

Congratulations and a big thank you for purchasing PHAEDRA.

PHAEDRA is a **ZERO-G/XFONIC** virtual instrument featuring over 4 gigabytes of sounds, 20,000 samples and 720 patches. This is the ultimate virtual analogue synth.

Unhappy with the lack of raw sonic power in virtual emulations of VSTi analogue synths producer Sam Spacey set out on a three-year journey to make the ultimate synth and ended up creating a monster in PHAEDRA. Constructed with the same attention to detail as a huge orchestral sample

library each of the 20,000 samples has been edited and looped by hand, with loops being very long so as to extract that lovely analogue randomness magic. Nearly every single preset has each separate note sampled to eliminate aliasing within the instrument's range.

With Kontakt's engine being pushed totally to the limits we have produced a library that is a full synthesizer in its own right.

Phaedra creator Sam Spacey writes:

Phaedra was primarily born out of 2 of my frustrations....

1. The lack of raw sonic power in virtual emulations of analogue synths
2. Sloppy midi timing of external analogue synths under modern computer operating systems (all is forgiven Atari ST1040).

I set about making a personal library for the dance releases I was working on at the time. A few of my producer friends managed to try out some of my presets and ended up using them a lot on their releases.

After finding myself more and more unable to satisfy my producing needs with soft synths I found myself more and more relying on the small number of sampled presets I had made from my old Minimoog D for bass sounds. 1 oscillator from a Moog seemed to sit so nicely in a mix without me having to throw loads of EQ or compression at it.

It seemed that to get the same amount of sonic energy for a bassline using 1 oscillator on certain VSTi analogue emulations required a lot more volume and headroom that I wasn't about to give up, not to mention the time taken in compressing and eq'ing just to get the virtual synths to sit right in the mix. The analogue samples just seemed to sit in the mix so much easier.

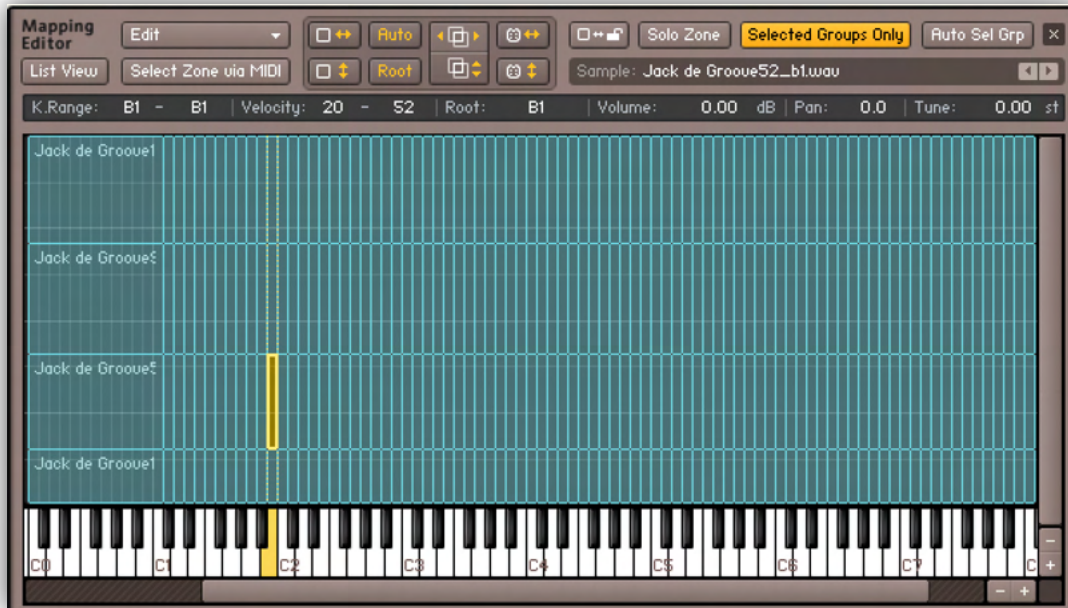
I was also getting very frustrated with so called "sample accurate" midi interfaces that were anything but sample accurate. No matter how I tried to set up the interface it was never tight on timing. In the days the Atari it was tighter but also there was no sample accurate audio then so much as there is now. And midi just comes across even looser when put up against a modern sequencers sample accurate audio and VSTi's.

