | | | | | | | | | | | |
| <p>View Report</p> | <p>Opens the Windows Event Viewer. You can use this to verify that the time synchronization took place correctly. Open the System Event Log and look for an entry with Source "W32Time" at the top of the list.</p> | | | | | | | | | | | | |



Note: The NTP test will not record an event in the Windows Event Log if the time is already correct.

2.2.8.1 Configuring AUX Devices



Adds a new AUX device to the list.

Type – The particular type of DIO device you are adding:

Add

ACTi Encoder

Network Settings

IP Address:

Port:

User Name:

Password:

Timeout:

Specifies you are attaching an ACTi encoder device. Input the connection information.


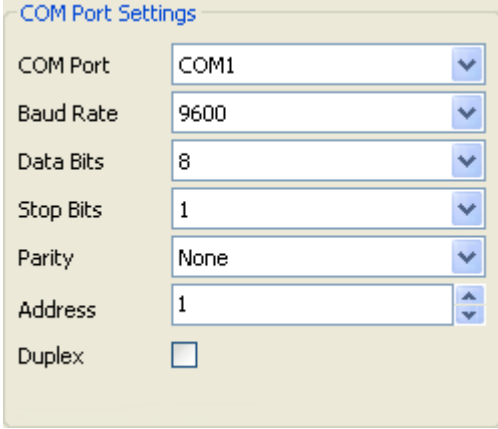
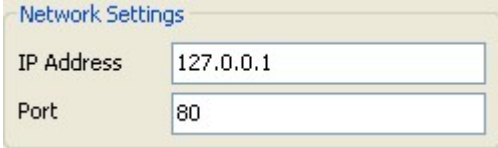
Comart DIO

DIO Boards

Master:

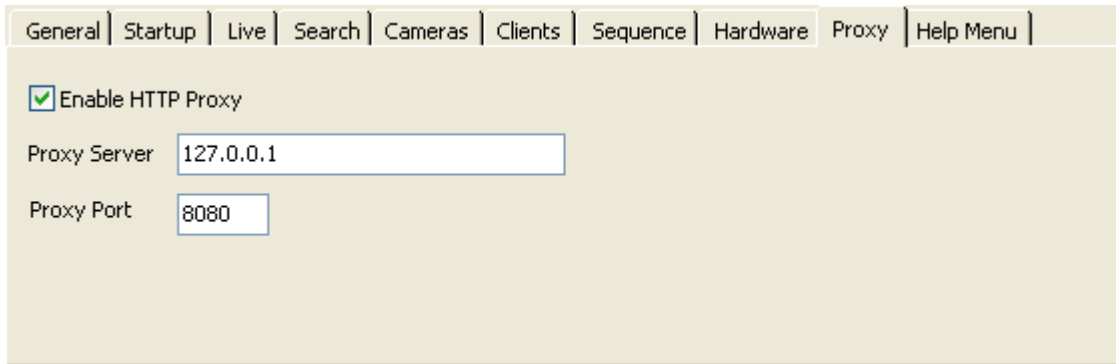
Slave:

Specifies an onboard DIO board (optional on certain capture boards). Select which configuration and DIO model number.

| | | |
|----------------------|--|---|
| | <p>Comart USB 1616-A</p> |  <p>Specifies a USB attached DIO board. Enabling System Beep causes the speaker located on the USB DIO to chirp on events such as triggered relays and opened/closed alarm inputs.</p> |
| | <p>ADAM 4052 / 4068</p> |  <p>Adds an ADAM 4068/4052H COM port attached DIO device. Specify COM port settings here.</p> |
| | <p>ADAM 6060</p> |  <p>Adds an ADAM 6060 network attached DIO device. Specify TCP/IP settings here.</p> |
| <p>Edit</p> | <p>Allows for changes to the configuration of the selected DIO device. Uses similar windows as the Add function.</p> | |
| <p>Delete</p> | <p>Removes the selected DIO device from the list.</p> | |
| <p>Up</p> | <p>Moves the selected DIO device up the list and changes the numbering order of the inputs and outputs.</p> | |
| <p>Down</p> | <p>Moves the selected DIO device down the list and changes the numbering order of the inputs and outputs.</p> | |

2.2.9 Proxy Tab

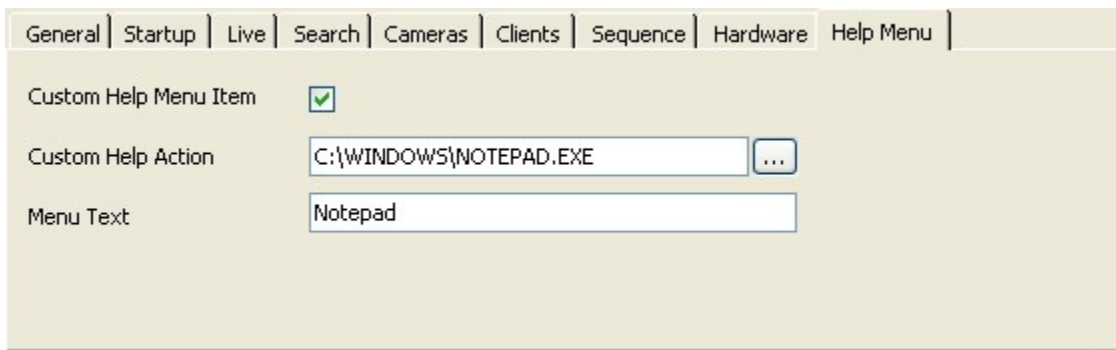
The "Proxy" tab allows you to configure a connection to a proxy server if it is required on your network to reach IP cameras.



The screenshot shows the 'Proxy' tab in a software configuration window. The window has a menu bar with options: General, Startup, Live, Search, Cameras, Clients, Sequence, Hardware, Proxy, and Help Menu. The 'Proxy' tab is selected. Below the menu bar, there is a checkbox labeled 'Enable HTTP Proxy' which is checked. Underneath, there are two text input fields: 'Proxy Server' with the value '127.0.0.1' and 'Proxy Port' with the value '8080'.

2.2.10 Help Menu Tab

The "Help Menu" tab allows the user to configure an application that can be run from the Help Menu.

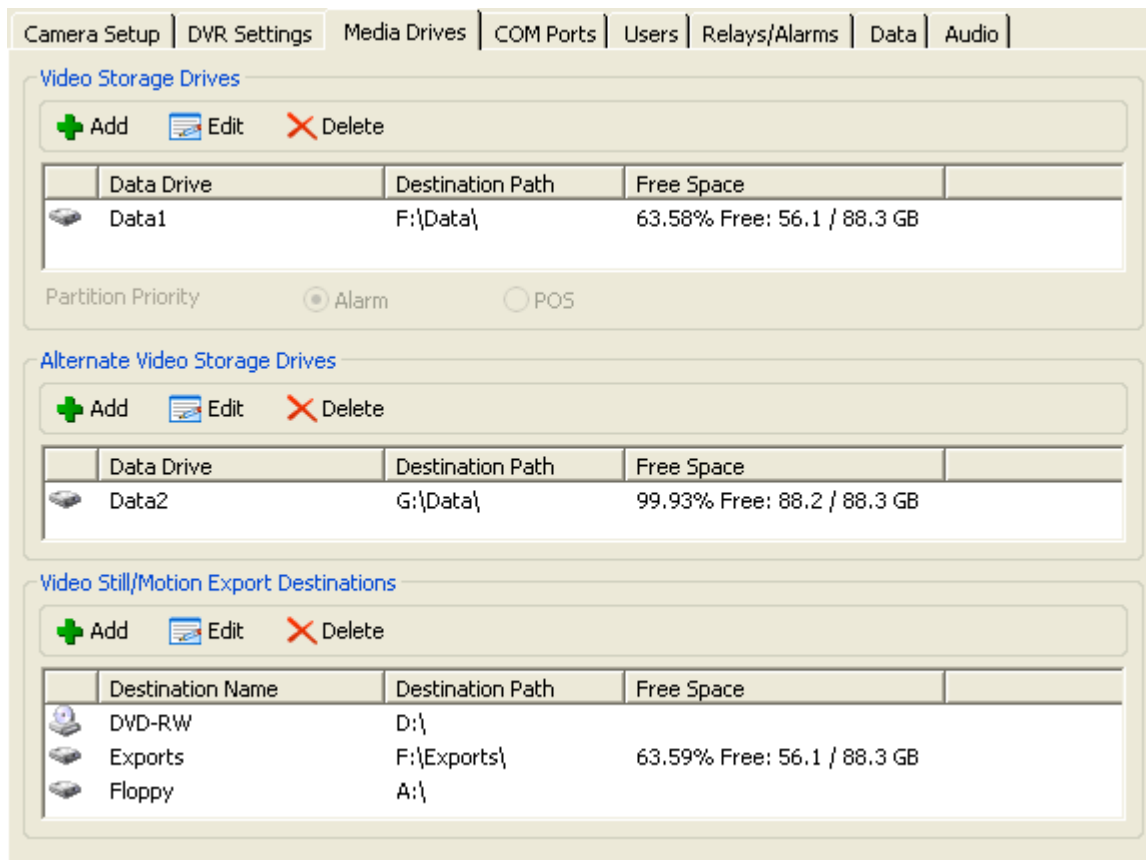


The screenshot shows the 'Help Menu' tab in a software configuration window. The window has a menu bar with options: General, Startup, Live, Search, Cameras, Clients, Sequence, Hardware, and Help Menu. The 'Help Menu' tab is selected. Below the menu bar, there is a checkbox labeled 'Custom Help Menu Item' which is checked. Underneath, there are two text input fields: 'Custom Help Action' with the value 'C:\WINDOWS\notepad.exe' and a browse button '...', and 'Menu Text' with the value 'Notepad'.

| | |
|---------------------------|---|
| Enable | Enables the customized help menu item. |
| Custom Help Action | The directory path to the executable program. Click "..." to browse directly to the file. |
| Menu Text | This is the text that will appear in the Help menu of Vigil Server. |

2.3 Media Drives Tab

The “Media Drives” tab configures the entire video recording and export destinations for the DVR.



There are three types of Media Drives: Video Storage Drives, Alternate Video Storage Drives, and Export Destinations.

- **Video Storage Drives** – Video Storage Drives are the main drives where video footage is stored. If all of the Video Storage Drives are offline, the Alternate Video Storage Drives will be used until the Video Storage Drives return online.
- **Alternate Video Storage Drives** – Alternate Video Storage Drives are emergency backup drives that are used only if all of the Video Storage Drives are offline. If an Alternate Video Drive is being used, Vigil Server will beep and a flashing Critical Warning message will be displayed. When the Video Storage Drives return online, the Critical Warning message will disappear; the Server will stop beeping and will switch back to recording to the main Video Storage Drives.
- **Video Still/Motion Export Destinations** – Video Still/Motion Export Destinations are used to store exported video footage. You must set up destinations before saving video footage or still images.

| | |
|---------------------------|--|
| Add | Opens the “Media Control” window that allows you to add a new storage location. |
| Edit | Edits the selected storage location. |
| Delete | Deletes the selected storage location. |
| Partition Priority | If data partitioning has been enabled, you can select a priority for alarm or POS data alarm footage. For example, if you have a motion alarm as well as a POS alarm at the same time on the same piece of footage, the priority determines under which partition the video footage will be saved. |



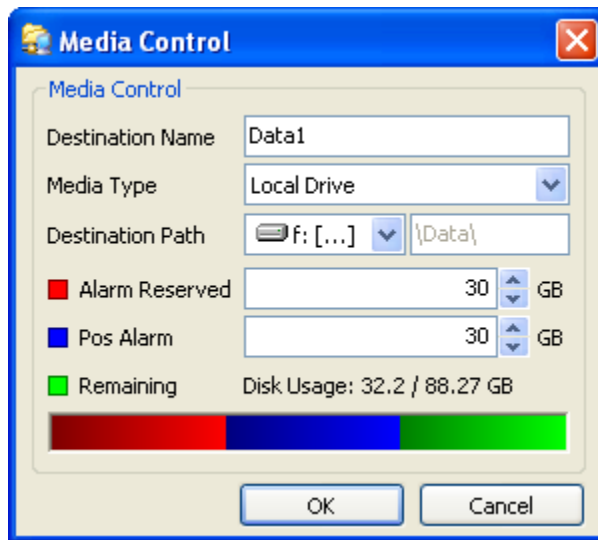
Note: Deleting a location does not remove the physical destination, only the reference to it within Vigil Server.



