

CHROMATIC HARMONICA

*Chris Hein Harmonica*

*Chris Hein*

**CHROMATIC**

**HARMONICA**



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*Chris Hein*  
**CHROMATIC  
HARMONICA**



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# Contents

<b>04</b>	<b>Introduction / System Specs</b>	<b>15</b>	<b>Articulation Overview</b>
<b>05</b>	<b>The Interface</b> Small-Page General Controls	<b>16</b>	<b>Settings</b> Fader Settings Release FX Synamic
<b>06</b>	<b>Basics</b> Meters Edit-Tabs	<b>17</b>	<b>Settings</b> Pitchbend Ensemble ADSR Micro-Tuner
<b>07</b>	<b>Basics</b> Articulation select Overview Body & Room Convolutions	<b>18</b>	<b>Vibrato</b> LFO-Vibrato Auto-Vibrato
<b>08</b>	<b>Articulation-Presets</b> Overview	<b>19</b>	<b>DSP Effects</b> Overview
<b>09</b>	<b>Articulation-Presets</b> Articulations Key-Switch Modes Copy / Paste Main controls Speed-Detection	<b>20</b>	<b>DSP Effects</b> Reverb Delay Chorus
<b>10</b>	<b>Articulation-Presets</b> Volume Control Dynamic Modes	<b>21</b>	<b>DSP Effects</b> Phaser Flanger Compressor
<b>11</b>	<b>Articulation-Presets</b> Transient Designer Attack Controls Noise Legato Mode / Glide Mode	<b>22</b>	<b>DSP Effects</b> Solid G Equalizer Filter
<b>12</b>	<b>Legato Settings</b> Legato Details	<b>23</b>	<b>Midi-CC list</b>
<b>13</b>	<b>Hot-Keys</b> Hot-Keys Overview	<b>24</b>	<b>The Family of Chris Hein - Horns</b>
<b>14</b>	<b>Hot-Keys</b> Key-Vibrato Hand-Damping Play Last Note Play Fall Attack Blow Empty	<b>25</b>	<b>Chris Hein - Guitars</b>
		<b>26</b>	<b>Chris Hein - Bass</b>
		<b>27</b>	<b>The Harmonica Player and his Instrument</b>
		<b>28</b>	<b>Chris Hein</b>

# Chris Hein-Harmonica

Thank you for buying **Chris Hein - Harmonica**

With almost 7,000 samples, 14 articulations, up to eight dynamic layers and a full 4 octave range, CH-Harmonica is definitely the most detailed sampled Chromatic Harmonica on the planet.

The user-interface holds tons of features on several pages to shape the sound the way you want it. However, if you don't feel like editing, just play and explore the 26 pre-programmed Key-Switch presets ranging from A-1 to A#1 on the lower keys on your midi-keyboard.

Thanks to the clever programming and intuitive user interface, new and innovative features like „Key-Vibrato“ or the „Hot-Keys“ are very easy to use.

One of the most unique features in CH-Harmonica are the Phase-Aligned samples.

After 6 months of research, Chris Hein found a solution to phase-synchronize the samples.

This enables an absolutely perfect blending between 6 dynamic layers.

During the development, very much attention was spent on how to work with dynamics to provide an extremely realistic and expressive instrument.

During the Phase-Align process, Chris had to separate the noise part of each sample, to synchronize the phase of the pure tone. As a result we get four audio files for each sample:

- The original recorded sample used in the velocity sensitive dynamic mode „Keyboard“
- The processed phase aligned sample used for the „X-Fade“, „Key & X-Fade“, „Auto X-Fade“
- A pure tone sample
- A pure noise sample

The fader „Noise“ lets you can blend between the pure tone and the pure noise part.

This is a „never seen before“ technique to shape the sound from „clean“ to „crisp“

## **System Specs:**

CH-Harmonica requires the full version of Kontakt 5.2 or better.

As this is NOT a Kontakt Player Library, you will not see the Harmonica in the library pane. Simply navigate to the Harmonica.nki via the “File” browser pane.

## **PCs:**

Windows7 (latest Service Pack, 32/64 Bit), Intel Core Duo or AMD Athlon 64 X2,  
2 GB RAM (4 GB recommended).

## **MACs:**

Mac OS X 10.6.8, or better, Intel Core 2 Duo,  
2 GB RAM (4 GB recommended).

**CH-Harmonica is watermarked with your personal data and IP address using proprietary watermarking techniques.**

**Do not distribute, resell or torrent.**



# Interface

## The Small-Page General Controls



### The Edit-Pages

After loading an instrument, the first screen you'll see is the Small-Page.

This screen has no edit features.

Click the „Open“ button to display some of the major controls.

Start playing right away and use the Key-Switch keys ranging from A-1 to A#1 to enter the 26 pre-programmed Articulation-Presets and Hot-Keys.

The actual selected articulation is displayed in white at the bottom of the screen.

Enter the different edit-pages by clicking one of the edit-tabs at the bottom of each page.



### General Controls

- 1 Solo/Mute
- 2 Tune - (CC09)
- 3 Panorama - (CC10)
- 4 Volume - (CC07)
- 5 Level indicator

### Saving Changes

CH-Harmonica has many features to customize the instrument to fit you demands.

To save the settings you have made, use the Files menu from the Kontakt top-menu.

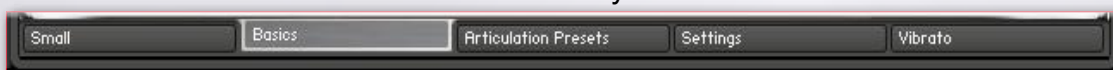


# Basics

## Meters / Edit-Tabs

### Edit-Tabs

Five tabs at the bottom of the interface let you enter the edit modes.

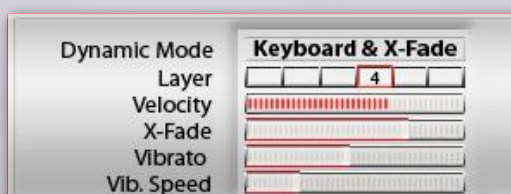


Click the „Basics“ tab to enter the Basics page.



### Meters

Several meters indicate the status of the following functions:



**Dynamic Mode** - Shows the selected dynamic mode. Change it in the articulation preset page

**Layer** - Indicates the dynamic layer of the the last note played.

**Velocity** - Shows the velocity of the the last note played.

**X-Fade** - Shows the state of the X-Fade position. This graphic also works as a slider

**Vibrato** - Adjust the vibrato intensity

**Vi. Speed** - Adjust the vibrato speed

## Basics

### Articulation Select / Overview / Body & Room



#### Articulation Display and Selector

The actual selected articulation is displayed on top of the virtual keyboard. Click any keyboard key on the graphic to switch to the corresponding articulation-preset



ARTICULATION OVERVIEW					
A-1	01 Sustain	F#0	07 Bending	D#1	Attack 1
A#-1	01 Sustain	G0	08 Short	E1	Play Fall 2
B-1	01 Sustain	G#0	09 Staccato 1	F1	Play Fall 1
C0	01 Sustain	A0	10 Staccato 2	F#1	Harmonize
C#0	02 Sus.Vib.Mou	A#0	11 Fall 1	G1	Play Last Note
D0	03 Sus.Vib.Hanc	B0	12 Fall 2	G#1	Hand Damping
D#0	04 Sus.Ex.Long	C1	13 Run Down	A1	Vibrato Down
E0	05 Sus.Ex.Med.	C#1	14 Run Up	A#1	Attack 1
F0	06 Sus.Ex.Shor	D1	Attack 2		

#### Articulation Overview

An overview of all actual loaded articulations and Hot-Keys is displayed here.

