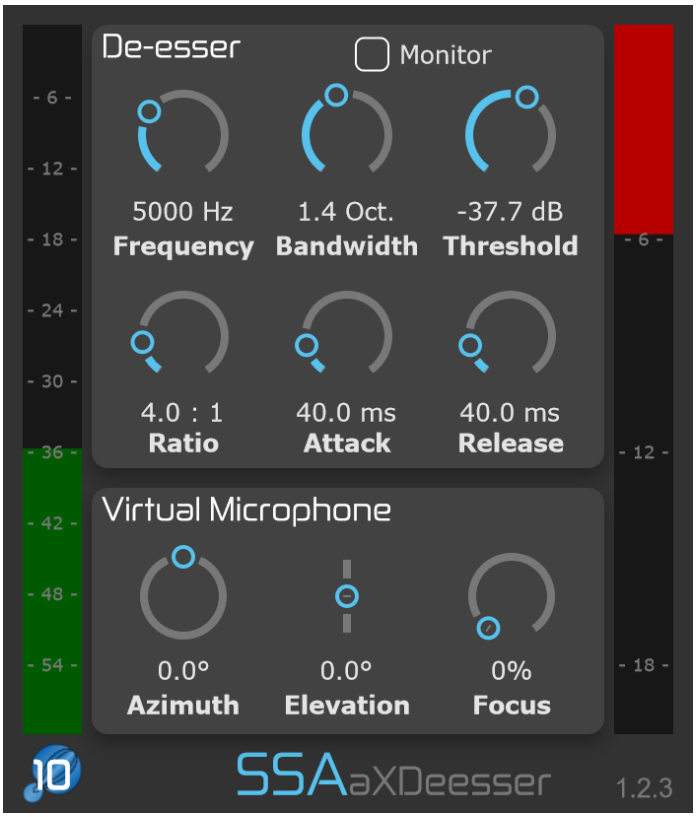
# aXDeesser

a1Deesser/a3Deesser/aXDeesser

## Ambisonic de-essing plugin

v. 1.2.3

## User Manual




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## Requirements

To use the **aXDeesser** you must have a program or DAW capable of handling plugins with the required number of audio channels without applying any additional processing.

## Installation

1. Download the .zip file from your account on https://www.ssa-plugins.com
2. Unzip the folder and run the installer to place the contents in the default VST3/AU/AAX folder on your computer.
3. Open your DAW and rescan for new plugins
4. Add the plugin to a new track that can handle multichannel audio. For example, in Pro Tools | Ultimate this will require you to create an Ambisonic track/buss.
5. If required, make sure your computer is connected to the internet, enter the serial number emailed to you to activate the plugin.

To uninstall simply delete the plugin files from your computer. On Windows you can uninstall from Add/Remove Programs.

## Plugin Summary

The **aXDeesser** is a de-essing plugin that can be used on any AmbiX-format (SN3D/ACN) Ambisonic signal. It allows the signal within a particular band to be compressed. This is normally used to remove sibilance from voices recorded or encoded Ambisoncally, though it can be used creatively on sub-mixes containing multiple sound sources. The **aXDeesser** also allows you to select the direction you want to focus on for activating the de-essing effect, so the compression will only be activated when signals from the desired direction are above the threshold. Sounds from other directions will not contribute to activation of the de-esser. Note, however, that the de-esser will be applied to all sources in the sound field when it is activated.

## Parameters

The **aXDeesser** has the following parameters:

- **Frequency**: The centre frequency of the band to be compressed. This should be centred on the portion of the spectrum in which you want to reduce sibilance.
- **Bandwidth**: The bandwidth, in octaves, of the band you wish to compress.
- **Threshold**: Set the level threshold at which the compressor begins to act on the defined sibilance band.
- **Ratio**: Adjust how much compression is applied to signal above the threshold. A ratio of 1 means no compression while higher ratios lead to stronger compression of the sibilance band.
- **Attack**: The time in milliseconds (ms) for the compressor to become fully effect once a signal goes above the threshold.
- **Release**: The time in milliseconds (ms) for the compressor to fully switch off once a signal goes below the threshold.
- **Monitor Sibilance Band**: You can solo the sibilance band in order to asses the effect of the compression.

The virtual microphone, used to generate the signal that drives the de-esser, has the following parameters:

- **Azimuth**: The azimuthal direction you want the virtual microphone to point. Positive angles are in an anti-clockwise direction, meaning +90 degrees is to the left and -90 degrees is to the right.
- **Elevation**: The elevation angle of the virtual microphone to be pointer. Zero is on the horizontal, +90 degrees is directly up and -90 degrees is directly down.
- **Focus**: The focus controls the directivity of the virtual microphone that is used to drive the de-esser. A focus of 0% leads omnidirectional directivity, meaning all audio in the sound field is used to drive the de-esser. Increasing the focus increases the rejection of sounds away from the direction the virtual microphone is pointed. The maximum narrowness of the 100% focus is dependent on the order at which the plugin is operating (shown in the bottom left corner). First-order allows up to cardioid directivity. Higher orders allow for narrower directivity and better rejection of sound sources away from the virtual microphone direction.
    - **Note that the maximum directivity depends on the order of the incoming signal, not the maximum order of the plugin**. A first-order Ambisonic input signal will have a maximum of first-order directivity/focus, even if the plugin is capable of third or tenth order.

## Usage Notes

*Automatic Order Detection* - The **aXDeesser** automatically selects order to match that of the input signal by estimating the signal order. This helps to keep the CPU use as low as possible while allowing the encoding order to be changed earlier in the signal chain without having to change parameters on the **aXDeesser**. The current order detected by the plugin is show in the bottom left hand of the user interface.

The level of the virtual microphone signal is shown in the green meter to the left of the interface.

The amount of gain reduction applied to the sibilance band is shown in the red meter to the right of the GUI.




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