

ALICE Aware

March 2016

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Getting Started

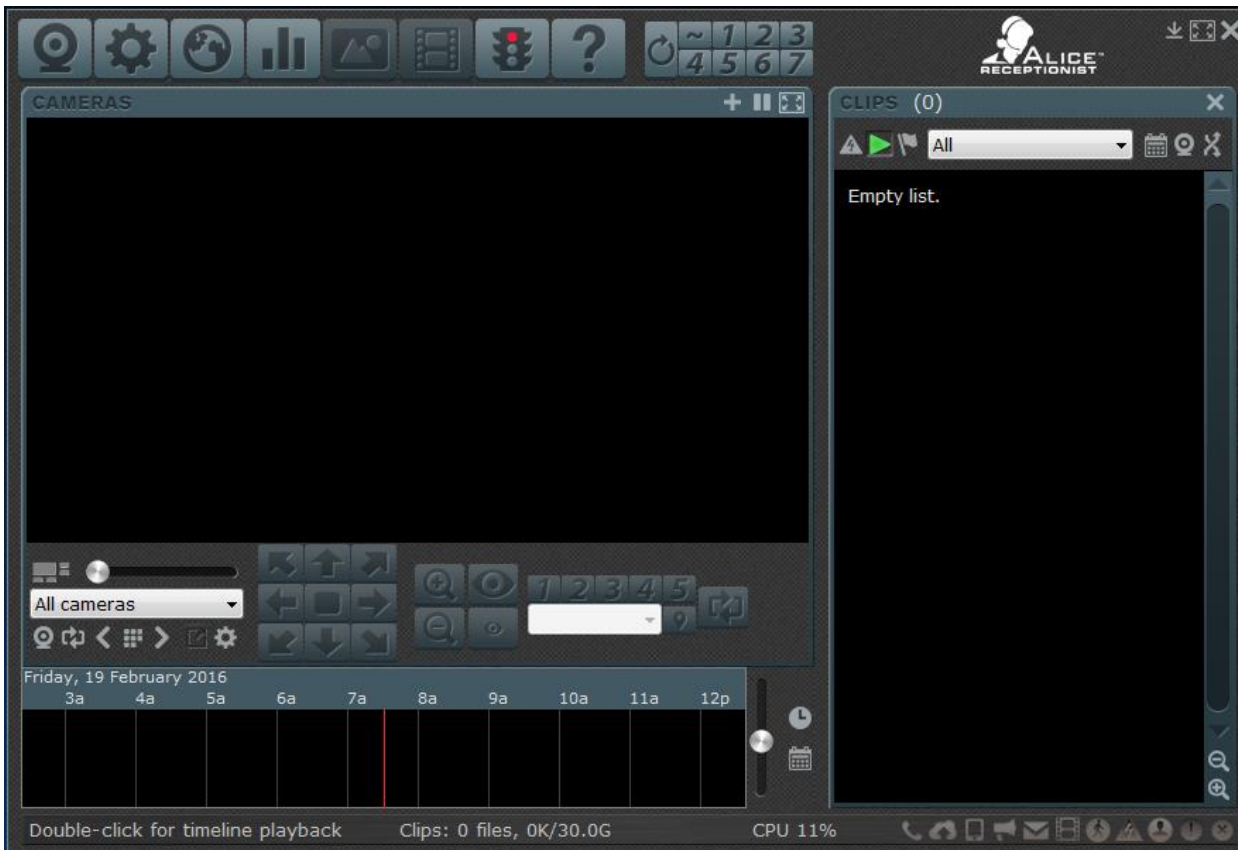
The Quick Start page will assist you with first-time configuration and will guide you to other pages which will help to familiarize you with many features of Alice Aware.

Download Alice Aware (IP Camera Software) from here: <http://files.alicereceptionist.com/arip4-0/ALICEAware.exe>

To configure the ALICE IP Camera with the ALICE Aware software, follow these instructions:

ALICE Aware Overview

When you start Alice Aware for the first time, here's what you'll see:



At the top is the toolbar which contains several command buttons.

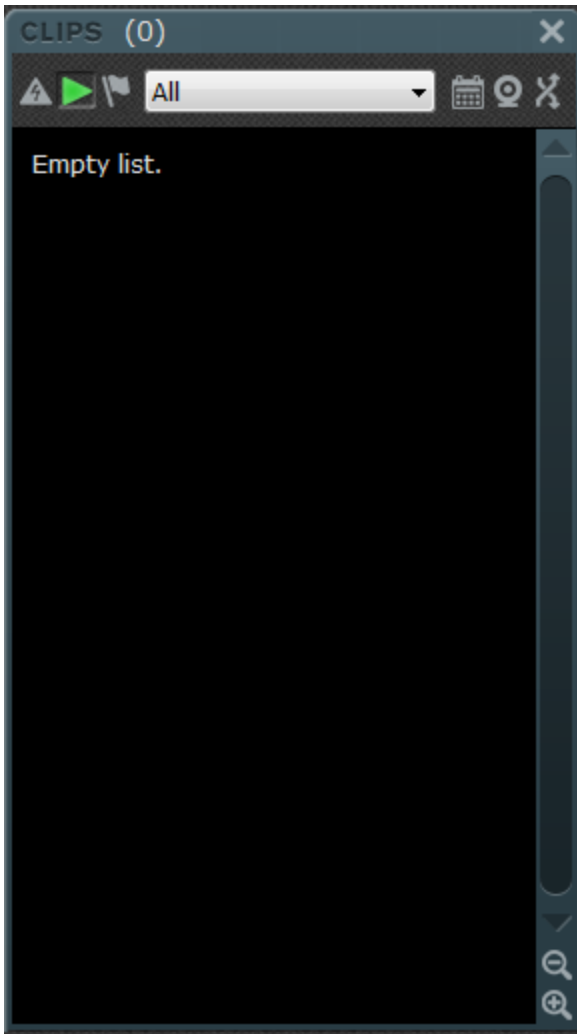


At the bottom is the status bar.



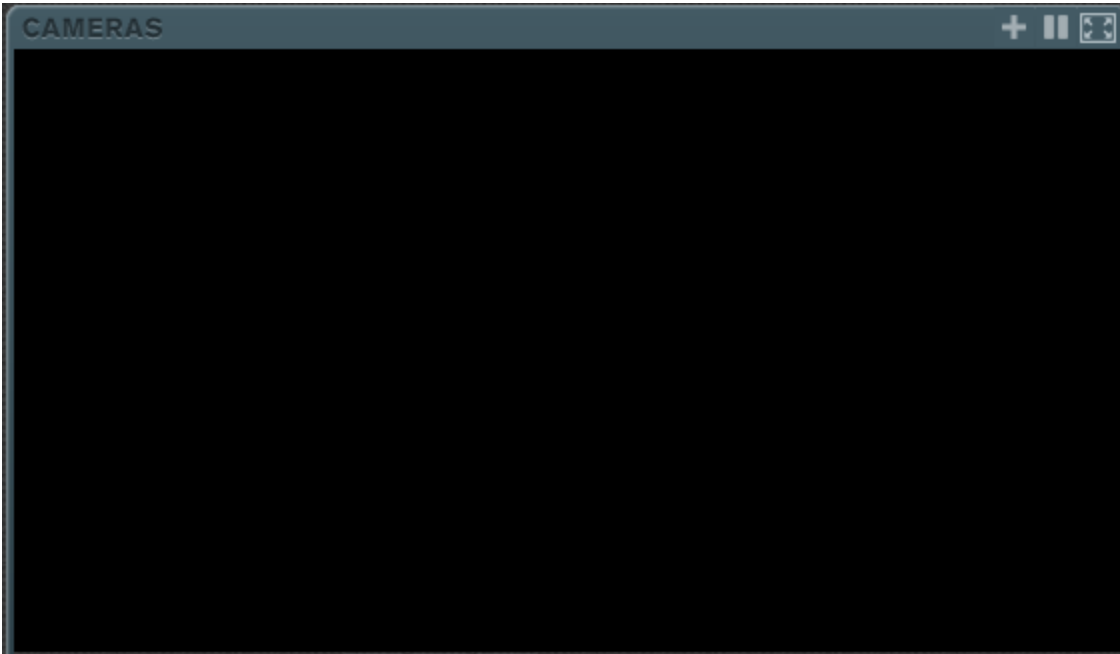
As you move the cursor over command buttons and other areas of the Alice Aware window, you will see that the status bar is updated with descriptive text. On the far right of the status bar you will notice several grey icons. These icons "light up" as Alice Aware performs various functions.

The black window on the right is called the "clip list."



As Alice Aware creates images and movies, "thumbnail" images along with dates and times will appear on this list.

The area to the left of the clip list will be filled with "live" views from your camera or cameras.

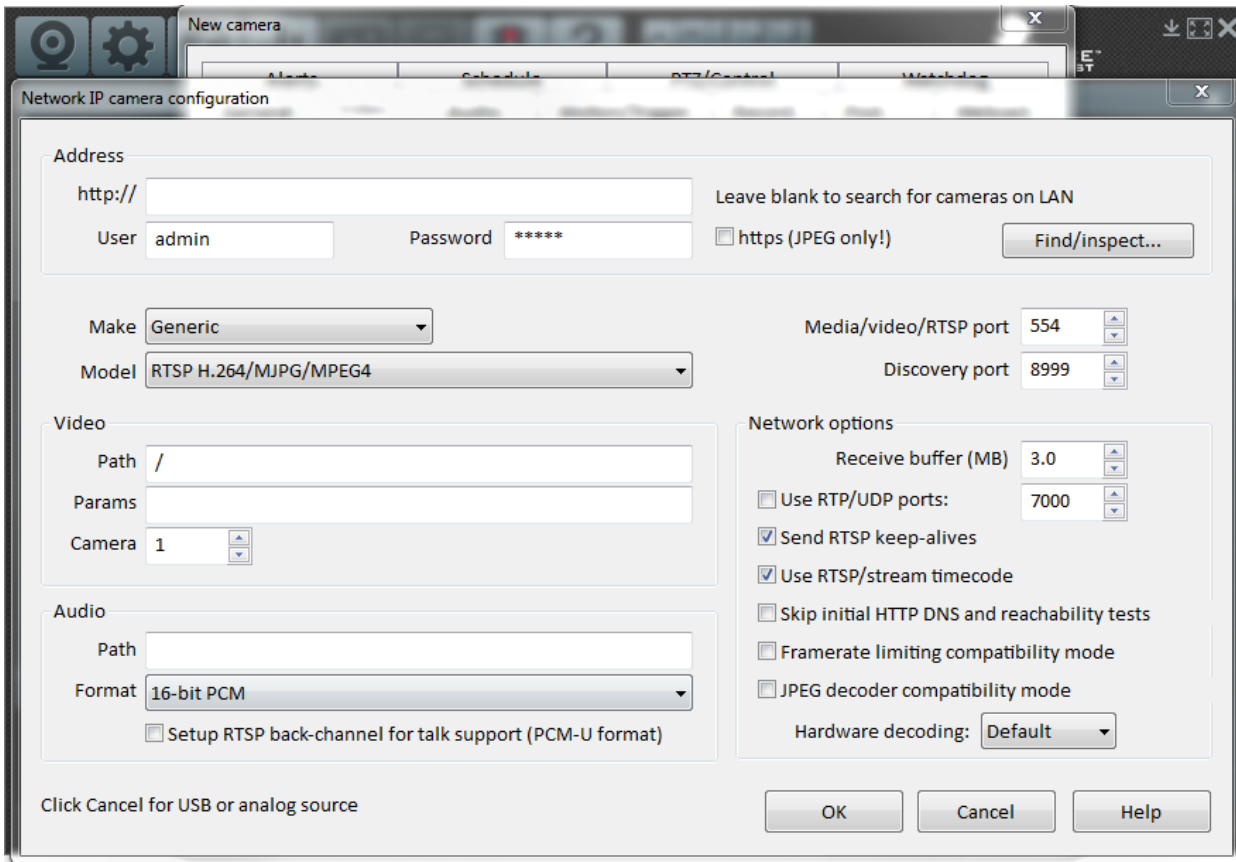


The following steps will assist you in configuring ALICE Aware in order to begin monitoring your Lobby:

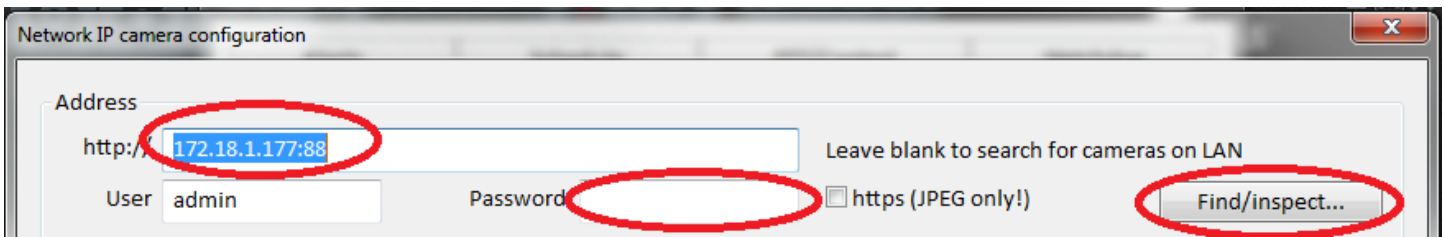
Step 1 - FINDING your CAMERA. Attach your camera to your computer and install its driver software according to the manufacturer's installation instructions; if you have a network camera, attach it to your network via Ethernet cable, or make sure it works with your wireless router. Be sure you know it's internal IP address and can access it in a browser. Now, click on the **webcam icon** or the **+** button at the top/right of the cameras window.



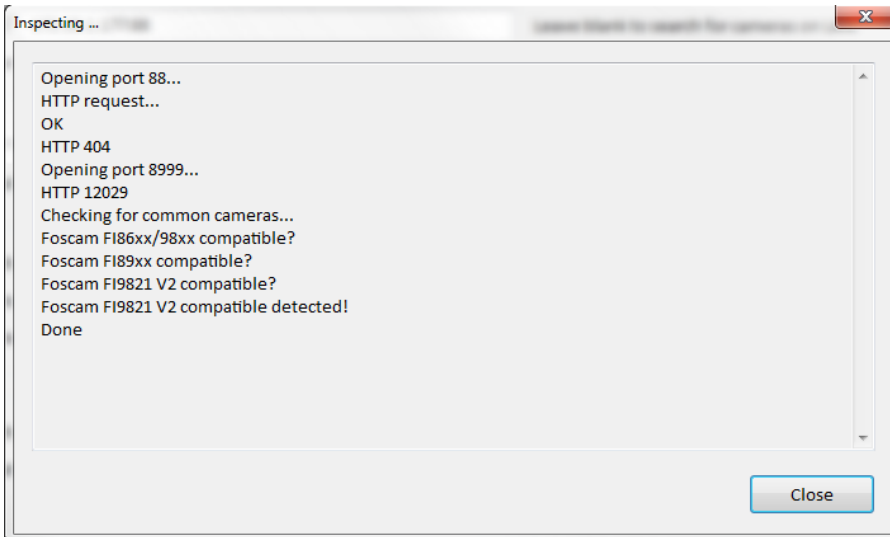
A Camera Properties window will appear.



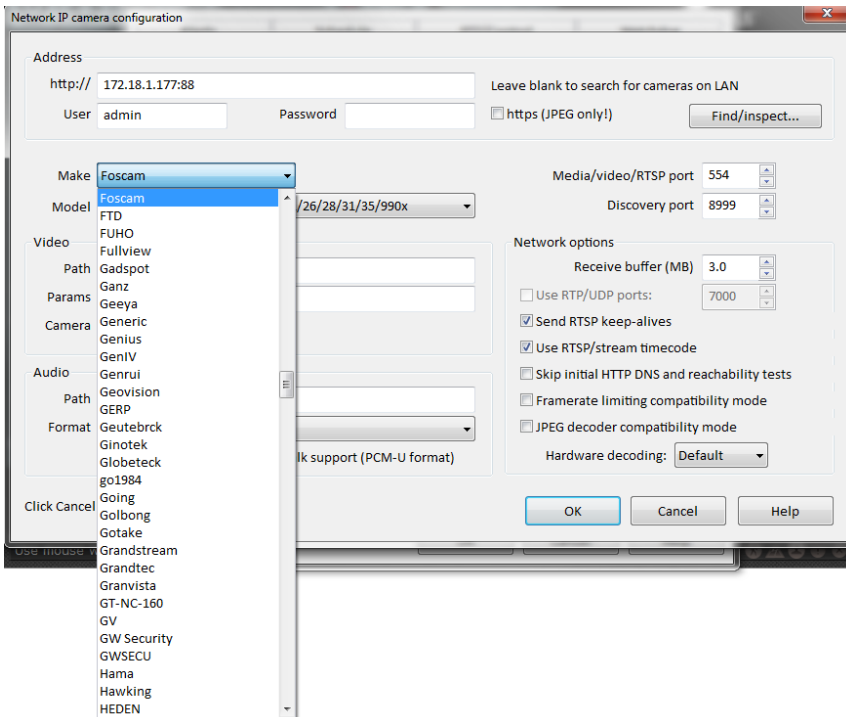
Step 2 - CONNECTING your CAMERA. Copy and paste a working URL for your camera from a browser address bar. Change the user/password from the default admin/admin if necessary. Press the Find/Inspect button.



Some cameras may be automatically configured with the Find/Inspect button.

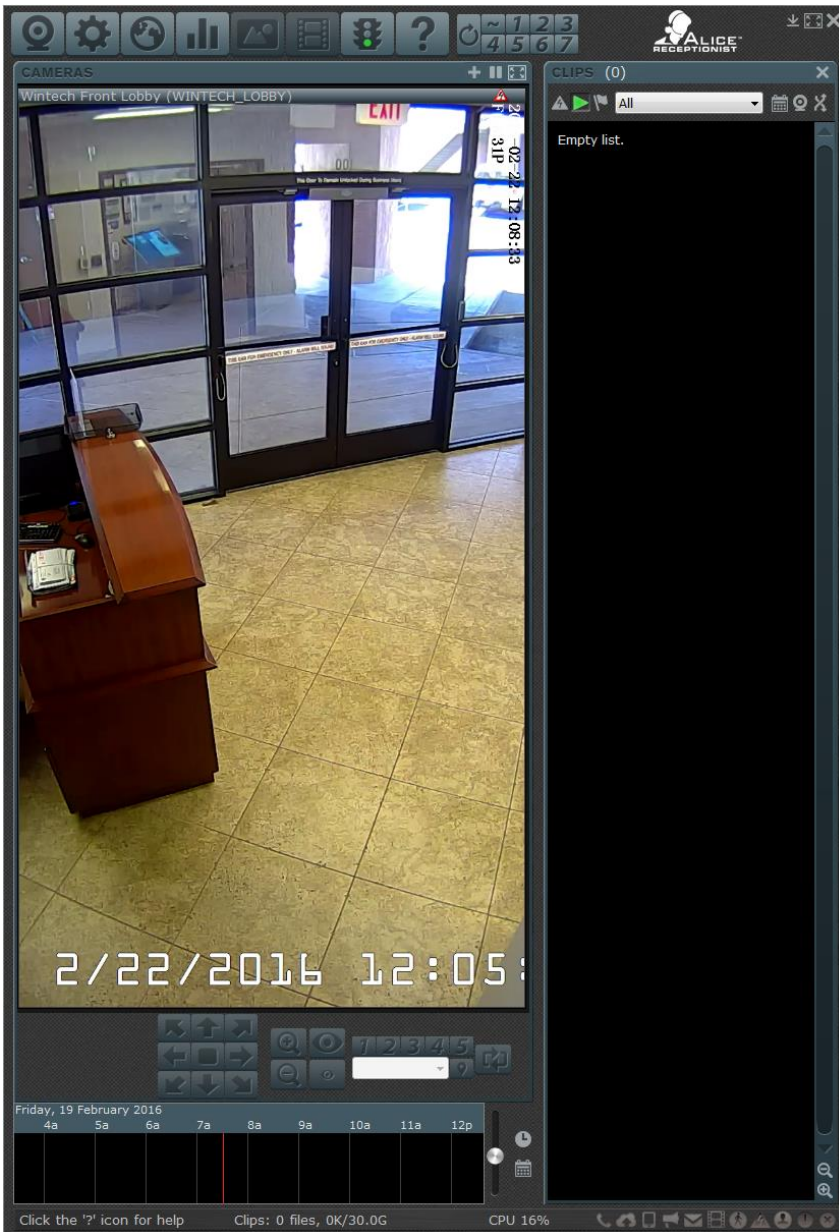


If your model is not found, search for your make/model on the list. If not listed, you can try a similar model, or select one of the generic methods at the top of the list if you know the video stream path.

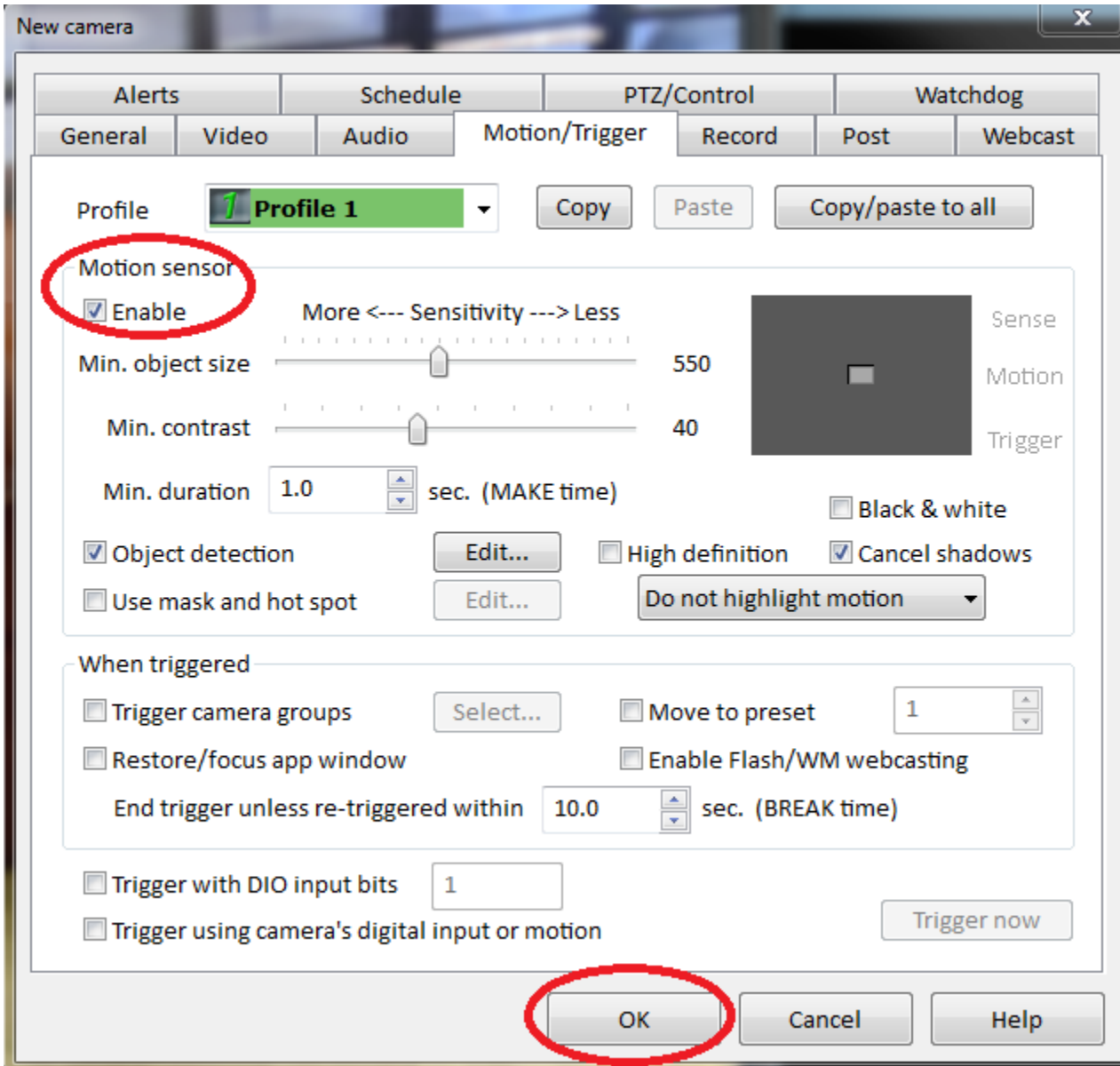


You may email Alice Aware support if you require assistance with this step. For a USB, Firewire or Analog camera, click Cancel and then select your camera's name in the device selection box, and click Ok. If the list is empty, be sure that you have installed the camera correctly, cancel the window, and return to step 1. Once the camera is created, you may return to the camera properties window later by again right-clicking the live camera image, or by clicking the webcam icon.

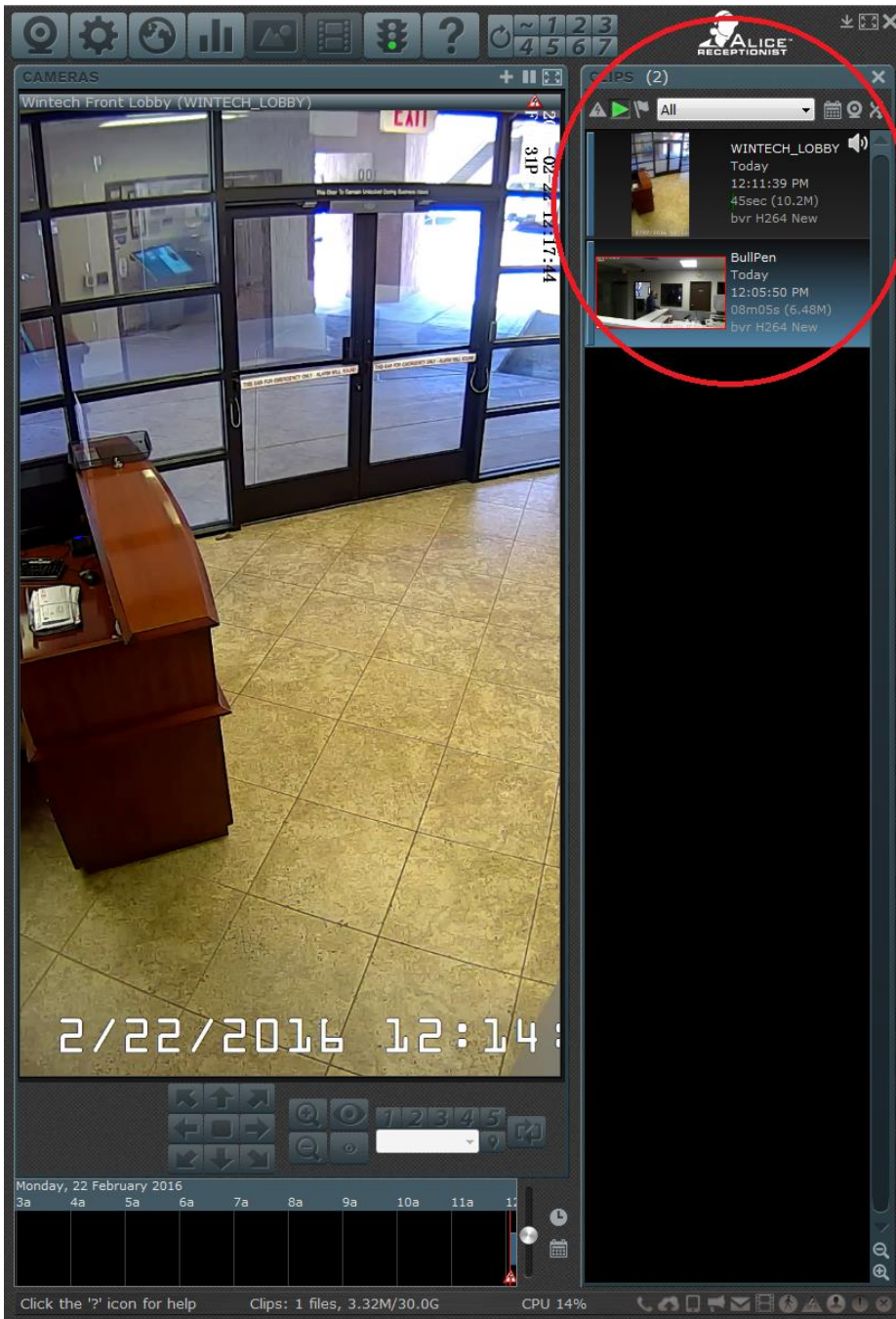
Step 3 – Viewing LIVE Video. Live video should now be displayed. If an error appears instead, verify that your camera is properly connected, and that no other camera software is running. For a network camera, Alice Aware must have access through any Windows firewall and **ALICEAware.exe** should be exempted from any Network/Web scanning by antivirus software--this software often filters out non-HTTP traffic and may attempt to cache the video stream. These topics are discussed on the network configuration and troubleshooting page. You may also try rebooting your computer. You may return to the Camera Properties window by clicking the webcam icon.



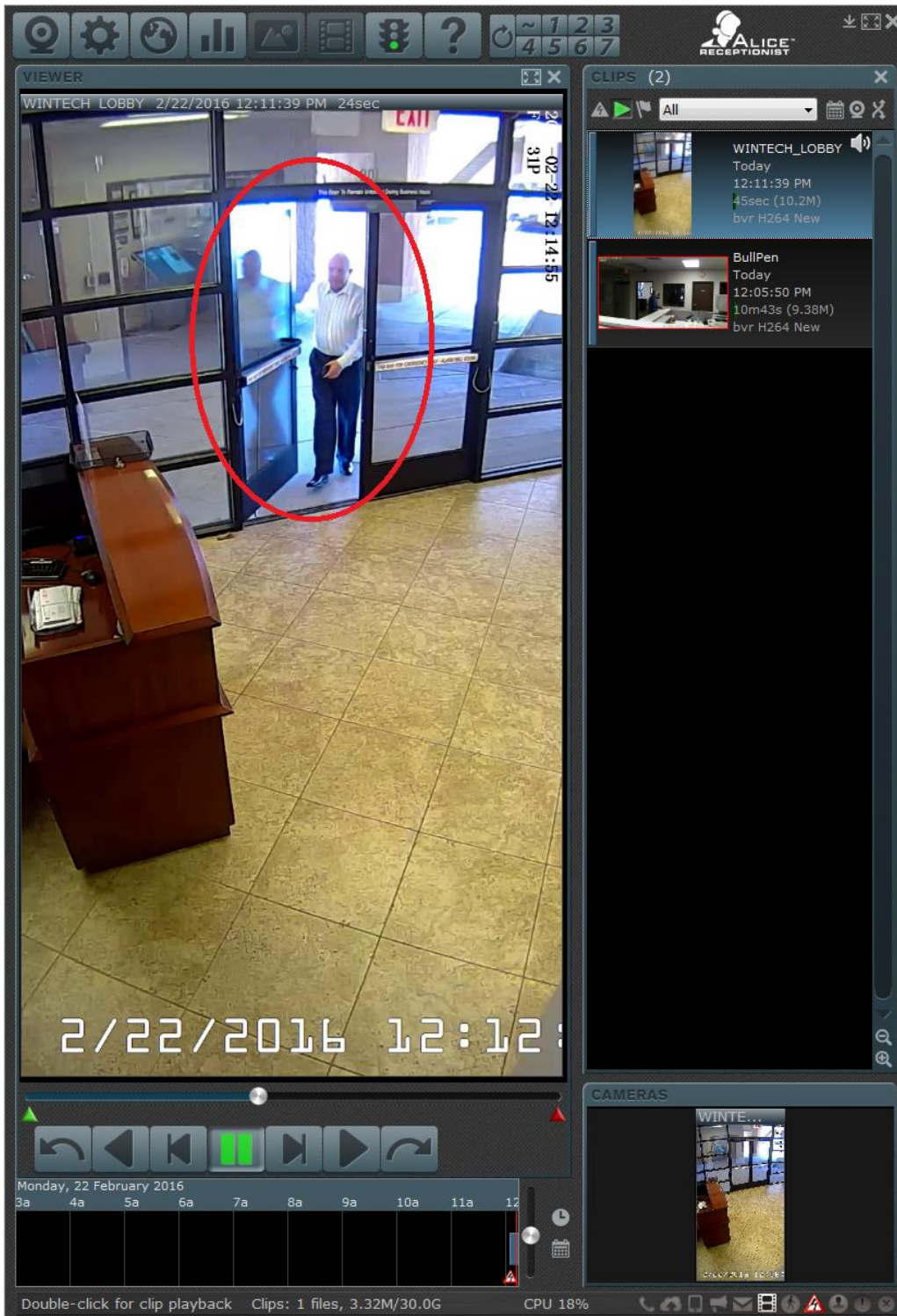
Step 4 - Enabling Motion Detection. Open the Camera Properties window by clicking on the webcam icon. Click on the Motion/Trigger page. Click to check "Enable motion sensor." Click Ok to close the window.



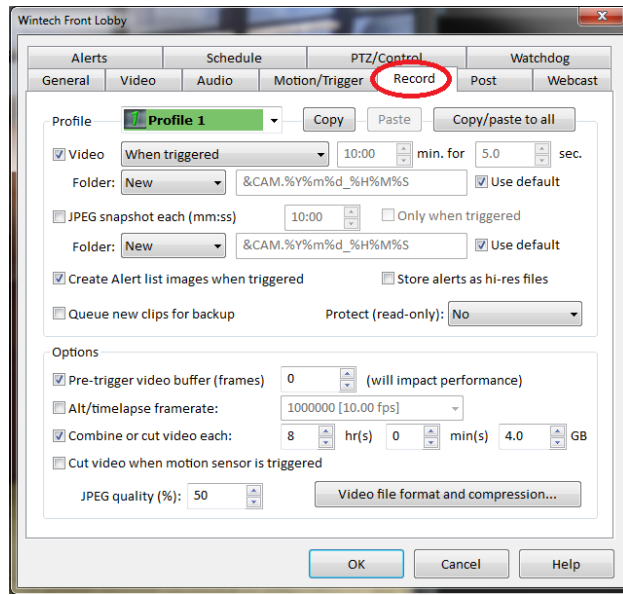
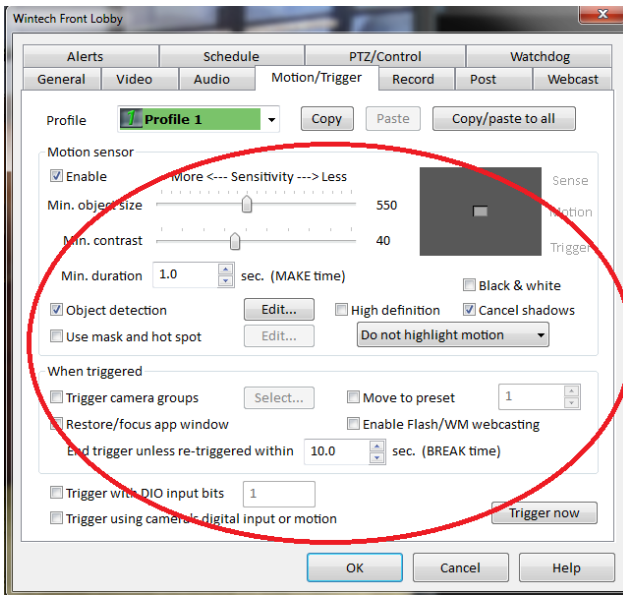
Step 5 – Recording Motion. By default, Alice Aware will record a video when motion is sensed. Try waving your hand in front of the camera. You will see a Clip created in the Clip List. Alice Aware will continue to record for several seconds once the motion stops. When recording stops, the Clip in the Clip List will now show a "thumbnail" image.



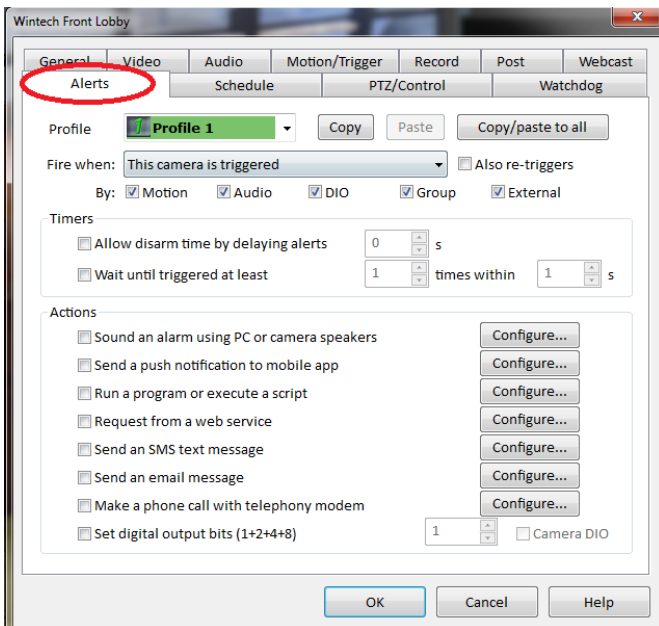
Step 6 – Reviewing Video CLIPS. Double-click on the thumbnail image in the Clip List to open the Clip in the Clip Viewer. Use the various clip viewer tools to playback the movie. Close the clip viewer by clicking on the live camera image, or clicking the "X" box at the top-right corner of the viewer.



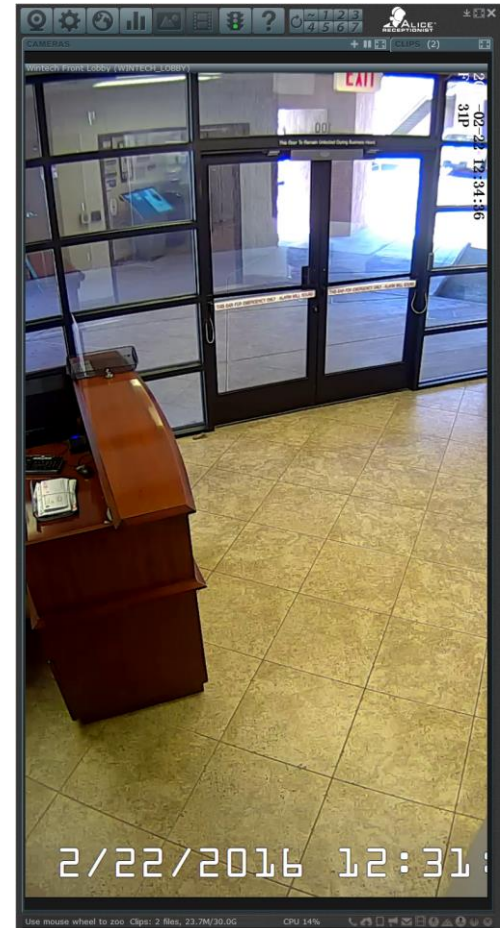
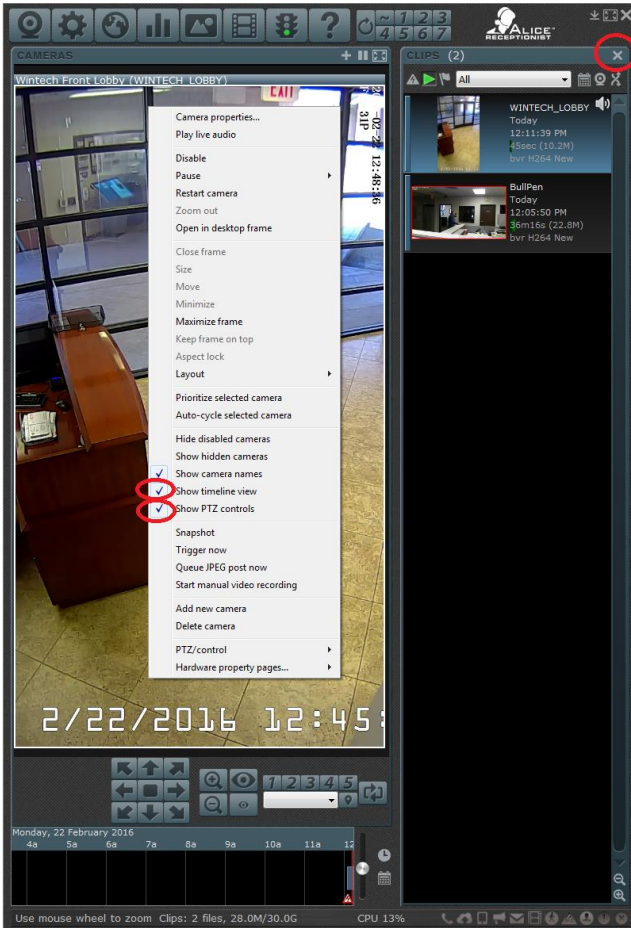
Step 7 – Fine Tuning Motion Detection and Recording Properties. Return to the Trigger profiles page to adjust the sensitivity as necessary. Visit the Camera Properties Record page to change recording properties as necessary.



Step 8 – Setting ALERTS. Visit the Alerts page to have Alice Aware sound an alarm, send an email, or alert you in some other way that motion is occurring.



Step 9 – SIMPLIFYING your ALICE Aware window. To minimize the amount of buttons and controls that are displayed on the ALICE Aware window, Right-mouse click anywhere on the camera feed and UN-check the Show timeline view and the Show PTZ controls options. To hide the Video VLIPS window on the right side of the screen, Click on the X icon in the upper-right –hand corner of the CLIPS window.



Your ALICE Aware system is now configured and ready to begin 24/7 monitoring of your lobby.

The Toolbar

The toolbar is a set of icons found at the top of the **Alice Aware** window. Each icon is actually a button that you can click with the mouse, and corresponds to a particular command or function.



The following is a description of each of the toolbar buttons:



Camera Properties

This button opens the camera properties window for the selected camera. You may also access this window by right-clicking any camera image and selecting "properties" from the menu. If you have no cameras yet configured, this button also may be used to add your first camera.



Options

This button opens the Alice Aware Options window. This window's initial page provides a quick reference to the version number of your **Alice Aware** software. Other pages allow for the configuration of the web server, start-up options, and other user preferences.



Remote Access

This button opens the Remote Access Wizard to assist you with configuration of your firewall, router, and client apps. Hold Shift when clicking to directly open a web browser to display your Alice Aware web server's login page.



Stats

This button opens the Alice Aware Stats window. This window has a Messages page, where **Alice Aware** lets you know of anything unexpected that happens during operation. There's a page that details Camera statistics, such as the number of frames processed and alerts generated. There's also a page which details the current web server Connections including the current camera or camera group being watched.



Snapshot

This command saves the camera image that's currently displayed. The file is a JPEG that's placed in the clip list. If you have more than one camera, a snapshot is only taken from the "selected" camera--the large camera window or the one with a blue border. After the file is saved, the clip viewer is then immediately opened.



Video

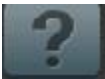
Click this button to immediately begin recording a video. Click it again to stop. Note that video recording may also be automatically initiated based on movement or

time of day according to additional settings on the camera's recording page. The movie's format (compression method and quality) is also determined by the camera's recording page.



Pause

When you click this button, the traffic signal light will change colors. When the light is yellow or red, a number of Alice Aware features are paused: recording, alerts, and image posting. The startup options page allows you to always launch Alice Aware in the red light state, and to choose how long a yellow light will be displayed before automatically turning green.



Help

This button opens the **Alice Aware** Help window at the Welcome page.



Profile

Shows the currently active global profile as configured on the Options/Schedule page. Click one of the numbered buttons to override the active global profile with any specific global profile. The first click will temporarily override the schedule with the selected profile; the schedule will resume normal operation when the profile is next scheduled to change or after 8 hours, whichever occurs first. Click the profile number a second time to lock it.



Inactive

This profile setting (sometimes called profile 0) is the equivalent of "clear" or "no profile" on the schedule. When set, all cameras will be inactivated, meaning no recording, alerts or image posting will occur, although webcasting is unaffected. The effect of the inactive profile may at first seem similar to that of the traffic signal icon, although the traffic signal's actual effect may be configured on the Options page and will never fully disable (disconnect) cameras as the inactive profile is capable of doing.



Temp Profile

When the currently active global profile has been *temporarily* overridden, you will see this stop watch. The schedule will resume normal operation when you click this icon, the profile is next scheduled to change, or after 8 hours, whichever occurs first.



Hold Profile

If you see this red hand icon, the scheduled profile will not change on its own--you must click this icon in order to resume the normal operation of the global profile schedule.

Schedule

If you have configured more than one schedule on the Options/Schedule page, you may change the active schedule from the toolbar. Right-click and select the new schedule from the pop-up menu.

