VIDEO
2 MINUTES WITH...

# Zynaptiq
# **Adaptiverb** £219 PC MAC

## Built on machine learning and "harmonic contour filtering", this radical new reverb aims to synthesise tails perfectly matched to their sources

> Never ones to take the well trodden path, Zynaptiq's new reverb plugin is billed as a "harmonic tracking resynthesis reverb" that generates reflectionless ambiences "without obscuring the source". In practical terms, that means that Adaptiverb synthesises a reverb tail based on the specific tonal content of the input signal, using artificial intelligence techniques, rather than simply building it on delays or sampled impulse responses, then conforms it to the input's tonality or even a user-defined scale.

The AI element is the Bionic Sustain Synthesiser, a machine-learning algorithm that synthesises a reverb tail based on analysis of the input signal minus transients and other 'noise', which are discarded as part of the process. This synthesis involves under-the-hood oscillators, interconnected and trained like a neural network, the number and frequency quantising of which are controlled with the Simplify slider. Oscillator interaction can also be affected so that the harmonics at a specified interval are enhanced, by raising the Richness slider. The sustain then feeds into the Reverb section, which applies diffusion before the signal is shaped and finessed using the powerful Harmonic Contour Filter.

## Adapt or die

All of this is accessed via a GUI divided into three main areas. The top strip houses controls for adjusting Pre-Delay (up to 1000ms), wet/dry Mix, Wet Gain and Bypass. The bottom section enables switching between the plugin's three Reverb Models (All Pass, Ray Trace and Ray Trace HD, the last two delivering complex 3D room simulation with a commensurate rise in CPU hit), adjusting Reverb Size and high-frequency Damping, and mixing the reverb input between the synthesised sustain and the input signal. The last is particularly relevant to drums and other 'attacking' sounds, where the total removal of transients by the sustain synth can be countered by biasing the Reverb Source slider in favour of the Input. Indeed, the ability to dial transients in and out of the reverb is remarkable in itself.

The centre section features an X/Y pad for simultaneous adjustment of Sustain length and Reverb Mix, with a Freeze button for freezing and looping a 93ms slice of the input (not the reverb itself, like in many other reverbs). On the left of those is the Bionic Sustain Synthesiser, while the Harmonic Contour Filter section sits on the right, both switchable between the Main view, where each hosts just one transformative control – Richness and Harmonic Filtering, respectively – and Fine-Tune view, in which the full parameter set is revealed.

One page isn't really enough to scratch the surface of this innovative, sonically impressive plugin. It's like no other reverb we've ever come across, and although the technology behind it is kinda mind-blowing, the interface manages to stay fairly intuitive. The tails it generates are *incredibly* smooth and feel genuinely symbiotic with the input signal. The liquidity, density and musicality of the sound really are something to behold, while the harmonic malleability on offer and input Freeze/HCF Hold functions open up spectacular sound design possibilities.

On the down side, with so much synthesis going on in the background, the CPU usage can get comparitively high, and the zero-latency Live mode is only really useful with long tails, but other than that, Adaptiverb is far more than just an intriguing programming experiment gone right – it's a weird, wonderful, lavish, creative reverb with a character and identity all its own. **cm**

Web www.timespace.com

## Alternatively

**2CAudio B2 Spatial Processor**
**cm184 » 9/10 » $250**
Supercharged dual-engine reverb with absurdly detailed control

**Eventide Blackhole**
**cm181 » 9/10 » $199**
A fine reverb for sound design and live performance

## Verdict

For Genuinely innovative
Super smooth, beautiful reverb tails
Input Freeze and HCF Hold functions are great for drones and sound design
Massive library of excellent presets

Against Rather expensive
Live mode is limited in its utility

Unconventional and unique, Adaptiverb is not only a beautiful all-purpose reverb but also a rewarding sound-design tool

**9/10**

## The Harmonic Contour Filter

**The Harmonic Contour Filter establishes and affects the harmonic relationship between the input signal and synthesised tail, bringing the two together seamlessly.**

**In Track mode, the input signal is taken as the harmonic/pitching source, and the all-important bipolar Harmonic Filtering control progressively attenuates similar or dissimilar elements in the reverb tail. With the similar components removed, very strange, dissonant effects arise, while knocking out** the dissimilar stuff can keep the tail constantly tied to the input pitch, rather than clashing with it when it 'overhangs' through key changes.

**In Keyboard mode, the reverb is 'snapped' to a user-defined key or chord, either by filtering out harmonics outside that key or quantising all of them to its harmonic series, the latter being the bigger, denser option.**

**The Breathiness slider adds random noise to the reverb, for added 'sizzle' and sheen.**