NUGEN Audio

OPERATION MANUAL

Halo Vision

Visual analysis suite for surround and immersive audio

Contents

Introduction

Halo Vision is a customizable, real-time visual analysis suite for surround and immersive audio. A variety of modules provide audio professionals with a clearer understanding of every aspect of their audio, allowing for precise and confident decision making and troubleshooting, and pinpointing problem areas which might be missed using ears alone. The views can each be rearranged and resized to suit specific workflows.

Interface - General Layout
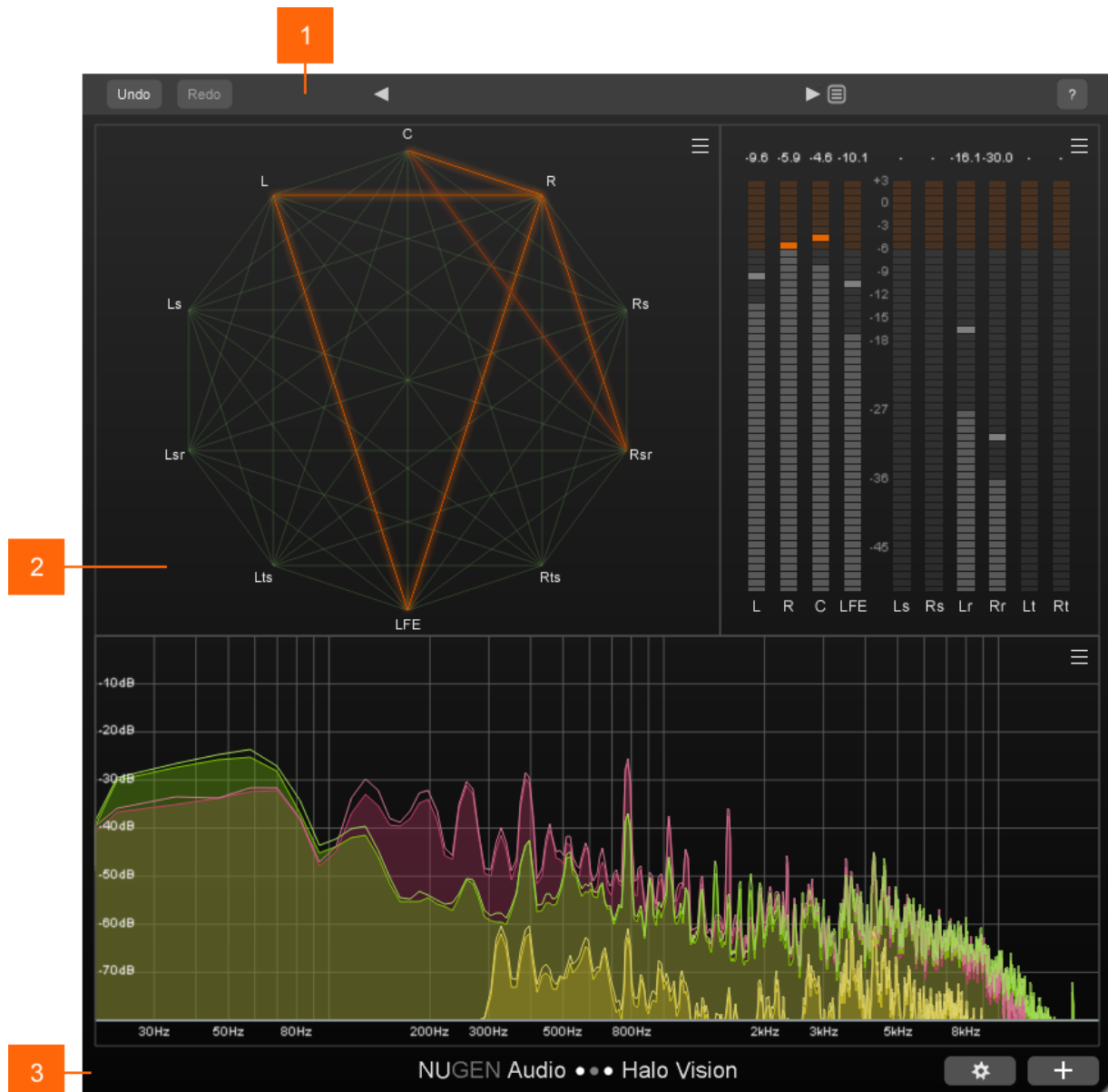
1   Utility controls.

