

PROGRAM PANEL

Assign up to eight on various MIDI channels or stack 'em up for richer sounds

ENVELOPE GENERATORS

Envelope 1 is for filter cutoff and wavetable position, 2 is for amplitude, while 3 is a two-stage affair with reversible polarity

DIGITAL PANEL

Dive inside of those wavetables, mess with their modulation and have a play with the arpeggiator

LOW FREQ OSCILLATOR

Offers adjustable rate, shape and delay, and is as erratic as the real thing!

BASIS

Determines how voices will be placed around the stereo sound field

MODIFIERS

Here you'll find filter controls, a drive control and knobs for setting the start position of the wavetable

PANEL BUTTONS

Select what to display in the Digital Panel area up top



PANEL FUNCTION

Choose filter modes, select between transistor- and tube-style drive and activate the True PPG function

Waldorf **PC MAC** PPG Wave 3.V £119



The virtual version of the legendary PPG Wave gets a long-awaited update, providing features long desired by PPG aficionados

System requirements

PC Intel P4/AMD Athlon 1.5GHz CPU, 256MB RAM, Windows XP/Vista/7, VST host

Mac 1.42GHz PowerPC/1.5GHz Intel CPU, 256MB RAM, OS X 10.4, VST/AU host

> Waldorf's PPG Wave 2.V virtual synth is an emulation of the classic PPG wavetable synth. The hardware saw the light of day in the early 80s and experienced a number of revisions: 2 (the original), 2.2 and 2.3. The soft version has been around for nearly a decade now and, though we've seen minor tweaks, fixes and even a repackaging, there has never been a significant update. We've seen variations on the wavetable approach (including Waldorf's own Largo), but the PPG clone seemed to be collecting dust. That would have been a shame. Technology has come on a great deal since the PPG Wave 2.V was first released, and developers can now take advantage of a lot more horsepower to hone their emulations to a T and provide keen extras like built-in effects. Happily, that's just what Waldorf have done with the PPG Wave 3.V.

Feeling blue

The interface will be instantly familiar to anyone who used the Wave 2.V or, indeed, a real PPG. As with the real thing, the interface is divided between familiar 'analogue' knobs and slightly more cryptic digital functions. The analogue

section recreates that of the the hardware with only a few variations, while the top half is used as a detailed display of the deeper functions. It's a vast improvement over the hardware's archaic two-line LCD display. A brace of buttons allows access to the digital facilities.

The sound is as familiar as the GUI. Subtractive synthesis is the name of the game here, though instead of the usual smattering of simple waveforms, the PPG uses wavetables, each consisting of a series of digital waveforms strung together in a linear fashion. This allows for a far greater range of sounds, but wavetables really come alive when using modulation to dynamically sweep through the waveforms, resulting in the shifting, evolving timbral changes that are the PPG's calling card.

New additions for the 3.V include a wicked Drive function in the filter section, along with the ability to select between the sound of the 2.2 and 2.3 hardware (or even the 2.V software, for backward compatibility). The True PPG mode must be activated to achieve the most faithful emulation of the original. The filter itself features 12dB and 24dB modes.

“PPG Wave 3.V still sounds terrific and is the closest thing to a real PPG”

Waldorf have included a full complement of effects this time around. There's an EQ, phaser, overdrive, chorus, six-tap delay and, of course, a reverb. They all sound good. The effects are assigned and saved per program, so if you stack a bunch of patches up in a multi, they can each have their own processing. Sweet.

Terms of endearment

Many of the sounds that we associate with the original PPG machines came courtesy of the bulky blue sidecar computers known as Waveterms. These heavy-duty processors opened up new possibilities for PPG owners, providing sampling, custom wavetables and more. When we heard that the new PPG Wave 3.V was to include the sampling of the original, our anticipation-ometer went off the scale.

However, our excitement may have been a little premature. Yes, the 3.V does import samples (dubbed 'transients' in PPG speak), and they are loaded in via the Digi page. The Wave 3.V comes with the original Waveterm factory samples, and it can even read Waveterm disc images (with the help of third-party freeware), if you are lucky enough to have an original Waveterm lying around. 8-, 12- and 32-bit playback resolutions are provided, the first two being in keeping with the PPG Waves 2.2 and 2.3 respectively.

