# audioPack by darkInteger
# //operation manual

High-fidelity, experimental audio devices for Max for Live.

## Introduction

Welcome to the audioPack. This suite contains 10 highly-specialized sound design and modulation devices. Built natively in Max/MSP and Gen~, every effect features ultra-low latency, custom zero-crossing handlers, anti-aliasing interpolation, and unparalleled depth.

IMPORTANT: you will need Ableton Live 12 to use this pack!!!

# 1. Beat Shuffler

A predictive algorithmic buffer-shuffler that perfectly synchronizes to Ableton's transport. Ideal for creating instant IDM style breakbeats, glitches, and micro-stutters from incoming percussion loops.


## Parameters

- **Freeze:** Freezes the recorded buffers.
- **Shuffler:** Controls the probability of jump events occurring.
- **Reverse:** Controls the probability of a buffer played backwards.
- **Repeats (2X, 3X, 4X):** The likelihood of a slice becoming a rapid stutter loop.
- **Repeats (Vari):** The likelihood of a repeated slice is played back twice as fast.

# 2. Slow

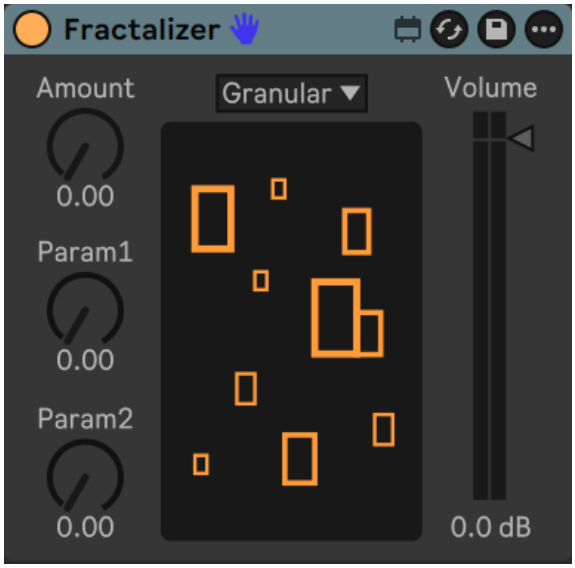
A high fidelity polyphonic granular time-stretching engine. Instantly freeze incoming audio or smoothly slow it down into washing, ambient textures without altering pitch.


## Parameters

- **Stretch:** Determines the speed ratio. At 0, the audio passes through cleanly. Higher values stretch out the grains dynamically.
- **Grain:** Tweaks the size of each overlapping audio micro-chunk.
- **XFade:** Controls the width of the volume transition between overlapping grains.
- **Freeze:** Instantly latches onto the current granular buffer indefinitely.
- **Mode:** Switches between the time-stretching engines.

# 3. Fractalizer

An aggressive granular synthesis unit that shatters the input signal into multi-layered sonic fragments. Features zero-crossing detection for heavily mangled but artifact-free stuttering.

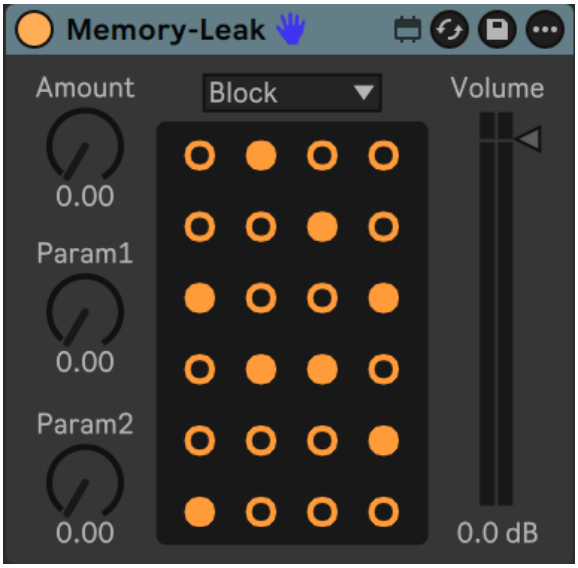



## Parameters

- **Amount:** The amount of parallel grains being generated simultaneously.
- **Param1, Param2:** These have multiple purposes depending on the mode selected.
- **Mode:** Swithes between the engines.

