

Erica Synths — Black Multi Mode VCF

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[Erica Synths Black Multimode VCF Manual \(PDF\)](#)

Using the Erica Synths Black Multimode VCF for Dense, Hyper-Complex Percussion & Rhythms

The Erica Synths Black Multimode VCF is a powerful and versatile multimode filter. While not a sound source itself, its ability to sculpt, distort, and dynamically manipulate audio and CV signals makes it a **secret weapon** for rhythmically rich and percussive eurorack music, especially with polyrhythms and shifting patterns.

1. Percussive Sound Sculpting with Filter Resonance & Overdrive

- **Self-Oscillation:** Crank the resonance until the filter self-oscillates, effectively turning it into a sine wave oscillator. Use short, percussive envelopes or rhythmic gates into the cutoff CV (CUTOFF CV) to create kick drum or tom-like tones.
- **Overdrive:** Set the input gain above 12 o'clock to enable the germanium diode overdrive for gritty, punchy percussion. This especially shines on sharp transient material or already percussive sources (e.g. noise, samples, drum machines).
- **Unique Percussion:** Use complex, multi-modal outputs (Lowpass, Highpass, Bandpass) simultaneously and send them to different VCAs or stereo channels, gating each with different rhythmic triggers for polyrhythmic layers.

2. Patch Ideas for Complex Rhythms

- **Polyrhythmic Modulation:** Use separate clock-divided or Euclidean gate sequences into VCA/envelopes that shape separate audio sources, then feed those into the VCF. Modulate the cutoff and resonance CV with independent rhythm generators (e.g., clocked LFOs, stepped random, or synchronized sequences in odd divisions).
- **Feedback Percussion:** Patch the LP or BP output back into the audio input via an attenuator or VCA, modulated with a rhythmic gate or envelope—this creates chaotic, ever-evolving textures and unpredictable percussive snaps.
- **FM the Filter:** Use fast cycling envelopes, function generators, or audio-rate modulation into the CUTOFF CV for unique, punchy percussive artifacts. Sync the modulator's rhythm to a different time signature or clock divider for polyrhythmic movement.

3. Rhythmically Complex Patterns—Filter as Performance Tool

- **Manual Performance:** Use the cutoff and resonance knobs live as you trigger or sequence patterns, accenting or “accent lifting” different hits in the sequence. This works especially well when you patch both CV and manual control for surprises.
- **Envelope-Following:** Patch a rhythmic source (e.g., drums) into an envelope follower and use its output to modulate the VCF's cutoff or resonance for dynamically responsive filtering, locked to the intensity of your percussive sequences.

4. Multimode Exploitation

- **Triple Output Routing:** Sequence three distinct percussive voices, mix them, and run through the VCF, then split the three outputs (LP, HP, BP) to different rhythmic effects, delays, or VCAs with their own rhythmic gates or patterns.
- **VCA before VCF:** Use a VCA before the VCF to gate or chop audio with complex rhythm triggers, then shape the resulting “chops” using overdriven and modulated filtering—hyper-punchy and detailed.

Module Recap for Percussion:

- Self-oscillating filter with CV and manual control over both cutoff and resonance
- Analog overdrive circuit on input for real grit
- Simultaneous HP, BP, and LP outputs for multi-band percussive textures
- CV attenuverters for modulation depth control (very handy for rhythmic CV modulation)

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