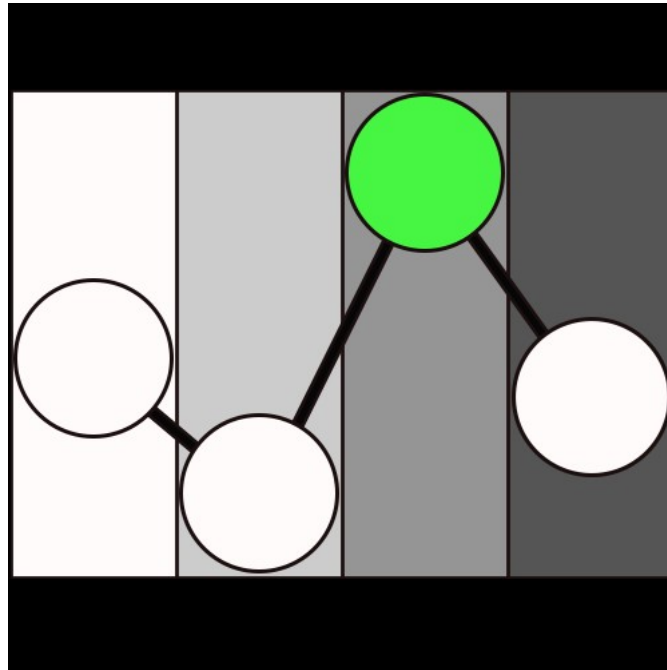


dotMatrix Drum Machine

by Zack Hagan



Before you read these very simple instructions that will get you started making intricate rhythms anywhere at anytime, I want to let the future user of this app know why I made it in the first place. Since the 90's there's been an ever increasing array of musical gadgetry centered in the software domain with a variety of results from unusable to revolutionary, but as our phones become as fast as computers used to be, the software has not kept up. The things I used to do on my old x486 Pentium in 1996 should be more than possible on my phone today, but alas, it isn't. Well, at least not until the dotMatrix. We are not stuck simply imitating devices of the past, the nature of new user interfaces are making music composition even faster and more detailed than ever. The dotMatrix strives to make time honored rhythms in a fast and intricate manor. Delivering a user experience that rivals anything has yet been created.

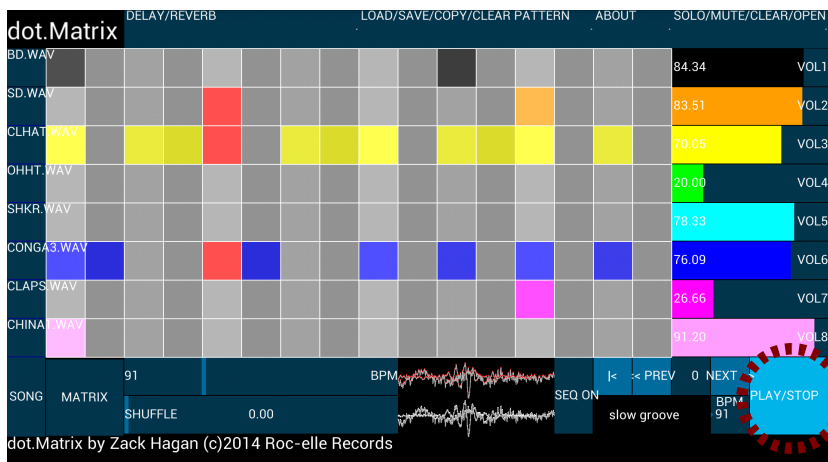
BASIC USE

Before telling you how to turn on the dotMatrix, I want to about the basics of how it works. The MATRIX is the way we sequence. There are 8 parts that in turn are divided into 16 - 16th notes each. Giving us an 8x16 grid. These are collected into 64 different patterns that can be chained together in SONG view. Each pattern can have unique samples, effects settings, BPM, shuffle, part parameters, and volume slider settings. Each part is color coded to make it easier to put them all together. As the dotMatrix play the current note on the grid will be illuminated red. If a part is selected the the part parameters will display instead of the MATRIX. Notice that there is a circle for each 16th note of the pattern, as the dotMatrix plays, if there is a n active note the circle will illuminate, this is to help you choose which note you'd like to change the parameter of. An easy way to change all the circles is to drag you're finger across. This also works on the MATRIX.

