



SONALKSIS

Creative Filter



Operation Guide

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Introduction

This guide describes the features, operation and applications of the Sonalksis Creative Filter. For detailed installation instructions, please refer to the *Sonalksis Plug-in Manager User Guide*. You can read more about general features common to all Sonalksis plug-ins in the *Universal Plug-in User Guide*.



The Sonalksis Creative Filter

The Sonalksis Creative Filter is an ‘adaptive resonance’ multimode filter. This is an entirely new generation of filter with automatic resonance adjustment, according to a user selectable ‘feel’. A standard filter will require the alteration of resonance with frequency to maintain stable sonic attributes. This can make setup complex, adjustments difficult, and makes obtaining a good filter sweep extremely demanding.

However the Creative Filter’s ‘adaptive resonance’ system uses a psychoacoustic model to ensure a faultless sound regardless of filter style, frequency settings or sweep motions. The Creative Filter also contains an adaptive distortion algorithm which adjusts with the filter sweep and type, giving saturation when required, but allowing clean sweeps when needed.

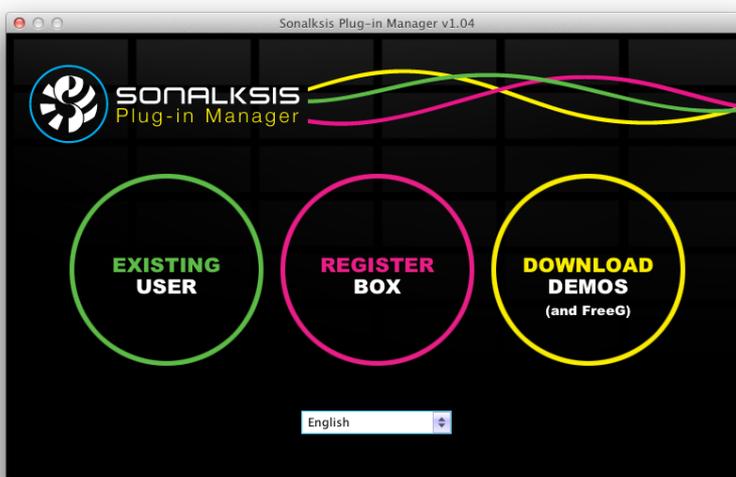
The Creative Filter can be used for slow, gentle sweeps; massive screaming distorted sounds, and just about everything in between. Ultimately, like the other plug-ins in the Sonalksis ‘Creative Elements’ series, the Creative Filter is all about creativity. It is designed to be flexible enough to fulfil your needs whenever you reach for a filter, but without forcing you through a complex interface, or requiring time spent calibrating fine detail. The Creative Filter adaptively calibrates itself for you. So whether you want a filter to correct a sound, to make a sonic statement, or to create something completely new, you can achieve what you want directly and with minimal effort.

Installation



All Sonalksis plug-ins are installed using the 'Plug-in Manager'. The Plug-in Manager simplifies the task of managing multiple Sonalksis plug-ins, and takes care of downloading, installing, authorising and updating your Sonalksis plug-ins.

Detailed instructions can be found in the *Plug-in Manger User Guide*.



Authorisation

If your computer is internet enabled, all license authorisation takes place automatically. When you install Sonalksis plug-ins, any plug-ins for which you have licenses will be authorised by the Plug-in Manager.

If your audio computer is not internet enabled, you must go to the 'Product Activation' section on the Sonalksis website in order to obtain an authorisation file. You will need the 'Activation Code' that is displayed when you run the Plug-in Manager on your offline system. You can then download your authorisation file which you simply need to drag-and-drop onto the Plug-In Manager window.

Unlicensed Sonalksis plug-ins will function for 14 days after installation without authorisation, after which the plug-ins will no longer process audio. After this period, you can still reactivate a plug-in by obtaining a valid license.

Operation

This section describes the functions of the Creative Filter. You can read more about general features common to all Sonalksis plug-ins in the *Universal Plug-in User Guide*.

Filters are used both correctively and creatively with audio, and hence perform a vital function in modern sound and music production. The Sonalksis Creative Filter is a new generation of filter, using 'adaptive resonance'.

All standard filters require the alteration of resonance with frequency to maintain stable sonic attributes: alter the frequency and to achieve the same 'sound' the resonance must also be adjusted. However altering the resonance can affect the saturation of the filter circuit in unwanted ways. All this can make accurate adjustments difficult, and makes obtaining effects such as good filter sweeps demanding.