Note: If a Video or Alternate Storage Drive is deleted, the user will be prompted whether they also wish to delete any database records of the footage at that location, and whether they wish to delete any saved footage at that location.

2.3.1 Video Storage Drives

When a video storage drive is added or edited, the “Media Control” window is displayed. Video Storage Drives are the main drives where video footage is stored. If all of the Video Storage Drives are offline, the Alternate Video Storage Drives will be used until the Video Storage Drives return online.



| | |
|-------------------------|--|
| Destination Name | A name for the destination to appear in Vigil Server. |
| Media Type | Choose the media type of the storage drive: <ul style="list-style-type: none"> • Local Drive – A local drive resides on the DVR system. • Network Drive - A network drive refers to a storage destination on a Virtual File Server system. |
| Destination Path | Select the hard drive partition you want to use to record video data to. |
| Alarm Reserved | Select the amount of storage you wish to be reserved for input and motion alarm video footage. |
| POS Alarm | Select the amount of storage you wish to be reserved for POS data alarm video footage. |

When using a network drive for video storage, install the Virtual File Server on the PC with the network drive. In the VFS Server text box, enter the IP Address or network name of the network server. Click the “...” button and a list of available drives on the specified VFS Server will be displayed. Select the desired network drive on the VFS Server and click “OK”.



2.3.1.1 Data Partitioning for Video and POS Alarm Video Footage

Data partitioning has been added to Vigil Server allowing for better user input as to how data is saved to the hard drive. Data partitioning allows you to set up logical divisions between both standard alarm and POS alarm video files and normally recorded video. This allows the video scavenging process to skip alarm video files and allows you to save these types of video footage for longer periods of time.

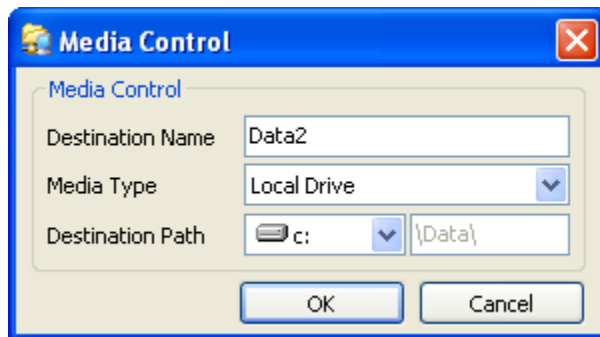
Instead of copying alarm footage under the normal areas for storage, it will be recorded to special folder that is considered a separate entity. Normal video storage is scavenged and deleted as new footage is written, however these special folders are not scavenged normally. They will retain as much data as you have allotted for them in the media control window. Once they reach capacity, they will be scavenged and the oldest video data will be removed to write new data. Since alarm and POS alarm data is often much rarer, this data can a much longer 'shelf life' on your DVR, depending on the size of the partition you create.



Note: This feature is not enabled by default and is only recommended for advanced users.

2.3.2 Alternate Video Storage Drives

When an alternate video storage drive is added or edited, the "Media Control" window is displayed. Alternate Video Storage Drives are emergency backup drives that are used only if all of the Video Storage Drives are offline. If an Alternate Video Drive is being used, Vigil Server will beep and a flashing Critical Warning message will be displayed. When the Video Storage Drives return online, the Critical Warning message will disappear; the Server will stop beeping and will switch back to recording to the main Video Storage Drives.



| | |
|-------------------------|--|
| Destination Name | A name for the destination to appear in Vigil Server. |
| Media Type | Choose the media type of the storage drive: <ul style="list-style-type: none"> • Local Drive – A local drive resides on the DVR system. • Network Drive - A network drive refers to a storage destination on a Virtual File Server system. |

Destination Path | Select the hard drive partition you want to use to record video data to.

2.3.3 Export Destinations

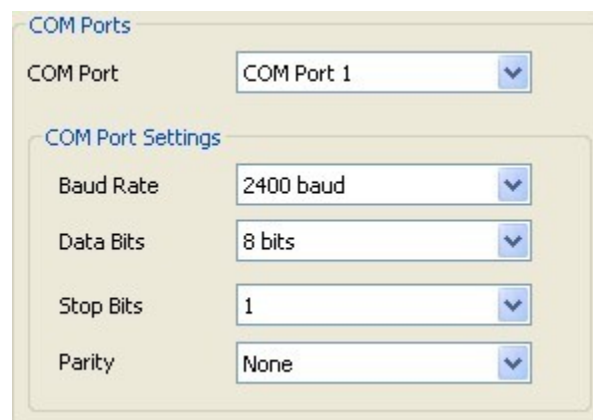
When an export destination is added or edited, the “Media Control” window is displayed. Video Still/Motion Export Destinations are used to store exported video footage. You must set up destinations before saving video footage or still images.



| | |
|--------------------------|--|
| Destination Name | A name for the destination to appear in Vigil Server. |
| Destination Path | Enter a path for the destination or click the “...” button to browse to a folder. |
| Destination Type | This setting affects how the destination appears in the selection list. Choose from: <ul style="list-style-type: none"> • Default On – By default, the destination checkbox will be selected. • Default Off – By default, the destination checkbox will not be selected. • Silent Send – All exports are also sent to this destination without notifying the user. |
| Include DV Player | Saves the DV Player (Digital Video Player) to the destination as well as the video, each time video footage is exported to this destination. This setting is normally used for CD-R or DVD-R media type destinations. |

2.4 COM Ports Tab

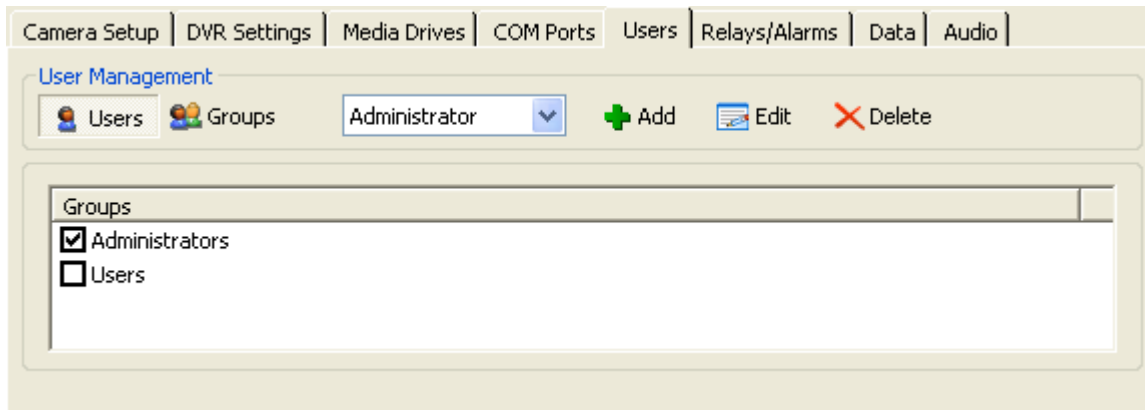
The COM Ports Settings tab configures the installed COM ports for communication with connected hardware such as POS data terminals and camera control.



Select the desired “COM Port” from the drop-down box and adjust the “Baud Rate”, “Data Bits”, “Stop Bits”, and “Parity” to match that of the connected hardware such as POS data registers or camera controls.


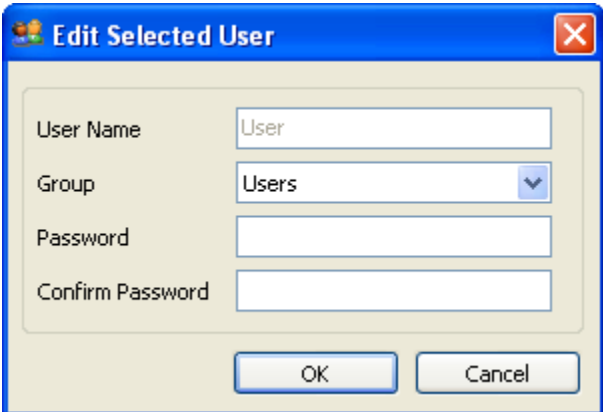
2.5 User and Group Management Tab

The “Users” tab allows the configuration of users on the DVR with specific permissions. Each user belongs to a group and each group has a set of permissions.



2.5.1 Add/Modify a User

To add/modify a user, select the **Users** button.

| | |
|--|--|
| Add a User | <p>Click the “Add” button and enter a username, password, and group in the “Add New User” window.</p>  |
| Edit a User (Password or Group) | <p>Select the user from the dropdown list and click the “Edit” button. Type in a new password or change the group in the “Edit Selected User” window.</p>  |
| Changing a Users Group | <p>You can also select the user from the dropdown list and place a checkmark beside the desired group in the “Groups” list to effectively change a user’s group.</p> |



Note: A user can only belong to one group.

Delete a User

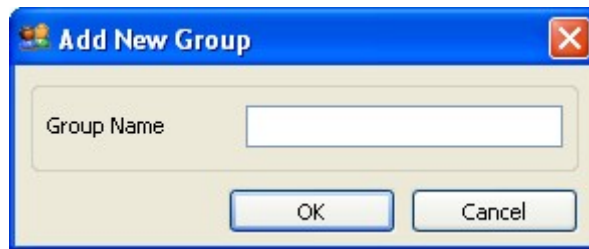
Select the user from the dropdown list and click "Delete".

2.5.2 Add/Modify a Group

To add/modify a group, select the **Groups**  button.

