

# User Guide



**VIRTUAL GUITARIST**

**carbon**

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*Virtual Guitarist CARBON*

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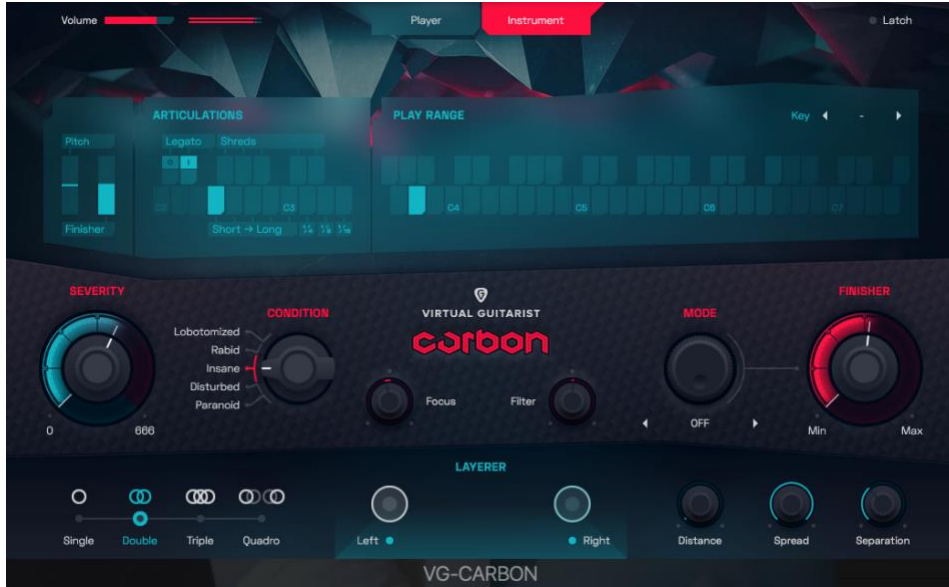
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## Welcome to *Virtual Guitarist CARBON*



*Virtual Guitarist CARBON*

We hope you will enjoy *Virtual Guitarist CARBON*, a powerful addition to your musical palette, and we thank you for being a part of the UJAM community of music creators!

## What is *Virtual Guitarist CARBON*?

*Virtual Guitarist CARBON* is a software instrument doubling as both

- a heavy “djent” guitarist playing a custom-built, 8-string, low-range / drop-tune guitar through a large custom setup of specialized, futuristic amps and cabinet models,
- and a creative electronic sound designer/engineer who knows how to creatively chop, tweak, modulate or destroy the raw guitar sound in order to create hundreds of guitar- or non-guitar-like sounds, rhythms and textures.

Carbon was designed to create a wide range of popular guitar sounds. Yes, it can play traditional metal riffs, but where it really shines is creating new, modern guitar sounds that are “sound-designed” and “unreal” in a good way.

## Virtual Guitarist CARBON

You've been hearing them emerging in all kinds of music genres – from the super-quantized accents in electronic music to drone-war-accompanying big riffs in game and action soundtracks to subtly detailed accents in film and commercial music.

To create these sounds in real life, it takes a lot of work, more gear and even more *knowledge* of gear and its interactions.

To create brutal distortion is easy – just stack amps or distortion pedals until your ears bleed. Chances are though that the sound will get broken, raspy and degraded.

To create a distortion that is hard like a razor blade and still has integrity – particularly in the high end – is a craft of its own and took a good chunk of the work we put into CARBON.

With CARBON, you have a solution at your fingertips that took a long time to build, tweak and repeat. And since at the heart of CARBON there is a real guitar, the tracks you will create will always be an organic, not synthesized, element, with the irregularities of the original instrument baked in.

What's best: If you've ever used one of our Virtual Guitarists, there is little learning curve – you'll feel right at home.

There are a few novelties though that set CARBON apart from its siblings:

- It goes loow – almost an octave lower than a regular guitar, to F#, and it sounds fatter and darker because the original guitar was tuned low as well so the string tension was lower. It plays a plethora of distorted guitar styles from bass riffs to power chords to melodic riffs and even simple melodies.
- It lets you play the guitar yourself, note by note, because it features the *Instrument Mode* that we introduced with our *Virtual Bassist series*. You can trigger and select various articulations from dead notes to mutes to long sustains with your left hand and play the matching notes with your right. We even included shreds that are almost unplayable on a MIDI controller. With a little practice, you will create riffs that you wouldn't have thought you'd be able to play, and that no other instrument (except a guitar, if you're really good) would let you.
- CARBON is not just a guitar hooked up to an amp. It's also a powerful sound design tool allowing you to shape the guitar sound with EQs, dynamics and ambiances, or even turn it into something that sounds synthesized. The section for doing these things is purposefully called the "*Finisher*". Technically it is a super-powerful guitar effect rack stuffed with all sorts of goodies – delays, reverbs, modulation effects, EQs, compressors, multiband this-and-that, distortion and more. You unleash its power by selecting a Finisher preset and turning either the Finisher knob or the Mod Wheel of your MIDI controller. Yes, it is that simple and powerful.

## About the Virtual Guitarist series



The original *Virtual Guitarist* was a best-selling virtual instrument series developed by Wizoo and distributed by Steinberg from 2002. The core people behind Wizoo, now in UJAM, also originated *Virtual Guitarist CARBON* – your new virtual instrument.

Since 2013 UJAM has revived the success of the temporarily discontinued Virtual Guitarist series with a bunch of popular VGs (as we call them): *Virtual Guitarist IRON, AMBER, SPARKLE, and SILK*.

While all Virtual Guitarists so far had been modeled after real-world musician/instrument combinations, *Virtual Guitarist CARBON* is a departure into new territory – it is a guitarist that doesn't exist, although the sounds it creates are extremely popular across a wide range of music genres from Cinematic to Electronic to Games to Heavy Metal.

*Virtual Guitarist CARBON* combines a forward-thinking heavy metal guitarist with an electronic music freak and sound designer. It creates hardcore guitar sounds that can sound traditional, but where it really shines are creatively altered and mangled new power tracks – often unnatural, sometimes even unplayable.

What it shares with all other members of the family is UJAM's signature ease of use, fail-proof interface and a lack of redundant, confusing controls in favor of instant gratification.

## You and us

*Virtual Guitarist CARBON* was built *by* musicians *for* musicians. We at UJAM are a pretty diverse bunch – from DJ to guitarist to weekend producer to Oscar-awarded Hollywood composer. We build every product for ourselves, and, like you, we're all users of *Virtual Guitarist* too.

That means that before we even start developing, a lot of thought and discussion goes into finding out what you, the user, will expect from the product, what problem it solves, which controls we can remove to make the product more inviting and simpler, which hurdles we can move out of the way between you and a perfect track.



## *Virtual Guitarist CARBON*

Every *Virtual Guitarist* is optimized for one clear, powerful purpose: To produce great-sounding guitar tracks without distracting you from the complex endeavor that producing a song is.

We hope that *Virtual Guitarist CARBON* transpires that philosophy in everything you do with it.

Naturally, we're always open to new ideas and critique, and you are always encouraged and welcome to talk to us:

- Send us an email: [support@ujam.com](mailto:support@ujam.com)
- Visit our Facebook page: [facebook.com/ujaminstruments](https://facebook.com/ujaminstruments)
- Catch us on Twitter: [twitter.com/ujaminstruments](https://twitter.com/ujaminstruments)
- Follow us on Instagram: [instagram.com/ujaminstruments](https://instagram.com/ujaminstruments)

## Looking for quick help?

If you're just looking to figure out something quick, there are three ways to get there:

- The *Quick Reference* has super-short explanations for every control.
- The *Walkthrough* is a guided tour where you'll try every control on the *Virtual Guitarist CARBON* screen once – the quickest hands-on experience possible.
- If you're looking for in-depth explanations of all functions and controls, head straight for the *Reference Guide* further down.

## Quick Reference

Area	Parameter	Explanation
Menu Bar	Preset	Click name to open menu for browsing and loading a new Virtual Guitarist CARBON preset
	Save	When editing a user preset, click to save your preset, replacing the previous version.
	Save as...	Click to save your preset under a different name and – optionally – assign a category.
	Trial Mode	
	Authorize Button	
	Notification Bell	Will illuminate for notifications such as product updates.
	Info Icon	Opens the About Page displaying your licensing status and links to acknowledgements, website, this manual and product support.
Top Area	Volume – Slider and Meter	Adjust and monitor CARBONS output volume
	Player / Instrument Mode Switch	Selects whether CARBON performs like a session player or a guitar instrument that you can record note by note.
	Micro Timing	Only in Player mode, this menu opens a selection of parameters adjusting the timing of the guitar player:  Speed: Lets you switch the player's relative tempo to half, normal or double time.

