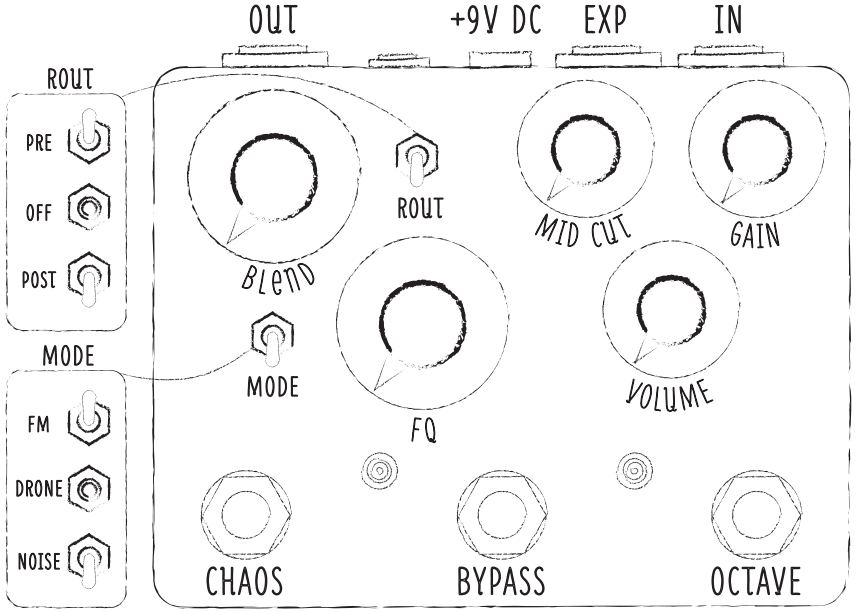
ENTROPY PEDAL



CONTROL KNOBS

VOLUME — overall output level.

GAIN — input drive. Compressed clean through overdrive and distortion to full fuzz.

MC (Mid Cut) — boosts lows and highs, scoops the mids around 1 kHz.

FQ (Frequency) — base frequency of the generator, shared by all three chaos modes.

BLEND — how much of the chaos signal is mixed into the Drive section. In modulation settings, depth.

FOOTSWITCHES

BYPASS — all processing ON or OFF.

OCTAVE — analog octave-up. Right indicator red.

CHAOS — adds the chaos section. Left indicator red.

INPUTS AND OUTPUTS

IN / OUT — instrument level.

9V DC — power.

EXP — controls generator frequency. TRS input.

TWO ANALOG ENGINES, AND A DIAL BETWEEN ORDER AND CHAOS

A fully analog original design, not a replica or clone: a drive box with the authority of a big tube stack, plus an independent chaos section built around a tunable generator. The two are separate circuits with their own gain ranges and dynamics, so chaos is something you add rather than something you survive.

IDLE SECTION — chaos off, right LED green. Overdrive, distortion and fuzz, with analog octave-up available across the whole gain range.

CHAOTIC SECTION — chaos on, left LED red. A tunable oscillator, generated noise you can morph and steer with FQ, and frequency modulation of your own signal. Vibrato, tremolo and ring modulation appear as by-products of the same generator.

TECHNICAL SPECIFICATIONS:

Power: +9V DC (center-negative polarity)
Curent draw: 140 mA
Dimensions: 120mm x 94mm x 38mm
Bypass : Relay True Bypass (Soft)
Input impedance: ≈ 1 MΩ
Output impedance: ≈ 1 kΩ

THE FIRST FIVE MINUTES

1. Set ROUT to the middle (OFF) and leave OCTAVE and CHAOS disengaged. Press BYPASS. VOLUME to unity, GAIN low, MC up. This is the Drive section on its own: clean, compressed, transparent.

2. Raise GAIN slowly. Overdrive tightens into distortion, then into fuzz. Stop wherever it sounds right; there are no steps in this range.

