Doepfer — A-121-3

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[A-121-3 12dB Multimode Filter Manual (Doepfer Website)](#)

Eurorack Songwriting with the Doepfer A-121-3 12dB Multimode Filter

As a eurorack musician, you may find it easy to patch up a fantastic loop, beat, or melody, but struggle to turn it into a composition with movement, structure, and progression. The Doepfer A-121-3 Multimode Filter is a deceptively powerful tool for arrangement, dynamic transitions, and variation—essential techniques for creating full-length songs in modular.

Let's explore **song-structuring uses** for the A-121-3, combining its features with other modules in your rack:

Key Features Recap

- Slim 4HP, saves rack space
- 12dB/octave multi-mode filter: LP, HP, BP, Notch outputs, all available simultaneously
- Voltage-controlled cutoff and resonance (CV in)
- Attenuator for FM (FCV2)
- Resonance up to self-oscillation (can act as a sine oscillator)
- Manual and CV control for filter cutoff and resonance

1. Dynamic Arrangement with Filter Transitions

Filters are essential tools for movement. Popular in electronic music to build tension, create breakdowns, or smooth transitions between sections.

Techniques

- **Intro/Breakdowns:** Sweep the cutoff (manually or via envelope/ LFO) to bring sounds in/out, e.g., filter down a drum loop for a breakdown, and raise for the drop.
    - **Patch:** Drum VCO → A-121-3 → Final Mix; modulate LP cutoff with envelope or LFO.
- **Build-Ups:** Automate resonance and cutoff for dramatic rises.
    - Add an LFO through an attenuator into CV1 (1V/oct) for smooth filter swells.

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2. Live Performance Morphing

The four outputs (LP, HP, BP, Notch) allow parallel processing and crossfading.

Techniques

- **Crosspatched Output Blending:** Use a sequential switch or matrix mixer to morph between filter types in real time, for evolving textures or sudden "scene" changes.
    - **Patch:** Mult your VCO to LP and HP outputs, send through crossfader/VCA, control blend with sequencer or CV for rhythmic filter morphs.

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3. Rhythmic Modulation

Combining the filter with fast LFOs or sequenced CVs can "chop" or sequence filter attributes as part of your beat.

Techniques

- **Filter as an Effect Beat:** Send a stepped/random CV (from a sequencer or random source) to cutoff or resonance inputs for animated, sequence-synced changes.
  - **Patch:** S&H or sequencer CV -> FCV2; control depth with FCV2 knob.

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4. Resonance Self-Oscillation for Melodic Elements

At high resonance, the filter will self-oscillate and act as a VCO.

Techniques

- **Filtered Sine Bass/Lead:** Trigger resonance manually or via CV, send 1V/oct pitch CV to CV1 (cutoff), create an additional voice in your track (e.g., a filtered sine bassline or melody).
  - **Patch:** Self-oscillation, use external sequencer or keyboard as pitch source.

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5. Automation & Macro-Controls

To mimic DAW-style "automation," use envelopes, function generators, or external modulation sources to control filter frequency/resonance for evolving, narrative arrangements.

Techniques

- **CV Macro-Control:** Patch a multi-segment envelope or function generator (like Maths, Stages, etc.) to cutoff or resonance for scene-like changes (intro, verse, build, drop).
- **Manual Improvisation:** Play the cutoff and resonance knobs as expressive "performance macros" during recording/takes.

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6. Separation & Layering

With LP/HP/BP outputs simultaneously available, you can process different bands of a signal separately—send them to different effects, pan locations, or even trigger different song sections.

Techniques

- **Parallel FX Processing:** LP to reverb, HP to delay, BP dry—mix for a wide, rich sound; fade in/out during arrangement.
- **Multitimbral Patching:** Use Notch for one sequencer line/FX chain while LP handles another.

7. Evolving Patches for Variability

Design patches that evolve automatically over time (slow LFOs, random voltages, or looping envelopes to filter inputs). This gradual movement keeps long sections interesting.

Workflow/Cheat Sheet Example: Composing a Modular Song with the A-121-3

1. **Start with a Loop:** Patch a drumline, bass, and melody (using the A-121-3 to shape the timbre of one/more elements).
2. **Define Sections:** Use filter sweeps (cutoff/resonance) for breakdowns, buildups, and drops.
3. **Contrast with Outputs:** Route different outputs to scene A/B: e.g., LP in verse, HP in chorus; switch with a matrix/sequential switch.
4. **Macro Automation:** Assign slow envelopes or random voltages to filter cutoff for evolving arrangements.
5. **Utilize Self-Oscillation:** Add filtered sine as a melody/bass layer in certain song sections, or for quick fills/transitions.
6. **Record/Perform Layers:** Record passes with real-time manipulation, or automate changes with sequenced CVs.

7. **Post-Process or Remix:** Take individual outs (or resample sections through filter) for additional arrangement or bounce/remix outside the modular.

Manual & Further Reading:

https://doepfer.de/a1213.htm

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