

VERSILIAN ^{STD.⁰⁵}
Chamber Orchestra 2
INTERMEDIATE ORCHESTRAL SAMPLE LIBRARY



Version 2.6.0

Professional Edition – Library Format

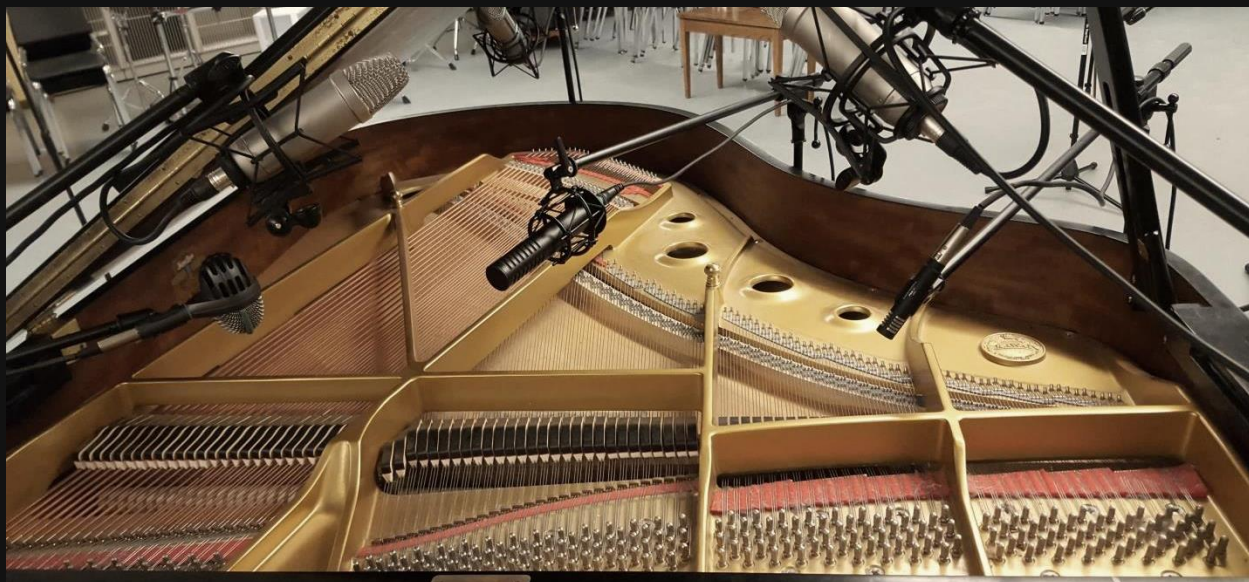
Product Manual

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MADE FOR

KONTAKT
PLAYER



INTRODUCTION

In January of 2010, I sat before a computer with a piece of software called LMMS and only the slightest idea on how to compose a piece of music, using a free soundfont from some now-archaic corner of the Internet. Six and a half years and over a dozen products later, it feels very strange to be sitting on the other side of the artist-supplier relationship.

The original premise of this project was simple: make an original orchestral library better than general midi. Little did I know this would turn into a major two-year-long commercial undertaking, involving dozens of individuals around the world. What was originally a small set of freeware instruments grew in size and quality exponentially into the library that sits before you right now.

The professional edition was developed under the complete autonomy of Simon Autenrieth, whose design and implementation choices subsequently reshaped the entire project. Greater multisampling, the inclusion of unique and rare instruments, dynamic cross-fading with phase-locking on all sustains, and the implementation of fully-mixable mic positions are just a few features that found their way into the library once he showed the potential of the library's future.

With the help of countless testers, musicians, and other individuals, we managed to sample [just about] every instrument found in a standard orchestra (sorry contrabassoon fanatics, but keep an eye out in 2018!). I hope you enjoy this library as much as we enjoyed making it, and that it helps you create music faster, easier, and more realistically.

Sincerely,

A handwritten signature in black ink, appearing to read 'Samuel A. Gossner', with a long horizontal flourish extending to the right.

Samuel A. Gossner
Durham, Connecticut. 2016



INSTALLATION

The following system properties are suggested for acceptable performance of VSCO 2: Professional Edition –

- ❖ 4 GB of RAM
- ❖ Intel Core 2 or later processor
- ❖ At least 16 GB of free disk space (plus 13 GB of additional space for the download, for a total of 29 GB temporarily)
- ❖ Hard Drive speed of 5400 RPM, minimum

For best results, a system of the following properties is preferable –

- ❖ 8 GB of RAM
- ❖ MIDI controller/keyboard, with mod-wheel
- ❖ Hard Drive speed of 7200+ RPM or SSD

NB: A video overview of the installation process is available [here](#). We highly recommend watching it for best results; below are the ‘cliff-notes’ from the video –

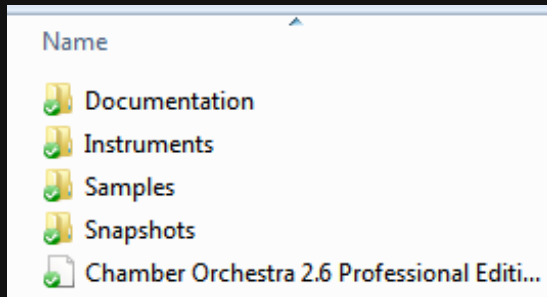
The first step in installation is to complete the multi-part download you are sent at the completion of checkout. You will be asked to enter your order details in order to access the download. We recommend securing a few hours with a reliable high-speed internet connection (preferably with an Ethernet cable) to complete this task. If this is not possible, we can ship the library to you on a flash drive for a small fee (“VSCO 2 Go Edition”).

If you are running VSCO off of the VSCO Go flash drive, then you do not need to complete any downloads, and do not need any disk space on your computer, unless you decide to copy the files off of the drive and on to your hard disk/SSD. To do this, simply copy the entire contents of the root directory of the flash drive into a new folder in the desired location.

Extract the contents of VSCO 2 Pro.rar using a tool such as **WinRAR** or **7-zip**. Then, extract the first (and only the first) of the Samples .rar files. Don’t worry, it will automatically extract all the files in order- so long as they have completed downloading when you start!

Decide where you would like to set up VSCO 2 (e.g. main HD, External drive, or Flash drive). Place the “**VSCO2 Pro**”

folder in this location (for best results, don't keep it in 'downloads'). Place the **Samples** folder inside the VSCO2 Pro folder, as shown below-

