



Auro Technologies

Auro-Headphone Plug-In Guide

Plug-in Version: 2.1

User Guide Version: 1.0

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Chapter 1: Controls

The Auro-Headphone plug-in uses an advanced binaural algorithm to play back Auro-3D content over a regular pair of headphones.



Figure 1-1 Auro-Headphone plug-in

1.1 Bypass

The Bypass toggle button switches the Auro-Headphone plug-in into Bypass Mode. In this mode, the virtualization of the channel-based content is bypassed. Instead, a constant-power stereo downmix is produced.

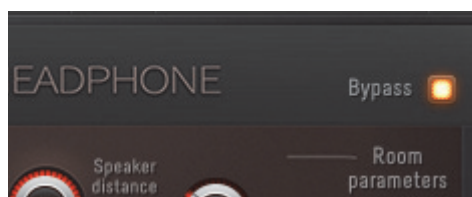


Figure 1-2 Bypass Mode

1.2 Name

The Name field initially displays a unique, automatically generated name. To rename an Auro-Headphone instance, click the Name field and type a new name.

NOTE: Changing the name of the Auro-Headphone instance does not change the name of the respective DAW-track.

1.3 Bus

The Bus menu, lets you choose the Auro-Mixing Engine instance to receive the channel-based output from.

In the image below, the Auro-Mixing Engine instance called Mix is selected as the bus for this Auro-Headphone instance.



Figure 1-3 Bus selection

1.4 Level controls

Volume

The Volume fader sets the signal level of the Auro-Headphone output to the DAW-track.

The Volume can be set three ways:

- Click and drag the fader.
- Click in the path of the fader.
- Double-click the numerical field below the fader and enter a value.

Bypass offset

This control allows you to apply a gain offset to the output of the Auro-Headphone plug-in when it is in Bypass mode. This way both modes can be compared while maintaining equal loudness.

ER level

The Early Reflections (ER level) control lets you adjust the level of the early reflections in the Auro-Headphone mix.

LFE level

The LFE level control lets you adjust the level of the LFE-signal (Low Frequency Effect) present in the Auro-Headphone mix.

1.5 Room parameters

The room parameters allow you to specify the characteristics of the room and the distance of the speakers to the listening position.

Top

The Top rotary encoder sets the distance from the listening position to the ceiling.

Bottom

The Bottom rotary encoder sets the distance from the listening position to the floor.

Left

The Left rotary encoder sets the distance from the listening position to the left wall.

Right

The Right rotary encoder sets the distance from the listening position to the right wall.

Front

The Front rotary encoder sets the distance from the listening position to the front wall.

Rear

The Rear rotary encoder sets the distance from the listening position to the rear wall.

Speaker distance

The Speaker distance rotary encoder lets you define the distance of the speakers to the listening position.

Delay factor

The Delay factor lets you increase the delay applied to the early reflections by a maximum factor of 3.

1.6 Reverb

Level

The Level control lets you increase the amount of reverberation.

Pre-delay

The Pre-delay rotary encoder determines the amount of time that elapses between the original audio and the beginning of the reverberation.

Alpha

The Alpha control lets you adjust the clarity of the reverberation. Increasing the Alpha value causes the high frequency harmonics to be less subjected to damping.

HF Cut

The High Frequency Cut (HF Cut) control lets you adjust the cut-of frequency of the high-cut filter (500 Hz - 20 kHz). To cut the high-end of the processed signal, lower the frequency.

RT60

Adjust the Reverberation Time (RT60) to change the length of the reverberation's decay. A higher value produces a longer reverberation.

1.7 Status Bar

Version

In the bottom left corner, the status bar lists the version number of the Auro-Headphone plug-in.

Connection

The Connection LED indicates the connection state of the Auro-Headphone plug-in. If the LED blinks red, there is a connectivity problem (please refer to "Restart Service" on page 43 of the Auro-3D Authoring Tools Documentation for help). If it lights yellow, the plug-in is ready to use.

Chapter 2: Using the Auro-Headphone Plug-in

This section covers the general workflow when using an Auro-Headphone plug-in. The DAW used here is Pro Tools, but the workflow is the same in any DAW.

1. Create a stereo audio track
2. Insert an Auro-Headphone instance on it.
3. In the top left corner, select an Auro-Mixing Engine instance as the bus for this Auro-Headphone instance.



Figure 2-1 Bus selection

NOTE: For more information on how to use the Auro-Mixing Engine, please refer to the *Auro-3D Authoring Tools Documentation*.

4. Select a stereo output to monitor through.

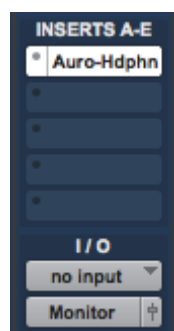


Figure 2-2 Insert and I/O assignment

5. Start playback

The Auro-Headphone plug-in now plays back a binaural virtualization of the channel-based output of the Auro-Mixing Engine instance.