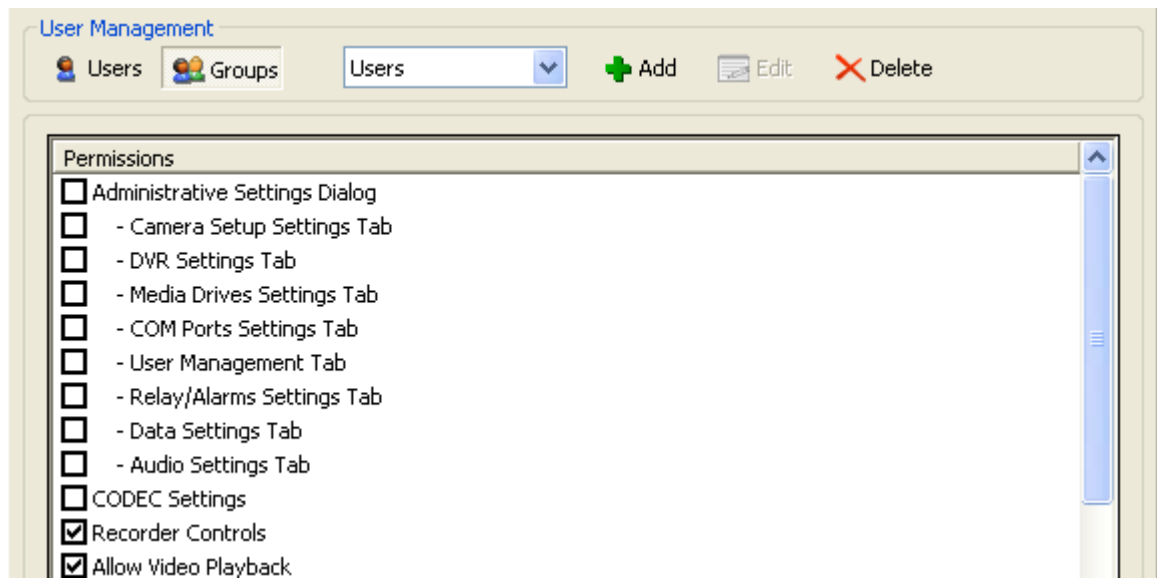
Add a Group

Click the "Add" button and enter a group name in the "Add New Group" window. Once the window closes, you can place checkmarks on the desired privileges for this new group.



Edit a Group

Select the group from the dropdown list and modify the individual permissions by enabling or disabling certain features/capabilities.



Delete a Group

Select the group you wish to delete from the dropdown list and click "Delete"

2.6 Relays/Alarms Tab

The “Relays/Alarms” tab configures the input alarms and associated notifications settings for the DVR.

The screenshot displays the 'Relays/Alarms' configuration window. At the top, there are navigation tabs: Camera Setup, DVR Settings, Media Drives, COM Ports, Users, Relays/Alarms, Data, and Audio. The 'Relays/Alarms' tab is selected. Below the tabs, the 'Digital Inputs' section is visible. It includes an 'Input Number' dropdown menu set to '1: ADAM 6060 - 1', an 'Edit...' button, and a checked 'Input Enabled' checkbox. Underneath, there are sub-tabs for 'Settings', 'Client Connections', and 'Notification Settings'. The 'Settings' sub-tab is active, showing a 'Dwell Timer' of 5 seconds, 'Normal Open' selected, and 'Auto Acknowledge' set to 10 seconds. A list of cameras (Cam1-Cam12) is shown on the right, with Cam1 checked. Below are 'Remote Client Retry Settings' (1 attempt, 60 seconds delay) and 'Output Relay Settings' (Keep Output Relay Closed While Application is Running unchecked). An 'Edit Relay Names...' button is also present.

2.6.1 Digital Inputs

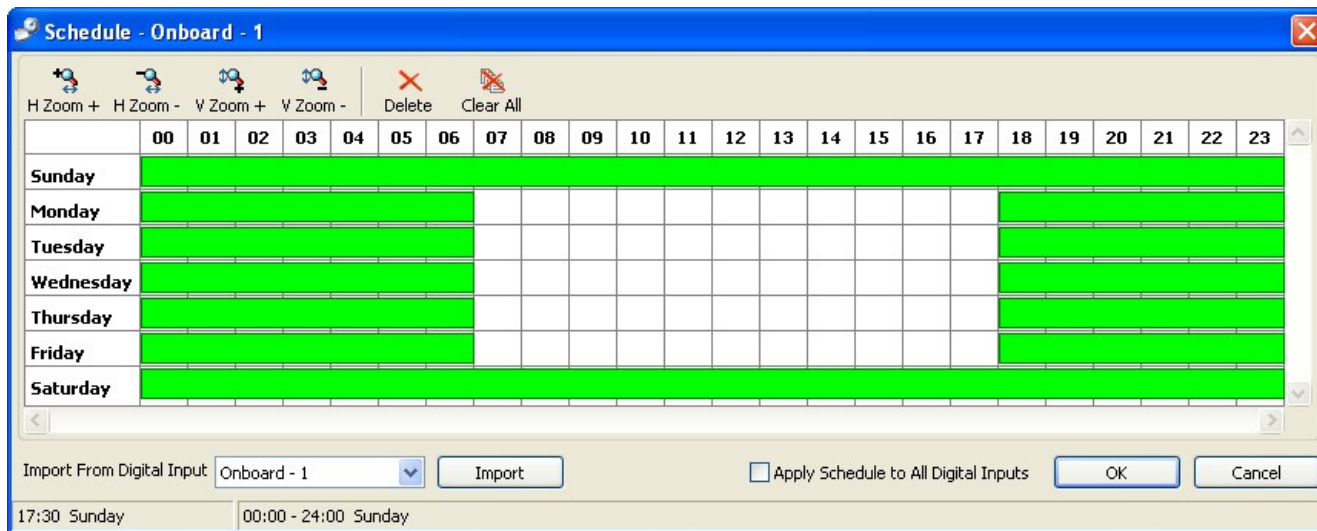
Digital inputs are alarms triggered by external circuits. The input alarm can be used to trigger audio and video recording.


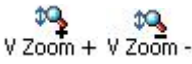
To configure a digital input, select the “Input Number” from the dropdown list and check the “Input Enabled” box. Using the “Cameras” and/or the “Audio” sub-tabs on the right side, select which cameras/audio channels that will begin recording during the alarm event. You may choose multiple cameras and audio channels for each configured alarm input. See the next section for further information on configuration settings.

You can rename individual inputs to assist in ease of use and configuration. Click the “Edit...” button near the input number dropdown and type in a new name for your input.

2.6.1.1 Settings Tab

| | |
|---------------------------|--|
| Dwell Timer | The number of seconds the digital input/output remains active after a trigger occurs. |
| Normal Open/Closed | If the digital input/output is normally open, select the "Normal Open" option. If the digital input/output is normally closed, select the "Normal Closed" option. When the input changes state, the alarm will be triggered. |
| Auto Acknowledge | Mark enabled for the alarm to be automatically acknowledged after the selected number of seconds have passed. |
| Schedule | Allows you to configure the input alarm to operate on a schedule. |



| | |
|---|---|
| Alarm Input Enabled | Sections that have the input alarm enabled are colored green . |
|  | Expands and contracts the time graph horizontally. This allows for better precision in setting your time periods. |
|  | Expands and contracts the time graph date graph vertically. |



Note: The smallest time interval that can be used is 15 minute periods.

| | |
|---|--|
| Moving a time period | Click and hold the "Shift" key and click-and-drag the section. |
| Copying a time period | Click and hold the "Ctrl" key and click and drag the section. |
| Changing the start or end time of a period | Select the section by clicking on it and then click and drag the right or left edge of the section. |
| Importing a schedule from | Select the digital input from the "Import From Digital Input" dropdown box list and then click "Import". |

| | |
|----------------------------|--|
| another alarm input | |
|----------------------------|--|



Note: Importing the schedule of another digital input will overwrite the schedule of the current digital input.

| | |
|---|--|
| Viewing the start and end times of a section | <p>Select the section by clicking on it. The start and end time of the selected section are displayed near the bottom left corner of the "Schedule" window.</p> <p>You can also mouse over the any part of the section and the time will be displayed near the bottom as well.</p> |
| Deleting a time period | Select the section by clicking on it and then click "Delete". |
| Deleting a schedule | Click the "Clear All Button" to delete the entire schedule. |
| Apply Schedule To Digital Inputs | When marked, this checkbox will apply the created schedule to all digital inputs that have a schedule enabled. This will not affect other digital inputs that have disabled the schedule. |
| Cameras Sub-tab | Select the camera(s) to be associated with the digital input. Selected cameras will record constantly while the digital input is triggered. |
| Audio Channels Sub-tab | Select the audio channel(s) to be associated with the digital input. Selected audio channels will record constantly while the digital input is triggered. |



Note: A digital input will only remain enabled if a camera or audio channel has been marked for recording in response to the input.

| | |
|------------------------------------|--|
| Push Still Shot Settings... | When configured, a still shot from the selected cameras will be uploaded to the locations specified when an alarm input is triggered. Please see section 6.1.4 Push Still Shot to Server for more information. |
|------------------------------------|--|

| | |
|-------------------------------------|--|
| Remote Client Retry Settings | |
|-------------------------------------|--|

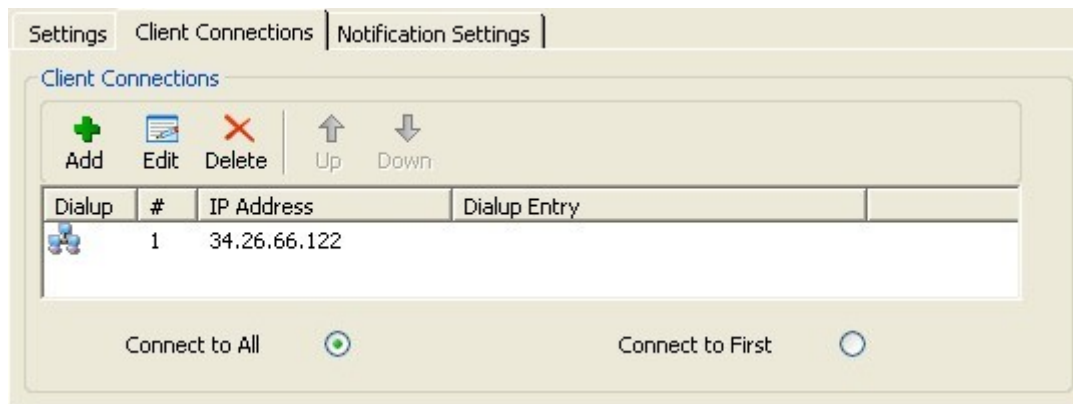
| | |
|----------------------------|---|
| Connection Attempts | The number of times to retry sending an alarm to a remote client. |
| Retry Delay | How long to wait between retries. |

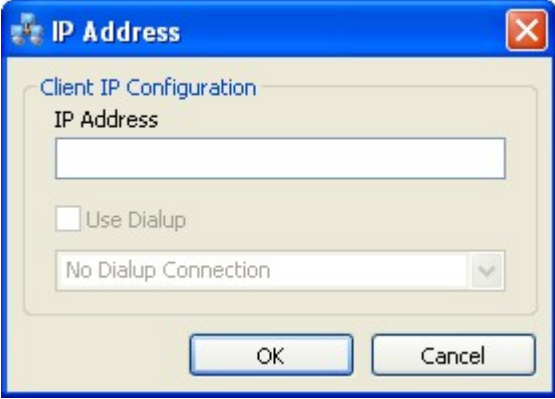
| | |
|------------------------------|--|
| Output Relay Settings | |
|------------------------------|--|

| | |
|--|---|
| Keep Relay Output Closed While Application Is Running | Mark the checkbox and select a relay from the drop down list. This relay will remain closed as long as Vigil Server continues operating correctly. If Vigil Server stops running, the selected relay will open. |
| Edit Relay Names... | Allows you to change the names of output relays to assist in ease of use and configuration. |

2.6.1.2 Client Connections Tab

The "Client Connections" tab controls input alarm notification to Vigil Clients.



