

# Mackie digitalXbus 200

It is one of the most eagerly awaited digital consoles of recent times and repositions Mackie as a contender. **ROB JAMES** believes it is revolutionary and that it will redefine expectations of the digital 8-bus sector.



**D**ESIGNING A RADICAL NEW console is a complex business, requiring artistic and scientific rigour. But this is not sufficient, there has to be lateral thinking and a dash of luck in the brew. Get it right and once potential customers take the time to investigate, they will experience that 'light-bulb' moment as suddenly it all seems so obvious. This will be followed by, 'Why didn't somebody think of this before?' as they reach for their credit cards.

When I first saw this console, at a trade show back in February, I was distinctly underwhelmed. Two pretty screens, each with 24 Penny and Giles motor faders, 24 V-Pot rotary encoders with 4 x 24 buttons underneath, a master strip, monitor section, the usual transport controls and a few other blocks of buttons and knobs. But where were the rest of the forest of knobs and the usual minefield of buttons? There is no hardware 'fat channel', one of the defining features of the d8b. OK, so the screens are touch sensitive, but I don't really like touch screens on the grounds that if you're touching them, you can't see them. So, when the big cardboard box arrived, my expectations were not especially high.

I have always been a great believer in the old adage of 'When all else fails, open the manual'. In other words, the first test with any new piece of kit is to see how far you can get without having to resort to the book of rules. Don't get me wrong, I'm not advocating ignoring the technical author's art, but this approach gives a much better idea of the likely learning curve. Diving in recklessly, the digitalXbus turns out to be amazingly intuitive, at least for me. Far more so than any digital console I have ever previously encountered. (Of course, you have to take into account all the hard won learning that has gone before...) (*You're being modest but the point is a fair one. Ed*) There could be a downside to this, lack of depth. But, as I was delighted to discover, nothing could be further from the truth.

Mackie has learnt a lot from the d8b experience. The d8b was always slightly quirky but ultimately close to being just another 'me too' console and I was never a great fan. The digitalXbus is a horse of a completely different colour. At the asking price of

UK£8932 plus VAT, with all the optional interface cards at UK£297 plus VAT, apart from the 8-channel mic/line at UK£510, I believe it will redefine our expectations in this 8-bus segment. Its up-market sibling, the digitalXbus 400, may well do more than that and frighten some much bigger fish. (*It's worth pointing out that the desk when originally announced was called the dXb but the owners of the dbx brand name complained and claimed it was too similar to dbx. Mackie refers to the desk now as the digitalXbus. Ed*)

The digitalXbus is unashamedly built on a PC platform, as was the d8b before it, but here the PC is in the control surface, a lot more convenient than separate units, but with the disadvantage, at least on the one I had, of being very noisy. I have six PCs in my studio/office (not all on at any one time) and the digitalXbus is noisier than any of them apart from the one the children use. Making a quiet PC power supply is no longer 'rocket science' or even especially expensive in components so I'm sure Mackie can do better in this area (*Mackie says that a retrofittable 'ducting' silencer will sort this issue. Ed*).

Unlike the d8b this console is running Windows XP which brings many benefits such as easier porting of third party plug-ins, for example, the estimable

Waves plug-ins will soon be available. Just one illustration of where the 'depth' comes in. This is a comparatively 'open' system. You can install any well-behaved VST plug-in. A 'first' to the best of my knowledge and most welcome.

The on-board DSP available for plug-ins is, of course, finite, as is the DSP for more basic functions. At 44.1kHz I managed to activate 64 iterations of four band EQ, compressors and gates plus 28 iterations of the SaneWave reverb. At higher sampling rates (up to 192kHz) you get proportionately less. If and when you run out, up to four of the excellent UAD powered plug-ins are already supported and, PC permitting, there is no obvious reason why support for other proprietary hardware plug-in accelerators should not follow.

Functionally, the digitalXbus 200 is a 72-input console with 8 buses plus a master stereo bus and 12 aux sends arranged as three input layers, master and 'VCA' group layers, and a MIDI control bank/layer. By using its Universal Control as a starting point, Mackie has been able to provide software control of the following workstations: Adobe Audition, Apple/Emagic Logic, Cakewalk Sonar, Digidesign Pro Tools, Sony Vegas, Steinberg Cubase SX/SL and Nuendo. In the future, the list will no doubt grow and there is no reason why alternative surface 'skins' should not be provided.

This console is revolutionary because it successfully combines the discipline of a traditional, fixed architecture, analogue desk with the almost anarchic flexibility of the WIMP interface and the workstation. This means 4-band parametric EQ and compressor/expander dynamics on each channel plus 8 aux and 2 stereo cue sends, inserts and direct outs. You also get surround panners and effects slots. Channel strips are consistent with EQ, dynamics, auxes, etc. in the same place every time.

The touchscreens are used to maximum effect. A single touch on any element block in a strip opens up an expanded window for the function. Another touch moves to the same parameters for the channel before or after. In the EQ window there is the choice of altering parameters by using the encoders under the screen/above the faders or touching and dragging directly on the graphic EQ curve nodes. Seventy two input channels plus masters and DAW control means bank or layer switching to access them all and, yes, you can hold or lock channels on the surface when you switch.

One really clever bit is translating familiar PC conventions to the hardware surface. For example, lots of useful and semi-intuitive double-click functions



on the buttons — the Shift key, when double-clicked, selects all strips in the current bank. Double-clicking a channel Select key opens the EQ and Dynamics windows for the selected strip, one on each screen, giving near instant access and a further double-click closes them again. Leaving your finger on a channel select for a couple of seconds opens the Channel Settings window.