The red border marks the selected articulation and Key-Switch key.



#### Body and Room

CHH contains 40 fantastic, built-in convolution reverbs, as well as 23 very short impulse responses to design the body of the instrument. The combination of two convolution reverbs lets you design the body and the room individually.

#### Controls for Body and Room

**On/Off** - Switches the Convolution Reverb on and off.

**Presets** - Choose from 21 specially-designed Impulse Responses.

**Volume** - Adjusts the amount of the Convolution Reverb.

**Delay** - Sets the pre-delay time before the reverb starts.

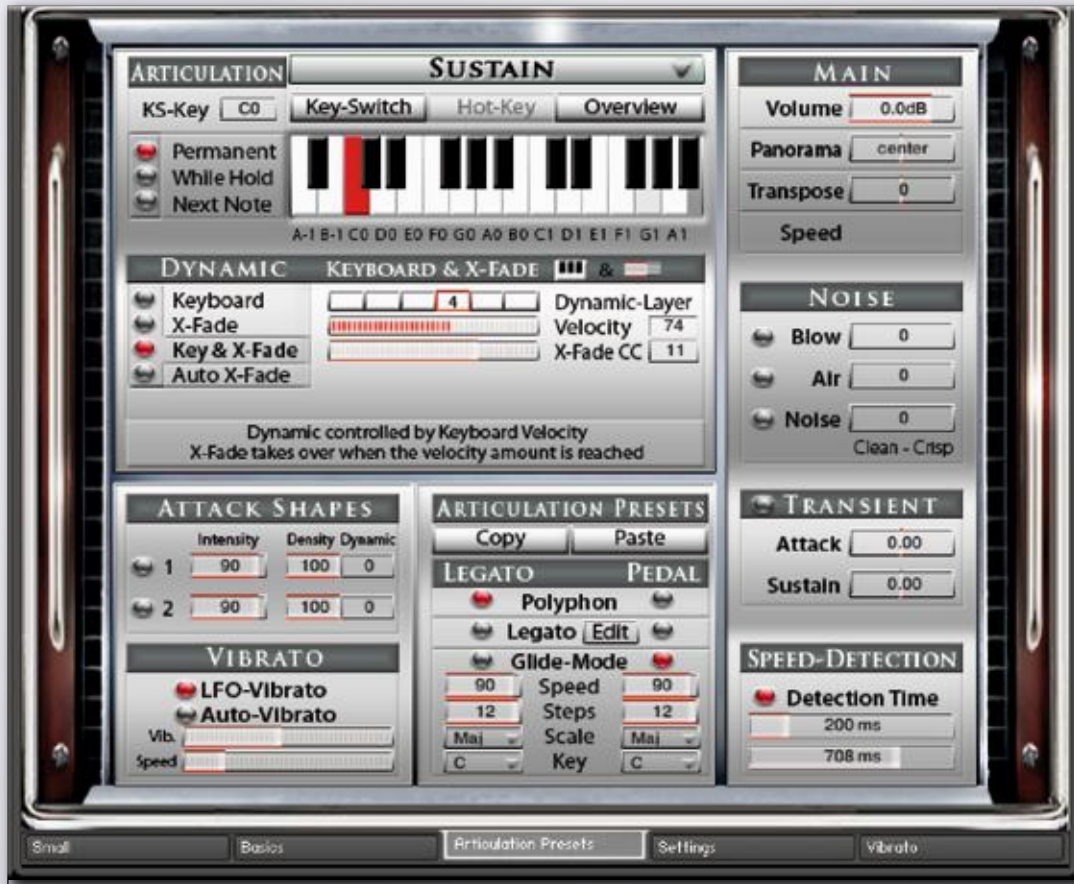
Recently, sampling (convolution) reverbs have become more and more in demand. With convolution, we have an opportunity to capture the sound of anything in the world that can generate a reverb and use these sound impulses freely in any sonic situation imaginable. This enables us to use the sound of highend reverb units, real-world rooms, halls, cathedrals, synthetic reverbs and other sources, including non-reverb ones, without any hassle and in a uniform way using only a single program or a plug-in module.



# Articulation-Presets

## Overview

You will probably spend most of your time with Chris Hein - Harmonica in the Articulation-Presets Page. Everything you see on the Articulation-Presets Page is stored on a single Key-Switch. Each setting of the functions on this page can be different for each of the 22 key switch keys. A key-switch preset can be assigned as a Key-Switch or as a Hot-Key.



The new key-switch concept allows you to customize the instruments in every detail to suit your needs. Let's say you want to play chords with the sustain articulation and then you want to play a solo line using the legato-mode. All you have to do is copy the articulation-preset, paste it to another key-switch preset and change the legato setting from polyphon to legato.

Now, switching from polyphon to legato playing is done by just pressing a key-switch.

The same process works for all other functions on this page. For example, you can assign different articulations to different keys, enabling you to change articulations on the fly. Or you can design a bunch of different settings for only the sustains, enabling you to alter the behavior of the instrument.

It's important to understand that all functions on this page are valid only for the selected key-switch. If you want to make changes for other articulations, you will have to change every articulation you plan to use.

The key-switch presets are allocated to the lower area of your keyboard, from A-1 to A#1.

Key-switches are displayed in red. Hot-keys are displayed in green.

There are several ways to select a key-switch preset:

- Hit the keys on your keyboard.
- Click the keys on the keyboard graphic in the interface.
- Right-click on the keyboard graphic and assign any midi-controller to select the key-switches.



## Articulation-Presets

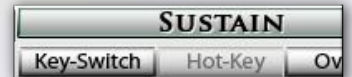
### Articulations, KS-Mode, Copy/Paste, Main controls, Speed-Detection

Let's start to customize your key-switch presets.

The first step is to assign the KS-preset as a key-switch or as a hot-key.

**Key-Switches** hold different articulations to be played on your keyboard.

**Hot-Keys** are special keys that don't change the overall articulation, but can add multiple effects, enable playing key-based vibrato, or work as repetition keys. Let's call these guys KS and HK.



#### Articulations

Lets start building a key-switch preset.

Select an articulation from the drop down menu on top of the keyboard graphics to be assigned to the selected KS-preset.

Click the "Overview" button to see and edit an overview of all loaded articulation-presets and Hot-Keys.