# 4. Memory-Leak

A digital degradation tool simulating catastrophic algorithmic failure within sample buffers, recreating bit-flips, corrupted pointers, and page fragmentation.

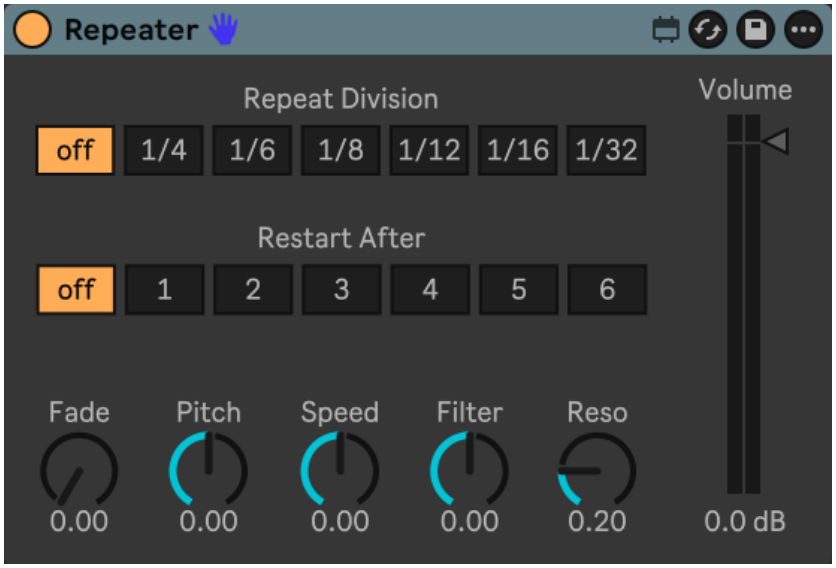



## Parameters

- **Amount:** The severity and depth of the memory collision effect.
- **Param1, Param2:** These have multiple purposes depending on the mode selected.
- **Mode:** Switches between the engines.

# 5. Repeater

A highly controlled rhythmic snapshot delay line, allowing you to instantly catch portions of the track and repeat them in rigid musical time grids.

