Tokyo Scoring Drum Kits

An Impact Soundworks Virtual Instrument

v1.0 (20 December 2022)

Introduction

The sound of Japanese scoring is both captivating and highly unique.

With decades of world-famous video games soundtracks, films, TV dramas, and anime recorded in Japan and performed by Japanese musicians, it surprised us at Impact Soundworks to find that this sound had never yet really been captured in a sample library before. That realization is what led to the creation of the **Tokyo Scoring Series**.

Smaller ensemble sizes, a drive for perfection through incredible accuracy, and tight, focused studio spaces: these are some of the hallmarks of the Japanese scoring sound.

Yet, these are only part of the picture. There's also much to be said about the approach to recording, to mixing, and to the dynamics—both interpersonal and musical—between all the members of the team.

That's why we *had* to work with the right people: the most in-demand musicians, producers, engineer, and recording studio in the entire country. It wasn't enough for us to simply create *a* Japanese scoring series of virtual instruments; we wanted to create *the* Japanese scoring series of virtual instruments.

To achieve this goal, we are honored to have partnered with an incredible 'dream team' of musicians and collaborators in Japan:

Ken Higeshiro: Top session drummer whose work can be heard on over 200 projects. Frequent collaborator with composers such as Hiroyuki Sawano, Yuki Hayashi, and our **Tokyo Scoring Series** partner **Masaru Yokoyama**; the maestro of this library.

Mitsunori Aizawa: Japan's top engineer, responsible for mixing and recording hundreds of world-famous scores and albums.

Sound City Recording Studio: A legendary space with over 60 years of history, and among the few studios in Japan capable of delivering a truly-authentic orchestral ensemble sound.

Masaru Yokoyama: A renowned composer for Japanese film, anime, and dramas, who brought his experience recording scores around the world through his companies **Plugnote** and **Miracle Bus**.

Crypton Future Media and **Sonicwire**: Our Japanese distributors who facilitate many aspects of this ongoing series project.

With this, the second installment of the **Tokyo Scoring Series**, we hope you will enjoy the hard-hitting talents of **Ken Higeshiro** (with colleagues **Akira Sakamoto** and **Shin Watanabe**), and that it will inspire your music-making for years to come.

Please enjoy **Tokyo Scoring Drum Kits**!

- Andrew Aversa & the Impact Soundworks team

Installation

1. Download and install the Native Instruments Kontakt Player, which will also install an auxiliary Kontakt library management software called Native Access.
2. Next, install the Pulse Downloader*.
3. Once Pulse is installed, open it and enter your T**okyo Scoring Drum Kits** product code, which is also its serial number (*e.g.,* `A1B2C-3D4E5-F6G7H-8I0J1-K2L3M`). Follow the instructions to download and install the library. *(If you wish to move the library to an external drive [for example], then do this before moving on to step 4, below.)*
4. Open Native Access, click 'Add a Serial', and input that same product code to activate the library.
5. Once Native Access has activated your library, click 'View Products Not Installed'.
6. Find **Tokyo Scoring Drum Kits** in this list and click the 'Add Library' button to the right.
7. Select the folder where Pulse downloaded the library (or, if you moved it in step 3, the folder where it currently resides). *This completes the installation process!*

** Pulse is a cross-platform desktop app that lets you download and install your libraries with blazing speed! You'll need to create a Pulse account, but once you do, you can access your purchases from any developers using Pulse, anytime, from any computer.*

Content

The library includes recordings of five individual drum kits and a three-kit drum ensemble.

Mr. Higeshiro says: *'I've recorded a lot of different kits here. I have my own idea of which genre I fall into, of course, from the various jobs I have done, but I hope that each person who uses this software can use it differently according to their own individual image and impression. They should be able to find each of these kits suitable for all-around use.'*

Each of the five kits was recorded *in situ* in a comprehensive multi-mic setup, all from the perspective of the drummer. No panning is needed to reproduce a natural kit sound.

The drum kit trio was also recorded *in situ* with **Ken Higeshiro**'s kit flanked by those of **Akira Sakamoto** and **Shin Watanabe**. This ensemble, like the individual kits, was recorded in a comprehensive multi-mic setup in the drummer's perspective; however, as there are three 'close' perspectives at once, the sound is more 'hyper-real' or 'epic' than that of the individual kits (though the more 'ambient' mic positions preserve the true Left-Center-Right arrangement of the kits as arranged on the studio floor).

All performances were captured at 24-bit/96 kHz and downsampled to 16-bit/48 kHz using the cleanest-possible resampling algorithms.

Kits

OrangeKit: the Standardized Drum Kit UI

Tokyo Scoring Drum Kits features a standardized drum kit layout, lovingly titled *OrangeKit*, which features these twelve kit pieces:

● Drums ●	
#	**Piece**
1	Kick
2	Snare
3	Tom Hi
4	Tom Mid
5	Tom Low*
6	Tom Floor

⚫ Cymbals ⚫	
#	**Piece**
7	Hi-Hat
8	Ride
9	Crash (Left)
10	Crash (Right)
11	Splash
12	China

** In some of the physical kits, as in the OrangeKit UI, this 'second-lowest' tom was a floor tom; in others, this was a mounted tom. We've labeled all tom-sets 'hi/mid/low/floor' to eliminate conceptual ambiguity when mixing-and-matching kit pieces.*

DW Allround

Mr. Higeshiro says: *'This maple kit is the orthodox set for a drum kit. The kick drum is somewhat special, though: it is 18" deep, 2 inches deeper than the typical 16" seen on most kicks. To counter the possibility of a slow kick attack thanks to the added shell-depth, the hole in the front kick head is in the center, directly across from the beater. This preserves the immediacy of the kick attack.'*

#	Piece	Size	Manufacturer (Model)
1	Kick	22"×18"	DW
2	Snare	14"×6.5"	riddim
3	Tom Hi	10"×8"	DW
4	Tom Mid	12"×8"	SONOR
5	Tom Low	12"×10"	DW
6	Tom Floor	16"×14"	DW
7	Hi-Hat	14"	Zildjian (K Sweet)
8	Ride	21"	MEINL (Byzance Traditional)
9	Crash (Left)	17"	Zildjian (K Sweet)
10	Crash (Right)	19"	Zildjian (K Sweet)
11	Splash	10"	Paiste (Signature)
12	China	18"	Paiste (Signature)

