SHO

VIRTUOSO JAPANESE SERIES

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Sonica Instruments

# SHO

Virtuoso Japanese Series

# User's Manual

Thank you for purchasing **SHO**, part of Sonica Instruments' Virtuoso Japanese Series. We hope you fully enjoy **SHO**, which has been designed to achieve the ultimate in authentic Japanese sound.

Sonica Instruments Team

# Introduction

## What is the *sho*?

The *sho* is free reed musical instrument and one of the three primary woodwind instruments used in gagaku court orchestra music. It consists of 17 slender bamboo pipes with an overall length of 40 to 50 centimeters. Shape of the instrument is said to resemble a resting phoenix, and in antiquity, its fluid tonal character was associated with light shining down from the heavens. The sho has hardly changed in shape or tone since the Asuka Period (550-710 CE), and it is still one of the central woodwinds in gagaku music today.

Fifteen of the 17 pipes are fitted with a shita, or reed, at their base. Exhaled and inhaled air vibrates the reed, producing sound, while the respective pipe's fingering hole is covered. One characteristic of playing the *sho* is that it produces the same tone whether exhaling or inhaling, allowing for long extended, unbroken tones.

The *sho* is played with single tones, called *itchiku*, when accompanying a singer and with chord-like tone clusters, called *aitake*, when playing in an ensemble. Both produce a space with beautiful, enfolding tones.

## Virtuoso Japanese Series
## SHO

Sonica Instruments developed this library to reproduce, with as much realism as possible, the magic of the *sho*.

The renowned *sho* performer Ko Ishikawa assisted with the recording sessions. He generously provided us with exquisite performances of the ever-changing sound of bamboo, from graceful and alluring long tones to the wildest sounds.

Through uncompromising recording and Kontakt programming, we have crafted **SHO** to be the closest software instrument ever to the real sho tones of light descending from the heavens. We encourage you to try **SHO** with all kinds of music.

Above all, it is our intention to respect Japanese instruments and performers. One of our hopes is that **SHO** users will become better acquainted with the charm of the real *sho*.

## Product highlights

***24 bit, 96 kHz multi-microphone recordings for full-fidelity***
For the recording sessions, we used an array of microphones paired with colorless microphone preamps to capture every nuance of the instrument in full 24 bit, 96 kHz fidelity. (The product itself contains 24 bit, 44.1 kHz samples.) The package comes with four microphone patterns — Direct, Overhead, Room, and Stereo Mix — for mixing versatility.

**Recreating the *sho*'s singular playing techniques with realism necessitated the development of special articulation mechanisms and interfaces**

***Performing characteristic aitake (chords) and itchiku (single tones)***
We recorded 11 chord tones (*aitake*), in which multiple pipes are played simultaneously, and all single tones (*itchiku*), in which just one pipe is played at a time. The interface has been designed to enable independent performance of both chord tones and single tones. The interface also includes independent articulation control.

***Pipe Indicator***
The Pipe Indicator lets the performer see the *sho* pipe arrangement and monitor the current pipes being played. The pipes are labeled with their traditional note names. When one of the eleven chords is played, the traditional chord name appears in the center. And because the Pipe Indicator works in conjunction with the Scale Tuning boxes (described below), it is very useful for monitoring the note of each pipe with notes on the keyboard.

***Key Mode faithfully recreates the instrument's traditional playing feel***

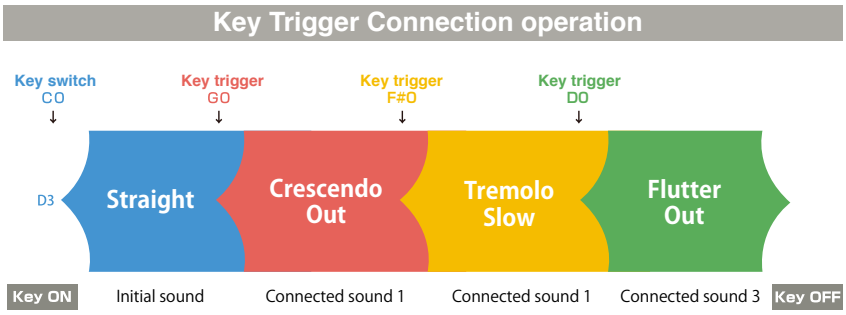
The library comes with two key modes: The Chromatic mode maps the keys to chromatic scale tones, and the Trad. Fingering mode maps one white key to one pipe in a way that recreates the feel of real *sho* fingerings. In the Trad. Fingering mode, placing the fingers of both hands on the white keys is like covering the holes on the pipes. This arrangement not only lets *sho* performers feel at home with the library; it is also a great aid to learning and understanding the instrument.

