

ClearOne®

CONSOLE AI Lite

Supported Products:

COLLABORATE® Versa Lite CT
COLLABORATE® Versa Room CT



Notices

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1. Introduction

CONSOLE AI Lite is designed for optimal use with the Versa Lite CT and Versa Room CT systems. With Audio Intelligence™ and Auto Connect™, it allows for easy and quick configuration of the COLLABORATE Versa Lite CT and Room CT systems.

With AutoConnect™, CONSOLE AI Lite proactively searches for available devices, connects to them, and then allows you to manage their properties. No need for a “Device Discovery” step!

COLLABORATE Versa Lite CT and Versa Room CT

Both systems use a patented USB audio-enabled Beamforming Ceiling Tile microphone (BMA CTH) to bring cost-effective professional conferencing audio to small and mid-sized meeting rooms. Built in AEC, noise cancellation and adaptive steering (think of it as smart switching) provide impeccable room coverage.

Add ClearOne’s CONVERGE Wall-Mount Bluetooth Expander to enable mobile devices to join the conference wirelessly.

Related ClearOne Documents

The following related documents are available at the ClearOne website (www.clearone.com) in the Resource Library:

- [COLLABORATE Versa Lite CT Datasheet](#)
- [COLLABORATE Versa Room CT Datasheet](#)

2. Install the CONSOLE AI Lite Software

You can install the CONSOLE AI on any Windows 8 (or greater) PC that meets the following requirements:

- 1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit (x64) processor
- 1 gigabyte (GB) RAM (32-bit) or 2 GB RAM (64-bit)

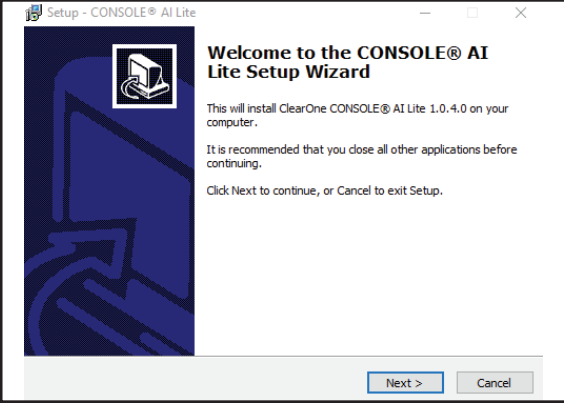



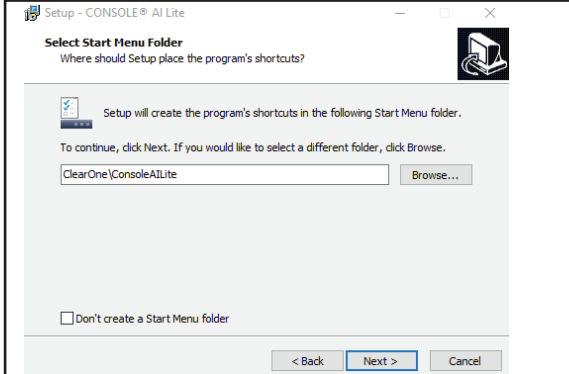
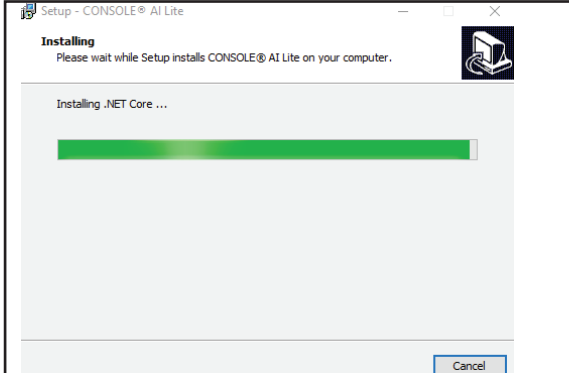
Note: As with many software applications, to install CONSOLE AI Lite, you must have administrative rights.

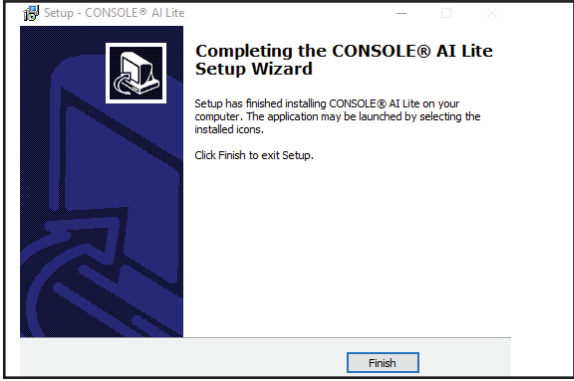
To install the CONSOLE AI Lite software, access the following web location:

<https://www.clearone.com/CONSOLE-ai-lite-documents>

then tap or click the Download CONSOLE AI Lite link, and complete the following steps:

Step	Action
1	Run the installation application, Setup CONSOLE AI_Lite. The Welcome screen appears: 

Step	Action
2	<p>If you receive a User Account Control message from Windows that asks if you want to allow the installation program to make changes to your computer, click Yes.</p> <p>The CONSOLE AI Setup wizard begins, and the Setup License Agreement screen appears.</p> 
3	Read the license agreement.
4	<p>If you agree to the terms, select the I accept the agreement option, and then click Next.</p> <p>The Setup program displays a screen that allows you to select a location for CONSOLE AI Lite's shortcuts.</p>
5	<p>Use the browse to select a folder, and then click Next.</p> <p>The setup program displays the Installing screen.</p> 
6	<p>Click Next.</p> <p>The successful install wizard screen appears:</p> 

Step	Action
7	<p>Click Finish.</p> <p>The program displays the following screen:</p> 
8	<p>Click Finish.</p> <p>Setup is complete.</p>

3. Launching CONSOLE AI Lite

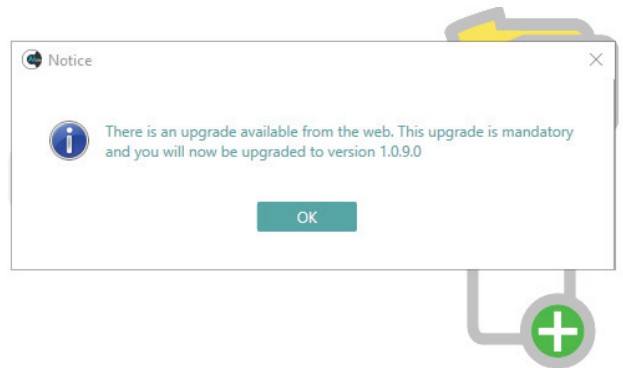
3.1 Software Updates

At the launch of CONSOLE AI Lite, regardless if a device is connected or not, CONSOLE AI Lite compares your system’s version with the most recent available version.

