



VERSILIAN STUDIOS LLC.



C O N T I N U O
ORGAN

P R O D U C T M A N U A L



INTRODUCTION

Across the millenia, few instruments have remained so closely linked to mankind's exploration of music as the organ. From ancient *hýdraulis* to the modern electric organ, the humble harmonium to the imposing Wanamaker organ, it has remained the weapon of choice from J.S. Bach to a dizzying array of modern performers across almost every genre.

One unique genre of great importance is that of Early Music, which employs the practice of Historically Informed Performance to interpret historical music as it might have sounded. To accomplish this in the modern world of travelling ensembles and temporary concert venues, a class of organs were designed to provide portable organ power wherever needed, the Continuo Organ.

Taking its name from its primary role as a member of the continuo section (effectively the historical equivalent of the modern 'rhythm section'), the continuo organ outlines and contextualizes the harmonic structure for the broader ensemble or soloists, much like a modern organist. Like a modern organ, it has a variety of stops which allow it to create a variety of colors.

DEVELOPMENT

Recorded is a Klop continuo organ featuring 4 stops (8', 4', 2', and 2 2/3' {quint}). Each stop was recorded separately with 2 takes of each note, which alternately play when a key is repeatedly struck (known in sampling as 'round robins' or RR), providing slight humanization. In addition, the sound of all stops played together was recorded, which provides a powerful, brilliant sound. The entire sample set is fully looped.

For added realism, a special pass was recorded of key mechanical noises, allowing you to increase or decrease the noise of the keybed. Also unlike many legacy organ products, the true sound of each note ending, called 'releases', is captured and automatically applied, giving a massive increase in naturalness over some products which simply fade out the sound.

Three perspectives are provided: a close, focused ribbon microphone, a pair of detailed, rich-sounding main mics, and a more distant pair of room mics. This allows you to virtually place the organ in any space or context.

Although sampled in Equal Temperament, a wide range of temperaments across 500 years of history are available as presets, and you can even create your own and save them for future use. The entire instrument can also be easily transposed to other pitches (392, 415, 465, etc.) using the transpose feature. This makes it an extremely effective tool for digital accompaniment, as only a controller keyboard and speakers are necessary.



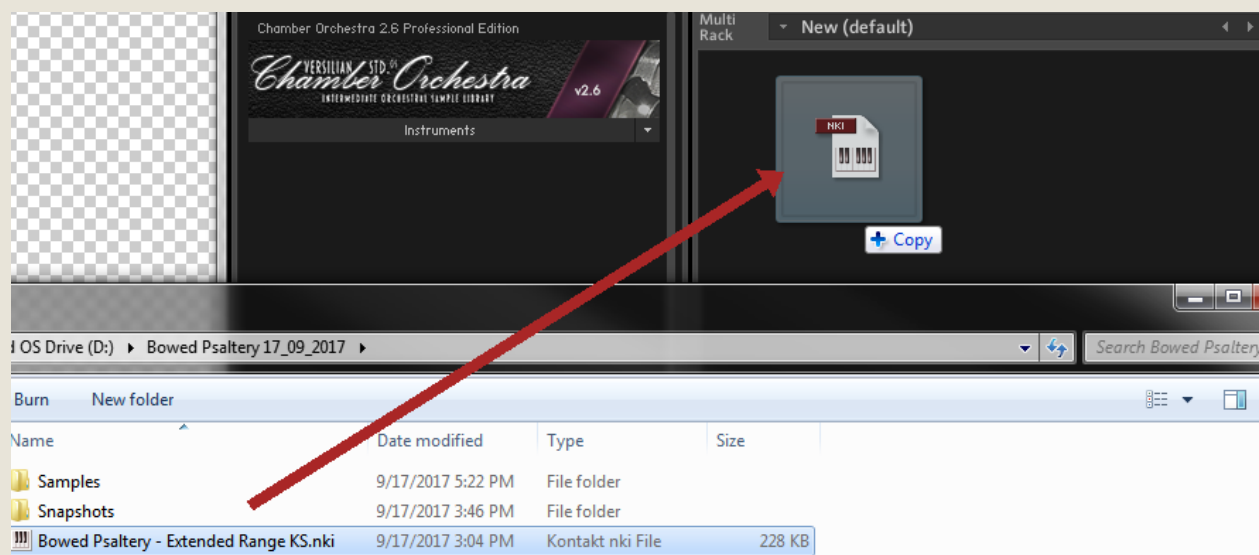


INSTALLATION

Begin installation by downloading the library after completing checkout, using [Pulse Downloader](#). Pulse is a special application designed specifically to distribute, verify, and update sample libraries and is used widely in the industry. Click 'Add a Product' and enter the code given at checkout.

Pulse will prompt you to select an install location— this could be on an external hard drive, an internal SSD, or your main hard drive.

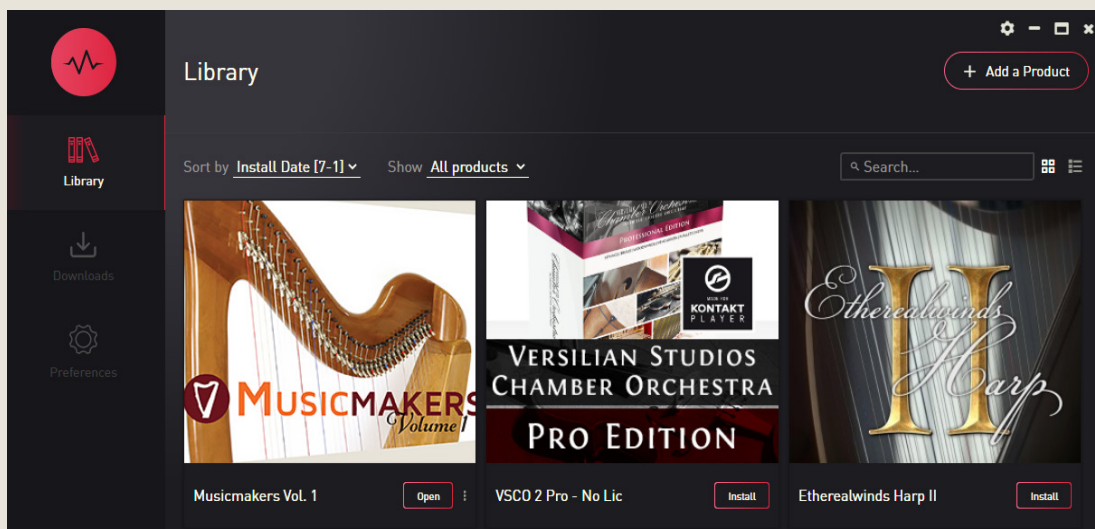
To use the library, drag and drop any of the .nki (Kontakt instruments) into an instance of Kontakt (either standalone or plug-in), as shown below.