***Scale Tuning***

Each chromatic pitch across the *sho*'s entire register can be individually fine-tuned. Controls provide easy selection of Pythagorean tuning, used in *gagaku* music, and equal temperament tuning. It is also possible to create and play custom tunings, which can be saved and recalled.

***Key Trigger Connection lets you string together playing techniques on the fly without ever interrupting the sound***

The *sho* is known for its seemingly endless flowing tones modified by breathing techniques that produce a wealth of articulations. Most of the time, articulations are blended from one to another while sustaining the sound. Designed specifically to recreate this playing technique, the Key Trigger Connection lets the performer change between any articulations smoothly and naturally just by hitting the assigned keys while playing.




**Articulations are connected smoothly without interrupting the sound.**

***Expression control adjusts the tonal strength in fine increments***

This function gives control over the tone by adjusting the strength and velocity of the breath. The expression control makes playing a keyboard feel like a wind controller, giving you access to smooth, dynamic breath expressions despite being sample based.

***Blow speed control adjusts the tonal attack***

Any ordinary controller can be used to control the speed of the tone's attack by adjusting the breath speed. When combined with the Expression control, the Blow Speed control unleashes more fluid-sounding performances.

***Polyphonic legato***

Polyphonic legato can be applied with both single tones and chord tones. It is used to gradually add tones while playing or shifting the note value of just one tone in a tone cluster, which are quintessential *sho* playing techniques. Polyphonic legato can be turned on and off instantly with a sustain pedal.

***Rich assortment of sho articulations***

The library contains many articulations recorded with chord tones and single tones: Straight (exhaled tone / inhaled tone), Flutter (exhaled tone / inhaled tone), Sforzando, Crescendo (exhaled tone / inhaled tone), Tremolo Slow, and Tremolo Fast. All are key-switch controlled for highly expressive, real-time performances from your MIDI keyboard. Furthermore, all articulations can be joined seamlessly with the Key Trigger Connection function.

***Ensemble selector adds up to three performers***

*Gagaku* court music is performed with multiple performers on each instrument playing in a thick-sounding unison. The Ensemble selector lets you choose from a solo performer or a two-performer or three-performer ensemble. Additional controls adjust the balance between the soloist and the other performers and the spread of their positioning.

## Notes on Using This Product

Installation
This product is installed using the Continuata Connect Download utility.
Continuata Connect can be downloaded from:
http://continuata.net/download_app.php

To safeguard this product from illegal copying and sharing, each purchase is embedded with a unique, non-removable watermark to track piracy.

Please download and install the library following the instructions in the email you received after purchase.

Product Specifications
Format: Native Instruments Kontakt 5.4 Full or newer (Kontakt Player is not supported)
Data size: 1.58 GB in NCW format (equivalent to 3.15 GB in wav format)

System Requirements
Mac OS X 10.10 or newer recommended
Windows 7, Windows 8, or Windows 10

Intel Core 2 Duo, AMD Athlon 64 X2, or better

A minimum of 4 GB of RAM (6 GB is recommended) is needed on both Mac and Windows systems.

•Native Instruments Kontakt 5.4 or newer (Full version) is required to use this library. (Kontakt Player is not supported)
•Installing the product requires a minimum of 3 GB of free disk space.
•Use the recommended Native Instruments Kontakt system requirements at a minimum.
•Installing the product on a computer with a faster CPU and ample RAM is recommended for optimal library performance.

**Important**: Online user registration is required in order to use the library.

Required MIDI Controllers
With additional MIDI controllers, you can access the full functionality of **SHO** for more lifelike performances.

*Sustain Pedal (CC #64)*
The sustain pedal can be used either to turn polyphonic legato on and off or to enable and disable the Key Trigger Connection function. Polyphonic legato can be applied with both single tones and chord tones and is used to gradually add tones while playing or shifting the note value of just one tone in a tone cluster. Key Trigger Connection lets you change articulations while playing.

*Modulation Wheel (CC #1)*
The modulation wheel adjusts the blow expression, which controls tone volume and color with breath strength.

