ADDAC Systems — ADDAC-112 Granular Looper

- Manual PDF

ADDAC112 VC Looper & Granular Processor Manual PDF

Using the ADDAC112 VC Looper & Granular Processor for Dense, Hyper-Complex Percussion

Overview

The **ADDAC112** is a deep, hands-on module designed for real-time looping and granular audio processing. It can function as both a voice and an effect, capable of intricate manipulation of audio for rhythmic, densely layered, and sonically complex percussion. Through its extensive CV/gate controls, internal modulation, and detailed menu options, you can sculpt patterns that are *algorithmic, polyrhythmic*, and highly dynamic.

Core Strategies for Generating Complex Percussion

1. Create Source Material with the Looper

- Use the **Looper Engine** to record short, percussive source loops (even a single hit or a short rhythmic phrase).

- Adjust **loop length** on-the-fly for micro/mini-hits or longer cyclical elements.
- Employ **multiple loops (up to 99 per preset)** and switch/select them rhythmically via the LOOP SELECT knob or CV for polyrhythms.

2. Granular Slicing and Rhythmic Recomposition

- Set **grain size**, **grain density (Grains Active)**, and **start position** to "slice" up loops into bursts of micro-rhythm, glitch, or stutter.
- Use **quantization** and **divisions (FREE/8/16)** — quantizing grains to musical fractions of the loop for odd/subdivided time signatures.
- **CV modulate** position, length, pitch, and delay for each grain, injecting randomness or controlled polyrhythmic behavior.

3. Modulation & External Control

- Patch rhythmic or non-regular clocks/sequencers into **CV and trig inputs** for key parameters (grain playback, direction, panning, length, loop select).
- Use **complex clocks** (e.g., 5/8 polyrhythms) into Recording/Playback; the module respects both internal and external timing:
    - In **Clocked Mode** (enable in Menu), triggers are quantized to the incoming clock, allowing tight alignment with external odd/even meters.
    - Use evolving/random clocks for generative percussion textures.

4. Punchiness & Percussive Envelopes

- Set **attack/decay** on grains short & snappy for "pointy" percussion (e.g. 0–20% attack, 10–40% decay).
- Experiment with **overdrive/distortion before input** or push the Input Gain for punch.
- The Looper's **overdub decay** can be modulated for constantly evolving "ghost notes" or decaying layers.

5. Realtime Loop Manipulation

- Use [FORWARD/REVERSE] switching (with or without CV) for “turnaround” or breakbeat-style fills and reversals.
- Trigger **CLEAR BUFFER**, **NEW REC**, and **RESIZE LOOP** during performance for abrupt resets or time-shifted variations.

6. Hyper-Complexity via Structure

- Set up multiple banks/presets each serving different meter or pattern:
    - e.g. **Bank 1** = 6/8 patterns, **Bank 2** = 4/4, **Bank 3** = 7/8 polyrhythmic overlays.
- Rhythmically change between loops/presets with CV for structural complexity.

7. Unique Effects & Textures

- Apply **granular feedback** and send the grains’ output back through the looper.
- Push **grain panning** probability for swirling, spatial effects — rhythmic elements can dart around the stereo field.
- Leverage **repeat and intermitency** controls for machine gun, flam, or ratcheting effects.

8. CV Matrix and Deep Macro Modulation

- Virtually every knob has a CV input: patch random, stepped, or clock-related CVs for wild, living percussion textures.
- Use **external sequencers or comparators** to sequence loop/preset changes, grain pitch/hits.

Example Complex Percussion Patch

1. Record short percussive sounds or samples into 3–5 loop slots (or import via SD card).

2. Activate Granular Engine; set “Grains Active” high (4–8 grains for density).
3. Quantize grain positions/lengths to 8 or 16 divisions for rhythmic slicing.
4. Patch separate clock divisions (e.g., one in 5, one in 7, one low probability trigger) into GRANULAR CV inputs (**GRAIN START**, **DELAY**, **POSITION**, **VOLUME**).
5. Use **Disting/Tempi/Pamela’s New Workout**-type mod sources for complex, nonstandard trig/CV patterns.
6. Set grain envelope tight, and grain feedback for evolving textures.
7. If desired, periodically resize loop live or switch preset for metric modulations.
8. Sum with external percussion for further frenetic layering!
9. Optionally sync the looper to external modular clock for tight integration.

Tips for Hyper-Percussive and Unique Results

- **Grains as Drums:** Use extremely short grain lengths, tight envelopes, and panned grains to fake “granular drums.”
- **Microtiming:** Modulate grain/repeat/delay parameters for micro-shifts—"drunk" or "lurching" groove.
- **Destructive Looping:** Set Overdub Decay low for decaying echoes; high for “perma-overdubbed” chaos.
- **Live Performance:** Map key triggers (Loop Select, New Rec, Play/Stop) to external touch pads or foot controllers for live fills/breaks.

Additional Recommendations

- **Experiment with bit depth & sample rates** for lo-fi or high-def attacks.
- **Combine with voltage-addressed sequencer** (e.g., via preset/loop select) for instant variations.

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