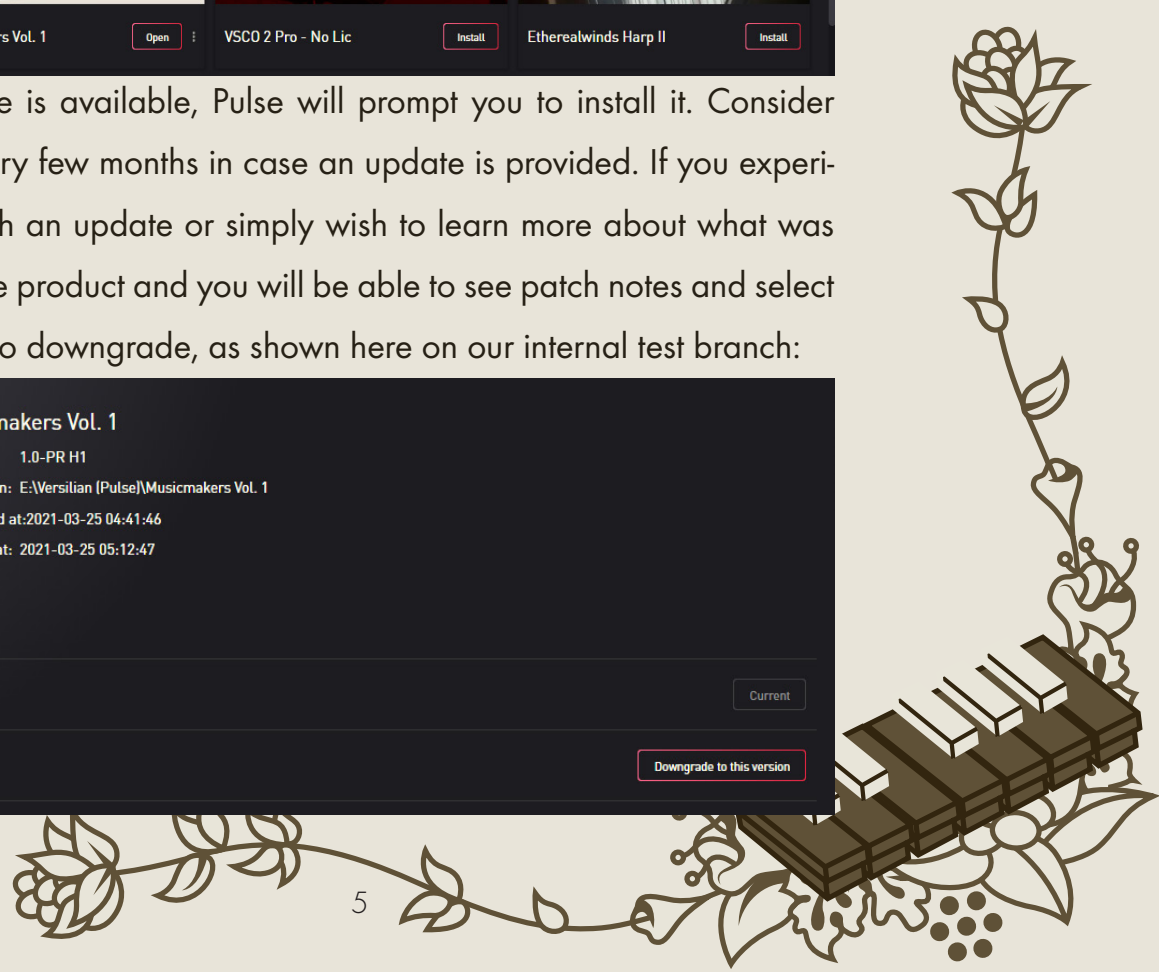
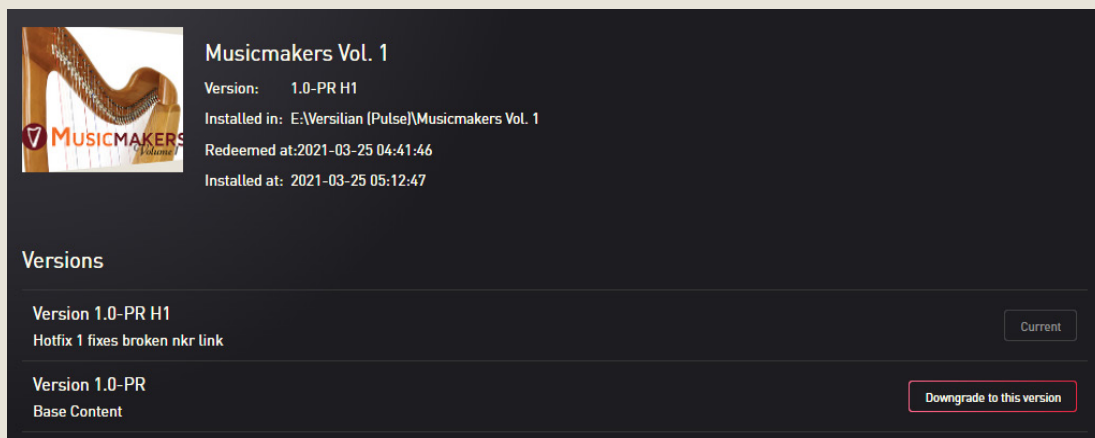
MANAGING YOUR INSTALLATION

Pulse Downloader not only manages the download process, it also allows you to maintain and update your installation in the event updates are provided for the library.

Once you have installed the instrument, it will appear in your Pulse Library. You can click 'Open' to jump to the files, or use the '...' to reinstall:



If an update is available, Pulse will prompt you to install it. Consider checking back every few months in case an update is provided. If you experience problems with an update or simply wish to learn more about what was changed, select the product and you will be able to see patch notes and select an earlier version to downgrade, as shown here on our internal test branch:





PATCHES & ARTICULATIONS

Within the main folder, you will find two .nki patches, **Continuo Organ - Player Perspective.nki** and **Continuo Organ - Audience Perspective.nki**. The Player Perspective file has low notes on the left and high notes on the right, while the Audience Perspective has the reverse: low notes on the right and high notes on the left.

Usually when recording as part of a large ensemble, the organ will end up audience perspective to match main mics. When playing solo or when using a MIDI controller, player perspective is usually more common.

At the bottom of the GUI, you'll find selectable articulations for each of the stops, as well as a Combined and Full option:

- **Combined Stops:** Mix the 4 stops together to taste with knobs to the left
- **Full:** Captured sound of all 4 stops blended as per real life
- **2' Stop:** Sound of 2' Principal pipes in isolation
- **4' Stop:** Sound of 4' Chimneyflute pipes in isolation
- **8' Stop:** Sound of 8' Gedeckt pipes in isolation
- **Quint Stop:** Sound of 2 2/3' pipes in isolation (treble range only)

MICROPHONES

Contrary to popular belief, there is no such thing as a "perfect" or "best" microphone. Each microphone presents us with a specific sound concept, sense of space/focus, and character, be it neutral, bright, dark, open, focused, or any number of endless adjectives people who probably have better things to do like to throw around late at night on internet forums.