**Make use of the convenient Quick Reference to SHO (PDF)**
We recommend that you have a look at the included PDF file while you get acquainted with **SHO**. This file gives a quick overview of the distinctive playing techniques of the sho as well as the traditional note and chord names.

# MIDI keyboard layout

**C0〜F1** : Articulation key switch zone

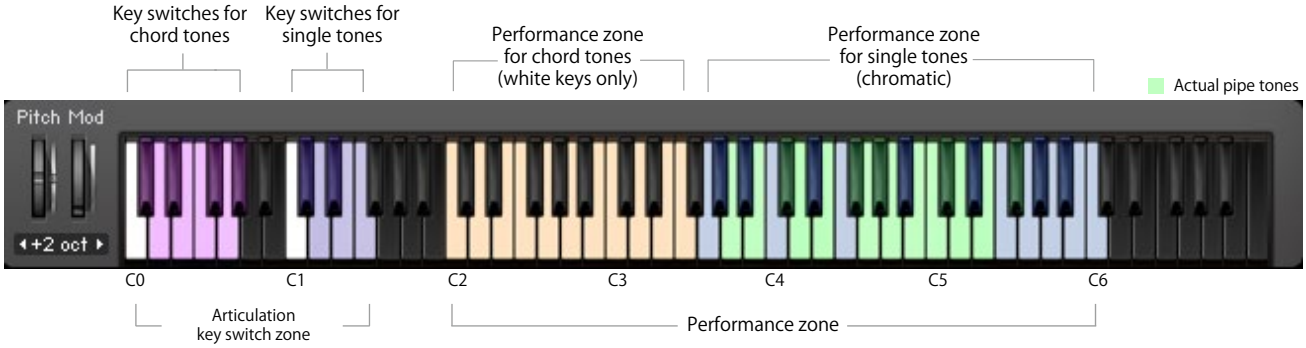
**C0〜G#0** : Articulation key switch zone for chord tones

**C1〜F1** : Articulation key switch zone for single tones

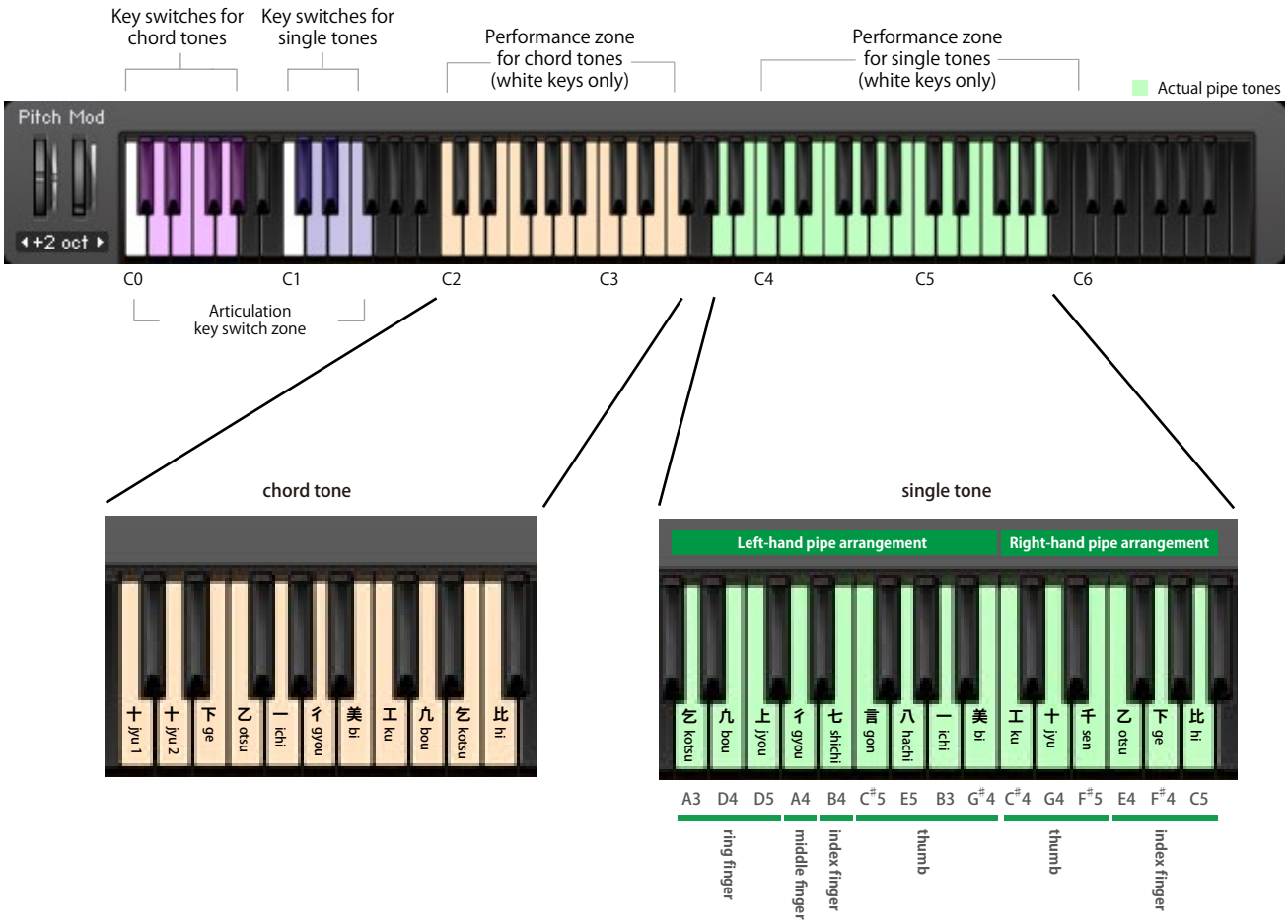
**C2〜F3** : Performance zone for chord tones