The Status Bar

The "status bar" is the name given to the area found at the very bottom of the Alice Aware window.



The status bar contains three important areas:

On the left is an area for context-sensitive help messages. You will notice that this text changes as you hover the cursor over the Alice Aware window to describe what's below the cursor.

Next is a status display describing the utilization of your clip storage folders. This display may consist of these numbers:

- The **number of files** in the folder. It is considered a warning condition if this number surpasses 200,000.
- The **amount of headroom** on the drive **beyond** what's required to store 100% of the folder's specified maximum size. It is considered an error condition if this number falls below 1GB. Ideally you should reserve enough free space to accommodate at least 15 minutes worth of completed files from each camera, as the process to store and delete files only runs occasionally. The clip storage status display will be shown in **red** if there is a warning or error condition.
- The current CPU utilization (approximately). If this number approaches 100% it is considered an error condition and the number will be shown in red.

The right side of the status bar consists of a series of miniature icons. These icons are shown "grayed out" when inactive. The following is a description of each icon:



Phone

Alice Aware is placing a phone call alert.



FTP

Alice Aware is posting images to your website or FTP server.



Push

Alice Aware is sending either an SMS alert or a Push notification to a mobile device.



Sound

Alice Aware is playing a sound alarm.



Email

Alice Aware is sending an email alert.



Record

Alice Aware is recording a clip.

**Motion**

Alice Aware detects motion via a video motion sensor.

**Trigger**

One or more cameras is in the triggered state.

**Web
server**

One or more people are connected and streaming images or video.

**Warning**

One or more cameras is in a trouble state--no signal, FPS mismatch, or webcasting error. Also shown if a warning message has been posted to the status window's message page.

**Error**

An error message has been posted to the status window's message page. Double-click this icon to be taken there

Camera Windows

Each camera's video is displayed within its own window with a title bar containing its name.



There are many "indicator lights" at the right-hand side of the title bar:

The blue circle indicates the camera is detecting motion.

The red triangle indicates the camera is in a triggered state.

The yellow circle with exclamation point indicates a warning or trouble condition. Usually this means a mismatched frame rate, but open the camera properties page for details.

The green circle indicates the software is playing live audio from this camera. It will turn blue when in "talk" mode for supported cameras.

The red circle indicates active recording is occurring. It will turn gray if recording is paused yet the file remains open.

You can place a camera directly into its own desktop window by right-clicking it and selecting **Open in desktop window**. Alice Aware will remember each camera's size and position on your desktop. To move the window back to the main Alice Aware window, right-click once again and un-check the option.

The Selected Camera

When a camera is the **Selected** camera, it is shown with a double white border and a brighter title bar. Select a camera by clicking on its window. Un-select all cameras by clicking anywhere within the black area of the Alice Aware cameras window not occupied by a camera. Several functions affect the selected camera, such as several Toolbar icons, the PTZ controls, and the Clips camera filter.

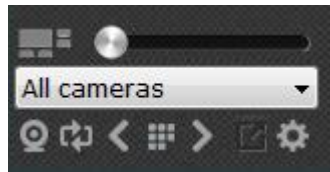
Window Layout

When you have multiple cameras, you may re-arrange them within the Alice Aware window by **clicking and dragging** them into the desired position. As you drag and hover over other camera windows, the "target" camera position will become the selected camera.

By default Alice Aware arranges camera so that there is a minimum of unused space within the Cameras window.



There are many tool buttons located beneath the cameras window. In addition to PTZ control which act on the selected camera, there are a number of window layout controls.



This **Layout slider** found at the top of this toolbar alters the relative size of 1, 2, or 4 cameras in relation to the others. With the slider at the far-left, each camera is treated equally. As you move the slider to the right, the chosen 1, 2, or 4 cameras become up to 9 times the size of the other cameras.



Change the layout from **1-up** to **2-up** or **4-up** by right-clicking and selecting the corresponding option from the **Layout** menu.

Group or Camera filtering

The **Group selector** allows you to choose between **All cameras** or any other defined camera group. Cameras are added to and removed from groups on the general tab of their camera properties pages. With a group selected, you may use

the **group spawn** button to open the entire group at once into its own top-level frame window on your desktop. The gear icon is used to edit **group settings** such as whether or not the group will participate in remote viewing or a remote cycle stream.

Use the **single camera** button to prioritize the viewing of an individual camera and its clips. While in this mode you may use the arrow keys or buttons as well as the frame button to de-select the camera and return to the full group view.

Auto-cycle

If you have more than one camera, use the **cycle** icon to automatically advance the camera selection to the next enabled camera in the frame using a timer. This creates a camera "patrol." Auto-cycle options are found on the Options/Cameras page. Without the **single camera** button enabled, the auto-cycle may be used to patrol the sound from each camera. Typically auto-cycle is combined with the **single camera** button however for a full-screen video patrol.

Full Screen Options

You may choose to open either a single camera window or the entire set of camera windows in full-screen mode.

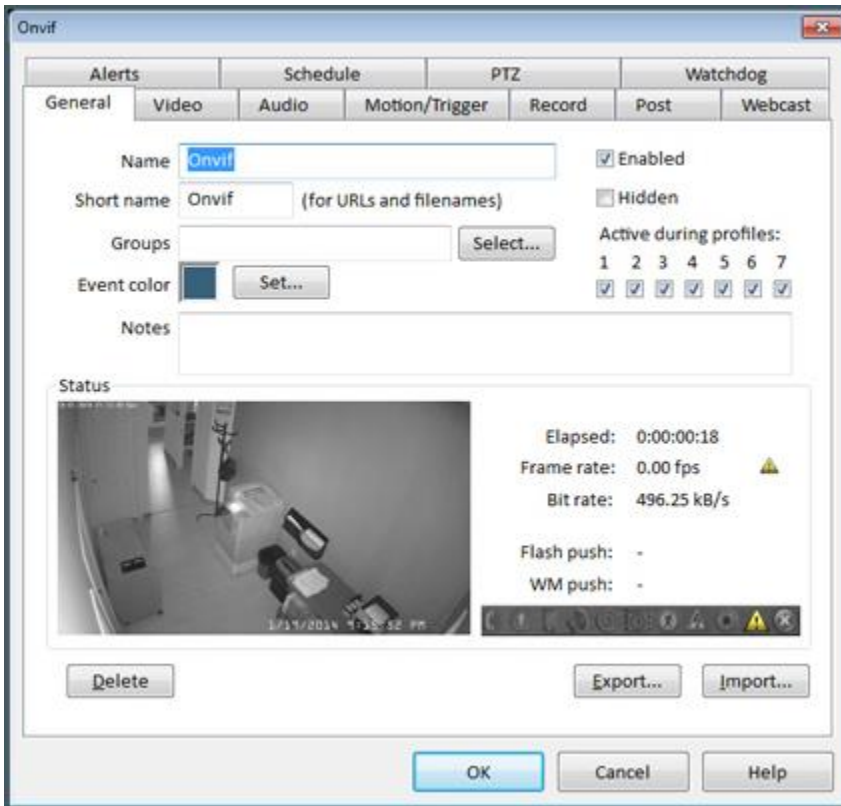
To open a single camera in full-screen, double-click it. Double-click again or press the Esc key to return to the normal view.

To open the entire cameras window in full-screen, use the icon at the top-right of the Cameras window, or right-click anywhere in the Cameras window and select **Maximize frame**.

Camera Properties



Use the webcam icon from the toolbar, or right-click a camera window and select **Camera properties** to open the following tabbed window following tabbed window:



The camera properties window is actually eleven windows in one, and configures a great deal of functionality for each individual camera on your system. Each window has its own "tab"--these are labeled General, Video, Audio, Motion/Trigger, Record, Post, Webcast, Alerts, Schedule, PTZ and Watchdog.

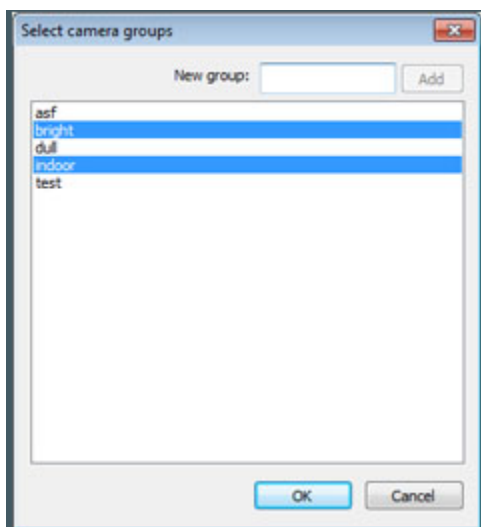
General

The General tab allows you to name or rename the camera, enable or disable it, or delete it altogether.

You may actually give a camera two names--a long name and a short name. The **Name** appears on the screen as a caption above the live video image. The **Short name** is used when naming clips on your hard drive and remote server.

Note: Each camera's name and short name must be unique--no other camera may have the same name or short name as another. In addition, the short name may not begin with a number in order to allow the software to distinguish between filenames beginning with camera names or date formatting codes. The OK button will be unavailable otherwise.

You may assign each camera to one or more **Groups** by clicking the **Select** button.



You may type a new name and then **Add**, or select one or more group names from the list. Group names are used for access control by the Web server and to allow you to configure the motion sensor to trigger cameras in groups.

You may enable/disable and pause/un-pause entire groups of cameras at once by holding the Shift key while selecting these commands from a camera window's right-click menu. Each camera that is a member of any of the target camera's groups will be affected.

You may assign each camera an alert or **Event color**. This color will be used to mark clips which belong to this camera when they are represented in a time-line view.

The **Notes** field exists so that you may enter and maintain a description for the camera, perhaps location or operating conditions.

Select the **Hidden** checkbox and the camera will be removed from the display. There's a right-click menu option to **Show hidden cameras** which you will need to use in order to get the camera displayed once again.

Use the **Active during profiles** checkboxes to force the camera to be inactive during specific profiles. If unchecked for the current profile, the camera will be inactive, meaning no recording or alerts. If you have unselected the option to "Continue to display and stream live video while inactive" on the Schedule tab, the camera will behave as though disabled (no video display).

Status

The status box will show the time elapsed since the camera was last reset or enabled in the software. The frame rate and bit rate values represent what is currently being received from the camera. If you are pushing to Flash and/or Windows Media server, you will see the connection status noted here as well. A camera-specific version of the Status Bar is displayed showing you the camera's current Motion and Trigger states as well as several icons representing the various Alert types.

Importing and Exporting Settings

Click the "Export settings..." button to save a camera's configuration to a file. You may wish to do this as a backup, or when creating a new camera as a copy of another. It may also come in handy to include this file if you need to ask for software support via email.

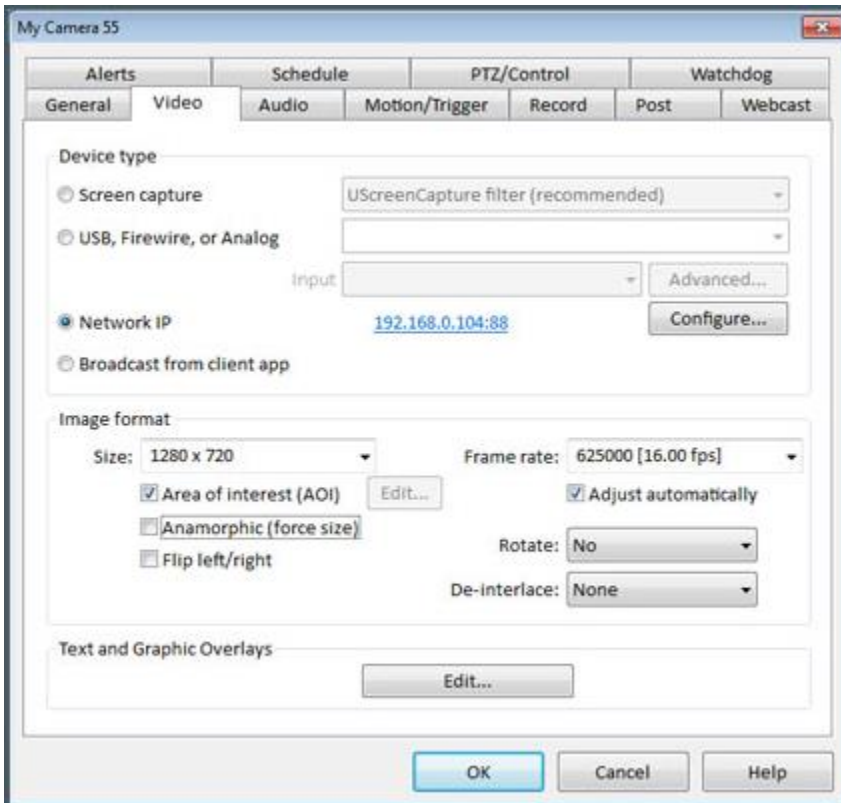
Click the "Import settings..." button to load the settings from a file previously created with the "Export settings" function.

Adding additional cameras

With the demo or if you have licensed the "full" version of Alice Aware, you may add additional cameras by right-clicking anywhere on the Live Video window and selecting **Add new camera**. You may also use the + icon located at the top/right of the cameras window.

Camera Properties - Video

This page allows you to select and configure the video source.



Device type

There are several capture technologies from which to choose:

The first is simply a **Screen capture**. You may wish to use this option to keep a record of how your computer was used while you were away, or for testing purposes. You may choose between the UScreenCapture method (recommended), which is the most efficient, or a DirectDraw Blit method. You may also choose full resolution, 3/4, or 1/2 (recommended for screen resolutions 1024x768 and above) in the X,Y size box. Note: screen capture uses a fair amount of CPU resources--to avoid noticeably slowing down your system, avoid exceeding a frame rate of 5 fps for screen capture. Also, DirectDraw screen capture may only work properly if your screen colors are set for 32-bit (millions of colors).

USB, Firewire, or Analog

When using a capture card, or a USB or Firewire (IEEE-1394) camera that's connected to your PC, you will need to use the **USB, Firewire, Analog** device type, which uses Microsoft's DirectShow capture technology. Note: you must connect your camera and install its drivers according to the manufacturer's installation procedure before the camera will appear on the device list.

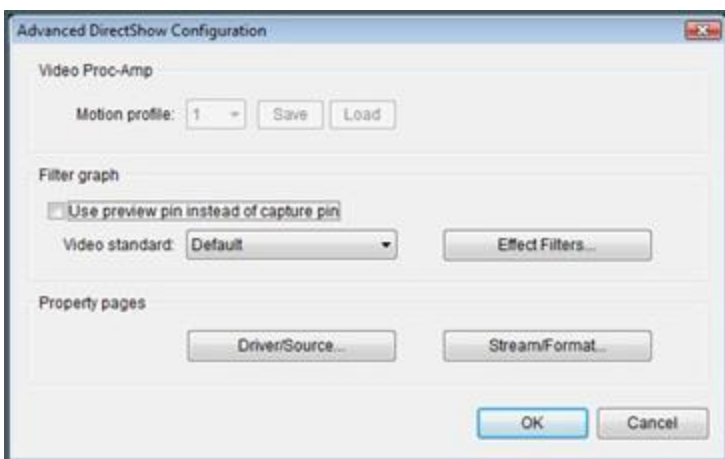
When you make a selection from the **USB, Firewire, Analog** list, the **X,Y size** list beneath it will be updated to show the available resolution formats for the device you've chosen. The **input pin** list will contain a list of possible source video inputs if you are using an analog capture device that includes multiple inputs, such as composite, s-video and TV (this is known as a video "crossbar").

Caution: some devices do not correctly report their supported X,Y resolution values. In fact, choosing one of the incorrectly reported values may cause the driver to bring down the system. For example, the Hauppauge Win/TV card reports PAL values here when you are actually using NTSC. Choosing one of these values will crash the system. With this card, it is necessary to use the "Stream/Format" property page to correctly choose the resolution. Advanced users may override the presets and manually enter the resolution in "X x Y" format.

Use the **Frame rate** option to specify the time between images. Many cameras may be able to provide images as fast as 30 frames per second (fps) (or 25 for PAL format video). If your PC is of sufficient muscle, Alice Aware will have no problem keeping up with these rates. However, this is generally not required for security or web cam applications, as the amount of system resources (CPU, memory and hard drive space) consumed may quickly become an issue. You'll probably find acceptable the 1 fps to 10 fps range. There are several "preset" frame rates from which to choose, but advanced users are able to specify their own values here by either entering the fps value (from 0.1 to 30.0) or the frame interval value in 100ns units (from 333333 to 100000000).

Caution: some device drivers will cause the system to halt (blue screen) if they are instructed to use frame rate values outside of their normal operating parameters. For example, the inexpensive "Twinkle Cam" driver will bring down Windows if fewer than 5 fps is specified.

The **Advanced...** button allows you to view and set various parameters for your capture device, depending on what the manufacturer of your capture device has built-in to its drivers. You may never find it necessary to use these features, but they are provided for advanced users, and to aid in the diagnosis of any hardware incompatibility. If your camera has an adjustable white balance, for example, this is where you will find this setting.



Video Proc-Amp for Motion Profile

For analog cameras and USB webcams, it is possible to maintain separate Video Proc-Amp settings (the qualities of an incoming video signal, such as brightness, contrast, hue, saturation, gamma, and sharpness) for each of the motion profiles 1-7. Using the camera's Timer page, this allows you to change these settings based on the time of day--at night you may wish to turn off color processing and increase contrast, for example. Use the **Save** button to make a snapshot of the current Proc-Amp settings for the selected profile. Use the **Load** button to recall previously saved settings. A device's Proc-Amp settings may be accessed via the **Driver/Source** button.

Some analog capture devices offer both a "preview" pin as well as a "capture" pin. By default, Alice Aware uses the capture pin. If you receive an initialization error, please try using the **Use preview pin instead of capture pin** option.

Your video hardware may provide additional property pages. To access these once the camera is operational, right-click the video image and select from the "Hardware property pages" submenu. If your capture card has a TV tuning capability, for example, this is where you will find this option.

BT8x8 Compatibility

Alice Aware is compatible with virtually all of the inexpensive BT8x8-based 4-input capture cards available today, and is able to use multiple input ports on those cards simultaneously. In order to offer these cards so cheaply, manufacturers include a SINGLE BT8x8 video capture chip. It is then up to the software to choose which input signal to use. In order to use them all *simultaneously*, the software must "multiplex" the 4 signals into the BT8x8, and then de-multiplex the captured video so that you may see each input independently.

On 32-bit Windows, the Conexant Universal BT8x8 driver has been found to work reliably with these cards. Please install the Conexant Universal BT8x8 driver by following these instructions:

Download and install the driver from btwincap.sourceforge.net. This installer allows you to first un-install any remnants of any other BT8x8 drivers. If your card is not listed as one that is supported, choose Custom, and be sure to select "no TV tuner" and "no S-video" unless your card actually has those features.

In Alice Aware, you will see a new DirectShow driver for your card, and the **input pin** drop down will allow you to select one of your card's inputs. You may create a new camera for each of these inputs by using the same DirectShow driver.

You will find that a frame rate of about 10 is most appropriate for these cards (which is then divided among the cameras you add). You may attempt to push this to 15, but at that rate, you may notice anomalies such as repeated frames, flickering, and images from other cameras, due to the fact that the card requires some time to switch inputs before a valid image is available.

Internally, the first camera that is created (usually first alphabetically when starting Alice Aware) becomes the "parent" and other cameras using the same driver become "dependents" to that first camera. This means that you should make x,y size and frame rate changes on the parent in order for the changes to take effect, and when you make changes to the parent, the dependents are automatically reset.

Ideally you should choose a capture card that has 1 BT8x8 chip for each input--this provides a full 30fps possibility for each camera and is less prone to tearing or image bleeding between the inputs. An excellent choice is the PV149 card available from bluecherry.net.

On 64-bit Windows, it has been found that the 64-bit driver for the Winnov Videum series of cards works well for many other BT8x8 cards, including the PV149. After installing the driver, to prevent the use of the crossbar filter, you should run RegEdit and create a new key HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\WnvaVs\VidCap and then add a DWORD value called "crossbar" with value 0 and reboot.

Another choice for analog capture card is the TW-220 and similar also available from bluecherry.net. This card uses a Techwell chipset, for which WDM drivers are now available in both 32 and 64-bit variety.

Network IP Cameras

The technologies that these cameras use to transfer video over the network vary greatly from manufacturer to manufacturer and even between their own models. Alice Aware support for these technologies is continuously evolving (along with the cameras themselves). If you are unable to get your camera to work with Alice Aware, please contact support@AliceReceptionist.com to request assistance.

To connect one of these cameras to Alice Aware, you need to know its IP address and port. If the camera is on your LAN, this address will most likely begin "192.168.x..." However, you may connect to any other camera found on the Internet anywhere in the world (provided you know the address, port, and id/password). Instead of an IP address, you may use a host name (like "yourhostname.com").

Use the **Configure...** button to configure your network IP camera:

The screenshot shows a dialog box titled "Network IP camera configuration" with a close button (X) in the top right corner. The dialog is organized into several sections:

- Address:** A text field containing "http:// 192.168.0.10". To its right is the text "Leave blank to search for cameras on LAN". Below the text field are fields for "User" (containing "admin") and "Password" (containing "*****"). There is a checkbox for "https (JPEG only!)" and a "Find/inspect..." button.
- Make:** A dropdown menu showing "Trendnet".
- Model:** A dropdown menu showing "TV-IP100W/400/501P/551/600/651/751/851 MJPEG".
- Media/video/RTSP port:** A spin box set to "554".
- Discovery port:** A spin box set to "8999".
- Video:** A section with "Path" (containing "/mjpeg.cgi"), "Params" (empty), and "Camera" (a spin box set to "1").
- Network options:** A section with "Receive buffer (MB)" (spin box set to "3.0"), "Use RTP/UDP ports:" (checkbox, set to "7000"), "Send RTSP keep-alives" (checked), "Use RTSP/stream timecode" (checked), "Skip initial HTTP DNS and reachability tests" (checkbox), "Framerate limiting compatibility mode" (checkbox), "JPEG decoder compatibility mode" (checkbox), and "Hardware decoding:" (dropdown set to "Default").
- Audio:** A section with "Path" (containing "/audio.cgi"), "Format" (dropdown set to "16-bit PCM"), and a checkbox for "Setup RTSP back-channel for talk support (PCM-U format)".

At the bottom left, there is a note: "Click Cancel for USB or analog source". At the bottom right, there are three buttons: "OK", "Cancel", and "Help".

The **HTTP** port is by default 80. This is the port used by a browser window to connect to the camera's internal web page. It should remain 80 unless you have changed this to another value using your camera's setup software. If it's any other number, it should be appended to the address, such as 192.168.1.100:81.

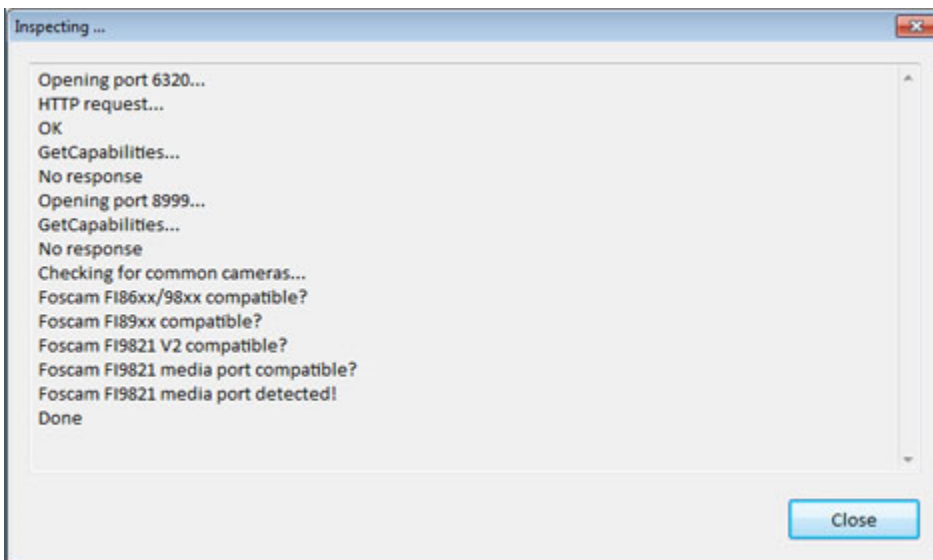
Select **HTTPS** only if your camera supports this and you are pulling individual JPEG images. Do not use this setting in any other circumstance. The default HTTPS port is 443; if you use any other port that number must be appended to the address.

The RTSP port is by default 554. If another video or media port is used by your camera for streaming, this would be specified here instead of the RTSP port.

Specify the **User** and **Password** for your camera if it is not the default admin/admin. Note that if your camera is set for a "blank" password, you must blank out the password box here as well.

Most cameras allow inspection/device discovery on the HTTP port. If yours uses another port specifically for this purpose, you may specify that here. Popular values are 8999, 8899, and 888.

Use the **Find/Inspect** button for Foscam and ONVIF inspection--if possible, the RTSP video request path will be found and used. Always set the correct user and password before using the Find/Inspect button. If you use this button with a blank camera address, the software will search your local network for discoverable devices and allow you select one of them for further inspection.



In addition to Foscam and RTSP cameras, several other very popular models will be detected and adopted as well. If the inspection results in "No automatic configuration done" you need to manually select your camera from the **make** and **model** lists.

The generic network technologies supported are as follows:

- **JPEG requests.** Individual images are continuously requested. This is the simplest technology, and typically uses a request path of "/image.jpg" (some D-Link models) or "/jpg/image.jpg" (some AXIS models).
- **MJPEG stream.** One request is made, and the device replies with a stream of images. This method is somewhat more efficient, but becomes increasingly device-dependent in terms of the way the stream is formatted. Typical request paths include "/cgi-bin/nphContinuousServerPush" (some Panasonic models) and "/GetData.cgi" (the Gadspot NC1000).
- **Raw H.264 stream.** An unformatted H.264 stream is expected. That is, video data alone without protocol or formatting data.
- **RTSP stream.** Uses the Real-Time Streaming Protocol over a dedicated RTSP port.
- **RTSP/HTTP stream.** Uses the Real-Time Streaming Protocol with an HTTP "tunnel." This allows the device to support both HTTP and RTSP with a single port.
- **ASF stream.** This is an advanced technology which utilizes Windows Media encoding. It is used by cameras such as the Linksys WVC11B with a request path of "/img/video.asf". This option requires a Full license; it is not available with an LE license.

You may select one of these technologies directly, and then manually set the request paths and optional parameters. You will also find numerous specific camera models on the device list from which to choose. When you choose one of these, the technology and request paths are automatically determined for you.

Audio

For the majority of cameras and with RTSP streaming, the audio path box should remain blank, and the audio format is automatically configured. It is however possible to pull audio from a completely separate URL or camera altogether.

Many cameras offer 2-way "talk" support through a speaker on the camera. For many cameras, this requires custom support, but for some, it's possible using an RTSP "back-channel." If your camera supports this, enable this option and then configure a microphone on the Options/Audio page.

Network Options

Some cameras do not offer RTP over TCP, and some may offer better quality over UDP. In this case, you may enable the RTP/RTCP option and select a range of UDP ports to use (the one specified and 3 following). This port range must be a multiple of 4, and must be unique on your system. No other camera or system service or software may be using the same port range.

The initial DNS reach-ability tests that occur by default consist of checking the HTTP for a reply and redirection. If you are not using the HTTP port (perhaps RTSP only) or there is a problem with redirection you can set the option to skip this step.

Only use the **Framerate limiting compatibility** mode if you are unable to control the FPS and/or bandwidth that your camera is producing and you need to find a way to lower the CPU requirements of the full stream. When this mode is

enabled, Alice Aware will attempt to meter and refuse incoming data, limiting the number of frames processed to the setting on the Video tab. This may setup a buffering situation within the camera itself, causing a delay in the video stream. If at all possible, it is better to have the camera limit what it is sending as opposed to having Alice Aware limit what it will accept.

The **JPEG decoder compatibility mode** may be used if you are experiencing decoding errors with the standard JPEG decoder. These types of errors may manifest as color swapping or shifting.

If you have an Intel processor and stream from H.264 cameras, you will likely see lower CPU usage if you enable the **Intel HD hardware acceleration** feature on Options/Cameras. This may be overridden here on a per-camera basis.

Image Format

The **X,Y size** box exists primarily to select the resolution used for a webcam or other USB or Analog device. For network IP cameras, the software will use whatever resolution the camera is sending, and it's not possible to override that with this setting--you may need to set this within the camera's own browser interface. Also, the software supports any resolution up to 10MP, so just because it may not be on this list does not mean it's not supported.

The **Area of Interest (AOI)** setting allows you to select a sub-set of the full resolution frame to use for a network IP camera. You may wish to exclude part of the frame for privacy concerns, or you may have multiple camera windows each devoted to a section of a large full frame. Once set, you must first un-check the option as well as the Anamorphic setting and return here to select a new AOI.

The **Anamorphic (force size)** setting will alter the size of the network IP video to match the numbers that you select or type into the X,Y size box. You may wish to stretch the video for a particular purpose or to match a required resolution. You may use this feature in conjunction with an AOI.

The yellow caution icon may be displayed on your camera window when there is a mismatch between the camera's frame rate and the frame rate setting on this page. By default, the software will now automatically increase the frame rate (FPS) setting in order to properly handle all frames delivered by your cameras. When this occurs a status message will be posted to the Status/Messages page. You may disable this new behavior if you wish by un-checking **Adjust automatically**. If you need to throttle the number of FPS from a camera, the best way to do that is by using the camera's own web interface to adjust the number of frames that it generates. Not all cameras may be so controlled, however, and in this case you may use the "frame rate limiting compatibility mode" option shown below.

The **De-interlace hi-res images** option should be used when capturing video at 640x480 resolution (or greater) from a camcorder. These images actually contain two pictures, and it's necessary to digitally remove one of them in order to provide a coherent (jitter free) image. Web cams, however, may not require this processing even when supplying such hi-res images.

Use the **Rotate** option to account for cameras mounted either upside down or on their sides. Use the **Flip left/right** option to mirror the video. If your camera has built-in rotation and flip capabilities, you should use those instead as they will be more efficiently performed in hardware.

D-Link Notes

The D-Link Corporation offers a wide variety of excellent IP cameras, but several of them require extra steps (in the form of extra software to be installed) in order to get them up and running.

The **3220** and **2100** require an ActiveX control called "Vitamin Control" to be installed. If you do not already have this installed, you may install it directly from <http://files.alicereceptionist.com/arip4-0/VitaminDecoder21.exe>

MPEG-2 Compatibility

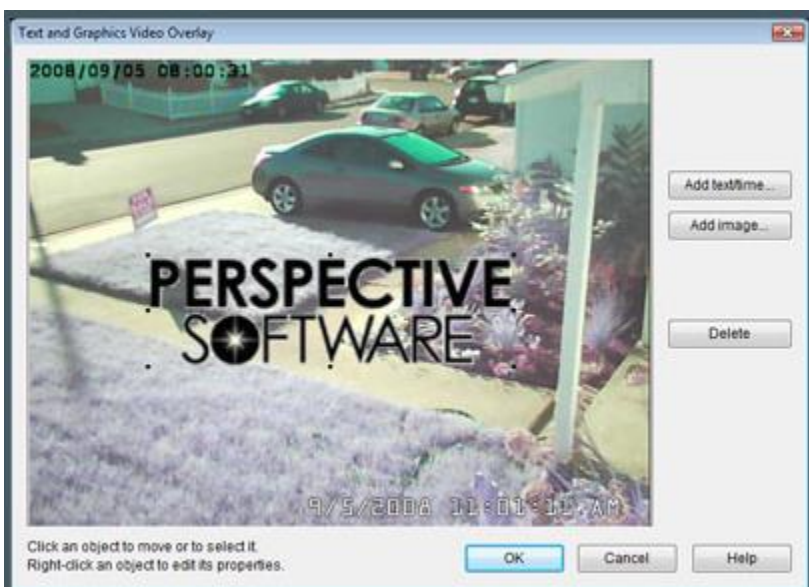
As MPEG-2 capture devices become more popular, support for them will become easier. As of this release, a number of MPEG-2 devices have been tested with differing degrees of compatibility. The ADS Technologies "Instant DVD" product, for example, now works with Alice Aware if you have the Pinnacle MPEG-2 Decoding software installed (this is included with a number of their software products). This device also only works at "DVD" resolution. At lower resolutions, incomplete frames are transmitted, making this scheme incompatible with 3rd party software.

Broadcast from Client App

When this camera type is selected, you will see "Off the air" in the camera window until a client connects and selects to broadcast video from the device. When using this camera type, you may wish to configure the camera to record or push to UStream etc. whenever the client is connected. If you enable IP camera audio on the Audio tab, the client will also have the ability to send audio. While one client is broadcasting, other clients may connect to view the camera stream.

Text and Graphics Overlay

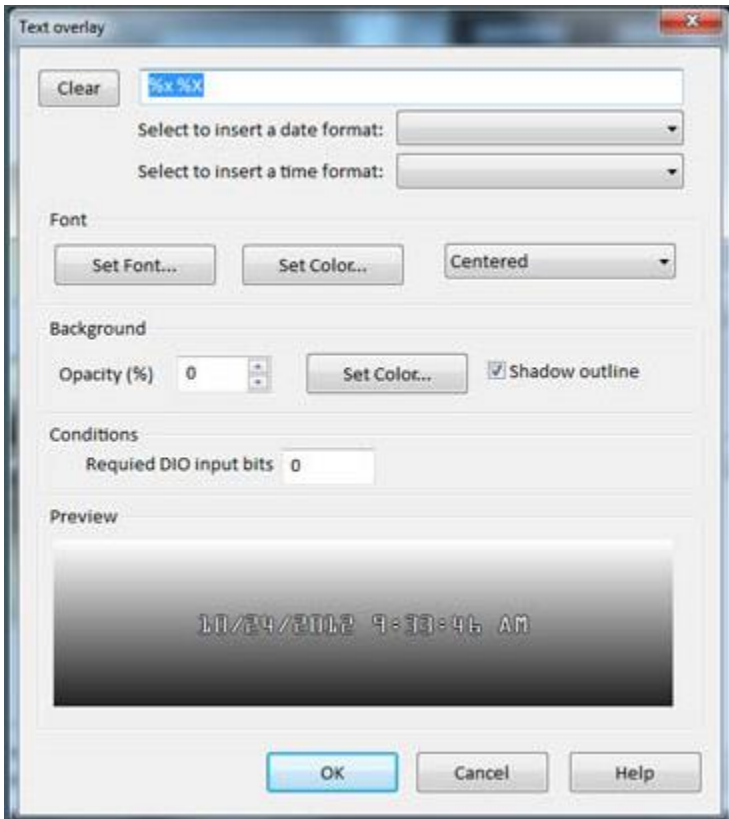
Alice Aware allows you to place text and graphics objects over captured images. You may choose the font, size and colors for text objects. You may choose the blending (alpha) level and transparency (key) color for graphics objects. The "text and graphics" button is available once a camera has been added and is displaying live video.



Alice Aware takes a snapshot from the current live view and opens a window like this one. This example shows a text (date/time) object, and a graphics object. The graphics object is shown with a transparent background.

To move an object, position the cursor over the object, then drag and move the cursor. You will notice that while the cursor is over an object, the cursor changes to a "hand." To delete an object, click and release the mouse button over an object, then press the "delete" key on your keyboard or the **Delete** button on the window. You will notice that after clicking or moving an object, it is shown as "selected" with eight black "handle" rectangles surrounding it. You may resize an object by clicking and dragging any of these rectangles.

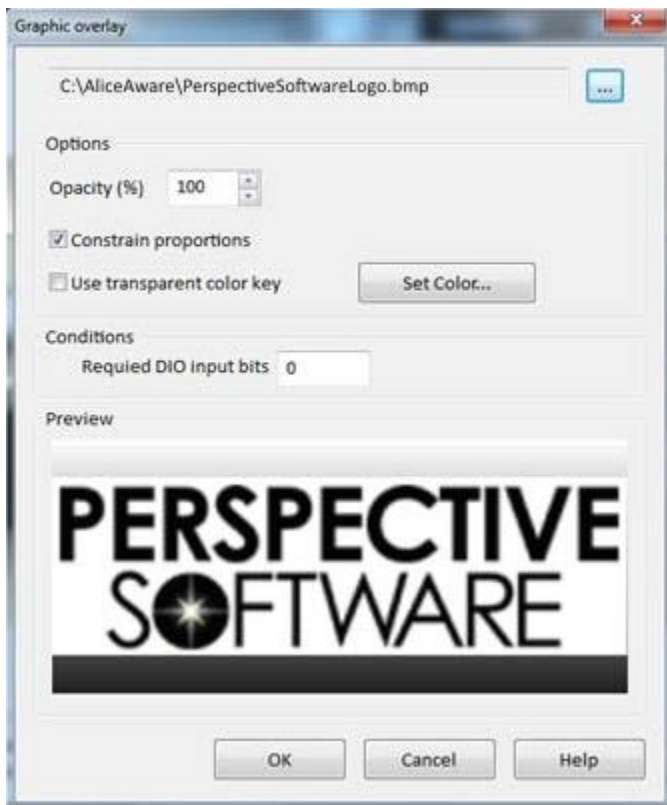
To place a new text object, click the **Add text/time** button.



Enter the text that you would like to appear on the image. In addition to selecting common and entering custom time formatting macros, you may use user defined macros as well. Use the **Set Font** and **Set Color** buttons to change these text attributes. You may also choose a background color and its **Opacity** (alpha blending %). The preview window has a gradient background so that you may see how your text appears over backgrounds of varying intensity. Use the **Clear** button to start over.

You may choose to make the display of the text conditional by specifying **Required DIO input bits**. The text will only be shown if all bits specified are present on the DIO input signal. You may combine bits using their power-of-two value, for example $1 + 4 + 16 = 21$ represents the combination of bits 0, 2 and 4.

To place a new image object, click the **Add image** button.



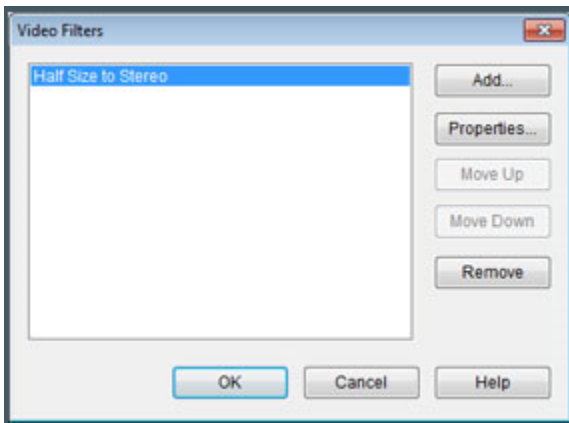
You will first be prompted to select a file, and then this window will appear. To change your file selection, click the "..." button. You may choose a transparent background color, and you may set the image's **Opacity** (alpha blending %). The preview window has a gradient background so that you may see how your image might appear against backgrounds of varying intensity. If you do not choose to **Constrain proportions** on your image, you will be able to size the image height apart from its width, causing it to distort from its original aspect ratio.

As with a text overlay, you may choose to make the display of a graphic overlay conditional by specifying **Required DIO input bits**. The text will only be shown if all bits specified are present on the DIO input signal. You may combine bits using their power-of-two value, for example $1 + 4 + 16 = 21$ represents the combination of bits 0, 2 and 4.

To edit the properties of either a text or image object, click the object with the right mouse button.

Effect Filters

One aspect of the power of the DirectShow architecture is apparent with the video filters feature. You may add third-party "filters" to the video that perform a variety of special effects, image processing, or analysis.



Click the "Add" button to see what's installed on your system. Not every filter that will be listed is a candidate to be used in Alice Aware as a video filter. If you have software such as Adobe or ULead installed on your system, for example, you may find some useful (and some fun!) filters to experiment with.

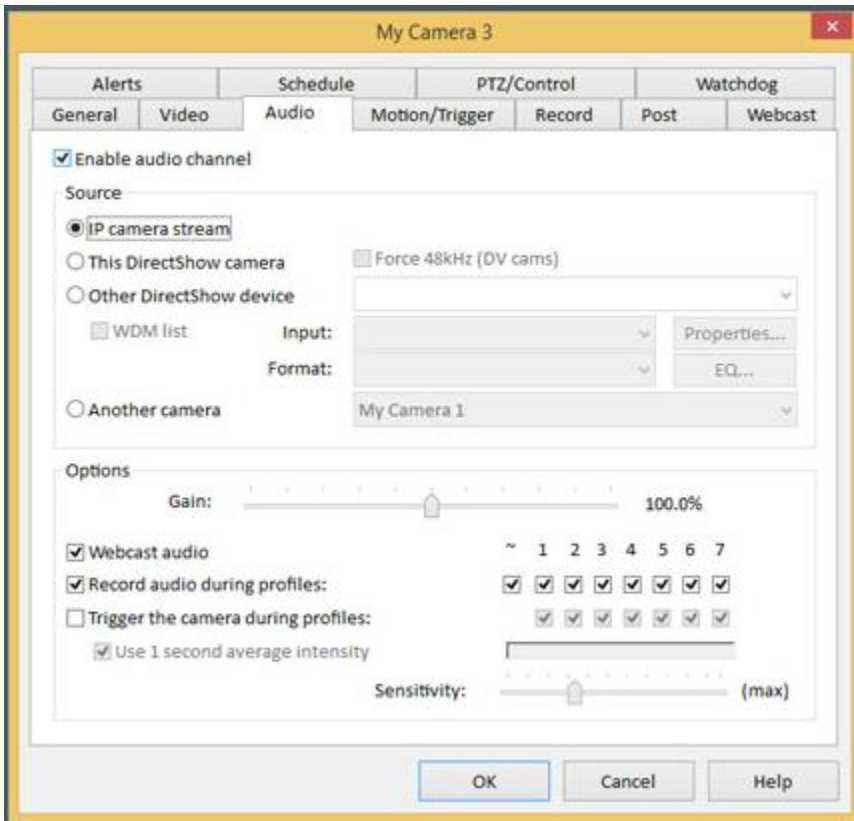
The order in which the filters are listed determines the order in which they are applied. That is, the output of the first filter becomes the input to the next, and so on. Click on a filter to highlight it, and then use the "Move Up" and "Move Down" buttons to change the filter's placement in the list.

When a filter is highlighted, you may also use the "Remove" button to remove it from the list, or the "Properties" button to open a properties screen provided by a manufacturer.

If a camera fails to initialize after you've added a filter, try removing the filter to restore the camera's functionality.

Camera Properties - Audio

Alice Aware allows you to capture audio along with video, or use an audio source as an alternate recording trigger (along with the video motion sensor).



Source

If your **IP camera** has a microphone and is able to supply an audio stream, you may select to capture that along with the video. Alice Aware supports audio from many popular IP cameras, and more cameras are being added continuously to this list.

If your capture source is a DV camcorder or analog audio/video converter such as the CamGuard USB TV! Pro you can capture audio directly from that device's microphone or audio line input jack. You may instead choose to use any **Other DirectShow** sound source on your PC. When you choose a DirectShow capture device, the box beneath the DirectShow capture device list will be filled with possible audio formats appropriate for your device. A higher audio signal frequency (expressed in kHz) will provide a better sound recording, but will also consume a greater amount of hard disk space.

Finally, the **Another camera** source allows you to "Y" split the signal from one camera into multiple cameras.

For DirectShow capture devices, you may use a **graphic equalizer** to adjust the sound levels on your microphone by installing the Dsound GE1 equalizer. This may be of particular interest if you are using the microphone to trigger recording.

Options

The **Gain** slider allows you to scale (multiply) the audio signal by a % factor (50-200%) in order to modify its apparent volume. You may want to use this feature in order to "balance" the volume levels among your various cameras. Note that if the audio signal is already strong, multiplying by a factor of more than 100% may cause "clipping" to occur where individual sample values have moved beyond the normal range.

You may choose to **Webcast audio**. This option must be set in order to stream audio using the remote ActiveX control or to push audio to either a Windows Media or Flash Live Encoding server. In the case of the ActiveX control, the user must also have **Remote audio streaming** enabled on the User account page.

Set the **Delay audio** value in milliseconds if you find that audio playback precedes video playback. Currently this must be a positive number between 0 and 2000. To perform the opposite function, that is to delay the video by using a negative value here, is not yet supported.

