



PAN DRUMS  
USER GUIDE

Soniccouture

SONICCOUTURE

# PAN DRUM

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# INSTALLATION

Keep the entire “*Pan Drum Kontakt EXS*” folder anywhere you like on your hard drive. Make sure you keep that folder structure as it is, so that the Kontakt instruments can find their samples.

If you do not own Kontakt 5, you will need to download and install the free Kontakt player which you can do here [Kontakt Player Download Link](#)

## ADD THE LIBRARY AND AUTHORIZE IN KONTAKT

1. In Kontakt or Kontakt Player open the Browser on the left (the folder icon at the top).
2. In the Libraries tab at the top of the Browser go to "Add Library"
3. Click and use the dialogue window to navigate to and point Kontakt to the location of the *SC Grand Marimba* / **Library** / folder. This will add it to the Kontakt Library list AND to the Service Center.
4. If Kontakt asks you to Activate the library, the *NI Service Center* program will launch and you will need your serial number to authorize *Marimba*.

If Kontakt *doesn't* ask you to authorize, you can force it to by clicking the little "Activate" button in the upper right corner of our Grand Marimba Library logo, in the Browser/Libraries list. It will then prompt you to launch the Service Center.

You will find your serial number in the email you were sent when you purchased, or in your personal account My Products section on [soniccouture.com](http://soniccouture.com)

After authorization, you should restart Kontakt.

# PAN DRUMS

The Pan or Hang Drum is a relatively new musical instrument, the first one being built in 2000. It was designed in Bern, Switzerland, by Felix Rohner and Sabina Schärer of the PANArt company, and was the result of many years of research into the Caribbean steel pan and other resonating percussion instruments. Each Hang Drum is built by hand and is unique.



*Ding Side*



*Gu Side*

A Hang consists of two hemispheres of hardened steel, which are joined together giving it a flying saucer shape. The top side is known as the Ding and the bottom known as the Gu. The Ding side has seven or eight 'dimples' or 'tone fields' that are struck to provide the different notes of the instrument. These are arranged around a central boss (also called the Ding) which provides the basic root note of the instrument. The Gu side has a large hole, and can also be played as a drum, although it has only one pitch.

The word "Hang" is from the Bern language and means "hand", and the Hang is usually played with the hands. It has a very wide dynamic range and can produce a variety of sounds, sometimes resembling a gong or vibraphone, as well as its ancestral steel pan.

Soniccuture Pan Drums features samples from the first 2 models of Hang which we will refer to as the Mk 1 and Mk 2. The Mk 1 had 8 "tone fields" around the Ding. These were available in 45 different tunings, and PANArt produced nearly 4000 of them.

At the end of 2005 PANArt ceased production of these instruments and began developing the Hang Mk 2. The Mk 2 remained basically the same shape but now had a brass coating on the top hemisphere as well as around the rim. The Mk 2 comes in only five

different tunings and has only seven “tone fields” around the Ding. It is a more sturdy design, stays in tune better over time, and has a slightly longer and purer sonic ring.

Hang Mk1



Hang Mk2



We also sampled two models of the HALO DRUM, manufactured by [Pantheon Steel](#) in Missouri. Kyle Cox and Jim Dusin brought two of their favourite drums for us to record and Kyle played the sampling session himself. The Halo is similar to the Hang, but larger and slightly deeper sounding.



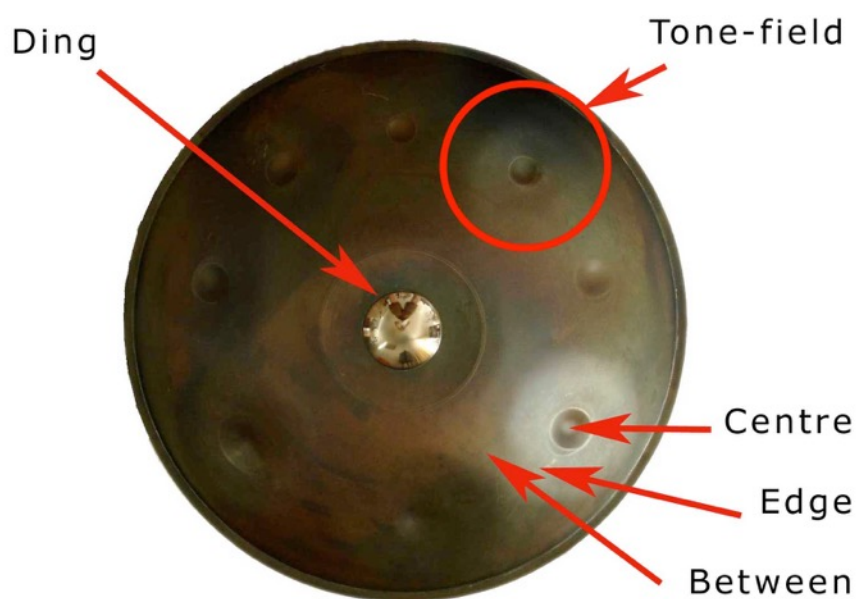
We also recorded pair of [Rock Creek tongue drums](#). These are chromatic and played with mallets.



