

Arturia — Keystep Pro

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Using the Arturia KeyStep Pro for Dense, Complex Percussion and Hyper-Complex Rhythms in Eurorack

Overview

The Arturia KeyStep Pro is an extremely powerful controller and sequencer for eurorack and electronic music setups. It excels at generating polyrhythms, polymeter, unconventional time signatures, and tightly synchronized sequences—making it a potent brain for high-density, complex, and ever-evolving rhythmic percussion.

Key Features for Advanced Rhythm:

1. Drum Sequence Polymeter & Polyrhythm

- **24-Track Drum Sequencer:** Track 1 of the KeyStep Pro is a 24-part drum sequencer. You can independently set the length of each drum track ("polymeter") in Poly mode (see p.71, "Polymeter").

- **Practical Use:** Set different tracks (kick, snare, hats, etc.) to run at non-matching step counts (e.g., 11, 13, 7, 16) to create constantly shifting rhythmic structures.
 - Example: Kick at 16, Snare at 13, Hats at 12, Rim at 7 steps.
- **Euclidean & Afro-Latin Rhythms:** Use step skip, nudge, and randomization features (p.84) for algorithmic patterns similar to advanced Euclidean sequencing modules.

2. Pattern Programming and Step Edit

- **Step Buttons & Nudge:** Use the 16-step buttons for hands-on editing. Shift steps left/right, invert steps, randomize, and quantize with SHIFT functions (p.43). This lets you morph, mutate, and nudge patterns in real-time for organic groove variation.
- **Advanced Editing:** In Step Edit with Overdub, you can edit velocity/gate/probability per note within a chord/step, introducing micro-rhythms, rolls, flams, and humanized grooves (p.65).

3. Splits for Simultaneous Drum/Sequence Performance

- **Keyboard Split:** Assign upper/lower parts to different tracks (e.g., one hand a drum polyrhythm, other hand melodic percussion) for live dynamic jamming (p.13, 94).

4. Odd Time Signatures & Time Divisions

- **Time Division per Pattern:** You can set each track/arpeggiator a different time division (from 1/4 to 1/32 and corresponding triplet values, p.40, 54, 79), thus easily creating cross-rhythms and complex pulses.
- **Metronome/Signature:** Set the internal metronome/division for uncommon signatures (7/8, 13/16, etc), ensuring your drum tracks and modular devices synchronize to your chosen complexity (p.119).

5. Randomness and Probability

- **Per-Step Randomness:** Dial in the ‘randomness’ encoder per step. Set certain notes to only *sometimes* trigger, producing never-repeating “organic” percussion patterns (p.66, 67, 76).
- **Pattern Randomization:** Use global randomize for unique, unrepeatable rhythm clusters.

6. Chains, Scenes, and Arrangement Automation

- **Pattern Chaining:** Use scenes and chains to automate polyrhythmic pattern changes, polymetric breakdowns, and buildup sections without manual intervention (p.98). Each chain step can bring in new meter relationships.

CV, MIDI, and Drum Triggers to Eurorack

- **Direct Drum Gate Outputs:** The 8 Drum Gates are perfect for triggering eurorack percussion modules, complex analog drum voices, or envelope generators for synthesized textures (p.47, 145).
- **Route Tracks Creatively:** Use the flexible CV routing to send melodic/perc triggers to any combination of voices for “interleaved” polyrhythms (p.143).
- **Advanced: Use MIDI CC/Control Mode for Eurorack Modules** – if you have MIDI-to-CV conversion in your rack, you can sequence control voltage modulations (for example, timbre, decay, or filter, tempo-synced LFOs tied to per-step rhythm triggers).

Making Percussion Voices Unique, Punchy, Percussive

- **Velocity and Gate Modulation:** Use per-step velocity and gate modulation to turn basic percussive sounds into expressive sequences—think accent patterns, ghost notes, or layered pulses.

- **CV Tools:** Send modulation, velocity, or aftertouch as CV to eurorack percussive voices for dynamic timbre and filter changes (p.122). Modulate decay, pitch, feedback, or wavefolder amount for each hit.
 - **Unusual Drum Trigger Lengths:** Adjust Drum Gate duration to trigger envelopes in non-standard ways, making clangorous FM blips, sharp hats, or ringing pings using short/long gates per hit.
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Tips for Hyper-Complex Percussion and Patterns

- **Create Polyrhythms with Pattern Lengths:** Set different track pattern lengths and time divisions; let them phase against each other. Experiment with breaking out of 16-step “grid-itis.”
 - **Randomness:** Use high randomness on secondary percussion, low on core beats for organized chaos.
 - **Step Skip Muting:** Temporarily mute/unmute steps in pages for shifting textures (p.102).
 - **Performance Controls:** LIVE swap patterns, change scales, or root notes “on the fly” for intricate rhythmic modulations.
 - **Eurorack Effects:** Route triggered modulation CVs to eurorack FX (wavefolder, LPG, delay feedback, distortion) for per-hit variation—turn any effect into a rhythmic performer.
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Inspirational Workflows

- **African, Arabic & Euclidean Grids:** Program real-world polyrhythms from the manual’s examples (p.82-85).
 - **Morph Patterns:** Use chains of patterns with micro-variations, nudged steps, and evolving velocities for generative drumscales.
 - **Layered Shifted Sequences:** Stack short sequences against long ones with entirely different time bases (“rotation”), using trigger outs for clean modular clocked mayhem.
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Read the full manual for further programming tricks:

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