Axis Media Control (AMC)

User's Manual

AXIS®
COMMUNICATIONS

About This Document

This manual is intended for administrators and users of the AXIS cameras and servers that want more detailed information about configuring the AXIS Media Control.

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Axis Customer Services

Should you require any technical assistance, please contact your Axis reseller. If your questions cannot be answered immediately, your reseller will forward your queries through the appropriate channels to ensure a rapid response. If you are connected to the Internet, you can:

Download user documentation and firmware updates

Find answers to resolved problems in the FAQ database. Search by product, category, or phrases

Report problems to Axis support staff by logging in to your private support area

Visit the Axis Support Web at www.axis.com/techsup/

Axis Media Control (AMC) User's Manual
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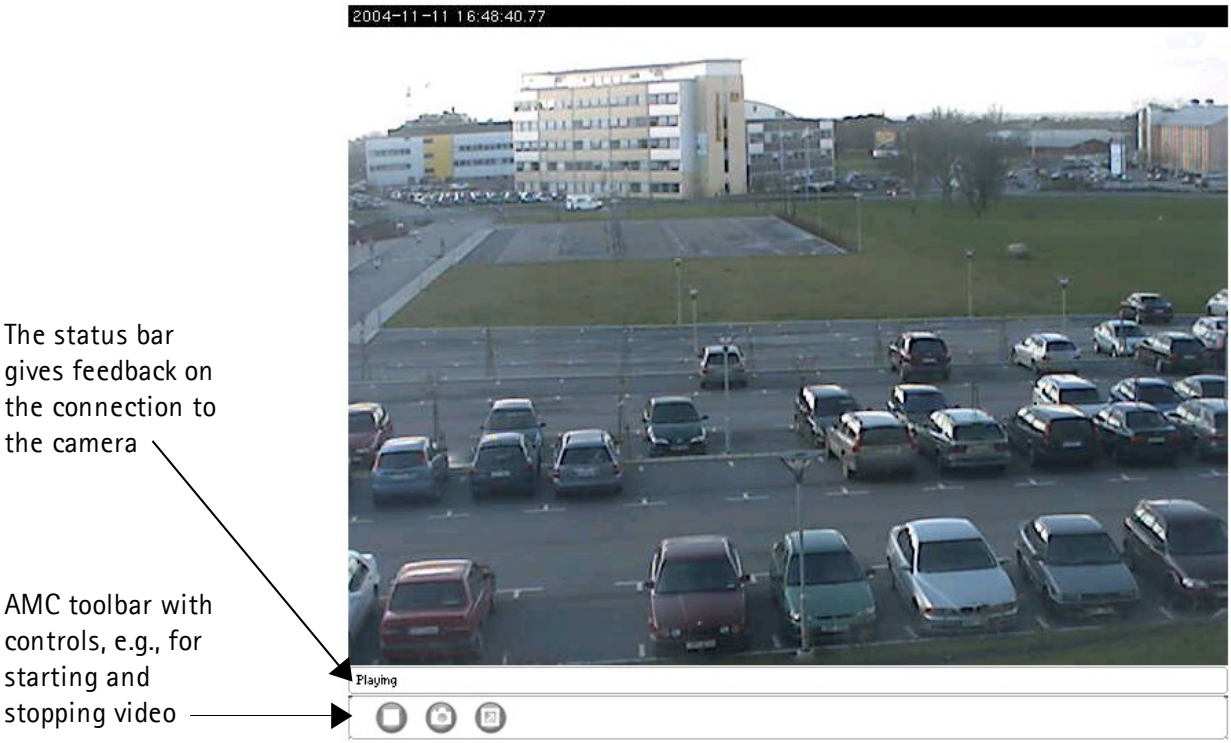
Introduction

This document gives you an overview of the controls provided by AXIS Media Control (AMC). AMC is an ActiveX component that enables live video to be viewed in a Web browser. Administrator or Operator rights are required to install and use AMC.

Table 1: Technical Requirements

	M-JPEG	MPEG
Internet Browser	Internet Explorer 6.0 or later	Internet Explorer 6.0 or later
Operating System	Windows 2000 Windows 2003 Server, Windows XP	Windows 2000 Windows 2003 Server Windows XP
CPU	Intel Pentium III 500 MHz or higher (1 GHz recommended), or comparable AMD processor	Intel Pentium III 1 GHz or higher, or comparable AMD processor
Memory	128 MB RAM	128 MB RAM
Graphics Card	16 MB video memory (32/64 MB recommended for high resolution/color depths)	AGP card with DirectX support 64 MB video memory
Software		DirectX 9.0 or higher

In addition to supporting streaming video, AMC provides additional camera controls. The controls provided by AMC will vary according to the features of the Axis camera and include controls for MPEG-2, MPEG-4, audio, motion detection, and Pan/Tilt/Zoom.



AMC & MPEG-4 Decoder

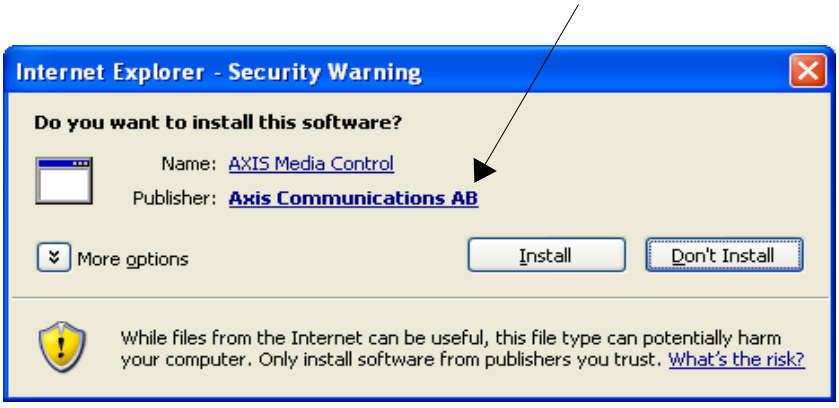
Installing AMC

If you are logged in and have Administrator rights to your computer, AMC will be installed when you access an Axis camera or video server for the first time, or when a newer version of the AMC is required by the Axis camera or video server.

Note: A system administrator may also allow other types of users to install and update AMC. If you have a problem installing AMC, please see you system administrator.

1. Start the Web browser and enter the IP address or domain name for the camera or video server you want to access.
2. A Security Warning dialog will appear. Click **Install** to proceed with the installation.

Note: Make sure that Axis Communications AB is listed as the Publisher!