By decoupling the filter frequency, resonance and circuit saturation, these parameters can be matched independently and dynamically to a suitable psychoacoustic model to obtain better sounding results in a much simpler fashion.

'Adaptive Resonance' is the technology in the Creative Filter that controls the interaction between frequency, resonance and distortion (saturation) with respect to a psychoacoustic model, in order to give an improved sonic aesthetic regardless of filter style, frequency settings or sweep motions.

The 'Adaptive Resonance' is an automatic technology, so the Creative Filter interface is made very simple yet very effective. Using the Creative Filter requires nothing more than choosing the type of filtering, selecting the severity of the filter slope, and picking the 'mode' that feels right. With this done, the CUTOFF can be set or swept.

Sensitive to the many applications of filters, a number of different resonance 'modes' have been developed. The four modes available on the Creative Filter, when used in combination with the other settings, enable a large assortment of sounds to be achieved with a minimal set of parameters - all thanks to the 'adaptive resonance' technology.



The CUTOFF frequency dial is the primary control on the Creative Filter. At the full counter-clockwise position, it sets the filter to cutoff at 20Hz. The full clockwise position sets it to a 20KHz cutoff.

For high-pass and low-pass filters, the CUTOFF determines the point below or above which the filter begins to roll-out frequencies. For band-pass filters, it determines the frequency at the centre of the pass-through band.



The TYPE switch allows selection of the type of filter to be used. HP selects High-pass, BP selects Band-pass and LP selects Low-pass. A High pass filter passes through frequencies above the cutoff, and reduces those below. A Low pass filter passes through frequencies below the cutoff, and reduces those above. A band-pass passes through frequencies either side of the cutoff, and reduces those further away, above or below.



The RESONANCE mode selects the style or ‘feel’ of the filter resonance. LOW is best for gentle unobtrusive filtering. MED adds a degree of piquancy to the filtering, and reflects the most usual ‘filtered’ sound. HIGH provides a more aggressive effect, typical of an ‘effect’ filter. RUDE provides a massively distorted screaming filter sound, typical to an analogue filter heavily overloading; this effect cannot be ignored, and we accept no liability for the results of its use, not limited to the perceived intent to make music to offend.

The SLOPE switch selects the gradient of filter roll-off away from the cutoff frequency, measured in decibels-per-octave. 12 gives a standard ‘2-pole’ filter. 24 produces an intense rolloff, such as a dedicated analogue filter. 48 provides a very rapid rolloff which can be used for surgical purposes, or in conjunction with high resonance settings to provide extreme emphasis in the filter sound.



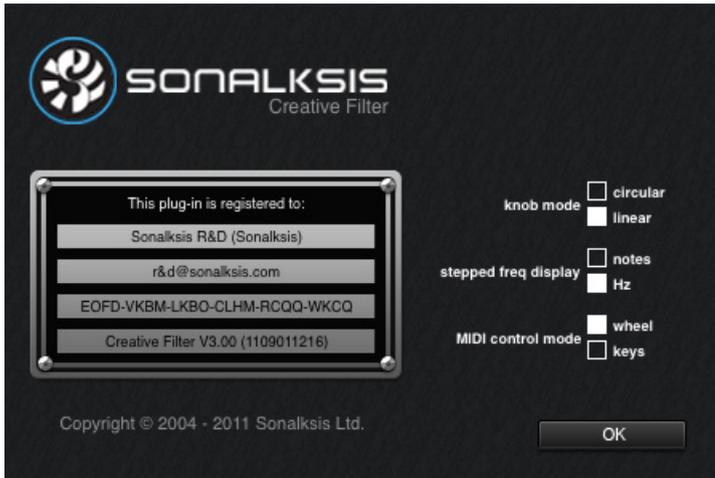
The STEP option allows the user to centre the cutoff frequency on a note from the chromatic scale [with ‘A’ tuned to 440Hz]. When Step mode is active (highlighted blue) the cutoff frequency is quantized to a selected note, so that a specific note can be emphasized or any content above or below a certain note can be removed trivially.

The INPUT Gain fader is used to change the level of the input signal. The gain structure within TBK is calibrated so that the output gain is compensated to match the input level regardless of input gain setting; therefore no output level adjustment should be necessary.