2   Main section.

3   Bottom panel.

Utility Controls

1   **Undo | Redo.** Unlimited session undo and redo commands allowing the user to step back and forward through processing modifications.

2   **Preset browser.** Use the arrow buttons to step sequentially through the presets, or click the end control to open the preset menu and select from a list. Double click the name to rename a preset.

   Preset management.

   ·   The 'Installed' folder contains the factory presets. These cannot be overwritten.
   ·   User presets can be saved in the 'User folder'. A '*' symbol will be shown against the preset name if settings have been changed from the saved version.
   ·   Additional folders can be created using the '+' button.
   ·   Presets and folders can be organised by clicking the '…' symbol, which is highlighted when the mouse pointer is placed over the folder/preset name. Folders can be deleted, renamed and browsed using the standard OS interface. Presets can additionally be moved and copied.

3   **?** Opens the 'About' page, with access to credits and the product manual (if installed).

Main section

This area contains the visual analysis tools, called 'modules'.
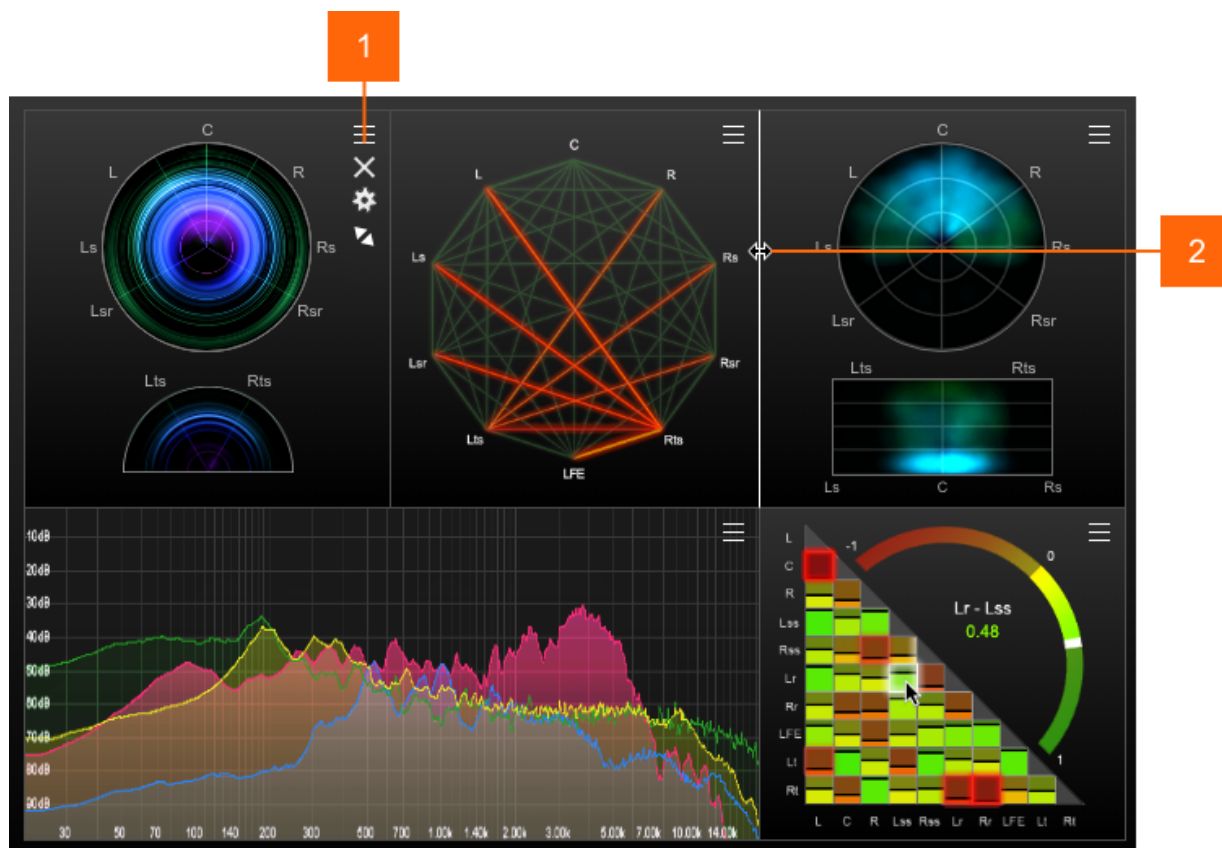
1   **Module menu.** Hover over the hamburger icon to reveal the module-specific menu items:

    a   **'X' button.** Removes the module from the GUI.

    b   **Gear icon.** Opens the module-specific settings window.

    c   **Maximize button.** Enlarges the module to fill the GUI window.

2   **Arrange controls.**

    a   **Resize.** Click-and-drag the module separation lines to resize the modules.

    b   **Rearrange.** Click-and-drag on any area within a module to move the module into a different position. The position of two modules can be swapped by dragging one on top of another.

Bottom panel
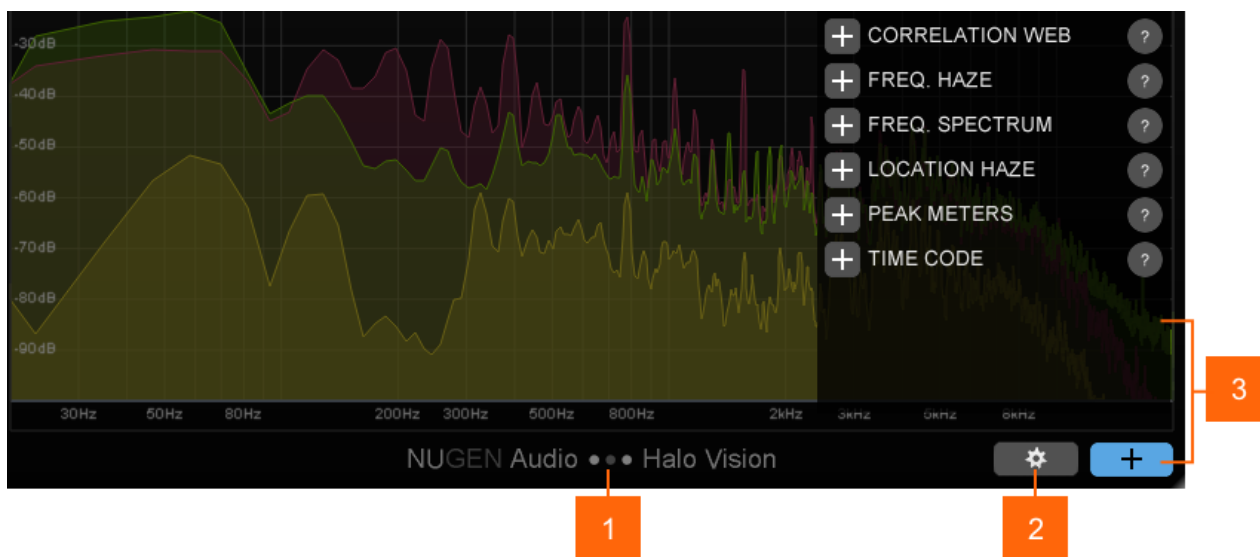
1   **Logo.** Click the logo to access the manual, credits, additional options, and to check for updates.