If an updated version is available, the application displays, on the status bar, a button and text that notifies the user of the available update.

To download and install the updated version, **tap or click OK.**

If your computer system displays a popup window that asks if you want to allow CONSOLE AI Lite Setup to make changes to your computer, **tap or click Yes.**




CONSOLE AI Lite Setup asks if you are sure you want to completely remove CONSOLE AI Lite and its components.

Tap or click Yes.

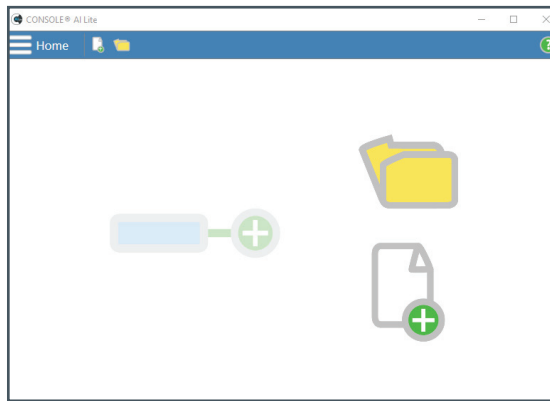
3.2 Launching CONSOLE AI Lite with a Device Powered On and Connected

At launch, CONSOLE AI Lite determines if at least one device is powered on and connected.

If...	Then CONSOLE AI Lite...						
Only one device is connected to the PC	<ol style="list-style-type: none"> 1. Connects to the device, then 2. Saves the device as the default device for future use of the app. <p> Note: This action overwrites a previously set default device.</p>						
More than one device is connected to the PC	Attempts to match the default device with devices it detects.						
	<table border="1"> <thead> <tr> <th>If CONSOLE AI Lite finds...</th> <th>Then it...</th> </tr> </thead> <tbody> <tr> <td>A match</td> <td>Automatically connects and leaves the default device unchanged.</td> </tr> <tr> <td>No Match</td> <td>Displays the home screen.</td> </tr> </tbody> </table>	If CONSOLE AI Lite finds...	Then it...	A match	Automatically connects and leaves the default device unchanged.	No Match	Displays the home screen.
	If CONSOLE AI Lite finds...	Then it...					
A match	Automatically connects and leaves the default device unchanged.						
No Match	Displays the home screen.						

3.3 Launching CONSOLE AI Lite with No Devices Powered On and Connected

When CONSOLE AI Lite launches with no ClearOne device powered on and connected, CONSOLE AI Lite displays the home screen:



When you then power on a device:

If you are...	Then CONSOLE AI Lite...
Creating or editing a project	Does not respond. You must close the file, then on the Home screen, tap or click Connect.
Not creating or editing a project file	Automatically connects to the devices.

4. The CONSOLE AI Lite Interface

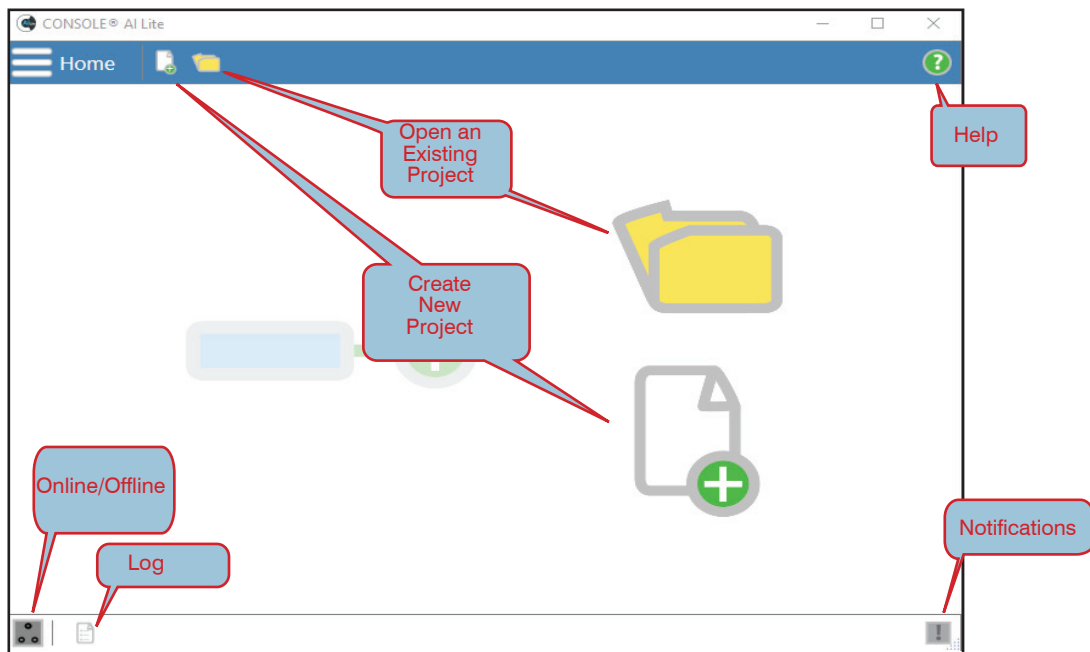
For quick access to the topics in this section, click the following links:

[4.1 Home Screen](#)

[4.2 Settings Screen](#)

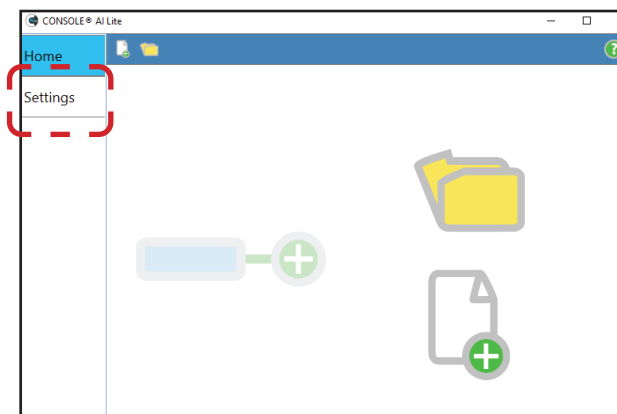
[4.3 Channel Properties Screen](#)

4.1 Home Screen



Home Screen Menu Options

From the Home screen, you can access the Settings screen. In the upper left, tap or click the menu icon.



