An Impact Soundworks Sample Library for Kontakt

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Version 2.0 – Updated May 8th, 2017

ORIGINAL INTRODUCTION

We created Koto Nation out of a desire to see traditional Japanese instruments receive a deep, thorough sampling treatment, much like our acclaimed North Indian sample library Sitar Nation. While there are a handful of libraries which include samples of the koto and shamisen, they feature only the most basic articulations and few (if any) velocities or round robins. To our knowledge, the bass koto has never been sampled at all! Given the popularity of the shakuhachi and taiko in many Western film soundtracks, we wanted to allow film composers, hobbyist producers, ethnomusicologists, anime fans and everyone in between access to these classic instruments and complete the repertoire of traditional Japanese sounds available.

This library includes nearly 4,000 samples of high-fidelity recordings using two mic positions (Close and Room) spanning a wide variety of both traditional and extended playing techniques. We're confident that this is, without a doubt, the most comprehensive koto, bass koto and shamisen library ever released. We encourage you to take the time to read this manual in its entirety and learn more about the making of the library as well as how to use it to its fullest potential.

Thank you, and please enjoy Koto Nation!

VERSION 2.0 INTRODUCTION

Koto Nation is one of our oldest libraries, and while the sample quality and range of articulations is still outstanding, we felt that its UI and patches could use a total re-design for better usability and convenience. In Version 2.0, we've updated Koto Nation with all of our latest tools like Total Articulation Control Technology (TACT) allowing you to create totally custom mapping and triggering setups, along with easy microtuning, mixing, and FX, all in a single patch per instrument.

INSTALLATION

1. Install the **Pulse** application if you don't already have it. **Pulse** is a cross-platform desktop app that lets you download and install your libraries with blazing speed!

https://pulsedownloader.com/

2. Once **Pulse** is installed, open it and enter your Koto Nation download code. Follow the instructions to download and install the library.

3. Finally, load the included Koto Nation NKI of choice in Kontakt. No activation is needed, as this is not a Kontakt Player instrument.

Optional: Please see our Kontakt workflow tutorial for information on adding instrument files to the faster Quickload window or the Kontakt Database.

INSTRUMENT AND ARTICULATION DETAIL

As you play this library, treat it as a 'living' instrument. We went out of our way to carefully edit each individual sample so that the plectrum attacks, crucial to the realism of koto and shamisen playing, were not lost. So, we encourage you to play parts live on your keyboard to get a feel for each patch. If you must sequence/quantize, you should anticipate notes by 20-50ms (depending on the patch.) This offset can be adjusted in the **Articulations** tab on a per-articulation basis.

Note that all articulations can be **re-mapped**. Please see the TACT section for more details!

Bass Koto - Glissando
A large assortment of tonal, pitched glissandi played with tuning to the Western C scale (C, D, E, F, G, A, B) as well as atonal glissandi.

Bass Koto - Mutes
A short, percussive articulation where the bass koto is picked with a plectrum while the strings are muted. Higher velocities trigger a quick double strike.

Bass Koto - Pizzicato
The bass koto is played in a pizzicato (plucked) style. Compared to the standard pick/sustain articulation, pizzicatos have a lighter attack and harp-like quality.

Bass Koto - Slides
A menu patch containing a selection of various pitched slides along the bass koto strings.

Bass Koto - Sustains
The bread-and-butter articulation of the Bass Koto, featuring unmuted, sustaining picks of each string with several finger plectrums. A rich, deep tone.

Bass Koto - Tonal Hits
A percussive articulation where multiple strings are struck simultaneously, creating a mix of pitches.

Bass Koto - Wood Hits
An unpitched percussive articulation consisting of hand strikes on the wood body of the bass koto at many dynamic levels and with many variations. Each key in this patch contains identical samples and is only mapped out across the keyboard for convenience.

Koto - Atonal Glissando
A series of atonal/microtonal glissandos, performed by running the plectrum across the strings on the opposite side of the movable frets.

Koto - Hard Pluck
One of the koto's strings is pulled very quickly and violently, resulting in a harsh plucked sound. Only one note was recorded for this patch (lower velocities = long pluck, higher = short), so playing notes far from the root of E1 may sound somewhat tinny and digital.

Koto - Harmonics
A beautiful plucked articulation where the koto's strings are lightly held at different points to produce harmonic overtones, similar to how guitar or bass harmonics are produced.

Koto - Hits
The koto's strings are struck very precisely with the fingers, producing a more percussive, rounded attack. This adds some additional harmonics to the attack sound as well.

Koto - Mordents – Slow and Fast

A variation of the normal picked sustain consisting of a quick pitch bend starting at the played note, going up approximately one whole step and then returning back to the original pitch for a sustain.