**KS-Key** lets you change the key-switch presets via MIDI-CC.

Right click to assign any CC and use a hardware fader to control the articulations

#### Key-Switch Modes



There are three different key-switch options to choose from, which determine exactly when and how the articulation change takes effect:

**KS-Permanent:** The articulation remains active until another key-switch is pressed.

**KS-While Hold:** The articulation changes only for as long as the key-switch is held and reverts to the previous articulation when the key-switch is released.

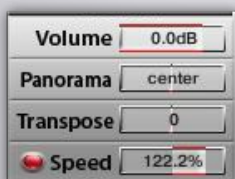
**KS-Next Note:** The articulation changes only for the note immediately following the key-switch and then reverts to the previous articulation.

#### Copy - Paste

You can copy and paste a whole KS-Preset. This is useful if you want a variation of an existing preset on another key to instantly switch between them.



#### Main Controls



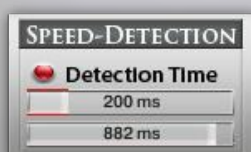
**Volume** sets the volume for each KS-preset individually. To adjust the global volume, use the volume slider at the top right of the interface.

**Pan** lets you pan each KS-presets individually from left to right.

**Transpose** lets you transpose the preset (36 semitones maximum) up or down.

**Speed** sets the overall speed of the selected articulation.

Changing the speed of the samples is useful for articulations such as crescendo, fall and doit. But changing the speed for the sustains can also yield some interesting effects. Click the little red dot to activate the speed-change. Since variable speed needs a lot more RAM, you should activate "time" only when you need it. The speed change is only available if the dynamic mode is set to „Keyboard“



**Speed Detection** automatically selects a different version of the sustain articulation when playing at faster speed. For example when playing the sustain sound, the attack of the sound might be too long when playing faster melodies.

In this case, you can turn on Speed Detection, which triggers special versions of the sustain samples that have faster attacks. Choose from different articulations to see what sounds best to you.

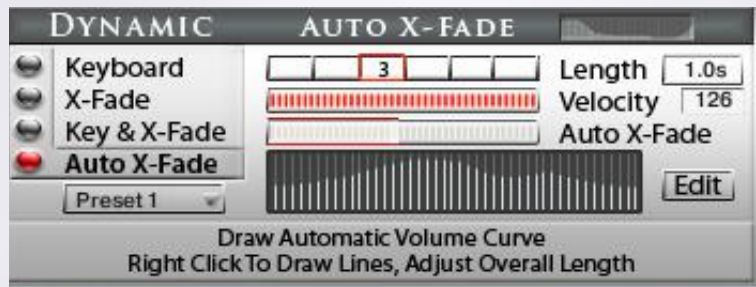
The knob sets the time between two notes required to perform the speed-control articulation switch. The time range is shown in milliseconds. Only notes played within the selected time range are performed with the sustain-speed articulation.

## Articulation-Presets

### Volume Control / Dynamic Modes

**Dynamic:** Usually the dynamic of an instrument is just controlled only by the velocity of your midi keyboard. CH-Harmonica offers different options to control the dynamic. The details on the next page may sound a bit technical, but don't hesitate to just experiment with the settings.

The button at the left side lets you switch between the four different dynamic-modes.



**Keyboard** - The articulation in CH-Harmonica have 3-8 dynamic layers. When set to „Keyboard“ these layers are available through the velocity of your midi keyboard. The actual played dynamic layer and the midi velocity are displayed.

**X-Fade** - When this is selected, the velocity is controlled via midi Control Change (CC11, Expression, by default). You can also use any other controller by changing the X-Fade CC. Setting the controller to zero plays the lowest velocity layer, moving the controller up fades between the velocity layers, while increasing the value crossfades between the velocity layers until the highest value of 127 is reached.

**Key & X-Fade** - This is a combination of Keyboard dynamic and X-Fade. Velocity is controlled via keyboard velocity, but you can also use Expression (CC11) to crossfade between the velocity layers. Key & XFade works in an intelligent way. Let's say you play a note at velocity 100, then you increase Expression (CC11), starting from zero. No change is audible until the Controller reaches value 100. From here, Expression takes control of the velocity and lets you change the dynamic even after the note is pressed. Key & XFade is perfect for playing realistic crescendos and decrescendos.

**Auto X-Fade** - This performs an automatic volume curve relative to the played velocity. When Auto X-Fade is selected, the automatic volume curve starts at the velocity played on the midi-keyboard, performing a volume change depending on the settings in the table. You can draw your own volume curve in the table. To edit the curve in more detail, click the „Edit“ button to enter a fairly big table. The length of the Auto X-Fade curve can be adjusted with the „Length“ fader

## Articulation-Presets

### Transient Designer, Attack, Noise, Legato, Sustain Pedal



**The Transient Designer** is a compressor designed to control the attack and sustain of a sound. Instead of following the amplitude of the sound like a traditional compressor, it follows the general envelope and is thus not as susceptible to changes of input gain.

**Attack** controls the scaling of the attack portion of the input signal's volume envelope. Increasing this parameter will add more punch and decreasing it will reduce sharp attacks.

**Sustain** controls the scaling of the sustain portion of the input signal's volume envelope. Increasing this parameter will add more body to the sound and decreasing it will reduce the sound's tail.



**The Attack Controls** can be used to alter the attack of each note.

Activate the attack-effect by clicking the little red on/off button.

Use the right-click Midi-Learn feature to assign a midi controller to ride the attack effect manually.

To achieve more variation to the sound you can use the density and dynamic controls to perform an automatic variation of the attack.

**Density** varies the amount of notes being played with the attack-effect. 100 means - all notes are played with the attack effect, 20 means - only 20% of the notes are played with the attack.

**Dynamic** varies the volume of the attack effect. Set the volume knob to a certain level, then set dynamic to, for example, 50% - The attack volume varies 50% randomly each note you play.

#### Noise



**Blow** adds the natural attack sound of blowing hard into the instrument

**Air** adds the natural sound of air blowing into the instrument without producing a note, which can be used to increase the 'breathiness' of the sound.

**Noise** This little fader provides a very powerful feature. It lets you blend between the pure tone and the noise part of the sample. Setting the noise fader to -50 results in a pure tone without any noise.

#### Legato Mode / Glide-Mode

When playing a note, holding it and playing another note, the Legato or the Glide Mode performs a smooth transition between the two notes. While Legato performs a smooth crossfade between the notes, Glide-Mode plays the notes within the interval you played. Let's say you play the note C4, hold it and play E4 with Glide-Mode on. First you hear the note C4, and as soon as you press E4, the notes C#4, D4 and D#4 are played and the run ends with a sustained note on E4. Glide-Mode works up to 12 semitones up or down. Legato-Mode works with any interval you play. You can edit the behaviour of the Legato-transition in detail in the Legato-Settings Page.

