

In this patch we will focus on the VCF's ability to self-oscillate and the resulting sinusoidal output being modulated. We'll make use of the VCO's capacity to act as a modulator in lfo-range mode and mix the

Triangle waveform with the White Noise generator, built into the Mixer / Noise module. The patch is a homage to the grainy, off-tune texture of early tape-sampler instruments such as the Mellotron and Optigan.


The resonance control can be used as a faux-finetune in VCF self-oscillation mode.
Any modulation of the resonance in self-oscillation is actually additive in relation to the positive-feedback circuit threshold.

Fine-tune the desired LFO frequency of the VCO in lfo range-position.

Set the range control to the lfo position. In this position the VCO's waveforms can be used as a source of modulation.
1v/oct tracking is bypassed.

Suggested settings: set the attack control between 8 & 10 o'clock for a slight "swelling" of the transient to emulate air-flow through the flute.

Toggle through the Envelope Generator's Curvature characteristics* by pressing **mode + time** toggles simultaneously.

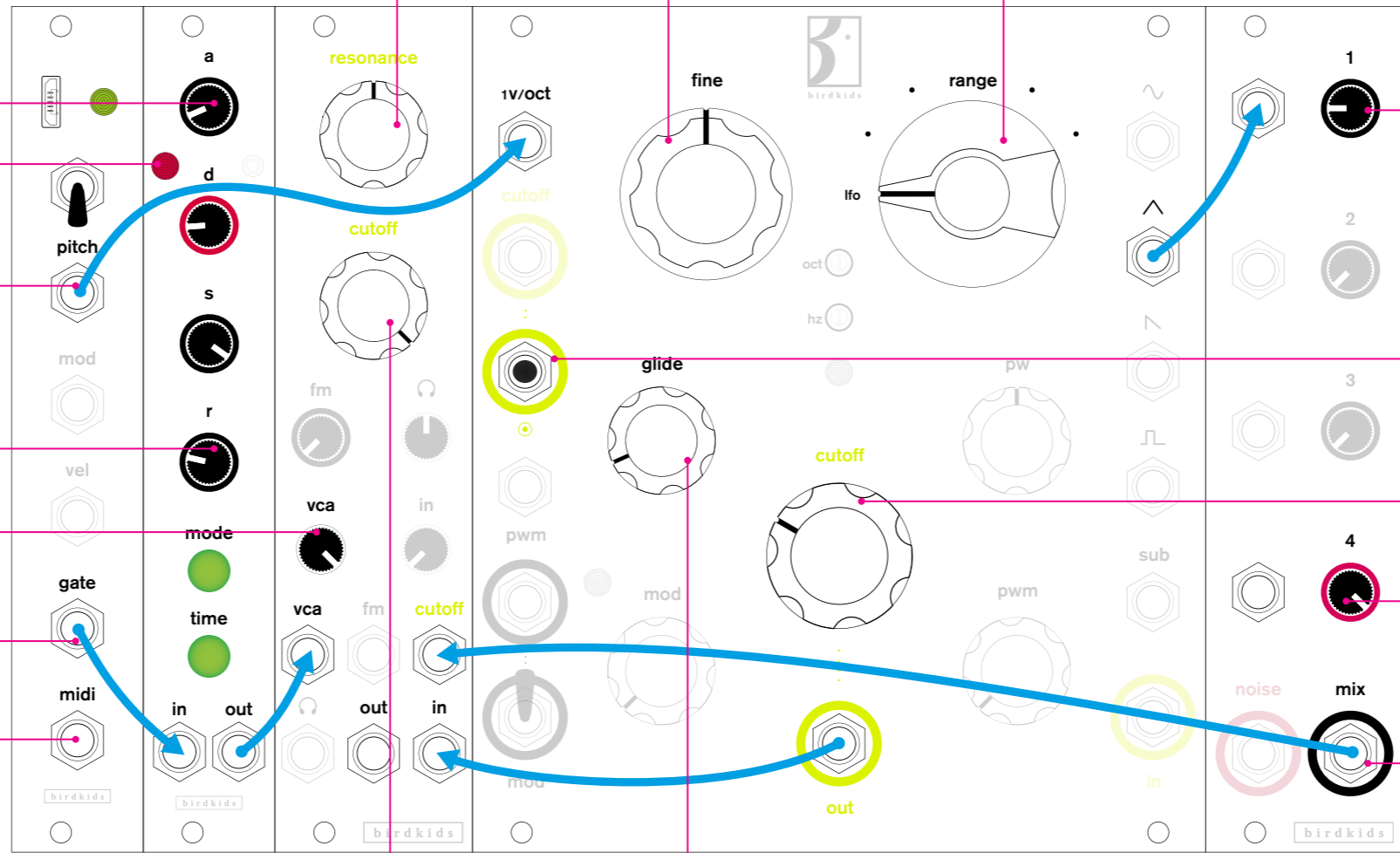
The VCF will track 1v/oct in self-oscillation+1v/oct  mode.

Consult the Envelope Generator's tech specs for more info on variable stage parameters, operation modes, mixed curvature characteristics and variable time domains.

Set the VCA's modulation depth.

Suggested patching: Power / MIDI gate output to Envelope Generator trigger/gate input. Envelope output to Expander VCA modulation input.

Use supplied MIDI-to-3.5mm Adapter to convert external MIDI data** to analog Control Voltages.



Suggested patching: Triangle waveform as a subtle vibrato source to pitch-modulate the VCF in self-oscillation mode(=Sine). The Audio gain 1 control becomes a modulation-depth control effectively. Start low, dial-in to taste.

Set the VCF mode switch to the MID position for self-oscillation + 1v/oct tracking. In this mode the LPF switches to a positive-feedback circuit to output a Sinusoidal waveform (VCF audio input is ignored).

In self-oscillation mode the VCF's cutoff frequency control acts as a manual frequency dial. Set to taste.

The analog, White-Noise generator on the Mixer / Noise module is **normalized** to the Audio input 4. We're using the Noise Generator's chaotic nature as a less predictable modulation source (subtle randomization).

The mixed (audio) modulation signal consisting of Triangle (lfo) + Noise, post individual gain-staging, is output here.

The VCF's cutoff modulation is affected by the Mixer / Noise module's output present at the **cutoff input jack**.
Any normalization between the vca and cutoff input 3.5mm jacks is bypassed upon patching (mechanical bypass).

Set note glide/portamento to taste.

*Red LED = Mixed Characteristic 2 (Log. Attack, Exp. Decay)
**Power / MIDI is set to receive MIDI via CH1 by default.

