



Video Recording

OPERATION GUIDE

for

Gov Video Recorder 9
Court Video Recorder 9
Interview Video Recorder 9

About This Manual

This manual covers the installation procedures for the video recording using SoniClear software and systems, including the following products:

- SoniClear Gov Video Recorder 9
- SoniClear Court Video Recorder 9
- SoniClear Interview Video Recorder 9
- Axis Video Camera Kits
- J-Tech Video Encoder Kit

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SoniClear Video Recording

Overview

SoniClear video recording products are designed to make it easy to capture digital video along with digital audio. The software works with compatible Axis video cameras and encoders, and keeps the audio and video synchronized during playback. The user can select audio from any microphone or the microphone in the camera while viewing synchronized video of the event. The current release supports a single Axis camera or encoder that is connected via Ethernet.

SoniClear Video Kits

SoniClear Video Camera Kits are available for use with Gov Video Recorder 9, Court Video Recorder 9, and Interview Video Recorder 9. The kits include either an Axis camera, or an Axis video encoder for connection to an existing video camera or video switcher. The kits also include all the required parts to start video recording quickly and easily.

Axis P1365 Video Camera Kit

The Axis P1375 Video Camera Kit includes the following hardware:

- Axis P1375 video camera
www.axis.com/en-us/products/axis-p1375/
- Axis P8221 Network I/O Audio Module (optional)
www.axis.com/en-us/products/axis-p8221
- Axis T8120 POE Power Injector
<http://www.axis.com/us/en/products/midspans/axis-t8120-midspan-15-w-1-port>
- Flexible 25' Ethernet cable for connecting camera to the Power Injector.
- Standard 6' Ethernet cable for connecting the Power Injector to the computer.

Axis V59 Video Camera Kit

The Axis V59 Video Camera Kit includes the following hardware:

- Axis V59 video camera
<https://www.axis.com/us/en/products/axis-v59-series>
- Flexible 25' Ethernet cable for connecting camera to the Power Injector.

Axis F44 Video Camera Kit

The Axis F44 Video Camera Kit includes the following hardware:

- Axis F44 video camera encoder
www.axis.com/products/f_series/index.htm
- Axis F1015 Varifocal camera head with 39 Foot Cable (4 heads)
www.axis.com/us/en/products/axis-f1015
- Axis F8203 Tripod Mounting Bracket (4 mounts)
www.axis.com/en-us/products/camera-mounts/axis-f8203-fixed-mount-bracket
- Axis T8120 POE Power Injector (optional)
<http://www.axis.com/us/en/products/midspans/axis-t8120-midspan-15-w-1-port>
- Flexible 25' Ethernet cable for connecting camera to the Power Injector.
- Standard 6' Ethernet cable for connecting the Power Injector to the computer.

J-Tech Video Encoder Kit

The J-Tech Video Encoder Kit includes the following hardware:

- JTECH-ENCH4 video encoder
www.jtechdigital.com/product/jtech-ench4-0220/
- Flexible 25' Ethernet cable for connecting camera to the computer.

Recommended Optional Equipment:

The follow equipment can be used with the Camera and Encoder Kits to optimize the configuration for various requirements:

- **SoniClear Tablet Recorder System.** This is a Microsoft Surface Pro 4 business-class laptop with an i5 processor.
www.soniclear.com/tablet-recorder
- **Ethernet POE switch.** Used for connecting both the camera device and a network connection to a single Ethernet jack on the computer. The POE power output from the switch eliminates the need to power the camera using a power brick or POE Injector. For most reliable operation, use an unmanaged switch that does not implement the “Green Ethernet” power saving standard (802.3az), or a managed switch that has the ability to turn off this feature.
- **Microphones for recording audio.** Various SoniClear microphones will work with video, including multichannel recording interfaces, such as the SoniClear Digikit USB audio interface. Consult with SoniClear for recommended audio additions to the video kit:

<https://www.soniclear.com/products/#microphones>

Recording with the Video Recording Kit

Using the P1375 Video Camera Kit

The Video Recording Kit with the Axis P1365 Camera is supplied ready to use. Once the SoniClear software has been installed and the computer has been configured for video, you can start recording using these setup steps:

1. Set up the computer and microphones as required for the recording.
2. Set up the Axis camera on a user-supplied tripod.
3. Plug the 25' Ethernet cable into the Axis camera.
4. For kits that do not include a P8221 audio encoder:
 - a. Plug the other end of the 25' Ethernet cable into the Power Injector (such as the Axis T9120). Be sure to use the jack labeled "Data & Power Out".
 - b. Plug the 6' Ethernet cable into the jack labeled "Data In" and plug the other end of the cable into the laptop or desktop computer.
 - c. Plug the audio feed from the microphone or sound system into the microphone input jack on the back of the camera. The kit of parts to make this connection will vary, depending on the sound system. Contact SoniClear for assistance with this connection.
5. For kits that do include a P8221 audio encoder:
 - a. Plug the camera and encoder into a suitable Ethernet switch. Note that the camera and encoder can be located anywhere, they do not need to be next to each other or the computer.
 - b. Plug the Ethernet switch into the computer.
 - c. Plug the audio feed from the microphone or sound system into the microphone input jack on the P8221.
6. Run SoniClear and record as directed in the SoniClear Users Guide.
7. Loosen the focus and zoom adjustments on the camera. View the SoniClear Liveview video preview window while adjusting the focus and zoom to the appropriate coverage of the room. After adjustment is complete, tighten the focus and zoom adjustments to prevent shifting.
8. After general adjustments have been made on the camera lens, it may be necessary to perform additional fine focus adjustment using the computer focus

assist feature. Connect to the camera using a web browser (entering the username and password for the camera). In the Settings section, select video settings and focus, following the steps outlined on that display.

Using the V59 Video Camera Kit

The Video Recording Kit with the Axis V59 Camera is supplied ready to use. Once the SoniClear software has been installed and the computer has been configured for video, you can start recording using these setup steps:

1. Set up the computer and microphones as required for the recording.
2. Set up the Axis camera on a user-supplied tripod.
3. Plug the 25' Ethernet cable into the Axis camera.
4. Plug the other end of the 25' Ethernet cable into the Ethernet jack in the laptop or desktop computer.
5. Plug the audio feed from the microphone or sound system into the Left XLR microphone input jack on the back of the camera. For systems using the SoniClear Digikit audio interface:
 - a. Kits with the Presonus Digimax preamp, the supplied cable connects from the Digiface Phones out (1/4" TRS phone plug) to the V59 camera Left XLR microphone jack.
 - b. Kits with the Behringer ADA8200 preamp, the supplied cable connects from the ADA8200 output #1 XLR jack to the V59 camera Left XLR microphone jack.
6. Run SoniClear and record as directed in the SoniClear Users Guide.
7. Adjust the camera settings using the web control panel for the V59 camera. To do this, enter the address of the camera in the Microsoft Internet Explorer browser (such as 192.168.0.90). When prompted, enter the username and password. After authentication, make the following adjustments:
 - a. Adjust Pan, Tilt, Zoom, and Focus manually in the main Liveview window.
 - b. If needed, enter Preset locations for Pan, Tilt, Zoom in the Setup panel, under the *PTZ* section.
 - c. If needed, adjust White Balance in the Setup panel, under *Video and Audio/Camera Settings* section.

Using the F44 Video Camera Kit

The Video Recording Kit with the Axis F44 Camera is supplied ready to use. Once the SoniClear software has been installed and the computer has been configured for video, you can start recording using these setup steps:

1. Set up the computer and microphones as required for the recording.
2. Set up each of the four the Axis camera heads on a user-supplied tripod. An optional 4-head mounting bracket is available to hold all four camera head units on a single tripod.
3. Plug the 25' Ethernet cable into the Axis F44 camera base unit.
4. Plug the other end of the 25' Ethernet cable into the Power Injector (such as the Axis T9120). Be sure to use the jack labeled "Data & Power Out".
5. Plug the 6' Ethernet cable into the jack labeled "Data In" and plug the other end of the cable into the Ethernet Crossover Adapter.
6. Plug the Ethernet Crossover Adapter into the Ethernet jack in the laptop or desktop computer.
7. Please note that some computers will connect to the camera without the need for the Ethernet Crossover Adapter. However, in testing we have found the camera may not always connect to the computer without the adapter. If you are connecting directly to the camera as described in this section, using the adapter is necessary for reliable operation.
8. Plug the audio feed from the microphone or sound system into the microphone input jack on the F44 camera base unit.
9. Run SoniClear and record as directed in the [SoniClear Users Guide](#).
10. Using a screwdriver, loosen the focus and zoom adjustments on the camera. View the SoniClear Liveview video preview window while adjusting the focus and zoom to the appropriate coverage of the room. After adjustment is complete, tighten the focus and zoom adjustment screws to prevent shifting.

Using the J-Tech Video Encoder Kit

The Video Recording Kit with the J-Tech Encoder is supplied ready to use. Once the SoniClear software has been installed and the computer has been configured for video, you can start recording using these setup steps:

1. Set up the computer and microphones as required for the recording.
2. Connect the J-Tech encoder to the HDMI video output of the existing camera or video switching unit.
3. Connect the J-Tech encoder to the supplied power adapter.
4. Plug the supplied Ethernet cable into the laptop or desktop computer.
5. Run SoniClear and record as directed in the [SoniClear Users Guide](#).

Setting Up the SoniClear System

The SoniClear Tablet Recorder system is ready to use for video recording without the need for additional configuration steps. If you are using SoniClear software with your own computer, you will need to perform the configuration and installation steps listed in this section.