**G3〜C6** : Performance zone for single tones (layout varies depending on the key mode and articulation)

### Key mode : chromatic

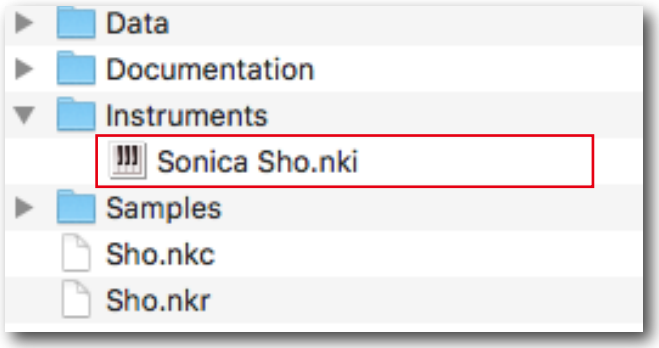



### Key mode : trad. fingering



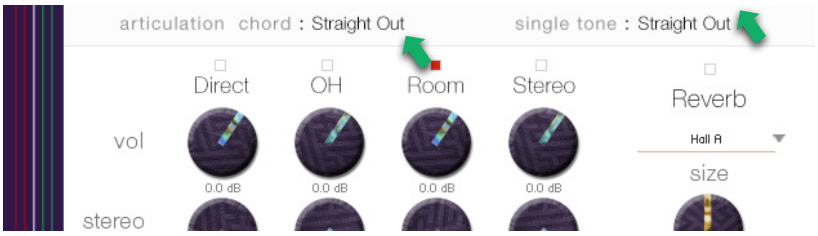
## Loading SHO

To load **SHO**, drag the file *Sonica SHO.nki* from the Instruments folder to the main Kontakt window.




## Articulation Monitor Fields

**chord** **single tone**




The two articulation monitor fields are displayed on all four panes — mix, play, tune, and memory. This lets you see immediately which articulations you have selected with the key switches.

### chord

This field shows the current articulation selected with the key switches for chord tones. You can also check the current key switch on the Kontakt keyboard.

### single tone

This field shows the current articulation selected with the key switches for single tones. You can also check the current key switch on the Kontakt keyboard.

## articulation Articulation List and Key Switch Parameters

### *Chord Tone articulations*

| Key Switch | Articulation Name | Key Trigger Connection |
|---|---|---|
| C0 | Straight Out | On / Off with sustain pedal (CC #64) |
| C#0 | Straight In | On / Off with sustain pedal (CC #64) |
| D0 | Flutter Out | On / Off with sustain pedal (CC #64) |
| D#0 | Flutter In | On / Off with sustain pedal (CC #64) |
| E0 | Sforzando | On / Off with sustain pedal (CC #64) |
| F0 | Tremolo Fast | On / Off with sustain pedal (CC #64) |
| F#0 | Tremolo Slow | On / Off with sustain pedal (CC #64) |
| G0 | Crescendo Out | On / Off with sustain pedal (CC #64) |
| G#0 | Crescendo In | On / Off with sustain pedal (CC #64) |