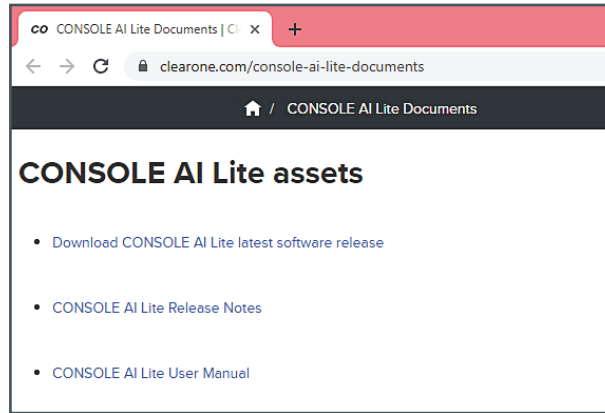
About Screen

The About screen indicates the version of CONSOLE AI Lite you are using.



Help Screen

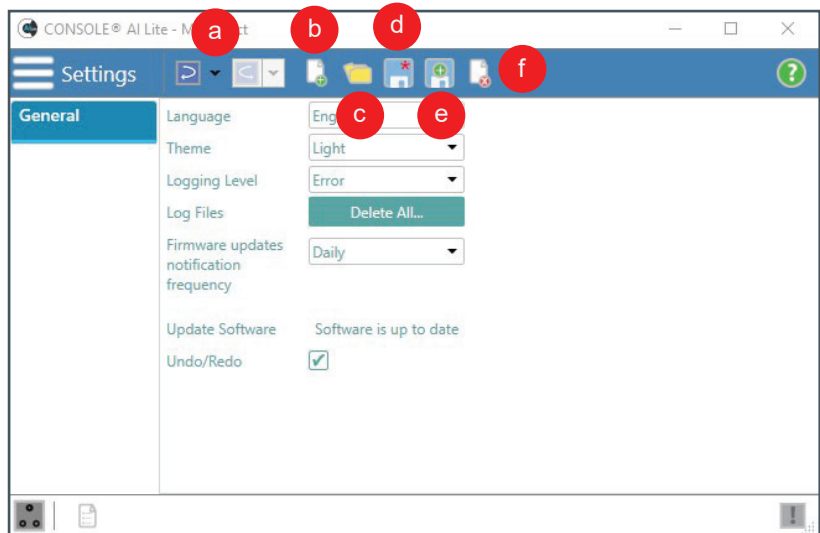
The Help screen is a web page on the ClearOne website: <https://www.clearone.com/CONSOLE-ai-lite-documents>.



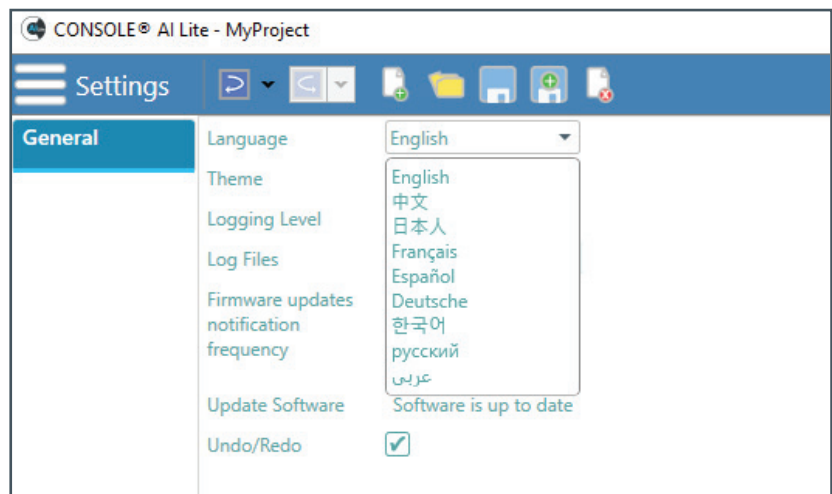
4.2 Settings Screen

4.2.1 General Screen

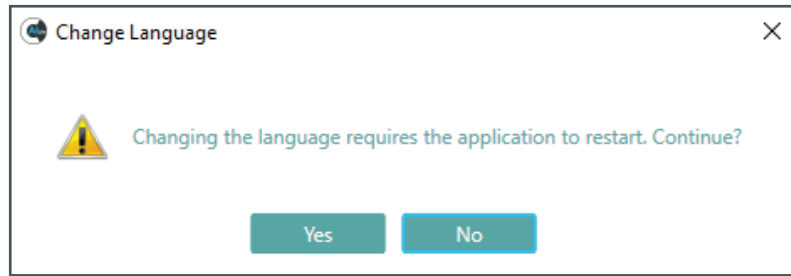
- a. Undo & Redo
- b. Create new project...
- c. Open existing project...
- d. Save
- e. Save As...
- f. Close Project



4.2.1.1 Language

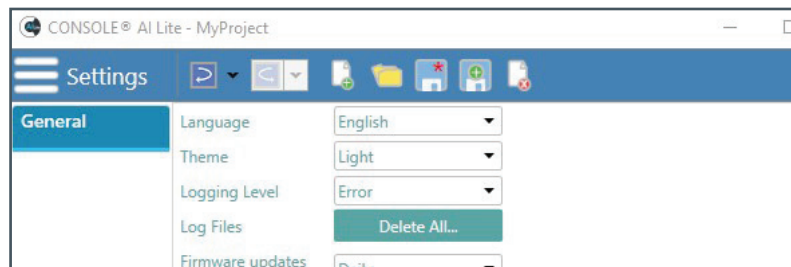


A change of language requires a restart of CONSOLE AI Lite.