Hardware Requirements

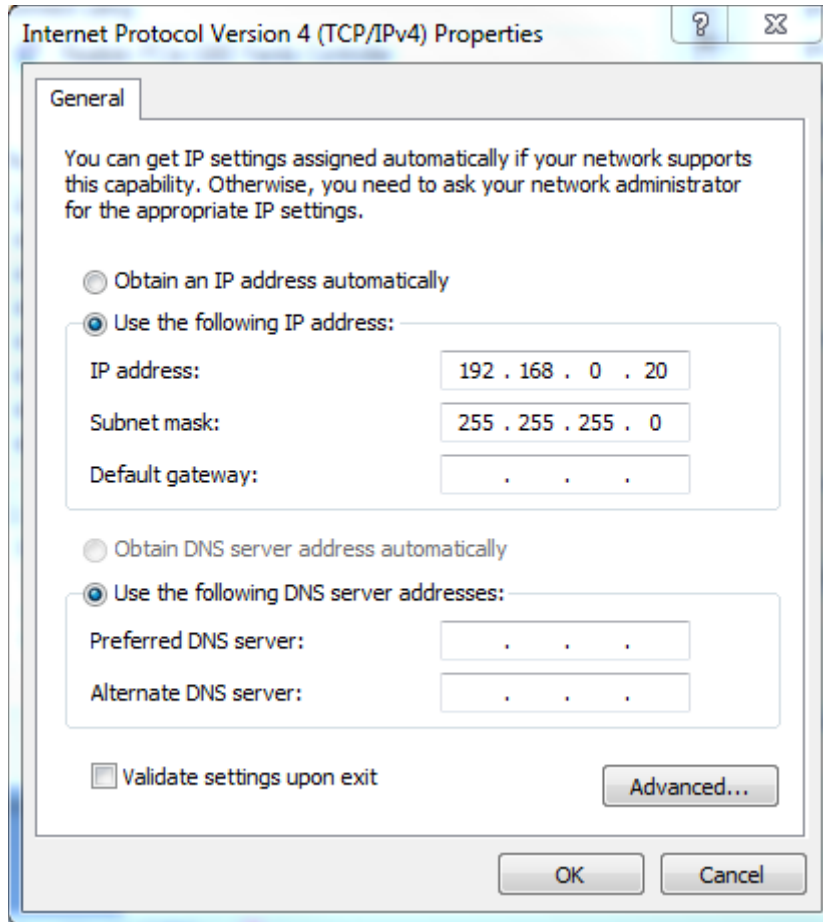
The SoniClear video recording requires a computer that has the following minimum hardware specifications:

- Intel-based desktop or laptop computer with i5 or i7 processor.
- Windows 10 Operating System (64-bit).
- SoniClear-compatible microphones.

Network Address Configuration

If the camera is connected to the laptop (either directly or through an Ethernet switch), the laptop will need to be configured to connect to the camera without the use of an Ethernet router to assign an IP address. This is accomplished by setting a fixed IP address in the laptop network settings:

1. Open the Network and Sharing Center (Click Start button, enter “network”, and select “Network and Sharing Center” control panel search result).
2. Click Change Adapter Settings link in left column.
3. Double click on Ethernet adapter entry to open the Connection Status dialog for that adapter.
4. Click the Properties button.
5. Double click on the Internet Protocol Version 4 entry to edit the connection settings.
6. Select the option “Use the following IP address”.
7. Set the IP address to 192.168.0.20 (or similar address on the same “subnet”).
8. Uncheck the option “Validate settings upon exit”.



9. Make sure the Subnet mask is set to 255.255.255.0 and click OK.
10. Make sure the “Default gateway” field is blank if the camera is directly connected to the computer (since there is no gateway used in this type of connection).
11. Make sure the DNS fields are also blank if this is a direct connection to the camera.
12. Click OK to close the Local Area Connection Properties dialog. This may display a diagnostic error dialog because this setting does not support connection to the Internet. Dismiss these dialogs.
13. Disconnect any Ethernet cable if it is not connected to the Axis camera.
14. Reboot the computer.
15. The computer will reset the Ethernet port to the new static address set in the when you connect to the camera.
16. To confirm the port setting, make sure the camera is connected, and wait for the alternate IP address to be set (done when the little circle on the Ethernet

connection turns to a warning triangle). Then click Start and enter cmd.exe into the search field. Run the cmd.exe program displayed, which will bring up a command line dialog.

17. On the command line enter the command: ipconfig. This will display the current computer IP address.
18. If the displayed IP address is not the one specified, enter the following additional commands:

```
ipconfig /release  
ipconfig /renew  
ipconfig
```

The release and renew steps should force the IP address to the new setting, which will be confirmed by the last ipconfig command.

19. If the IP address does not set correctly, contact SoniClear Support for assistance.

IMPORTANT NOTE: after making these setting changes, the Ethernet port can only be used for connection to the camera. Use the Wi-Fi connection or second Ethernet port for Internet access, if that is required.

