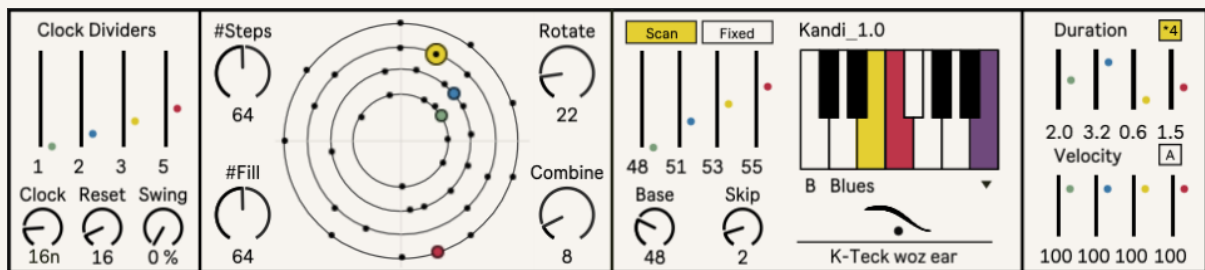


Kandi

Max for Live Step Sequencer

User Guide



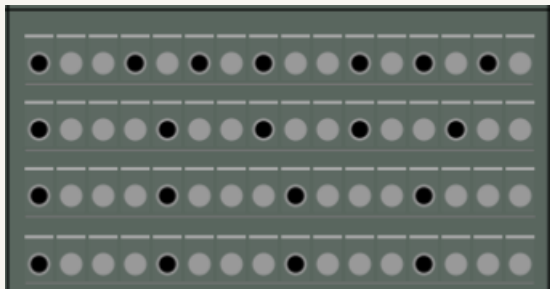
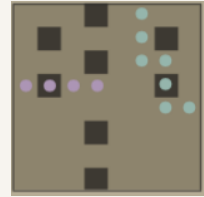
2021

K-Teck

<https://k-teck.co.uk/>

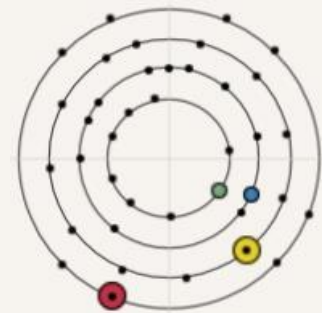
Kandi

Kandi originally came about as one of several prototypes for the LockStitch_2 update – there is also an 8*8 grid-based version lying around...

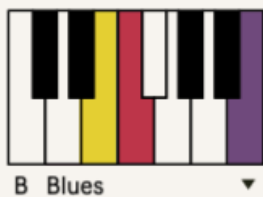


I was looking for an alternative way to present 4 euclidean sequences instead of LockStitch's linear view

I found that a while a linear view gives better visual feedback for general percussion sequencing – concentric circles encourage more complex rhythmic exploration



Kandi_1.0



So I connected the Quad Euclidean engine to a Scale Scan module and it works beautifully – rhythmically powerful melodic phrases pour out of Kandi

There is a Fixed Pitch option - so the four patterns can trigger four drum rack pads or notes in a more traditional 'euclidean' sequencer manner

Important – Read This

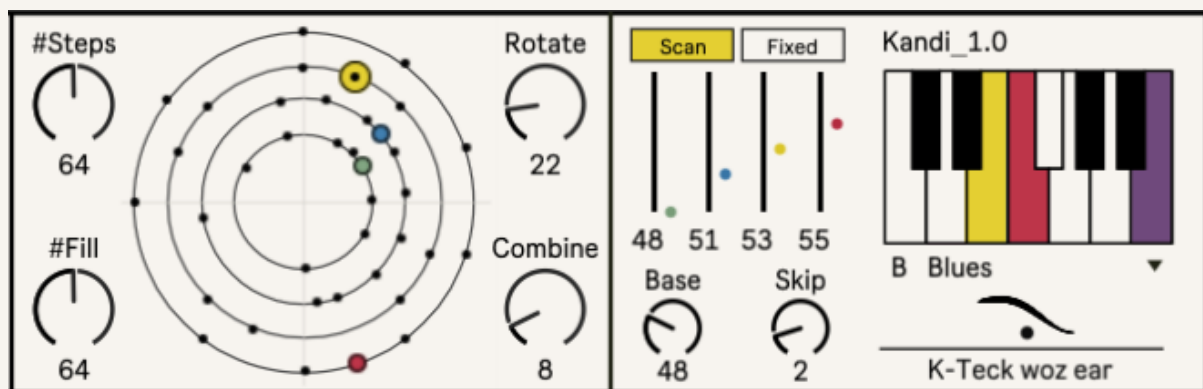
Kandi is a step sequencer coded in Max for Live

