

SONICBITS

Silk User Manual



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www.sonicbits.com

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Introduction and Overview

Thank you for using Silk!

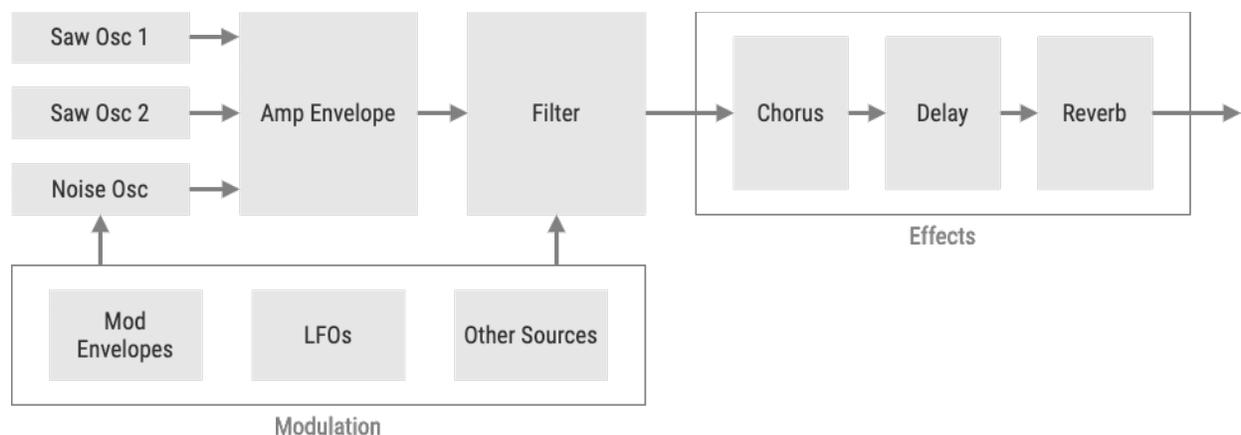
Silk is an easy-to-use virtual analogue synthesizer instrument plugin which can be used from within your DAW.

Getting in touch

If you experience any problems while using this plugin, or you just wish to pass on your comments regarding Silk or this manual, or links to cool tunes made with Silk, you can email the developer directly at: info@sonicbits.com.

We're also available on Twitter: [@sonic_bits](https://twitter.com/sonic_bits)

Silk Structure



The structure of Silk is actually pretty easy. The audio signal flows from the left, where the oscillators generate the sound, to the right where it's amplified and filtered. After that, the signal goes through the three effects.

Various oscillator and filter parameters can be modulated by the mod sources.

All these components are explained in full detail later on.

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Getting Started

Installing Silk

Silk is available in both Windows and macOS versions. It is designed to be used within a 64-bit host audio application that supports the VST2, VST3 and AU (macOS only) plugin format.

Installing on Windows

Double-click the downloaded Exe installer. It will prompt for the location of your VST folder. You can choose whether you want to install the VST2 and/or the VST3 plugin format and where on your system these plugin folders are.

The factory presets will be installed to

C:\Users\USERNAME\AppData\Roaming\Sonicbits\Silk\Presets

Installing on macOS

Double-click the downloaded PKG installer. You can either install everything or you can choose whether you want to install the VST2, VST3 and/or the Audio Unit (AU) plugin format.

The factory presets will be installed to

/Library/Application Support/Sonicbits/Silk/Presets

Demo Version Limitations

The unregistered demo version of Silk can be used for an unlimited time. However, no presets can be saved and every 60 seconds the audio signal of Silk is muted for a short moment.

When you open Silk in a new DAW session, you will be asked for a serial number.

You can buy a serial number at www.sonicbits.com to unlock the full version of Silk.

Using Silk in your DAW

Add Silk

Silk should be added to an instrument (MIDI) track. This is the same procedure as if you add any other software instrument in your DAW.

Depending on your DAW and whether you're on Mac or PC, select your preferred plugin format (VST2, VST3 or AU).

For details about adding a software instrument inside your DAW, please refer to your audio host documentation or contact us via email or Twitter, and we'll try to help you.