DW Jazz

Mr. Higeshiro says: *'This setup uses a kick drum that is both smaller and deeper, at 20" by 18", than a typical kick. Because it is set up as a jazz kit, I've also tuned the toms a little higher to give the feeling of extended overtones.'*

#	Piece	Size	Manufacturer (Model)
1	Kick	20"×18"	DW
2	Snare	14"×5"	SONOR (ProLite Series Steel)
3	Tom Hi	10"×7"	DW
4	Tom Mid	12"×8"	SONOR
5	Tom Low	12"×10"	DW
6	Tom Floor	16"×14"	DW
7	Hi-Hat	13"	Zildjian (Light Hi-Hat)
8	Ride	22"	Zildjian (A Avedis)
9	Crash (Left)	17"	Zildjian (A Custom)
10	Crash (Right)	19"	Zildjian (A Custom)
11	Splash	10"	Paiste (Signature)
12	China	18"	Paiste (Signature)

Riddim Custom

Mr. Higeshiro says: *'This maple kit is fully made-to-order by a Japanese domestic manufacturer. The depths of the lower toms are an odd number of inches, whereas it is more common to see an even number. The sound is simple and lean, yet sophisticated, and it looks cool! I often use it for live tours, TV taping, and so on.'*

#	Piece	Size	Manufacturer (Model)
1	Kick	22"×15"	riddim
2	Snare	14"×5.75"	riddim
3	Tom Hi	12"×8"	riddim
4	Tom Mid	12"×8"	SONOR
5	Tom Low	14"×13"	riddim
6	Tom Floor	16"×15"	riddim
7	Hi-Hat	14"	Zildjian (K Sweet)
8	Ride	21"	MEINL (Byzance Traditional)
9	Crash (Left)	18"	MEINL (Byzance Traditional)
10	Crash (Right)	19"	MEINL (Byzance Traditional)
11	Splash	10"	Paiste (Signature)
12	China	18"	Paiste (Signature)

SL Vintage

Mr. Higeshiro says: *'This kit from the 1980s is the first kit I ever got. Compared to the other kits in this collection, it has a warmer sound. Although it is vintage, it can be used for a wide range of musical genres.'*

#	Piece	Size	Manufacturer (Model)
1	Kick	22"×14"	Slingerland
2	Snare	14"×5.75"	riddim (Maple)
3	Tom Hi	12"×8"	Slingerland
4	Tom Mid	12"×8"	SONOR
5	Tom Low	13"×9"	Slingerland
6	Tom Floor	16"×16"	Slingerland
7	Hi-Hat	15"	Zildjian (vintage New Beat)
8	Ride	20"	Zildjian (90's K)
9	Crash (Left)	16"	Zildjian (70's vintage A)
10	Crash (Right)	19"	Zildjian (70's vintage A)
11	Splash	10"	Paiste (Signature)
12	China	18"	Paiste (Signature)

SNR Natural

Mr. Higeshiro says: *‘This little old kit is from the 1980s or so. Many manufacturers offer acrylic kits, but SONOR’s acrylics are really carefully crafted. Both attacks and lows sound good, and they don’t come out sounding unpleasant, so they are easy to use without muting. The kick, in particular, sounds good and powerful. Overall, this kit is one that resonates well without being buried in the sound of the orchestra or accompaniment.’*

#	Piece	Size	Manufacturer (Model)
1	Kick	22″×16″	SONOR
2	Snare	14″×6″	SONOR (Artist Series Bell Bronze)
3	Tom Hi	10″×8″	SONOR
4	Tom Mid	12″×8″	SONOR
5	Tom Low	14″×14″	SONOR
6	Tom Floor	16″×16″	SONOR
7	Hi-Hat	14″	Paiste (RUDE)
8	Ride	21″	MEINL (Byzance Traditional)
9	Crash (Left)	17″	Zildjian (A Custom)
10	Crash (Right)	19″	Zildjian (A Custom)
11	Splash	10″	Paiste (Signature)
12	China	18″	Paiste (Signature)

Kit Ensemble

Joined by colleagues **Akira Sakamoto** and **Shin Watanabe**, **Ken Higeshiro** leads a powerful trio of kits.

The ensemble setup. From left-to-right: Kit 3, Kit 2 (Higeshiro), Kit 1.

Patches

Tokyo Scoring Drum Kits includes the following NKIs:

1 - Aizawa Mix - All Kits.nki

2 - Aizawa Mix - Drum Ensemble.nki

3 - Full Mixer - All Kits.nki

4 - Full Mixer - Drum Ensemble.nki

5 - Board Mix - All Kits.nki

6 - Board Mix - Drum Ensemble.nki

These may be conceptually sorted as such:

	All Kits	**Drum Ensemble**
Aizawa Mix	1	2
Full Mixer	3	4
Board Mix	5	6

When deciding which NKI to use on your project, you may find it helpful to first determine the core performance/sound:

- ***single drum kit*** — choose an ***All Kits*** (NKIs 1, 3, or 5)
- ***ensemble of drum kits*** — choose an ***Ensemble*** (NKIs 2, 4, or 6)

*(For more information about the individual drum kits and the three-kit ensemble, please see the **Kits** section above.)*

Next, based on your workflow preferences, decide on the most appropriate mixer type:

- ***Pre-processed, authentic sound of Japanese media*** — choose an ***Aizawa Mix*** (NKIs 1 or 2)
- ***Lightweight, general-purpose*** — choose a ***Board Mix*** (NKIs 5 or 6)
- ***Heavy-duty, fully-customizable*** — choose a ***Full Mixer*** (NKIs 3 or 4)

*(For more information about the three mixer types, please see the **Mixer Types** section below.)*

Mixer Types

The three mixer types in the **Tokyo Scoring Drum Kits** patches are as follows:

Aizawa Mix	Created by engineer Mitsunori Aizawa in the studio at the time of recording, these patches feature Aizawa's signature outboard mixing and processing chain. No external reverb has been added, but the sound has been colored in a pleasing way.
Board Mix	These patches, based on a single full-stereo mic mix, allow for a more neutral and lightweight starting point. For mixing flexibility, we have given each drum its own channel in `Console`.
Full Mixer	Representing the most granular selection of microphone signals, the Full Mixer patches allow a neutral mix starting point with maximum flexibility at the expense of more RAM and CPU usage.

