PAN DRUM
SONICCOUTURE

live

USER GUIDE

SONICCOUTURE

PAN DRUM

CONTENTS :

INTRODUCTION

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 it's ancestral steel pan.

Soniccouture Pan Drum 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
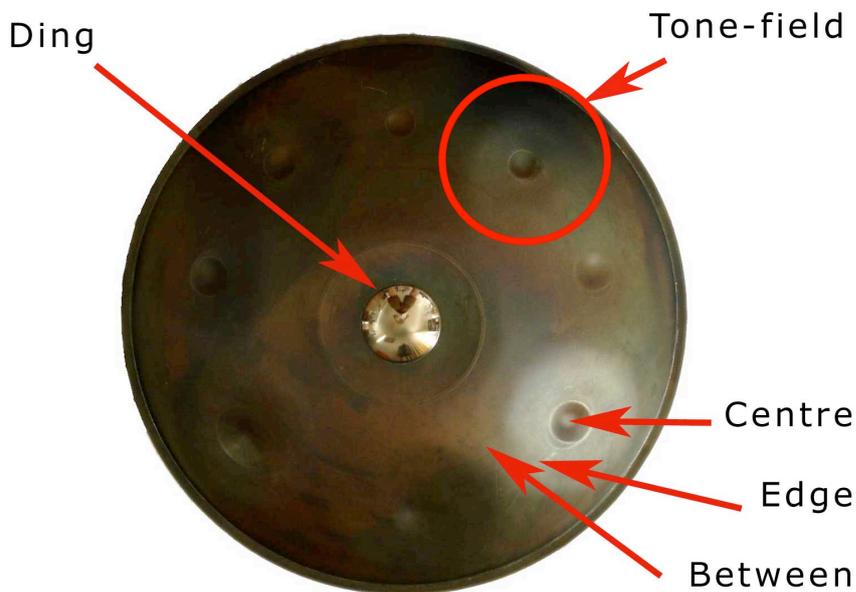
the top hemisphere as well as around the rim. The Mk 2 comes in only five different tunings and has only seven "tone fields" around the Ding. It is a more sturdy design, stays in tune better over time, and has a slightly longer and purer sonic ring.
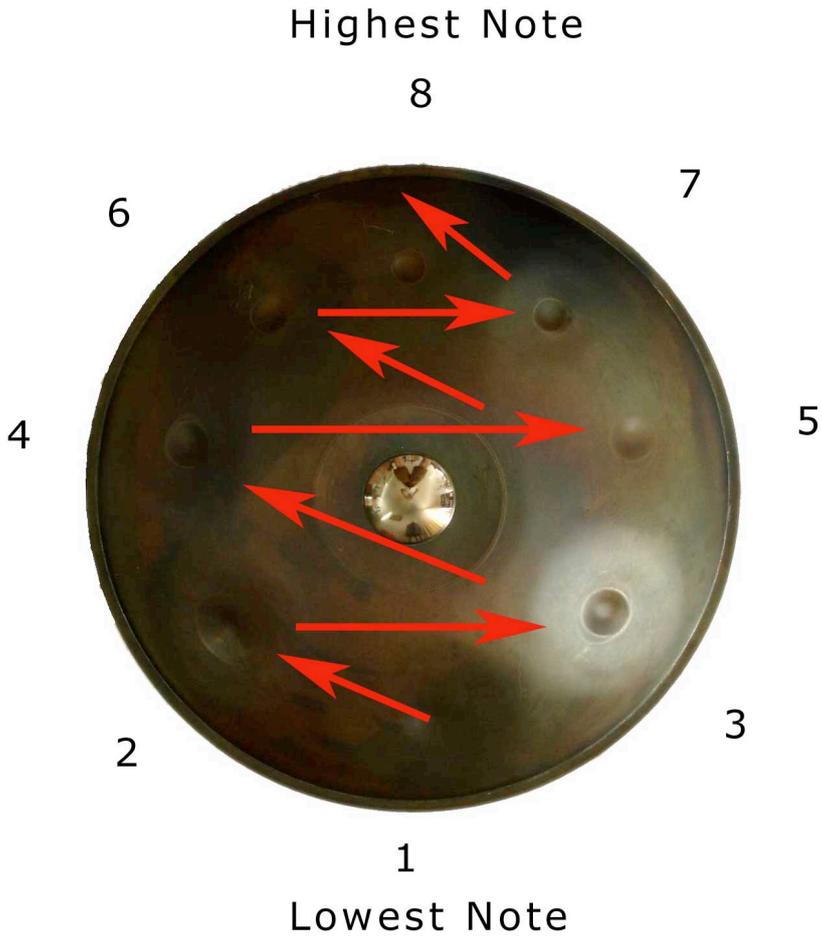

