vengeance

Vengeance Producer Suite

Phalanx

Version: 1.0
Date: June 2013

Table of contents

Introduction

Dear customer,

Thank you for choosing Vengeance Producer Suite - Phalanx ("Phalanx" for short). With this plug-in you are now the owner of an exceptionally powerful sampler tool, which we believe will revolutionize your workflow. As Phalanx is a very extensive, complex instrument, we recommend that you read this manual thoroughly so that you can master all the functions Phalanx has to offer.

And now - have fun with Phalanx!

The Vengeance-Sound team

Installation

Installating eLicenser

First of all, you will need a Steinberg Key (also known as Syncrosoft / eLicenser dongle) plugged into a spare USB port on your computer.

If you don't already own such a dongle, you can order one online (they are not expensive) from one of several sources, e.g. here:
http://www.thomann.de/gb/steinberg_key.htm

The eLicenser dongle serves as copy-protection for the software.

You will also need the configuration software 'License Control Center' (LCC), which you will find at www.elicenser.net

Please ensure that you have downloaded and installed the latest LCC version!

Immediately after ordering Phalanx, you will receive an e-mail containing your license information. All you have to do is to activate your license using LCC (note: you must be connected to the Internet)

Installation (Windows):

Start the file VPS Phalanx.exe and install the plugin into your standard VSTPlugIns folder. Follow any further on-screen instructions. The plug-In should be available the next time you start your sequencer / host application.

Installation (Mac):

Unpack the file VPS Phalanx Installer.zip, then start VPS Phalanx.pkg. Follow any further on-screen instructions.

The standard installation path for the VST version is: ~/Library/Audio/Plug-Ins/VST
The standard installation path for the VST3 version is: ~/Library/Audio/Plug-Ins/VST3
The standard installation path for the AU version is: ~/Library/Audio/Plug-Ins/Components
The standard installation path for the RTAS version is: ~/Library/Application Support/digidesign/Plug-Ins

After installation, please check that the VPS Phalanx files have appeared in that location. The plugin should be available the next time you start your host application.

Overview - What is Phalanx? (Quick Start Guide)

In principle, Phalanx is a one-shot sample player. It can reproduce samples from any source (such as those from any of the Vengeance Sample Packs) directly, but also encourages realtime, creative editing. Although Phalanx is primarily a comfortable 16-track drum sampler capable of delivering the foundation for your productions, it can do a lot more than simply trigger drum sounds: Phalanx offers enough different ways of manipulating the loaded samples that it could almost qualify as a full-fledged synthesizer.

Included in the Phalanx package is a huge **sample library** (over 6000 individual sounds in the Pro version) as well as hundreds of **preset** effects, envelopes, individual Sample Pads and entire banks with ready-made configurations for all 16 Sample Pads. Of course you can also integrate your own samples and sample libraries.

One major feature of note is that Phalanx stores all the samples you have used in a (Phalanx-based) project directly within the song file. Even if you load a song project several years later, you will still have immediate access to all the original samples - no more tedious searching through your hard drives for missing samples, everything is precisely there where you left it.

Phalanx can accommodate up to 32 samples, shared across 16 fully-featured mixer channels (called "**Sample Pads**"). You can assign each of the 16 Sample Pads to a stereo output of your host application, and assign a MIDI input channel. The appearance of Sample Pads can be switched into one of two modes: **"Full" and "Slim"**. In the "Slim" view you will see a narrow, simpler version that includes only the most important controls; in this mode, all 16 channels will fit on a single screen. In the "Full" mode, all parameters are made visible, giving you access to all functions. View modes can also be mixed - less important tracks can run in the "Slim" view mode, while tracks you need to edit more often are better displayed in "Full" mode.

Phalanx is 256-note polyphonic (with up to 16 notes per Sample Pad) and offers two extremely high precision **anti-aliasing modes** designed for medium to powerful computer systems. Aliasing problems are therefore a thing of the past: For instance, a sawtooth wave in Phalanx can sound perfectly clean and transparent when the sample is transposed all the way up, it exhibits none of the dreaded artefacts so often caused by aliasing.

Phalanx also has a lot to offer in the area of non-destructive editing: **Graphic realtime displays** are everywhere, you can always check how a waveform is affected by a control. For instance, the envelope generators in Phalanx appear as rubber bands with freely adjustable curves, while the background is a realtime display showing how the envelope (which is modulating e.g. volume or filter cutoff) is affecting the waveform.

As well as the **amp and filter envelopes**, Phalanx also includes a **pitch envelope** plus a freely assignable **modulation envelope** (Mod Env). All envelope generators include several common options (such as the **"Timeshift"** control, which speeds up or slows down the envelope) and a **browser** for loading/saving envelope shapes. In addition, the pitch envelope features a **Portamento rate control (Poly & Legato)** for each sample.

The **filters** in Phalanx are highly flexible and fast: 12 top quality filter types (6db LP/HP/BP/Notch, 12db LP/HP/BP/Notch and 24db LP/HP/BP/Notch) with **Drive** either before (clean) or after (dirty) the filter in the signal chain. Also, each Sample Pad has its own independent **low and highpass filters** that can be used for e.g. quickly removing low frequency grunge from a hi-hat.

Of course there is a bunch of **effects** already on board: Phalanx offers **15 effect types** plus the option of integrating external Vengeance effect plugins (such as Metrum or Multiband Sidechain). One particular highlight in the effect processing world is the **ArtsAcoustic Reverb**, which was also used for Nexus by our associates at reFX.

The integrated effects include Delay (ping-pong, modulation, pattern, tape-sim/resonance), the compressor/limiter model from our multiband compressor, flanger, chorus, phaser, bit-crusher, the stereo width processor known from the Vengeance Stereo Bundle, a lo-fi ("trash") reverb, ring modulation, regular and multiband distortion, and 4-band parametric EQ. Each effect has its own preset browser and includes plenty of factory presets. Each Sample Pad can host up to 7 independent effects (plus EQ), which can be rearranged via drag & drop and **the resulting chain saved as a preset**.

During development we paid special attention to the **sample browser**, as this determines how fast and smooth your workflow in Phalanx will be. The browser is **tabbed**, and can display an entire hard drive in your computer or just a single folder (your personal **Library**). One of the tabs shows all the factory presets. Lists of "**favourites**" can be defined, and individual samples can be "**tagged**". Tagging in Phalanx works like this (for example): You are searching through a large folder full of bass drum files for the most suitable kick. You listen to all the samples and click on the "T" (**Tag**) symbol for the ones you want to be included in a shortlist of most likely candidates. Afterwards, your list of tagged samples is displayed in a separate window so you can make your final choice more comfortably. No more "*that kick drum I found a while back was great - now what was it called again?"*

There are two divergent philosphies of drum programming: Some prefer the classic **sample mode** where individual samples can be played (tonally) across the keyboard. Others prefer to work with **drum kits**, where each key triggers a different sound. No problem, **Phalanx can do both**, even at the same time: For instance, you could have a percussion instrument on MIDI channel 2 spread across the keyboard, but the kick, clap and hi-hats as a small kit on MIDI channel 1 - and still route each source to independent audio outputs in the mixer! Kick, clap and hi-hats in this example would share a single piano roll, and because you have an immediate overview of those tracks, interactive loop programming is easy. Using Drum Kit mode, Phalanx can be controlled live from external "MPC" type drum pad hardware. It goes without saying that Phalanx also includes such convenience features as **Kill Note** (e.g. the closed hi-hat can mute the open hi-hat).