#### Legato / Glide-Mode

**Polyphon** lets you play polphonic chords, no legato transition is audible.

**Legato** lets you play monophonic lines with a legato transition.

**Glide-Mode** provides real played runs from one note to another.

**Glide Speed** sets the speed of the Glide-Mode transition.

**Steps** sets the maximum halftone steps to be played.

**Scale** choose from chromatic, major, different minor or pentatonic scales.

**Key** sets the key of the scale



**Pedal** If you have a sustain pedal connected to your midi keyboard, the legato settings allow you to change the function of the pedal. If set to „Polyphon“ the pedal acts as a regular hold pedal. If no pedal is connected, you can use CC 64 to switch between Poly-, Legato- or Glide-Mode.



# Legato Settings

## Legato Mode, Legato Details



### Legato Mode

When playing a note, holding it and playing another note, the Legato performs a smooth transition between the two notes. You can edit the behavior of the Legato transition in detail in the Legato-Settings Page. by clicking the „Edit“ button. Playing in Legato Mode is always monophonic.

Activate legato playing in the Articulation Preset page.

Clicking the little **Legato Edit** icon brings you to the Legato Settings page to edit the details.

You can also enter the Legato Settings page through the tab on the left side of the interface.



### Legato Details

The legato transition consists of four elements:

- Fade Out for volume
- Fade Out for tuning
- Fade In for volume
- Fade In for tuning

There are separate controls for volume-fade in/out and for tune-fade in/out:

**Fade Out Offset (ms)** Sets the time before the fade starts.

**Fade Out Length (ms)** Sets the length of the fade out.

**Tune Out Offset (ms)** Sets the time before the detuning starts.

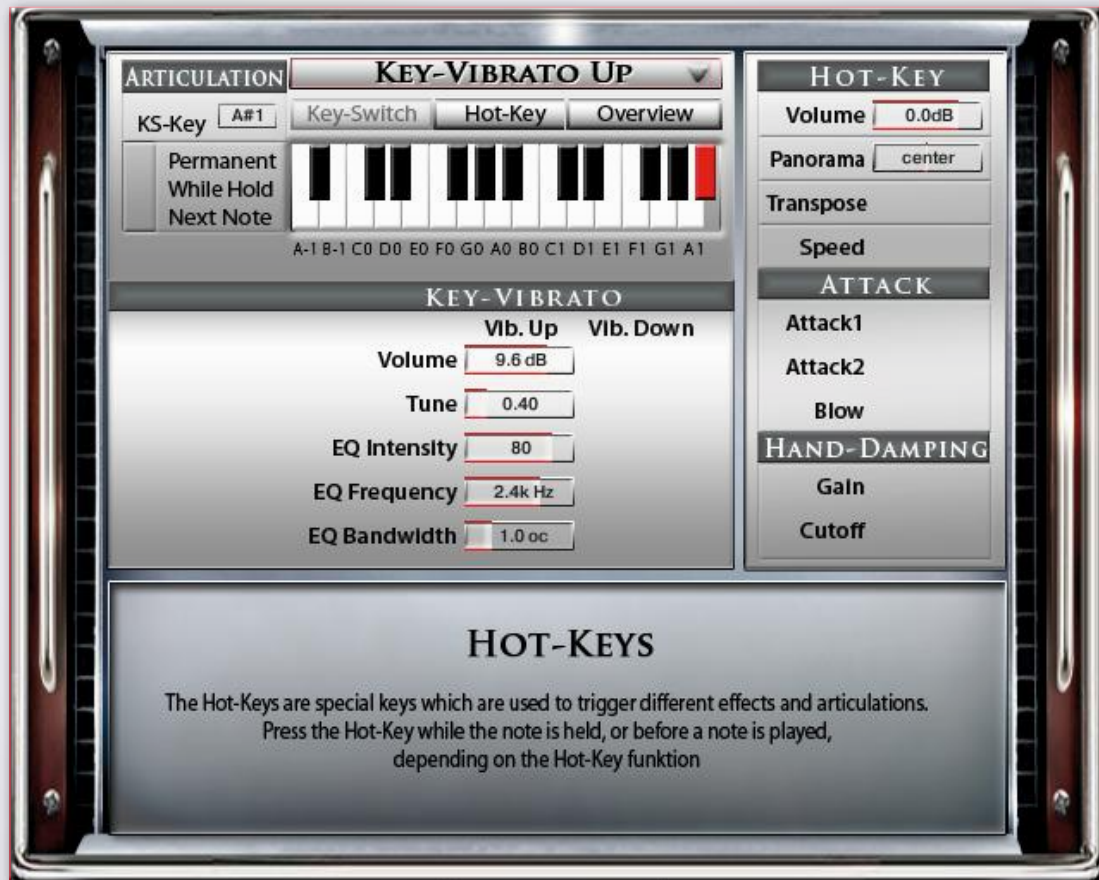
**Tune Out Length (ms)** Sets the length of the detuning.

**Tune (c)** Sets the amount of detuning in cents.

**Slope** Spreads the amount of legato. A higher value results in a lower amount of legato when playing small intervals, like a semitone, and a higher amount when playing larger intervals, like an octave.

# Articulation-Presets

## Hot-Keys



The Hot-Keys are special keys which are used to trigger different effects and articulations. Each of the 26 keys from A-1 to A#1 can be assigned as a Key-Switch or as a Hot-Key Preset.



To assign a Hot-Key to a key on your midi keyboard, switch from Key-Switch to Hot-Key and select one of the Hot-Key function from the drop down menu.

You can also set a Hot-Key to 'Play Last Note', which will literally retrigger the last note you played. This is particularly useful for playing legato repetitions which would otherwise not be possible by simply re-playing the same note repeatedly.

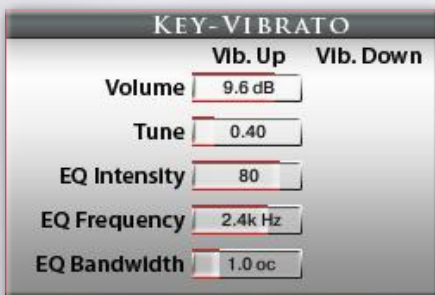
In addition to repeating or retriggering the previous note played, hotkeys can also be used to modify the note currently playing. For example, a hotkey can be assigned to trigger a fall, which will stop the note and play a realistic "fall".