For most purposes, we highly recommend using an **Aizawa Mix** patch, as those provide an excellent out-of-the-box sound while still allowing for deep mixing possibilities. The **Board Mix** patches are by far the lightest on CPU & memory, but the tradeoff is less flexible mixing.

As the **Full Mixer** patches give you access to all mic channels used at the original sessions, it can take longer to achieve the perfect mix result. The samples are also less processed than the other patches. Overall, this is a good option for those who want total control over tone shaping.

Please be aware that each enabled microphone position and kit piece will increase the overall RAM load required by your Kontakt instance. CPU usage will also be multiplied when using multiple mic positions, as more samples are being played back simultaneously.

Console Channels

Individual Kit NKIs

Signal Name	Mono / Stereo	1 - Aizawa	3 - Full Mixer	5 - Board Mix[†]
Kick	mono	✔		✔
Kick Front	mono		✔	
Kick Rear	mono		✔	
Kick Add	mono		✔	
Snare	mono	✔		✔
Snare Top 1	mono		✔	
Snare Top 2	mono		✔	
Snare Btm	mono		✔	
Hi-Hat	mono	✔	✔	✔
Hi Tom	mono	✔	✔	✔
Mid Tom	mono	✔	✔	✔
Low Tom	mono	✔	✔	✔
Floor Tom	mono	✔	✔	✔
L Crash	mono			✔
R Crash	mono			✔
Ride	mono	✔	✔	✔
China	mono			✔
Splash	mono			✔
Overhead	stereo	✔	✔	
Amb Near	stereo	✔	✔	
Amb Mid	stereo	✔	✔	
Amb Far	stereo	✔	✔	

[†]NB: ***All*** `Console` *channels/signals are stereo (****not*** *mono) in the two Board Mix NKIs,* **5 - Board Mix - All Kits.nki** *and* **6 - Board Mix - Drum Ensemble.nki.**

Ensemble NKIs

Signal Name	Mono / Stereo	2 - Aizawa	4 - Full Mixer	6 - Board Mix[†]
Kick	stereo	✔		✔
Kit 1 Kick	mono		✔	
Kit 2 Kick	mono		✔	
Kit 3 Kick	mono		✔	
Snare	stereo	✔		✔
Snare 1 Top	mono		✔	
Snare 2 Top	mono		✔	
Snare 3 Top	mono		✔	
Snare 1 Btm	mono		✔	
Snare 2 Btm	mono		✔	
Snare 3 Btm	mono		✔	
Hi-Hat	stereo			✔
Hi Tom	stereo			✔
Low Tom	stereo			✔
Floor Tom	stereo			✔
L Crash	stereo			✔
R Crash	stereo			✔
Ride	stereo			✔
Overhead	stereo	✔		
Overhead 1	stereo		✔	
Overhead 2	stereo		✔	
Overhead 3	stereo		✔	
Amb	stereo	✔	✔	
Amb Near	stereo	✔	✔	
Amb Mid	stereo	✔	✔	
Amb Far	stereo	✔	✔	

[†]NB: ***All*** *Console channels/signals are stereo (****not*** *mono) in the two Board Mix NKIs,* **5 - Board Mix - All Kits.nki** *and* **6 - Board Mix - Drum Ensemble.nki.**

Articulations

The exact articulations available depend on the kit piece and model. Not all kit pieces of the same type have the same articulation list available. Furthermore, the ensemble patches have a slightly different list of available articulations than the individual kit patches do.

In general, here are the list of available articulations per kitpiece:

Kicks

	Hit	Felt Hit	Plastic Hit
All Kicks (except SONOR)	✔		
SONOR Kick 22″×16″		✔	✔

NB: *'Felt' and 'Plastic' refer to the material of the beater.*

Snares

	Center	Roll	Flam	Rimshot	CenterRim	Edge
riddim Maple 14″×5.75″ A	✔	✔	✔	✔		
riddim Maple 14″×5.75″ B	✔	✔	✔			
riddim 14″x6.5″	✔	✔	✔	✔	✔	
SONOR Bell Bronze 14″x6″	✔	✔	✔	✔	✔	
SONOR ProLite Steel 14″x5″	✔	✔	✔	✔		✔
Ensemble Snares	✔	✔	✔	✔		

Toms

	Hit	Hand	Rimshot
All Toms (non-Ensemble)	✔		
Ensemble Hi Toms	✔	✔	✔
Ensemble Low Toms	✔		✔
Ensemble Floor Toms	✔	✔	

Hi-Hats

	Closed	ClosedTip	HalfOpen	SemiOpen	Open	Pedal
All Hi-Hats (non-Ensemble)	✔	✔	✔	✔	✔	✔
Ensemble Hi-Hats	✔		✔		✔	✔

Rides

	Tip	Choke	TipSoft	TipHard	Smash	Cup
MEINL Byzance Traditional 21″	✔	✔			✔	✔
Zildjian 90 K 20″	✔	✔			✔	✔
Zildjian A Avedis 22″		✔	✔	✔	✔	✔
Ensemble Ride	✔					

Other Cymbals

	Hit	Choke
All Crashes	✔	✔
All Splashes	✔	✔
All Chinas	✔	✔

NB: *Each ‘Choke’ stops the ‘Hit’ of its respective cymbal.*

Using Tokyo Scoring Drum Kits

The Tokyo Scoring Drum Kits User Interface

The Tokyo Scoring Drum Kits User Interface is divided into two main tabbed views at the bottom-left of the patch window, **`Tokyo Scoring Drum Kits`** and **`Console`**:

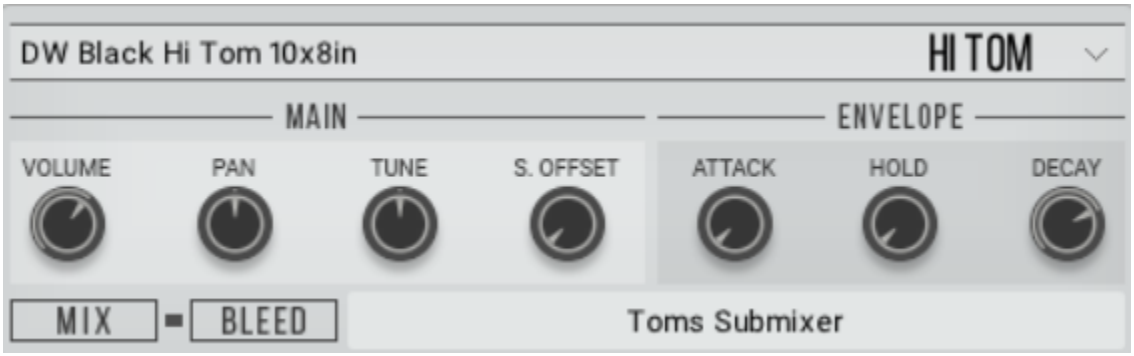
View 1: `Tokyo Scoring Drum Kits`

Tab 1: Kit

We've already broadly seen how OrangeKit works in the **Content > Kits** section of the manual.

Now, let's get *tweaky*: Click the **down-arrow** on any kit piece to open up its settings pop-up.

Kit Piece Settings Pop-Up



Kit Piece Name (*e.g.*, **DW Black Hi Tom 10×8in**) / Piece Type (*e.g.*, **HI TOM**)

Click on either of these labels to switch to a different kit piece of the same type. In the above example, clicking the Kit Piece Name will show all other Hi Toms:

Volume / Pan / Tune

Straightforward adjustments to the volume, panning, or tuning (in cents; 1/100th of a tone) for the kit piece.

S. Offset

Adjusts the sample playback position for this piece. The default value of `0` is recommended. Adjusting the overall latency of the playback engine can be done on the Settings tab.

Envelope: Attack, Hold, Decay

These control the shape of the volume envelope when the piece is triggered. When a note is received, the **Attack** time is basically a fade-in time to max volume. This value should almost always be left at `0ms`. **Hold** is the amount of time before the **Decay** (*i.e.,* fade-out) occurs. Tightening the 'tail' or 'ring-out' of a hit can be done by shortening the **Hold** and **Decay** values.

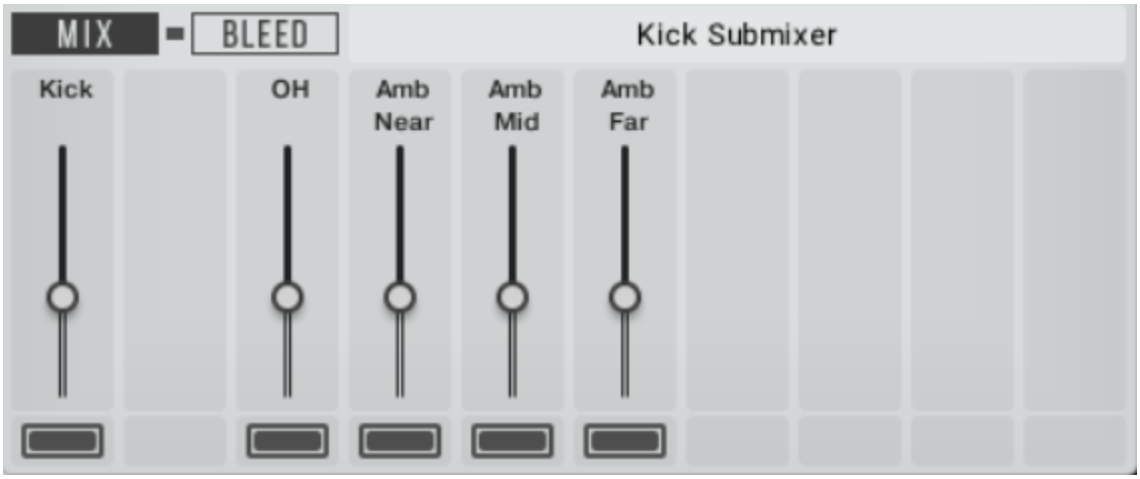
Mix & Bleed Buttons

These buttons open the **Submixer** interface.

The **Mix** tab shows the direct signals, overhead, and ambient mics (see below), while **Bleed** will show the bleed signals (that is to say: the direct mics for the *other* kit pieces). *For example, when mixing a Kick, the Snare mic would be considered a bleed; when mixing a Snare, the Kick mic would be considered a bleed.*

In general, Bleeds are *not* necessary and will add to both memory and CPU load. However, the functionality is there should you want it!

Submixer



The **Submixer** controls the signal/mic levels for a **family** of kit pieces. The families are as follows:

- Kick
- Snare
- Toms (includes ALL toms)
- Cymbals (includes ALL cymbals: ride, splash, china, *etc.*)

