Cognate Ringmod

Modulation & Pitch

Category	Modulation & Pitch
Channels	Mono in / mono out
Version	1.10 (06/04/2026)

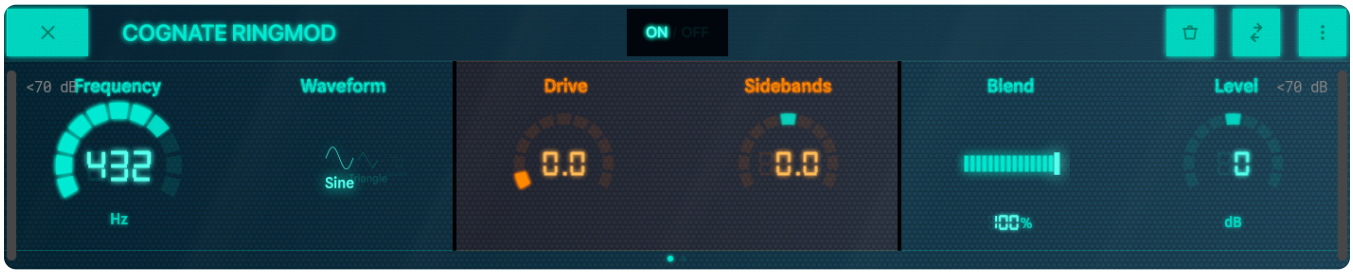
Overview

Cognate Ringmod is ring modulation at its most playful — and most controlled. At its core it's a classic ringmod: a carrier oscillator multiplied against your bass, with drive to push it into rougher territory. The **Sidebands** control opens it up further, morphing continuously between lower-sideband frequency shifting, full ring modulation, and upper sideband — everything from subtle pitch displacement to full metallic clang. An expressive envelope section ties the carrier to your playing dynamics; **Tracking** locks the carrier to your bass's pitch for harmonised intervals from an octave down to three octaves up. Stars falling, doom bells, sci-fi aliens, EDM growls — and a surprisingly fat octaver — all in one block.

Use cases

- **Metallic clangs and bells.** Mid-range carrier, full ring mod (Sidebands at 0), high Blend.
- **Fat octaver.** Turn **Tracking** on, set **Interval** to -12 (octave down) or +12 (octave up), Sine waveform — a surprisingly clean and fat octaver.
- **Sci-fi laser zaps.** High Drive, Square waveform, **Env Amount** positive — hit harder for more carrier sweep.
- **Doom bells.** Slow envelope, deep Drive, low carrier frequency, partial Blend.
- **Subtle pitch displacement.** Sidebands near zero (but not quite), low carrier frequency — adds a chorus-like detune that isn't a chorus.
- **Tremolo without tremolo.** Sub-audio Frequency (under 20 Hz), Sine waveform — rhythmic amplitude modulation.
- **Pseudo-phasing.** Very slow Frequency, asymmetric blend.
- **Stars-falling textures.** Random LFO direction with high carrier — twinkling, glassy, generative.
- **EDM growls.** Tracking on, Interval at +7 or +12, fast LFO — dubstep harmoniser.

Parameters



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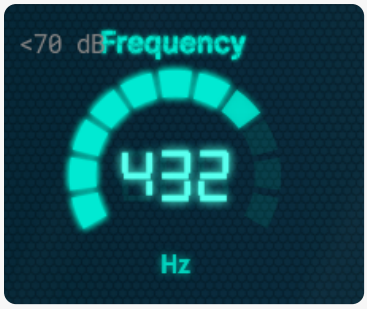
Bypass

Type: Toggle in the centre of the top bar

Turns off the ring modulator and passes your bass straight through. The plugin stays in your preset, so you can switch the effect in and out without reloading anything.



Frequency

Range: 0.5 to 20000 Hz **Default:** 440 Hz

The carrier oscillator's frequency. The whole character of the effect depends on this:

- **Sub-audio (below ~20 Hz)** — The ringmod becomes amplitude modulation: tremolo and pseudo-phaser textures.
- **Low audio (20–200 Hz)** — Detuning, beating, and metallic shimmer that interacts with your fundamentals.
- **Mid (200 Hz–2 kHz)** — Classic ringmod territory: bells, robots, sci-fi clangs.
- **High (2 kHz+)** — Bright, glassy, glitchy artefacts on top of the bass.

When **Tracking** is on, this control is overridden in favour of **Interval**.

Waveform

Options: Sine, Triangle, Square, Saw

Shape of the carrier oscillator. Each waveform produces a different harmonic interaction with your bass.

- **Sine** — Pure tone, fewest sidebands. The cleanest, most musical ringmod sound; the right choice for octaver and harmoniser duty when **Tracking** is on.
- **Triangle** — Sine with a touch of grit; subtly more present than pure sine.
- **Square** — Heavy with odd harmonics. Buzzy, aggressive, the classic harsh ringmod tone.
- **Saw** — Full harmonic spectrum, the most chaotic and richest texture. For sound design and noise.

Drive

Range: 0 to 1 **Default:** 0

Saturation in front of the modulator. At **0** the multiplication is clean — every artefact is purely the carrier × bass interaction. As you push it, the bass is driven harder before being modulated, generating extra harmonics that interact with the carrier and produce a denser, rougher, more aggressive output. Goes from polite ringmod to full digi-noise across the range.