*Virtual Guitarist CARBON*

		<p>Feel: Set to left of center for a "push" feel, to the right for a laid-back ("dragging") feel.</p> <p>Swing: Continuously adjusts syncopation - often also called Shuffle. Move to the right to syncopate off-beats.</p>
	Latch	<p>PLAYER Mode: When active, Virtual Guitarist CARBON will keep playing independently of keys held, until you deactivate Latch or press the Stop Key.</p> <p>INSTRUMENT Mode: When active, you can play CARBON by holding notes and triggering them using the Articulation keys. Try it, it's huge fun!</p>
	Style	<p>Loads a Style (collection of 11 phrases, accessible via the style phrases section of the keyboard).</p>
Interactive Keyboard	Pitch	<p>The Pitch Wheel lets you bend the pitch by one semitone in both directions</p>
	Finisher	<p>The Mod Wheel (MIDI CC#1) doubles as a control for the Finisher knob, allowing you to live-perform the Finisher.</p>

## *Virtual Guitarist CARBON*

PLAYER Mode		In PLAYER mode, the rhythmical, articulation and phrasing aspect of the guitar performance are controlled by CARBON. All you need to do is select the phrases and notes you want to be played.
	Common Phrases	Keys in this area select "always useful" phrases that can be combined with style phrases. Several black keys labelled "Ends" and "Shreds" trigger one-shot special phrases.
	Silence	In LATCH Mode, this key silences the performance but doesn't stop it. You can continue by selecting any phrase key
	Ends	Selecting one of these keys will play a long final note or chord and stop the player: C#1: Sustain D#1: Long Mute
	Shreds	Similar to instrument mode, Shreds let you insert hard-to-play fast note successions at any time. Other than the other keys, Shred keys are temporary and change back to the selected phrase when released.  F#1: 32th Moderate Mutes G#1: 32th Half Mutes A#1: 32th Full Mutes C#2: 16T Half Mutes D#2: 16T Full Mutes
	Style Phrases	Keys in this area select phrases of the currently selected Style. Generally, as you play the white keys upwards, the intensity of the phrases will increase. Depending on the Style, the black keys may provide useful fills.
	Stop	In LATCH Mode, this key stops the performance.
	Key	You can set any key here to force notes to that key's scale.
	Single Mode	Optimized for fast melodic riffs and melodies – includes all the legato mode behavior from Instrument Mode
	Chords Mode	Polyphonic mode applicable for almost anything, but without melodic behavior modeling
	Phrase Drag'n'Drop	Common and Style Phrase keys have specially marked handles at the top. You can drag phrases from there right into tracks in your DAW and edit notes (and the phrasing too, of course) using your DAWs editors.
	Play Range	Play the notes to be triggered by the phrases, up to four note polyphonic.

*Virtual Guitarist CARBON*

INSTRUMENT Mode		In Instrument Mode, the keyboard emulates guitar playing technique. You play the Articulation Range with your left hand and the Play Range with your right hand to create performances.
Articulations	Legato Keys	Notes C#2 and D#2 turn Legato Mode (realistic transitions between adjacent notes) on and off.
	Short - > Long	Use the white keys from F2 to C2 to control the note articulation of the guitar: F2: Dead Notes G2: Full Mutes A2: Half Mutes B2: Long Mutes C3: Sustains
	Shreds	The black keys from F#2 to D#3 play so-called shreds – super-quick successions of notes that are hard to play on a keyboard or controller but significantly spice up your performance. Insert them by playing and holding any Shreds key. When releasing a Shreds key, CARBON will return to the previously playing phrase.  F#2: 32th Moderate Mutes G#2: 32th Half Mutes A#2: 32th Full Mutes C#3: 16T Half Mutes D#3: 16T Full Mutes
	¼, 1/8, 1/16	As long as you hold any of these keys, CARBON will auto-play the corresponding note resolution.
	Key	You can set any key here to force notes to that key's scale.
Play Range	F#3 – F#6	This is where you play notes, up to four-note polyphonic and velocity-sensitive.

Guitar/Amp Section	Condition	Selects one of 5 futuristic amp setups – from bottom to top, CARBON'S condition becomes increasingly mad
	Severity	Turns up distortion inside the multiple amp stages. Go beyond 2 "o'clock" at your own risk!
	Focus	Lets you morph through CARBON-optimized EQ settings from bass boost/high attenuation to low mid

*Virtual Guitarist CARBON*

		boost to to neutral (center) to high mid boost to bass attenuation/high boost.
	Filter	Turn left for a resonant lowpass filter, turn right for a resonant highpass. Great for intros, risers, endings when automated.
Finisher	Mode	Selects a Finisher preset – a macro setting for a rack of effects
	Finisher	Changes the character of the Finisher effect depending on the preset. Most Finisher presets are designed to be live-controlled, which is why this knob is doubled by the Mod Wheel.

LAYERER		This section lets you stack up four CARBON guitarists and distribute them vertically and horizontally across the sound stage. This is visually reflected in the Layerer image in the center.
	Single/Double/Triple/Quadro	Choose the number of guitarists. Each configuration is specifically arranged across the stereo and room image.
	Distance	Moves the white layer(s) towards the back of the virtual stage.
	Spread	(n.a. in Single): Moves guitarists away from the center of the stereo image
	Separation	(n.a. in Single): Dials in a sound character separation between white and blue layers.

## **Why so few controls?**

We are all musicians and we know that there's never enough time for inventing and laying down that amazing idea in your head.

We are also UI (user interface) and UX (user experience) experts, and we know there is a trade-off between complexity – giving you maximum flexibility at the cost of time – and ease of use – letting you focus on your music at the cost of detailed editing options.

The way we design our user interfaces is aimed at giving you the best of all worlds:

- Easy, not simple: By weeding out more controls than we actually leave in, and by carefully grouping, macro-fying and labeling them, we aim to let you use all your attention on making our instruments sound like you, without having to spend too much of your limited time and focus on a large screen estate of detailed controls.
- Hardly any learning curve: Usually you can use any of our instruments out of the box, with very little reading up.
- Fail-proof interface: No matter how you set up the controls of *Virtual Guitarist CARBON*, the result will never be musically or technically wrong, and it gives you immense freedom and flexibility to create your sound.

Most importantly especially for those of us who don't play the guitar: You can trust in the fact that tracks produced with *Virtual Guitarist CARBON* are legit, professionally produced guitar tracks.

## **Trial and Authorization**

We have designed the entire process of downloading, activating and authorizing *Virtual Guitarist CARBON* with a strong focus on simplicity. It's important to us to make it as easy as possible for you to get your hands on *Virtual Guitarist CARBON* – and make it your own if you like it.

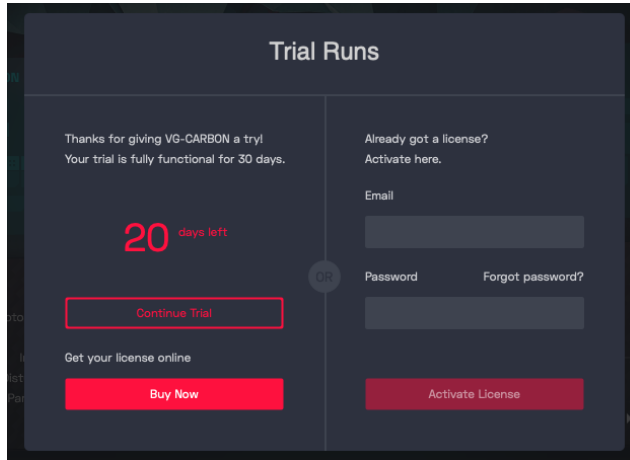
## **Trying, Buying, Authorizing**

We only want you to spend money if you're absolutely happy with *Virtual Guitarist CARBON*. Therefore, we grant you a 30-day trial period, during which the plugin will run without any limitation.

## Virtual Guitarist CARBON

When opening *Virtual Guitarist CARBON* during the trial period (or when clicking the *Authorize* button in the menu bar), you will see this overlay which

- displays information about your trial status,
- provides a link to the Virtual Guitarist website where you can purchase a permanent *Virtual Guitarist CARBON* license after or during the trial period,
- allows you to enter your credentials and authorize *Virtual Guitarist CARBON* once you've purchased it.



*Trial Screen*

## Where to put the Content

The actual guitar goodness of *Virtual Guitarist CARBON* – the audio content – is packed into a so-called blob file named VB-CARBON.blob which is about 4 GB large.

You can keep the blob file anywhere you like (e.g. on a separate content drive).

During standard installation, it will be put into the following locations on your system drive:

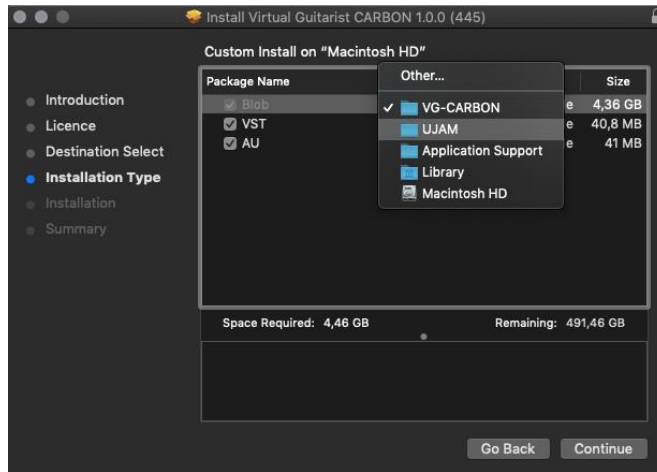
OS X	/Library/Application Support/UJAM/VB-CARBON
Windows	C:\ProgramData\UJAM\VB-CARBON <i>(assuming your system drive is C)</i>



## Installing to a different drive on OS X

If you wish to install the blob file onto a separate drive, you can set a different content installation folder in the installer.

- Open the installer and follow the procedure to step “Installation Type”
- Click “VB CARBON Content” to select it – as shown in the image below – and follow the instructions in the installer.



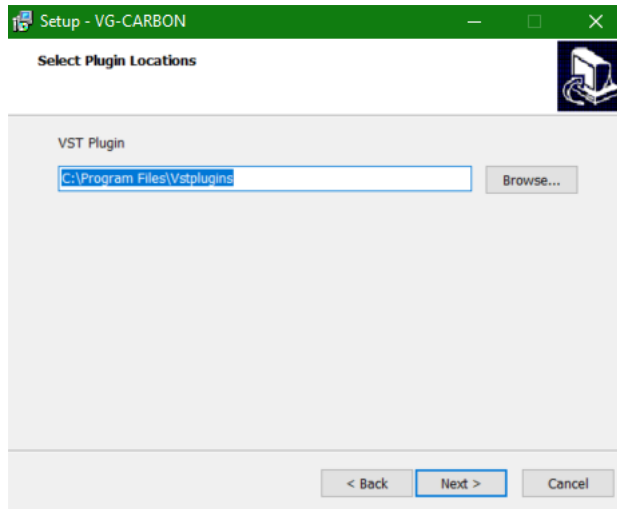
OS X Installer – Change Content Location

## Installing to a different drive on Windows

The Windows installer will ask you if you want to install the content to a different directory.

