

Foil | Max for Live Device

Foil is a Max for Live additive synthesizer device. Additive synthesis combines sine waves to create complex harmonic timbre.

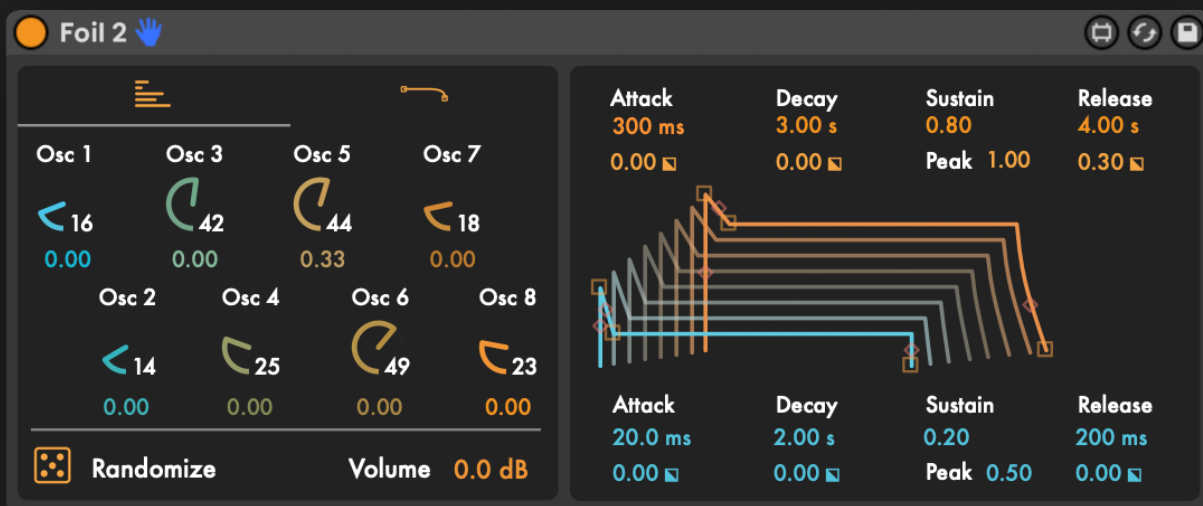
Installation

Unzip the amxd file and drop the file to the following: ableton/user library/presets/instruments/max instruments.

Double ADSR

Foil utilizes a unique double ADSR interface that simultaneously controls eight sine oscillators, drastically simplifying additive synthesis. The blue ADSR envelope in the front shapes the amplitude of Oscillator 1, while the orange ADSR envelope in the back shapes the amplitude of Oscillator 8. Oscillators 2 - 7 is shaped by the interpolated ADSR envelope values in between.

This design allows for envelope shapes that plucks some harmonics with a faster attack while others ease in like a pad, or shapes that sustains some harmonics over while others decay out – timbral gestures unique to additive synthesis.



Oscillators

Foil uses eight sine wave oscillators. The oscillator dial sets the oscillators to integer ratios of the note pitch up to the 60th partial, while the boxes below allow for detuning of the individual oscillators. This means that if the dial is set to 16, and the detune value set at -0.40, the resulting harmonic ratio will be 15.6.

The randomize button randomizes the ratios, allowing for quick experimentation of different timbral structures.



Pitch Envelope

The pitch envelope helps create complex timbral gestures. Using a standard ADSR envelope generator, individual segments can be tuned 24 semitones above and below the note pitch.

The pitch envelope has three modes: Off will function like a regular ADSR envelope, while Tgr will trigger the pitch envelope in its entirety – disregarding MIDI note-off messages. Loop will loop over the envelope shape until MIDI note-off message is received.

Support

For best result, make sure that Live is running the latest version of Max, from www.cycling74.com. For any further support, please email projects@takumamusic.com.