

Which Virtual Controller?

The virtual controller has all but supplanted the traditional console in most studios. But the options, functionality and compatibility can all be a bit bewildering. Brad Watts helps clear the air.

Over the last few years I've looked at a number of virtual controllers. Through my studio I've had offerings from all the major contenders – Mackie, Digidesign, Emagic, Behringer, CM Automation, various forms of HUI, Tascam... When the AT 'powers at be' (they like being called that) mentioned that I was in a unique position to take stock and offer some overall perspective on the subject, I had to stop and think... Yes, that's true, but I wasn't entirely sure that I had the clarity of perspective. In short, as the lieutenant in every yank cop show says: "Watts! You're too close to this... you're off the case."

Why so? The whole controller caper is such a 'horses for courses' affair. Plenty of contenders have been thrown into the ring, each with their own strengths and weaknesses. Often the choice depends entirely upon whether you're running ProTools, Logic, Digital Performer or Cubase. It could be down to whether you use microphones in your studio or if you're wholly in the synth/sampler game.

All this is a big departure from not so long ago. It certainly didn't feel like it at the time, but a mixing console was the studio's nerve centre. Audio hit the desk as lots of inputs and left as considerably fewer outputs. Its role was obvious. Apart from some Midi or other machine automation, the console didn't have to be multilingual – it didn't need to talk and shake hands with the entire SMPTE-approved world, dozens of host applications and thousands of plug-ins.

It took me a while, but I sold my analogue console around three years ago. In many ways I miss its reassuring presence, but the writing was on the wall – I simply couldn't justify its place in my studio any longer. It's a similar story the world over. Studio folk are mixing within their host audio/sequencing applications. Fader moves, EQ settings, compression, reverb and other effects are all stored within the project and the lure of tweaking and fine tuning on the computer screen is hard to resist.

But let's get one thing straight – mixing with a mouse is a compromise. Sure you can do it, and yes if you're happy to put up with the repetitive strain injuries it's possible to get good results. But beside the physical shortfalls, there's the mental anguish to put up with. To offer you some sort of metaphor: I'm typing out this article on a qwerty keyboard. It's the best way for me to make a connection from my brain to the page. I *could* type it out on my mobile phone as an SMS, but the ideas are hardly going to flow. In the same way, real, honest-to-goodness faders, pots and buttons will raise the 'bandwidth' of the connection between your brain (and inspiration) and your computer.

Compatibility Test

The initial consideration for many is obviously compatibility. Will the control surface work with my software? Fortunately,

manufacturers have settled on a few pseudo standards, and compatibility shouldn't be a problem. A definite nod should go to Digidesign and Mackie, who in the mid '90s concocted the seminal HUI controller and consequently 'wrote the book' on interfacing faders with an audio workstation. The now discontinued HUI (Human User Interface) accomplished the task via a single Midi interface and some not-so-simple Midi code. The HUI Midi mapping protocol has since become the predominant standard for controllers, but two further systems have developed since: the LogicControl standard for Logic Pro, and the MackieControl standard for just about everything else.

Midi is still the protocol *du jour* for your typical eight-fader controller. Surfaces comprising more faders usually speak to the host computer via a faster protocol such as ethernet or, more recently, Firewire or USB. All methods work, although Midi interfacing can get a little cumbersome these days. For example, 24 faders of Mackie Control requires three separately available Midi ports. You may need multiple Midi interfaces.

Other points to look out for are features such as footswitch jacks for dropping into record or talkback control. You'd be surprised how useful a footswitch can be, especially if you're a solo operator. Command and modifier buttons such as Escape and Enter are also useful additions for dealing with your DAW's onscreen dialogue boxes, but unfortunately go missing on some controller designs. You should always go for the quietest fader you can find and there are no prizes for guessing why. However, you may find that your software and budget may end up restricting your options there.

I've compiled a shortlist of the main controller contenders. It's not exhaustive and I've not looked at anything worth over \$5,000. Each has its pros and cons but each will at the very least get your hands off that mouse and your eye away from the computer monitor. All have been used and reviewed by yours truly.