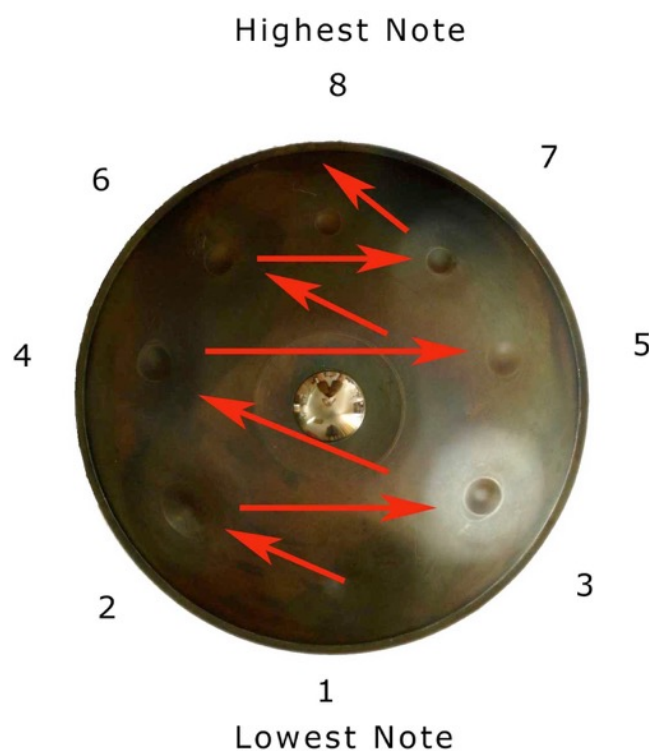
All six drums make up the five basic drum presets in Soniccouture Pan Drums.

## ARTICULATIONS

There are many ways to hit the a pan drum to achieve different sounds... with the fingertips, the palm of the hand, or with your knuckles. Also, where the Hang is struck results in a different type of sound quality. We have sampled our Hang Drums at three different zones around each “tone field”... the centre, the edge, and in-between.



Generally, the Hang is rested on the player's lap with the lowest "tone field" towards him, and the notes are laid out so that a scale alternates left and right hands, as in this diagram of a Mk 1 Hang:



The middle *Ding* note is basically the "key" of the drum, and is the lowest note of the set.



# INSTRUMENTS

## ARTICULATIONS

For the Hang drum marks 1 and 2, each “tone field” was sampled at the centre, the edge, and in-between at up to 21 velocity levels, and with up to three versions of each hit in a round-robin rotation. We also sampled each tone field with the fingers (normal playing), the palm (a “slap”), and with the knuckle. We also sampled some hits on the Gu side, which is a single pitch and sounds similar to an Udu drum.

For the Halo drums we sampled articulations using the Fingertips, the Thumbs, the palm Slap, and Mallets.

The Rock Creeks were only played with mallets, as these are very thick and the sound is not easily generated with the fingers.



## KEY-MAPPINGS

One initial problem was how to map this data onto the keyboard. A Pan Drum is round, and a keyboard is not. We also are aware that some people would like to play the Hang as realistically as possible while others would like to play it chromatically and manipulate it as they would any other set of samples.

To address this, we arrived at a few different types of mapping, which present the same data but arranged differently on the keyboard. You need to find which one works best for you. Don't worry if you prefer to use just one of them, as they all contain exactly the same sample data. The following examples refer to the Hang Marks 1 and 2, but similar layouts are available for the Halo drums as well.

