

"no humans were involved in the making of the title"



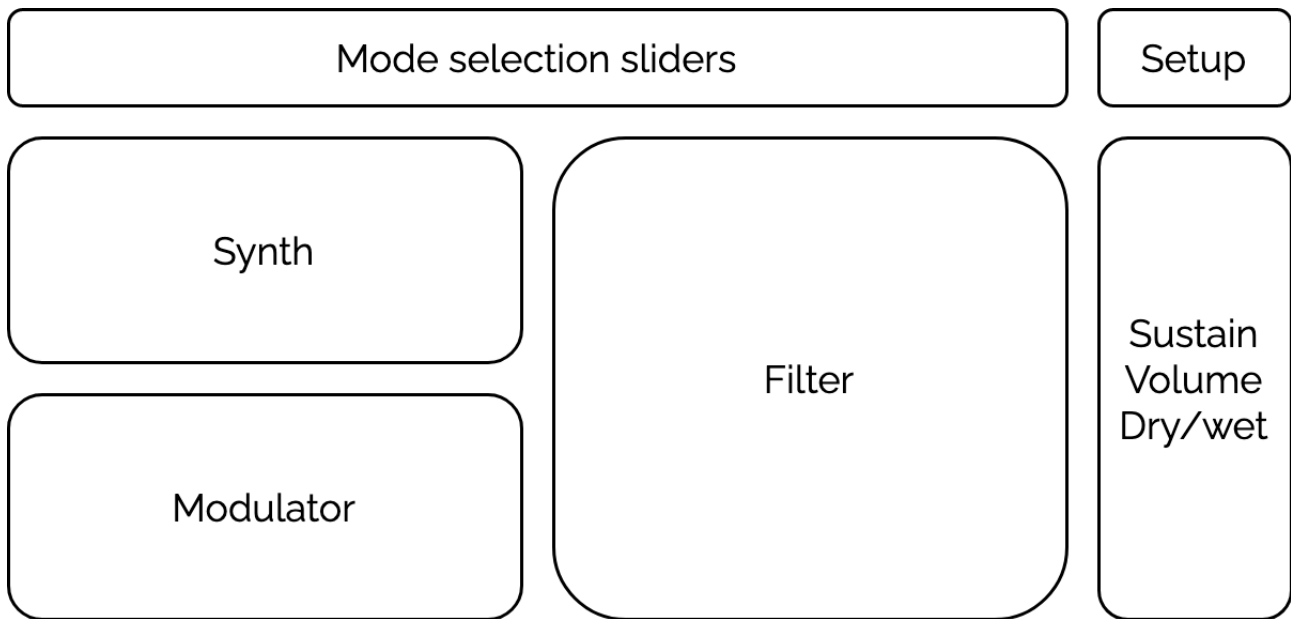
**broohahaizer** is an experimental noise machine AUv3 effect and standalone app.

it features:

- two sound sources, "synth" and "modulator" with various noise & tone making settings.
- the sound of these two sources is passed to the ring modulator and then goes to a switchable "filter" unit
- the app works as an audio effect and the input goes to both "synth" and "modulator" sections
- when modulator is inactive it passes audio input (if available)
- all XY control pads have sustain switches
- all plugin parameters can be automated in AUv3 host and can be controlled / recorded

AUv3 connection note: though this is mostly a noise generator, the plugin type of this app is "Music Effect" and it is not listed in "Instrument" AudioUnit list in your host application.

## elements



**“synth”** section has following modes:

- **“Synth 1”**: noise generator with three kind of noises across the X-Y parameter space
- **“Synth 2”**: produces more harsh noise with some higher frequencies for lower Y values
- **“Synth 3”**: more uniform noise with subtle changes
- **“Synth 4”**: generates random crackle sounds
- **“Mod Sine”**: two sine waves and ring modulator. X sine wave frequency is from 50 Hz to 5kHz; Y sine wave has the frequency range from 0 to 20 Hz.
- **“Mod Saw”**: the same but with aliased sawtooth waves. The frequency ranges are also the same.
- **“Hi FM”**: a sine wave with the frequency modulated by another sine wave. X value is for base frequency (5kHz to 10kHz) and Y value is for modulator frequency (0 to 5kHz)
- **“Revb Feed”**: sound produced by a feedback chain that contains sine wave generator and a reverberator unit. X is for sine wave frequency and Y is for feedback. Sine wave frequency range is from 0.1 Hz to 5kHz.
- **“Over LP”** is a 12dB/octave lowpass filter with a special feedback circuit. Filter frequency range is from 0 Hz to 15kHz.

Please note that synth section also accepts sound input but the chosen presets are supposed to depend less on the incoming signal. For other cases the input signal goes directly to “modulator” section and goes further to “filter” when it is not active.

**“modulator”** contains:

- **“Mod Sine”, “Mod Saw”, “Hi FM”, “Revb Feed”, “Over LP”** modes
- **“Dual HP LP”**: this is a unit that contains two 12dB/octave filters; X is for lowpass frequency (50 Hz to 15kHz), Y is for highpass (with the same range). Depending on the frequencies this works either as a “bandpass” or a “notch” filter. This is the only synthesis mode in modulator section that doesn't produce sound by itself and is supposed just to process the audio input.

**“filter”** section has following modes:

- “Over LP”, “Dual HP LP” modes
- “EOE LP”: some custom implementation of famous 303 filter with q feedback circuit. This filter has lower range for cutoff frequency (40 Hz to 4kHz). All these three filters have resonance setting controlled by Y value.
- “SAH LP” is a basic 24dB/octave filter that goes to sample-and-hold unit. In this mode Y value controls the rate of the sample-and-hold oscillator. Filter frequency range is from 50 Hz to 5 kHz.

right section contains three buttons that enable “hold” mode for synth, modulator and filter and two sliders (volume, logarithmic from ~-70dB to 0dB and dry/wet, linear 0..100%)

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