



Bitwig PC MAC

Bitwig Studio 2 €379

No longer the DAW with everything to prove, Bitwig is back with a finessed GUI, new devices and a dazzling modulation system

> The first full version update to Bitwig Studio (9/10, cm203) - the upstart DAW launched in 2014 by a team of ex-Ableton employees - doesn't mess with the fundamentals. It still combines freeform clip launching and linear arrangement in a workspace obviously influenced by Live but with a clear personality all its own; it still enables the construction of elaborate nested instrument and effects chains; it still treads its own GUI path; and it still runs under Mac OS, Windows and Linux, with full touchscreen support for the last two.

Alongside the expected slew of added devices, workflow-related features and refinements, though, Bitwig Studio 2 heralds a transformative upgrade to what was already one of its best features, opening up a vista of compositional and sound design possibilities that no other DAW can match out of the box. Before we get to that, let's start at the beginning...

Dashing about

As is de rigeur these days, Bitwig Studio 2 launches with a swanky new Dashboard screen,

bringing together the usual ancillary tools and operations, including application settings, Package management, project creation and opening, and access to online and offline help and documentation. The Dashboard can be opened at any time by clicking the Bitwig logo at the top-centre of the interface.

With the Dashboard dismissed, it becomes immediately apparent that the GUI has seen a rethink. The menu bar has been split up and reworked into File, Play, Add and Edit menu 'buttons' (a purely graphical change - they're

“Every menu entry has an associated pin button, and clicking it pops that function into the control bar”

still just menus), while a single context-sensitive menu button at the right-hand end of the control strip switches role depending on what's currently selected, and relieves the Inspector of a fair few buttons. With a clip selected, it becomes the Clip menu, containing Quantize, Bounce, Transpose, Reverse, etc; with a track selected, it's the Track menu - Rename, Group, etc; select a MIDI note and it's the Note menu... you get the idea. Most of this stuff is accessible via right-click, too, of course.

Bitwig have also thrown in an ingenious toolbar pinning mechanism. Every menu entry has an associated pin button, and clicking it pops that function into the control bar as a dedicated button appearing next to its parent menu. It's a simple and effective way to build your own collection of frequently used commands, although a lack of scrolling functionality means that once the bar is full, further buttons can't be pinned without unpinning other ones first. It also seems like a prime opportunity to implement support for Apple's MacBook Pro Touch Bar, which we're quite surprised Bitwig haven't.

“Bitwig Studio 2 doesn’t add any new virtual instruments to the line-up, but it does bring in five new audio effects”

Beyond that, the interface has been made more intuitive and consistent through the repositioning and resizing of various controls, none of which existing users will have any trouble adapting to; and the Arranger and Details views now have their own tool selection menus, so you can automatically switch between, say, the Time Selection and Pen tools as you move the mouse pointer into each panel. Similarly, Smart Tool switching automatically toggles between object and time selection as the pointer moves between the body of a clip and its top bar. Oh, and one of our biggest Bitwig bugbears has at last been dealt with: track heights are now adjustable in the Arranger!

Mr Modulator

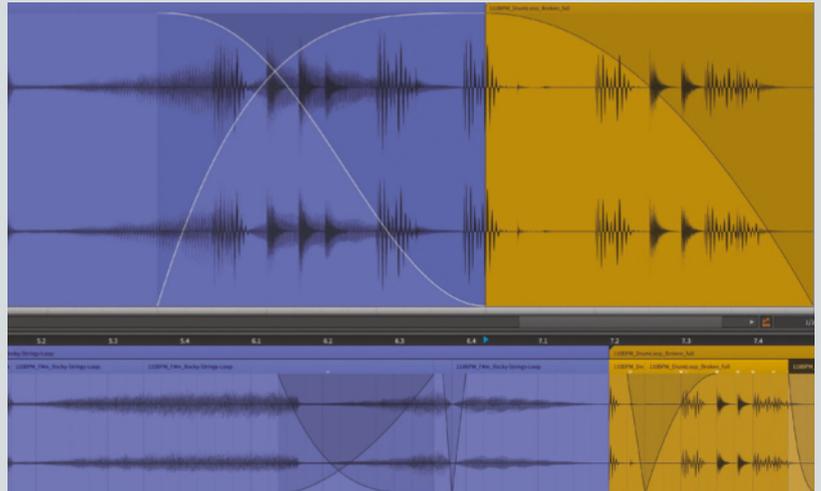
Onto the main course, then. One of the defining elements of the original Bitwig Studio was its Unified Modulation System, with which modulators – both standalone and integrated into instruments and effects – were assigned intuitively and consistently, for comprehensive chain-wide automation of device parameters. Bitwig Studio 2 takes this concept up about... oh, ten notches.