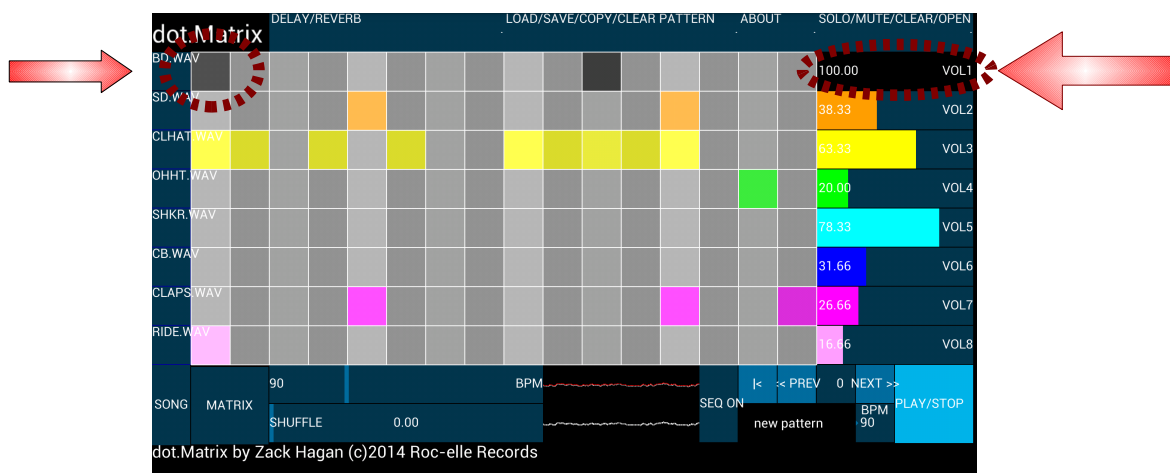
After making a beat you can save the sequence in a text file, so that you can work on it at a later time or

record the beat to a .wav file for use in the digital audio workstation of your choice. The dotMatrix does not export midi because it's not midi.