# Articulation-Presets

## Hot-Keys

The following functions are available through the Hot-Keys:

<p><b>KEY-VIBRATO UP</b> Play Vibrato Up manually while holding a note Velocity sensitiv, adjust pitch and volume</p>	<p><b>PLAY FALL 1</b> Pressing the Hot-Key while holding a note stops the note and plays a Fall Down 1 semitone</p>
<p><b>KEY-VIBRATO DOWN</b> Play Vibrato Down manually while holding a note Velocity sensitiv, adjust pitch and volume</p>	<p><b>PLAY FALL 2</b> Pressing the Hot-Key while holding a note stops the note and plays a Fall Down 2 semitones</p>
<p><b>HAND DAMPING</b> Simulates damping by moving the hand Velocity sensitive</p>	<p><b>ATTACK 1</b> Pressing the Hot-Key before a note is played adds a hard attack note</p>
<p><b>PLAY LAST NOTE</b> Repeats the last played note Perfect for fast repetitions</p>	<p><b>ATTACK 2</b> Pressing the Hot-Key before a note is played adds a hard attack note</p>
<p><b>HARMONIZE</b> Adds a second interval to the note Transpose sets the interval</p>	<p><b>BLOW</b> Pressing the Hot-Key before a note is played adds a blow attack noise</p>



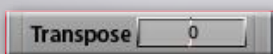
**Key-Vibrato Up/Down:** Rather than playing a static vibrato with the modwheel, this enables you to perform the vibrato manually on a key of your midi keyboard. You can choose between Vibrato Up or Vibrato Down, which affects volume, pitch and EQ of the note being heard.

A real vibrato, performed by a harmonica instrumentalist, consists of a change in volume and pitch and a frequency change. You can edit all these parameters separately.



**Hand-Damping:** Simulates a harmonica players hand being used to change the color of the sound. Its actually a filter which lets you edit volume and cutoff frequency.

**Play last note:** This Hot-Key simply repeats the last note you have played. This is great for fast repetitions. No special controls are needed for this effect.



**Harmonize:** Adds a second note with a different pitch. The interval depends on the setting of the Transpose fader.

**Play Fall 1,2:** Pressing this Hot-Key while a note is being played, stops the sustain note and adds a real played fall down of the note.

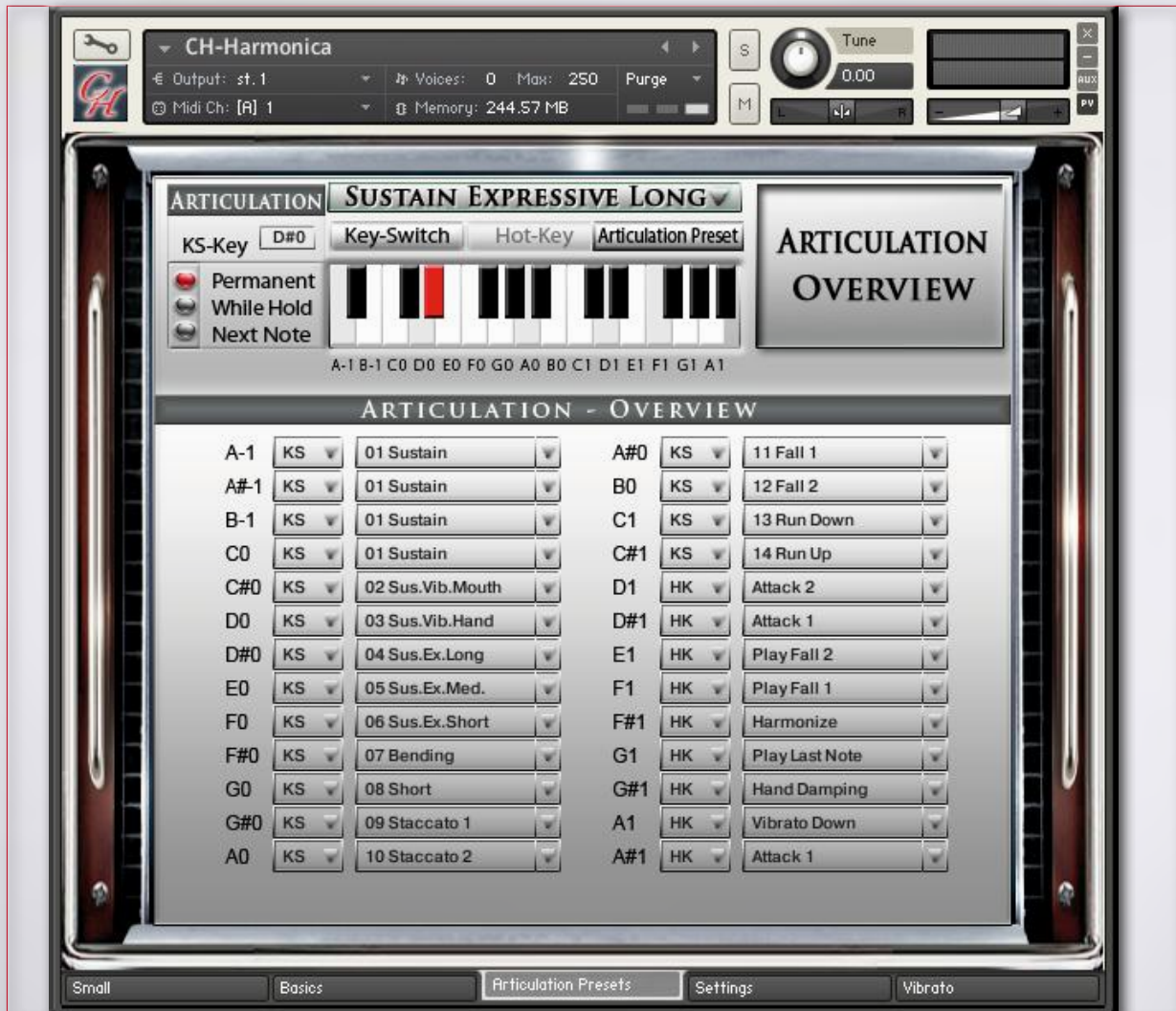
**Attack 1.2:** Adds a short and hard attack note to the sound.

**Blow:** Same as Attack, but add a natural sound of blowing into the instrument. The volume of the attack and blow sounds can be adjusted but is also velocity sensitive.

**Empty:** Selecting the empty Hot-Key clears the key-switch preset to save memory.



## Articulation Overview



A list of all selected articulations and Hot-Keys is available through the Articulation Overview tab. You can select from different articulations in the drop down menu and you can define if the preset should be a Key-Switch (KS) or a Hot-Key (HK). However, define the details of the selected articulation in the Articulation-Presets page.

The Articulation Overview page is also handy to unload articulations which you don't need. If you only need one or a few articulations, setting the unneeded preset to "Empty" saves a lot of RAM.

All features in the CH-Harmonica which require RAM have an on/off switch. Switching features you don't need to off can save you a lot of worthy computer memory.

## Settings / DSP FX

### Fader Setting, Release-EFX, Dynamic

The functions on the Sound-EFX page work as global parameters for all articulation presets. Use the upper right buttons to switch between general settings and DSP-FX



#### Fader Setting:

Adjust the behavior of your mouse with these controls. Most faders in CH-Harmonica are horizontally, but if you prefer to control them with a vertical movement of your mouse, you can switch to „Vertical“. You can also adjust the length of the mouse movement. Check which settings works best for you.



#### Release EFX:

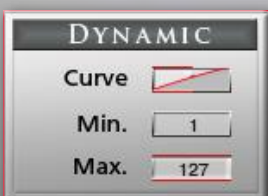
The Release EFX work on the release of a note. Play a note, raise the knob and release the note at any time to hear the selected effect.