3. AMC is now installed and can be configured by opening the AMC Control Panel. Open the control panel either by right clicking in the video window, or by clicking **Start > Settings > Control Panel > Axis Media Control**. For more information about AMC configuration see AMC Control Panel.

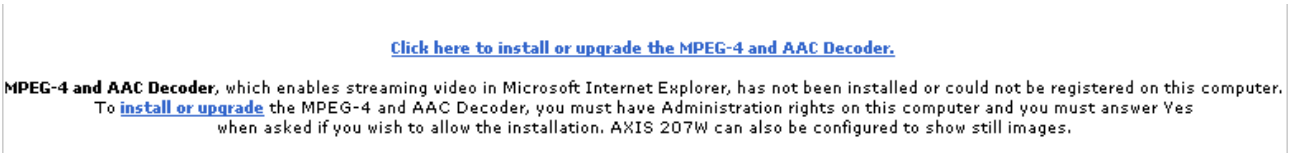
Removing AMC

1. If you need to remove AMC from your computer, click **Start > Settings > Control Panel > Add/Remove Programs** to remove the program.
2. Select **AXIS Media Control Embedded**. Do not delete the **AXIS Media Control** program since other Axis products may use it.

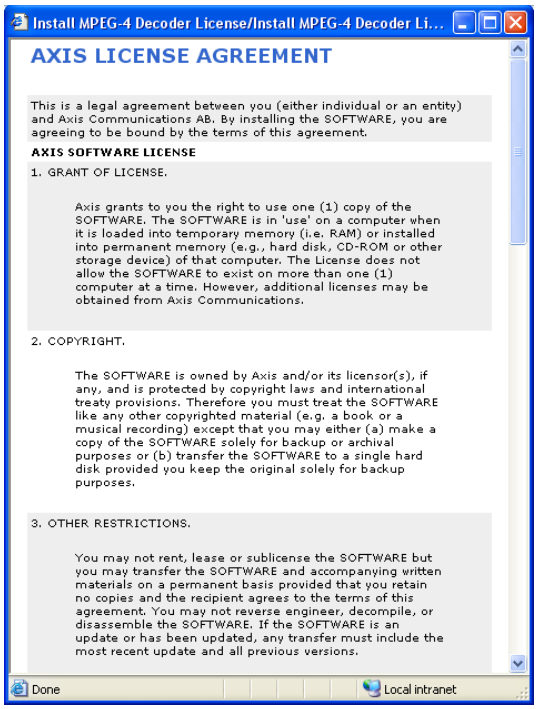
Installing an AAC Decoder

If you want to hear or transmit audio from your Axis camera over your network or over the Internet, and your hardware supports AAC audio, you will need to install an AAC decoder.

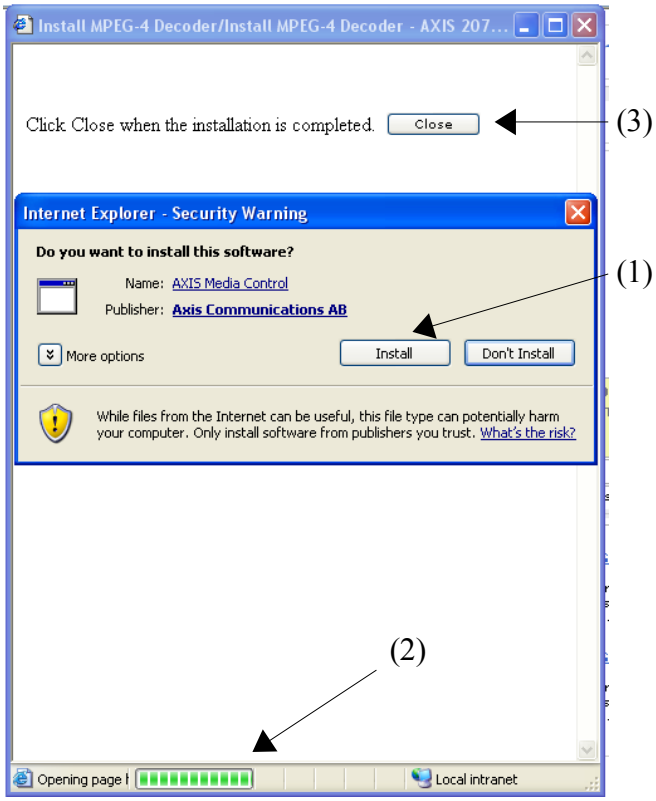
1. To start the installation, select the **Click here to install or upgrade the MPEG-4 and AAC Decoder** link in the Live View page as shown in the figure below.



2. Read through the MPEG license agreement that appears, and if you agree to the conditions, select **I accept the License agreement** and click **OK**.



3. Finally, click **Install** (1), and when the green status bar (2) has finished, click **Close** (3) to complete the installation.



Removing an AAC Decoder

To remove the decoder:

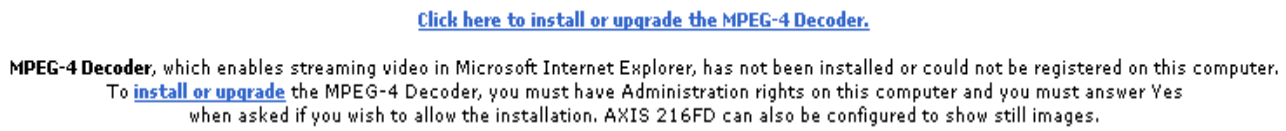
1. Open the **C:\WINDOWS\Downloaded Program Files** folder.
2. Right-click the file **CAxAacDec Class** and select **Remove**.