*On Windows, you can also set a different location for the plug-in, however we recommend leaving this untouched unless you have a good reason.*

## Virtual Guitarist CARBON



*Windows Installer – Change Content Location*

### **Changing the content location after installation**

You can always change the content location after installation by just moving the VB-CARBON.blob file:

- Move your file to the desired location (different folder or different drive)
- Launch your DAW and open *Virtual Guitarist CARBON*. It will present you with a dialog asking for the file location. Simply point to the new location of the VB-CARBON.blob file – done.

## **Controller hardware for *Virtual Guitarist CARBON***

*Virtual Guitarist CARBON* requires MIDI note input for playing and recording musical performances, and optionally Pitchbend, Modulation and Sustain Pedal data for added real-time variation.

If you have a MIDI controller (keyboard), this will be the easiest and most straightforward MIDI input method and it's most fun as this way you control your guitar player in real-time.

Of course, you can also control *Virtual Guitarist CARBON* by using MIDI step sequencers or by entering MIDI notes manually into MIDI tracks.

## *Virtual Guitarist CARBON*

*For getting to know Virtual Guitarist CARBON and for testing purposes, you can also use the interactive keyboard in the top half of the Virtual Guitarist CARBON window. This works best with the Latch function enabled.*

*Please note that whatever you play on this keyboard won't leave Virtual Guitarist and therefore won't be recorded in your DAW.*

## **Start Playing!**

Before we look at things in more depth, let's first explore how to play *Virtual Guitarist CARBON*, as that may be all you need for now.

Let's go through the various playing modes and how you can use them:

- By default, *Virtual Guitarist CARBON* is set to *Player Mode*.
- When you press keys from F#3 upwards, *Virtual Guitarist CARBON* will start playing a phrase with the notes you hold on the keyboard. When you release the key(s), playback will stop.
- MIDI notes below F3 don't represent musical keys but select the phrases of your player in real-time. This is a powerful way of making your performance interesting and dynamic.
- Switch between Single and Chords mode and try how the first is optimized for melodic riffs, while the latter lets you play anything from melodies to four-voice chords, yet without applying melody playing techniques such as slides.

*When using a keyboard, combine left hand (phrase select) and right hand (notes) to build your performance.*

- By switching to Instrument Mode, you turn Virtual Guitarist into a Virtual Guitar, i.e. you can play it like an instrument, note for note. The interactive keyboard will display different options now:
- The left range of the keyboard lets you choose not phrases but articulations. Play a few notes while with the left hand selecting keys between F2 and C3, and recognize how notes change from dead notes to mutes to sustains as you move up the keyboard.
- "Black" keys (not really black on our sleek on-screen keyboard) trigger special functions like Ends or Shreds.
- The keys A3, B3 and C3 play note repetitions in various resolutions.

If you know these things and can switch presets, you know all you need to start producing with *Virtual Guitarist CARBON*.

*Virtual Guitarist CARBON*

*\*C3 is middle C. The MIDI note number is 60. Some DAWs refer to it as C4.*

## Walkthrough

*Note: Keywords printed italic refer to parameter or section names you will also find elsewhere in this manual.*

If you're pressed for time or if you already know the basic concepts behind Virtual Guitarists, then this Walkthrough may be all you need for now, and you can come back later to look up deeper explanations as you need them.

We will take a quick tour across all controls of *Virtual Guitarist CARBON*. After this you will have a good basic understanding of the instrument and how to use it.

*We assume you have Virtual Guitarist CARBON opened in your DAW. Ideally you have a MIDI controller connected, otherwise use the interactive keyboard.*

## Make A Sound And Learn About Chords

- With Player Mode selected, play F#3 or a higher note. Your guitarist will start playing. Play a few notes and get a feel for how it works.

## Try The Presets

- At the very top of the *Virtual Guitarist CARBON* window you can load presets. A preset is always a complete setting of *Virtual Guitarist CARBON*, i.e. it will change the performance as well as the guitar and effects.

*The Preset will not change between Player mode and Instrument mode, simply because that's really not what you'd want. Also, Latch is not saved or changed with Presets.*

- At this point, just go through different presets to get an impression of the musical and sonic palette of *Virtual Guitarist CARBON*.

## Tell Your Player What You Want

- In *Player* mode, activate the *latch* button on the far left above the interactive keyboard. Now *Virtual Guitarist CARBON* will keep playing even if you don't hold a note. Let it keep playing.
- Now play a note in the correspondingly labeled *STYLE PHRASES* range of the keyboard, F#2 – E3. Go upwards and notice how the phrasing gets more intense. Try black keys which let you throw in riffs in many styles. These are the phrases you can replace by loading different *Styles*. Let's do just that now:

## Virtual Guitarist CARBON

- Load different styles by clicking a Style name or the arrows above the interactive keyboard. You will notice that your guitar player masters a vast range of playing techniques and musical genres.
- Now try keys in the C#1 – F2 range, labeled *Common Phrases*. These phrases will always be there no matter which *style* you've loaded, and can be freely combined with the *style phrases*. There are a few specials like Ends and Shreds worth trying.
- Interrupt your player temporarily by holding the *silence key* (C1). Playing will continue when you play another note. Now stop your player by pressing or clicking the *stop key* (F3).

*You can use the silence key in latch off mode too to mute your phrase but keep it running. This is different from lifting the key and playing it again as that will restart the phrase.*

## Melodic vs. Power Chords

- Switch between SINGLE and CHORDS mode and notice how SINGLE mode Carbon is optimized for melodic riffs, while CHORDS mode lets you play up to 4-voice chords.
- Try the KEY parameter to and notice how it “locks” your keyboard into a certain scale. This is a nice helping hand if you're not too familiar with keyboard playing.

## More Performance Tweaking Fun

- Have *Virtual Guitarist CARBON* keep playing. Open the *Micro Timing* menu by clicking the menu icon in the top right corner.
- The speed switch lets you set *Virtual Guitarist CARBON* to half time or double time – this comes in extremely handy when you like a particular style that plays half- or double-time relative to your existing arrangement.
- Now experiment with the *Feel* slider right next to the *Swing* control. It makes subtle changes to the timing, creating a rushed or relaxed feel. Maybe play a drum loop along for better comparison.
- Slowly turn up the *swing* control right next to the *interactive keyboard*. As you will notice, this will delay the off-beats until the phrasing resembles a ternary feel that is common in Swing music (hence the name), often also called Shuffle or Groove depending on your DAW.

## Play The Guitar Yourself

If you're a prolific keyboard player, you might as well play the entire guitar yourself:

## Virtual Guitarist CARBON

- Switch Virtual Guitarist to *Instrument* mode using the top center switch. Close the timing menu first if still open.
- Note how the interactive keyboard reflects the new mode – here, all keys from F#3 upwards play notes, while the key range below lets you play dead notes, mutes, sustains, shreds and repetitions. Experiment with your left hand while your right hand plays chord changes or melodic riffs.
- Activate Legato Mode by pressing D#2 and notice how melodic riffs now sound much more guitar-like.

### Guitar-style playing

- A not so obvious but cool feature is the guitar-style playing mode. Activate *Latch* in *Instrument Mode* to turn it on.
- When guitar-style playing mode is active, you can also trigger notes hitting the Articulation keys with your left hand while your right hand changes the notes – pretty much like a guitarist does it with one hand stroking the strings and the other working the fretboard.

### Find Your Guitar Sound

Let's look at the bottom half of the *Virtual Guitarist CARBON* window. Here you set up the guitar and the amps, and you can shape the sound in almost any way you like.

- Activate *Player* mode and *Latch* and keep playing while you tweak controls.
- First, play with the *CONDITION* knob. Notice how it changes the character of the guitar sound by switching from one ultra amp array to the other.
- Now experiment with the *SEVERITY* knob. On conventional amps, this knob would be called "Drive" or "Gain". Severity does a bunch of well-adjusted things inside the amp array, practically controlling the level and depth of distortion. As the knob colors indicate, turning it up to clock position 2 overdrives the amps at a "healthy" level, whereas going beyond pushes them into insane mode, with sometimes brittle and unstable, but interesting results.
- With the Focus knob you can change the character of your guitar sound easy and quick, while the filter knob lets you create cool risers and intros by controlling a bi-directional synthesizer filter.

### Finish him!

- Some people on the UJAM team think that so far you've only seen half the fun of Carbon, because the other half is the Finisher. It lets you mangle and

## Virtual Guitarist CARBON

twist the sound of Carbon in a lot of ways – from subtle adjustments to total craziness. Let's try it:

- While having Carbon keeping playing, click through the Finisher Presets by using the arrow buttons underneath the Mode knob (or turning the knob, or selecting presets from the menu that opens when you click the Preset name)
- In every Preset you try, turn the Modwheel or the Finisher knob up and down and listen for the alterations in the sound! A complete guide to Finisher Presets is included in the Reference section.