So..... I spent a few weeks making a load of my favourite patches in Kontakt 1. This worked really well, and I was really considering selling my analogues again (been there before though lol). After constant pestering from friends to make more presets I decided to pitch my idea for a library based on analogue synths to Zero- G. Nothing new I hear you say.... but I wanted to go about this with the same attention to detail as say an orchestral sample library developer would:

1. Hand looped and hand edited, with loops being very long so as to extract that lovely analogue randomness magic.
2. Nearly every single preset has every note sampled to eliminate aliasing within the instruments range.
3. Very high-quality A to D converters used for library.

4. Unique velocity/modulation source to sample start in order to use the actual analogue synths filter bringing great flexibility and playability.
5. I feel that I came at this library from a composer/producer's point of view so presets are designed to be used and not to just sound good on their own.
6. Convolutions were made of the actual units I use in my productions, other devices were hired in to have convolutions made from them, but FX have NOT been plastered all over this library, they have only been used when they are a part of the sound rather than making a normal preset sound better by just sapping reverb on it!
7. With Kontakt's engine being pushed totally to the limits I was able to get a library that was not just for playing back recordings but is a full synthesizer in its own right. This gives the product huge longevity as I feel its strengths are in using the presets as building blocks or starting points for your own presets.
8. I wanted the library to be able to be controlled by external controllers. All parameters use smoothing so as to eliminate stepping.
9. All the presets move i.e. can have the sound altered by either velocity, mod wheel or aftertouch.
10. All the samples were taken raw from the analogue synths with no enhancing or eq'ing. I prefer to let the producers who will use this make their own decisions on eq.
11. 20,271 individual samples were recorded over a 12-month period (yes I now have RSI lol), over 4.1gb of raw samples.
12. No duplicates in any of the raw recording samples, this library is not padded out to make it look bigger.
13. I stopped at 770 presets in the following presets folders: Synth 1, Synth 2, Bass, Leads, Pads, Seq, Fx, DnB (bonus), Synth Builder (for starting off with raw settings for your own creations) and a Multi folder.
14. Multi is where the magic happens by stacking presets on top of each other.
15. This library is very efficient due to the lack of re-sampling needed by Kontakt because of a total overkill in multisampling :)

This library is based on no particular electronic genre and would lend itself well to any style.



Getting started.....

Below is the main PHAEDRA interface with everything you need to create your sound. Power is nothing without control. The Graphic User Interface (GUI) was designed to give the user full control over a huge amount of sonic sculpting options, the real challenge was to do this without slowing down the creative process. We believe we have succeeded with this interface; it is both quick and simple but devastatingly powerful when creating your own presets...which you will find yourself doing within seconds.

Over the next few pages, we will go into more depth on how to fully use the interface.



Loading presets

We've made some great presets to get you started, 770 single instruments and 85 multis in total. You will love how they instantly sound part of your song with no EQ or Compression needed, they sound for want of a better phrase "Warm, real just like a record". Phaedra sounds like ...well...Phaedra, it is unique in its tone and versatility offering sounds that you just cannot get with other synths.

So, let's go through some presets, you might find yourself playing for longer than you had expected so have the coffee/tea at the ready...