**Release1** - Adds a natural release sound.

**Release2** - Adds a very short fall when releasing the note.

**Fall1** - Adds a fall sound when releasing the key.

**Fall2** - Same as fall short but with a longer fall.



#### Dynamic:

Lets you control the Velocity Response of your midi keyboard.

**Curve** - Sets the curve for the Velocity Response.

Setting the curve to 0 results in a linear response.

**Min** - Sets the Minimum velocity.

**Max** - Sets the Maximum velocity.

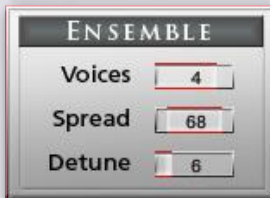
## Sound EFX

### Pitchbend, Ensemble, ADSR, Micro-Tuner



#### Pitchbend:

You can assign the Pitchbend range separately for Bend Up and Bend Down from 1 to 12 semitones. You can also assign the Fall1 or Fall2 articulation to Bend Up or Bend Down by using the dropdown menus.



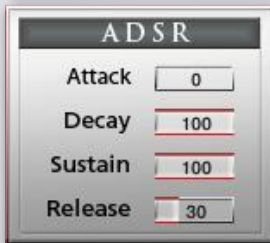
#### Ensemble:

You can setup a group of Harmonica players here.

**Voices:** Select 1-5 instruments to play.

**Spread:** Sets the Stereo-Spread of the harmonized Sound

**Detune:** Detunes the harmonized sounds in cents.



#### ADSR:

**Attack** - Sets the Fade In time for the sound.

**Decay** - Sets the time until the Sustain level is reached.

**Sustain** - Sets the level maintained from the end of the Decay stage to the start of the Release stage.

**Release** - Sets the Fade Out time after releasing the key.



#### Micro-Tuner:

All samples in CH-Harmonica are perfectly tuned to the standard chromatic scale with A at 440Hz. However, real players usually don't play perfectly in tune. You can edit the tuning in precise detail using the Micro-Tuner. You can create your own tuning scales by shifting the tuning of each note up or down, or you can use one of the pre-programmed tuning scales based on some of the most famous historical scales.



#### Tuning Presets:

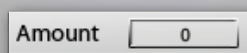
12 Micro-Tuning preset scales are available. You can build your own tuning scales or use the pre-programmed scales and edit them in order to create your own scales.

In addition to the Micro-Tuning scales, you can fine tune each instrument in its channel strip in the Mixer Page.



#### Key:

Sets the root key of the scale.



#### Amount:

Scales the overall amount of detuning.

#### Other Tuning Methods:

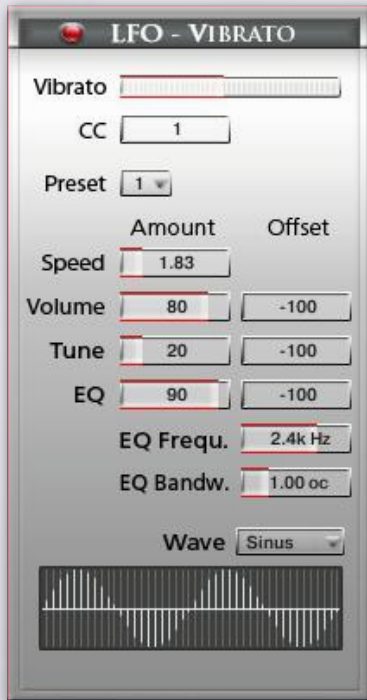
A Master tuning knob for all instruments is available in the header of the virtual instrument on the Play-Page. Hold down the shift key (of your computer keyboard) while turning the on-screen knob for fine-tuning.



# Vibrato

## LFO-Vibrato / Auto-Vibrato

Two types of Vibrato are available in CH-Harmonia.  
 Choose between manual LFO-Vibrato, and Auto-Vibrato.  
 The vibrato type can be set individually for each articulation preset.

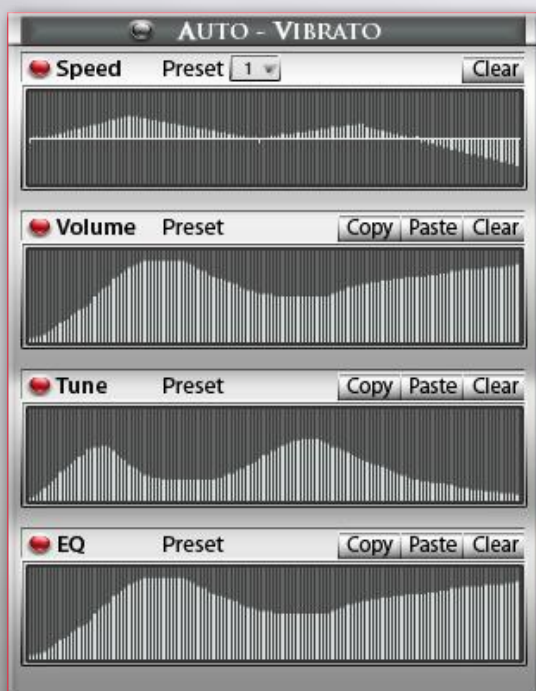


### Vibrato:

These are the controls for the intelligent LFO-based Vibrato available through CC01 (Modwheel).  
 You can Change the CC from 1 to any other CC.

### The following controls are available for LFO-Vibrato:

- Vibrato** - Sets the amount of vibrato.
- CC** - Sets the midi controller to control the vibrato. (CC1 - Modwheel by default)
- Speed** - Sets the speed of the volume and pitch change.
- Volume** - Sets the volume of the vibrato.
- Tune** - Sets the degree of pitch change. Setting tune to 0 performs a tremolo.
- EQ** - Activates a filter to simulate a realistic hand-damping. Works best in combination with Volume and Tune.
- EQ Frequency** - Sets the frequency for the filter.
- EQ Bandwidth** - Sets the bandwidth of the filter frequency.
- Wave** - choose from different waveforms to set the vibrato curve.



### Auto - Vibrato:

performs an automatic vibrato curve.  
 Instead of using the Modwheel, you can draw different curves to set the development of the vibrato over time.

### The following controls are available for Auto-Vibrato:

- Preset** - Choose from different pre-programmed curves
- Speed** - Sets the speed over time.
- Volume** - Sets the volume curve over time.
- Tune** - Sets the amount of detuning over time.
- EQ** - Sets the amount of filtering over time.
- Copy** - Copy the curve to paste it into another table
- Paste** - inserts a copied curve
- Clear** - Resets the curve to a clear table

Vibrato can also be controlled via the innovative Hot-Key Vibrato (See page 13)

# DSP Effects

■

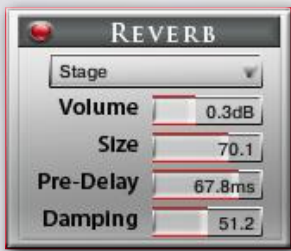
The image shows a digital interface for DSP effects, organized into several sections. At the top, there are two main tabs: "SETTINGS" and "DSP-FX". Below these are eight individual effect modules, each with its own set of controls and a red indicator light.