2   **Global settings.** Opens the Global Settings window.

3   **Add modules.** Click the '+' button to open the module selection menu. This menu contains a list of the available modules, each with a '+' button, which adds the module to the GUI, and a '?' hover-button, which displays a short description of the module.

Modules

Correlation Matrix

The Correlation Matrix displays the phase relationships between every channel, using a small square 'cell' meter for each pair of channels. The colour of the cell represents the correlation value, ranging from green (in phase), to red (out of phase).

This module also includes a larger arched meter for a more detailed look at the phase relationships of specific pairs of channels. By default this meter displays the correlation of L and R, but can be changed to show any pair of channels by hovering over the corresponding cell - clicking the cell locks the pair into the arched view. The meter is accompanied by channel labels, and a correlation value read-out. A value of 1 indicates 100% correlation (mono), 0 indicates no correlation, and −1 indicates 100% negative correlation (out of phase).
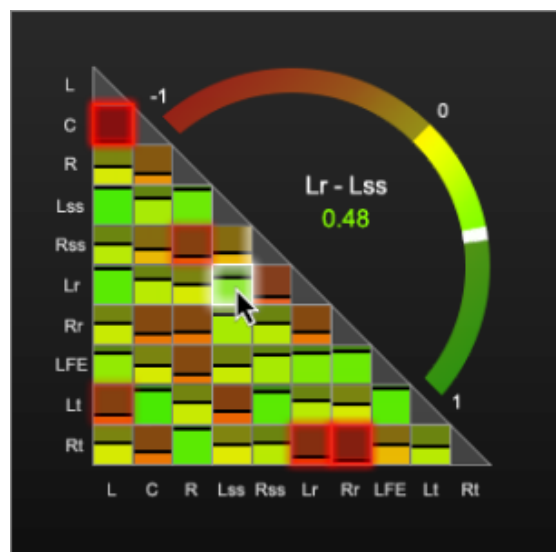
Anti-correlation alert: When the correlation between two channels drops below a user-defined threshold, the corresponding cell momentarily glows red. The anti-correlation threshold can be adjusted in the module's settings.

Correlation Web

The Correlation Web is another way of visualizing the phase relationships between each audio channel. The view consists of a network of channels with an interconnecting line between each pair. When the phase relationship between two channels becomes anti-correlated, the corresponding line lights-up. The further out of phase the two signals are, the more intense the colour becomes.
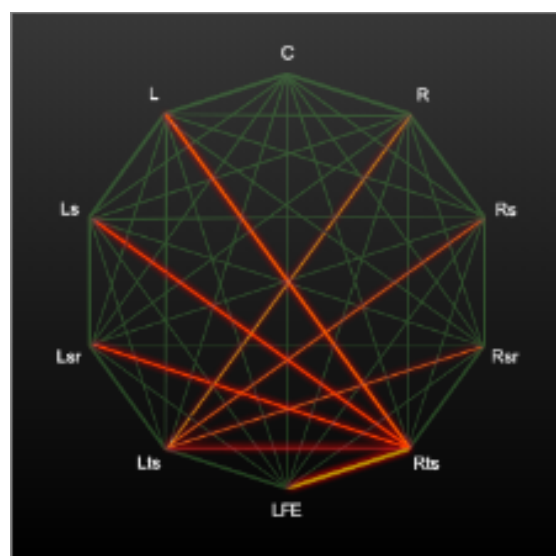
Clicking on the channel labels changes the view to only show the phase information for selected channels. This allows the user to focus-in on specific channels without being distracted by others, which can be particularly helpful when working with higher channel counts.

Frequency Haze

The Frequency Haze displays frequency content across the surround panorama, providing a general 'perceived location' of tonal information. The frequency spectrum is displayed with the lowest frequency at the centre of the circular view, and the highest frequency at the edge of the view, with channel labels in typical speaker positions around the outside of the circle.

