

Nervous Squirrel — Conway's Game

- [Manual PDF](#)
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[Conway's Game Eurorack Module Manual \(PDF\)](#)

Generating Dense, Complex Percussive Rhythms with Conway's Game Eurorack Module

As a modular synth musician seeking intricate, evolving, and hyper-complex rhythms, the *Conway's Game* module offers a deeply algorithmic approach to percussion sequencing. Below are strategies and creative approaches tailored to your goal of achieving densely layered, polyrhythmic, and unpredictable percussion:

1. Mapping Cellular Automata to Triggers for Percussive Density

- **Direct Patterning:**

Each of the 64 outputs from the 8x8 LED matrix can trigger a separate percussion module, sample, or envelope. Patch these outputs into a mix of drum voices—kicks, snares, hi-hats, claps, and more exotic percussion.

- **Maximum Utilization:**

Use all 64 outputs! This creates a constantly shifting tapestry

where each “cell” of the Game of Life corresponds to a drum hit or percussive accent.

- **Layering:**

Route multiple outputs to a single sound via a mixer, or multiples, for flams, ghost notes, or dense “crowd” textures.

2. Introducing Polyrhythm and Multidimensional Clock Sources

- **External Clock Manipulation:**

Feed the *Clock In* with polyrhythmic triggers from unrelated sequencers or LFOs (e.g., a Euclidean sequencer, odd-division clock sources like 5/8 or 7/8 time).

- **Audio-rate Clocking:**

Push into “timing strangeness” as per the manual by advancing the simulation with audio-rate signals to create jittery, pseudo-random bursts akin to stutter edits or granular percussion.

3. Pattern Refresh and Generative Complexity

- **Automatic Evolution:**

Let the Game of Life run with random starts; patterns will die out or stabilize, triggering auto-resets—this causes constant structural evolution in your percussion grid.

- **Manual Reset:**

Use the *RESET* button or CV/gate for real-time “scene” swaps—filling in fresh, chaotic clusters for live performance drama.

4. Trigger/Gate Modes for Dynamic Accentuation

- **Trigger Mode:**

Delivers sharp 20ms pulses for crisp, articulated hits.

- **Gate Mode:**

Sustains gate as long as a cell is “alive”—send these to

percussion voices with variable decay or amplitude for evolving textural hits and rolls.

5. MIDI to Trigger for Structured Chaos

- **MIDI Mapping:**

In *MIDI Mode*, map MIDI notes (C2–E7) to trigger outputs.

Sequence the grid outputs explicitly from software or hardware sequencers for controlled polyrhythmic effects or algorithmic percussion overlays.

6. Creative Patching Recipes

- **Probability and Logic:**

Combine outputs via logic modules (AND, OR, XOR) to derive meta-triggers—gate percussion only if both cells A and B are alive.

- **CV Modulation:**

Use the state of a cell (trigger/gate presence) to modulate parameters of drum voices—pitch, decay, sample start point, or filter cutoff, making each hit unique.

- **Hybrid Voices:**

Patch several Game of Life outputs to trigger or gate percussion voices with envelope generators, then modulate those envelopes using slow LFOs or random sources for per-hit humanization.

7. Performance Tactics

- **Morphing Complexity on the Fly:**

Vary clock speed throughout performance—from slow pulses (glacial evolution) to frantic bursts (granular rhythms).

- **Live Improvisation:**

Use manual resets, mode switches, and external MIDI control to conjure new rhythmic constellations mid-set, keeping audiences and dancers alert.

Summary Table

Function	Resulting Rhythmic Effect
64 triggers mapped to drums	Dense, layered, ever-evolving percussion grid
External polyrhythmic clocking	Shifting, overlapping time signatures and unquantized groove
Pattern auto-refresh	Generative, never-repeating structure
Gate versus trigger modes	Dynamic accent/hit shaping; textural rolls
MIDI mode	Algorithmic meets performative control over complexity
Logic patching (AND/OR/XOR)	Meta-rhythms, pattern intersection, probabilistic accents
CV modulation of drum parameters	Unique, punchy, per-hit dynamics and timbre

CC Patch Inspiration:

- *Patch multiple outputs to trigger a bank of sample players, each tuned to microtonal pitches: complex grooves with melodic/rhythmic fusion.*
 - *Feed Game of Life gates to clock random voltage sources which in turn modulate percussive envelopes or effects.*
 - *Link Game of Life resets to a voltage-addressed switch, cycling between drum banks for evolving percussion kits.*
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Ready to Make Unpredictable Percussive Magic?

Let the *Conway's Game* module's cellular evolution drive rhythms beyond what sequencers and probability generators can easily offer. Build your grid, patch deep, embrace complexity!

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