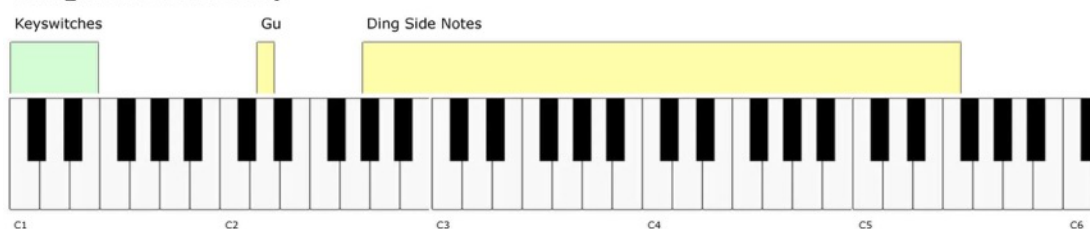
## THE CHROMATIC MAP

This type of mapping is most like a normal keyboard patch, as each note will play the correct pitch for the note that triggered it. It means that some of the samples are being transposed to fill in the gaps between the original notes.

### Hang 1 Chromatic Map



### Hang 2 Chromatic Map



The Chromatic Maps use Keyswitching to switch between the different articulations.

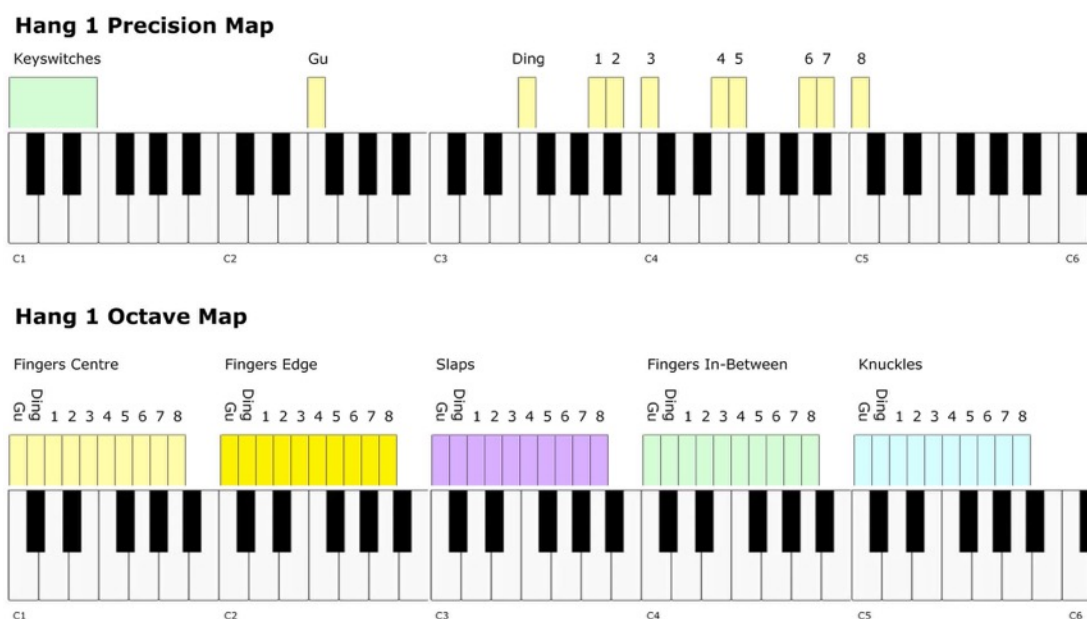
The default keyswitches are as follows:

- C1 = Fingers Centre
- C#1 = Fingers Edge
- D1 = Slap
- D#1 = Fingers In Between
- E1 = Knuckles

The Gu note (reverse side of the Hang) is offered on it's own key below the main set of samples. This note is the key of the instrument at it's original pitch, ie. F for Hang Mk 1 and D for Hang Mk 2

## THE PRECISION MAP

This type of mapping offers just the original notes for each Hang, at the correct note for it's pitch.