Three different pairs or arrays of microphones from around the world were used:

R121L 8
R O Y E R



Rich, warm, and focused mono ribbon mic, placed very close to organ.

SPIRIT 8
A S T O N



Articulate, detailed pair of mics, placed at ideal listener position.

NT5 8
R O D E



Distant mics for blending with large ensembles (e.g. chamber orchestra).

REVERB

Reverb On/Off

Space Type Selection

Reverb Pre-Delay

Reverb Amount (mix -dB)

Reverb Time (T60)

MIXER

Mix Preset/Default Mix:

SAVE the mixer as Default

RECALL the saved mix

AUTO load saved mix on init (!)

Microphone Position Name

Microphone Model

Microphone Volume

Microphone Pan

Microphone Stereo Width

Microphone Solo/Mute

Microphone Load/Purge

Microphone Outputs

TONE control tab (active)

TUNING control tab (inactive)

Articulation Name & Info

Keyswitch Mover (drag)

Per-Articulation Settings

Articulation Attack Time

Key Mech. Noise

Stop Volume Mixer (variable)

MIRAGE FX Page

Active Keyswitch

Advanced Features

Disable Keyswitching (Lock)

ARTICULATION CONTROLS

These controls apply only to the currently active articulation, so that you might adjust each articulation to taste and need.



VELOCITY CURVE

Something nice to look at

Velocity Curve On/Off

Curve Selection (Linear/Shelf/Fixed)

Curve Editor (drag to alter curve)



Dynamics (Modwheel/CC1)

Dynamic Range (vol. gamut)

Expression (CC1)

Transpose (drag)

Range Limits (drag)

Articulation Name

Articulation Icon

Articulation Keyswitch (KS)

Articulation Load/Purge

D
Y
N

A
R
T

C O N T I N U O O R G A N

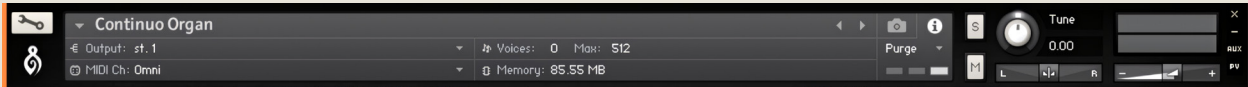




OPERATION

Continuo Organ makes use of our new Kontakt engine, VISAGE 3, complete with its own effects system, MIRAGE. VISAGE 3 features numerous advanced systems and functions to simplify and speed up usage regardless of your use case or technical level. In this section, I'll go over all functions of the VISAGE 3 engine and share tips on how to get the most out of this library.





Starting with the top of the instrument, we have the default Kontakt header. This area provides basic instrument settings and allows you to shrink or expand the GUI as needed. Note that VISAGE uses a special 'extra wide' mode, allowing for a larger, easier to read interface.

On the left is the wrench icon, which allows access “under the hood” of the instrument. This is best for veteran Kontakt users only, but is worth exploring if you’re new to Kontakt as well.

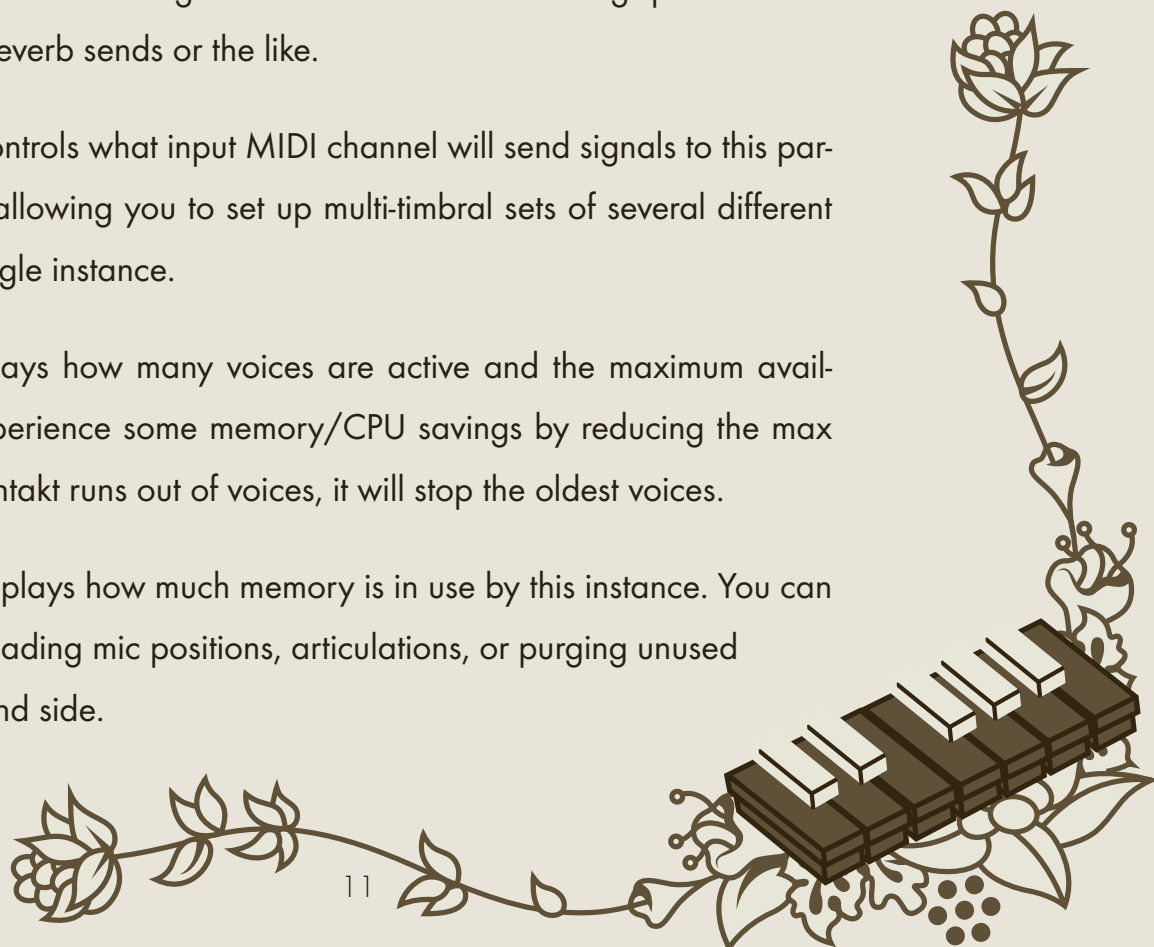
The central gray box displays general information and settings for the instrument. You can swap this display over to show the snapshots menu simply by pressing the camera icon to the right, and vice versa by pressing the ‘i’.