| | |
|--------------------------------|--|
| <p>Add a Client</p> | <p>Click "Add" to open the "IP Address" window. Type in the IP address of the remote client or mark the "Use Dialup" box if you wish to use a Windows dialup connection.</p>  |
| <p>Edit a Client</p> | <p>Select a remote client and click "Edit" to change that remote clients IP address.</p> |
| <p>Delete a Client</p> | <p>Select a remote client and click "Delete" to remove it.</p> |
| <p>Up/Down Arrows</p> | <p>Moves the selected remote client up or down the client list. This enables you to change the notified client if "Connect to First" is used.</p> |
| <p>Connect to All</p> | <p>When this option is selected, when an alarm occurs, an alarm notification is sent to all clients on the list.</p> |
| <p>Connect to First</p> | <p>When this option is selected, when an alarm occurs, an alarm notification is sent to only the first client on the list.</p> |

2.6.1.3 Notification Settings Tab

The screenshot shows the 'Notification Settings' tab within a larger settings window. It is divided into three sections:

- Email Notification:** Contains a checkbox for 'Enabled', an 'Email Settings...' button, and a 'Test Email' button.
- Notification Settings:** Contains a checkbox for 'Popup Alarm Screen', a 'Monitor Output' dropdown menu set to 'None', and a checkbox for 'Suppress Email Notification'.
- Audio Notification Settings:** Contains a checkbox for 'Audio Notification', two radio buttons for 'System Beep' and 'Wave File', and a text input field with a browse button ('...').

| | |
|---------------------------|--|
| Email Notification | When enabled, an email is sent when an alarm is triggered. Click "Email Settings..." to change to the format and recipients of the notification email. |
| Test Email | Sends a test email based on your notification settings and email configuration. |

The screenshot shows the 'Email Settings' dialog box with the following fields and options:

- Email Header Options:**
 - From (Name): DVR
 - From (Address): dvrtest@camacc.com
 - Subject: Alarm Input
 - Email Body: Alarm triggered
 - Attach Still Shot
- Recipients:**
 - Buttons: Add (+), Edit (envelope icon), Delete (X)
 - Address list: admin@website.com

Buttons for 'OK' and 'Cancel' are located at the bottom right of the dialog.

Enter the appropriate details for the email that will be sent. To add, edit, or remove email recipients, use the "Recipients" section and the appropriate buttons. Enabling "Attach Still Shot" will add a still image of the selected cameras to the outgoing email. This image is from the beginning of the triggered alarm event.



Note: For email options to function properly, a valid SMTP server must be set up correctly in the "DVR Settings" tab.

| | |
|------------------------------------|---|
| Popup Alarm Screen | When enabled, opens an alarm window on the DVR. You can also select a monitor to output the specified camera feed to using the "Monitor Output" dropdown box. |
| Suppress Email Notification | This option, which will only work in conjunction with enabling Popup Alarm Screen, will prevent a flood of email alerts being sent out. It will only send out one email alert until the alerts have been acknowledged on the Popup Alarm screen. If alerts have been set to auto acknowledge, it will send out an email after each period of auto acknowledgement has passed. |
| Audio Notification | Enables audio notification which plays a system beep or wave file when an alarm is triggered. When "Wave File" is selected, click "..." to browse for the wave file that will be played. |

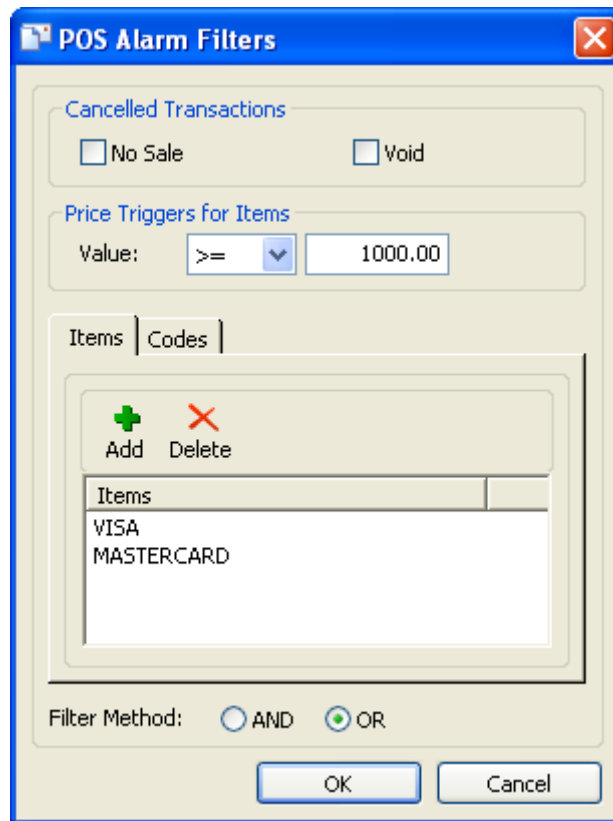
2.7 Data Tab

The Vigil Server Software can be configured to receive and record information from point of sale data terminals. The "Data" tab allows configuration of the data terminal settings.

To configure a data terminal, select one from the dropdown box and click "Enabled".

| POS Settings | |
|--------------------------|---|
| POS Terminal Type | Sets the terminal type for the POS data stream. |
| Priority Camera | A priority camera is automatically selected when reviewing video and POS data from this terminal. |

| | |
|---------------------------|---|
| COM Port | The DVR COM port to which the terminal is connected. Ensure that the COM port settings match those of the terminal. |
| Register Number | The POS register number. |
| POS Alarm Settings | |
| Enabled | Enables a certain text trigger to fire an alarm event which will be recorded as POS alarm footage (if data partitions have been enabled), as well as fire an output relay if desired. |
| Dwell Time | The time in seconds that the POS alarm event will last for. This pertains to the length of video footage that will be recorded. |
| Output Relay | Select the output relay to trigger when the text trigger is fired. |
| Trigger | There are two trigger types: a momentary trigger of 2 seconds or a latched trigger which will stay triggered until it is manually disabled via the Live Viewer Relays button. |
| Filter Settings | The Filter Settings screen is where you customize which POS data items will cause a POS data alert. |



| | |
|---------------------------------|--|
| No Sale/Void | Enables POS data alerts for all No Sale and/or Void items. |
| Price Triggers for Items | You can set a POS data alert that will occur when any item is greater/equal/lesser than the value you set. |
| Items/Codes | Set a POS data alert for particular items and/or codes. |

Filter Method

You can select to apply an AND/OR operator to the filter values. This operator will apply to all fields in POS Alarm Filters.



Note: For the POS alert to function, the text must be an exact match to the POS data record including spaces, but it is not case-sensitive.

2.7.1 General Settings Tab

The “General Settings” tab controls the display and storage of POS data.

| General Settings | Email Settings | Ignore Fields | External POS Data | External Data Interface |
|---|--------------------------------------|---------------------|------------------------------------|-------------------------|
| Live/Playback Settings | | | | |
| Max Live Scroll | <input type="text" value="1000"/> | Max Playback Scroll | <input type="text" value="10000"/> | |
| Data Storage Settings | | | | |
| Records of Data Storage | <input type="text" value="2000000"/> | | | |
| POS Search History | | | | |
| Number of Search Items to Keep in History | <input type="text" value="10"/> | | | |

Live/Playback Settings

Max Live Scroll

The maximum number of lines displayed in the “Live Data” tool from the main window.

Max Playback Scroll

The maximum number of lines displayed in the “Search/Playback” window.

Data Storage Settings

Records of Data Storage

The maximum number of records of POS data to retain.

POS Search History

Number of Search Items To Keep In History

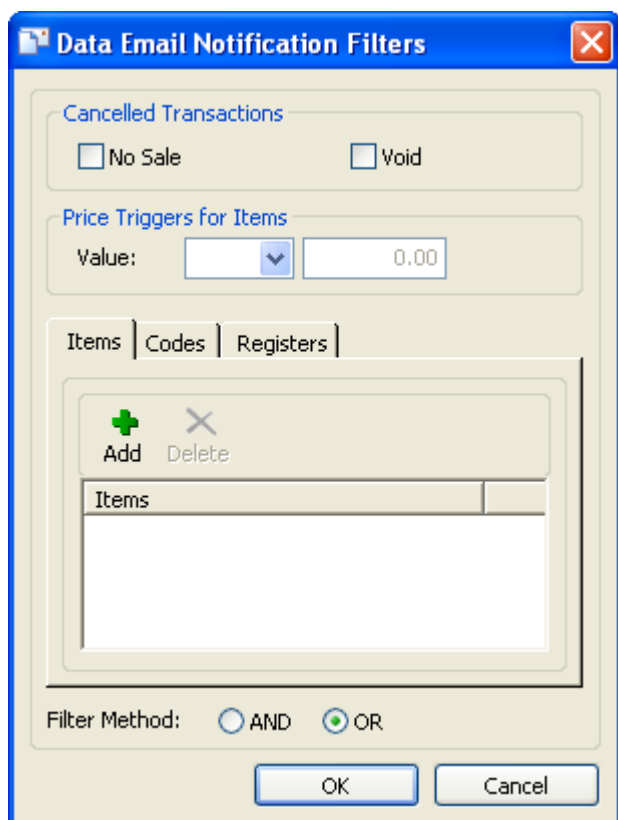
The number of previous searches to remember from the “Search/Playback” window.

2.7.2 Email Settings Tab

The “Email Settings” tab allows periodic email of POS data.



| | |
|--|---|
| <p>Enable POS Data Email Notification</p> | <p>When enabled, an email will be sent to specific recipients with POS data information. Data records recorded since the last check and that match the criteria in the “Filter Settings” are emailed.</p> |
| <p>Email Frequency</p> | <p>Specifies the time between emails that will be sent.</p> |
| <p>Filter Settings...</p> | <p>In the “Data Email Notification Filters” window you can specify which conditions to filter for when sending POS data emails.</p> |



Cancelled Transactions – Allows you to add “No Sale” or “Void” cancelled transactions to be filtered.

Price Triggers for Items – Allows you to add a filter that will add POS data based on the criteria you make for the Price Triggers.

Add a new entry - Select the appropriate tab (Items, Codes, and Registers) and click “Add”.

Remove an entry – Select a filter tab and an entry in the list, and click “Delete” to remove that object as a filter.

| | |
|---------------------------------|---|
| <p>Email Settings...</p> | <p>In the “Email Settings” window, enter the details for the email that will be sent with the POS Data.</p> |
|---------------------------------|---|

From (Name) – The name of the entity that is sending the email.

From (Address) – The email address of the entity sending the email.

Subject – This text will be included in the subject line of the email

Email Body – This text will be included in the body of the email. The POS data is also included in the email body.

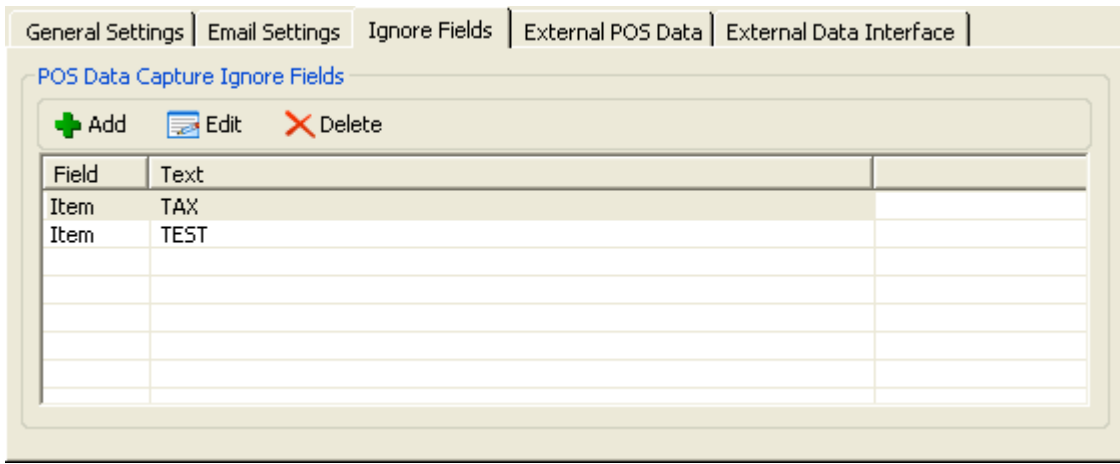
Recipients, CC, and BCC – Enter the email address of the recipients in the appropriate sections.