Every one of Bitwig Studio’s devices, and external VST plugins, now features a limitless number of modulation slots into each of which one of 25 signal generating devices can be loaded for free assignment to that device’s parameters, the parameters of any other devices nested within it, and/or each other. Modulators are loaded from the popup browser, pulled from a spectacular list that includes LFOs, envelopes, a step sequencer, audio and MIDI envelope followers, a keytracker, a maths module, buttons, faders, X/Y and vector pads, a randomiser, CV and MIDI CC inputs, and more.

Modulators are assigned to parameters just as they always have been: click the usual Modulation Assign button to enter routing mode, then drag up or down on the parameter(s) to be modulated (within a searchable list panel for VSTs, rather than their main GUIs). Modulators can be monophonic or polyphonic, and when a modulation Assign button is active, all controls assigned to that



The new modulation architecture is nothing short of genius – we can’t wait to see what the community build with it!



Apply fades and crossfades to audio clips, and shape the resulting curves directly on the clip itself

Not fade away

Bitwig Studio 2 introduces editable audio clip fades and crossfades. White handles appear at the top left and right of any audio clip – or region in the audio editor – when the mouse pointer is in proximity. Drag them into the clip to apply a volume fade, then drag the line of the fade to bend it into a curve.

To crossfade two clips on the same track, overlap them and drag a fade marker from one into the other. The crossfade comprises a fade in or out curve for each clip, both starting at the edge of the clip from which the dragged handle originated, and ending at the handle position. Drag the point of intersection to change the crossfade as a whole, or adjust each individually. You can even drag the whole crossfade

region left and right without moving the clips themselves.

By default, fade handles snap to grid, but holding Shift while dragging them disables that. Alt-clicking a fade curve, meanwhile, switches it between regular and S-shaped. All of the mouse-manipulated Fade parameters are also editable in the Inspector, for those who prefer a more numerical approach.

The old ‘edge fades’ of v1 have been upgraded, too, to the new Auto-Fade Clip menu option, applying very short fades to the start and end of a clip for the alleviation of clicks. With a time selection made, Auto-Fade also appears in the Time menu, applying a crossfade across the whole selection range when invoked.

modulator light up green (polyphonic) or blue (monophonic).

Depending on the modulator, its controls will be either housed entirely in the square slot itself, or a larger popout ‘details’ panel with the slot giving a miniature representation or summary of the main controls. The animation of LFOs, envelope paths and output signals in the modulator GUIs is as gorgeous as it is informative, with separate indicators showing each note for polyphonic modulation. Multiple details panels can be opened at once by holding Shift while clicking slots; slots are rearranged by dragging and dropping; and all mod assignments and depths are listed in the Inspector.

It’s a slick, beautifully designed system – with no limit to the number or routing of modulators within a device chain, the scope for elaborate modular instrument and effect design is mind-boggling. It’s also rendered Polysynth and FM-4’s onboard LFOs and Expression modulators redundant, so they’ve been removed – but presets made in v1 load with the new modulators assigned to match.

Its own devices

Surprisingly, Bitwig Studio 2 doesn’t add any new virtual instruments to the line-up, but it does bring in five new audio effects, a Spectral Analyzer, six Note (MIDI) effects, and six incredibly useful devices for outputting MIDI data (CC, Program Changes and song selections) and CV/gate to external instruments. We can see the last of these making Bitwig a gamechanger for producers heavily invested in hardware synths and samplers – working within the DAW just like any other effects, they all incorporate the new modulation system.