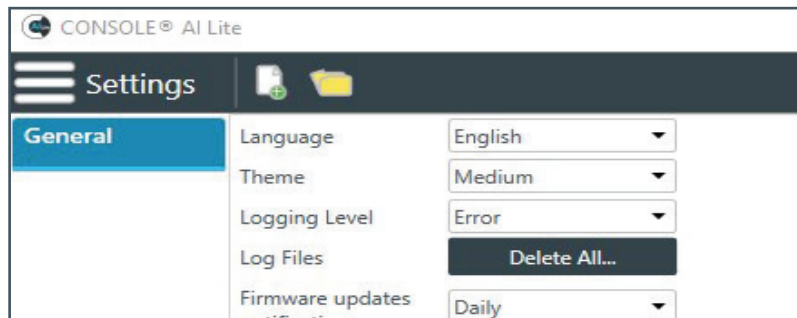


Light

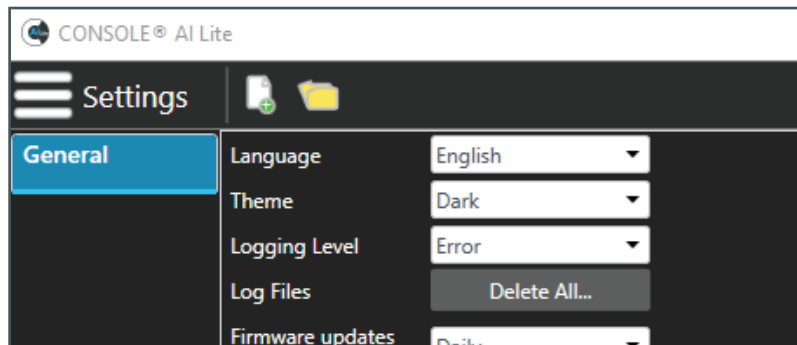
4.2.1.2 Theme



Medium



Dark



4.2.1.3 Logging Level

AI Lite includes the following hierarchal Logging Levels:

Error

Full diagnostics. Often used by technical support to troubleshoot problems.

Warning

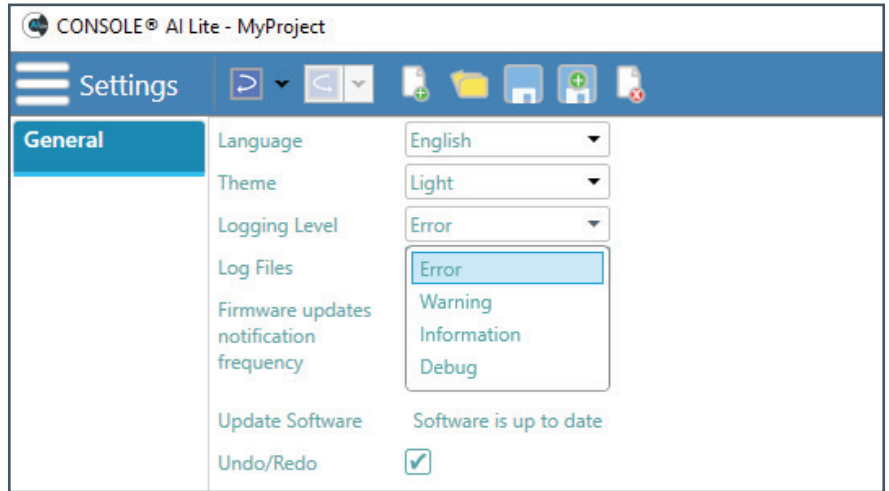
Items to watch for and investigate.

Information

Completed processes, such as completed firmware updates

Debug

Other potentially helpful information such as log comments.



Note: After you change the Logging Level, in the log area at the bottom of the screen, AI Lite displays a message about the change to the log level.

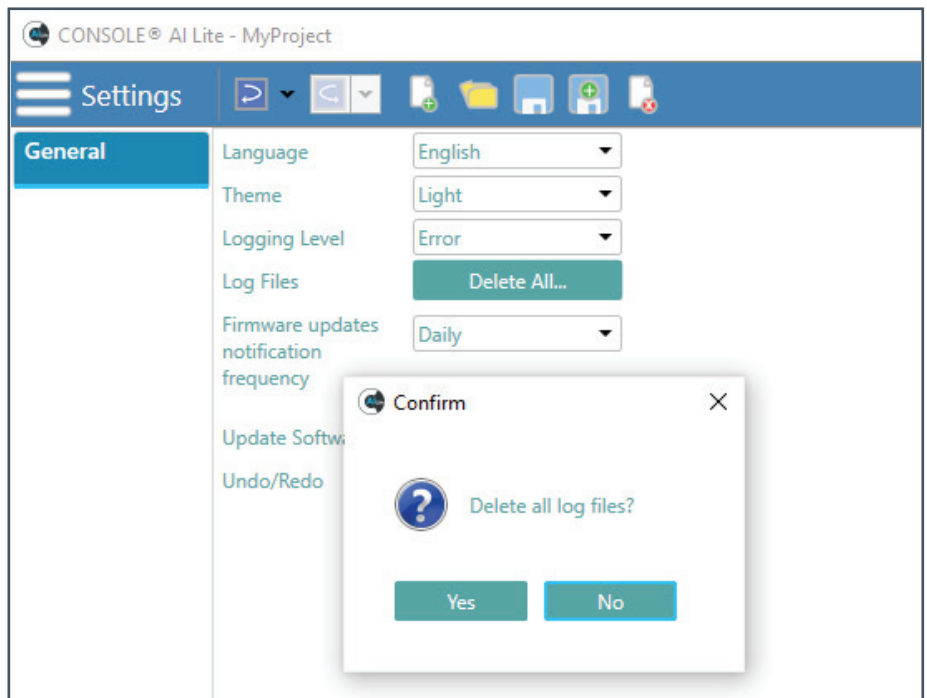


4.2.1.4 Log Files

If you call for assistance, ClearOne Technical Support may ask you to delete your log files.

This allows CONSOLE AI Lite to create new log files.