The V-Pots above the faders are 'soft'. When a window is open with adjustable parameters, for example EQ, the V-pots below become controls for the window. Otherwise the block of buttons to the right of the screens governs their global function. LR pan, FB pan aux sends 1-8, digital level trim, level to tape or cue send 1&2 level or pan. This is far more intuitive in practice than in description. The same logic applies to the programmable Macro keys. By default Macro 1 opens the Effects Rack window; another press on the key closes it. When opened, plug-in effects can be added, removed, routed and controlled from a combination of pull down menus, the touchscreens

and the surface controls. Again, this is all arranged in an intuitive and logical manner with operational controls mapped to the surface and set-up options relegated to pull down menus. Routing to the main stereo bus can be made directly from the surface although curiously, routing to the 8 buses has to be done via a pop-up. I suspect this will soon change.

All this translates into a fast, productive interface, often with several ways of achieving the same result. I found myself using the touch screens much more than I would have expected. Of course, you can connect a standard mouse or trackerball and QWERTY keyboard as well if you prefer.

As ever, the devil is in the detail. The V-Pots or shaft encoders are inferior in feel to those found on the d8b and lack the concentric circle of LEDs.

The fader motors retain the curious 'damped' action found on the d8b. This gives the illusion that the faders are slow. They aren't, but when a fader moves automatically from, say, unity to infinity, the last centimetre or so takes significantly longer than

the rest of the move. I think this may be done to avoid fader jitter or hunting, but it is unsettling until you become accustomed to it. Needless to say, audio transitions happen exactly as they were originally made, it is just the faders that lag behind. The automation needs a bit of work. It could use more options and the editing is a bit clunky in practice, although the theory looks good. A method of quickly zeroing pans and EQs would be nice. All this and a great deal more is eminently possible thanks to the PC software nature of the beast.

At present, the digitalXbus is something of a work in progress and to some extent, it probably always will be. This goes with the territory when there is a PC involved and should be seen as a virtue rather than a vice. Throughout the product's life it can be updated, improved and extended and this includes the PC hardware and the DSP accelerator(s) should this become necessary or desirable. To judge from Mackie's previous form, this will undoubtedly be the case. The hardware is sleek and good looking, the buttons and faders all feel positive and the jog-wheel is superb. SMPTE generation is built in and the digitalXbus is also a 9-pin controller. Throw in a scrolling automation display and editing, VST plug-ins, surround in formats up to 7.1 and, whether used with digital multitracks or workstations, the fluidity of the interface offers a considerable enhancement to productivity.

What we have here is a glimpse of the future, a hardware audio mixer/controller for the Playstation generation, with a seriously powerful DSP engine underneath, supported by flexible I-O options. Where others have sought to disguise the PC basis of their consoles so far as is possible, the digitalXbus celebrates this fact and exploits it to maximum effect. Best of all, anyone who is PC literate and knows what an audio mixer is supposed to do, can operate this console without spending a ridiculous amount of time learning how the designer's mind works. Check it out. ■

## I-Os

On the rear panel are two USB ports, an Ethernet port, MIDI I-O, two footswitch jacks and a serial 9-pin socket. The digitalXbus is a 9-pin controller (but not synchroniser). Lurking underneath a metal plate are the normal motherboard connectors.

The digitalXbus comes with a Mix card and a Sync card already installed. The card cage has a dedicated slot for the included sync card, (which has BNCs for Wordclock I-O and Jacks for SMPTE I-O) plus three A slots, three B, three C and a single D slot.

One C slot is occupied by the Mix out card which has 8 analogue balanced jack outputs for stereo speakers A and B, phones 1 and 2 and mix out and two XLRs for stereo AES-EBU I-O and two phonos for SPDIF I-O. There is only one digital stereo input, software switched between AES-EBU and SPDIF.

## OPTIONAL I-O CARDS

**Mic/Line 4 Card:** 4 XLR balanced analogue mic/line inputs; 4 TRS balanced analogue line level inputs; digitally remote-controlled mic preamps; independent (+48v) phantom power per mic input channel.

**Mic/Line 8 Card:** 8 balanced analogue mic/line inputs; 8 balanced analogue line level outputs; independent phantom power (+48v) per input channel; digitally remote-controlled mic preamps; two female 25-pin D-Sub connectors.

**Line Card:** 8 channels of balanced analogue line level inputs and outputs; +4dBu/-10dBV jumpers for each channel; two female 25-pin D-Sub connectors.

**Digital Card:** 8 channels of ADAT optical digital audio input and output at 96kHz (4 channels at 192kHz); up to 8 channels of TDIF digital audio input and output at 96kHz; direct digital connection between digitalXbus and external digital devices; female 25-pin D-Sub connector (TDIF) and four Toslink optical connectors (ADAT x 2).

**AES Card:** 8 channels of AES-EBU digital audio input and output at 96kHz; direct digital connection between digital X bus and other AES-EBU compliant equipment; uses one female 25-pin D-Sub connector.

**FireWire Card:** direct digital audio streaming between digitalXbus and any compatible computer running Windows XP or Mac OSX; ASIO 2.0 or OSX Core Audio compliant; 2 IEEE 1394a FireWire ports.



**PROS** First of its kind; shallow learning curve; Huge potential.

**CONS** Noisy power supply fan; automation needs work; LP and HP filters in addition to the 4-band EQ would have been nice.

## Contact

**MACKIE, US:**  
Website: [www.mackie.com](http://www.mackie.com)