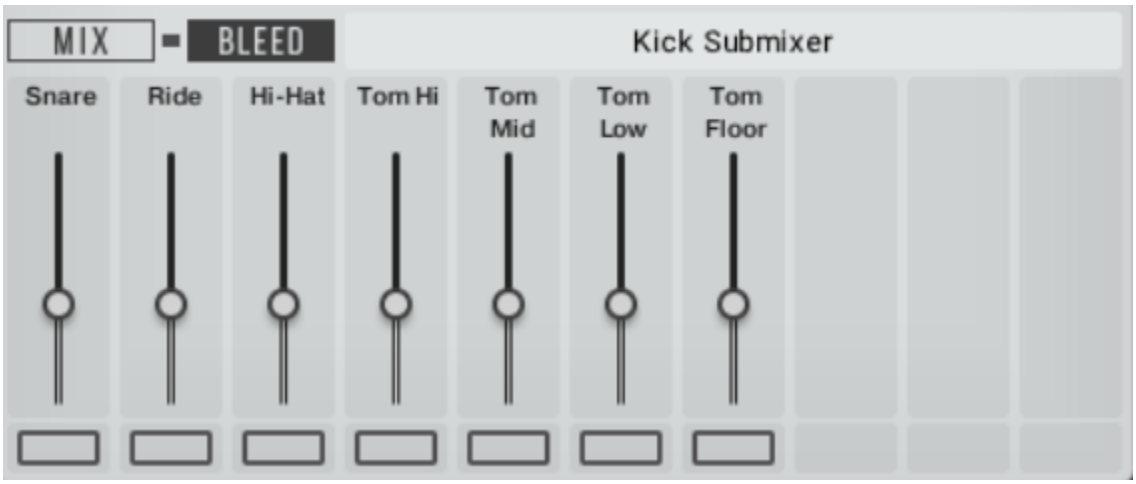
For example, when you are editing the Tom submixer, your submix-changes will be applied to the Floor Tom, Low Tom, Mid Tom, AND Hi Tom.

Volume Faders

The volume for each signal can be adjusted or automated using these sliders.

Toggles: Load / Unload Signal

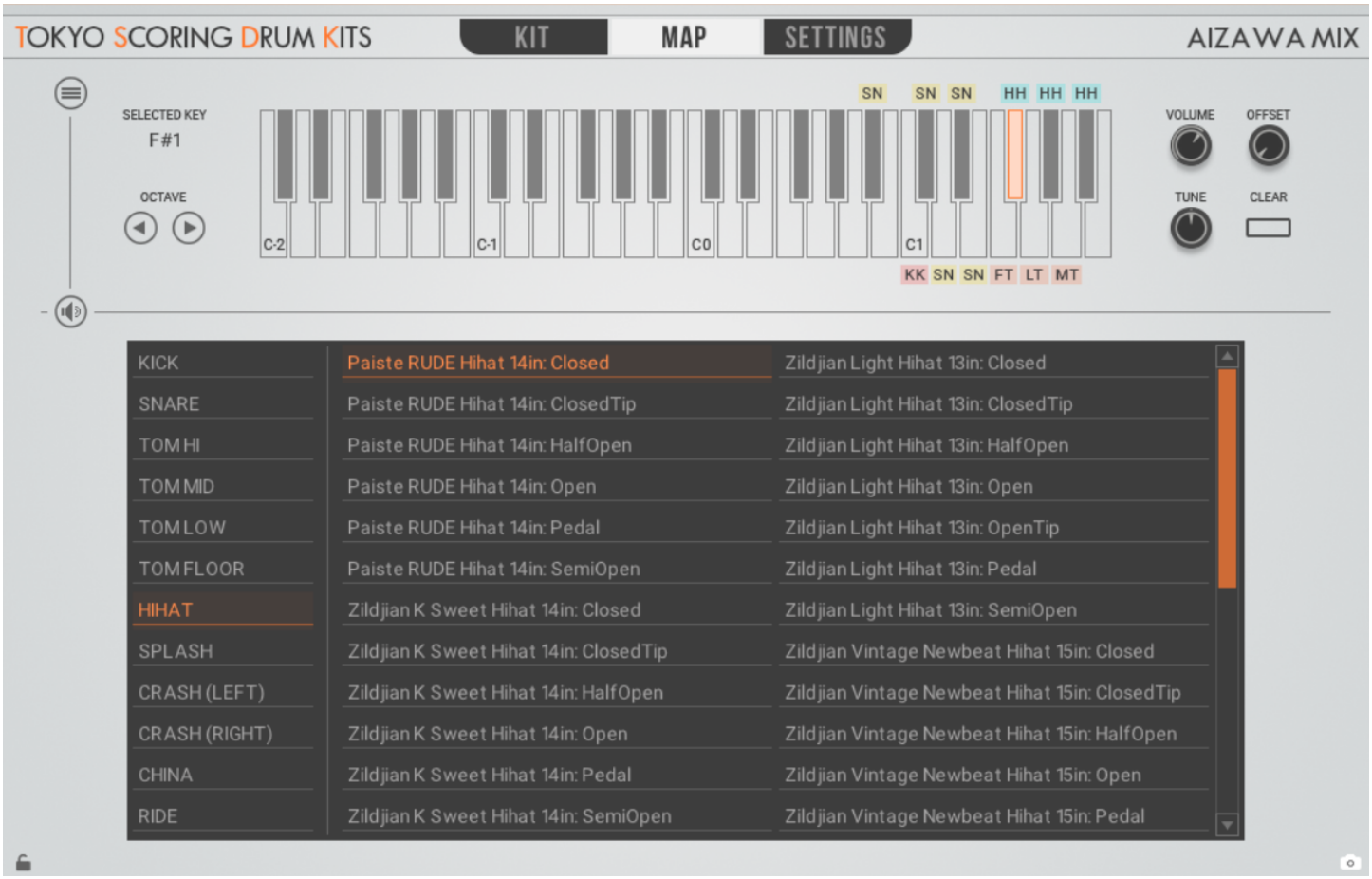
The solid gray rectangular toggle buttons below each fader represent the state—either the **loaded** or **unloaded**—of that fader's mic channel. If a channel is *un*loaded, it frees up both RAM and reduces CPU usage by lowering the total voice count.



*Example of the **Bleed** submixer view. The controls here work exactly the same as they do in the regular **Mix** view, but note how in the default patches, all **Bleed** channels are disabled & unloaded by default.*

Tab 2: Map

In this tab, you can create a completely custom drum kit and/or mapping setup. By and large, most users will not need to use this tab, as the default snapshots and functionality of the main tab should cover 95% of use cases. *We included as much flexibility as possible here for power users!*



Mapping Overview

The mapping system works by allowing you to assign **any articulation** to **any key**. Most kit piece types have multiple articulations. You can reference these in the **Articulations** section of this manual.

