Rupture 2

Kick & Bass Generator

Max for Live Device for Ableton Live

by Rawton Forge

INTRODUCTION

Rupture is a kick drum and mono synthbass generator. Every sound starts as a pure sine and is reshaped in real time as the kick plays.

The waveform is never static. It moves across the duration of the sound: it can begin as a saw, bend toward a square, saturate near the end. Every parameter is envelope-driven, so the timbre evolves from the transient to the tail.

Six waveshaper blocks (triangle, saw, square, fold, spike, drive) morph the oscillator over time, each with its own depth, slope, and direction. A pitch envelope shapes the attack and tonal drop, an amplitude envelope shapes the body and decay. FM and a dynamic filter add harmonic complexity and movement.

Rupture is fully MIDI-driven. Notes set the final pitch and trigger the sound directly. A built-in oscilloscope shows the result in real time.

Let's break the silence.

OSCILLATOR / WAVESHAPING

The oscillator starts as a pure sine and is reshaped in real time by six waveshaper blocks. Each one morphs the sine toward a target shape, and the amount of shaping follows the amplitude envelope: the waveform moves across the duration of the sound rather than staying fixed.

The blocks can be used alone or combined. Together they define the tone, punch, and harmonic character of the kick.

Triangle
Morphs the sine toward a triangle. Linear rise and fall, adding clarity and a slightly sharper tone with few harmonics. At full amount, a perfect triangle.

Saw
Morphs the sine toward a downward ramp, enhancing both odd and even harmonics. Pushed fully and combined with Triangle for linearity, it reaches a clean, aggressive sawtooth.

Square
Flattens the top and bottom of the wave, creating strong odd harmonics and a hollow, punchy tone. At full amount, a true square.

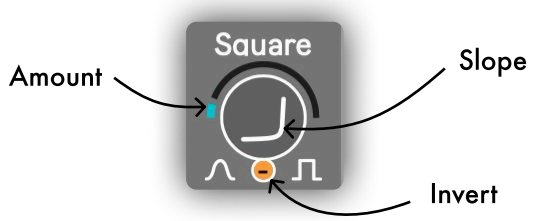
Fold
Reflects the waveform back into itself once it passes a threshold, generating dense harmonics and a metallic texture. Harmonic density tracks the amount.

Spike
Adds a sharp spike in the cycle. Reduces the fundamental while boosting upper harmonics, for a brighter, sharper sound with less low-end.

Drive
Soft-clips the signal for analog-style saturation, adding warmth, loudness, and presence. At full amount, compressed and harmonically rich without harsh digital clipping.

MODULATION KNOBS

Each block has a triple control defining how the shaping is applied over time:



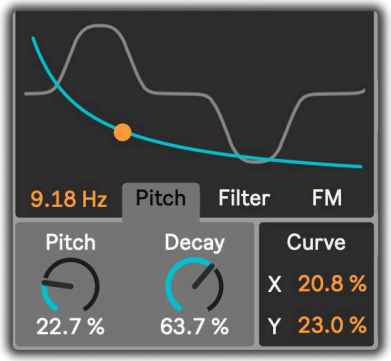
Amount
Depth of the transformation. At 0, pure sine. At 1, fully morphed into the target shape. Follows the amplitude envelope, applying more shaping as the volume rises.

Slope
Curve of the modulation over time. Low values give an exponential response, high values a logarithmic one.

Invert
Reverses the direction. The waveform starts fully transformed and returns to sine as the envelope progresses (e.g. triangle to sine instead of sine to triangle).

PITCH ENVELOPE

The Pitch Envelope controls how the oscillator pitch evolves over time, shaping the attack, impact, and tonal movement of the kick. It starts high and drops toward the final pitch set by the incoming MIDI note.



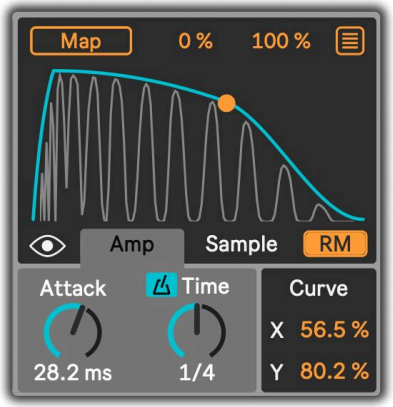
Pitch
Starting frequency of the envelope. Higher values give a more pronounced drop and a sharper, more aggressive transient.

Decay
Duration of the pitch envelope, as a percentage of the amplitude envelope (Amp Time). At 50%, the pitch envelope lasts half as long as the volume envelope. At 100%, both are equal. Above 100%, the pitch movement extends beyond the amplitude envelope.

