AARON VENTURE
INFINITE WOODWINDS
User manual

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Contents

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DEFAULT CC# LIST

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CC11 – Volume

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WELCOME

Thank you for purchasing *Infinite Woodwinds*. This follow-up to *Infinite Woodwinds* of individual woodwind instruments was created with one goal: to provide maximum control and expressiveness to you—the user, the *player*.

Starting from the instruments themselves: 6 Flutes (3 Concert, 1 Piccolo, 1 Alto, 1 Bass), 3 Oboes, 1 Bass Oboe, 1 English Horn, 5 Clarinets (3 Bb, 1 Bass, 1 Contrabass), 3 Bassoons, 1 Contrabassoon, and 6 Saxes (2 Alto, 2 Tenor, 2 Baritone) were all **chromatically sampled** and are all available as **individual patches**, allowing you to choose the size of your woodwind section and maintain that sound through your compositions by writing for and performing each instrument individually.

The cornerstone of Infinite Woodwinds is its mixer, along with *Space* and *Position* menus. Together they offer incredible control over space, instrument position within that space and depth through mixing different sets of "microphones".

Along with **phase-aligned crossfading**, fantastic Smart Legato function, playable vibrato, flutter, growl and embellishments, this is a set of some of the most expressive virtual instruments ever released. On top of that, they're easy to use, sound great and are so much fun to play!

Let's dive into the details.

SPECIFICATIONS

- Chromatically sampled
- phase-aligned samples provide a sense of infinite dynamic layers
- 4 rooms: Large Hall , Medium Hall, Scoring Stage, Studio
- 3 selectable rows, each with 18 positions

SETUP

Since *Infinite Woodwinds* requires full Kontakt 5.7.2, it's loaded by either navigating to the "Instruments" folder from within Kontakt, or by dragging-and-dropping patches from the file explorer into Kontakt. And that's it! Set up your routing and you're good to go!

There is a ~45ms delay (a few milliseconds plus or minus, due to RNG; 45 being the average) from the start of the note until it reaches its rhythmic value. Setting the track delay for *Infinite Woodwinds* outputs on your mixer to -30ms will align the note starts with the click for grid-aligned notes.

DYNAMICS

Infinite Woodwinds was recorded in 4 dynamic layers. All dynamic layers are phase-aligned, meaning the crossfading is super-smooth—even though there are only 4 layers, it sounds like there is only ever 1 voice playing. By default, Dynamics are controlled by CC1. This is the main and most important control in *Infinite Woodwinds*. Due to quick response and smooth fade, it offers unparalleled expressiveness and phrase-shaping options. Get familiar with it and use it *all the time*.

Attack Dynamics

If **Attack Range** is set to an amount higher than 0, note velocity will determine the loudness of the start of a non-legato note. If the note velocity value is lower than the current **Dynamics** value, the script will create a smooth attack, based on **Attack Range** and **Attack Time** values. If the note velocity is higher instead, a note with an attack will be played, with attack dynamics proportional to note velocity and limited by **Attack Range**. You can let go of the key at any point and the note will stop playing, and so this is the simplest, most efficient and best-sounding way to play shorts.
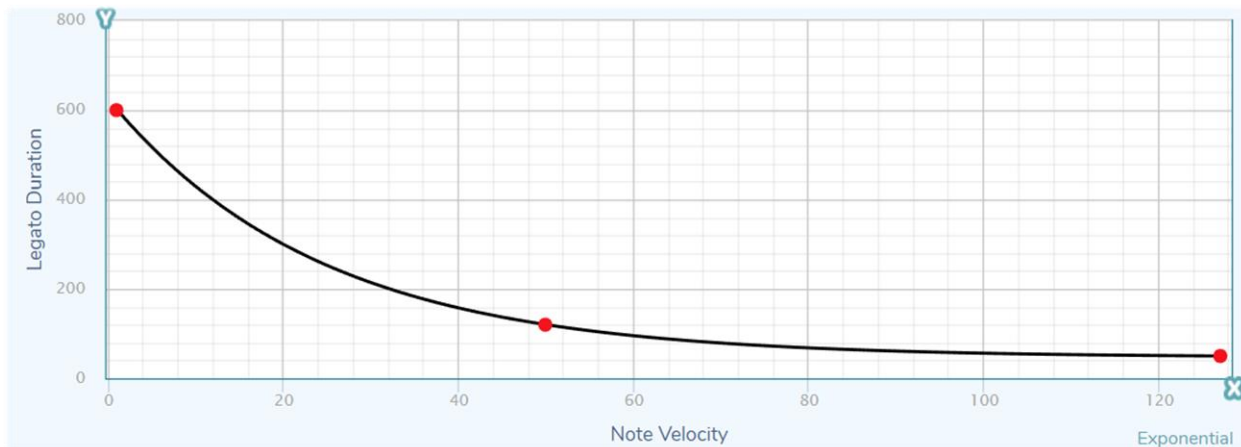
SMART LEGATO

All of *Infinite Woodwinds* instruments load in "legato" mode by default. There are no articulations, and keyswitches are only used to add options to your performance. Articulations are performed and shaped by *you, the player,* using a combination of note velocity and **Dynamics** to control **Attack Dynamics** and **Legato Duration**.