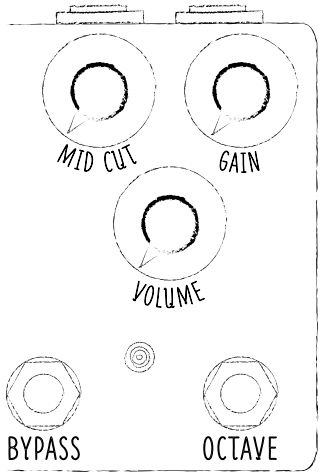
3. Turn MC down. Lows and highs rise, mids scoop out, and the tone becomes noticeably more massive and fuzzy. Turn it back up for a flatter, more forward voicing.

4. Press OCTAVE. The effect shows itself best higher up the neck; switch to the neck pickup and roll your guitar tone back to hear it clearly.

5. Set MODE to the middle (DRONE), ROUT down (POST), BLEND low, FQ at minimum. Press CHAOS, then bring FQ up slowly. First you hear the modulator beating against your signal as volume dips, close to a tremolo. Keep going up and it turns into ring modulation.

IDLE STATE: DRIVE AND OCTAVE

THE DRIVE SECTION



With CHAOS disengaged the pedal is in IDLE state, indicated by the right LED glowing green. In this state Entropy works as a high-grade discrete amplifier capable of reaching deep saturation, and it behaves less like a pedal in front of an amp than like a large tube head already turned up: thick low end, forward midrange, and raw grind on top when you push it. The compression is the giveaway. Notes bloom and hold instead of simply getting louder, which is how a big rig behaves when it is genuinely working hard.

GAIN RANGE

One knob, no marked steps between positions.

Low — clean, lightly saturated, compressed, transparent.

Low mid — compression and clipping build together. Overdrive that stays articulate under chords.

High mid — a fuzz character arrives: compressed, harmonically rich, still fully dynamic.

High — a classic velvety fuzz, or an aggressive mid-focused distortion-fuzz.

JFET AND BJT

The JFET stages handle saturation and compression, giving the tube-like squeeze and the dynamic response. The final one is set for maximum compression and saturation, which is where the clipping happens.

The BJT stage in the middle boosts and clips, then feeds two parallel paths, one lifting lows and highs and one left clean, recombined into that final JFET. This keeps the midrange present as you add gain.

MID CUT

A frequency booster that lifts lows and highs together, producing a dip around 1 kHz.

Down — lows and highs rise, mids scoop out. Roar underneath, bite on top, and a more massive, fuzzier character.

Up — flat and forward, ready to cut through a band.

DYNAMICS

Picking harder pushes the gain up; rolling your guitar volume back cleans it to a clean tone. The whole range from transparent overdrive to dense fuzz is available through playing alone

ANALOG OCTAVE-UP

Engaging OCTAVE switches the pedal to analog octave mode, right indicator red. A self-adjusting system rebuilds the circuit around the upper octave: stages engage, components re-tune, gain re-sets, all automatically, so the octave tracks cleanly instead of tearing apart.

It cuts and sparkles, slicing through the signal and lifting it an octave higher. The effect is strongest higher up the neck; the neck pickup with your guitar tone rolled back makes it unmistakable.

Minimum — an almost clean, faintly modulated octave. Moderate — dense, saturated, still controlled.

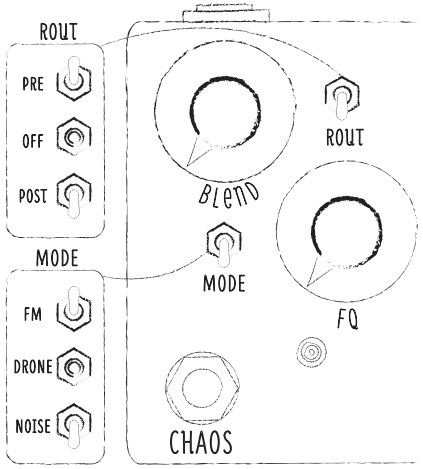
Maximum — aggressive octave fuzz with a distinct splitting character.