### Going Three-Dimensional

- The Layerer at the bottom of the Carbon user interface is a virtual 3D-stage that lets you stack and position up to four Carbons on top of each other. Each individual guitarist sports their own amp stack and Finisher! From a tiny campfire guitar in space to a Monster Wall of Doom, it's your choice.
- Switch between the Single, Double, Triple and Quadro settings and watch the Layerer stage display.
- Turn the *Distance* knob in the various modes to see how it moves the sound backwards in the virtual room.
- Try *Spread* and *Separation* in various modes as well and notice how they affect the sound – again, watch the virtual stage to see those changes reflected graphically.

By now, you have a pretty good first impression of what Carbon can do! Keep playing and experimenting. There's nothing to break. When you're done, just start laying down tracks or continue to the Reference Guide for more detailed information.

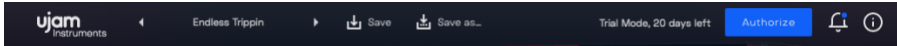


# Reference Guide

In the following part of this user guide, every feature of *Virtual Guitarist CARBON* will be explained in depth.

## Menu Bar

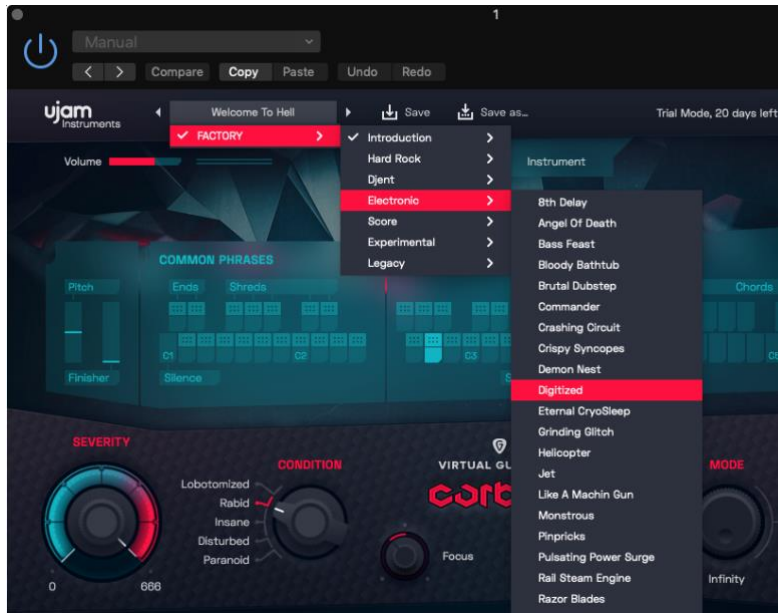
The top bar of the *Virtual Guitarist CARBON* interface lets you load and save presets. It also contains important management functions from checking your trial status to contacting support.



## Virtual Guitarist CARBON

### Menu Bar

## Loading Presets



### Preset Browser

A preset in *Virtual Guitarist CARBON* is a complete setting of the entire plug-in including *Style* selection and all control values. Here's how you can switch presets:

- Advance to the next preset by clicking one of the arrows left and right of the *PRESET* name.
- Click on the name of the current preset in the *PRESET* menu to open the *Preset Browser* (see image above).

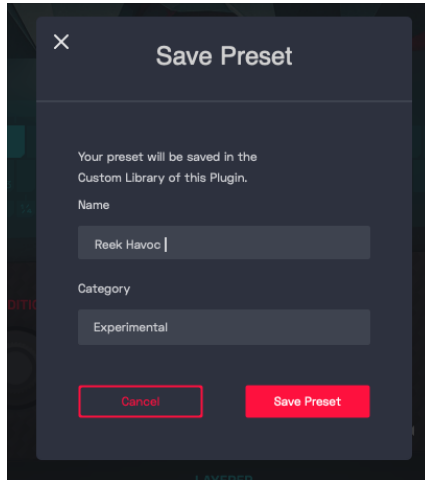
As you can see, the *Preset Browser* is a clean, organized list of presets, categorized by simple musical terms.

*Virtual Guitarist CARBON* ships with 40 Factory Presets. Take your time exploring them, as this is the quickest way of getting an overview of what *Virtual Guitarist CARBON* can do!

*If you have freshly installed Virtual Guitarist CARBON, there will only be Factory Presets. User Presets will appear once you have saved your first own preset.*

## Save and Save as ...

You can of course save your own *Virtual Guitarist CARBON* presets. You can name them and assign a category too.



*"Save as ..." Dialog*

The difference between the *Save* and *Save as ...* buttons:

- *Save* replaces the preset with the changes you just made.
- *Save as ...* lets you assign a name and a category, so does not replace the current preset.

*Factory Presets can only be saved using Save as ..., they cannot be replaced.*

## Moving, renaming and deleting presets

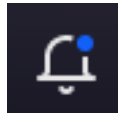
You can move, rename or delete Presets directly in your operating system. You will find *Virtual Guitarist CARBON* Presets in these folders (replace "USERNAME" by your actual username):

OS X	Factory Presets	/Library/Application Support/UJAM/VB-CARBON/Presets
	User Presets	/Users/USERNAME/Library/Application Support/UJAM/VB-CARBON/Presets
Windows	Factory Presets	C:\ProgramData\UJAM\VB-CARBON\Presets

## *Virtual Guitarist CARBON*

User Presets	C:\Users\USERNAME\AppData\Roaming\UJAM\VB-CARBON\Presets
<i>(assuming your system drive is C)</i>	

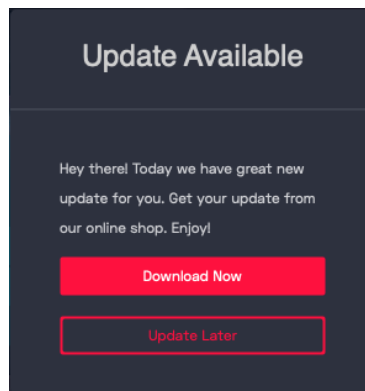
## **Notification Icon**



*Notification Icon*

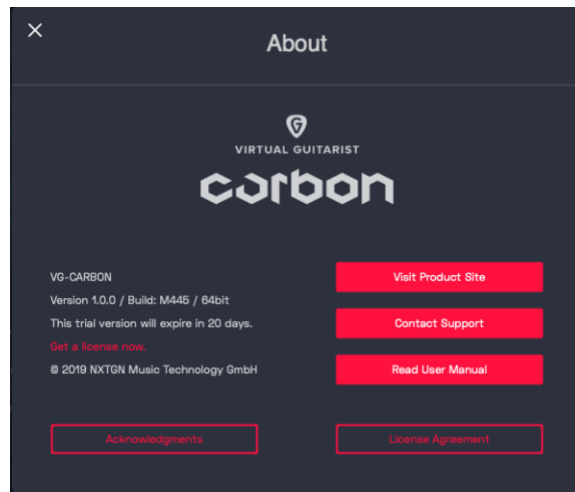
When you launch *Virtual Guitarist CARBON*, it will automatically check for updates. If an update is available, the notification icon will be activated.

Clicking it will open a dialog that lets you choose whether you want to download the update now or later:



*We built this mechanism to save you the pain of manually checking foär updates in order to keep up with the latest improvements of Virtual Guitarist CARBON.*

## Info Icon – About Page



### *About Page*

The About Page is the place for information about your version and licensing status of *Virtual Guitarist CARBON*. It is also a portal to other services:

- Visit Product Site takes you to [www.ujam.com](http://www.ujam.com) with regularly updated news, videos, tutorials and other helpful stuff.
- Contact Support lets you report problems and ask questions.
- Read User Manual opens this document.
- Acknowledgments – the people behind *Virtual Guitarist CARBON*.
- License Agreement – legalese for gourmets.

## Volume Section



### *Volume Slide and Meter*

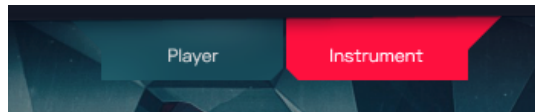
Although a virtual instrument such as CARBON lives inside a DAW with multiple level faders, a correct output level setting is important. If nothing else, it makes sure that subsequent audio processors, particularly dynamics or distortion, work in their optimal range.

## Virtual Guitarist CARBON

Therefore, the Volume slider and meter at the top left let you set and automate CARBONs output level between -inf and +12dB, and monitor the resulting level.

All components in CARBON are adjusted so you won't exceed the level meters top range, but it's still idea to watch it, particularly if you work a lot with automation of the *Severity* and *Finisher* controls.

## Player and Instrument Mode



Player/Instrument Switch

*Virtual Guitarist CARBON* can perform either as a guitar player or as a guitar instrument, and you can switch between those two at any time.

- In *PLAYER* Mode, you can play notes and select phrases and this way control the performance of the built-in guitar player.
- In *INSTRUMENT* Mode, *Virtual Guitarist CARBON* emulates a guitar instrument that you can play on your MIDI keyboard.

*Note that the Interactive Keyboard and its MIDI note assignments are very different in INSTRUMENT and PLAYER mode. Also, certain parameters such Micro Timing are only needed in PLAYER Mode and therefore hidden in INSTRUMENT mode to avoid clutter and confusion.*

## Which mode for what?

- *Player Mode:* Use this mode when you want to enjoy the super-realistic performance of a real guitar player with very simple input from yourself. Here, you control *Virtual Guitarist CARBON* using notes – e.g. from a piano track or by just holding keys, and you create a vivid, real performance switching phrases in the Common or Style areas of the Interactive Keyboard.
- *Instrument Mode:* This mode is perfect if you are a prolific keyboard player and want to play the guitar live, or if you just want to throw in a riff or note here and there.