Also worth highlighting is Phalanx' comprehensive **modulation matrix** - you can connect any modulation source you like to any target parameter. Modulation sources include many experimental options (Random Note, Incremental, Alternating etc.), the three definable control knobs on the panel, all standard MIDI controls as well as two independent LFOs offering many waveforms. By the way, those **LFOs** can be synchronized to song tempo, and are definable per Sample Pad for a total of 32 LFOs. Each Sample Pad also has its own **arpeggiator** with independently definable degree of shuffle.

Customisation - setting things up to suit your personal working environment - is a major feature of Phalanx! Each Sample Pad can be given a **name** and **colour**. Furthermore, each Sample Pad in "Full" view mode includes a large, initially empty area where you can drag & drop controls for instant access. For instance, you could drag filter cutoff to your kick drum, distortion amount to your snare, a reverb mix for the percussion... even anything from the modulation matrix.

Phalanx also has a **MIDI-Learn function**: Simply activate the "MIDI Learn" button, click on one of the control knobs/faders, then adjust any control on your hardware controller. The selected element in Phalanx will now respond to that particular hardware control. All in all, we have good reason to call it "total customisation"!

But the best is yet to come: Phalanx' special tools for **creative and experimental sound design**. Let's start with **looping**, which leaves nothing to be desired: Standard loops, ping-pong, crossfade looping, micro-fades to prevent clicks, automatic zero-crossing positions, locking and shifting the loop area - graphic editing throughout, and in realtime! If, for instance, an LFO makes the loop end progressively smaller, you can watch that happening live in the Loop view. Of course absolutely everything here can be accessed in the mod matrix. Example: You can create a very short loop area and use the mod wheel (on your MIDI keyboard) to slowly "scan" through the sample. Freeze any point in time? Move at any speed you like back and forth through the sample? No problem at all - try it!

The **Scratcher** is another interesting feature - when the Scratcher is switched on, the Sample Pad simulates a **turntable**. Phalanx interprets playing a MIDI note as placing a finger on the vinyl, after which the sample can be scanned ("scratched") forwards or backwards using the pitch bender or any MIDI continuous controller. You don't have to be a world-class scratcher - even very rapid movements can be automated using an LFO or the integrated envelope.

Then there's **Retrigger**. You will find this humble control in each Sample Pad, and all it really does is restart the sample from the beginning, at a definable rate. For instance, you can retrigger a bass drum so quickly that it turns into a note with a discernible pitch. The possibilities for creative sound synthesis are limitless, as the sound of your "oscillator" depends on the audio material being retriggered. Retrigger is perfect for making those wicked breaks: In the mod matrix, select the mod wheel as source and Retrigger speed as target. While pushing the wheel/stick, the sample (e.g. a snare or a vocal snippet) gets faster and faster until it reaches a point where you can even play a melody. A very popular effect in modern dance music!

Finally, we should also mention Phalanx **UNDO / REDO** function - so useful, but a surprisingly rare feature in audio plug-ins. Every step you make while editing Phalanx can be undone or redone ("undo the undo"). Accidental editing, with no way back, is no longer a problem.

As you can see, Phalanx is a very powerful tool with a lot of options, which is why we strongly recommend reading this manual carefully. A thorough understanding will help you make the most of Phalanx.

Function Reference

The Librarian

To the left you will see Phalanx' **sample browser**, which we call the **Librarian**. Samples can be loaded into Sample Pads via drag & drop. Alternatively, you can right-click on a sample (this opens the context menu) and load it directly into the currently selected Sample Pad (SampleA or SampleB, as indicated by a red outline). There is also an option in the System page (see SYS page below) that lets you skip having to open the context menu - right-clicking on a sample will load it directly into the currently selected Sample Pad slot.

TIP: You can also drag & drop audio material into Phalanx from an Explorer/Finder window (Windows / OSX), as well as from your DAW.

Drives

(1)
Click on the Drives tab to navigate between all **hard drives** connected to your computer.

Lib. (Library)

(2)
Click on the Drives tab to navigate between all hard drives connected to your computer.
Selecting this tab will display Phalanx' **factory library** (both samples and presets), as well as the library from "Vengeance Producer Suite - Metrum" if you happen to own a valid Metrum license. Future expansion pack purchases will also appear here.

Fav. (Favorites)

(3)
This tab opens all folders you have already marked as a "**Favorite**". Marking folders as favorites is easy: Click on the Drives tab, navigate to the desired folder and click on the "fav" next to that folder - the folder is added to your list of favorites (click on the Fav tab and check). To unmark a folder i.e. remove it from your favorites list, open Favorites and right-click on that folder.

Tagged

(4)

This special tab opens a second window (a tagged list) containing any samples you have put in your shortlist of **likely candidates** for the job at hand. To tag a sample i.e. add it to the list, activate the "T" symbol next to the desired sample (this works in Drives, Lib as well as in Fav). As long as the "T" is active, the sample will remain in the tagged list. Clicking on the "T" again will remove a sample from the list.

Tagging in Phalanx works like this: Say you are searching through some folders containing countless bass drum samples for the most suitable kick for your latest track. While auditioning samples you click on the "T" symbol next to those you want to add to a list of most likely candidates. Afterwards, your tagged samples are displayed in a single list so you can make your final choice without having to see all the rejected ones. No more "*that kick drum I found a while back was great - now what was it called again?*"

Collapse

(5)

Clicking on this icon closes ("**collapses**") all open folders - it's quite common to lose orientation in a browser when too many folders are open, and this function neatly addresses that problem in Phalanx.

Refresh

(6)

Whenever you have added, renamed or deleted samples and find that certain changes are not reflected in the browser, clicking on this icon will force it to update.

Auto Play

(7)

The three "**Auto Play**" controls are used for auditioning samples. Activating the right-pointing triangle (Play) causes Phalanx to audition any sample you select. The square button (Stop) immediately cuts playback, which is primarily useful for long samples. The sloping triangle symbol (Volume) adjusts Auto Play level - setting a level below maximum is recommended.

Path display

This field displays the current position within the directory tree. It works like your operating system's path display - you can jump out of multiple nested folders without you having to clicking your way back, folder by folder.

Icons and Color Codes

Each type of content has its own icon: Samples have a waveform icon, directories have a folder icon, presets have a keyboard icon, and banks have an audio mixer icon. The colors also differ: user content is yellow, factory samples are purple, factory presets are turquoise and Metrum content is blue.

Sample Pads and Mixer

The main area in Phalanx' window contains the **16 Sample Pads**. Each Pad can accommodate two different samples (**SampleA** and **SampleB**) which can be mixed to taste via **A/B crossfade**. For instance, you can mix two different clap samples, layer a synth sound with another transposed an octave higher, or morph between SampleA and SampleB using the mod matrix or automate left-right panning etc.. Each Sample Pad has two view modes: "Full" or "Slim", like the mixers in many popular DAWs.

Elements in "Full" view mode

Full/Slim Modes

(1)

This switch toggles between the **two view modes**, "Full" and "Slim". Not all controls are available in Slim mode, but the Sample Pads are narrow enough that all 16 of them can appear in the window at once.

Color Selector

(2)

At the top left of each Sample Pad is its **color selector**. Using different colors per Sample Pad can help make your project clearer, for instance by giving bass sounds a darker color, while the brighter sounds are e.g. yellow.

Name

(3)

The **name** of the Sample Pad. All Sample Pad names are saved with the project. To edit, double-click on the name.