Output will control where the audio data goes to. Typically this should be left untouched unless working with a surround mix or bussing specific instruments to different reverb sends or the like.

MIDI Ch. controls what input MIDI channel will send signals to this particular instrument, allowing you to set up multi-timbral sets of several different instruments in a single instance.

Voices displays how many voices are active and the maximum available. You may experience some memory/CPU savings by reducing the max number. When Kontakt runs out of voices, it will stop the oldest voices.

Memory displays how much memory is in use by this instance. You can reduce this by unloading mic positions, articulations, or purging unused files to the right-hand side.





The central part of the GUI is where you can shape the **Tone** of the instrument.

On the left are the controls for Kontakt's new algorithmic **Reverb**, which lets you switch between Room and Hall style reverberances. Time controls the length of the reverb tail. Imagine this as an extra "ambient" pair of mics out in the space, with the 'Amount' as your mixer level. The pre-delay is similar to placing the virtual "mics" farther or closer to the sound source (1 ms = approx. 1'/0.3m).


Below the Reverb you will find the **Mic Mixer**. When we recorded Continuo Organ, we used 5 different *microphones*, arranged in 3 stereo pairs/arrays, to capture every single note. Here you can load and mix together each of these microphones, blending them together to get a *brighter* or *darker* sound, or a *closer* or *further* sound.

The 3 arrays are organized here in 3 positions: **Close**, **Main**, and **Room**, each progressively further away. The Close mic will provide the driest, cleanest sound, while the Room mics will provide the most spacious sound. The Main mics in between will provide a sound between the two, still clean and focused with lots of detail, but with a wide stereo image and lots of articulation to the sound.

Beneath the positions, round white *sliders* can be moved up or down to change the **Volume** of mics, followed by a small **Pan** knob, a stereo **Width** control (to reduce/enlarge width of a mic), and **Solo/Mute** buttons.

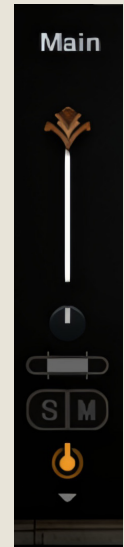
At the bottom, most critically, is a **Load/Purge** button in the shape of an off/on toggle. When loaded, this will show *orange*. When not loaded, it will be *greyed out*, showing that mic position is not loaded.

Note that each microphone position will consume around **85 MB of RAM**. It also may take Kontakt a while to load all the samples, especially if loading from a slow mechanical hard drive. *By default* Continuo Organ only loads up with 1 of 3 mics active, but you can re-save with a preferred blend.

If you're working with multiple patches of Continuo Organ, rather than manually trying to match your mix settings between each instrument, set your *optimal mix* on one instrument, then double-click **'SAVE'** in the top of the mixer window. This will save your mix for this patch. 

Now in each instance you wish to apply the mix within, simply click **'RECALL'**. The mix settings (excluding *Pan*) will be loaded up. This lets you retain any panning to individual instruments necessary to make an ensemble mix.

'AUTO' is not really used in this product, but is useful in other libraries with multiple instruments, where it allows you to apply mixer changes across all the patches at once after saving and initializing the patches ("!" button).



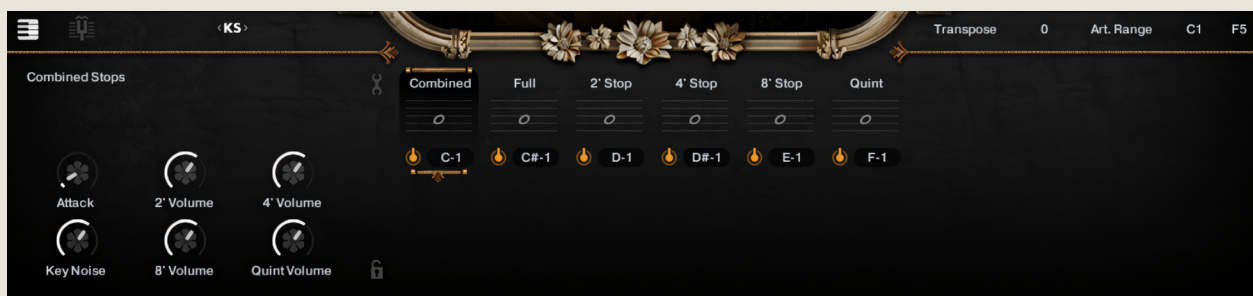


The **Velocity Curve** panel in the top right side allows you to adjust how the instrument responds to the velocity input of your keyboard. Select a curve type, then drag the curve around in the box below to change the behavior.

This is very helpful when you want to play more softly or more aggressively with greater consistency, such as in a soft ballad or to stick out in a full orchestration, as it will ease your input towards the direction you curve the line. S and fixed type curves are also present for further tweaking to handle inconsistent or limited keyboards.

The three controls below the velocity curve shape the volume of the instrument:

- **Dynamics** controls the volume of sound within the gamut of *Dynamic Range*.
- **Dynamic Range** is the total gamut between the highest and lowest velocity.
- **Expression** is an additional volume control for balancing/mixing use.



The bottom third of the user interface controls the articulation, pitch, and performance parameters of the instrument. Here you will find a range of different sampled articulations to choose from, controls for those articulations and their keyswitch triggers, as well as options for transposing and limiting the range of the instrument.

In the upper left of this area, you can toggle the middle of the interface between the **Tone** controls and **Tuning** controls. The adjacent **<KS>** slider will allow you to move the keyswitches to a more optimal spot. See pg 15-17 for more details on Tuning.

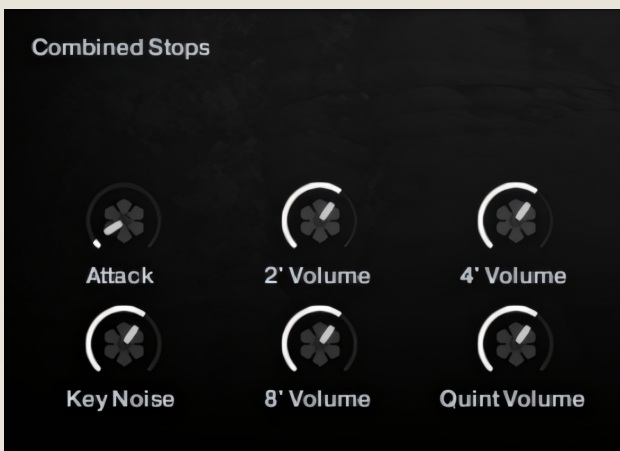
Transpose 0 Art. Range C1 F5

Transpose can be useful in situations where you need to transpose the instrument up or down an octave or two, or play in different pitches like A=392, 415, or 465. Double-click and type the desired halfsteps (12, -12).

