

## Hybrid Factory for NI Kontakt 4



Hybrid Factory is an inspirational sample-based synthesiser with which you can create, shape, and play over 1,000 combinations of sounds. With Hybrid Factory, you can make warm analogue emulations, aggressive digital tones, and imaginary electroacoustic instruments.

Hybrid Factory contains:

- Over 1,160 stereo samples at 24-bit, 44.1kHz quality
- 80 NKI presets, including basses, leads, keys and pads, demonstrating the capabilities of Hybrid Factory
- Twelve unique impulse responses
- A default NKI to use as a starting point for your own patches

The size of the sample pool is 1.77GB (1.32GB compressed). Thanks to Kontakt's disk streaming technology, the samples use only 134MB RAM.

- ① **The full version of Kontakt 4.2.3 or above is required.** Hybrid Factory will not work with the free Kontakt Player.

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## Instrument architecture

Hybrid Factory is a two-layer instrument. You can load a different sample set into each layer, and apply effects independently to each layer. You can also switch off either layer, to create a sound that uses only one layer, or to audition sample sets in isolation.

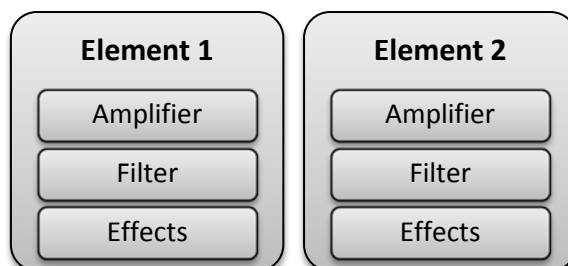
Sample sets in Hybrid Factory are referred to as **Elements**. These Elements are grouped into eight **Banks**. Each Bank contains eight Elements. So there are 64 Elements from which to choose:

Bank	Elements	Bank	Elements
Bass	Brutal Biscuit Data Stamp Fat Diode Meat Bass Nodal Bass Plastic Broomstick Torsion Slap Turbo Walrus	Bowed	Bowed Reed Cheesecake Strings E-Bow Bell Glass Cello Piped Viola Polyester Tremolo Stringed Mirror Superheated Bow
Keys	Baked Tines Banjo Wurlitzer Digital Bud Dirty Firefly Gamelan Piano Pillow Piano Prog Caterpillar Robot Keys	Organs	Arcade Wash Broken Fantasia Electrostatic Organ Nebula Transmission Octopus Pad Peptic Transistor Singing Foil Tantalum Reeds
Plucked	Bubble Lute Meantone Ukulele Modelled Guitar Picked Clavinet Plucked Organ Radio Harp Tin String Tremolo Plectrum	Simple	Brown Noise Pink Noise Saw Sine Square Tape Noise Triangle White Noise
Sound FX	Alien Beam Comet Tail Hadron Device Metal Moths Neural Net Poison Ivy Torture Chamber Vinyl Modem	Tapes	Blown Steel Cassette Ensemble Ferric Wheel Mellotron Mandolins Resin Orchestra Retro Marimbas Rewound Rhombus Taped Solina

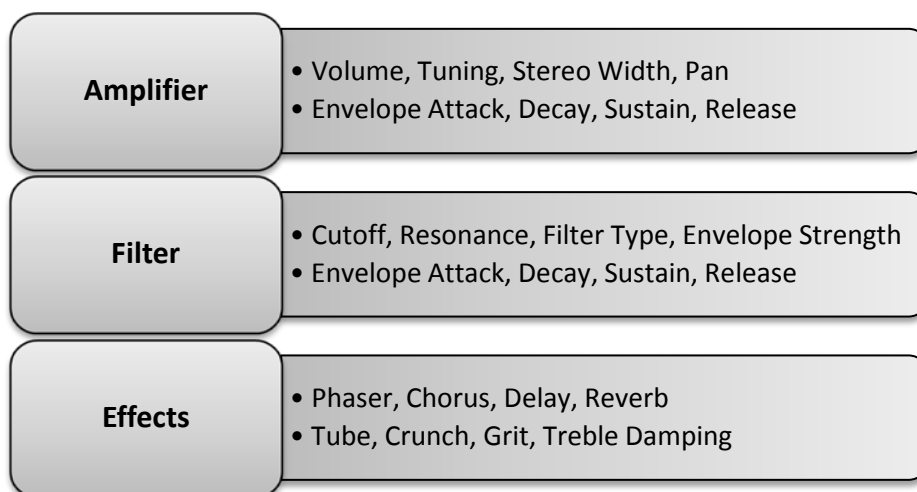
- ① The Bank names organise the Elements by their main characteristics, but are not intended to prescribe how you use them.

