



Soniccouture

TONAL DRUMS

USER GUIDE

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LIBRARY SPECIFICATIONS

- 14 GB Library
- 24bit 48khz Stereo Sampling
- 83,868 samples total
- 49,434 snare
- 10,465 kick
- 14,970 toms
- 7,224 hat
- 1,135 ride
- 640 crash
- Kontakt Player 7.10+ NKS compatible



TONAL DRUMS: CONCEPT



Tom Tuning with TuneBot



The Canopus Yaiba Kit

In recent years, drum tuning seems to have undergone a renaissance. Devices like *TuneBot* and apps like *iDrumTunePro* (both of which I recommend), have given drummers more precision and insight when tuning their drums. Youtube is filled with videos relating to drum tuning, and this has helped demystify it and pique many people's interest in it. And while it is certainly true that you do not need to tune your drums to notes to fit the key of your track, to my ears it's undeniable that doing this can give an extra musical edge to a production.

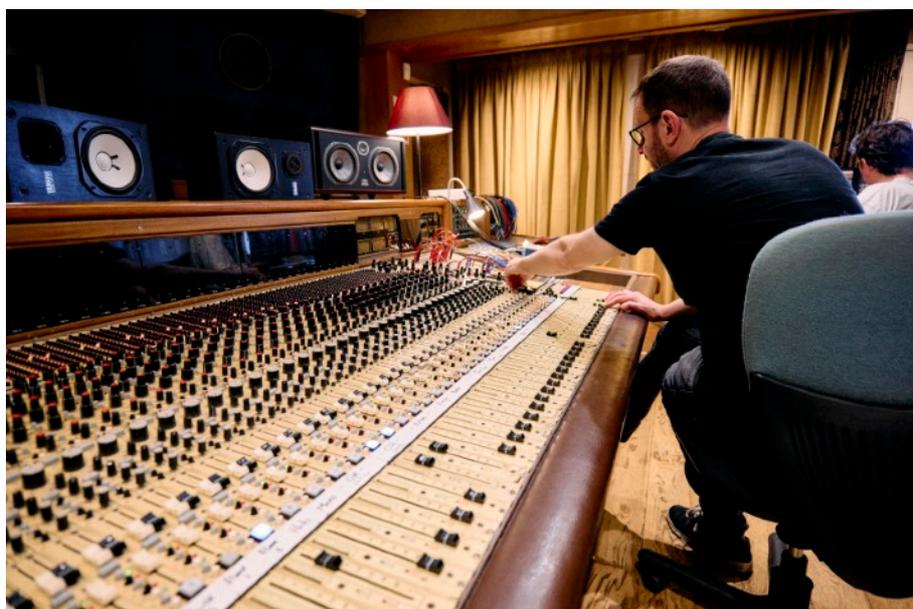
Thus, the idea to sample a full drum kit at multiple different tunings was born. The ability to set your kick drum at C and your floor toms at D and E at the click of mouse seems very desirable as an idea. So we went to Rockfield Studios in Monmouthshire, Wales, to do exactly that.





ONE KIT

The challenge we set ourselves was to take just one kit, and create enough sampled data that the user would be able to make any kind of drum sound imaginable from it. We worked with Rubiks Drums, London, and they recommended a Canopus Yaiba Kit, the very kit they use in their own studio, for its versatility and craftsmanship that allows a wide range of accurate tunings.



TUNING THE DRUMS

Snare Drum

Snare drums are complicated beasts, because traditionally the bottom head is tuned a few tones higher than the top. Often this is a fifth, although you will also find people who prefer a third, or a fourth (said to be John Bonham's preferred setup.) So, as well as the fundamental frequency (f) of the drum, you will hear, generally much more prominently, the note of the bottom head. Add into this mix the fact that the snare tension will pull the tuning sharp, and you get a confusing task when trying to tune to each notes precisely.

In Tonal Drums, the snare drum f frequency + audible overtone (which is what appears on the GUI tuning dial) were tuned as follows:

C f - **G** Overtone

D f - **A** Overtone

E f - **B** Overtone

G f - **D** Overtone

A f - **E** Overtone

B f - **F#** Overtone

So while the snare drum is technically tuned to the lower f note, the dominant audible frequency is the overtone, so for practical purposes, we have labelled them as such.

Bass Drum + Toms

These were a much more straightforward task, with the dominant f frequency being clearly audible. In the case of the four toms, the bottom head was tuned to the same note as the top, but an octave higher, to give a very clear pitch.

Tools

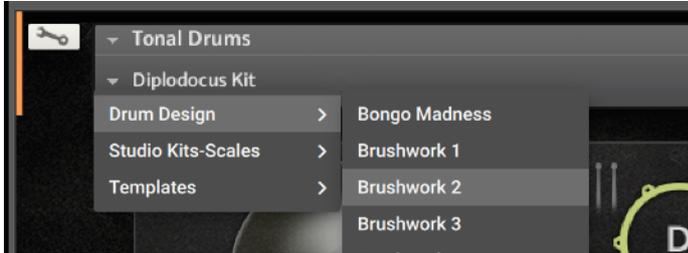
We used two TuneBots, the iDrumtune Pro iPhone app, and the Bosendorfer piano in the live room as references for the drum tuning.