Hang Mk1   Hang Mk2

There are many ways to hit the Hang 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:

Including the *Ding* note in the middle, a Mk 1 Hang has nine possible notes, and a Mk 2 has eight possible notes.

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

INSTRUMENTS

SAMPLING THE HANG -

ARTICULATIONS, VELOCITY & ROUND-ROBIN

Each Hangs' "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 have 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.

This resulted in rather a lot of data, but we feel this provides a wealth of possibilities and a natural sounding instrument. Although the Hang only produces a few notes, it's expressiveness comes from it's dynamics and variation in tone quality.

KEY-MAPPINGS

One initial problem was how to map this data onto the keyboard. The Hang 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 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.
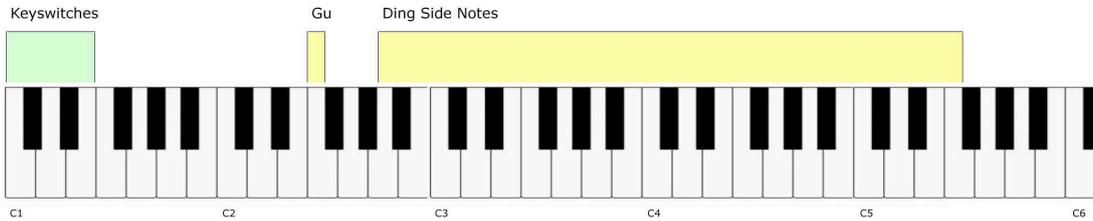
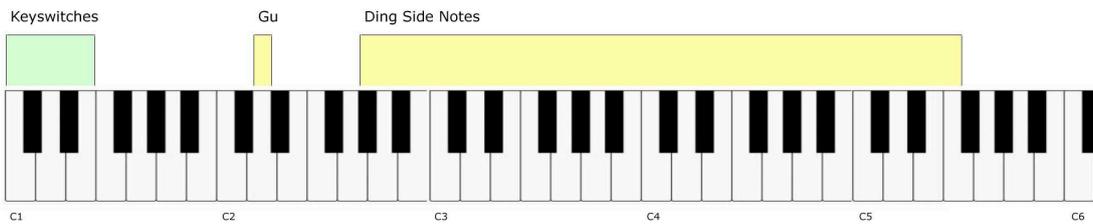The drums are originally tuned as follows:

Hang mk1   *Hang mk2*

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

Keyswitches   Gu   Ding Side Notes

C1   C2   C3   C4   C5   C6

Hang 2 Chromatic Map

Keyswitches   Gu   Ding Side Notes
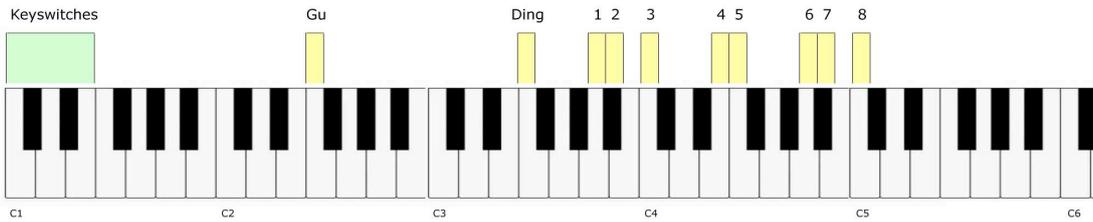
C1   C2   C3   C4   C5   C6

The Chromatic Maps use the **Strike** macro knob (see 'Instrument Racks' section later on) to switch between the different types of sample.

