

# Acid Rain — Chainsaw

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- [Manual PDF](#)
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[Chainsaw Stereo Super-Oscillator Manual \(PDF\)](#)

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## Creative Sound Design with Chainsaw Stereo Super-Oscillator

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Below is an analysis of how to modulate the **Chainsaw** module for unique sound design, with a focus on **distorted percussive sounds**, **crazy basslines** (dubstep/DnB), and **haunting atmospheric pads**.

## Understanding Chainsaw's Modulation Capabilities

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### Relevant Controls & Inputs

- **Detune Knob (4) & CV Input (6):** Controls spread of 7 waves per voice; modulate for density & movement.
  - **Waveform Morph (5) & CV Input (7):** Fades all waves from saw to square. CV morphing is very expressive.
  - **Linear FM Input (9):** Linear frequency modulation affecting all voices, up to 2kHz CV.
  - **1V/Oct Inputs (8, 10, 12):** Individual pitch control per voice for polyphony, chords, or stacked intervals.
  - **Stereo Outs (11, 13):** Waves distributed for wide image; use both or just one for mono.
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# Sound Design Techniques

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## 1. Distorted Percussive Sounds

- **Patch Ideas:**

- Feed a sharp envelope (e.g., Maths, Function) to **Detune CV (6)** for a rapid detune burst. This creates metallic, punchy attacks as all waves move out of unison.
- Morph the waves quickly: Envelope into **Waveform Morph CV (7)** for a snap from saw to square or reverse.
- For *extra bite*, patch a high-frequency oscillator (audio rate) to **Linear FM (9)**—this can yield clangorous, noisy timbres with digital edge.

- **Tips:**

- Use a VCA after Chainsaw and trigger it with a short envelope for sharp transients.
- Post-process the output with aggressive overdrive and fast envelopes on a filter for more impact.

## 2. Crazy Basslines (Dubstep/Drum & Bass)

- **Patch Ideas:**

- Voltage sequence to main **V/OCT input(s)** for pitch slides & glides.
- LFO or envelope into **Detune CV (6)** for evolving, thick bass movement. Try modulating just a bit or exaggerated for slurred, chorus-like swarms.
- Use an envelope or LFO to morph between saw and square via **Waveform Morph CV (7)**. Many dubstep basses are made by dynamically wavetable-scrubbing/morphing.
- Audio-rate modulation (e.g., another VCO) into **Linear FM (9)** for "formant" and dysphonic textures.

- **Tips:**

- After Chainsaw, patch through a low-pass filter with high resonance for "wub" sounds. Modulate cutoff with a fast envelope or synced LFO.

- Experiment with stereo image by using both outs and panning/filtering each further downstream for a wall-of-sound effect.

### 3. Haunting Atmospheric Pads

- **Patch Ideas:**

- Slow random voltages (Sample & Hold, Wobblebug, etc.) into **Detune CV (6)** and/or **Waveform Morph CV (7)** for drifting, evolving pads.
- Use all three 1V/OCT inputs for stacked chords (root/third/fifth, etc.) and send smooth modulations to each for subtle pitch drifting.
- Subtle LFO or slow envelope to **Linear FM (9)** for unstable, eerie textures.

- **Tips:**

- Blend the stereo outs for a wide image; follow with reverb and delay for atmospheric washes.
- Modulate detune slowly for a chorus-like shimmering pad.

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## Patch Example Tables

Sound Type	In 6 (Detune CV)	In 7 (Morph CV)	In 9 (FM CV)	1V/Oct (8/10/12)
Percussive	Envelope: fast, sharp burst	Envelope: short spike	Audio rate VCO	Triggers > VCA
Bassline	LFO (medium/fast sweep)	Envelope or LFO (rhythmic)	Audio/LFO rate for growl	Pitch sequence
Atmospheric	S&H or slow LFO		Slow LFO or S&H	Triads/Chords

Sound Type	In 6 (Detune CV)	In 7 (Morph CV)	In 9 (FM CV)	1V/Oct (8/10/12)
		S&H, multiple LFOs		

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### General Tips:

- **All mod inputs** are bipolar ( $\pm 5V$ ), so unipolar sources (like envelopes) may need offset for symmetrical morphing.
  - **Linear FM** is great for subtle vibrato or intense, digital atonality.
  - **Detune** can go from sweet chorus to metallic, detuned madness—try automating it with slow CV for pads or fast for percussive shimmer.
  - For *maximum impact*, post-process Chainsaw's output with envelopes, distortion, filters, and spatial FX.
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