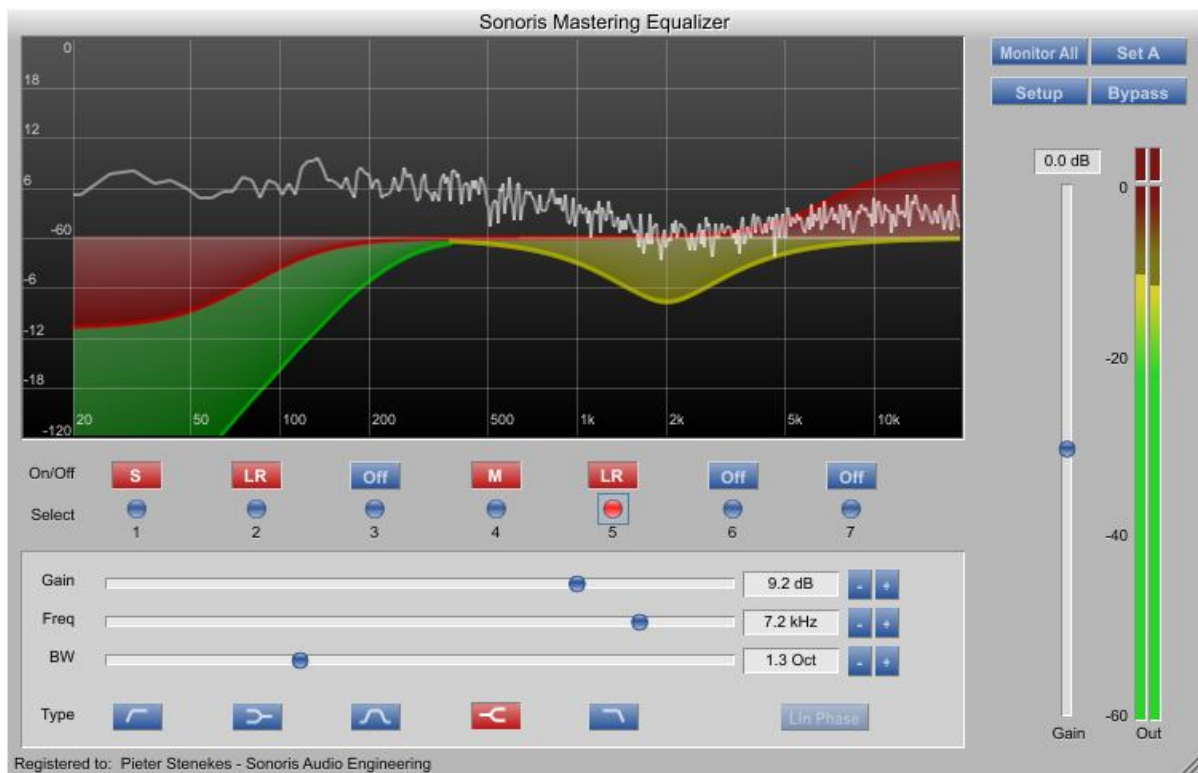


Sonoris Mastering Equalizer 1.0

User Manual



Introduction

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Thank you for choosing Sonoris Mastering Equalizer!

What is it?

The Sonoris Mastering Equalizer (SMEQ) is a parametric equalizer in VST, AU and RTAS format for Windows and Mac. It has selectable linear phase or minimum phase operation per band. The plugin is suitable for mixing and especially mastering and features 7 bands, including lowpass, highpass, peaking and shelving filters. The SMEQ can be used to enhance or correct difficult material like vocal or instrumental soloists and groups, orchestral recordings and complex mixes, without introducing any unwanted coloring. The linear phase implementation of the SMEQ ensures a transparent character and just boosts or cuts a frequency range without adding a "sound". It doesn't smear transients or create mud, nor does it alter the imaging and depth information of the original sound. This way it is possible to boost or cut more than with a conventional equalizer without any of these negative side effects.

The linear phase algorithm of the SMEQ is based on a technique called "backward-forward filtering", until now only implemented in some expensive high end equalizers. The main advantage of this technique is that IIR filters can be used instead of FIR filters, the latter is commonly found in linear phase implementations. IIR filters are known for their more analog kind of filtering and are also more efficient than FIR filters. The filters have correct gain up to Nyquist.

Every band can be set up to process stereo, L, R or M(id) and (S)ide channels. Processing the mid or side information can be very useful in certain situations. In mastering for example, it allows you to enhance a centered vocal while leaving the other instruments untouched. Or to center a bass without losing the stereo imaging of the rest. Adjustment of is made easy because the SMEQ allows for monitoring the LR or MS channels.

The plugin has a large graphical display that shows exactly what you get. The size of the plugin can be changed to your liking by dragging the lower right-hand corner.

The Sonoris Mastering Equalizer has an automatic as well as 2x, 4x or 8x manual upsampling mode. When upsampling, the SMEQ has an even more accurate response, especially at the higher frequencies.

About the plugin

Much effort has been put in maintaining the sound quality. All calculations are performed with 64 bit resolution internally.