## Signal flow

The signal from each Element flows through an amplifier module, to a filter, and finally to an effects bank. The signal flow is independent for each Element:



The amplifier, filter and effects provide the following controls over the sound of each Element:



The amounts of phaser, chorus, delay and reverb applied to each Element are independently adjustable, but the Elements share common parameters for these effects:

- The phaser and chorus effects share an adjustable speed parameter.
- The delay effect has adjustable time, treble damping, stereo width, and feedback parameters.
- The reverb effect has adjustable type, treble damping, pre-delay, and size parameters.

Lastly, the Elements share three modulation parameters:

- Modulation of the filter cutoff by the modwheel (MIDI CC1).
- Modulation of the filter cutoff by velocity.
- Modulation of note volume by note velocity (also known as velocity sensitivity).

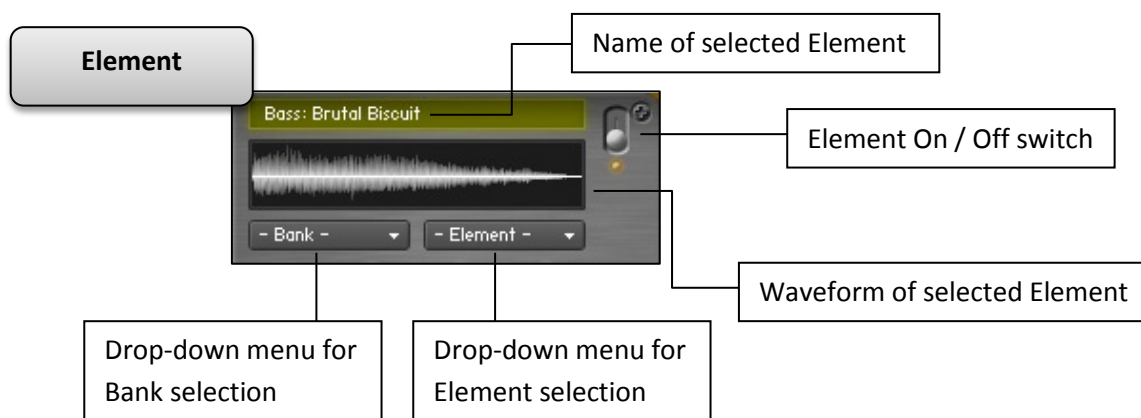
In the next part of the manual, you will learn how the instrument architecture is represented on the Hybrid Factory interface.

## Instrument interface

Like the illustrations on the previous page, the Sound Elements page of the Hybrid Factory interface represents the signal flow from top to bottom, with the selected Elements in parallel:



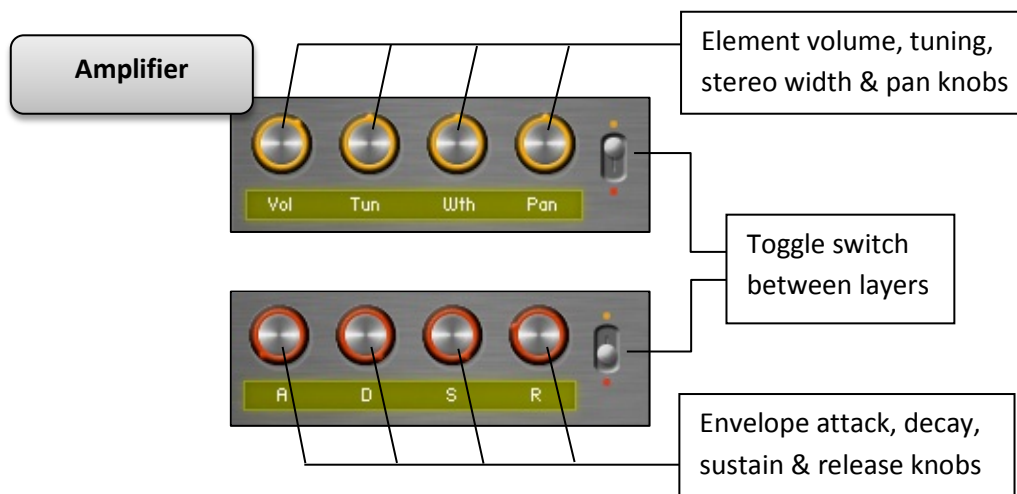
### Sound Elements controls in detail



In addition to the On / Off switch, an Element can be turned on by selecting a Bank or Element from the drop-down menus.

- ① It is not possible to select the same Element in both layers. If you try to, the next available Element in the current Bank will be selected.

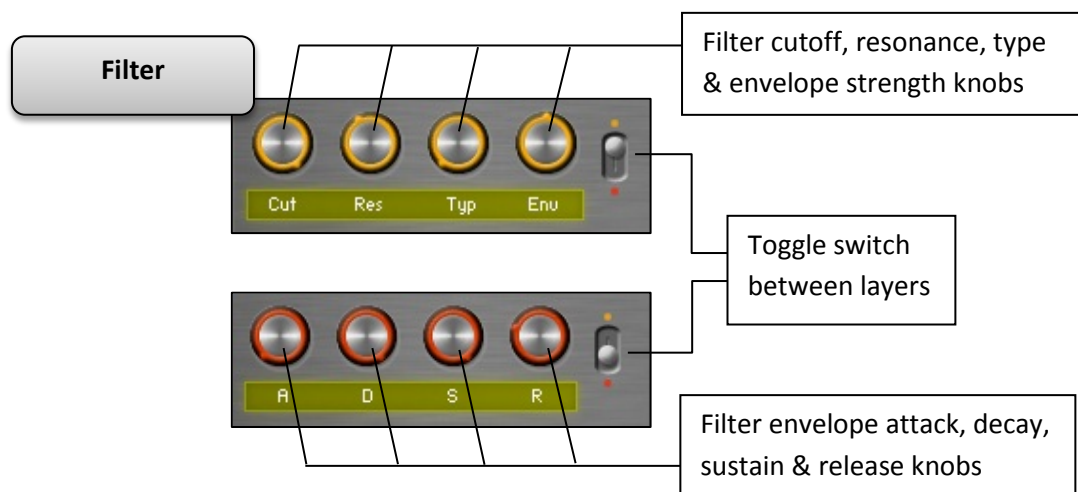
The controls for the amplifier, filter and effects are arranged in layers of four knobs. Switches next to the knobs toggle between the layers.



The tuning knob affects the pitch of the selected Element by up to -25 cents (knob fully left) or +25 cents (knob fully right).

When the stereo width knob is fully left, the selected Element will play in mono. When fully right, a stereo widening effect is applied.

