Doepfer — A-160-2

- Manual PDF

Doepfer A-160-2 Manual PDF

Using the Doepfer A-160-2 Clock/Trigger Divider II for Dense, Complex, and Hyper-Percussive Rhythms

The A-160-2 is a **clock/trigger/gate divider**—not a voice or audio effect, but a powerful rhythm-generation and event-manipulation tool in your Eurorack system. Here's how to maximize its potential for complex, polyrhythmic, high-density percussion:

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1. Generating Complex & Polyrhythmic Patterns

Three Division Modes

- **Power of Two:** 2, 4, 8, 16, 32, 64, 128
- **Prime Numbers:** 2, 3, 5, 7, 11, 13, 17
- **Integers:** 2, 3, 4, 5, 6, 7, 8

Polyrhythm and Polytime Strategy: - Feed a steady **master clock** (from another clock source, LFO, or sequencer). - Patch different outputs to various percussion trigger inputs (kick, snare, hats, etc). - Use the **prime number** mode: Assign e.g., /3 (triplets), /5 (quintuplets), and /7 (septuplets) outputs to different percussive voices. This immediately interlocks non-aligning subdivisions, generating dense polyrhythms impossible with standard binary divides. - Combine the **integer mode** (includes /4, /5, /6, /7, etc.) for even denser, cyclically evolving patterns.

Layer and Cross-Trigger

- Send multiple outputs into logic modules (AND, OR, XOR) to generate even more complex, shifting patterns—especially if those logics are fed from different division sets.

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2. Playing with Clock and Output Modes

Gate vs Trigger Mode

- **Gate mode:** Outputs are held high for the length of the divided period (stays “on” for half the cycle at /2, a quarter at /4, etc).
- **Trigger mode**: Outputs are AND-wired with the input clock—pulses are as short as the incoming clock pulse, which can add a sharp, percussive attack.

Tip: Use **Trigger Mode** for ultra-snappy percussion, or patch to a fixed-envelope generator for punchy blips. Use **Gate Mode** for sustained triggers, or patch to drum voices/envelopes that like held gates.

Jumper Options for Advanced Tweaks

- **Edge Selection:** The divider can act on either rising or falling edges of the clock, letting you subtly offset or shift grooves.
- **Output Polarity:** Invert the outputs for “negative logic” percussive hits—not only do you double your pattern complexity, but can trigger “reverse” or opposite hits from the same stream.
- **Reset Behavior:** Using resets, you can either tightly lock patterns to bar cycles or intentionally disrupt pattern alignment for phase-shifting, Steve Reich-like polyrhythm structures.

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3. Unique Patch Ideas for Complicated Patterns

- **Multi-Drum Programming:** Each output goes to a unique drum sound. With the prime or integer divides, you get complex, never-repeating sequences.

- **Accent/Fill Creation:** Use one output to reset or re-trigger another sequencer or modulator, introducing periodic “jumps” or fills in a pattern.
- **Self-Patching for Shifting Grooves:** Patch one divider output into the reset of another, causing divisions to phase or “gate skip” in unpredictable ways.
- **Layer Multiple A-160-2s:** Chain outputs between modules (with different division modes) for extremely long and evolving rhythmic cycles.

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4. General Tips for Punchy, Percussive Results

- Use the **shortest possible triggers** (trigger mode, tiny input clocks) for crisp, clicky percussion.
- Use logic and switch modules to alternate between odd divisions for evolving, morphing grooves.
- Pair with random modules, switches, or dynamic modulation on the clock/reset lines for generative unpredictability.

Remember: - The A-160-2 is not a voice or effect, but a trigger/gate generator. Its musical power comes from controlling when other modules “fire.” - Combine several A-160-2s, logic, random, and analog trigger logic for Richter-level rhythmic density and modular “math.”

Further Reading: - Doepfer A-160-2 Website/Manual PDF - A160_2_jumpers.pdf – Jumper Layout & Customization

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