ADDAC Systems — ADDAC-112 Granular Looper

- Manual PDF

ADDAC112 VC Looper & Granular Processor Manual (PDF)

Creative Modulation with the ADDAC112 VC Looper & Granular Processor

The ADDAC112 is a powerful and flexible looper + granular processor module, offering extensive voltage control, internal modulation sources, and hands-on real-time tweakability. Below, I'll break down approaches for three sound design goals—distorted percussive sounds, wild basslines, and atmospheric pads—using unique features and modulations possible with this module.

1. Distorted Percussive Sounds

Key concepts: glitch, stutter, aggressive grain settings, loop slicing, CV-driven disruptions.

Recommended Patch/Settings: - **Source**: Feed a transient-rich signal (drum hit, or snappy synth hit) into the stereo/mono input. - **Record Short, Tight Loops**: Use [REC NEW] to capture ultra-short drum segments (milliseconds to <1s). - **Granular Engine**:
- Set [GRAINS ACTIVE] to a moderate value (2–4); more grains can create fuzzier, glitchier textures. - Use a small [PLAY LENGTH] with high [LENGTH DEVIATION] to generate broken, stuttered grains. - Crank [GRAINS

VOLUME] for more prominence. - [GRAIN LOOP DELAY]: Short but **modulated by CV**—use an LFO or envelope (even audio-rate for hard stutters). - [POSITION] + [POSITION DEVIATION]: Modulate with stepped random/S&H to create retriggers or shifting slices. - **Distortion via Feedback**: - Increase [GRAINS FEEDBACK] to route processed grains back into the looper—raise until feedback saturates for digital distortion/ bitcrush. - Use [BIT DEPTH] at 8-bit and lower [SAMPLE RATE] in options for aliasing and lo-fi noise. - **Modulation Inputs**: - Envelope followers for pseudo-sidechain or to “punch” in grains on each hit. - Step-sequencers or rhythmic triggers to glitch the [FORWARD/REVERSE] input. - Modulate [GRAIN REPEAT] or [REPEAT X] with randomness for stuttering ratchets.

Outcome:
Metallic, glitched, and totally mangled drum textures with sharp, digital distortion and rhythmically shifting grain streams. CV modulation drives the chaos for evolving, unpredictable percussive hits.

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2. Wild Dubstep/Drum & Bass Basslines

Key concepts: aggressive pitch, looping, fast transients, hard-modded grain timing, and feedback for growl.

Recommended Patch/Settings: - **Source**: Synth bass, bass guitar, or even a full mix loop as input. - **Loop Generation**: - Sample a short, wobbly bassline riff. - Manipulate [LOOP PITCH] CV input with an envelope or sequencer for fast pitch sweeps/glides. - Switch [REC MODE] to OVERDUB with [OVERDUB DECAY] <100% for evolving layers. - **Granular Engine**: - [GRAINS ACTIVE]: 1–4 for clarity or up to 16 for wildness. - [POSITION] + [POSITION DEVIATION]: Use high values to scan across the bass sample. - [GRAIN PITCH] heavily modulated by ENV/LFO for pitch wobbles and slides; try audio-rate mod for FM-like effects. - [GRAIN FEEDBACK] up for saturation/ growl. - Low [ATTACK] / short [DECAY] for snappy, percussive grains; increase [ATTACK]/[DECAY] for longer bass. - **Clocked Mode**: Quantize actions to a clock for stepped, rhythmic gating or “chopped” phrasing. - **External Sequencer/Controller**: Use sequencer notes to modulate [GRAIN PITCH], [LOOP PITCH], [GRAINS ACTIVE], and [DIRECTION]. - **Stutter/Glitch**:

Trigger [RETRIG./PAUSE] or play with [GRAIN REPEAT] via CV for rapid-fire repeats.

Outcome:
Thick, dynamic, and gnarly basslines with modulated digital distortion, pitch glitches, and bass “wobbles” characteristic of aggressive electronic genres.

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3. Haunting Atmospheric Pads

Key concepts: evolving grain clouds, long buffer, diffuse layering, spatial movement, smooth time-variance.

Recommended Patch/Settings: - **Source**: Sustained vocals, field recording, drone, or chords. - **Long Buffer**: Record a long (several seconds to minutes) loop to act as a granular bed. - **Granular Engine**: - Raise [GRAINS ACTIVE] for dense layering (6-16 grains). - High [POSITION DEVIATION] and mid-high [LENGTH DEVIATION] so grains are offset and overlap smoothly. - [GRAIN LOOP DELAY]: Medium/long, modulated with random LFOs for asynchronous caress. - [PLAY LENGTH] long, with drifting [LENGTH DEVIATION] so some grains swell and others fade quickly. - [ATTACK]/[DECAY]: Medium to high for fade-in/fade out, removing artifacts and creating ethereal swells. - **Panning**: Modulate [GRAIN PANNING] across the range with a random or slow LFO for immersive stereo motion. - **Feedback**: Gentle [GRAINS FEEDBACK] for dreamy, evolving soundscapes, but avoid over-saturating unless you want swirling distortion. - **Sample Rate & Bit Depth**: 16bit, 44.1k or 48k for cleaner pads; drop to 8bit/11k for lo-fi, ghostly atmospheres. - **CV Modulation**: Slowly modulated random signals to [POSITION], [LENGTH], [GRAINS ACTIVE], and [PANNING] keep textures alive and morphing.

Outcome:
Lush, shimmering, and ever-evolving pads; clouds of grains move ghostlike through stereo space and pitch, perfect for dark ambient or cinematic backgrounds.

Modulation Ideas At-a-Glance

- **LFOs**: To any CV input for cyclical movement (pitch, grain size, position, direction, repeat).
- **Random/S&H**: For unpredictable slice/position, glitch, and panning.
- **Envelopes**: Dynamic accents, especially for tight percussives and expressive pads.
- **Sequencers**: Melodic pitch quantization, rhythmic loop changes, glitch repetition.
- **Audio-rate**: Use for wild, aliasing-rich AM/FM effects via CV inputs.
- **Manual**: Real-time hands-on tweaks + CV for live performance.

Tips

- Use the [PRESET] system to quickly jump between drastically different modulation “scenes.”
- Save/Load banks for instant recall in live setups.
- Use external mults and stackcables to send one modulation source to multiple CV inputs for complex correlation.

For even more creative patching, see the full manual (PDF).

Generated With Eurorack Processor