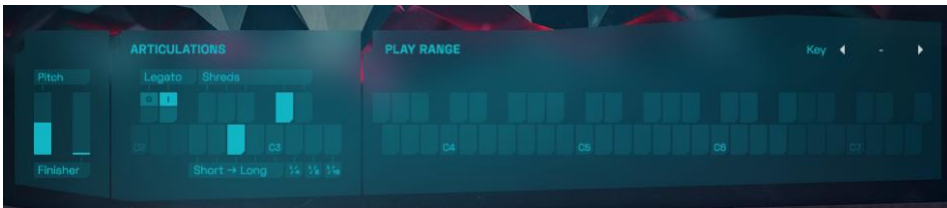
## Interactive Keyboard

The Interactive Keyboard is both a display of received MIDI notes and an actually functional on-screen keyboard – with the only exception that notes you play on the Interactive Keyboard are not recorded into your DAW.

The layout and functionality of the Interactive Keyboard changes between *PLAYER* and *INSTRUMENT* modes as shown below.



*Interactive Keyboard in PLAYER Mode*



*Interactive Keyboard in INSTRUMENT Mode*

## Pitch and Finisher Controller

The two controllers representing the standard wheels on a MIDI Keyboard behave identical in both modes, so we'll cover them here.

## *Virtual Guitarist CARBON*



*Pitch and Finisher Display*

### **Pitch**

The Pitchbend Controller or Pitch Wheel allows you to detune CARBON by a whole tone up or down. That's pretty much all there is to it.

### **Finisher**

The Modulation Controller or Modwheel always remote-controls the Finisher Knob. Although you can theoretically assign it to any MIDI controller, we hard-wired this connection because the Finisher is such an integral part of CARBON.

Make sure you try the Modwheel extensively on every Finisher preset to explore the possibilities!

## **Player Mode**

### **Style Selector**

Here you choose a *STYLE* – the selection of phrases accessible via the Style Phrases range on the keyboard.



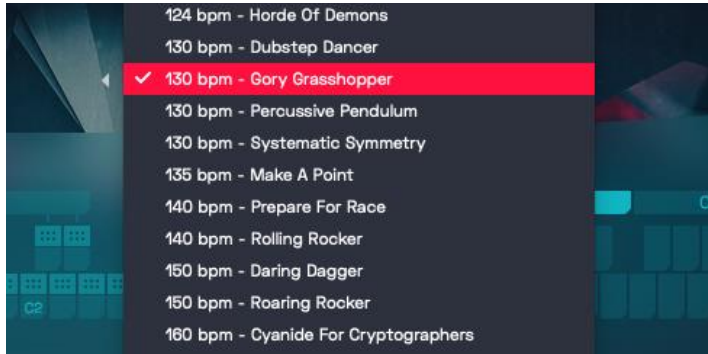
*Style Selector*

A *STYLE* in *Virtual Guitarist CARBON* is a collection of phrases that you “ask” your guitar player to play. Styles are the “rhythmic vocabulary” of *Virtual Guitarist CARBON*, which is why we have included over 50 of them.

You can select styles by either clicking the arrows of the Style Selector to skip to the previous/next style, or by clicking the name of the current *Style* to bring up the full list.



## Virtual Guitarist CARBON



### Style List

Every *Style* is a set of eleven phrases. You can select them from the *Style Phrases* area of the Interactive or MIDI keyboard.

*In many Styles, Phrases are ordered by intensity/density from left to right, with white keys playing the actual phrases and black keys providing fills.*

## Common Phrases



### Common Phrases

The lower left of the MIDI keyboard (C1 – F2) is reserved for a collection of so-called *Common Phrases*. These phrases are “hard-wired” and won’t change with the *STYLE* selection. *Common Phrases* complement the *Style Phrases* by patterns that are more generic and applicable to multiple contexts.

## *Virtual Guitarist CARBON*

*Note: Virtual Guitarist CARBON lets you switch phrases in real-time without interrupting the performance. That's a great way to create dynamic and interesting phrasings of your own by quickly switching phrase keys.*

### **Special Keys**

Within the Common Phrase range, certain keys have special functions:

- The lowest key of the *Common Phrase* range (C1) is the *Silent key* – it will keep playback running, just with an empty phrase. Use it to create temporary gaps without restarting phrases.
- The keys C#1 and D#2 play an open and muted long note and end the performance. Handy for a simple ending.
- “Black” keys from F#1 to D#2 play Shreds – these are super-fast note successions almost impossible to play on a keyboard. Use them in quick alternation to spice up your phrases. Notice that Shreds keys are temporary – Shreds just get played as long as you hold the key.

*Virtual Guitarist CARBON*

**Reference of Common Phrases**

MIDI Note	Type	Description
C1	Silent	
C#1	Ending	Open 1/1 Note
D1		Open 1/4 Notes
D#1	Ending	Muted 1/1 Note
E1		Muted 1/4 Notes
F1		Open 1/8 Notes
F#1	Shred	Open 1/32 Notes
G1		Muted 1/8 Notes
G#1	Shred	Half Muted 1/32 Notes
A1		Open 1/16 Notes
A#1	Shred	Full Muted 1/32 Notes
B1		Muted 1/16 Notes
C2		Wuggeda 1
C#2	Shred	Moderate Muted 1/16 Triads
D2		Wuggeda 2
D#2	Shred	Full Muted 1/16 Triads
E2		Wuggeda 3
F2		Wuggeda 4

## Style Phrases



*Style Phrases*

Keys in the F#2-E3 range play phrases of the currently selected *Style*. There are 11 phrases in each *Style*, which you can freely combine with the Common Phrases.

### Stop Key

The highest key of the Style Range – F3 – is the *Stop key*. In Latch mode, pressing this key will stop playback.

## Single / Chords Mode

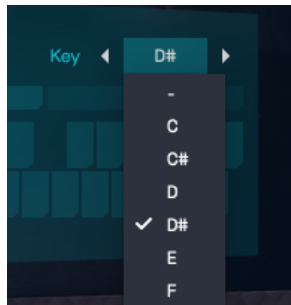


*Single/Chords Mode Selector*

Essentially, the Single and Chords Modes are optimized for two different scenarios:

- Use the Single Mode for melodic riffs and melodies. In Single Mode, the Legato feature of Instrument mode is enabled and you can only play one note at a time.
- Use the Chords Mode for power chords or a mix of melodic and power chords. Chords Mode lets you play up to four notes at the same time, although with a low guitar like CARBON you will probably hardly ever play more than two or three. In Chords Mode, the Legato feature is disabled.

## Key



*Key Selector with menu*

The Key parameter forces any note you play on the keyboard to notes of the selected scale. This comes in particularly handy when you use pad controllers to play Carbon, or when you are not a prolific keyboard player.

- Click between the arrows or on the current key denominator to change the key.

## Play Range



*Play Range on the Interactive Keyboard*

The right section of the keyboard is the one that actually starts and stops the guitar performance and determines the notes or melodies your guitar player will play.

*Because of the nature of the instrument, CARBONs note range is significantly lower than that of a standard guitar – extending 10 semitones lower than the regular E to a F#, covering exactly 3 octaves. This provides for a large palette of playing styles, from bass riffs to super-evil low power chords to regular power chords to melodic riffs and even simple melodies.*

## **Transposing phrases**

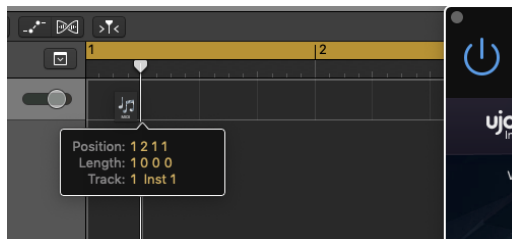
When you transpose recorded or dropped MIDI notes from CARBON in your DAW, always make sure to not use the Transpose parameter for the track, but to manually transpose only the notes of the Play Range, as otherwise you will transpose articulation or phrase select notes as well.

*If you know you're going to be experimenting with transposition, you could record or split notes and select keys to two separate tracks and only transpose the note range track.*

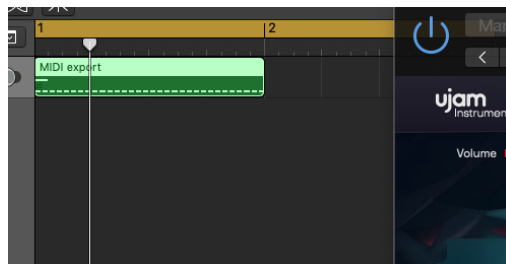
## Phrase Drag'n'Drop (Player Mode only)



*Clicking on a drag handle ...*



*... and dragging it onto a position in the CARBON track ...*



*... creates an exported MIDI copy of the phrase.*

*Note: This is an advanced and not necessarily easy-to-use feature. We recommend you only use it if you're ready and willing to do manual editing in your DAW!*

The easiest and fastest ways to create your own phrases are using Player or Instrument Mode and record them into your DAW.

What will usually end up in your Instrument Track are the MIDI notes that represent the actual notes, along with the phrase keys to go with them.

But sometimes you may like a Style in the Player Mode very much but want to detail-edit the notes, velocities or timing. This is where Phrase Drag'n'Drop will help.

You may have noticed that the keys in the Common and Play Range of the Interactive Keyboard show little handles with six dots at the top.

- By clicking such an handle and dragging it into your Instrument Track, you will create a MIDI copy of that particular phrase, pitch taken from the last notes you played in the Play Range, in your DAW track.

## **Mixing Instrument and Player Mode**

A dropped MIDI phrase will resemble what you would have recorded if you'd played this phrase in Instrument mode.

In fact, under the hood, CARBON plays back these phrases in Instrument Mode while you can remain in Player Mode and even mix both modes in one track.

