Bitwig Studio 1.0

Graham Morrison pulls himself out of rapture to write not nearly as many words as he wanted to.

This is a day-one Linux release of a market changing desktop music composition application. On Apple's OS X and Microsoft Windows, Bitwig Studio is causing a stir because it implements a similar workflow to an industry standard, Ableton Live. Instead of creating music by recording onto tracks, an arrangement is created by recording a sequence of triggered loops of audio and MIDI, often live and augmented with bucketloads of effects, automation and processing.

There's simply nothing like this for Linux. Bitwig Studio is a refined, minimally styled and powerful application. It's capable of full-blown music production and is a joy to work with. It's occasionally frustrating and slightly unstable – mostly because this is the first release – but it's constantly capable of the kind of audio gymnastics that a certain kind of music producer can't live without.

Jack your body

The only officially supported Linux platform is Ubuntu 12.04 LTS, which is unambitious but understandable. You can activate up to three installations, the idea being that you have a workstation at the studio and a laptop for travel, and you can activate an instance for a single session, which is useful if you're using someone else's machine.

With our i5 CPU, the Pro 40 and the Jack audio layer, we got ultra-low latencies of 2.9ms running with a Frames/Period buffer of 64. That was fast enough for realtime effects processing and monitoring on incoming audio, plus MIDI software synthesiser playback, without any hint of latency, at least to our ears. A slightly larger buffer did significantly reduce the CPU overhead of polling the audio interface, which we'd recommend if your CPU is a few years old. We also tested latency on the Dell XPS 13's internal audio, and found it perfectly acceptable for playback, being in the region of 12ms, making Bitwig and Linux a great gigging combination.

The brilliant thing about Bitwig Studio is that it features an arrangement view and a clip view that can be opened side-by-side. The arrangement view is how Audacity, Ardour, Rosegarden, Cubase, Cakewalk, Apple's Logic and countless others manage their multitrack productions. Each track of MIDI or audio is a different horizontal bar on the screen, and a mixer view usually handles effect sends and processing for each track. The clip view is where you create loops of either audio or MIDI, putting variations on the same track and arranged into groups you want triggered at the same time.

Thanks to Jack, we found the process of creating audio input and output channels, send and return

Partner packages provide an instant hit of sounds that can be dragged and dropped into your own compositions.

THE BITWIG INTERFACE

Transport control
Play, rewind, record, and enable the various latch modes for controlling the application with remote hardware.

Clip view
Uniquely, Bitwig can place the clips alongside the arrangement view.

Arrangement
Traditional DAW functional for audio, MIDI and hybrid tracks.

Browser
All instruments, clips, loops and effects are accessible through a single panel. You can also build your own collection of sounds and presets and access them from here.

Channel inspector
Colorise and manage device assignment for each channel, as well as the effects sends, volume and channel I/O.

Device panel
Create chains of devices made up from instruments and effects then control their parameters using your mouse or an external MIDI device. It's also possible to script your own controllers.

Edit mode
Switch between the arrangement, clip and edit views and create screen sets.

Sound preview
Listen to clips, sounds and instruments through separate output.
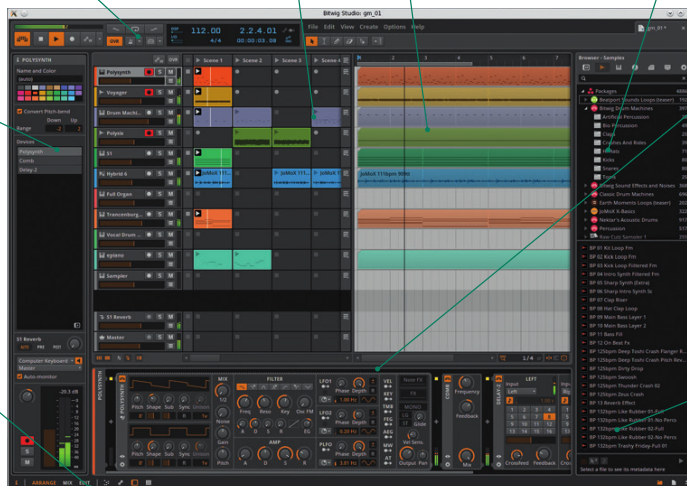
Hardware configuration

Bitwig Studio enabled us to make best use of our audio hardware by allowing us to create virtual inputs and output that pointed to their hardware counterparts. We would have appreciated some input monitoring to make assignments without the guesswork, but reassignments could be done without starting the audio engine.

