Milestone Plug-in Installation Guide
Sound Intelligence
Axis ACAP Application

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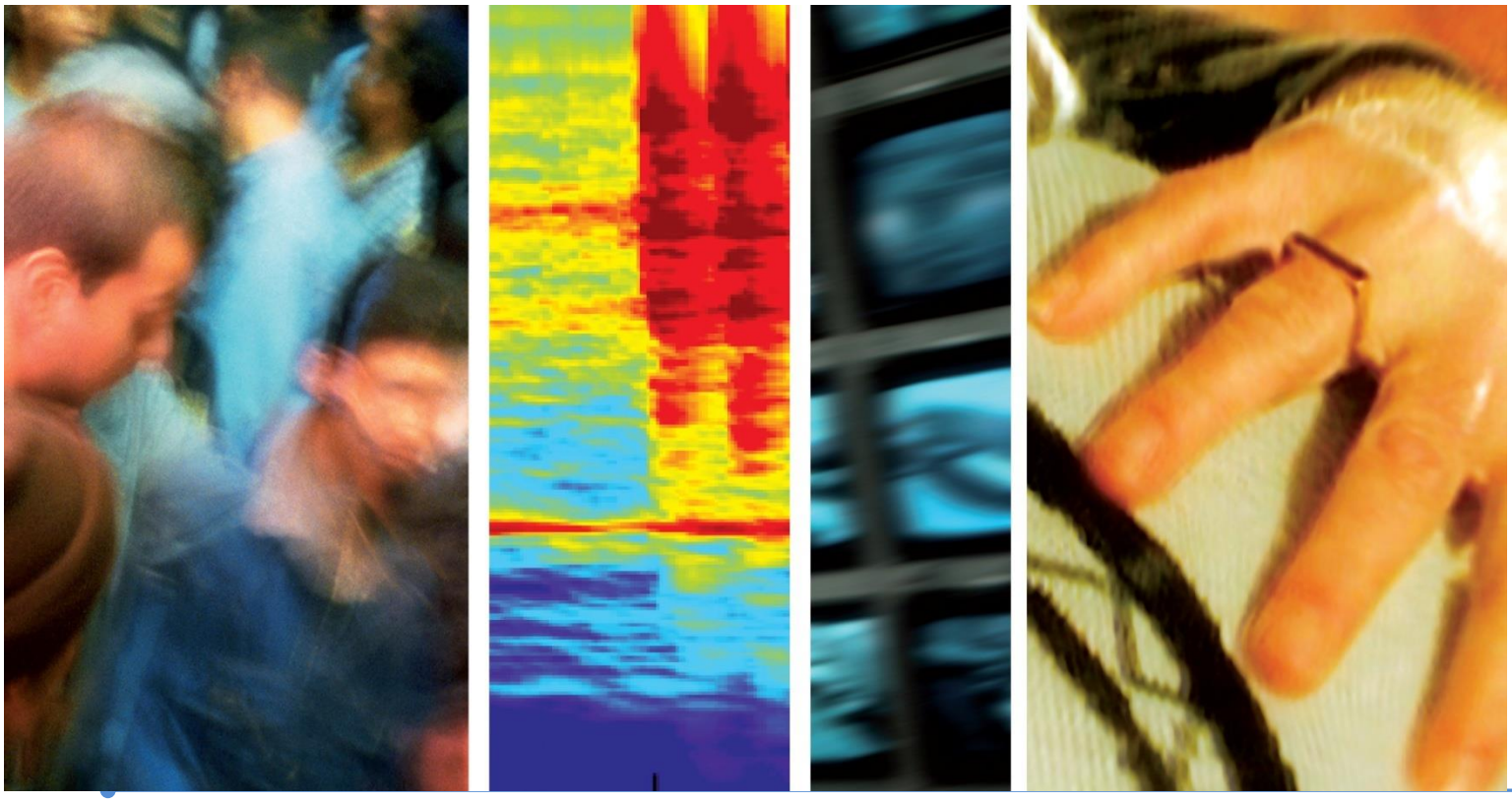

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Installation Guide

This guide is to help you through installation of the SoundIntelligence plug-in which enables you to monitor and verify sound analytics notifications in Milestone.

