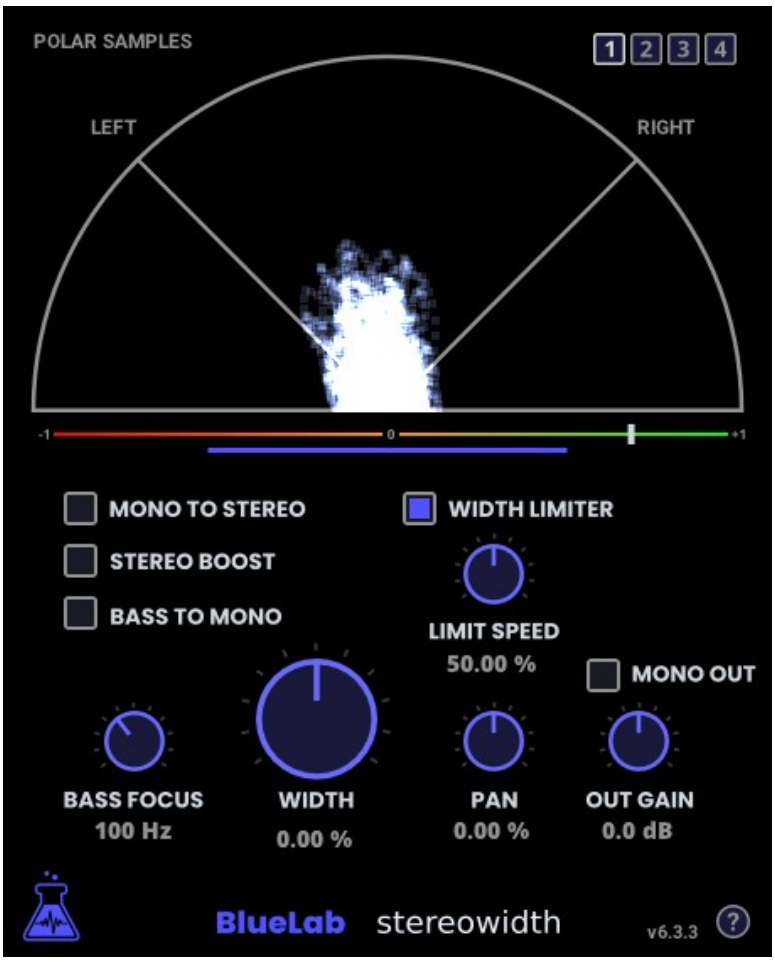
BlueLab stereowidth

plugin version: 6.3.3
manual version: 3.2

www.bluelab-plugs.com

DESCRIPTION

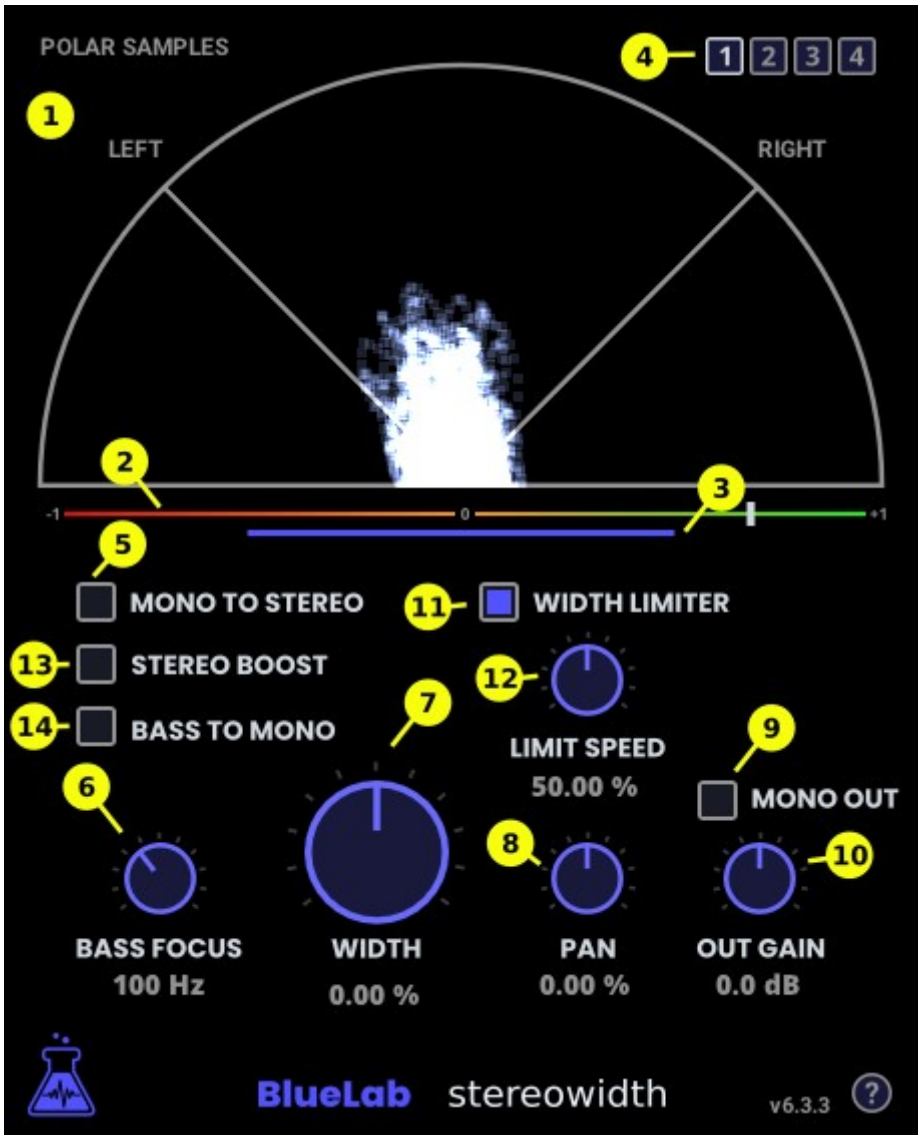
StereoWidth is a plugin that enlarges or narrows the stereo image of a stereo sound. The plugin provides several visualization modes to see the changes of the stereo image. It also provides a state of the art method to get a quality stereo effect from a single channel sound.



FEATURES

- Stereo widen and narrow
- State of the art mono to stereo feature
- 5 visualization modes
- Correlation meter
- Bass focus
- Pan
- Mono out
- Output gain
- Width limiter
- Stereo boost
- Bass to mono

USAGE



The **GRAPH (1)** area visualizes the stereo field. 4 different visualization modes are available. Dragging the mouse left and right on this area changes the pan. Alt + up and down mouse drag changes the width.

The **CORRELATION METER (2)** displays the correlation of the current output signal. When the signal is mono, the correlation value is +1. When the signal is stereo, the correlation can vary from -1 to +1. This meter makes possible to check if the stereo signal is mono compatible. For correlation between 0 and +1, the output signal is fully mono compatible. For values between -1 and 0 the signal is not mono compatible anymore. In this case, if this stereo signal is turned into a mono signal later, there will be issues, for example phase cancelation. To get a good sound that will stay mono compatible, it is necessary to check that the correlation meter won't display values under 0.

The **WIDTH METER (3)** displays the widening or narrowing value. When the width is narrowed to the maximum, the meter is narrow. When the width is widen at the maximum, the meter has a maximum width.

The **VISUALIZATION MODES (4)** buttons let choose between 4 different types of stereo visualization (see **APPENDIX I** for a detailed description).

The **MONO TO STEREO (5)** parameter activates the pseudo stereo processing. If we have a mono signal as input, this option can turn the signal into pseudo stereo, by using a state of the art algorithm.

NOTE: The **MONO TO STEREO (5)** parameter is optimal when using power of two buffer sizes in the DAW (buffer size of values 64, 128, 256, 512, 1024, 2048...). If the buffer size is not a power of two, the plugin will add a latency (which will be obviously compensated by the DAW latency compensation system). But if you want a process with zero latency, it is necessary to use a power of two buffer size.

The **BASS FOCUS (6)** parameter lets choose the bass focus frequency. Under this frequency, the sound won't be modified. The **PAN (8)** parameter won't pan the frequencies under the bass focus frequency. This parameter enables the possibility to avoid widening low frequencies, as low frequencies are centered in the mix most of the time. It also makes possible to widen only high frequencies such as air or very high harmonics, to make a subtle widening effect.

