



Bitwig Studio 3 \$399

With The Grid, Bitwig adds an ambitious modular environment to its already impressive toolkit. **Si Truss** asks if this is the most creative DAW on the market

CONTACT WHO: Bitwig **WEB:** bitwig.com **KEY FEATURES** Digital Audio Workstation. Version 3 adds The Grid – a fully modular synth/effect processor equipped with 150+ modules and over 200 presets



It's a little over five years since version 1 of Bitwig Studio first hit hard drives, which makes it still a relative infant in DAW terms. The application has come a long way in that time though, throwing off the shackles of its inevitable Ableton Live comparisons – the two share a number of original developers and some significant workflow similarities – by adding multiple features that have bolstered Bitwig's reputation as possibly the most creative DAW on the market.

The most significant of those additions has been the flexible modulation system introduced for Bitwig 2. This allows any device, be it native or third party, to have an unlimited number of additional modulators attached, selected from an impressively diverse line-up of LFOs, envelope generators, randomisers, performance tools and more. It's a simple system to use but can be incredibly powerful, particularly since it also works with Bitwig's MIDI and CV I/O devices, effectively allowing you to add an

THE PROS & CONS



The Grid makes Bitwig an even more powerful creative tool

Has lots of potential to grow

Perfect learning curve – accessible to beginners and experts alike



Current crop of effects modules is a little hit-and-miss

plans, rather than simply purchase each update individually (when a subscription ends, users can no longer access updates, but get to keep all their software). Bearing in mind that all of the features mentioned above were additions during the life-cycle of Bitwig Studio 2, you'd be hard pressed to argue that Bitwig aren't giving users their money's worth with those plans.

Now we have version 3 – an update very much focussed around just a single new feature, albeit a significant one. That headline feature is The Grid, a new type of device that brings a fully modular environment to the DAW's toolkit. There are two iterations included – Poly Grid, used for polyphonic sound generation, and FX Grid, which is used to create audio effect processors. Aside from these intended purposes and their default I/O configuration, the two Grid devices are the same, each offering an open-ended UI space in which users can add any configuration of more than 150 virtual modules.

The available modules themselves are broken up into 16 categories, ranging from simple virtual synth elements through to an extensive assortment of modulators, as well as logic and maths-based signal processors that take their inspiration from the hardware modular realm. In all, there's an absolute wealth of tools to experiment with, and a ton of potential available, although – understandably at this stage – some types of module are better represented than others. The range of oscillators is particularly strong, with analogue-style sine, square, saw and triangle oscillators joined by a specialist phase modulation oscillator, the unison-focussed Swarm device and a sampler module. Even the simple oscillators feature extensive modulation options along with a multitude of creative tools to adjust parameters such as wave slope and wavfolding. All of which makes it very easy to set up Buchla-inspired complex oscillators and other interesting custom sound generators.

There are several varieties of filter included too, providing Ladder and Sallen-Key style LPFs, a more generic state variable filter, an all-pass filter and simple vanilla low- and high-pass devices. It's not as extensive as, say, the line-up of characterful filters included in NI's Massive X or Arturia Pigments, but still provides plenty of

expansive array of additional modulation tools to your studio hardware. It really is a great system; it impressed us immensely at the time it was unveiled and Bitwig remains head and shoulders above the rest of the market on that front.

Other new features have helped to flesh out Bitwig's toolkit over the last few years too, such as a beefed-up sampler and an excellent phase distortion synth. Moreover, the pace of these updates has been pretty consistent and impressive. Bitwig users buy into 12-month update

THE ALTERNATIVES

**Ableton Live 10 Suite** £539

Still Bitwig's closest rival, these days boasting its own DIY toolkit in the form of Max For Live.

ableton.com

**Kilohearts Phase Plant** from 169€

Like the Grid, Phase Plant is fully modular and hugely powerful yet remains sleek and accessible.

kilohearts.com

**VCV Rack** Free

VCV Rack is a free and fully open source software modular instrument. Great for dipping your toes in the modular waters.

vcvrack.com

inspiration when it comes to both analogue-style and digital creations.

The selection of effects, on the other hand, is a little hit-and-miss right now. For instance, there are several types of delay but no reverb processors, and multiple excellent distortion/shaper types but no EQ, compression or limiter. Admittedly, many of these functions can be achieved by creatively patching existing elements, but a few 'off-the-shelf' processors would go a long way to speeding things up. It means that, at launch, The Grid feels more fully fleshed-out on the synthesis/sound creation front than it does as an effect processor.

To be honest, there's a long list of tools we'd like to see added to The Grid. A convolution effect would be a great addition, as would some kind of resonator tool. Dedicated percussion generators would be nice too – while it's easy to create synth drums by patching up pitch envelopes and layering noise, it would still be cool to

have Bitwig's stock percussion instruments available as Grid oscillators. Importantly though, these are all wish list items rather than omissions; if anything, it's testament to the creative potential of The Grid that we're already imagining ways it could be developed.