Tokyo Scoring Drum Kits allows for the same articulation to be mapped to multiple keys. For example, you can map the same kick to both `B0` and `C1`, allowing for easy double-kick patterns. It's also possible to adjust parameters on a per-note basis, separate from the per-piece controls on the Kit page of the UI.

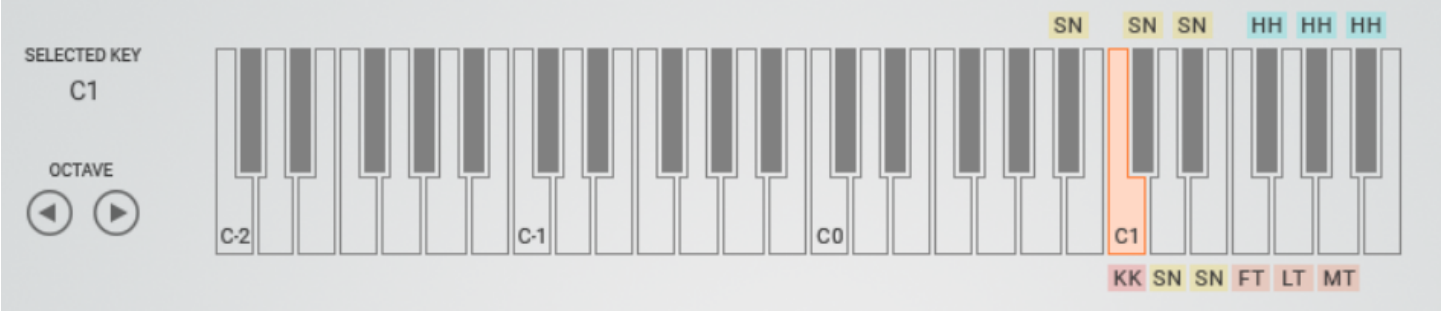
Mappings are compatible with piece changes on the Kit page. For example, by default, the snare 'Center' articulation is mapped to `D1` and snare Rim to `E1`. If you switch snares on the Kit page to a snare that *doesn't* have a snare Rim articulation, then `E1` will cease to trigger. However, the mapping will

remember that the snare Rim articulation was mapped there; when you switch back to a snare with that articulation, `E1` will trigger Rim as expected.

Furthermore, if you map articulations from the same drum across multiple keys, switching that drum on the Kit page will update the drum selection in this view.

Virtual Keyboard

The keyboard display at the top of the UI (that is, not the Kontakt instance's MIDI keyboard at the *bottom* of the UI) shows four octaves at a time. If a drum is currently mapped, you will see a colored label above or below the key.



Key Labels

The labels are as follows:

KK	Kick	
SN	Snare	*can be any articulation*
HH	Hi-Hat	*can be any articulation*
FT	Floor Tom	
LT	Low Tom	
MT	Mid Tom	
HT	Hi Tom	
RC	Right Crash	
RD	Ride	*can be any articulation*
CH	China	
SP	Splash	
LC	Left Crash	

Selected Key

The currently selected key is highlighted in orange and displayed under the text label 'Selected Key'.

Octave Buttons

Shifts the virtual keyboard view by one octave at a time.

Per-Note Adjustment Knobs (Volume / Offset / Tune)

These controls adjust the volume, [sample playback] offset, and tuning (respectively) for the selected note. Even if the **same drum** and **same articulation** are mapped across several notes, THESE controls only affect ONE note at a time.

Toggle: Clear

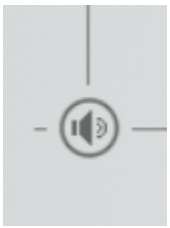
Unloads the drum/articulation from the selected key and resets all per-note values.

Sound Browser

Allows you to browse all possible drum pieces and articulations available in the current patch. Single clicking on one will preview it (if the preview option is enabled). Double clicking will assign it to the selected key.

Preview Button

When enabled, drum kit pieces will trigger a sound when single clicking in the browser.



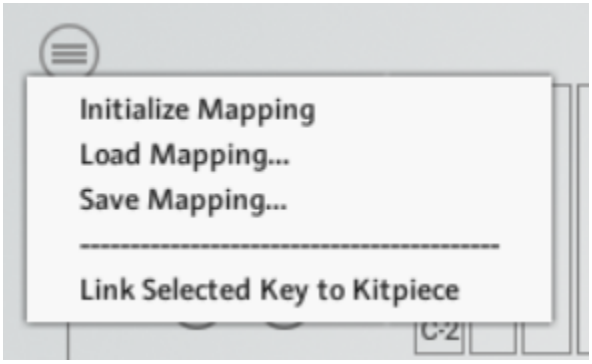
Dropdown Menu

The ‘hamburger’ style menu exposes some additional commands and options:

Initialize Mapping	Clears the entire keyboard. *Use at your own risk!*
Load Mapping	Allows you to select an overall mapping preset saved to disk.
Save Mapping	Allows you to save a custom mapping preset to disk.