The **WIDTH (7)** parameter sets the increase or decrease of the stereo image width.
When set to -100%, the stereo image is narrowed at the maximum, and we get a mono signal. When set to 100%, the stereo image is enlarged at the maximum. With a value of 0%, the signal is not touched.

The **PAN (8)** parameter lets balance the signal between left and right channels. It can be very useful in order to re-center a stereo image that is not well centered, or just to apply a panning effect. If **BASS TO MONO (14)** is on, the frequencies under the **BASS FOCUS (6)** frequency won't be panned, in order to keep the bass frequencies centered. If **BASS TO MONO (14)** is off, all the frequencies will be panned.

The **MONO OUT (9)** parameter converts the output stereo signal to mono. It is applied after all other processing. It can be useful in order to check mono compatibility when the stereo width has been increased.

The **OUT GAIN (10)** parameter applies an output gain to the processed signal. It can be useful in order to adjust the output gain, without requiring an additional gain plugin.

The **WIDTH LIMITER (11)** option activates the width limiter. With this feature, the width is automatically reduced if the correlation becomes negative. This will make possible to increase the stereo width, but to reduce it automatically in case the correlation value becomes a problem (for mono compatibility for example).

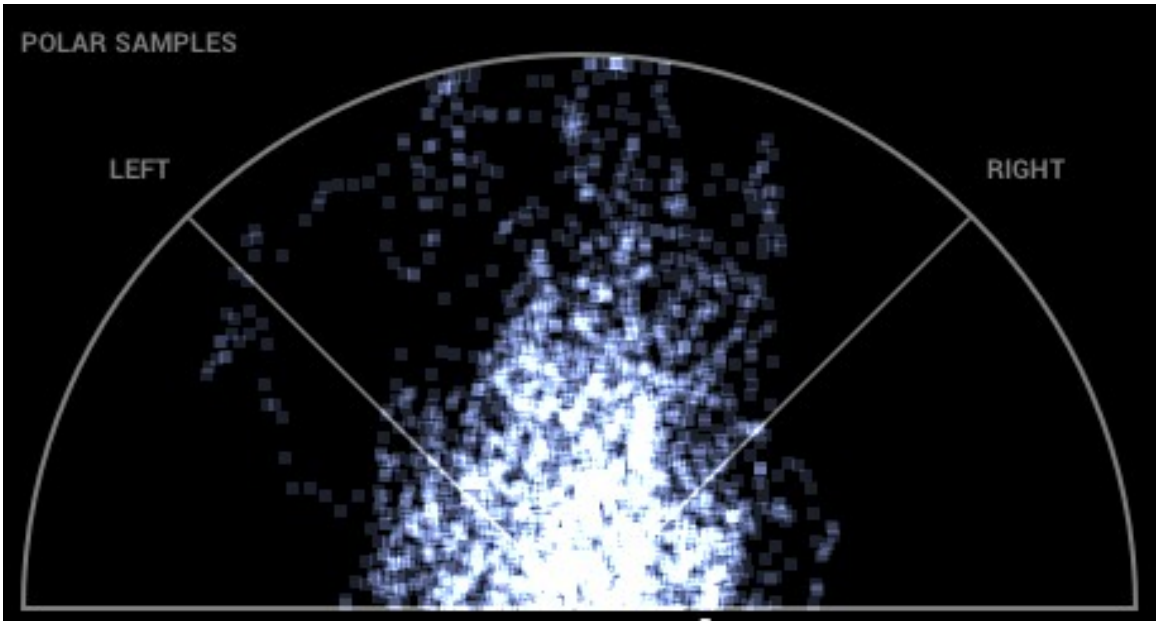
The **LIMIT SPEED (12)** sets the speed of the width limiter.

The **STEREO BOOST (13)** option boosts the effect of the **WIDTH (7)** parameter, by boosting the stereo widening effect. This option is to use with care, as it does not watch the correlation at all.

The **BASS TO MONO (14)** parameter converts to mono the frequencies which are under the **BASS FOCUS (6)** frequency. This can be useful if the input sound has bass frequencies that have a stereo width, or when using the **MONO TO STEREO (5)** option, to make sure that the bass frequencies are mono and well centered. The **BASS TO MONO (14)** option changes the behavior of the **PAN (8)** parameter. It makes the low frequencies to be panned or not.