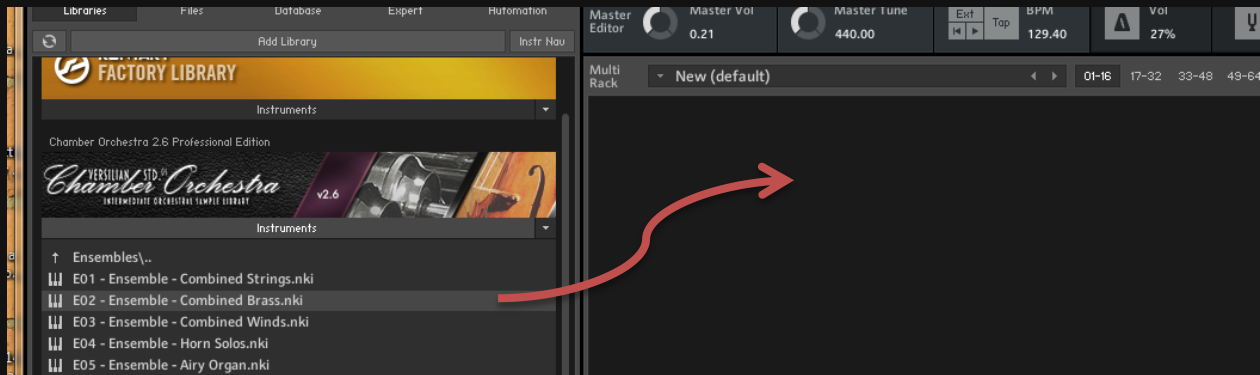


ACTIVATION: You will need to go into Native Access (if you don't have it, you can download it [here](https://support.native-instruments.com/hc/en-us/articles/115000685889-Setting-Up-a-Third-Party-KONTAKT-Library)) to activate the library. Please read the instructions on the Native Instruments website on how to activate a library. The Serial Number referenced can be found in your invoice, which was also sent to your e-mail (check your junk folder in case it ended up in there).

<https://support.native-instruments.com/hc/en-us/articles/115000685889-Setting-Up-a-Third-Party-KONTAKT-Library>

LOADING INSTRUMENTS: To load up an instrument, load an instance of Kontakt, then open up the Libraries tab on the left, navigate (double-click folders to open) to locate a .nki file that you want to load, and either double-click the name or drag and drop it into the main view window. Dragging and dropping onto

an existing instrument will replace, dragging and dropping into empty space will load it in addition to what is already loaded.

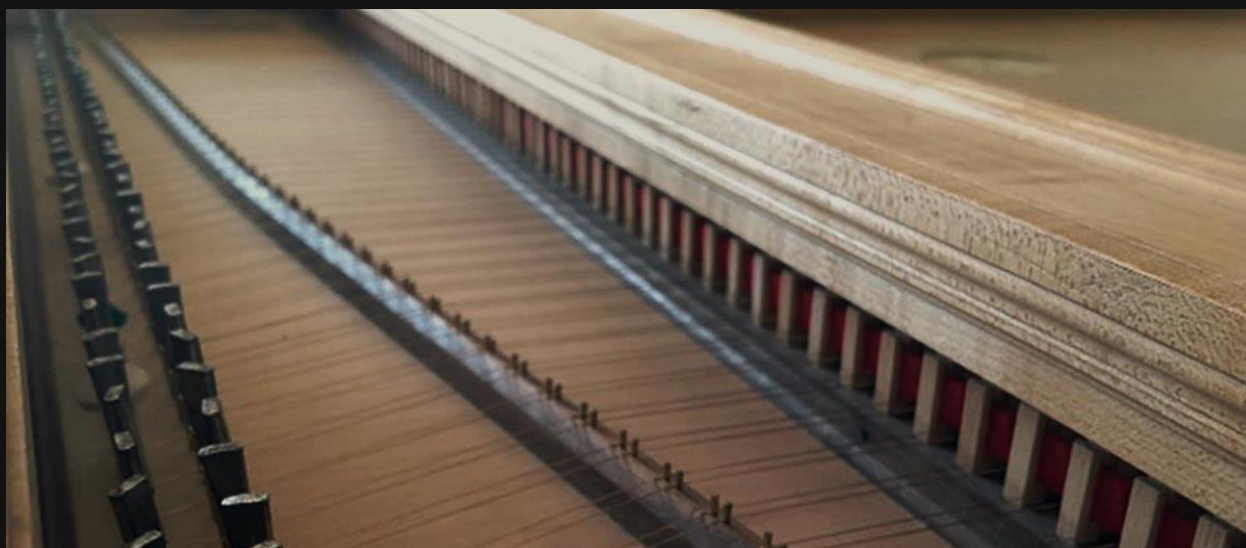


Alternately, you can also use Finder/Explorer to locate the .nki on your computer or use the **File** Browser window in Kontakt to locate the instruments you wish to load, then drag and drop from there, but this is a less efficient method.



Here is a table of terms you will see in file names and articulation names –

What it is...	What it means...
KS = Keyswitch	Patch contains keyswitches / multiple articulations
TM = Time-Machine	Patch contains time-machine option for stretching/shrinking the length of short samples on the UI.
VB/Vib = Vibrato	Patch contains baked/live vibrato
NV = Non-Vibrato	Patch does not contain baked/live vibrato
MS = Muted Sustain	Patch uses a mute of an undocumented sort
HM = Hand-Muted	Horn-specific articulation done by putting majority of hand in bell while playing
SM = Straight Mute	Most open/sharpest of brass mutes
CM = Cup Mute	Medium-sounding brass mute
BM = Bucket Mute	Most closed/warmest of brass mutes
HM = Harmon Mute	Special mute with very ‘buzzy’ sound; common in jazz
GN = Grace Note	Sustain approached by a grace-note
Expr = Expressive	Starts non-vibrato and mp and crescendos, while adding vibrato, before tailing back again.
Leg = Legato	Faux legato via WIPS/SIPS
Trem = Tremolo	String articulation where player strokes rapidly back and forth. Technically ‘unmeasured tremolo’ in VSCO.
Sul P = Sul Ponticello	String bow position, near the bridge.
Sul T = Sul Tasto	String bow position, near the fingerboard.
Flutter = Flutter-tongue	Wind articulation, sustain with a ‘rolled R’.



OPERATION

The following section will walk you through the operation and format of the custom user interface shown below. It will appear at the top of each page for visual aid.





1. **“Under the Hood” Access:** Make fine adjustments or add additional effects to the instrument in Kontakt; recommended for advanced/experienced users only! Click the VS logo beneath this to hide the rest of the UI.
2. **Instrument Name:** Tells you the instrument loaded.
3. **MIDI Channel Input:** Describes which MIDI channel the instrument is receiving input from. If you set up a template with 16 tracks, each routed to a MIDI channel (1-16), and say, you would like your flute (let’s say its channel 6) receive data from that track, set this to match.
4. **Maximum Voices:** If you find the Voices indicator nearing the max and voices get cut out as a result (more common on multi-mic instruments), then increase this number.
5. **Memory Indicator:** Shows how much memory the instrument takes up. This does not take into account the amount of data reserved for “Direct-from-Disk” (DFD) streaming, which reduces the memory amount required by instead relying on the streaming capabilities of your drive.
6. **Purge:** Unload unnecessary samples here, with caution.



7. **Solo/Mute:** Solo or mute the instrument within this instance of Kontakt. Does not work across multiple instances of Kontakt.
8. **Tune:** Adjust the intonation of the entire instrument at once. Adjustments greater than 4.00 (4 semitones) are not recommended if realism is an objective, but some interesting effects can be had by returning instruments by 12, 24, or 36 in either direction (cinematic vibraslaps? -36 S.T.'s!).
9. **Traditional Pan:** This is likely tied in with the pan knobs in your DAW's mixer- if you want to adjust this, I'd recommend adjusting it in your DAW's mixer window. Use stereo pan instead, or in tandem, for a more realistic effect.
10. **Volume:** Likely tied in with the balance slider in your DAW's mixer, or MIDI CC#7- if you want to adjust this, I'd recommend adjusting it in your DAW's mixer window.