The Bypass button switches the entire filter in or out of circuit. When bypassed, the meter will become inactive as an indication of the bypassed state. The Bypass control may be used for simple ‘In/Out’ comparisons, or automated to effectively switch the filter on or off during use. The Bypass in the Creative Filter should be used in preference to the host’s bypass as it will guarantee glitch-free in/out transitions, thanks to the use of a high quality cross-fade.

Preferences



The user preferences and registration page is accessed by clicking the SETUP button on the bottom left of the interface. To exit the setup screen click the OK button.

All preferences are stored and recalled according to the current system user, therefore a unique set of preferences is maintained for each system user.

The setup page also displays the software version.

Control Preferences

- knob mode - sets the default knob mode.

Display Preferences

- stepped freq display – when ‘Hz’ is selected, the cutoff frequency is always displayed in Hertz, even when STEP mode is selected. When ‘notes’ is selected, the filter cutoff will be displayed in musical-scale note format when in STEP mode.

MIDI Options

- MIDI control mode - selects whether the filter controls responds to control wheel midi data or key (note on) midi data.

The Sonalksis Creative Filter can react to MIDI messages, which control the filter parameters. The MIDI specification for the plug-in is defined in Appendix B.

Note that in order to feed MIDI into the plug-in, you should refer to your audio host software documentation. [It may be necessary to instantiate the plug-in as a software instrument].

Support



You can visit the Sonalksis website to find the latest product information. If you are a registered user you will automatically receive relevant information about new releases and updates, unless you unsubscribe from this service.

All Sonalksis plug-ins are installed, authorised and updated using the 'Plug-in Manager' application. You can download this application from the Sonalksis website.



If you encounter any difficulties when installing or using our products, please ensure that you have read all appropriate documentation, including the relevant user guides and FAQ on our website before contacting us.



If you are unable to resolve your issue after reading all appropriate documentation, you can log in to your Sonalksis user account on our website and access the 'Support' section where you can request direct assistance.

www.sonalksis.com/support

Sienda New Media Technologies SL
Calle Provenca, 278, pral. 1a
08008 Barcelona
Spain

+44 (0)151 3240022

Appendix A: Technical Specifications

Sonalksis Creative Filter Supported Sample Rates:

- 44.1 kHz
- 48 kHz
- 88.2 kHz
- 96 kHz
- 176.4 kHz
- 192 kHz

Sonalksis Creative Filter Control Ranges:

| Filter Response Type/s | Cutoff Range | Filter Slopes | Resonance Modes |
|------------------------------------|---------------|----------------------------------|---------------------------|
| Low Pass Band Pass High Pass | 20Hz to 20kHz | 12dB/oct 24dB/oct 48dB/oct | 'Low' 'Med' 'High' 'Rude' |

Appendix B: Midi Specifications

WHEEL MODE

| | Function | Transmitted | Recognised | Remarks |
|------------------|--|----------------------------|----------------------------|--|
| Basic Channel | | X | 1-16 | |
| Mode | | X | X | |
| Note Number | 48-50 60-64 72-77 84-89 | X X X X | O O O O | STEP ON/OFF FILTER TYPE RESONANCE SLOPE |
| Velocity | | X | X | |
| After Touch | | X | X | |
| Pitch Bend | | X | X | |
| Control Change | 0 1 (MODWHEEL) 2 3 4 5 6 | X X X X X X | O O O O O O | INPUT GAIN CUTOFF STEP ON/OFF FILTER TYPE RESONANCE SLOPE BYPASS |
| Program Change | | X | X | |
| System Exclusive | | X | X | |
| System Common | | X | X | |
| System Real Time | | X | X | |
| Aux Message | | X | X | |

KEYS MODE

| | Function | Transmitted | Recognised | Remarks |
|------------------|---------------------------|-----------------------|-----------------------|--|
| Basic Channel | | X | 1-16 | |
| Mode | | X | X | |
| Note Number | 0 - 127 | X | O | CUTOFF FOLLOWS NOTE FREQ |
| Velocity | | X | X | |
| After Touch | | X | X | |
| Pitch Bend | | X | X | |
| Control Change | 7 16 17 18 19 | X X X X X | O O O O O | INPUT GAIN STEP ON/OFF FILTER TYPE RESONANCE SLOPE |
| Program Change | | X | X | |
| System Exclusive | | X | X | |
| System Common | | X | X | |
| System Real Time | | X | X | |
| Aux Message | | X | X | |

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