2hp — Euclid

- Manual PDF

2hp Euclid Manual PDF (official site)

Using the 2hp Euclid To Structure Full Length Eurorack Songs

The 2hp Euclid is a compact but versatile Euclidean rhythm generator for Eurorack modular systems, ideal for injecting evolving, musically-interesting rhythmic patterns into your patches. While it excels at creating immediate grooves, its real power—especially for full-length song structure—is in how you can use its features and CV inputs to create rhythmic variation, structure, and dynamic progression over time.

Below, I describe strategies for leveraging the Euclid module in the context of full-track composition, including how to interact with other modules to achieve song-length variety and development.

Euclid Module Key Features Highlighted for Song Creation

- **Generates Euclidean rhythms (up to 16 steps, variable density)**
- **CV control over Steps and Length**
- **Offset control for phase shifting**
- **Reset and Trigger inputs for syncing**
- **6ms gate outputs for triggering other modules**

Strategies to Build Full Tracks with Euclid

1. Automate Rhythmic Variation Over Time

- **Use CV to Morph Patterns:**
  Sequence the **Length** and **Steps** parameters with slow LFOs, step sequencers (like a Doepfer A-155, or even a MIDI-to-CV interface running an automation track in your DAW), or programmable function generators (e.g. Make Noise Maths, Intellijel Quadrax).
    - **Example:**
    - 16-step rhythms for the chorus, 8 in the verse.
    - Steps rising/falling to build or release energy.
- **CV-sequence the Offset:**
  Shift the phase of your rhythm to subtly or abruptly alter groove placement across sections of your song.
    - Good for creating fills or song transitions.

2. Macro Song Structure via Manual or Automated Control

- **Reset Input:**
  Use a master clock divider (e.g. 4ms QCD, Pamela's Pro Workout) to reset the Euclid pattern at section boundaries (verse, chorus, breakdowns) to synchronize changes across your whole rack.
- **Length or Steps Jumps:**
  Use a CV switch/sequential switch (e.g. Doepfer A-151) to switch between pre-programmed rhythm patterns at key moments in your track.

3. Layer and Modulate Multiple Euclidean Patterns

- **Polyrhythm/Polymeter:**
  Run several rhythm modules, or multiple uses of the Euclid, each with different length/step settings, triggering different percussive voices (kick, snare, hats, synth stabs, etc.).
- **Inter-module Cross-Influence:**
  Use Euclid's trigger output to clock S&H, sequential switches,

sequential analog switches (for chord progressions, basslines, or FX changes) in sync with rhythm variations.

4. Fill Creation and Breakdowns

- **Modulate Steps/Length for Fills:**
  Use CV or manual control to create quick fills—suddenly lowering the number of steps or steps at the end of a section.
- **Mute/Unmute with Switches or VCAs:**
  Route Euclid's output through a VCA or switch, muting the rhythm during breakdowns, or using gates/envelopes (triggered by song-structure logic modules such as Mutable Instruments Marbles, Erica Pico SEQ, or external MIDI).

5. Drive Non-Drum Sounds for Evolving Texture

- **Modulate Non-Percussive Elements:**
  Send Euclid triggers to envelope generators controlling filter cutoff, wavefolder amount, or delay send levels for evolving pads, drones, or effect sounds.
- **Melodic Triggers:**
  Use as a step input for pitch sequencers, advanced quantizers, or switch-based melodic routing, creating rhythmically complex melodic patterns.

Practical Example Patch: Full Song Arrangement

```
 Clock source (Pamela's Pro Workout) → Euclid Trigger In
Pamela's pattern divider → Euclid Reset In (trigger at measure star
Pamela's CV out (random/automation) → Euclid Length CV In
Pamela's CV out (different lane) → Euclid Steps CV In

Euclid Out →
    1. Percussion voice (snare, hat, or rim - e.g. Mutable Peaks in
```

```
    2. Envelope generator for synth stabs (trigger VCA or effect se
    3. Clock input for sequential switch (changing basslines or FX)

Patch VCA for rhythmic mute/fade for breakdowns, outro, or song sec
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Additional Techniques for Song-Length Structure

- **Record and Loop changes with CV recorders (e.g. WMD S.S.R., ALM Pamela's Workout looped automation)**
- **Mute/unmute or swap between multiple Euclid setups with switches or logic modules**
- **Combine with MIDI-CV for DAW-synced macro control of patterns and transitions**
- **Use Euclid triggers to set scene changes, sample triggers, or send cues to visual/lighting systems for live performance**

The key to full-length song form with Euclid is leveraging CV, reset, and inter-module communications to automate rhythmic change, create variety, and sequence transitions at multiple levels—from pattern detail to entire track sections.

Generated With Eurorack Processor