Network Device Power Settings

By default, the Ethernet network hardware in the computer will have power settings enabled. This will interfere with recording of video information sent through the Ethernet connection. The power saving settings must be disabled following these steps:

1. Open the Device Manager control panel (Click Start, type “device manager”, and select the Device Manager control panel search result).
2. Open the Network Adapters section of the device list.
3. Double click on the Ethernet network device. (If there is more than one Ethernet device, configure the device that will be connected to the Axis camera).
4. In the device properties dialog select the Power Management tab.
5. The options displayed for power management will vary, depending on the type of network device. The generic option is “Allow the computer to turn off this device to save power”. This should be unchecked. For Intel network devices the dialog will display is a set of options under the section “Power Saver Options”. Uncheck all these options to fully disable power saving.
6. Click OK.
7. Close all programs and reboot the computer.

Disable Wi-Fi

To ensure proper access to the camera via the Ethernet port, it may be necessary in some cases to disable the Wi-Fi transmitter while using the computer with the camera. This is because some systems will try to connect to the camera via Wi-Fi and fail to connect to the Ethernet port. The most reliable way to turn off Wi-Fi is to disable the Wi-Fi driver in the Device control panel. Alternatively, it is possible on many laptop computers to manually disable the Wi-Fi from a button. However, this requires that the system user be properly training on this detail and that they exercise care to make sure the Wi-Fi is turned off before starting SoniClear.

NOD32 Antivirus Setup

SoniClear has been tested for compatibility with the Eset NOD32 antivirus product. SoniClear video recording has not been tested with any other antivirus product and only NOD32 is recommended and supported.

By default, the NOD32 antivirus scanning product tries to monitor the recording files being written by SoniClear. With audio this generally does not interfere. However, with the high data volume produced by video recording the antivirus product can introduce processor overhead and disk drive delays that will cause problems.

To prevent this type of interference, add exclusions in the antivirus software setup for the following file types:

- *.video
- *.index
- *.state
- *.mp3
- *.wav
- *.bkc
- *.bkm
- *.txt

Adjust the settings for NOD32 Real Time Scan following these steps:

1. Open the Eset NOD32 control panel: Click the Start button, click All Programs, scroll down and click Eset folder and the Eset NOD32 folder, then click the Eset NOD32 program icon.
2. In the NOD32 window click the Setup link in the left panel.
3. Click the link “Enter advanced setup...” in the right panel.
4. Double click on the Computer link to open that section.
5. Double click on the “Antivirus and antispysware” link to open that sub-section.
6. Click on the Exclusions link to open the Exclusion editing panel.
7. Click the Add button and enter an exclusion item listed above (such as *.video).
8. Repeat the Add operation to add all the file exclusions.
9. Click OK to close the setup window.
10. Click the link “Enter advanced setup...” in the right panel.
11. Double click on the Computer link to open that section.

12. Double click on the “Antivirus and antispysware” link to open that sub-section.
13. Click on the Real-time file system protection link to open those options.
14. Click on the Setup button for ThreatSense engine parameter setup.
15. Click on Extensions option.
16. Enter an exclusion item listed above, without the “*.” characters (such as VIDEO)
17. Click the Add button.
18. Repeat the Add operation to add all the file exclusions.
19. Click OK twice to close the editing dialogs and close the main NOD32 window.

Adjust the NOD32 web scanning feature to prevent the camera video from being scanned while recording:

1. Open Eset control panel (click on NOD32 icon in System Tray icon).
2. Click on Setup button on left.
3. Click on "Enter advanced setup" link.
4. Expand "Web and Email" settings tree.
5. Expand "Web access protection" settings tree.
6. Click on "URL address management" link.
7. Click the Add button and enter the IP address of the camera (such as 192.168.0.90).
8. Click OK to save the new IP address exclusion. Click Yes to accept security warning, if you get one.

Configure Windows Firewall

After the SoniClear software has been installed the Windows Firewall must be modified to allow access from the SoniClear software to the Axis camera or encoder. Follow these steps:

1. Click Start button and select Control Panel.
2. Ensure that “Small Icons” is set as the display type.
3. Click on Windows Firewall.
4. Click on link in left column, “Allow a program or feature through Windows Firewall”.
5. Click the Change Settings button.
6. Click the Allow Another Program button.
7. If SoniClear 9 is shown on the list of programs:
 - a. Select SoniClear 9 on the list.
 - b. Click the Add button.
8. If SoniClear 9 is not shown on the list, continue:
 - a. Click the Browse button.
 - b. Navigate to the folder where SoniClear was installed, select the SoniClear9.exe program, and click Open.
 - c. Click the Add button.
9. Ensure that both check boxes for SoniClear 9 allowing access on Home/Work and for Public networks are checked.
10. If using the Video Encoder option, these steps will need to be repeated to add the SoniClearVideoProxy.exe program located in the proxy\bin folder under the folder where SoniClear9.exe is located.
11. Click OK button.
12. Close Control Panel.