Background noise stays low as a natural consequence of the rectifier, not a separate noise gate.

CLEAN OPERATION

When a noise mode is off, power to its circuit is physically disconnected rather than re-routed. No interference, no hiss, no generator residue, whether the pedal is bypassed or only one mode is disabled.

CHAOTIC STATE



THE CHAOS SECTION

Engaging **CHAOS** turns on the noise section, left indicator red. A dedicated generator enters the circuit, configurable as a tunable oscillator, a noise source, or a modulator that frequency-modulates your own signal.

BLEND balances the Drive section against the chaos signal, from a trace of texture to complete replacement.

THE THREE MODES

FM (up) — your signal through complex oscillator transformations: radical synthetic timbres that still follow the base frequency.

DRONE (middle) — a steady tone at the frequency set by FQ. Holds under everything you play, with resonant surges when swept by hand.

NOISE (down) — modulated pink noise layered on the base frequency. Dense, massive textures, warped further with FQ.

FREQUENCY RANGE

FQ runs from low values, measurable in BPM, up past 1 kHz.

DRONE and **NOISE**. **Low**: rhythmic patterns imitating percussion, and modulation of the main signal, applied instantly with no attack or release and no delay on frequency changes.

DRONE and **NOISE**. **Mid to high:** a tonal signal of definite pitch, which can be smoothed or driven with the Drive section and MC. Tune it to the unison, the fifth, the third or any interval of your key. From mid-high upward, frequency changes carry a slight release.

FM. Low: the modulating signal lingers after you stop playing, leaving clear pauses between sound and silence.

FM. Mid to high: synthesizer-like, with random oscillations, and modulation returns almost immediately when you stop, so there are no clear pauses.

SELF-OSCILLATION IN FM

With no input, or at low amplitude, the system self-oscillates at the base frequency, a convincing simulation of acoustic feedback. It does not simply switch over but transforms organically, adding modulation through the crossover: feedback whines and screeches, smooth morphing, complex transitional timbres.

ROUTING

PRE — into the front of the drive circuit, for full reprocessing.

POST — at the end, over the tone you have already shaped.

On NOISE and FM this is a choice between fused and layered. In DRONE it is more than that: the generator's voltage acts directly on the drive stages your signal passes through, physically bending the circuit.

	Low frequency	**High frequency**
PRE	Pitch wobble: vibrato	Ring modulation
POST	Volume dips: tremolo	Ring modulation

Ring modulation: two frequencies grinding against each other rather than harmonising. Bell-like, metallic, inharmonic.

Here BLEND becomes depth and FQ becomes rate. Drop the frequency far enough and the effect turns percussive. Engaging OCTAVE changes the character entirely: the octave circuit is monophonic, so complex signals produce harsh interference and artifacts.

ROUT must be set to PRE or POST. In the middle the chaos signal is not routed into the chain, though a faint trace can still come through.

CONTROL AND EXAMPLES

CONTROL BEYOND THE KNOBS

Guitar volume in FM mode. Rolling your volume back, or using a volume pedal before Entropy, brings up autonomous oscillations and chaotic timbre shifts. The quieter you get, the more the pedal plays itself.

Expression pedal. The EXP input places the generator frequency under your foot, from 0 Hz and completely silent up to around 1.2 kHz. Use a standard TRS expression pedal.

A tremolo before Entropy. Rhythmic volume changes become cyclical modulation, turning automatic pulsation into structured patterns you steer with the tremolo's own depth and rate.

MOMENTARY MODE

All three footswitches support momentary operation.

To enable: hold any footswitch for more than 10 seconds. The function is then active only while your foot is down. To exit: two short presses and one long hold, at roughly 120–150 BPM. Release the switch when the indicator begins to blink. Power-cycling also exits momentary mode.