SampleA / SampleB Selector

(4)

Use this to switch between **SampleA** and **SampleB**. Please note that switching over will also change the targets of the lower controls. For instance, "Transpose A" only affects the pitch of SampleA. If you switch over to SampleB, "Transpose B" will appear in that position, and this affects the pitch of Sample B only.

„R“ (Reverse Play)

(5)

This function causes a sample to be **played backwards**. Note that Reverse Play is available as target parameter in the mod matrix.

Waveform / Start Offset

(6)

This is a view of the currently loaded **sample's waveform**. A green line sets the Start Offset (the part before the line will be skipped i.e. not played). Click on the line and move it right-left to adjust Start Offset.

Random Offset

(7)

The "Rnd.Offset" function causes the sample to start (see Start Offset above) at a **random position** for each note. A value of 100% here means that it can start anywhere within the sample, so low values are generally more useful and higher values more "experimental". Random start positions will often cause clicks, and we recommend setting the attack time of the envelope a little longer, just enough to eliminate clicks.

Gain

(8)

The Gain value lets you adjust the relative **volume** of the sample. This is especially useful for boosting samples that are too soft compared with others you are currently using in the project.

Sample Name

(9)

This field displays the **name** of the loaded sample file (.wav or .aiff).

Crossfade

(10)

The horizontal fader determines the **levels** of both SampleA and SampleB. The middle position means that both samples (A and B) will play back at full volume (100%). When Crossfade is set to the far left, SampleA will still remain at 100%, but SampleB will have reached 0% (silence). Set to the far right, SampleA will be silent and SampleB will be at full volume.

Mute/Solo

(11)

This pair of buttons is used to mute (M) or solo (S) the Sample Pad. "Mute" silences the Sample Pad, and "Solo" silences all Sample Pads except this one.

Voices
(12)
This field shows how many **voices** (vc) are currently being played. By default, each Sample Pad is limited to 16 voices, but this value can be changed in the System Page. Of course the more voices Phalanx has to play at the same time, the more CPU power it will use.

Pan L/R (channel)
(13)
This small horizontal fader determines the **stereo position** of the overall signal (SampleA and SampleB). If you want to pan SampleA and SampleB independently, you should use the Pan A/B controls instead (see below).

Volume Fader (channel)
(14)
The large vertical fader in each Sample Pad controls its overall **volume** (i.e. both SampleA and SampleB). For independent control of SampleA and SampleB levels, use either Crossfade or change the Gain value.

Transpose A/B
(15)
The Transpose parameter adjusts **pitch**, in semitone steps with a range of -24 to +24.

Fine Tune A/B
(16)
Fine Tune lets you add a **precise** (positive or negative) pitch offset to the value of Transpose. The total range is 1 semitone.

LPF A/B
(17)
A handy **low-pass filter** for quickly removing any unwanted high frequencies.

HPF A/B
(18)
A handy **high-pass filter** for quickly removing any unwanted low frequencies.

LoFi A/B
(19)
A sample **rate reducer / bit crusher** combination, useful for "digital destruction" effects or adding a more subtle "zing".

Spike A/B
(20)
Spike accentuates the **attack** of a sample. For instance, it can be used to strengthen the initial attack of a bass drum or the "pluck" of a synth sound.

Pan A/B

(21)

This gives you independent control over **pan position** for SampleA and SampleB. If you wish to pan the complete signal (SampleA and SampleB together), you should use Pan L/R instead (see above).

Retrigger

(22)

This controls the nominal **retrigger rate**. SampleA and SampleB are restarted at the specified rate, and this can be set so fast that it becomes a tone with recognizable pitch. Around 15.25 Hz is an area called "**near C**" which means that the frequency is close enough to an extremely low 'C'.

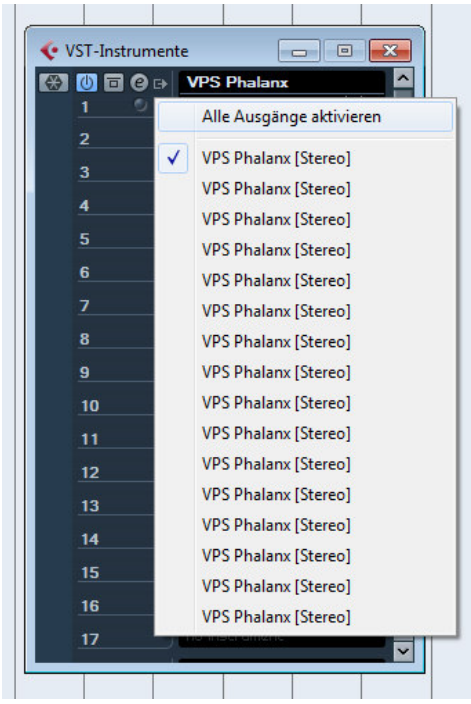
*TIP: If you want to play "tunes" via retrigger rate, you should go to the MIDI page and **set "Rtrg. Keytrk" (Retrigger Keytrack)** to +100%!*

Output (Out 'n')

(23)

Important: In order to use this function, you will need to activate **multiple outputs** in the host application first. For instance in Cubase's instrument rack (press F11), click on the symbol highlighted in the image below.

After having activated all outputs in the host, you can then select which one you want to use for each Sample Pad. Phalanx offers a choice of 16 stereo outputs:



MIDI Input (MIDI 'n')

(24)

This is where you can set a **MIDI channel** (1 to 16) for each Sample Pad. Note that drum kits always receive their MIDI data via channel 1 (more about this in the "Drumkit Mode" section of this manual).

Customize Panel

(25)

The rectangular area at the bottom of each Sample Pad is where you can drag & drop **controls you want to be immediately available**. First, you will need to activate **Customize mode** (the button at the top left, next to MIDI Learn). The entire GUI goes dark except for those elements that can be dragged into the Customize Panels. These include "amounts" from the mod matrix, envelopes or loop positions. While in Customize mode, the entries can be freely reordered and/or renamed.
To exit Customize mode and return to the normal GUI view, click on the Customize button again.
Clicking on the "+Expand" button in the top bar will hide / reveal the Customize Panel.

Well-furnished Customize Panels

Elements in „Slim“ Mode

In this view mode, the Sample Pads become much narrower (so that all 16 will fit into Phalanx’ window). Note that only the most important controls and functions are available in this mode.

Name

(1)

The name visible in "Full" view mode is replaced by a **simple index** (1-16) in "Slim" mode.

Waveform

(2)

Another difference: Unlike in Full view mode, the waveform image in Slim mode is normally displayed **vertically** i.e. it runs from bottom to top instead of left to right. When in Customize mode (as in this image) however, the waveform is displayed horizontally like in "Full" view mode.

Multifunction field

(3)

This field/button gives you access to all the other functions that the Slim view is too narrow to accommodate. Right click on the button and select a function from the context menu.

Editor Panel

Envelopes

The lower panel always shows the envelopes of the selected (highlighted in red) Sample Pad. The envelopes are standard ADSR types i.e. with **Attack** (how quickly/slowly the envelope swells when you play a note), **Decay**, **Sustain** and **Release** (how quickly/slowly it fades when you release the note). All times plus the Sustain level are edited using the coloured dots, and the curves can be altered (positively or negatively) by clicking and dragging on the yellow lines.

