

# Algorithms

The Eternity has 6 studio grade algorithms to choose from. Below details the sounds for each algorithm.

## Tape Delay

Designed to emulate tape machine delay's. With sonic characteristics of warm tube saturated repeats, each repeat gets progressively darker and the speed of the tape reels can fluctuate, causing artifacts such as wow and flutter. A brand new tape machine will have minor artifacts affecting the delay repeats. However as it ages, these characteristics tend to be more distinct and the delay repeats will represent more of these artifacts. Cntrl1 will emulate the tape age, fully counter-clockwise is like a brand new tape machine. As its rotated clockwise, each repeat gets darker and the wow & flutter becomes more noticeable.

## Digital Delay

Bright & clean delay repeats. The Cntrl 1 knob adds some character/grit to your repeats for a less pristine delay sound. The character/grit is input sensitive, play harder and this will be more noticeable or play softer for less character/grit.

## Analog Delay

Designed to emulate the old bucket brigade analog delay's. Analog delay's will have signal degradation on each repeat causing each successive repeat to roll off some high frequency's. The Cntrl 1 knob, when set fully counter-clockwise, is a simple and straightforward Analog delay. When rotated clockwise, the Cntrl 1 knobs adds modulation to the repeats of the delay. The rate and depth of the modulation is fixed, think of the Cntrl 1 knob as a volume knob for the modulation.

## Dual Delay

This delay runs two different delay's with different subdivisions in full stereo and in ping pong (L & R). Delay 1 is an analog delay which is set by the Subdivision switch and Delay 2 is a fixed dotted eight digital delay. The Mix knob controls the level of delay 1 and the Cntrl 1 knob controls the level of delay 2. The subdivision switch affects Delay 1 and is as follows:

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#### 1/4 Note Setting

- Delay 1 will be set to a 1/4 note with Delay 2 set to a dotted 1/8 note

- Dotted 1/8 Note Setting

- Delay 1 will be set to the Golden Ratio with Delay 2 set to a dotted 1/8 note

- 1/8 Note Setting

- Delay 1 will be set to an 1/8 note with Delay 2 set to a dotted 1/8 note

## Echo | Slap | Doubler (ESD) Delay

This delay is actually three delay's in one and the subdivision switch selects between the three different delay's. The Echo delay is called up when the Subdivision switch is set to the 1/4 note position. Based on the tap tempo range (approx. 60 - 160 BPM) the Echo delay will range from 333 milliseconds to 125 milliseconds. When the subdivision switch is set to dotted 1/8, this calls call up the Slap delay. The tap tempo range will go from 125 milliseconds to 47 milliseconds. When the subdivision switch is set to the 1/8 note position, this calls call up the Doubler delay. The tap tempo range will go from 63 milliseconds to 23 milliseconds. The Cntrl 1 knob widens the stereo spread of the ESD delay, at fully counter-clockwise the stereo spread will be off and gets wider as its rotated clockwise.

## JET Signature Rhythm (JRD) Delay

This delay is not commonly found on other delay pedals however it is a sound that I (Junior "JET") have used extensively for creating massive sounding rhythm & lead sounds. This delay is very similar to the Dual Delay however it is important to not have the delay's ping pong back and forth. Delay 1 is an analog delay and the Subdivision switch, Mix, and Repeats knobs all control delay 1. Delay 2 is a fixed 100 millisecond Slapback delay and Cntrl 1 adjusts the overall volume of delay 2.

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