- REVERB**: Stage (dropdown), Volume (0.3dB), Size (70.1), Pre-Delay (67.8ms), Damping (51.2).
- DELAY**: Doubler (dropdown), Volume (0.3dB), Time (44.7ms), Feedback (27.6%), Damping (37.0).
- CHORUS**: Slow Deep (dropdown), Volume (0.3dB), Depth (100.0), Speed (0.29Hz), Phase (90.0).
- PHASER**: 70s Funk (dropdown), Volume (6.2dB), Depth (42.5), Speed (0.40Hz), Feedback (50.4%).
- FLANGER**: Warmer (dropdown), Volume (0.3dB), Depth (40.2), Speed (0.65Hz), Feedback (40.2%).
- COMPRESSOR**: Volume (-0.2dB), Threshold (3.3dB), Ratio (3), Attack (0.1ms), Release (400ms).
- EQ**: A table with columns for Gain, Frequency, and Bandwidth. The Gain column has values for High (0.00dB), High Mid (0.00dB), Low Mid (0.00dB), and Low (0.00dB). The Frequency column has values for High (5.7kHz), High Mid (2.0kHz), Low Mid (707.0Hz), and Low (155.0Hz). The Bandwidth column has values for High (HF Bell), High Mid (1.6oc), Low Mid (1.6oc), and Low (LF Bell).
- FILTER**: Gain (0.0dB), Cut Off (640.5Hz), Resonance (50.0%), Type (0.5).

At the bottom of the interface, there are five buttons: "Small", "Basics", "Articulation Presets", "Settings", and "Vibrato".

## DSP Effects

### Reverb, Delay, Chorus



#### Reverb

**Preset:** Different pre-programmed effects.

**Volume:** Level of the reverb effect.

**Pre-Delay:** Introduces a short delay between the direct signal and the reverb trail build-up. This corresponds to the natural reverberation behavior of large rooms, where a short time elapses before the first reflection of a sound wave returns from a wall.

**Size:** Adjusts the size of the simulated room. This affects the duration of the reverb trail.

**Damping:** Sets the amount of simulated absorption that takes place in rooms due to furnishings, people, or acoustic treatments affecting the reflection behavior.



#### Delay

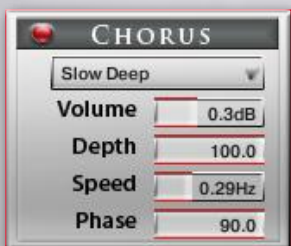
**Preset:** Different pre-programmed effects.

**Volume:** Level of the delay effect.

**Time:** The delay time in milliseconds. To synchronize the time to your host or Master Editor tempo, click on the Speed parameter's unit display and choose a note length value from the drop-down list.

**Feedback:** Controls the amount of the output signal that's being fed back into the input of the delay line, thereby creating a series of echoes that gradually fade into silence.

**Damping:** Attenuates high frequencies in the delayed signal. Turning this control clockwise will increase the damping effect. If you have set a feedback level, the signal will gradually lose more high frequency content with each repetition.



#### Chorus

**Preset** - Different pre-programmed effects.

**Volume** - Level of the chorus effect.

**Depth:** Adjusts the range of modulated detuning. Higher values give a more pronounced chorusing effect.

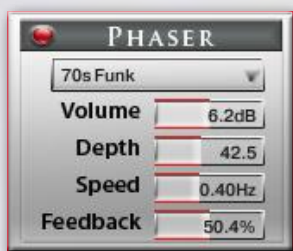
**Speed:** Adjusts the LFO speed. To synchronize the speed to your host or Master Editor tempo, click on the Speed parameter's unit display and choose a note length value from the drop-down list.

**Phase:** Imparts an LFO phase difference between the left and the right stereo channel. This can considerably increase the width of the output signal's stereo base.



## DSP Effects

### Phaser, Flanger, Compressor



#### Phaser

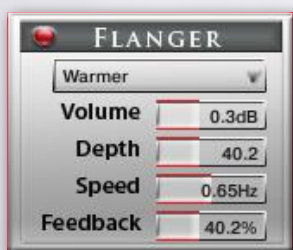
**Preset:** Different pre-programmed effects.

**Volume:** Level of the phaser effect.

**Depth:** The amount of LFO modulation. Higher values cause the phaser effect to sweep over a wider frequency range.

**Speed:** The LFO modulation speed. To synchronize the speed to your host or Master Editor tempo, click on the Speed control's unit display and choose a note length value from the drop-down list.

**Feedback:** This control adjusts the emphasis of the peaks and notches that the comb filter effect imparts on the signal.



#### Flanger

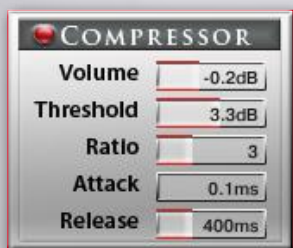
**Preset:** Different pre-programmed effects.

**Volume:** Level of the flanger effect

**Depth:** The amount of LFO modulation. Higher values cause the flanging effect to sweep over a wider range.

**Speed:** The LFO speed. To synchronize the speed to your host or Master Editor tempo, click on the Speed parameter's unit display and choose a note length value from the drop-down list.

**Feedback:** Feeds a certain amount of the delayed signal back into the module's input, thereby creating a more pronounced effect.



#### Compressor

**Preset** - Different pre-programmed effects.

**Volume** - Gain of the compressed signal.

**Threshold** - Sets a level threshold above which the Compressor starts working. Only levels that rise above this threshold will be reduced by the compression; signals that stay below it will be left unprocessed.

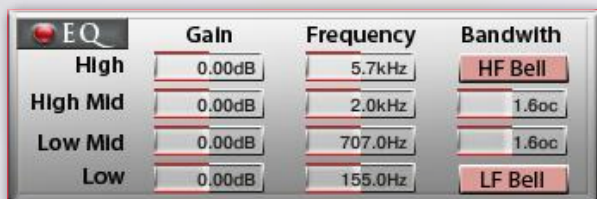
**Attack** - Adjusts the time the Compressor will take to reach the full Ratio value after an input signal exceeds the Threshold level.

**Ratio** - Controls the amount of compression, expressed as a ratio of "input level change" against "output level change". A Ratio of 1:1 means that no compression will be happening. For example, a setting of 4 represents the ratio 4:1, which means for every 4 decibel increase of amplitude above the threshold, the output will increase by only 1 decibel.

**Release** - Adjusts the time the compressor will take to fall back to non-compression after the input signal falls below the threshold.

## DSP-Effects

### Solid G Equalizer, Filter



#### Solid G Equalizer

The Solid G-EQ is a 4-band parametric EQ and offers the choice of bell or shelf style control of the low and high frequency bands.