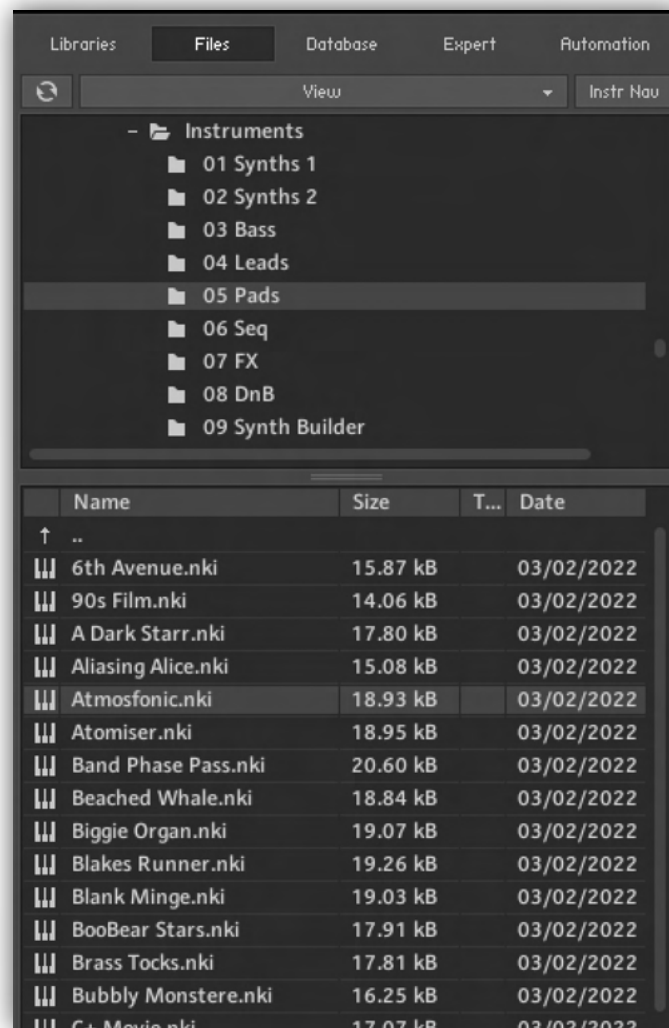
Preset Interface

This title contains Kontakt Formatted files which can be accessed from the Files tab within the full version of Kontakt 6.6.0. As stated on the product page, Kontakt files will only run in demo mode in the free Kontakt Player.

From within Kontakt, can you please ensure you are on the Files tab, and not the libraries tab, and use the browser to locate your chosen install path. If the Browser interface is not in view, then simply click on the 'Browse' icon (F1) on the top toolbar.

Now with the product folder in the bottom of the two left windows, navigate through the folder and there will be Kontakt instrument files (.nki) which you can double-click to load into Kontakt.

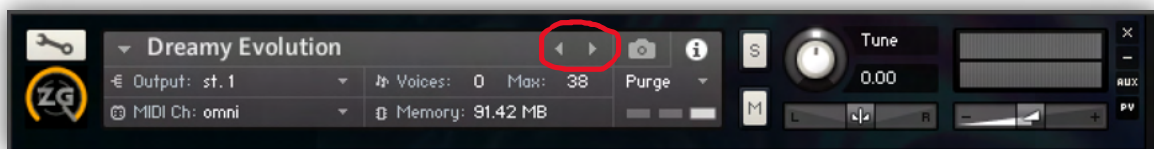
On the left you will have a selection of folders, each of these folders will be full of presets. Simply (for example), select for example the '**Pads**' Folder and below will be all the presets that are in the pads category.



Let us select the **Atmosfonic** pad preset with the left mouse button and drag it to the blank section of Kontakt Player on the right (you can also launch a preset by double clicking it).



Now to try another preset there are two ways of doing this, you can either just drag another preset from any of the folders and drop it onto the one you have or..... you can select the previous or next preset in the folder by clicking the left or right arrow as shown below. To get rid of a preset you just click the 'X' in the top right window of that preset.



If, however you double click on a preset in the browser it will add that preset alongside the one you have, which is great for making huge sounds (you will find many of these in the 'Multi' preset folder).

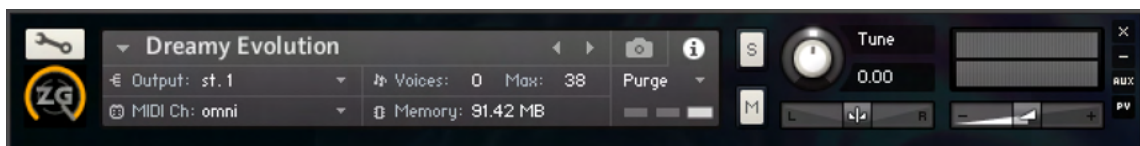
A lot of the presets have many samples so depending on how fast your hard drive is make sure they have loaded before playing.

Top Tip: *Solid State Data (SSD) hard drive are now so cheap that it is a good idea to have one for your samples drive. Huge preset like the Dreamy Evolution pad 92mb take less than a second to fully load up on my SSD drive.*

[NB. Going back and forth between the library and files tab can slow down workflow, therefore Native Instruments included a handy Quick-Load feature within Kontakt. By setting up the Quick-Load feature you can customize the layout and access all your Kontakt formatted files and libraries in one location. Please read the Kontakt menu on how to use Quick-Load.]

Phaedra Interface

To minimise the GUI if you want to concentrate on other presets simply click on the ZG icon on the left below the spanner icon. Clicking it again will maximise the GUI.



