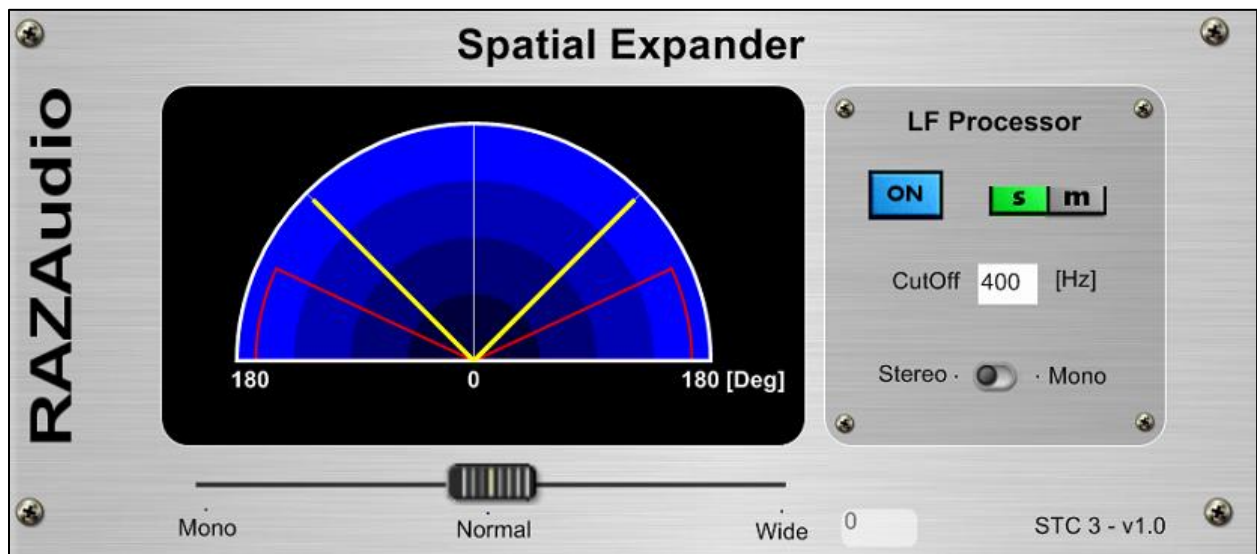# STC-3: Spatial Expander

Users Manual

STC-3, what it is and what it is not:

The STC-3 is a spatial expander used to expand or narrow a perceived stereo field.

It is a natural sounding effect, designed to receive a stereophonic input and provide an either wider or narrower stereo output.

It does not use any 'artificial' means of 'mono-to-stereo' or 'stereo like' effects and does not use active-phasing or delays to achieve its natural sounding result. A dedicated compensation mechanism keeps the 'phantom center' pure and natural sounding, while the stereo content is processed.

STC-3 is designed to be used on a single (stereophonic) channel or as a 'bus' processor for full range processing, for either mixing or mastering.

For such use, the dedicated 'LF processor' becomes very handy and useful. Read on for more details.

Controls and Knobs:

1. **The intensity slider and numeric readout:**
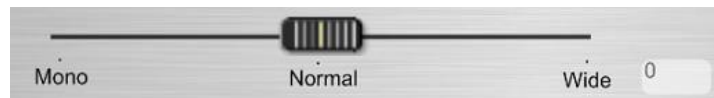
This is the main slider control of the STC-3 processor; swipe it towards 'wide' or towards full 'mono' to receive natural sounding results.

The numeric readout is there for you to have an exact reference point, create precise presets and return to specific results, if needed. Its representation is a 'base free' number between (-100) and (100), 0 being 'no process' at all.

2. **The stereo readout screen:**
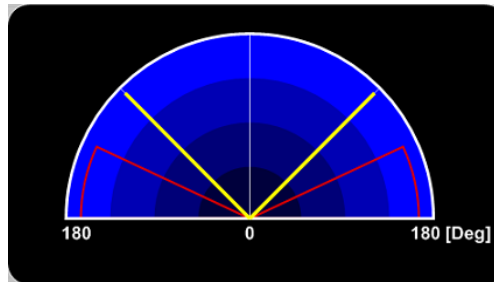
The stereo readout screen provides a vector representation of just how wide are you setting the sound to be. The stereo width is represented by the angle of the two yellow lines, while their projection on the x-axis provides a numeric angular representation, of it.

The static 'red zone' represents a stereo width zone which might be destructing, due to 'anti phase'.

Notice that at a 'mono' setting of the slider, the two yellow lines are at 'dead zero' representing 'zero stereo width'.

3. **The dedicated Low Frequency processor:**

Keeping the low frequencies at low stereo width (or full mono) is an accepted methodology and the STC-3 comes to your aid with this aspect by introducing a dedicated 'LF processor'.

Once switched on, the STC-3 becomes a full 2-band system in which the upper band's stereo width is controlled by the intensity slider and the lower band is in full bypass to that processing.

The cut-off (in Hz) is a 'type in + readout' control type, for you to dial in the exact frequency of band separation (limited between 20 and 800 [Hz]).

To achieve quality results fast, the STC-3 provides you dedicated 'Solo' and 'Mute' buttons to easily focus on the low end content.

Last thing is the Stereo/Mono selector which helps you 'collapse to mono' all content lower than the set cut-off, for extra punch and coherency of the low end.

Notice that with the 'On/Off' button switched to 'Off' the buttons turn grey but are still controllable, so that once it is turned back to 'On', you can audition the effect of each knob. The 'On/Off' switch is actually a true bypass knob, for easy A/B comparisons.

As with all 'RazAudio' technologies, you are welcomed to write to us for any suggestion, bug report, idea or other related topic. We welcome such communication via:

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We wish you a happy and fruitful music production session!