Tunings have been further finessed in Kontakt to be as accurate as possible.



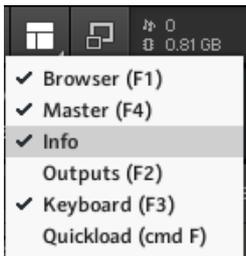
THE KONTAKT INSTRUMENT

SNAPSHOTS (PRESETS)



Kontakt stores presets as Snapshots, and we've provided a selection of different kits and grooves as Snapshots.

To access them, click the 'camera' icon at the top of the Kontakt window and you'll see a drop down menu. The Factory section contains the ones we've made, and your own will be stored in the User section.

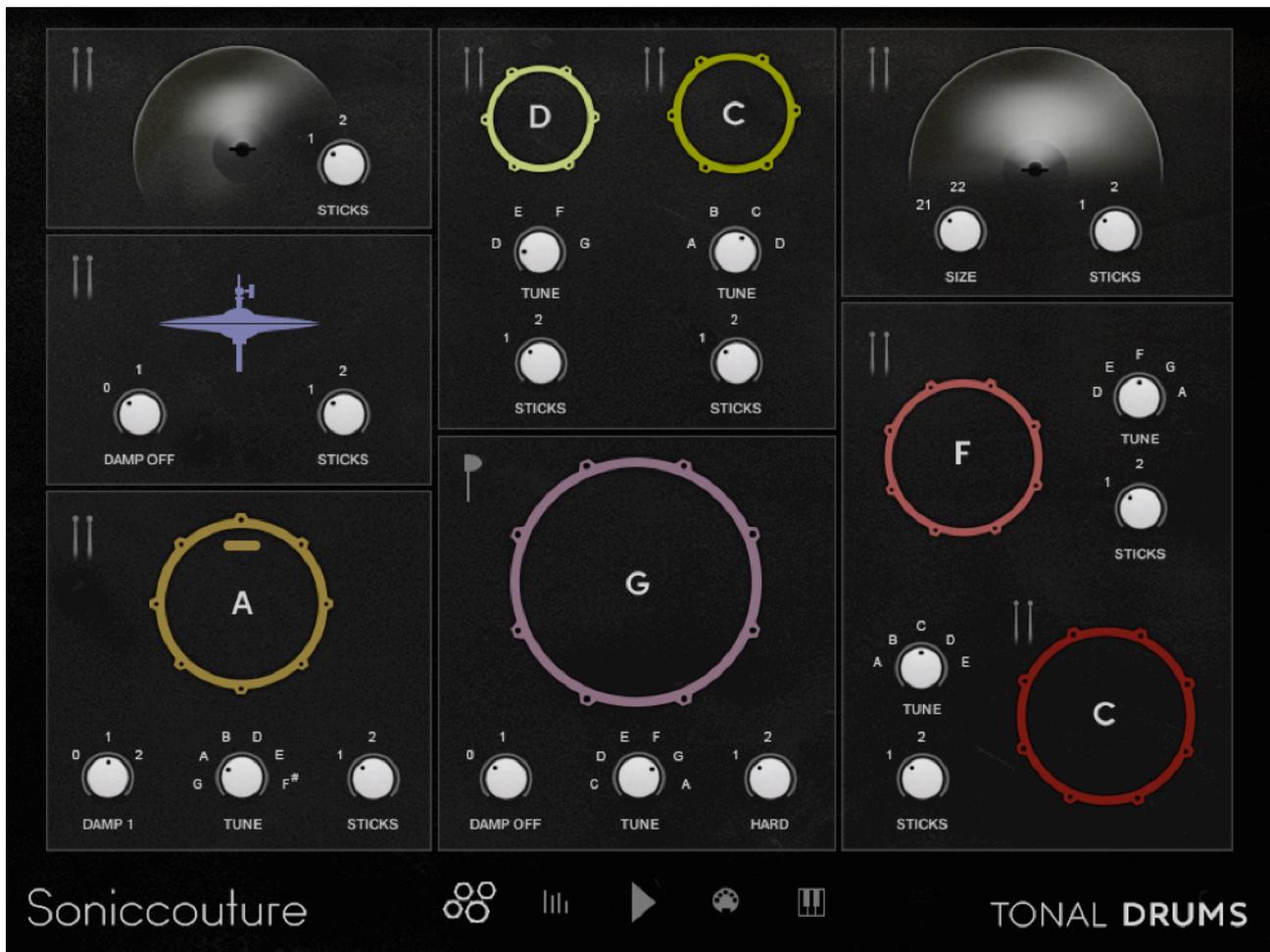


BUILT-IN HELP

If you activate the Info pane in Kontakt, you can hover over any control in the instrument and a short note will appear in the Info pane at the bottom describing what that control does.



DRUM PAGE



The default main drum panel or 'overview' panel, chosen with the drums icon at the bottom.