Kandi can be used within Ableton Live provided Max for Live is installed

Kandi will not work in other DAWs

Kandi will not work without Max for Live installed

Kandi generates MIDI notes not sound – load an instrument onto the same MIDI track



Installation

Either:

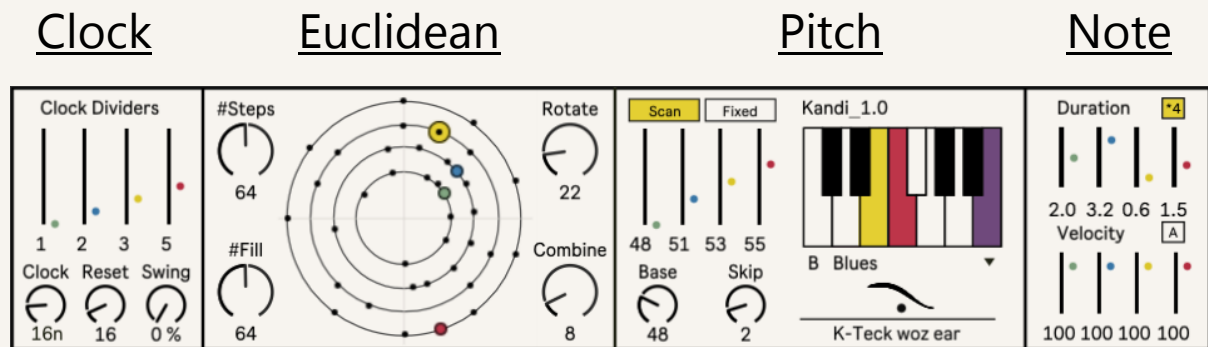
1. Drop Kandi .amxd onto a MIDI track then save
2. Drop Kandi .amxd into your Ableton\User Library\Presets\MIDI Effects\Max MIDI Effect

Layout

Kandi's UI is laid out in four sections left to right:

1. Clock Pulse module
2. Euclidean Trigger module
3. Pitch module
4. Note Out module

Each module has 4 parallel generators colour coded: **Green**, **Blue**, **Yellow** and **Red**



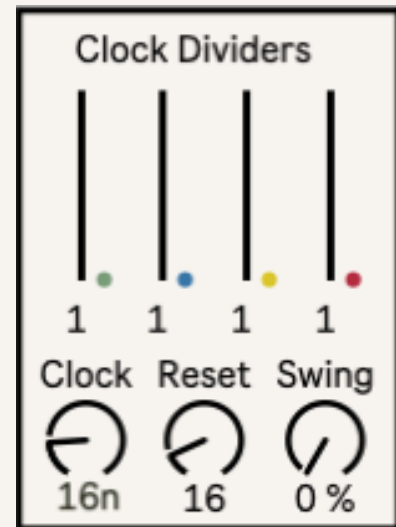
Each parallel generator is a discrete sequencer from Clock Divider to Note Out

Signal flow

- A Master Clock generates a regular pulse at a division of Live's tempo:
- Master Clock pulse is divided using the faders and a pulse count is sent to the Euclidean module:
- The Clock pulses count through the Euclidean pattern: 0 1
2 3 4 5 6 7
- This generates a series of Triggers which are sent on to the Pitch Module and assigned a MIDI note value by the Scale Scanner: 60 63 65 66 67 69 60 63
- The Pitch module outputs values to the Note module where they are combined with Velocity and Duration data to generate MIDI Note Out

