

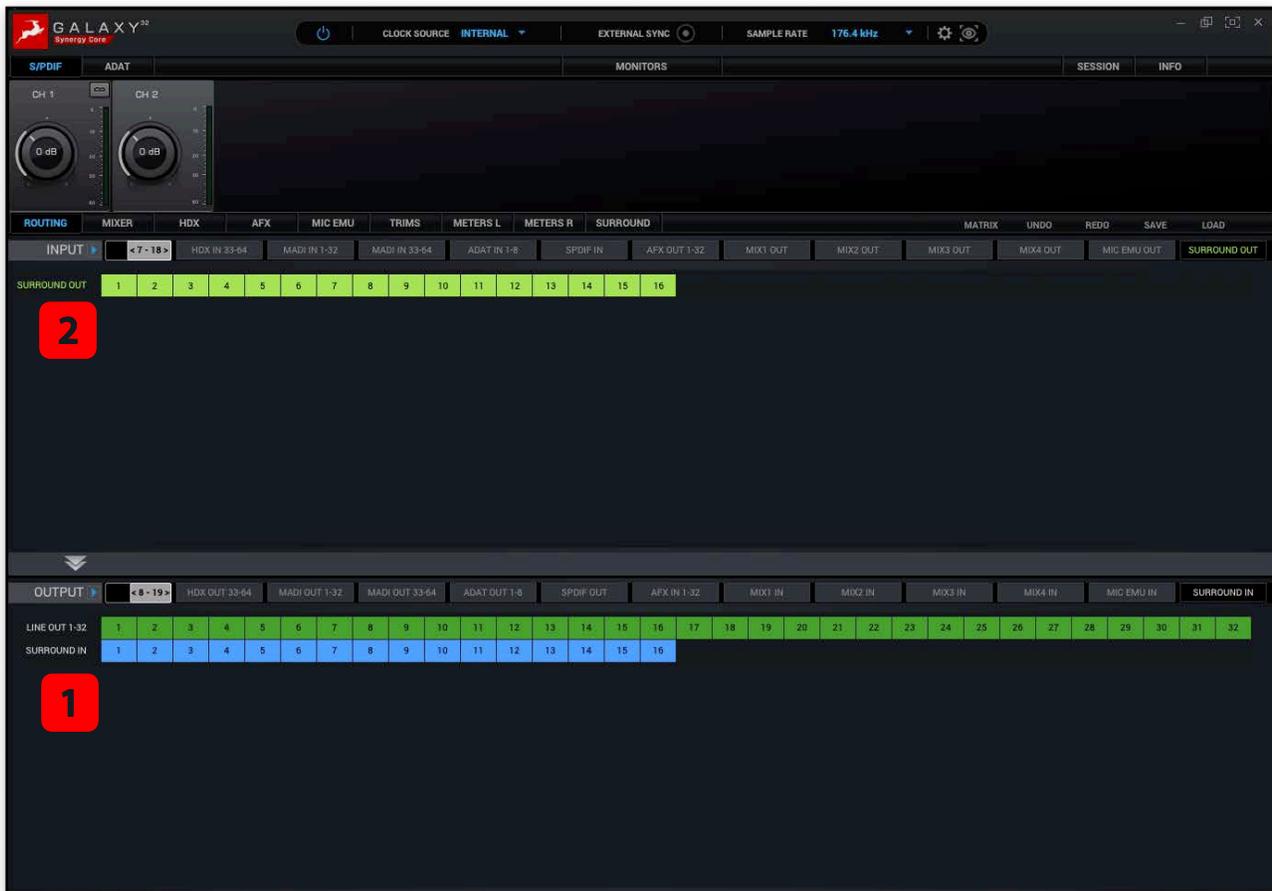
Galaxy 32 Synergy Core

Surround/Immersive audio monitoring functionality overview

Antelope Audio's Galaxy 32 Synergy Core interface receives a major update providing monitoring control functionality and speaker calibration processing for up to 16 channels of surround or immersive audio. Formats from stereo up to 9.1.6 Dolby Atmos are supported, while maintaining customizability within the 16 channel limit for any unorthodox setup requirements.