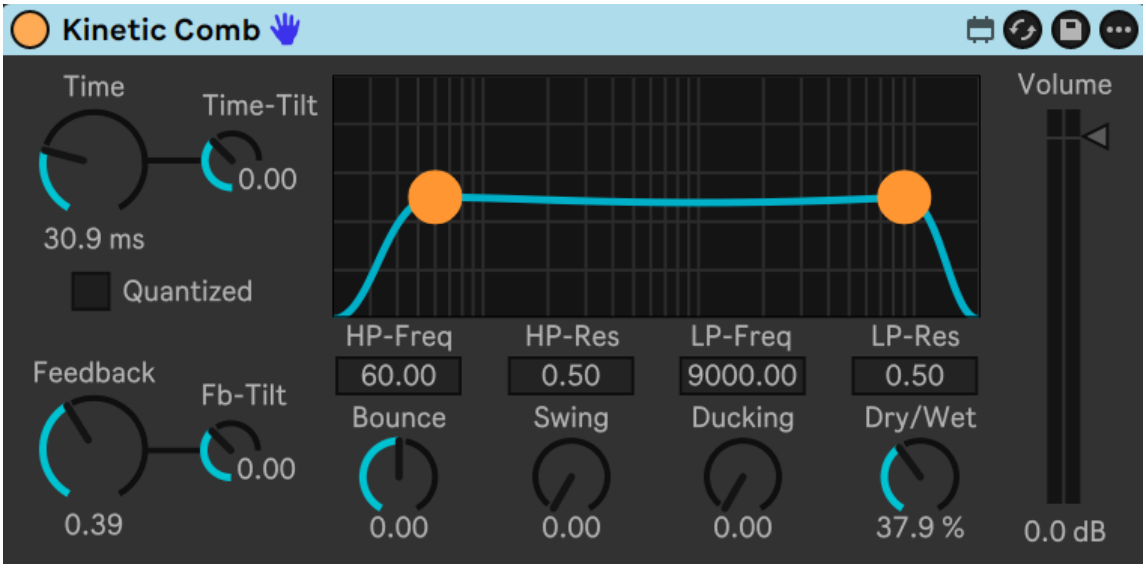



## Parameters

- **Repeat Division:** The speed at which the sampled chunk loops.
- **Restart After:** Controls how many repeats happen before the resampling happens into the repeat-buffer.
- **Fade:** Controls the fade-out amount on the repeated signal.
- **Pitch:** Controls the pitch modulation on the repeated signal.
- **Speed:** Controls the playback speed of the repeated signal.
- **Filter:** Controls the filter amount on the repeated signal.
- **Reso:** Controls the resonance applied on the repeated signal.

# 6. Kinetic Comb

A highly resonant comb filter manipulated by advanced modulation sources to create metallic plucks, robotic phasing, and extreme flanging effects.