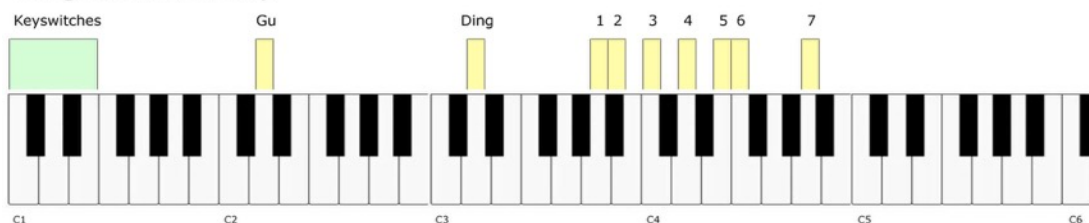
The Precision Maps again use Keyswitching to switch between the different articulations.

The Gu note (reverse side of the Hang) is offered on it's own key below the main set of samples. This note is the key of the instrument at it's original pitch, ie. F for Hang Mk 1 and D for Hang Mk 2.

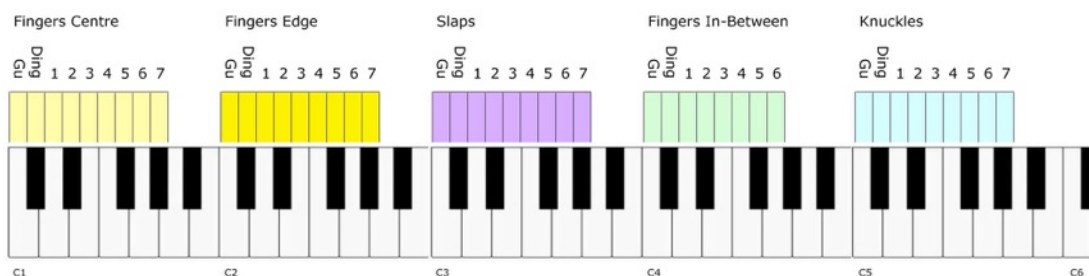
## THE OCTAVE MAP

Some people hate keyswitches, so this is a mapping with no switching at all. In the Octave Maps, each set of original sounds are placed sequentially starting at C, but in a different octave.

### Hang 2 Precision Map



### Hang 2 Octave Map



NB. As with the chromatic map, some of the Gu and Ding notes are copied unaffected to each octave (ie. there is no “knuckle Gu”) This facilitates sequencing, so that there is something for these keys, no matter which octave you transpose to.

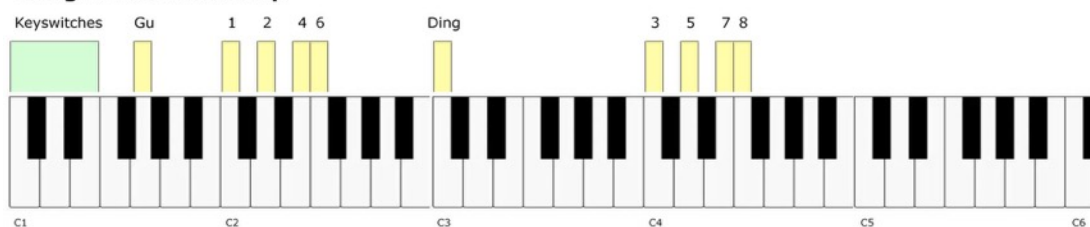
## THE TWO HAND MAP

In the Two Hand Maps, the left and right side of the Hang drum are separated on the keyboard. Hang players naturally play certain notes with their left hand and others with their right hand.

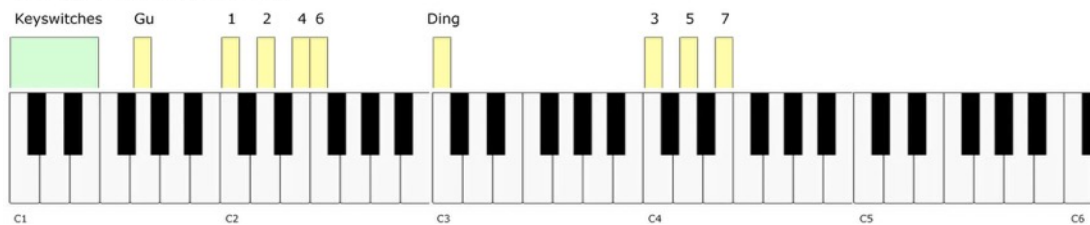
To mimic this alternate hands technique, the left hand notes of the drum are laid out on the left side of the keyboard (from C2), and the right hand on the right side of the keyboard (from C4), with the Ding note in the centre (C3).