Note: For email options to function properly, a valid SMTP Server must be configured.

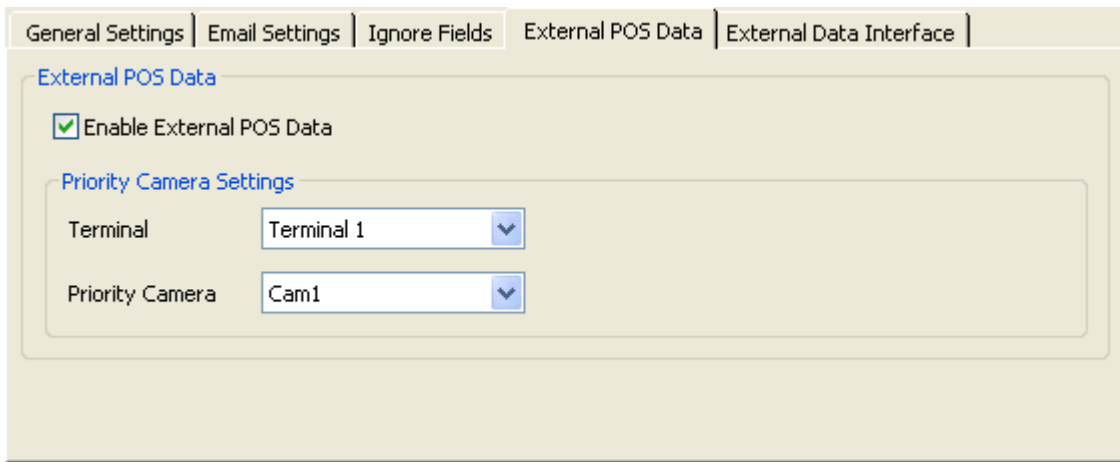
2.7.3 Ignore Fields Tab

The “Ignore Fields” tab allows POS data records to be ignored if they match the specified criteria.



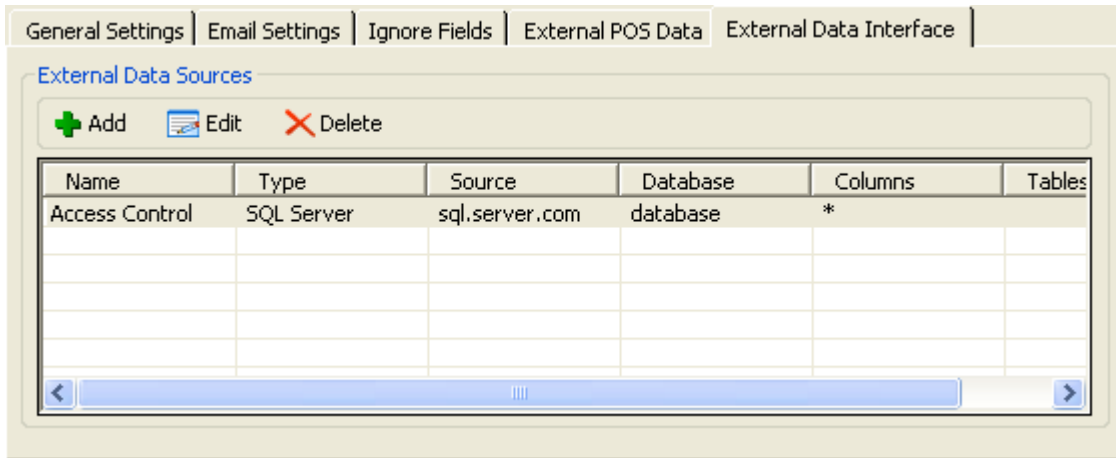
| | |
|--------------------------------------|--|
| <p>Add an Ignore Field</p> | <p>Click "Add" to create a POS data ignore field. The "Data Capture Filter" window will open. Select the field type from the dropdown box (Item or Code) and then type in the text string exactly.</p> <div data-bbox="683 705 1256 1024" data-label="Image"> </div> |
| <p>Edit an Ignore Field</p> | <p>Select the ignore field you wish to edit and select "Edit".</p> |
| <p>Delete an Ignore Field</p> | <p>Select the ignore field you wish to remove and select "Delete".</p> |

2.7.4 External POS Data Tab



This feature reconfigures data display screens for external data source capability. Please call Technical Support (see contact information at the end of this document) for more information before enabling this feature. When external data sources is enabled, use the dropdown lists to select a priority camera for each terminal.

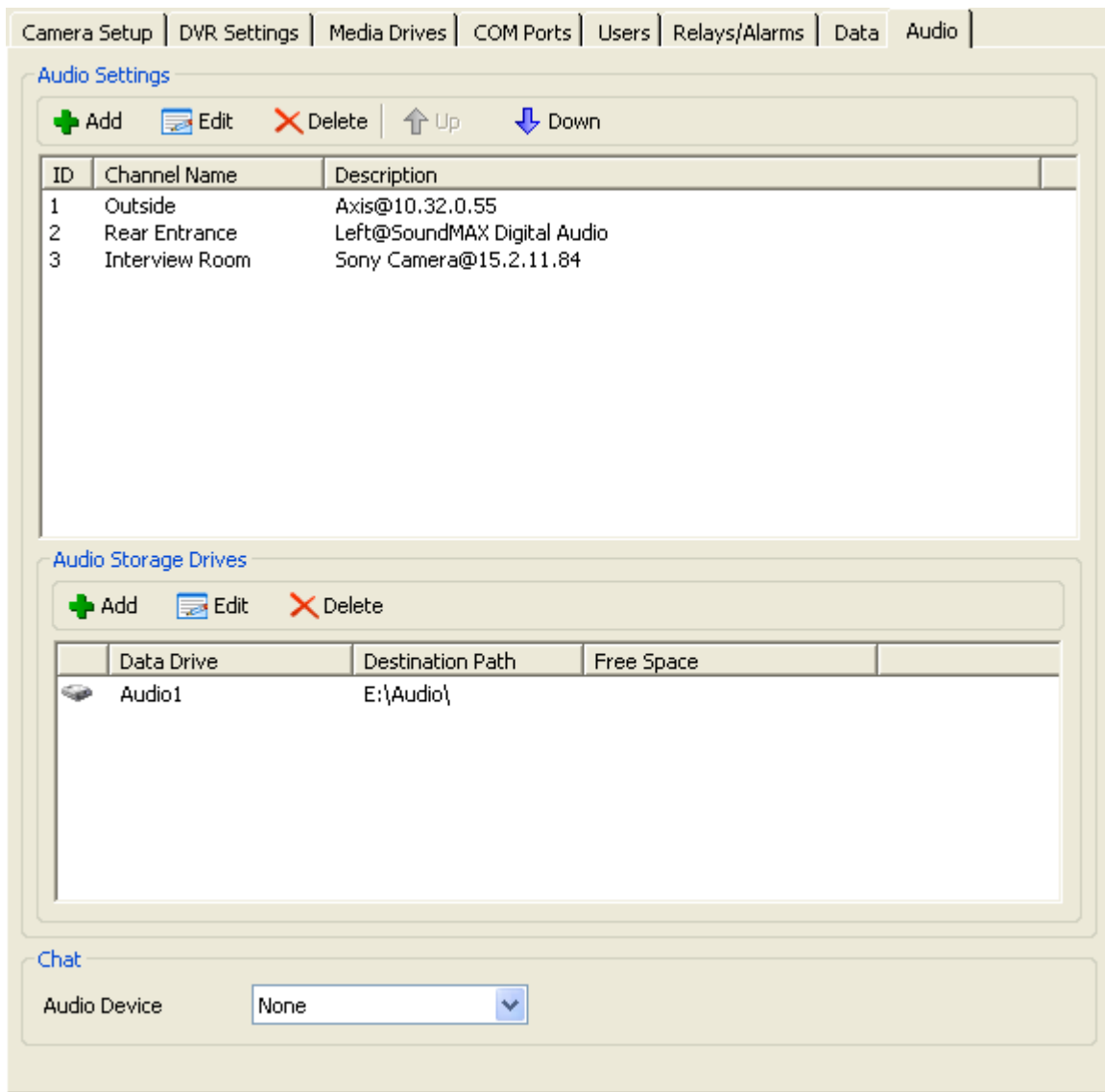
2.7.5 External Data Interface Tab



Vigil Server has added support to connect and read data from third party databases, such as access control panels, coin counters, GPS data, etc. For more information, please contact technical support (contact information located at the end of this document).

2.8 Audio Tab

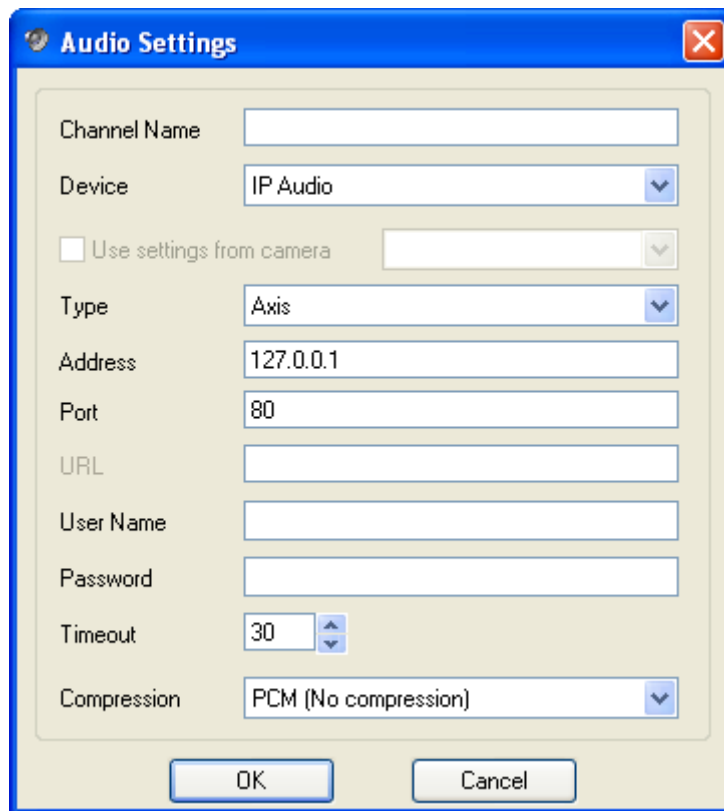
The "Audio" tab configures the audio recording parameters for Vigil Server.