Installing an MPEG-4 Decoder

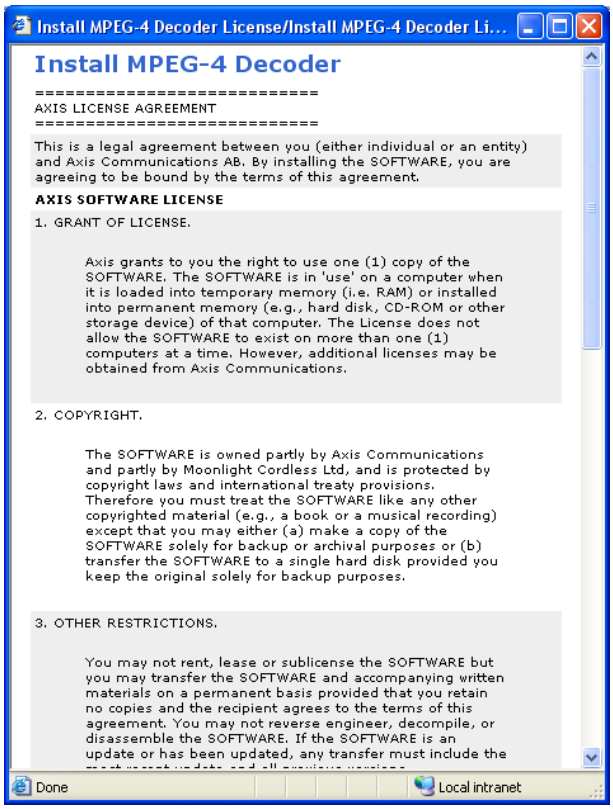
If you want to view the live video from your Axis camera over your network or over the Internet, you will need to install an MPEG-4 decoder.

Note: A system administrator may prevent users from installing and updating the MPEG-4 decoder. If you have a problem installing the MPEG-4 decoder, please see you system administrator.

1. To start the installation, select the **Click here to install or upgrade the MPEG-4 and AAC Decoder** link in the Live View page as shown in the figure below.



2. Read through the MPEG license agreement that appears, and if you agree to the conditions, select **I accept the License agreement** and click **OK**.



3. Finally, click **Install** to complete the installation.

Removing an MPEG-4 Decoder

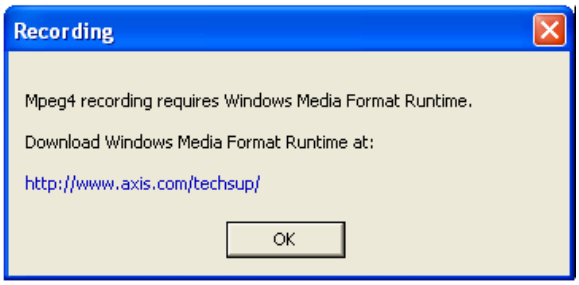
To remove the decoder:

3. Open the **C:\WINDOWS\Downloaded Program Files** folder.
4. Right-click the file **CAxMP4Dec Class** and select **Remove**.

Installing Windows Media Format Runtime

Windows Media Format Runtime (WMFR) is used to create a high-definition Windows Media Video files. This is the file format AMC uses to store recorded video. For more information see the Recording Tab.

If WMFR is not already installed on your computer when you install AMC, you will be prompted to install it.



Note: WMFR is included in Windows XP SP2, and will automatically be installed when you download and install XP SP2.

You can wait to install WMFR, but you cannot record video using AMC until it is installed. See the Recording Tab.

Toolbar Controls

The AMC toolbar, visible below the video image in the Live View page of an Axis camera or video server, will have general controls for playing or stopping the media stream. The Live View page may also have other controls depending on the Axis product and how it has been configured in the Setup page. This section gives a description of all the AMC controls.

General Controls

There are AMC controls that are common to all cameras.

The **Play** button connects to the Axis product and starts playing a media stream.

The **Stop** button stops the stream being played and terminates all network traffic with the Axis product.

The **Snapshot** button takes a snapshot of the current image. The location where the image file is saved can be specified using the AMC Control Panel.

Click the **View Full Screen** button and the video image will fill the entire screen area. No other windows will be visible. Press **Esc** (Escape) on the computer keyboard to cancel full screen view.

The record button is used to record the current video stream. The location where the image file is saved can be specified using the AMC Control Panel.

Audio Controls

There are some AMC controls that are specifically for audio, but are only visible if audio is enabled in the Web Setup page for your Axis Camera. These controls change the settings for the speaker and microphone connected to the camera or video server that is being configured.

Click the **Speaker Button** to switch the sound off and on to your computer's speaker.

If you have set your camera to half duplex mode and the half duplex **Listen** button appears in the live view page of your Axis camera, you are only able to receive audio from the built-in or external camera microphone. To be able to send audio, click this button. See note below.

If you have set your camera to half duplex mode and the half duplex **Talk** button appears in the live view page of your Axis camera, you are only able to send audio to the speakers connected to your Axis camera. To be able to receive audio, click this button.

Click the **Microphone** button to switch the sound off and on to your computer's microphone. In Simplex - speaker only mode, you can click this button to stop sending audio to the camera. See note below.

Note: In Simplex – speaker only mode microphone only, you can use either the **Microphone** button or the half duplex **Talk** button to stop sending audio to the camera. To send audio, both buttons must be enabled.

Use this scale to control the volume of the speakers and the microphone.

Pan/Tilt/Zoom Controls

Center Mode

The default setting for PTZ is the Center Mode. When in Center Mode, click on any part of the image other than its exact center and the camera will move so that the point you clicked on becomes the new center of the image.

Emulated Joystick Mode

If you select Emulate Joystick Mode, the camera moves in the direction of the mouse pointer. If you click and hold down on the left mouse button, and then point your cursor at the lower left hand corner of the image, the camera continues to move left and down until you release the mouse button.

AMC Control Panel

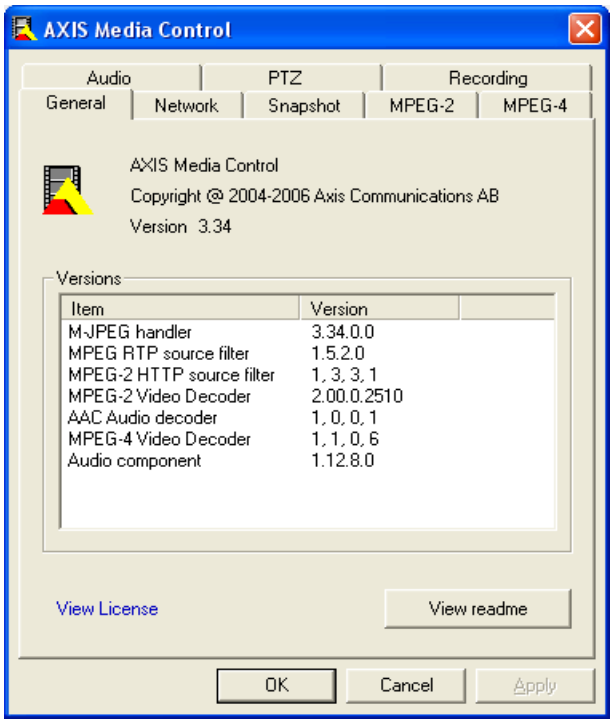
The AMC Control Panel is used to configure AMC. The figure below, General Tab, shows the different parts of AMC that can be configured such as audio and PTZ, for example. The sections below describe each of these AMC tabs and how to configure AMC.