One area where The Grid does shine is in its range of I/O, sequencing and control options. Naturally, creations can be sequenced and automated using Bitwig's timeline, as with any other instrument in the DAW. There's also an extensive selection of pitch, gate, trigger and step-sequencing tools within The Grid

itself though. Coupled with the available clock dividers, transport router, pitch quantisers and other tools, it's possible to get really creative. There are also modules for routing audio and CV signals into and out of Bitwig, allowing creations to fit seamlessly into a wider studio setup or modular rig. There's also a sidechain tool for routing audio from elsewhere in the DAW. Finally, it's worth noting that all elements of The Grid are compatible with Bitwig's existing, hugely flexible modulation and MIDI controller systems.

The Grid isn't necessarily a revolutionary tool in and of itself; the

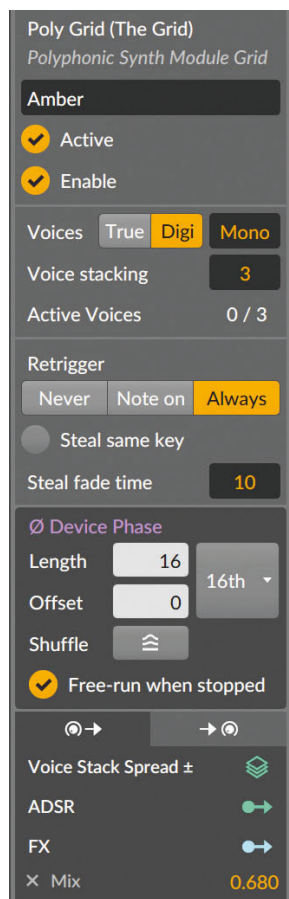
What sets Bitwig's Grid apart is its approachable, user-friendly design

WHAT ELSE?

Although Bitwig Studio 3 is focused around The Grid, there are a number of other updates of note. The most significant is probably the reworked device voice mode menu, added to the inspector panel for polyphonic instruments. This now offers three voice modes: polyphonic, digital mono and true mono. Digital mono mode provides two alternating voices, with envelopes that always retrigger from their zero point, whereas true mono is a single voice mode, closer to an analogue synth. In this panel there are also controls for engaging Bitwig's modulate-able Voice Stacking capabilities.

Elsewhere, Bitwig has also added auto-backups of project files, saved to the project folder in case of emergencies. This latest version also adds the ability to easily swap certain devices for similar tools, such as upgrading EQ-2 to EQ-5. There's support for version 3 of Ableton Link too.

Beyond the features themselves, there have been minor refinements to lots of UI areas and, we're told by Bitwig, lots of under-the-hood tweaks improving the audio back-end, as well as the behaviour of several devices.



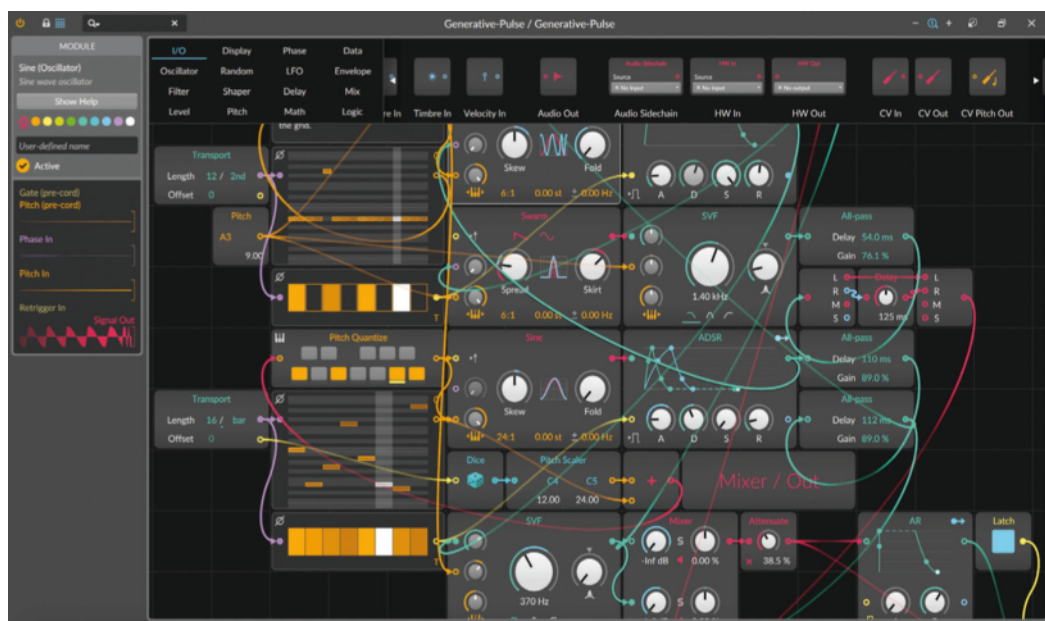
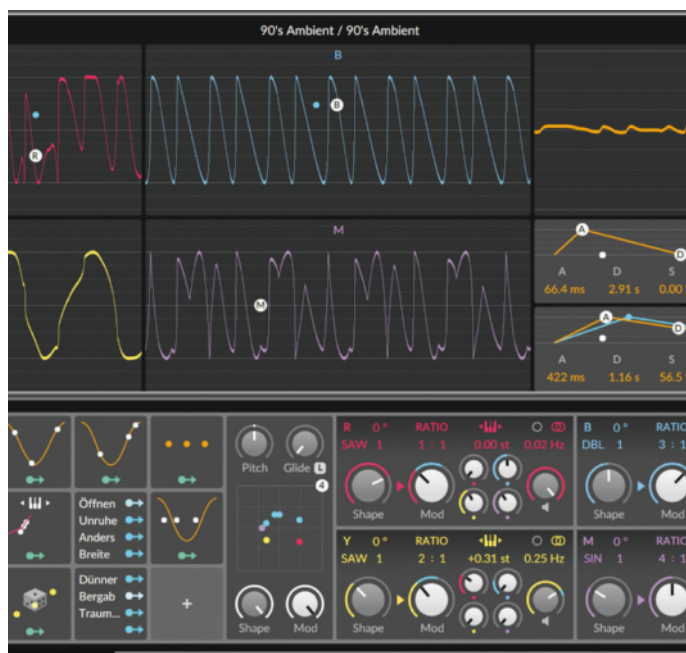
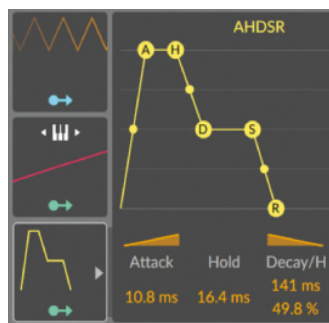
concept of a DIY device toolkit has existed in NI's Reaktor and Max for some time, and Softube Modular, Phase Plant and others have previously brought modular flexibility to the softsynth realm. What sets Bitwig's version apart, however, is its approachable, user-friendly design.