*** The camera icon will open the 'Snapshots' window, where you can save or load presets for the instruments. More info is available on page 31.



11. Mic Position Volume: Adjust the volume of the mic positions to create the desired mix. Turning off will not unload the position, instead use the...

12. Mic Position Load/Unload: A grey square means the position is unloaded, and an orange square signifies it is loaded. Loading and unloading positions will dynamically purge and load the samples (if running out of RAM, you can unload some extra positions, or save your own instrument files or snapshots with different mic settings for future use).

13. Mono Position L/R Pan: All mono mic positions have a traditional left/right panning slider under them for better positioning. We recommend panning this to the instrument's natural position on an orchestral stage.

14. Stereo Width: Stereo width increases the phase difference between the left and right channels, giving a wider sense of space for the instrument. I'd recommend moving it no more than 25% up or down, as we used almost exclusively



Spaced Pair microphone arrays, which result in a quite wide stereo field to begin with, and can risk **phase interference** if too greatly adjusted.

15. **Stereo Pan:** Simulates an accurate panning effect by slightly delaying one channel over the other by a few milliseconds (just like turning your head to one side or the other would result in sound reaching the ears at slightly different times). Used predominantly, with a little bit of **traditional pan**, can give a very realistic effect!

16. **High-pass & Low-pass:** Click the grey square to enable the filters. High-pass (HP) will remove signals below the cutoff (allowing “*highs*” to “*pass*”), with a fade, while Low-pass (LP) will remove signals above the cutoff (allowing the “*lows*” to “*pass*”), with a fade. HP will help remove hiss, and dull/warm up the instrument sound (also handy for simulating quiet dynamics on many instruments), while LP will remove key thuds and other low-end noises.



17. Convolution Reverb: Typically enabled (orange), but if not, you can click the grey square to enable. Clicking again disables it.

- a. **Pre-Delay:** The length of time before the reverb impulse ‘reacts’. This is analogous to the length of time it takes the original sound signal to bounce off the walls of a hall and return to you. A small amount will result in a crisp, close sound, while a high amount will result in more of an auditorium “slap” sound.
- b. **Room:** The amount of “wet” impulse sent back. Typically -15 to -5 dB is best. Passing -5 dB is only recommended for effects, as any musical figures will be too muddy to be understandable at that point.
- c. **Room Size:** The length of the impulse. This is analogous to the size of the space. 50% is roughly a small ensemble room, while 100%+ is a large concert hall.



18. Advanced Controls: Most instruments will feature some additional controls here, such as attack and the volume of release tails. These are *Articulation-Specific*, meaning each articulation can have different values set.

19. Articulation Lock: Click this icon to keep from accidentally switching articulations if you choose to only use one articulation per that patch.

20. Keyswitch Mover: Move the position of the keyswitches (chromatically) up and down the keyboard by clicking and dragging.

21. Articulation Indicator: Indicates the current articulation.

22. Visual Articulation Indicator: The white articulation is the current selected one; burgundy ones are unselected. You can click to change articulations, or use the Keyswitches.



23. Articulation Purge/Load: Purge unneeded articulations by clicking the corresponding white diamond. Purged articulations will be unloaded from the instrument, greatly reducing disk and RAM load. If you choose to follow the “one-articulation-per-instrument” approach rather than the keyswitch approach, make sure you purge your unwanted articulations, as well as lock the articulation.



In legato instruments, the following controls will also be visible on the bottom part of the UI (shown above) –

1. **Sample Start:** Determines where the sample starts (recommended left at current setting).
2. **Length:** Determines how long the legato transition will take place. This basically controls a simple crossfade. A length of about 30-50 is recommended for keyed and valved (most woodwinds and brass) instruments, with values 50-120 for strings and some other instruments, at discretion.
3. **Intensity:** Determines how strong the actual bend sound will be. This basically controls the length of the bend. A length of about 30-50 is recommended for keyed and valved (most woodwinds and brass) instruments, with values 50-120 for strings and some other instruments, at discretion. A value of about 35-45 will result in a quick snap, like clicking a key regularly, while longer values will give more of a bend.
4. **Offset:** Allows you to enter the ‘destination’ note at a certain point. All expressive patches should be full (1000 ms), while most other patches are good about 50-150 ms.



5. **Vibrato Amount:** Adds a synthetic vibrato. 25-40% is typically sufficient. Use this on non-vibrato patches to create a milder and more controllable vibrato for instruments that have too exaggerated of a live vibrato for the style of piece you are writing.

6. **Pitch:** The change in pitch at each vibration. 3-12 cents is typical.

7. **Volume:** The change in pitch at each vibration. 4-8 dB is typical.

8. **Speed:** The speed of the vibrato. A rate of 3-9 Hz is typical, with brass typically around 4-5 and woodwinds 5-7, depending on the mood, style, and era of the piece.

You can access additional controls for fine tuning the WIPS phrasing engine by clicking the “Under the Hood Access” wrench and under the UI area, going to the WIPS tab. Once you have a setting you like, don’t forget to make a snapshot (see Pg. 31) or re-save the instrument!

Some **important things** to remember when operating this library –

- ❖ All **sustaining** articulations (including rolls) are controlled by Mod Wheel (CC#1), while all **short** articulations (spic, stac, marc, hit, etc.) are controlled by keyboard velocity. It is **recommended** to always use a keyboard with a modwheel when using this library.
- ❖ Be cautious when switching between sustaining and short articulations, as you may accidentally activate the top velocity layer and create a louder-than-expected sound.
- ❖ Upon loading an instrument, the CC#1 input is set at 64 (halfway). Just wiggle your modwheel (virtual or real) to resolve this; this is a Kontakt default, nothing we can change.
- ❖ All controls on the UI can be automated by right-clicking and clicking "Learn MIDI CC# Automation. This will allow you to do things like change the reverb amount, mic blend, or filters at any point in your piece.
- ❖ Don't forget to load/enable a mic position, effect, or articulation prior to altering it!



CREATING REALISM

Creating a realistic mock-up is a very challenging skill! In this section, I'd like to discuss a few points to help create the most effective mock-up you can with our library. Veteran composers feel free to skip this section if desired.

The first step in creating a realistic mock-up is to understand the strengths and weaknesses of your library, and how those fit into your style. Take several hours to review the entirety of the library (and this goes for all new libraries). Make mental (or physical) notes of the immediate reactions, emotional or otherwise, that you have to each instrument. If one instrument seems to draw you in for a long time and 'ask' to be played, take note.

For example, Chamber Orchestra 2 is not a “Hollywood”-style orchestral library, and using it as such will likely produce mixed results. Its strengths are its subtle sections and unique timbres. It is highly blendable and will readily combine with such “Hollywood”-style libraries to add detail and closeness. As it is generally a dry sound set, it flourishes with the addition of reverb and can be made to fit in any space desired.

When an instrument doesn’t have a whole lot of round-robins or doesn’t sound good in a particular phrase, you should either change the instrument or the phrase. Often times, making small compositional compromises in the name of a more realistic performance by the virtual instrument can result in a far better result than not heeding the limits and strengths of the instruments.