In the background of the editor you can see the Sample Pad's **waveform**, which will respond in realtime to any changes you make in the envelopes. If your mouse has a wheel, you can use this to **zoom in and out** of the waveform. To completely zoom out, click on the "**Back**" button in the bottom righthand corner. Either use the **scroll** bars to move the waveform to the left or right, or click in the background and drag to the left or right. **Switching off** the "Env" button in the bottom left of the editor disables the envelope. Note: If the amp envelope is disabled, the sample will simply be played from start to finish, unaltered.

Sync switch (affects all envelopes)

Immediately above the envelope editor window is a small switch labelled "Sync". This is always visible, as it affects all envelopes of the currently selected Sample Pad. When Sync mode is on, the grid in the envelope edit window displays beats (note values), and all envelopes will follow the tempo set in your host application. For BPM-precise synchronization of envelope phases, drag the coloured dots left or right until they snap to the required beat.

Amp Envelope

To the right of the envelope editor is a **preset browser (1)** for the amp envelope containing numerous factory presets. The **triangular buttons** in the top right of the browser **(2)** are used for selecting the previous or next preset in the list. Alternatively, you can select a preset by simply double-clicking on the one you want. Clicking on the **file symbol** at the far right **(3)** opens an options menu which lets you save your own envelope settings. Below the envelope preset browser are four extra controls:

Timescale

(4)

Continuous control over the **rate/speed** of the Amp envelope, as a percentage of the original.

Sustain (On/Off)

(5)

When Sustain is switched on, the amp envelope will act like a regular ADSR i.e. **it will remain at the sustain level** as long as the note is held. When Sustain is switched off, however, the amp envelope becomes a "one-shot": As soon as the sustain level is reached, the amp envelope will continue through the release stage (i.e. down to zero), however long you hold the key down.

Retrigger Post/Pre

(6)

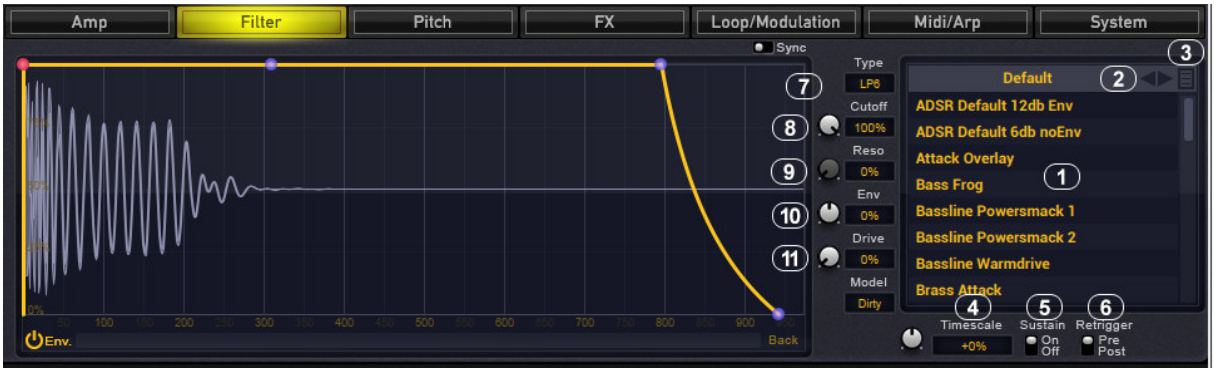
This switch specifies whether the amp envelope is applied before (pre) or after (post) the Retrigger function (see "Retrigger" in the "Sample Pad" chapter). If the amp envelope is pre-retrigger, it will be applied to each and every retriggered iteration of the sample. If the amp envelope is post-retrigger, it will be applied to the already-retriggered sample as a whole.

Positionen (Pre/Post Filter)

(7)

This switch determines whether the amp envelope will be applied before (pre) or after (post) the filter. This setting can have a significant effect on the sound of the filter saturation/distortion: If the amp envelope is placed pre-filter, the degree of saturation/distortion will follow the shape of the envelope. If the amp envelope is post-filter, it will of course have no effect on filter saturation - the shape of the envelope will only effect the volume of the already saturated/distorted signal. See "Drive & Model" below.

Filter Envelope



To the right of the envelope editor is a **preset browser (1)** for the filter envelope containing numerous factory presets. The **triangular buttons** in the top right of the browser **(2)** are used for selecting the previous or next preset in the list. Alternatively, you can select a preset by simply double-clicking on the one you want. Clicking on the **file symbol** at the far right **(3)** opens an options menu which lets you save your own envelope settings. Below and to the left of the filter preset browser are several extra controls:

Timescale

(4)

Continuous control over the **rate/speed** of the filter envelope, as a percentage of the original.

Sustain (On/Off)

(5)

When Sustain is switched on, the filter envelope will act like a regular ADSR i.e. **it will remain at the sustain level** as long as the note is held. When Sustain is switched off, however, the filter envelope becomes a "one-shot": As soon as the sustain level is reached, the filter envelope will continue through the release stage (i.e. down to zero), however long you hold the key down.

Retrigger (Pre/Post)

(6)

This switch specifies whether the filter envelope is applied *before* (pre) or *after* (post) the Retrigger function (see "Retrigger" in the "Sample Pad" chapter). If the filter envelope is pre-retrigger, it will be applied to each and every retriggered iteration of the sample. If the filter envelope is post-retrigger, it will be applied to the already-retriggered sample as a whole

Type

(7)

Click on this field to change the basic **type of filter**. The available options are three flavours (- 6dB, 12dB or 24dB per octave) each of lowpass, highpass, bandpass or notch (band reject).

Filter Cutoff

(8)

This is the ubiquitous frequency threshold of a filter. For example, if the Type is a lowpass, turning Cutoff down will successively remove high frequencies, and if the type is highpass, turning **Cutoff** up will remove low frequencies.

Resonance (Reso)

(9)

This is the equally famous "quality factor" of a filter („**resonance**“), with higher values creating a characteristic whistling effect. Please note that the 6dB/octave models do not resonate i.e. this setting is ignored.

Envelope (Env)

(10)

The **envelope control** determines how much the filter envelope will modulate (add to) the cutoff value. For snappy filter effects, set the filter to a lowpass model and turn down Cutoff, then set a fairly rapid decay (in the filter envelope) and turn up Env.

Drive & Model

(11)

The Drive parameter is Phalanx' **filter saturation/distortion** depth, and Drive is applied according to the Model parameter: "**Clean**" means that the signal is saturated before the filter, and "**Dirty**" means post-filter distortion. Try them both out to hear the obvious difference!

Pitch Envelope

To the right of the envelope editor is a **preset browser (1)** for the pitch envelope containing numerous factory presets. The **triangular buttons** in the top right of the browser **(2)** are used for selecting the previous or next preset in the list. Alternatively, you can select a preset by simply double-clicking on the one you want. Clicking on the **file symbol** at the far right **(3)** opens an options menu which lets you save your own envelope settings. Below and to the left of the filter preset browser are several extra controls:

Timescale

(4)

Continuous control over the **rate/speed** of the pitch envelope, as a percentage of the original.

Sustain (On/Off)

(5)

When Sustain is switched on, the pitch envelope will act like a regular ADSR i.e. **it will remain at the sustain level** as long as the note is held. When Sustain is switched off, however, the pitch envelope becomes a "one-shot": As soon as the sustain level is reached, the pitch envelope will continue through the release stage (i.e. down to zero), however long you hold the key down.

