LiquidSonics

Filtrate

Linear Phase Paragraphic Equaliser for Mac and PC

User Guide

Applies to Filtrate v1.100 (and above)

1. System Requirements, Installation and Registration

To install Filtrate an Intel Mac or Windows VST/RTAS DAW PC is required. It is recommended to install the plug-in on at least a Pentium 4 2.4GHz PC with 256MB memory. Installation and registration are different under Mac and PC.

Windows PC

The install process will request a number of file locations, your license key file and the type of plug-in you wish to install (VST for most hosts or RTAS for Pro-Tools). Typically Windows VST plug-ins are installed in c:\Program Files\Steinberg\Vstplugins and this folder location should be selected unless another location is used on the target system. RTAS plug-ins for Pro-Tools are typically installed in C:\Program Files\Common Files\Digidesign\DAE\Plug-Ins.

Mac

To install the plug-in on Mac, simply run the installer and select your local disk. The plug-ins are provided as combined 32-bit and 64-bit binary packages. Your license file is selected after the installation process – open the plug-in and click the LiquidSonics logo, then click 'License' and then select your license file from a location on disk.

2. General Usage

Liquid Sonics' Filtrate is a highly efficient stereo paragraphic equaliser. The plugin presents a single view to the user as shown below providing standard frequency, gain and bandwidth (filter width) controls. A trim control is applied after the EQ stage.

All values can be selected using the sliders (hold shift for enhanced mouse resolution) or typed manually by clicking on the relevant parameter value box. Alternatively the circular selection handles can be dragged on the EQ visualisation window.

Right clicking the handles toggles each band on/off (in the image below band 7's handle is shown as an outline as it is disabled, filled handles such as that of band 2 represent active filter bands). The mouse wheel can be used to edit the filter bandwidth where hosts support this action. Holding the keyboard ALT key and clicking a handle toggles the EQ type (peak, low pass, etc) and holding shift toggles between stereo processing modes.

Trim and mix controls are provided. The trim applies gain or attenuation to the output audio stream. The mix control fades between the original dry signal and the filtered signal. Fading the filter in and out can be useful when seeking to modify the prominence of the effect achieved in real-time without requiring multiple bands to be recalculated or modulated independently.
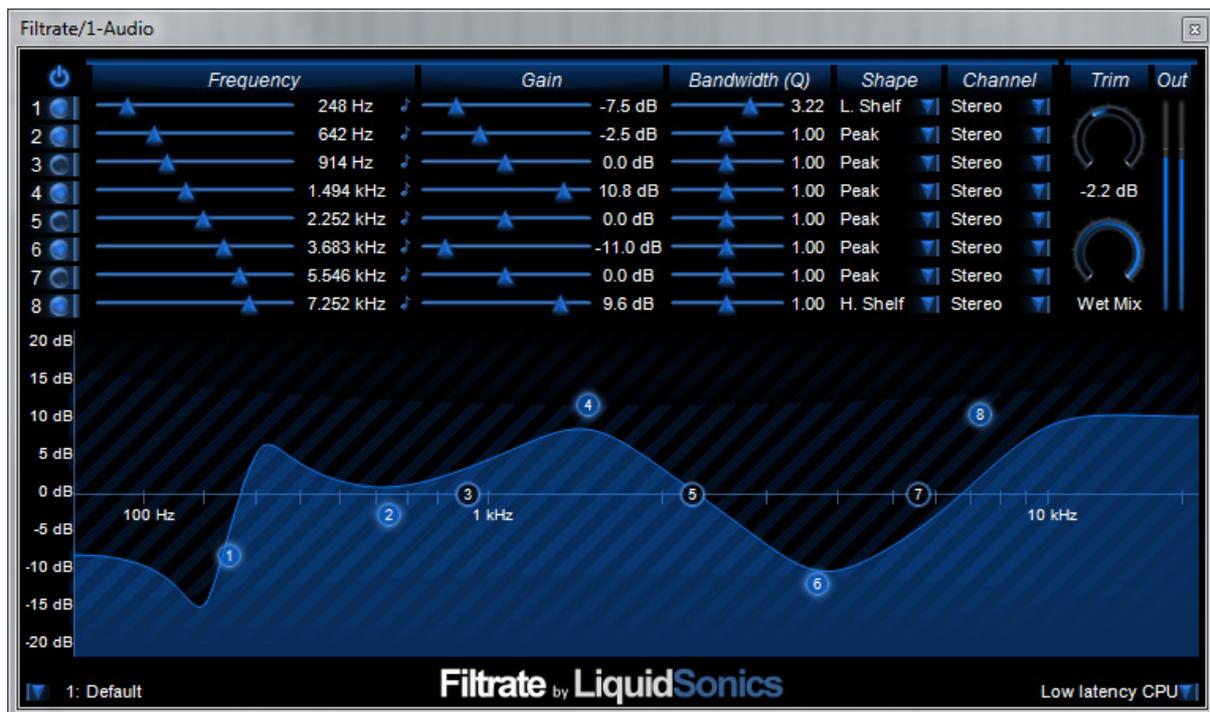
### Frequency Set and Follow Based on Music Notes and MIDI

Clicking the note icon next to the frequency parameter value reveals a pull-down menu for automatically setting the frequency. A range of fixed notes can be selected from A0 to G#8.

The 'Follow Midi Note' submenu allows the frequency of the relevant band to be selected relative to a note provided via MIDI. This requires routing MIDI data to the Filtrate plug-in (see your host manual for details). Notes from -12 to +24 semitones can be selected. This can be useful when

filtering monophonic sources where tracking the fundamental and/or harmonics of the audio is desirable.