Take your time to learn the names, approximate ranges (which are higher, medium, low, etc.), and timbres (tone qualities) of the various instruments of the orchestra. Being able to select the right instrument for your needs at a moment’s notice is a great skill.

When creating any lyrical lines, use a legato instrument, but don’t just make every single interval a big legato slur! Try to think of each line as a series of short phrases, or words. You may slur the first three notes, then shorten the third note to $\frac{1}{2}$ length so that the player ‘breathes’, before the next phrase. Typically

big leaps on ‘weak’ beats are slurred, while pickups/escape tones are not approached by slurs. Try singing the line, allowing yourself to breathe regularly, and wherever you breathe, shorten the previous note.

If you are uncertain what I mean by this, go listen to some recordings of real traditional orchestras, and listen to the way solo instruments space their lines. Unfortunately, neither I nor anyone can particularly *teach* you what makes a line “musical” and another “stilted” (at least not without years of study and practice), but enough exposure to music will help your ear develop a sense for what is musical and what is not. Musicality is the holy grail of virtual orchestration and is something even the best mock up artists are still improving every day.

I highly, highly recommend playing all flowing lines into your DAW live, simultaneously recording mod wheel changes, using a MIDI keyboard. If you cannot, then take care to de-quantize the line, and make sure all legato points have the first note stretched so it will trigger the legato change. Even if you are a dreadfully incompetent pianist (such as yours truly), you can always edit your performance to clean it up a little. The rest will add a great deal of realism to the performance.

When adding mod-wheel (or CC#1) changes, try to think about the motion of the phrase. Typically, phrases start quiet and

grow to the cadence, before having a sense of release on the resolution. If this means nothing to you, then again, listening to some live recordings (and not just modern film and game scores too) are your best bet. **ALL sustaining patches in VSCO 2, no matter what, have modwheel crossfading. All non-sustaining patches, no matter what, rely on key velocity.**

When locating music to guide idiomatic solo writing, search for works such as “concertos”, which are works that feature the particular instrument (piano concerto, oboe concerto), and etudes, which are advanced, highly-idiomatic works that push the boundaries of the performer’s ability. Also useful are “chamber orchestra”, “quartets”, and “quintets” (woodwind quintet, brass quartet, etc.), which all feature idiomatic usage most similar to the original instruments in VSCO 2.

Always use keyswitches whenever possible. Don’t be afraid to switch to a staccato or spiccato articulation in order to get a shorter sound rather than just playing a shortened sustain note, and use the “TM” or “Time Machine” patches to lengthen or shorten short articulations to your needs!

The next most important aspect of your song to keep in mind is the sense of space you create. Space is comprised of the spacing (panning) of the instruments, the amount and feel of the reverb, and the orchestration choices that manipulate the timbre

and flow of the piece (i.e. which instruments you pick for what parts).

When panning, focus on trying to balance between the left and right- this can help when composing too! If you have a violin section line in the left, have the bassoons or cellos or trombones doing something on the right. This is particularly important when using repeating patterns such as ostinati or arpeggios.

VSCO 2 is already fairly well tailored to produce a clear, precise mix with little adjustment necessary. A good mix engineer might take this to a further step and add exciters, compressors, EQ's, etc. if desired, but the vanilla library requires none of that to sound realistic (the rest is just the “icing” on the ‘cake’).

Take care not to pan your mix too wide, or too thin. This is where keeping it easy on the stereo width, stereo pan, and normal pan can be your best friend! Too much width manipulation can result in some funky cancellations and phasing that will detract from your mix, while too thin width can create similar cancellations and a weak, mono sound. Make subtle moves, compare your mix to live recordings, and for the love of all things beautiful, don't pan things 100%.

Don't be afraid to add effects after you have completed your basic mix. VSCO sometimes needs a bit more bass and low-

mids added (because it was recorded mainly with cardioid large-diaphragm condenser mics), and a little subtle tube emulation/ exciter can only help. Here you can experiment with some subtle width changes overall (sometimes sending an exaggerated width and EQ'd version through reverb and adding it back in very subtly can create some nice reverb effects). Again, it's important to keep your ear on some live recordings. If you hear something that seems awful, go back and fix it.

You may feel the urge to call your work complete immediately, but letting it sit at least overnight, and returning to it the next day for revisions is always a great chance to catch some issues you did not hear before. On a tight deadline, "complete" a track, then go "complete" another, then return to the first to check it through. You will always find things to fix!



TIPS

400+ Kontakt instruments are a lot to keep track of, so here are a few tips to make your life at least a little easier.

- ❖ Want a less exaggerated vibrato for Trumpets II and III? Consider using the artificial vibrato in the NV legato patch.
- ❖ When using the snares in a pop mix, use or exaggerate the close mics; in an orchestral mix, use or exaggerate the mid and far mics.
- ❖ Turn any snare drum into a tenor drum by pitching down the instrument 4-6 semitones.

- ❖ To reduce mud or 'echo-ness' in a low or fast-transient instrument, reduce the room size of the reverb to 60-80% and reduce pre-delay. This will approximate the sound of a medium ensemble space.
- ❖ You can add your own reverb impulse, or pick a different factory default one, by going under the hood, under "Insert Effects" (in the Convolution box). Click "Preset", and load a different impulse. You will need to do this for every instrument, but you can always save snapshots or re-save as new filenames (or even write over the original instrument if you really like yours better).
- ❖ Add distance to any instrument by enabling the High-pass/low-pass and turning up the High-pass to a few hundred Hz and adding more reverb.
- ❖ Want less accented key hits on harpsichord, mallets, or piano? Enable and turn up the high-pass to 100-300 Hz.
- ❖ All strings are mic'd as close-mids in a dry room. This allows you to transplant them into just about any hall you want.
- ❖ Load multiple instances of Kontakt and spread your load across them for best results.



USING SNAPSHOTS

Snapshots are quick and easy presets that come in both pre-made and user-made forms. Snapshots are accessible by clicking the camera button to the right of the instrument name, and can be closed by clicking the ‘i’ button to the right of the camera button.

VSCO Pro 2.6 comes with 150 snapshots for 36 instruments, listed below. I will leave the actual content of these snapshots for you to explore and play with.

You can also easily create your own snapshots of your favorite mixes or in-instrument effects (click the wrench icon and scroll down to the part labeled ‘InsertEffects’, then click on an

empty box and select an effect to add it). Note that it WILL save just about everything in the Kontakt UI except the volume and pan settings, but will not save anything outside of Kontakt, such as 3rd party effects or reverbs. Feel free to explore around in Kontakt to find new sounds and effects, but instead of saving instruments, save snapshots! That way, you can't actually break or corrupt the instruments, but you can explore freely.

Please note that Snapshots cannot be applied across instruments (e.g. you can't use a Solo Flute I – KS snapshot on Solo Oboe I – KS, or even on Solo Flute I – VB Leg!). However, effects parameters can be saved as presets in the effects options, meaning it is not impossible to create similar presets across instrument files.