*The way CARBON identifies dropped phrases is by the note C-2, which you will see inserted in all your dropped phrases.*

*Make sure not to delete these note events, as that may mess up the result.*

## **What to do with dropped phrases**

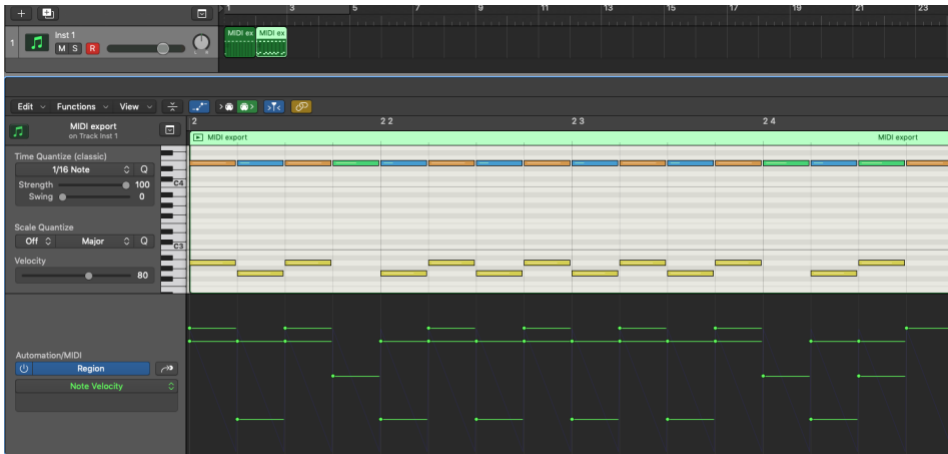
Here's what you can do by dragging and dropping phrases into Instrument tracks:

- Build a song structure by dropping multiple different phrases one after the other.
- Create a melodic or harmonic structure by editing the note pitches from F#3 upwards
- Change the articulations of notes by editing the note pitches below E3
- Change the timing of notes by editing note positions.
- Change the velocities of notes – e.g. lower them in intros, increase in verses. Velocities of select keys make no difference.
- Use the entire phrase as a toolkit for building an entirely new phrase.
- Use MIDI transformation in your DAW (double speed, half speed).

*IMPORTANT: When you drag notes, always make sure to drag the corresponding select keys below F2, otherwise articulations might get messed up!*

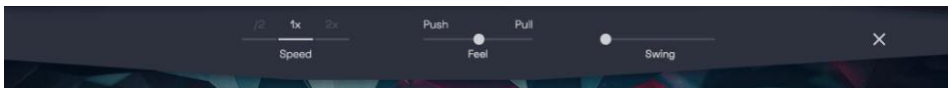


## Virtual Guitarist CARBON



A typical MIDI export (here shown in Logic Pro X), with the MIDI region at the top, the note editor below showing both the notes and the select keys (below) and their velocity levels.

## Micro Timing Parameters



### Timing Menu

- Only in Player Mode, you will find a label called *Micro Timing* in the top right corner of the user interface.
- Click it to open a selection of Timing parameters that you can use to adjust your *Virtual Guitarist CARBONs* performance to your song.

### Speed

The *Speed* switch lets you halve (0.5x) or double (2x) *Virtual Guitarist CARBONs* tempo relative to the song tempo.

### Swing

This function, often also called "Shuffle", delays the off-beats. *Virtual Guitarist CARBON* will automatically switch the *Swing* resolution to 8<sup>th</sup> or 16<sup>th</sup> note depending on the selected *Style*.

## Virtual Guitarist CARBON

*At maximum position, the off-beat will have the same timing as the last note of a triplet.*

Use this control to match the timing of *Virtual Guitarist CARBON* to a shuffled or triplet-based song.

*Not all phrases contain 8<sup>th</sup> or 16<sup>th</sup> note off-beats. In these cases, the Swing control has no effect.*

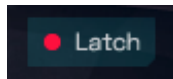
### Feel

You can tweak the feel of your guitar player's performance either towards relaxed or rushed using this control:

- As you move the slider to the left, the player will play off-beats slightly earlier, leading to a rushed or driving feel.
- In the opposite direction, off-beats will be slightly delayed, creating a laid-back or relaxed feel.

*Feel has a stronger effect when listened to against other tracks. If you're not sure what it does, try playing a drum loop along with *Virtual Guitarist CARBON* and tweak the control. You will notice that the off-beats will play earlier or later than the off-beat drums (usually hi-hats or snares) as you turn the control.*

### Latch (Player Mode)



#### *Latch*

When *Latch* is activated, once you press a key in the Play Range, *Virtual Guitarist CARBON* will keep playing until you press the *Stop* key.

When *Latch* is off, *Virtual Guitarist CARBON* only plays as long as you hold at least one key in the Play Range. *Latch* is convenient when testing or setting up sounds, and is more practical if you build a track by manually entering notes into your MIDI track.

*You can use an optional Sustain Pedal as a temporary Latch. Lifting the sustain pedal unlatches any notes that are no longer held, even if the Latch switch is still on.*

*Note: Latch behaves differently in Instrument Mode. Please read on!*

## **Instrument Mode**

If you are a skilled player and know how to play the typical phrasings and riffs of a guitar, then INSTRUMENT Mode might be for you, as it allows you total control over phrasing and notes.

Like the name says, *Instrument* Mode lets you play the guitar *instrument*.

*Actually, Instrument Mode is active in PLAYER mode too – it is the guitar model that gets played by the Player.*

We wouldn't be surprised if playing *Virtual Guitarist CARBON* in INSTRUMENT mode felt like your keyboard were hooked up to a mechanism playing the physical guitar.

This is because a *Virtual Guitarist* is not just a multisample, but a real model that emulates the behaviors of a physical guitar. While there's a good amount of "wanted" unrealism in *Virtual Guitarist CARBON*, unwanted "unrealism" of a conventional sampled guitar won't be found in *Virtual Guitarist CARBON* – such as machine-gun effect when repeating notes, synthesized note-offs or pitching/transposition artifacts.

*Playing tip: Unlike many other instruments, realistic, grooving guitar performances rely heavily not only on the correct onset of notes, but also on their end! A succession of long guitar notes with no pause in between is easy to play on strings, but hard on a MIDI keyboard. In these cases, try recording your guitar performance at half the original tempo – chances are this will still sound more realistic than note-length editing.*

## **Play Range and Articulations**

The first thing helpful to know is that you'll most probably use your right hand to play notes in the Play Range - which defines which notes you play when – and your left hand to play notes in the Articulation Range, which defines how these notes get played (i.e. as a muted or sustained note, shred or repetition).

## Play Range



### *Play Range in Instrument Mode*

The Play Range of the Interactive Keyboard is unusually low for a guitar – it ranges from F#3 – F#6 on the keyboard, but actually represents the notes F#1 to F#4.

This is because CARBON is based on a low-tuned 8-string guitar to create that ultra-fat djent sound at the heart.

The higher MIDI note range was chosen to leave space to the left for Articulations.

The Play Range is where you play the guitar like any MIDI instrument, up to four-note polyphonic and velocity-sensitive.

## Articulations



### *Articulations*

In Instrument Mode, the Articulations range of the Interactive Keyboard lets you

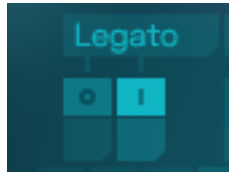
- activate Legato Mode
- play different articulations

## Virtual Guitarist CARBON

- play shreds
- play 1/4, 1/8 and 1/16 repetitions

With a little practice, you'll create stunning phrases very quickly – whether you choose to program them in your step sequencer or play them live on a keyboard.

### Legato Mode



*Legato Mode Keys*

- In Legato Mode, *Virtual Guitarist CARBON* will apply typical techniques of a real guitar (see "Guitar Model" below) and sound more realistic when you play melodic riffs. Use this mode for melodic riffs and melodies if you're going for a realistic impression.
- With Legato Mode off, you will be able to play intervals down to a semitone polyphonically, and generally the Guitar Model will be applied less rigid. Use this mode for power chords and rhythmic phrases or when you're not looking for a real guitar impression.
- Using the keys C#2 (Off) and D#2 (On), you can switch Legato Mode on and off at any time, even within phrases.

### Short -> Long Notes

Use the "white" keys from F2 to C2 to select the articulation of the guitar.

One of the most important techniques used to create rhythmic patterns is damping the strings with the thumb-ball of the right hand, varying length and harmonic content of the note. CARBON offers five different articulations plus velocity sensitivity for a large expressive range:

Note	Term	Description
F2	Dead Notes	Unpitched, extremely short notes, usually

## Virtual Guitarist CARBON

		used as rhythmic fillers and stops
G2	Full Mutes	Short but pitched notes
A2	Half Mutes	Slightly longer pitched notes
B2	Long Mutes	Almost sustain notes but still slightly damped
C3	Sustains	Undamped long sustained notes

### Shreds

Another integral part of interesting rhythmic CARBON patterns are short, super-fast note successions. Those are almost impossible to play on a keyboard, which is why we have supplied them as triggerable events in various note resolutions – of course Shreds aren't simple samples, but the engine "plays" them for you, and they will follow your song's tempo.

- To play a Shred, just hold its key for the length you want it to play – half a bar maximum. Releasing the key reverts to the previous phrase if in Latch Mode or if a phrase note is held.

Note	Term
F#2	32th Moderate Mutes
G#2	32th Half Mutes
A#2	32th Full Mutes
C#3	16T Half Mutes
D#3	16T Full Mutes

### Repetitions

Whenever you need successions of long notes, the Repetition keys come in handy, as they play these notes fully legato, which is hard on a keyboard controller without the sustain pedal held. The Repetition keys offer three note resolutions, each of which is two bars long:

Note	Resolution
D3	4ths
E3	8ths
F3	16ths

## **Key**

Again, this is a convenience parameter that lets you set a key and then forces any notes you play in the Play Range to that scale. It's particularly handy when you use a pad controller or aren't a seasoned keyboard player.