Preliminary setup

In order to access the speaker calibration processing, up to 16 channels can be routed into the speaker management processing (Surround In **1**) via the routing tab. These can be any signals inputted into the interface - analog, digital or computer playback channels.



The processed signals are outputted via the Surround Out **2** channels, which can be routed to any analog or digital output. These routing capabilities allow for full flexibility when integrating the processing into any setup.

Surround tab functionality



1 Format selector - List of supported formats based on channel count

2 Path order - Select the preferred channel order and speaker layout

3 Speaker layout and selector - Selected format and channel order is visualized here, allowing control over each speaker's settings by left clicking it. Each channel routed via the routing tab is allocated a speaker and labeled according to the selected path order. Customized path orders are possible when routing the processed output channels.

The following functionality is available for monitoring controls:

- Alt + left click mutes target speaker
- Cmnd (Ctrl on PC) + left click solos target speaker
- Cmnd (Ctrl on PC) + Shift + left click adds a speaker to the soloed group
- Cmnd or Alt + left click on the blank background removes all mutes

4 Metering - Peak meters for each channel of the selected format, with color-coding and labeling, along with pre and post-processing switch. The Monitors tab can be viewed independently of the Surround tab.



- 5** Surround delay - Offsets all of the processed channels by up to 100ms, useful for syncing the audio to picture (lip sync delay). Bypass button switches on/off both the global and per-channel delays.
- 6** Surround level - Main output level affecting all of the processed channels, along with dim and mute monitoring functions. Bypass here toggles off the entire processing except for level adjustments, both global and per-channel.
- 7** Monitor out - Controls the output level of the stereo hardware monitor output of the Galaxy 32. Dim, mute and mono summing functionality are also available.
- 8** Channel/Speaker settings - Views the following settings of the selected channel, top to bottom:
 - Full name of the selected channel/speaker.
 - Channel EQ reset, copy and paste settings buttons.
 - Bypass button for all of the channel's processing, except for the level setting.
 - Phase invert button.
 - Level setting in dB - hold down Cmnd (Ctrl on Windows) for fine 0.1 dB steps.
 - Total gain - sum read-out of the channel's level setting and the main output level.
 - Delay - Time offset of the channel in milliseconds. Holding down Cmnd (Ctrl on Windows) enables offsetting by 0.1ms steps.
 - Total delay - sum read-out of the channel's delay value and the global delay.
 - Crossover settings - bass management settings, explained in detail on the next page.
- 9** Channel EQ graph and settings - 8-band parametric EQ with cut and shelf filters available for the low and high bands, and bell filters available for the remaining bands. Color coded graph visualization of the selected channel's frequency calibration. Four separate graphs are available as follows:
 - channel output (**coral orange - L, C, R; green - surround speakers; blue - overhead speakers**) - represents the signal being sent to the output.
 - channel EQ settings graph (**teal**) - represents the currently dialed EQ settings.
 - LFE split signal (**purple**) - represents the signal split and sent to the LFE channel via its bass management crossover mixer. The graph shows the low-pass filter applied to the channel.
 - crossover high-pass filter graph (yellow) - represents the high-pass filter settings applied to the channel, also available via the LFE's mixer window.



Bass management crossover settings



The above mixer is available via the LFE channel settings (LFE crossover button). It provides all bass management settings allowing monitoring low frequency content of the surround/overhead channels via the LFE channel. Global on/off for the crossover is available, again via the LFE channel settings.

- 1** High pass crossover filter - cutoff frequency, filter type (Butterworth/Linkwitz-Riley)
- 2** Low pass crossover filter - cutoff frequency, filter type (Butterworth/Linkwitz-Riley)
- 3** Mixer settings - controls the level of the low-passed signal of each surround channel, being sent to the LFE channel. Volume control link, mute and solo are available.
- 4** LFE low pass filter - cutoff frequency of the LPF on the LFE channel.

Crossover filter settings are also available from each channel's settings, high pass filter settings for the surround channels and low pass filter settings for the LFE channel.