Instruments Featuring 'Factory' Snapshots in v2.6.0
B01 – Horn Section – KS
B02 – Trumpet Section – KS
B03 – 7P Tenor Trombone Section – NV Leg
B03 – 7P Tenor Trombone Section – TM KS
B03 – 7P Tenor Trombone Section – KS
B04 – Bass Trombone Section – KS
B04 – Bass Trombone Section – NV Leg
B08 – Solo Alto Saxhorn – Expr Leg
B08 – Solo Alto Saxhorn – KS
B11 – Solo Trumpet II – HM Expr Leg
B22 – Solo Ophicleide – KS
E01 – Ensemble – Combined Strings

K01 – Grand Piano – Time-Loop
K01 – Grand Piano – Warm
K02 – Upright Piano
K03 – Italian Harpsichord – KS
K04 – French Harpsichord – KS
M01 – Vibraphone – KS
M01 – Vibraphone – Sustaining KS
M02 – Marimba – KS
M04 – Ethnic Xylophone – KS
M05 – Glockenspiel
M06 – Tubular Bells – KS
M07 – Tubeglock
P02 – Ensemble – Percussion Big
P02 – Ensemble – Percussion GM Layout
S01 – Violin Section – KS
S02 – Viola Section – KS
S03 – Cello Section – TM KS
S09 – Harp – KS
W01 – Solo Flute I – KS
W08 – Solo English Horn I – KS
W08 – Solo English Horn I – VB Leg
W15 – Soprano Recorder – KS
W16 – Alto Recorder – KS
W17 – Tenor Recorder – KS



MICROPHONE POSITIONS

Here is a chart of a few mic position names and what they mean in regards to placement.

What it is...	What it means...
Main/Mid	A stereo, likely spaced pair at 6-12 feet.
Close	A single mic at ~12" from source.
OH	A single or pair of small diaphragm condenser microphones 3-6 feet over the sound source.
Bell/Rear	A single mic located 4-6" behind the bell of a brass instrument (extremely warm, round sound).
Snare	A single small diaphragm condenser under drum.
Ribbon	A ribbon mic perspective, typically rather close.
Outrigger	Particularly wide spaced pair.
Close SDC	A close small diaphragm condenser.
Close LDC	A close large diaphragm condenser.



WHAT'S INCLUDED

The Professional Edition is the most content-packed of all the editions of the library available, with over 90 instruments, across over 430 .nki, and a grand total of over 61,000 audio files. The charts on the next few pages will enumerate the exact numbers and contents of each instrument available with this version.

**Please note that the keyswitch provided is not absolute; the UI allows the moving of the keyswitch section as a whole at will; all KS are listed in 'Japanese' (Kontakt) Notation (C3 = 60 = Middle C), not IPN.*

[M] – Denotes Multi-Mic;

WOODWINDS

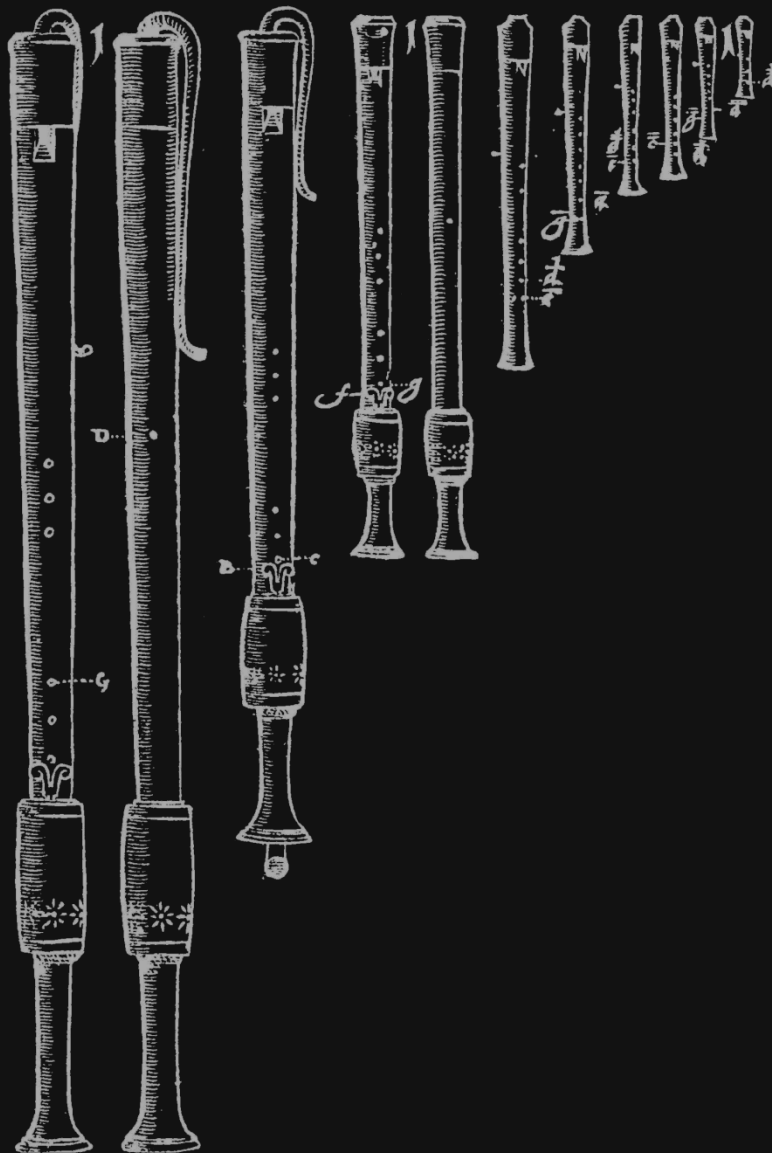
Woodwinds		
Instrument Name	Articulation	Keyswitch*
Piccolo (flute)	Vibrato Sustain	C0
	Staccato	C#0
	Trill, Half-Step	D0
	Trill, Whole-Step	D#0
Flute I <i>(balanced)</i>	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Expressive Vibrato	D0
	Staccato	D#0
	“Pop”	E0
	Flutter-tongue	F0
	Trill, Half-Step	F#0
	Trill, Whole-Step	G0
Flute II <i>(slightly airy)</i>	Vibrato Sustain	C0
	Staccato	C#0
	Trill, Half-Step	D0
	Trill, Whole-Step	D#0
Flute III <i>(ultra-strong)</i>	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
	Trill, Half-Step	D#0
	Trill, Whole-Step	E0
Flute IV <i>(ultra-airy)</i>	Vibrato Sustain	C0

Woodwinds		
Instrument Name	Articulation	Keyswitch*
<i>(Flute IV Cont'd)</i>	Staccato	C#0
Oboe I	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
Oboe II [M]	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
English Horn [M]	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
Bb Clarinet I [M]	Non-Vib. Sustain	C0
	<i>(tighter)</i>	Exp. Sustain (NV)
	Staccato	D0
	Flutter	D#0
Bb Clarinet II [M]	Non-Vib. Sustain	C0
	<i>(brighter)</i>	Exp. Sustain (NV)
	Staccato	D0
Bass Clarinet [M]	Non-Vib. Sustain	C0
	Staccato	C#0
Bassoon I	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
Bassoon II	Non-Vib. Sustain	C0
	Staccato	C#0
Blown Bottle	Sustained	C0