These five navigation icons at the bottom are, from left to right:

DRUM OVERVIEW page select

MIXER page select

PLAY button to turn the Beat Tools on or off

MIDI SELECT button, to enable selecting a MIDI editor by playing that drum

MAPPING page



On this overview page, each drum has a few controls. Where the drum has various tunings, damping, or tools, this is where you'll find them.



E.G. SNARE DRUM:

There are three controls here:

DAMPING

TUNE

STICKS/BRUSHES

These controls change which sample sets are loaded, since all possible combinations are sampled in full detail.

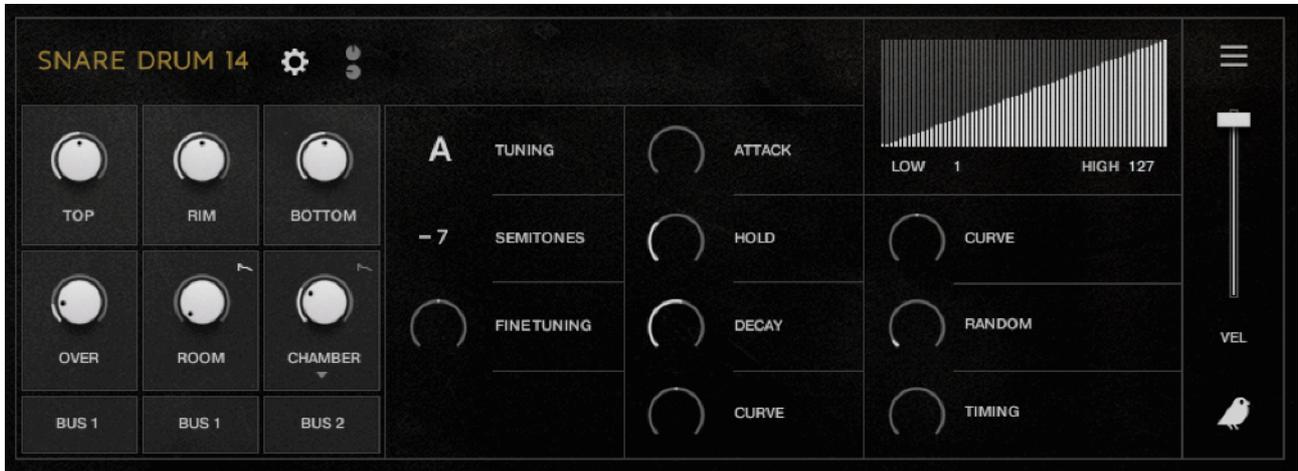
N.B. This means that there is a slight delay when you change any of these settings as Kontakt clears and loads different (very large) sample sets, so its best not to do this during your song, or to try to automate the controls, since it will interrupt the audio.



THE EDIT PANEL



Click this button to show the Mixer + Edit screen.



When in Mixer mode, each drum channel has two screens. The COG icon chooses the Drum Edit panel.



On the left are the Mic channel levels. These vary for each drum. The bottom three channels (Overheads, Room, and Chamber, can be routed to mixer busses 1+2 with the menu beneath them. 'Main' routes them through the direct fader for that drum for a unified signal path.)

The ENVELOPE icon on the Room and Chamber knobs lets you enable or disable the amplitude envelope from those channels.

The ECHO CHAMBER can be switched with LIVE ROOM by clicking on its name.



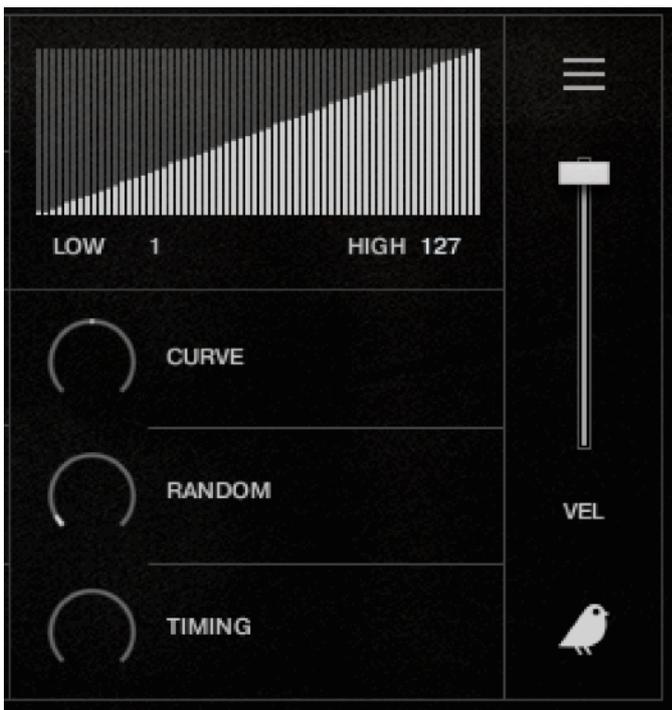
In the middle you have the Tuning and Envelope controls.



The TUNING is a duplicate of the control on the DRUM OVERVIEW page. The SEMITONES and FINE TUNING are Kontakt digital pitch controls.

