

CAUDAL

mechanical chaos source

USER GUIDE



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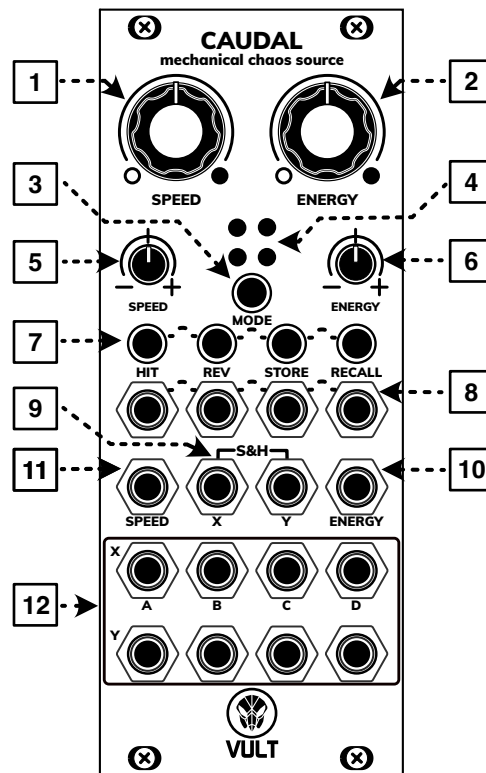
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OPERATION MODES

PENDULUM

It mimics a four-segment pendulum swinging in a frictionless universe. The signals generated in this mode have a slight correlation because the segments are interconnected.

PLANETS

This mode creates a simulation of four planets within a confined universe, where gravitational forces impact the trajectory of each planet.

FLUCTUATIONS

This mode offers four Buchla-style fluctuating voltage generators. They work by generating a noisy triangle waveform. The 'Y' outputs produce positive pulses when their respective voltage is above zero.

FISH TANK

This mode creates a simulation of four fish continuously exploring a tank in search of food.

SIMULATION CONTROL

You can modify how the simulation runs by utilizing simulation control actions. These actions can be activated either by pressing buttons or by supplying a trigger signal into the matching input jack.

HIT: selects a new random initial state for the elements e.g. a random position of the pendulum.

REV: reverses the directions of the elements creating the illusion that the simulation is moving backward in time.

STORE: saves the current state of the simulation making possible to recall it later.

RECALL: restores the saved simulation state.

SAMPLE & HOLD

The outputs feature a sample and hold circuit activated by groups (X and Y). When no trigger signal is connected, the S&H remains inactive. Once a signal is connected, the respective group of S&H is triggered by the signal's positive edge.

FIRMWARE UPGRADE

1. Download the latest firmware file at: www.vult-dsp.com/caudal
2. Power the module as usual.
3. Enter the bootloader mode by pressing and holding the HIT + RECALL buttons, then pressing the Reset button on the back.
4. When in bootloader mode, the module's lights will flash in a different pattern than during a normal boot.
5. Connect the audio signal to the SPEED input jack. For instance, using the audio output from a laptop (set at maximum volume) should suffice to flash the firmware.
6. Play the firmware file using an audio player that doesn't add effects, such as Audacity.
7. Once the playback finishes, the module will restart and boot normally.
8. If anything goes wrong, you can repeat the process.