START

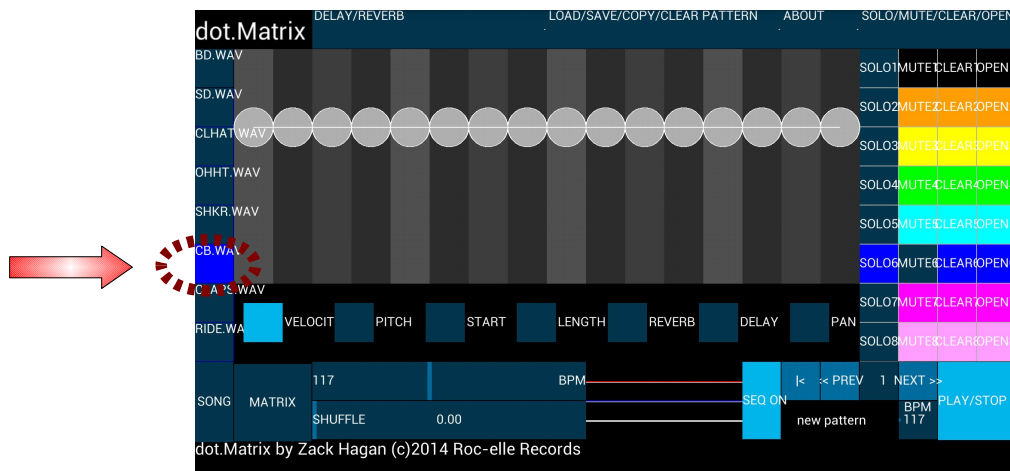


To start the dotMatrix press the play/stop button

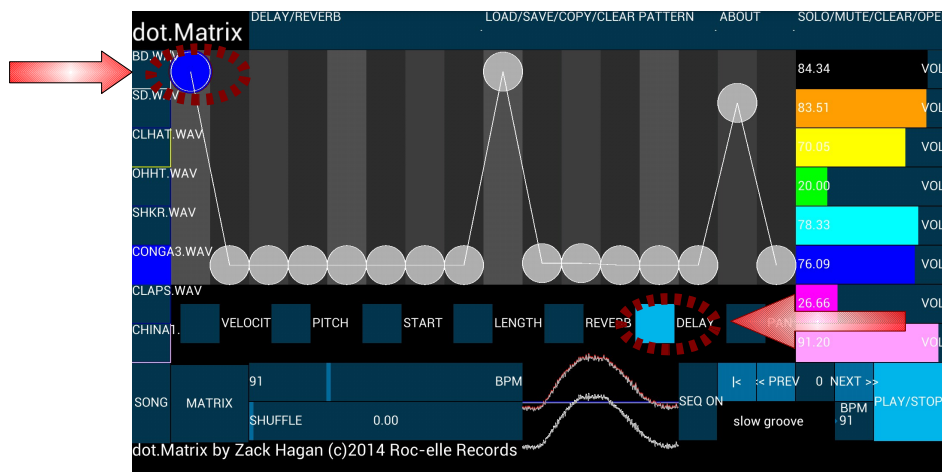


You can toggle any note on/off by selecting the any box in the matrix, you can also drag your finger to select or deselect multiple boxes

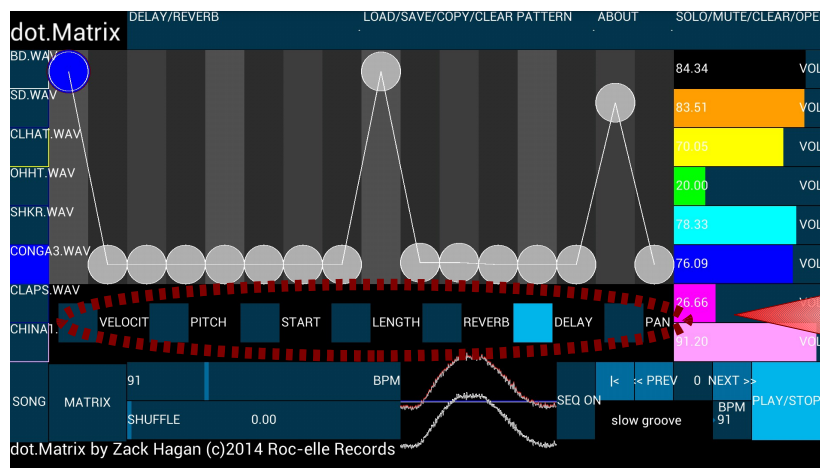
To adjust the volume of the each of the 8 parts with the slider directly to the right of each part