When working with channel configurations that use overhead channels, such as 7.1.2, the Frequency Haze includes an extra semi-circular view to show frequency content across those channels.
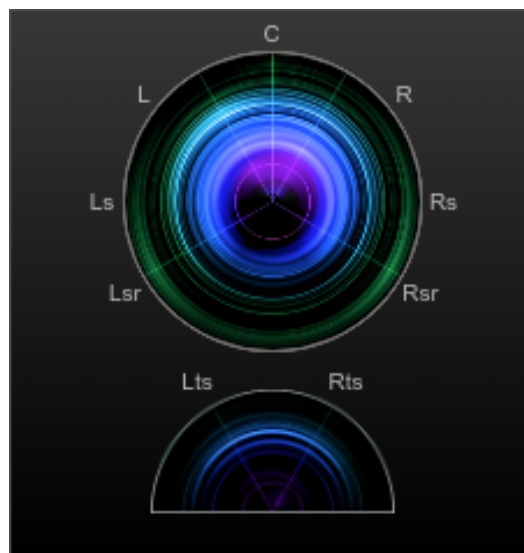
Location Haze

The Location Haze shows the energy distribution across the surround panorama. Brighter sections indicate increased energy, providing a visualization of the perceived location of your audio.

When working with channel configurations that use overhead channels, an additional rectangle haze view displays perceived height information.
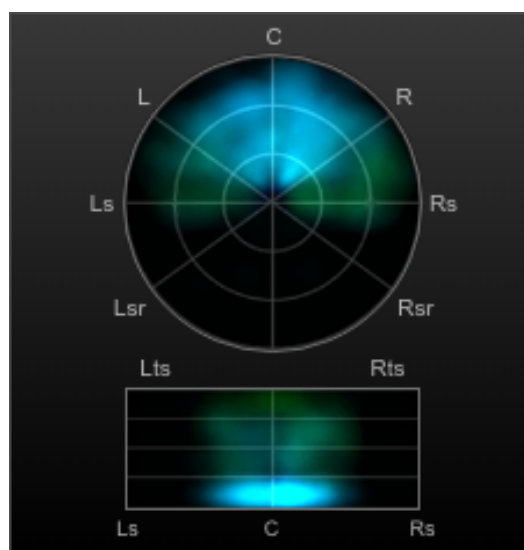

Spectrum

The Spectrum view is an FFT (Fast Fourier Transform) spectrum analysis view, graphing level against frequency. The module has two modes that can be switched between in the module's settings.

When in **Combined mode**, the graph displays the frequency information of all of the channels in one spectrum, showing the overall frequency content of your multichannel audio.

In **Groups mode**, channels can be organised into several groups of overlaying spectrums. This can be useful for comparing the frequency content of different parts of the surround panorama. For example, checking that the dialogue in the C channel isn't being masked by the frequency content of the L and R channels.
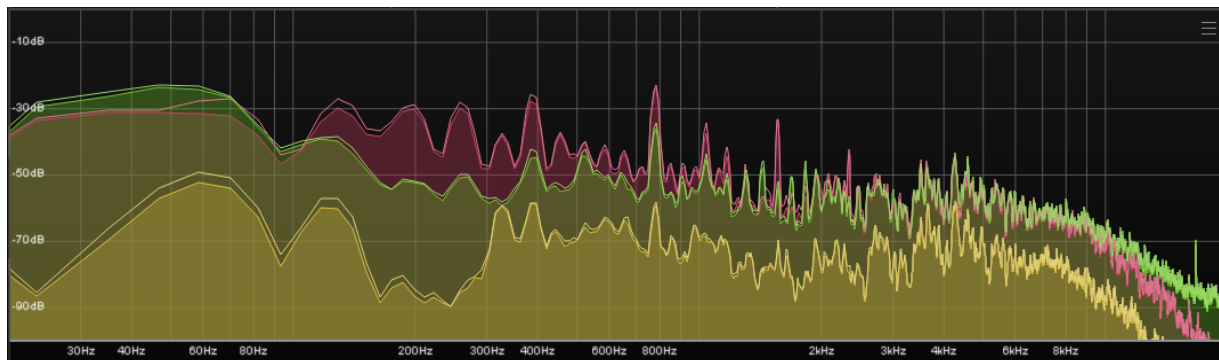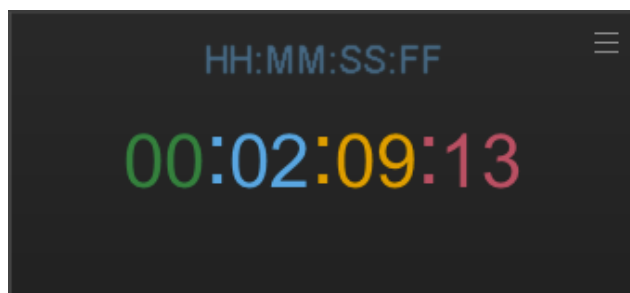