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.
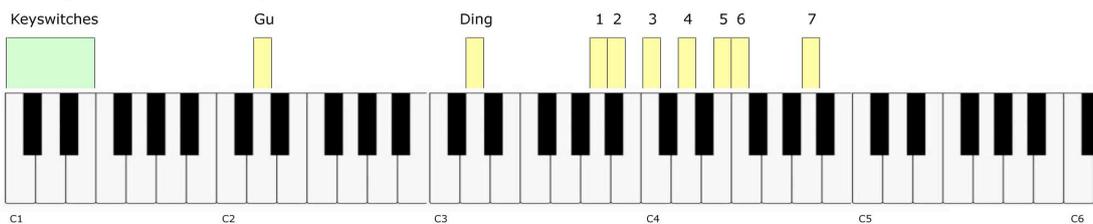
THE PRECISION MAP

This type of mapping offers just the original notes for each Hang, at the correct note for it's pitch.
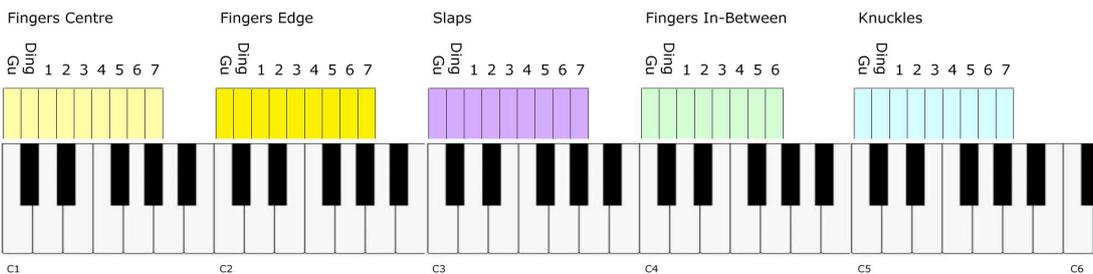
Hang 1 Precision Map

Hang 2 Precision Map

Again, you can use the **Strike** macro knob (see 'Instrument Racks' section later on) to switch between the different types of sample.

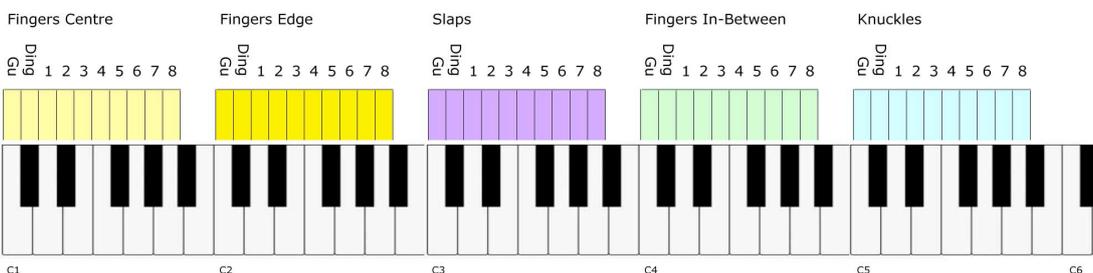# THE OCTAVE MAP

Some people hate switching the articulation sound using a knob, 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.
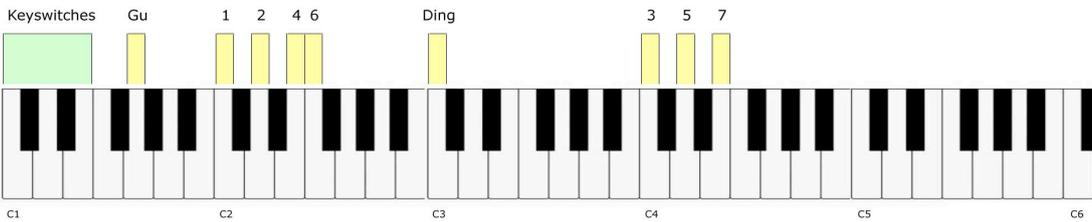
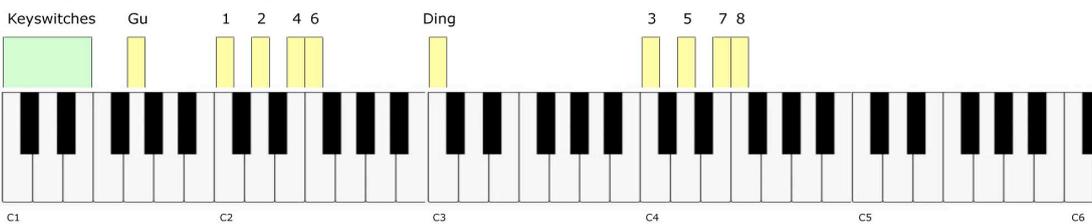**Hang 2 Octave Map**

