



SawsAll

Multi-Voice Super Saw Oscillator

Introduction

SawsAll is a big saw for your super-sized jobs: Three 7 oscillator Super Saw/Super Square voices in a single module.



All three voices have independent V/Oct inputs, but share other controls, including:

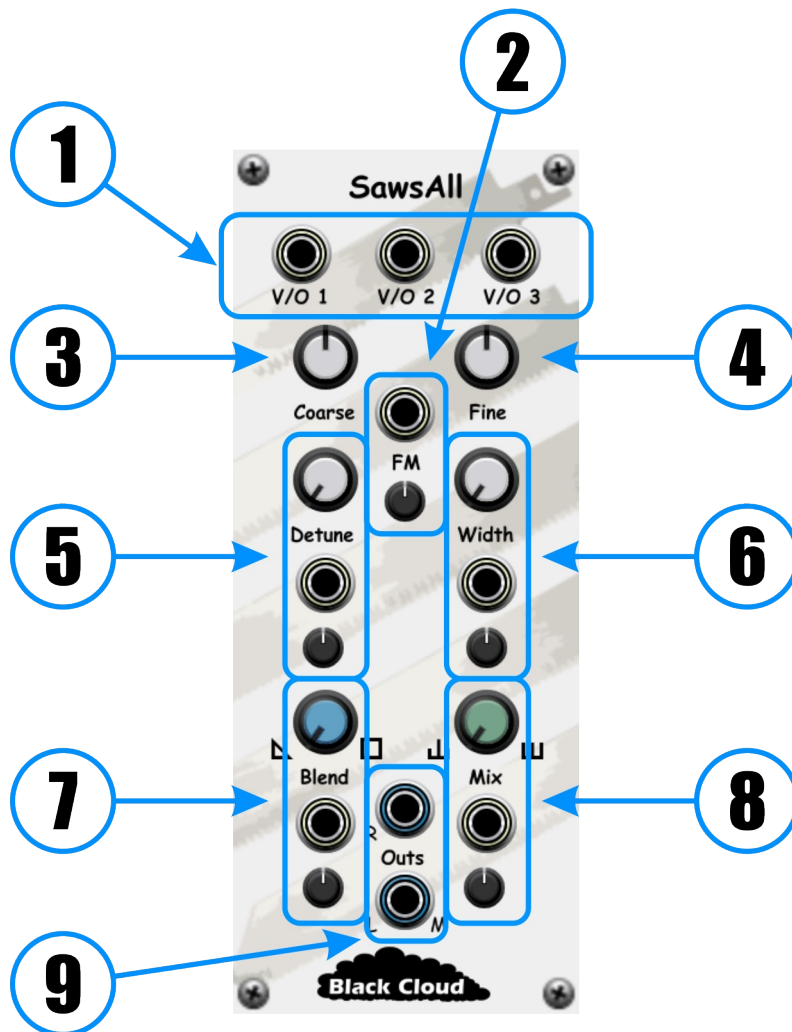
- +/- 3 Octave coarse and +/- 1 Octave fine tuning.
- Adjustable unison detune amount with manual and CV control.
- Adjustable pulse width with manual and CV control.
- FM input.

The Detune, Width, FM, Blend and Mix CV inputs feature *Randverters* that can be used to add some movement without using external modulation sources.

Stereo outputs are available, and if used the oscillators for each active voice are panned 3 hard right, 3 hard left, with the "center" oscillator in both left and right channels.

A single channel Mono output of all oscillators from each active voice is available by connecting to just the *L/M* output jack.

Knobs, Buttons and Sliders



<p>1 V/Oct Inputs Independent V/Oct inputs for each of the three voices.</p>	<p>2 FM Input Equipped with a <i>Randuverter</i>.</p>
<p>3 Coarse Tuning Control Adjusts the base frequency of all voices over a +/- 3 octave range.</p>	<p>4 Fine Tuning Control Adjusts the base frequency of all voices over a +/- 1 octave range.</p>
<p>5 Detune Amount Controls Adjusts the degree of detuning for all voices. CV input is equipped with a <i>Randuverter</i>.</p>	<p>6 Width Controls For square waves, <i>Width</i> sets the pulse width in the traditional fashion, but for triangle/saw waves, it morphs the waveform from negative saw through triangle to positive saw. Sonically, the result is similar to square wave PWM modulation, but with less harshness. CV input is equipped with a <i>Randuverter</i>.</p>

<p>7 Blend Controls Morphs the output waveform of all active voices from super saw to super square. CV input is equipped with a <i>Randuverter</i>.</p>	<p>8 Mix Controls Adjusts the emphasis of the oscillators in all active voices, from favoring the central oscillator in each voice, to a more equal presentation of all the oscillators in each voice. CV input is equipped with a <i>Randuverter</i>.</p>
<p>9 Stereo Outputs Right and left outputs from all the voices. Connect just the Left channel for Mono output.</p>	

Randuverters



An extension of traditional *Attenuverters*, in addition to providing offset and scaling of an external signal, they can also function as a random source.

If a cable is connected to a *Randuverter* equipped input jack it functions as a normal *Attenuverter*, but if no cable is connected, the *Randuverter* will produce random variations that will be applied in place of the absent external CV signal.

Smoothed random values are available on the right-hand sweep of the *Randuverter's* knob, with stepped values on the left.

Knob position controls both the rate of random value generation and the intensity of the random effect on the parameter being controlled by the *Randuverter*.

Turning the knob fully clockwise will maximize both the rate and intensity of smooth random variations, while turning the knob fully counter clockwise will maximize both the rate and intensity of stepped random variations. With the knob at the zero position, no random influence will be applied.