Rayzoon Technologies LLC
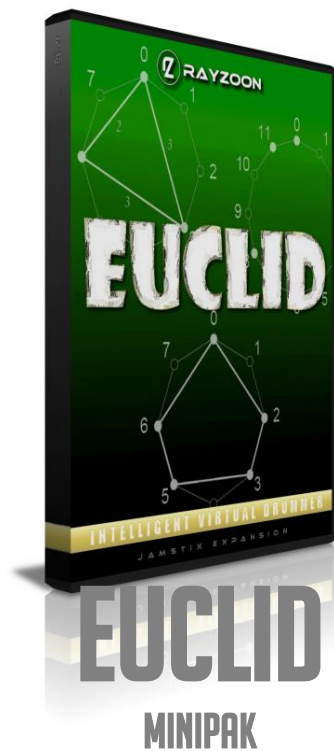
EUCLID

MINIPAK

USER MANUAL

1 What is Euclid?

This MiniPak gives Jamstix the ability to generate Euclidean rhythms for drum set as well as Jamcussion (hand percussion).

Euclidean rhythms were discovered in 2004 by Godfried Toussaint and found to create a wide range of world rhythms. The algorithm used can be simply described as:

"Within a **length** of equal musical ticks, distribute a given number of **hits** as evenly as possible."

This is just the kind of thing that Jamstix excels at: apply a rule-based algorithm dynamically. We have created several styles (with many presets) for this MiniPak that give you a quick entry into this field.

We encourage you to play a lot with the Euclidean controls as outlined in this document as you may discover entirely new combinations that will inspire your music in new ways.

2 Contents

- 4 new Jamstix styles with 23 presets
- 3 new Jamcussion styles with 8 presets

3 Installation

- open the Jamstix Manager tool
- click 'Connect'
- click 'Start Install'

4 Questions & Issues

If you have any problems or questions, please use our online forum at www.rayzoon.com/community or e-mail us at support@rayzoon.com.

5 The Euclidean Controls

The core of all Euclid styles is one or more Euclidean control sets as shown her:
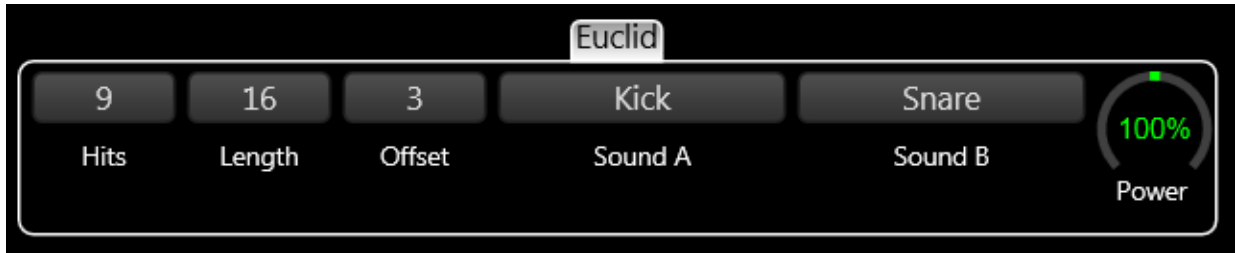
5.1 HITS

This is the number of notes that will be created across the entire length. The closer the number is to length, the more notes will be generated.

5.2 LENGTH

This is the total number of 16th ticks that the pattern will be generated across. If this number equals the bar length of the part (i.e. 16 for 4/4) then the pattern will repeat in synch with each bar change. If it is less or more, you will have a pattern that shifts across bar boundaries, which is the key to polyrhythms with Euclid.

5.3 OFFSET

This setting shifts the created pattern to the left by the given number of 16th ticks. It will come in handy if, for example, you have a great pattern but wish to move it so the first note is on the downbeat.

5.4 SOUND A

This is the default sound used for all generated notes.

5.5 SOUND B

This is a second sound that will be used sparingly across the pattern to make things more interesting. In Jamstix styles, this will usually be the snare sound while Sound A is set to kick.

6 Build Your Own!

If you have never experimented with the '**Extract From Other Style'** feature in the brain menu, you should really check it out now to get the most out of Euclid. You can extract Euclidean brain elements from Euclid styles into another to mix-&-merge them. Equally important, you can load any non-Euclid style and then extract Euclid brain elements into it to spice up any style you already own.

7   Jamstix Styles

All Jamstix styles are located in the 'Euclid' style folder.

7.1   Euclid

This is a simple Euclid setup with just one generator providing kick and snare. Hihat notes are created the standard way.

7.2   Backbeat Euclid

This style has a steady snare backbeat with three Euclids producing kick, hihat and percussion. You can develop complex polyrhythms steadied by the backbeat.

7.3   Super Euclid

One Euclid generator drives kick and snare and another one delivers the hihat/ride. A third Euclid provides percussion. This style can create very complex polyrhythms.

7.4   Tom Euclid

Kick and hihat foot form the backbone with two separate Euclid generators driving toms and a third one taking care of percussion. Endless possibilities...

8   Jamcussion Styles

All Jamcussion styles are located in the 'Jamcussion\Euclid' style folder.

8.1   Euclid

Three Euclid players give you a wide range of polyrhythmic opportunities.

8.2   Euclid Latin

One Euclid player spices up a basic Latin setup of conga, guiro and clave.

8.3   Euclid Five

Maximum impact with 4 Euclids driving the 4 main drums and a fifth Euclid throwing in some 'spice'.