Hang 1 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

Hang 2 Two Hand Map

Hang 1 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.

To mimic this alternate hands technique, the left hand notes of the drum are layed 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.)

Again, you can use the **Strike** macro knob (see 'Instrument Racks' section later on) to switch between the different types of sample.
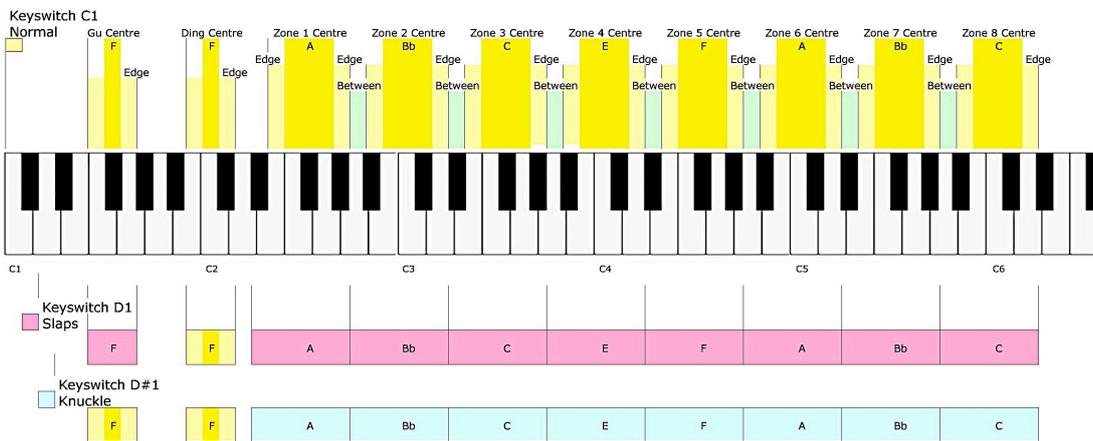
THE WIDE ZONE MAP

This is a complex map which lends itself to live jamming and random sequencing (see the **Jammer** macro knob, coming up).
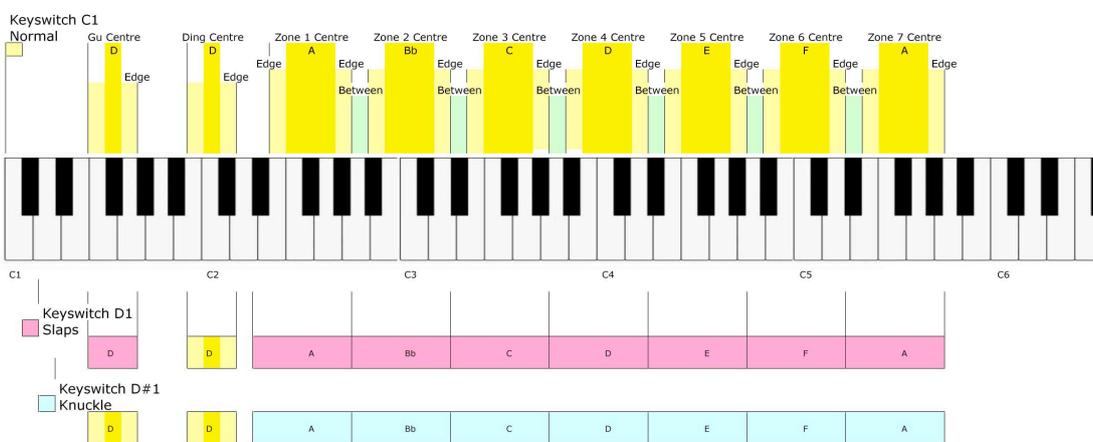
It attempts to "zone" the keyboard so that each "tone field" has an edge, a centre, and an in-between place on the keyboard... as if we unwrapped the Hang Drum and stretched it out into a straight line.