Retrigger (Pre/Post)

(6)

This switch specifies whether the pitch envelope is applied *before* (pre) or *after* (post) the Retrigger function (see "Retrigger" in the "Sample Pad" chapter). If the pitch envelope is pre-retrigger, it will be applied to each and every retriggered iteration of the sample. If the pitch envelope is post-retrigger, it will be applied to the already-retriggered sample as a whole.

Steps

(7)

This control determines how steppy the pitch envelope will be interpreted - 0% is **perfectly smooth**, 100% is very **obviously stepped**.

Range

(8)

This is the **overall depth** of pitch modulation from the envelope, measured in semitones. Note that the filter envelope is bipolar: For example, setting the Range to 12 will give you +/- an octave.

Flip
(9)
This continuously inverts the entire pitch envelope (**invert**). At 100%, the pitch is modulated in the opposite direction.

Porta (portamento mode)
(10)
"Portamento" means pitch **gliding** smoothly from one note to the next. Phalanx offers a choice of 3 portamento modes: "**Off**" disables portamento entirely, "**Poly**" is polyphonic i.e. each new note glides (independently), starting at the pitch of a previously released note. Finally, in "**Legato"** (monophonic) mode the Sample Pad plays a single voice only, and each new note takes over from the preceding one.

Portamento Time
(11)
The portamento **Time** parameter controls the speed of the glide effect.

Curve (portamento curve)
(12)
Continuous control over the **shape** of the glide effect. A value of 0% means linear glide (a straight line). Higher values make the curve increasingly "logarithmic", which causes the first bit of the glide to be faster than the last bit.

The Effects (FX) Page

The Effects page is divided into three sections: On the left are the **insert slots (1)**, in the middle is where the control panel for the currently selected **effect** appears **(2),** and on the right is the control panel for the **4-band equalizer (3).**

Insert Slots

(1)

Each Sample Pad has it's own insert effects rack with 8 slots. The first slot is always the **Equalizer** (EQ), but the other **7 slots** can be filled with any effects you like: Simply right-click on any slot and select from the list. The signal chain in the rack flows from top to bottom, but once loaded, effects can be rearranged via drag & drop. To the left of each slot is an on/off switch for bypassing the effect. Clicking on a loaded effect will open its control panel in the middle (2). Immediately above the Equalizer slot is a preset browser for the entire rack - so you can save or load complete effect chains.

Effect Editor

(2)

Whenever you click on an insert effect, the appropriate control panel appears here. Different effects have a different set of controls, and each **effect editor** has its own preset browser with which the settings can be loaded and saved.

4-Band Equalizer

(3)

The **4-band equalizer** control panel is always visible on the right. The equalizer can be edited either graphically (per mouse in the grid) or by double-clicking on the individual fields and entering absolute values. Click and drag one of the 4 circular elements in the grid to adjust the band's Gain and Freq (frequency), or move the outer rim to adjust its Q-factor / resonance. Each EQ band can be set to either Peak, Shelving Hi/Low or LowPass/HiPass filter types. there are more options available in the context menu (right-click), e.g. band inversion etc.. For details about each effect, see the section "FX Types" later on in this manual.

The Loop/Modulation Page

The Loop/Modmatrix page is divided into two sections: On the left is one of **three editors** (Loop, Mod Env or Scratch), on the right is the **Matrix** / **LFO** panel.

Loop Editor

Loop Editor

(1)

The **waveform** of SampleA or SampleB (whichever is currently selected). If the loaded sample already includes loop data, this will appear directly. The **green flag** sets the Sample Start Offset (see "Waveform / Start Offset" in the "Sample Pads and Mixer" section) and the **light blue flag** sets the Sample End. The **Loop Start** and **Loop End** flags are both red: These define the limits of the loop, and are set to the start / end of the sample by default.

On/Off Switch

(2)

Switching this on causes the sample to repeat the section within the loop (red flags). When switched off, the sample will play from the Start Offset to the end i.e. it will not loop.

Fade Time

(3)

To the right of the on/off switch is the **Fade Time control**. This defines the length (in milliseconds) of a crossfade that reduces clicks whenever the loop restarts.

Find Zero-Crossing

(4)

Clicking on this button will adjust the loop start and end points to positions where the **wave crosses zero**, thus minimizing clicks.

Lock Start/End

(5)

Activating this button will **lock the length of the loop**, and a white lock symbol will appear in the editor window (which you can grab and move around). Setting a short loop and keeping the length constant is great for "scanning" through a sample while retaining pitch/rhythm.

Loop Type

(6)

Use this field to select the most suitable type of loop for the current sample. **Normal** simply jumps from the loop end to the loop start. **PingPong** mode alternates the direction between forwards and backwards. **Xfade** (**crossfade looping**) is the best choice whenever you need very smooth loops: the last portion of the loop is faded out while audio material from immediately before the Loop Start is faded in, thus ensuring a smooth transition. Xfade has one disadvantage, though: used with simpler sounds, it can cause unwanted phase cancellation effects. To minimize cancellation, the XFadeLength and XFadeCurve controls become active so you can fine-tune the crossfade to taste.

Time Ruler

(7)

Immediately beneath the loop editor window is a **time display** showing 32nd, 16th, 8th note positions etc. - useful for setting loops to precise rhythms. Note that the Ruler automatically adjusts to played notes (including any pitch modulation from the envelope, LFO etc.) and that it can be freely adjusted via click and drag.

The Mod Envelope

Mod Envelope

(1)

This is offers the same functionality as the envelopes already described in the Amp and Filter sections of this manual, with one addition: the mod envelope lets you set an end point for Release.

Timescale

(2)

Continuous control over the **rate/speed** of the mod envelope, as a percentage of the original.

Flip

(3)

This continuously **inverts** the entire mod envelope. At 100%, modulation is in the opposite direction.

Retrigger

(4)

This switch determines how the mod envelope will be triggered. When Retrigger is set to "**All Notes**", each note played will retrigger the mod envelope. Set to "**First Note**", the mod envelope only retriggers on the very first note of a legato phrase i.e. after all notes have been released and the next one is played

Loop On/Off

(5)

When this switch is set to "Off", the mod envelope behaves like any other regular envelope. When set to "On", the envelope acts more like an LFO with user-definable shape - after finishing, it jumps back to the start and **repeats** the entire envelope as long as the note is held.

Sync On/Off

(6)

When Sync is switched on, the grid in the envelope edit window displays beats (note values), and the envelope will follow the tempo set in your host application. For BPM-precise synchronization of envelope phases, drag the coloured dots left or right until they snap to the required beat.

Der Scratcher

Scratcher Editor

(1)

The Scratcher simulates the behaviour of a **turntable**. whenever you play a note, Phalanx interprets this as placing a finger on the vinyl, after which the sample can be scanned (scratched) forwards or backwards using the pitch bender or any (MIDI) continuous controller. Note that the position of the "needle" can also be automated via envelope and the mod matrix.

On/Off Switch

(2)

Switching this on activates the Scratcher, but doesn't affect the sound until the designated controller is moved or the position is otherwise modulated.

Env (Envelope On/Off)

(3)

While Env is switched off, the Scratcher is controlled via pitch bend, MIDI controller and/or modulation matrix. When Env is activated, the envelope overlay appears and the vertical position of the envelope will also control the Scratcher. Values above the line mean forward scratching, values below mean backward scratching. The structure of the Scratcher envelope is otherwise the same as the regular Pitch Envelope (see there).

Pre Silence

(4)

A length of time (in milliseconds) inserted before the beginning of the sample so there is enough room to scratch before e.g. the attack of a bass drum or a vocal snippet.