The Gu note is placed out of the way on G1. (In real life, a player cannot play the Gu at the same time as the rest of the notes, since you need to turn the drum over.)

### Hang 1 Two Hand Map



### Hang 2 Two Hand Map



The Two Hand Maps use Keyswitching to switch between the different articulations.

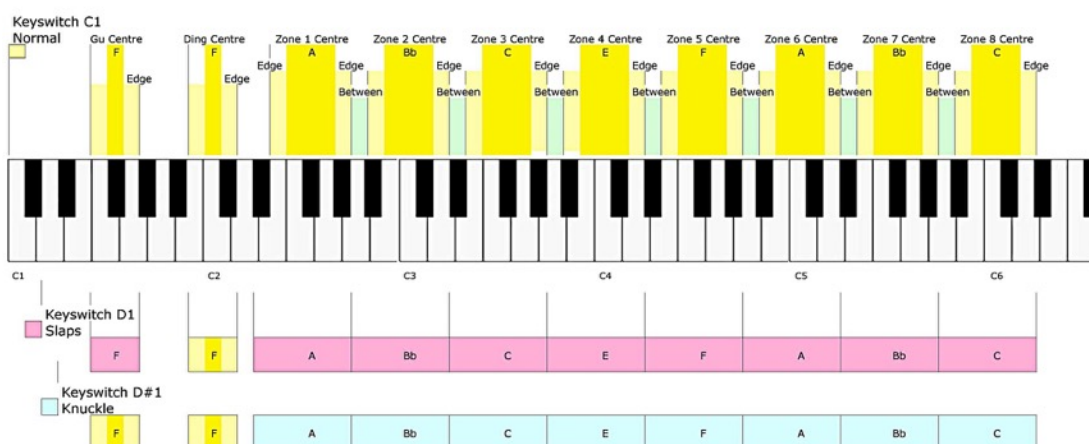
## THE WIDE ZONE MAP

This is a complex map which lends itself to live jamming and random sequencing (see the **Jammer**, coming up).

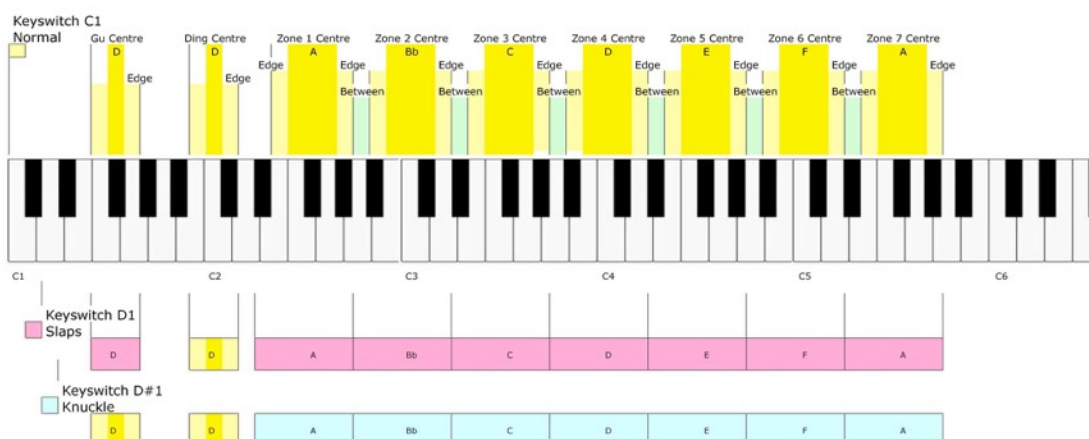
It attempts to “zone” the keyboard so that each “tone field” has an edge, a centre, and an in-between place on the keyboard... as if we unwrapped the Hang Drum and stretched it out into a straight line.

The “centre” points of each “tone field” are separated by 6 semitones, so that they become C, F#, C, F#, etc across the keyboard. As you move either side of the centre points, you reach the “edge” samples, and then finally the “in-between” samples” are between each “tone-field”.

