

Frequency Central – Wonderland

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Creative Sound Design With Frequency Central Wonderland

As a fellow Eurorack musician, I've taken a close look at the Wonderland module's documentation and here's how you can use (and abuse) this powerful 8x8 patchbay/matrix mixer for sound design—especially for aggressive percussion, heavy basslines, and atmospheric pads typical of dubstep, drum and bass, and cinematic genres.

Core Capabilities Recap

- **8 inputs** (*each with a micro-attenuator*)
 - **8 normal outputs + 8 inverted outputs** (*180° out of phase*)
 - **64 pushbutton switch matrix:** freely route any combo of inputs to any outputs, with possible mults, sums, and inversions
 - **Miniature input attenuators:** support gain staging and deliberate distortion
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1. Distorted Percussive Sounds

Technique:

Leverage matrix mixing to *stack multiple percussive sources to a single output*, creating intentional clipping/distortion via the summed signal level.

Use normal and inverted outputs to reinforce or cancel elements, and micro-attenuators to fine-tune distortion character.

- **Connect several drum modules or short, snappy synth blips to multiple Wonderland inputs.**
- **Route them to one output via multiple engaged switches (e.g., Inputs 1, 3, 5 → Output A).**
 - Turn the attenuators higher to intentionally overload/clipping the output—Audible distortion = edgy percussion!
- **Take inverted outputs to a separate VCA, then mix with normal outputs for dynamic phase-cancelled “rip” effects.**
- **For extra grit:** Take the distorted output and send it into a wavefolder/waveshaper, or back into your modular FX chain.

Pro tip:

Don't forget to experiment with routing and blending outputs back into other inputs for quick, no-cable feedback paths!

2. Crazy, Modulated Basslines (Dubstep/Drum & Bass Style)

Technique:

Achieve wild, modulated bass by combining several different oscillators/ waveforms (e.g. sine + saw + noise) into a single output. Use inverted and normal outputs simultaneously for stereo or mid/side tricks, or route one signal to both normal and inverted outputs for “hollow,” toothy sounds.

- **Input Sub-oscillator, main bass osc, and noise source to different Wonderland inputs.**
- **Send all three to one output for a thick, layered signal.**
 - Add envelope or LFO-modulated attenuation using the Wonderland's micro-attenuators for dynamic movement. (Or modulate attenuators externally by carefully wiggling or swapping voltage sources if hardware allows.)

- Patch inverted output to a filter or VCA, then crossfade/mix with the normal output for evolving phase changes—a trick for morphing bass timbres.
- Mult the output into other processors (bitcrusher, distortion), then re-sum back into Wonderland along with dry signal for parallel processing within the mixer.

Pro tip:

Use Wonderland as a switch matrix live: tap in or out different waves/noises with the pushbuttons for “instant drop” effects and ever-changing bass tone.

3. Haunting, Atmospheric Pad Sounds

Technique:

Create evolving textures by routing multiple slow, droning sound sources with lots of modulation (e.g. LFOs, slow envelopes, random voltage) through the matrix. Sum and cross-phase the outputs, and experiment with attenuator positions for subtle movement.

- **Send several subtle, evolving sound sources (FM drones, field recordings, reverb returns) to Inputs 2, 4, 6, and 8.**
- **Assign each to a range of outputs, spreading textures across the matrix.**
 - Engage both normal and inverted outputs—pan one left, pan the other right for *supernatural stereo width* by mixing in and out of phase signals.
- **Use the micro-attenuators to set just the right blend—low/no distortion, but rich sum textures.**
- **Patch returns from modulation or FX processors (tape delay, granular) into more matrix inputs for feedback atmospheric layering.**
- **Swap patch button combos during a performance for ghostly, morphing landscapes.**
 - Disengage certain buttons suddenly to “hollow out” the pad.

Pro tip:

Automate (by hand) the switching matrix during performance for polyrhythmic, ghostly rhythmic movement in pads and drones.

Advanced Ideas

- **Feedback Chaos:** Route an output back to a free input for internal feedback loops—start with the micro-attenuators low and introduce drone or shrieking FX as you slowly raise attenuation.
 - **CV Processing:** Although designed for audio, Wonderland could process CV, letting you combine or invert modulation sources for evolving filter/oscillator control.
 - **Live Remixing:** Use pushbuttons to “remix” your input sources live—instantly jump between percussion, bass, and pad-focused textures.
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Reference

- [Frequency Central Wonderland Manual \(PDF\)](#)
 - [Generated With Eurorack Processor](#)
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Let your creativity loose—it’s not just a patchbay, it’s a playground for radical modular sound design!