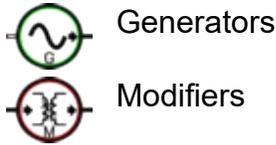


# SinMad Objects Layout

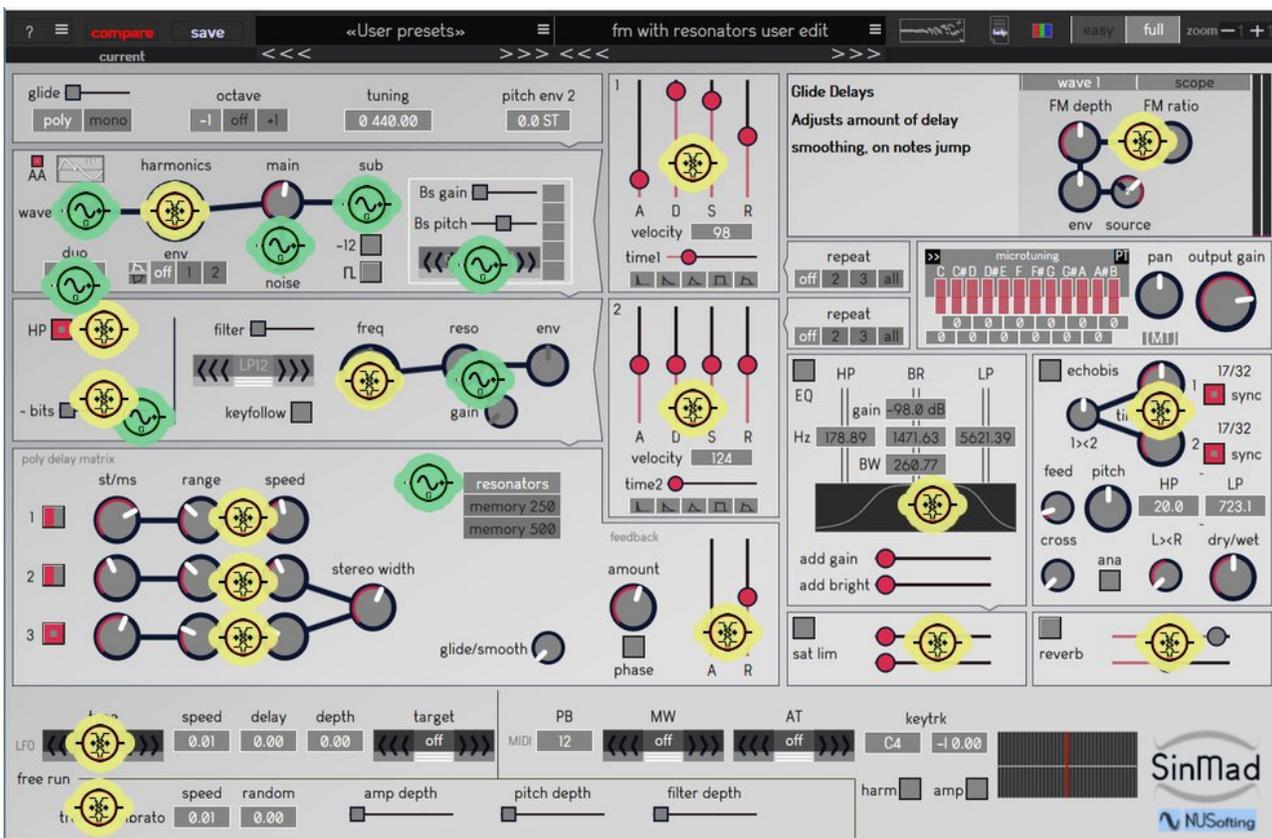
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We are going to subdivide the modules of this synthesizer in two categories:



A *generator* is one that produces sound by itself.

A *modifier* is one that transforms or modifies the sound that's received.



As you can see in the picture there are basically ten generators (10) and seventeen sound modifiers (17).

Well, the generator icons are actually eight, that's because the resonators are three (3) but marked just once.

The generators are grouped on the left of the screen, where the polyphonic section of the synthesizer can be found. All generators are polyphonic.

Let's see a table to help the conceptual organization of the modules:

## Generators:

name	what is it?	note 1	note 2
wave	the main oscillator with 5 waveforms. Where selection 1 is a mini FM synth.	1] FM oscillator 2] sawtooth 3] square 4] medium pulse 5] narrow pulse	all 5 waveforms can be modulated using the 'harmonics' modifier. The FM osc can be also modulated using the controls in the 'scope' panel.
duo	an auxiliary oscillator that doubles "wave", with adjustable detuning.	this oscillator produces a sawtooth or a sine when FM osc is selected in "wave".	
noise	a noise/hiss generator		
sub	a separate oscillator with 3 waveforms.	possible waveforms are sine, soft sawtooth and square	'sub!' can be transpose one octave lower than the main oscillator
burst (HIAT)	a separate oscillator based on a selection of built-in samples, with no sustain. Used for attack transients or decaying sound, thanks to a tunable comb filter.	12 unvoiced samples available.  Voicing is provided by the resonator, if activated.	HIAT means 'harmonic integrated attack transient'  There are 5 levels of harmonic integration, which are the 5 levels or resonance.
~bits	this bit reducer can become a generator at the highest settings. That is generating new frequencies.		
resonance (filter)	high resonance can turn the filter into an oscillator, generating it's own sound.	the 'keyfollow' switch allow the pitch to follow the MIDI notes as played. According to the 'freq' knob position.	for enhanced timbre control the resonance is scaled or boosted in overdrive using the 'gain' little knob.
resonators (delays)	despite they always need some input, the resonators do generate their own sound.	You can think of these as a polyphonic matrix of comb filters.	