Audio Settings

Add, edit, and remove audio devices from this section.

| | |
|-----------------------|---|
| Add/Edit | Add/Edit the selected audio device. |
| Delete | Deletes the selected audio device. |
| Up/Down Arrows | Changes the order of the audio devices. |



| | |
|---------------------------------|---|
| Channel Name | The name for the audio device. This can be used to describe the location of the audio source. |
| Device | The type of audio device. Options include: IP Audio (from a supported IP camera), onboard audio inputs on the DVR, and audio inputs from the capture cards. |
| Use Settings From Camera | Allows you to use the settings from a currently connected IP camera that supports audio. |
| Type | Select the type of IP camera. |
| Quality | For some inputs such as onboard audio inputs, you can adjust the quality settings. Options are low, medium, and high. |
| Compression | The compression type for the selected channel: <ul style="list-style-type: none"> • PCM (No compression) – Audio recording with no compression. • Medium – Audio recording with an approximate compression ratio of 4 to 1. • High – Audio recording with an approximate compression ratio from 8-10 to 1. |
| Address/Port | The IP address/DNS name and TCP/IP port of the IP camera. |
| URL | Set this to the camera URL, if used. |
| User Name/Password | The user name and password to connect to the camera. |
| Timeout | The period of time, in seconds, before a disconnection is determined to have occurred. |

Audio Storage Drives

Create and configure audio storage drives, similar to creating video storage drives.

Add/Edit

Audio storage drives are defined in the same way as video storage drives. It is recommended that the audio storage drive be on a different drive than the video storage drive(s).

Chat

Audio Device

Select audio device that will be used for voice communication in the chat mode. Set to none to disable audio chat.

3 Registering

Click the Windows Start menu and select "Programs | Vigil | Register Vigil".




To register Vigil Server:


1. Write down the Serial Number from the Registration screen of Vigil Server.
2. Send the Serial Number, your name, company name, and contact information to 3xLogic at support@3xlogic.com. 3xLogic will contact you with a Registration Key.
3. Once you have received a Registration Key:
 - Select the Module from the "Unregistered Modules" dropdown list.
 - Enter the Registration Key
 - Click "Register"
4. Repeat step 3 for each module you wish to register.
5. Close the Registration window by clicking "Exit".

4 Authentication

To authenticate an exported video clip:


1. Open the "Export File Browser" window and select the destination folder.
2. Double-click on the video clip to open it DV Player.
3. Click the "Authenticate"  button.
4. When the authentication is complete, one of two message boxes will be displayed:
 - a. "The selected file has been successfully authenticated" – Every frame in the video clip is authentic.
 - b. An authentication error occurred at frame < # > - Not all frames in the video clip are authentic; the number listed is the first frame that was encountered that is not authentic.
5. When playing back video footage, if a frame is not authentic, a red X is displayed.

To authenticate a recorded video clip:

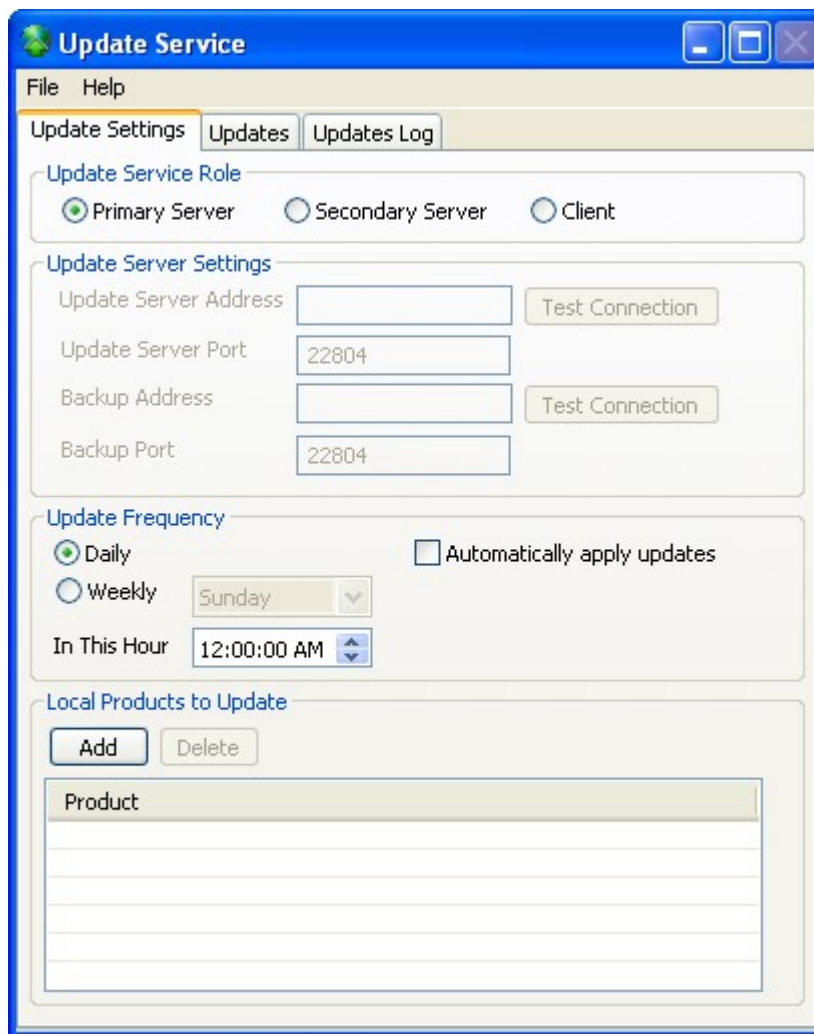
1. Open the "Search Footage and Data" window.
2. Search for the video footage you wish to authenticate.
3. Click the "Authenticate"  button.
4. When the authentication is complete, one of two message boxes will be displayed:
 - a. "The selected file has been successfully authenticated" – Every frame in the video clip is authentic.
 - b. An authentication error occurred at frame < # > - Not all frames in the video clip are authentic; the number listed is the first frame that was encountered that is not authentic.
5. When playing back video footage, if a frame is not authentic, a red X is displayed.

5 Software Updates

5.1 Update Service

The Vigil Update Service icon  appears in the system tray when the Update Service is running.

To open the Update Service configuration and status screen, double-click on the icon in the system tray or go to the Windows Start menu and select “Programs | Vigil | Update Service”.



You can find the following options under the “File” menu:

- **Refresh Updates** – This option checks with the configured Update Server and refreshes the list of available software updates. View available updates in the “Updates” tab.
- **Close** – This closes the “Update Server” configuration window, but you can see that the service is still running by looking in the system tray.
- **Exit** – This closes the “Update Server” configuration window and stops the Vigil Update Service. You will know that the Service is no longer running by looking in the system tray.

5.1.1 Update Settings Tab

Update Service Role

Primary Server

A “Primary Server” provides update files to other systems, but does not receive

| | |
|-------------------------|--|
| | updates from other update servers and does not automatically apply updates to itself. Update files must be manually added to the "Updates" tab. |
| Secondary Server | A "Secondary Server" acts as a client and as a server. As a "Client", it receives update files from other "Update Servers" and applies updates to local software. As an "Update Server", it provides update files to other systems. It provides the files that it has received as well as files that are added manually. |
| Client | A "Client" receives and applies updates to local software, but does not provide the updates to other systems. |

Update Server Settings

The settings for the Update Servers from which update files are received.

| | |
|-----------------------------------|--|
| Update Server Address/Port | The Update Service connects to the Update Server listed when it automatically checks for update files. The IP address or DNS name and port of the Update Server is placed here. |
| Backup Server Address/Port | When the Update Service automatically checks for update files, if the connection fails to the Update Server fails, the Backup Server is used. The IP address or DNS name and port of the Backup Update Server is placed here. |
| Test Connection | Click the Test Connection button to test the connection to the Update Server/Backup Server listed. If the connection test is successful, the following message is displayed: "Connected to update server and retrieved product list successfully". If the connection test fails, the following message is displayed: "Failed to connect to update server." If the connection test fails, check that the Update Server Address and Port are correct. Software updates will not be received and applied if a valid update server is not listed or if the connection fails. |

Update Frequency

Configure how often to connect to the Update Servers to check for update files and whether or not to automatically apply the update files received.

| | |
|------------------------------------|--|
| Daily | The Update Service connects to the Update Server once per day during the hour specified in the "In This Hour" section. |
| Weekly | The Update Service connects to the Update Server once per week on the day selected from the dropdown list during the hour specified in the "In This Hour" section. |
| Automatically Apply Updates | When a new version of software is available for one of the products listed in the "Local Products to Update" section, it is automatically applied. |



Note: When the system is automatically updated, it will restart itself, apply the update, and then restart itself again.



Note: if there are no products listed in the "Local Products to Update" section, no updates will be applied.

Local Products To Update

If "Automatically apply updates" is enabled, the products listed are automatically updated when a new update

is received.

Add a Product to Update

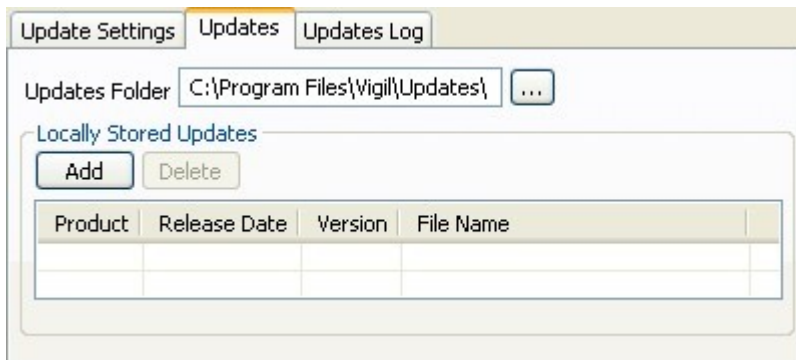
Click "Add" to add a new product to the list. In the "Local Products to Update" window, select a product from the dropdown list.



Remove a Product to Update


Select a listed product and click "Delete" to remove it.

5.1.2 Updates Tab



Locally stored update files are listed in the "Updates" tab. These files may have been received automatically from a configured update server or may have been added manually. If the "Update Service Role" is set to "Primary Server" or "Secondary Server", the files listed are available to "Clients".

Click the "Add" button to add a new file to the list. When adding a file the following information is required:

| | |
|-----------------------------|--|
| <p>Add an Update</p> | <p>Click "Add" to add a new file to the list.</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;">  </div> <p>Product – The product that the update applies to. Release Date – The date when the update was released. Version – The software version of the update file. File Name – Enter in the filename of the update file, or use the "..." button to browse for the Vigil update VGL file.</p> |
|-----------------------------|--|



Note: It is important that the information included with the update file is correct. The Vigil Update Service uses the information listed; this information is sent to other systems along with the update file.

5.1.3 Updates Log Tab

The "Updates Log" tab lists three types of logs. Use the dropdown list to view each log.



| | |
|----------------------------|--|
| Client Download Log | Log of files downloaded from other Update Servers. Log information includes: The product and version of the file downloaded, the date it was downloaded, the update server that it was downloaded from, and the download results. |
| Server Download Log | Log of files downloaded by remote clients. Log information includes: The product and version of the file downloaded, the date it was downloaded, the remote client that it was downloaded by, and the download results. |
| Local Update Log | Log of updates automatically applied by the Update Service. Log information includes: The product and version of the file downloaded, the date the update was applied, the release date of the software version, and the update results. |

6 Language Switcher



To change the language that Vigil Server uses:

1. Exit Vigil Server.
2. In the Windows Start menu, select: "Programs | Vigil | Language Switcher".
3. Select the desired language from the dropdown list.
4. Click "Switch"
5. Click "Close"

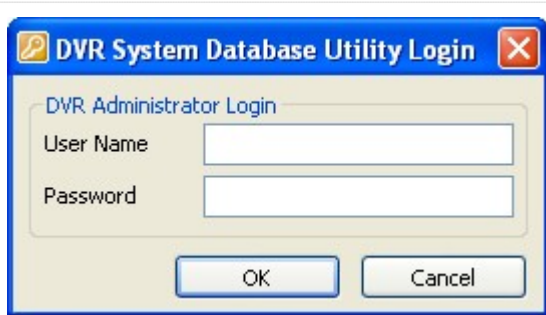
7 DVR System Database Utility

The DVR System Database Utility is an advanced management utility for data drive and Database Management.