You can control the Amplitude EG Attack, Hold, Decay, and attack Curve.

On the right you have the velocity section.



Here you can control the velocity amplitude sensitivity (fader on right), and enable or disable the round robins (robin icon below the fader).

You can also adjust the velocity CURVE, the LOW and HIGH limits.

You can introduce randomness to the velocity with the RANDOM knob and to the TIMING of the note here as well.



DRUM CHANNEL PROCESSORS



Chosen with the KNOB icon at the top left. Think of these like an outboard rack in your studio. They apply across all the signals in your drum, and cannot be applied individually to each signal.



Each module can be switched ON using the white square in the top right of each box.

- **FILTERS** A high pass and a low pass filter, with resonance control.
- **COMPRESSOR** Kontakt's Pro compressor module. Very precise and versatile for shaping and tightening up drum sounds.
- **TRANSIENT** A very useful simple module for quickly shaping the attack and sustain of an individual drum.
- **EQUALISER** Kontakt Solid BUS EQ - an SSL channel EQ emulation. Shelved High and Low sections (switchable to a Bell curve) with 2 parametric mid-bands.
- **DRIVE** A saturation effect. Gentle harmonic distortion can give your sound more presence. Better used at low values.
- **WIDTH** Adjust the stereo width of the channel.



ENABLING SEPARATE OUTPUTS



You can route each drum out to a separate virtual output in your DAW if you wish. Select from the triangle menu below the mute and solo switches under the fader.

Note that you will need to setup Kontakt's outputs to what you want first. You can do this in the [Outputs pane in Kontakt](#).



MASTER CHANNEL EDIT



The MASTER channel features Compressor, Tape Simulator, EQ, and Limiter stages.

NOTE: If you route individual drum channels out into your DAW mixer as outlined in the previous section, you bypass these processors, giving a small difference in sound to the snapshot kits.

- **COMPRESSOR:** This is the Supercharger GT compressor, which provides a range of compression and saturation effects. There is a MIX control for parallel compression techniques. A more in depth guide can be found in the [Kontakt Manual](#)
- **TAPE:** A tape emulation effect. Drive the GAIN knob until you hear an effect, then back it off a little way. Subtle, but has a nice rounding effect on the bottom end, and the HF ROLL is nice for giving beats a vintage feel.
- **EQUALISER:** The same SOLID EQ as on the individual channels.
- **LIMITER:** Useful mainly for stopping the output clipping. Set and leave it alone.