1. Supported versions

2018R3 and higher three detectors per camera are supported

2. Install Plugin folders

*Pause all Milestone services before replacing folders.
**Before unzipping folder, ensure that it is Unblocked: Right-click main folder and go to Properties and check Unblock if it is available.
***If the Milestone Management Server and the Milestone Event Server are on independent machines, please place folders (according to the below) on both machines.

On the device with the Milestone Management Server copy **SoundIntelAdmin, SoundIntel and SoundIntelClient** plugins files to "MIPPlugins" folder in Milestone installation directory (default C:\Program Files\Milestone\MIPPlugins):

SoundIntelClient ==> XProtect Smart Client\MIPPlugins

Install on each PC where Milestone Smart Client will be used (so if the Main server is also the Client save this also there)

SoundIntelAdmin ==> XProtect Management Client\MIPPlugins

Install on the main PC with Milestone Management server installed

SoundIntel ==> XProtect Event Server\MIPPlugins

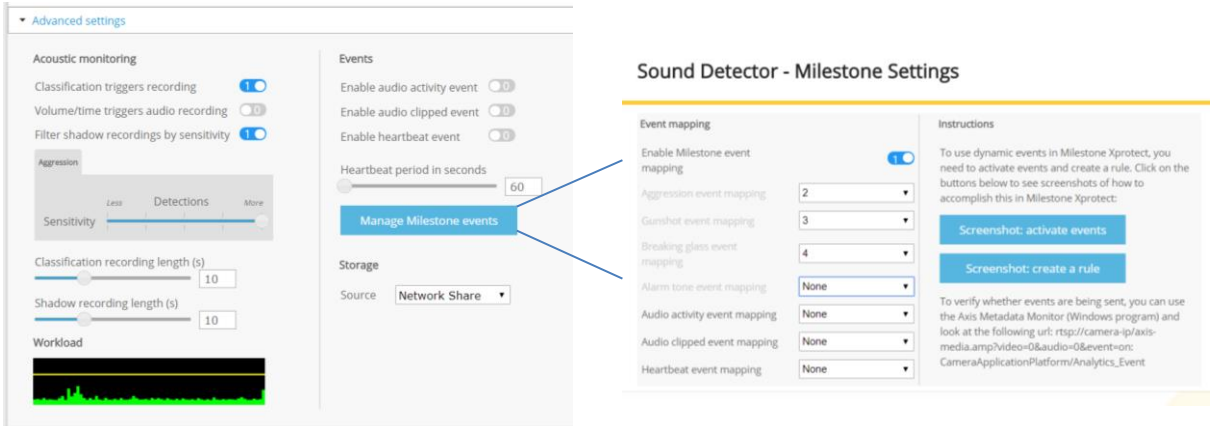
Install on the main PC with Milestone Event server installed

If the Smart Client user does not belong to the "Administrators" role, go to Security => Roles section, to check if the user has access to alarms.

NOTE
For 2018 R2 and newer, replacing the VideoOS.Platform DLL is not needed.
It is advised to make a back-up folder at the location where the file is present and move it there before copying the new dll file in this folder.

3. Set-up Milestone settings in ACAP (from 2018R2 or higher)=

Go to the advanced settings in Milestone Management Client and click Manage Milestone events:



Make sure the mapping is enabled. It is advised not to use 1 as it is sometimes used for other purposes. The events need to be mapped in order to have the index numbers correspond with the different events generated by the Sound Detector. So now these numbers will also need to be used when configuring the camera is the Milestone Management Client.

4. Set-up Milestone Management Client

In Milestone Management Client for each camera with the Sound Detector installed:
v2018R3 and higher
add the following event(s):
Video analytics event started with the index number corresponding to the set-up in the ACAP (see previous section 3, f.e Analytic event index 2 for Aggression and Analytic event index 3 for Gunshot).