### *Single Tone articulations*

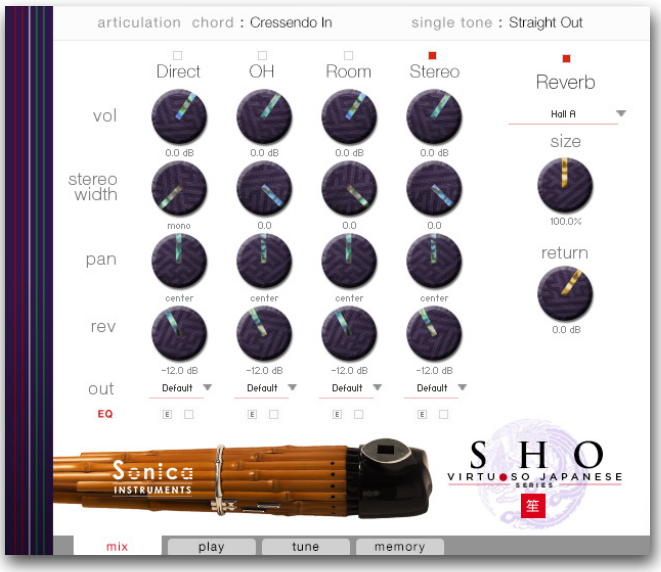
| | | |
|---|---|---|
| C1 | Straight Out | On / Off with sustain pedal (CC #64) |
| C#1 | Straight In | On / Off with sustain pedal (CC #64) |
| D1 | Flutter Out | On / Off with sustain pedal (CC #64) |
| D#1 | Flutter In | On / Off with sustain pedal (CC #64) |
| E1 | Sforzando | On / Off with sustain pedal (CC #64) |
| F1 | Slide-Up | On / Off with sustain pedal (CC #64) |

† Chord tones and single tones can be played simultaneously, and their articulations can be selected with independent key switches.

† All articulations can be joined seamlessly with the Key Trigger Connection function.

## mix

This pane is used for basic sound production.




### Audio Mixer

The audio mixer lets you mix the three stereo microphone positions — Direct, OH (overhead), and Room — and the Stereo Mix channel, which is a balanced mix of the three microphone sources. Note that turning on any of the microphone channels disables the Stereo channel, and turning on the Stereo channel disables all the microphone channels.

**vol** : Adjusts the volume of each channel.

**stereo width** : Adjusts the stereo microphone width of each channel: 100% gives the original stereo width; 0% reduces the width to monaural.
*Note*: This knob does not function for the Direct channel, which was recorded in monaural.

**pan** : Adjusts the left-right panning of each channel.

**rev** : Adjusts the send volume of each channel to the built-in convolution reverb.

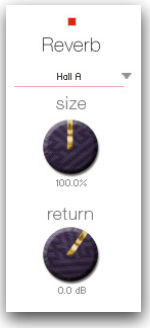
**out** : Selects the audio output of each channel. This is useful when sending multiple channels to your DAW.

*Note*: Please see the Kontakt manual for how to create multiple outputs. After creating outputs, clicking the Restart Engine button (marked with an exclamation mark) at the top right of the Kontakt interface will update the output list under **SHO**'s out control.


**EQ** : Provides a four-band equalizer for each channel. Clicking the left [E] button opens the Equalizer window. Clicking the right button enables or disables the equalizer settings for the corresponding channel.

## Reverb

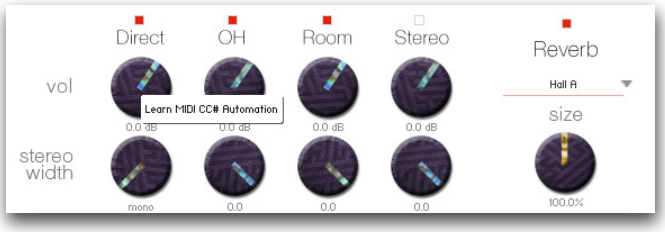
There are 28 convolution reverbs available from the pull-down list.
**size** : Adjusts the reverb time.
**return** : Adjusts the volume of the reverb component.




## MIDI Learn function

All control knobs can be controlled individually with MIDI Control Change (CC) messages.

To assign a **SHO** knob to a certain MIDI controller:
1. Right-click on the knob and select Learn MIDI CC# Automation.
2. Turn the knob or move the slider on your MIDI hardware controller.
3. The assignment is complete.