You may choose to **Record audio with video** clips. The Clip Viewer will playback the audio when you open a clip and press the Play button.

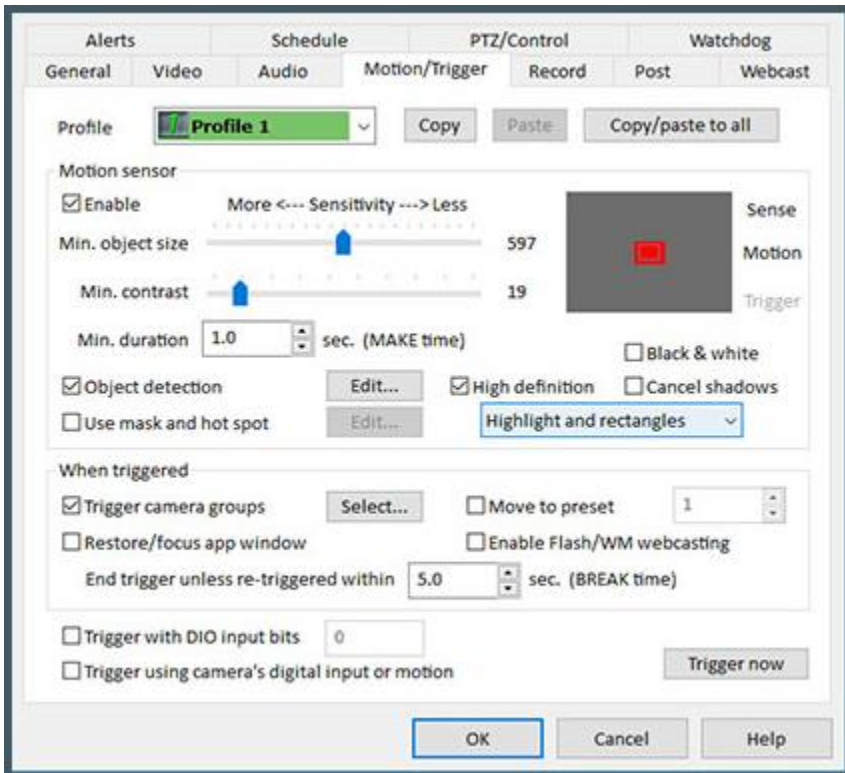
You may choose to **Trigger the camera** when loud-enough noises are detected. The camera's trigger "break time" is used to end recording regardless of whether or not you have the video motion sensor enabled. You may adjust the sensitivity of the audio trigger (the loudness of the audio signal which will cause recording to begin). When the slider is toward the left, only very loud sounds will trigger recording. When the slider is toward the right, small sounds will also trigger recording. Maximum sensitivity is achieved when the microphone gain is high (or at max) and the trigger sensitivity is high (or at max). Beneath the sensitivity slider is an audio power meter, which will show the current strength of the audio signal. When the signal is sufficient to trigger recording, the meter will show in red. This meter may only be available once the audio source has been initialized (that is, you Ok the camera property window, and then return to this properties page).

By default, a **1 second average intensity** is used for the audio trigger. With this option enabled, only longer/sustained noises will result in a trigger. With this option disabled, short noises such as a single hand-clap may be capable of triggering the camera.

Camera Properties - Motion/trigger

This page defines the interaction between several key Alice Aware components: **Motion Detection, Triggers, and Profiles.**

There are several ways to **trigger** a camera, and motion detection is only one of them. You may also use Audio, a Digital I/O device or other external source such as a mobile client app. In addition one camera can trigger other cameras if they are in a common group. Alerts may be configured to fire when the camera is in a triggered state.



Profile

You may choose to edit one of seven **profiles**. Each profile consists of a completely separate configuration for the motion sensor as well as several video and snapshot recording options. The particular profile that is active at any given time is determined by settings on the global Schedule page, or if you prefer, the camera's own Schedule page. This feature allows you to implement a different motion sensor configuration based on the time of day and the day of the week. The currently active profile will be automatically selected for editing. Profiles are also color-coded: green is 1, blue is 2, red is 3, and so on. There are **Copy** and **Paste** buttons to make it convenient to copy one profile's configuration to another. To copy profile 1's settings to profile 2, edit profile 1, click Copy, then switch to profile 2 and click Paste. Use the **Copy/paste to all** button to quickly take the current profile settings and apply them to all 7 profiles.

There are profile buttons at the top of the Alice Aware window which show the current global schedule profile. If you press any of these buttons, it overrides BOTH the global schedule as well as the individual camera schedules for all cameras. Press the button once to temporarily force a particular profile, or press it twice to hold the profile indefinitely.

Motion sensor

Check **Enable** to use this key Alice Aware feature. The motion sensor is the common way in which a camera is triggered. This allows you to record only when there is "action" in front of a camera, saving large amounts of hard disk space that might otherwise be wasted recording the same images over and over again.

Minimum object size and contrast

These settings allow you to fine-tune the amount of change in the camera image that will be required to trigger the motion sensor. The **Object size** slider controls the overall number of moving pixels that will be required in order to consider the image to have motion. The **Contrast** slider controls the amount of change in each pixel that will be required in order to consider it to be moving. These concepts are represented graphically here. The Size is shown as a grey rectangle against a black background. As you move the Size slider, the rectangle will become smaller or larger. The Contrast will alter the brightness of the gray rectangle. When the Contrast slider is toward the left, the grey rectangle is dark, representing low-contrast, and when the slider is toward the right, the grey rectangle is brighter, representing a higher contrast.

Moving the sliders toward the LEFT makes the motion sensor more sensitive, as this will cause it to sense smaller objects with lower contrast.

When motion is detected in one or more pixels, a green rectangle will appear in the center of the grey rectangle and the word **Sense** will light up, showing that the motion sensor sees a change in the image. The size of the green rectangle will vary depending on the amount of change in the image. When the amount of change reaches or surpasses the size of the gray rectangle, the green rectangle will become red and the word **Motion** will be illuminated. The motion sensor must remain in this state for the duration of the **Make time** (discussed below) in order for the camera to be triggered. When this happens, the word **Trigger** will be illuminated for the duration of the **Break time**.

Make time

This slider allows you to choose a motion sensor **Make time**--motion must be detected over this time period in order to **trigger** the camera. That is, once motion is detected, a timer is started. If motion continues to occur through the end of the make time, the motion sensor is triggered, and recording will begin if enabled on the Camera Properties - Record page. This feature might help to eliminate false triggers by short-lived events, such as flying insects crossing the lens. If you wish to trigger the motion sensor immediately when a single frame of motion is detected, set this timer to 0.0 seconds.

The **High definition** option will cause the motion sensing algorithms to use 4x the number of samples. This may help detect smaller object more clearly but will use more CPU time.

The **Cancel shadows** option attempts to identify pixels which are merely darker version of the background and them eliminate these from further motion analysis.

The **Object detection** option (previously "object detect/reject") provides for more advanced motion detection. After analyzing the image for overall change, an additional algorithm is applied which attempts to identify regions within the image where motion is occurring. If you have the **overlay motion map** feature enabled, you will see these regions represented by red rectangles. It is the size of the red rectangle that is compared against the Size sensitivity setting.

You may apply rules to detected objects in order for them to cause triggers. Currently, a distance rule is implemented. Click **Edit** to set the number of pixels that an object must travel before it causes a trigger (it must still exist beyond the "make time").

By default, Alice Aware uses color and brightness changes to help detect motion. In certain circumstances, such as low-light, this may be undesirable. Try checking the **Black & White** option in low light conditions.

If you are having trouble identifying the source of motion in your video, you may experiment with the **Highlight motion** feature. This will cause each image to be overlaid with a representation of the motion in that image. That is, what's changed from one frame to the next will be shown with a blue or green overlay, depending on whether the change is either internally positive or negative. If using the Object detect/reject feature, you may also select to show the object rectangle.

When triggered

The **Break time** slider allows you to choose the amount of time that the camera should remain in the triggered state once it is initially set. This feature is analogous to the timer that's in your motion-sensing outdoor flood light. Once you trigger the light, it remains on for a programmed duration of time once motion has stopped. Just as with the light, as motion or other trigger input continues, the timer is reset, and the camera will remain in the triggered state.

The **Restore/focus app window** option will attempt to open the Alice Aware window when motion occurs if you have minimized it.

Use the **Enable Flash/WM Webcasting** option to automatically connect and disconnect your webcasting push connection based on the camera's triggered state. This may be used in conjunction an off-site video archival scheme for example.

Set the **Move to preset** option if you would like to send a PTZ preset position command to the camera when it's triggered. This might be useful for example if you have your cameras triggering in groups and you want them all to move to known positions when one of them is triggered.

Use the **Trigger camera groups** feature if you want other cameras to be triggered automatically when this one is triggered. This might be useful if one camera is better positioned to pick-up motion, but you want an event recorded from multiple angles. The other cameras must be assigned to groups; this is done on the General camera properties tab.

Use the **Trigger with DIO input bits** option together with a [Sealevel SeaDAC Lite](#) (P/N 8112 and similar) device in order to receive an external signal from an alarm system, home security system, PIR sensor, electric gate, electric eye, etc. and interpret this as a camera trigger. The 8112 has 4 inputs numbered 0-3 and this is a *bitwise* field. The values are related as follows:

Input	Bit value
0	1
1	2
2	4
3	8

You may combine these values in order to trigger on combinations of input bits. For example a value of 6 represents inputs 1 and 2. A value of 15 will allow any one of the inputs to trigger the camera.

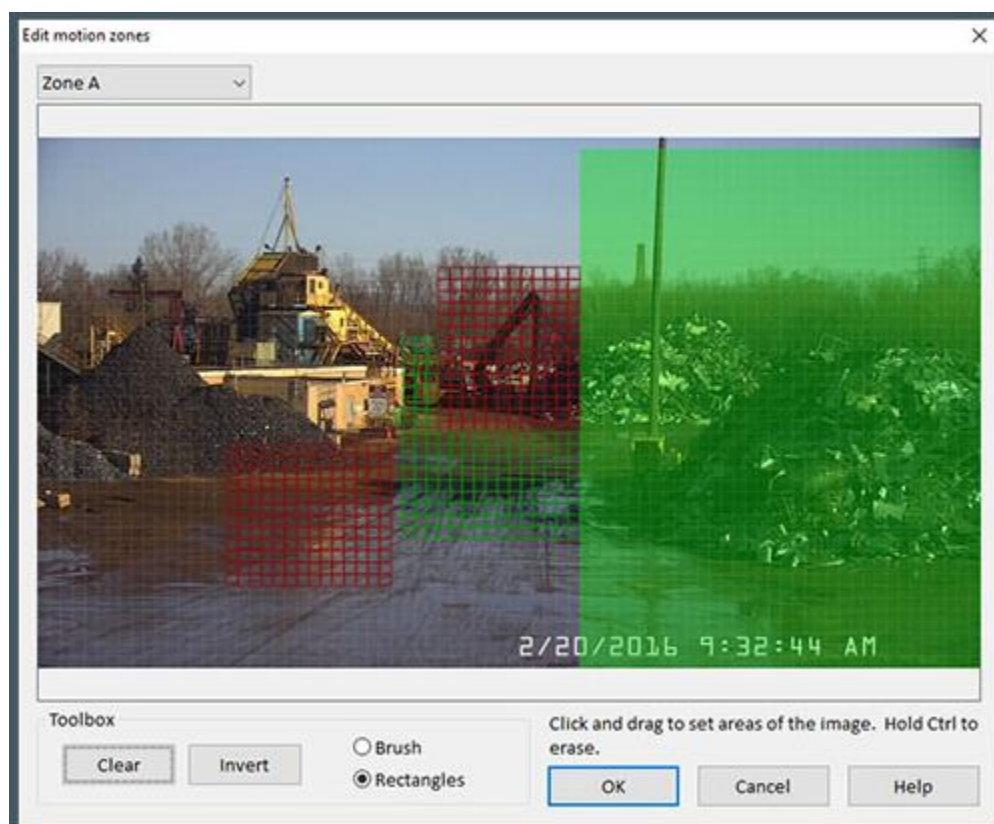
Use the option for **Trigger using camera's digital input or motion** if your camera has a digital input line and/or internal motion detection and you would like to use that to trigger the camera in Alice Aware. Support for this feature has been added for many popular camera models.

Click **Trigger now** to immediately force an external trigger on the camera. Any scheduled recording and alerts will occur.

Zones and Hot Spot

This window allows you to set up to 8 zones or regions for motion detection. Zones are assigned letter values from A to H. Motion must occur within one or more of these zones in order to be analyzed further in order to potentially trigger the camera for recording and alerts. By default, Zone A is set to the entire frame and the other zones are undefined.

Use the control at the top of the window to select the zone that you wish to edit:



Zones A-G are shown in green, while zone H is shown in red because it's the "hotspot" zone. When motion occurs in the hotspot zone, it is exempt from further analysis and will immediately trigger the camera. Use the hotspot zone with reserve as it is likely to produce a large number of false-positives.

While you are editing a zone, areas that have been defined for other zones appear with a crosshatch pattern so that they may more closely align zones to one another. It is OK however for zones to overlap. With the **Brush** tool selected, you can "paint" the zone pixel by pixel. With the **Rectangle** tool selected, you can draw a rectangular area of any size by clicking at one corner then dragging the mouse to the opposite corner. Hold down the Control key while drawing to restore portions of the original image.

Use the **Clear** button to fully restore the original image. Use the **Invert** button to reverse all drawn areas. This might come in handy if you first want to mask areas of non-interest, and then create a zone by inverting your drawing.

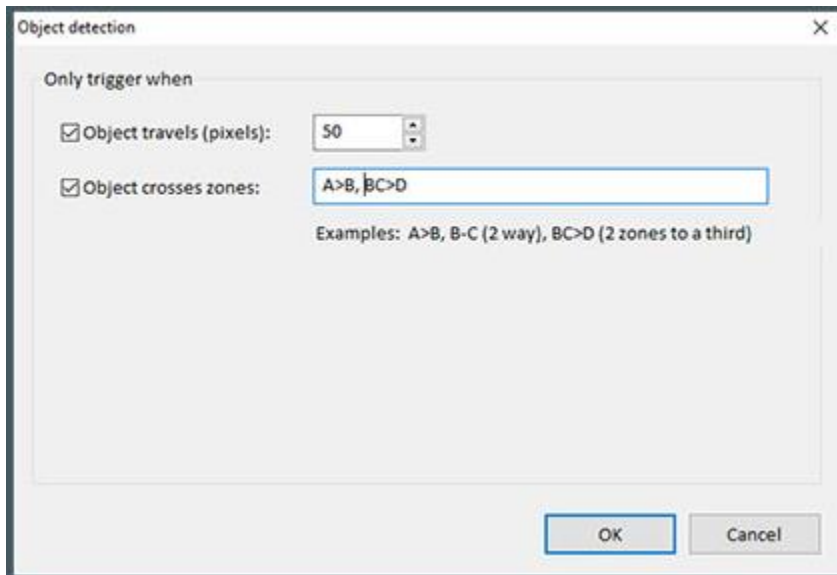
Click **Ok** to save your changes.

Object Detection

The **Object detection** option (previously "object detect/reject") provides for more advanced motion analysis. After analyzing the image for overall change, an additional algorithm is applied which attempts to identify regions within the image where motion is occurring. If you have the **Highlight and rectangles** feature enabled, you will see these regions

represented by green and red rectangles. It is the size of the rectangle that is compared against the Size sensitivity setting. When a green object rectangle has triggered the camera, it will become red.

You may apply rules to detected objects in order for them to cause triggers. Click **Edit** to edit these rules.



Use the **Object travels** rule to set the number of pixels that an object must move before it causes a trigger (it must still exist beyond the "make time" defined on the main Motion/Trigger window).

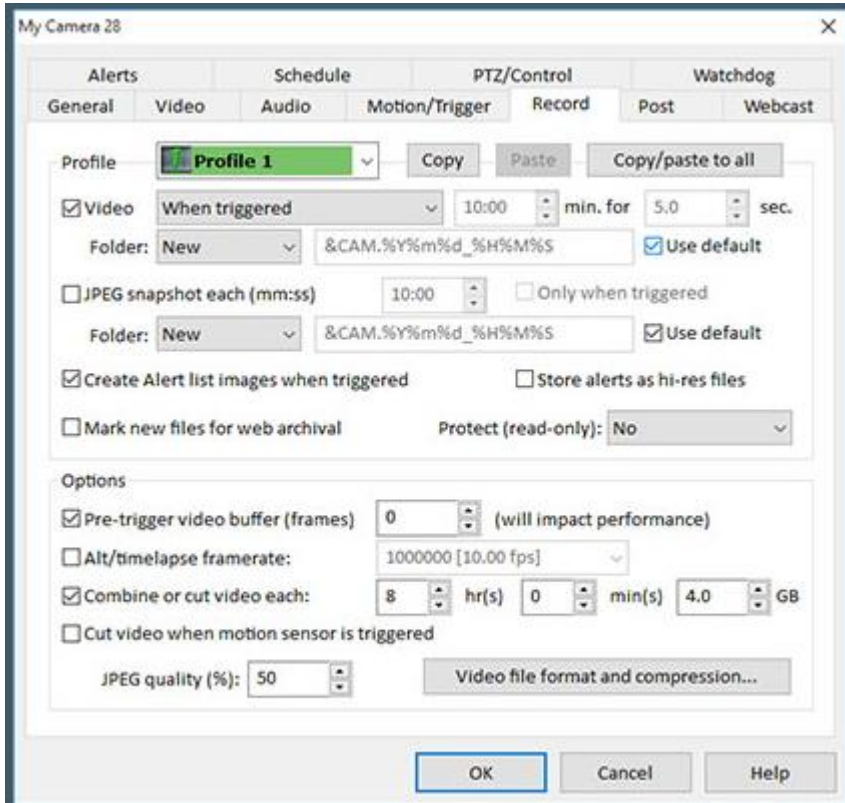
Use the **Object crosses zones** rule to require that an object move between zones before triggering. The simplest requirement is A>B which means the object must move from zone A to B. You may also use the syntax A-B as shorthand for A>B, B>A, meaning the object must move between these zones, but the order is not important. You can also specify a more complicated movement, such as AB>C, meaning the object must have been in both A and B before moving to C.

You will see that new Alert images are marked with the triggering object's zone/s at the time of the trigger.

Click **Ok** to save your changes.

Camera Properties - Record

The Camera Properties **Record** tab determines whether or not images from the camera will be stored in the Clip List for later viewing, and how they will be formatted.



Profile

You may choose to edit one of seven **profiles**. Each profile consists of a completely separate configuration for the motion sensor, alerts, as well as several video and snapshot recording options. The particular profile that is active at any given time is determined by settings on the global Schedule page, or if you prefer, the camera's own Schedule page. This feature allows you to implement a different motion sensor configuration based on the time of day and the day of the week. The currently active profile will be automatically selected for editing. Profiles are also color-coded: green is 1, blue is 2, red is 3, and so on. There are **Copy** and **Paste** buttons to make it convenient to copy one profile's configuration to another. To copy profile 1's settings to profile 2, edit profile 1, click Copy, then switch to profile 2 and click Paste. Use the **Copy/paste to all** button to quickly take the current profile settings and apply them to all 7 profiles.

There are profile buttons at the top of the Alice Aware window which show the current global schedule profile. If you press any of these buttons, it overrides BOTH the global schedule as well as the individual camera schedules for all cameras. Press the button once to temporarily force a particular profile, or press it twice to hold the profile indefinitely.

Video

For each profile, you may choose how video will be recorded. You may choose from:

When triggered. Select if you want to record only when the camera is triggered by motion or another source.

Continuous. Select to record non-stop, which is desirable in some surveillance situations.

Periodic (Every X minutes for Y seconds). Use this option to create evenly spaced recordings of a specific duration. If you specify a small duration (such as 0.1 seconds), the net effect is similar to that of the JPEG periodic recording, except you have the option of combining these images into a larger movie file by using the **Combine or cut each** option. Alice Aware will align the recording times if the period evenly divides a day. For example, if you select to record every 15 minutes, recordings will occur on the hour, and :15, :30 and :45 minutes past the hour.

Triggered + Periodic. Combines "when triggered" with period. If you set the duration to 0 seconds, a single frame will be captured. When used with the "combine or cut" option, the effect will be a time-lapse video with normal speed recording only when the camera is triggered.

Triggered + Continuous. This option is similar to the "Triggered + Periodic" mode with the important difference that the file is recorded at a normal playback rate and does not require "combine or cut" in order to create a continuously recorded file.

If you do not enable Video recording here, you may still manually begin recording by using the record toolbar icon. However, manual recording is by default limited to 30 seconds according to the setting on Options/Cameras.

Folder and Filename

By default, files are created in the New folder as configured on Options/Clips. You may instead choose one of the other managed folders that you've configured.

It is recommended that you allow Alice Aware to name clips automatically. If you choose to specify your own filename format, you should include time formatting codes for minutes and seconds (as well as year, month, day) in order to prevent existing clips from being overwritten as new ones are created. Notice that the default format also contains the "&CAM" macro at the beginning to distinguish files created by each camera on multiple-camera systems. Advanced users may add a subfolder specification to the beginning of the filename to automatically sort clips into folders based on the camera or the date. For example, if you add %Y%m%d\ to the beginning of the filename, a new folder will be created for each day. If you add &CAM\ the camera will have its own folder. Although not recommended, it is also possible to specify an absolute path here, causing the files to be recorded to unmanaged locations (no automatic deletion or folder maintenance).

IMPORTANT: You must always retain the "&CAM." (note the . as well) at either the beginning of the filename segment of the path or at the end (".&CAM")--the software uses this to identify clips recorded by a particular camera.

Snapshots

Use **JPEG snapshot each** to automatically take snapshots on a timed basis. By default this will create JPEG files in your New clips folder, but again you can specify another managed folder and subfolder. Additionally, you may choose for this to happen only while the camera is triggered.

The option to **Create Alert images when triggered** will save a low-resolution JPEG snapshot to the database whenever the camera is triggered. If a video is open for recording at that time, an offset into the file is also noted so that when this image is later viewed, it will take you directly to the point of interest in the video. These are the images that will appear in the mobile client Alerts list. If you further select the option to **Store Alerts as hi-res files**, a full-resolution file is saved to the Alerts folder.

File options

Select the **Mark new files for web archival** option to automatically upload all new clips to your Options/Web archival FTP site.

Use the **Protect (read-only)** option cautiously. This option prevents the system from automatically moving clips to the Stored folder or deleting them according to the rules on the Options/Clips page, possibly causing you to run out of space on the disc. You may choose to only protect files which contain images captured while the camera was triggered. Using this feature, it's possible to record continuously, yet only save video which might be of interest.

Options

If you enable the **Use alt frame rate** option, you can record single frames on a periodic basis. When you record video without audio at a frame rate of less than 2fps, the playback frame rate is set to 2fps. The effect is a "time lapse" where video will playback faster than real time.

Pre-trigger frame buffer size. Alice Aware maintains a buffer of images as they are received from the camera--when motion is detected, you may choose to record up to 150 images from this buffer so that you can see what occurred just prior to the event which actually triggered the motion sensor. Please note that the use of this feature consumes considerable memory and CPU resources--it should only be used if you have both to spare. In fact, it may be impractical if not impossible to use more than 5-10 frames here unless you are also using **Direct-to-Disc** recording (see below).

The **Combine or cut each** feature allows you to manage the number of movie files that Alice Aware creates. By default, without this option selected, a new movie is created when recording begins, and is closed when recording stops. That is, each time there is a trigger, and each time there is a "periodic" recording, there is also a new file created. You may then specify the maximum duration of the file in hours and minutes or total GB consumed. If your specified group time evenly divides the day (such as 1/4, 1/2, 1, 2, 3, 4, or 6 hour intervals), then Alice Aware will align groups on these intervals. That is, when you start recording at 3:29pm with a 1 hour interval, a new clip will be opened at 4:00pm.

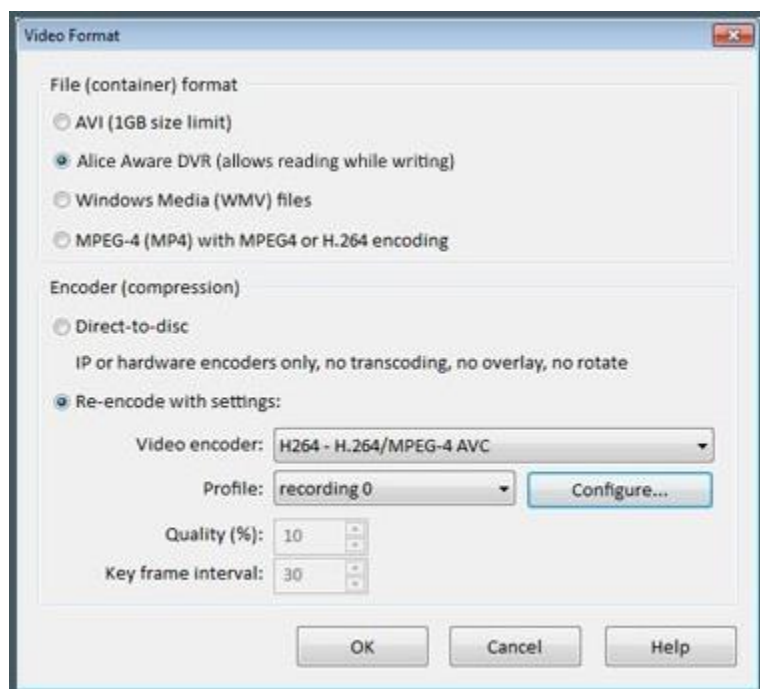
Note: while a clip is open for "recording" it will appear in the clip list without a thumbnail image if it's in AVI or WMV format. Once it is closed, it will appear and may then be viewed. If you wish to immediately view what's been recorded so far in an open clip, you may use the "traffic signal" command button in the toolbar to momentarily stop recording. All clips currently open for recording will be closed. The Alice Aware DVR (.bvr) file format does not suffer from this restriction--you may open the movie for viewing while it is simultaneously open for recording.

The **Cut each time the motion sensor is triggered** option forces the current movie to be closed and another created each time the motion sensor is triggered--the result is a hybrid of the Continuous and Motion sensor recording options.

A **JPEG Quality** setting allows you to control the JPEG compression, expressed as a percentage from 1 to 100. Low quality values equate to small files, but very noisy images.

Video File Format and Compression

Click the **File format and compression** button to open the video format window.



You may choose between **AVI**, **Alice Aware DVR** (.bvr), **Windows Media** (.wmv) or **MPEG-4** (.mp4). Each format has its advantages.

The **AVI** container format is a legacy Video for Windows technology. They are limited to 1GB in size, and may not be viewed while open for writing. An AVI file may contain video that has been encoded using H.264, MJPEG, XVID, etc. Windows Media Player will not be able to open these AVI file unless the proper decoder has been installed. It is recommended that you install the K-Lite codec pack from codecguide.com in order to play these AVI files on your system.

The **Alice Aware DVR** format allows videos to be read and written simultaneously, as well as for videos to exceed 1GB, both of which are limitations of the AVI file format. The Alice Aware DVR format is also a highly-efficient flat-file format as opposed to the RIFF structure found in AVI files. You should consider using this format when creating large video files or when you need to access the video while it is still open for writing. Before the content of an Alice Aware DVR file may be played on a PC without Alice Aware, you must Edit the clip as described in the Working with Clips topic in order to create an interchangeable format file (MP4 or WMV).

The **Windows Media** and **MPEG-4** formats, although the least efficient to record, are also the most portable and provide the most precise control over compression settings for advanced users.

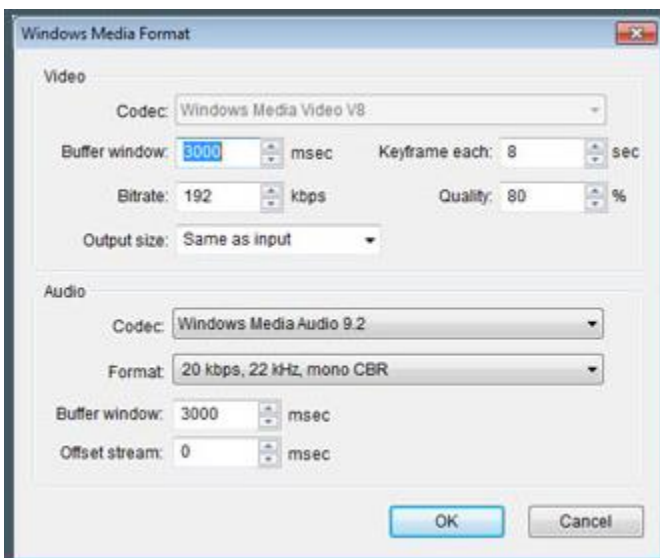
When you choose AVI or Alice Aware DVR, you may select the video encoder (codec). Currently, you may choose from either H.264 (the default), MJPG (no temporal compression), or XVID if you have that installed from xvid.org.

The **XVID** MPEG4 codec may be preferred on slower systems or on systems where you will be recording from many cameras at once and you find that your CPU utilization is too high with the H.264 codec. Install XVID from xvid.org and XVID will then appear on the list of video encoders.

The **MJPG** codec used by Alice Aware was installed automatically for you as well. The MJPG codec is highly efficient in terms of CPU usage, but not very efficient in terms of hard disk space consumed (because each frame is a key frame). One limitation of this codec over the others is that only "standard" frame dimensions can be compressed--the video height must be a multiple of 16, and large dimensions, such as a screen capture of 1280x800 may in fact crash the MJPG codec. When you select the MJPG codec, you may then specify a quality setting (from 1 to 100%).

A **Key frame** is a complete frame. All other images that are captured into the movie file are incomplete, and consist merely of the "changes" since the previous frame. This compression technique is called "temporal" compression, and allows for more efficient use of the hard disk. The only real drawback to using key frames and temporal compression comes when you try to do random access on the frames. You will notice that if you create a movie with a key frame every 2 or 3 seconds or so, that when you move the video slider bar to randomly access the movie, it may not move as smoothly as it had before you changed these settings. Playback and forward stepping, however, will not be affected.

If you choose to capture Windows Media files, you should click the **Configure** button to configure the video and audio codecs.

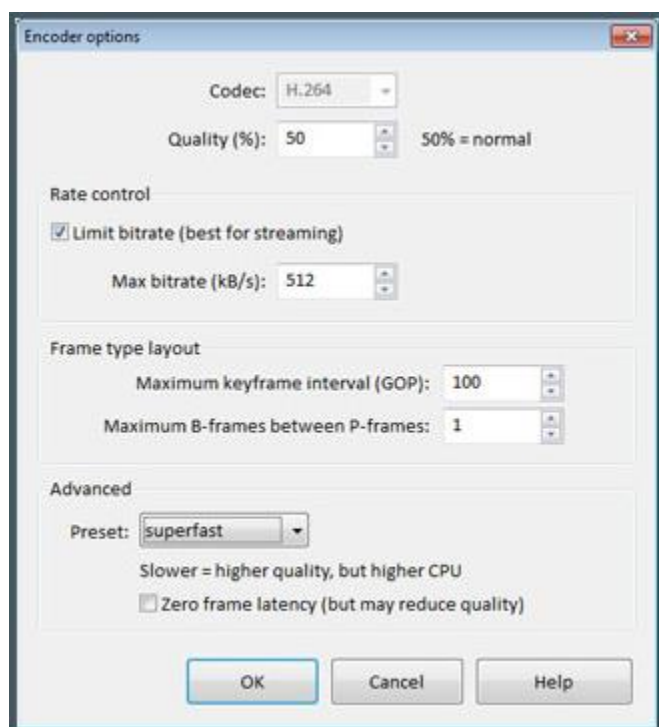


For optimal quality and performance, you should choose the Windows Media V8 for video, and version 10 for audio, and then select a suitable Audio format. The combination of audio and video bit rates (in kbps, kilobytes per second) closely determines the amount of hard drive storage used.

The **Offset stream** audio option may be used to account for a constant audio/video sync problem if one is identified.

H.264 Encoder Profiles

You may select and configure three H.264 encoder profiles to be used for recording. Select the profile and then click **Configure**.



The **Quality** setting when set at 50% is designed to produce visually lossless output. You may increase this value to further refine the output or lower it as necessary to reduce hard drive space used.

When the encoder is used for streaming, you should enable the **Rate control** option for **Max bitrate**. This option will insure that the outbound network bandwidth falls below a specified value in order to provide a smooth streaming experience.

You may also select a **Maximum keyframe interval**, also known as the Group of Pictures (GOP). When streaming, using a higher value is acceptable as it raises the quality/bandwidth equation. When recording, however, this value directly affects file seeking (random access) times and efficiency and should be kept relatively low at the expense of using additional storage resources. **B-frames** offer further advanced compression technology, at the expense of some output latency (delay).

Under **Advanced** you may select an encoding **Preset**. The "faster" presets will use less CPU, while the "slower" presets will produce a higher quality output.

Use the **Zero frame latency** option along with 0 b-frames in order to produce encoder output that is closest to real-time, which may be desirable for streaming. However if you can tolerate some latency, leaving this option un-checked will produce significantly higher quality output.

Direct-To-Disc

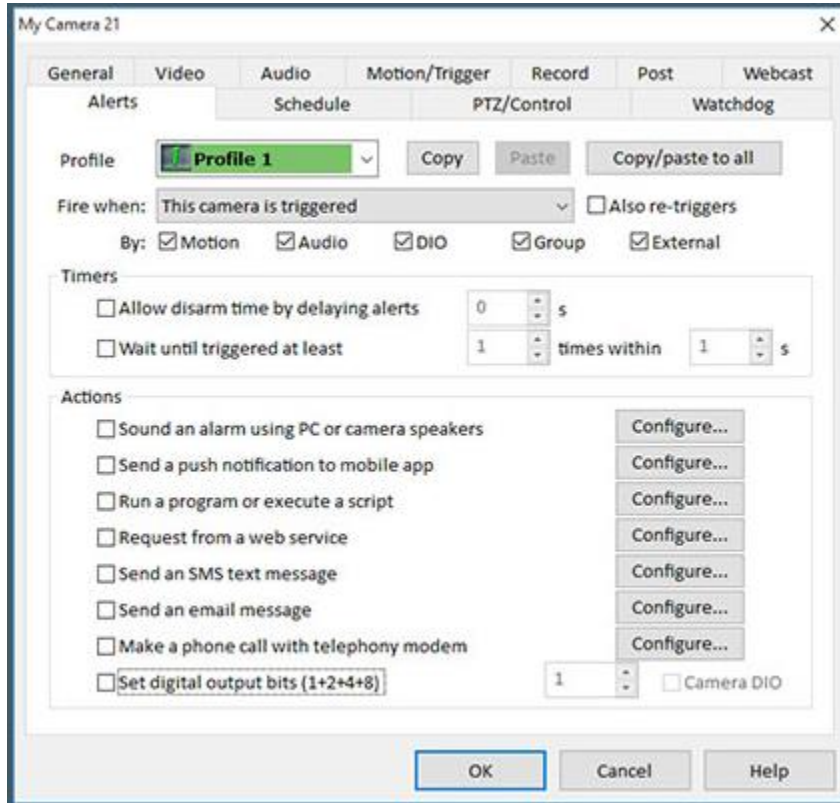
Advanced users may wish to experiment with the Direct-To-Disc feature. Instead of recompressing the video for recording, an attempt is made to save the exact stream as received from the camera. This may not be used with the Windows Media container format, and only H.264 streams are appropriate for the MP4 file format at this time.

Where this technology will be invaluable is for the recording of HD and larger frame video, as recompressing these formats is highly CPU-intensive. The down-side to using direct-to-disc is that you will not be able to add graphic and time overlays such as the time-stamp. You will need to rely upon the camera to add these itself. Also, recording must begin at the arrival of a key-frame (complete image). If your camera sends these only infrequently, you may miss the beginning of some motion-activated recordings unless you also use the pre-trigger video buffer.

It is possible there are camera streams yet to be discovered which are not fully compatible with this recording method-- if you require assistance please contact the developer.

Camera Properties - Alerts

When triggered by motion, sound, or an external source such as a Digital I/O device, Alice Aware is capable of alerting you with any combination of several actions (that is in addition to recording the action for later review).



You may configure a unique combination of alert **Actions** for each **Profile**. The active profile is determined by the Options/Schedule page. The global schedule profile may be overridden by the camera's own Schedule and then further by using the profile buttons at the top of the main window. You may also configure a unique combination of alerts that will fire according to the camera's Watchdog settings page by selecting Watchdog from the profile list. For your convenience, you may configure alerts for one profile and then copy/paste them to another profile, or copy them to all profiles with the click of a single button. NOTE: These copy and paste operations are immediate and may not be undone by clicking cancel.

The selection **Fire when** gives you the option to make these alerts global. It is possible to setup alerts on only one camera, and then fire those alerts when any camera on the system is triggered, or when any camera in a specific group of cameras is triggered. You may also limit the alerts for specific types of trigger: motion (video), audio, DIO (digital input signal), group (another camera triggered this alert), or external (via the mobile app or web interface).

There is an option **also fire with re-triggers**. An initial trigger occurs when the camera goes from the non-triggered state to the triggered state. A re-trigger occurs when the camera is already in the triggered state, but additional motion or other trigger events occur.

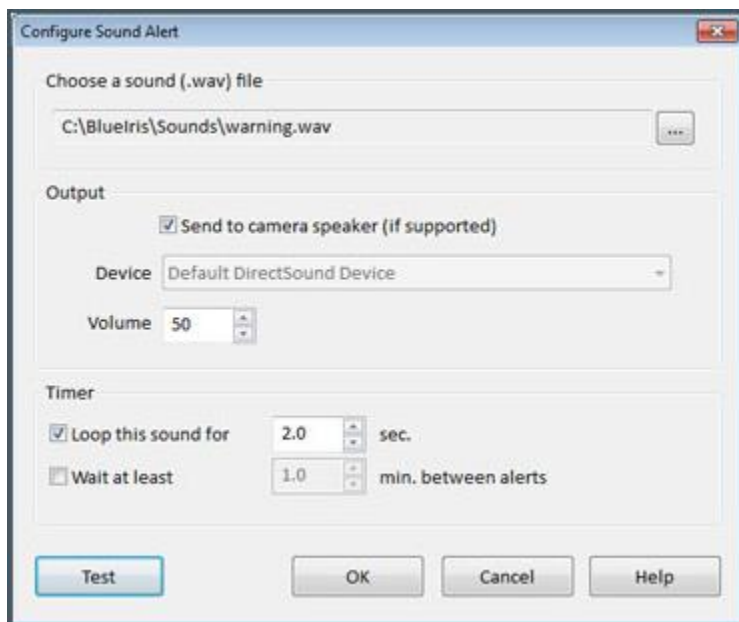
You may specify a **disarm time** in seconds. This will delay an alert in order to allow you time to disarm Alice Aware, for example to prevent an alert following entering your own home. During the disarm period, the loudspeaker icon will blink rapidly in the status bar. Typically, disarming means to use the traffic signal icon or to manually change the profile #.

In order to reduce the likelihood of a false alarm (as by shadows, insects, wind, etc.) you enable the **Wait for motion at least X times in Y seconds** option. For purposes of this feature, the camera must be in the triggered state, and motion (or external trigger source) must alternately begin and end. Note that regardless of this setting, Recording will still occur whenever the camera is triggered if you have specified to record based on motion/trigger.

Enable an alert action by checking its box. Configure a specific alert action by clicking its corresponding **Configure...** button.

Sound

The Sound alert is designed to get your attention by playing a sound from your computer's speakers.



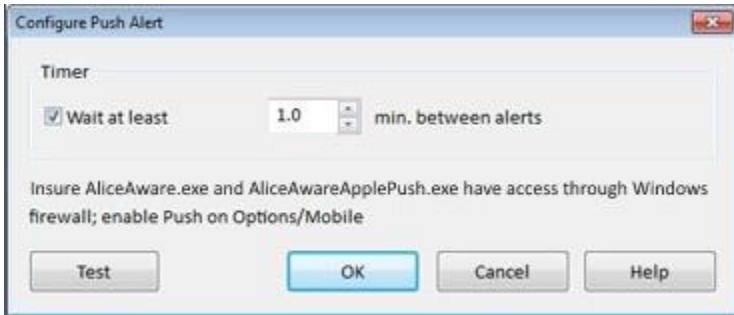
Click the "..." button to select a pre-existing file from your system's hard drive. Use the **Volume** setting to lower the volume to a specific percentage of the original if necessary for balancing other system sounds.

The timers determine the amount of time for which the sound will play, and the amount of time to pause between sound alerts if the camera continues to be triggered. Use the Test button to hear the sound before closing the window.

Push notifications

The iOS and Android client apps may receive push notifications from your Alice Aware system. You may use this mechanism to replace SMS and Email alerts. In addition to enabling this Alert, you must also go to the Options/Mobile devices page to specifically select the devices that will receive the push notification as well as the Options/Users page to

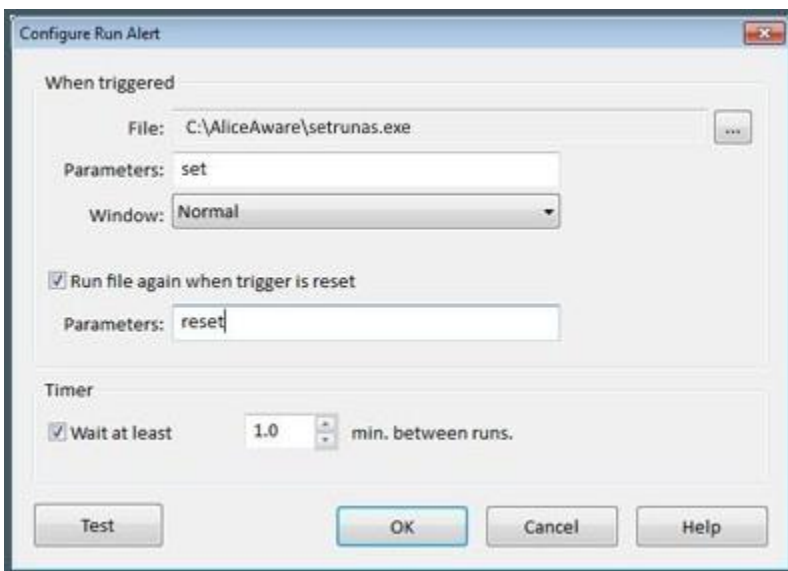
insure it's also enabled for the user account that has most recently used each device. In order to appear on the mobile devices page, your device must have previously successfully logged-in. Furthermore on the device itself, you must choose to accept push notifications from the Alice Aware client app.



Use the **Test** button to send a test message to all configured devices.

Run a Program

This feature allows you to create your own customized alerts by calling external programs or scripts.



Use the "..." button to locate the program, script, or other file that you would like Alice Aware to execute. Enter any necessary **parameters**. There are several macros which you may include in the parameters line as follows:

&CAM ... the camera's short name

&TYPE ... will be either MOTION, AUDIO, EXTERNAL or WATCHDOG

&PROFILE ... the currently active profile #

You may choose one of the following window modes: Hide, Normal, Minimized, or Maximized. Like the other alerts, the timer feature allows you to throttle the frequency of the alert.

You have the option to **Run the file again when the trigger is reset** with a second set of parameters. This may be used to set and reset an external alarm for example.

The **Test** button allows you to try your alert before "going live" with the it.

Web Request

This alert action is similar to the **Run** action, but will instead make a web request using either a page GET or POST.

The screenshot shows a dialog box titled "Configure Web Alert". It contains the following fields and controls:

- When triggered:** A text box with the URL "http:// google.com/test?x=123" and an empty "POST text:" field.
- Request again when trigger is reset:** A checked checkbox and a text box containing "http://".
- Timer:** A checked checkbox labeled "Wait at least" followed by a spin box set to "1.0" and the text "min. between requests".
- Buttons:** "Test", "OK", "Cancel", and "Help".

Specify a server address with parameters. If you put text into the **POST text** box, the web request will handled with the HTTP POST method instead of GET. You may specify a completely separate address to be used when the trigger event has ended.

SMS Text Message

The SMS alert allows you to send a text message to a cell phone. The requirement is that your carrier provides an SMS gateway--that is, an email address to which you may send an email and have it converted to an SMS message.



Specify the outgoing email server to use as configured on the Options/Email page.

Most large carriers offer this service to their subscribers. If your carrier is not listed, you may obtain the gateway address from them and select "Other gateway" and enter it manually.