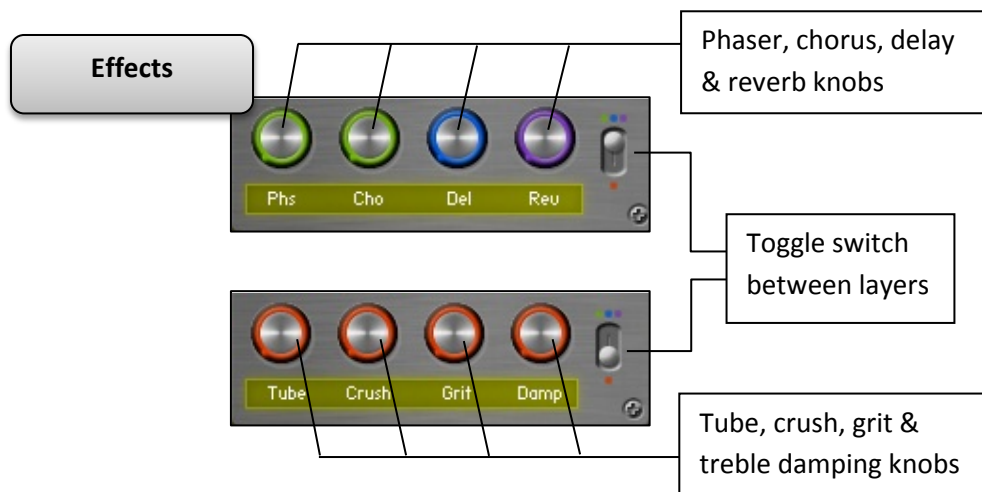
- ① If you use the stereo widening effect, consider checking your mix in mono, because the frequency balance may change when the left and right channels are summed.



The type knob morphs between a low-pass filter (knob fully left) and a high-pass filter (knob fully right). With the type and cutoff knobs both at mid-point, you have a band-pass filter.

When the envelope strength knob is at mid-point, it does not affect the filter. When turned left, the envelope has a negative effect on the filter cutoff; turned right, it has a positive effect on the cutoff.

- ① Take care when using high resonance values, because the filter can self-oscillate and become loud.



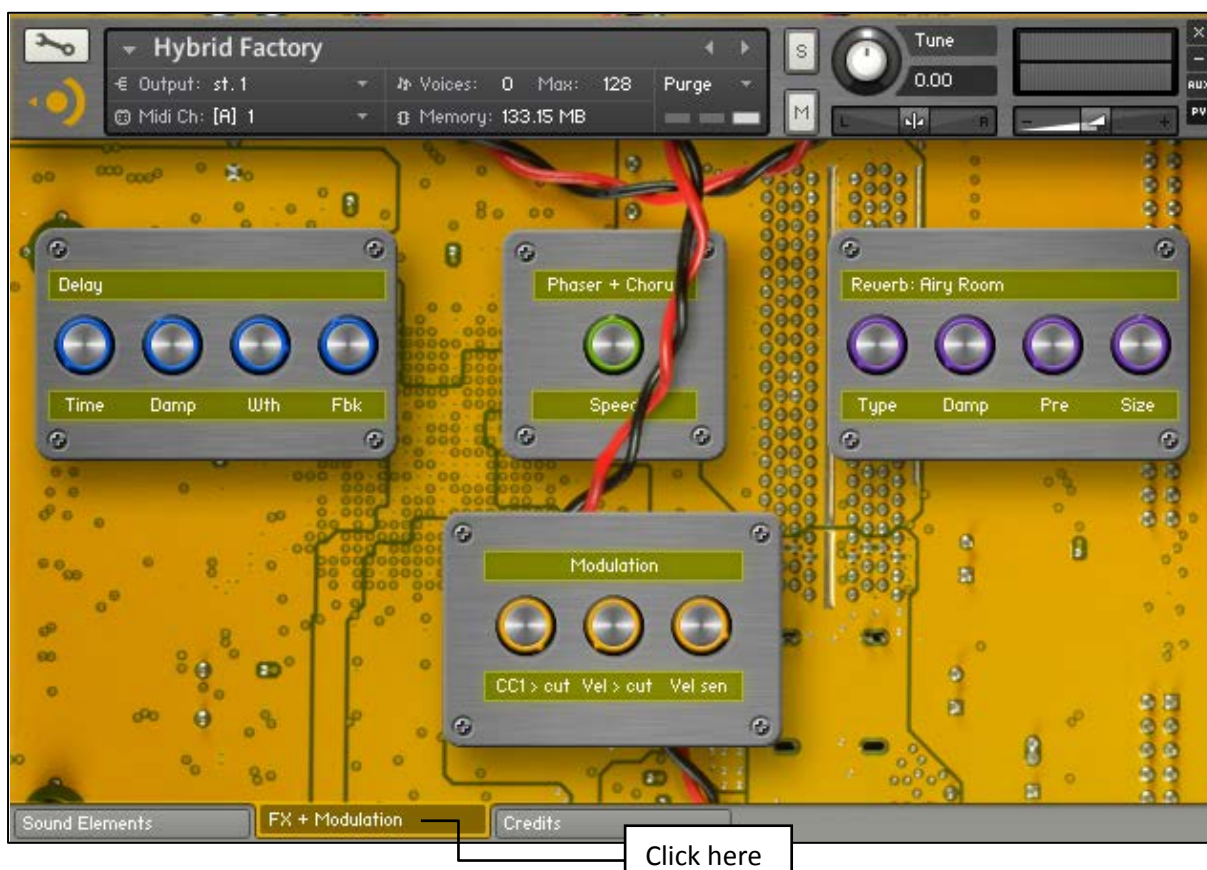
The phaser, chorus, delay and reverb effects are applied in parallel to the selected Element, as send effects. The tube, crush and grit distortion effects are applied in series, as insert effects.