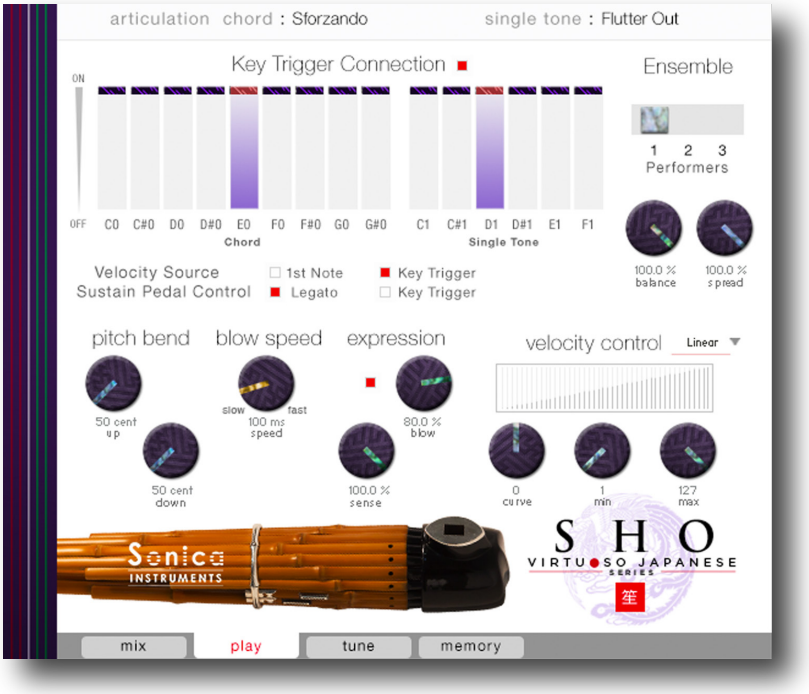


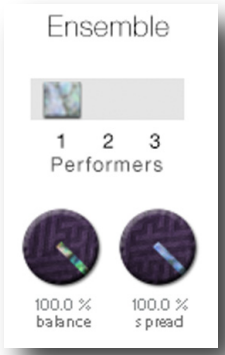

## Removing MIDI controller assignments

To remove an assignment, right-click on the knob and select Remove MIDI Automation: CC# nn.

## play

This pane is used to set performance and tonal nuances in **SHO**.

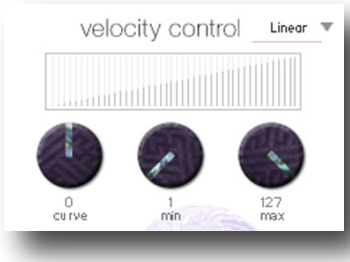



### Ensemble

The Ensemble selector lets you choose from a solo performer or a two-performer or three-performer ensemble as well as adjust the balance between the soloist and the other performers and the spread of their positioning.

**Performers** : Selected from soloist, two-performer ensemble, or three-performer ensemble.
**balance** : Adjusts the balance in the mix of the second and third performer.
**spread** : Adjusts the positioning spread for two-performer or three-performer ensembles.

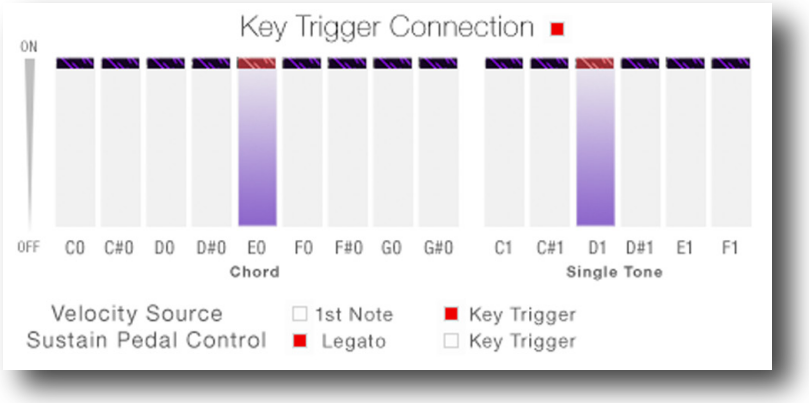



### Velocity Control

**Curve Type** : *Linear, S-Curve, Compound, Fixed,* and *User*

**curve** : Modifies the selected curve.
**min** : Adjusts the minimum velocity of played notes.
**max** : Adjusts the maximum velocity of played notes.