Troubleshooting Connection to the Video Device

If you have trouble connecting to a camera or encoder device, here are a few tips on how to determine the solution:

1. Rule out IP address problems. Make sure the IP address of the device is on the same subnet as the computer. Other issues can include problems with the device being assigned to the same address as another device on the network, not being accessible because of network connection problems, being behind a hardware firewall, etc.
2. Use the command line ping command to ensure that the recording computer can access the video device address.
3. Try temporarily disabling the Windows firewall. If you disable it and the device still cannot connect, the problem is not the Windows firewall.
4. Some antivirus programs include a proprietary firewall that replaces or augments the Windows firewall. Sometimes disabling the antivirus product will allow a connection (indicating a setting needs changing in the antivirus software). However, most antivirus programs include several scanning mechanisms, so it can be difficult to disable the product entirely. Consult the documentation for the product to determine the correct antivirus and/or firewall settings.
5. Connect to the video device using the browser. If you can connect with the browser and not SoniClear or VLC, most likely cause is a firewall or antivirus program blocking the packets based on the RTSP protocol port number or blocking the application from accepting a connection (see VLC technique below).
6. Use the freeware video software VLC to connect to the video device (see www.videolan.org). From the Media pulldown menu selection, use the Open Network Stream feature and enter the RTSP connection URL, such as:

For Axis Camera:

rtsp://192.168.0.90/axis-media/media.amp?videocodec=h264

For J-Tech Encoder:

rtsp://192.168.1.168:554/0

If VLC can connect and SoniClear cannot connect, the issue is not related to the network connectivity or the firewall.

Install Axis Camera Software

Software for the Axis camera must be installed on the recording computer. Run the Axis software installation program provided with the Video Recording Kit and following the instructions on screen:

`InstallAxisCameraSoftware4_21_2.exe`

Note: the version number of this installer will be updated from time to time, with the version number shown in the installer executable name.

You will need to install the Axis software on all workstations that will be playing video using SoniClear software. Run the provided Axis Camera Software Installer on each playback computer to install the H.264 and AAC decoders required for playing these types of recordings.

Install SoniClear Video Proxy Software for Encoder

If you are using the J-Tech video encoder, you will need to install both the Axis camera software (see above) and the SoniClear Video Proxy Software on the recording computer. Run the Video Proxy software installation program provided with the Video Recording Kit and following the instructions on screen:

`InstallSoniClearVideoProxy-112319.exe`

Note: the version number of this installer will be updated from time to time, with the version number shown in the installer executable name.

In addition, the Visual Studio Runtime Library must be installed on the computer, which is required by the Video Proxy software:

`vc_redist.x64.exe`

The Video Proxy Software and Visual Studio Runtime Library do not need to be installed on computers that only play recordings captured in SoniClear using the encoder.

Install Video and Audio Decoder Licensing

The SoniClear video software and solution kits provide a license package that allows for installation of the H.264 and AAC decoders included in the Axis Camera Software Installer.

If you wish to install the Axis camera software on more systems than provided by SoniClear or the Axis cameras being installed, an additional 50-unit license pack (Axis part number 0160-060) must be purchased first. Contact SoniClear to purchase this

license product. It can also be purchased from any Axis distributor, or as a drop-ship item from B&H:

www.bhphotovideo.com/c/product/600593-REG/

IMPORTANT LICENSING INFORMATION: A single license for the H.264 and AAC decoders is included with each camera or encoder device. Before running the Axis Camera Software Installer on more than one recording or playback computer you must have a license for the decoders that will be copied to each computer in this installation process. A copy of the license agreement is included with the decoder license package. Some applications, such as commercial recording and distribution of video content for profit, may require additional licensing arrangements with MPEGLA, the patent licensing organization for H.264 and AAC. More information is available on their website at: www.mpegla.com. See the section “Request A License”, and “AVC/H.264 License Agreement”.

Install SoniClear 9 Software

Install the SoniClear software following the directions in the SoniClear Installation Guide for Gov Video Recorder 9 or Interview Video Recorder 9. For Court Video Recorder 9 consult the [Court Recorder Installation Guide](#).

Configure SoniClear 9 Software Preferences for Axis Cameras

The SoniClear software preferences must be modified for video recording. This includes enabling video support, specifying how to connect to the video camera, and video options.

The steps for editing the SoniClear preferences are:

1. Select the Edit/Preferences/Recording Options dialog
2. Check the Enable Video option.
3. If you are recording audio from input jack of the camera device, select “One Camera”. Also check the “Include camera audio” option. This is the recommended setting.

If the camera channel audio is being recorded from an Axis P8221 audio encoder, select “Two Devices (Video+Audio). Then enter the connection information for the device that has the audio encoder.

If you are not using audio from the camera at all, select “One Camera” and leave the “Include camera audio” option unchecked.