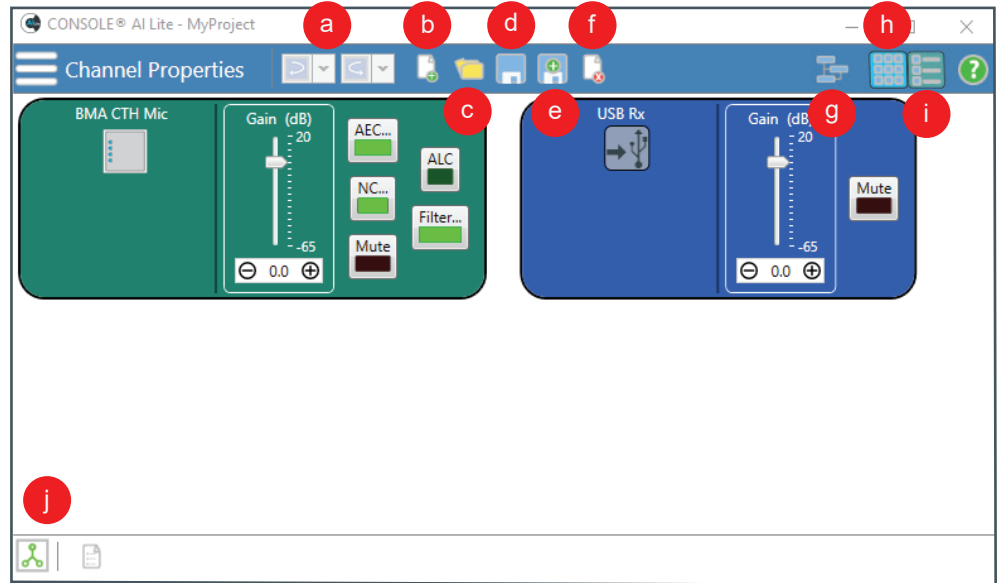
These new log files help the technical support representative diagnose your problem.



4.3 Channel Properties

The Channel Properties screen provides the following functions:

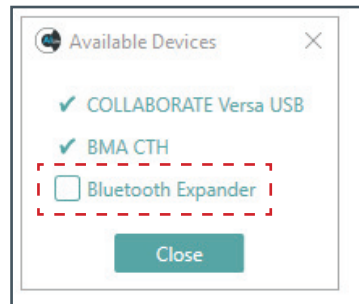
- a. Undo/Redo
- b. Create new project...
- c. Open existing project...
- d. Save
- e. Save As...
- f. Close Project
- g. Available Devices
- h. Grid Layout
- i. List Layout
- j. Connection (green indicates Connected)



4.3.1 Available Devices

To view available devices, tap or click the Available Devices icon (g).

To add a Bluetooth Expander and view Bluetooth Receive and Transmit channels, tap or click the Bluetooth Expander checkbox.



4.3.2 Grid Layout

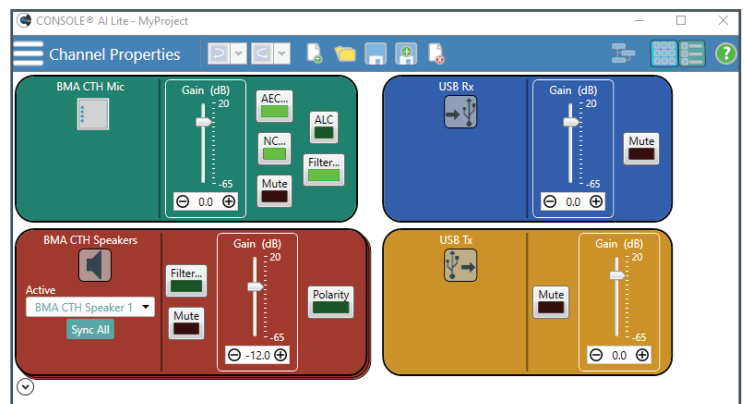
The grid layout displays the devices in a grid of rows and columns.

To select the Grid layout, tap or click the Grid layout icon (h).



Note the following:

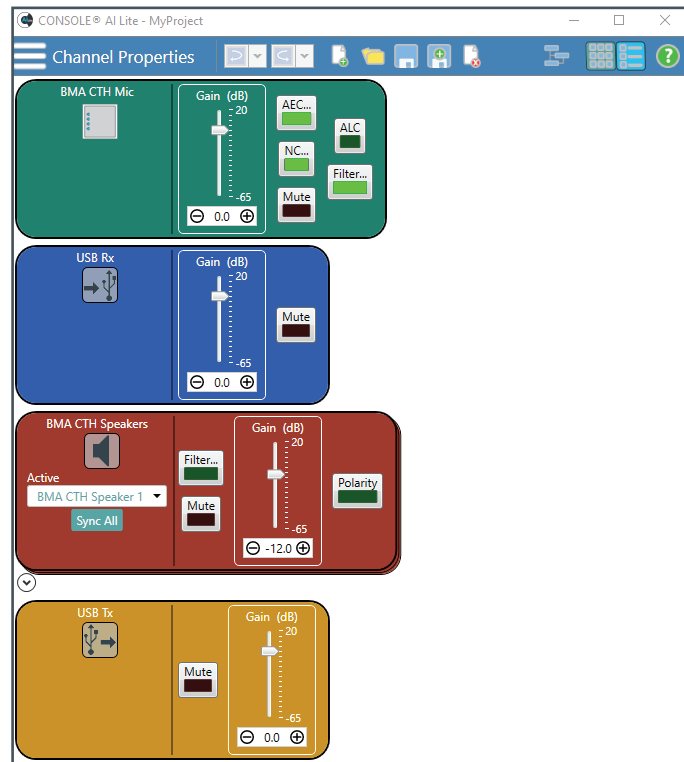
- The number of columns in a grid layout is dependent on the width of both your monitor's (or tablet's) screen and the CONSOLE AI Lite application window.
- As you narrow the application window, the system reduces the number of displayed columns.
- At a reduced window width, or with a small monitor, a grid layout may display only a single column. A grid layout then appears similar to a list layout (described in the next section).



4.3.3 List Layout

The list layout displays the devices vertically in a single column.

To select the List layout, tap or click the List layout icon (i).

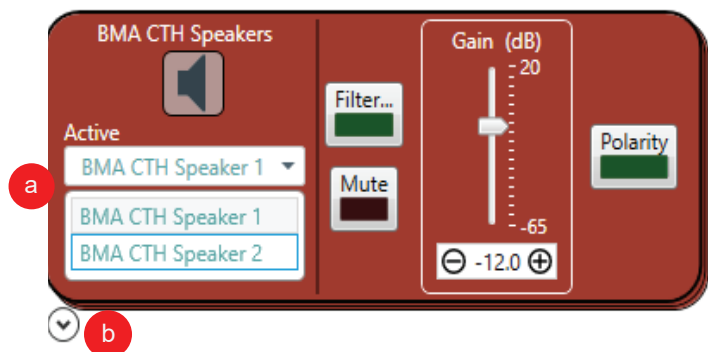


4.3.3 Speaker Views

CONSOLE AI Lite provides two ways to view the speakers in your system - Tile and Vertically Arranged.