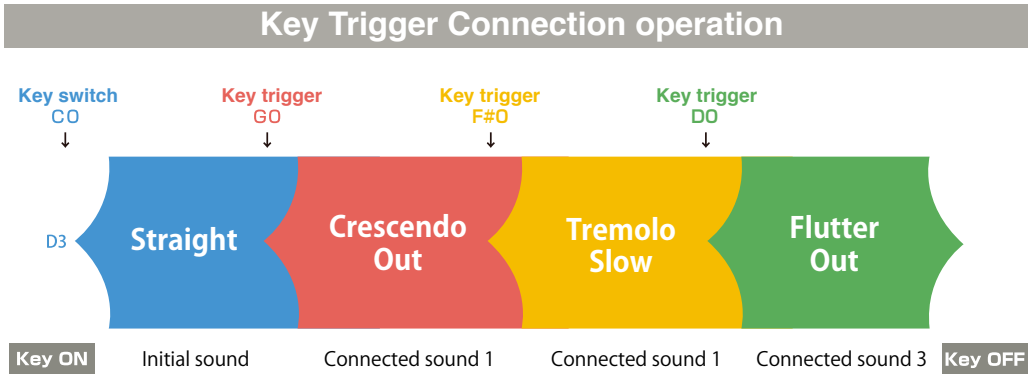
## Key Trigger Connection




The *sho* is known for its seemingly endless flowing tones modified by breathing techniques that produce a wealth of articulations. Most of the time, articulations are blended from one to another while sustaining the sound.

The Key Trigger Connection mechanism was designed specifically to recreate this playing technique. The mechanism outperforms musical expressions created with ordinary key switches by providing much smoother control over articulation changes. Using Key Trigger Connection, you can string together as many articulations as you like while holding down the base note.

The sustain pedal (CC #64) can be assigned to toggle Key Trigger Connection on and off. This is helpful in attaining emotional nuances from the instrument because you can instantly activate the function as needed.




**Articulations are connected smoothly without interrupting the sound.**

### Velocity Source

This control selects the velocity source for articulations connected using Key Trigger Connection.

**1st Note** : Applies the velocity at the initial Key On event to all following articulations.

**Key Trigger** : Applies the *Key Trigger* event velocity to the corresponding connected articulation. Use this setting to add nuance at each articulation connection.

### Sustain Pedal Control

This control selects the behavior assigned to the sustain pedal (CC #64).

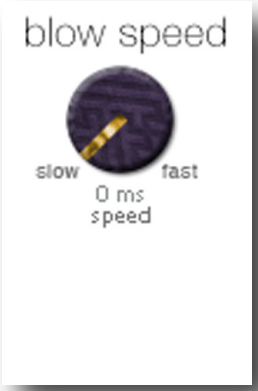
**Legato** : Assigns the sustain pedal to control legato sustain when transitioning from pipe to pipe while playing single tones or when playing additional pipes to add more tones.

**Key Trigger** : Assigns the sustain pedal to toggle Key Trigger Connection on and off.

## Pitch Bend


Provides individual adjustment of the up and down pitch bend ranges.

## Blow Speed




Provides control over the tonal attack by adjusting the breath speed.