THE BEAT TOOLS

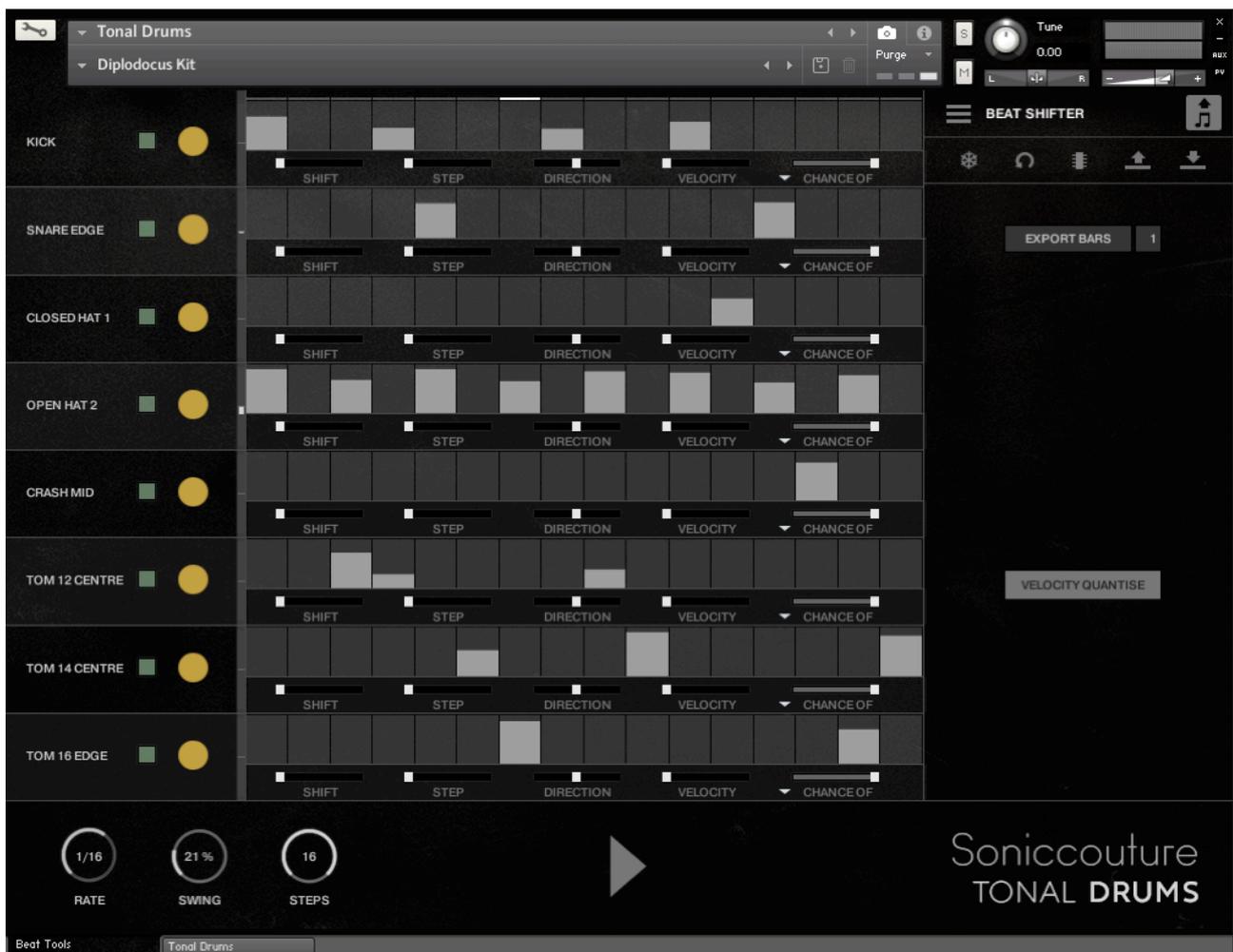


MIDI BEAT EXPORT

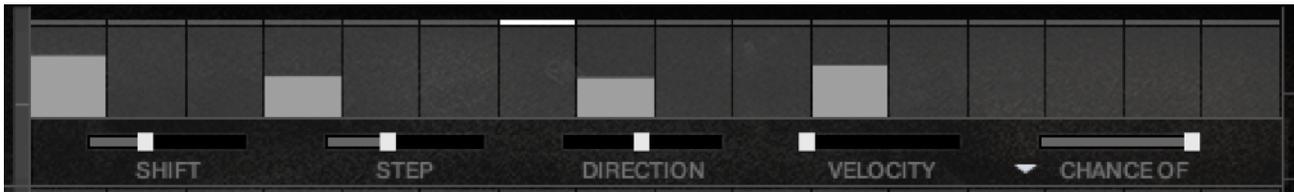
On all Beat Tools if you drag this icon into your DAW window, it will make a MIDI file of the beat you have created.

THE BEAT-SHIFTER

PLAY: The Beat Shifter is enabled when the play arrow is pressed (bottom right). If AC-DR is running within a host DAW, the host transport will control the start and stop of the beat. There are 8 tracks that have identical controls. Firstly, using the drop down menu on the left, you can choose which sound in the current kit you want to trigger with that row, here the first row is set to KICK. The table allows you to draw notes at varying velocities, which will be triggered by the cursor as it moves across the screen.



BEAT SHIFTING



Where things get interesting are with the five small sliders along the bottom of each track, which are labelled **SHIFT**, **STEP**, **DIRECTION**, **RANDOM**, and **CHANCE**. These introduce changes that evolve the pattern while it's repeating.

SHIFT controls the likelihood of the hits in that track moving shifting to the left or right (earlier or later) in time. When it's at zero, all the way left, the pattern hits stay exactly as you drew it, and no shifting will happen. The further right the slider the higher the chance of a **SHIFT**, the more likely it is that the hits will shift on each repeat. When the pattern **SHIFTS**, it moves your programmed beat to other positions on the grid, thus altering and evolving the beat based on what you started with.

STEP size tells the generator how far to shift, if a shift is to happen. If **STEP** is set to 1, then a note can only shift one grid position at a time. If it's set to 2, then if a note shifts, it will shift two grid positions, etc. Note that if you set **STEP** to even numbers your beat will evolve in more naturally rhythmic ways than if you set **STEP** to odd numbers.

DIRECTION tells the generator in which direction to shift the beats, if a beat is to be shifted. When it's in the middle (default), the chance of a hit moving to the left or to the right (i.e. earlier or later in the bar) is equal, so beats can move in either direction. If the **DIRECTION** is set all the way to the right, then beats will **ONLY** move to the right (later), and if set all the way to the left, beats will only move to the left. Note that hits will "wrap" from the end of the bar to the beginning, or from the beginning to the end, if moved beyond the beat **LENGTH**.

VELOCITY slider introduces small amounts of randomness to the velocity of the played notes if you want to introduce some more human feel.



CHANCE OF slider sets the percentage chance of a hit happening. If **CHANCE** is at 100%, the beat will play as you see it, if **CHANCE** is at 50% then about half of the hits won't play at all.

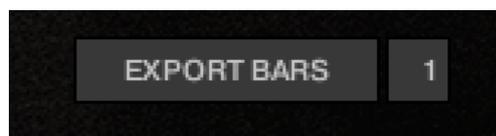


There are 2 more Chance sliders hidden behind the drop-down menu. **All are active at once.**

CHANCE MISS: If you set a value here, it will increase number of 'miss-hits'; a hit on the key next to the intended one.

CHANCE ROLL: increase this slider to hear occasional rolls. works well with snares. Set to 100% and all hits will be rolls.