Tile

By default, speaker 1 is in front of speaker 2.



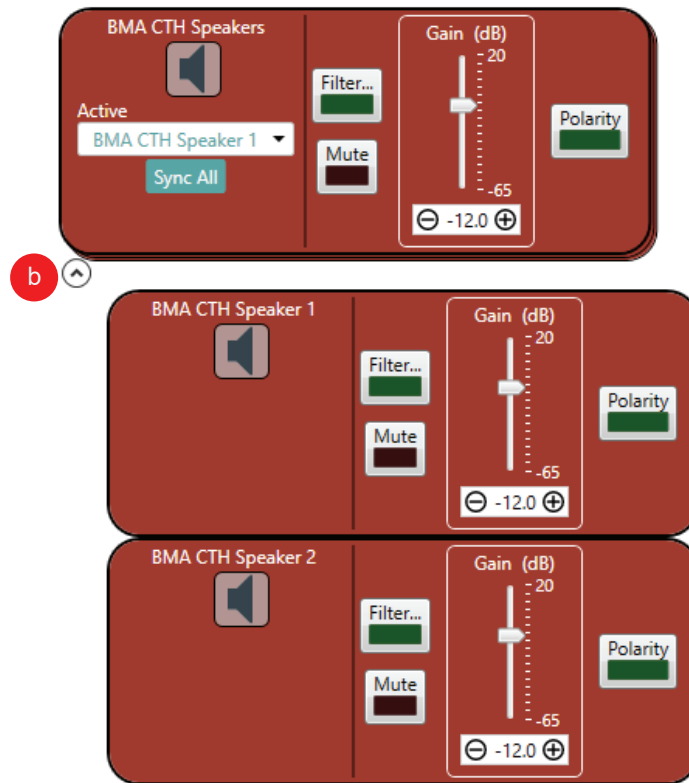
To change which speaker is on top, in the Active dropdown (a), select which speaker you want to view.

Vertically Arranged

To view both speakers, in the lower left, tap or click the expand/contract arrow (b).

See the images on the following page.

To return to the tile view, tap or click the arrow (b) again.



5. Setting Channel Properties

For quick access to the topics in this section, click the following links:

[5.1 BMA CTH](#)

[5.1.1 Gain Setting](#)

[5.1.2 Beam Pattern and LED Settings](#)

[5.1.3 AEC and NLP](#)

[5.1.4 Noise Cancellation](#)

[5.1.5 Microphone and Speaker Filters](#)

[5.1.6 Automatic Level Control \(ALC\)](#)

[5.2 Bluetooth](#)

[5.2.1 Bluetooth Receive](#)

[5.2.2 Bluetooth Transmit](#)

[5.3 USB](#)

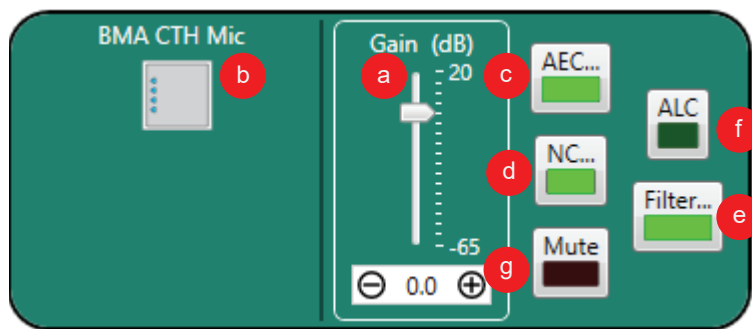
[5.3.1 USB Receive](#)

[5.3.2 USB Transmit](#)

5.1 BMA CTH

The following settings are available for the BMA CTH Mic:

- a. Gain
- b. Beam Pattern and LEDs
- c. AEC (Acoustic Echo Cancellation) and NLP (Non-Linear Processing)
- d. NC (Noise Cancellation)
- e. Filters
- f. ALC (Automatic Level Control)
- g. Mute. All Mute buttons are toggle on (red)/off (brown).



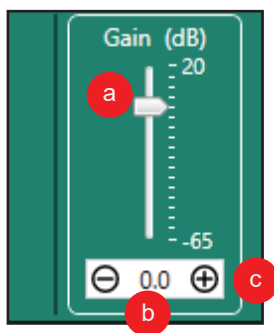
5.1.1 Gain Setting

You can set the gain level in 3 ways:

Drag the slider (a).

Type a value in the text box (b).

Click the incrementer and decrementer arrows beside the text box to set the value (c).



5.1.2 Beam Pattern and LED Settings

To access the beam pattern and LEDs settings, tap or click the BMA CT icon (a).

Two beam patterns are available:

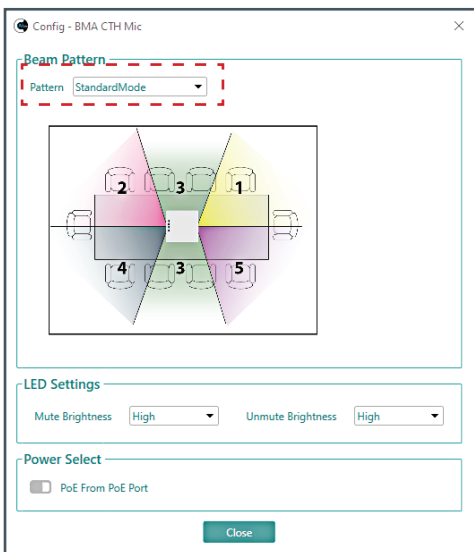
- Standard Mode
- Wide Angle Mode



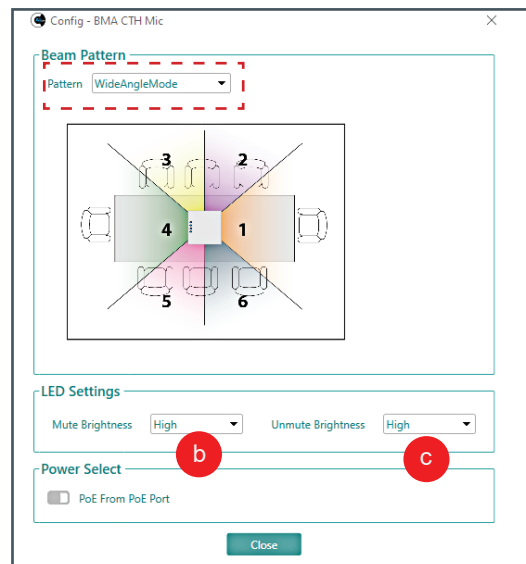
In each mode, four brightness levels for both Mute and Unmute are available (Off, High, Medium, Low).