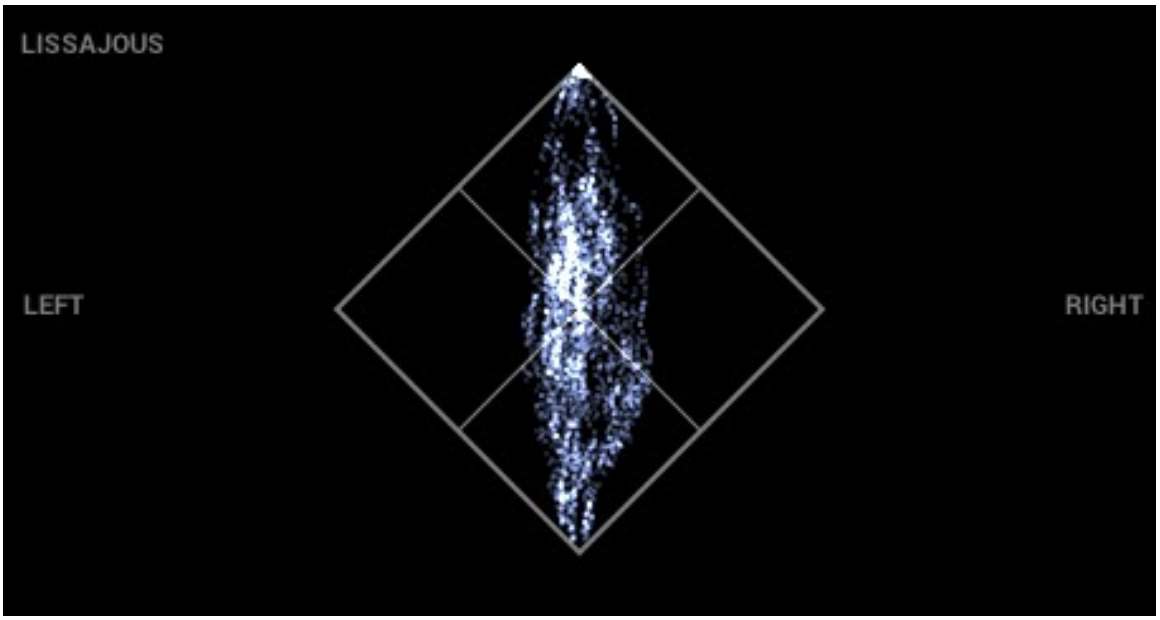
APPENDIX I – STEREO VISUALIZATION MODES

MODE 1 – POLAR SAMPLES



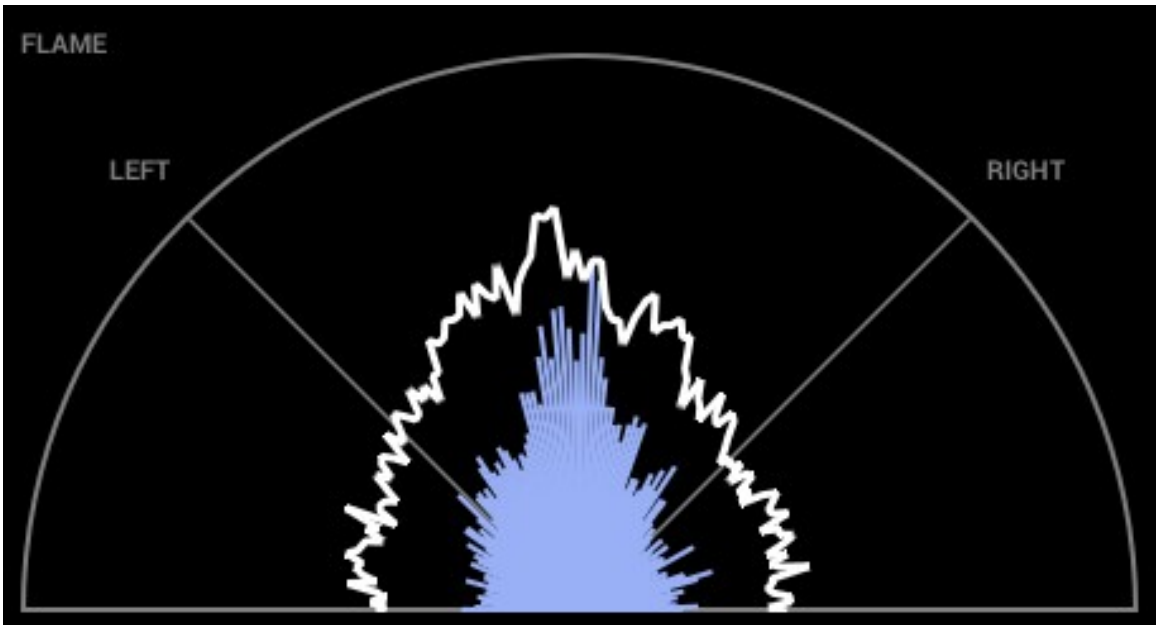
This mode shows the stereo spread over the left and right channels. The distance from the center corresponds to the volume of the sound. Values near the bottom left and bottom right correspond to a correlation value near -1.