In "Rules and Events" section
In "Rules and Events" section, add a *rule*:

Perform an action on <event>: **Sound Intelligence Start Recording (Sound Intelligence)**
from: **SIcams**
Select actions to perform: start recording on <devices>: **5 seconds before** (-5 seconds) on **the devices from metadata**
Perform stop action after <time>: **5 seconds after** (5 Seconds)
Stop recording **immediately**

Optionally add Bookmark to rule to mark exact time of alert:

Perform an action on **Sound Intelligence Start Recording (Sound Intelligence)**
from **SIcams**
start recording **5 seconds before** on **the devices from metadata**

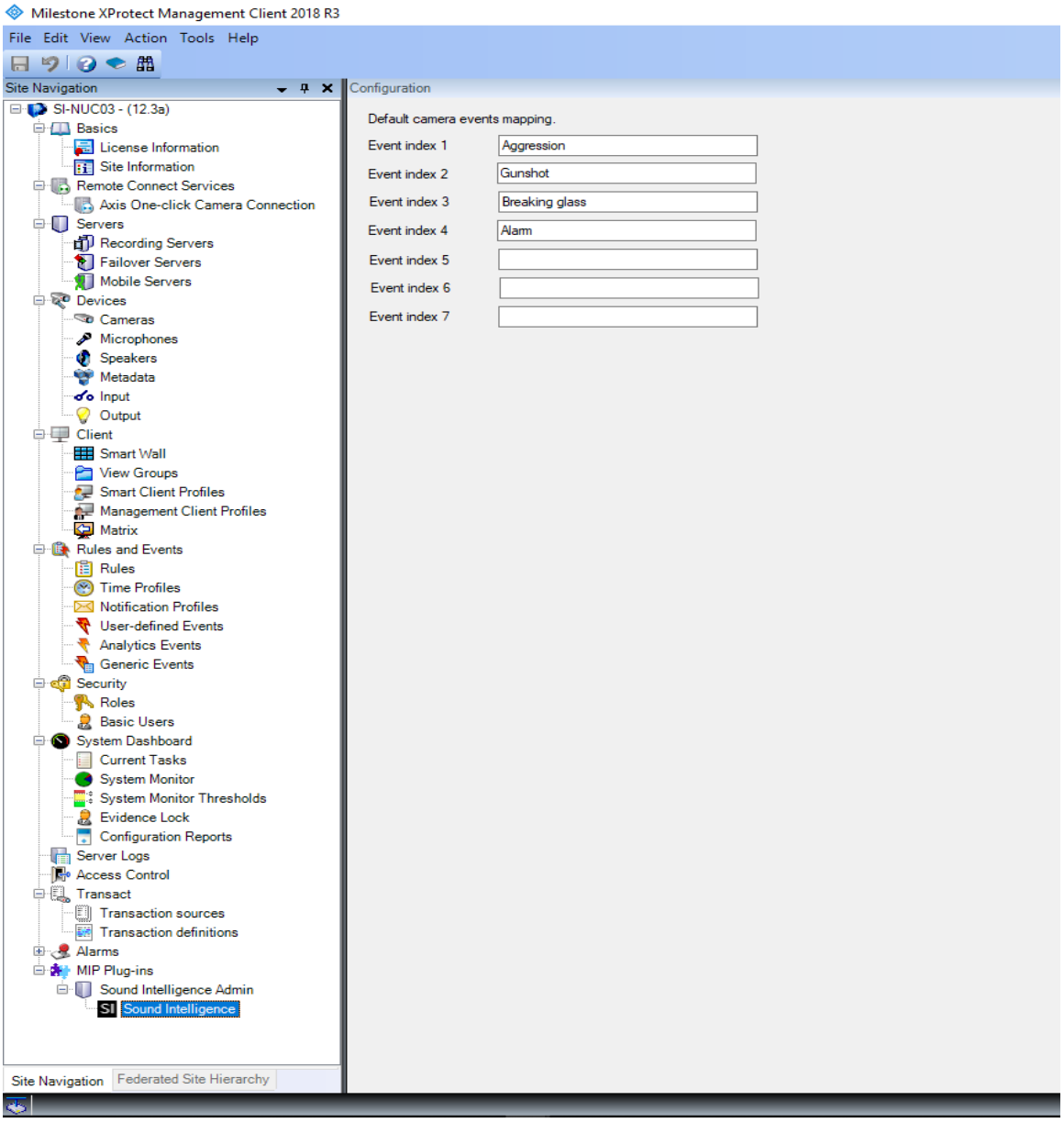
and Create bookmark **$EventName$ on $DeviceName$** on **the devices from metadata**

Perform action **5 seconds after**
Stop recording **immediately**

Now Restart Milestone Event server.
Re-Launch Milestone Management Client[1]