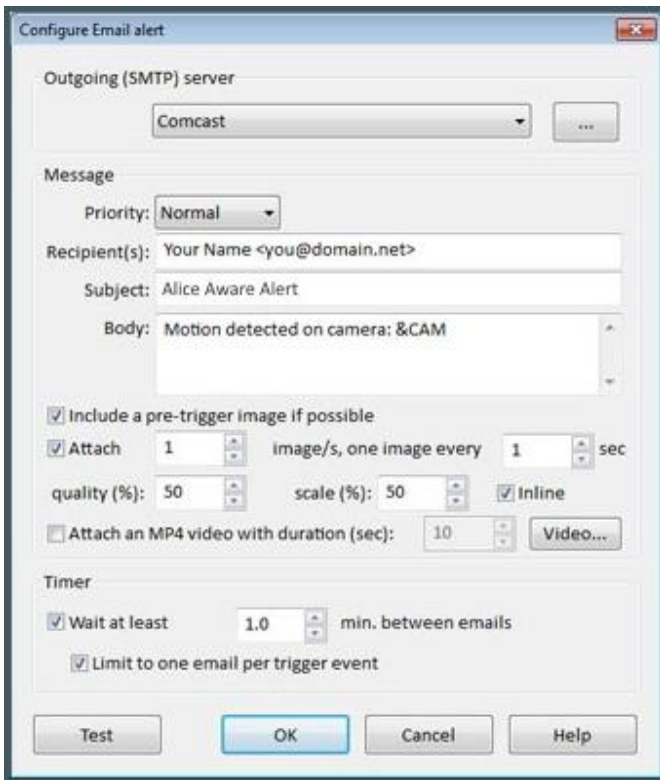
The **phone#** field may contain multiple numbers separated by either commas or semicolons. All phone numbers entered together in this way must be associated with the same carrier.

You may choose to **Attach current image**. Technically this then becomes an **MMS** message, and your carrier may require another gateway address for that. Some popular MMS gateway addresses are also listed.

Use the **Timer** to force Alice Aware to wait a specific amount of time between consecutive SMS messages, even if the camera remains in the triggered state.

Email

The Email alert will contact your outgoing (SMTP) email server directly, and send a message.



In addition to the server name from Options/Email, you must also specify the recipient's email addresses. You may choose to simply enter the email address (name@whatever.net), or you may use a format like the example above, which provides a "friendly" name along with the actual email address. For multiple recipients, separate each address with a semicolon (;).

The Subject line may contain one or more of these macros:

&CAM ... the camera's short name

&NAME ... the camera's long name

&TYPE ... will be either MOTION, AUDIO, EXTERNAL or WATCHDOG

&PROFILE ... the active profile number

&PRESET ... the most recently used PTZ preset name/number

You will find that several of these will work in the body of the message as well.

When attaching images, you may choose to **Include a pre-trigger image**. With this, an attempt is made to provide an image representing the moment at which motion first begin.

Select **Attach X image/s, one image every Y sec** to add additional JPEG images to the email message. You may specify a number of seconds to wait following the trigger and each subsequent image attachment.

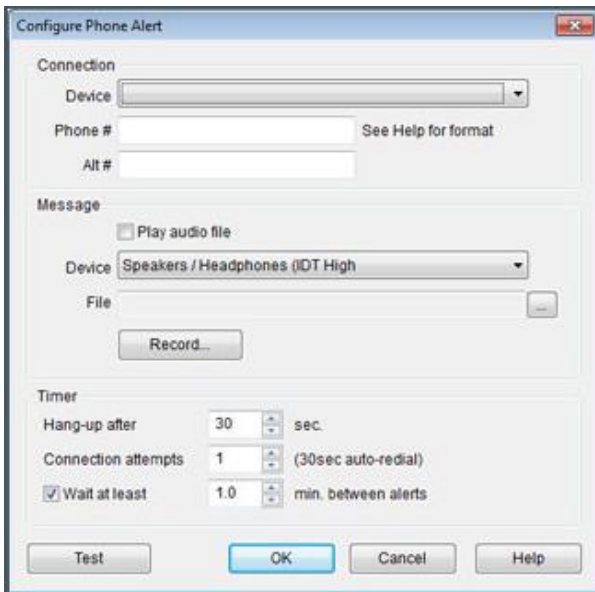
JPEG images may be included as either **Inline** or Attachments. You may specify the **quality** and **scale** of the image (the smaller each of these numbers, the smaller the image byte-size will be).

In addition to either one or two JPEG images, you may also choose to **Attach a 10-second MP4** file. An MP4 will be playable on most mobile devices.

Use the **Timer** to force Alice Aware to wait a specific amount of time between consecutive email alerts, even if the camera remains in the triggered state.

Telephone

If your PC has a modem with the proper telephony drivers installed, Alice Aware can use it to place a phone call to alert you or your home security system. If the modem is a "voice modem" and features a wire that runs from your sound card, you can also play a pre-recorded message when the phone is answered. Here's the Phone Alert configuration window:



Choose your modem from the connection device list, and enter the phone number to call. It's necessary to enter all required digits here, regardless of system dialing profiles. In addition to the numbers 0-9, * and #, you may also use these characters:

A-D	These are actually touch-tone characters that are not on common phones, but which may be recognized by some systems as part of a command sequence
!	1/2 second hook flash (for 3-way calling, etc.)
,	Wait for approximately 3 seconds before proceeding
W or w	Wait for a dial-tone before proceeding
@	Wait for "quiet answer" (several seconds of silence after a ring) before proceeding
\$	Wait for a "billing signal" (such as a credit card prompt tone)

If you have a Honeywell 4286 Phone Module, for example, you might want to sound the Panic Alarm by dialing XX,111111, where XX is your 2-digit phone code.

If you supply an **Alt #**, this will be used in place of the **Phone #** in the case of a Watchdog timer alert.

You may choose "play audio file" if your modem is capable of playing sound. If it is, you will see the modem's audio playback device listed as something like "Modem#0 Line Playback." The above screen shot actually shows the system speaker device, which was used to test the Phone Alert. You may choose a pre-existing sound file by clicking the "..." button, or record your own voice message by clicking "record."

The **Disconnect after** setting determines the amount of time the phone will remain off-hook. You should allow for the total of dialing time, ringing time, and then the amount of actual connection time. The **Wait at least** setting determines the amount of time to wait between successive telephone alerts if the camera continues to be triggered.

If you have a simple "data modem" you should set the **Connection attempts** to 1. This type of modem is not capable of detecting rings, busy signals, etc., so it cannot communicate a successful connection to Alice Aware. If you have a "voice modem" with "call progress detection" capabilities, you may set the connection attempts as high as 10. If the telephone alert is unable to complete the call (busy, no dial tone, etc.), it automatically retries with a 30 second interval.

Use the **Test** button to place the call with a status window which provides immediate feedback from the modem as to the status of the call.

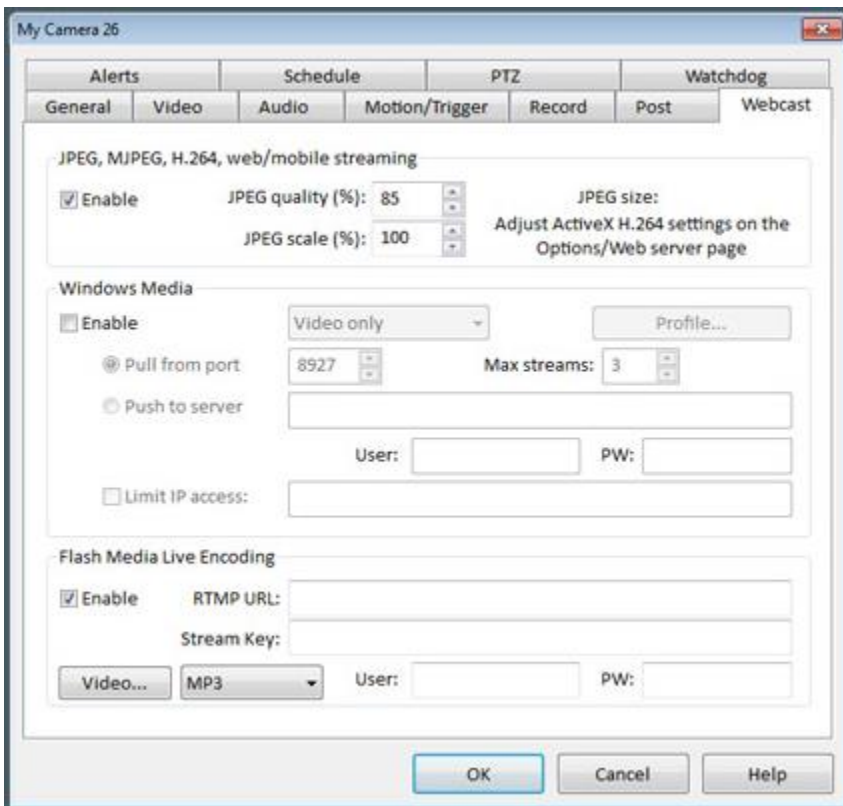
Set Digital Output Bits

Using the [Sealevel SeaDAC Lite](#) (P/N 8112 and similar), you may send a signal to an external device when the motion sensor is triggered. The Sealevel 8112 has 4 digital inputs and 4 digital relay outputs. In addition to the device and its drivers being installed, you must also have the SeaMAX.dll in your Alice Aware program folder. To configure this and other devices, see Options/Digital I/O.

Multiple DIO output bits may be triggered at once--this setting now represents a collection of bits. Outputs 1,2,3,4 have bit values 1,2,4,8 respectively. Enter a value of 6 (which is 2+4) to trigger outputs 2 and 3 simultaneously.

Camera Properties - Webcast

Web broadcasting (**webcasting**) is accomplished by "streaming" images (and optionally sound) over the Internet. Streaming may be provided directly from your Alice Aware PC if you have configured the Web server and you have adequate upload bandwidth. You may also "push" streams to a Windows Media Server or a service such as Akamai or [UStream](#) to reach a large audience. You may also wish to simply use Image Posting to upload a series of still images to your website.



Webcasting is segmented into these basic groups: web/mobile, Windows Media, and Flash Media Live Encoding. **Note:** In general web/mobile streaming should remain enabled. Only disable this option and/or enable the other options for unique and advanced configuration requirements.

Available Webcasting Technologies

Alice Aware supports five distinct webcasting technologies, each with its own advantages and disadvantages as shown here:

ActiveX/H.264	<ul style="list-style-type: none"> • Used by the default home page when you connect using Microsoft IE (Internet Explorer). • Very efficient - makes a single request, and then receives a continuous stream of H.264 temporally-compressed images. • Uses a C++ ActiveX component, which requires the use of Microsoft IE or potentially a Firefox plug-in.
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	<ul style="list-style-type: none"> • Browser <i>and user</i> must accept component download and installation (adjust Explorer's Tools/Internet Options/Security settings as necessary)
JAVA/JPEG	<ul style="list-style-type: none"> • Uses a Java Applet, <i>but this method is deprecated</i> • Makes a single request, and then receives a continuous stream of JPEG images • Browser must support and run Java Applets. See Mac notes below. • The system must have Java installed from http://java.com. Java version 6 update 21 has been successfully tested. • The Java applet must have privileges to access the Internet • Some systems will not allow the Java applet through a DNS name; the IP address must be used. • Available on an alternate home page "jpegpush.htm" - click the "Goto JAVA/JPEG" link at the top of the default home page.
JPEG refresh	<ul style="list-style-type: none"> • The simplest • Uses Java Script to continuously refresh a standard HTTP image • Least efficient - each frame is independently requested • Major advantage: compatible with virtually all browsers, mobile devices and networking configurations • Available on an alternate home page "jpegpull.htm" - click the "Goto JPEG Refresh" link at the top of the JAVA/JPEG page.
Windows Media	<ul style="list-style-type: none"> • Full license version only • Must enable Windows Media in the camera's webcasting setup page • Efficient stream, but high CPU utilization • Uses an embedded Windows Media Player ActiveX object remotely, so again Internet Explorer is required • Ability to "push" to a Windows Media Server for mass distribution
Flash Media Live	<ul style="list-style-type: none"> • Full license version only • Easily distribute to a large audience with a service such as UStream

Configuring JPEG and ActiveX Streams

JPEG webcasting and ActiveX webcasting are enabled together. The default Alice Aware home page uses H.264 webcasting via an ActiveX component (you must answer "Yes" to install it when you view the page remotely for the first time, and whenever the ActiveX component version number changes).

When webcasting JPEG images, you may choose to scale them (make them smaller) and use a specific quality value. By default, JPEG images are broadcast in the same size they are captured according to the camera's video properties. As you decrease image size and lower image quality, the number of bytes needed for each image decrease as well. This directly translates into smoother video (more frames per second), especially over slower connections, or when bandwidth must be shared with multiple clients.

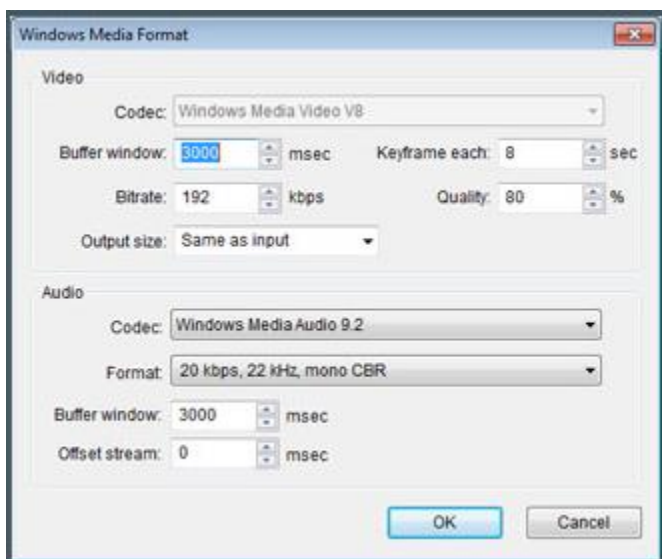
Advanced users may configure the H.264 stream via the Web Server options page.

Windows Media® Technologies

The Windows Media webcasting format intelligently compresses your camera's video stream (and optionally the audio stream as well). The goal is simply to produce the highest quality audio/video experience using the least amount of

bandwidth. The advantages are fluid video with audio for multiple viewers. The one clear disadvantage to this technology is that the viewer (Windows Media Player® or a browser plug-in) "buffers" several seconds of the stream before displaying the image, so the image is "delayed" by this amount of time. Another is intensive CPU utilization to accomplish the encoding.

You should click the "Profile configuration" button to configure the Windows Media encoding and broadcasting engine.



For optimal efficiency, you should select the Windows Media Video 8 and Audio 9 codecs. If you or others will be viewing over very slow connections, you'll want to keep the total "bitrate" under 40 kbps. That is, you if select 8 kbps for audio, you should enter 32 for video. When using broadband (DSL and cable modems), you might want to experiment with bitrates in the neighborhood of 1000 (1Mbps) instead.

Advanced users may experiment with altering keyframe, quality, and buffer window settings. A "key frame" is a complete image, and requires more bandwidth to transmit. However, when they are spaced closer, it may require less time to buffer and synchronize with the stream.

Instead of using the Alice Aware web server and web pages, you may instead view a Windows Media broadcast by opening your Windows Media Player, and selecting "open URL" from the File menu. Enter "http://yourdomain:8880" where 8880 is the port number. "Yourdomain" may be your computer's name in a LAN, or an Internet address or IP address if you accessing your computer from anywhere else in the world. If you have a router and/or firewall, this port number must be specifically routed to the machine running Alice Aware.



For advanced uses, instead of streaming directly to a maximum number of client connections, you may choose to **push** your stream to a Windows Media server or service website. In addition to an address, you may also be supplied with a "publishing point" to use. Enter both the address and publishing point into the "Push to server" box using the format `http://address:port/publishingpoint`. If the port is 80, the `:80` is optional.

To limit incoming Windows Media connections to a specific set of IP addresses, check the **Limit IP access** box and enter one or more IP addresses separated by semicolons. You may use an asterisk (*) in place of any IP address component, for example `24.22.102.*`. By default the list is an inclusion list. To instead specifically exclude addresses, begin your list with a minus sign (-).

Flash Media Live Encoding

Enable this option only if you have an RTMP URL and Stream key obtained from a FML service such as UStream. After setting up a UStream account, you will find these on the Dashboard/Channels/Your channel/Broadcast settings/Encoder settings page. After entering these details you may view any connection errors on both the camera properties page and the Status/Messages page.

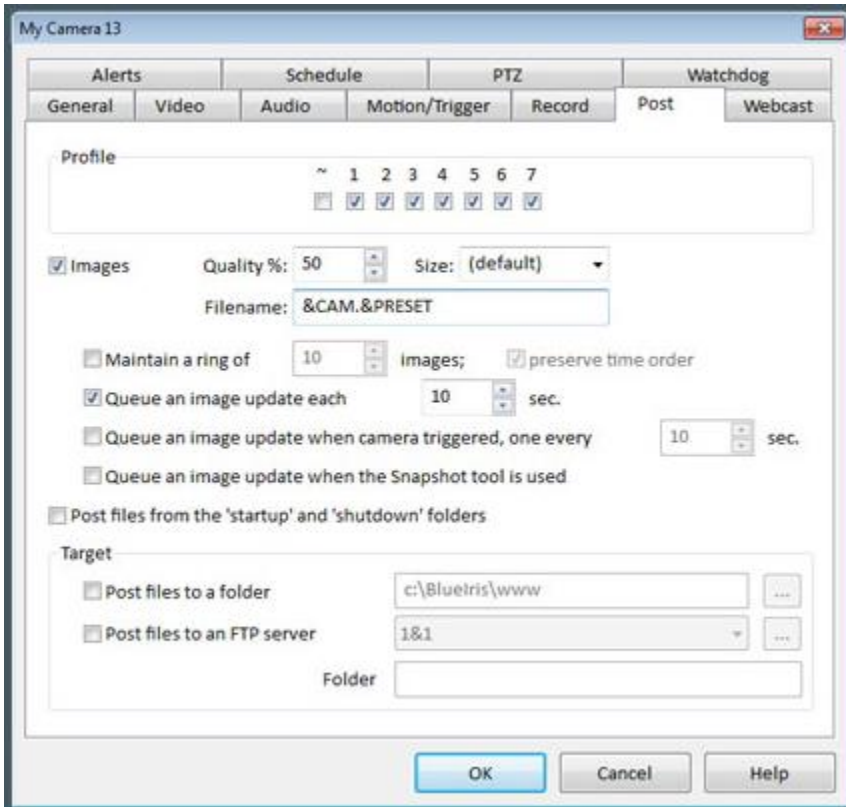
Mac notes

The JAVA applet may require a Mac preference change as follows. Open an obscure application found in the Utilities folder; "Java Preferences". In the "General" pane, change the "Run applets:" radio button from "Within the browser process (Default, more compatible)" to "In their own process". The Java jpegpush viewer works best in Chrome, rather than Safari and Firefox (all current versions).



Camera Properties - Post

Posting still images to a web server is the simplest form of "adding live video" to a web page. (See the Webcasting page to learn about "streaming" video instead.) However, if "motion video" is not required, the very straightforward method of "image posting" for getting images onto your web page may suffice, so read on.



Profile

You may choose to post during any combination of **Profiles**. The particular profile that is active at any given time is determined by settings on the global Schedule page, or if you prefer, the camera's own Schedule page. There are profile buttons at the top of the Alice Aware window which show the current global schedule profile. If you press any of these buttons, it overrides BOTH the global schedule as well as the individual camera schedules for all cameras. Press the button once to temporarily force a particular profile, or press it twice to hold the profile indefinitely. The checkbox labeled as ~ allows you to choose whether or not to post images while the camera is *inactive* (that is, there is no active profile).

Images

Once you enable image posting, you may choose the filename that will be used. The **Filename** may contain these macros:

&CAM ... the camera's short name

&PRESET ... the most recently used PTZ preset

&PROFILE ... the currently active profile #

The camera's short name is especially useful if you have multiple cameras uploading images to the same website/folder. The filename may also contain the standard time formatting codes. These are helpful if you are creating an image history. The **Quality** and **Size** options allow you to adjust the file size and image dimensions, perhaps to make the images more appropriate for portable viewers like cell phones.

You may wish to have a collection of the 10 most recent images, for example. When you select to **Maintain a ring**, a three digit number will be appended to the filename. This number will cycle from 000 to the number of images that you specify (minus 1) as each image is uploaded. So, the first image will have "000" the second "001" and so on. If you specify the **Preserve time order** option, the newest image will always be the one with "000" appended; all other images will be renamed down (a queue format, where 000 becomes 001, 001 becomes 002, etc., and finally 009 is deleted). Without the **Preserve time order** option, images in the ring will be overwritten in numerical order (000, 001, ... 009, and then 000 again).

Note: if your filename contains time formatting codes, the function of the ring is altered, such that a new ring is created when the time designated by the time format changes. In other words, if you use "%a" (day of the week) in your filename format, and ask for a ring of 10 images, you will get 10 images for each day of the week.

Images may be "queued" for upload in one or more of three possible ways. The first is time-periodic. That is, after a specified number of seconds have elapsed, an image is uploaded, regardless of motion. The second is motion-triggered. When you select this option, you may also specify a "break time"--the minimum time between consecutive uploads. The final option will cause an image to be uploaded when you use the "snapshot" command on the toolbar.

Any combination or all of these three methods may be used. The time-periodic and motion-triggered methods use the same internal timer. If either one of these methods causes an upload, the trigger is reset. That is, if an image is uploaded due to motion, the next time-periodic upload will not occur for the specified number of seconds, regardless of when the last time-periodic upload occurred.

The upload "queue" actually has only one opening. That is, if you specify an image update each 5 seconds, and it takes 10 seconds to perform one upload, any images received by the camera during the 10 second upload period are not considered for uploading. In this example, uploading will begin again as soon as an image arrives to the camera following the previous upload.

Note: if your filename format contains time formatting codes, the function of the ring is altered, such that a new ring is created when the time designated by the time format changes. In other words, if you use "%a" (day of the week) in your filename format, and ask for a ring of 10 images, you will get 10 images for each day of the week.

Startup and Shutdown Files

If you are posting images to a website, you may wish for that website to display different pages or images based on whether or not your webcam is available. If you select the "post files from the startup and shutdown folders" option, Alice Aware will upload files that you specify when Alice Aware is started (or a camera is created), and when Alice Aware is shutdown (or a camera is destroyed).

Alice Aware will upload all files contained in the following folders:

C:\program files\Alice Aware\Cameras\<ShortCamName>\Startup

C:\program files\Alice Aware\Cameras\<ShortCamName>\Shutdown

Target

You may post the images to either the built-in web server or another web server, either local (such as IIS on the local machine), or remote (via FTP upload).

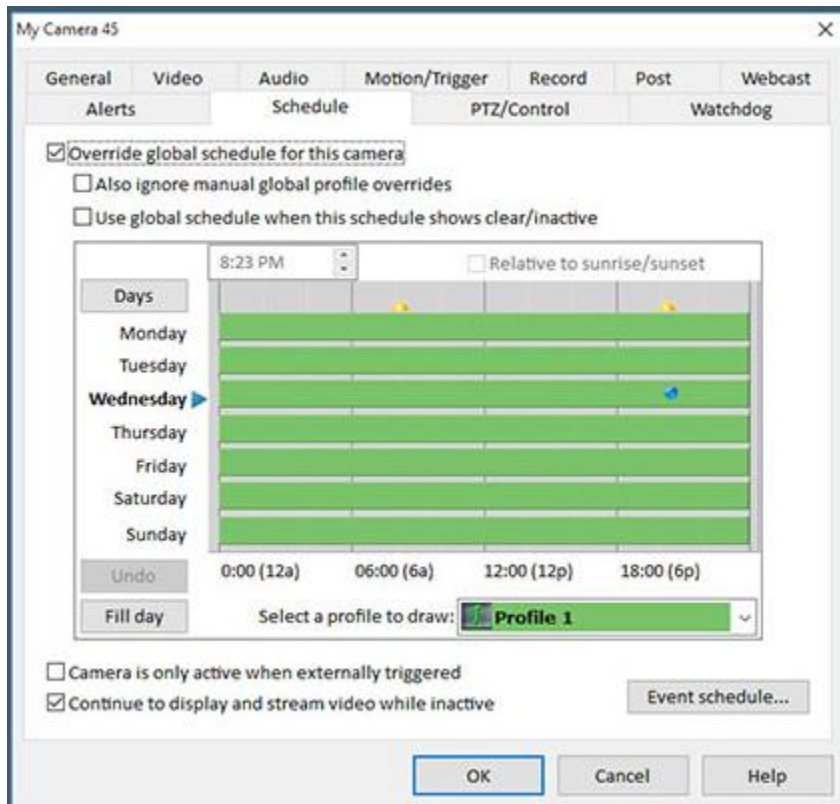
The built-in web server may be used to simply serve a list of these files, or you may create a simple HTML page which displays selected images.

Use the **Post files to a folder** option to feed a local IIS server application.

Use the **Post files to an FTP server** option to feed a remote website. Select a server that you have configured on the Options/FTP page. FTP errors appear in the message log. If a yellow warning icon appears in the Alice Aware status bar, click on the "stopwatch" icon in the toolbar to view these error messages.

Camera Properties - Schedule

You may setup a global schedule on the Options/Schedule page. However, this camera properties page allows you to create and maintain a custom schedule which specifies when this camera specifically should be *active*. When the camera is active, triggers such as motion detection are used to record clips and to generate alerts. By default, images are posted only when the camera is active. The schedule does not affect webcasting.



The graph shows a colored bar wherever the camera is active. The color corresponds to the active profile. By default a camera is active 24/7 (24 hours per day, 7 days per week), using profile 1 (green). You will see 7 green bars representing this, one for each day of the week.

To prevent confusion and to simplify matters, it is recommended that you only use the global schedule. You will find a description of the schedule editing control on the Options/Schedule page.

Schedule options

If you enable the option to **Also ignore manual global profile overrides**, the camera will continue to follow its own schedule even if you use one of the numbered profile buttons at the top of the main window, or the profile is overridden in another way, such as by client app or geofence updates.

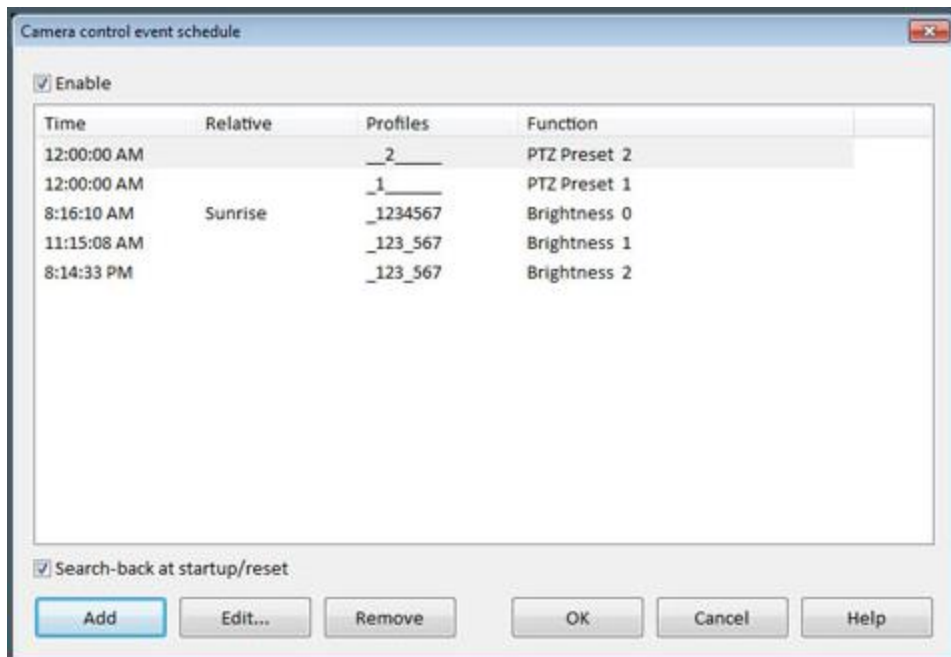
Instead of making the camera inactive, you may choose the option to **Use global schedule when this schedule shows inactive/clear**. This will cause the camera to instead use whichever profile is specified by the Options/Schedule page during this time.

If you select the option **Camera is only active when triggered**, the camera will remain in a persistent inactive state until it is triggered by another camera. This is useful if it is being triggered as part of a group trigger and you wish to otherwise limit its bandwidth.

If you want to make the camera *completely inactive* when the schedule is clear, un-check the box **Continue to display and stream video while inactive**. When un-checked, the camera will not display live video and will be unavailable for webcasting while it is inactive. You may wish to use this option to free system resources including CPU and network bandwidth when the camera is unneeded.

Event Schedule

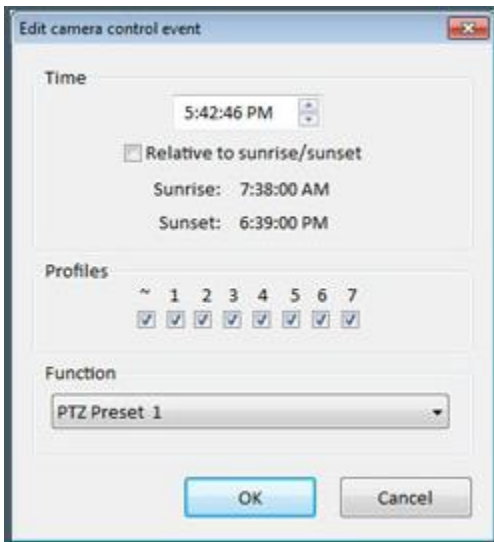
You may configure Alice Aware to send PTZ and other camera controls to your network IP camera on a timed schedule. Click the **Event schedule** button from the PTZ page to open the **Camera control event schedule** window.



Use the Add, Edit and Remove buttons to create a list of daily events such as PTZ presets, brightness, contrast, and IR light mode (as supported by your camera and Alice Aware).

The **Search-back at startup/reset** option will cause Alice Aware to search the list from the current time backward until an event is found for each type of event. For this example image, if the camera was reset at 10am and profile 1 was active, PTZ preset 1 and brightness 0 off would be sent.

When you add or edit an event, you may specify a time and a function:

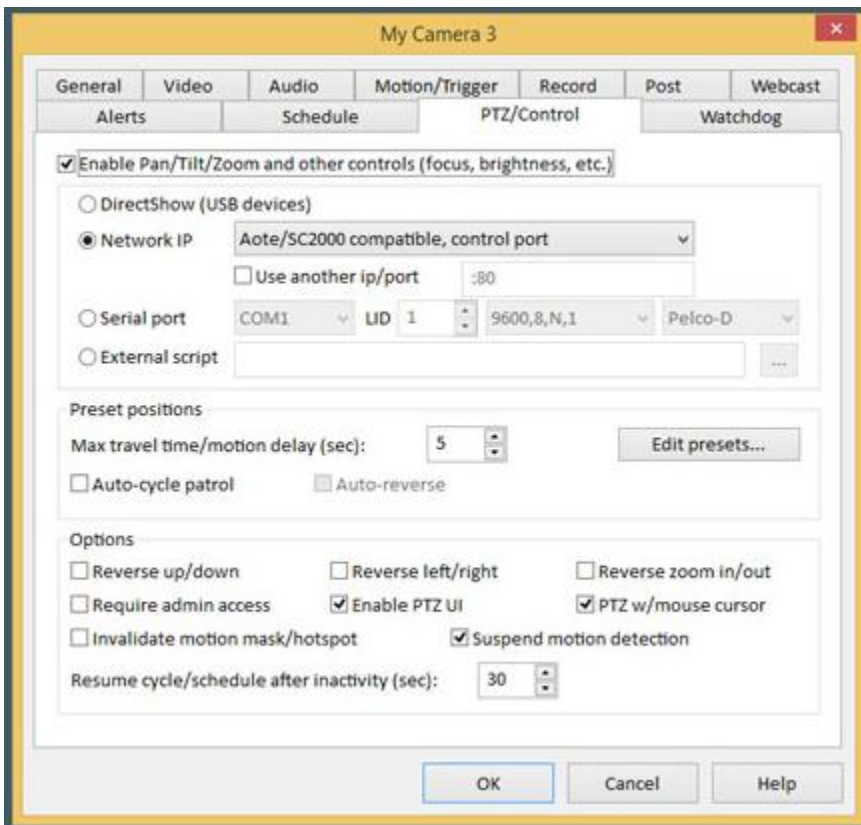


If your time is within 30 minutes of sunrise or sunset (as configured on the Options/Schedule page), you may specify the time to remain relative to this event. For your convenience the current sunrise and sunset values are displayed here.

You may specify a combination of profiles for which the event will be valid. Use the Schedule to automatically set the active profile or use the profile buttons at the top of the Alice Aware window to set the profile manually.

Camera Properties - PTZ/Control

Many cameras have an integrated mechanical system for adjusting the viewing angle and zoom, known as "Pan Tilt Zoom" or PTZ for short. This property page allows you to enable Alice Aware's PTZ controls, as well as control for other camera features such as focus, brightness, IR lights, etc.



Choose **DirectShow** if your USB or IEEE-1394 camera has PTZ capability (one popular example is the Logitech Orbit). For **Network IP** cameras, there are a number of manufacturer-specific protocol options from which to choose. If you have a **Serial port** PTZ device attached to your camera, select the appropriate COM port, logical unit ID and protocol (either Pelco-D, Pelco-P or VISCA). Pelco-D devices have 1-based LID's, while Pelco-P devices have 0-based LID's. The connection is currently limited to 9600/4800/2400 baud, 8 data bits, No parity, and 1 stop bit.

The **External script** option is for advanced use. You may specify any EXE or other executable file to run in response to a PTZ movement. The parameter sent to the script will be one of UP, DOWN, LEFT, RIGHT, ZOOMIN, ZOOMOUT, HOME, or PRESET followed by a comma and preset number.

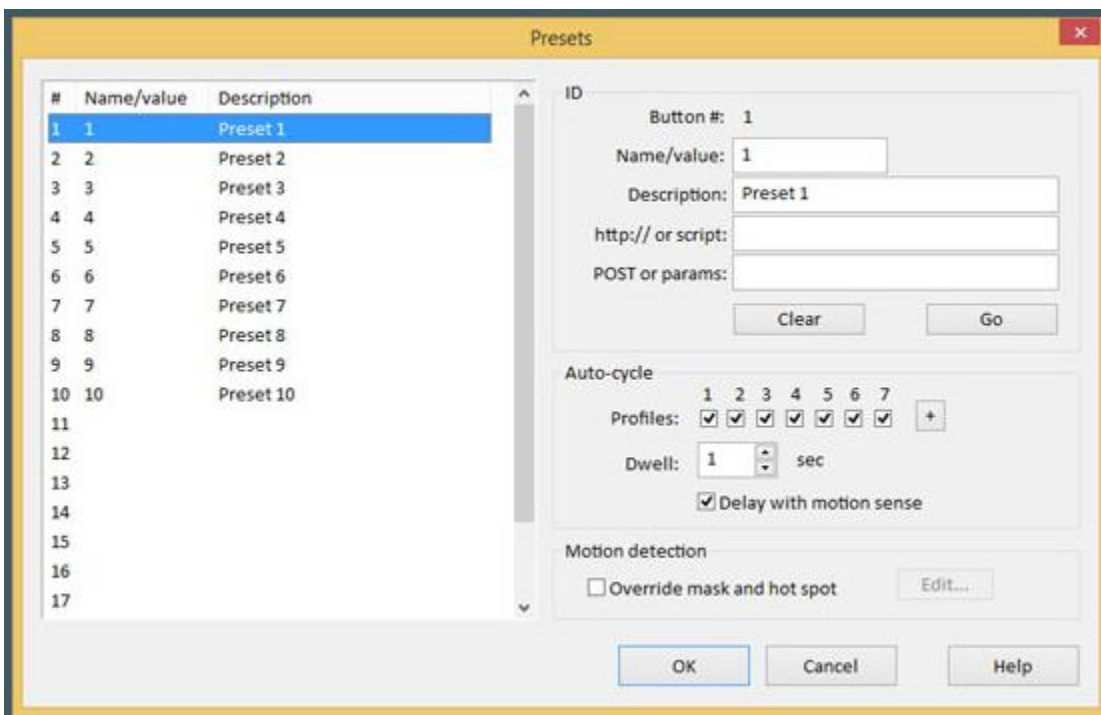
Preset Positions

Many network cameras allow you to create PTZ **preset positions**--select an exact coordinate and zoom setting by name or number. You should first use the network camera's web interface directly to create the presets and/or set them to the desired PTZ positions.

The **Max travel time/motion delay** setting is used to momentarily pause motion detection on the camera while it is being moved in order to prevent triggers. Set this value as low as possible, but greater than the time necessary for the camera to finish movement.

Select the **Auto-cycle patrol** option to automatically perform a patrol function through selected presets, possibly only during selected times of the day/week. The **Auto-reverse** option will cause the presets to be used sequentially from first to last and then backwards from last to first repeatedly, that is for example 1,2,3,4,3,2,1 instead of 1,2,3,4,1,2,3,4.

Click the **Edit presets** button to manage Alice Aware's use of your presets:



You will see a table showing the 20 possible presets. Each preset has a **Name/value** and a **Description**. The name/value is what is actually sent to the camera in response to your request. Most cameras use numbers that directly correspond to the button numbers, in which case you need not make any changes. However, some cameras use text name values, or values beginning with 0, or even-numbered values beginning with 30--and in such cases you will need to edit the name/values to match. You may assign a description to each preset that will be displayed at the bottom of the main window when you hover the mouse cursor over the buttons 1-5.

Click to select a preset on the list in order to change its settings. Use the **Clear** button to quickly erase the preset name and description. Use the **Go** button to call the preset on the camera in real-time. The Go button may only be used if the camera is already streaming with the PTZ feature previously enabled and appropriate camera type selected.

The majority of cameras use numeric values. If your camera uses text values however, you should change the name/value here to match your camera's settings.

In addition to name/value and description, you may select whether the preset will participate in the PTZ **auto-cycle** feature where the camera is made to patrol through preset positions. You may use the **+** button to quickly select or unselect all of the profile checkboxes 1-7, or you may select only specific schedule profiles during which the preset position will be included.

The **Dwell** time specifies the amount of time that the camera will pause at the preset position before continuing to the next position during the auto-cycle patrol. You may also select to **Delay with motion sense** meaning that the auto-cycle will pause beyond the dwell time as long as motion is detected by the motion detector. Note however that if the dwell time is less than the **Max travel time** setting, motion detection may never be operational during the auto-cycle function.

You also have the capability to specify a custom motion detector mask and hotspot for each preset position. Whenever the preset position is called, the new mask and hotspot will be loaded into the motion detector.

By setting a **custom http** request (with optional **http POST** string) or a **script** path (with optional **parameters**) it's possible to use the PTZ preset buttons in many creative ways to trigger external devices or home automation systems. With a custom script or http request, the standard built-in preset call is not sent to the camera.

PTZ Controls

When PTZ is enabled for a camera, and the camera is selected in the Live View, the PTZ controls will be available:



There are four arrows used to move the camera in the corresponding directions--pan left, pan right, tilt up, and tilt down. To the left of these four buttons is a grid button which may be used to position the camera absolutely--clicking the button near the top/left will pan the camera to its left-most stop and tilt it up to its top-most stop; clicking near the center of the button will center the camera. **NOTE:** Absolute position is supported by only a small number of IP cameras.

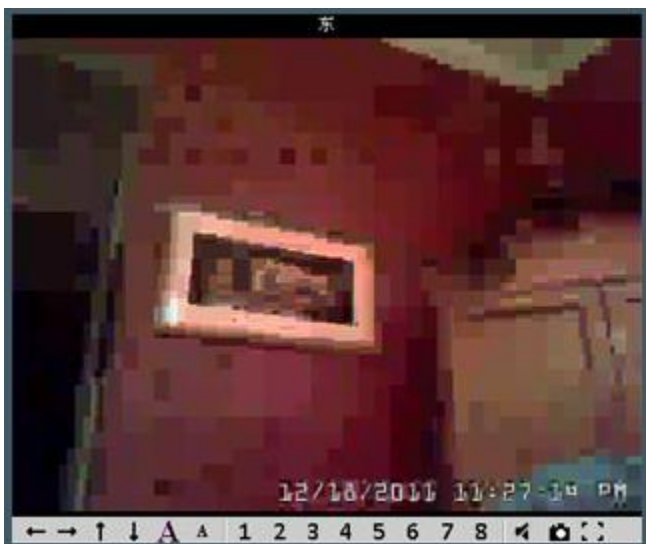
There are two zoom buttons used to zoom in (+) and out (-).

You may select any of the buttons 1-5 to move immediately to a preset number 1 through 5. Hold down the Control key while clicking to add 5, the Shift key while clicking to add 10, or both keys for +15. Instead you may pick a preset name from the list, then use the **Go** button.

To **Set** a preset position (if supported for your camera), hold-down the associated preset number button or the **Go** button until it pops back up.

Note: Motion Detection is disabled for a minimum of 1.5 seconds following any PTZ activity in order to prevent the motion sensor from being triggered and to allow your camera to adjust to the new view.

When viewing your camera remotely, there is a new toolbar at the bottom of the Viewer window which allows you access to the PTZ controls:



PTZ buttons available remotely include pan left/right, tilt up/down, zoom in/out, as well as 8 presets.

PTZ Options

For cameras mounted upside-down or to correct for differences in firmware, you may select to reverse the sense of one or all of left/right, up/down, or zoom in/out.

If you select to **Require admin access to PTZ controls remotely**, only users with the Admin flag on their Options/Users page will be allowed to control the camera using a web or smart phone client. This allows you to give a standard user access to PTZ controls on all cameras except ones marked with this flag.

Use the option to **Invalidate the motion mask/hotspot** feature to automatically discontinue use of the motion detector's mask and hotspot settings whenever the camera is moved. If you had masked-out parts of the image with a specific camera angle, it may no longer make sense to use that mask if the camera is now pointing in a different direction. In addition, you may now also specify a custom mask and hotspot for each preset position.

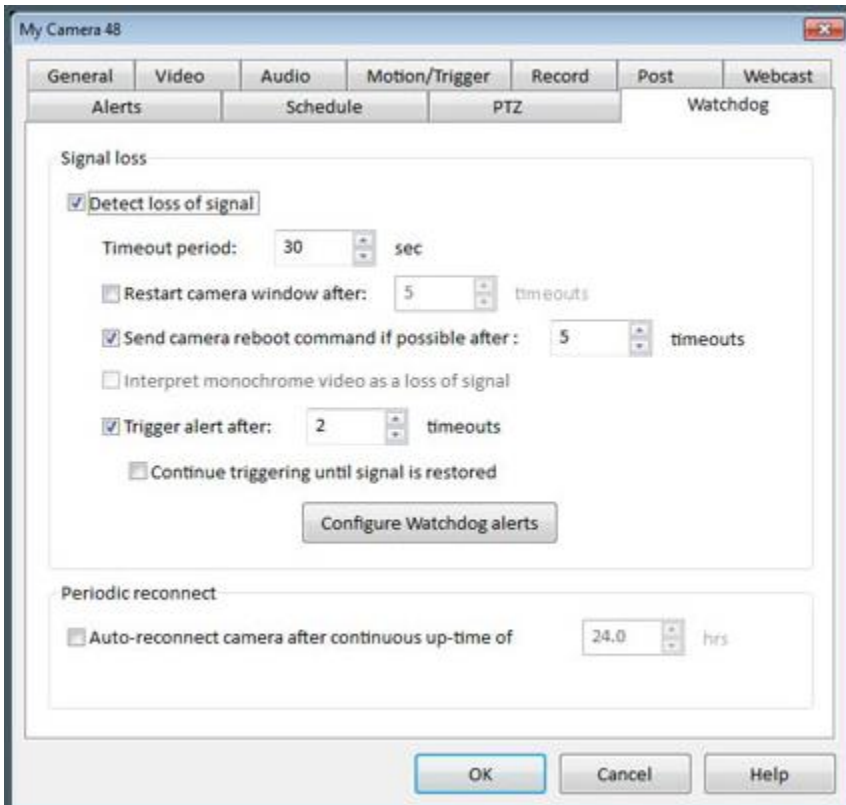
The **Suspend motion detection** option is enabled by default. This prevents the motion detector from triggering the camera as you use the PTZ controls. In certain cases you may wish to override this and allow the motion detector to potentially trigger the camera if PTZ movements are interpreted as actual object movement.