Woodwinds		
Instrument Name	Articulation	Keyswitch*
<i>(Blown Bottle Cont'd.)</i>	Staccato	C#0
Flutophone	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
	Flutter	D#0
	Effects	E0
Small Ocarina	Sustained	C0
	Staccato	C#0
Tin Whistle	Combined Artic.	C0
	Non-Vib. Sustain	C#0
	Vibrato Sustain	D0
	Staccato	D#0
	Cut (ornament)	E0
	Tap (ornament)	F0
	Roll (ornament)	F#0
Wooden Fife	Non-Vib. Sustain	C0
<i>(natural flute in C)</i>	Vibrato Sustain	C#0
	Staccato	D0
	Whole-step Trill	D#0
Mayan Flute	Sustained	C0
<i>(whistle)</i>	Staccato	C#0
Native American Flute	Combined Artic.	C0
<i>(whistle)</i>	Sustained	C#0
	Staccato	D0
	Ornament 1	D#0

		Woodwinds
Instrument Name	Articulation	Keyswitch*
(N.A. Flute Cont'd.)	Ornament 2	E0
	Fall	F0
Tibetan Flute	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
	Fall	D#0
	Whole-step Trill	E0
Sop'nino Recorder [M]	Non-Vib. Sustain	C0
	Staccato	C#0
Soprano Recorder [M]	Non-Vib. Sustain	C0
	Staccato	C#0
	Half-step Trill	D0
	Whole-step Trill	D#0
Alto Recorder [M]	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
	Half-step Trill	D#0
	Whole-step Trill	E0
Tenor Recorder [M]	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
Bass Recorder [M]	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
	'Pop'	D#0

Woodwinds		
Instrument Name	Articulation	Keyswitch*
(Bass Recorder Cont'd.)	Flutter-tongue	E0
	Distorted Sustain	F0
	Key Taps/clicks	F#0



Recorders of the Renaissance, depicted in Michael Praetorius' Syntagma Musicum

BRASS

Brass		
Instrument Name	Articulation	Keyswitch*
Horn (Double) I	Non-Vib. Sustain	C0
(pop/'close')	Swell Sustain	C#0
	Staccato	D0
	Tight Staccato	D#0
	Muted Sustain	E0
	Muted Staccato	F0
	'Call' Up P4	F#0
	Diminuendo	G0
Horn (Double) II [M]	Non-Vib. Sustain	C0
	Staccato	C#0
Horn (Bb) III [M]	Non-Vib. Sustain	C0
(antique- 1890's)	Crescendo	C#0
	Staccato	D0
	Hand-Muted	D#0
Horn Section [M]	Sustain + Attack Ovly	C0
	Non-Vib. Sustain	C#0
	Effects	D0
Trumpet I [M]	Non-Vib. Sustain	C0
(orchestral)	Vibrato Sustain	C#0
	Staccato	D0
	Flutter-tongue	D#0
	Straight Mute Sus.	E0

Brass		
Instrument Name	Articulation	Keyswitch*
<i>(Trumpet II Mutes cont'd)</i>	Harmon Mute Stac.	F#0
Trumpet III	Non-Vib. Sustain	C0
<i>(jazz)</i>	Multo Vibrato Sus.	C#0
	Vibrato Swell Sus.	D0
	“Grace Note”	D#0
	Staccato	E0
	Flutter-tongue	F0
	Falls	F#0
	Doits	G0
Trumpet Section [M]	Staccato + Sustain	C0
	Non-Vib. Sustain	C#0
	Staccato	D0
	Doubles	D#0
	Flutter	E0
	Fall	F0
	Cup Mute Sustain	F#0
Cornet I [M]	Non-Vib. Sustain	C0
<i>(high)</i>	Swell/Expressive	C#0
	Staccato	D0
Cornet II [M]	Non-Vib. Sustain	C0
<i>(low)</i>	Vibrato Sustain	C#0
	Staccato	D0
Alto Trumpet [M]	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Exp. Vibrato	D0

Brass		
Instrument Name	Articulation	Keyswitch*
<i>(Alto Trumpet Cont'd.)</i>	Staccato	D#0
	Marcato	E0
	Vibrato Marc.	F0
	Sforzando	F#0
	Flutter-tongue	G0
Alto Saxhorn [M]	Non-Vib. Sustain	C0
<i>(antique- 1920's)</i>	Exp. Vibrato	C#0
	Staccato	D0
	Flutter-tongue	D#0
	'Call' Up P5	E0
Trad. Mellophone [M]	Non-Vib. Sustain	C0
<i>(antique- 1920's)</i>	Crescendo	C#0
	Staccato	D0
	'Call' Up M2	D#0
	'Call' Up M3	E0
	'Call' Up P4	F0
	'Call' Up P5	F#0
	'Call' Up M6	G0
Tenorhorn [M]	Non-Vib. Sustain	C0
<i>(antique- 1920's)</i>	Vibrato Sustain	C#0
	Exp. Vibrato	D0
	Staccato	D#0
	Short Staccato	E0
Euphonium I	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0

Brass		
Instrument Name	Articulation	Keyswitch*
<i>(Euphonium I Cont'd.)</i>	Staccato	D0
	'Cuivre'	D#0
Euphonium II	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Staccato	D0
	'Cuivre'	D#0
Tenor Trombone I	Non-Vib. Sustain	C0
<i>(vintage- 1945)</i>	Vibrato Sustain	C#0
	Staccato	D0
	Flutter-tongue	D#0
	Straight Mute Sus.	E0
	Bucket Mute Sus.	F0
	Plunger Mute Sus.	F#0
	Plunger Mute Wah	G0
Tenor Trombone II	Non-Vib. Sustain	C0
<i>(antique- 1905)</i>	Vibrato Sustain	C#0
	Staccato	D0
	Flutter-tongue	D#0
	Bucket Mute Sustain	E0
Tenor Trombone III [M]	Non-Vib. Sustain	C0
<i>(modern w/ F-Trigger)</i>	Multiphonic Glissando	C#0
	Multiphonic 5 th	D0
	Multiphonic 10 th	D#0
7-Player Tbn. Sec. [M]	Staccato + Sustain	C0
<i>(6 small bore + 1 bass)</i>	Non-Vib. Sustain	C#0

Brass		
Instrument Name	Articulation	Keyswitch*
<i>(7p Tbn. Sec Cont'd.)</i>	Staccato	D0
	Effects	D#0
Bass Trombone I	Non-Vib. Sustain	C5
	Vibrato Sustain	C#5
	Staccato	D5
	Flutter-tongue	D#5
	Straight Mute Sus.	E5
Bass Trombone II [M]	Non-Vib. Sustain	C5
<i>(ultra-tight)</i>	Vibrato Sustain	C#5
	Staccato	D5
	'Shake'	D#5
	Doit	E5
	Flutter-tongue	F5
	Muted Sustain I	F#5
	Muted Sustain II	G5
	Effects	G#5
Bass Trombone Ens.	Staccato + Sustain	C0
	Non-Vib. Sustain	C#0
	Staccato	D0
	3-Layer Sustain	D#0
	Soft Sustains	E0
	Loud Sustains	F0
Tuba (full) I	Non-Vib. Sustain	C0
	Staccato	C#0
Tuba (3/4ths) II	Non-Vib. Sustain	C0