## Expression

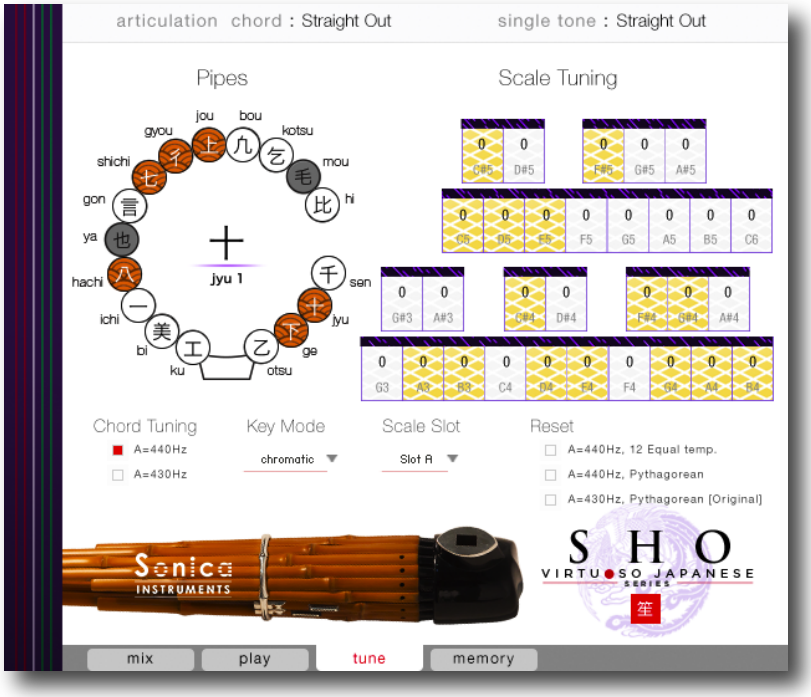

Provides control over the tonal character by adjusting the breath strength.

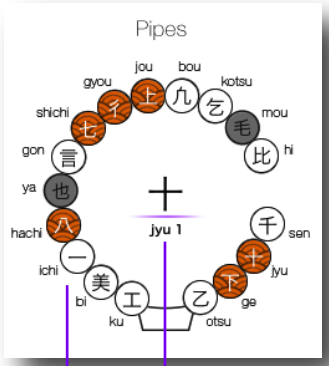
**blow**：Adjusts the breath strength for control over volume and harmonic overtones. Initially assigned to the modulation wheel (CC #1).

**sense**：Adjusts how much of the expression set with the blow parameter is applied.

# Tune

This pane displays the Pipe Indicator and allows for individual fine-tuning of each chromatic pitch across the entire *sho* register. The key mode can also be selected on this pane.




**The traditional chord (*aitake*) name is displayed in the center.**

**Pipe and its traditional name**

## Pipe Indicator

The Pipe Indicator lets the performer see the sho pipe arrangement and monitor the current pipes being played. The pipes are labeled with their traditional note names. When one of the eleven chords is played, the traditional chord name appears in the center. And because the Pipe Indicator works in conjunction with the Scale Tuning boxes, it is very useful for monitoring the note of each pipe with notes on the keyboard.

Clicking on a pipe in the Pipe Indicator will display an indicator above the corresponding Scale Tuning box.

## Chord Tuning

Sets the fundamental pitch of chord tones.

**A=430Hz**
**A=440Hz**

## Key Mode

Provides selection of a chromatic key mapping or a mapping recreating the sho's traditional fingering.

**chromatic**: Maps tones in the ordinary chromatic order, allowing performance of all notes in the chromatic scale — not just the 15 single tones of the pipes.

**trad.fingering**: Maps the 15 single tones to 15 white keys. Tones are mapped in the order of how the pipes are played by the left and right hands.

## Scale Tuning

Provides individual fine-tuning of each chromatic pitch across the entire sho register. Boxes shown in yellow are the pipe's original notes.

Controls provide easy selection of Pythagorean tuning — which is used in gagaku music, and equal temperament tuning. It is also possible to create and play custom tunings, which can be saved and recalled.

## Scale Slot

You can save and load created scales in three slots: Slot A, B, and C.

## Reset

Sets the scale tuning boxes to either 430 Hz Pythagorean tuning — the *sho* tuning used in *gagaku* music, 440 Hz Pythagorean tuning, or 440 Hz equal temperament tuning. You can fine tune each key starting from these tunings.

Resetting will overwrite the currently selected Scale Slot with the reset data.

**A=440Hz, 12 Equal temp.:** 440 Hz equal temperament tuning
**A=440Hz, Pythagorean:** 440 Hz Pythagorean tuning
**A=430Hz, Pythagorean:** 430 Hz Pythagorean tuning

## memory

This pane is used to selectively load samples for all articulations, allowing you to adjust the amount of memory used by Kontakt. Turning off a Load button in the list will disable the corresponding articulation and reduce the size of the library's memory footprint.

The bottom section displays MIDI Control Change number assignments and the sustain pedal's assignment.


**Credits**

Production, Recording, Editing and Kontakt Development: Sonica Instruments
SHO Played by Ko Ishikawa
GUI Designer: Yujin Ono

Executive Producer: Tomohiro Harada
Kontakt Programming: Rataro. M (Think Master Inc.)
Marketing, Translation & Production Consulting: Craig Leonard

Photography: Takashi Matsuda
Music Video: Yoshitaka Koyama
User's Manual: Yoshifumi Yamaguchi (Stylus Inc.)



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