Min (red flag)

(5)

This flag sets the minimum limit of the scratchable area. Note that the maximum possible pitch while scratching depends on the distance between Min and Max (see below).

Max (red flag)
(6)
This flag sets the maximum limit of the scratchable area.

Scratch Start (green Flag)
(7)
The most important Scratcher parameter, as it specifies the point around which scratching occurs - practically the place where you put your finger on the vinyl i.e. where the needle of the pick-up is "parked". The vinyl can then be "scratched" forwards or backwards by moving your finger around this position.

The Mod Matrix

Phalanx' **modulation matrix** is structured as follows:
To the left is an **on/off switch (1)**. Next, the **Source field (2)** specifies the modulator, with a choice of MIDI and math sources, LFOs plus the three GUI modifiers you can see immediately below the mod matrix. **Amount (3)** sets how much of the source (in percent) is sent to the specified Target. You can enter positive or negative values here. 100% always means the complete range the Target has available in the corresponding direction (positive or negative). Finally, the **Target (4)** specifies which parameter will be modulated. The list of possible targets encompasses all parameters in Phalanx - knobs, faders, switches and other options. Of course this always applies to the currently selected Sample Pad.

GUI Modifiers

(5)

The **three GUI Modifiers** are freely assignable modulation sources, especially useful for controlling multiple Targets from a single knob, with well-tuned ranges. For instance, GUI Modifier 1 could raise the pitch a little while closing the Bitcrusher, adding some reverb and raising the cutoff of the highpass filter - all at the same time. Double-click on the label and edit the text to be more descriptive.

NOTE: The Amount value in the mod matrix always applies to the available range of the Target parameter. For example, let's say a filter cutoff is already set to 60% and you enter "+100%" into the Amount field. Although there is only 40% left before cutoff reaches maximum (60 + 40 = 100), your +100% amount only applies to the available 40% i.e. it will only modulate cutoff up to 100% and can't overshoot. Similarly, entering "-100" will modulate cutoff from 60% down to 0%.

Exception: The LFOs. As these are bipolar modulation sources, negative and positive modulation will not be scaled differently depending on the value of the Target parameter, but will be equal (so modulation can overshoot the limits of the target parameter).

The LFOs

Click on the **LFOs** tab to open this panel - a pair of low frequency oscillators as modulation source for each Sample Pad. Both LFOs are structurally identical, but can have different settings. To hear what an LFO does to the sound, you will have to use it as a modulation source in the Matrix (for instance, set Source = LFO1, Amount = 100%, Target = Sample A Transpose/Pitch).

Offset

(1)
The Offset control shifts the LFO waveform vertically i.e. a constant is added to (or subtracted from) the LFO's output.

Shape

(2)
The Shape control specifies the **LFO'S waveform**, offering a choice of several shapes.

Rate

(3)
This is the **speed** at which the LFO oscillates. If Sync (see below) is active, note lengths are displayed and the LFO is synchronized to host tempo.

Phase

(4)
The **Phase control** shifts the LFO horizontally, so that its starting point is elsewhere within the wave.

Sync On/Off

(5)
Switches song tempo **synchronization** on (light) or off (dark).

Retrigger

(6)

This parameter has 3 options: **Freerun** means that the LFO runs permanently (quasi globally), ignoring whether or not a note has been played - played notes will simply "cut in" at the current phase. **All Notes** means that each note will reset the LFO phase i.e. the LFO will be restarted. **First Note** means that the LFO is restarted on the first note of a new legato phrase (after all notes have been released).

The MIDI / Arp Page

This page contains everything you need to set up **MIDI** parameters and **routing**, as well as **arpeggiation** for the current Sample Pad. The bottom half of this panel is a playable 4-octave keyboard which also displays **key zones** when Phalanx is in Drumkit Mode (see point 20 below).

First, the Velocity sub-panel...

SampleA/B Vol

(1)
This control adjusts how much the volume of the selected sample (A/B) will be affected by MIDI velocity - higher values mean low volume when you play softly. A value of 0% here causes the sample to play at the same volume, however softly you play a note.

Filter Cutoff

(2)
This control adjusts how much the filter cutoff of the selected sample will be directly modulated by MIDI velocity - high values will lower the cutoff when you play softly. 0% here means MIDI velocity does not affect cutoff at all, however softly you play a note.

Filter Envelope

(3)
MIDI velocity can still affect cutoff indirectly via the filter envelope. Higher values here mean the softer you play, the less the filter envelope will modulate cutoff.

Velocity Curve

(4)
The Velocity Curve graphic editor lets you bend MIDI velocity response away from the usual linear to logarithmic, either positively or negatively. If the curve is negative (i.e. the dot is closer to the bottom) you will have to play quite hard to send high velocity values, but the resolution is finer when you play softly (piano-like response). Conversely, positive curves mean less resolution at higher velocities.

Next, the Pitch sub-panel...

Sample A/B Root
(5)
This specifies the **root note** for the selected sample. The standard value here is C2, as all sounds in the factory library were sampled with this note as root.

Sample A/B Keytrack
(6)
Adjusts the amount of **pitch key tracking** for the selected sample. The maximum value is 100%, playing an octave higher will play the sample exactly an octave higher - use lower values if you want to reduce that range.

PB Up/Down (pitch bend)
(7)
Finally, the two controls for setting **pitch bend ranges**. Note that PB Down can even be set to 2 octaves, while the maximum value of PB Up is restricted to 3 semitones.

The Special sub-panel...

Panorama
(8)
First, a rather unusual **Panorama** control. Like any other pan control, the central position (12 o'clock) has no effect. Negative values introduce a **random** pan position per note - the more negative, the more random. Positive values **alternate** the pan position (left/right) per note - the higher the value, the more extreme the pan position.

Pan Keytrack
(9)
Below the Panorama control is a switch for **panorama key-tracking**. When set to "On", lower notes will be panned to the left and higher notes to the right - like e.g. sitting in front of a grand piano.

Killnote
(10)
Kill Note specifies the MIDI note that will immediately cut the selected Sample Pad. For instance, you might want to stop the sound of an open hi-hat whenever the closed hi-hat is played. This option is particularly useful in **Drumkit mode**.

Retrigger Keytrack
(11)
This control modulates the **Retrigger rate** via key tracking - the higher the note, the faster the retrigger. When set to 100%, retriggered sounds can be played tonally like a synthesizer voice (an octave higher on the keyboard means doubling the retrigger rate). See "Retrigger (22)" in the chapter "Sample Pads and Mixer".

Retrigger Fade
(12)
This control introduces a very short **crossfade between retrigger events**. It's main use is to prevent clicks, for instance during a typical automated "acceleration" effect. Adjust to taste, but if you are playing retrigger tonally (see Retrigger Keytrack above), we recommend leaving Retrigger Fade at minimum (0ms) so you don't lose high frequencies.

The arpeggiator sub-panel...

On/Off

(13)
At the top left of the Arpeggiator sub-panel is an **on/off** switch for activating or deactivating arpeggiation for the selected Sample Pad (remember that each Sample Pad has its own arpeggiator).

Speed

(14)
A selector for the basic host-synchronized **arpeggiator rate**. Click on the field and select from the drop-down menu.
*Tip: Phalanx includes a **fine tuned "Arp Speed"** control as a modulation target in the Matrix. For instance, you could use the modulation wheel on your keyboard to continuously speed up the arpeggio - great for breaks and "acceleration" effects.*

Octaves

(15)
The Octaves selector specifies the number of **octave transpositions** the arpeggiator will cycle through.