Curve (XY Pad)
Shapes the pitch drop on two axes. X controls the horizontal shape: lower values make the drop faster and more immediate, higher values smooth out the transition. Y controls the vertical shape: lower values give a convex–concave drop (fast then slow), higher values a concave–convex drop (slow then fast).

AMP ENVELOPE

The Amp Envelope shapes the amplitude of the kick over time, defining its body, length, and decay.



Attack
Attack time of the volume envelope. Higher values give a softer onset, useful for smoothing the transient or layering.

Time
Length of the amplitude envelope, synced to the project tempo and set in time divisions. This defines the rhythmic length and decay of the kick.

Curve(XYPad)
Shapes the amplitude drop on two axes. X controls the horizontal shape: lower values give an exponential decay (sharp drop), higher values a logarithmic decay (smooth and gradual). Y controls the vertical shape: lower values give a convex–concave curve (fast then slow), higher values a concave–convex curve (slow then fast).

Map
Maps the volume envelope to any control in Live. Use it as a modulation source, as a sidechain, or to drive an effect placed on the kick that Rupture doesn't provide internally.

FILTER

The Filter section sculpts the tonal balance and harmonic content of the kick. It contains three modules.

Harmonic Mixer
Blends between the fundamental and its harmonics. Isolate the pure tone of the kick, or bring in harmonic content for a more aggressive, textured sound.

Dynamic Filter
A one-pole lowpass whose cutoff follows the oscillator frequency. It opens wide at the start and closes as the modulation decays, shaping the brightness envelope. Amount, Slope, and Active control its behavior.

Exciter
Enhances highs and transients with a one-sample differentiator, $x[n]\cdot(1-z^{-1})$, reinjected into the signal. Adds crispness and clarity, making the attack more defined.

FM

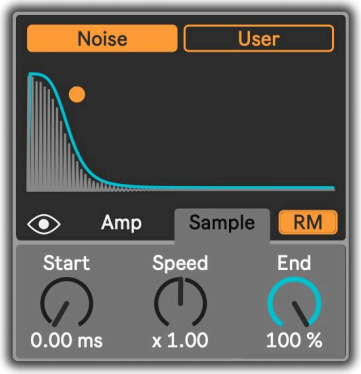
The FM section adds harmonic complexity and aggression by modulating the oscillator frequency with a second signal.

It has three controls.

Source
Selects the modulator waveform.
Sine: smooth, controlled harmonic addition.
Saw: bright, sharp, aggressive overtones.
Noise: chaotic, textured modulation. The noise source can be edited in the Sample panel, including drag and drop of an external sample.

FM Depth
A triple control.
Amount: depth of the FM effect.
Slope: shapes the FM intensity over time, from early peaking to late rising.
Invert: reverses the contour, starting at maximum and decaying to zero.

Ratio
Frequency ratio between modulator and carrier, from 1x to 4x. A staircase-shaped function allows smooth transitions between ratios while letting you lock easily onto musically useful values, avoiding unstable in-between settings.



NOISE / SAMPLE

The Sample panel sets the secondary source used by the device, either the internal noise generator or a user file.

It feeds the FM Noise source and can be ring-modulated against the kick with RM.

Noise / User
Selects the source. Noise uses the internal generator. User loads an external sample by drag and drop onto the display.

Start
Playback start point into the sample.

Speed
Playback speed of the sample, as a ratio. Higher values read it faster and raise its pitch.

End
End point of the playback range, as a percentage of the sample length.

RM
Ring-modulates the source against the kick using (1 − |kick|) · noise. The source appears in the dips of the kick and is pushed down on the peaks, similar to a sidechained ring modulation.

PRESETS, RANDOM & VELOCITY

This section stores and recalls kicks, generates variations, and sets how the device responds to MIDI velocity.

Preset Slots 

Six slots store complete settings. To save, click Save, then choose a slot. Saved slots stay lit. Click a slot at any time to recall it instantly.

Save 

Arms saving mode. Once active, click any slot to store the current settings.

Random 

The dice randomizes all active parameters. Its scope is set in the Settings panel below.

Settings 

Opened from the settings wheel. Each block has two columns: Random and Velocity.

Random enables or disables the dice for that block. Velocity sets how much incoming MIDI velocity affects it, as a percentage.

At 0%, velocity has no effect on the block.
At 100%, full response.

MIXER

The Mixer sets the balance of the two sources and the final output level.

Sample
Level of the secondary source (noise or user sample) in the mix. Osc and Sample are mixed in parallel: set Osc to 0 and Sample to full to hear the source alone.

Osc
Level of the oscillator, the synthesized kick itself.

Output
Final output gain, in dB.

Rupture is a Max for Live Device
compatible with Ableton Live 11 and Ableton Live 12.

Developed by Rawton Forge.
https://rawton.gumroad.com/

For questions, feedback, or support, please contact:
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