### Hang 1 Wide Zones Keyboard Map



### Hang 2 Wide Zones Keyboard Map



## THE KONTAKT INSTRUMENT

The Pan Drums instrument contains three pages, Jammer, Instrument, and Effects. These are selected with the Kontakt tabs at the bottom of the instrument GUI. The first page is the Jammer, which is a kind of generative arpeggiator. It uses notes you hold down on your keyboard to generate new patterns.

### THE JAMMER



The controls of the Jammer are as follows:

The power button at the top left enables or disables the Jammer. When the Jammer is ON, all throughout of MIDI is disabled, you only hear the output of the Jammer.

The five knobs along the top of the Jammer are global controls, these are:

**MODE** This sets the type of arpeggiation used to create patterns. The original Jammer mode is Random mode, but you can also choose Up, Down, or Up Down, for somewhat more traditional arpeggiator results. This controls how the notes are selected from what you are holding down.

**RATE** controls the speed of the Jammer, this is always related to the tempo of Kontakt or the host sequencer.

**LENGTH** is an offset to the duration of the created notes. In the centre position, the notes are created at the same duration set by the Rate knob, but using LENGTH you can make these longer or shorter.

**VEL OFFSET** adds or subtracts from the velocity of the notes created by the Jammer. Automating this can be useful for creating fades.

**SWING** adds some time to the offbeat notes to give a shuffle or swing feeling to the rhythm.

The next five sliders are controls for the generative part of Jammer, which are essentially randomising various aspects of note generation. These are:

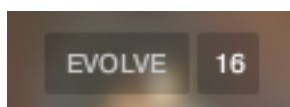
**NOTE** add random offsets to the pitches you give Jammer (are holding down). This is in semitones, so if it's set to "1" the Jammer will output notes plus or minus 1 from the notes you play, as well as the note you play.

**OCTAVE** add random octave offsets to the pitches created by Jammer. This control only ADDS octaves, it doesn't subtract octaves.

**TIME** add random changes to the timing of the Jammer, so that the result is less stable and rhythmic.

**VELOCITY** add random changes to the velocity of the output notes. This always uses the input velocity as a starting point, so if the VELOCITY range is small, it will just add small changes to your input velocity.

**GAPS** add random rests or silent beats into the Jammer sequence.



In the middle of this section you'll see a button titled "**EVOLVE**", with the number 16 to the right of it (by default). **EVOLVE** mode means that the Jammer is working to generate new data constantly, the randomisers are always creating new patterns from your input notes.

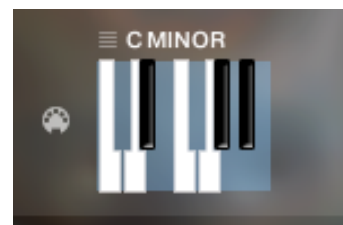
If you click on **EVOLVE**, the button changes to display **LOOP**. Now the Jammer is repeating the pattern it most recently created. The length of this pattern is determined by the number to the right, so by default it repeats the last 16 generated 'notes'.



It's important to remember that the Jammer is not storing the 'notes' themselves, but rather the choice of, and offsets to, the input notes you play into it. So even in **LOOP** mode, the Jammer will output different notes depending on what notes you play. The **pattern** is stored, not the exact notes themselves. This means you can create quite complicated patterns, but play them with any chord or input notes.

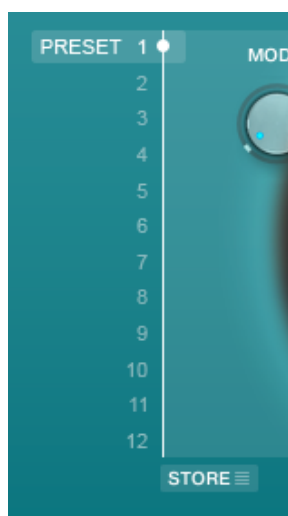
## THE PITCH FILTER

Below the EVOLVE section is a small keyboard that represents a pitch filter. Here you can limit the output notes of the Jammer to a certain key or chord or any selection of notes you like. At the top of the small keyboard is a drop down menu with some popular scales, but you can click on the keyboard directly to allow or disallow any pitch as you like.