In MIP Plug-ins section

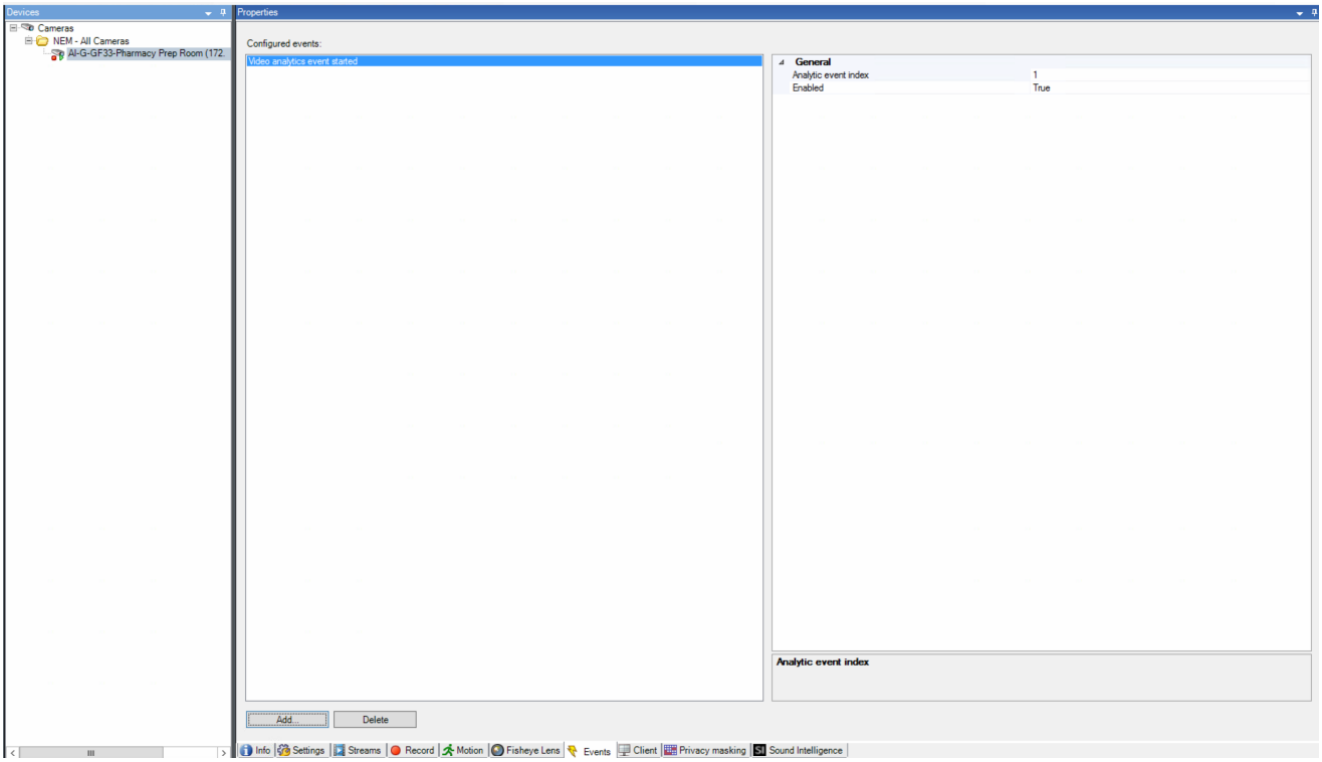
Open 'Sound intelligence' and enter a name of the event (e.g. Aggression detected, Gunshot detected). Event indices are automatically picked up from the ACAP when this has been configured in advanced (See "Setting up Milestone Events in the ACAP").



[1] To retrieve camera credentials the Management Client on server PC should be always launched

In Camera section

Navigate to the camera running Sound Detector and under events click "Add" and locate Video analytics event started. The event index corresponds to the event name configured in previous step. For instance, 1 corresponds to Aggression, 2 corresponds to Gunshot and so on.



Recording audio based on analytics events triggering only

It is possible to change the rules / settings such that the system is only recording audio when the analytic event has been triggered (few seconds before and after). Audio will still be heard when live viewing the camera, but it's not being recorded. Upon the event triggering, it is logged, and the audio is recorded. The following steps need to be taken:

1. Go to the camera device and the "record" tab. Uncheck the option in the camera to "Record on related devices". This separates the triggering of the audio recording from the camera video recording so they can start and stop independently from each other.