As with the original, you can use up to eight different samples to create a multi (assuming that each of the eight parts is responding to the same MIDI channel). You can adjust sample start and loop position, but not a lot else. It's very rudimentary by today's standard, but that's really the point: to provide an authentically retro experience. Yet we can't help but feel a little disappointed that more of the Waveterm's functionality wasn't included. We'd dearly love to see the ability to cobble together custom wavetables (Waldorf suggest that this might be implemented in the future). Still, the sampling is a nifty addition and it's terrific to have access to all of those familiar 80s sounds.

Waldorf's press releases have made much ado about the diligence applied to recreating the harsh, characterful sound of the original PPG Waves. It just so happened that we had access to an actual (battered) PPG Wave 2.2 for our review, and we couldn't think of a better way to put their claims to the test than by comparing



The PPG Wave 3.V's graph display is a heck of a lot easier to grasp than the two-line LCD of the original



We compared the PPG Wave 3.V plug-in to the original hardware - and came away impressed

Keeping it real

So how does the software stack up to the hardware? As the Wave draws upon digital wavetables, the oscillators are, as you'd expect, pretty close. The main differences that we found were in the envelopes, which isn't uncommon in emulations. However, we have to say that in the case of the PPG Wave 3.V, the differences are slight indeed: they really only became evident when using ADSR 1 to sweep through the selected wavetable. You can plainly hear this in the files PPGTestWaveSweep1.aif and PPGTestWaveSweep2.aif on the cm DVD. In these examples, we set up both the real PPG and the 3.V with the same parameter values - the real one plays first, and the clone sounds after that.

Obviously, there are some slight differences. It turns out that the envelopes in the Wave 3.V are matched to the slightly faster envelopes of the

Wave 2.3, and even though you can switch between emulations of the 2.2 and 2.3 modes hardware, it seems the envelope is always in 2.3 mode.

These disparities are even less noticeable when, say, shaping classic PPG bass, as our PPGTestBass.aif clip demonstrates. Again, the real PPG is heard first, followed by the clone.

The final example is a recording of initialised settings with the resonance cranked high, while the cutoff sweeps from lowest to highest settings and back. Here, you can plainly appreciate the hard work that Waldorf's boffins put in to the filter! It should be noted that the filter itself is the same as the one used in the 2.V - it has always sounded this good. The improvement comes in the way it responds to the envelope, which is far more accurate on the 3.V. Very well done, lads!

the Wave 3.V with the gritty, grainy grandiosity of the real thing. See *Keeping it real* for the results.

What's it bring to the table?

It's easy to expect too much from an update that took so long to arrive. While we'd have loved more Waveterm functions, there's no denying that the PPG Wave 3.V brings enough new features to justify the cost of upgrading. The ability to layer programs with individual effects is alone worth the upgrade fee. It should also pique the interest of those who didn't grab the 2.V version. It's still sensibly priced, it still sounds terrific and it's the closest thing to a real PPG.

Of course, much of the cryptic nature of the 3.V's hardware forebear is still in place. The original patch names still give nothing away as to how they sound (superb, in most cases), and the Waveterm samples often have confusing names - all carried over from the real thing.

Nevertheless, like its old man, the PPG Wave 3.V provides an awesome, gritty sound that, even decades on, will make the most jaded synthesists sit up and listen. **cm**

Web www.waldorfmusic.de
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Info Upgrade from any 2.V version, €119

Alternatively

Waldorf Largo
cm142 >> 8/10 >> €199
Packs in more features, but doesn't quite have the raw bite of the PPG

ConcreteFX Kubik
cm142 >> 9/10 >> £54
A true 'sleeper' synth packed with options. Does custom waveforms!

Verdict

For Astoundingly faithful recreation
Filter still sounds amazing!
Loads samples and Waveterm content
Flexible effects
Stack up to eight patches

Against No user wavetables

This emulation of a character-packed classic is now more convincing than ever, with greater flexibility to boot.

9/10