

Korg – Volca FM2

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Using Korg volca fm2 for Dense, Hyper-Complex Percussion & Polyrhythms in Eurorack Context

While the **Korg volca fm2** is not a native Eurorack module, its compact design, sync capabilities, and extensive MIDI support make it very compatible as a polyrhythmic AI-driven percussion voice/controller in a modular setup. Here's how you can get the most rhythmically intricate sequences and percussive textures with it:

1. Create Percussive FM Drum Voices

FM Synthesis is Ideal for Drums: FM excels at producing metallic, clicky, bell-like, and punchy percussive tones.

- **Edit mode:** Dive into the envelopes (EG ATTACK and DECAY) for each operator: - Use *short attack* and *very fast decay* for sharp transients (think: kick, snare, rimshot, claves). - Experiment with **feedback** in an algorithm for more aggressive, noisy snares and hats. - Assign operators as *modulators* for unusual overtones—great for clangorous or zappy percussion.

Velocity Slider & Motion Sequence: - Use *motion sequencing* to automate envelope, pitch, or algorithm changes step-by-step, resulting in evolving percussion hits.

2. Dense, Polyrhythmic Sequencing Techniques

Step Sequencer and Polyrhythm: - The volca fm2's **16-step sequencer** can run polyrhythms by chaining uneven-length patterns (e.g., sequence lengths of 5 and 7 steps for hemiola/complex cycles). - Use the **CHAIN function**: Hold MEMORY and select non-consecutive sequences for odd metrical groupings. - **Active Step mode**: Disable (skip) steps at strategic points to create polymetric loops (e.g., making a 12-step loop against a 16-step master clock).

Time Signature Manipulation: - **FUNC + WARP ACT.STEP**: Even if you have fewer than 16 steps, the sequencer will "stretch" the pattern across 16-step time, which can yield cross-rhythms. - Chain different length patterns for Euclidean/polyrhythmic cycles.

3. Complex Modulation & Parameter Locking (Motion Sequencing)

- **Motion Sequence ON/OFF/SMOOTH:**
- Use motion sequencing for rapid parameter jumps or gradual morphs (SMOOTH).
- Record LFO, Algorithm, Envelope, Velocity, and TRANSPOSE changes per step to sharply differentiate each hit.
- “Parameter lock” type behavior: use it for evolving timbres within a rhythm for rich, IDM-like or experimental textures.

4. Sync & Modular Integration

- **SYNC OUT/IN:** Clock Eurorack sequencers or drum modules from volca fm2 for tight integration.
- Use multi-channel triggers/gates in your modular to fire off the volca at unusual points.
- **MIDI IN/OUT:** Utilize an external sequencer (like Hermod, Torso, etc.) to send polyrhythmic sequences or clock-synced LFOs for deeper pattern complexity.

5. Live Unpredictability: Program Random, Chaining, and Effects

- **FUNC + PROGRAM RANDOM:** Randomizes the loaded program—use this for unpredictable per-step drum violence; lock to a pattern for semi-chaotic structures.
- **Effect Section:**
 - *Chorus:* Smeared metallic hats/claps or blurring kick attacks—automate chorus level or combine with motion sequence for ghost notes or varied hit widths.
 - *Reverb:* Smear snares, toms, or hats for big room percussion; automate reverb amount/freeze for dubby breaks.
- **Algorithm Morphing:** Switch algorithms per-step for wildly different attack tones and body.

6. Advanced Patterns: MIDI, Modular, and External Sync

- Use **odd step patterns** (lengths like 11, 13, 17, chained to 16 or 8) for tuplet-based polyrhythms.
- **Active Step** plus *muting/unmuting* steps on the fly = “live fills,” evolving glitch, or burst rhythms.
- **Sending MIDI CC from Eurorack/CV-to-MIDI module:** Modulate volca parameters with envelope followers, random generators, or LFOs from your rack.

Example: Building a Hyper-Rhythmic Drum Pattern

1. **Program a snare ‘drum’ on Operator 2, tight attack/decay, algorithm favoring feedback/modulation.**
2. **Set step length to 7 steps, chain it with a 5-step “kick” pattern.**
3. **Active Step mode:** Drop every 4th snare for odd syncopation.
4. **Motion Sequence:** Randomize velocity and reverb.
5. **Sync OUT to modular, clocking a 5-step burst sequencer driving a hats module.**

**6. Chain a 13-step pattern for metallic FM blips, syncopated
against the snare.**

Repeat, combine, and mutate for ongoing generative, dense percussion storms.

For Further Exploration

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