Open the AMC Control Panel by clicking **Start > Settings > Control Panel > Axis Media Control**. Depending on which camera you are using, you will have either some or all of the following tabs shown in the figure below.

> **Note:** If you are using a simpler Axis camera, not all of the tabs shown below will be visible. If you then log into a camera with greater functionality, the necessary software will also be installed for use with that camera. If you later go back to the simpler camera, while not usable, the additional tabs will still be visible.

> **Note:** Also note that any changes you make to the settings tabs in AMC will not appear in the live view until you refresh your browser (Click **View > Refresh**).

General Tab



Versions

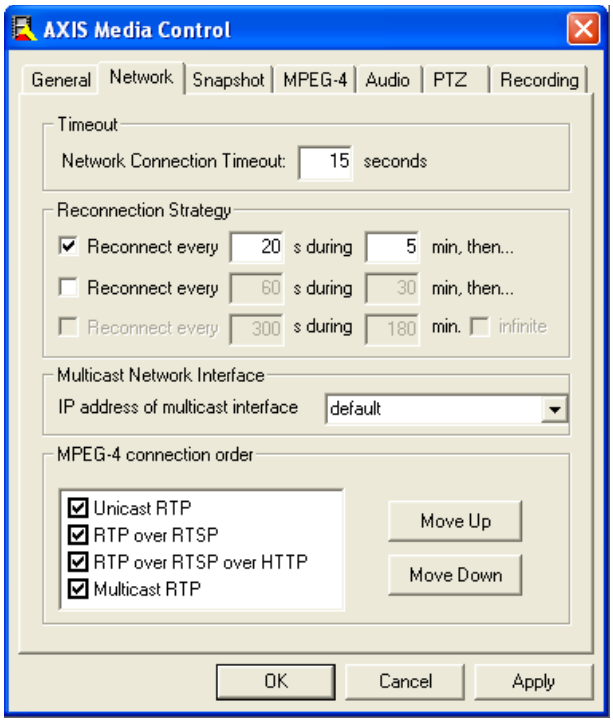
Versions shows the software that has been installed to use with AMC and your Axis camera together with its version number.

The figure above shows version information about M-JPEG, MPEG and audio components.

Click on View License to open the Axis AMC support site in you Web browser: http://www.axis.com/techsup/cam_servers/amc_software/license.htm.

Click on **View readme** to open a text document providing more information about your specific version of AMC.

Network Tab



Note that any changes you make to this tab will not appear in the live view until you refresh your browser (Click **View > Refresh**).

Timeout

Timeout is the maximum time (seconds) that AMC will attempt to connect to an Axis product before displaying an error message. The maximum timeout is 999 seconds; the default is 15 seconds.

Reconnection Strategy

If for any reason AMC looses its connection with your Axis camera, a **Reconnection Strategy** can be used to set up a reconnection schedule. The default strategy is for AMC to try to reconnect to the camera every 20 seconds for 5 minutes. If AMC is not able to reconnect to your camera within 5 minutes, an error message will pop up telling you that AMC was not able to reconnect to the camera.

If you still want AMC to keep trying to reconnect to your camera, you can also set up a second and even a third period of time. If you want AMC to keep trying indefinitely to reconnect to your camera, click the **infinite** box.

Multicast Network Interface

The Multicast Network Interface is the interface that AMC will use to connect to the multicast stream sent from the Axis camera or video server. Windows will use the default interface (see the figure abve), unless you specify a specific interface listed in the drop down menu **IP address of multicast interface**.

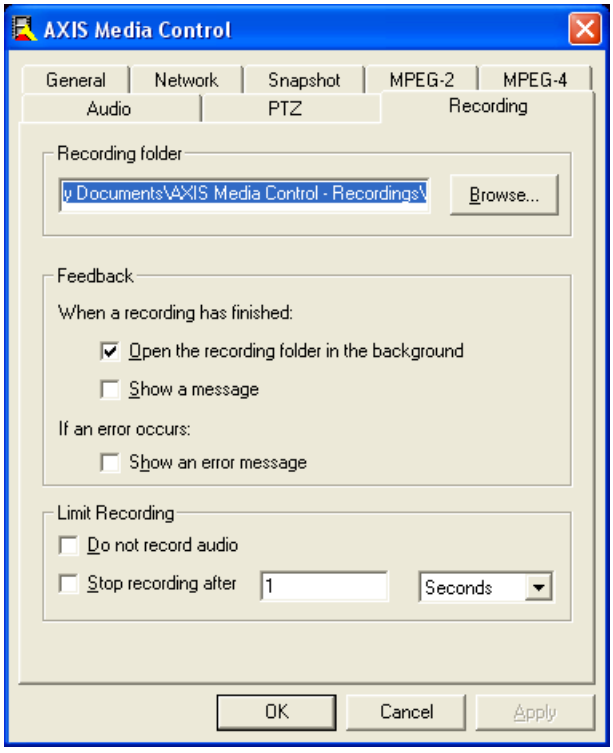
For example, a specific IP address can be selected if the multicast stream sent from the network camera or video server is not visible. Or, if you have more than one network interface, you can select which network interface AMC will use to connect to the multicast stream sent from the Axis camera or video server listed.

MPEG-4 connection order

AMC will use one of the protocols listed above depending on your network environment. It will try each protocol in the order you specify and use the one that works best.

The default setting is shown in the figure above, but you can either deselect a protocol or change the order AMC uses to select a protocol, by highlighting a protocol and clicking **Move Up** and **Move Down**.

Recording Tab



Note that any changes you make to the Recording tab will not appear in the live view until you refresh your browser (Click **View > Refresh**).

Recording Folder

Specify the recording folder where recordings will be stored when the recording button is clicked. The default recording folder is **My Documents\AXIS Media Control – Recordings**. This folder will be created if it does not already exist.

If you want to save your recording to another folder, simply click on the **Browse** button and choose the folder you would like to use to save your recording.