Warning: Only qualified technicians should use the DVR System Database Utility. Improper use of this utility can cause system failure.

If the DVR is experiencing issues, please contact your system administrator or 3xLogic technical support. Contact information is located at the end of this document.



You will have to login to the utility before being able to modify any settings. You must use an administrator account.

7.1 Drive Management Tab

In the "Drive Management" tab, three types of media drives can be set up: Video Storage Drives, Alternate Video Storage Drives, and Audio Storage Drives.

Video Storage Drives – Video storage drives are the main drives where video footage is stored. If all of the Video Storage Drives are offline, the Alternate Video Storage Drives will be used until the Video Storage Drives return online.

Alternate Video Storage Drives – Alternate Video Storage Drives are emergency backup drives that are used only if all of the Video Storage Drives are offline. If an Alternate Video Drive is being used, the Vigil Server will beep and a flashing warning message will be displayed. When the Video Storage Drives return online, the warning message will disappear, the audio alarm will stop beeping, and the Vigil Server will switch back to recording to the main Video Storage Drives.




Audio Storage Drives – Audio storage drives are the drives where audio data is stored.

| | |
|---------------|--|
| Add | Allows you to add a storage drive. Click the “Add” button in the corresponding section to determine which type to storage drive will be created. |
| Edit | Select a storage drive and then click “Edit” to edit the location properties. |
| Delete | Select a storage drive and then click “Delete” to permanently delete the destination. Does not delete the location from the hard disk however. |


Drive Management | Video Data | Data | Backup/Restore | Database Settings

Set Up Primary, Backup, and Audio Data Drives

Video Storage Drives








 Add Edit Delete

| | Data Drive | Destination Path | Free Space |
|---|------------|------------------|-----------------------------|
|  | Data1 | F:\Data\ | 57.10% Free: 50.4 / 88.3 GB |

Partition Priority Alarm POS




Alternate Video Storage Drives


 Add Edit Delete

| | Data Drive | Destination Path | Free Space |
|--|------------|------------------|------------|
| | | | |

Audio Storage Drives

 Add Edit Delete

| | Data Drive | Destination Path | Free Space |
|---|------------|------------------|------------|
|  | Audio1 | E:\Audio\ | |

7.2 Video Data Tab

The "Video Data" tab contains tools for managing video data.



Warning: Only qualified technicians should purge video footage.

Drive Management | Video Data | Data | Backup/Restore | Database Settings

Perform Maintenance Operations on Database

Purge Footage
Purge data drives of footage within the specified date range or purge all footage.

From: 26/06/2006 To: 26/06/2006 Purge All Footage

Purge

Rebuild Database
Rebuild the footage database from the existing footage on the data drives.

Automatically reboot the DVR after rebuilding the database

Rebuild

Reset Initial Footage Date
Reset the initial footage date to the oldest footage.

Reset

Purge Video Footage

To purge video footage, specify the days to purge in the "From" and "To" date boxes, and click the "Purge" button.

To purge ALL video footage, tick the "Purge all video footage" checkbox, and click the "Purge" button.



Warning: This will permanently delete all footage for the selected days.



Note: Vigil Server is designed to manage the purging of video footage; it will delete the oldest hour of video footage automatically before the data drives become full. Under normal operating conditions, there is no need to manually purge video footage.

| | |
|---|---|
| Rebuild Database | The Rebuild Database feature rebuilds the database entries for all of the footage on the selected drives. Click the "Rebuild" button, select the drive(s) to rebuild and click "OK" to rebuild the selected drives. |
| Automatically reboot the DVR after rebuilding the database | Restarts the DVR after rebuilding is completed. |



Warning: This action may take a lengthy period of time to complete. Do not run Vigil Server while rebuilding the database.

| | |
|-----------------------------------|--|
| Reset Initial Footage Date | <p>The DVR Health Monitor software uses the initial footage date in Vigil Server to determine if the DVR is recording the proper number of days of video storage. Click the "Reset" button to reset the cached date of the first video footage recorded by the DVR to the oldest footage currently on the DVR.</p> <p>Please refer to the DVR Health Monitor software user's guide, or contact 3xLogic for more information.</p> |
|-----------------------------------|--|

7.3 Data Tab

Drive Management | Video Data | **Data** | Backup/Restore | Database Settings

Perform maintenance operations on the POS data database.

Purge POS Data

Purge database of POS records within the specified date range or purge all POS records.

From: To: Purge all POS Data

Purge Persons Counter Data

Purge database of PersonsCounter records within the specified date range or purge all records.

From: To: Purge all PersonsCounter data

| | |
|--|---|
| <p>Purge POS Data</p> | <p>To purge POS data, specify the days to purge in the "From" and "To" date boxes, and click the "Purge" button.</p> <p>To purge all POS data, tick the "Purge all POS Data" checkbox, and click the "Purge" button.</p> |
| <p>Purge Persons Counter Data</p> | <p>To purge people counting data, specify the days to purge in the "From" and "To" date boxes, and click the "Purge" button.</p> <p>To purge all people counting data, tick the "Purge all PersonsCounter data" checkbox, and click the "Purge" button.</p> |



Warning: This will permanently delete POS and people counting data for the selected days.



Note: Vigil Server is designed to manage the purging of POS and people counting data; it will delete data older than the number of days specified in the settings, or delete the oldest data once the number of rows has exceeded the number specified in the settings. Under normal operating conditions, there is no need to manually purge data.

7.4 Backup/Restore Tab

| | |
|---------------------------------------|---|
| <p>Backup/Restore Database</p> | <p>Creates a backup image of the video footage database or restores the database from an existing backup image. Click the "Browse" button to select the image folder. Click "Backup" to backup the database in the selected folder. Click "Restore" to restore the database from the backup image in the selected folder.</p> |
| <p>Compact Database</p> | <p>Compacts the memory usage of the video footage database to tune its performance.</p> |



Warning: These actions may take a lengthy period of time to complete. Do not run Vigil Server while running these operations.

7.5 Database Settings Tab

The “Database Settings” tab is used to change settings within the Vigil Server database.

| | |
|---|--|
| <p>Local Database Administrator Password</p> | <p>This setting changes the SQL Server administrator “sa” account password of the local SQL Server installation.</p> |
| <p>TCP Port</p> | <p>Enter in the desired port number and click “Change” to change the listening TCP port number of the SQL Server database.</p> |
| <p>Central SQL Database:</p> | <p>Please contact 3xLogic (see contact information at the end of this document) for critical information regarding this feature prior to enabling the Central SQL Database.</p> <p>The Central SQL Database feature is designed for DVRs with massive amounts data storage. The Central SQL Database feature overcomes the 2GB database size limitation of the MSDE version of SQL used in Vigil Server by connecting to a PC running the full version of SQL server. When enabled, Vigil writes all of its video references and data records to a centralized SQL database(s). The PC running the SQL database must be connected to the DVR at all times and each DVR connecting to the database(s) must have a unique DVR ID.</p> <p>POS data and video/audio storage can be stored on differing SQL servers if so</p> |

desired.

**Local Database
Memory Usage**

The Database Memory Usage section is used to limit the amount of memory used by the local SQL database. This will not affect the disk space usage of the database, only the memory usage. Minimum memory usage should always be set to 0 MB. Maximum memory usage should be set according to the amount of memory installed in the DVR (see table below). Setting the appropriate maximum memory usage level for the DVR will improve DVR performance. To change the maximum memory usage, drag the slide bar to the appropriate MB amount.

| MB of RAM installed in DVR | Max MB of memory usage recommended |
|-----------------------------------|---|
| 256MB | 80MB |
| 512MB | 250MB |
| 1024MB | 700MB |

8 Settings Utility

The “Settings Utility” window is used to export and import Vigil Server Settings.



Enter an administrator username and password to use the export and import features.

Export – Click the “Export” button to export the current Vigil Server settings.

Import – Click the “Import” button to import Vigil Server settings from a previously exported settings file.



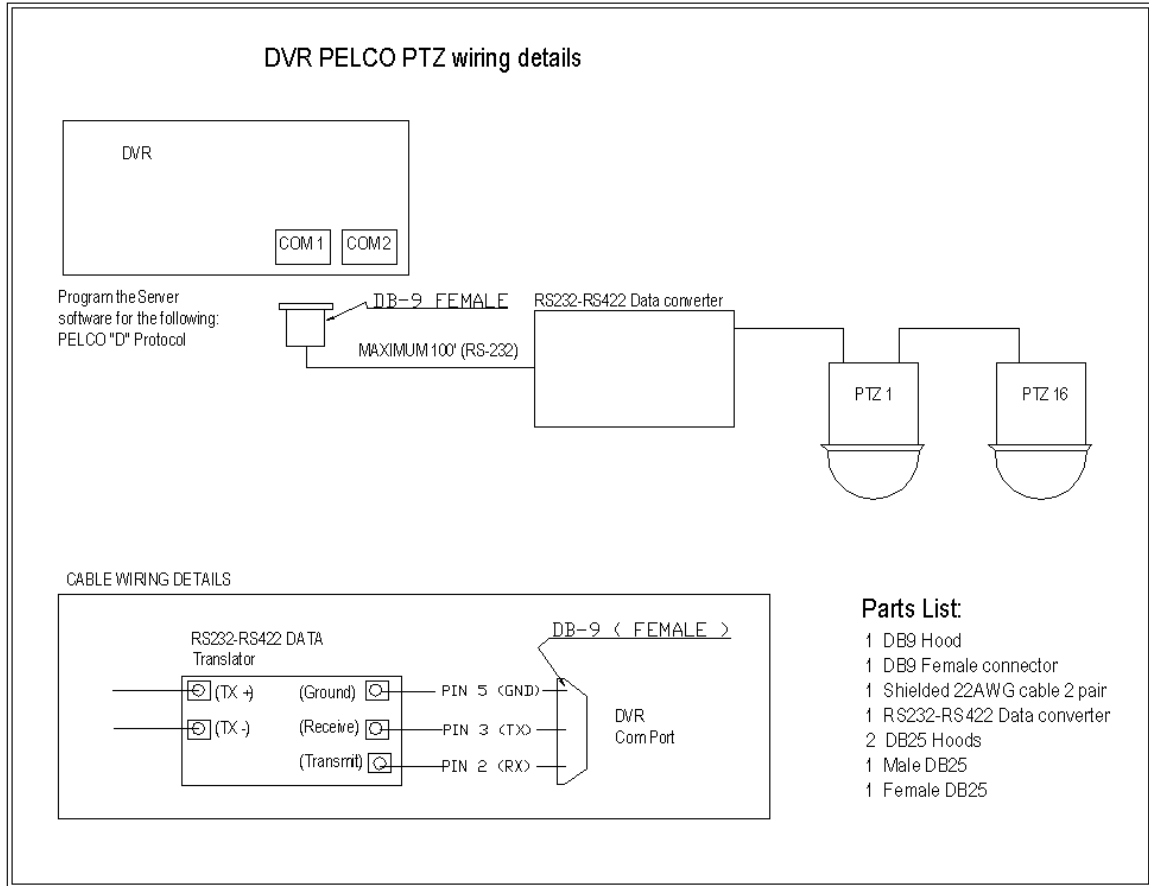
Warning: Only qualified technicians should import or export server settings.