Stereo Processing

Stereo equalisation can be used for tonal panning, which is especially useful for placing mono sources in the sound stage. Normal operation applies each EQ band to both channels simultaneously, but bands can be applied to either the left or right channels for independent channel equalisation as required. The left and right channels are then shown using two superimposed graphs; the left channel in blue, the right in red; and areas of common equalisation overlay to produce a purple shaded area.
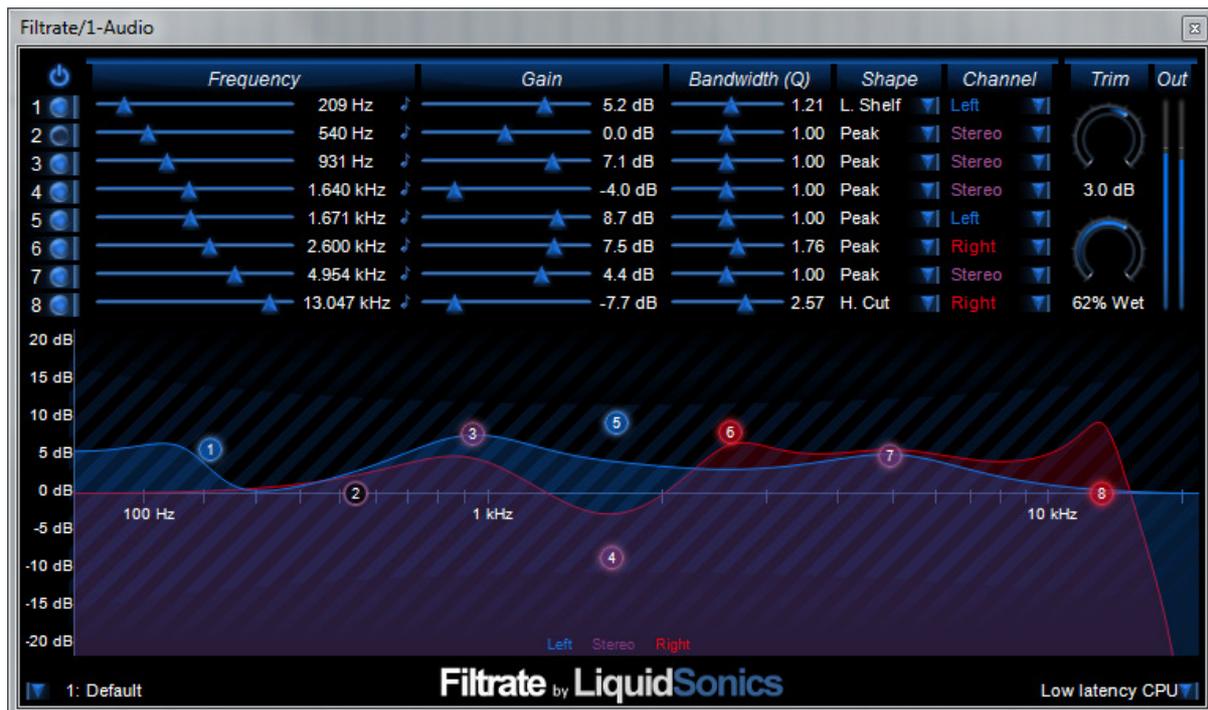
Latency and Processing Modes

The linear phase processor used in Filtrate has a variable processing and filter delay.

- Processing delay: The equaliser is processed using a standard convolution algorithm, this can be set to a zero latency mode, or a one that buffers samples before filtering them reducing CPU consumption.
- Equaliser delay: The linear phase filter used in Filtrate has a filter delay in samples equal to half the filter length. A longer filter results in increased filter resolution which is especially apparent in the low frequency ranges.

On PC an additional option is provided to enable GPU processing using NVIDIA CUDA. This is enabled using the *Low latency GPU* (2048 additional samples delay) or *High efficiency GPU* (8192 additional samples delay) options.

The delay produced by Filtrate is reported to the host for use in plug-in delay compensation schemes. Some hosts (such as Pro Tools) require that delay compensation be explicitly enabled for this to take effect.

Preset Management

Presets can be loaded via the drop-down arrow to the bottom left of the plug-in, and presets can be named by clicking on the preset name and editing the text. Further capabilities are available within the *options* menu:

- Copy Preset: Copy the current preset to an internal clipboard.
- Paste Preset: Paste the preset in the internal clipboard into the currently selected preset.
- Clear Preset: Wipe the current preset applying an empty preset state.
- Load Bank from FXB File: Allows the user to select an FXB preset file from disk.
- Save Bank to FXB File: Saves the current presets in a new FXB bank.
- Reset All Presets in Bank: Wipe all memory resident presets clean to the empty preset state.

Parameter Automation

All filter parameters can be automated using the host's parameter automation tools or using the Midi-CC control numbers in the table below. For best automation results use the low latency CPU mode.

	Global							
Master gain	CC 2							
Master toggle	CC 3							
Mix	CC 52							
Parameter	*Filter 1*	*Filter 2*	*Filter 3*	*Filter 4*	*Filter 5*	*Filter 6*	*Filter 7*	*Filter 8*
Band Toggle	CC 4	CC 10	CC 16	CC 22	CC 28	CC 34	CC 40	CC 46
Shape	CC 5	CC 11	CC 17	CC 23	CC 29	CC 35	CC 41	CC 47
Stereo mode	CC 6	CC 12	CC 18	CC 24	CC 30	CC 36	CC 42	CC 48
Frequency	CC 7	CC 13	CC 19	CC 25	CC 31	CC 37	CC 43	CC 49
Gain	CC 8	CC 14	CC 20	CC 26	CC 32	CC 38	CC 44	CC 50
Bandwidth (Q)	CC 9	CC 15	CC 21	CC 27	CC 33	CC 39	CC 45	CC 51