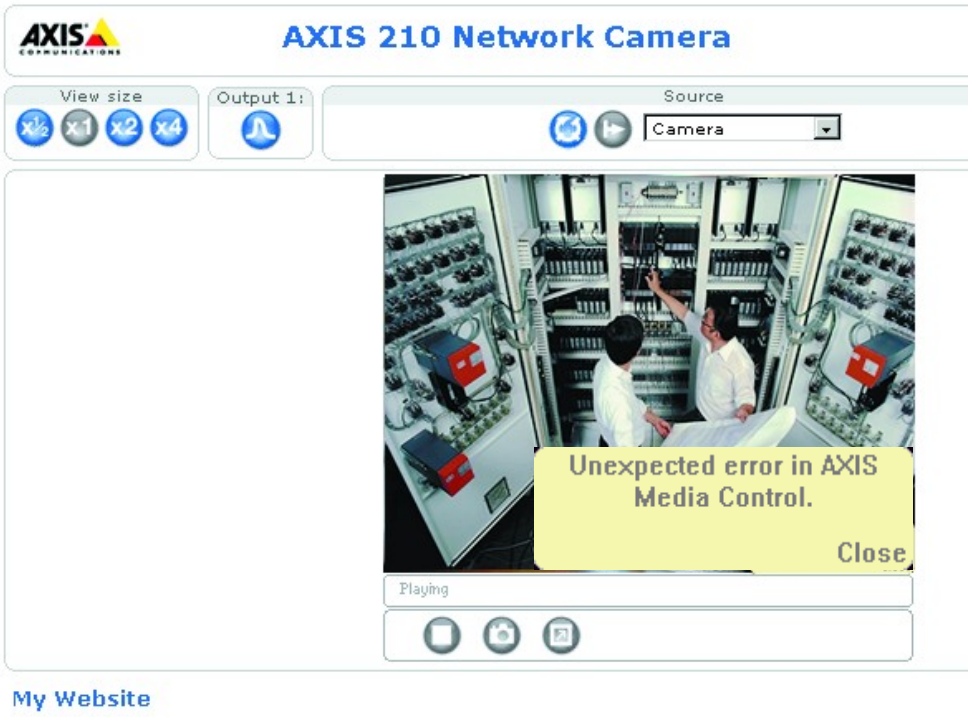
If you have not already installed Windows Media Format Runtime (WMFR), see Installing Windows Media Format Runtime below.

Feedback

It is also possible to specify the form of feedback given when making a recording.

When a recording has finished – Windows notifies you that your recording is either complete or failed via one of its system sounds (See *Assign sounds to program events* in your MS Help and Support files). You can also select if you want the recording folder to open up in the background for quicker access to your recordings, and for an on screen message to appear when a recording is being made.

Show an error message – If you would like to be notified of an error with your recording via a message on the Live View page, select this option. See the figure below for an example.

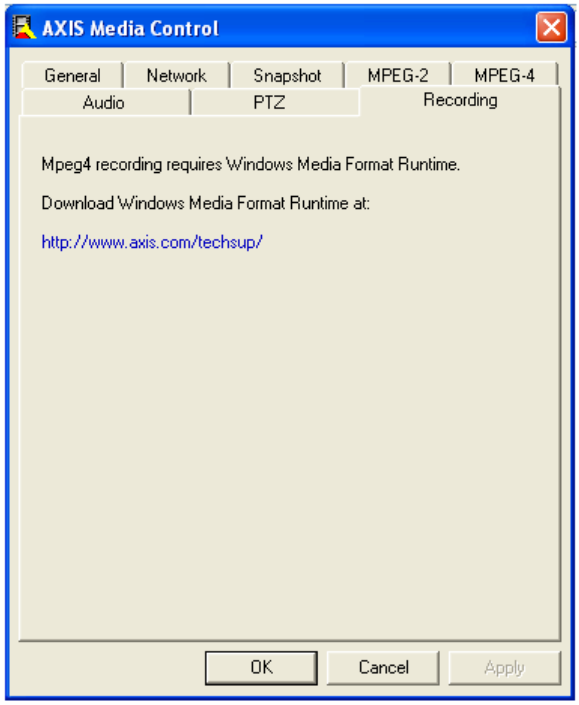


Limit Recording

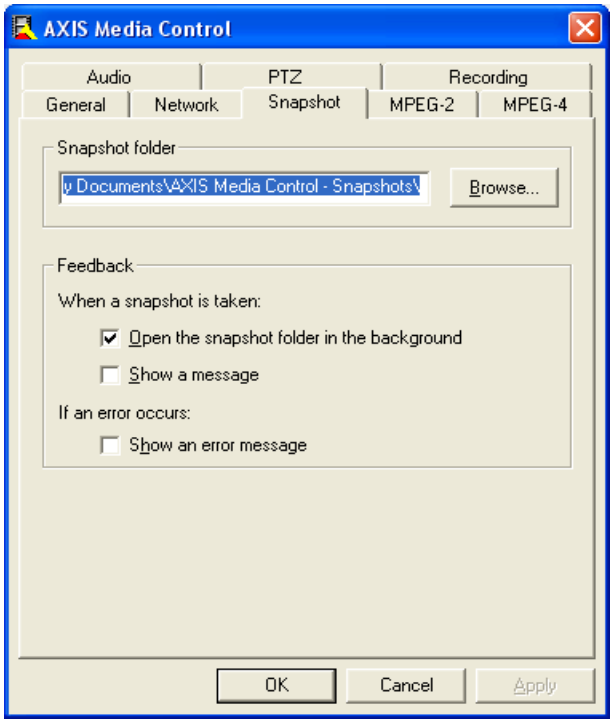
You can select to not record audio, and to limit the amount of time of your recording. Choose **Stop recording after** and set the number of minutes, or seconds for your recording. Or to conserve storage space, you can limit your recording to a specific size measured in megabytes.

Windows Media Format Runtime

If you have not already installed WMFR, you will not be able to record and the Recording tab will appear as the example below. To install WMFR, simply follow the instructions in the Recording tab as shown in the example below.



Snapshot Tab



Note that any changes you make to the Snapshot tab will not appear in the live view until you refresh your browser (Click **View > Refresh**).

Snapshot folder

Specify the snapshot folder where snapshot images will be stored (when the Snapshot button is clicked). The default snapshot folder is **My Documents\AXIS Media Control - Snapshots**. This folder will be created if it does not already exist.

If you want to save your snapshot to another folder, simply click on the **Browse** button and choose the folder you would like to use to save your snapshot.