SOME EXAMPLES

1. Amp in a box — Drive only, no octave, no chaos.

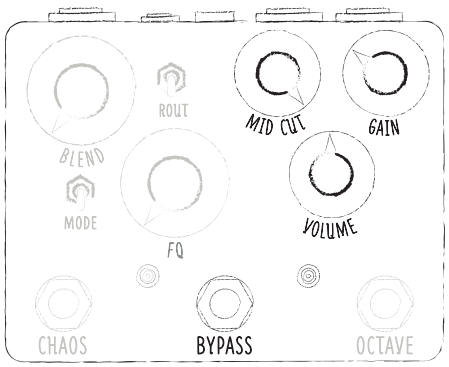
2. Octave lead — moderate gain, OCTAVE engaged.

3. Fuzz wall — maximum gain, MC middle.

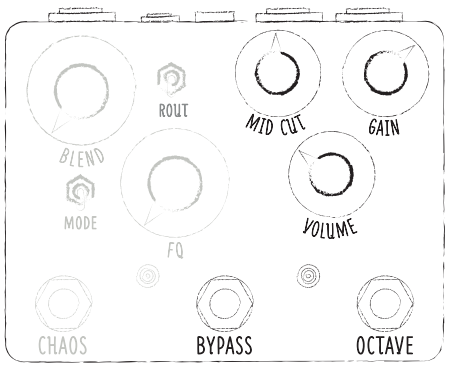
4. Drone / Noise in key — DRONE / NOISE, FQ tuned to the key, BLEND balanced.

5. Vibrato / Tremolo — DRONE, POST, low FQ, BLEND as depth.

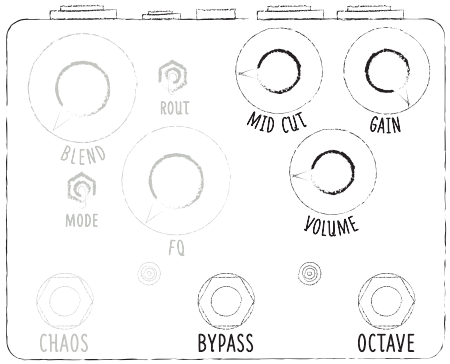
6. Synthetic Fuzz — Massive fuzz, layered with synth chaos and synthetic modulations.



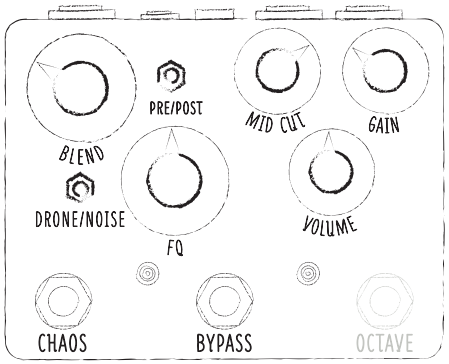
1. Amp in a box



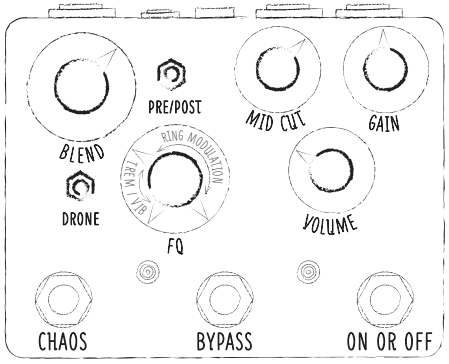
2. Octave lead



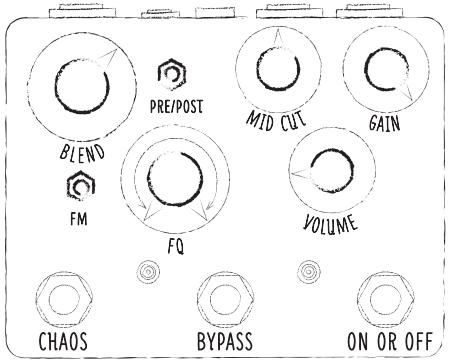
3. Fuzz wall



4. Drone / Noise in key



5. Vibrato / Tremolo



6. Synthetic Fuzz