Mutable Instruments — Plaits

- Manual PDF

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How to Use Plaits for Densely Rhythmic & Hyper Complex Percussion

Mutable Instruments Plaits is a digital macro-oscillator that is capable of being a *full percussive voice generator* in addition to more traditional melodic and textural duties. The following strategies, drawing from the manual, will guide you in building music with dense, complex, and polyrhythmic percussion.

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1. Choose the Right Models

Plaits includes several synthesis models well-suited for percussion/ complex rhythms:

- **Bank 2:** Noisy and Percussive Models.
- *Drum synthesis models (kick, snare, hihat/cymbals)*.
- *Physical modeling (mini-Rings: string, bar, tube)*.
- *Granular noise, dust, filtered noise*.

For percussion, cycle to these models using the model selection buttons. Experiment with the AUX out for alternate timbres.

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2. Triggering & Polyrhythm Creation

- **TRIG Input:**
  Patch distinctly clocked, irregular, or polyrhythmic trigger patterns into the TRIG input.
- Use multiple trigger generators—e.g. Euclidean sequencers, clock dividers/multipliers, or step sequencers running at odd divisions (3, 5, 7, etc).

- Cross-patch clocks from sequencers with different time signatures for polyrhythms.

- **LEVEL Input:**
  Patch envelope generators, sequencer CVs, or accent patterns to LEVEL. This will simultaneously control amplitude and timbral brightness for each hit—introducing variation and punch.

- **TRIG plus unpatched CV Inputs:**
  If TIMBRE, MORPH, or FM CVs are left unpatched, the respective attenuverters can set how much *internal envelope modulation* affects those parameters. Crank these for hyper-punchy, dynamic timbre with each hit.

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3. Complex Parameter Modulation

- **External CV Modulation:**
- Use fast, stepped, or even random/noise CV sources to modulate TIMBRE, MORPH, FM, and HARMONICS.

- Sequencers running at polyrhythmic divisions can be routed separately to each modulation input.

- **Model Selection CV Input:**
  Sequence (or randomly modulate) the Model Select CV input in time with (or offset from) your main triggers—Plaits will change drum types/pitched/noise elements on the fly. When patched to trigger, the model only changes on trigger, allowing per-step timbre switching.

4. Accentuation & Groove

- **Accent/Groove:**
  Send an additional trigger/gate or CV to LEVEL on specific rhythmic steps (e.g. every 4th or 7th). This can function as an “accent” and impact both loudness and tonal brightness.

- **Decay & Envelope Settings:**
  Hold the first button (A) and use:

- *MORPH knob:* Set the LPG/envelope decay appropriately—short for sharp, punchy hits, longer for reverb-y, overlapping textures.
- *TIMBRE knob:* Adjust LPG from VCA (sharpest) to VCFA (more rounded/transient).

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5. Unusual Voicings and Textures

- Use additive, wavetable, and granular models—tuned to percussive ranges—by keeping frequency low and modulating wave/harmonic spread for metallic, glitch, or Eraserhead-style percussion.

- Bank the module into speech/voice synthesis for chopped, stuttered, or robotic rhythmic elements, modulating CLOCK/ trigger to scan phonemes in rhythm.

- Use “modal resonator” and “inharmonic string” models for organic, quasi-acoustic percussive effects by sending very rapid or irregular triggers.

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6. Advanced: Firmware & Calibration

- Configure a tight *frequency knob range* (hold second button; turn HARMONICS) to avoid accidental pitch sweeping that could mess up percussive articulation mid-performance.

- If using as a multi-sound drum voice (model switching via CV/trigger), calibrate Plaits so that 1V/oct CV from a well-calibrated sequencer precisely switches models.

Creative Tips:

- **Layer with Other Modules**: Use AUX and OUT for stereo/dual timbral layering, or process separately with differing effects for extra complexity.
- **Silence as Rhythm**: Some models will output silence at certain parameter extremes—sequence these momentary mutes for stutter/shuffle effects.
- **Randomize**: Use sample & hold, stepped random, or Turing machine sources into model or timbre to maintain unpredictability in your percussion.
- **Feedback FM**: Use FM modulation from another Plaits or digital source clocked at a related, but offset, rhythm for cross-modulated percussion.

Quick Patch Example

```
 1. Set model to bank 2 “drum” type.
2. Patch three different Euclidean sequencer outputs (e.g., 5-step,
3. Set LEVEL to a fast S&H sequence.
4. Modulate DECAY and LPG response for desired percussiveness.
5. Use OUT and AUX for two separate percussion voices in your mix.
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