Tascam FW-1884 & FW-1008

The FW-1884 and the recent FW-1008 are no doubt designed to compete with the Digidesign 002 market. Both are very similar in overall concept in that they're a control surface, audio and Midi interface rolled into the one box. Retailers love these units because if there's a problem there's only one company to deal with. Unlike the 002, neither will function as an actual *audio* interface to ProTools software but they will both function as a *control* surface for ProTools. Each arrives with a copy of Cubase LE and Gigastudio LE, so for a modest investment you can be completely up and running. The FW1884 offers more mic preamps (eight in total) than the Digidesign 002, four sets of Midi ports and Adat optical I/O. There are even eight discrete monitoring outputs so you can tackle surround mixes. The

cutdown FW-1008 sacrifices the surround outputs, loses the Adat I/O and only provides four mic pres. It's also fitted with those teeny 60mm faders.

Tascam's uncluttered approach to both these units has resulted in two very effective and versatile controllers. Frankly, I'd be surprised if these aren't selling by the crate load. They're both a good 24-bit/96k recording interface, controller and Midi interface. There are even insert points on all the inputs! For non-ProTools folk and those seriously into their recording I'd suggest that the 1008 is the best value all-in-one package out there.

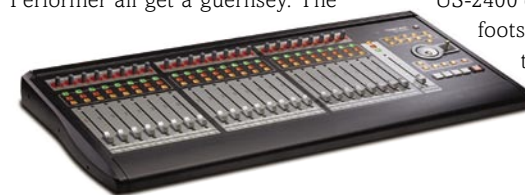
Supports: Digital Performer, Logic, Cubase and Nuendo, Sonar and ProTools (as a controller only).

Electric Factory: (03) 9474 1000 or www.elfa.com.au

Tascam US-2400

Tascam decided to break the mould with the US2400 and provided a full house of 25 faders and 24 rotary encoders. Credit must go to them as it's one of the few controllers to offer the mixing console experience straight out of the box. It achieves this thanks to its size but, more importantly, because the 24 faders means far less fader bank changing. There's a lot to be said for more than eight faders. You can access a reasonably complex mix without having to stop and think where you are. The Tascam talks to all the popular DAWs in either HUI or native mode. ProTools, Logic, Sonar, Cubase, Nuendo and Digital Performer all get a guernsey. The

US-2400 offers a footswitch controller, jog/shuttle



wheel and those big fat Tascam transport controls. Plus it's the only unit to provide a joystick controller for surround panning. This is pretty much my favourite controller of the bunch, firstly because of the fader count and secondly because the faders haven't been crammed into as small a space as possible – you can get your hands around things. There are no SMPTE displays and flashing lights to dazzle you and the faders are quick and quiet. Connects via USB.

Supports: Sonar, ProTools, Logic, and Performer.
Electric Factory: (03) 9474 1000 or www.elfa.com.au

Digidesign Control8

Effectively the Control8 is the control surface section from a Digi 002 and it's a very cost effective option for driving any current variant of ProTools above v6.4 – including TDM systems. There's a monitoring section courtesy of a Focusrite alliance and the unit is small enough to fit into space-challenged rooms. The faders are very smooth and quiet, and the price isn't astronomical. The Command8 can be used as an eight-fader expansion module for the Digidesign 002, Control24 and the ProControl. It provides a one-in/two-out Midi interface and can be used as a stand-alone Midi controller. An upmarket, compact controller for ProTools only.

Supports: ProTools, ProTools LE

Digidesign: www.digidesign.com



Digidesign Digi 002

The ground-breaking 002 raised the bar considerably upon its release and superseded the very common (but equally ground-breaking) Digi 001. It offers the full gamut of 24-bit/96k audio interfacing, Midi interfacing in combination with a control surface. If ProTools is where you prefer to spend your time then the 002 is an obvious option. The 002 will operate as a stand-