Brass		
Instrument Name	Articulation	Keyswitch*
<i>(Tuba II Cont'd.)</i>	Staccato	C#0
Tuba (full) III [M]	Non-Vib. Sustain	C5
<i>(most detailed tuba)</i>	Staccato	C#5
	Soft Sustains	D5
	'Blast'	D#5
	Sforzando	E5
	'Chewy'	F5
Ophicleide (C) [M]	Non-Vib. Sustain	C0
<i>(antique- 1890's)</i>	Vibrato Sustain	C#0
	Staccato	D0
	Flutter-tongue	D#0

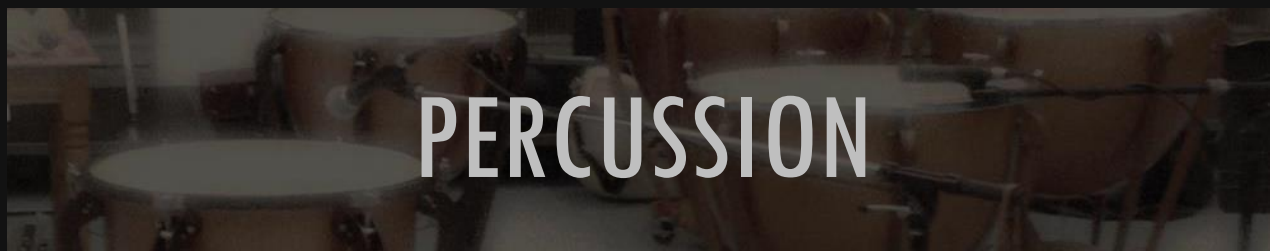


Trombone Player, circa 1835 from Vobaron's Trombone Method

KEYS & MALLETS

		Keys & Mallets
Instrument Name	Articulation	Keyswitch*
Church Organ [M]	Powerful Combo	--
<i>(try it, I dare you)</i>	Powerful Manual	--
	Powerful Pedal	--
	Soft Combo	--
	Soft Manual Only	--
	Soft Pedal Only	--
	Contraposaune Pedal	--
	Zimbelstern & Blower	--
Italian Harpsichord	Stop I (single)	C0
<i>(for solo works)</i>	Stop II (double)	C#0
French Harpsichord [M]	Stop I (single)	C0
<i>(blends w/ ensembles)</i>	Muted	C#0
	Plucks	D0
Grand Piano [M]	'Bright'	--
<i>(close/player)</i>	'Strong'	--
	'Warm'	--
	Cinematic 'Distant'	--
	Cinematic 'Timeless'	--
	Cinematic 'Time-Loop'	--
	Cinematic 'Time-Pluck'	--
	Cinematic 'Time-Stop'	--
Upright Piano [M]	(Normal)	--

		Keys & Mallets
Instrument Name	Articulation	Keyswitch*
Glockenspiel	Hits, Normal	--
Xylophone [M]	Rubber Mallets (med.)	C0
	Wood Mallets (hard)	C#0
	Yarn Mallets (soft)	D0
	Dia. Gliss Up; Down	D#0
	Penta. Gliss Up; Dn	E0
'Ethnic' Xylophone [M]	Traditional Mallets	C0
<i>(unknown, African)</i>	Soft Mallets	C#0
	Hard Mallets	D0
Tubular Bells	Normal Hits	C0
	Top-Hits	C#0
	Normal, Muted	D0
	Top, Muted	D#0
'Tube-glock'	Hits, Normal	--
Vibraphone [M]	Wood Mallets	C0
	Wood Mallets, Vib.	C#0
	Yarn Mallets	D0
	Yarn Mallets, Vib.	D#0
	Bowed	E0
	Bowed, Fast Attack	F0
Marimba [M]	Hits, Normal	C0
	Rolls	C#0



Percussion		
Instrument Name	Articulation	Keyswitch*
Bongos [M]	High (various hits)	--
	Low (various hits)	--
Congas [M]	Conga (various hits)	--
	Quinto (various hits)	--
	Tumba (various hits)	--
Crash Cymbal I [M]	Various Hits	--
Crash Cymbal II [M]	Various Hits	--
Crash Cymbal III [M]	Various Hits	--
Susp. Cymbal I	Hits, Rolls, Bowed	--
Susp. Cymbal II	Hits, Rolls, Bowed	--
Gong I	Hits, Scrapes	--
Gong II [M]	Hits, Scrapes, Rolls	--
Hand Drums [M]	High (various hits)	--
	Low (various hits)	--
Snare I [M]	Hits, sampled rolls	--
Snare II [M]	Hits, sticks, rolls	--
Snare III [M]	Hits, sticks, rolls	--
Snare IV [M]	Hits, sticks, rolls	--
Snare Ensemble [M]	Hits, sticks, rolls	--
Toms [M]	Low (various hits)	--
	High (various hits)	--
Bass Drum [M]	Hits (Orchestral-style)	--

		Percussion
Instrument Name	Articulation	Keyswitch*
Timpani [M]	Normal Hits	C5
	Hard Hits	C#5
	Center Hits	D5
	Rolls	D#5
	Normal Hits, Muted	E5
	Hard Hits, Muted	F5
	Center Hits, Muted	F#5
	Rolls, Muted	G5
Agogo Bells [M]	High	--
	Low	--
Brake Drum I [M]	Hits, Normal	C0
	Drum Stick (pitched)	C#0
	Hammer I (pitched)	D0
	Rubber I (pitched)	D#0
	Suspended (pitched)	E0
	Yarn Mallet (pitched)	F0
	Bowed (pitched)	F#0
Brake Drum II [M]	Hits, bowed	--
Cabasa I [M]	Hits, shakes	--
Cabasa II [M]	Hits, shakes	--
Cowbell I [M]	Hits, muted hits	--
Cowbell II [M]	Hits, muted hits	--
Log Drums [M]	High (multi. mallets)	--
	Low (multi. mallets)	--
Ratchet I [M]	Rolls, single clicks	--

Instrument Name	Articulation	Percussion
		Keyswitch*
Ratchet II [M]	Rolls, single clicks	--
Tambourine I [M]	Hits, shakes, rolls	--
Tambourine II [M]	Hits, shakes, rolls	--
Tambourine III [M]	Hits, shakes, rolls	--
Triangle I [M]	Hits, chokes, rolls	--
Triangle II [M]	Hits, chokes, rolls	--
Triangle III [M]	Hits, chokes, rolls	--
Triangle IV [M]	Hits, chokes, rolls	--
Triangle V [M]	Hits, chokes, rolls	--
Triangle VI [M]	Hits, chokes, rolls	--
Triangle VII [M]	Hits, chokes, rolls	--
Triangle VIII [M]	Hits, chokes, rolls	--
Vibraslap I [M]	Hit	--
Vibraslap II [M]	Hit	--
Anvil [M]	Hits, Various	--
Ball Whistle [M]	Whistles, Various	--
Bell Tree [M]	Single Hits (pitched)	C0
	Sus. Strokes	C#0
Cajon	Hits, Various	--
Claves [M]	Two; Hits, Various	--
Darbuka	Hits, Various	--
Guero [M]	Strokes, Hits	--
Hi-Hat [M]	Hits, Open & Closed	--
Large Shaker [M]	Shakes	--
Ocean Drum [M]	Swirls	--