Basic Operation

All controls can be controlled with the mouse by dragging or clicking. To increase the resolution press the shift key while dragging. The sliders have a snap function that allows for a quick reset to the default value. An added feature is the possibility to adjust the knobs with the mousewheel. Clicking on a value field enables the direct entry of a value.

About this helpfile

This helpfile explains all settings and options to get started. Basic knowledge of parametric equalizers is needed.

Have fun!

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Features

- ✓ 7 band parametric equalizer
- ✓ Selectable linear phase or minimum phase operation per band
- ✓ Lowpass and highpass filters up to 48 dB/octave
- ✓ Peaking and shelving filters
- ✓ Stereo, L, R or MS processing and monitoring
- ✓ No pre-warping effects, that is, correct response up to Nyquist
- ✓ 2x, 4x, 8x or auto upsampling for an even more accurate response
- ✓ Soft Engage technology to prevent switching noise
- ✓ A/B comparison
- ✓ Large graphical display
- ✓ Spectrum analyser
- ✓ Three zoom levels
- ✓ High resolution level meter
- ✓ Full automation possible
- ✓ Mousewheel support
- ✓ Settings can be saved and loaded
- ✓ 64 bit resolution
- ✓ Windows VST (32 / x64) and RTAS compatible
- ✓ Mac OS Universal Binary VST, AU and RTAS compatible
- ✓ Installer / uninstaller

A/B

This button switches between settings A and B for comparison. All adjustments are automatically saved to the current set. Copying from one set to another is possible by pressing the control key and the A/B key at the same time.

This setting is automatable.

B1 – 7 buttons

These buttons switch the filters on and off. Soft Engage technology is used, that guarantee no pops and crackles during switching. Soft Engage is a Sonoris proprietary technology that prevent sudden changes in the audio data that could cause unwanted noise.

Right clicking the button (on Mac also ctrl-left click) switches the band processing between LR(stereo), (L)eft, (R)ight, (M)id and (S)ide.

These settings are automatable.

Filter type buttons

These buttons select between the various filter types.

This setting is automatable.

Bypass

This button switches bypass on or off. The bypass is a soft bypass, disabling the filters, the volume stage and the monitor setting.

This setting is automatable.

Gain

This setting sets the gain of the filter. The gain ranges from -18 to $+18$ dB. Double clicking the thumb will reset the slider to 0dB.

This setting is automatable.

Freq

The freq value sets the resonance or cut-off frequency for the chosen filter. This setting ranges from 16Hz to 20KHz.

This setting is automatable.

Bandwidth / Slope

This sets the bandwidth for the peaking filters and the slope for the shelving and LP/HP filters. The bandwidth is scaled in octaves ranging from 0.1 to 4.0. For the LP/HP filters the slope is measured in dB/octave. For the shelving filters the slope is a Q-factor. The slope ranges from 0.1 and 4.0 too.

This setting is automatable.

Graph display

The graph display shows the magnitude response of the current setting. This display updates whenever a setting is changed.

All filter bands have a little dot with the band number written on it. You can drag these dots up and down with the mouse to change the gain and frequency of the filter. As soon as you click a dot, the sliders will load the corresponding settings.

To affect the gain only, hold the ctrl key during dragging. To affect the frequency only, hold the shift key during dragging. Holding the ctrl AND shift key affects the BW or slope.

Clicking on the graph display switches between the three zoom levels.

These settings are automatable.

Monitor

Chooses between the following monitoring modes:

- All: displays all curves and monitoring is stereo output (all colors)
- LR: displays LR curves and monitoring is stereo output (red)
- L: displays L curves and monitoring is left channel output (blue)
- R: displays R curves and monitoring is right channel output (cyan)
- M: displays M curves and monitoring is mid channel output (yellow)
- S: displays S curves and monitoring is side channel output (green)

This setting is automatable.

Trim fader

With this fader you can adjust the output gain of the equalizer. The gain ranges from -18 dB to $+18$ dB. You can also use the mousewheel. Double clicking the thumb will reset the slider to 0dB.

This setting is automatable.

Metering

The level meters show the real-time level of the monitored signal.

When a level reaches 0 dB the clip indicator lights up. You can reset this indicator by clicking on it.

Options

In the option menu are these choices:

- Load. This function allows you to recall previous settings stored in a file
- Save. This function allows you to save the current settings to a file
- Analyser: Toggles spectrum analyser
- Mode: Selects the mode of the equalizer. You can choose between 5 linear phase modes and minimum phase operation. The linear phase modes controls the length of the buffer that is used to create the linear phase. The higher the quality, the longer the buffer and the higher the latency. Auto mode sets the lowest quality for playback and the best quality for rendering, in compatible hosts only
- Upsampling: Selects upsampling: Off, 2x, 4x, 8x or Auto. In Auto mode the upsampling factor is chosen for the best quality with the current sample frequency.
- Save as Default: Saves the Mode and Upsampling settings as default
- Help: Shows this helpfile
- About: Shows the about box with registration info.
- (Re)activate license: This function resets the license. This must be used to change from a trial license to a full license or to change the current license if needed.