As is standard, playing a note within the instrument range while another note is already playing will create a "slurred" transition between the two notes. Legato in *Infinite Woodwinds* is fully scripted; no transitions were recorded. This allows for maximum flexibility, consistency, smoothness and ultimately–expression.

Legato Duration

Legato duration is determined by note velocity; higher velocity equals faster transition. The response follows an exponential curve and the response times range from 1700 ms to 70-50 ms (each instrument has a slightly different legato curve and different legato timing limits), meaning there are 127 different timings for each instrument. Very low velocity values will induce a *portamento* transition for some instruments.

Picture 1: Example of a Legato response curve

With this in mind, while it makes sense that you would have to play harder to pull off a good-sounding run, the **Smart Legato** script will accommodate if you're not; if you're playing a slow, quiet passage and you don't press hard on your next quick succession of notes since don't wish to play any louder, the script will recognize what you're trying to do and speed up the transitions. Still, it's only a prediction, so it will not always be exactly what you had in mind and editing the velocity value for these notes might be required.

Release Legato

Releasing the legato note while the previous note is still being held will create a legato transition back to the previous note. For the purposes of determining **Legato Duration**, velocity of the previous note will be applied. This feature is useful for performing embellishments including trills, mordents and appoggiaturas, all without having to worry about releasing and hitting the same note again in a quick manner, or splitting the MIDI note in editing and trying to get the timing right. It's simple, intuitive and keeps the flow of the performance intact.

Legato Bypass

Legato can be bypassed at any time with the "Legato Bypass" switch. The switch is mapped to CC64 (Sustain Pedal) by default. Enabling the switch will completely bypass the **Smart Legato** and the **Attack** scripts, allowing you to play **chords**. **Attack dynamics** will now always be determined by the current **Dynamics** value.

ARTICULATE

In this section you'll find real-time controls for **Vibrato Intensity, Flutter,** and **Growl,** as well as **Vibrato Rate, Volume** and **Dynamic Range**.

All controls within *Infinite Woodwinds* can be remapped to any controller you desire. Simply right click on the control, click on "Learn…" and move the controller you wish to assign the control to. Or, you can find your desired CC values in Kontakt's MIDI Automation tab and manually drag them onto the controls in the *Infinite Woodwinds* interface.

Controllers 103 - 120 cannot be used, since they are used for back-end operations and functions.

Vibrato will not play during a legato transition. There is a vibrato frequency fade-in on each note, determined by note velocity.

You can enable or disable **Playable Vibrato** with the 'play' icon on the right side of the Vibrato Intensity slider. If enabled, the script will analyze modwheel movement and will attempt to predict whether you're trying to play vibrato (sine wave-like movements) and will apply an appropriate amount of pitch changes. On very fast modwheel movements, this will 'trick' the script and it will add a small amount of pitch bend to the fast Attack/deAttack. If that's not a desired effect, disable this option. Playable Vibrato is also a switch that you can map to any CC controller and use on-the-fly in your projects. Its default mapping is CC 65.

Volume will control the instrument volume pre-reverb. If you want to take care of the volume yourself or want the timbre of fortissimo playing at a quieter level, you can do it with this slider. By default, it's set to its maximum value and mapped to **CC 11.**

Dynamic Range controls the overall dynamic range of the instrument. When set to 0, the instrument will play at the same volume across all dynamics. Dynamic Range slider isn't available for flutes due to different sampling approach.

Harmonics controls how loud the harmonics are relative to the main body of the sound. Increasing harmonics will reduce the main body volume. Harmonics slider is only available for flutes due to different sampling approach.

Attack Range

This control outputs a value from 0 to 127. The value indicates the maximum range of the velocity-induced Attack and independence of **Attack Dynamics** from the main **Dynamics** value.

By default, it's inversely linked to CC 1 (**Dynamics**), ranging from 100% to 30%. I believe this offers the best playing experience—if your **Dynamics** value is high, you shouldn't have to hit the keys super-hard to play FF **attacks**, as you probably want to be playing loudly. On lower CC1 values (lower **Dynamics**), the range increases. While it doesn't reach maximum range until the CC1 value is at 0, it isn't that important because such range isn't needed here—127 is the full range of a CC controller. **Attack Dynamics** won't be so closely-knit to the main **Dynamics** value, but they won't be fully independent until the **Attack Range** value is at its maximum.

Attack Range isn't meant to take care of all of your Attacks; you should play them in yourself. Instead, it serves to gently soften up the attacks and marry the control over dynamics to both the CC1 *and* velocity.

As such, if you're only going to play shorts, it's best to pull your CC1 controller all the way down, and have **Attack Dynamics** decided solely by note velocity. I've found this play style to be the least obtrusive when playing.

However, you are free to remap, reassign and set the range to your liking. Having options is important, which is why this one was included as an assignable control, instead of being hard-coded in the script.