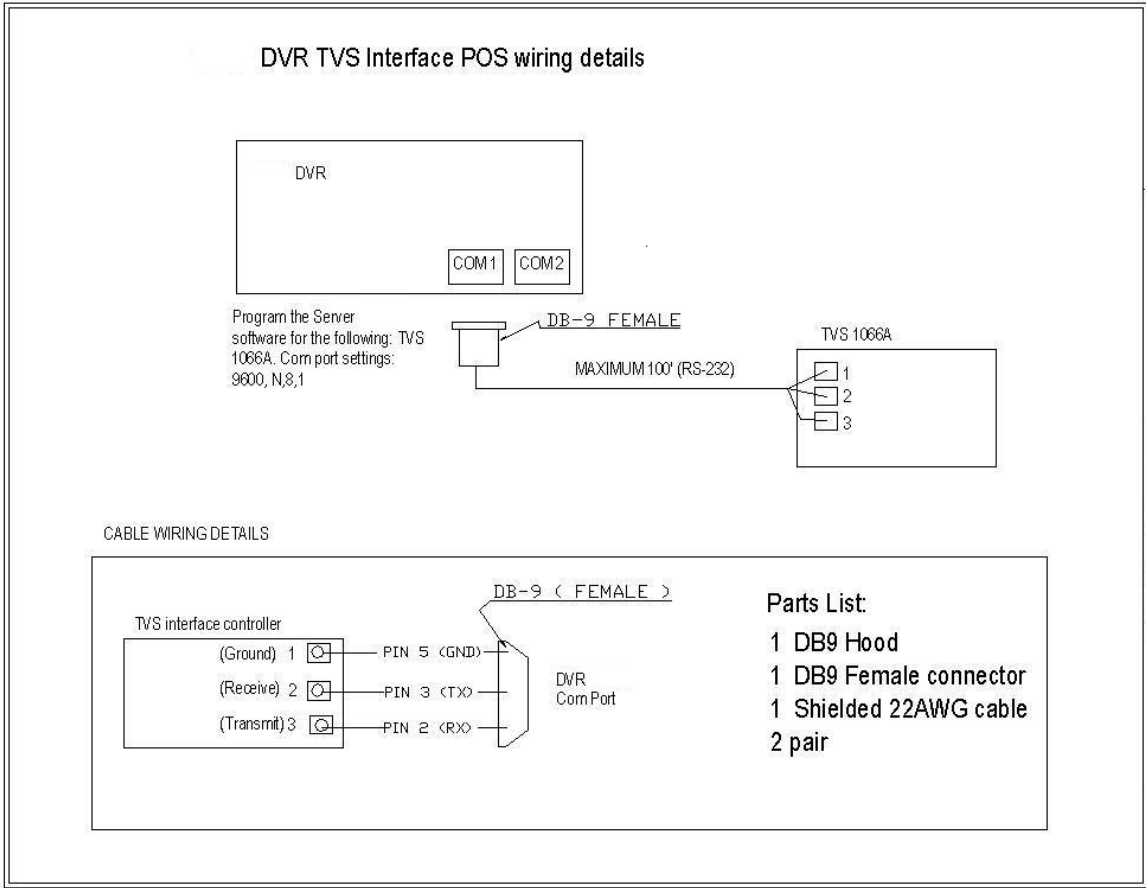
Note: A settings import will erase all existing Vigil Server settings. Please check that “Media Drives” settings are correct after performing an import.

Please contact 3xLogic for more information about settings import and export features.

9 PELCO PTZ Wiring Details



10 TVS Interface POS Wiring Details



1 Supported Network Cameras

The following table lists supported network cameras and their respective features. Also listed is typical connection information such as default TCP port settings and username/passwords.

| Make/Model | Media Format | Resolution | Protocol | Default Port | Default User / Password | PTZ Support | Audio Support | Misc. |
|----------------------|--------------------------------------|--|---|--------------------------------------|-------------------------|----------------------------------|----------------------------------|---|
| HTTP | JPEG | Any | HTTP | 80 | n/a | n/a | n/a | Any JPEG camera using HTTP protocol can record with this setting. URL of JPG image must be specified. |
| Acti | MPEG4 | 720x480(576), 352x240(288) | TCP / UDP Multicast | 6000, 6001, 6002 | Admin: 12345 6 | n/a | No (under development) | |
| Arecont | JPEG | Any | TFTP/UDP/ HTTP | 69/80 | n/a | N/a | n/a | |
| Axis 2130-R | JPEG | 704x480, 352x240, 176x112, 704x240 | HTTP | 80 | n/a | Yes | Yes | |
| Axis 211 | JPEG / MPEG4 (simultaneousl y) | 604x480, 320x240, 240x180, 160x120 | HTTP (JPEG), RTP Unicast (MPEG4) | 80 (JPEG), 554 (MPEG4 RTSP) | n/a | No | Yes | |
| Axis 213 PTZ | JPEG / MPEG4 (simultaneousl y) | 4CIF (704x480), 2CIF Expanded (704x240), 2CIF (704x240), CIF (352x240), QCIF (176x120) | HTTP (JPEG), RTP Multicast (MPEG4) | 80 (JPEG) | n/a | Yes | Yes | Decoder does not support 4CIF (640x480) MPEG4 stream |
| Axis 241QA | JPEG / MPEG4 (simultaneousl y) | 4CIF (704x480), 2CIF Expanded (704x240), 2CIF (704x240), CIF (352x240), QCIF (176x120) | HTTP (JPEG), RTP Unicast (MPEG4), | 80 (JPEG), 554 (MPEG4 RTSP) | n/a | No | Yes | |
| Axis (Others) | JPEG / MPEG4 | Any | HTTP (JPEG), RTP Unicast/Mul ticast (MPEG4) | Varies | n/a | Yes (depending upon model) | Yes (depending upon model) | |
| Bosch | JPEG | Any | HTTP | 80 | n/a | No | n/a | Non-standard JPEG image, not supported by "fast decompress" and AZTech CODEC |
| Canon | JPEG | 320x240, 640x480 | HTTP | 80 | n/a | Yes | n/a | |
| HikVision | H.264 | QCIF, CIF, D1 | TCP (Through SDK) | 8000 | n/a | No (Under development) | No (Under development) | Multilple channel is supported, Both major streams and sub streams are supported. In HD viewer, in order to |

| Make/Model | Media Format | Resolution | Protocol | Default Port | Default User / Password | PTZ Support | Audio Support | Misc. |
|---------------------------------------|------------------------------------|---|----------------------------------|--------------|--|-------------|------------------------|---|
| | | | | | | | | use sub stream, use camera number + 100 as channel number |
| IQEye | JPEG | Any | HTTP | 80 | N/a | No | n/a | |
| JVC | JPEG | Any | HTTP | 80 | N/a | No | n/a | |
| Merit Lilin / Pixord | JPEG | Merit Lilin: Any Pixord: 704x576, 352x288 | HTTP | 80 | N/a | Yes | n/a | Save preset not supported, you can only save preset using web interface |
| Messoa | JPEG | 160x120, 320x240, 640x480 | HTTP | 80 | n/a | No | Yes (PCM, ADPCM) | |
| Panasonic NM100 | JPEG or MPEG4 (not simultaneously) | 640x480, 320x240, 160x120 | HTTP (JPEG), RTP Unicast (MPEG4) | 80 | admin: password | Yes | n/a | |
| Panasonic NP1004, NP244 | JPEG / MPEG4 (simultaneously) | 1280x960 (JPEG only), 960x720 (JPEG only), 640x480, 320 x 240 | HTTP (JPEG), RTP Unicast (MPEG4) | 80(JPEG) | admin: 12345 | Yes | Yes | Set "Refresh interval(MPEG-4)" to 1 second if using MPEG-4 Max 8 simultaneous connections. Max 15FPS in JPEG full scan mode. |
| Panasonic NW47xS, NS32X, NP472 | JPEG | 640x480, 640x320, 320x240, 160x120 | HTTP | 80 | admin: <empty> | Yes | n/a | Max 15 simultaneous connections PTZ is using digital pan/tilt, and will only work when zoomed in |
| Sanyo J2K | JPEG2000 | 720x480, 720x240, 640x480, 320x240, 160x120 | HTTP | 80 | id1:1111 (Viewing) id2:2222 id3:3333 (Administrator) | No | n/a | JPEG2000 decoder does not work well with broken images and can cause memory leaks |
| Sanyo Pan Focus | JPEG | 640x480, 720x240, 360x240, 180x120 | HTTP | 80 | guest: guest (Viewing) admin: admin (Administrator) | Yes | No (Under development) | The camera will stop functioning if two admin are logged in at the same time. |
| Sony | JPEG or MPEG4 (not simultaneously) | 640x480, 384x288, 320x240, 256x192, 160x120 | HTTP | 80 | admin: admin | Yes | Yes | |
| Toshiba IK- | JPEG | Any | HTTP | 80 | root: ikwb | Yes | Yes | |

| Make/Model | Media Format | Resolution | Protocol | Default Port | Default User / Password | PTZ Support | Audio Support | Misc. |
|--------------------------------|--------------|---------------|-----------|--------------|-------------------------|----------------------------|------------------------|---|
| WB21A | | | | | | | | |
| Toshiba IK-WB02A/WR-01A | JPEG | Any | HTTP | 80 | n/a | No | Yes | Please use Messo camera type |
| VivoTek | MPEG-4/JPEG | Up to 640x480 | RTSP/HTTP | 80 | n/a | Yes (depending upon model) | No (Under development) | For streaming JPEG, use HTTP camera type with "/cgi-bin/video.jpg" as URL |

1 Troubleshooting

This section reviews common problems and error messages of Vigil Server.

- Make sure you have recently rebooted the DVR (Start | Shutdown | Restart)
- Make sure you are running a full install (not upgrade version) of Windows 2000 or Windows XP (North American release)
- Make sure you have a valid license key
- Make sure a network card is properly installed on the DVR
- Make sure you have the latest version of the software

- **Adding new cameras to the Vigil DVR.** When adding new cameras to a Vigil DVR, the camera must be set up in the Vigil Server software settings screen. Otherwise, it will not be loaded when Vigil Server is started. Use the following instructions to add a new camera:
 1. Set up the new camera hardware and plug it into an available input in the DVR.
 2. Reboot the DVR.
 3. Run Vigil Server and open the "Settings" window.
 4. In the "Cameras" tab, select the new camera from the cameras dropdown list.
 5. Change the "Recording Speed" dropdown list from "Disabled" to "Enabled".
 6. Click "OK".

2 Contact Information

3xLogic has offices in Victoria BC, Canada and in Westminster Colorado, USA. Please visit our 3xLogic web site at www.3xlogic.com. Please contact us by e-mail at support@3xlogic.com (technical support), or using the following contact information:

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Toll Free: (877) 3XLOGIC
(877) 395-6442

Email: support@3xlogic.com

Website: www.3xlogic.com

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