Sheng Khaen Sho
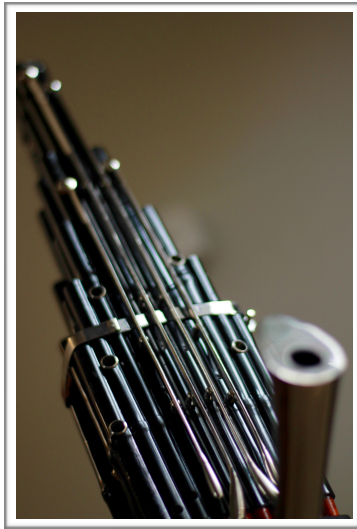
User Guide

Soniccouture

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LIBRARY SPECIFICATIONS

- Three instruments: Chinese Sheng, Laotian Khaen, and Japanese Sho
- 24 bit 96 kHz sampling, dynamic modelling
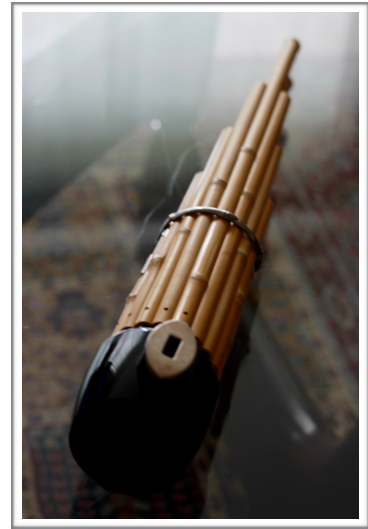- 3 GB with NCW compression

SHENG KHAEN SHO

Sheng

Khaen

Sho

The Chinese Sheng, Laotian Khaen, and Japanese Sho are three very similar instruments. All three are constructed from bamboo pipes and are "free reeds" in that small metal reeds are fixed at one end. (Western "free reed" instruments include the accordion and the harmonica.) The performer blows into the central chamber to provide pressure to the instrument. Covering a hole in a pipe allows air to pass and vibrate that reed so the pipe will sound. Each pipe makes a single pitch, but as many pipes can sound at once these instruments are polyphonic.

Just like on a western mouthorgan, the performer can both inhale and exhale to create pressure. By controlling his breath the player can keep an almost endlessly sustained sound, characteristic of traditional Japanese Sho technique, or use breathing to create quick rhythmic pulsing, a characteristic of typical Khaen performance.

These instruments all share a common ancestor, and the earliest record of Chinese free reed instruments date from the 14th century B.C. The instrument was introduced to Japan from China in the 8th century AD and became a primary woodwind in the court *Gagaku* ensembles of the Heian period.

Today these instruments differ in several ways.   The Sheng is the most technically developed instrument, with metal keys and a fully chromatic tuning.   Modern Sheng actually come in various sizes including some very large bass instruments, but for this library we sampled a standard alto instrument with 30 pipes.   The Khaen has the longest pipes in our collection, but is also the most "rustic" of the three and lacks the finesse and sensitivity of the other two.

The Sho is the smallest of the three and has a the highest pitch register.   Although the Sho was traditionally used in the ancient gagaku ensembles of Japan, there has been a rediscovery of the instrument in modern times with new pieces being written for the instrument by such composers as John Cage, Toru Takemitsu, and Alan Hovhanness. Björk used Sho as a primary instrument in the music to her film *Drawing Restraint 9*.

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THE KONTAKT INSTRUMENTS

BUILT-IN HELP

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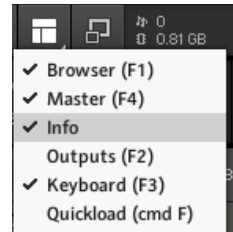
PAGE NAVIGATION

There are three main tabs in our instruments, which you select at the bottom of the display: Microtuning, Sheng, Effects.

Furthermore many edit controls on the main tab have two pages, selected with the "double square" button at the right end:

THE MAIN EDIT PANEL

The three instruments have a similar main editing panel with a few significant differences. These differences primarily concern the bottom section, BREATH, since each instrument has some distinct features there, so let's discuss this first.

BREATH PRESSURE

Both the Chinese Sheng and Japanese Sho are extremely dynamic instruments, so breath pressure is a primary source of their expressive capability. We've dynamically modelled these instruments so that you can use a controller to recreate the breath pressure, taking the instrument from silence to full volume smoothly, without re-triggering the note or distinct dynamic steps. The large central PRESSURE knob at the bottom can of course be set with your mouse and left alone, but we encourage you to assign a MIDI controller to it and make that part of your Sheng and Sho programming technique, it will greatly enhance the realism of the result. By default the PRESSURE knob is mapped to the Mod Wheel, CC1.