BEAT SHIFTER SETTINGS



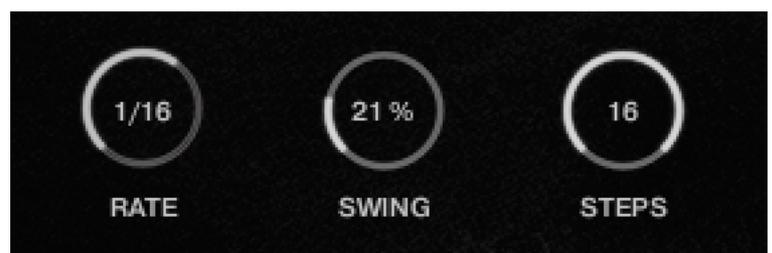
EXPORT BARS: here you can set the length of the MIDI file you drag into your DAW.

If you have setup a shifting pattern using the controls outlined above, the shifts that occur on each new bar will be included in the resulting MIDI file, meaning that you can export up to 128 bars of continually evolving beats!

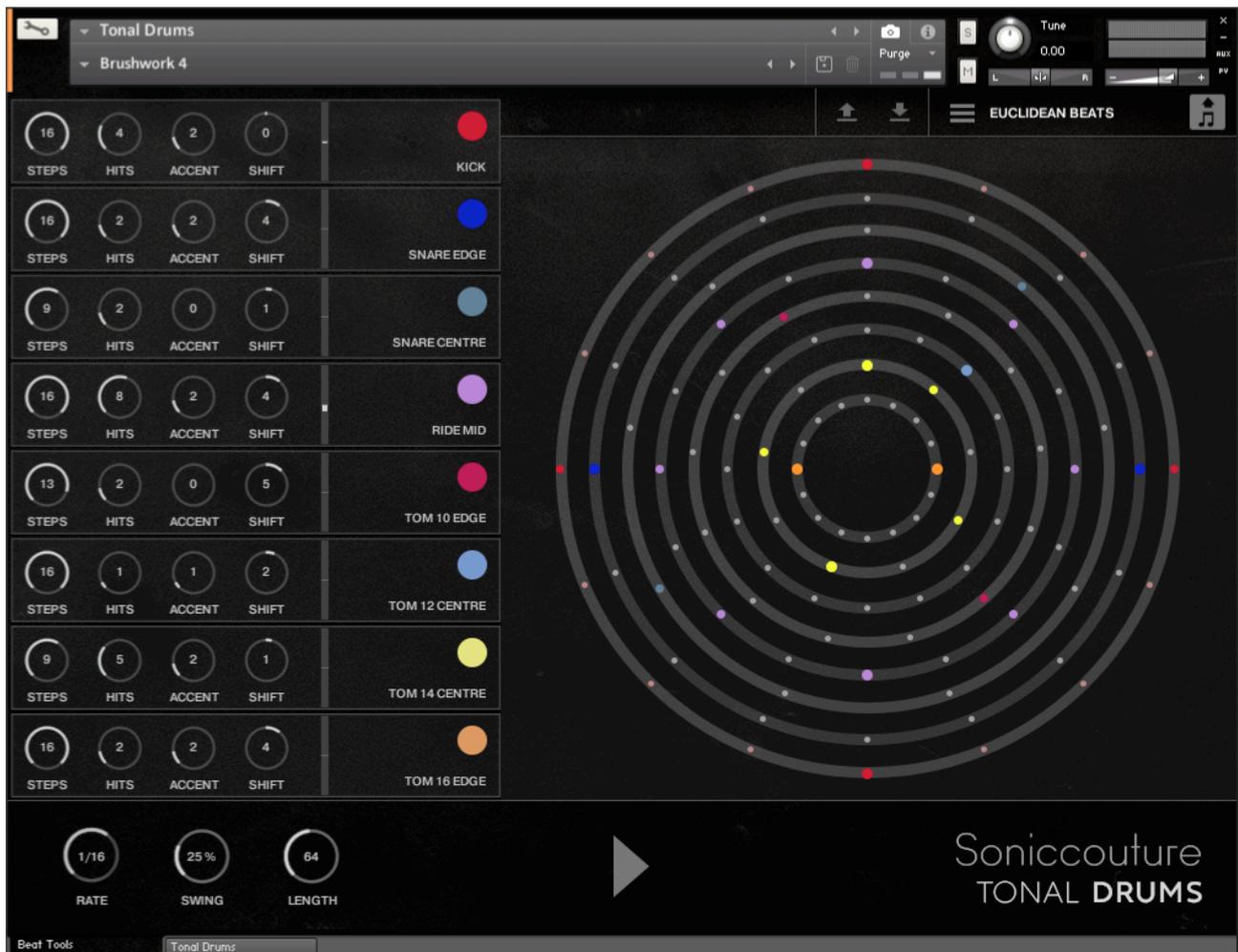


- **FREEZE:** sets all SHIFT sliders to zero, freezing the pattern as it is, and stops it evolving on the next repeat. This is useful if you suddenly hear a pattern you like, and want to keep it. You can assign a MIDI note below the FREEZE icon to trigger the FREEZE function if you like.
- **REVERT** sets the pattern to how it was the last time you hit STORE
- **STORE** stores the current state of the pattern
- **EXPORT** saves the pattern to disk, so you can share it with other kits
- **IMPORT** loads a pattern from disk

- **SWING** the rhythm
- **STEPS** is length of the pattern
- **RATE** sets the tempo of the steps



EUCLIDEAN BEATS



Euclidean Beats are a way of thinking about rhythm that has become popular over the last few years. Essentially the basic idea is to take a number of STEPS (say a bar of 16 steps) and evenly distribute a number of HITS within those steps. If you use 16 STEPS and evenly distribute 4 HITS, you get a very basic 4 beat bar, since the most even way to divide 4 HITS in 16 STEPS is to put one HIT every 4 STEPS. So far so disco.