2. Go to the microphone for that device, make sure "Recording" IS checked.
    a. Note it will take a few moments for this to take effect in the software, but after a short time, you should see the icon for the microphone, change such that the red dot indicating recording disappears, but the green triangle remains. This indicates that audio is streaming, but not recording.

3. In the rules engine, you now will need to setup a rule that specifically instructs the audio to start and stop recording. Make a rule that the trigger is your analytic, and the action it performs is "Start recording on <devices>. Click <devices> and choose the microphone as the device. Click Next, and set the stop

action after <time> (when the analytic stops) to stop recording audio on the mic device.

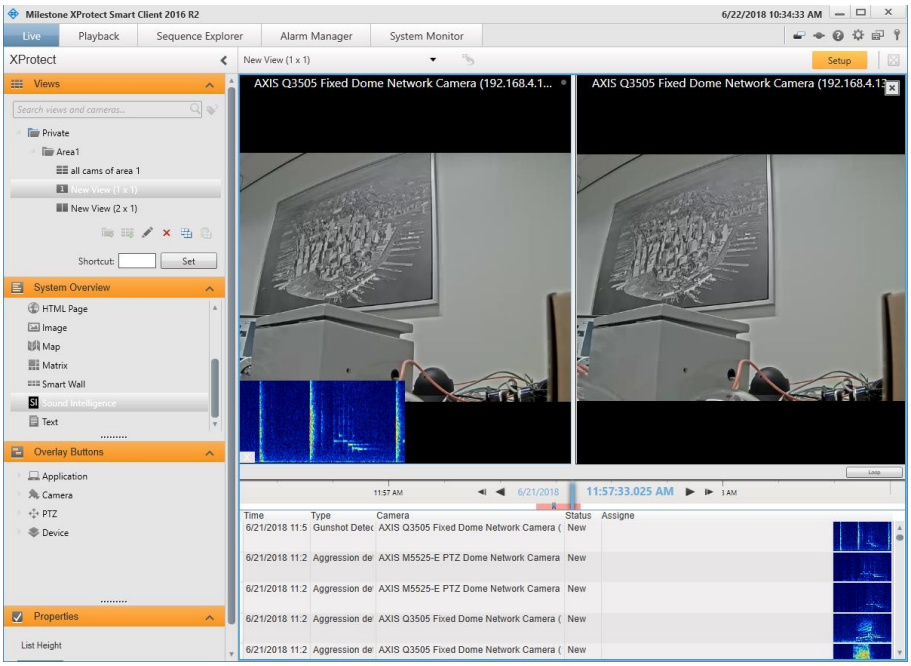
In this way it will configure the system to not record audio normally (because nothing has told it to do so), and when your analytic activates and deactivates, the rule that is watching for the analytic event will trigger the audio recording will start and stop along with it.

Note that this does not stop the camera from streaming audio 24/7, meaning that an operator can always listen LIVE to the camera's mic anytime, but the audio from it is not being recorded based on motion detection. Audio will however be recorded if the operator manually clicks the "record" button in the Smart Client, or, if your analytic event triggers the rules engine to command the system to begin recording audio.

NOTE
Make sure to restart the event server after the camera settings are done.
Also, when Adding a Camera, refresh the mapping in SI plug-in (or it will have the default mapping).