You can also use the MIDI input switch on the left of the keyboard to **LEARN** a scale by playing it into the Jammer.

## STORE MENU



This menu lets you store the Jammer setup into any of the 12 PRESET positions (chosen with the large slider on the left).

You can also copy and paste presets to different positions, or import / export patterns between various Soniccouture instruments that have the Jammer.

**DOUBLE NOTES** will trigger two notes on each step, as if you are playing with both hands simultaneously.

## THE INSTRUMENT PAGE



The Instrument page gives you choice of which drum you want to use, with control of articulations, as well as access to a variety of Kontakt's internal sound shaping tools.

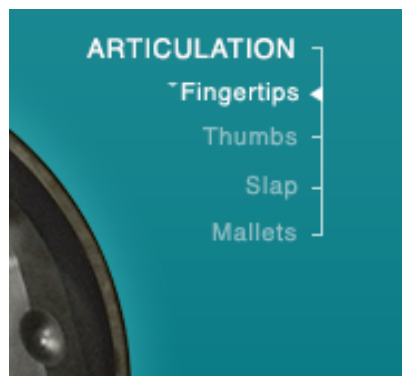
At the top left, the name of the current drum is displayed. This is also a drop down menu so you can choose between either the :

- Hang Drum Mark 1
- Hang Drum Mark 2
- Halo Drum in B
- Halo Drum in C
- Rock Creek Tongue Drum Pair

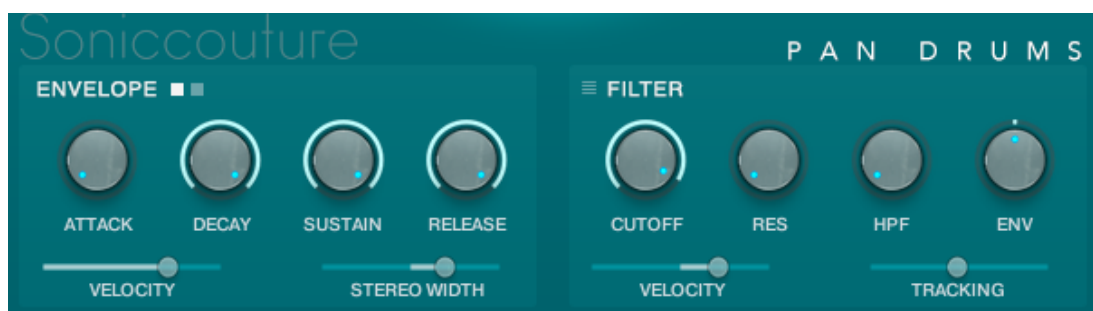
Only the samples of the current drum are loaded into Kontakt to save memory, so there is a moment of silence when loading a different drum.

Below this are two menus with which you can choose the Transposition and Mapping of the current Drum. If you use the Chromatic mode (by default) you probably won't need to use the Transpose menu very often. However, if you are trying to be super authentic and use only original Hang or Halo pitches, the the Transpose menu might be helpful to shift the drum into another key while keeping the original note layout.

On the right side at the top you will see a list of the available articulations in the current drum. The articulations are related to the position in the tone field sampled, or the object used to strike the tone field. These articulations are also switches, so you can select them by clicking on them with the mouse. Keyswitches are assigned using the tiny drop down menu on the left of each articulation. These default to C1, C#1, D1, D#1 ... at the bottom of your keyboard.



At the bottom of the panel are control for the two main envelopes (AMP EG and FILTER EG), as well as the filter itself.



On the left of the main panel you can control the chance and loudness of HANDS, which is the surface noise of hands moving around the drum during performance.

## THE EFFECTS PAGE



The Effects panel gives you access to a wide number of insert effects in Kontakt. You can choose six effects in any order you like on the left, change their order, or randomise them with the DICE icon at the top of that list.

On the right is the SPACE or overall reverb section, in which you have access to some of our favourite impulse responses.

At the bottom you can store effect presets separately from the instrument itself for recall later.

# SUPPORT

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

[support@soniccouture.com](mailto:support@soniccouture.com)

or we have a support forum within the KVR Audio community, which can be found here :

[Soniccouture Support Forum](#)

We will always endeavour to reply to any enquiry within 12 hours, but do bear in mind the differences in time zones.

# E.U.L.A.

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