BREATH DIRECTION

To the left of the PRESSURE knob is the breath direction switch, marked EXHALE in the previous screenshot. We sampled all the instruments both inhaling and exhaling, and the sound is slightly different in each direction.   Usually you won't set this switch with the mouse, but rather use automatic breath direction switching or else the assignable breath direction key switches. (See BREATH SETUP section below.). The direction keyswitches are set to default at C2 and D2 and appear read on the Kontakt keyboard display or on your NKS keyboard.

KEY NOISE

Sheng and Khaen both have a KEY NOISE adjustment to the right of the PRESSURE knob. This controls the volume of finger noise on the instrument.

KHAEN BREATH AND DRONE

The Khaen instrument does not have a PRESSURE knob.   The Khaen is physically much larger than the other two instruments, and requires much more air to create a sound. Typical Khaen playing therefore doesn't involve as much sustained breathing technique and is usually much more aggressive, breath rhythms and dynamic accents being characteristic instead.   There are two dynamic levels sampled here, and you can adjust the velocity split point of the two on the BREATH SETUP page.

Another characteristic of Khaen performance is the holding down of drone notes or chords and moving the melody around that.   To make this easier to imitate on a MIDI keyboard we've added a DRONE feature.   Essentially when the DRONE is on, the notes of the drone will always be triggered along with the notes you play, allowing you to concentrate on playing the melody.   You can change any of the DRONE presets by pressing the RECORD button and entering your own notes.

AITAKE

The Japanese Sho traditionally plays a collection of 11 tone clusters in the gagaku ensemble, known in Japanese as *aitake*, 合竹.


To make is easy to explore these, we have mapped them to the bottom 11 notes, C1-Bb1. As you play, the notes of the current cluster appear to the right of the PRESSURE knob, so if you want you can use these as the basis for some gagaku of your own.

Of course, modern sho players like *Mayumi Miyata* play much more than these traditional chords, but there is something slightly haunting about the ancient clusters.

BREATH SETUP

On page 2 of the breath section you will find BREATH SETUP, which for Sheng and Sho looks like this:
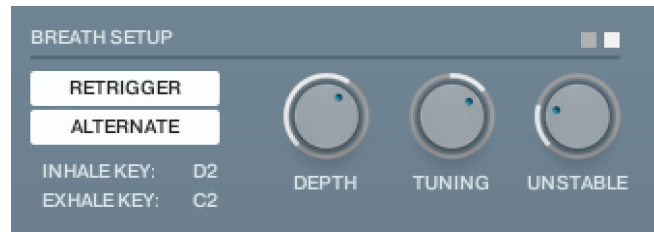
Here you can set the INHALE and EXHALE keys, which will display red in NKS and on the Kontakt keyboard.

RETRIGGER will tell the instrument that when you press the INHALE or EXHALE keys you also want to retrigger the notes that are being held down. This is very handy for Khaen for example, since you often want to hold down a chord and simply breath in and out to create a rhythm.

ALTERNATE tells the instrument to automatically change direction if all keys are lifted from the keyboard.

In Sheng and Sho, you will also see three knobs here, DEPTH, TUNING, and UNSTABLE.

DEPTH adjusts the volume range of the PRESSURE knob.

TUNING adjusts the difference in pitch between the INHALE and EXHALE samples. This is typically quite subtle, but definitely one of the main audible clues to inhale and exhale.

UNSTABLE adjusts the amount of random wobble to the pitch and pressure.

VIBRATO

In Sheng and Sho, the section above the the BREATH PRESSURE section is the VIBRATO section. Here you can set up a vibrato controller to modulate the PRESSURE in real time. You can set the basic RATE of that vibrato, and the DEPTH and RATE modulation that the vibrato controller will introduce.   The controller is chosen at the right, and is set to AFTERTOUCH by default.

It's important to understand that VIBRATO is a bit different from a simple LFO. Here the modulation is added directly to the PRESSURE amount, and you can see the depth of that modulation at the outer edge of the PRESSURE knob display.   By modulating the PRESSURE, we imitate the vibrato of a real player, and the timbral modulation of the pressure changing, rather than simply modulating the volume or filter.

There are also simple LFO routings available for standard synthesis voicing, these are on page 2 of this section in the Sheng and Sho instruments.

OTHER EDITING PARAMETERS

The top section of the main panel is the ENVELOPE editor.   Here you can edit the ATTACK and RELEASE of the amplitude envelope, as well as VELOCITY to volume, and VELOCITY to ATTACK amounts.   Flipping the page with the double-square on the right you can adjust FILTER ENVELOPE parameters and overall PITCH.