To select one of the 8 parts, press a button on the left

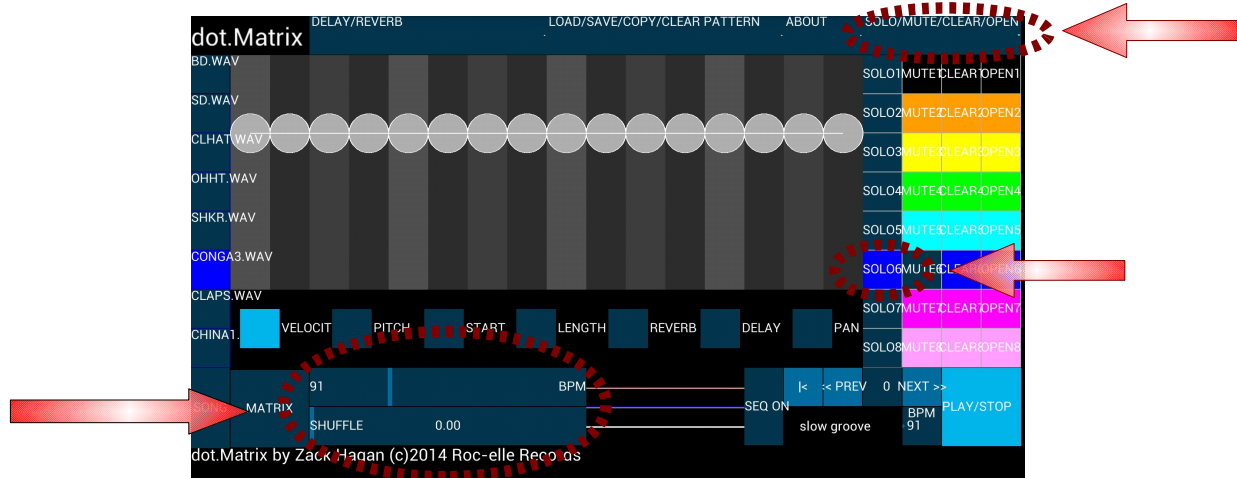


Once a part has been selected can select which parameter to modify and change the parameters. Each circle represents one of the 16 notes possible for the pattern. If a note is playing it will illuminate the corresponding circle. If you modify notes that aren't playing you may not get a result. Also, when a part is selected the signal appears in the oscilloscope view on a line corresponding with the parts color.



There are seven different parameters you can change in this view:
VELOCITY – changes the volume per step (1-100)

PITCH – changes the pitch per step(1-200), 100 is the original pitch
 START – changes the start envelope length per step(1-100ms)
 LENGTH – changes the length of the sample per step(1-100%)
 REVERB - changes the send to the reverb effects unit per step(0-100)
 DELAY - changes the send to the delay effects unit per step(0-100)
 PAN - changes the panning per step(0-100), 50 is center, 0 is left, 100 is right



You can solo/mute/clear/open any of each of the 8 parts. To toggle the view press the button labeled solo/mute/clear/open in the upper right corner.

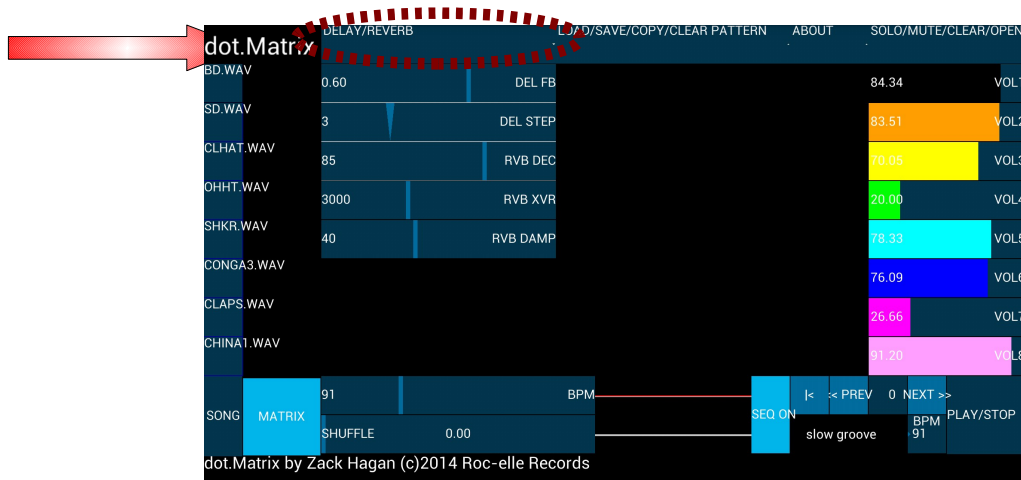
SOLO – when pressed all other parts are muted

MUTE - mutes an individual part

CLEAR – clears and individual line on the matrix also resets any parameter modifications

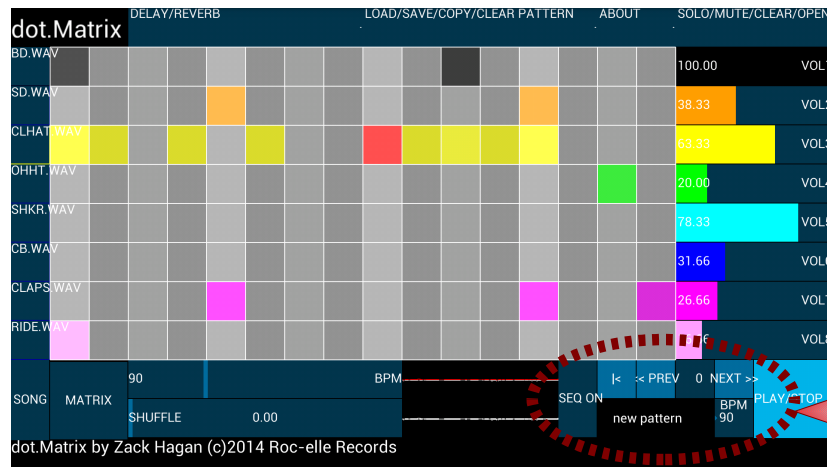
OPEN– opens any CD quality .wav or .aif file for the corresponding part

You can also change the BPM or shuffle for each pattern. The sliders are located in the lower part of the screen at any time, they will both retain their value until the pattern is changed.