Whenever you manually move the camera with one of the up/down/left/right or zoom buttons, the **auto-cycle** and **event schedule** timers are paused. Use the **Resume cycle/schedule after inactivity** setting to specify the duration of this pause before these features resume normal operation.

By un-checking **Enable PTZ UI**, you may access PTZ capabilities yet disable PTZ UI, allowing you to continue to use the PTZ schedule without access to the manual PTZ controls.

Camera Properties - Watchdog

This page allows you to configure options to monitor the camera for a loss of signal or to periodically reset the camera after a specified up-time.



Detect loss of signal

The **Timeout period** is the number of seconds that must pass without an image received from the camera before action will be taken to restore the connection.

Select to **Reset camera window after** a specified number of timeouts if you want to restart the camera window. This is equivalent to opening camera properties and clicking OK. All files, internal buffers, etc. will be reset. This option does nothing to physically reset the camera.

For IP cameras which support it, you may choose to **Send camera reboot command if possible after** a specified number of timeouts.

You may **Trigger alerts** after a specified number of **timeouts**. You may specify which alerts will be sent during which profiles by selecting the corresponding checkboxes beneath the W column on the Alerts page. For email and SMS alerts, the message subject will indicate the camera's condition.

By default, alerts are triggered just once. However, you may choose to **Continue triggering until the signal has been restored**.

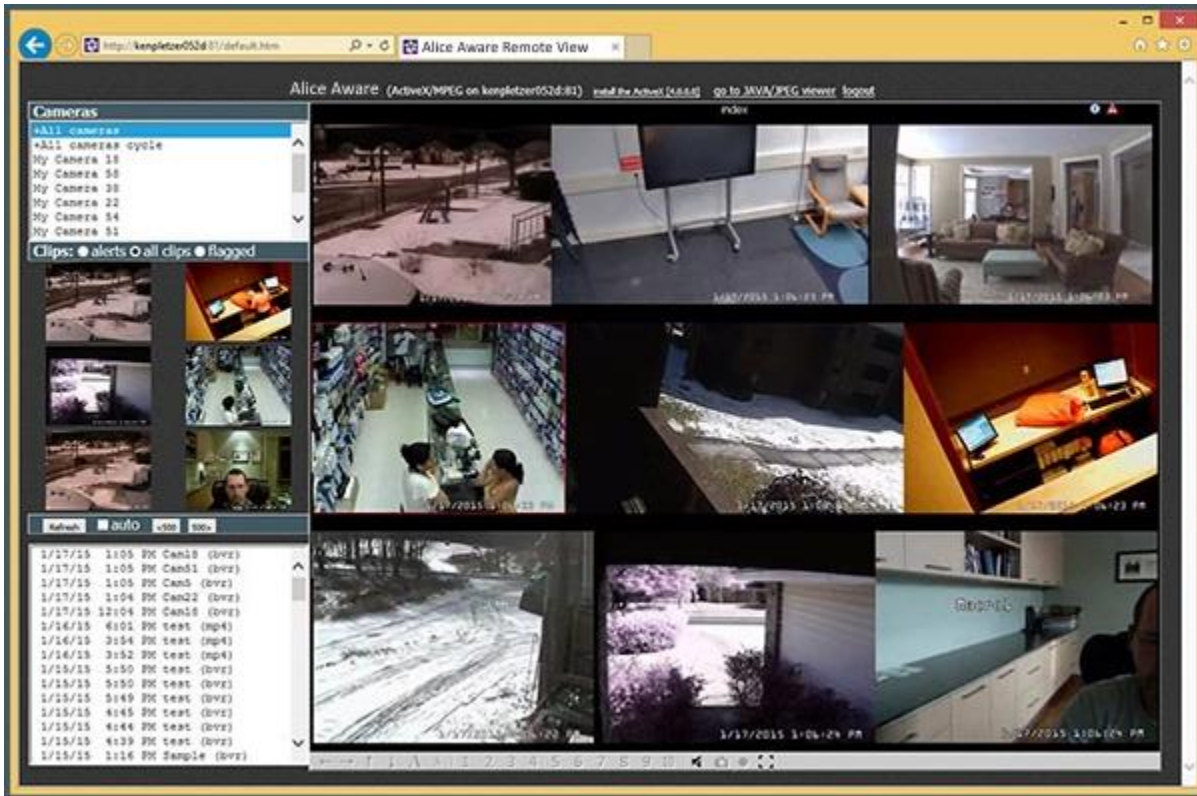
Click the **Configure Watchdog alerts** buttons to be taken directly to the Alerts tab for editing Watchdog alerts.

Periodic Reconnect

Use this feature to simply restart the camera window after a specified period of up-time. You may use this feature to prevent issues in cameras known to misbehave after streaming for extended periods of time.

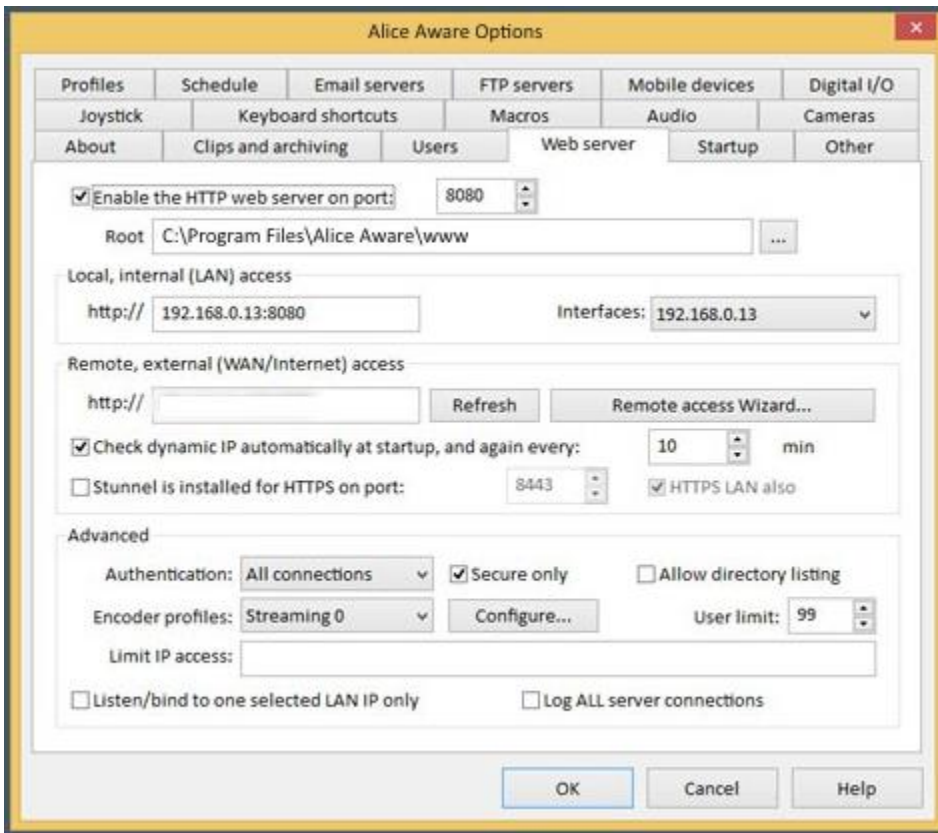
The Web Server

The Alice Aware Web Server feature allows you to create a LAN and/or Internet home page right on your own PC. You can use this server to view your cameras and recordings from another PC in your home or office, or from anywhere in the world. When you first install Alice Aware, the web server is enabled, and is configured for local network (Intranet) use. Click the Globe toolbar icon to open the Remote Access Wizard to assist you with the configuration of your firewall, router and client apps. Shift-click this icon to view your home page in your default Internet browser (e.g. Internet Explorer).



The home page that is installed with Alice Aware (its name is default.htm) contains a window for live video, and a window with thumbnails of the four most recent clips. There are also options to switch cameras in multiple-camera configurations, and to open any clip on the clip list. Because of the ActiveX control that is used, this page will only be used by Internet Explorer. Other browsers will open JAVA-based pages, either jpegpush.htm or jpegpull.htm.

To view and edit the Web Server's configuration, click the Options toolbar icon (the gear, second from the left), and then click the "web server" tab.



The **Network Configuration and Troubleshooting** section offers instructions on how to configure your web server for viewing on either the local network (LAN), the Internet, or both.

Port number

You should not change the **port** number from 81 unless you know what you are doing and have a reason for doing so. Port 80 is actually the default HTTP address used by websites on the Internet, but it is often blocked by ISPs for incoming connections or is very difficult to forward through your router.

Local, internal (LAN) access

The **LAN address** shows you how to access the Alice Aware server from another PC on your LAN. For a wireless network, you may need to instead use a LAN IP address instead of the computer name. Note: for configuration/testing purposes, the name "localhost" and the IP address "127.0.0.1" always refer to your own PC. Note: your PC's LAN IP address (192.168.x.x) is internal, and cannot be used in a browser outside of your local network.

If you want to access the Alice Aware Web Server from another PC on your LAN (local area home or business network), open a browser and type into the address bar the Alice Aware computer's name (e.g., http://officepc) or LAN IP address (typically http://192.168.x.x). For your convenience, a list of LAN IP addresses in use by your PC is generated. This list is for reference only; it is not necessary to select from this list. You will need your PC's LAN IP address later when you configure your router for remote access.

When connecting, you will be prompted for a user name and password. These are configured on the Options/Users page.

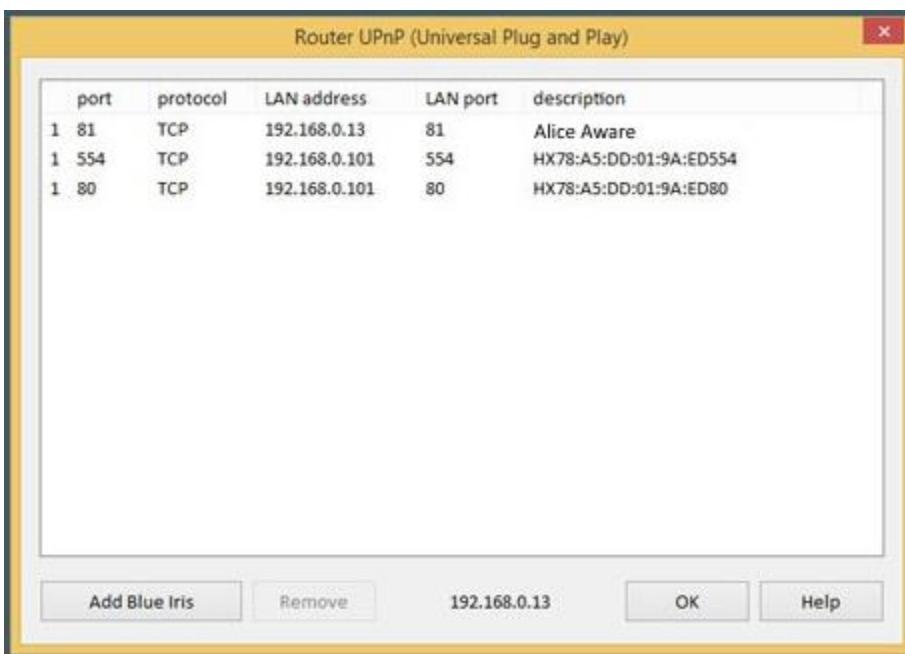
Remote, external (Internet) access

The **Router's IP address** is the IP address that must be used from OUTSIDE of your LAN for remote access to Alice Aware. If your IP address is "67.1.2.3:81" for example, you may then use "http://67.1.2.3:81" in a web browser on any PC on the Internet.

In order to see Alice Aware via this IP address from the outside world, you are going to have to configure your router and firewall to allow access. Start here with the **Router port forwarding UPnP** button,.

Remote Access Wizard

If you have a single router between your PC and the Internet, and that router is one purchased in recent years and has the UPnP feature enabled (typically this is the default), then Alice Aware may be able to do the router port forwarding configuration for you. The software will query the router for a list of existing open ports:



Various devices and software on your network may have already used UPnP to open ports. If there is no other 81/TCP listed, you may just click **Add Alice Aware**. If another software/device is already using external port 81, you will first need to address this, either by selecting another port back on the Web server page, or by first removing the other entry from the list. To remove any entry, click to highlight the entry, then click **Remove**.

Once the routing is done, you can test this by using your external address in a browser on a smart phone cellular connection or via the website canyouseeme.org. If this routing step alone is not sufficient, see the **Network Configuration and Troubleshooting** section for further detail in more complex networking environments.

Dynamic IP address

If your ISP changes your IP address periodically, you may wish to use the option provided here to periodically find the new address automatically. If you want to get a name to use instead of using your IP address when doing a remote connection, you can click on the [Get a domain name](#) link.

Advanced

If you choose to enable **Authentication**, Alice Aware will automatically cause remote users' browsers to prompt them for a username and password. If they do not match a valid user account, they will be denied access. Users are configured on the Options/Users page. If you select to authenticate **Non-LAN connections only**, users connecting from within your local home/office network will not be prompted, while those connecting from the Internet will be prompted. The connections status page will show which username was used to authenticate.

Whenever a user is permitted access without a username or password, an Anonymous user will appear on the Options/Users page. You may edit the privileges of this account as you would the others.

Select the **Secure only** authentication option in order to use the new login.htm page. If you un-select this option, Alice Aware will also accept plaintext or "basic" authentication. Basic authentication may be a requirement for the use of certain third-party add-on software such as TrackIT.

If you use the **Allow directory listing** option, web users will be able to view the list of files in your Alice Aware web root folder if you don't have a home page. You may also use this feature to directly access your New and Stored clips folders. To do this, add /clips/ or /stored/ respectively to your URL, for example, <http://mydomain.dyndns.org/clips/>. Note that the trailing / is required.

Use the **User limit** setting to control the number of users which may login to your web server at any given time.

The **Limit IP access** box provides basic firewall capability for the web server. If left blank, or if there are no specific inclusions, all IP addresses are allowed to connect if not specifically excluded. To add an included IP address or range of addresses, just enter the IP address, optionally preceded by a + (plus). Use the * character in place of a number as a wildcard. To add an excluded IP address or range of addresses, precede the address with a - (minus). Separate multiple addresses with either a comma or a semicolon. Here are some example:

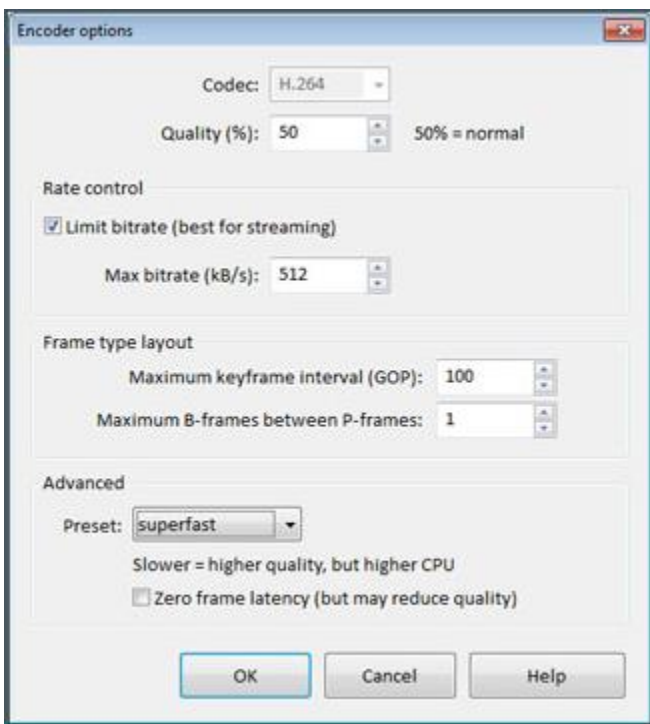
+192.168.*.*	allow all typical LAN addresses
-58.*.*.*	deny any address beginning with 58.
+68.77.123.1	allow this one specific Internet address
^68.22.1.*	allow a range of IP addresses AND skip authentication with admin access (use carefully)

Use the **Listen/bind to one selected LAN IP** option to force the web server to use a specific network interface on your PC. You may wish to use this to force connections to be made from only wired or wireless sources for example. Note that if your local IP addresses change, you may need to revisit this page in order to update the LAN IP list.

Use the **Log ALL server connections** options if you wish to have a record of each connection attempt to your server. Note that a connection attempt is NOT the same as a successful login, and no video is served unless there's a successful login.

Encoder Profiles

The **ActiveX encoder options** button allows you to select and configure the video compression technology that will be used for webcasting by the Alice Aware ActiveX control. This setting does not affect Windows Media or Java/JPEG webcasting--these are configured on a per-camera basis on each camera's Webcasting page. Here is the encoder options page:



The **Quality** setting when set at 50% is designed to produce visually lossless output. You may increase this value to further refine the output or lower it as necessary to reduce bandwidth or hard drive space used.

When the encoder is used for streaming, you should enable the **Rate control** option for **Max bitrate**. This option will insure that the outbound network bandwidth falls below a specified value in order to provide a smooth streaming experience.

You may also select a **Maximum keyframe interval**, also known as the Group of Pictures (GOP). When streaming, using a higher value is acceptable as it raises the quality/bandwidth equation. When recording, however, this value directly affects file seeking (random access) times and efficiency and should be kept relatively low at the expense of using additional storage resources. **B-frames** offer further advanced compression technology, at the expense of some output latency (delay).

Under **Advanced** you may select an encoding **Preset**. The "faster" presets will use less CPU, while the "slower" presets will produce a higher quality output.

Use the **Zero frame latency** option along with 0 b-frames in order to produce encoder output that is closest to real-time, which may be desirable for streaming. However if you can tolerate some latency, leaving this option un-checked will produce significantly higher quality output.

HTML Macros

Alice Aware pre-processes all files ending in ".htm" before they are sent. This is useful if you're using a dynamic IP address (most dial-up networking does) as your server name. Alice Aware will substitute your server name wherever "%SERVERNAME%" appears. Other available macros include the following:

<code>%%SERVER%%</code>	Server name without the HTTP port number appended
<code>%%CAMLIST%%</code>	A list of HTML <OPTION> tags containing the available cameras
<code>%%CLIPLIST%%</code>	A list of HTML <OPTION> tags describing the clips currently displayed in the Clip List
<code>%%CAMPORT0%%</code>	The first camera's webcasting port number
<code>%%CAMNAME0%%</code>	The first camera's name
<code>%%THUMBn%%</code>	A virtual path to a thumbnail image for the "nth" clip currently displayed in the Clip List
<code>%%CLIPn%%</code>	A virtual path to the actual "nth" clip currently displayed in the Clip List

The sample web pages that are installed demonstrate each of the webcasting formats in operation.

Direct image, video and command requests

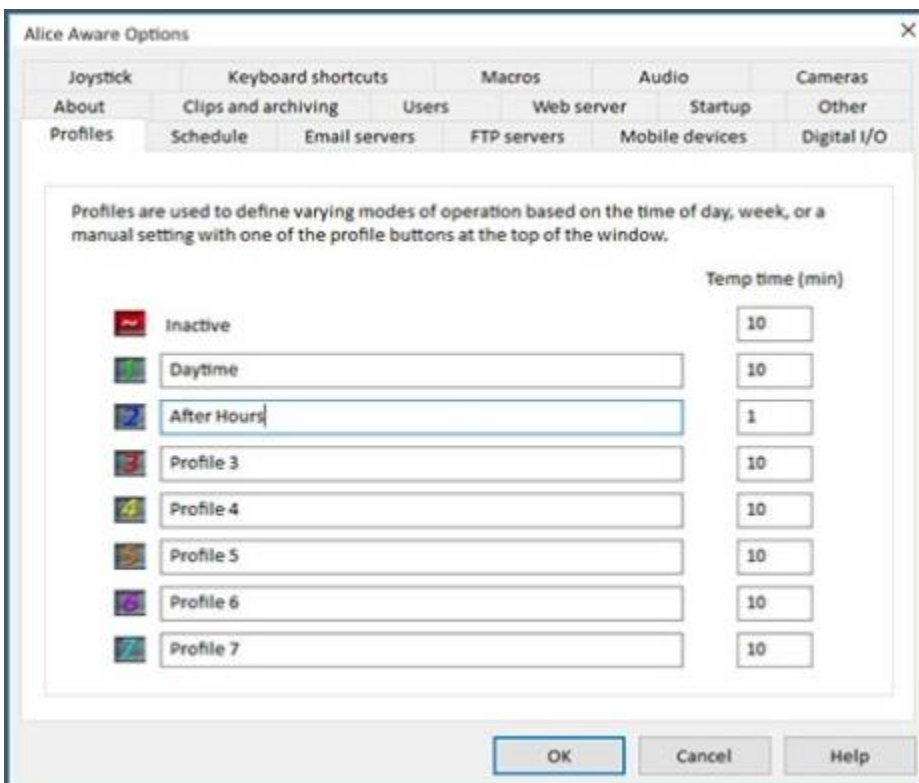
In addition to serving HTML pages, Alice Aware can also act as a "video server." There are a number of methods for retrieving images and video from the Alice Aware web server for use on mobile devices, converting a USB camera into a web camera, or for any other purpose. Here are the paths to these methods:

<code>/image/{cam-short-name}?q=50&s=80</code>	A single JPEG image from a specific camera or group, with optional quality (q) and scale (s) parameters. Quality is a percentage from 1-100, and scale may be any number >0.
<code>/image/{cam-short-name}?h=100</code>	You may also specify a specific height (h) or width (w) instead of scale.
<code>/mjpg/{cam-short-name}/video.mjpg</code>	An M-JPEG stream. This stream is compatible with Alice Aware's "MJPEG stream request."
<code>/file/clips/{filename}&mode=jpeg&speed=100</code>	An M-JPEG stream of a clip from your New clips folder. You may include additional subdirectory names in the filename. The speed parameter is

	optional, a percentage of normal playback speed.
/thumbs/{filename}	A thumbnail image from a specific file in the New clips folder.
/alerts/{filename}	A JPEG image from the Alerts folder.
/admin?profile=x	Temporarily change the active profile to x. Use x=-1 to toggle the lock status.
/admin?camera=x&trigger	Trigger camera x (short name)
/admin?signal=x	Changes the traffic signal state and returns the current state. x=0 for red, x=1 for green, x=2 for yellow. This requires admin authentication.
/audio/{cam-short-name}/temp.wav	Pull a raw audio stream (MIME type audio/x-wav).
/cam/{cam-short-name}/pos=x	Performs a PTZ command on the specified camera, where x= 0=left, 1=right, 2=up, 3=down, 4=home, 5=zoom in, 6=zoom out
/cam/{cam-short-name}/pos=100	Causes a snapshot image to be captured from the specified camera.
/h264/{cam-short-name}/temp.h264	Pull a raw H.264 stream (MIME type video/H264). This stream will play in a tool like VLC, and may be used in future versions of the ActiveX control.
/h264/{cam-short-name}/temp.ts	Pull an MPEG-2 transport stream (MIME type video/MP2T).
/h264/{cam-short-name}/temp.m or .m3u8	Pull a virtual M3U8 file (MIME type application/vnd.apple.mpegurl). This will play in QuickTime, iPad and the iPhone using the iPhone Live Streaming format.

Profiles and Schedule

Profiles were first used to define different motion detection behavior based on the time of day--maybe black and white and more sensitive at night for example. Now, Profiles are used to define varying modes of operation throughout the software based on the time of day, week, or a manual setting with one of the profile buttons at the top of the window. You will find that they are referenced throughout the software when configuring schedules, alerts, recording and other camera features. Profiles are basically configuration sets.

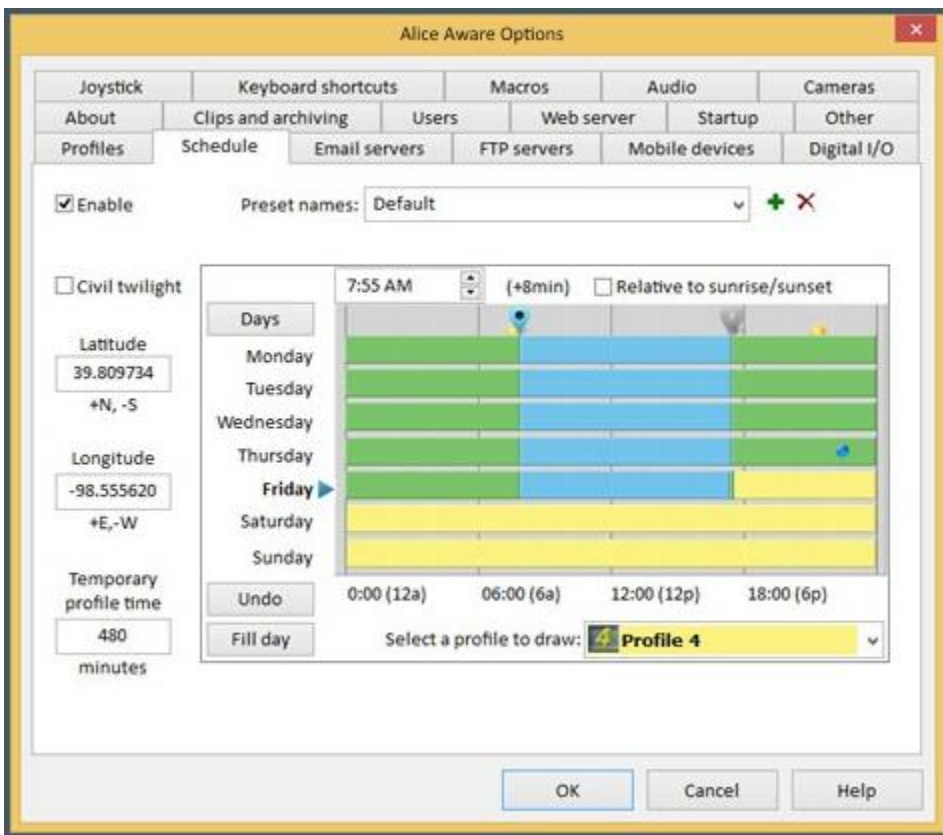


Here you may assign each profile a name. Popular choices might be Daytime, Evening, Nighttime, Home, Away, Vacation, Work, etc.

Schedule

A Schedule automates the active profile. Based on the time of day and weekday, the schedule will automatically set the active profile.

Beginning with version 3.0, you may now set a global schedule. Previously, each camera maintained its own schedule; however you may still override this global schedule on a per-camera basis if absolutely necessary.



By default, every minute of every day will use profile 1 (green). Use the controls on this page to assign the various profiles to different times of the day or week. Do this by first selecting a profile number/color to draw from the **Select a profile to draw** box. Once you have selected a profile, click anywhere on the graph and drag the mouse to draw a rectangle beginning at any day/time and ending at any other day/time. You may repeat this process any number of times until you have arranged the graph as you would like.

You may fine-tune any profile transition time by clicking its time bubble at the top of the graph. Time bubbles are shown for all selected days. You may select days by clicking the **Days** button to cycle between weekdays, weekends or all days. You may select a single day by clicking on its name. You may select any combination of days by clicking day names while holding the Control key on your keyboard.

When a time bubble is selected it appears in blue. While selected, you may use the **Time** edit box to directly enter a time, or highlight the minute value and use the arrow up/down keys on your keyboard. You may also specify the time to be **Relative to sunrise/sunset**. The profile transition times will then automatically move according to your local sunrise and sunset.

At the top of the profiles selector you will find the **Inactive profile**. This profile may be drawn like the others, but has the effect of removing the color from the graph. When a camera is inactive, no recording, alerts, or image posting will occur.

For profiles 1 through 7, each camera may define for itself what effect that particular profile will have. On the camera properties Record page, you select which type of recording occurs during each profile. On the camera properties

Motion/triggers page, you may assign a different sensitivity, mask, or set a flag that will force continuous recording. On the camera properties Alerts page, you may decide which alerts are sent while each profile is active.

You may use the Toolbar profile buttons 1-7 to manually force a particular profile to be used by ALL cameras regardless of whether you have enabled the global or any specific camera schedule. The ~ symbol will force all cameras to be inactive. Use the toolbar profile **hold/run** button to return to normal schedule operation.

Undo

Use this button to reverse the effect of the most recent change that was made to the schedule graph.

Fill

Use this button to quickly fill the selected day/s with the selected profile.

Civil Twilight

If selected, this option will adjust your sunrise time earlier and your sunset time later to account for civil twilight.

Latitude/Longitude

If you set these values to represent your physical location, times for sunrise and sunset will be calculated and represented as sun icons at the top of the schedule. If you move one of the time markers within 1 hour of either the current sunrise or sunset time, you may choose for that marker to automatically change relative to the sunrise or sunset time. You need to use the decimal format for these values, not minutes and seconds. North America will have a negative longitude, while Australia will have a positive longitude. There are many sites which assist you with determining this, such as <http://www.findlatitudeandlongitude.com/>.

Temporary profile time

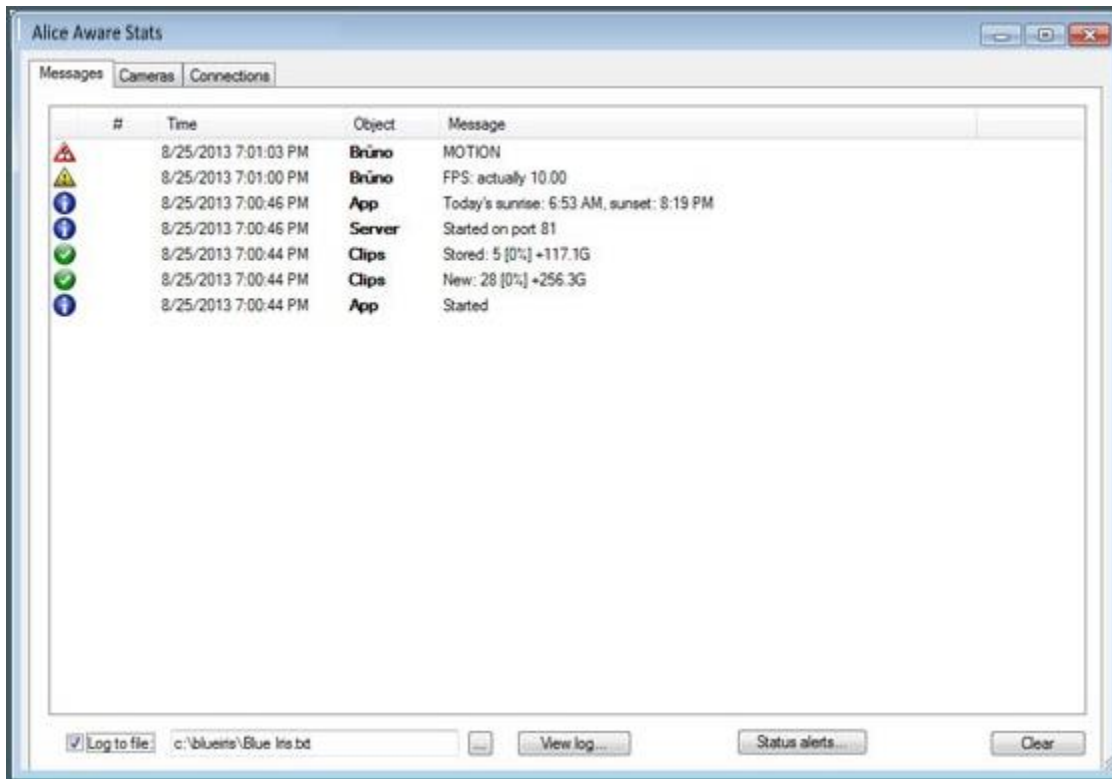
This value represents the number of minutes for which a temporary profile selection will remain in effect. A temporary profile selection is made by clicking one of the buttons 1-7 or ~ at the top of Alice Aware window. The timer is in effect when you see the stopwatch icon to the left of the profile numbers. Click the stopwatch icon to return to normal schedule operation.

Schedule Presets







You may now create multiple schedules, name them, and select the active schedule. You may wish to completely alter the schedule that's used based on special circumstances such as holidays or vacations. Then you click the + button a new schedule is created as a copy of the currently displayed schedule. Use the X button to delete a schedule. You must always have one schedule preset on the list.

Stats Window

The Graph toolbar icon opens the Alice Aware Stats window.



The first stats page contains a list of system messages. There are three classes of messages:

-  Information -- the application startup time, for example.
-  Warning -- a resource conflict, for example. Warnings cause the warning symbol to appear in the Alice Aware status bar.
-  Error -- a server connection could not be established, for example. Errors also cause the error symbol to appear in the Alice Aware status bar.
-  OK -- an error has been corrected or the status is OK
-  Alert -- a camera has been triggered by motion or another trigger source
-  User -- a user has connected to your web server

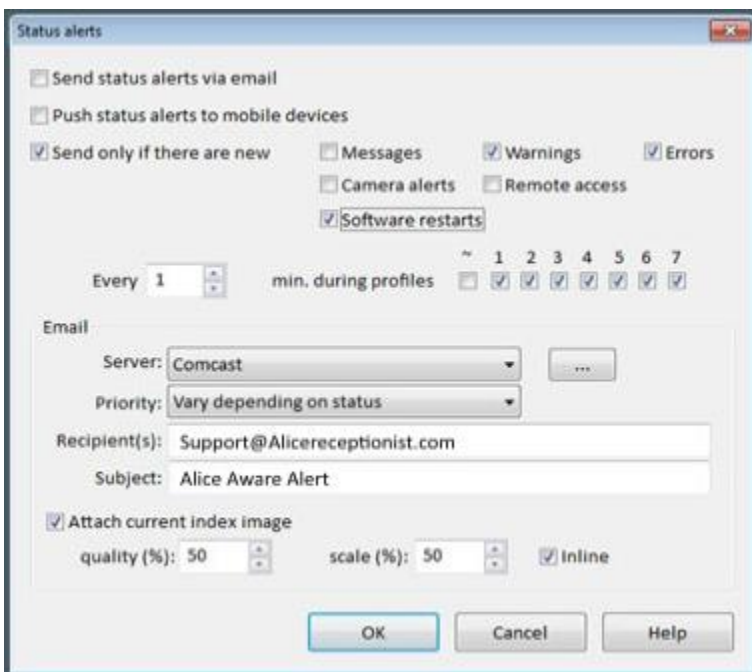
Note: If the warning or error symbol appears in the status bar, you can double-click it to open the Stats Window.

If you enable the **Log to File** option, everything that is written to the Stats Window is also saved to a file. By default, this file resides in the Alice Aware program folder, but you may click the "... " button to place it elsewhere.

Click the **View Log** button to open the log file in a text editor. To reset the log file, you can select-all, delete, then save the file.

Click the **Clear list** button to reset the stats window. This button does not delete the log file; you may reset the log file by deleting it from your hard drive, or using the **View log** button to open and delete the log contents.

The **Status Alerts** feature allows you to configure email and/or push-to-mobile notifications when the system status has been updated.



Un-check the box for **Send only if there are new** and you will receive status alerts continuously. This may be useful in order to be assured of system health on an ongoing basis.

You may specify multiple email recipients by separating their addresses with semicolons or commas. You may choose to include the "all cameras" image along with the email.

In order to receive push-to-mobile notifications, the device must first login to your server with an admin access account. Then you must enable push for the device on the Options/Mobile devices page.

Camera Stats

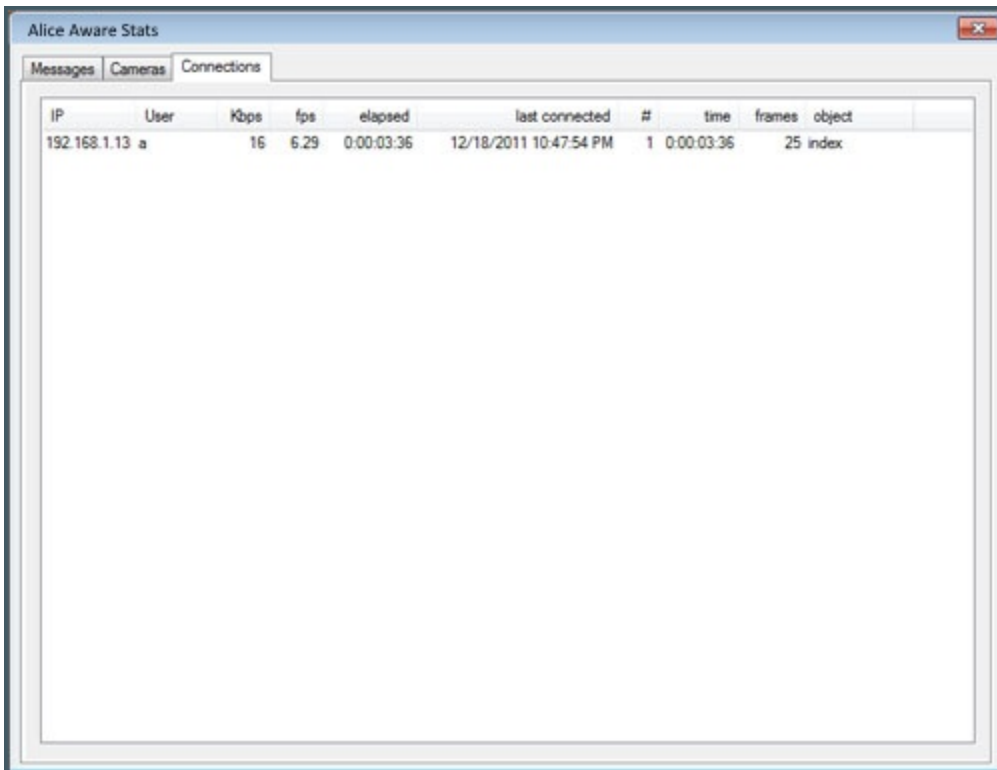
In addition to the messages page, the stats window contains a page summarizing the activity on each camera.

Name	Elapsed	Frames	Motion	Alerts	Posted	Clips	Webcast	Watchdog
+asf								
ASF (ASF)								
+bright								
9000 (9000)	RTSP: 404 Not Found							
Pan (Pan)								
DV (D)	0:01:02:04	6.31 fps	748	0	0	0	0	
+dull								
Ian (Ian)								
My Camera 12 (Cam12)								
+indoor								
Pan (Pan)								
DV (D)	0:01:02:04	6.31 fps	748	0	0	0	0	
My Camera 12 (Cam12)								
+test								
Mobotix (Mobotix)								
My Camera 3 (Cam3)								
Grandstream (gd-name)								
My Camera 11 (Cam11)								
My Camera 14 (Cam14)								
Other cameras								
jack (jack)								
My Camera 2 (Cam2)								
1231 (1232)								

This page tracks the amount of time for which each camera has been online and the total number of frames processed. There's also a count for the number of times the motion has been sensed, the camera triggered while active, and counters for the number of frames broadcast, the number of images posted, and the number of new clips created.

Connections

The "Connections" list shows the IP addresses and bandwidth for viewers using a webcasting connection. There's a counter for the elapsed time since the most recent connection time. There're also counters for the total number of connections, total time connection, and total frames served. These stats are "zeroed" each time you start Alice Aware. They persist, however, through a camera reset. The "user" column will have usernames if you have enabled authentication on the server options page.



The screenshot shows a window titled "Alice Aware Stats" with three tabs: "Messages", "Cameras", and "Connections". The "Connections" tab is active, displaying a table with the following data:

IP	User	Kbps	fps	elapsed	last connected	#	time	frames	object
192.168.1.13	a	16	6.29	0:00:03:36	12/18/2011 10:47:54 PM	1	0:00:03:36	25	index

When a connection becomes idle, it becomes grayed, and is moved down the list as necessary to keep active connections at the top of the list. When a connection is added or is reactivated, it appears at the top of the list. If you've configured the option on the Options/Server page, a sound is played when a connection is activated.

Working with Clips

The term **Clip** in Alice Aware is used to refer to a movie file. The clip list however may also contain still images (JPEGs). Clips are created by automated camera recording options, or by using the manual snapshot or manual record toolbar icons.

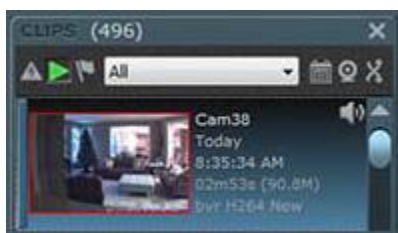
Here's an Alice Aware screenshot showing both the Clip List and the Clip Viewer:



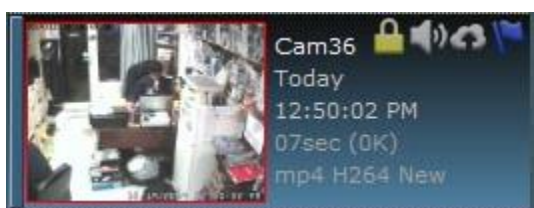
Notice that when the Viewer window is open, the live camera window is moved to the lower-right hand corner. If you have more than one camera, you may cycle through them by double-clicking on the "Cameras" window title bar. If you click on the live video image, the viewer will be closed.

The Clip List

The clip list is located to the right of the Cameras window:



As alerts and clips are created, "thumbnail" images are created on the clip list. The clip list has a vertical scroll bar, and zoom in/out buttons. When you zoom out, more clips and their associated thumbnails will fit into the clip list window before it becomes necessary to use the scroll bar. However, a number of graphical clip features are only visible in the fully "zoomed-in" view.



To the right of the thumbnail image, you will find the camera name and time of capture. Beneath that is the duration and file size. A green bar is displayed to graphically show the clip's size relative to others in the folder. This allows you to see at a glance which clips are longest or occupying the greatest amount of disk space. Finally, there are several icons that may possibly be displayed: Protected, Audio, Archive, and Flagged. If the clip is marked as Protected, it will not be moved automatically, deleted or recycled according to the automatic clean-up rules (discussed below). If the clip has the Audio icon, it has an audio track. If the clip has the Archive icon, it will be copied to your web archive according to settings on the Options/Clips/Backup page.

Click on a clip's thumbnail to "select" the clip. Once you've done this, you can use the arrow keys on your keyboard to move up and down in the list. Now, press Enter, or double-click a clip to "open" the clip for viewing. More than one clip may be selected at a time by holding down the Ctrl key as you click on different clips. If you click on one clip, then click on another while holding the Shift key, all of the clips in-between the two will be selected.

Clip Folders

There are three main views:

Alerts

Represented by the red hazard icon. This folder contains snapshot images taken when cameras are active and triggered. Each alert snapshot acts as a bookmark into a video clip. If you open an alert snapshot, the clip that contains the alert event is opened in the viewer window. If the referenced clip is no longer available on your system, the alert JPEG itself is displayed if saved to disc. If the alert image exists only in the database, nothing will open in the viewer window.

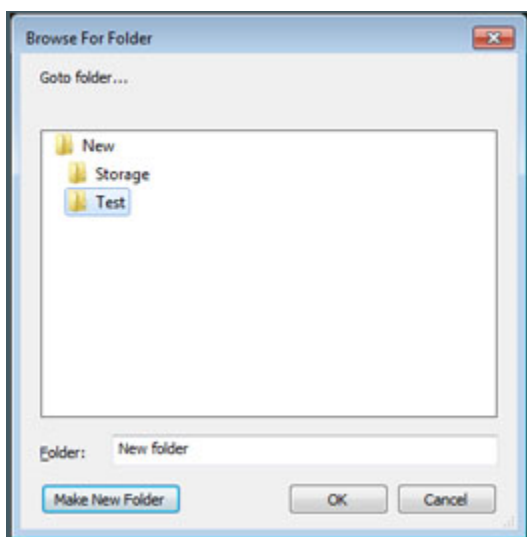
All clips

Click the green "play" icon to see all video clips stored on your system. Each clip may represent many trigger events or a continuous recording, as configured on the Record tab in camera properties. Clips may be divided into many drives and subfolders. The folder drop-down list allows you to navigate these folders.

Flagged

Represented by the blue flag icon. Any clip or alert image may ALSO exist on this view. You may add or remove items from the Flagged view by right-clicking and selecting the option from the pop-up menu.

You may also create any number of subfolders to allow you to organize your clips. After you select a folder such as New or Stored, right-click in the Clip List and select "Goto folder..." to see the folder tree:



Click the **Make New Folder** button to place a new folder at the highlighted position. When this folder tree is changed, the list of folders will be updated at the top of the Clip List. You may view any subfolder by selecting it from the drop-down list. The ".." entry in the list moves you "up" or "backwards" in the folder tree. To move clips between folders, select one or more clips, then right-click on the Clip List and select "Move to another folder..."