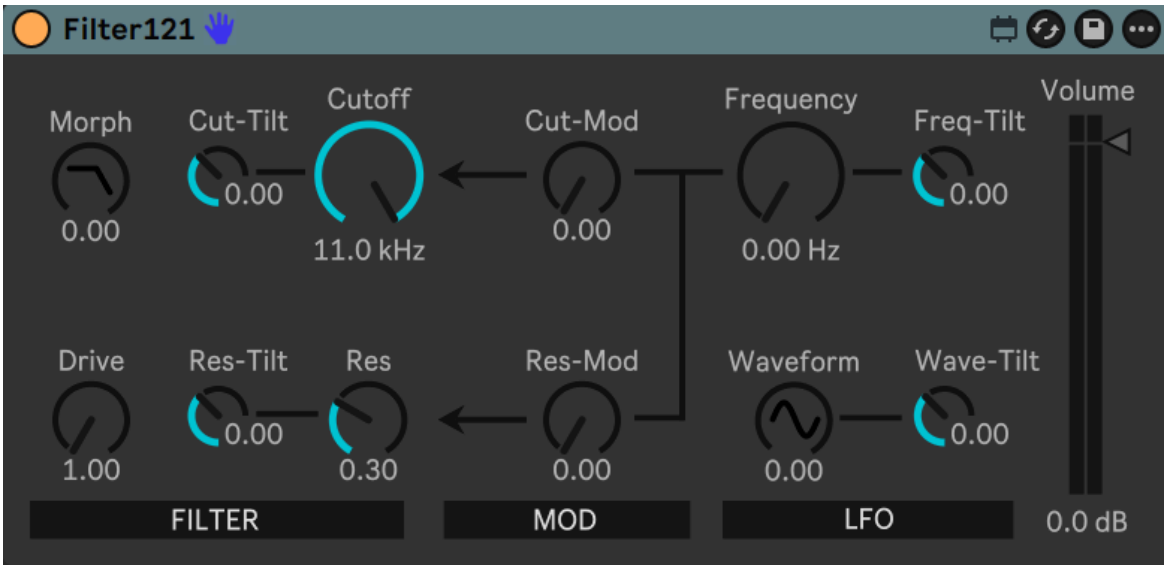



## Parameters

- **Time:** Tuning for the hyper-tight delay line.
- **Note:** Musically tuned delay line.
- **Quantized:** Switches between Time and Note mode
- **Time-Tilt:** Offsets the left and right value creating a stereo image.
- **Feedback:** Pushes the comb filter towards aggressive self-oscillation.
- **Fb-Tilt:** Offsets the left and right value creating a stereo image.
- **HP-Freq:** High-pass filtering applied on the delay line.
- **HP-Res:** Resonance applied with the high-pass filtering.
- **LP-Freq:** Low-pass filtering applied on the delay line.
- **LP-Res:** Resonance applied with the low-pass filtering.
- **Bounce:** Applies the incoming signal's amplitude to the delay time.
- **Swing:** Controls the stereo width of the comb filter's resonant feedback by a physical pendulum model.
- **Ducking:** Applies a ducking effect on the resonant feedback by the dry signal.
- **Dry/Wet:** Sets the ratio between the dry and the wet signal.

# 7. Filter121

A painstaking analog-modelled multi-mode filter inspired by classic Eurorack modules, complete with continuous morphing between lowpass, bandpass, highpass, and notch modes. Containing a built in LFO with morphable waveform and audio-rate modulation.




## Parameters

- **Cutoff & Reso:** The classic filter controls, perfectly smoothed at audio rate.
- **Morph:** Seamlessly blends between the 4 filter topologies.
- **Cut-Tilt:** Offsets the left and right value creating a stereo image.
- **Res-Tilt:** Offsets the left and right value creating a stereo image.
- **Drive:** Analog-modelled filter overdrive.
- **Frequency:** Speed the built-in LFO.
- **Freq-Tilt:** Offsets the left and right value creating a stereo image.
- **Waveform:** Morph parameter for the LFO's waveform.
- **Wave-Tilt:** Offsets the left and right value creating a stereo image.
- **Cut-Mod:** Modulation amount for the cutoff.
- **Res-Mod:** Modulation amount for the resonance.

# 8. Barb Filter

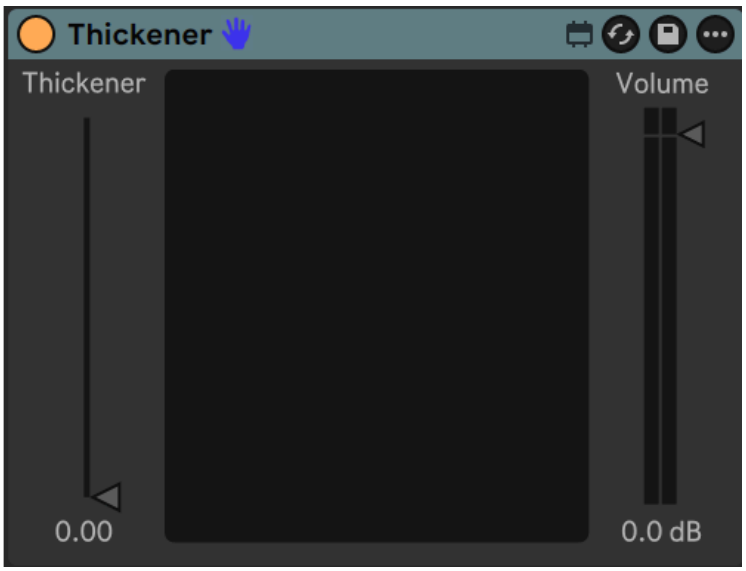
An aggressive nonlinear digital filter featuring multiple resonance points. When pushed, it screams and creates intense, tearing harmonic artifacts.


## Parameters

- **Cutoff & Reso:** The classic filter controls, perfectly smoothed at audio rate.
- **Peaks:** Emphasizes the resonance points.
- **Timbre:** Controls the distance between the resonance points.
- **Mode:** Selects between low-pass, band-pass and high-pass modes.

# 9. Thickener

This device lets transients hit hard, aggressively pulls up the quiet parts of the signal and slightly saturates the end result making it thicker.




## Parameters

- **Thickener:** Controls the thickness applied on the signal.

# 10. Shifter

A multi-engine pitch and frequency shifter.


## Parameters

- **Shift:** The exact mathematical shifting amount applied.
- **Param:** This has multiple purposes depending on the mode selected.
- **Mode:** Switches between the engines.