To change the parameters for the delay and reverb effects, press the delay/reverb drop down menu at the top of the screen. Each parameter will retain it's setting until the pattern has changed.

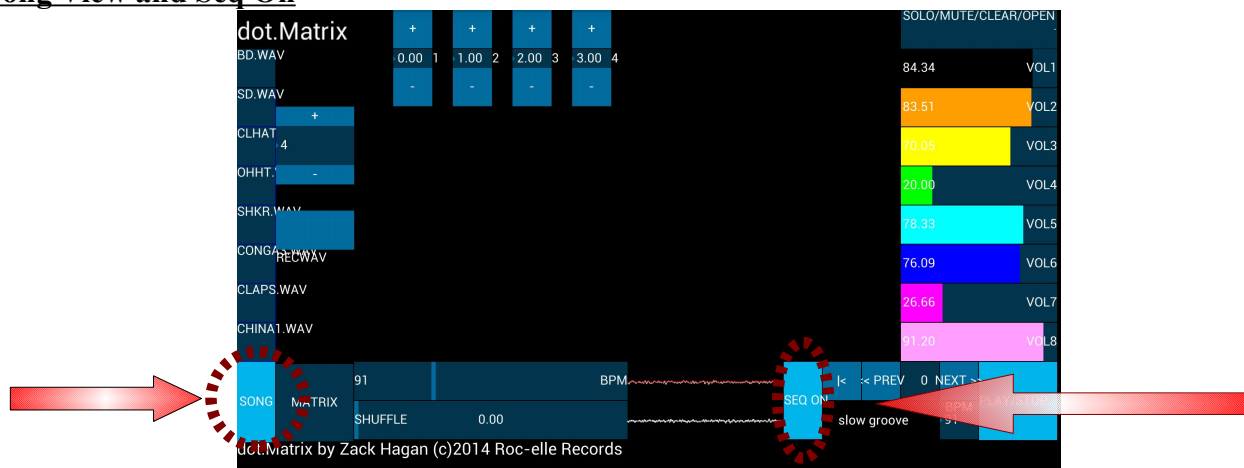
Patterns



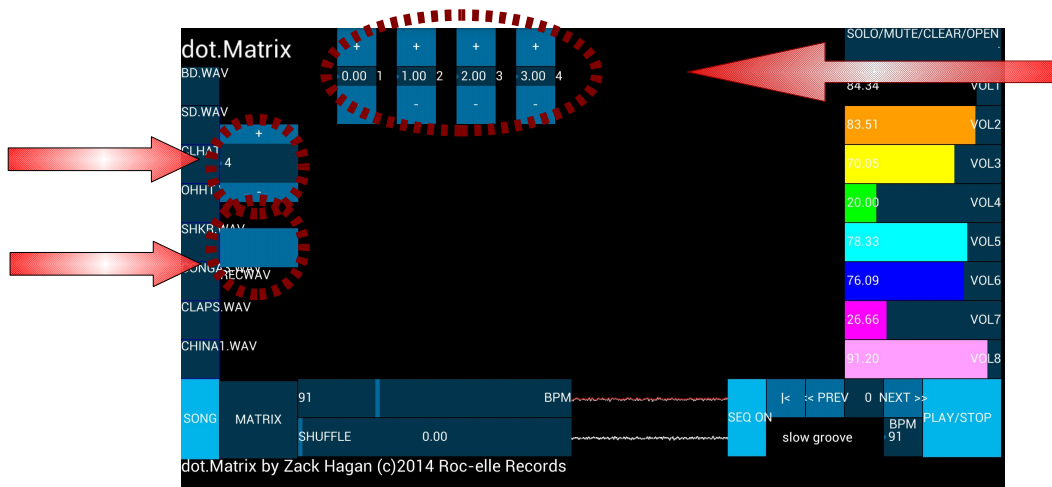
The dotMatrix app has up to 64 patterns (from 0 - 63), and you can navigate the patterns by using the NEXT>> or <<PREV in transport indicated above. The transport maybe accessed at any time and does things like displaying the whether the sequence is on (SEQ ON), the pattern name, the BPM, and what pattern is currently selected and playing, is indicated between the <<PREV and NEXT>> buttons. The pattern name may also be changed, just press on the field where it says “new pattern” above, change the name and press enter.

