Acid Rain — Constellation

- Manual PDF

Download the Constellation Firmware V1.1 Manual (PDF)

Modulating Constellation for Unique Eurorack Sounds

As a Eurorack musician, Constellation offers deep rhythmic and modulation possibilities thanks to its 8 channels, advanced Euclidean pattern engines, CV assignment system, and flexible clocking and logic combinations. Here's how to exploit these features for experimental sound design, percussive attacks, brutal basslines, and haunting textures.

1. Distorted Percussive Sounds

Key Techniques

- **Euclidean Ratchets & Bursts:** Set patterns with short lengths (e.g., 4–7 steps) and high ratchet/burst parameters. This creates dense flurries of triggers–perfect for glitchy, metallic percussive hits.
- **Randomization & Chance:** Use the **chance** parameter for patterns or assign a slow/random LFO to it via CV. This introduces unpredictability, mimicking analog noise and random percussive artifacts.
- **Clock Division/Multiplication:** Use clock dividers/multipliers on selected channels for uneven, polyrhythmic pulses.

- **OR/XOR Logic:** Combine patterns with XOR or OR to layer rapid hits, causing overlaps, gaps, and unexpected off-beats.
- **Variable Pulse Width:** Crank the channel's **width** to create "choked" gates or blend pulses into harsh, distorted gates.

Sample Patch Idea

- Channel 1: Short Euclidean pattern, ratchet 6, burst 4, low chance (30–40%), routed to a drum distortion module.
- CV input 1: Assign a stepped random voltage to modulate **events** or **rotate** for aggressive motion.
- Use XOR or OR to combine patterns, maximizing unexpected overlapping triggers.

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2. Wild Basslines (Dubstep/Drum & Bass)

Key Techniques

- **Long Patterns, High Events:** Use longer patterns (length 16–32) with moderate events (7–10) for hypnotic movement.
- **Ratchet and Burst for Wobble:** Assign ratchet (2–4) and burst (2–3) for wobbly, shifting gates sent to bass synth envelopes or filters.
- **CV Modulation:** Map an external LFO to **rotate** or **events** for constantly morphing subdivision/groove.
- **Channel Polyrhythms:** Set one or more channels to triplet or quintuplet divisions against the main clock for wonky, rolling grooves.
- **Flip-Flop (Flop) Mode:** Use on bass channels for held gates, letting the event rhythm determine note on/off—useful for classic DnB "stabs."

Sample Patch Idea

- Channel 3: Length 12, events 5, burst 2, ratchet 3, flip-flop ON, routed to bass VCA envelope or filter for movement.

- CV input 2: Sine LFO (0-5V) modulates **rotate** for sweeping, shifting downbeats.
- Clock division: Channel 3 runs at 3/2 of main clock for groove offset.
- Channel 4: Shorter length, high chance, triggers a synced distorted sub hit.

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3. Haunting Atmospheric Pads

Key Techniques

- **Very Long Patterns:** Use maximum pattern length (e.g., 64, 128, 256+) with low events. This causes rare, unpredictable trigger clusters—ideal for slow ambient textures.
- **Slow CV Modulation:** Assign a slowly cycling LFO or manual joystick to **events**, **chance**, or **width** for evolving, organic changes.
- **Wide Pulse Widths:** Set channel width high (70–95%), blending gates for sustained, breathy effect triggers.
- **AND Logic:** Combine sparse patterns with AND logic to make events even less frequent and more spectral.
- **Flip-Flop Mode:** Gate pads or drones, letting Constellation's logic structure define shifting, ghostly tails.
- **Pattern Rotation:** Mutate the rotation parameter over time for morphing pad entrances.

Sample Patch Idea

- Channel 5: Length 128, events 6, wide pulse width, AND logic, triggers a wavetable/polyphonic pad.
- CV input 3: Patch a slow triangle or sample & hold to **width** and **events** for evolving pads.
- Channel 6: Flip-flop ON, very sparse, triggers granular or reverb-heavy sounds for added texture.

Additional General Tips

- **Muting Patterns:** Use the mute menu (page 20) dynamically—either via knob, or with assigned gates for live "dropouts" and lightning-fast rhythm edits.
- **Live Slot Change/Random Modulation:** Assign a CV input to "load" to instantly change whole save slots (entire rhythmic scenes) with voltage or sequencer triggers—great for wild, automated shifts mid-performance!
- **Input Normalization:** Use the CV input cascade feature for global modulation, or disable for per-input control (see page 26).

Manual-specific CV Assignment Examples: - Assign 0–5V CV for upward modulation (e.g., from LFO or envelope). - Assign -5V to +5V for bipolar mod sources (e.g., random voltage, joystick). - Most parameters can be randomized on gate, allowing for hands-off controlled chaos.

References

- Download the Constellation Firmware V1.1 Manual (PDF)
- Generated With Eurorack Processor