Mode

(16)
This selector offers 3 directions of arpeggiation: **Up**, **Down** or **Alternating** (up and down). This parameter, as well as Octaves, has a substantial effect on the resulting melody.

Gate

(17)
Control over **how long each note will be played** when arpeggiated. A value of 100% means the gate will only close for the current step when the next one is due. Lower Arp Gate values can make the arpeggio more percussive.

Shuffle

(18)
Finally, Shuffle (often called "**swing**") affects the groove - every second note is slightly delayed. Swing rhythm is prevalent in Jazz, but is also a popular stylistic device in modern dance music.

Keyboard

(19)
The bottom half of the Midi/Arp panel is a playable 4-octave keyboard, including **Pitch Bend** and **Modulation wheels**.
Tip: In Customize mode, this can be dragged into the Customize area. The keyboard also highlights individual key zones when Phalanx is in Drumkit Mode.

Drumkit Mode / Drumkit Matrix

(20)

As an alternative to Sample Pads having their own MIDI channels, Phalanx also lets you assign **each Sample Pad to a particular note** (MIDI channel 1 only). This means you can play complete drum kits "live", either via MIDI keyboard or MIDI pad controller (Akai MPC and similar).

Assigning a drum kit is easy: drag individual Sample Pads from the lefthand column (labelled "**Multitrack**" in standard mode) into the Drumkit Matrix. As soon as a Sample Pad is in **Drumkit mode**, the righthand column displays a selector field used for assigning a note to this Pad. So you can easily check which notes are still available, unused notes appear greyed-out in the keyboard panel (19), while the used ones appear normal.

Phalanx' Drumkit Matrix is extremely flexible, even mix-and-match between Multitrack and Drumkits is possible. Here's a practical example:

Sample Pad 1 is a bass drum (MIDI channel 2, audio output 1) running in normal Multitrack mode, which can be played across the entire keyboard. Similarly, Sample Pad 2 is our synth bass (MIDI channel 3, audio output 2). Next, we want to use three Sample Pads for a group of percussion instruments that really belong together, e.g. bongos (Sample Pads 3 to 5, audio output 4) - in the Drum Matrix, simply drag Sample Pads 3, 4 and 5 to the right, then assign them different keys (e.g. C, D and E). The bongo samples are now running in "Drumkit mode", they can be played live using those assigned keys. Important: Drumkits only receive over MIDI channel 1!

System Page

The System panel contains several **global settings** (parameters which affect all instances of the plug-in), as well as a few lesser-used parameters. The extra space allows for future additions.

Content Location

(1)

This field specifies the path where Phalanx keeps its **work folders**, all presets and samples. If you Change this path (click on the button), please remember to move all your sample and preset libraries accordingly. Pressing the Open button to the right of this field will reveal the specified folder in a standard file window (so you can instantly find the factory content folder on your system).

Startup Preset

(2)

This field specifies which **preset** will be **automatically loaded** whenever Phalanx **starts**. An empty bank is created by default, but we recommend that you configure and save a preset to suit your personal preferences, then change the Startup Preset to point to that file. Tip: Doing this just once can save you a lot of time later on!

Browser Right Mouse Button

(3)

This option governs what happens when you **right-click** on a sample in the browser. Either a context menu appears in which you select a slot (SampleA or SampleB) for that sample, or the sample is immediately loaded into the currently active slot. Note: If you make a mistake here, you can always use the Undo function.

“Open a folder” Behaviour

(4)

This option determines how the Librarian behaves whenever a folder is opened. "Jumps on top" places the folder at the top, "Stays where it is" means the position doesn't change.

Loop Follow Mode

(5)

This parameter governs how the loop editor will behave when you **continuously move a locked section** of the sample. "Scrub" jumps immediately to new positions without changing pitch while "Pitch" reaches the new position by speeding up then slowing down the sample. Both options have specific advantages, and both can deliver interesting effects.

Anti Alias Filter

(6)

Aliasing is an unwanted artefact (enharmonic frequencies are added to the signal) caused by the sample rate not being quite fast enough to perfectly capture the highest frequencies. Phalanx' **high quality anti-aliasing filter** fixes this problem at the cost of higher CPU usage. The choice is yours: For high-end computer systems we recommend switching anti-aliasing on, as it can noticeably improve audio quality (especially with tonally "playable" sounds). However, anti-aliasing is seldom necessary for drum kits, as the samples are mostly played back at the original pitch.

Display Active A/B Slot

(7)

This option can display a large **'A' or 'B'** in the waveform preview of each Sample Pad so you can see at a glance which one is currently active. The values are "Off", "Only Current Pad" (appears in the highlighted Sample Pad only) or "Always" (appears in all Sample Pads).

Incoming MIDI Transpose

(8)

If you have a hardware **MIDI controller** connected (e.g. pad matrix controller) and find that it is an octave too low or too high, you can correct it using this parameter.

Midi Learn Monitor

This page offers an overview of all the currently assigned MIDI controls. To remove an existing MIDI assignment, simply click on the trash can symbol.

Tip: Right-click in this panel to export or import the complete MIDI assignment settings!

MIDI Learn - Assigning external controllers to Phalanx parameters

Phalanx offers a very easy way to connect your hardware controller to any of its parameters. All you have to do is "tell" Phalanx which of its parameters you would like to respond to the hardware controller: Click on the MIDI Learn button - the GUI will become dark, but all assignable controls will remain light - select the one you want. A window opens, signalling that Phalanx is "listening" i.e. waiting for you to move a control on your hardware device. Now adjust that control on your hardware (e.g. a knob or fader) in any direction, and Phalanx will display the MIDI data it receives. To confirm the assignment, click on the green tick at the bottom right. To abort the assignment, click anywhere in the background of that window.

TIP: If you move the hardware control through its entire range in both directions (closed, open, closed) while Phalanx is "listening", you don't even have to confirm the assignment.

FX Typen

Equalizer
The Equalizer **raises** or **lowers** certain frequency ranges. Per band, you can select one of 3 different types: Peak, Low/Hi Shelf, Low/Hi Cut. The settings for Frequency, Gain and Width (Q-factor) can be specified either directly within the graphic editor, or by entering a numeric value.

Chorus
This effect thickens the audio material and gives it “body”, extra movement and stereo width. In principle, a Chorus adds multiple copies of the original signal, which are delayed as well as modulated in pitch (Rate, Depth). The chorus effect is ideally suited for “lead” sounds.

Delay
Arguably the most often used type of effect. Delay units add rhythmic echoes to the original signal. The VPS Delay offers a bunch of unique functions and delay types: Mono, Stereo, PingPong (left/right) and pattern delays (rhythmic L/R patterns). The Ghost Q control makes the fading echoes sound increasingly brighter, with a resonant whistling feedback at maximum. The modulation control (Mod) adds Vibrato to the delays (thus avoiding the flanging effects of stacked delays). The LoFi control effectively mangles individual echoes in one of two ways: turned to the left, it reduces the bit-depth; to the right, it reduces the sample rate.

Flanger
The Flanger is related to the Chorus effect, but the significantly shorter delays cause heavy **phase cancellations** for a roaring, highly animated sound. This effect can be further enhanced via the Feedback control, which can even lead to an aggressive whistling effect.

Phaser
Like the Flanger, the Phaser also works with **phase cancellations**. In the Phaser, however, the cancellations and peaks in the frequency spectrum are not caused by a delay, but by a filter. The frequencies can be periodically modulated. The “Stages” value determines how many notches (Combs) occur in the frequency spectrum. More stages result in a heavier, richer sound.