While viewing the New folder (or one of its subfolders), right-click on a clip and select **Move** to move it to another managed folder or to export it to another location. If a clip is in a subfolder, that subfolder is automatically created within the target managed folder. That is, when you Move a clip from New\Home to the Stored folder, the subfolder Stored\Home is created if it does not yet exist.

Please note that Alice Aware DVR (.bvr) files are only readable by Alice Aware. Before you export a video, you may wish to Edit it (described above) to both shorten it to the section of interest and convert it to an interchangeable format (WMV or MP4).

You may have a camera automatically place its new clips directly into a subfolder by adding the subfolder name(s) to the beginning of the filename on the camera's Record Properties page. For example, Home\&CAM.%Y%m%d_%H%M%S will place new clips into the New\Home folder. Use &CAM\&CAM.%Y%m%d_%H%M%S to create a folder for each camera.

IMPORTANT: you must retain the code following any added subdirectories. This code consists of the camera name followed by a period and the date. The camera name here is used throughout the software to identify clips belonging to a particular camera.

Sorting the Clip List

Use the cross-arrows icon to alternate between ascending and descending date order. Use the camera icon located to the left of the arrow icon to toggle the camera filter on or off. When this filter is on, only clips from the selected camera are displayed in the clip list.

The Clip List Calendar

Use the calendar icon to bring up the clip list calendar view.



The clip list will be filtered by the date that you select. Red dots denote days with activity. The most recently selected date is shown in blue, and today's date is shown with red numbering. Use the Cancel button to remove the date filter from the clip list.

The Clip Viewer

The clip viewer allows you to play the clip, if it is a movie, either frame by frame, or full-speed. There is a slider which represents the current frame position within the video. If the movie has sound, you can also adjust the playback volume with a volume slider.



Use the buttons on either side of the play button to step frame-by-frame forward or backward. Holding down either of these buttons will automatically repeat the stepping.

The play button may be clicked multiple times to advance from normal speed to 2x, 4x, on up to 256x. For BVR files, the reverse play button is also available.

The buttons at the far-left and far-right are used to advance to the next or previous event in a BVR file. A maximum of 30 seconds at a time will be skipped. This is particularly handy if your recorded clips contain multiple events or a continuous recording. For all file types, once there is no further event to display, the next or previous file on the clip list is then opened.

Use the mouse wheel over the viewer window to digitally zoom in and out. When you are zoomed-in, you may use the left mouse button to "drag" the video within the window.

To close the Clip Viewer and return to the live camera view, click on the live camera view or the X icon at the top-right of the viewer window.

The Timeline View

This is the view at the bottom of the main window beneath either the cameras or viewer window:



The purpose of this view is to graphically represent the contents of your clip list as a function of time. Using the slider you will find 12 levels of zoom that allow for viewing an hour of time or several days at once. Clips are grouped into colored rectangles in one or more tracks. Each color used by a camera will be given its own track. Alerts and Flagged clips will be illustrated with appropriate icons. The "focus time" is shown with a red line.

There are many ways to navigate the timeline. You can click and drag the date/time portion of the display. You may click within the track area to move the focus time (the red line). You may drag within this area as well and cause it to scroll at the sides. When you change the focus time, the clips list should also automatically scroll to the appropriate time as well.

Use the clock icon to jump to the current time. When you do this, the timeline enters "now" mode and will automatically advance with real time.

Use the calendar icon to jump to a specific date in time.

Timeline Playback

Enter time-based playback mode by double clicking anywhere on the timeline. In this mode, the Cameras window becomes a playback window, and each individual camera window will show the appropriate BVR file for the selected

focus time. As you navigate the timeline or use the play controls, each camera window will be updated accordingly allowing for synchronized playback control.

You may select to listen to the audio for a particular video by clicking on its window. Double-click a video window to open one individual clip in the standard viewer mode. Use the Esc key to return to the timeline playback mode. Use the Esc key again, the clock icon, allow playback to reach the current time in order to exit the timeline playback mode.

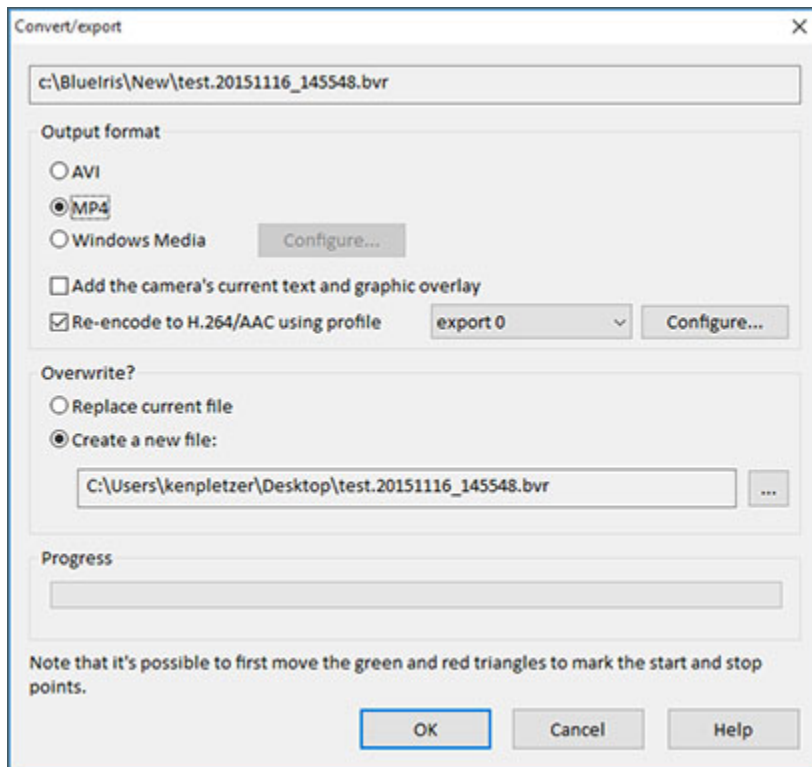
Deleting Clips

When you right-click on a clip and select the Delete menu item, you then have a choice of either Recycle or Destroy. When you choose to recycle, clips are moved to the Windows recycle bin. When you choose to destroy, they are permanently deleted. When you delete a clip, its associated Alert images are also automatically deleted for you.

Editing Clips

The clip viewer allows you to edit clips by moving the two markers you see below the position slider--there's a green or "start" point and a red or "stop" point. When you click Play, playback loops from the start point to the stop point.

To make your edit permanent, click the **Convert/Export** button that's to the right of the black box or right-click the viewer window and click **Convert/Export** to remove the video that's both before the start point and after the stop point. You may choose to replace the current video or to create a new one. If you choose to replace, the video is automatically re-opened in the viewer.



BVR and AVI are considered "input" formats, while MP4 and WMV are considered "output" formats. You may convert an input format to an output format. In addition, you may trim an AVI file to an output AVI file, or convert a BVR file to an AVI file, without re-encoding the video or audio streams. Note that if the output format is AVI, the final file size must be less than 1GB. The new clip will retain the original's "date modified" and file attributes (such as read-only or protected status).

If you are using direct-to-disc recording (no video re-encoding video from the camera) then you will notice that text and graphic overlays such as the time stamp that may be specified on the Video tab in camera properties are not added to your recordings. You may choose to add these now during the export. The precise video timestamp is retained in the BVR format and is used here to reproduce the exact time overlay that would otherwise have been recorded.

Bulk Clip Conversion and Export

Select multiple clips in the clips list then right-click and select **Convert/Export**. The Convert/Export window appears to allow you to make changes to the output folder or output compression format. When you click **OK**, you will see the clips marked with an export icon in the clips list. As they are converted and exported, you will see these icons turn a solid green. The process occurs as a background task and any errors encountered will be logged to the Status/Messages window.

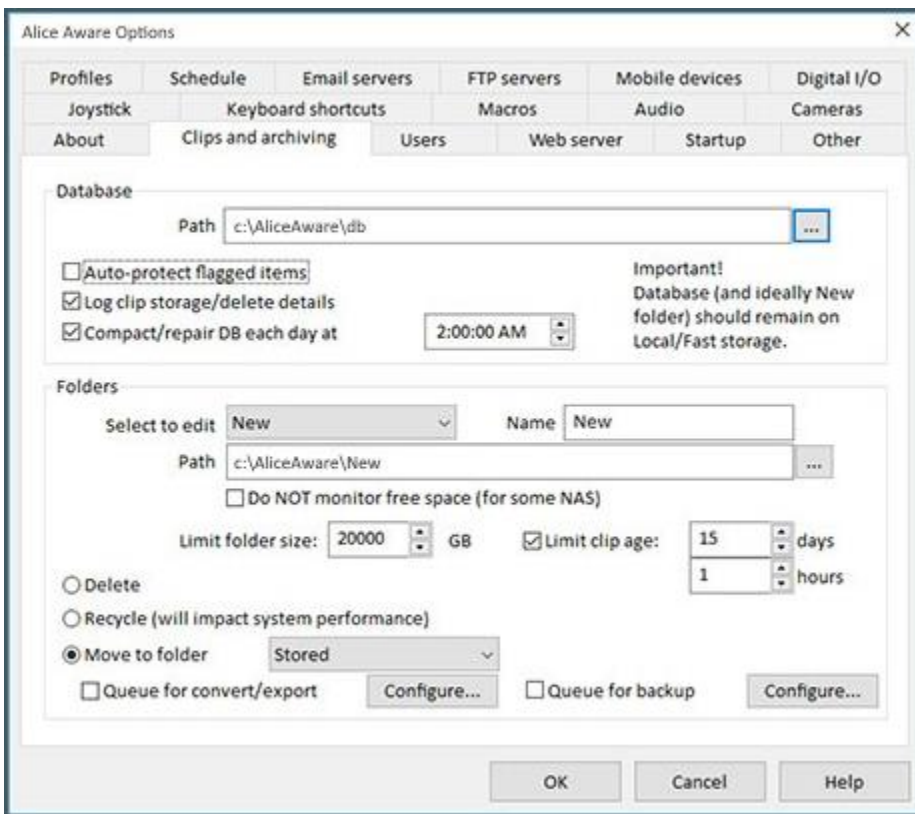
While clips are waiting to be exported, you may select them and the Convert/Export option to remove them from the queue.

Clips and Archiving Options

The Clip Options window allows you to specify the physical location on your hard drive where clips will be created and stored. You must specify the first three, with default names New, Stored and Alerts. You may specify up to 10 in total. These folders must not be overlapping or "inside" one another. You must retain a name for each folder, but if you will not be using it, you can blank out the path setting.

The Alerts folder is special in that it will contain JPEGs as configured by the option on the Record tab in camera properties and is not used for video recording. The Alerts folder must remain 3rd on the list.

These folders do not need to be located on the same hard drive or PC as the database. Note however, that if you are running Alice Aware as a service, you may not be able to use the "LocalSystem" account if your Stored clips folder is located on a network drive; instead, you must use a named user account, and give that account rights to the network resource.



Alice Aware may be configured to automatically move or delete clips based on age and disk space specifications. Each folder is handled completely independently. Each has its own age and disk space quota. The task which actually move files runs once each 5 minutes. In addition to the quotas you specify, Alice Aware also attempts to automatically enforce a rule of maintaining at least 1GB free on the hard drive in order to prevent failed recordings.

The size specified with "limit folder size" should fit comfortably on your hard drive. If you are short on space for it, you will see red warning text at the bottom of the window as well as status/messages log entries with double exclamation points !!. You should not allow your drive to fill up as this may cause video and/or database corruption.

By default, Alice Aware does NOT use the Windows Recycle Bin when deleting clips. It has been found that doing so greatly adversely affects performance when many clips are being deleted and the recycle bin itself is at capacity. However, the advantage of the recycle bin is that you may easily recover recently deleted files.

A clip may be protected from automatic storage or deletion by right-clicking it and selecting **Protect**. You may make this the default for all new clips by selecting an option on the camera's Record Properties page. To protect an entire folder, right-click in the Clip List and select the option **Protect entire folder**.

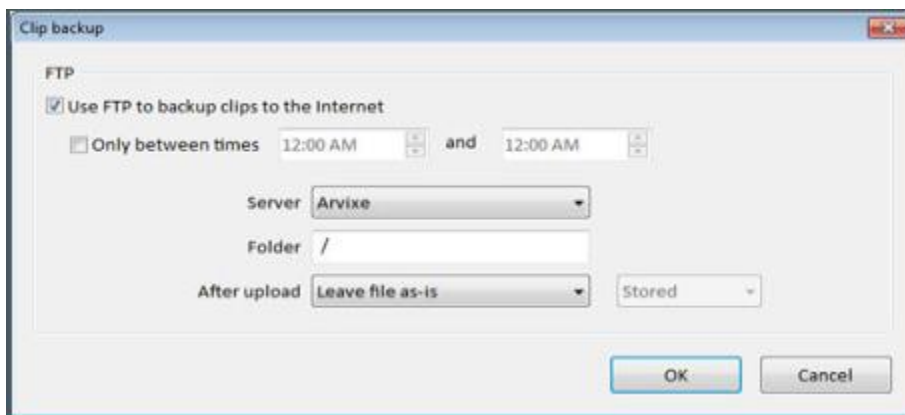
The Clip Database

New at version 3.33, this feature will offer huge savings in CPU and memory utilization, and the possibility for the management of 100,000's of clips now exists. The database will be created by default at C:\BlueIris\db. This location may be altered on the Options/Clips page but should be set for your fastest local storage or SSD if available. You may

repair or regenerate the db at anytime by right-clicking in the clip view and selecting **Database->Repair/Regenerate**. The **Database->Compact** action removes deleted records and resets the recording status if the system was shutdown unexpectedly. The Compact action may be ran automatically once per day according to a setting on the Options/Clips page. When Compact or Repair/Regenerate is running, database updates must be suspended, so all camera recordings will be closed. If you have 24 hour mission critical recording, you can disable this automatic Compact and perform it manually at your convenience, however the database will continue to grow with deleted records during that time.

Clip Backup

Select **Use FTP to backup clips to the Internet** to enable Web archival of your clips. Select an FTP server that you preconfigured on the Options/FTP servers page. Leave the **Folder** box empty to simply use the default folder specified on the FTP server configuration page.



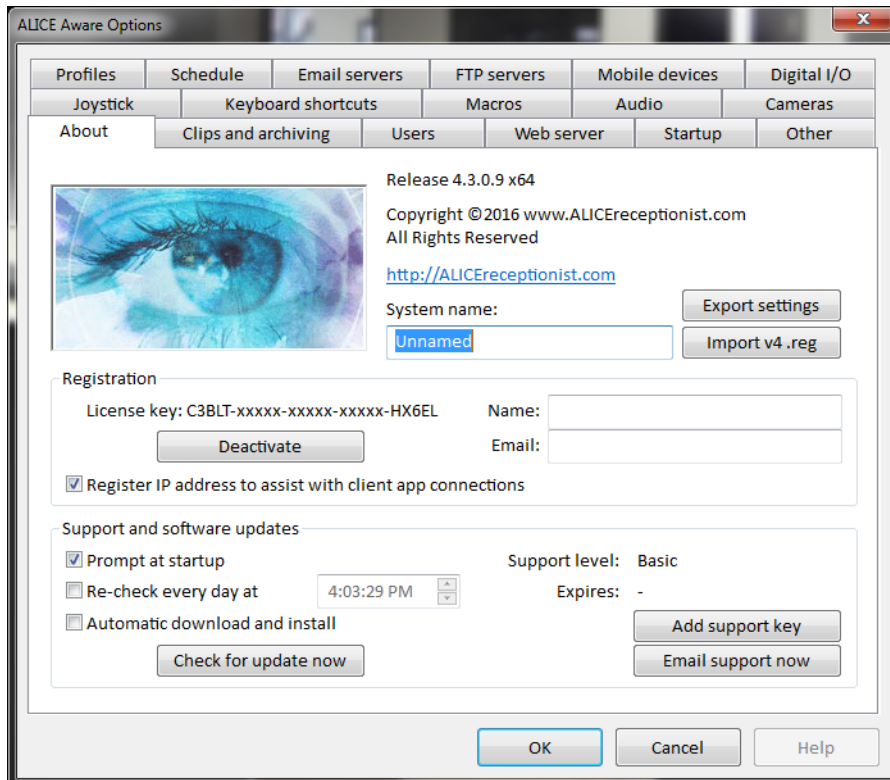
To manually select to archive a clip to the Web, right-click it and select **Archive**. An FTP icon will be displayed on the clip in the clip list until it has been successfully uploaded. If Alice Aware is interrupted during a file transfer, a partial file may exist on your server until Alice Aware is restarted and retries the transfer. Until a clip is actually sent, you may right-click it and select **Don't archive**.

Clips may be marked automatically for archival via an option on a camera's Record Properties page.

Options



The Options toolbar icon is second from the left. Click this button to open the following window:



The **About** page contains copyright and registration information. There's also a field to specify a **System name**. This name is used to identify your system when a client connects using one of the smart-phone client apps.

You may use the **Export settings** button to copy the entire contents of the Alice Aware registry key to a file for backup or transport to another PC. The file that's created may only be imported here with the **Import settings** button. If you have a version 3 settings export, double-click the file on your Windows desktop to import or merge the file into the registry. If installed onto a new PC, it will still be necessary to re-enter the license key on the new PC.

It is important that you **register** your software by entering your name and email, especially if one of these has changed since your purchase, or if you have purchased from a third party reseller. In the case of a third party sale, this registration information may be the only proof of your license ownership. The registration of IP addresses is optional, but makes it easier to connect from the client apps using the "GET IPs" button in the app, especially if your IP addresses often change.

There are several **Software update** options to always ensure that you're working with the latest version each time you start the software. Alice Aware always checks for an update when you start-up; if you choose the **Prompt at startup** option, Alice Aware will immediately ask you to install the update. The **Re-check every day** option provides further assurance that you are always aware of new developments on a daily basis. The update notice will be posted to the

Stats page message window. If you additionally choose the **Auto download and install** option, Alice Aware will automatically download and install the update, and then re-start. As the update is being downloaded, the progress is displayed in the status bar at the bottom of the Alice Aware window.

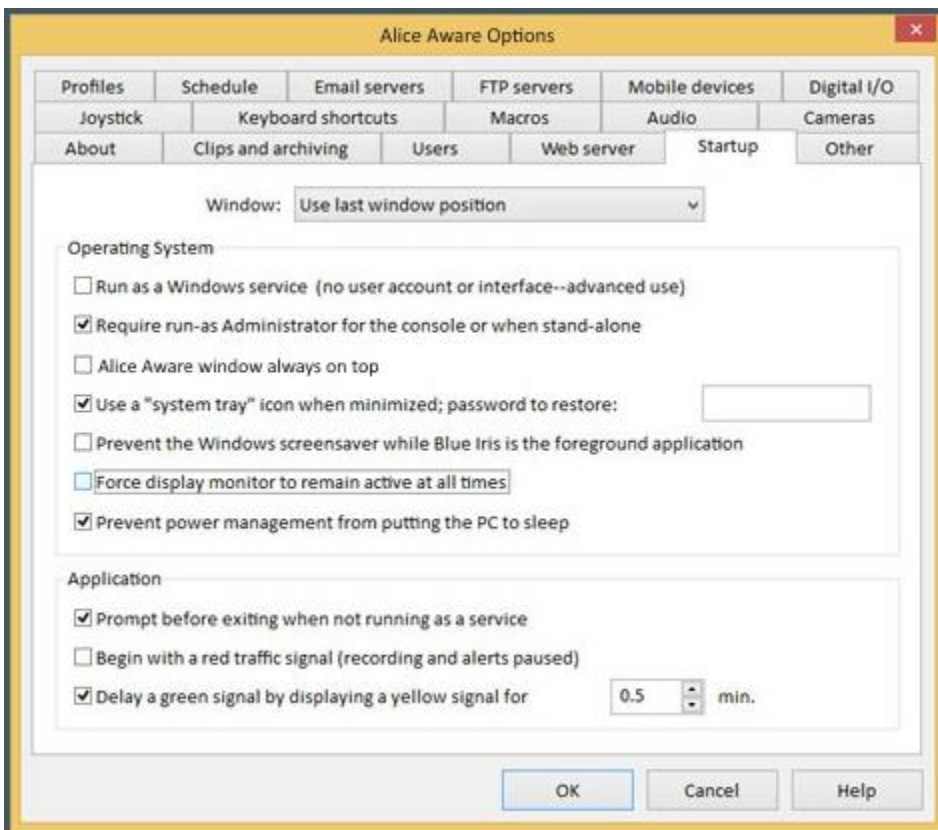
Following purchase or license activation, you receive one year of basic support. When this expires, the date will turn red, and you will have the option to purchase an extended support key. Use the **Add support key** button to enter the new key that you receive via email.

When you email support, it will be helpful and a time-saver if you first use the **Email support now** button. This copies critical support and system information to the clipboard. Use the Paste function in your email client to include this text at the top of the message.

The Profiles and Schedule, Clips and Archiving and Web Server options pages are covered in pages devoted to those specific topics.

Startup

This page allows you to control various aspects of the software's startup behavior.



Window

By default, the software will attempt to remember its last window size and position each time it is launched. You may instead choose to **run quietly**. In this case, a splash screen will not be displayed, and the main Alice Aware window will

not open. If you are running an unregistered version, however, the registration screen will always be displayed. You may also choose to startup in full-screen video mode.

Operating system

Use the **Run Alice Aware as a Win32 service** option to start Alice Aware when your computer starts up, without requiring a login. When the PC or Alice Aware is restarted, Alice Aware will run on the "LocalSystem" account (a privileged account not requiring login, but having no user interface). You may run Alice Aware again as a "console" that will interact with the service. The console can edit settings, restart cameras, and view stats and messages. Important notes about running as a service:

- You can manage the service from the Windows Service Manager: right-click the Computer icon and select Manage.
- Remember to provide write access to your storage devices for your service account.
- You may switch the service account to your own account in order to provide the service the same access rights.
- The service will automatically restart if there's a software failure; this will be written to the status/messages log as "Restarting after unexpected shutdown."
- You may set the service for a delayed start after Windows in order to provide your NAS time to come online.

By default, when you run the software, you must be using an administrator account and/or answer Yes to the UAC prompt (the one asking to allow the software to make changes to your computer). However, if you uncheck the box for **Require run-as Administrator for the console or when stand-alone**, you may allow the console (or the application if not running as a service) to run "as a user." When running in this way, the user may not make any changes to the Alice Aware settings or camera properties. In addition, the user will only be able to manually delete and move clips if they have write access to the folders without administrator privileges. Note also that unless you are running as a service, some features may not be fully functional, such as the web server and automatic software updates.

The default program shortcut that is installed to Windows runs the BlueIrisAdmin.exe, which guarantees the UAC prompt. You may wish to change this to point directly to BlueIris.exe, which does not require the UAC prompt. In this case, you may always still right-click the icon and select "run as administrator" as necessary.

The Alice Aware window **always on top** option will override your ability to move the Alice Aware window "behind" other windows on your desktop.

Most Windows programs display a smaller window in the taskbar at the bottom of your screen. When you minimize these programs, the taskbar window remains, and you may click it to re-open the program. With Alice Aware, you instead may select to use a **system tray icon**. When you minimize Alice Aware with a system tray icon, the taskbar window is removed. To restore Alice Aware, double-click the system tray icon, or right-click it for other options. Here's what the system tray icon looks like:



You have the option of securing the Alice Aware system tray icon with a password. Without this password, it will be impossible to re-open the Alice Aware window from the system tray. The password entered here is case sensitive. To remove the password protection, delete all letters and spaces from the password box.

The options to **prevent the Windows screensaver** and **Force display monitor to remain active at all times** allow you to override these Windows monitor and power management features which may interfere with your use of Alice Aware.

Application

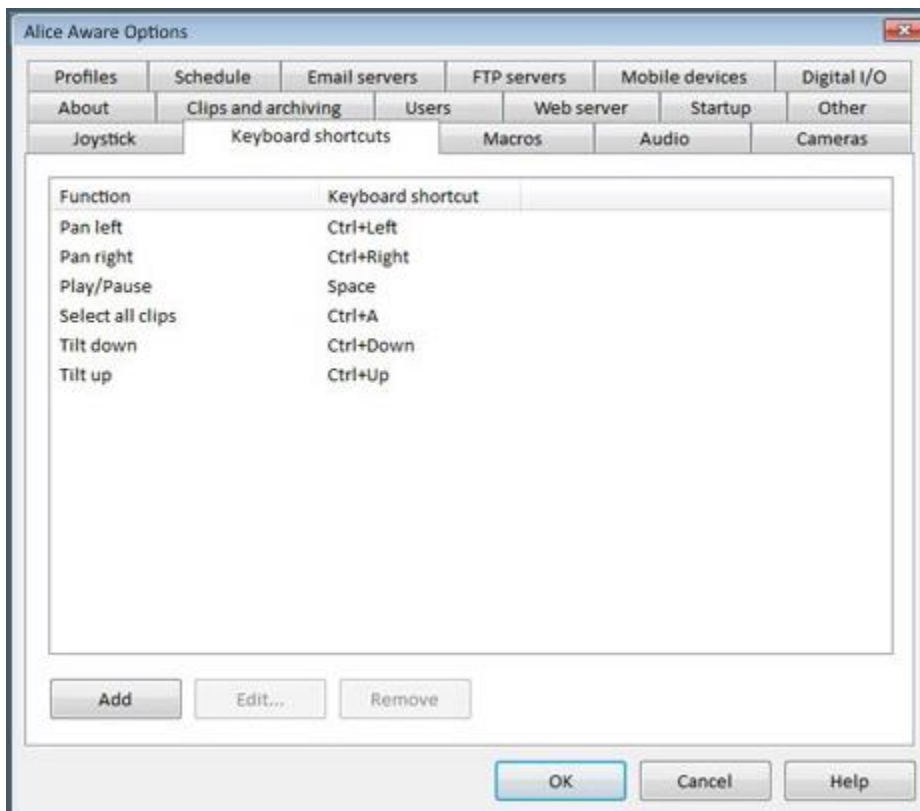
In order to prevent the accidental shutdown of the software, you may choose to **Prompt before exiting when not running as a service**. When running the console for the service, closing the console does not stop the service so this option does not apply.

If you choose to **begin with a red traffic signal** then the traffic signal icon in the toolbar will be red when Alice Aware starts. This means that nothing will be recorded, ftp posting will be disabled, and no alerts will be issued until the signal turns green. You may manually switch the signal after startup by clicking on it. You may also choose to have the signal set to green after a specified time period. This allows you to the opportunity, for example, to leave the house before the system becomes "armed." During this count-down to green, the signal will show a yellow light and display the time remaining at the bottom of the Alice Aware window.

If you choose the **Delay a green signal** option, Alice Aware will show a yellow traffic signal for a specified amount of time before automatically turning green. This gives you time to leave the room or house before the surveillance begins.

Keyboard shortcuts

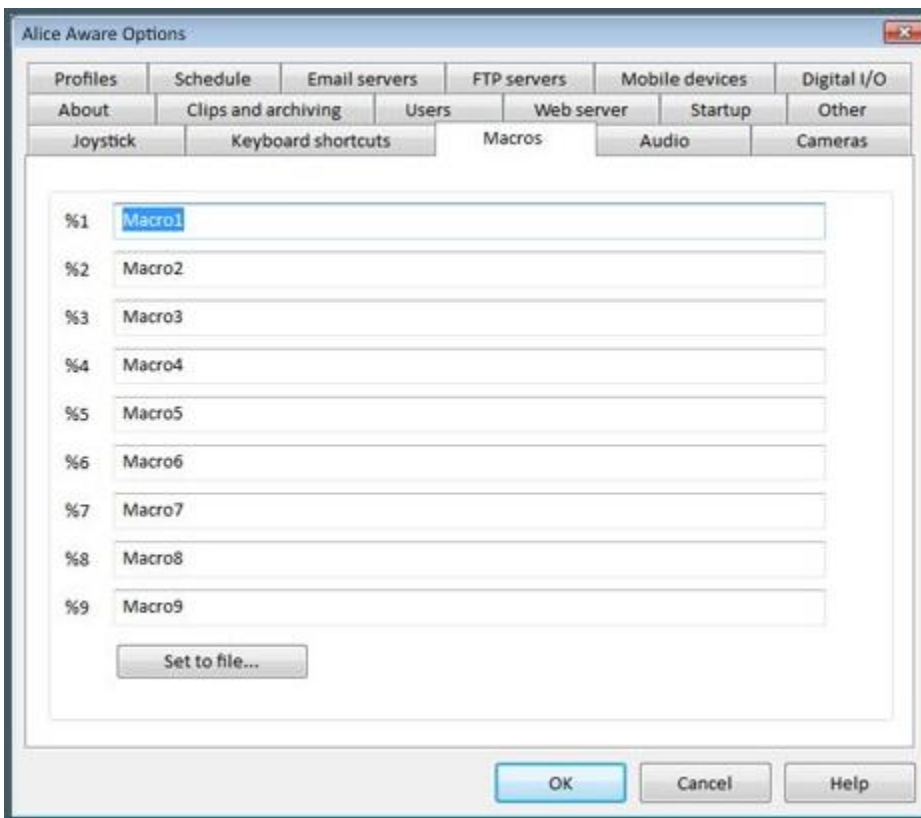
This page allows you to assign Alice Aware functions to key strokes of your choosing.



Click "Add" to add a shortcut to the list. Highlight an existing shortcut and choose either "Edit" to change it, or "Remove" to remove it from the list. Your key combinations should include the Control, Shift, and/or Alt keys to avoid invoking functions accidentally.

Macros

In addition to standard time formatting macros such as %c, you may also add user-defined macros to your text overlays, email subject and body and elsewhere. This page allows you to assign text to be substituted for occurrences of "%1", "%2", ... "%9" when they are encountered in text overlays.



You may update a macro dynamically in one of three ways:

1. Click **Set to file** in order to browse for a text file; the macro will be changed to the file's path. Alice Aware will read and use the contents of the file specified as the macro text. This allows you to use an external application to dynamically change what you see on your video--you might place the current temperature, for example.
2. Change the macro's registry value directly. You will find that macros are stored in the key `HKEY_LOCAL_MACHINE\SOFTWARE\Perspective Software\Alice Aware\macros`.
3. If your external application supports DDE, you may connect to the DDE server "BlueIris" with the topic "macro" and "poke" the macro text to the item "1" through "9".

Camera-specific macros

There are a number of other formatting codes which are defined based on the camera context:

%f

The current FPS received from the camera

%k

The current bit rate in kbps received from the camera

%n

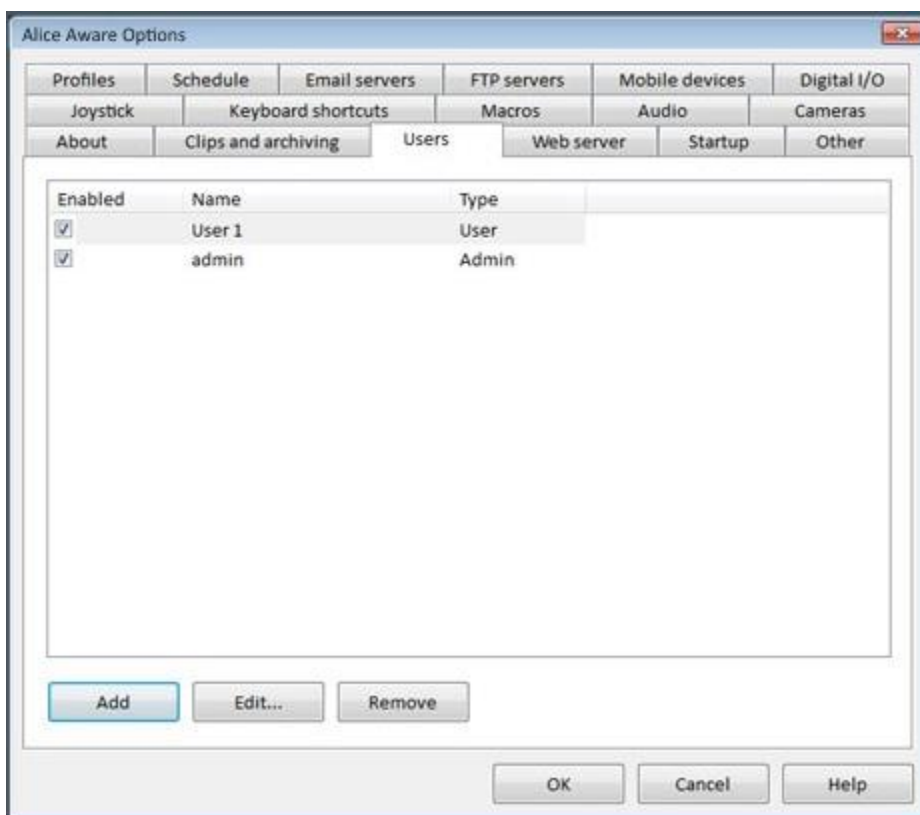
The most recent PTZ preset position sent to the camera

%P

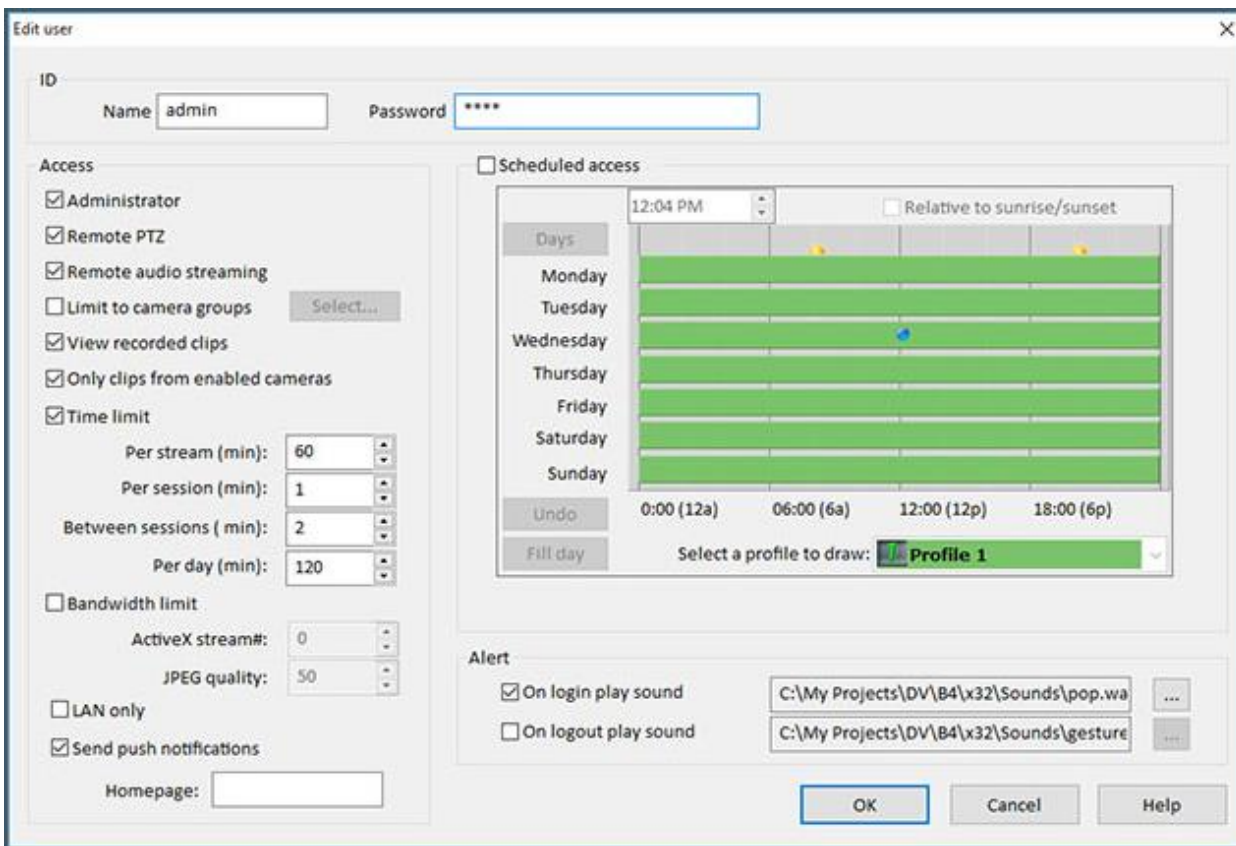
The current profile number in effect for the camera

Users

This page allows you to enter name/password pairs that will be used by the web server. In a future release these may be used to provide varying levels of access at the console as well.



You may specify as many different username/password combinations as you wish. Use the **Add**, **Edit**, and **Remove** buttons to make changes to the list. You may also right-click and double-click to Edit. Here is the **Edit user** window:



An account with **Administrator** privileges may perform remote administration, which in the case of the mobile clients includes deletion of clips.

Although you may provide the Remote PTZ privilege here, you may choose to require administrator privileges to use PTZ controls on a per-camera basis by setting that option on the camera PTZ properties tab.

For privacy or to limit bandwidth, you may un-check the box to allow **Remote audio streaming** via the ActiveX control.

Choose the **Limit to camera groups** option in order to specify which camera groups the account may access. Cameras must first be assigned to groups on their General properties tab. NOTE: Using this option also prevents the account from viewing the "all cameras" index stream.

In order to allow users to only view live video, un-check the **View recorded clips** option.

The **Only clips from enabled cameras** option will hide video and images from cameras which are either disabled, renamed, or no longer on the system.

You may impose **Time limits** in several ways:

Per stream. This setting has the effect of imposing an "idle time" restriction--a user may not endlessly watch live video for instance.

Per session. This is the time from login until logout.

Between sessions. Once logged out, this is the time the user must wait before logging in again.

Per day. The total time in a 24 hour period, midnight to midnight.

You may enable **Scheduled access** which will limit the times during the day and/or week that a user account may be used. The only distinction at this time is between active and inactive. While active, the profile number is irrelevant.

You may impose **Bandwidth limits** in the form of lower quality JPEG and H.264 compression.

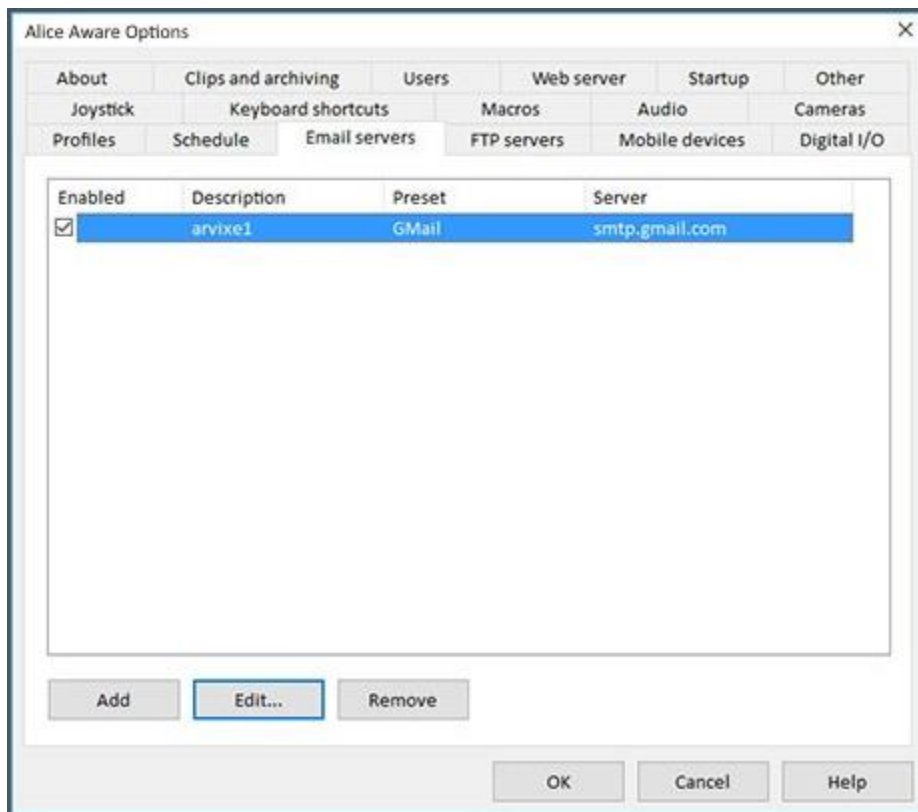
Choose **LAN only** and the software will attempt to deny use of this account to anyone outside of your LAN (local network).

In order for a push notification alert to be sent to one of the client apps, the device must be selected for push on the Options/Mobile page and that device's most recent user account must have this **Send push notifications** option enabled.

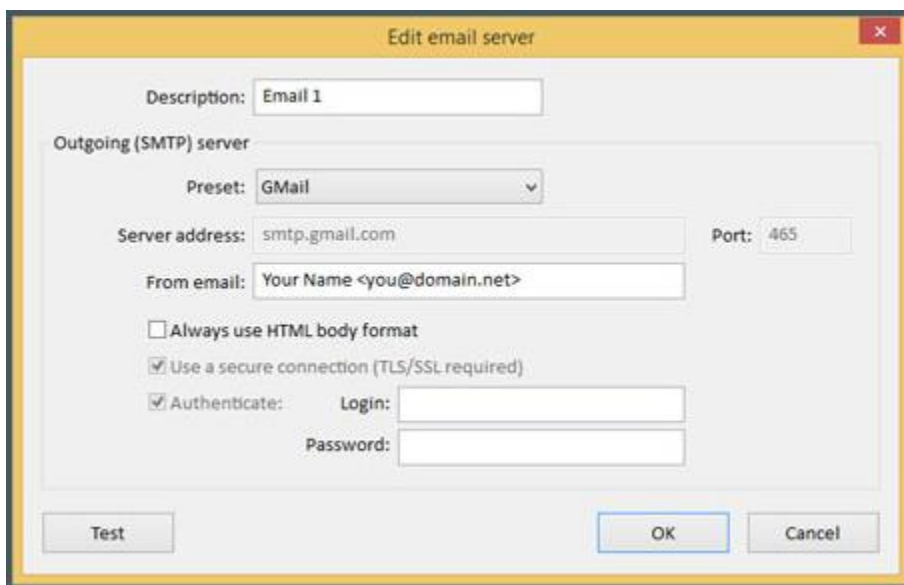
You may choose to play a sound when this user logs in.

Email servers

This page allows you to enter the login credentials for one or more outgoing email servers that will be used to send Email and SMS alerts.



Use the **Add**, **Edit**, and **Remove** buttons to make changes to the list. You may also right-click and double-click to Edit. Here is the Edit window:



You may select a preset email server, or select **User defined** to enter your mail server's address manually. The default port for outgoing SMTP mail is 25, but you may override this if your server uses another port (sometimes done for security purposes). If your server requires authentication (that is, "relay" mail is not allowed), you may specify a login name and password. If your server requires a secure connection using SSL or TLS, the option is now available.

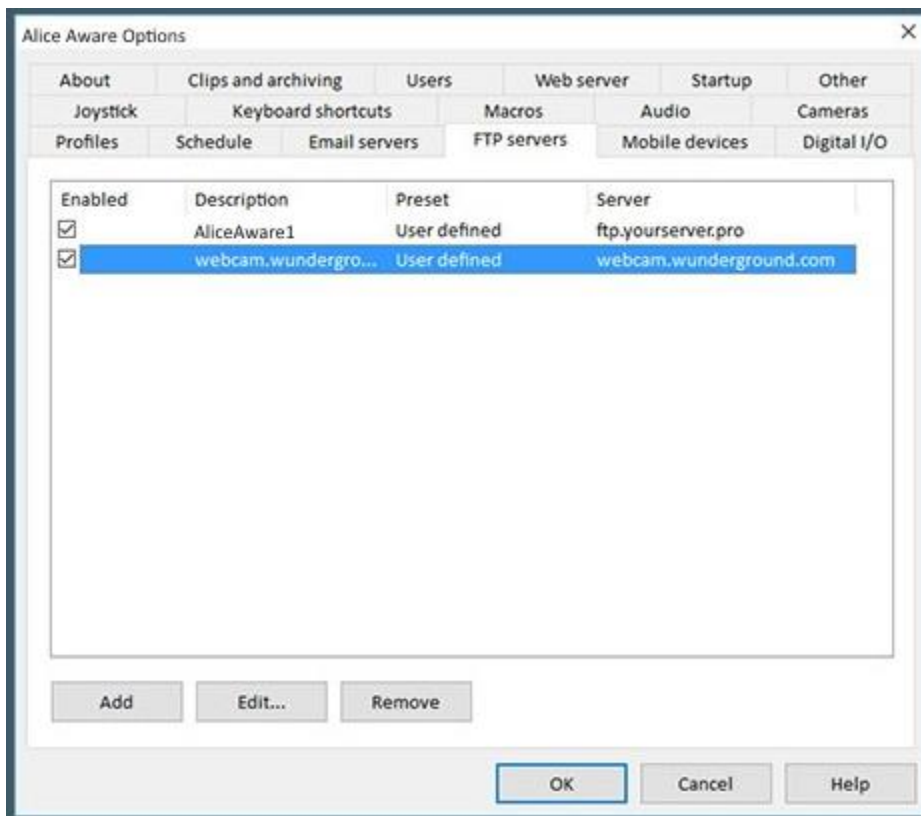
You may choose to simply enter the **From email** address (name@whatever.net), or you may use a format as you see in the example above, which provides a "friendly" name along with the actual email address.