MIDI was picked up and handled automatically, but you have to create a generic MIDI device to handle standard USB ports before they'll work. We've also got two MIDI controllers – a Behringer BC2000 and BCF2000. These are devices with lots of knobs and sliders, and Bitwig Studio comes with two patches that can be loaded into both to allow you to control the application remotely.

With the MIDI devices enabled, one of Bitwig's best features is its remote control provision. You can right-click on almost any control on the screen and then move a remote MIDI controller to make a quick and easy assignment. This is perfect for adjusting the equaliser without looking at the screen, for example, or turning the BCR2000 into a hardware controller for the built-in synth, and it obviously helps when it comes to creating a clip-launching environment, which many performers will want to do for their live work.
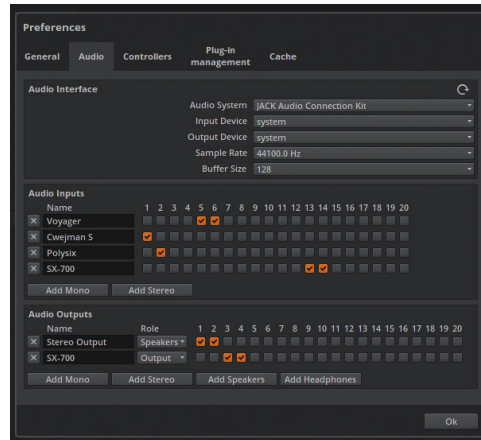
Our audio device has 20 individual inputs and outputs, but Bitwig is able to make sense of this configuration with only a little help from us.

effects channels, external instruments and MIDI surprisingly straightforward. Tracks can be armed for recording and enabled for input monitoring. When recording and editing loops, the markers used to delineate duration and loop points were intuitive and easy to modify. The pitch-shifting algorithm sounds good, though maybe not that creative at extremes. We missed MIDI recording quantisation, but post-recording quantisation worked well, and the automation control on tracks was brilliant, right down to the per-note level for built-in devices.

Wired for sound

Bitwig Studio comes with a lot of sounds, instrument and effects devices, all navigable through a context search enabled browser panel on the right of each view. We don't particularly enjoy the building block approach to creating music, where bass, drums and melody loops are dragged into the clip view to be reconstituted into a new piece of music, but it works well in Bitwig, and you'll be plundering commercial sample banks and libraries before you can say 'Rhythm Is A Dancer'.

Far better for us were the drum machine and synth samples, which can be used to construct your own kits using a drum kit device or quickly added to your project as a pre-built configuration. Every drum in a kit can have its own send control and dynamism, and you often find you can unfold instruments to reveal further parameters, and you can fold racks together in the same way. We found the remaining sounds a little uninspiring, but as karma dictates you should build everything from the ground-up using your own loops and samples in the comprehensive sampler device, this isn't problem for us. We're also certain that it won't be long before Bitwig's community starts sharing sound packs.

Alongside the samples, the loops, drum kits and effects, there's also a small selection of virtual instruments. There's a lovely analogue-styled polyphonic synth, a four operator FM synth, several drum sound generators and a drawbar organ, all with a considerable amount of control. Combined with the effects modularity, you can create both bread-and-butter sounds and more experimental timbres. But this is where we hit the biggest problem for this first release – Bitwig only supports plugins compiled against Steinberg's VST API, even on Linux. This is good for VST developers who want to create cross-platform versions of their instruments and effects, but not so good for native Linux developers. We'd love to see LV2 supported in a future release, without having to go through Jack re-routing hoops, and can we also ask for a loop-building effects plugin and a way of filtering MIDI input by channel?

We've barely scratched the surface. All we can say is that there's nothing like Bitwig Studio on Linux. If you have any interest in music composition or production, you need to try out the demo. It is relatively expensive (though not compared with its competitor), but it's the result of many years of beta testing and development. From a music production perspective, Bitwig feels like, finally, Linux has come in from the cold.

> "If you have any interest in music composition or production, you need to try the demo."

LINUX VOICE VERDICT

Amazing. A top-tier audio workstation released for Linux. Look out for a Paldandy gig near you.

★★★★★