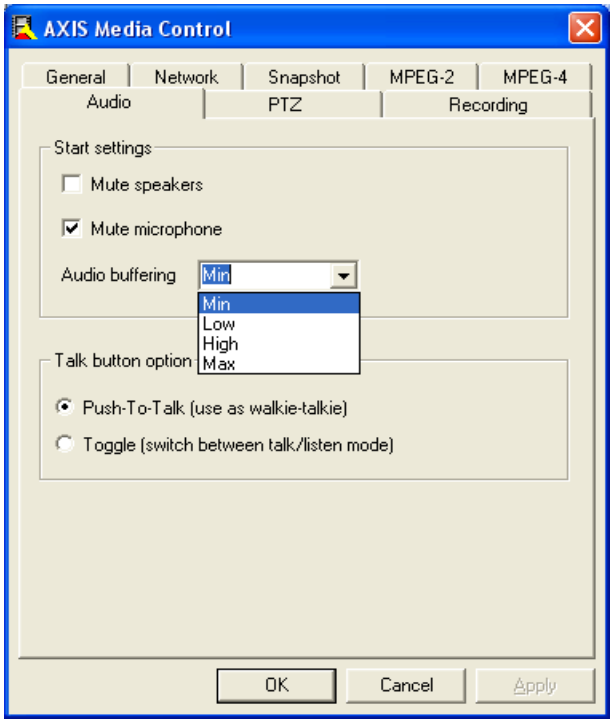
Feedback

It is also possible to specify the form of feedback given when taking a snapshot.

When a snapshot is taken - Windows will notify you that your snapshot has been taken or failed to be taken via one of its system sounds (See *Assign sounds to program events* in your MS Help and Support files). You can also select if you want the snapshot folder to open up in the background for quicker access to your snapshots, and for an on screen message to appear when a snapshot is taken.

Show an error message – If you would like to be notified of an error with your snapshot via a message on the Live View page, select this option. See Recording Tab Feedback for an example.

Audio Tab



The Audio Tab controls the default settings for your PC's speakers and microphone and audio buffering. Note that any changes you make in this tab will only take effect after you refresh the web page showing your Axis camera (Click **View > Refresh**).

Start Settings

Mute speakers – Turn off the sound from your PC's speakers.

Mute microphone – Turn off the sound from your PC's microphone.

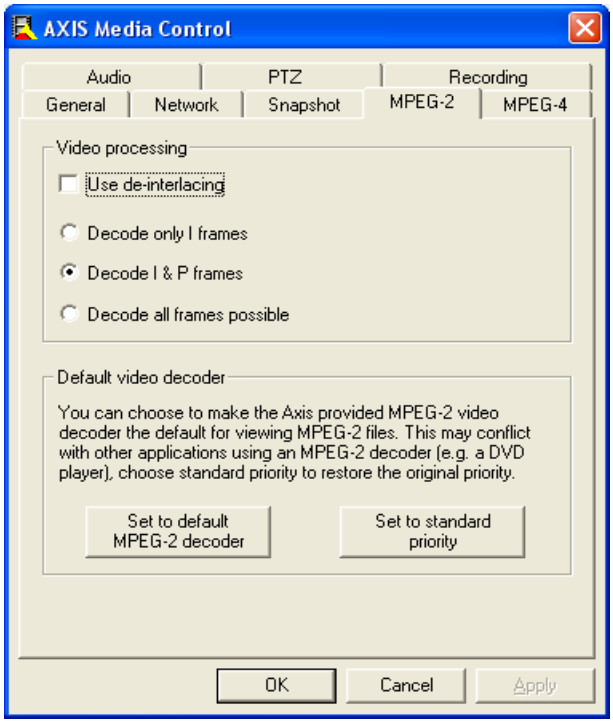
Audio buffering – The audio buffer size can be adjusted from min to max depending on the quality of your network connection. For networks with lower bandwidth, a higher audio buffering level will reduce audio break-up, but may introduce a noticeable lag in audio transmission. The default value is minimum (Min), which assumes an internal network or a network with good bandwidth.

Talk Button Option

Push-to-talk – If you have configured you Axis camera to be in half duplex mode, select this option to speak by clicking and holding down the microphone button. Let go of the microphone button to be able to hear.

Toggle - Click once to talk and click once to listen. Note that this option is only valid in Half duplex mode and in Simplex - speaker only modes. In Simplex - mode, you switch between talk and secrecy (i.e., no audio is transmitted).

MPEG-2 Tab



This tab sets the advanced properties for MPEG-2 video processing and default video decoder. Changes to the video processing properties will not take effect on media streams being displayed until the stream is restarted.

Note: The MPEG-2 video decoder must be installed for this tab to be present in AMC.

Video Processing

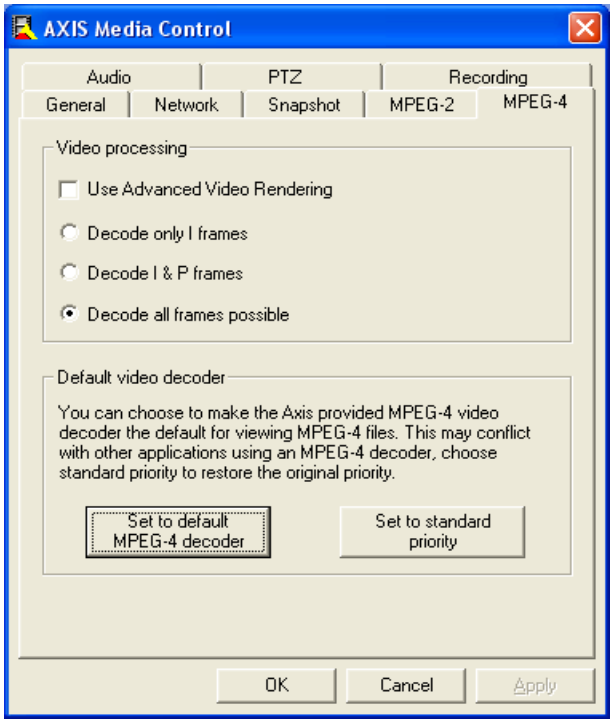
De-interlacing helps eliminate unwanted image effects when viewing rapidly moving objects if you use an Axis video server or Dome camera that uses interlaced display, but not if you use a video server or Dome camera that uses progressive display. The default is to not apply de-interlacing.

By default, AXIS Media Control decodes as many MPEG-2 video frames as possible given the capabilities and performance of the computer. To decrease the amount of CPU capacity used for video processing, it is possible to only decode I or I and P frames. This will, however, greatly reduce the quality of the video being displayed. Only displaying I frames has the lowest performance/quality ratio. For an explanation of different types of MPEG frames, please refer to the MPEG standards.