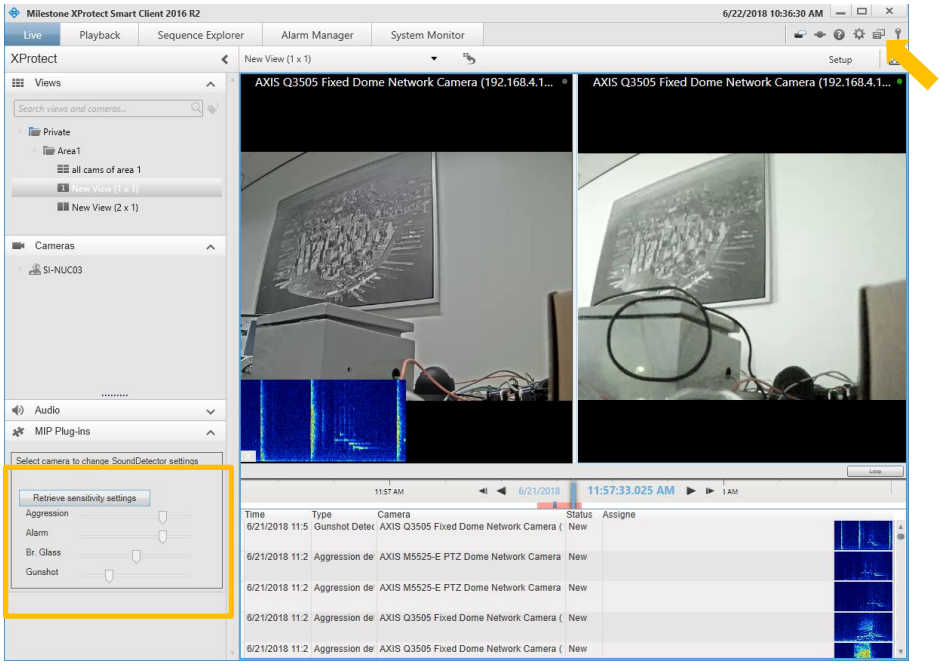
5. Milestone Smart Client

The Smart Client will have the SoundIntelligence plug-in as view option in the Live view:

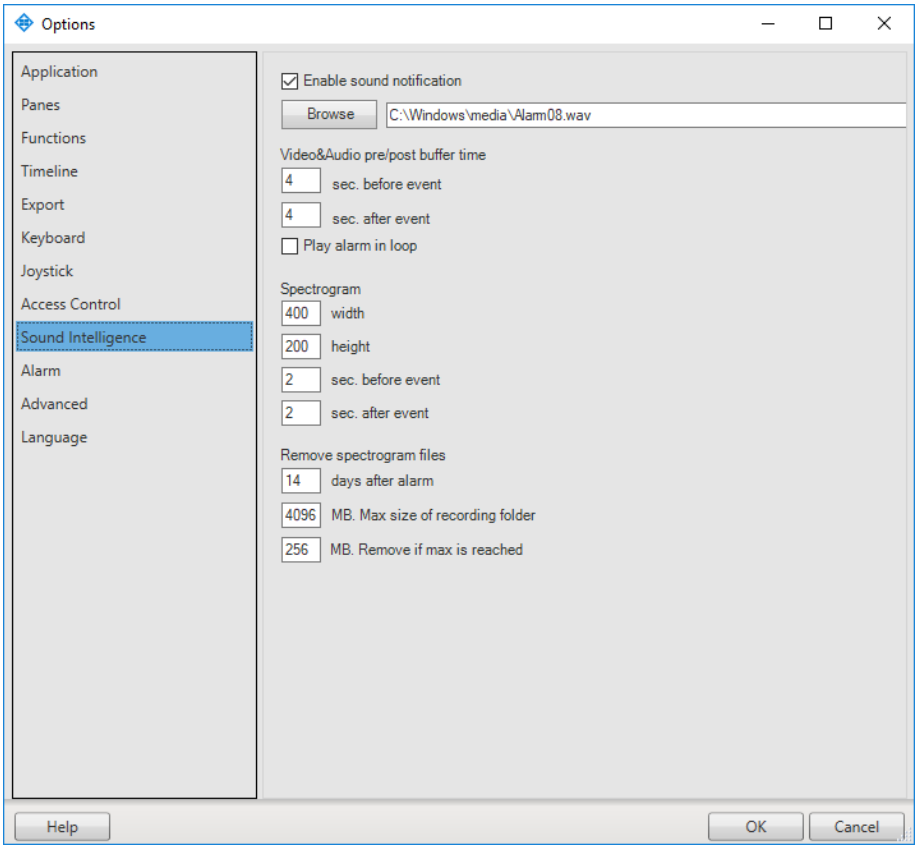


Under properties you can change the height of the list. By changing the width of the columns, you can choose to change the size of the rows and spectrogram images. You can also change the size of the cam live and recorded view.

By selecting the live view of the camera, sensitivity settings of the detector can be changed instantly for the detectors running on that camera:



Under the options button (top left wheel icon marked by orange arrow in above view), general settings of the view can be changed:



6. Support

Should you require any technical assistance, please contact your Sound Intelligence Reseller. If your questions cannot be answered immediately, your reseller will forward your queries through the appropriate channels to ensure a rapid response.