

Mutable Instruments – Ripples

- [Manual PDF](#)
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[Ripples 2020 Manual PDF](#)

(Note: Replace with the actual PDF link if available; Mutable Instruments usually hosts manuals here.)

Mutable Instruments Ripples 2020 – Cheat Sheet

OVERVIEW

- **Type:** Eurorack analog multimode VCF (Voltage Controlled Filter)
 - **Modes:** High-pass, Band-pass, Low-pass
 - **Features:** Switchable 2-pole/4-pole for BP/LP, voltage-controlled resonance, soft-limiting, built-in VCA on LP out
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FRONT PANEL CONTROLS

- A. Cutoff Frequency (knob)** - Range: 20 Hz → 20 kHz
- B. Filter Slope (toggle switch)** - 2-pole (12dB/oct; down) - 4-pole (24dB/oct; up) - *Affects BP and LP outputs only*
- C. Resonance (knob)** - Self-oscillation: ~75% and up
- D. Input 1 Level (knob)** - Gain: 0 → 5 (soft clip = overdrive at high setting)
- E. FM Attenuverter (knob)** - Adjusts amount & polarity of cutoff modulation via FM CV input

INPUTS & OUTPUTS SUMMARY

Jack	Function	Voltage Range	Notes
In 1	Audio input 1	Modular level	Soft-clipping circuit for overdrive
In 2	Audio input 2	Modular level	Clean input, vintage tone
FM (CV)	Cutoff CV (FM) input	±5V typical	Mod amount set by E; responds to attenuverter
V/OCT	1V/oct cutoff tracking	0–5V (typical)	Keyboard/sequencer pitch CV in
RES (CV)	Resonance voltage control	0–5V	Exponential response
LP GAIN (CV)	VCA for LP output	0V = mute; 5V = 1x	>5V compresses; 7V normalized if unpatched
HP OUT	High-pass output	Modular audio	Slope varies w/ resonance
BP OUT	Band-pass output	Modular audio	2-/4-pole selectable
LP OUT	Low-pass output	Modular audio	2-/4-pole selectable, final output has VCA

USAGE TIPS

- **Mix both audio inputs** for more complex filtering (Input 1 for overdrive, Input 2 for clean).
 - **Select filter slope** with the B switch (only BP/LP).
 - **Voltage-control resonance** via Res CV for animated textures & pinging.
 - **Self-oscillation:** Use as a sine oscillator if resonance is up.
 - **VCA on LP out:** Use LP Gain CV for dynamic level modulation or remove cable to use default 7V (fully open).
 - **1V/Oct tracking:** Use V/OCT input if you want filter cutoff tracked by sequencer/keyboard (calibrate as needed).
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CALIBRATION SUMMARY

1. FREQ ~10 o'clock, RES max, no input or FM CV.
 2. Connect keyboard/sequencer to V/OCT.
 3. Listen to LP out, adjust on-board trimmer for proper octave tracking (~4 octaves).
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Power Requirements

- +12V: 35mA; -12V: 35mA
 - Connect bus cable with -12V (red stripe) matching markings.
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