Koto - Octaves
Also known as *awasezume*, a playing technique where two strings are picked simultaneously one octave apart. Lower velocities are not only softer, but have less upper string resonance, whereas higher velocities bring in the upper octave more.

Koto - Phrases 1 and 2
Contains two prerecorded phrases fundamental to traditioanl koto playing, triggered by playing within the playable range.

Koto - Pizzicato
The koto is played in a pizzicato (plucked) style. Compared to the standard pick/sustain articulation, pizzicatos on the koto have a faster attack and a harp-like quality.

Koto - Scrapes
A collection of non-pitched 'scrapes' where the plectrum is pulled up and down various strings of the koto.

Koto - Sustains
The bread-and-butter articulation of the koto, featuring unmuted, sustaining picks of each string with several finger plectrums. Features a wide range of dynamics and variations.

Koto - Tonal Glissando
A large assortment of tonal, pitched glissandi played with the standard pentatonic *hira joshi* tuning (D, Eb, G, A, Bb).

Koto - Tremolo
Metered tremolo on each string. Use the modwheel (CC1) to control dynamics.

Koto - Vibrato – Slow and Fast
Traditional vibrato on each string.

Shamisen - Bends – Up, Down, Octave

Bend Up = A short strike one whole note below the played note, followed by a long, sustained strike bending up to the played note.

Bend Down = A fast bend all the way up the string before landing back on the played note. Note range: **C1-G2**.

E0 = A slow, sustained strike half-step above the played note which bends slow up the string before re-striking on the played note. Note range: **C1-G2**.

Shamisen - Sustains
A deep sampling of *jiuta*-style shamisen using a large tortoiseshell plectrum. Lower notes produce an almost sitar-like buzz due to the ornate construction of the instrument.

USER INTERFACE

The new Koto Nation UI has many useful features. Starting in the bottom left, we have:

Vel Sens: Velocity Sensitivity. Increasing this slider makes the volume of all notes more sensitive to MIDI velocity. This does not affect the recording triggered; for example, low velocity always triggers a low dynamic recording.

Vibrato: Increases the amount of generated instrument vibrato. (This is separate from the Vibrato articulation, which is pre-recorded vibrato.)

In the **Upper Middle** area we have the mic mixer.

Power Buttons: Enables or disables a mic position. Disabling a mic will purge it from RAM.

VOL (Red / Outer Circle): Controls volume of the mic.

PAN (Black / Inner Circle): Controls pan position of the mic.

Tuning: Coarse (Red / Outer): Controls tuning +/- 12 semitones.

Fine (Black/Inner): Controls tuning +/- 100 cents (1 semitone)

Koto Nation includes an ADSR volume envelope which can be used to shape each articulation. Select the articulation envelope you want to edit from the **Dropdown Menu** ("Sustain" by default).

HPF/LPF: Moving these controls horizontally will change the amount of high pass and low pass filtering on the sound of the instrument.

Microtuning Table: Each "bar" of this table controls the tuning of one note in a scale. You can select the root note using the **upper left** menu, or use a tuning preset from the **lower left** menu.

FX Rack

The "Effects" tab lets you use some handy built-in FX units such as a parametric 4-band EQ, analog-modeled compressor, synced delay, and convolution reverb!

Clicking the * button next to each effect will randomize the FX settings; holding shift and clicking will reset all knobs to normal.

# TACT – Total Articulation Control Technology

The Concept

TACT is a modular, scalable system designed to create a consistent plug-and-play performance experience in Impact Soundworks virtual instrument products. It manages articulations with up to 3 triggering types, volume and offset control, and independently controlled legato toggles when applicable. Current supported trigger sources are note range, velocity range, CC range (on any CC# from 1 to 127), keyswitches (latching or non-latching, independently chosen per articulation), and sustain pedal up/down.

TACT is designed to manage user mapping schemes and facilitate experimentation to create the best performance setups for users very quickly and easily. Extra features include:

- A **conflict detection algorithm**, which cross references articulations through their 3 rules and detects if the articulations will trigger under the same input. It will then highlight the articulations in red to so the user can observe and resolve the conflict.

- A crown-jewel convenience feature called "**Automap**", which allows users to quickly lay out, build, and audition structured mapping schemes.

- A utility to **save and load mapping presets** within a sample library. This allows them to create schemes that suit them for different purposes, such as live performance or efficient DAW sequencing. These presets can also be shared with other users, as they are stored as .nka files.

Impact Soundworks looks forward to providing customers a very consistent and reliable experience in the future using TACT in our new virtual instruments!