Attack Time

You can control the duration of the velocity-induced Attack here. The range is 300 -1000ms.

MIXER

This is the cornerstone of *Infinite Woodwinds*. Three volume sliders let you dial in different mixes of three "microphone" positions. To be precise, you're not controlling the volumes of samples recorded with different microphones at different positions; you're controlling the volumes of convolution reverbs sporting impulse response recorded with different microphones at different positions.

This allows for flawless representation of Woodwinds instruments in a space. All the reverb is correctly applied to your performance, and all is done in real time. There are no weird tails, glitches and missing ambience bugs that happen with samples recorded in very ambient spaces. Due to the fact that there are 3 convolution reverbs active, these instruments will have a higher CPU hit.

The CPU hit can be reduced by 40% by enabling Mixed Mic. This option will only use one convolution reverb unit and allow you to choose between 5 pre-mixed depth levels of a selected position within a selected space.

If you decide to not use the Mixed Mic and only use one or two mic positions, you're best off muting the mic positions not in use, as that will bypass the convolution effect in the background instead of leaving it on 'stand-by', saving CPU cycles.

The Ambient set of "microphones" can be routed to a different output by clicking on the routing icon. This is the only set of "microphones" that can be routed without doubling or even tripling the voice count due to the fact that this instrument works with convolution, rather than groups and actual samples of different microphone sets, and as such is limited by Kontakt. If you add outputs after the

instrument was loaded, make sure to re-initialize Kontakt so that the script can fetch new outputs to be displayed in the menu.

Space

The "Space" menu lets you choose between 4 different rooms. Each room is different, has slightly different seating positions and they all have a full set of impulse responses.

The icon next to the "Space" menu is also a slider, allowing you to learn the "room switching" to a CC controller, letting you audition different spaces effortlessly (especially if you have dozens of *Infinite Woodwinds* instruments loaded). Simply select all of your MIDI tracks that route to *Infinite Woodwinds* instruments and move the controller! You can also use Expression maps to set the controller to values 15, 47, 79 or 111. Note that this will reload the samples in all the convolution units, so there will be a loading time and Kontakt might freeze for a second or two. That being said, be careful with automating this slider in a project, since that is not its primary purpose.

Position

The "Position" menu lets you position the instrument in the selected space. Each instrument offers various positions across the room, with "Off-stage" and "Soloist" positions being the same across the entire Woodwinds section. Each position has its own 3 "microphone" sliders, and 5 pre-mixed depths. **Note:** if you can, avoid placing instruments of the same family in the same positions (e.g. a Tenor Trombone and a Bass Trombone in the position *Trombone R 1*), because impulse responses are almost like snapshots, and this would mean that these two sounds are originating from the exact same position in the room. This will result in phasing. If you've exhausted all the positions and still need more power (Scotty!), try using delays and Haas effects on the overlapping instruments, as well as different mic mixes.

Infinite Woodwinds allow you to position your instruments in any of the three rows for maximum flexibility. Change the row by clicking on the Space icon in the left side of the menu field.
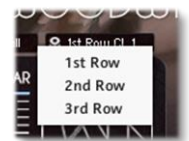
SETTINGS

Here you'll find **Legato Bypass** and **Mixed Mic** switches, as well an additional **"Zone Options"** menu.

Additional zone options include Neighbour RR, which will include the neighbouring shorts and sustains into the rotation. *Infinite Woodwinds* was sampled chromatically, so transposition artifacts will be minimal.

There are also 4 "Transpose" options, allowing you to transpose the entire instrument and thus play different samples. This is a common trick with virtual instruments and sample libraries, allowing you to play 2 instances of the same instrument, no additional space or RAM impact, while playing different samples, and is effectively used for doubling sections and creating sections from solo instrument patches, with a minor nuisance of missing 1 or 2 notes at one end of the sampled instrument range.

Since *Infinite Woodwinds* was sampled chromatically, you can create 4 additional instruments from each of the included instrument patches. Transposing to a nearby semitone will obviously yield the best results, and so I would suggest going for the whole tone transposition only once you've exhausted all other options. By that point you'll already have plenty of instruments, so the minor timbral changes induced by the whole tone transposition won't be audible unless that instrument is solo playing an exposed line. **This effectively gives you control over 130 individual instruments,** each to be positioned and mixed however you wish!

Use them wisely.

Character lets you choose between **Natural**, **Clear** (tiled upwards), **Full** (thicker bottom end), **Modern** (scooped mid-range with boosted highs) and **Dark** (slightly recessed treble and 5 kHz area) sound profiles.

The **icon** of the Character menu is a **slider** mapped to CC32 by default, which lets you choose between character profiles on the fly.

Key Noise

Adjust the amount of key noise.

Breath Noise

Adjust the amount of breath noise. Great feature for emphasizing and adding power to fortissimo runs.

FINAL WORDS

Once again, thank you for your purchase of *Infinite Woodwinds!* As promised, and building on the success of Infinite Brass, Woodwinds are finally out in the open. The series will continue with Strings and round off with Percussion.

Enjoy these wonderful instruments!

See you in the trenches,

Aaron Venture