4. Configure the address for connecting to the camera:
 - For a standard connection the H264 option and enter the IP address of the camera (or encoder).
 - For manually controlling the connection using H.264 encoding, select Custom and enter the following URL:
axrtsphhttp://192.168.0.90/axis-media/media.amp?videocodec=h264
 - For connecting to the quad view stream on the Axis F44 camera, select Custom and enter the following custom URL
axrtsphhttp://192.168.0.90/axis-media/media.amp?videocodec=h264&camera=quad
(enter as one line)

Note: H.264 and AAC encoders require licensing for recording and playback. See the section “*Install Axis Video and Audio Software*” above for details.

5. For the User field enter:
root
(or other valid user account on the Axis camera).
6. Enter in the Password field:
Use password assigned to the camera during setup.
7. Set the Adjust Sync field to:
0 (the number zero)
Note: this may need to be adjusted based on characteristics of the sound card in this computer.
8. Set the Adjust Export field to:
0 (the number zero)
Note: this may need to be adjusted based on characteristics of the camera device to provide accurate audio/video sync when exporting the recording to MP4 or WVM format.

After setting this information in the preferences, exit and restart the program. The Video Preview window should be displayed on the screen. If not, contact SoniClear Support for assistance.

Configure SoniClear 9 Software Preferences for Video Encoders

The SoniClear software preferences must be modified for video recording with the J-Tech or similar HDMI encoder. This includes enabling video support, specifying how to connect to the video camera, and video options.

The steps for editing the SoniClear preferences are:

1. Select the Edit/Preferences/Recording Options dialog
2. Check the Enable Video option.
3. Select “One Camera”.
4. Configure the address for connecting to the camera:
 - Select the “Proxy” option for camera type
 - In the field next to the camera type selection, enter the following URL:
axrtsphhttp://localhost/jtech

- For encoders other than the J-Tech device, the “jtech” portion of the URL will be changed to reflect the camera type specified in the proxy.ini settings file. Consult the instructions provided with the purchased from SoniClear or contact SoniClear for additional support.

Note: H.264 and AAC decoders licensing is required for recording and playback. See the section “*Install Axis Video and Audio Software*” above for details.

5. For the User field enter:
user
6. Enter in the Password field:
password.
7. Set the Adjust Sync field to:
0 (the number zero)
Note: this may need to be adjusted based on characteristics of the sound card in this computer.
8. Set the Adjust Export field to:
0 (the number zero)
Note: this may need to be adjusted based on characteristics of the camera device to provide accurate audio/video sync when exporting the recording to MP4 or WVM format.

After setting this information in the preferences, exit and restart the program. The Video Preview window should be displayed on the screen. If not, contact SoniClear Support for assistance.

Transcriber Live Configuration

Transcriber Live supports video monitor and video playback functionality. This feature must be configured in Edit/Preferences/Recording Options by checking the Enable option in the Video section.

To allow playback of camera audio in addition to microphones recorded in the audio channels, select the “Include Camera Audio” option. This will enable the selection of camera audio in the Channel selection control during playback of recordings that have camera audio.

SoniClear Player Configuration

SoniClear Player (in Export CD Image and Manage LAN Archive) supports video monitor and video playback functionality. This feature is enabled by default. To disable video, uncheck the Enable check box in the Video section of the Edit/Preferences/Recording Options dialog.

Configure Camera Audio Playback

When playing back camera audio in Court Recorder 9 or Gov Recorder 9, the sound will be played through the current default Windows audio output device. This can be set in the Windows Sound control panel. The audio device selection can be the same output device that SoniClear uses for playback (headphones or speaker), or a different device.

Custom Axis Video Camera Configuration

When purchasing an Axis camera from SoniClear, the camera has been pre-configured and can be used without making additional changes during installation. However, if the camera was purchased from somewhere other than SoniClear, it will need changes to the device settings to be compatible with SoniClear.

Specific details for each camera type may differ from these general instructions. Technical assistance for setting up a stock Axis camera can be requested from SoniClear, with consulting provided on an hourly fee basis.

The following section describes general instructions on how to set up the recording system using an Axis camera.

Connect the Axis Camera

The Axis camera option is connected to the computer using an Ethernet cable. It is recommended that the camera be connected directly to the recording computer for improved reliability and security.

The camera can be powered using a power adapter. It is also possible to power the camera using POE (“Power Over Ethernet”). This allows the camera to be placed anywhere in the room without the need for a separate power extension cord for the power transformer. The source of power for POE can either be a POE-enabled Ethernet switch, or a POE “injector” that is placed in-line with the Ethernet cable going to the camera. The POE switch or injector can be placed next to the laptop and powered off the same power strip the computer is plugged into.

Configure the Axis Camera

The stock settings for Axis devices are not compatible with SoniClear. The settings described are an overview of the adjustments needed. Each type of device will have various settings. Contact SoniClear Support for additional instructions for specific Axis cameras.