Articulations
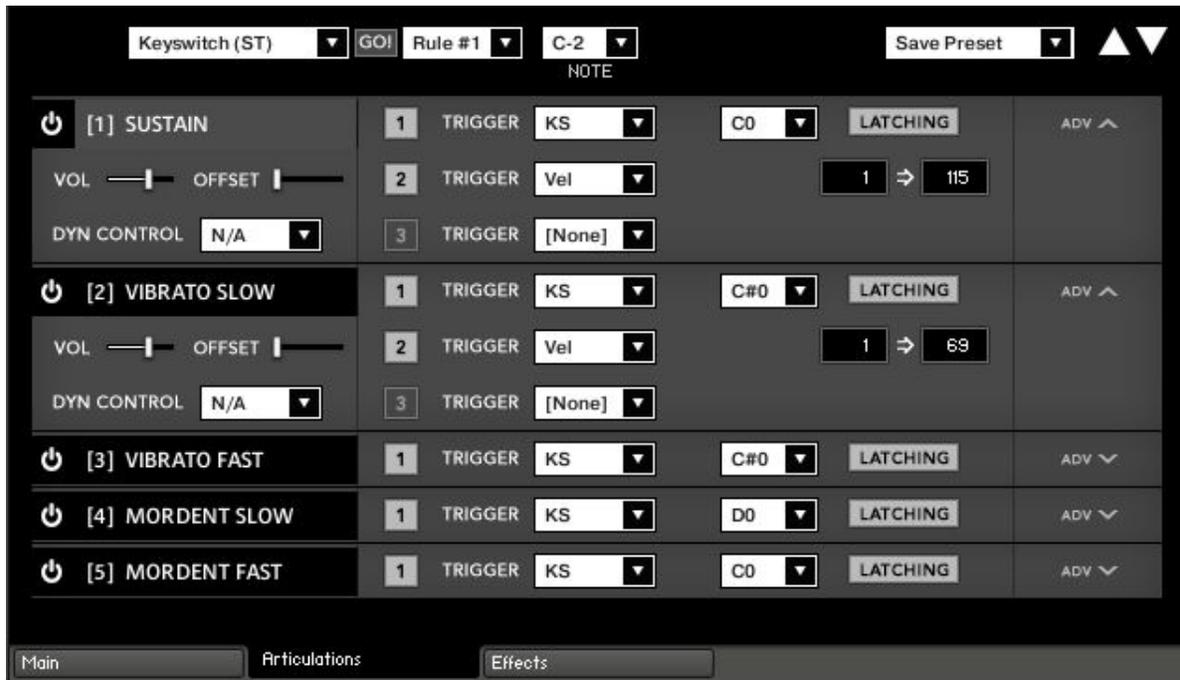
The main screen of the interface shows a list of articulations. Each articulation shows its name, a **power button** to purge it from memory, its first triggering rule, and an **ADV button**.

Pressing **ADV** will expand the articulation to show its 3 rules, as well as other controls like volume, offset, and dynamic control. For legato-applicable articulations, they may allow disabling legato. If expanded articulations make the list exceed the window height, **scroll buttons** will appear on the top right. Holding shift while clicking these scroll buttons will scroll **3 rows at a time**.

The **numbered squares** to the left of each rule are **toggle states** for the rules. If turned off, a rule is not factored into the system's evaluation logic. If all 3 are turned off, the articulation will never play. Note that setting an articulation rule's trigger type to [None] is equivalent to turning the rule off.

Each trigger type can **only be used once per articulation**. If a trigger type is used in a rule, it can't be used for other rules. This is not true of the [None] type, however. Each articulation will preserve its parameters for each rule type, and even if that rule is set to [None]. For example, if you set a keyswitch to B1, then set it to [None], then enable a keyswitch in another rule, it will remember B1 automatically. This is convenient for re-ordering rules for visual organizational purposes.

Each articulation can be selected/highlighted by clicking on its name. This is important for the Automap feature.

Keyboard Shortcuts:

- Holding control, alt, or shift on the ADV will **expand all articulations** at once.
- Holding control, alt, or shift on the keyswitch rule "LATCHING" button will **set all keyswitch rules** to the same latching designation (latching or non-latching).
- Holding alt while moving the volume or offset sliders will **move them simultaneously** across all articulations to the same value.
- Holding shift or alt while scrolling will scroll by 3 rows (a full expanded articulation) instead of 1.

Automap

Automap works by selecting a list of articulations by clicking their names (activating the blue highlighting to the left), selecting a scheme, such as "CC Split Range", configuring any parameters associated with that scheme (such as for CC Split, which CC# for it to work on), setting the rule # to apply the new mapping on, and the "GO" which executes the automap.

Holding control, shift, or alt while selecting an articulation will select or deselect all articulations.

When automap is executed by pressing GO, the previous mappings will be preserved in memory. If the user wishes to undo the change, they can access the preset menu and hit "Undo Automap". Note that this will only work 1 time, as there is only 1 level of history.

When a new mapping is applied to an articulation via Automap, the associated rule is automatically turned on in every selected articulation. If an articulation already contained a rule with the relevant trigger type, that pre-existing rule will be cleared out first.