Clock

Kandi's Clock outputs 4 parallel Pulse Counts to the Euclidean generators

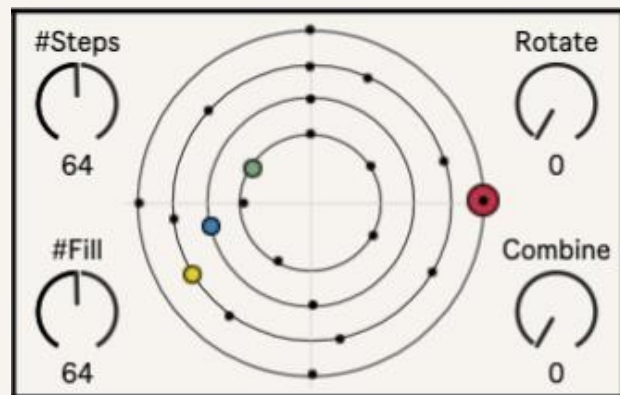


- Each of these Pulse Counts runs at its own rate as set by the Clock Dividers
- Swing offsets every second note and is introduced globally after the Clock Dividers
- Each Pulse Count is Reset to zero when it reaches the Reset value -1 – each Pulse Count is independent

Euclidean

The Euclidean section is designed to output 4 parallel binary patterns using 4 Macro controls: #Steps, #Fill, #Rotate and #Combine

All four Macro controls use simple algorithms to assign different values to the 4 Euclidean generators



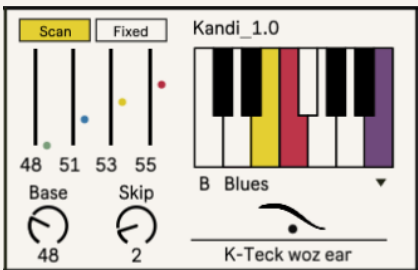
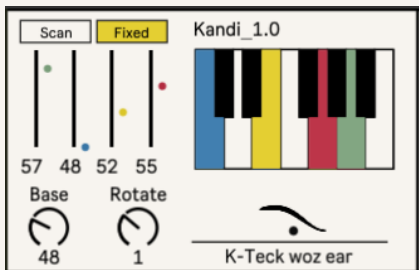
This process is not random but logical and repeatable - some Combination algorithms include a Scramble function – which retains the Fill values but randomises their position

- #Steps sets the number of steps – up to 16 - in each Euclidean generator
- #Fill sets the number of Triggers distributed across each Euclidean generator
- The combination of #Steps and #Fill creates 4 distinct binary patterns
- Rotate sets the rotation of each binary pattern
- Combine uses algorithms taken from K-Teck's LockStitch_2 step sequencer to generate combinations of the 4 Euclidean patterns
- It is these Combined Patterns that are presented in the central display
- The Clock's Pulses count through each sequence's steps sending a Trigger to the Pitch and Note generators

Pitch

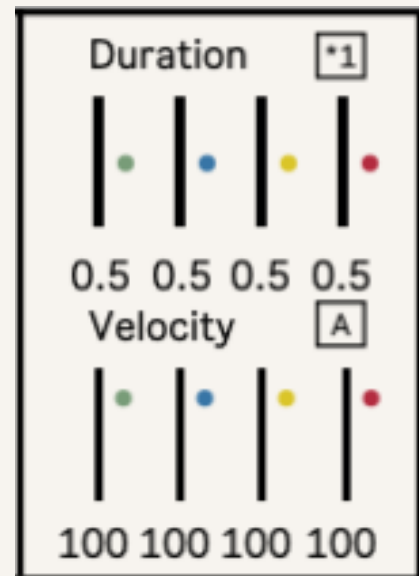
Kandi offers 2 methods of Pitch generation: Scale Scanning or Fixed Pitch

There are 4 parallel Pitch generators – colour coded

Scale Scan	Fixed Pitch
	
'Counts' incoming Triggers from the Euclidean section up to the number of notes in the scale	'Fixes' the pitch of each generator so that each pattern only plays 1 note
Uses this count to 'play' through the scale	Useful for percussion sequencing
The count increments by the Skip value	Or just as a variation on melodic sequencing
Root note for the scale is selected by clicking a note on the keyboard display – highlighted Purple	Rotate switches the values of the four faders – rotating their position on the keyboard
Scale is selected using the dropdown menu	No scale can be selected
Base sets the lowest possible MIDI note value	
4 faders set the base note value for each generator	

Note

The output from the 4 Pitch generators is combined with Duration and Velocity values to generate MIDI Note Output



- Values are set using the 4 colour coded faders
- Velocity values are scaled from 0-127
- Duration values are scaled relative to their Clock Pulse rate

Velocity

- A = Fixed velocity
- B = Velocity value is triggered by Note Output

Duration

- *1 = scaled up to 1*Clock Pulse Rate
- *4 = scaled up to 4*Clock Pulse Rate