The treble damping knob is useful for reducing high frequencies introduced by the distortion effects.

- ① You can use the treble damping knob as an additional low-pass filter, even if all the distortion effects are at zero.

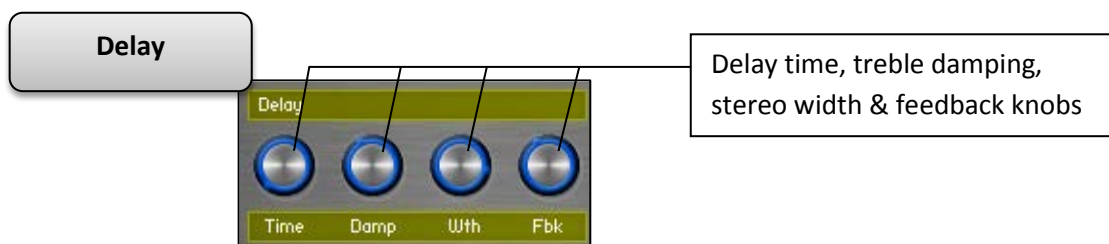
### The effects and modulation page

This page can be accessed by clicking the 'FX + Modulation' tab at the bottom of the interface:

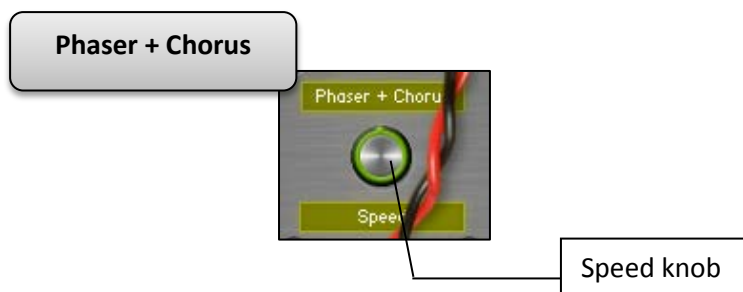


## Effects and Modulation controls in detail

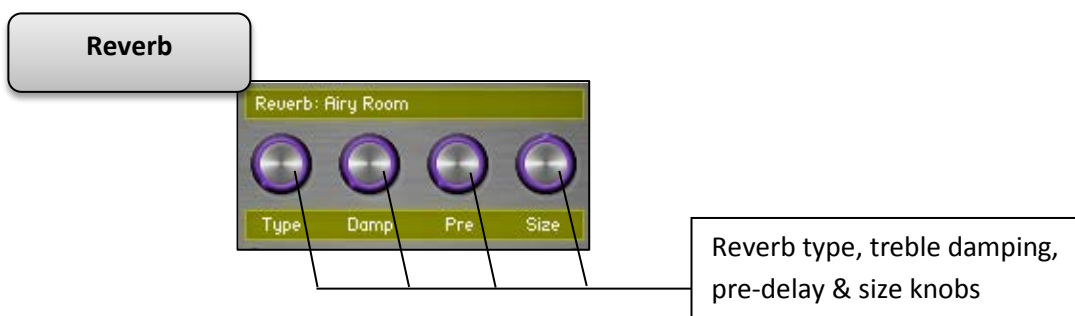
The knobs on this page are colour-coded to match the effect knobs on the first page of the interface: blue for delay; green for phaser and chorus; purple for reverb.