Configure the Axis camera using the following steps:

1. Determine the IP address of the camera. If the camera is connected directly to the computer, it will default to the address 192.168.0.90. If the camera is connected to the computer through a network that includes a DHCP server, the camera automatically obtains an IP address from the DHCP server. In this case, locate the camera address using the Axis IP Utility program that can detect the camera address (available for free download from the Axis website).

2. Open the Windows Internet Explorer browser (also works with Firefox).
3. Enter the URL address of the camera (the IP address number), such as 192.168.0.90.
4. The first time you access the camera you will be required to enter a password for the “root” account.
5. When the browser finishes connecting to the camera or encoder it will display a “Live View” of the video stream.
6. Switch to the setup view by clicking on “Setup” link in upper right corner of the page.
7. The default user is “root”. You can continue to use this user or create a new account. For example, a non-administrator user can be used for accessing from SoniClear in order to keep the administrative password for the device more secure.
8. TCP/IP: IP address should be set to a fixed address, such as 192.168.0.90, as follows:

The screenshot displays the web interface for the AXIS Q7401 Video Encoder. The top navigation bar includes the AXIS logo, the device name 'AXIS Q7401 Video Encoder', and links for 'Live View', 'Setup', and 'Help'. A left-hand navigation menu lists various configuration categories: Basic Setup (with sub-items: Instructions, 1 Users, 2 TCP/IP, 3 Date & Time, 4 Video Stream, 5 Audio Settings), Video & Audio, Live View Config, PTZ, Applications, Events, Recordings, System Options, and About. The main content area is titled 'Basic TCP/IP Settings' and contains the following sections:

- Network Settings:** A 'View' button to see current network settings.
- IPv4 Address Configuration:**
 - Enable IPv4
 - Obtain IP address via DHCP
 - Use the following IP address:
 - IP address:
 - Subnet mask:
 - Default router:
- IPv6 Address Configuration:**
 - Enable IPv6
- Services:**
 - Enable ARP/Ping setting of IP Address
 - Enable AVHS
 - One-click enabled Always

At the bottom of the settings area, there is a section for 'AXIS Internet Dynamic DNS Service' with a 'Settings...' button, and 'Save' and 'Reset' buttons. A footer note says 'See also the [advanced TCP/IP settings](#)'.

9. Date & Time: The camera should be set to sync with the computer:

AXIS COMMUNICATIONS **AXIS Q7401 Video Encoder** [Live View](#) | [Setup](#) | [Help](#)

Date & Time Settings ?

Current Server Time
Date: 2013-12-18 Time: 15:52:18

New Server Time
Time zone: GMT-08 (Las Vegas, San Francisco, Vancouver) ▾
 Automatically adjust for daylight saving time changes.

Time mode:
 Synchronize with computer time
Date: 2013-12-18 Time: 15:53:24
 Synchronize with NTP server
NTP server: [No server specified](#)
 Set manually
Date: 2013-12-18 Time: 15:52:04

Date & Time Format Used in Images
Specify date format: Predefined YYYY-MM-DD ▾
 Own %F
Specify time format: Predefined 24h ▾ With resolution: 1 second ▾
 Own %T

Alternatively, you could set the time option to sync with an NTP server, if the camera is connected to a network that has an NTP server behind the firewall, or Internet access to a public NTP server.

10. Video Stream: this controls the default settings for streaming video data. Set the image preferences in the Image tab:

The screenshot displays the configuration interface for the AXIS Q7401 Video Encoder. The left sidebar contains a navigation menu with the following items: Basic Setup (Instructions, 1 Users, 2 TCP/IP, 3 Date & Time, 4 Video Stream, 5 Audio Settings), Video & Audio, Live View Config, PTZ, Applications, Events, Recordings, System Options, and About. The main content area is titled "Video Stream Settings" and features four tabs: Image, Audio, H.264, and MJPEG. The "Image" tab is active, showing the following settings:

- Image Appearance:**
 - Resolution: 4CIF (704 x 480) (with an "Aspect ratio correction" checkbox)
 - Compression: 0 [0..100]
 - Mirror image:
 - Rotate image: 0 degrees
 - Color setting: Color
- Video Stream:**
 - Maximum frame rate: Limited to 30 [1..30] fps per viewer (with "Unlimited" as an alternative option)
- Overlay Settings:**
 - Include overlay image at the coordinates: X 0 [0..] Y 0 [0..] (checkbox unchecked)
 - Include date: Include time:
 - Include text:
 - Text color: white Text background color: black
 - Place text/date/time at: top of image

At the bottom, there is a "Preview" section with the text "View image stream while configuring." and a "Video format" dropdown set to H.264. Below this are "Save" and "Reset" buttons, and an "Open..." button to the right.

For the Axis Encoder, set the Resolution to match with resolution of the external video source, or a smaller resolution for recording (if preferred). For the Axis Camera, set the resolution to the desired resolution for recording.