Settings like pattern name, BPM, shuffle, delay effects parameters, reverb parameters, individual part volumes, and what sample names are saved into each individual pattern. So when the pattern number changes these settings also change.

Song View and Seq On



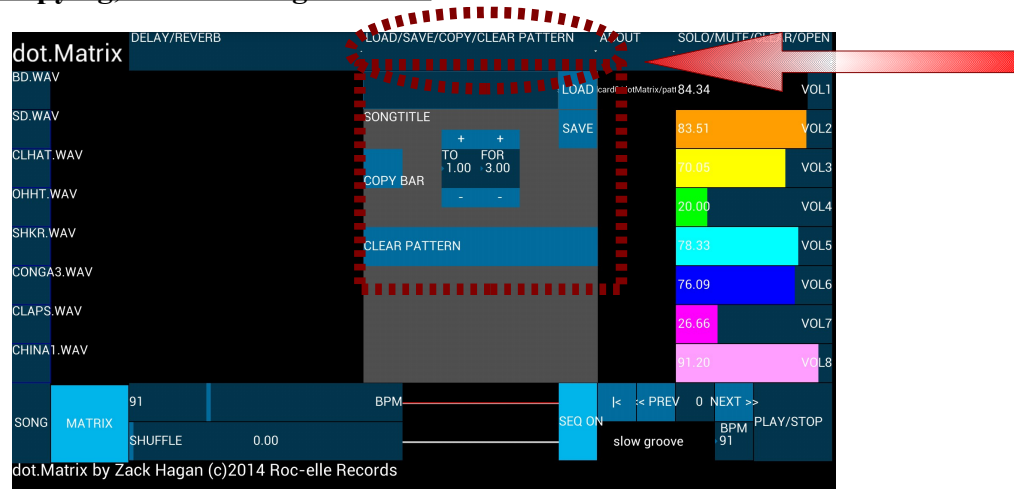
In order to chain patterns together to make complete phrases we need to use Song View. The SONG button is located in the lower left corner of the screen. In order for the sequence to play the SEQ ON button must be activated.



On the left the larger button determines the length of the song in measures (the max is 32). The measures are represented as a series of number buttons in the center of the screen, the number of the measure is indicated to the right of each number button. As the sequence plays the pattern number will display what pattern the dotMatrix is actually playing not the number of the measure of the song. All of the views will switch from pattern to pattern, culminating in an interesting visual experience as the dotMatrix loops through the song.

The ability to record your work as a .wav file also exists on this page. After you press REC WAV you will be presented with a dialog warning you that this action will stop audio. If you press NO, you will return to song view. If you press YES, you will be asked where you'd like to save your file and what name you'd like to call it. Upon the pressing the create button the dotMatrix will begin to play at the end of the phrase, it plays the complete phrase and then stops. Once the dotMatrix has stopped your .wav has been recorded. These recordings are 16-bit, 44.1khz CD quality .wav files.

Loading, Saving, Copying, and Clearing Patterns



As long as the SONG button is not activated the LOAD/SAVE/COPY/CLEAR PATTERN button will be at the top of the screen, if you press that button you will be presented with a drop down menu where you can load a bank of patterns or save the bank of patterns you are currently working on. The copy pattern function and the clear pattern function are also in this drop down.

LOAD – pattern banks for the dotMatrix are stored on your SD card at dotMatrix/patterns.

SAVE – you can save the pattern banks you create anywhere on your SD card

COPY PAT – this copies the current pattern

TO – this set the destination to copy to

FOR – the number of additional measures it will copy to

CLEAR PATTERN – clears the entire current pattern