For one thing, upon opening up a Poly Grid device, by default the user is presented with a simple pre-patched oscillator/envelope setup. While this seems a minor thing, having a default setup that makes sound right off the bat, rather than simply an empty space, makes The Grid feel less intimidating than some of its peers. There are a number of little touches throughout that make The Grid feel user-friendly: like the system of 'Pre-Cords' that automatically connect common patches; or the inclusion of spectral analysers in each device's inspector panel that offer a visual representation of all input and output signals. There are pop-out diagrams for each module too, which provide a brief explanation of its function along with the available inputs and outputs.

Another handy feature is the way it allows users to swap modules while, to the best of its ability, maintaining existing patches – ie one filter can be swapped for another with all audio and modulation routing connections intact. This makes it considerably easier to experiment with different elements without fear of having to reconstruct your entire signal flow.

In general, this ethos of letting users experiment freely runs throughout The Grid. The signal flow is set up so that any output can be patched into any input without the fear of breaking something; that's not to say that routing experiments will always work, but unlike working within the hardware realm, you can guarantee they won't go horribly wrong – and could generate interesting results. Signals are 400% oversampled and stereo throughout too, so there's a lot of flexibility for how things are routed. Despite this, The Grid isn't as CPU intensive as you'd expect – in contrast to similarly routable third-party 'power synths', we were able to push The Grid considerably further without problem.

In their promo materials, Bitwig state that their aim is to keep the tech that powers The Grid 'transparent, so you can focus on the big sonic picture', and I'd say they've



THE GRID: Bitwig's new modular environment dominates this update, and it really is excellent

MODULATORS: Bitwig's modulation system, added with version 2, is still head-and-shoulders above the competition

PHASE-4: The DAW's stock 'phase distortion' synth is still a fantastically creative instrument

nailed that. What's really impressive here is that – as with the existing modulation system – Bitwig has taken a deep, complex tool and made it feel user friendly. The learning curve is pretty much perfect here; novices can use The Grid to build simple synths and deepen their understanding of synthesis, adventurous users will get lost in the deep possibility of logic generators and mathematical processors. But there's no drastic jump between these two levels; rather a simple path of discovery as users begin to try out new elements.

You could say that, as a whole, Bitwig Studio 3 doesn't have much to offer users not interested in The Grid. Even for those with little or no interest in designing their own instruments though, Bitwig 3 still comes stocked with over 200 presets split across the Poly and FX Grid types, so even taken purely on a surface level it adds a significant volume of interesting new sounds. While, as discussed, there are perhaps areas where The Grid can be refined with further features and module types. For now though, it really is an excellent starting point. **FM**

FM VERDICT

9.6

A powerful, truly inspiring update that further cements Bitwig Studio's existing stake as the creative producer's DAW of choice