In the FILTER section you have control over the main low pass filter CUTOFF, RESONANCE, a HIGH PASS FILTER, ENVELOPE and VELOCITY depth.   The menu at the far right allows you to choose various options as the main low pass filter.

In the LFO section you can route an LFO to various parameters, as well as choose the LFO waveform and sync with the two menus in the middle.   In Sheng and Sho, the LFO section is found on page 2 of the VIBRATO section.

THE MICROTUNING PANEL
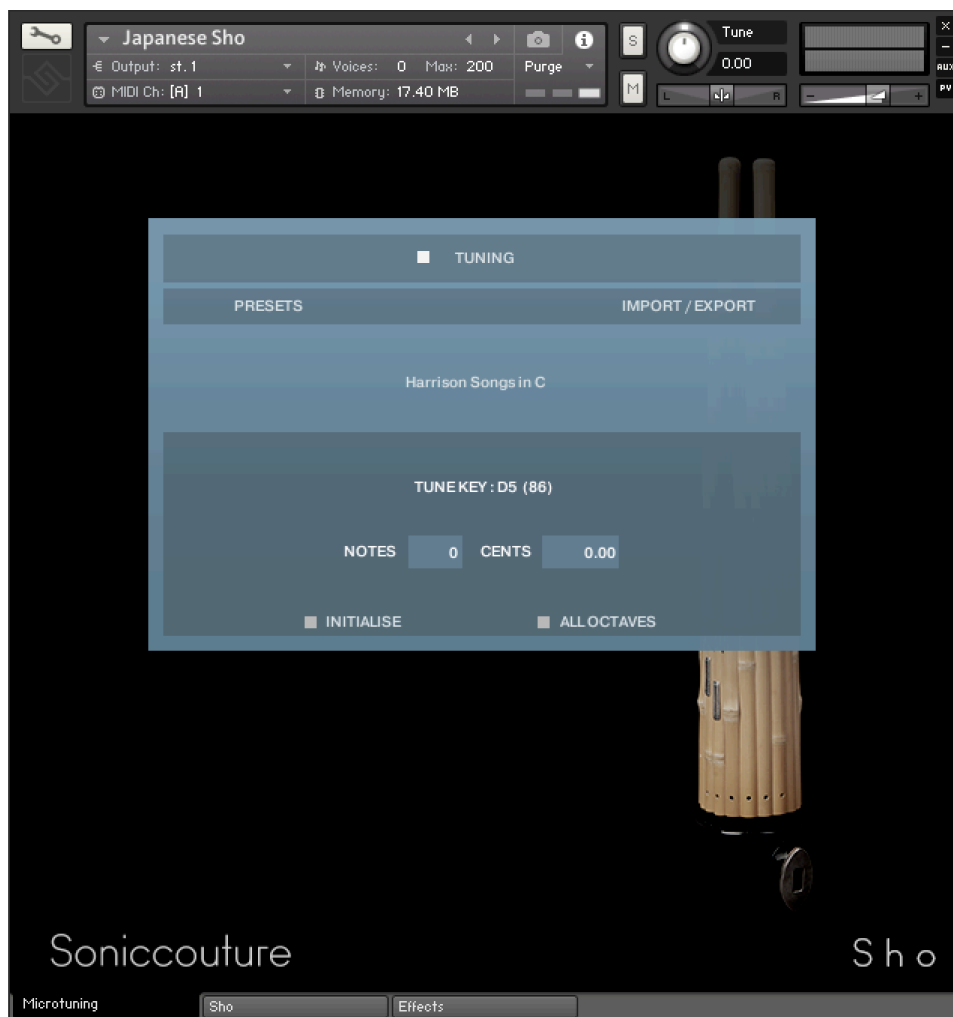
The MICROTUNING panel lets you use alternate tunings with these instruments. To hear the tuning the small switch at the top needs to be ON.

On the top left there is a menu with some tuning PRESETS. And on the top right you can IMPORT or EXPORT tunings to and from other Soniccouture instruments.

To edit the tuning, you can play any note and it will be displayed as the current TUNE KEY. You can adjust the semitones (NOTES) and cents (CENTS) offset to that input pitch.

ALL OCTAVES lets you adjust all octaves of a given pitch at once. INITIALISE sets the tuning back to equal temperament.

THE EFFECTS PANEL

The Effects panel lets you configure up to six INSERT effects however you like, as well as a SPACE convolution reverb on the right.

The INSERT effects are selected with the large button displaying their name, and the selected insert's controls will appear to its left. The small square switch to the select button's right turns the effect on or off, and the menu below that lets you choose a different type of effect.

INSERT effects are in order of top to bottom. If you select an existing effect with the menu, the POSITION of those inserts will be swapped.

The small dice at the top of the INSERT list will randomise all the effect selections.

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 :

support@soniccouture.com

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.

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