For all mapping schemes, especially splits, they are done *in order of selection*, not visually ascending or descending order. For instance, if velocity split mapping was engaged on articulations ABCD that are selected in order CDBA, then articulation C will have the lowest velocity range, D will have the next lowest, and so on. Here is the list of currently implemented schemes:

Keyswitch (WT) - Will map selected articulations starting at the specified keyswitch, ascending by whole tones (2 half-steps).

Keyswitch (ST) - Will map selected articulations starting at the specified keyswitch, ascending by semi tones (1 half-step).

CC Split Range - Will map selected articulations on the specified CC# to ascending ranges that are even divisions of 1 to 127. For example, on articulations AB will map A to 1-64 and B to 65-127.

Velocity Split Range - Will map selected articulations to ascending velocitry trigger ranges that are even divisions of 1 to 127. For example, on articulations AB will map A to 1-64 and B to 65-127.

In addition to the spanning schemes listed above, TACT also features "shared" schemes that apply the same rule to selected articulations:

Shared Keyswitch - Will map selected articulations to the specified keyswitch.

Shared CC Range - Will map selected articulations to the specified value range on the specified CC#.

Shared Vel. Range - Will map selected articulations to the specified velocity range.

Shared Key Range - Will map selected articulations to the specified key range.

Pedal Position - Will map selected articulations to the specified pedal position.

Clear Rule - Will "delete" whatever mapping exists in the selected articulations on the chosen rule (set them to [None]).

A combination of spanning schemes and shared schemes is the key to getting the most out of TACT. For example, in a string library, a user could set all short articulations to a "shared keyswitch" rule, and then have their second rule be a "CC Split Range". This way, they can switch to a general "shorts" keyswitch, and use their mod wheel to select the specific one. Another example is when the user has a satisfactory mapping scheme

but would like to trigger legato using the sustain pedal; they can quickly use automap on the non-legato articulations to have them only trigger when the pedal is released.

Presets

TACT can save presets as .nka files. These files can even be shared with other users, provided they are using it with the same sample library.

To save a preset, simply open the preset dropdown menu and click "Save Preset". A dialog box will appear prompting you to name your scheme.

To load a preset, click "Load Preset". A dialog box will appear, and you can browse your computer to select your saved schemes.

A preset will completely load all articulation purge states, triggering rule data, legato toggles, offset values, and dynamic control mappings. A preset will not, however, save or load articulation volume values. This is done so that the sound and general tone is not affected if the user wishes to heavily experiment with performance mappings.

ABOUT THE SESSIONS

Koto Nation was recorded at Studio Crash in Philadelphia, PA by Alec Henninger, the same engineer who recorded Sitar Nation. We had the pleasure of working with world-renowned Japanese instrumentalist Masayo Ishigure as our performer. A student of koto legends Tadao and Kazue Sawai, Mrs. Ishigure has continued their legacy and given koto, shamisen and vocal performances all over the world. She has worked with, among others, John Williams for his award-winning score to "Memoirs of a Geisha", alongside Yo-Yo Ma. We consider ourselves very lucky to have had the opportunity to work with such a master of these instruments for our project!

The koto and bass koto were recorded in a small, well-treated studio room using a Beyerdynamic MC834, Neumann TLM-170 and two Neumann KM-184 microphones running through an extremely transparent Millennia HV-3D preamp into Pro Tools at 24biit/44.1khz. We recorded the shamisen using the MC834, TLM-170 and KM-184 mics through the same chain. The recordings perfectly capture the actual sound of the koto; there is very little coloration from the equipment. If you close your eyes and imagine you're at a live performance, the sound is identical - we compared them side by side!

In order to best achieve an accurate sound, *hira joshi* tuning was used for the koto (D-G-A-Bb-D-Eb-G-A-Bb etc.), while diatonic tuning (C-D-E-F-G etc.) was used for the bass koto and 1-4-8 tuning (D-G-D, E-A-E) was used for the shamisen. In terms of playing style, Masayo performed following the classical traditions rather than contemporary styles with all instruments. The shamisen, for example, was played in the *jiuta* style, as opposed to the contemporary *tsugaru* style commonly heard in contemporary pop, rock and crossover music featuring the instrument.

TROUBLESHOOTING & FEEDBACK

Have you used **Koto Nation** in a project recently? Got an awesome track you'd like to share? Drop us a line (admin@impactsoundworks.com) and we might post it on our website! Or, tell the world at our Facebook page here: http://www.facebook.com/ImpactSoundworks

We encourage all our users to share and promote their work. Word of mouth is the #1 way people find our samples, so it also helps us to produce more great libraries for you!

For any technical support issues regarding the library, don't hesitate to email support@impactsoundworks.com.

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