It gets more interesting when the numbers are less even. For example, 3 HITS in 8 STEPS gives you a nice funky rhythm that's quite commonly heard in a lot of different musical styles.

Another thing you can then do to those HITS is SHIFT their position. The default is always to start with a HIT, so the first HIT will typically occur on STEP 0. However if you SHIFT earlier or later you get a slightly different rhythm, even though it will still be built from same basic ratio of 3 HITS to 8 STEPS.



TRACK CONTROLS

There are 8 tracks each with identical controls.

STEPS sets the length of the pattern

HITS sets the number of times to strike that drum during those STEPS. You cannot alter how those HITS are distributed within the STEPS, they are always evenly distributed (Euclid's algorithm).

SHIFT moves the position of the hits earlier or later.

ACCENT lets you add a certain number of accents to the hits. ACCENTS are evenly distributed among the HITS using the same algorithm used to distribute the HITS among the STEPS (Euclid again).

GLOBAL CONTROLS

PLAY Clicking on this PLAY control starts the beat pattern. Clicking again on it will stop the beat pattern. Within a DAW the generator will start and stop with your host transport.

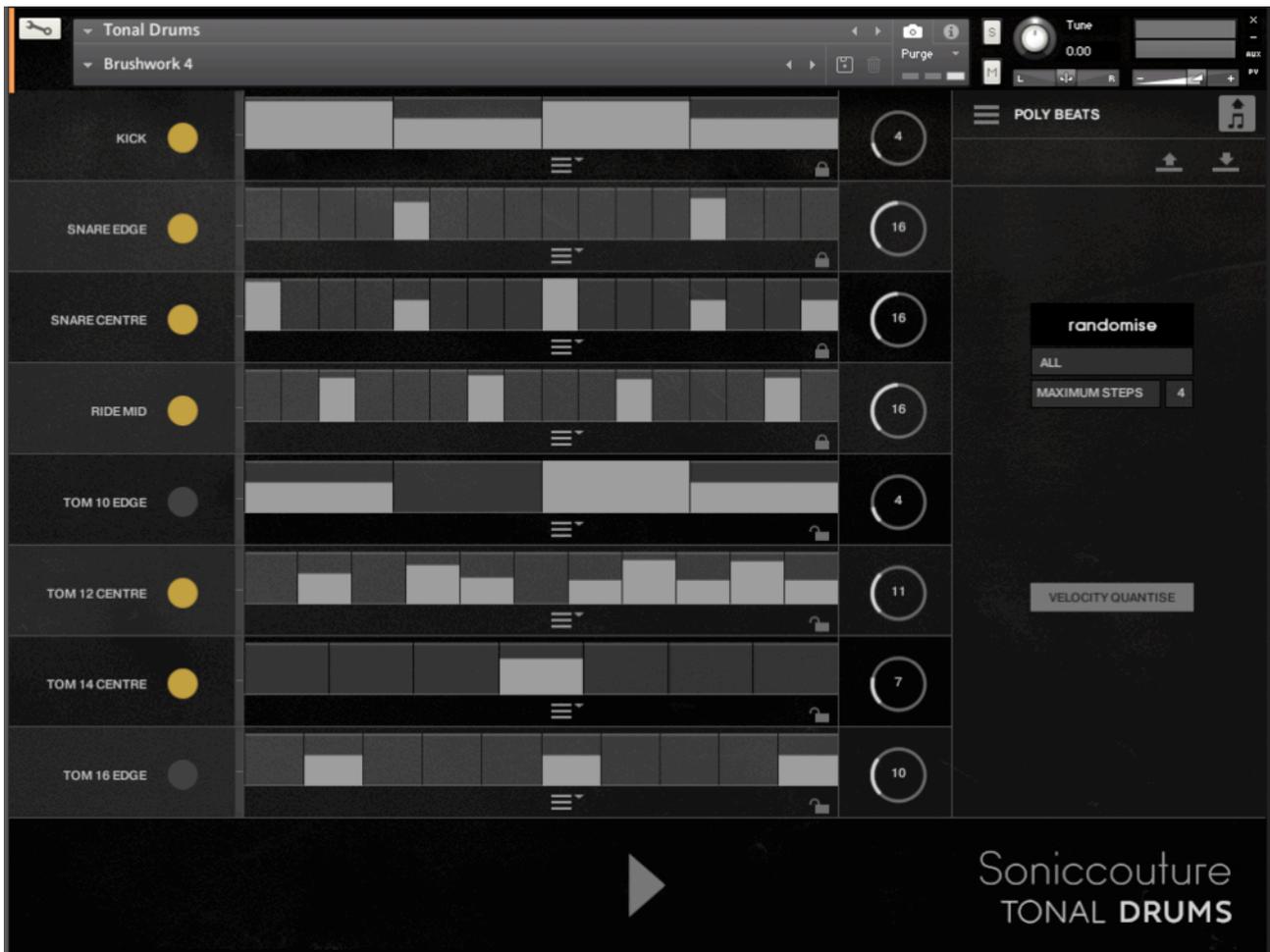
RATE is the sync note value (from 1/4 note to 1/32 note), and is always calculated in relation to the host tempo. SWING adds a shuffle to the beat.