The **Always use HTML body format** option exists for compatibility with certain remote systems and is generally not required. HTML body format is already used automatically if there are inline image attachments.

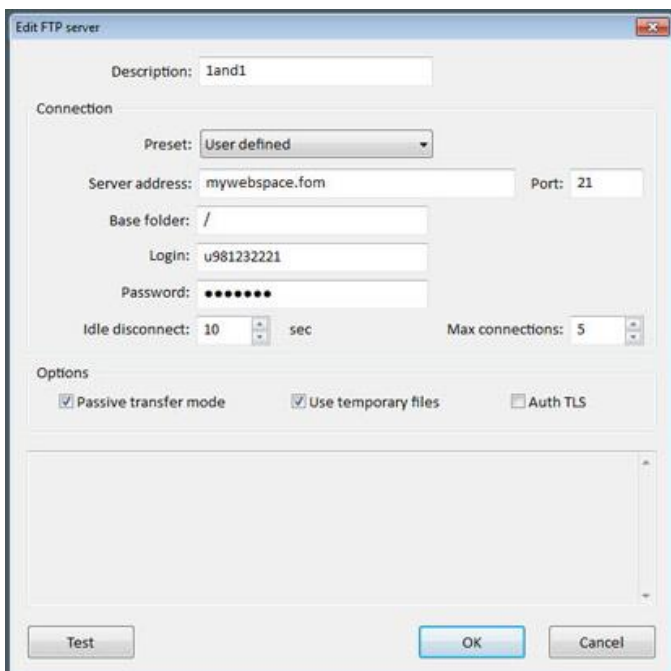
Use the **Test** button to immediately send a test message. A window will appear which will contain the complete mail server "conversation" for debugging purposes. Note that the process may take several seconds between steps and is not complete until you see an error or "Completed."

FTP servers

This page allows you to enter the login credentials for one of more FTP servers that will be used to post images to a web space or to archive your video to an offsite location.



Use the **Add**, **Edit**, and **Remove** buttons to make changes to the list. You may also right-click and double-click to Edit. Here is the Edit window:



There are presently no Preset FTP server addresses, so you must choose **User defined** and enter the server name manually. The server address and login credentials are supplied by your website or FTP service provider. The default FTP port is 21 and should not be changed unless you are instructed to do so by your FTP service provider.

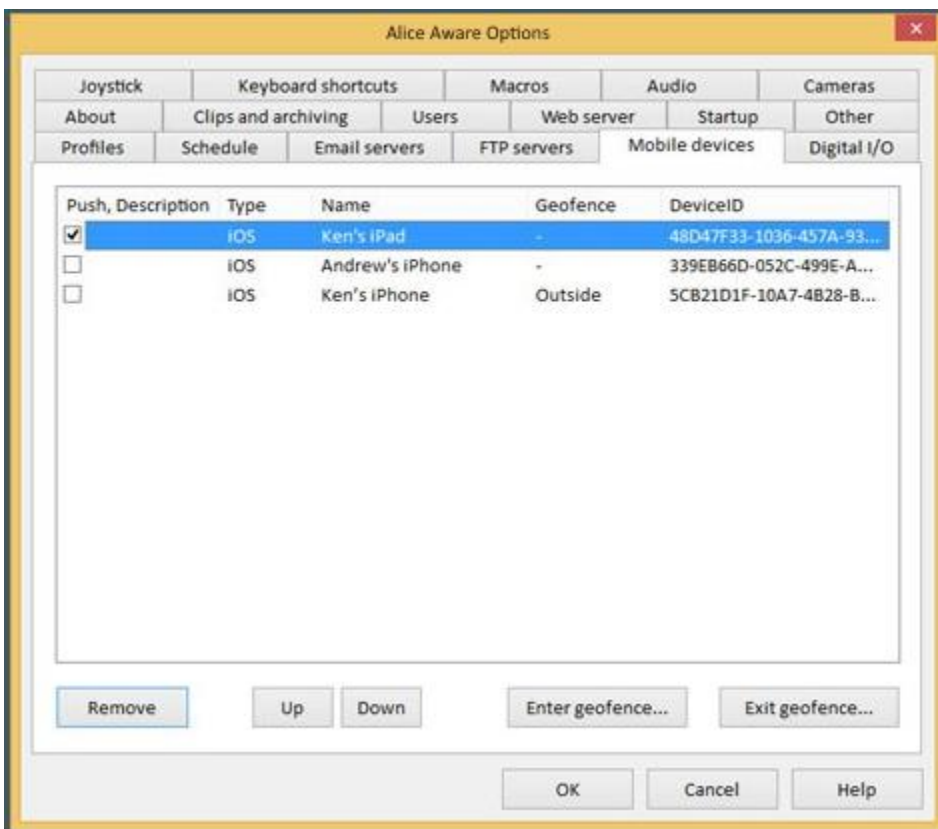
The **Base folder** setting will be pre-pended to the destination paths of all uploads to this server.

Passive transfer is necessary for some firewall and gateway configurations, and when you get failed data channel errors. Use the **Temporary files** option to mitigate the risk of writing to a file which may also be simultaneously read by a user of the website. The entire file is uploaded before it is renamed into position.

Use the **Test** button to upload a small file in order to check your settings.

Mobile devices

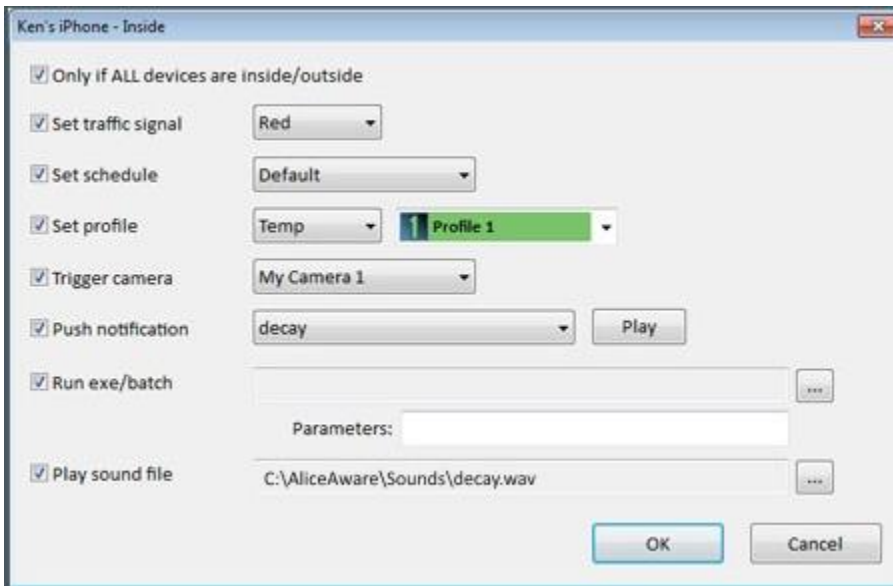
When the Alice Aware iOS, Android, or Windows phone client is used to connect to your Alice Aware server, an entry for each device will appear on the Options/Mobile devices page.



In addition to tracking mobile device client connections, this page will allow you to "pair" with each device, in order to allow your Alice Aware to send "push notifications" to these devices. Check the boxes in the Push column corresponding to the devices which should receive push notifications. You must also enable push notifications on the Alerts page in camera properties. Finally, make sure that the executable BlueIrisApplePush.exe in your Alice Aware program files folder has been allowed through your Windows Firewall.

Select a device and then use the **Up** and **Down** buttons to re-arrange the priority of the mobile device. Push notifications are sent to devices according to their order on this list.

Geofencing is a device location services technology that allows the device to notify a server when the device enters or exits a defined region. If location services and geofencing are enabled for the Alice Aware client app on your mobile device, the app will notify your Alice Aware server whenever the device leaves or enters a defined circular region. You may define what Alice Aware should do in response to these events by selecting a device and then using the **Enter geofence** and **Exit geofence** buttons.



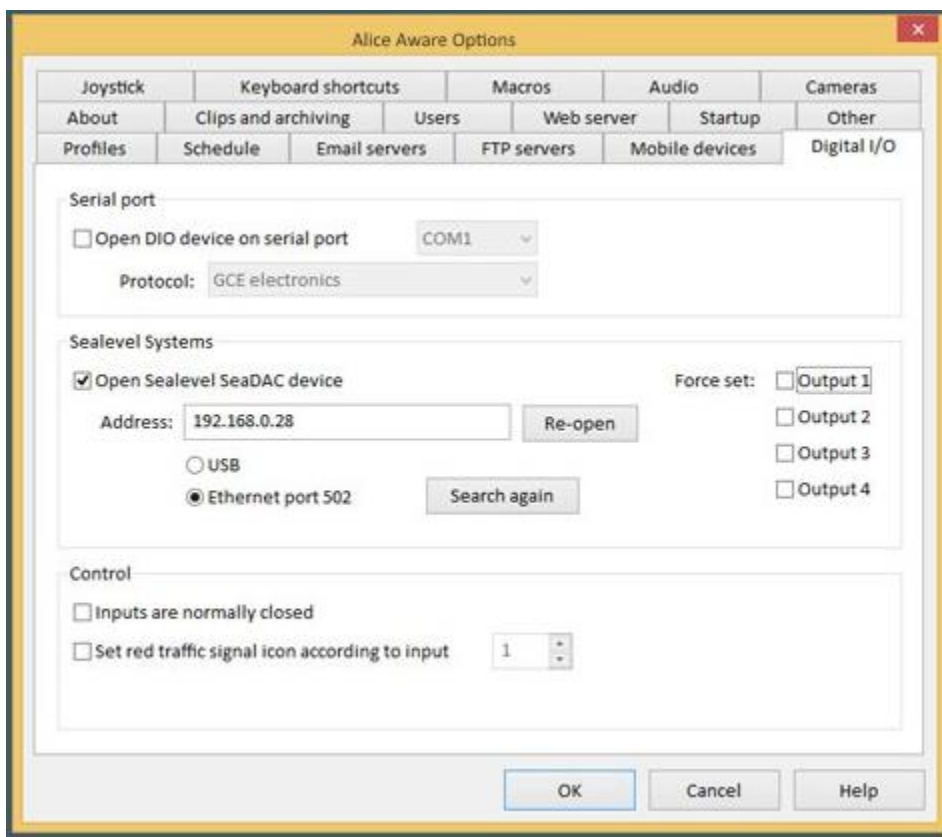
Select **Only if ALL devices are inside/outside** to prevent a single device's status from triggering the actions.

You may specify a number of actions to be performed as a device enters or exits its geofence region. These actions include changing the traffic signal icon, the active profile, the schedule preset, as well as triggering a camera, sending a push notification, running a script or simply playing a sound on the PC.

There are a large number of potential uses for this functionality apart from simply "arming" and "disarming" Alice Aware. For example, when the "run" option is used in conjunction with other home automation software, you may use Alice Aware to turn on/off lights. Or, you can be notified when your children leave or are about to return home.

Digital I/O

This page allows you to configure digital input/output (DIO) devices for use with Alice Aware as trigger sources or alert mechanisms. You might, for example, want your home alarm system's PIR or other sensors to trigger Alice Aware to record and send alerts. You may also want Alice Aware to trigger other external systems when it has sensed motion via its video or audio sources.



Serial port

Select the COM port that the device is using. Consult the device manufacturer's documentation to learn how the driver maps a USB device to a COM port number.

The Protocol may be either "single-byte I/O" as originally used to support the Arduino board, or something more advanced as used by the GCE electronics DIO module.

The Arduino UNO is an open-source project board, available very inexpensively at electronics hobby shops or online via eBay. The UNO must actually itself be programmed to respond to data it receives via the serial port from Alice Aware. When an alert is triggered, Alice Aware will send a single byte of data to the UNO, an ASCII number 0-7 representing the output number specified on a camera's Alerts tab. Alice Aware also monitors for incoming serial data, and interprets each incoming byte as the 8-bits representing digital input numbers 0-7, which may be used to trigger the camera.

The GCE electronics module uses an output protocol consisting of 3 ASCII bytes:

- The letter S

- The output number '0' - '7'

- The output state, either '0' or '1'

Sealevel Systems

The [Sealevel SeaDAC Lite](#) (USB P/N 8112 and similar or Ethernet P/N E120 and similar), although more expensive than the UNO, provide a more turn-key solution. You may simply connect your digital inputs and outputs; there's no project-board programming involved.

A Sealevel device is accessed using an **Address** which is either an IP address in the case of an Ethernet interface such as the E120, or a special identifier in the case of a USB interface. It's possible to use an Ethernet Sealevel device anywhere in the world by forwarding port 502. Select Ethernet or use the **Search again** button to locate a device on your LAN and automatically populate the Address box with its IP address.

The **Force set** check boxes may be used to test or manually enable the outputs on the Sealevel device.

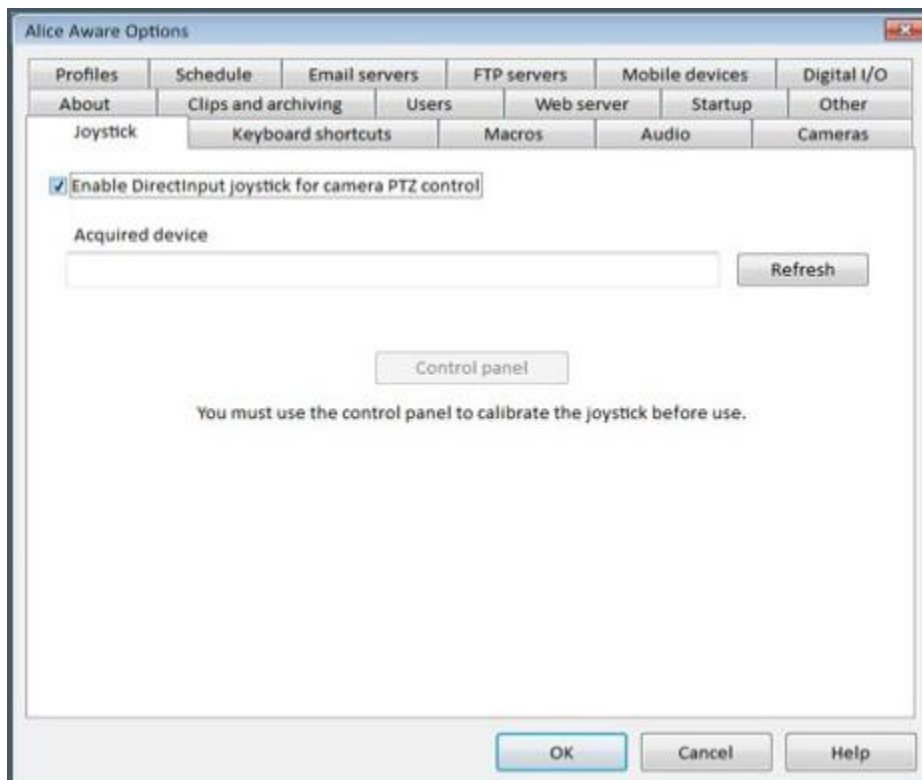
Control

Select **Inputs are normally closed** to reverse effect of the "on" and "off" states of the inputs. Instead of triggering when in the "on" state, triggering will occur in the "off" state.

Select the **Set red traffic signal icon according to input** option along with an input bit and the software will set the traffic signal icon in response to a change in this input bit. When "on" the traffic signal will be red. When "off" the traffic signal will become green. To switch this orientation you may use the **Inputs are normally closed** option.

Joystick

This options page allows you to enable and configure a DirectInput compatible joystick for camera PTZ control.



If a DirectInput compatible joystick is found attached to your PC, it will be initialized and its name will be displayed. If you connect or disconnect a joystick, use the **Refresh** button to update the status display.

Use the **Control Panel** button to open the DirectInput driver's calibration tool. You must perform a joystick calibration after connecting it for the first time. This allows software to recognize the proper center position and maximum travel of the various axes.

In addition to up, down, left and right, many joysticks offer a third axis to be used for zoom--possibly implemented by twisting the control stick. Joysticks designed for applications such as this will also offer an array of buttons. Alice Aware uses these buttons to call preset positions.

Network IP camera PTZ capability and Alice Aware support of these capabilities vary widely. PTZ support for a given camera will fall into one of these categories:

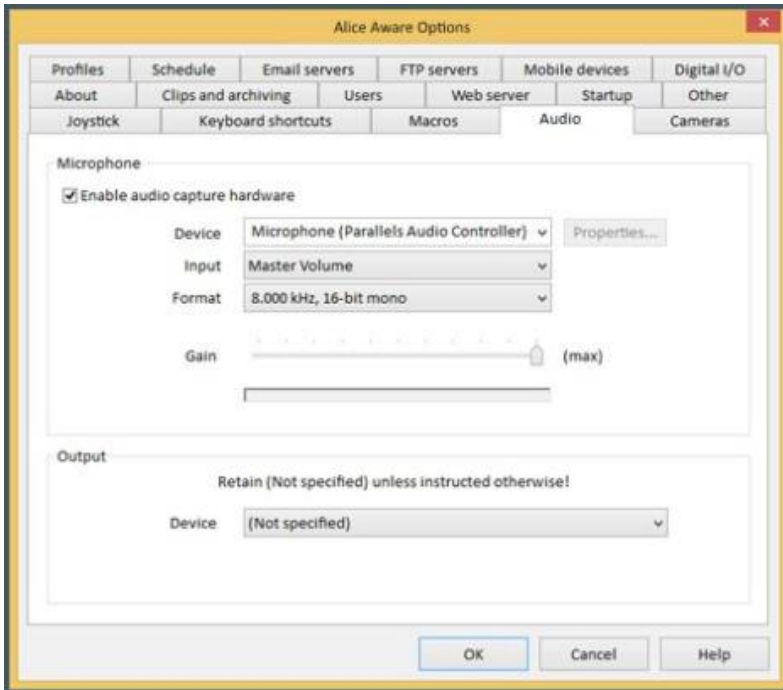
- **Single step:** You must move and re-center the joystick for each step movement. This type of PTZ is not ideal for use with a joystick.
- **Manual stop:** Move the joystick to initiate motion, and then re-center the joystick to stop movement. With some models, such as Foscam FI89xx compatibles, support for additional directions such as up-left and up-right are now supported.
- **Full range:** The camera responds with varying speed on multiple axes depending on the position of the joystick. This type of PTZ is most ideal for use with a joystick.

There may be many cameras which support the "full range" mode of operation for which Alice Aware currently only supports the "manual stop" or even "single step" methods. Over time and on an as-requested basis, this support may be upgraded.

Use the **Zoom axis is not auto-centering** switch with joysticks whose z-axis controllers do not "snap back" to center when released. In this mode, zoom commands are sent only when the controller is push to the extreme forward or backward positions. You must move the z-axis controller away from an extreme position in order to then use X and Y positioning.

Audio

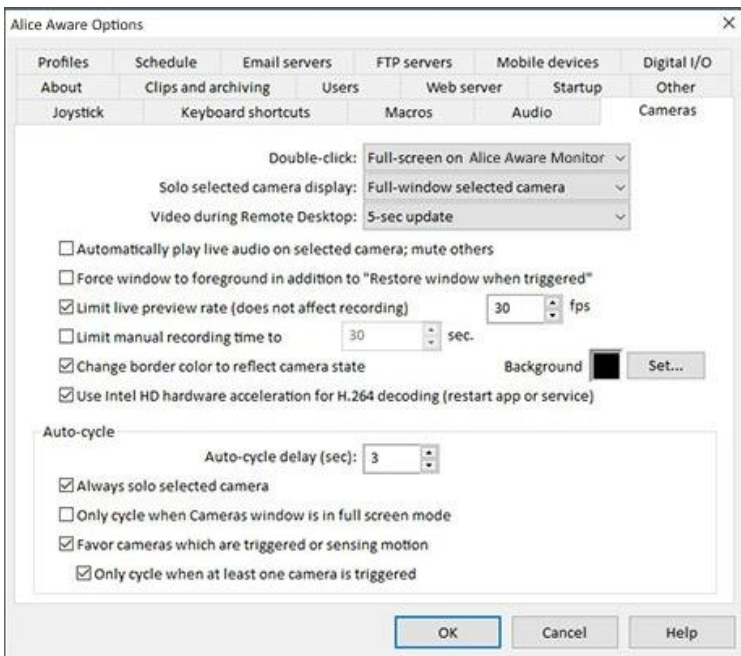
This page allows you to configure the microphone that will be used for the camera Talk function where supported by the camera and Alice Aware.



Select the **Device** as well as the **Input** on the device that will be used. The format should be 16-bit mono. The sampling rate will be determined by camera or output device's requirements. A **Gain** slider and test meter will allow you to visually see the functionality and volume of the microphone.

Cameras

This page contains miscellaneous software behavior options:



You may choose how **double-clicks** within camera windows are handled. The default is to open the camera in full-screen mode. Instead, you may choose to open the camera in a desktop window or to open its properties window.

Use the **Solo selected camera display** selector to choose what occurs when using the solo-camera button that's beneath the Group selector box of the Cameras window. By default, this button causes the selected camera to alone be displayed in the main window. However you may also choose to use it to bring the selected camera into the "1-up" (first and larger) position in the Cameras window.

By default, video is not displayed during remote terminal sessions. This is to prevent the interface from becoming unusable due to continuous screen updating. However, if you feel that you have a fast enough connection and need to see the video, adjust the **Video during remote desktop** setting to allow for occasional or continuous live camera updates.

Select the **Automatically play live audio on selected camera** option to hear your live camera audio whenever the camera is selected. A camera is selected by clicking on its video. To unselect all cameras, click anywhere outside of a camera's video window. Your camera's audio must be supported by Alice Aware, and audio streaming must be enabled on the camera's Audio tab.

There is an option on each camera's Motion/Trigger to "restore window when triggered." This is used to un-minimize either the camera window or the application window when motion is detected. However, if the window is already open, but behind other windows, you may also want to bring it to the foreground. Check the **Force window to foreground** option to enable this functionality.

You may choose to **Limit the preview rate for live video** in order to ease demands on your CPU and video card. If you are running as a service, this setting may have little effect, as the preview rate is already limited by the service-console process memory sharing throughput.

You may choose to **Limit the manual recording time** to a specific number of seconds. When you use the toolbar icon to begin a manual recording, it will automatically stop.

When the option to **Change border color to reflect camera state** is selected, you will see camera borders change to blue when there is motion or red when the camera is either triggered or recording.

If you have an Intel processor and stream from H.264 cameras, you will likely see lower CPU usage if you enable the **Intel HD hardware acceleration** feature. This may be overridden on a per-camera basis on the network camera configuration window from the Video tab in camera properties.

Auto-cycle

Live camera auto-cycle is activated with the circular arrow button that's beneath the Group selector box of the Cameras window. You should also select a camera window to start the process. This feature has a number of options, beginning with the **delay** between camera switching in seconds.

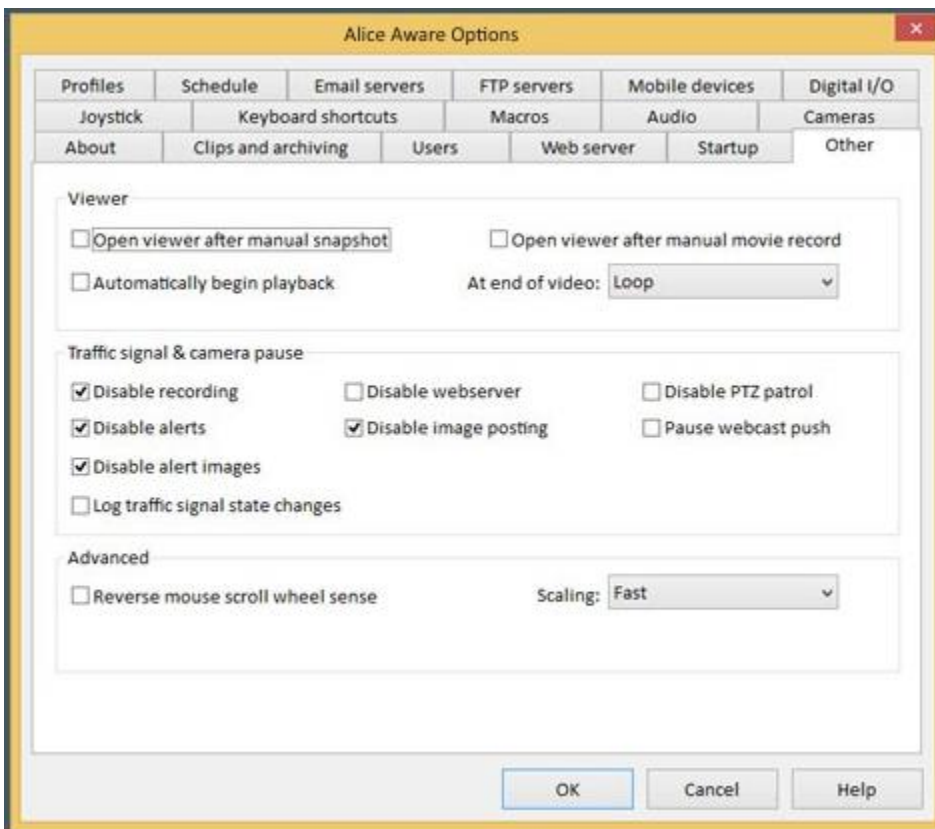
By default, the currently connected camera in the cycle is shown "solo"--all by itself with the other cameras hidden. Without this option selected, the cycle will simply iterate through each camera, selecting it in turn, possibly also causing the live audio and clip list to change as a result.

You may select to only activate the auto-cycle function when the Cameras window is shown in full-screen. This is the maximize button in the Cameras window, not the maximize button for the entire interface and is not the same thing as an individual camera in full-screen mode.

By default, the auto-cycle will **favor cameras which are triggered or sending motion**. However, in addition, you may also select to **Only cycle when at least one camera is triggered**. With this last feature enabled, all cameras will be shown normally until one or more cameras is triggered.

Other

This page contains miscellaneous software behavior options:



Viewer

By default, the clip **Viewer** is automatically opened whenever the Snapshot or Video Record icons are used. You can turn these features off by removing the appropriate checks.

Also by default, video clips automatically begin playback when they are opened and automatically loop back to the beginning when the end is reached. If you would like your clips to play sequentially, select **Next video** from the the **At end of video** list.

Traffic signal and camera pause

You may now define the effect of the traffic signal icon's "red" state. By default, recording, alerts and image posting are disabled. However, you may wish to completely disable the web server or disable camera PTZ patrol options. If webcast "push" operations are paused, connections are broken to any Windows Media server or Flash Media Live Encoding server.

These options also affect the function of the camera pause feature. When a camera is paused, it is equivalent to using the traffic signal on that particular camera in isolation.

Select **Log traffic signal state changes** and an entry will be made to the Status/Log when the traffic signal goes to/from the green state.

Advanced

By default, the mouse wheel will perform a digital zoom-in when you scroll the wheel toward you and will zoom-out when you scroll the wheel away from you. You may reverse this operation if you wish.

By default, a very fast software graphics scaler is used when displaying video. Although fast, you may notice minor artifacts of this scaling process. If you have CPU cycles to spare, you may increase the visual quality of the camera preview images by adjusting this setting to either **Bilinear** or **Bicubic**. The additional **HighQ** option is provided for experimentation. Note: once changed, you must either restart Alice Aware or reset each camera for the change to take effect.

FAQ (Frequently Asked Questions)

This page is designed to compile a list of the most commonly asked support questions and their answers.

Why am I getting error 8000274c, 10060 or 10061 from a camera?

These errors mean one of 2 things ... either you have specified the wrong IP address/port number, or Alice Aware does not have access to the Internet. What are you putting into the IP address/port boxes? It should be just 4 numbers with 3 dots or a server address. Does the hyperlink work from the Video tab to open the camera's HTTP interface in a browser window? That's usually a good test of the IP address and port settings. Does the "check for updates" button work on the Options page? Make sure blueiris.exe is allowed through any firewalls and is exempted from all network/web scanning by antivirus software.

Why am I getting error 12002 or 12029 from a camera?

This may also be an incorrect address, but it's much more likely to be a firewall issue. Be sure you have allowed the software access to use the network.

Why do I see "trouble creating file" messages when attempting to record video, or error 5 when attempting to move from New to Stored?

These errors are caused by an "access denied" condition from the OS. After checking paths on Options/Clips, if you are running as a service, it's easiest to run the service under your own user account with the same name and password as used on the NAS or network storage device. This is done with the Windows Service Manager.

Does Alice Aware need to be running in order to detect motion, send alerts, etc?

Yes. Alice Aware is PC software that runs on your PC. If your PC is not running, Alice Aware is not running.

Is there a printable manual?

The available documentation is in the form of a CHM (Windows Help) file, found in the program folder. From within the software, use the ? icon to access it. You can convert this to a printable format like PDF if you download a CHM to PDF conversion utility from download.com. It remains a goal to produce a more traditional-style document.

How do I backup and/or restore all settings or move them to a new PC?

You can use the Export button from the Options page. On the new PC, use the Import button on the same page Options page.

Alternatively, you can use Regedit to find the key HKEY_LOCAL_MACHINE\SOFTWARE\Perspective Software, right-click that and save it to a file. A file exported in this way is imported onto the new PC by right-clicking it and selecting Merge.

How can I access my cameras remotely?

An entirely new Wizard was created. Use the Globe icon to open the Remote Access Wizard. The help page network configuration and troubleshooting may also be helpful.

Why must I re-enter my registration code?

The most common reason is that you have installed the software on more than 1 PC. Each PC requires its own license, however you are able to transfer the license from PC to PC by re-entering the code. If you do need more than 1 license, they are available at a discount, please inquire. However, there are other reasons for a de-activation, and these include changing your RAM size or CPU speed.

Can you add support for network Camera X?

Standard authentication and streaming formats are HTTP/MJPEG and RTSP. If your camera supports one of these, chances are that we will be able to get it supported. I will need to be able to access the camera online via browser in order to determine the most appropriate settings. You can follow the same basic instructions at portforward.com for configuring your router for remote access to your camera.

Why is my camera displaying a sluggish framerate?

There may a number of reasons. Start with insuring antivirus exemption as described on network configuration and troubleshooting. Also make sure your CPU is not running at 100% usage, and if it is see the Troubleshooting page for ideas on how to lower that.

Networking

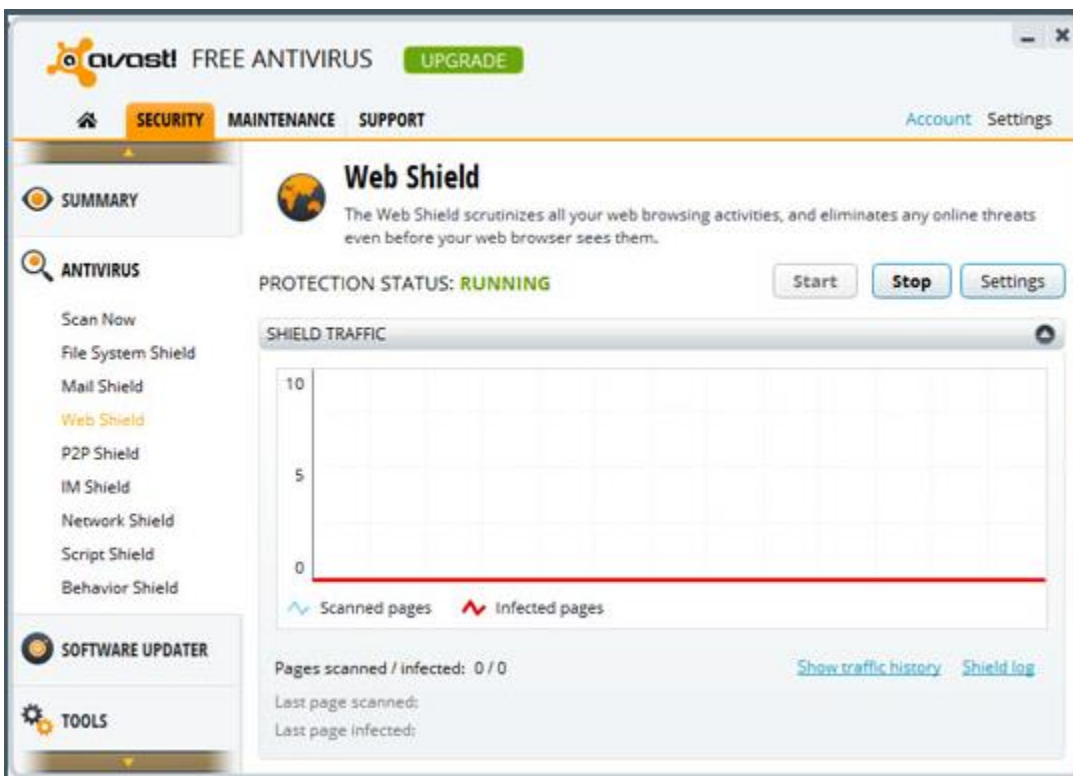
Much of what's discussed in this topic is now covered and configured automatically via the new Remote Access Wizard, accessed via the Globe icon at the top of the main window.

This page will cover several important topics for successful remote access. Some of what you will be asked to do here is admittedly not for the faint of heart. If you do not feel comfortable getting intimate with the inner workings of your operating system, you may want to enlist the help of a networking expert.

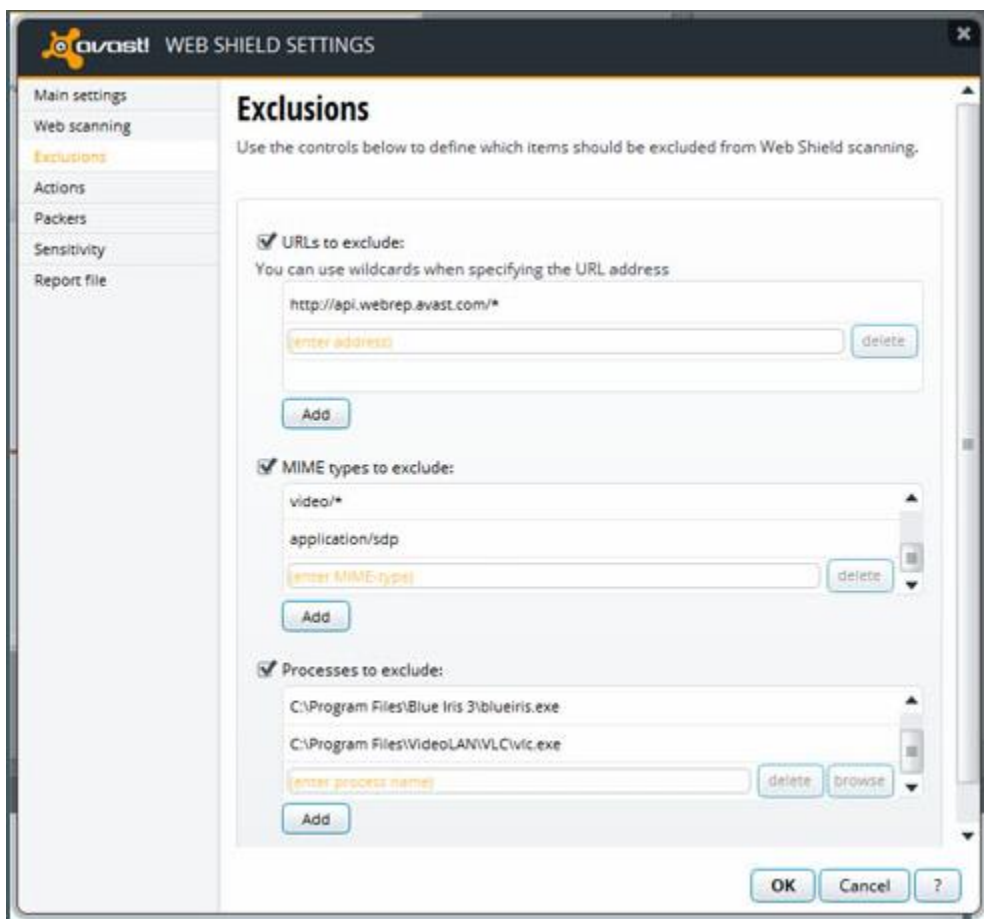
How to configure your antivirus to properly exempt Alice Aware network traffic

In order for you to achieve the full bit-rate capabilities of your cameras on the network, it is necessary to instruct your antivirus software to not scan Alice Aware traffic. Your antivirus software may not like the idea of software like Alice Aware using many network connections (one or more for each camera) and endlessly downloading (which is what video streaming is). The result may be throttling, connection limiting (some cameras may not connect), or camera disconnects (as the antivirus software attempts to cache the video stream and becomes overwhelmed).

Here's where to find this in a very popular and free antivirus software avast:



From the Web Shield page, click the Settings button, then Exclusions:



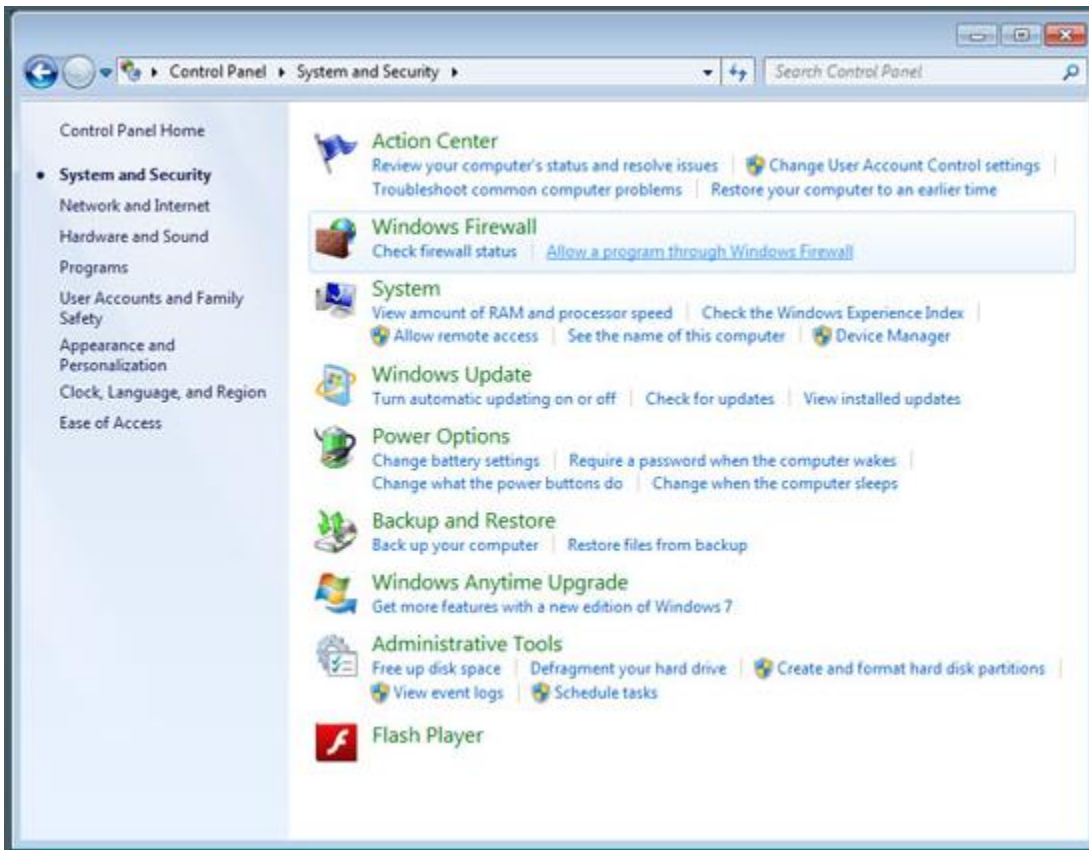
If you have any RTSP streaming cameras, be sure to exclude the MIME application/sdp.

In all cases, exclude the process blueiris.exe specifically to prevent the antivirus software from scanning and caching all camera traffic.

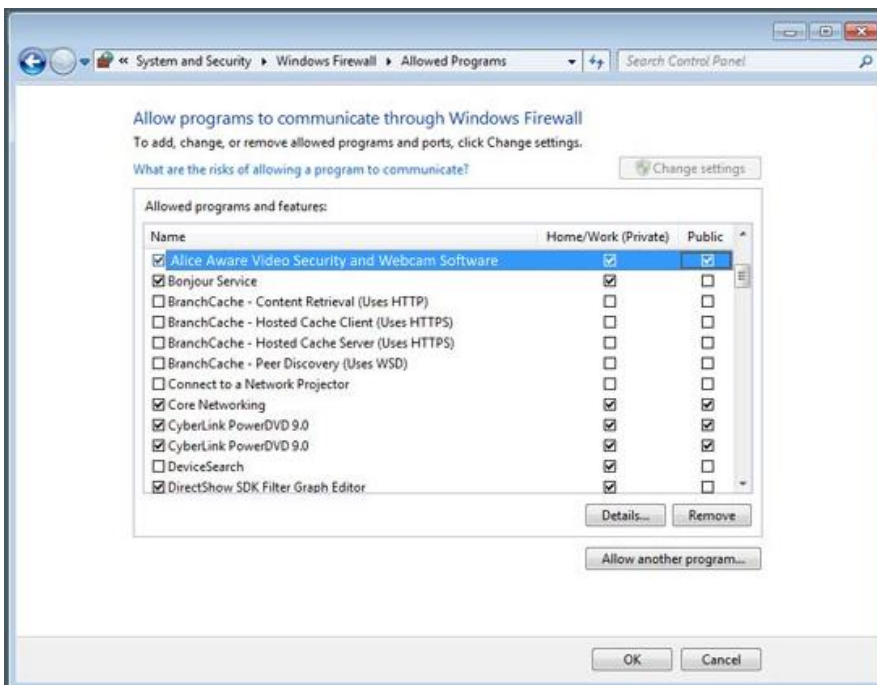
How to configure the Windows Firewall

In order for Alice Aware to see and be seen on the LAN or Internet, you need to allow it through the Windows Firewall as well as any other firewall you may have installed as part of an antivirus package.

Go to your Windows Control Panel, and find the Windows Firewall settings either by navigating the menu or typing firewall into the search box:



Click on the option to Allow a program through Windows Firewall.



If Alice Aware is not already on this list, click the Allow another program button to find BlueIris.exe in your program files folder.

For remote access, the Alice Aware entry should have a check box under both Private and Public. For LAN-only access, the Private setting alone should be adequate. If you need to make changes, click the Change settings button in order to allow yourself to check these boxes. Click OK to save your changes.

If you are running other firewall software instead of or in addition to the Windows Firewall, you may try disabling that, or consulting with the manufacturer on how to allow a program to receive connections through the firewall. This may involve specifying which "ports" are also allowed through. By default, Alice Aware uses port 81 for everything. However, there are reasons to change this, and you may use other ports as well.

How to find your LAN and WAN (Internet) IP addresses

Your PC has an address on your home/office network (LAN). This number is assigned by your router and usually has the format 192.168.1.x. In turn, your router has an address on the Internet, and this is assigned by your Internet Service Provider (ISP). The LAN address may only be used from another device (PC or smart phone) on the same LAN. The Internet address may be used from anywhere in the world, but requires "port forwarding" as described in the next section--this will allow your Alice Aware PC to accept connections from the outside world.

To discover either address, open the Alice Aware Options window and click on the Web server tab. You may also find your Internet address just by Googling for "What is my IP address."