The Spectrum Analyzer is a simple affair, offering visualisation of two channels at once (Left, Right, Mid or Side), with the B signal sourced from the host track or any other in the project. The Fall rate can be set anywhere from

“Bitwig Studio 2 is arguably the most overtly creative DAW money can currently buy”

static to instant, and despite the inflexibility of only having two spectra to work with when comparing separate sources (ie, only one channel from each), it's a useful reference tool. Handily, spectral analysers have also been integrated into the existing EQ, filter and reverb devices, too.

The new audio effects comprise Phaser (2-32 poles; independent L/R frequency adjustment), Pitchshifter (up to one octave each way; Grain control), Dual Pan (true stereo panning), DC Offset and Treemonster (an insane but very musical ring modulator). The new Note FX facilitate chord generation, note length and velocity manipulation, latching, and harmonising with notes routed in from another track.

Bitwig's flagship instrument, Polysynth, has been beefed up with the addition of six oscillator mixing modes, post-filter waveshaping, unison width control, a secondary 12/24dB/octave high-pass filter and a filter feedback circuit. It's a much more interesting instrument than before, certainly, but still not what anyone would describe as a 'go-to'.

Finally, Bitwig Studio 2 supports the VST3 protocol, which won't be much consolation for Mac users still left awaiting the addition of Audio Units compatibility.

'Wigging out

If the nicely revamped GUI, capable crossfading, welcome Remote Controls revamp and groovy new devices were all there was to Bitwig Studio 2, we'd be summing it up as your classic evolutionary refresh.

Really, though, v2 is all about the modulation system, and in that regard, this is as revolutionary an update as we've seen any DAW make in recent years, letting us get hands-on with far more of the software's famously modular underpinnings than we could with version 1. We guess the next logical step is to untie modulators from their host tracks and devices entirely, enabling any given device to control any other devices or mixer parameters, with no locational restrictions, followed by a full-on integrated Reaktor Blocks-style construction environment. That's all

speculation, though, of course, and Bitwig 2's amazing modulation system is more than enough to be getting on with. Incredibly powerful, fun to use, rapturously flexible and visually arresting, it's reason enough on its own for existing users to upgrade and newcomers to take a long hard look at what is now a uniquely empowering music production system. Sure, it still falls short in its tiny roster of instruments and the relative quality of some of its effects, and some of the interface quirks take a bit of getting used to, but Bitwig Studio 2 is arguably the most overtly creative DAW money can currently buy.

Web www.bitwig.com



Build custom MIDI control schemes in the Remote Controls Editor, and switch on the fly

Remote possibilities

The Macros panel has been replaced in Bitwig Studio 2 by the new Remote Controls system, improving on v1's Device Mappings Panes. Bitwig's devices have always featured menu-selected pages of eight MIDI control slots each, assignable to any of that device's parameters, for instant switching of MIDI controllers between related banks of knobs. So, Polysynth, for example, has a page for each Oscillator, a page for the Filter, etc, and moving between them switches the first knob on your MIDI controller between controlling oscillator Pitch, filter Cutoff, etc, the second knob between oscillator Shape, filter Resonance, etc, and so on. You can edit and add to the default pages (most devices only start with one) with your

own custom controller banks, and save the whole lot with the current preset or for all instances of the device.

In Bitwig Studio 2, not only has all this been made more readily accessible, but buttons and selectors are supported as well as knobs, and it all just feels more polished and obvious. The old Panel Mappings Editor has been upgraded to the Remote Controls Editor, giving a far nicer editable overview of all pages together, and the whole thing makes for a supremely easy way of building and storing studio and live performance MIDI control schemes.

Macros, it's worth noting, are still available as modules (in one- and four-knob varieties) in the modulation system, for one-knob control of multiple parameters.

Alternatively

Ableton Live 9
cm190 » 9/10 » €349
Live's DNA still clearly runs through Bitwig Studio

Propellerhead Reason 9
cm234 » 9/10 » €369
The closest any other DAW gets to BS2's modulation power

Verdict

For Brilliant new FX
New modulation system is extraordinary
MIDI and CV output to control hardware
Streamlined GUI
VST3 and MIDI Time Code support

Against No new instruments
Still doesn't support Audio Units plugins

With an amazing universal modulation system, new FX, better MIDI control and top-notch hardware integration, Bitwig Studio 2 is a truly essential upgrade

9/10



Polysynth is greatly improved in Bitwig Studio 2, but we'd have preferred a new instrument or two, really...