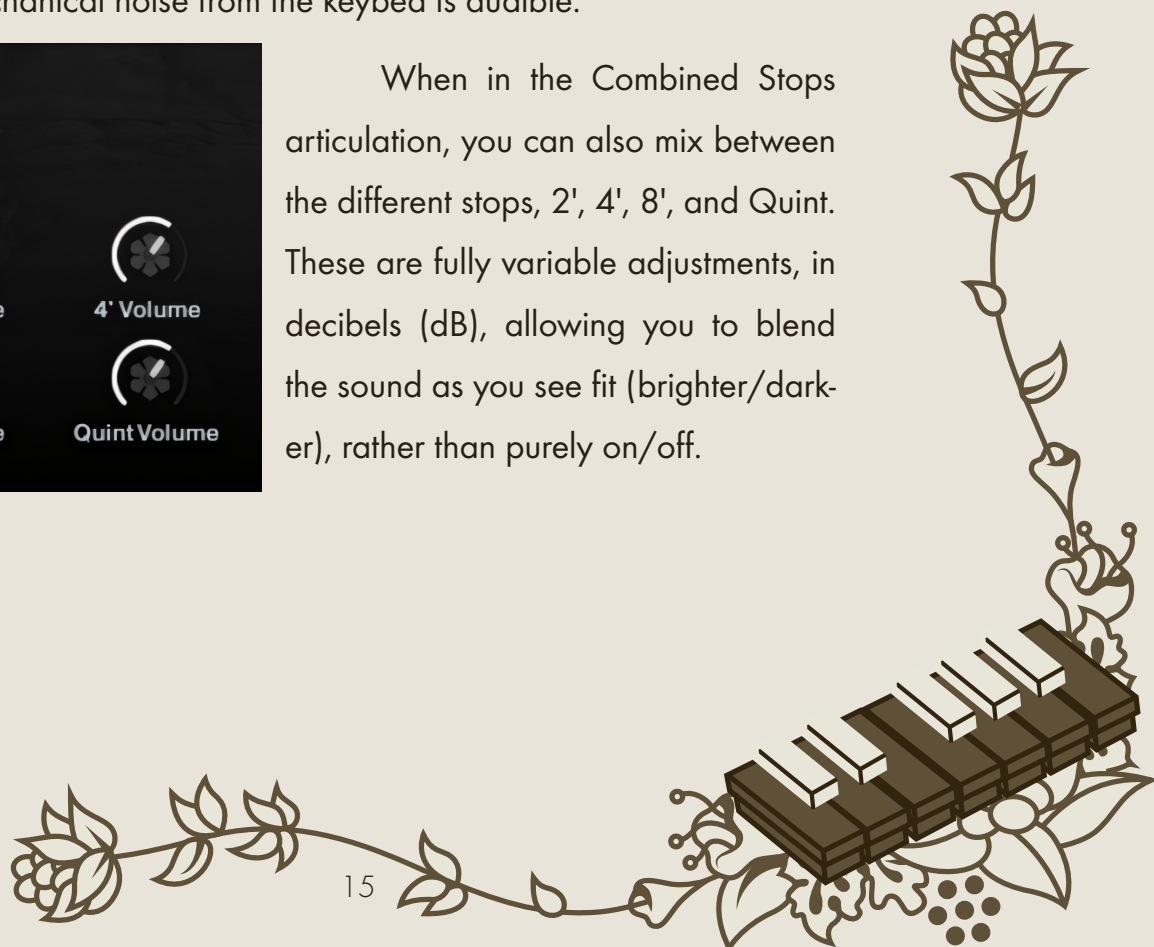
The **Articulation Range** control is also useful if you are building a unison ensemble effect by layering multiple instruments of different ranges together. You can limit the high or low range in order to "transition" to other instruments (e.g. recorders, gambas) to make handy 'ensemble' patches for sketching and quick mockups.

The **Articulation Control** panel in the bottom right corner shows which articulation is loaded and allows you to make adjustments specific to the loaded articulation, and only that articulation.

You can control the intensity of the start of notes (attack) as well as adjust how much mechanical noise from the keybed is audible.



When in the Combined Stops articulation, you can also mix between the different stops, 2', 4', 8', and Quint. These are fully variable adjustments, in decibels (dB), allowing you to blend the sound as you see fit (brighter/darker), rather than purely on/off.





The **Articulation Palette** shows all available articulations in the instrument, as well as what *Keyswitch* each articulation is tied to. As noted earlier, the keyswitch range can be adjusted by dragging the **<KS>** control.

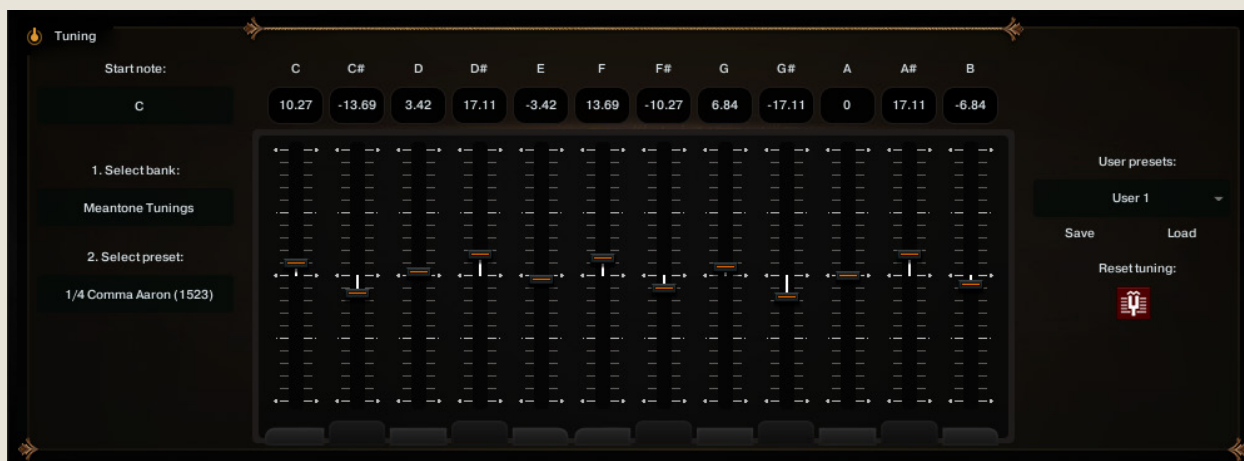
Articulations can be *selected* either by clicking, or, for changes during a piece, by entering keyswitch notes (e.g. C-1) in the piano roll or recorded during your performance. A gold frame will appear around the active articulation.

If you know you won't be using an articulation, you can disable it by pressing the *on/off toggle*. If the samples are not used elsewhere, they will be purged, saving memory.

If you plan on using only one articulation in your project and do not want to accidentally press a keyswitch, click the **Lock** in the bottom left corner to prevent the chance of changing articulations via any method.