How to configure your router/s for remote access

If you have not already tried to use the Router UPnP button on the [Options/Web server](#) page, do that first, it would be much easier. Following is the manual option:

If you are using a cable or wireless router (and you probably are), you will definitely have to configure it to "route" or forward traffic from the Internet to a specific PC on your local network. This is highly brand-specific, but here's an example when using a DLink WBR-2310 router:

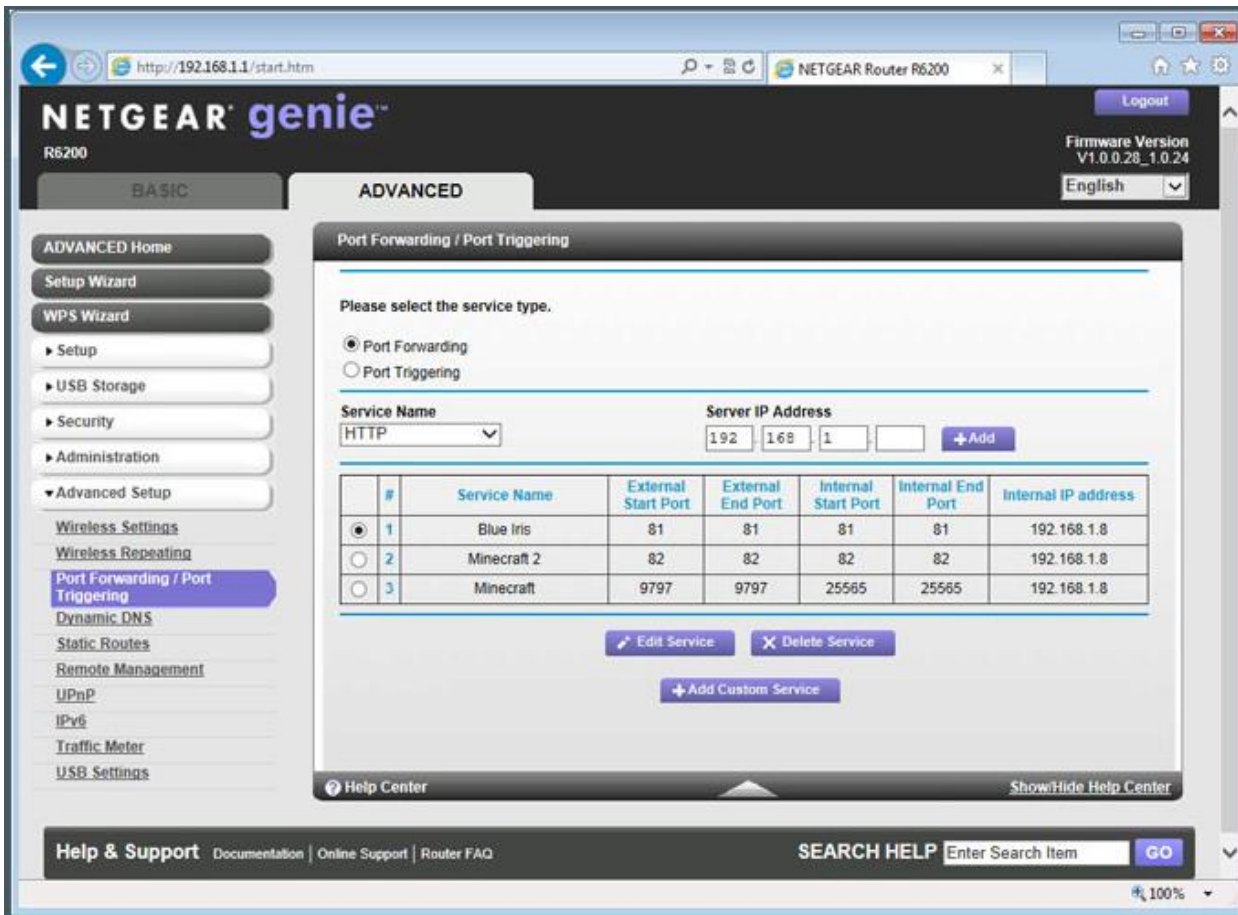
- Use your Internet browser to browse to your router's configuration page, which is almost always <http://192.168.1.1/>
- Login to the router. If you don't know the password, consult the router's manual for the default password or the method to reset it.
- Go to the Advanced tab
- On the Virtual Server Rules tab, add an entry for Alice Aware; it might look like this:

20 - VIRTUAL SERVER RULES				
		Port	Traffic Type	Schedule
<input checked="" type="checkbox"/>	Name Alice Aware << Application Name	Public 80	TCP	Always
	IP Address 192.168.0.100 << Computer Name	Private 80		

- This example shows that any Public (Internet) traffic arriving on port 80 will be sent to your PC running at local address 192.168.0.100 (also using port 80). The Computer Name dropdown helps you to choose from a PC currently connected. Alice Aware may not be on the Application Name dropdown, so just manually enter it into the name box for reference.
- If your router does not have a "virtual server rules" page, it should have a "port forwarding" page which will allow you to accomplish the same thing.
- Make sure the check box is checked to enable the entry. Save your changes and exit.
- It is recommended that for simplicity you use the same external (public, Internet) port number as your internal (private, LAN) port number (that is, the two port numbers you might see on a "server rules" page like this one match the port number for your Alice Aware web server).

Note that if port 81 does not work for whatever reason (some ISPs may intentionally block this port to prevent you from running a web server from your home), you may have to change to port 82 or another number. This means that you must change it in Alice Aware, your router, the address you use to connect remotely (it will become `http://yourip:81` instead of just `http://yourip...`), and maybe your firewall if you specified port(s) there.

Here's another example using a Netgear router. Again, use a browser to open the router settings and login to the router.



You will find the Port Forwarding settings here under the Advanced Setup tab. This example shows port 81 being used and the local PC's address is 192.168.1.8. Whatever port number you use, it should match the setting on the Options/Webserver page.

Finally, there's a great resource on the net which contains instructions for almost every router, <http://www.portforward.com/>. The Alice Aware tutorial on this page instructs you to route both port 80 and 81. However, it is only necessary to route the single port that you specify on the Options/Webserver page.

With Alice Aware running, you can check your settings by using the website www.canyouseeme.org. Enter your port number into the What Port? box and click the Check button. If your routing was successful, you will see a Success message.

If you have TWO routers in series

If you have two routers, perhaps one built-in to the cable modem, then another elsewhere, and your Alice Aware PC is plugged into this second router, you will have to configure BOTH routers. You can simply daisy-chain the forwarding of port 81 from one router to the next, then to the PC. However if you have no other devices needing remote access on the first router, you have the option of just using the DMZ feature on the first router to forward EVERYTHING to the second router, basically eliminating any further port forwarding to be done on the first router.

How to use a STATIC IP address for your PC on the LAN

This step is optional but will save you the trouble of having to repeat router configuration each time your PC or router is power cycled.

If you power cycle your PC or router, your PC's IP address (192.168.1.8 for example) may change, meaning that all of your routing will have to be revisited to reestablish remote access. The Netgear router shown in the previous example also has a feature to reserve IP addresses:

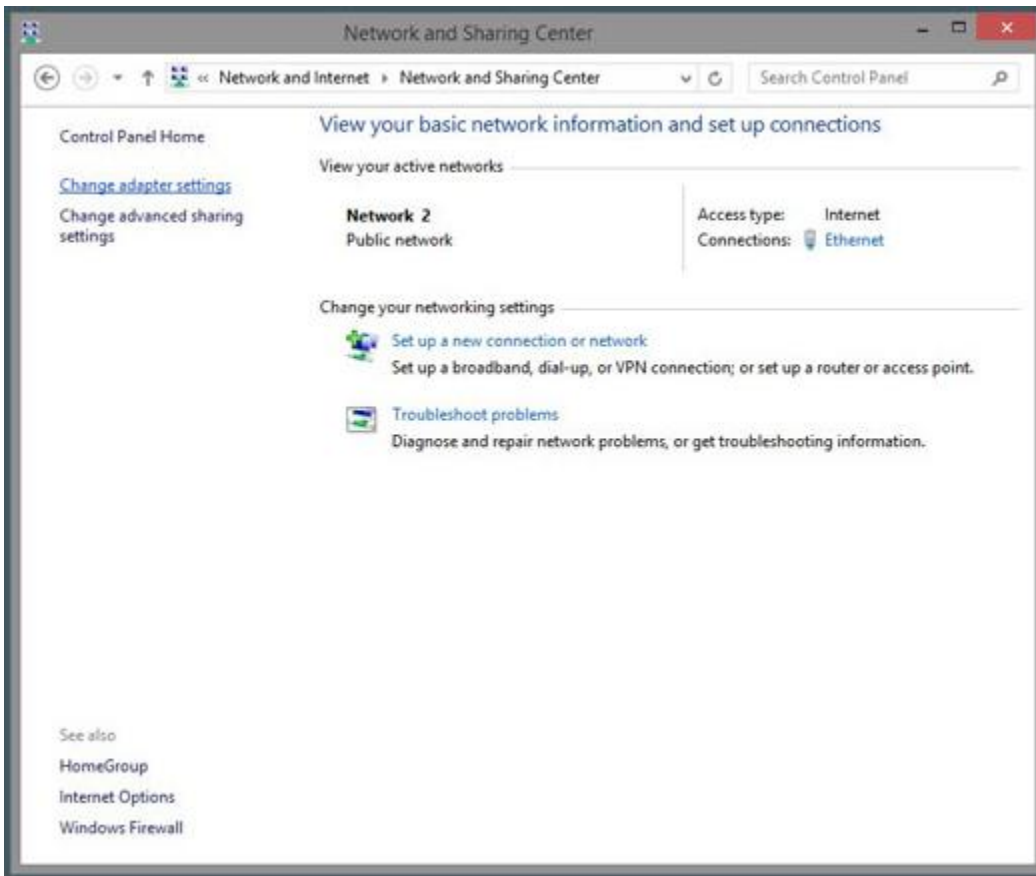
The screenshot shows the Netgear Genie web interface for a NETGEAR Router R6200. The 'LAN Setup' page is active, displaying the following configuration:

- IP Address:** 192.168.1.1
- IP Subnet Mask:** 255.255.255.0
- RIP Direction:** Both
- RIP Version:** Disabled
- Use Router as DHCP Server**
- Starting IP Address:** 192.168.1.2
- Ending IP Address:** 192.168.1.254

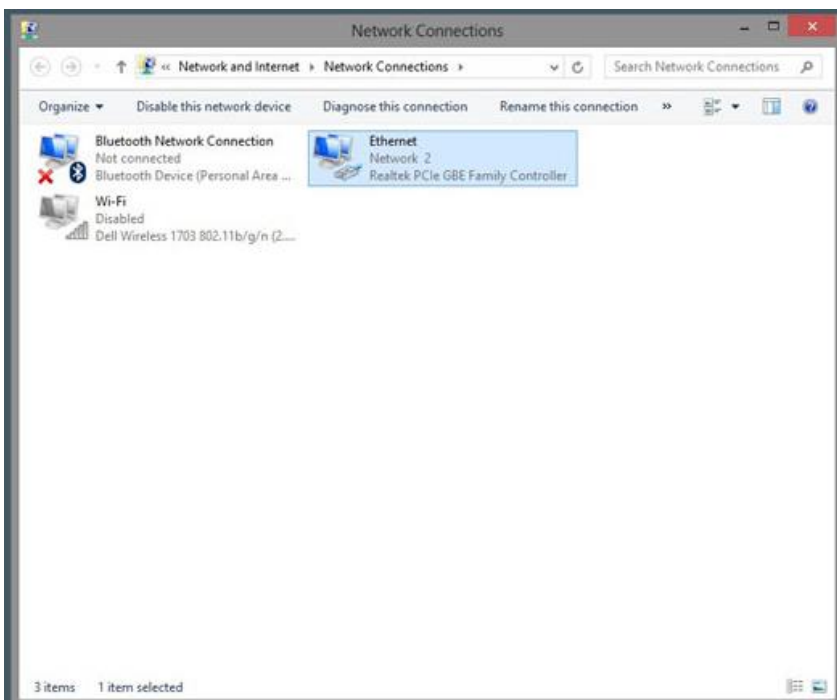
The **Address Reservation** table is as follows:

#	IP Address	Device Name	MAC Address
1	192.168.1.8	Blueiris	90:B1:1C:5F:DE:B9
2	192.168.1.10	BASEMENTROUTER	68:7F:74:B9:58:42
3	192.168.1.14	PogoCam	00:E0:4C:B4:E6:23
4	192.168.1.15	FonrtCam	78:A5:DD:01:9A:ED

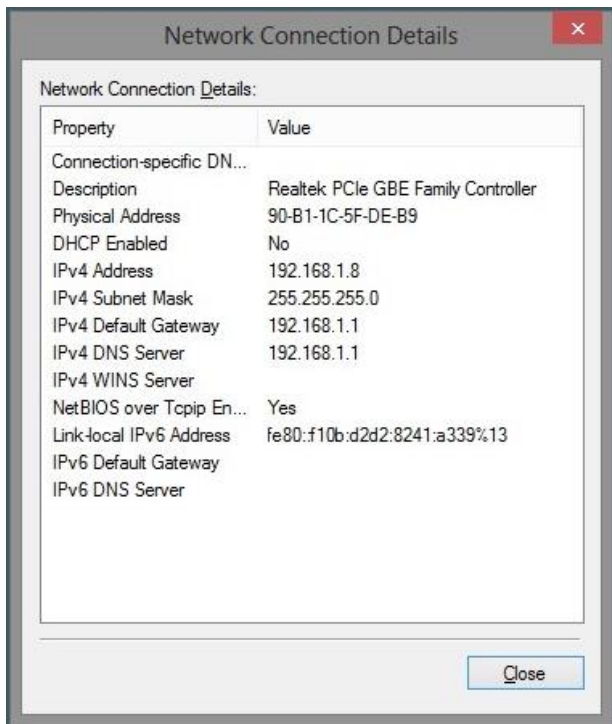
Here you will see that I added 192.168.1.8 to this list. Now on the Alice Aware PC, you must also set the IP address to be static. Begin by opening the Windows Control Panel and navigating to the Network and Sharing Center:



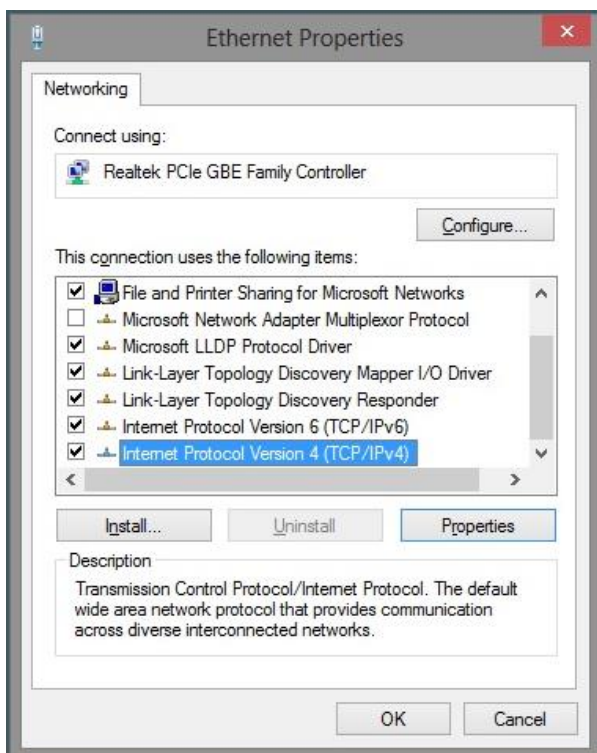
Choose Change Adaptor Settings:



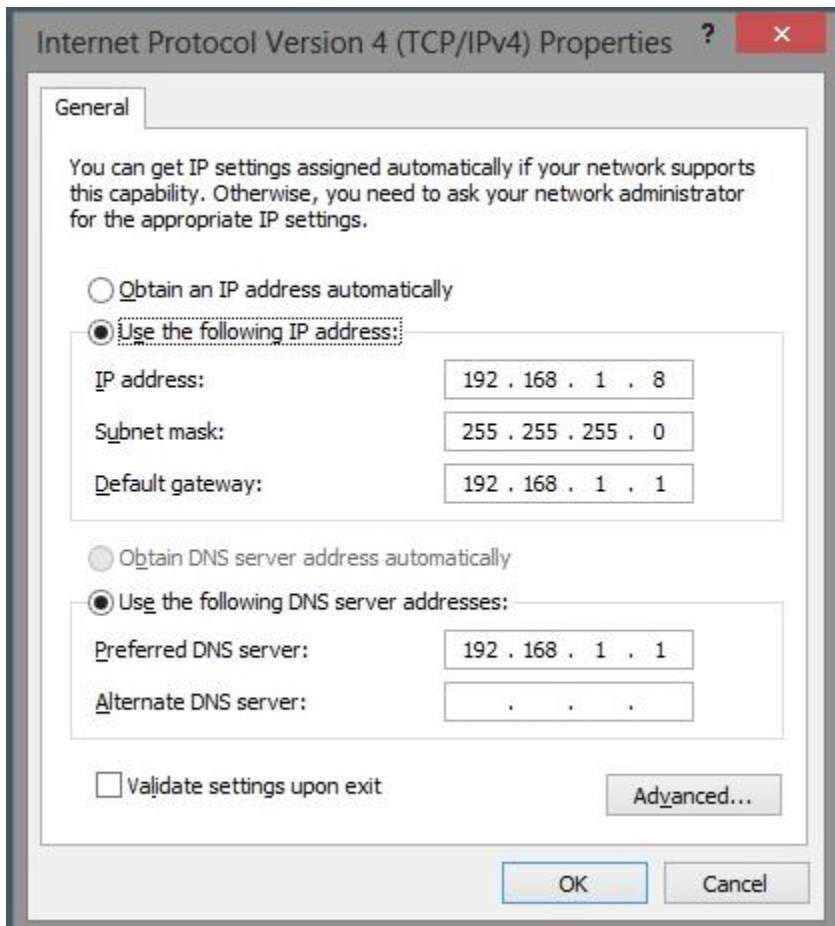
Find your Ethernet adaptor and double-click to open and click the Details button:



Make a note of the Subnet Mask, the Gateway, and DNS server addresses. Close the Details box, then right-click on the adaptor icon and select Properties:



Find the Internet protocol version 4 entry, click on it, and then click on Properties:



Select to Use the following IP address, then you will need the addresses that you noted previously. Once these have been entered, click OK to save your changes. Now in the event of a reboot or power outage, the PC will retain its IP address on the LAN.

How to deal with a DYNAMIC IP address for your router on the Internet

Most ISP customers will have a "dynamic" IP address on the Internet. While the address may not change for months or a year, this means that the address that you will use to connect to Alice Aware remotely MAY change over time, especially if your router or cable modem is restarted. And for most people, a name is easier to remember.

Your current Internet IP address is shown on the [Options/Web Server](#) page. There is a feature on that page to automatically check for a new address assignment.

There are services such as www.no-ip.com and dyndns.org which offer you a NAME to use instead of the IP address, and will provide you with software to install on your PC so that their servers are notified when your IP address changes.

Alice Aware does NOT need to know what your no-ip or dyndns name is. These names are simply aliases for the actual Internet IP address. If the no-ip or dyndns service is properly setup, you should be able to use either the name OR the number remotely. Furthermore, your Internet IP address may not be changed by you--it is assigned by your ISP.

Why Alice Aware uses port 81 by default

A port number is like a channel number, and each IP address may use a number of different port numbers through a single IP address.

The default www HTTP (web page) port number is 80. Because it's the default, when the port number is 80, you do not need to specify it as part of the LAN or Internet address in a browser or the mobile apps.

When using any port number other than 80, you must include it as part of the address when accessing on the LAN or remotely. For example, 192.168.1.8 is ok for port 80, but with port 81, you need to use 192.168.1.8:81 instead.

Some ISPs discourage the hosting of web services from your home PC. They may enforce this by actively blocking incoming connections on port 80. In this case, you must use another number, such as 81 or 8080.

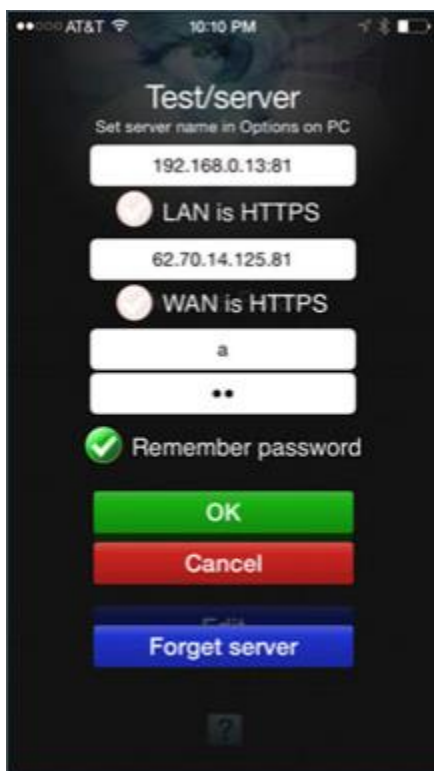
Some routers use port 80 internally for services such as UPnP or remote router administration and make it very difficult to use port 80 for anything else. In this case again, you will need to use another port number such as 81 or 8080.

Although port numbers range from 1-65535, there are many port numbers which are reserved for standard web services such as SSL, email, etc. You should insure that the number you select.

How to authenticate (login) to the Alice Aware web server

Although it is possible to select to have NO authentication on the Options/Webserver page, this is highly NOT recommended. Without authentication, Anonymous connections will be permitted from possibly anywhere in the world to view your cameras.

Web server user names and passwords are setup on the Options/Users page. With authentication enabled, you must add at least one account in order to connect from a browser or one of the mobile apps. Here's what the iOS app login page will look like when filled in with LAN address 192.168.0.13:81 and Internet address 62.70.14.125:81 and a very short user name of a and 2 character password:



Do NOT check the HTTPS boxes unless you have connections already established and working and have installed an HTTPS layer as described next.

How to use HTTPS (SSL) with the Alice Aware web server

When you have selected Secure Only on the Options/Webserver page, you are presented with a Alice Aware login page instead of the browser's own username/password form. When this login page is used, your user name and password are NOT sent to the Alice Aware web server. A secure hash (encryption) is created from a combination of these credentials and a unique session key.

While your authentication is securely protected by this mechanism, some users will want to know that the actual video itself is encrypted. This is only possible with the use of an add-on SSL (Secure Socket Layer) technology.

We have recently discovered stunnel (www.stunnel.org) which you may install as a service onto your PC. Instead of configuring your router to forward traffic to Alice Aware, you would configure that traffic to go to stunnel, and then configure stunnel to then forward the traffic to the Alice Aware web server. For example, external port 443 (the standard HTTPS port) forwards to stunnel port 443, and stunnel forwards to Alice Aware on the same PC on port 81.

Troubleshooting

What to do when things aren't working as they should...

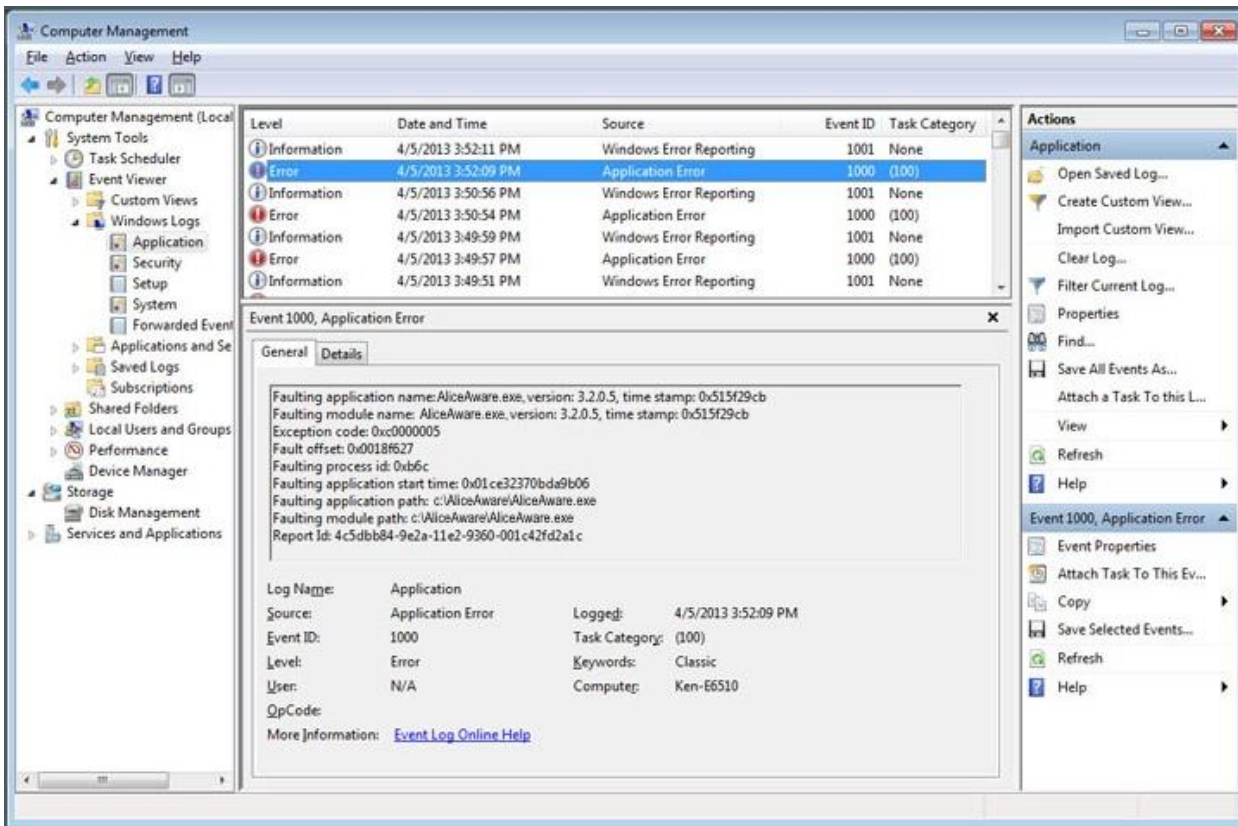
I had a crash, how do I report this to the developer?

First, there are several ways that a computer can "crash" ... if your computer stops working either with a complete "freeze" where the cursor doesn't move or you see a "blue screen" error where the entire display turns blue with white writing, this is caused by faulty hardware, a device driver issue, or an OS issue. In these cases it's best to make sure all device drivers and OS components are up to date and then perform a hardware scan to check for bad memory etc. It's possible to say that Alice Aware may indirectly cause such an error, as it uses your hardware, often under significant load, but in this case the root cause is not Alice Aware.

If however you see an Application Error box on the display, this is something which may be traced more directly to a software bug. Before you report the error, please obtain the error details from the Windows Event Manager. To do this, right click on your Computer icon and select Manage:



The Computer Management window will appear:



Find System Tools, Event Viewer, Windows Logs, Application and click on it. The application log will display, and you should be able to locate the error by the time that it occurred. When you click on the error, you will see its details displayed. Copy and paste the text from the General tab into your email to Support@AliceReceptionist.com.

If the Faulting module name does not say BlueIris.exe, it may be necessary to do some additional testing on your system to determine what was the cause of the error. This usually consists of disabling specific cameras, features, etc. until a cause can be pinpointed.

I can't access Alice Aware remotely

Start by running the Remote Access Wizard with the Globe icon. Further assistance may be found on the help page for network configuration and troubleshooting. If you still need to contact support, please provide all of the details from the wizards many pages.

I can see the web page remotely, but no live video

First, make sure you have enabled JPEG, MJPEG, H.264 webcasting on the **Webcasting** tab in camera properties for each camera.

If you see a message saying that the ActiveX control is not installed, your browser's security settings may be set so as to not even prompt you to install the control. In Internet Explorer, go to Tools, Internet Options, Security, and click on "Custom level...". Make sure "download signed ActiveX controls" is not disabled. Make sure that "run ActiveX controls"

is not disabled. Make sure that "script ActiveX controls marked safe for scripting" is not disabled. Also, you need to be logged into Windows as an administrator to install the Alice Aware ActiveX control.

Although not as feature-rich, you might also try one of the other Alice Aware web pages, such as the Java/JPEG page or JPEG refresh page. There is a link at the top of all three pages which allows you to cycle between them. The ActiveX page may only be used on Internet Explorer running on Windows. If you prefer Firefox, the Java/JPEG page should work for you. For any other browser or when using a Mac, you will need to use the JPEG refresh page.

If you are unable to see video with Firefox using the Java/JPEG page, you may need to add your domain to the java.policy file on the viewing PC. In your C:\Program Files\Java\jre1.6.0_03\lib\security folder, there is a file java.policy. You need to edit that to add:

```
grant codeBase "http://www.yourdomain.com" { permission java.security.AllPermission; };
```

Your version of the JRE may differ from jre1.6.0_03, and that will change the path to the java.policy file.

My system is running slowly, is unresponsive, or not creating clips correctly

A maxed-out CPU (100% utilization) is usually the culprit. To monitor your CPU's performance, right click on the taskbar at the bottom of Windows and select Task Manager, then switch to the Performance tab. If ever you see the CPU usage reach 100% and stay there for any extended period of time, that means that your CPU does not have power to do all that you are asking of it in real time. And, since video capture is more or less a real time application, a maxed-out CPU means that Alice Aware performance will suffer as a result. Here are some things to look at in order to attempt to minimize CPU utilization:

- What other software is running on the same PC? Can any of that be eliminated?
- Can you lower the capture frame rate on one or more of your cameras? For an IP camera, this also must be done from within the camera's own browser interface--ideally the frame rate that the IP camera is sending should match the value you specify in Alice Aware.
- Can you lower the resolution on one or more of your cameras?
- Can you remove one or more video overlay graphics or text? Transparent items use the most CPU.
- Can you switch to the BVR recording format? This is more efficient than either MP4 or WMV.
- If you are running multiple cameras, can one of them be eliminated?
- Can you minimize the Alice Aware window? When it is minimized, no CPU time is used to draw to the screen.
- If you are running as a service, do not leave the console instance running when unnecessary
- Turn off Windows Aero (switch to Windows Vista or 7 "basic" display mode). It is pretty, but it uses more CPU cycles to draw to the screen in this mode.
- Are you using the pre-trigger frames option on the Record tab? This will use more CPU.

- If you switch from H.264 to XVID codec recording, this will save CPU time on slower processors. Install that from XVID.org. When installed, it will become an option on the Record/Format page in camera properties.
- For an IP camera, you can eliminate re-encoding video altogether during recording by using the Direct-To-Disc option on the Recording format page.

There is a start-up issue, I can't get into Alice Aware, and I need to reset to defaults

Enter "regedit" into the Start Search box (Vista/7) or the Start/Run box (XP). Find the key HKEY_LOCAL_MACHINE\SOFTWARE\Perspective Software\Alice Aware. This is where all Alice Aware settings are stored. If you delete that entire key, all Alice Aware settings will be reset to their defaults. Instead, you may wish to find the subkey "Cameras" and delete that to delete your cameras, or delete the "Options" key to solve other startup issues. It's also possible to just go into each Camera node and set the Enabled value to 0.

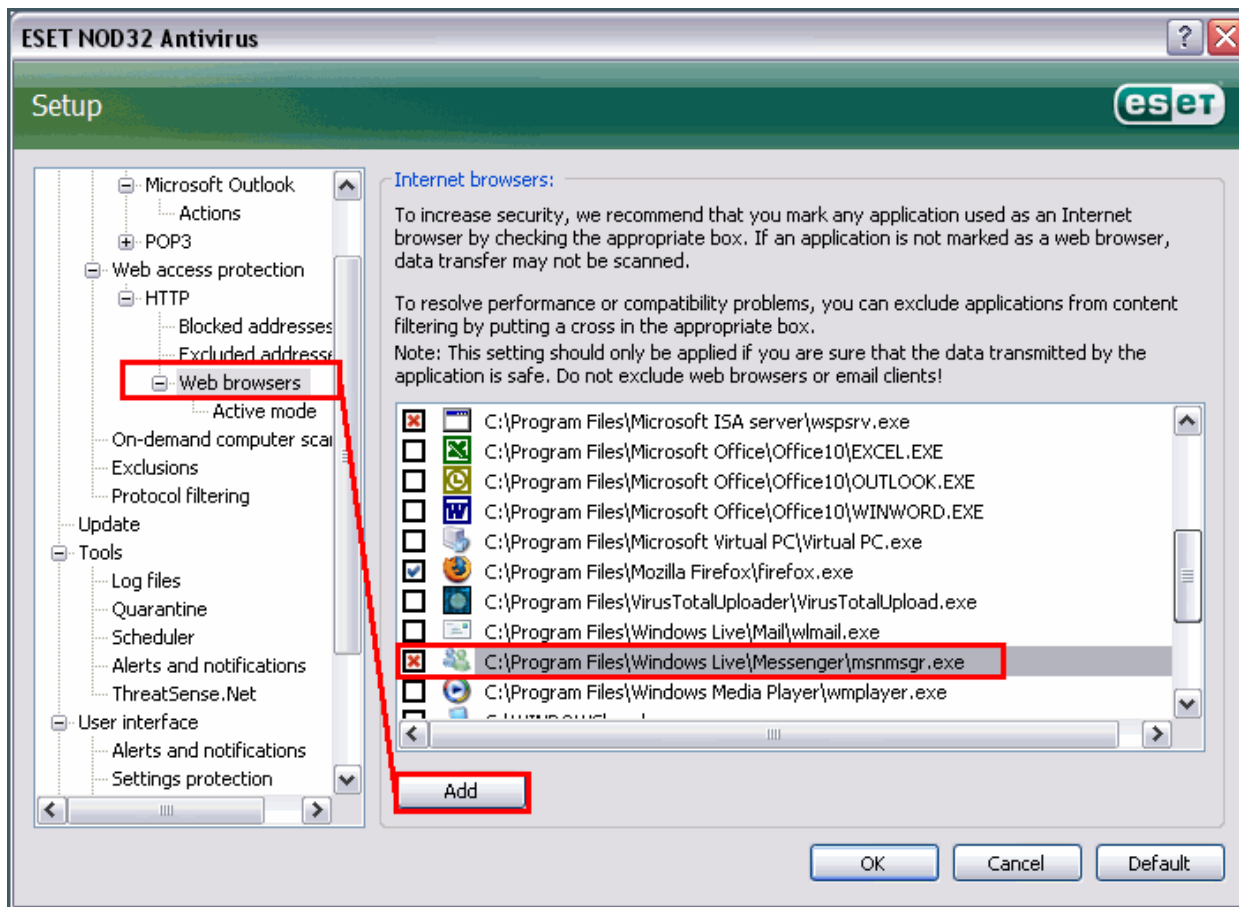
If you had previously enabled the "run as a win32 service" option, you may also need to go to the manually remove the service. To do this, right-click on the Computer or My Computer icon in Windows, select Manage, then find Alice Aware on the list of Services. Stop the service, and then set the startup to manual or disabled.

The video from my IP camera is delayed, jerky, out of audio sync, or the PTZ commands appear delayed

The camera may be sending images faster than Alice Aware is expecting them, resulting in a full receive buffer. Try matching the frame-rate (fps) setting in your camera to the frame-rate setting in Alice Aware to avoid the buffering situation. If your camera does not allow you to specify the frame-rate, you should set the frame-rate in Alice Aware as high as possible (up to 29.97 fps) until the buffering and resultant video delay is minimized. If a high frame rate setting is clobbering your CPU and you have no way to lower it from within the camera's own web interface, there is a Alice Aware option **Framerate Limiting Compatibility Mode** on the Video/Network page in camera properties which will help.

My Temp folder grows unbounded as video is streamed from my IP camera

This is caused by antivirus software that is caching your camera streams. This feature of the AV software may be disabled by adding Alice Aware to an exclusion list. In the ESET software, you need to exclude Alice Aware from a list of 'web browsers' by locating the blueiris.exe and placing a red x. The example below shows how another program, 'msnmsgr.exe' is excluded:



Internet Explorer becomes unstable after Alice Aware has been running for awhile

This condition is often due to faulty Antivirus software unable to deal with video streaming. This has been observed with the AVG free edition. One antivirus package known to not cause any issues is the Avast! free version.

My IP camera just shows as a black window with the time updating

Check that the resolution (image width, height) setting in the camera matches your resolution setting in Alice Aware. If these do not match, the MPEG4 codec will be unable to decode the image.

My analog cameras show only black & white and/or are distorted

This may be the result of using PAL mode with an NTSC camera or vice-versa. If you are using an NTSC camera, make sure the height is set to 480 or 240 in Alice Aware. PAL resolutions would have heights of 576 or 288.

Cameras on my single-chip analog card "cross feed" or flip between an images and a blue signal

To eliminate conflict between the inputs, make sure to select no higher than 15 fps on each camera, perhaps 12.5. If you have this set for 30 or 25, this would explain the problem. If you require more fps, you need to acquire a card with multiple chips, such as the PV149 from bluecherry.net.

JSON interface

The **JSON** (JavaScript Object Notation) interface exists to provide methods for remote administration of your Alice Aware system. It will be the gateway used by new client apps including those for iOS (iPhone and iPad) and Android mobile devices. It will also be used by the next generation of web pages used to access Alice Aware via browser in order to provide more secure authentication.

For a description of JSON, see <http://www.json.org/>. It's simply a block of text which is sent by HTTP-POST to the Alice Aware web server page /json. Alice Aware will respond with a JSON formatted response (content-type application/json).

Each JSON object sent to Alice Aware should have a "cmd" value, for example, "cmd":"login". Additional values will depend upon the type of command sent. Here's an example command and response in full JSON format:

```
{"cmd":"login"}
```

```
{"result":"fail","session":"182c8a04f7d4ab042ff8e4a2"}
```

Following are the available commands:

alertlist

Get a list of alert images from the Alerts folder

camera: a camera's short name or a group name; "index" will return alerts from all cameras

startdate: expressed as the integer number of seconds since January 1, 1970

reset: if true, will erase all alerts from the alerts folder.

The returned *data* value is an array of JSON objects each describing a camera or a camera group. For each of these objects, the following values are defined:

camera: the camera or group name

path: the database locator for the alert image

clip: the database locator for the clip--it's possible for one clip to contain many alerts

offset: the number of kilobytes (for BVR files) or milliseconds (for other formats) into the file at which the alert occurred

flags: the following flags are defined:

1: the offset is in time (milliseconds)

2: the alert was triggered by the motion detector

4: the camera was in a no-signal state at the time of the alert

8: the alert was triggered by an audio event

16: the alert was triggered by an external source such as DIO, JSON command, or manual trigger

date: file creation date, expressed as the integer number of seconds since January 1, 1970

color: 24-bit RGB value (red least significant) representing the camera's display color

camconfig

Get (and optionally set) the state of many camera properties:

reset:true reset the camera

enable:true or false enable or disable the camera

pause:n sends a pause command, and returns a value in seconds

-1: pause indefinitely

0: un-pause

1..3: add 30 seconds, 1 minute, 1 hour to the pause time

motion:true or false enable or disable the motion detector

schedule:true or false enable or disable the camera's custom schedule

ptzcycle:true or false enable or disable the preset-cycle feature

ptzevents:true or false enable or disable the PTZ event schedule

alerts:n sets the corresponding alert function

record:n sets the corresponding record function

camlist

Returns a list of cameras on the system ordered by group. Cameras not belonging to any group are shown beneath the "all cameras" group. Disabled cameras are placed at the end of the list.

reset: send a value of true for this argument to reset the statistics for the cameras.

data is an array of objects (note the [] surrounding a JSON array), each describing a camera or a camera group. For each of these objects, the following values are defined:

optionsDisplay: the camera or group name

optionsValue: the camera or group short name, used for other requests and commands requiring a camera short name

FPS: the current number of frames/second delivered from the camera

color: 24-bit RGB value (red least significant) representing the camera's display color

clipsCreated: the number of clips created since the camera stats were last reset

isAlerting: true or false; currently sending an alert

isEnabled: true or false

isOnline: true or false

isMotion: true or false

isNoSignal: true or false

isPaused: true or false

isTriggered: true or false

isRecording: true or false

isYellow: true or false; the yellow caution icon

profile: the camera's currently active profile, or as overridden by the global schedule or the UI profile buttons.

ptz: is PTZ supported, true or false

audio: is audio supported, true or false

width: width of the standard video frame

height: height of the standard video frame

nTriggers: number of trigger events since last reset

nNoSignal: number of no signal events since last reset

nClips: number of no recording events since last reset

cliplist

Get a list of clips from the New folder

camera: a camera's short name or a group name; "index" will return clips from all cameras

startdate: expressed as the integer number of seconds since January 1, 1970

enddate: expressed as the integer number of seconds since January 1, 1970

tiles: true or false; true to send only 1 entry per day in order to mark tiles on the calendar

The returned *data* value is an array of JSON objects each describing a camera or a camera group. For each of these objects, the following values are defined:

camera: the camera or group name

path: the part of the absolute file path that follows the New clips folder path; if there are no subfolders, this is simply \ and the filename.

date: file creation date, expressed as the integer number of seconds since January 1, 1970

color: 24-bit RGB value (red least significant) representing the camera's display color

log

Get a list of the status log entries, an array of objects:

date: expressed as the integer number of seconds since January 1, 1970

level: severity, 0=info, 1=warn, 2=error

obj: object name

msg: the text of the log entry

login

Alice Aware will respond with a "result" value of "fail" and a "session" value. Respond with this session value combined with a userid and password and MD5 hash encoded as follows:

response = MD5("userid:session:password")

```
{"cmd":"login","session":"182c8a04f7d4ab042ff8e4a2","response":"response"}
```

There are additional login values supported in order to identify a mobile device:

uuid: a unique identifier

token: a code used to send push notifications

devicename: a description of the device

devicetype: for example, "iOS"

if a correct response is received, Alice Aware will respond:

```
{"result":"success","data":{"system name":"your system name"}}
```

For all other commands, you must supply a valid "session" value as supplied by the **login** command.

logout

If you were successfully logged-in, you will receive

```
{"result":"success"}
```

ptz

Operate a camera's PTZ functionality

camera: a camera's short name

button: this value determines the PTZ operation performed:

0: Pan left

1: Pan right

2: Tilt up

3: Tilt down

4: Center or home (if supported by camera)

5: Zoom in

6: Zoom out

8..10: Power mode, 50, 60, or outdoor

11..26: Brightness 0-15

27..33: Contrast 0-6

34..35: IR on, off

101..120: Go to preset position 1..20

updown: send a value of 1 to indicate that a complementary "stop" event will follow; send 0 otherwise and the camera will be moved for a preset duration

status

Get (and optionally set) the state of the traffic signal icon, active global profile as well as the schedule's hold/run state:

signal: a single digit 0 for red, 1 for green, 2 for yellow.

profile: a single digit 0-7 for the profile number to set; or -1 to change the hold/run state. This functions the same it does on the local UI, so sending a profile change a second time will set the schedule to it's "hold" state.

dio: the state of a DIO output. An array of 0's and 1's is returned, or you may set a particular value by sending an object with:

output: an output number 0-7

force: true or false

msec: the number of milliseconds to hold the output enabled if *force* is not specified.

play: play a sound file from the application Sounds folder.

The follow values are also returned:

lock: the state of the schedule run/hold button: 0 for run, 2 for temp, 1 for hold

clips: a text value describing the number of clips in the New and Stored folders along with disc usage statistics

warnings: the number of new warnings since the **log** command was last used

alerts: the number of new alerts since the **alerts** command was last used

cpu: the server's CPU usage overall (not just Alice Aware) expressed as a percentage.

mem: a string representation of the Alice Aware process memory usage

uptime: a string representation of the time in days:hours:minutes:seconds that Alice Aware has been running

sysconfig

Get and set system configuration settings. Admin access required.

archive (output and optionally input): enable web archival

schedule (output and optionally input): enable the global schedule

trigger

Trigger the motion sensor on a specific camera. Admin access required. Additional required values:

camera: a valid and enabled camera short name.

How to access your Alice Aware from a web browser or a mobile client app

Once your cameras are connected and recording and sending alerts, you may now wish to view your cameras remotely (off-site). To get started, use the Remote Access Wizard button, the globe icon at the top of the main window.



For even further assistance, there are a number of networking hurdles discussed on the network configuration and troubleshooting section of this document.

Following successful network configuration, you may wish to install one of the following smart phone client applications. These will allow you control over many key Alice Aware features, such as changing the active profile, traffic signal icon, reviewing and deleting clips, etc.

Android: <https://play.google.com/store/apps/details?id=com.blueirissoftware.blueiris>

iPhone/iPad/iPod: <https://itunes.apple.com/app/blue-iris/id585350145?;amp;amp;amp;mt=8&mt=8>