LOOP forces the pattern to restart after a certain number of steps. This might not be obvious at first, but you can potentially create a pattern with odd numbered steps needing several years before the sequence would naturally repeats at the beginning again. To force those kind of things into a usable musical time-frame you can set the LOOP as you like. (You can also set LOOP to NEVER if you don't like to dance.)

If you'd like to read more about Euclidean beats and why they're getting so much attention, Google Godfried Toussaint, he wrote an original paper that started the fad some years ago.

POLY BEATS





Poly Beats is a way to divide the bar into arbitrary subdivisions, or polyrhythms.

(This is distinct from the *polymetric* behaviour of Euclid, which loops different tracks after various numbers of steps, but in which the steps are all the same duration. In a *polyrhythm* the overall pattern length stays constant, and the duration of the steps is adjusted to fit the required steps into that pattern length. The pattern length in Poly Beats is always one bar.)

Polyrhythms can quickly sound very strange and unnatural, this is definitely the beat programmer for the left field composer.



CONTROLS



There are 8 identical tracks.

DRUM ON VEL VELOCITY TABLE LOCK GRID SIZE

Drum type and On/Off switch at the far left of each track. On the far right the large knob with the numerical is the divisor. If you set this to 8, you will divide the bar into 8th notes. Note that you are only adjusting the GRID size... where you choose to draw your beats is still up to you, the velocity etc is still editable.

- VELOCITY FADER offsets the velocity values of the entire track
- VELOCITY MENU contains quick tools for populating the steps with different patterns.
- LOCK Any track with the padlock shut will be excluded from the RANDOMISE function, see below.
- GLOBAL CONTROLS
- PLAY starts or stops the sequence. If you are in a DAW the host transport control will also start and stop the sequence.
- RANDOMISE randomly changes the grid size of each track, and notes occurring on that track. To the right is a menu with some choices about how to randomise the polyrhythmic grids, choosing only powers of 2 or 3, even, or odd values.
- MAXIMUM STEPS The maximum grid size that randomise can create.



BLOCKS

BLOCKS is the most recent addition to our Beat Tools collection, and basically works by setting up a number of beats (BLOCKS, 4 by default), which can be further subdivided into smaller rhythmic units (16ths by default).

The LENGTH setting at the far right determines how many beat blocks will be in each part, and the SPEED decides how fast those blocks will play. Both LENGTH and SPEED will all change together if you hold down the ALT or OPTION key while scrolling.

The division of each beat block can be increased or decreased using the plus or minus keys at each end of the block.



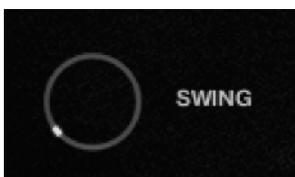
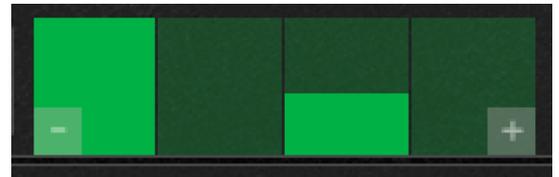
Again, if you use ALT or OPTION when increasing or decreasing the block subdivision, all the blocks on that channel will change together.

You can draw in each block table to create a drum note, and the height is of course the velocity of that note. If you use VELOCITY QUANTISE, at the bottom left, all entered notes will be quantised to off, normal, or accent velocity.



At the left you can choose the drum the channel is routed to, and whether that channel is off or on.

If you enable the CHANCE view, at the bottom left, all the tables turn to a green colour. By default all hits have a 100% chance of playing, but you can lower the chance of any hit by lowering this value.



You can adjust the SWING at the bottom left, and export MIDI using the DRAG NOTES symbol at the top right.



The number of bars to include in the MIDI export is set at the top, beside EXPORT BARS, and you can import and export BLOCKS patterns in it's own format using the two import and export icons to the right of that.



SUPPORT

If you have any problems or questions relating to the use of this product, please feel free to contact us. You can email us at :

<http://www.soniccouture.com/en/support/>

We will always endeavour to reply to any enquiry within 24 hours. We are based in the UK, so please bear in mind differences in time zones.

While you are waiting, you will find lots of answers to common questions in our FAQ.



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