Distortion
Phalanx also has a Clip Distortion effect (simple **signal distortion**). High signal peaks above 0db are immediately cropped, producing additional harmonics. Make sure you compensate any resulting boost in volume by lowering the Output Gain.

Multiband Distortion
A similar effect to Clip Distortion, but with up to **three "channels" of distortion**, each affecting a specific frequency range. For instance, you can distort only the low bass frequencies, leaving the higher frequencies unaffected - or vice versa.

AA Reverb

We licensed this **reverb** unit from Artsacoustic.com. It is the same widely praised, excellent sounding reverb that was already used in the reFX Nexus synthesizer (see www.reFX.com). AA Reverb offers a choice of three types: Room, Hall and Arena (in order of volume). The Size control adjusts how long the reverb tail will be. The Mod parameter adds the final "magic" - it modulates the reverb signal in a way that causes it to sound particularly soft and pleasant.

Room Sim

This is the right choice for **ultra-short reverb effects** - it is especially good when used on drum sounds. Room Sim creates natural-sounding small rooms without any interference from reverb tails. Signals that are too dry are "thickened" i.e. given more body and a more natural (stereo) space.

Trash Verb

This reverb is anything but natural - it sounds metallic, artificial, it “shatters” - Trashverb is perfect for LoFi effects and wherever a subtle, natural-sounding space is NOT required!

Gated Reverb

A “bouncing” **reverb effect**. The distance from the source track can be adjusted in note values: a setting of 1/8 results in the reverb of a bass drum bouncing up on the offbeat (range between two bass drums, or beat number 3). Techno music at the turn of the millennium made lavish use of this effect.

Multi Mod

This one includes four related effects: **Ring Modulation**, **Autopan**, plus two **FM Modulation** modes. Ring modulation involves a very rapid amplitude (volume) modulation that can go so far as to create “robot” vocal sounds. Autopan mode replaces simple volume modulation with L/R panning. The two FM modes offer frequency modulation, capable of extremely trashy, aggressive sounds. The FM mode “Nasty” has an even broader range, as well as extra stereo width.

Compressor

This **compresses** the signal, meaning it makes loud signals that cross a certain threshold quieter, by a user-defined factor/ratio. A ratio of 2:1 means that the compressor will reduce the part of the signal exceeding the threshold by a factor of 2. The Attack time determines the compressor’s start-up delay, so percussive transients can pass through uncompressed. The Release time determines how slowly the signal level rises after being compressed.

Limiter

The Limiter is basically a compressor with a ratio of infinity and an attack of 0. It is implemented as a so-called a **brick-wall limiter**, as no signal above 0db is allowed through. This effect is perfect for preventing clipping (distortion) caused by very high peaks.

Bitcrusher

Use the Bitcrusher to mangle your **signal quality (LoFi effect)** in two ways: you can reduce the signal’s bit-depth (Bitcrusher) as well as its sample rate (Rate Reducer). These are both very popular, modern effects.

Stereo Matrix

This one gives you comprehensive control over the **Stereo Field** by applying the „Haas effect“. The Mono Level and Stereo Level controls let you individually balance the mono and stereo portions of the signal.

Impulse

This is a very powerful **Convolution Reverb** plug-in, the reverb of a real space or processor can be simulated 1:1. This simulation is achieved by recording an impulse response (a very short, percussive sound) in the original “space” and importing the resulting .WAV file as an “impulse”. Simply pressing the Load Button lets you import existing .WAV files: an extensive library of excellent reverb impulses is already preinstalled. The reverb signal can be processed further in Impulse, for instance you can extend or reduce the stereo width, pitch the reverb signal (longer or shorter), add pre-delay, or draw your own volume envelope using the graphic display.

Vengeance Plugins

If you own a valid license for other **Vengeance plug-ins** e.g Multiband Sidechain, Philta XL, Stereo Bundle, you can also load them here. Note that our kick drum synth "Metrum" can also be loaded, but as it is an instrument (not an effect), Metrum is loaded into Sample Pads instead - right-click, then select "Metrum Mode".

Practical Tips:

Right Click, Context Menus
Whenever possible, check whether right-clicking will open a context menu. Many areas of Phalanx give you access to additional parameters!

The Centre Mouse Button
Practically every element of the EFX Bundle - control, envelope curve, fader or numeric field - can be reset to its default value by clicking on the centre mouse button (Mac: Ctrl+click).

Fine Tuning Values
Of course everybody knows that "left-click, hold and drag" is the standard way to adjust the values of knobs and faders, but what may not be so obvious is that you can get much higher resolution i.e. you can often fine tune values via right-click instead of left-click. So try "right-click, hold and drag" on all elements in Phalanx!

CPU Performance
If you find your system struggling to handle large projects, you should try switching off the Anti Aliasing option in Phalanx' "System" page. You should also try reducing maximum polyphony of the Sample-Pads to a lower value than 16 (e.g. 4).

Multi Channel Outputs
Depending on the DAW/sequencer you're using, you might have to activate Phalanx' extra audio outputs. If all Sample Pads are always routed to output 1, you should refer your sequencer documentation and find out how to activate the additional outputs.

For instance in Cubase, Phalanx should be loaded into the Instrument Rack (F11), and not as individual "VST instrument track". The Instrument Rack includes a small "arrow" icon - click on this to activate all 16 outputs (these will appear in Cubase's mixer view - see page 16).

Automation in the Sequencer
The most elegant method of automation for Phalanx tracks is an entry in the modulation matrix. GUI modifiers 1-3 as well as 64 more automation sources (AUTO-63) are available.

Sample Slot Selection via Keyboard
Ue your computer's TAB key to move the highlight (red outline) the next sample slot to the right, and SHIFT+TAB to move it to the left.

The Phalanx “Single” Version

The Phalanx package not only includes the "normal" version described in this manual, but also a slimmed-down version with only one Sample Pad. The file called "**VPS Phalanx_Single.dll**" is perfect for those occasions when you don't need all 16 Sample Pads (i.e. 16 instances), but only want to add one or two Phalanx samples to your project. The Single version will also be particularly interesting for Apple Logic or Ableton Live users, as the MIDI channel routing in these hosts is somewhat limited compared to e.g. Cubase.

In principle, the Single version works just like the full version except that you will only see one Sample Pad. The Loop Editor is no longer selectable per sample at the bottom - instead, Loop Editor panels for both SampleA and SampleB are always visible to the right. In the position where Phalanx normally displays the waveform, Phalanx Single has a StereoScope or FFT analyser. (Note: Of course Phalanx Single is unable to load 16 slot Bank Presets!)

Phalanx "Single" - perfect for whenever you don't need a whole drum kit

Tips and new Features via Update

We intend to continually improve and expand "Vengeance Producer Suite - Phalanx" with new updates and functions. As soon as new features become available, they will be explained in this section.

Sample Delay and Phase Invert

Short before release, we added 2 additional features in Phalanx:

Sample Delay

This knob delays the sample in the A or in the B slot for xx miliseconds. You need this when layering delayed samples, like handclaps etc…. for example

Phase Invert

This button turns the phase of the sample in the A or in the B slot for 180°. When layering low sounds together, for example when building kickdrums, you can use this function if you encounter phase problems.

Changes

v1.00 (June 2013): Official Release

Support & Contact

Technischer Support: keilwerth@vengeance-sound.com

Kontakt: info@vengeance-sound.com