	Motorised Faders	Fader Throw	Audio Interfacing	Midi Interfacing	Audio Monitoring System	Touch Sensitive	# Of Rotary Encoders	# Of Faders	Dedicated Master Fader	Connects Via	Dedicated Transport	Jog Wheel	Foot Switch	Expandable	Modifier Keys	Retail Price
Behringer BCF2000	✓	100mm		✓			8	8		USB/Midi				✓	✓	\$399
Behringer BCR2000					✓		32	0		USB/Midi				✓	✓	\$299
CM Automation	✓	100mm		✓			8	8		Midi				✓	✓	\$1,695
Digidesign Command8	✓	100mm		✓	✓	✓	8	8		USB	✓			✓	✓	\$1,999
Digidesign 002	✓	100mm	✓	✓	✓	✓	8	8		Firewire	✓			✓	✓	\$4,390
Mackie Baby HUI	✓	60mm				✓	8	8		Midi	✓					\$1,895
Mackie HUI	✓	100mm			✓	✓	8	9	✓	Midi	✓	✓	✓	✓	✓	Discont
Mackie/Logic Control	✓	100mm				✓	8	9	✓	Midi	✓	✓	✓	✓	✓	\$2,495
Radikal SA2K	✓	100mm		✓		✓	12	9	✓	USB	✓	✓	✓	✓	✓	\$3,995
Tascam FW1082	✓	60mm	✓	✓	✓	✓	8	9	✓	Firewire	✓	✓	✓			\$1,699
Tascam FW1884	✓	100mm	✓	✓	✓	✓	8	9	✓	Firewire	✓	✓	✓	✓	✓	\$2,999
Tascam US2400	✓	100mm				✓	24	25	✓	USB	✓	✓	✓	✓	✓	\$3,600



alone 8:4:2 digital mixer with EQ, dynamics and rudimentary effects. It sports the same silky smooth faders as found on the Command8. There's an Adat I/O so you could feasibly double your input count and it drives the industry standard platform. Runs with (...you guessed it) ProTools LE.

Supports: ProTools LE
Digidesign: www.digidesign.com

Mackie HUI

The godfather of the bunch. No longer in production but it's possible to grab for around the \$1,000 (USD) mark on eBay – not bad for a unit that originally retailed for A\$7,000. It really does as good a job as the Mackie Control that superseded it, but includes a monitoring and talkback section, a 3x3 stereo monitor matrix and a pair of Mackie mic preamps. At the time I considered it expensive and rather excessive, but hey, this was the first time moving fader automation was available without buying a Neve console! The HUI is a sizeable beast with most units I've seen being installed into bespoke desks. Still a valid controller.

Supports: ProTools and ProTools LE, Mackie Soundscape 32, Mackie Mixtreme, Digital Performer, Nuendo and Cubase SX.



Mackie Baby HUI

Could well be just what the doctor ordered for smaller editing suites and, indeed, smaller budgets. The baby of the HUI crew unfortunately owes its small footprint to the use of 60mm faders. I can't admit to liking 60mm faders, they're just too fiddly to mix with. That said, the HUI munchkin would be an ideal controller



for location recordings (due to its size and its hardcore Mackie build quality). No foot-switching.

Supports: ProTools, Digital Performer, Nuendo, Cubase SX, Soundscape 32, and Mackie Mixtreme.

Australian Audio Supplies: 1800 502015 or sales@ausaudio.com.au

Mackie Control Universal & Logic Control

These units are essentially the same bo. The original Logic Control was a joint effort between Mackie and Emagic and worked only with Logic Audio - using the Logic Control format. Shortly after the Logic Control's release, Mackie unleashed its own version - exactly the same hardware with firmware to drive competing software products such as Cubase and Performer.

Emagic dropped the product from its lineup almost immediately and, shortly after, Mackie began to ship its Control Universal with the option to run it as a Logic Control – at a somewhat cheaper retail price. The nice thing about the MCU is the ultimate control it provides. With the MCU you can pretty much drive an entire session without reaching for the mouse or, in fact, looking at the host computer screen. The faders are smooth and quiet and the unit really looks the part. What I did find a little unnerving is the build quality – mostly plastic without any of that legendary Mackie bulletproof steel.