Default Video Decoder

The MPEG-2 video decoder can be used to view standard MPEG-2 streams and files produced by other sources. This decoder may, however, conflict with other MPEG-2 applications already installed in the target computer, e.g., DVD player software. Use the buttons on this tab to attempt to resolve conflicts, or to set this decoder as the default for viewing MPEG-2 video content.

MPEG-4 Tab



This tab sets the advanced properties for MPEG-4 video processing and default video decoder. Changes to the video processing properties will not take effect on media streams being displayed until the stream is restarted.

Note: The MPEG-4 video decoder must be installed for this tab to be present in AMC.

Video Processing

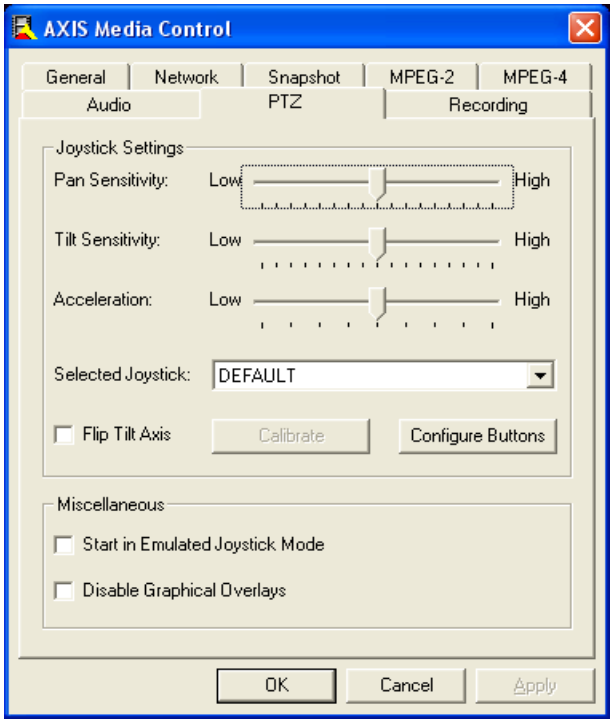
For MPEG-4, a new video renderer has been added with the introduction of DirectX 9. If problems are encountered when rendering the date or text overlay on the video, select the **Use Advanced Video Rendering** check box. This feature will also need to be enabled if you want to use client side overlays in emulated joystick mode with MPEG-4.

By default, AXIS Media Control decodes as many MPEG-4 video frames as possible given the capabilities and performance of the computer. To decrease the amount of CPU capacity used for video processing, it is possible to only decode I or I and P frames. This will, however, greatly reduce the quality of the video being displayed. Only displaying I frames has the lowest performance/quality ratio. For an explanation of different types of MPEG frames, please refer to the MPEG standards.

Default Video Decoder

The MPEG-4 video decoder can be used to view standard MPEG-4 streams and files produced by other sources. This decoder may, however, conflict with other MPEG-4 applications already installed in the target computer, e.g., XVID, DIVX6 players. Use the buttons on this tab to attempt to resolve conflicts, or to set this decoder as the default for viewing MPEG-4 video content.

PTZ Tab



Note that any changes you make to the PTZ tab will not appear in the live view until you refresh your browser (Click **View > Refresh**).

Joystick Settings

Pan Sensitivity – Controls the horizontal (left/right) sensitivity of your joystick.

- At low sensitivity, maximum speed is achieved by moving the joystick arm far to the left or right.
- At high sensitivity, maximum speed is achieved by moving the joystick arm very little to the left or right.

Tilt Sensitivity – Use the Tilt Sensitivity scale to adjust vertical (up/down) sensitivity of your joystick.

- At low sensitivity, maximum speed is achieved by moving the joystick arm far up or down.
- At high sensitivity, maximum speed is achieved by moving the joystick arm very little up or down.

Acceleration – At low acceleration, the camera turns at a speed relative to how far you move the joystick in any direction. If you move the joystick far to one side, the camera will turn quickly to that side.

High acceleration causes the joystick to move faster the further you move the joystick arm in any direction.

Note: See Axis 295 Video Surveillance Joystick below for a description of the joystick and its parts.

Selected Joystick – If you have more than one joystick attached to your computer, use this drop down menu to select which joystick you want to use with your Axis PTZ camera. The default joystick will appear in this box when it is plugged into a USB port and after you restart the AMC Control Panel.

Flip Tilt Axis – The default setting for AMC is for the camera to tilt up if you pull your joystick arm

backwards, and tilt down if you push your joystick arm forward.

Check **Flip Tilt Axis** if you would like to reverse how your camera tilts. In other words, the camera will now tilt down if you pull the joystick arm backwards and tilt up if you push your joystick arm forward.

Calibrate – Click **Calibrate** to open the **Game Controllers** window located in the MS Windows control panel, which is used to configure game controllers located on the system. See the MS Windows help files for more information.

Configure Buttons – Click on **Configure Buttons** to bring up the **Configure Button Menu**. Your Axis joystick has 12 buttons that can each be programmed to perform one of several different functions. See Joystick button configuration below for more information.

Miscellaneous

Set AMC to start in Emulated Joystick Mode instead of the default Center Mode.

Select **Disable Graphical Overlays** to hide the graphical overlays that normally appear in the image when viewing your camera on the Live View Web page.

Axis 295 Video Surveillance Joystick

An optional device that can be used with AMC is the Axis 295 Surveillance Joystick. It is specifically designed for responsive and accurate control of Pan/tilt/zoom (PTZ) and dome cameras.

This joystick has 2 configurable buttons on its arm and 10 configurable buttons on its base.

While viewing the Live View image of your camera in your browser, you can move the joystick arm left/right and forwards/backwards to pan the camera to different positions.

The joystick arm can also be turned clockwise to zoom the camera in on an image and counter clockwise to zoom the camera out from an image.

