



**d16 group**  
AUDIO SOFTWARE

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# Product Overview

Sigmund 2 v2.0.0

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## Key Points

### Four independent delay lines

Four beefed-up delay units in one box to expand your sound-shaping capabilities beyond imagination.

### High-quality delay line algorithm

Precisely adjust delay times across a wide range for a very flexible sound. Delay, chorus, flanger? You name it!

### Multipurpose modulators

Four multipurpose modulators make it quick and easy to apply different types of modulation to several delay line parameters at the same time. This lets you do everything from adding subtle movement to your sound, to wild expressive delay effects.

### Flexible signal routing

The four delay lines can easily be arranged in nine different ways, changing the signal flow between them and bringing unique delay sounds to your project.

## Overview

Sigmund is far from just another delay. It provides an incredible degree of sound-shaping freedom.

The plug-in consists of four discrete delay units, each with an independent set of parameters that offer you the freedom to shape your sound. There's an ancient saying, often attributed to Aristotle: The whole is greater than the sum of its parts. With Sigmund, this is especially true as each of the delay lines has complementary modules such as filter and overdrive built in, working independently from the feedback loop. The delay lines themselves can also be combined together in several ways.

Sigmund's user interface has been designed from the ground up to be as intuitive as possible. Everything is presented as if on a silver (or brushed aluminum) platter, cleanly and clearly laid out with instant access to each section and its parameters.

## Four independent delay lines

With Sigmund 2, each delay line is absolutely alias free; the only sonic colorations you'll ever hear are the ones you've intentionally created.

The signal path design process that created Sigmund has been zero-compromise from beginning to end. In fact, the sound quality is so high, the processing so pure, that it's possible to work with even the smallest delay times with zero artifacts emerging, even down to one-tenth of a millisecond. So, it's possible without any tricks or half-measures to use a single delay line not only as a traditional delay / echo effect, but also as a chorus or flanger using smaller delay times. Such precise control allows subtle modulation on time parameters to delicately bring a sound to life and add gently flowing, modulated warmth that is reminiscent of the analog delays of yesteryear.

## Stereo options

The available stereo options expand Sigmund's functionality to add a spatializer effect. Applying delays in different stereo modes (M/S or L/R) and adding phase shifts between channels can really widen things up.

## Overdrive module

Overdrive offers a whole variety of possibilities to shape your sound. With four delay lines at your disposal, you can go into the weeds pretty deeply and achieve complex multi-band distortion or multi-band dynamic effects.

## Multimode filter

A very musical filter can work either inside or outside the feedback loop. Use it outside to remove unwanted frequencies, or inside to create the impression of a fading sound. You can even get creative by using it in a few lines at once to make any filter effect you desire, such as wah-wah, vowel or even phaser-like sounds.

## Modulation amounts

Here is where the magic happens. You're in control of just how much the modulators affect filter cutoff, in-loop delay time and/or volume of a delay line. This makes it possible to get all sorts of modulation effects, ranging from choruses and flangers (by affecting delay time) through to phasers, wah-wah (modulating cutoff parameter), tremolo and panners (influencing volume). In skilled hands, this feature becomes a powerful weapon.

## Routing

Sigmund's four delay lines can be interconnected with each other in practically every manner possible. The plug-in offers a choice of nine different routing topologies which give access to completely new dimensions of sound creation. For example, say you have delays currently running in parallel but would like to have a cascade of serially connected delays instead: you can reconfigure them instantly with just a click of the mouse. For even greater convenience, the output signals of each delay line are combined in a purpose-built internal mixer to ensure seamless transition between algorithms and a much more efficient workflow.

## Multi-purpose modulators

Sigmund offers four general-purpose modulators which can auto-modulate some of the delay lines' internal parameters. Each modulator can operate in three different modes:

- **LFO**  
At extreme settings, the LFO is capable of twisting the input signal utterly beyond recognition and into what you might expect transmissions from an alien civilization to sound like!
- **Envelope**  
In combination with a built-in transient detector, this gives you a very powerful tool; when applied to amplitude, you can freely shape your sound's dynamics to control how it blends into the whole mix. Using the transient detector to modulate the signal's amplitude lets you control the dynamics very precisely.
- **Peak follower**  
It's a must-have for a modulator; nothing else offers such an expressive wah-wah effect when applied to filter cutoff. And in the hands of skilled sound designers, the only limit is imagination.

## Modulator re-triggering

Each modulator can be independently re-triggered with MIDI notes or the signal itself (with a transient detector) when LFO or ENV modulator type is selected, allowing for yet more control and creative freedom.

## Padlock system

Sigmund can be effortlessly applied in nearly any configuration in the studio. It can be used as an insert effect for an instrument or bus channel, or as a versatile send effect with the help of a parameter lock that allows for auditioning presets without having to readjust the FX fader with each new selection.

In combination with the padlocks for locking individual delay lines when changing presets, this allows

you to zero in on the desired effect with extreme efficiency.

## All features

- **Four independent delay lines**, each with:
  - Input stereo mode
    - Channel setup (L/R or M/S)
    - Channel crossfade \*
    - Monophonization
  - Multimode filter
    - Four filter types \*
    - Optional in-loop mode
  - Overdrive unit
    - Preliminary dynamics control \*
    - Adjustable color
  - High-quality delay line algorithm
    - Independently configured pre and loop delay times with optional tempo sync
    - Delay times down to 0.1 ms
    - Tap function
    - Stereo spread
    - No aliasing or artifacts
  - Modulation amounts from all four modulators adjustable per delay line \*
- **Four multipurpose modulators** \*
  - Modulator type
    - **LFO**
      - Optional tempo sync
      - Six invertible waveforms
      - Stereo phase shift
      - Waveform invert
      - Smooth option \*
    - **ADHSR Envelope**
    - **Peak** follower
  - **Re-trigger** type (for LFO and Envelope)
    - MIDI note
    - Transient detector
- Flexible **routing** with **nine possible topologies**
- Convenient delay line mixer
- Master limiter
- Miscellaneous
  - Tag-based preset browser \*
  - Screen-fit features \*

- Several GUI sizes \*
- HiDPI / retina screen scaling support \*
- MIDI-learn functionality

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\* Added in Sigmund 2.0



## System requirements

- (i) 32-Bit architecture means the product is appropriate for host applications working in 32-Bit mode. 64-Bit means compatibility of the product with 64-Bit host applications.
- (ii) Hardware requirements / recommendations are based on estimates performed on available computers at D16 Group HQ, and therefore cannot cover all possible configurations available on the market. CPU usage may vary widely depending on the manner in which the product is used. Factors that may contribute to variance in CPU usage include particular patch and its complexity, the global quality setting, project sample rate. In order to form a better understanding of how a plug-in will behave within your current setup, we highly recommend downloading the demo and giving it a try.
- (iii) This product is not a standalone program so you need a host application to use it.

### Windows

<b>OS version</b>	Windows 7 - Windows 11
<b>Architecture</b> <sup>(i)</sup>	64-Bit
<b>CPU</b> <sup>(ii)</sup>	Intel x86 / AMD x86
<b>Software</b> <sup>(iii)</sup>	VST2 / VST3 / AAX compatible application
<b>Sample Rate</b>	≥ 44.1 kHz

### MacOS

<b>OS version</b>	10.13 - 14
<b>Architecture</b> <sup>(i)</sup>	64-Bit
<b>CPU</b> <sup>(ii)</sup>	Intel x86 / Apple Silicon
<b>Software</b> <sup>(iii)</sup>	VST2 / VST3 / AAX / AU compatible application
<b>Sample Rate</b>	≥ 44.1 kHz