Select and play a Preset

Let's just assume that at this point you don't want to create your own sounds from scratch. A good place to get started with the instrument is by selecting and playing a preset. The preset list is at the top of the plugin window:

Select a preset by clicking somewhere on the preset name. A list with all available presets grouped by category appears. You can also cycle through this list by clicking on the left and right arrows beside the preset name.

You can play the preset by clicking on the virtual keyboard within the plugin window or by simply play a few keys on your connected MIDI keyboard.

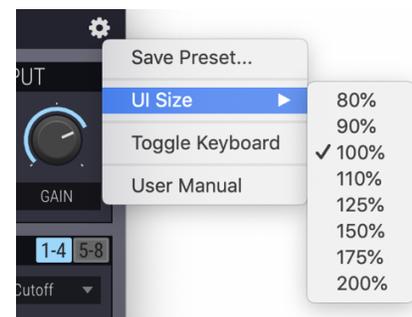
The virtual keyboard in the plugin window supports different velocity levels. Clicking the keys in the lower area plays with higher velocities, the key area at the top produces lower velocity values.



Adjust the UI size

The Silk user interface can be displayed in different sizes. In order to adjust the size, select the cog symbol on the top right of the plugin window and choose one of the size entries from the menu.

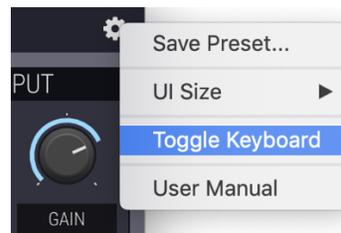
This setting is stored globally and will be applied each time when a new instance of the plugin is opened.



Showing or hiding the virtual keyboard

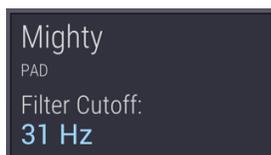
In order to save some screen space, the virtual keyboard (and the wheels) can be hidden. In order to do that, select the cog symbol on the top right of the plugin window and click on "Toggle Keyboard".

This setting is stored globally and will be applied each time when a new instance of the plugin is opened.



Using the controls to edit a preset

Using the mouse, you can edit any parameter. These are the different UI elements:



Info Panel

The info panel on the bottom right shows the currently selected preset. Below the preset name is the preset category name, which is the name of the parent folder.

The currently edited parameter value is displayed at the bottom of the info panel. If you hover over an UI element, its current value is displayed here.



Knobs

Knobs can be rotated using the mouse. If you click on a knob and hold the mouse button, moving the mouse up and down increases and decreases the value. Also using the mouse wheel while hovering above the knob changes its value.

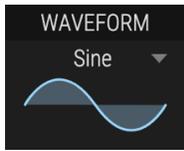
For finer control hold the Ctrl key while moving the mouse.



Sliders

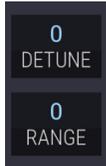
Sliders can be moved using the mouse. If you click on a slider and hold the mouse button, moving the mouse up and down increases and decreases the value. Also using the mouse wheel while hovering above the knob changes its value.

For finer control hold the Ctrl key while moving the mouse.



Dropdown lists

Dropdown lists can be used to select an item from a given list. Clicking somewhere in the dropdown area opens the list.



Text Values

These values can be adjusted by clicking on the value and dragging the mouse up or down. Also using the mouse wheel while hovering above the number changes its value.

A mouse double click resets the value to 0.



Buttons

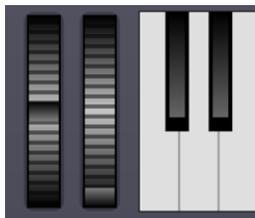
Buttons can be clicked to turn something on or off.

When the button is lit, it means the according parameter is turned on.



Tabs

Silk has got 2 oscillators, 2 modulation envelopes, 2 LFOs and 2 pages for modulation assignments which are displayed on a separated page each. By clicking a tab button, the page for the according elements appears. The selected tab is lit.



Pitch Bend and Modulation Wheels

The sound of Silk can also be changed by moving the pitch bend wheel. If assigned to any destination in the mod matrix, moving the mod wheel controls the according parameter.

If you have connected a MIDI keyboard or controller to your DAW, the wheel controls in Silk reflect the position of the real wheels.