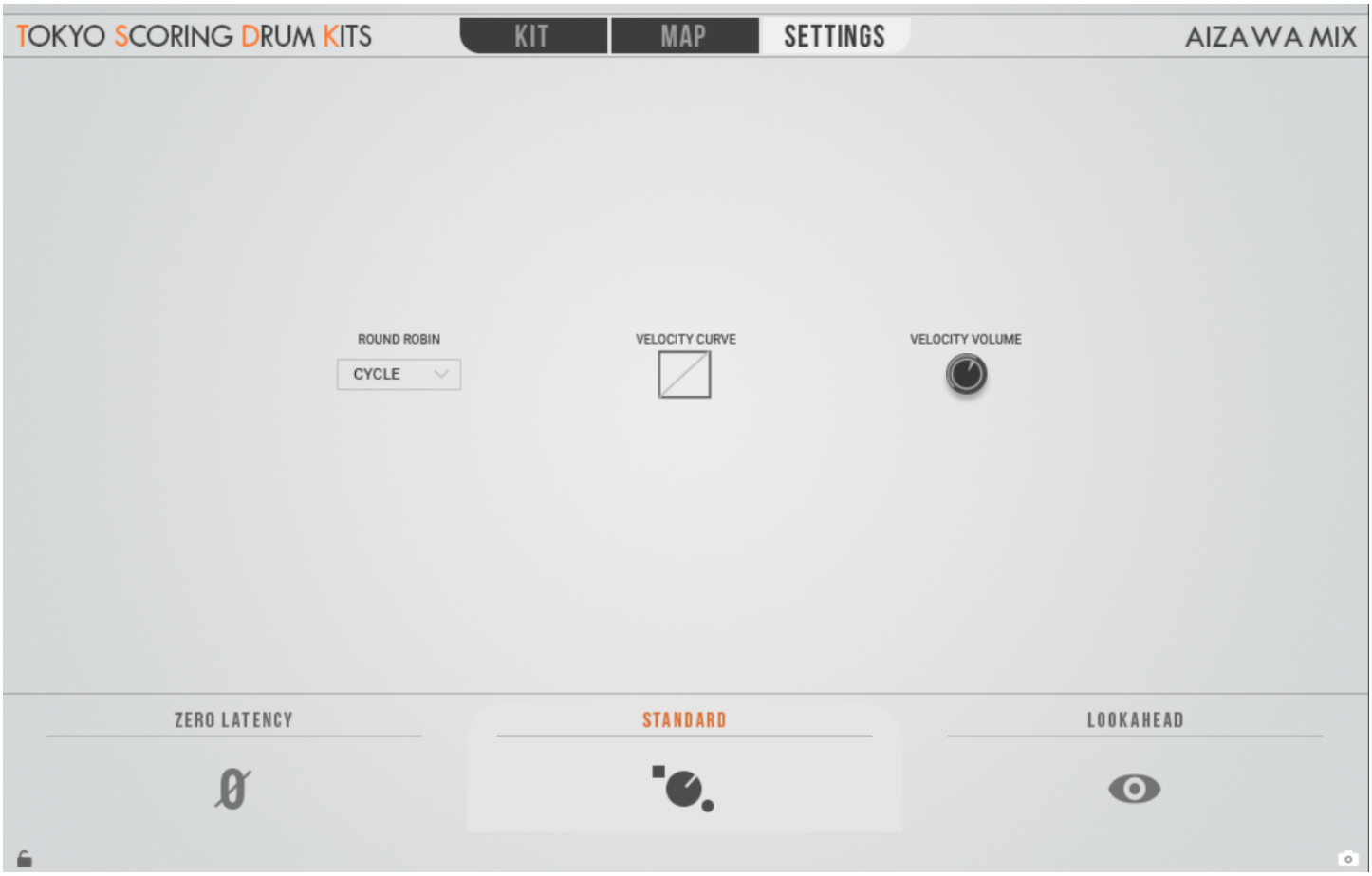
Link Selected Key to Kitpiece

This controls the functionality described earlier, where changes on the Kit page affect the Map page. If this option is ***disabled***, then changing a kit piece on the Kit page will ***not*** affect the selected key. *This functionality may be desirable for certain custom mappings.*



Tab 3: Settings

In this tab, you can easily control a number of engine playback parameters.



Round Robin Mode

The drop-down menu allows you to select from one of the three following modes:

Cycle Round Robins play back in a set sequence (*e.g.,* RR1, RR2, RR3, RR4...) and then repeat. The cycle will start from its beginning on DAW transport.

Random Round Robins play back in a random sequence.

Off Round Robins are disabled. *This is useful for genres like EDM, Hip-Hop,* etc.

Velocity Curve

Adjusts the Velocity of incoming MIDI notes. Higher values (attained by dragging the mouse pointer ***up*** on the control knob) will scale Velocities UP; likewise, lower values (attained by dragging the mouse pointer ***down*** on the control knob) will scale Velocities DOWN.

Velocity Volume

Controls the degree to which MIDI Velocity affects note playback volume *(note: this does NOT change which actual dynamic recording is played back!)*.

If the Velocity Volume control knob is set to its lowest value (`0`), then the playback volume of all notes will be identical regardless of MIDI Velocity, since the samples are fully-normalized. Likewise, a maximum control knob value of `100` will result in the greatest volume range between Velocities `1` and `127`.

Engine Mode (Zero Latency / Standard / Lookahead)

To preserve as much of the character and 'life' of the samples as possible, **Tokyo Scoring Drum Kits** includes ample pre-transient information in each drum sample. By adjusting the engine mode, you can decide how much of this 'pre-attack' is played back.

Just like with **Tokyo Scoring Strings**, when using **Standard** or **Lookahead** modes, you must use either a negative track delay OR shift your MIDI notes 'leftward' to account for the added note onset delay.

Zero Latency There is virtually no time before the main transient hit of each sample, making this Engine Mode the most responsive and most appropriate for real-time playing, at the expense of a nuanced sense of 'reality'. This is the familiar way most popular drum sample libraries are edited.

Standard This Engine Mode responds similarly to most high-end orchestral (and other virtual) samples you might also be using in your template, striking a nice balance between latency and more realistic, lively sounds. Includes up to `40ms` of pre-transient information before the transient of each sample while adding about `40ms` of latency.

Lookahead This engine mode should be used for the most realistic, lively, and natural sound, especially in mixdown scenarios. Includes up to `120ms` of pre-transient information before the transient of each sample while adding `120ms` of latency.
When **Lookahead** is enabled, a 'Sync Flams' option becomes available; enabling this will trigger Flams *in advance* so that their *primary* (that is to say, *second*) hit syncs up with the beat!

When using **Standard** or **Lookahead** modes, you may wish to compensate for the added latency:

Compensating for Latency in Your DAW

First, check if your DAW supports time offsets or time delay in the settings for a track. If there is a value field, and it supports *negative* delay values, enter `-40ms` for **Standard** mode or `-120ms` for **Lookahead**.