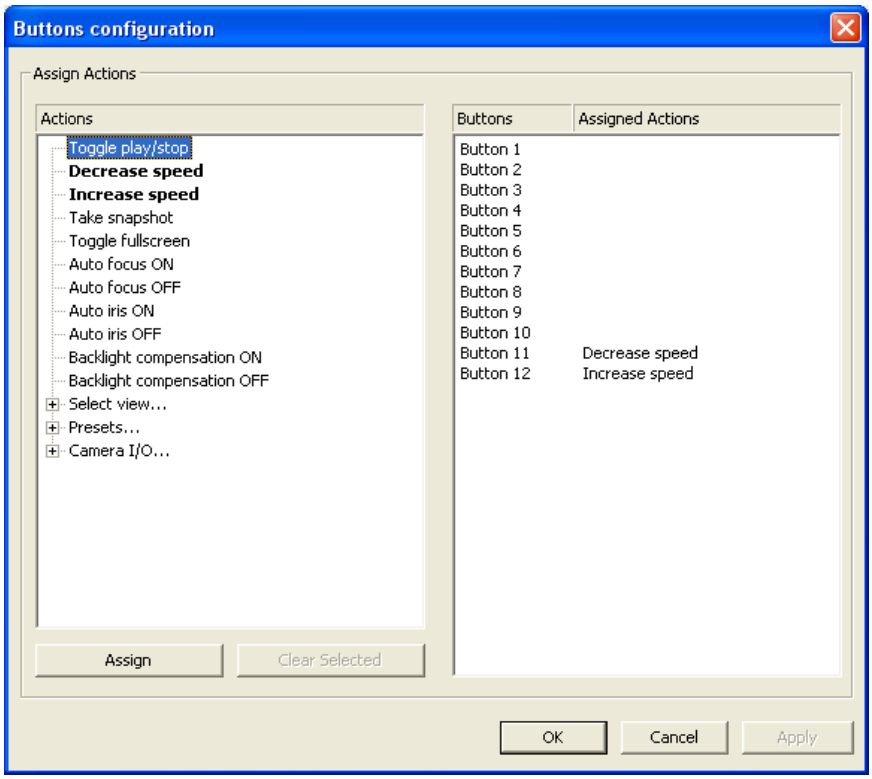
For more information see Joystick Settings.

Joystick Button Configuration

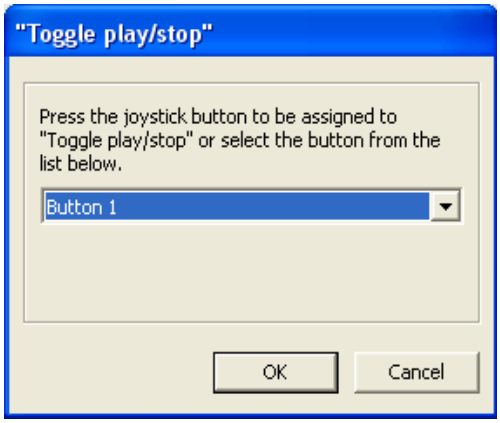
Using Your Mouse

Follow the steps below to configure one or more of the 12 joystick buttons:

1. Click once with your left mouse button to highlight one of the actions such as **Toggle play/stop** listed in the menu under **Actions,**



2. Click on **Assign** to bring up the button selection window.

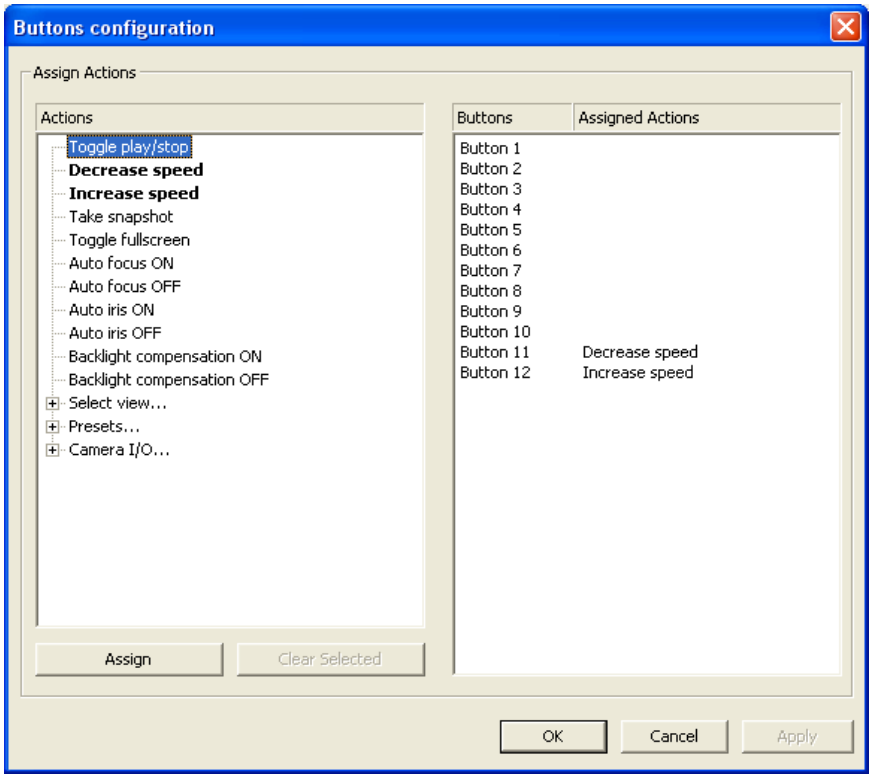
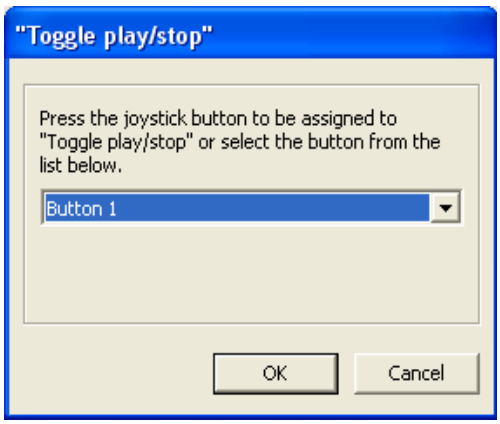


3. Select one of the buttons in the menu such as **Button 1** shown in the figure below and press the return key.
   You can see under **Assigned Actions**, in the figure above, that buttons 11 and 12 have already been assigned a specific action. Note also that assigned actions are highlighted under **Actions**, and actual button configurations for your camera may be different from the example above.

Using the Axis 295 Video Surveillance Joystick

Follow the steps below to configure your joystick buttons using your Axis 295 Video Surveillance Joystick:

1. Click once with your left mouse button to highlight one of the actions such as **Toggle play/stop** listed in the menu under **Actions**,



2. Press the configurable joystick button that you want to assign to that action and the button selection window will pop up with the button you selected highlighted in the menu. Press Return to confirm your selection.
   You can see under **Assigned Actions**, in the figure above, that buttons 11 and 12 have already been assigned a specific action. Note also that assigned actions are highlighted under **Actions**, and actual button configurations for your camera may be different from the example above.