

Centreville — PlusMix

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Creative Rhythmic Uses for PlusMix Utility Mixer Switch in Eurorack Percussion Patching

The **PlusMix** is a gate-controlled unity mixer, ideal for high-precision CV or audio mixing, and can be dynamically controlled via gates and polarity switches. Its architecture gives you powerful tools for sculpting percussive, polyrhythmic, or complex modular rhythmic music.

Key Features Relevant to Rhythmic Complexity

- 3 audio/CV inputs (**PLS1**, **PLS2**, **BASE**), 1 mix output (**MIX**).
 - 2 gate inputs (**SW1**, **SW2**) and 2 gate-polarity switches (**SW1PL**, **SW2PL**).
 - **PLS1** and **PLS2** inputs are selectively mixed, per gate and polarity status.
 - **BASE** always mixes through.
 - Can be used as manual switch or gate-automated for rhythmically dynamic processes.
 - DC Coupled — suitable for both audio and CV.
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Techniques for Complex Rhythmic and Percussive Music

1. Dynamic Patterned CV Mixing for Polyrhythms

Route multiple sequencer CVs (possibly from polyrhythmic sources, e.g., a 7-step and 5-step sequence) into **PLS1** and **PLS2**. Use gate/trigger patterns from your rhythm/clock modules (e.g., Euclidean sequencers, clock div/mults, logic processors) patched to **SW1** and **SW2**.

Result: Only at specific beat coincidences do one or both patterns merge to the output. Complex, evolving melodics or modulation.

Example Patch: - **PLS1:** 5-step modulation CV, clock-divided. - **PLS2:** 7-step modulation CV. - **SW1:** Main clock triggers. - **SW2:** Swung/divided clock or logic OR from other percussive triggers.

This propagates polyrhythms to any CV destination (oscillator pitch for tuned percussion, filter cutoff, etc.).

2. Percussive Audio Layer Gating

Feed **PLS1/2** with audio-rate percussive sources (e.g., different digital noise bursts, metallic FM hits). Gates to **SW1/SW2** select which layer is present, with polarity switches (**SW1PL/SW2PL**) providing instant inversion/mute.

Result: Rapid, switchable layering of drum hits, claps, glitches—unique composite percussion sounds that change at intricate rhythmic intervals.

3. Probabilistic/Conditional Percussion Hits

Insert a logic or probability gate module before **SW1/SW2**. Now, percussion layers or modulation get mixed in only on rare, non-regular triggers, producing unpredictable fills and accents.

Example:

- **Probability gate** on **SW2**.

- Odd step triggers on **SW1**. - Two contrasting percussion voices, switched as dictated by the gates.

4. Morphing Manual Switch for Live Performance

Use when unpatched (SW1 & SW2 normals engage), and flip polarity switches for instant, punch-in/out percussion changes; perfect for rimshot/hat/snare switching on stage.

5. Precision Pitch CV Remixer for Drum Melodies

Because PlusMix is high-precision, send pitch CVs to PLS1/PLS2/BASE and merge them rhythmically to oscillators tuned for percussive synth drums. This creates drumlines with evolving, rhythmically changing tunings—think Aphex Twin/IDM drum edits.

6. Nested Syncopation with Clock-Linked Gates

Feed in pulse trains from different clock-divisions (e.g., 3/16, 7/16, 13/16) to SW1/SW2, with percussion CV/audio routed accordingly. Utilize the gate polarity switches to invert or phase-offset layers, exploiting the normalization to create cross-rhythm accents as the clocks "breathe" together.

Tips to Maximize Punch & Uniqueness

- Mix envelopes or accent CVs that open VCAs downstream, creating dynamic, talking percussion.
- Switch between different effects sends (distortion, delay, bitcrush) under gate control.
- Use BASE for the main pulse and gate-mix in noisy or metallic layers for "ghost" hits.
- Chain several PlusMix modules for even more combinatorial rhythmic complexity.