## **Guitar-style Mode**

In Instrument Mode there's a semi-easter-egg feature called Guitar-style mode. It lets you play CARBON the same two-handed way a real guitar is played – with one hand "stroking the strings" and the other pressing down on the fretboard to define the pitches – except the hands are reversed here.

This is how you use it:

- In Instrument Mode, activate Latch.
- Hold any notes in the Play Range (Fret Board) - these will still trigger notes unless played legato.
- While holding notes, hit the keys in the Articulation Range to trigger the respective events.

*Note that CARBON will respond differently to recorded MIDI if you switch to Guitar-style Mode after the fact!*

## **The "Guitar Model"**

In *Virtual Guitarist CARBON* there is a mechanism at work under the hood that – instead of just playing samples – models the instrument "behavior" – i.e. its reaction to which notes are played in which interval, how strongly, at what speed.

This all works fully automatic following the physical rules of guitar playing, because we don't want to require our users to be intimate experts of the inner workings of a guitar, nor don't we want to require you to know exactly what notes to play when, when to switch strings, or trigger slides or articulation noises manually.

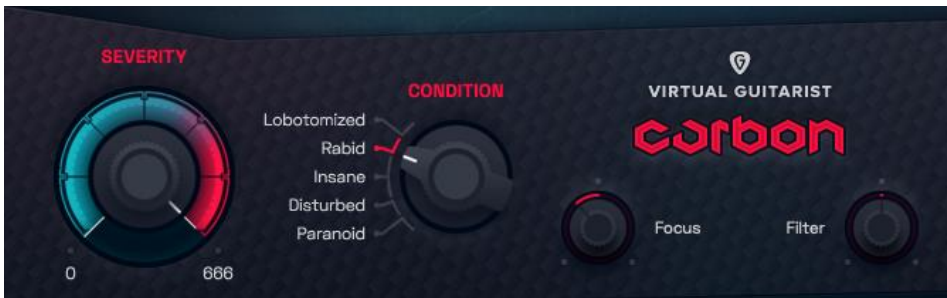
The model is complex, with lots of program code taking care of rules, exceptions, exotic playing styles and impossible key successions. What you have to know about this is: Nothing. Play whatever you feel like and the guitar will sound great.

Just know there's intelligence working under the hood taking care of finicky things, for example:

- Slides (Legato or Single Mode) – instead of attacking the string anew when you play an adjacent note (up to a whole tone), the sounding note will slide to the new pitch, as would the finger of the guitarist on the string.

- Hammer-Ons and Pull-Offs: If the adjacent legato note is weaker than the sounding one, you'll get a Hammer-On (pitch up) or Pull-Off (pitch down).

## Amp Stacks and Sound Section



*Amp Stacks and Sound Section*

The left two thirds of the mid section in CARBON's user interface let you set up and tweak the guitar sound using a bunch of innovative, powerful controls.

### Condition



*Condition Selector*

You can tell we didn't want to call this selector "Amp Select", as it would not do justice to what it actually is. We deliberately didn't emulate real-world, physical amps or cabinets to create the Carbon Sound.

We first created that sound we wanted to go for using a literal network of real and virtual processors, distortion stages, amps, cabinets, and then built the algorithms that created that sound. We refer to them as ultra amps, as they not only go beyond the traditional amp concept in terms of distortion. But definitely distortion.



## *Virtual Guitarist CARBON*

Carbons five "ultra amps" can't be defined by terms like "British" or "American", "Rectifier" or "Tube". They are more like moods or different types of force, which is why we called them *Conditions*.

There are five of them available in CARBON, representing increasing stages of rage and insanity from bottom to top:

### **Paranoid**

A tamer, warm sound almost resembling tape saturation. The sound will become grungier with higher Severity settings, with a rich, over-rectified and fuzzy tone when pushed over the edge.

### **Disturbed**

Typical hard rock setting with a warm and mid-based speaker array. The distortion is based on a hi-gain model that emphasizes the transients and the natural roaring sound of the low strings. Pushed over the edge using Severity adds a lot of high-frequency quality and shine.

### **Insane**

The bridge between classical hard rock and hi-gain metal. Combines the best of both worlds in a crystal-clear, aggressive and piercing sound when pushed over the edge. Becomes less mid-heavy and a more linear distortion when turning Severity from 0 to 100%. Will easily blend into the mix but can also shine through if necessary.

### **Rabid**

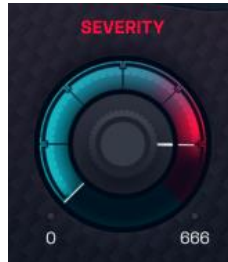
Fully-grown metal setting with aggressive hi-gain distortion, punchy bottom end and piercing high frequency quality. This is the in-your-face guitar that cuts through the mix.

### **Lobotomized**

The most dangerous weapon of choice – the soundtrack to tearing down empires or destroying planets. At Severity settings below the red range, Lobotomized will still behave like an amp stack.

From there, you're on your own!

## Severity



*Severity Knob*

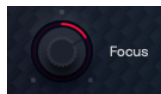
Like a flu or headache, CARBON conditions come in various levels of Severity too, and this knob gives you that kind of control. Technically, Severity turns up “distortion” inside the multiple amp stages.

As indicated visually, going into red range pushes the ultra amps “over the edge”, resulting in often broken, harsh, unpredictable results.

And that’s often what you’ll end up loving. “Going to 11” is cute, but so 1984.

The Severity Knob goes all the way to 666 – the number of the beast. You can take that literally.

## Focus



*Focus Knob*

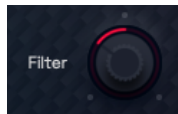
The Focus knob controls a morphing EQ. Across the range of the knob we have placed 4 distinct EQ settings, optimized for *Virtual Guitarist CARBON*. Instead of just switching between those settings, the Focus control lets you morph through them, allowing you to tweak CARBONs sound character before you send it into the Finisher.

Knob Position (o'clock)	EQ preset	Focuses ...
7	Bass Boost	CARBONs lowest frequency range, particularly effective in the low range. At this position, the high range is also attenuated. Use e.g. when

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		doubling bass lines with Carbon
9	Low Mid Boost	.. the lower mids and low noise portion of Carbons sound. Use to separate rhythmic riffs from the bass and when a CARBON riff with a lower octave version in a second instance
12	Neutral	-
3	Hi Mid Boost	... higher mids – where the “twang” sits. When you stack CARBON tracks, you can efficiently avoid masking by setting their Focus EQs to slightly different settings such as “2” and “3:30”
5	Hi Range Boost	... the high range, naturally most efficient with the higher note range and melodies rather than rhythmic figures.

## Filter



*Filter Knob*

This is a multimode 24dB synthesizer filter specifically optimized for creating those juicy risers and intros by slowly turning the filter across a bar or two.

- Turn the knob left for a lowpass filter (gradually removing high-end frequencies), turn right for a resonant high pass (gradually removing low-end frequencies).

*Apart from automating the filter, you can of course use it stationary as an extra sound-shaping parameter.*

## The Finisher



*The Finisher*

The Finisher is a super powerful custom effect array, with no less than 20 individual effect processors, macro-controlled by a single selector and control knob. Effects used range from EQs to multiband compressors to distortion, delay, chorus, phaser, flanger, and reverb to a convolution unit (providing impulse responses of cabinets and more) to rather experimental stuff like beat cutter or grain pitch.

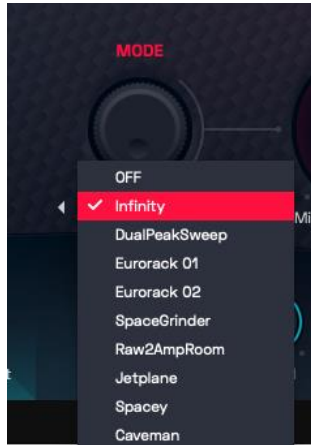
It lends the raw guitar sound all kinds of finish, from subtle character changes to standard effects such as delay, reverb or modulations to crazy grain clouds that render the original sound unrecognizable.

The Finisher is the way to go for creative sound-design with Carbon. It comes with over 70 presets specifically created for Virtual Guitarist CARBON. Every preset sets up the 20 individual processors in a new way and connects them to the Finisher Knob.

Best of all: The Finisher is meant to be "played live". Either using the Finisher Knob or the Mod Wheel of your keyboard (or generally MIDI cc#1) you can create amazing morphing sounds.

And it couldn't be simpler:

## MODE Knob and Menu



*Mode Knob and Menu*

Select a Finisher MODE Preset using the *MODE* knob or

- click either on the preset name to open the full list,
- or click the arrows to step through the list.