Peak Meters

The Peak Meters provide a dB level meter for each channel. This can be set to show True Peak, Sample Peak, or Apple Peak from the module settings.
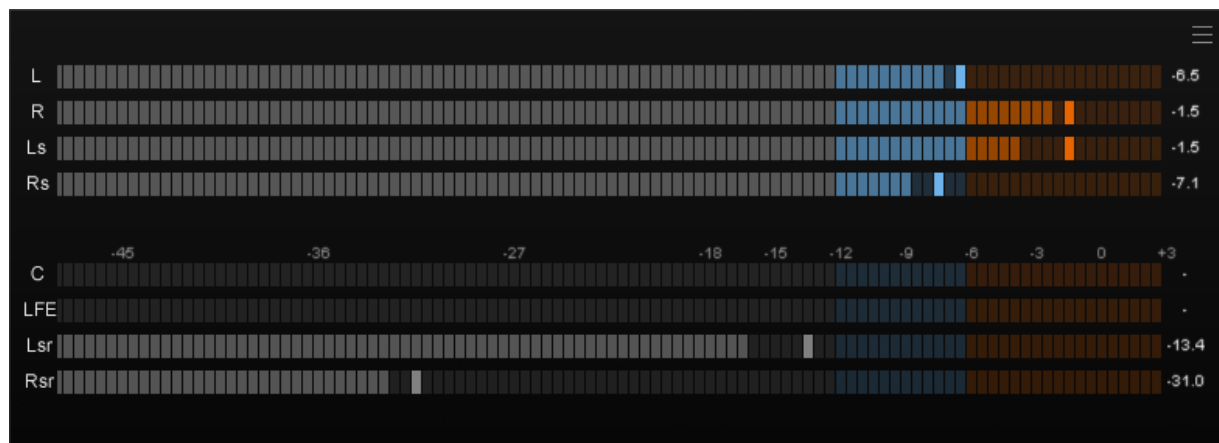
Time Code

The Time Code displays a timecode readout based on the current host/DAW playback position.

Reporting a Problem

If you encounter a problem with any of NUGEN Audio's products, please let us know, to help us improve them.

You can email the NUGEN Audio support team at support@nugenaudio.com.

To make it easier for use to resolve the issue you are seeing:

- Please give a clear explanation of the problem, including any steps required to reproduce it if appropriate.
- Please state how frequently you've experienced the problem.
- Please supply details of the system you are using, in particular:
    - The operating system (Windows/Mac OS) and version.
    - Host application and version.
    - CPU speed and RAM available.

Please be patient with any problems you may experience, particularly with products at a beta stage of release. At NUGEN Audio we take problems with our software seriously, and will endeavour to correct them as quickly as possible.

Version history

1.0   Initial release

1.0.2   Fixed an issue in the Spectrum view
               Fixed a routing issue in Nuendo

1.1   Added support for 7.1.4
               Apple Silicon native support
               Link to feedback form in menu

Notes:

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