Supports: ProTools, Logic, Final Cut Pro, Nuendo, Cubase, Reason, Audition, Sonar, Vegas, Samplitude, Sequoia, Soundscape & SAW Studio.
Australian Audio Supplies: 1800 502015 or sales@ausaudio.com.au



Behringer BCF2000

Another 'cat among the pigeons' product from Behringer. Despite initial teething problems with software, the BCF2000 is proving to be a popular choice for many, simply because it's the cheapest controller available. With a retail price of \$499 it's a unit that's very difficult to ignore. The caveat is, again, the faders: they're not touch sensitive but rely on sensing movement. The other caveat is that the unit can be fiddly to set up. Needless to say, moving faders are moving faders (even if they're not touch sensitive) and Behringer should be applauded for bringing the BCF2000 to market so cheaply. The BCF works with just about anything, functions as a stand-alone Midi controller and can be configured to output 14-bit controller info (16,000 steps). It operates via both USB and Midi and if used via USB can provide one-in/two-out Midi I/O to your DAW platform.



There's even a free editor/librarian program for setting the unit up and the free 'virtual display' software, which simulates Mackie/Logic display on your computer (Windows only).

Supports: ProTools, Logic, Sonar, Cubase and other plug-ins
Behringer Australia: (03) 9877 7170 or sales@behringer.com.au

CM Automation Motormix

Very small footprint and fully compatible with HUI mode. Much like the Behringer offerings, it's subjectively not the most attractive piece of equipment, but it will fit into a nook, a cranny or neatly beside your computer keyboard. Personally, I'm pleased that the 'silver' era of musical instrument history has passed. The Motormix has been around long enough to have been updated to drive just about anything but, again, beware of the 'chatter' faders. Aside from my complaints, the MotorMix is a very

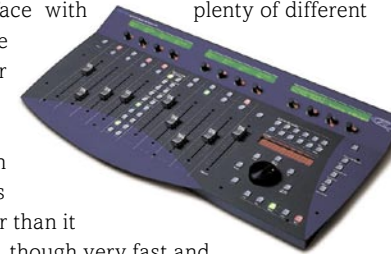


comprehensive controller. It will operate as a stand-alone unit and can be expanded to include a jog-wheel and master section.

Supports: ProTools, Cakewalk, Cycling 74, Logic, Digital Performer, Cubase SX, Nuendo.
Network Entertainment Technology: (02) 9905 5997 or sales@network-et.com

Radikal SAC2.2

Radikal's contribution is an incredibly well built controller with some nicely thought out facilities. Like the Mackie Control, the SAC2.2 will interface with plenty of different platforms but uses those pesky overlay panels for the button legending. Built in Germany and utilising some top-notch hardware, the SAC2.2 is possibly more controller than it needs to be. The faders, though very fast and precise, are undeniably noisy. To circumvent this problem the faders can be disengaged. If you're looking for a high 'impression ratio' controller then this is the baby for you - more bells and whistles than the Enterprise and almost as big. Make sure you can fit this thing on your desktop or fit it into a custom console. A cool addition is the built-in USB hub to take your iLoks and protection keys.



Supports: Cubase, Cubase SX, Nuendo, Digital Performer, Live, Logic Audio, ProTools, Pulsar/Scope Fusion, Pyramix Virtual Studio, Reaktor, Reason, Samplitude, Sonar, Sound Diver & Soundscape.
Sound & Music Promotions: (03) 9555 8081 or www.sound-music.com

Rounding off the Roundup

It behoves me now to neatly wrap this overview up. But as I mentioned in my introduction, that's not an easy thing to do. Key points to consider: if you're a child of the DAW revolution and you've never owned a mixing console then don't fool yourself – knobs and faders are where this all started. As we've seen with the Behringer devices it's not prohibitively expensive to get a virtual control surface on board. It'll certainly change your life far more than yet another new software synth. Meanwhile, if like me you're more of an old-stager and you're finding your console increasingly collecting dust, then it's important not to think that a \$10,000 console can be replaced by a \$1,000 controller. You'll be driven crazy by the small, uneven throw of the faders etc. If your life revolves around ProTools then the decision is all but made for you (check out the new Digidesign controller in our news pages this issue); if you're not, then check the internet forums and ask around about how your favourite software is dealt with by the various controller options. Apologies for not being any more definite than that, but this is software we're talking about and new drivers and versions are coming online every day. Good luck.