The Wide Angle Mode image below displays the brightness options for Mute (b) and Unmute (c).

Standard Mode



Wide Angle Mode



5.1.3 AEC and NLP

AEC (Acoustic Echo Cancellation) reduces or removes acoustical echo from an input signal to improve audio clarity.

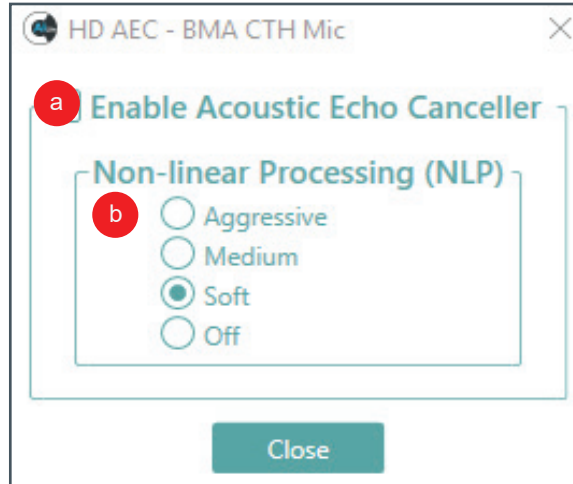
The BMA CTH uses the AEC function with the full bandwidth (20 Hz to 22 kHz) of the signal.

It uses a reference source based on the acoustic characteristics and dynamics of a specific room.

Non-linear Processing (NLP) increases the power of echo cancellation for challenging acoustical environments.

You can select the following:

- Whether or not you want to use AEC. Tap or click the checkbox (a) if you want to use AEC.
- The level of aggressiveness. Tap or click the appropriate radio button (b).



Important: Use NLP with care. The use of NLP has trade-offs, including audio suppression and half-duplex operation.

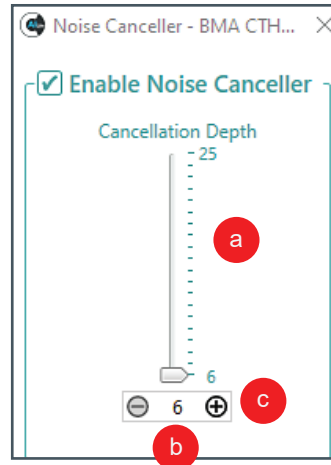
5.1.4 Noise Cancellation

Noise Cancellation removes ambient (background) noise from an input signal, with no noticeable degradation in signal quality.

To enable noise cancellation, tap or click the Enable Noise Canceller check box.

You can change the cancellation depth with any of the following methods:

- Drag the slider (a).
- Type a value in the text box (b).
- Tap or click the incrementer and decrementer arrows beside the text box to set the value (c).



5.1.5 Microphone and Speaker Filters

Filters enable you to shape the audio signals from microphone inputs channels and to speaker output channels for improved audio quality.

You can add up to **four filters** to a BMA CTH microphone or speaker channel. Available filter types include the following:

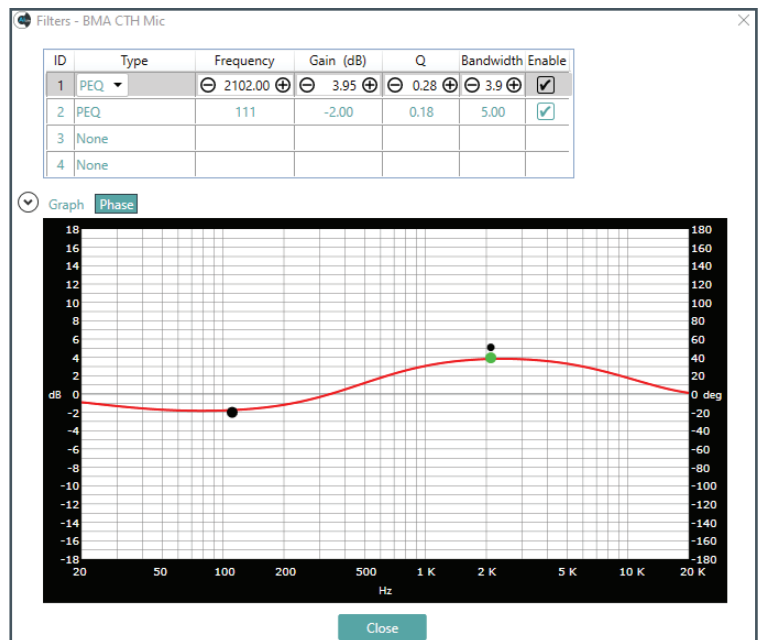
Filter Type	Description
All Pass	Frequency range is 20 Hz to 20 kHz. All pass changes the phase of the audio signal at the set frequency.
High Pass	Selectable frequency cutoff is 20 Hz to 20 kHz. Rolloff is 12 dB/octave. Level is fixed at 0 dB.
Low Pass	Selectable frequency cutoff is 20 Hz to 20 kHz. Rolloff is 12 dB/octave. Level is fixed at 0 dB.

Filter Type	Description
Notch	Center frequency range is 20 Hz to 20 kHz. Bandwidth is from 0.05 to 5.00 octaves in 0.01 octave increments. Level is fixed at -80 dB.
Parametric Equalizer (PEQ)	Center frequency range is 20 Hz to 20 kHz in 0.01 Hz increments. Bandwidth is 0.05 to 5 octaves in 0.01 octave increments. Level range is -15 to +15 dB in 0.5 dB increments.