The **Wrench** icon in the top left corner allows access to some extra features, namely neighbor-borrowing round robin (which increases the number of round robins by repitching samples from neighboring notes) and using aftertouch to stop notes.

These extra features are not really applicable to this product but may be helpful in some extreme cases.



The **Tuning** page is accessible via the tuning fork icon above the bottom left corner of the UI. A default bank of 22 historical and modern temperaments and intonations are available. It is also possible to manually temper the instrument by dragging the sliders for each note up or down to achieve the desired cent offset from ET (as shown above each slider).

On the left hand, it is also possible to offset/cycle the temperament to start from a different key, e.g. to shift the wolf around in meantone. On the right, you can save presets. Type a name, then hit save. If things ever go haywire, click the Reset Tuning button below.

Meantone Temperaments

- 1/4 Comma Aaron (1523)
- 2/7 Comma Zarlino (1558)
- 1/5 Comma Holden (1694)
- 1/6 Comma Silbermann (1714)
- 1/7 Comma Romieu (1755)
- D'Alembert Modified (1752)
- Britannica Modified (1797)
- Fisher Modified (1818)
- George Secor #3 (1975)

Other

- Grammateus Pythagorean (1518)
- Merrick Melodic Quasi (1811)
- De Morgan Unequal (1843)
- De Morgan Alt Equal (1858)
- Wendell Synchronous (2002)
- Jorgensen Ideal Well (2002)

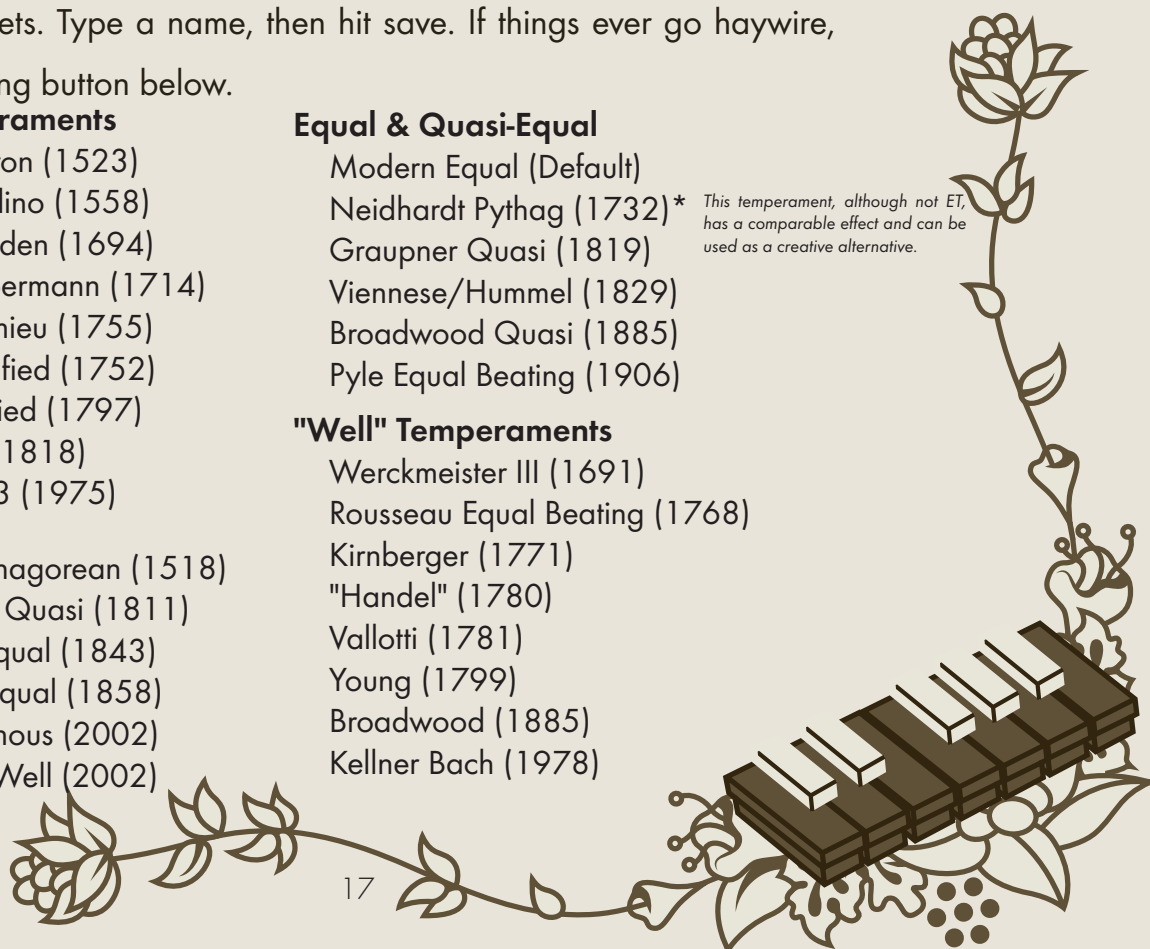
Equal & Quasi-Equal

- Modern Equal (Default)
- Neidhardt Pythag (1732)*
- Graupner Quasi (1819)
- Viennese/Hummel (1829)
- Broadwood Quasi (1885)
- Pyle Equal Beating (1906)

This temperament, although not ET, has a comparable effect and can be used as a creative alternative.

"Well" Temperaments

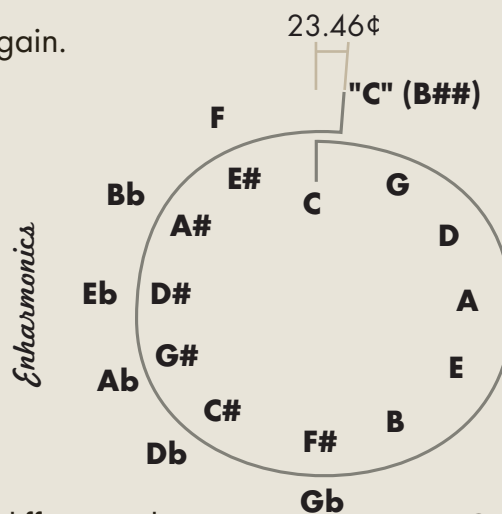
- Werckmeister III (1691)
- Rousseau Equal Beating (1768)
- Kirnberger (1771)
- "Handel" (1780)
- Vallotti (1781)
- Young (1799)
- Broadwood (1885)
- Kellner Bach (1978)



TUNING & TEMPERAMENTS

Throughout history, the problem of tuning harmony has been a continuous thorn in the side of musicians and scholars. While pure diatonic and pentatonic scales are easy to create using simple ratios (2:1, 3:2, 4:3, etc.), we run into an issue once we want to access notes beyond the diatonic scale. Let's say, D major chord in a C major diatonic setting. Due to the fundamental nature of mathematics, a small overshoot begins to develop.