This part of the GUI allows you to also choose the following:

Output: Choose the audio out channel of the preset

Voices: How many notes Polyphony you would like for that preset, useful for changing monophonic sounds to Polyphonic. It is also great for lowering the amount of CPU a preset uses by restricting the amount of notes it can play.

Midi Ch: Which midi channel you want the preset to respond to, Omni setting is used when making a huge sound from lots of presets as Omni mode will set the preset to receive from any of the 16 midi channels.

Memory: Shows you how much memory (RAM) a preset is using, the 3 rectangles to the left of this show you how much of the preset is to be loaded.

There are also **Tune**, **Balance** and **Volume** adjustments. As with all adjustment, to fine tune them just hold the 'Shift' key on the qwerty keyboard when moving the adjustment control with the mouse.

The Phaedra Synthesizer

You should think of the presets that you load as the raw oscillators for your sound creation. This is where Phaedra excels as the sound sources come from a huge range of analog and digital hardware recorded through a very boutique chain of analog hardware.

The samples are very long and have been obsessively sampled and looped by hand. A lot of the sounds use the actual analog filter sweeps of the synthesizers that were sampled and implemented using sample start points assigned to either velocity or random so as to enable the true sound of the sampled synth.

That being said Kontakt 6's new modelled filters are astoundingly good and give a huge palette of sonic possibilities to anything you create.

The rest of the synthesizer engine is broken down into the following parts:

Amplitude



This is the Amplitude Envelope Generator that controls the volume of the synth. Unlike most VCA ADSR's Kontakt 6 has added a 'Hold' function which can be very useful.

A: Attack is the initial bite of a sound; it can be instant for example bass or a slow increase for say strings

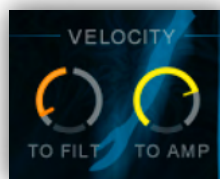
H: Holds the synth at full volume for a set time before passing it on to the decay phase.

D: Decay controls how slow the sound fades to the volume set by the Sustain control.

S: Sustain sets the volume that the synth will stay at until the note is released.

R: Release decides how long the note plays on when you release the note.

Velocity



You can assign Velocity (how hard you hit the notes) :

To Filter: If you are using one of the 6 analog modelled filters available in Phaedra then you can further control the filter by Velocity. 0 to +5 increases the Filter setting depending on how hard you hit the note whilst -5 to 0 decreases the Filter depending on how hard you hit the note.

To Amp: This basically allows you to adjust the volume of the sound by how hard you hit the note. When emulating analog mono synths it is best set to 0.

Pitch Envelope



With its **Attack**, **Decay** and **Sustain** controls the Pitch Envelope is great for creating all sorts of effects. The amount the Pitch is affected by the **Attack**, **Decay** and **Sustain** can be controlled by the **Amount** knob. This works from -5 to +5 which means you can have a pitch either climbing or falling.

Startpoint Mod



For me personally this is my favourite control in Phaedra as it enables me to use the actual synthesizer that was sampled filter. When you move the Startpoint knob it basically just plays further along the sample and the Velocity knob will assign Note Velocity between the Startpoint knob setting and the Velocity knob setting.

When say a Sequential Pro-1 preset with a filter sweep is sampled you can now play the sample back at different points of the sweep using either Velocity or Random knobs. Or lock it into place with just the Startpoint knob.

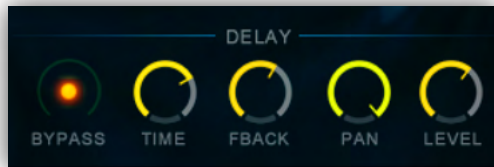
But it comes into its own when using a tiny amount of the Random knob (by holding Shift key and moving knob with mouse), because this gets rid of the issue that I have always had with samplers....it stops the sampler from starting at the same start point in the oscillator. Analog synths Oscillators are always running so they never start in the same place twice, by assigning a small random start point to the sample you ensure that the sample never gets played from the same point either. It's a big part of why analog sounds so...analog.

With the Startpoint Mod controls alone you get access to a huge palette of different sounds using the same preset. Experiment, the whole interface screams "*Abuse me*".

Assigning your controllers Modulation Wheel to Startpoint (will be explained how to in later part of manual) can create some truly playable synth creations with the Mod Wheel controlling the 'Actual' real world synth filter.