*The purpose of the knob is that Finisher MODE preset selection can be automated, i.e. you can switch Finisher MODE presets during the track. Note that some algorithms won't switch glitch-free, in that case plan for a brief pause.*

### Finisher MODE Presets - Reference

Name	Description	Turn Finisher/MW up to ...
Infinity	Turns guitar into an aerial synth pad	fade in effect
DualPeakSweep	Two strong resonant LP filters at slightly different cutoffs	sweep cutoff frequencies upwards
Eurorack 01	Sequencer producing random octave jumps	fade in effect
Eurorack 02	Sequencer creating a complex filtered delay pattern	fade in effect
Space Grinder	Metallic modulation with auto pan	fade in effect

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Raw2AmpRoom	Cabinet in a nice guitar recording room	fade to cabinet/room
Jetplane	Hi-feedback slow flanger	fade in effect, above mid: speed up
Spacey	Metallic Spectral Modulation	slow down modulation
Caveman	Ambience and sound character of a long cave	fade in effect
Phazor Razor	Hi-feedback phaser with distortion	move phaser frequency
Big Hair	Classic 80s chorus and ambience	fade in effect
Trigger Happy	8th note repeater effect (filter)	fade in effect
Double Track	Combines chorus and doubling delay for a big ambience	fade in effect
Synth Tremolo	Classic synth filter tremolo	close filter
Clouds	Big "pipe-organ-like" sound cloud	fade in effect
Delay TimeTravel	Delay with variable delay time	increase delay time
EARTH2ISS	Fades from dry signal to "out of space"	fade in effect
Air Vent Tunnel	Simulation of a long tunnel with big rotating vents	fade in effect
CyberLeslie	Exaggerated rotary speaker effect with spectral modulation	control speed
CyberFade	Manual version of CyberLeslie	manually rotate speaker
Dstroytion	Total destruction distortion	fade in effect
Megaphone	Megaphone character with echo	fade in effect
Old Radio	Character of an old radio with small speaker	fade in effect
Hot Bath	"bathtub" EQ (bass/treble boost, mid attenuation) plus distortion	fade in effect
Rotor Cab	Simulation of a rotor cabinet	switch motor speed
FrequencyShift	Frequency Shifter	increase frequency shift range
AutoPan Vari	Auto Pan with variable depth	Increase AutoPan Depth

*Virtual Guitarist CARBON*

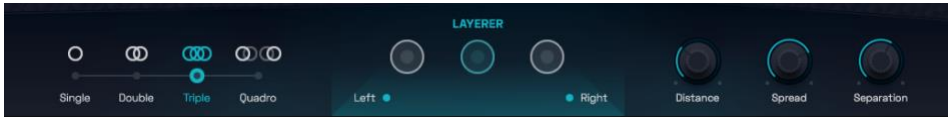
CombFilter	Resonant Comb Filter (similar to extreme flanging)	sweep comb filter frequency
Bitcrusher	Bit and Sample Rate Degradation	increase degradation
SlamCompressor	Super-attacky compressor	increase compression effect
Vibrato	Adds a vibrato	increase vibrato depth
Big Vibrato	Adds vibrato and big ambience	increase vibrato depth
VariBite	Adds bite (mid range boost) with variable frequency	set peak frequency
VariNotch	Removes bite (mid range attenuation)	set notch frequency
BassBoost	Adds bass	Increase bass gain
MidBoost	Adds mid range	Increase mid range gain
Bass/Treble	Seesaw EQ - from bass boost / treble removal to bass removal / treble boost	set seesaw angle
LP48	Two serial 24 dB lowpass filters - double the cutoff steepness of the Filter knob turned left.	
BP	Classic resonant bandpass filter	sweep cutoff frequency
HP48	Two serial 24 dB highpass filters - double the cutoff steepness of the Filter knob turned right.	sweep cutoff frequency
Notch	Classic resonant notch filter	sweep cutoff frequency
LP+Dist	Classic resonant lowpass filter with distortion	sweep cutoff frequency
Delay 4	6 ping-pong delay programs from 1/4 to 1/24	increase delay mix and feedback
Delay 6		
Delay 8		
Delay 12		
Delay 16		
Delay 24		

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Lead Delay	Complex delay optimized for long lead/melody sounds	increase delay mix and feedback
Guitar Room	6 distinctive, guitar-type reverb programs	increase reverb mix
Spring Reverb		
Staircase		
Iron Plate		
Courtyard		
Cathedral		
Hangar		
Flanger	Basic Flanger	increase effect depth/rate
Chorus 1	4 Chorus programs (1-4 voices), from subtle to strong	increase effect depth/rate
Chorus 2		
Chorus 3		
Chorus 4		
Phaser 1	4 Phaser programs (1/2/4/8 pole) from subtle to strong	increase effect depth/rate
Phaser 2		
Phaser 3		
Phaser 4		
Cabinet 1	5 different speaker cabinets (impulse responses)	morph from dry to cabinet signal
Cabinet 2		
Cabinet 3		
Cabinet 4		
Cabinet 5		
Gater Vari	Gater with increasing speed	off, 1/8, 1/16, 1/32
Gater 1/8	Fixed speed gater with adjustable depth	fade in effect
Gater 1/16	Fixed speed gater with adjustable depth	fade in effect
Gater 1/12	Fixed speed gater with adjustable depth	fade in effect
Gater 1/24	Fixed speed gater with adjustable depth	fade in effect



## The Layerer



### *The Layerer section*

The Layerer is a complex engine-in-the-engine that is capable of stacking up four *CARBON* guitarists and position them vertically and horizontally across the sound stage.

This means that it doesn't merely multiply a single guitarist's signal, but that it literally engages up to four guitarists who play independently (with slightly different timing and tuning) just like in real life.

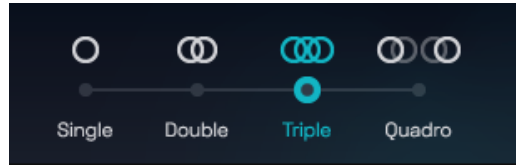
As you will notice over time, *CARBON* is most powerful when doubled, tripled or quadrupled. The Layerer saves you the tedious work of setting up various instances with their respective mix settings.

*Of course, there will be situations where you do want to use several instances - e.g. to have multiple CARBONS with different Condition ultra amps or Finisher presets, or when you want total individual control over each guitarists mix. But for a big, coherent sound the Finisher is a super-convenient, optimized tool.*

Using the Layerer, you can build all kinds of ultra guitar scenarios from subtle intro guitar to huge Walls of Doom.

The number, position and sonic separation of currently active Layers is visually reflected in the Layerer image in the center.

## Configurations

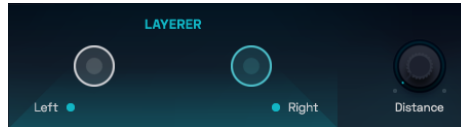


### Configuration Switches

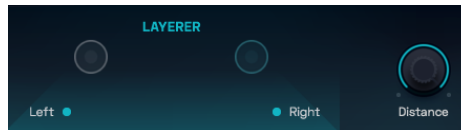
The configuration switches to the bottom left select the number and configuration of guitarists. Each configuration is specifically arranged across the stereo image and the virtual stage:

Mode	Layer 1 (white)	Layer 2 (white ... blue)	Spread
Single	Center	-	inactive
Double	Left	Right	Moves Layers towards the far end of the stereo image
Triple	Center	Left/Right	Stereo width of Layer 2
Quadro	Left/Right	Left/Right	Stereo width of each Layers 1 and 2

## Distance



*Double configuration with minimum ...*

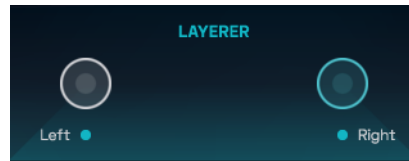
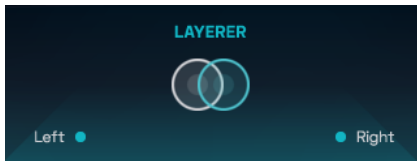


*... and maximum Distance*

The Distance knob controls the 3D simulation of the virtual stage, virtually moving the signal back into the virtual room. The signal will sound more ambient and transients will be blurred.

*Always use a little distance to make CARBON sound more natural (if that is what you want). Use more distance for second/third priority tracks if too many signal transients are fighting for the „front real estate“ of the mix.*

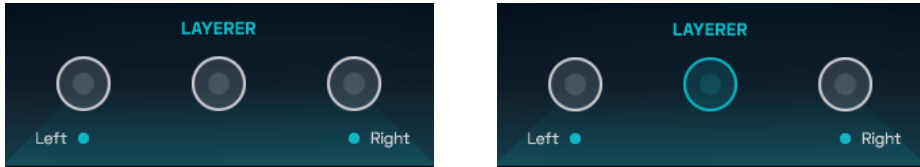
## Spread



*Minimum and maximum Spread*

The Spread knob controls the stereo distance between the guitarists positioned left and right. Turn fully up for maximum stereo width.

## Separation



*Minimum and maximum Separation in a Triple configuration*

This knob is the equivalent of what a sound engineer would do when having to disentangle multiple guitar tracks – all fighting for the same frequency ranges and just creating a ton of mush – in order to re-establish transparency and the ability to tell the various guitars from another. The sound-engineering term for this would be “un-masking”.

Technically, Separation applies different morphing EQs to the two Layers, this way separating them from each other in the mix. This is indicated visually by a color separation in the Layerer image.

Keep Separation down if you want a coherent Wall of Doom, turn it up if you want the two Layers to be distinguishable in the mix.

## MIDI Learn

Using MIDI Learn, you can assign any *Virtual Guitarist CARBON* control to hardware controls of MIDI keyboards or other controllers.

To assign a control, you usually right-click or ctrl-click a control in *Virtual Guitarist CARBON* to open the MIDI Learn context menu of your DAW.

## *Virtual Guitarist CARBON*



*MIDI Learn Menu*

## **Automation**

All controls in *Virtual Guitarist CARBON* can be automated. In combination with the phrase select keys this is actually a very powerful way of creating more dynamic performances. For example, automate *FINISHER* or *SEVERITY* with faders to create dynamic transitions, or switch-automate *CONDITION* or *SPREAD* to drastically change the sound between song parts.

*For instructions on how to activate Virtual Guitarist CARBON parameters for automation, please refer to your DAW's user guide.*

## **FAQ**

Where can I get help?

We keep a help desk with a knowledgebase and known issues here: [UJAM Helpdesk](#)

I still have questions! Where can I send them?

Please send your questions to [support@ujam.com](mailto:support@ujam.com). We will help you out asap!