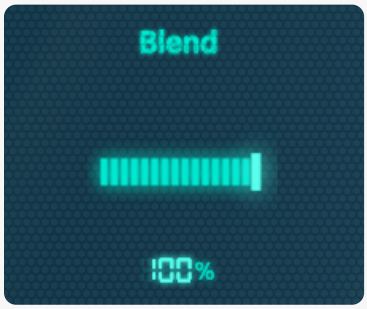
Sidebands

Range: -1 to 1 **Default:** 0

Continuously morphs between three modes of operation, all in one knob.

- **-1.0** — Pure **lower-sideband frequency shifter**. Shifts the bass *down* by the carrier frequency, in a non-harmonic way (different from a pitch shifter). Subtle pitch displacement at low carrier frequencies; alien at higher ones.
- **0** — Classic **ring modulation**. Both sidebands present — sum and difference frequencies of carrier and bass. Bells, clangs, robots.
- **+1.0** — Pure **upper-sideband frequency shifter**. Shifts the bass *up*. Bright, glassy, often used for sci-fi effects.

Anywhere in between is a smooth blend. Try mid-positive values for a slightly displaced shimmer over the dry-ish bass.



Blend

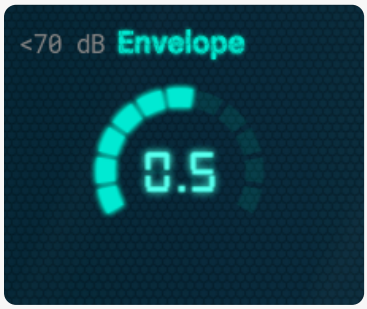
Range: 0 to 100 % **Default:** 100 %

Mixes the modulated signal against the dry bass. At **100%** you only hear the effect; pull it back to keep the dry bass underneath as a foundation for the modulated layer to sit on. For extreme settings (Square waveform, high Drive) blending in some dry signal is often what makes the result musically usable.

Level

Range: -12 to 12 dB **Default:** 0 dB

Output trim. Heavy ring modulation can change perceived loudness in unpredictable ways — use Level to match the bypassed and engaged volumes so kicking the effect on isn't a level surprise.



Envelope

Range: 0 to 1 **Default:** 0.5

Shapes the *speed* of the envelope follower that responds to your playing. Low values give a slow, smooth envelope — the effect breathes with the contour of each note; high values are snappy and zappy, locking onto each pick attack. Pair with **Env Amount** to set how much the envelope actually moves the carrier.

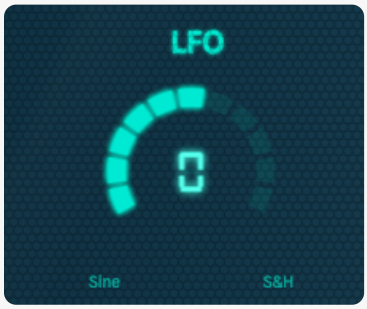
Env Amount

Range: -100 to 100 % **Default:** 0 %

How much — and in which direction — your playing dynamics push the carrier frequency. Bipolar:

- **Positive** — Harder playing pushes the carrier *up*, brightening the modulation as you dig in.
- **Negative** — Harder playing pushes the carrier *down*, getting darker and more aggressive on louder notes.
- **0** — No envelope modulation; the carrier sits at **Frequency**.

Use this to make Ringmod react to your touch instead of just sitting there: hit harder for more, ease off for clean.



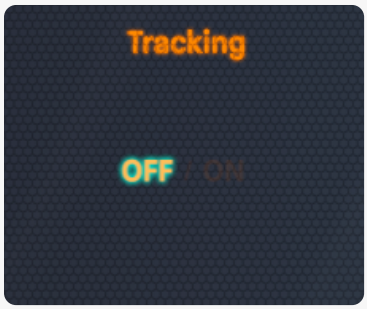
LFO

Range: -100 to 100 **Default:** 0

A single-knob LFO that adds automatic movement to the carrier frequency. Bipolar:

- **Positive** — Smooth sine modulation. Wobble, vibrato, dubstep wub depending on rate.
- **Negative** — Sample & hold (random stepped). Robotic, glitchy, generative textures — great for "stars falling" sounds with high carrier frequencies.
- **0** — Off.

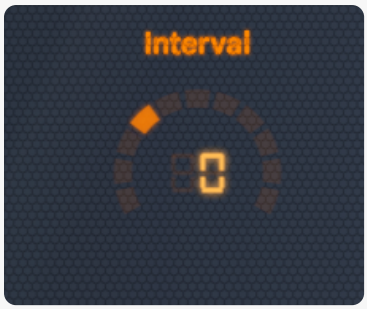
Combines additively with the envelope, so you can have both touch-responsive *and* automatic movement at once.



Tracking

Type: On / Off

When on, Ringmod listens to your bass's pitch and locks the carrier oscillator to follow it. **Frequency** is overridden; **Interval** sets the harmonic relationship between the carrier and your fundamental. This is what turns the plugin into a harmoniser or octaver — every note generates its own carrier at the chosen interval, so the modulation result is always musically related to what you're playing.



Interval

Range: -12 to 36 **Default:** 0

The interval between your bass note and the tracked carrier, in semitones. Only active when **Tracking** is on. Ranges from an octave below (-12) to three octaves above (+36).

- **-12** — Octave down. With Sine waveform and full Blend, a fat, clean octaver.
- **0** — Carrier matches the fundamental — produces a harmonic-rich doubling of the same note.
- **+7** — Perfect fifth above. Power-chord harmoniser.
- **+12 / +24** — One or two octaves up. Bright synth-octaver textures.
- **+36** — Three octaves up. Glassy, sparkly upper-register sheen.

Try non-octave intervals (like +5 or +14) for more dissonant, sci-fi harmonisations.