MODE 2 - LISSAJOUS



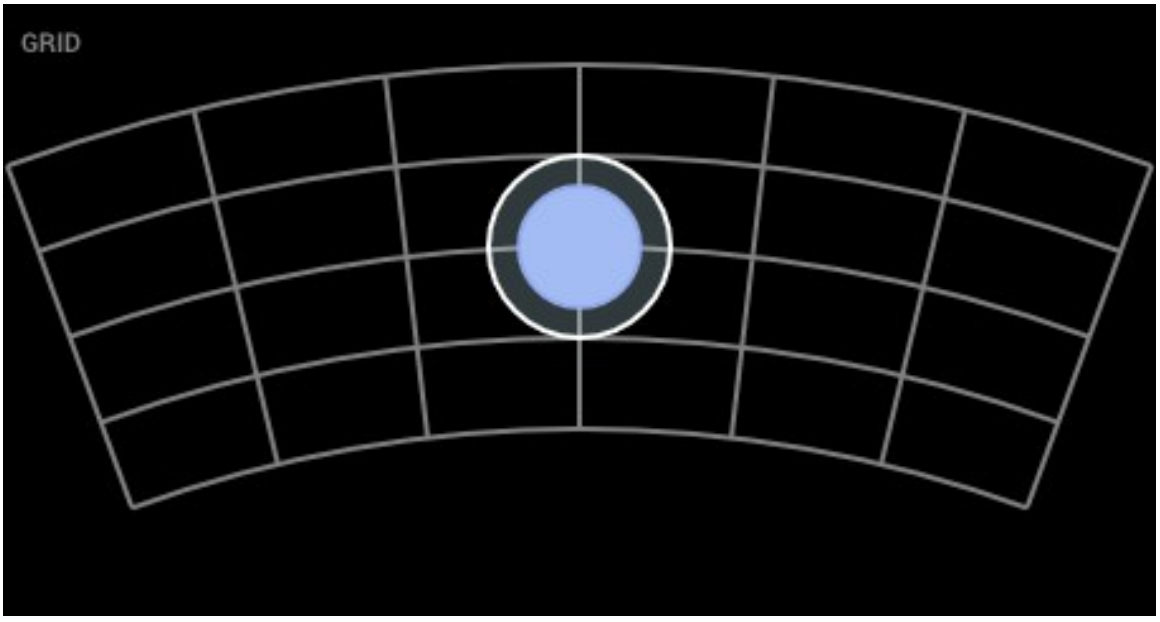
This mode shows a standard Lissajous diagram. Vertical main orientation correspond to good correlation values. Horizontal main orientation correspond to correlation that will have mono compatibility problems.

MODE 3 – FLAME



This mode is similar to the **POLAR SAMPLES** mode, but it displays lines instead of points. An additional curve is displayed in white, showing a more global evolution of the samples. This curve keeps track of previous values and helps to understand the stereo field evolution over the time.

MODE 4 – GRID



This mode shows the panning and the stereo widening set by the plugin. The circle is a representation of a stereo sound source. Pan values correspond to left to right on the grid. Stereo widening correspond to the size of the circle. The circle (sound source) can be dragged with the mouse (left and right), and can be increase or decreased in size (Alt + up/down mouse drag).