		Percussion
Instrument Name	Articulation	Keyswitch*
Siren Whistle [M]	Various whistles	--
Sleigh Bells [M]	Hit	--
Small Shaker [M]	Shakes, Various	--
Sustained Glasses I	Rubbed	--
Sustained Glasses II	Normal Hits	C0
	Staccato Rubs	C#0
	Fast Rub Sustain	D0
	Slow Rub Sustain	D#0
Thunder Sheet [M]	Various Shakes, Hits	--
Train Whistle [M]	Various Whistles	--
Wind Chimes [M]	Various Glissandi	--
Woodblocks [M]	Hits (pitched)	--

STRINGS

Strings		
Instrument Name	Articulation	Keyswitch*
Solo Violin	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Expr. Vibrato	D0
	Spiccato	D#0
	Martelé	E0
	Pizzicato	F0
	Tremolo	F#0
	Artificial Harmonics	G0
Solo Viola	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Expr. Vibrato	D0
	Vibrato Spiccato	D#0
	Pizzicato	E0
	Bartok Pizzicato	F0
	Col Legno	F#0
	Tremolo	G0
	‘Distorted’	G#0
	Artificial Harmonics	A0
	Harm. ‘Call’ Up M3	A#0
	Effects	B0
Solo Cello	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0

		Strings
Instrument Name	Articulation	Keyswitch*
<i>(Solo Cello Cont'd.)</i>	Expr. Vibrato	D0
	Spiccato	D#0
	Martelé	E0
	Pizzicato	F0
	Bartok Pizzicato	F#0
	Tremolo	G0
	Artificial Harmonics	G#0
	Effects	A0
Solo Contrabass I	Non-Vib. Sustain	C5
	Vibrato Sustain	C#5
	Spiccato	D5
	Martelé	D#5
	Pizzicato	E5
	Pizzicato (responsive)	F5
	Tremolo	F#5
	Artificial Harmonics	G5
	Effects	G#5
Solo Contrabass II	Non-Vib. Sustain	C4
	Spiccato	C#4
	Pizzicato	D4
	Pizzicato (responsive)	D#4
	Bartok Pizzicato	E4
5P Violin Section	Non-Vib. Sustain	C0
	<i>(+violin II's; big ens)</i> Vibrato Sustain	C#0
	Expr. Vibrato	D0

		Strings
Instrument Name	Articulation	Keyswitch*
<i>(Violin Section Cont'd.)</i>	Spiccato	D#0
	Martele	E0
	Pizzicato	F0
	Bartok Pizzicato	F#0
	Col Legno	G0
	Sul Tasto	G#0
	Sul Ponticello	A0
	Tremolo	A#0
	Artificial Harmonics	B0
	Non-Vib. > Vib. Sus.	C1
	Non-Vib. > Tremolo	C#1
3P Viola Section	Non-Vib. Sustain	C0
	Vibrato Sustain	C#0
	Expr. Vibrato	D0
	Spiccato	D#0
	Martele	E0
	Pizzicato	F0
	Bartok Pizzicato	F#0
	Col Legno	G0
	Tremolo	G#0
	Non-Vib. > Vib. Sus.	A0
	Non-Vib. > Tremolo	A#0
3P Cello Section	Non-Vib. Sustain	C6
	Vibrato Sustain	C#6
	Spiccato	D6

		Strings
Instrument Name	Articulation	Keyswitch*
<i>(Cello Section Cont'd.)</i>	Pizzicato	D#6
	Pizzicato, Tight	E6
	Bartok Pizzicato	F6
	Bartok, Tight	F#6
	Tremolo	G6
	Molto Sul Pont.	G#6
	'Singing' – Aleatoric	A6
	Non-Vib. > Vib. Sus.	A#6
	Non-Vib. > Tremolo	B6
	Non-Vib. > M. Sul P.	C7
Concert Harp	Normal	C-1
<i>(close, solo- warm)</i>	Près de la Table	C#-1
	Harmonics	D-1
	Glissandi, Diatonic	D#-1
	Glissandi, Wholetone	E-1



Ensembles	
Instrument Name	Articulation
Airy Organ	Round, warm tone with organ + winds
Ancient Monastery	Blend of instruments with an ancient or eastern flair.
Catnip	“Meow” (for the cats)
Combined Brass	A big pile of brass, uses both modwheel + velocity.
Combined Strings	A big pile of strings, multiple articulations!
Combined Winds	A big pile of woodwinds, multiple articulations!
Continuo	Quaint blend of oboes, recorders, harpsichord, and organ.
Dawn of the Strings	String harmonics into tremolo.
Defeat	Upright Bass pizz + marimba and bassoon over plunger mute trombone or various trumpet articulations.
Dimensional Rift	FX... glorious FX.
Dragon Hunt	Big brass sections in octaves (upper and lower) over Timpani and crash cymbal. Dragons, beware!
First Snow	Glasses, bell tree, and marimba rolls over various small percussion. Chilly!
Flutterpizz	Wild flutter and ‘pop’ woodwinds with string pizz over an upright bass.

Ensembles	
Instrument Name	Articulation
Horn Solos	(Not related to Han Solo)- the three solo horns from VSCO 2 layered. Can be combined with Horn Section to create 8-horn ensemble.
Intergalactic	Big brass over cymbals and snare, with a timpani. Bombastic and heroic.
Leviathan	What do you get with 3 bass trombones and 3 tubas? This patch. Yeah, we went there.
Medieval Feast	Flutes and “viol” over a set of Renaissance-like percussion. Great for Renaissance dance music or Organum.
Metalbending	Brass with copious mutes OR copious brass with mutes. Take your pick.
Ominous Signs	Encounters of the four-stringed kind- mixtures of tremolo, harmonics, and non-vibrato techniques.
Renovations	Catnip without the wild side and a wandering violinist.
Resurrection	A divine ensemble of exp. vibrato patches across all strings. Hauntingly beautiful.
Sand Sea	Soft flutes, clarinet, and solo string harmonics over some tubas, euphoniums, and bass clarinet. Hit hard for a “blast”.
Silent Steps	Literally the opening to Star Trek: TOS. Harp + bowed vibes, backed with string harms.
The Sleeping Forest	An elusive vibrato bass trombone with harp harmonics, glock, col legno and vibes.

Ensembles	
Instrument Name	Articulation
Transfiguration	Bipolar patch of soft winds and strings (red) contrasted with some serious brass, strings, and clarinets. Start with the soft and then switch to quiet brass, crescendo up, then fall away to reveal soft winds sustaining above the chasm.
Trumpet & Cornet Solos	Another legacy patch, combining the solo trumpets and cornets. Trumpet Section is recommended instead.
Twinkly Upright	Exactly what it says on the box.
Windlands	A combination of bassoons and euphoniums in a quirky but warm patch.

CREDITS

I'd like to take these last few pages to thank all the individuals who made this project not just possible, but real.

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Gerson Martinez

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Focusrite

Berklee College of Music

Coginchaug High School, CT RSD 13

In Memory of *'Big Bob' Villwock*, whose work on faux legato enabled us...

and *Fredrich Von Huene*, a maker of the world's finest recorders...

Both have created beautiful instruments, new and old;

Enabling thousands to make music in a way

We can only hope to live up to.

Thank You.