As we work further around the circle of fifths (3:2 ratios multiplied together), G to D to A to E to B and so on, we eventually come to the point of C# major, which we today may enharmonically treat as Db major. But, this is a ruse, for C# major sits entirely several cents sharp of Db major! Thus by the time we finally reach C again, we are in fact at B##, not C as we knew it, now over 23 cents sharp, spiralling away forever into the tonal abyss, never to be heard from again.



The accumulated difference between our starting C and ending C is known as the comma, and over a millenia of theoretical and practical inquiry has been devoted to trying to ameliorate this issue.

This basic method of assembling a chromatic scale using fifths has a name of its own, *Pythagorean Intonation*. Drawing from the ancient language of metalworking, the term *Temperament* was devised to refer to the process of altering *Pythagorean* by distributing the comma across all the intervals, thus bringing the spiral more or less into some form of sense, either by emphasizing the purity of some keys over others such as in meantone, or by distributing the flaw evenly across all keys, as in equal temperament.

Temperaments are alterations made to a tuning system in order to make certain intervals or keys more or less harmonious. There are 22 factory temperaments provided, grouped in logical banks based on the underlying principles of the temperament/intonation. To the right, a graph indicates the alterations made to each of the 12 tones relative to Equal Temperament.

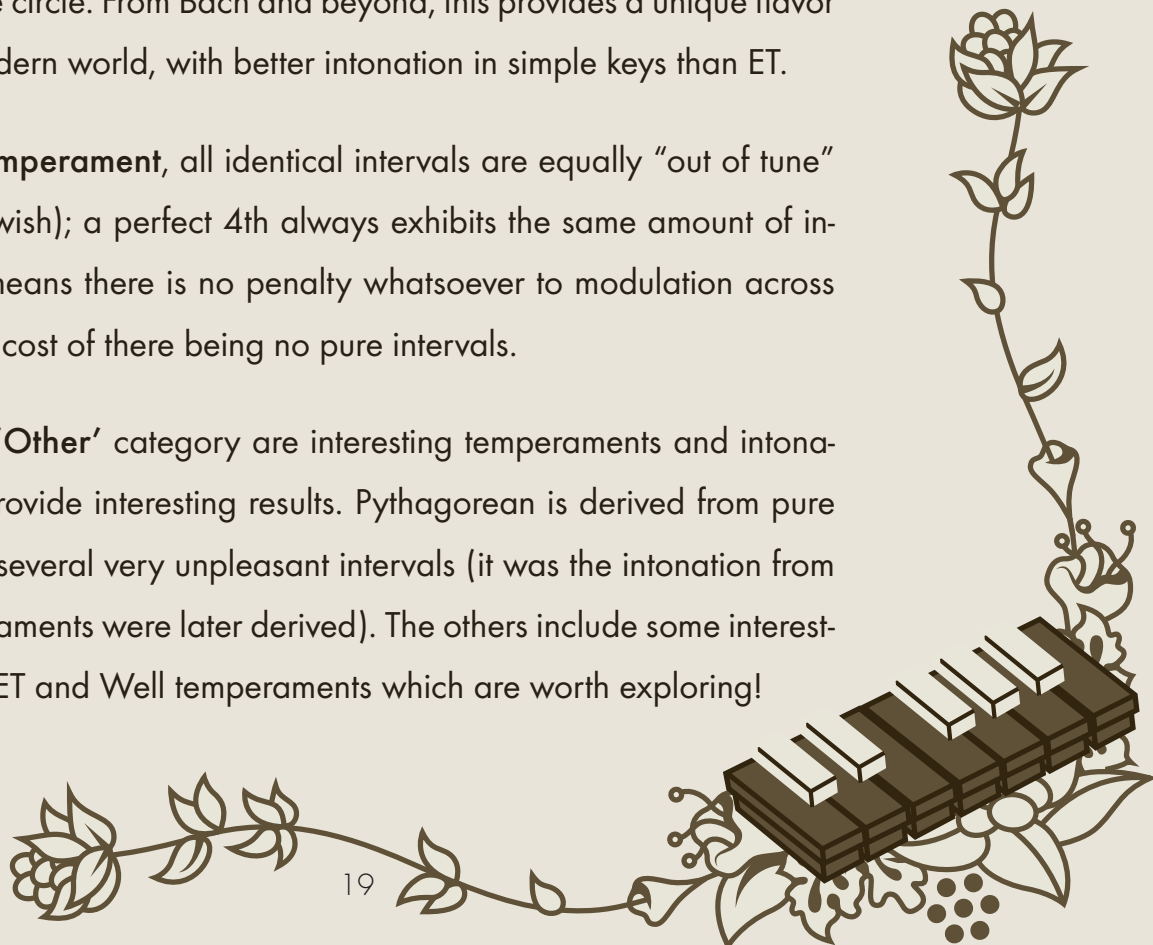
Meantone seeks to maximize pure intervals (in particular 3rds) in the 7-9 “easiest” keys, shoving all of the nasty inharmonicities in less used keys (e.g. Ab, Db, Gb/F#). Meantone is most synonymous with the Renaissance period, but is useful as an approximation of Just Intonation when writing non-modulating music. Use this for the greatest purity of intervals, but **beware the wolf!!**

The wolf tones lurk among the shadowy distant keys, intervals of indescribable horror and disgustingness, they feed on the mistakes of the unwitting keyboardist.

Well temperaments interpolate this behavior, gradually transitioning from being very pure in C Major to very impure in F# Major. This allows for tone color, where each chord and key provides a different feeling due to the gradual increase of inharmonicity as one works towards the more obscure keys at the bottom of the circle. From Bach and beyond, this provides a unique flavor now lost in our modern world, with better intonation in simple keys than ET.

In **Equal Temperament**, all identical intervals are equally “out of tune” (or in tune, if you wish); a perfect 4th always exhibits the same amount of inharmonicity. This means there is no penalty whatsoever to modulation across distant keys, at the cost of there being no pure intervals.

In the final ‘**Other**’ category are interesting temperaments and intonations which may provide interesting results. Pythagorean is derived from pure 5ths, but results in several very unpleasant intervals (it was the intonation from which most temperaments were later derived). The others include some interesting alternatives to ET and Well temperaments which are worth exploring!





The **MIRAGE FX** system provides easy access to Kontakt's internal suite of FX. VISAGE lets you shape the vision of the sound as it exists, MIRAGE lets you twist and shift those sounds into something mix ready or even surreal.