**LF Gain:** Adjusts the amount of boost or cut at the LF Frequency.

**LF Freq:** Adjusts the center frequency of the low frequency band at which the boost or cut will occur.

**LF Bell:** Toggles the bell shape of the low frequency band. If turned off, the band becomes a shelf.

**LMF Gain:** Adjusts the amount of boost or cut at the LMF Frequency.

**LMF Freq:** Adjusts the center frequency of the low-mid frequency band at which the boost or cut will occur.

**LMF Q:** Controls the Quality (or Q) of the low-mid frequency band. For most EQs, the higher the quality, the narrower the frequency band, but with this EQ the control is reversed to match the hardware it emulates and becomes a bandwidth control.

**HMF Gain:** Adjusts the amount of boost or cut at the HMF Frequency.

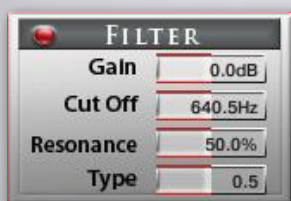
**HMF Freq:** Adjusts the center frequency of the high-mid frequency band at which the boost or cut will occur.

**HMF Q:** Controls the Quality (or Q) of the high-mid frequency band. For most EQs, the higher the quality, the narrower the frequency band, but with this EQ the control is reversed to match the hardware it emulates and becomes a bandwidth control.

**HF Gain:** Adjusts the amount of boost or cut at the HF Frequency.

**HF Freq:** Adjusts the center frequency of the high frequency band at which the boost or cut will occur.

**HF Bell:** Toggles the bell shape of the high frequency band. If turned off the band becomes a shelf.



#### Filter

A high class filter can be used to limit the frequency of the sound. when a harmonica player uses his hand to shape the sound, its actually the same effect. The high frequencies are lowered in volume. To achieve this effects you can use the Hand-Damping Hot-Key or use the filter.

The following controls are available:

**Gain:** Adjusts the volume of the filter effect.

**Cutoff:** Sets the frequency.

**Resonance:** Sets the bandwidth of the filter effect.

**Type:** Choose from different colors of the filter.

## MIDI-CC

### List of pre-programmed midi controller

#### Global controls

07	Global Volume
10	Global Pan
09	Global tune
70	ArticulationVolume
71	Articulation Pan
72	Articulation Transpose
73	Articulation Speed On/Off
74	Articulation Speed
75	Pitch

#### Live controls

11	X-Fade Amount
80	Transient Designer On/Off
81	Transient Designer Attack
82	Transient Designer Sustain
85	Air On/Off
86	Air Volume
87	Noise On/Off
88	Noise Clean - Crisp
89	Attack1 On/Off
90	Attack1 Volume
91	Attack2 On/Off
92	Attack2 Volume
93	Blow On/Off
94	Blow Volume

#### Sound EFX

99	Release1 On/Off
100	Release1 Volume
95	Release1 Density
96	Release1 Dynamic
101	Release2 On/Off
102	Release2 Volume
97	Release2 Density
98	Release2 Dynamic
103	Fall1 On/Off
104	Fall1 Volume
68	Fall1 Density
69	Fall1 Dynamic
105	Fall2 On/Off
106	Fall2 Volume
107	Fall2 Density
108	Fall2 Dynamic

#### ADSR

109	Attack
110	Decay
111	Sustain
112	Release

#### Section Maker

113	Section Maker Voices
114	Section Maker Spread
115	Section Maker Detune

#### LFO Vibrato

117	Vibrato Speed
118	Vibrato Volume
119	Vibrato Tune
120	Vibrato EQ
121	Vibrato EQ Frequency
122	Vibrato EQ Bandwidth



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### CONTROLS & SCRIPTS:

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- DIFFERENT ATTACK -CONTROLS,
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- E-Bass Picked
- E-Bass Slap
- E-Bass Fretless
- Upright-Bass Steel Strings
- Upright-Bass Nylon Strings
- Upright-Bass Gut Strings

„Chris Hein - Bass“  
is an outstanding, sampled  
virtual instrument. Thousands  
of samples, many articulations  
and dynamics all in one  
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With about 20.000 samples  
and 12,7 GB content, CHB is  
the largest available bass-library.



Thanks to Native Instrument's genius script feature, „Chris Hein - Bass“ is easy to control.

## INSTRUMENTS:

- E-Bass Pick
- E-Bass Slap
- E-Bass Fretless
- Upright-Bass Steel String
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- Upright-Bass Gut String

## MAIN FEATURES:

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- Up to 4.096 samples per instrument
- Up to 42 articulations in one preset
- Up to 8 velocities
- 112 intelligent midicontroller
- Reverb, Delay, Chorus & 3-Band EQ
- Flanger, Phaser, Compressor, Filter.

## CONTROLS & SCRIPTS:

- Different Slide Modes
- Solo Mode (hammer on/pull off)
- Two Fretpositions
- Automatic Variations
- Harmonizer
- Electric/Acoustic Blending
- Different Release-Controls
- Different Attack-Controls
- Fall Control
- Buzz String Control
- Atmosphere Control
- Bridge and Center playing
- Effect Samples
- Chord Mode



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## The Harmonica Player and his Instrument

Berthold Matschat - Chromatic Harmonica

We were very happy when BM consented to have his rare harmonica sampled. There are very few chromatic harmonica players worldwide, and he is the leading player in Germany. BM is also an accomplished jazz pianist and composer. Because he works extensively with sample instruments in his own studio, he had a detailed concept of what needs to be played on the harmonica and sampled.

His tone is particularly soulful and emotional. We recorded an old Hohner harmonica, that dates back to those times, when Hohner could impress with the words "Made in Germany".

BM has been touring and recording in Europe extensively. He is also specialized in recording via internet. Feel free to contact him and have him play on your recording:

E-Mail: [info@matschat.de](mailto:info@matschat.de) Tel.: +491775985011



## **Chris Hein** **Recording / Programming**



**Chris Hein has almost 30 years of experience with sound samples. By 1986 he had already produced the legendary “Studio-Sample” series for Metra-Sound.**

**In 1985 he was one of the first computer pioneers, to use the Commodore C-64 for computer music. His work for Emagic (the C-Lab application) at the Frankfurt Music Exhibition set the course for his successful work as a sound-arranger. With the SX-64, the world’s first laptop, he traveled to various music studios in Europe.**

**From Atari to Mac, he eventually settled down with the foundation of “Hine-Studio” and created innumerable sounds for CD-Productions, Film & TV music, industrial shows and musicals. The focus of his work has always concentrated on the reproduction of real orchestras with virtual instruments. The contract musicals “A World for Deinhard” (1994) and the great horse-musical productions “The Enchanted Forrest” (1996), “Goa” (2000) and “Sudakan” (2010) consist exclusively of sample sounds. Today his studio contains an impressive collection of 22 samplers of various types.**

**In 1997 Chris Hein established the Film & Media production company: “Wizard Media GmbH”.**

# Wizard Media GmbH

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