

Pittsburgh Modular — Double Helix Oscillator

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Creative Patch Ideas for the Pittsburgh Modular Double Helix Oscillator

The **Lifeforms Double Helix Oscillator** from Pittsburgh Modular is a versatile dual oscillator with wave shaping, a dynamic low-pass gate, and an advanced voltage-controlled modulation matrix. Here are some creative ideas for patching this module with others in your rack:

1. Complex FM & Audio Rate Modulation

- **Patch:** Use the Double Helix's secondary oscillator as an FM modulator for the primary, and then patch a different oscillator (e.g., the *Make Noise DPO* or *Intellijel Dixie II+*) into the FM input as the audio rate modulator.
 - **Result:** Layered, evolving FM tones with deep, multi-dimensional timbres.
 - **Tip:** Vary the FM Index with an envelope or LFO to dynamically morph between subtle vibrato and metallic clang tones.
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2. Animated Harmonics via Wavefolder Modulation

- **Patch:** Send a slow LFO (from a module like *Mutable Instruments Tides* or *ALM Pip Slope*) to the **Timbre CV**, and a stepped random voltage (*Make Noise Wogglebug*, *Intellijel Noise Tools*) to the **Dynamics CV**.
 - **Result:** Rich, fluctuating harmonics and organic, acoustic-like timbral changes.
 - **Tip:** Try patching audio-rate modulation to the wavefolder for aggressive, tearing sounds.
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3. Percussive Synth Voice

- **Patch:** Use the Double Helix's contour section's **Impulse Input** with a gate/trigger sequencer (e.g., *Tiptop Audio Circadian Rhythms*, *ALM Pamela's Pro Workout*). Adjust the **Dynamics Response** for musically sync'd plucks and strikes.
 - **Result:** Extremely natural, *Buchla-esque* percussive tones and LPG "plonks".
 - **Tip:** Replace the input with a short envelope for custom percussive shapes.
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4. Self-Modulating West Coast Synth Voice

- **Patch:** Use the mod matrix's VCR channels to route the LFO and the secondary oscillator (in LFO range) to various CV inputs (FM, Timbre, Dynamics) and cross-modulate modulation sources for feedback patches.
 - **Result:** Chaotic, generative West Coast soundscapes—great for experimental music and evolving textures.
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5. Stereo Animation

- **Patch:** Patch the primary and secondary oscillators to two separate filters or effects modules (e.g., *Mutable Instruments Ripples*, *Make Noise QPAS*), process independently, then pan left/right.
 - **Result:** Wide, animated stereo fields for pads/leads.
 - **Tip:** Use the modulation matrix to send correlated CV modulations to wiggle each channel in a related but asymmetric way.
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6. Double Helix as a Complex Modulator

- **Patch:** Run the Double Helix in LFO mode (both oscillators), and use the random, noise, or shaped LFO outputs to modulate engines elsewhere: sequencer rate, effect parameters (e.g., *Strymon Magento*, *Make Noise Mimeophon*), or filter cutoff on other voices.
 - **Result:** Animate non-pitched parameters in complex, organic ways using the Double Helix's CV outs and router matrix.
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7. Layering with Other Sound Sculptors

- **Patch:** Feed the Double Helix's contour output to a granular processor (*Mutable Instruments Clouds*, *Qu-Bit Nebulae*) or resonator (*Mutable Instruments Rings*).
 - **Result:** Huge, cinematic textures that retain the organic dynamic behavior from the LPG and wavefolder.
 - **Tip:** Sequence the **Impulse Gate** rhythmically and/or manually for controlled "strikes."
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Other Module-Type Recommendations

- **Random Sources:** Wobblebug, Turing Machine, or Marbles for evolving modulation.
 - **Envelope Generators:** Maths or QuadraX for complex, time-variable modulation of timbre and dynamics.
 - **Filters & Effects:** Stereo multi-mode filters, phasers, or reverbs to further carve the final output.
 - **Sequencers:** For evolving pitch AND gate pattern control to ping/strike the LPG.
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Resources

- [Pittsburgh Modular Double Helix Oscillator Manual \(PDF\)](#)
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