The pitch bend range can be adjusted when you right click on the pitch bend wheel and select the desired range.

This setting is also stored globally and will be applied to all new plugin instances.

When you're happy with your sound editing, you can save your own presets by clicking on the save button on the right of the preset browser. Another way is by clicking on the cog symbol in the top right of the plugin window. Select "Save Preset..." and enter a preset name to preserve your sound for another session.

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Silk in Detail

The Oscillators

One of the main parts of the synth are the two sawtooth oscillators. These can be combined with a noise oscillator, and together they generate the sound and build the sonic heart of Silk.

The sawtooth oscillators each have got a stack of 7 unison voices which play notes at the same pitch but can be slightly detuned. Three voices are tuned slightly higher, and three voices slightly lower than the base note pitch.

The more the individual voices are detuned, the more the spread of the sound increases. The amplitude level of the detuned copies can be adjusted, they can be blended in continuously.



The oscillator section is on the top left area of the plugin. Both sawtooth oscillators have got their own page of control elements.

SPREAD detunes the sawtooth voices. **BLEND** controls their amplitude level. The graphic between these two knobs shows the detuning and the amplitude of the voices.

Please note that this is a simplified representation. The actual detuning and amplitudes are not arranged so uniformly.

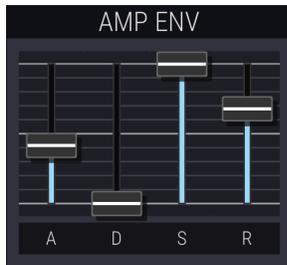
DETUNE changes the whole oscillator tuning away from the played note. You can adjust this from -99 to +99 cents.

RANGE changes the whole oscillator tuning in semitone steps. You can adjust this from -24 to +24 semitones (-2 to +2 octaves).

VOL changes the oscillator level.

NOISE adjusts the noise oscillator level. There's only one noise oscillator, its level knob appears on both oscillator pages.

The Amp Envelope



The amplitude envelope control sliders are positioned just below the oscillators. It's a classic ADSR envelope structure.

The **A** slider controls the oscillator amplitude attack time. Use the **D** slider to adjust the decay time. The **S** slider controls the sustain level and the **R** slider is for the release time.

The attack and decay times have got a range from 0 ms to 10 seconds, the release time can be adjusted from 1 ms to 10 seconds.

The Filter

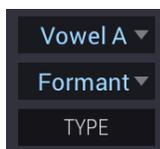


The filter section lets you select the filter type and edit the cutoff frequency, the resonance amount and the keyboard tracking value.

You can choose between the following filter types:

- Lowpass 6 dB/oct
- Lowpass 12 dB/oct
- Lowpass 18 dB/oct
- Lowpass 24 dB/oct
- Highpass 12 dB/oct
- Bandpass 12 dB/oct
- Formant Filter

The first 6 filter types are self-explanatory by their names. The number after the name indicates the slope.



The formant filter is a cascade of bandpass filters connected in parallel. You can choose between different settings for this filter type, each emphasizing the frequencies of a vowel from the spectrum.

There are predefined settings for the vowels **A**, **E**, **I**, **O** and **U**.

When the formant filter is selected, changing the cutoff frequency causes a shift in the emphasized frequencies so that a "morph" to another vowel can occur.

Altering the resonance value changes the slope of the emphasized frequencies.

The Output Section



The output section contains knobs for the note glide and the output gain.

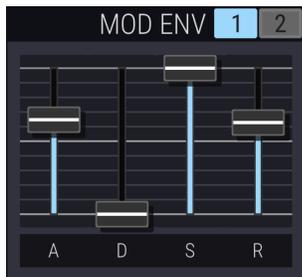
The note **GLIDE** time can be set from 0 to 500 milliseconds.

The output **GAIN** knob contains a range from -70 dB to 24 dB.

The Modulation Sources

In Silk there are several modulation sources available in order to change the sound dynamically.

There are two modulation envelopes and two LFOs per voice. In addition, the **keyboard velocity** and (channel) **aftertouch** values can be used. Another source is the **modulation wheel**.