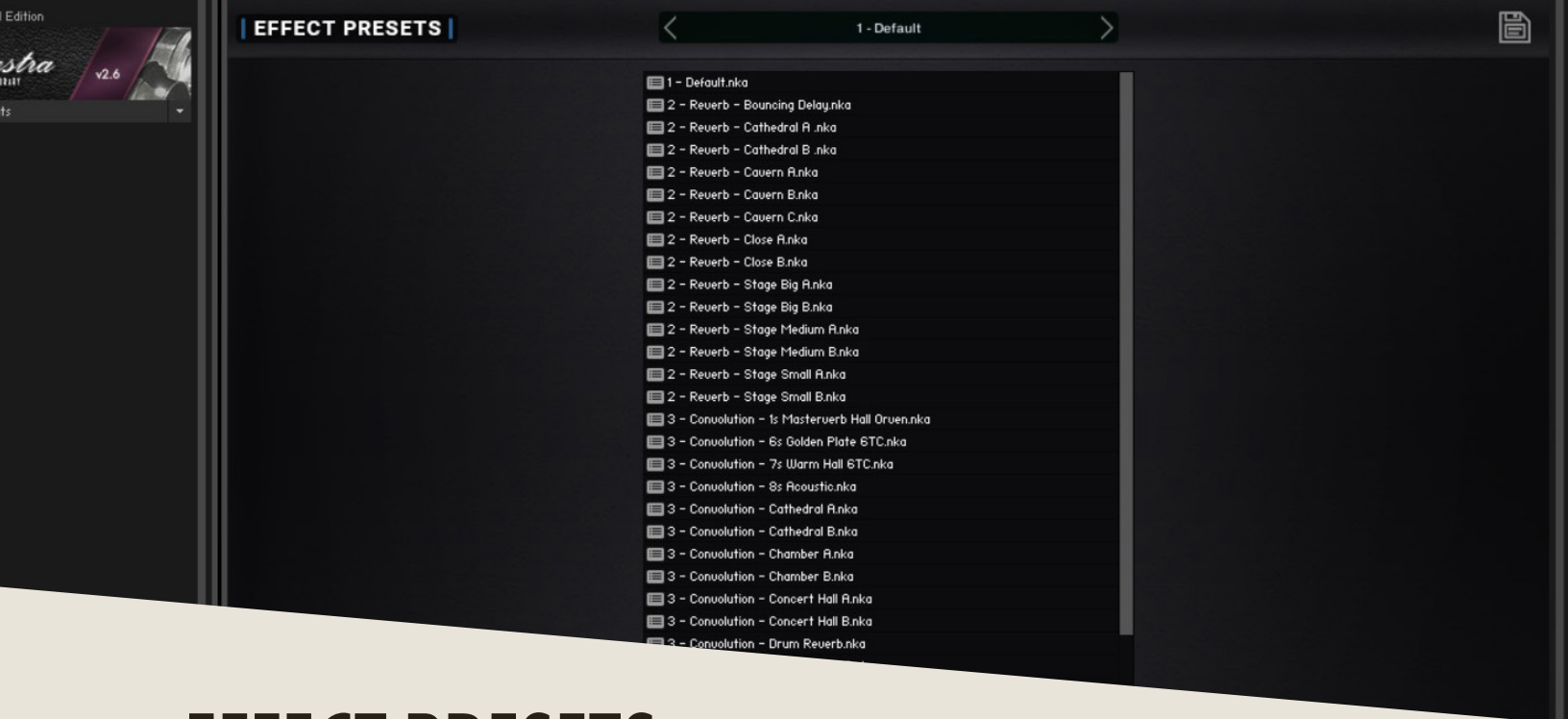
MIRAGE is divided into four sections: Tone, Dynamics, Space, and Crunch. Each row moves from calmest effect to most severe from left to right.

Tone controls the timbre and frequency response, with some tape warmth available on the right for additional coloration.

Dynamics shape the dynamic behavior of the instrument, with the extremely handy transient master.

Space lets you put the instrument anywhere you want- studios, halls, even surreal landscapes.

Crunch saturates, distorts, and bitcrushes the sound for some scintillating resonances and overdriven effects.



EFFECT PRESETS

Effect Presets let you immediately get into action with a variety of reverb and other effects, augmenting Kontakt's default Snapshots feature. Create and deploy your own presets across multiple VISAGE 3 products with portable .nka.

Reverb

- Bouncing Delay
- Cathedral A, B
- Cavern A, B, C (adds delay)
- Close A, B
- Stage Big A, B
- Stage Medium A, B
- Stage Small A, B

Convolution Reverb

- 1s Masterverb Hall
- 6s Golden Plate 6TC
- 7s Warm Hall 6TC
- 8s Acoustic
- Cathedral A, B
- Chamber A, B
- Concert Hall A, B
- Drum Reverb
- Music Studio A, B
- Tavern Close, Far

Effect

- Buzzing
- Crunchy Echoes
- Focussed
- Hard Tape
- Lofi Distortion A, B
- Old Radio
- Saturated Plate
- Transistor Distortion

*Reverb and Effect presets
designed by Simon Autenrieth.*



TROUBLESHOOTING

If you are experiencing issues with the library, there are a few steps you can try to resolve the issues before contacting us. Below is a list of common possible problems and 'home remedies' that will work to fix them.

1. Samples missing dialogue.

If you see this window, it means that the samples were moved or are missing from their original location. It is recommended to re-download the library via Pulse. If you still get the dialogue, do a batch re-save: select the floppy disk icon at the top of the Kontakt window towards the right and select 'Batch Re-save'. Navigate to the 'Continuo Organ' folder and select it. When the dialogue pops up, click 'Search for folder' and select the samples folder. After the batch re-save is complete, you should not experience any further samples missing dialogues.

2. Instrument uses up too much memory or CPU.

Use the circles beneath the articulations to purge any you doubt you will typically need, and turn off any effects you don't use (filter/reverb). Save this patch (under the floppy disk/save icon at the top of the Kontakt window itself) so that way it will load this

way by default. Note that snapshots include which articulations and mic positions are selected and enabled/disabled.

3. Instrument is only available in "DEMO" mode.

This is caused by trying to run the instruments in Kontakt Player. Unfortunately there's nothing we can do about this- making libraries for Kontakt Player requires a licensing agreement with Native Instruments, which is not economical for specialty products like this.

However, Kontakt is on sale often around December/January for \$150 USD. Regardless, we would be happy to offer you a refund if you are experiencing this issue and aren't interested in upgrading to the full Kontakt.

4. Instrument takes a long time to load.

On Windows 10 devices or devices with 'realtime protection' anti-malware systems, such systems will attempt to scan the literally thousands of samples that Kontakt needs to load before letting Kontakt load them. It is strongly advised that you exempt your samples drive from the scan.

5. Clicks/pops during playing.

Your buffer size is too small or your processor is not capable of running the library. Increase buffer size; on Windows, use an audio interface with true ASIO support to run with low latency.

5. Instrument won't respond to MIDI input.

Make sure your DAW or standalone Kontakt is receiving MIDI from your device, then ensure that the MIDI Ch. is set to match.

If you have any other issues, drop us a line at contact@versilstudios.net.



CREDITS

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John McKean