If you wish to compensate for the added latency, but your DAW *doesn't* have any options for negative track delay *or* manual latency reporting and compensation, you must either:

1. Shift all **Tokyo Scoring Drum Kit** MIDI tracks EARLIER ('leftward') by `40ms` / `120ms`.
   - or -
2. Shift *all* other tracks in your project LATER ('rightward') by `40ms` / `120ms`.

View 2: `Console`

For more about the `Console` *view, please see the* ***Content > Console Channels*** *section above, as well as our standalone* ***Console Manual****.*

Setup & Tweaking

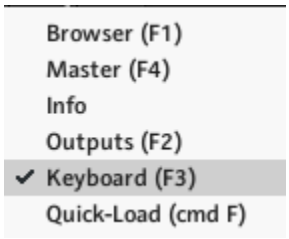
Tips for Getting the Most out of the User Interface

➔ Almost all controls can be MIDI-learned by (1) right-clicking the UI and (2) selecting 'MIDI Learn'. You will then need to move the control of your choice (*i.e.*, fader, knob, *et al.*) on your MIDI control surface or in your DAW to establish the link.

***Pro tip**: Once you MIDI-learn something, you should save your modified version of that NKI so you won't have to do it again!*

➔ You can view Help Text by hovering over controls in the Tokyo Scoring Drum Kits UI. The Help Text will appear at the bottom-left of the Kontakt UI plug-in window.

➔ The colorful Kontakt virtual keyboard, seen in our videos, is a Kontakt feature and not specific to Tokyo Scoring Drum Kits. To enable the virtual keyboard, simply press **F3** on your computer (*not* MIDI!) keyboard. Alternatively, you can go to the Panels drop-down menu by clicking the (Panels) icon at the top-right of the plug-in window and ensure 'Keyboard' is checked:



➔ **Tokyo Scoring Drum Kits** is fully NKS Compatible and features quite a few existing host-automatable controls. If you have a Komplete Kontrol keyboard or use the Komplete Kontrol application, you will be able to benefit from this functionality!

Tips for More Realistic Drum Mockups

As with many aspects of music creation, think of these as guidelines, not hard-and-fast rules that can never be broken!

Recording Live vs. Sequencing

If you have decent keyboard skills, it's a good idea to try performing your drum parts one at a time and recording the MIDI data. The natural variations in timing and expression will often lead to a better result. We recommend recording using **Zero Latency** mode, then switching to **Standard** or **Lookahead** for rendering.

*Keep in mind that when using **Standard** or **Lookahead** Mode, a negative track delay or manual adjustment of all MIDI notes on the track backward in time (to trigger the MIDI data 'before the beat') will be necessary for the samples to sound 'on the beat'.*

Stay Off the Grid

For drums, keeping every single hit 100% quantized to a grid of 8th or 16th notes will not sound very natural. If you're quantizing live playing, try using a 50-75% quantize instead of 100%. If you're clicking in notes with a mouse, try manually making very slight adjustments to certain hits!

Use Dynamics

It's tempting to use very high dynamics, particularly when you are writing heavy rock & metal tracks. But real drummers do not play at 100% max-energy at all times, and this sound can quickly fatigue the ear. Even for very heavy parts, try using a spread of velocities within the same (high) range.

Another possibility to make sure you retain volume/power in a loud mix is to decrease 'Velocity Volume' on the settings page, then using a wider range of MIDI velocities. This method acts somewhat like a compressor, pushing the maximum and minimum dynamic layer volumes closer together while maintaining timbral variety.

Finally, ensuring that you're monitoring your music at an appropriate level to begin with (not too quietly, not too loudly) will help you make correct, informed decisions about dynamic performance and dynamic range—not just for your drum parts, but for each element in your mix!

Tips for CPU & Memory Optimization

If you experience high CPU and memory usage with **Tokyo Scoring Drum Kits**, there are a number of things you can do to mitigate the issue.

Save memory and CPU by disabling unused mic channels

If you are not using certain mics, for example the Amb positions, consider disabling these altogether on the `Console` tab. Doing this will reduce both memory usage and voice count. If memory and CPU are extremely limited, the Board Mix patches are also a worthwhile option due to their low overhead.

Balance memory and CPU with DFD preload settings

Kontakt does not load all samples fully into memory; it only loads (or buffers) a small chunk of each one. By clicking on the wrench icon next to a loaded patch, clicking Instrument Options, and going to the DFD tab, you can adjust this preload buffer amount.

A higher buffer means less CPU usage but more RAM usage. A lower buffer means higher CPU usage but less RAM usage.

It's up to you to determine which setting is best for you.

Save CPU and memory by quitting unnecessary applications

For experienced users, this may seem obvious, but it's easy to lose track of how much computing power is being used by seemingly-innocuous applications. For example, it's not uncommon to have a Chrome browser, Discord, Slack, Skype, Zoom, and Dropbox all running at the same time. All of these not only take up RAM, but can also interfere with real-time audio playback by causing pops & crackles.

So, anytime you work on a very intensive DAW project, it's a good idea to close all applications and services you don't need - even if they just run in the background.

Avoid pops and crackles with a higher buffer size

This applies to your DAW settings in general. Typically, every DAW's audio settings allow you to change the 'buffer size' of the playback drivers. Sometimes, this may only be changeable in a separate application, such as with some RME products.

The buffer size (measured in ms or samples, like `8ms` / `512 samples`) determines the amount of latency in DAW output and input, inversely correlated to CPU usage. In other words, lower buffer sizes are much more demanding on your CPU than higher ones.

Though it feels great to perform and record MIDI at very low buffer sizes, this is also most taxing on your CPU. Consider increasing your buffer size once you're out of the MIDI recording phase, and on to editing, mixing, and mastering.

Credits & Acknowledgements

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Tokyo Scoring Drum Kits proudly features a custom drum kit created by riddim. Please visit the riddim website to learn more about these amazing Japanese drums!

Troubleshooting

Having trouble with Tokyo Scoring Drum Kits? Use it in a project you want to tell us about? Drop us a line via our **Contact page** (but be sure to read the FAQ first!)

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