Because the Volume ADSR is so fast you might need to add a tiny amount of Attack to the Volume ADSR so as to avoid any clicks when using/abusing the Startpoint controls. This is because the starting point of the waveform might fall either above or below the 0dB line hence the click.

Delay



I decided to only use the Delay as an effect in Phaedra because we all have so many reverbs and multi-FX at our disposal in our digital workstations that if you wanted an effect, you could always add your own.

If I had to choose one effect to take with me on my studio desert island it would be Delay. When a Reverb or Multi FX was needed for a preset I tended to record the samples through the awesome Eventide H-8000 FW or Lexicon PCM 96.

Delay Bypass: You can Bypass the delay by clicking on the Bypass light. When the delay is bypassed, the light turns pink.

Time: Time basically is the divisions of time for the Delay set to the BPM of your workstation.

Feedback: Adjusts the amount of delay that is fed back on itself or...how many echoes.

Pan: This controls if the Delay will be mono or ping pong in stereo.

Amount: How loud you want the Delay to be.

Filter



You select from one of the 6 filters by clicking in the Type Box and choosing a filter from either:

Lowpass 12db or Lowpass 24db

Highpass 12db or Highpass 24db

Bandpass 12db or Bandpass 24db

All the filters are of the Ladder type analog modelled and surprisingly good for a digitally modelled filter.

The ADSR knobs have the same function as the Amp Envelope part of Phaedra except that these ones control the Filter. It also does not have a Hold function.

Freq: Controls how much the Filter is initially opened or closed. If you right click on the Filter knob you can assign a controller like say the Modulation Wheel to it. This gives a huge controllability to the sound.

Res: This controls the Resonance peak of a filter, the higher the setting the more it will be affected when the filter is swept. Think high resonance for those TB-303 squelchy type sounds. It would be best to look up on the internet about Filter Resonance and Filters in general as it is beyond the scope of this manual.

Env: This knob controls how much the Filter is controlled by the ADSR section, it can be set to negative -5 to 0 and positive 0 to +5.

Key: Is for when you want the Filter to open up as you play up the octaves on the keyboard making a sound brighter as you play higher notes.

LFO



Phaedra has 3 x LFO's and each LFO has 5 Waveforms: Sine, Triangle, Saw, Square and Random.

They can be assigned to **Pitch**, **Filter** and **Amp** (Volume). LFO stands for Low Frequency Oscillator which is basically a slower non audible wave which you use to control part of a synthesizer.

Taking a look at the Pitch LFO controls:

To Pitch: This assigns how much the Pitch destination is assigned to the LFO, this can be Negative -5 to 0 or Positive 0 to +5.

Freq: This is the speed of the LFO, how fast it modulates.

Delay: Delay is basically an Attack Envelope for the LFO which gradually fades in the LFO. It can be very useful for sound creation.

Modwheel: You can control the LFO by the Modulation Wheel on your controller by using this knob, this can be Negative -5 to 0 or Positive 0 to +5. This is how you add the classic vibrato effect to be controlled by the Mod Wheel that is common to most synthesizers.

You might have to use the shift key on your keyboard to go into fine tune mode on some of the controls on the LFO section as it is quite sensitive. This was needed so as to give you full control from slight to extreme in the way the LFO interacts with the Synthesizer.

Assigning Phaedra functions to your midi controller:

You can very quickly use your midi controller to control any knob on Phaedra simply by right mouse clicking on the knob you wish to control. Then select 'Learn Midi CC# Automation', at this point you just move the hardware controller that you want assigned to that knob.

For further control you can limit where the assigned knob starts from and ends when linked to your hardware controller for example the Modulation Wheel on your keyboard controller. In the picture below you can see on the left where you would normally select the presets to load, at the top there is a Tab called 'Auto'.

Click this and you will be taken to the Automation screen which shows any midi CC Controllers that are assigned to any Phaedra functions. It will default to 'Host Automation' so select 'Midi Automation' to show any midi controller data. Selecting a Midi CC allows you at the bottom of the picture to define low and high settings. You can go Negative to Positive and also Positive to Negative. And you can have for example the Modulation Wheel Controlling the Filter Cut off, Delay amount and also the Filter Resonance as many sources and destinations as you can think of.



And lastly, please enjoy and make some great music!!