When the stereo width knob is fully left, the delay repeats are in mono; when fully right, the delay repeats alternate between left and right ('ping pong').



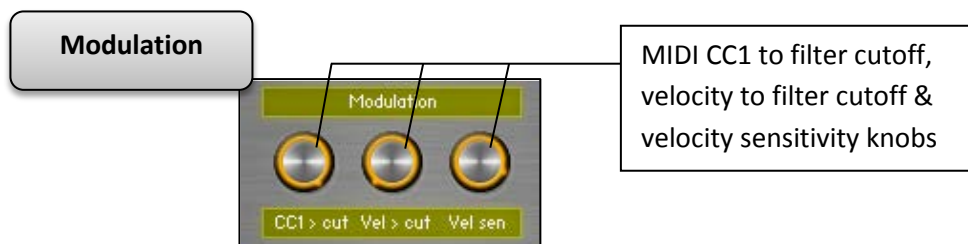
Both the phaser and chorus speed are controlled by the speed knob.



The reverb type knob cycles through twelve impulse response reverbs that were created especially for Hybrid Factory:

Airy room	Drum room	Reversed skinny
Cathedral	Melting glass	Tape echo
Concert hall	Psychedelic spring	Vintage spring
Dark digital	Reversed fat	Wide ambience

① Adjusting the reverb damping and size while playing notes can be processor-intensive.



When the filter cutoff modulation knobs are turned to the right, the sound will become brighter as the modulation sources intensify (MIDI CC1 or note velocity).

If the filter cutoff for an Element on the first page of the interface is already at maximum (fully right), then the filter cutoff modulation knobs will have no effect on that Element.

- ① Many MIDI controllers have a modulation wheel that sends CC1 messages. If your MIDI controller does not have one, assign a knob or slider on your controller to CC1, to hear the effect of Hybrid Factory's CC1 to filter cutoff knob.

### The credits page

This page can be accessed by clicking the 'Credits' tab at the bottom of the interface:



Audio design and editing by Iain Morland

Script programming by Iain Morland

Preset design by Iain Morland and Lars Westin

GUI graphics by Lars Westin

## Presets

Alongside the default NKI instrument, you will find a folder named presets. This contains four folders of Hybrid Factory instruments with Elements, filters, and effects already tweaked by Precisionsound:

- Basses
- Keys and Plucks
- Leads
- Pads and Textures

There are twenty instruments of each type, giving a total of 80 ready-to-play presets.

- ① Many presets have CC1 assigned to the filter cutoff. Don't forget to turn the modwheel!

## Making your own instruments

We encourage you to create your own instruments with Hybrid Factory. You could try:

- Blending the attack of one element with the sustain of another
- Slightly detuning one layer for a fat, analogue-style sound
- Using Elements from the Sound FX Bank to add tension to pad sounds
- Turning a sustaining Element into a short hit by lowering the envelope decay and sustain
- Processing noise Elements from the Simple Bank with effects
- Using extreme settings for reverb damping and size
- Applying a filter envelope with a very slow attack to a pad sound
- Using the tape echo reverb type instead of the delay effect
- Deconstructing the supplied presets and tweaking them to make new sounds...

## Known issues

Due to a Kontakt automation bug, it's not possible to automate the controls of Hybrid Factory. This bug has been reported to Native Instruments. However, you can still automate the filter by turning up the CC1 to cutoff knob, then recording CC1 movements in your host program.

## Feedback

We welcome your feedback on Hybrid Factory! You can write to us at [info@precisionsound.net](mailto:info@precisionsound.net).

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