(Optional) If you do **not** want to use the filter default values, use the information in the following table to adjust:

Option	Description	Range	Default Value
Frequency	The center frequency for the filter you are configuring.	20 Hz to 20 kHz in 1 Hz increments.	1 kHz
Gain	The gain value for the filter you are configuring.	-15 to 15 dB	0 dB
Q	Quality factor. The ratio of the center frequency divided by the bandwidth. Q is the inverse of bandwidth, and the two parameters are linked. A change in the Q value changes the bandwidth value.	0.18 to 28.85	
Bandwidth	The difference between the upper and lower points of a filter's audio passband. Bandwidth is the inverse of Q, and the two parameters are linked. Hence changing the bandwidth value also changes the Q value.	0.05 to 5.00 octaves	

5.1.5.1 Example of a Filter

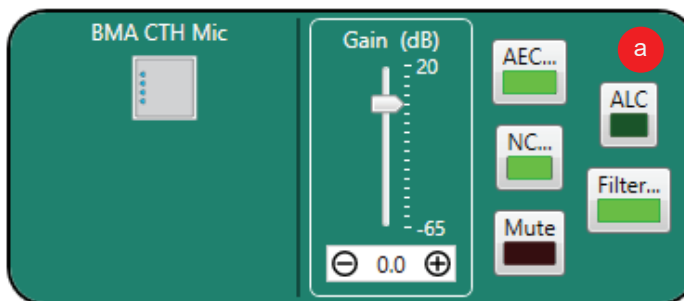


5.1.6 Automatic Level Control (ALC)

ALC keeps soft and loud local participants at a consistent level.

Default setting: On (bright green)

Tap or click the ALC button (a) to toggle ALC on and off (dark green).



5.2 Bluetooth

5.2.1 Bluetooth Receive

You can set the gain with any of the following methods:

Drag the slider (a).

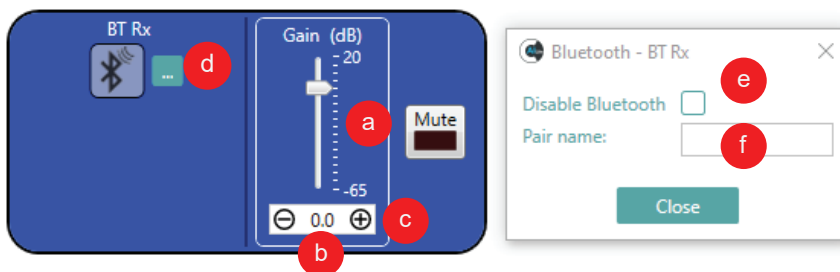
Type a value in the text box (b).

Tap or click the incrementer and decremter arrows beside the text box to set the value (c).

To pair with a mobile device, or disable Bluetooth, tap or click the Bluetooth ... symbol (d).

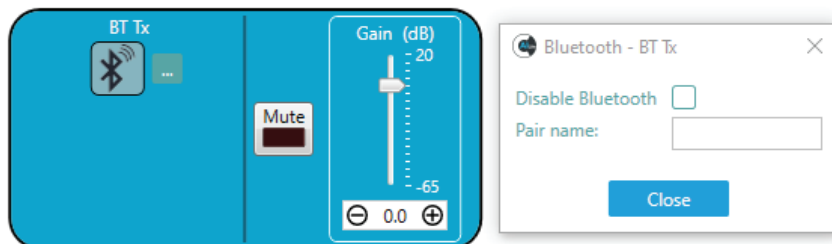
In the Bluetooth popup window, tap or click the check box (e) or, in the Pair name field (f), select the mobile device name.

The Mute button is toggle on (red)/off (brown).



5.2.2 Bluetooth Transmit

Instructions for Bluetooth Transmit settings are the same as those for Bluetooth Receive.



5.3 USB

5.3.1 USB Receive

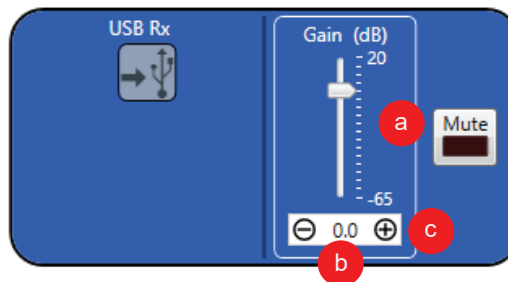
You can set the gain with any of the following methods:

Drag the slider (a).

Type a value in the text box (b).

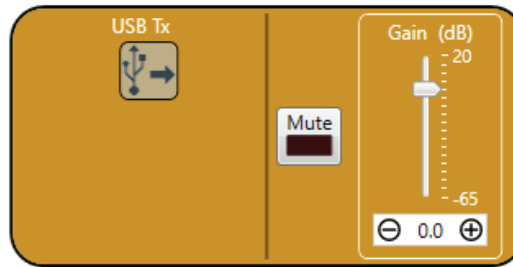
Tap or click the incrementer and decremter arrows beside the text box to set the value (c).

The Mute button is toggle on (red)/ off (brown).



5.3.2 USB Transmit

Instructions for USB Transmit settings are the same as those for USB Receive.



6. Glossary

Term	Definition
Acoustic Echo Cancellation (AEC)	A process in which acoustical echo is removed from a signal. AEC can be used to re-move unwanted signals from mic audio if the unwanted acoustic signal is available separately as an electronic signal.
Attenuation	A reduction of signal amplitude.
Automatic Level Control (ALC)	ALC can be selected for Telco Receive and Mic/Line Input AEC channels. ALC keeps soft and loud telephone participants at a consistent level. ALC can be turned on or off in the Telco Receive and Mic/Line Input AEC Channel Properties. The default is on for both Telco Receive and Mic/Line Inputs.
Filter	A device that passes and blocks audio signals based on user-definable requirements of the system. PEQ (Parametric Equalizer). A multi-band variable equalizer with control of gain, center frequency, and bandwidth. A properly configured PEQ enables Con-verse Pro devices to offset speaker anomalies and room acoustic imaging deficiencies. Center frequency range is 20 Hz to 20 kHz in 0.01 Hz increments. Bandwidth is 0.05 to 5 octaves in 0.01 octave increments. Level range is -15 to +15 dB in 0.5 dB increments.
Noise Cancellation (NC)	A process which removes ambient noise from a signal.
Polarity	Polarity in electrical terms refers to the positive or negative conductors within a DC circuit, or to the Line and Neutral conductor within an AC circuit. Electrical polarity (positive and negative) is the direction of current flow in an electrical circuit.
Project File	Project Files allow you to store configuration settings for Versa Lite configuration, including Inputs, and Outputs for a specific application or venue. Project files also provide CONSOLE AI Lite with the necessary information to communicate with project hardware using your PC.
Quality Factor	It is the ratio of the center frequency divided by the bandwidth. Q reflects an inverse relationship to the bandwidth, and is adjustable from 0.02:1 to 40:1.

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