

## Installation

Ripples requires a **-12V/+12V** power supply (2x5 pin connector). The red stripe of the ribbon cable (-12V side) must be oriented on the same side as the "Red stripe" marking on the module and on your power distribution board.

The module draws **35mA** from both the **+12V** and **-12V** supply rails.

## Calibration

If necessary, adjust the trimmer on the left side of the module so that the tone emitted by the filter (when it self-oscillates) tracks a CV sent to the **V/OCT** CV input.

## Online manual and help

The full manual can be found online at [mutable-instruments.net/modules/ripples/manual](https://mutable-instruments.net/modules/ripples/manual)

For help and discussions, head to [mutable-instruments.net/forum/](https://mutable-instruments.net/forum/)



Please refer to the online manual for detailed information regarding compliance with EMC directives

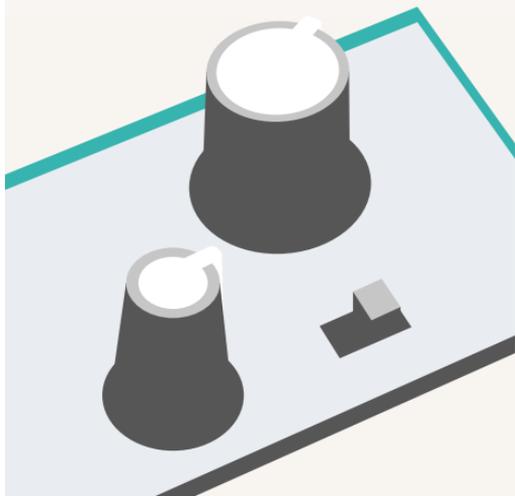


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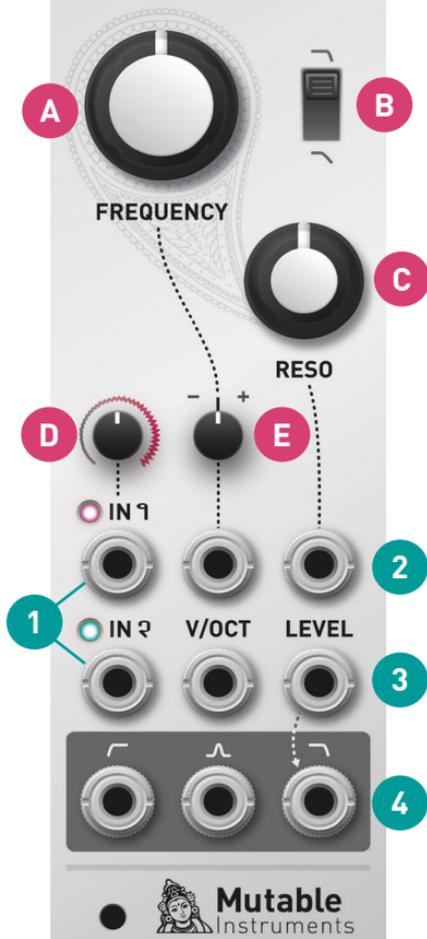


# Ripples

## Liquid filter



# Ripples



## Controls

**A. Cutoff frequency.**

**B. Filter slope.** The lower position corresponds to a 12 dB/octave slope (2-pole), the upper position to a rounder 24 dB/octave (4-pole). The **BP** and **LP** outputs are affected.

**C. Resonance.** Goes up to self-oscillation.

**D. Input 1 level,** with a tasty analog soft-clipping.

**E. FM Attenuverter.** Adjusts the amount and polarity of frequency modulation from the corresponding CV input.

## Inputs and Outputs

**1. Audio inputs.** Input 1 goes through a soft-clipping circuit, while input 2 is always clean.

**2. CV inputs** for cutoff modulation, resonance, cutoff modulation with V/Oct tracking.

**3. Voltage controlled gain** for the LP output.

**4. HP, BP and LP filter outputs.** The slope of the HP output varies with the resonance.