The **MOD ENV** section contains two ADSR modulation envelopes. You can switch between the two by clicking on the tab number.

The **A** slider controls the envelope attack time. Use the **D** slider to adjust the decay time. The **S** slider controls the sustain level and the **R** slider is for the release time.

The attack and decay times have got a range from 0 ms to 10 seconds, the release time can be adjusted from 1 ms to 10 seconds.



The **LFO** section contains the two LFOs (low frequency oscillator). You can switch between the two by clicking on the tab number.

The LFO supports different waveforms and its tempo can be set using the **RATE** knob. The tempo can either be synchronized to the DAW host or can be set to a fixed frequency value in Hz.

In order to synchronize the tempo, make sure the **SYNC** button is lit. The **RATE** knob will then show the different time markers.

If the **FREE** button is off, the LFO will be reset by each note played. If it's off, it will run freely. You can choose between the following LFO waveforms:

- Sine
- Saw
- Square
- Triangle
- Sample and Hold (S & H)

The LFO has got a value range from -1 to +1. The actual modulation value is determined by the **DEPTH** value.

The Modulation Matrix

Silk has got eight slots or rows for modulations per preset, they are arranged in two pages in the **MOD MATRIX**. Each of the modulation sources introduced in the last chapter can modify one of the total 10 destinations.

Using the Mod Matrix is an excellent idea to add time-controlled changes to the sound!



Silk has got eight slots or rows for modulations per preset, they are arranged in two pages in the **MOD MATRIX**.

Each of the modulation sources introduced in the last chapter can modify one of the total 10 destinations.

In each row the selected **SOURCE** modifies the selected **DEST**ination. The current source value is multiplied by the value of the modulation depth knob. This depth value can be positive or negative. If negative, the modulation value is inverted.

In the above example, when the LFO 1 value goes up, the influence on the Saw 1 and Saw 2 level goes down.

You can select between the following modulation destinations:

- Saw 1 Spread
- Saw 1 Blend
- Saw 1 Level
- Saw 2 Spread
- Saw 2 Blend
- Saw 2 Level
- Noise Level
- Filter Cutoff
- Filter Resonance
- Pitch

The note pitch can be modified from -2 to +2 octaves.

In all factory presets which are sensitive to keyboard velocity, the mod matrix assignments are on page 2 (mod rows 5-8).

The Effects

On the bottom of the plugin window are the three effects in Silk: A creamy 2-stage chorus, a stereo delay with continuously switchable ping-pong, and a stereo reverb.

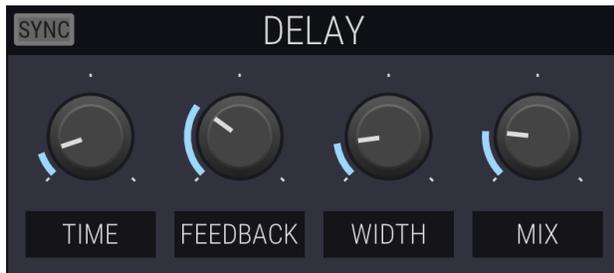
The audio signal passes these effects one after another, from “left to right”.

If you would like to bypass Silks effects and only use your own DAW effects, simply dial in 0 for all three effect MIX parameters.



The chorus has two individually switchable stages. Just click the buttons I and II to switch them on or off.

The modulation depth can be controlled via the **DEPTH** knob. **MIX** controls the amount of chorus in the audio signal.



The stereo delay time can either be synchronized to the DAW host or can be set to a fixed frequency value in Hz.

In order to synchronize the tempo, make sure the **SYNC** button is lit. The **TIME** knob will then show the different time markers.

FEEDBACK controls the amount of the delayed audio signal which is fed back into the delay.

If you increase the value of **WIDTH**, the stereo delay changes to a ping-pong delay, where the delay bounces back and forth between the left and right channels.

MIX controls the dry/wet ratio of the delay in the audio signal.



The reverb effect can be controlled by setting the **REFLECT** and **DAMPING** parameters.

REFLECT

REFLECT controls how much of the audio signal is reflected in the room, and **DAMPING** determines how much the room attenuates the signal.

MIX controls the dry/wet ratio of the reverb in the audio signal.