Set Compression to 0 for maximum clarity. The manufacturer default value of 30 produces less clear recordings that take up less disk space.

Maximum frame rate should be limited to 30 fps.

Set the Overlay Settings fields, “Include date” and “Include time”, if you want the image to be timestamped in the video feed.

11. In the Audio tab, select the “Enable audio” option if you want to record audio from the camera or the encoder:



The settings in the H.264 and MJPEG tabs can be left as their default values.

12. Audio Settings: For recording audio from the camera or encoder, set up the audio options:

AXIS Q7401 Video Encoder Live View | Setup | Help

Audio Settings

Audio Channels

Audio mode: Simplex - Network Video Encoder microphone only

Audio Input

Source: Line

Enable microphone power. If your microphone is dynamic or battery powered, this should be off.

Input gain: 6 dB (0 = medium default level)

Encoding: AAC

Sample rate: 16 kHz

Bit rate: 64 kbits/s

Alarm level: 50 [0..100] %

Audio Output

Output gain: 0 dB (0 = medium default level)

Note: The Java applet only supports G711 audio. QuickTime supports G711 and AAC.

Save Reset

Select the Simplex microphone option (you do not want audio from the computer to be sent to the speaker in the camera, for example).

Set the input source to the correct type of audio input (microphone or line).

Set the input gain to provide the desired signal level in the recording. This will require experimentation to determine the optimum value.

Set the Encoding option to AAC, 64 kbits/s.

Specific audio setup instructions for the V59 camera:

- a. Under Video and Audio section, Audio Settings, adjust the following settings:
 - i. Audio Mode: Simplex Network Camera microphone only.
 - ii. Audio Input Source: Microphone.
 - iii. +30 dB microphone boost off (Unchecked).
 - iv. Microphone power: Off.
 - v. Input Gain

1. Master: 0 dB
 2. Left: Inherit
 3. Right: Inherit
-
- vi. Encoding: AAC
 - vii. Sample rate: 48 kHz
 - viii. Bit rate: 128 kbits/s

Custom J-Tech Video Encoder Configuration

When purchasing a J-Tech video encoder from SoniClear, the encoder has been pre-configured and can be used without making additional changes during installation. However, if the encoder was purchased from somewhere other than SoniClear, it will need changes to the device settings to be compatible with SoniClear.

If setting up an encoder other than J-Tech, the specific details may differ from these instructions. Technical assistance for setting up a video encoder can be requested from SoniClear, with consulting provided on an hourly fee basis.

The following section describes general instructions on how to set up the recording system using an Axis camera.

Connect the Encoder

The encoder is connected to the computer using an Ethernet cable. It is recommended that the encoder be connected directly to the recording computer for improved reliability and security.

The encoder is powered from the power adapter supplied with the unit.

Configure the Axis Camera

The stock settings for the J-Tech encoder are not compatible with SoniClear. The settings described are an overview of the adjustments needed. Some settings may be different, depending on the HDMI source and the network configuration.

Configure the J-Tech encoder following these general steps:

1. Determine the IP address of the encoder. The default address of the encoder is 192.168.1.168. If you are using a different subnet, or this address conflicts with another device on the network, you will have to set up an isolated network for connecting to the computer to perform initial configuration.
2. Open the Windows Internet Explorer browser (also works with Firefox).
3. Enter the URL address of the camera (the IP address number), such as 192.168.1.168.
4. The default login to the encoder is user “admin” and password “admin”. These values should be changed for improved security.
5. Select the Encoder tab to adjust encoder settings.
6. Set FPS (maximum frame rate) to 30.

7. Set Bitrate(kbit) to the desired rate, such as 2500 for 720p, or 5000 for 1080p. The optimal bitrate is dependent on the desired quality and the amount of motion in the image.
8. Set Encoded size to match the input source, such as 1280x720 for 720p, or 1920x1080 for 1080p.
9. Set H.264 Level to “baseline profile”.
10. Set Bitrate control to “vbr”.

Hardware Warranty and Repair

Any hardware included in a SoniClear video recording kit is covered by the Limited Warranty provided by the manufacturer. SoniClear does not provide hardware repair services. SoniClear will coordinate repair services and ensure proper installation of the SoniClear software installed on the computer, on customer request.

Hardware Information:

Hardware Model: _____

Hardware Serial Number: _____

SoniClear Order Number: _____

SoniClear Purchase Date: _____

Axis Camera Login User: _____

 Password: _____

Axis Camera Power Frequency: 60Hz

Notes:

1. For security reasons, the default password supplied with the system should be changed before deploying the video recording system. The corresponding password will need to be changed in the SoniClear Tablet Recorder, if you purchased a complete system.
2. The video hardware has been initialized for using with power systems using 60Hz AC. For power systems using 50Hz AC the camera will need to be reset. Follow the hardware instructions for resetting and then following the instructions in this manual for device setup.