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 **Strike** macro knob is used to switch between the Slap (D1) and the Knuckle (D#1), and the normal layout.

THE LIVE INSTRUMENT RACKS

You will find the Pan Drum Instrument Racks in the Instrument Racks/ Soniccouture folder.

MACRO CONTROLS

- **Jammer** - *This is a random arpeggiator which will generate Hang sequences based on the notes you play.*
- **Shaper Drive** - *A saturation effect to add body to the sound.*
- **Attack** - *Adjusts initial transient of the amplitude envelope.*
- **Decay** - *Adjusts how long the note decays. For the most natural sound, leave it set to full.*
- **Strike** - *This allows you to choose from the different types of hit on the Hang. When set at 0 you are playing the finger hits, then as you move the knob it steps through the Slap and Knuckle hits.*
- **Filter Type** - *Switches between HP, LP and BP filter types.*
- **Cutoff** - *Adjusts frequency of selected filter.*
- **Reso** - *Adjusts amount of boost around filter cutoff frequency.*

PAN DRUM SFX PRESETS

Also included is a folder of creative sound design patches for the Pan Drum sample set. Generally we have used the chromatic mapping for these

presets, as realism is not the main concern. The macro setup varies for each preset, using controls that are appropriate for the effects and processes used.

SFX PRESETS:

- **Pan Drum Delay Jammer.adg**
- **Pan Drum Grainy Knuckles.adg**
- **Pan Drum Inside Out.adg**
- **Pan Drum Islander.adg**
- **Pan Drum Long Fluttery Tails.adg**
- **Pan Drum Lost Plaza.adg**
- **Pan Drum Outside In.adg**
- **Pan Drum Space Bubbles FX.adg**
- **Pan Drum Spatial Bubbles.adg**
- **Pan Drum Spatial Chamber.adg**
- **Pan Drum Speaking Pans.adg**
- **Pan Drum Sprinkler.adg**

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 :

livesupport@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, so please be patient!

E.U.L.A.

END USER LICENSE AGREEMENT

PREFACE: This End-User License Agreement ("EULA") is a legal agreement between you and Soniccouture LTD for the Soniccouture product accompanying this EULA, which includes computer software and may include associated media, printed materials, and online or electronic documentation ("Software"). By installing, copying, or using the software, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this EULA, you may not use the software.
The software is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The software is licensed, not sold.

Soniccouture Ltd grants the Owner of a Soniccouture product the right to create finished musical works and performances using the sounds and software that comprise the Soniccouture product.

The making of sample libraries in any form, commercial or otherwise, using Soniccouture audio or software (be they single hits, loops, fully mixed audio clips, or scripts) is STRICTLY FORBIDDEN without express written agreement of Soniccouture Ltd, and violations will be prosecuted to the full extent of international and local copyright law.

The ownership of all title and copyrights in and to the Software (including but not limited to any images, photographs, animations, video, audio, music, text, and "applets" incorporated into the Software) is fully asserted by Soniccouture Ltd.

The Owner may only install and use Soniccouture libraries and software on multiple computers strictly under the following conditions: where multiple computers comprise part of a single composition workstation for a composer; or where the Owner has two non-concurrent sites of work, for example a studio desktop and a laptop for live performance.

The Owner may not transfer, modify, rent, lease, loan, resell, distribute, network, electronically transmit or merge the Software.

DISCLAIMER OF WARRANTY: The software is provided "as is" and without warranty of any kind. The entire risk arising out of the use or performance of the software and documentation remains with user. To the maximum extent permitted by applicable law, Soniccouture further disclaims all warranties, either express or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the software, and any accompanying hardware. To the maximum extent permitted by applicable law, in no event shall Soniccouture be liable for any consequential, incidental, direct, indirect, special, punitive, or other damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of this EULA or the use of or inability to use the software, even if Soniccouture has been advised of the possibility of such damages.