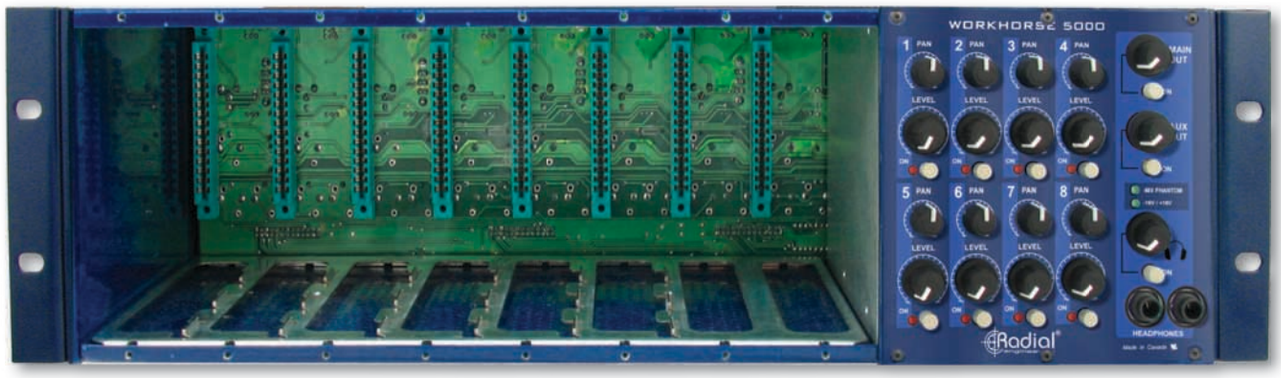

Radial

Workhorse 5000

Radial is hoping to shake up the 500-Series market with its new Workhorse 5000. **Mike Hillier** packs his Lunchbox.

Workhorse 5000/Shuttle Module

Manufacturer **Radial**

Price **Workhorse 5000 £1,799 (£1,019 without summing mixer). Shuttle Module £155**

Contact **Shure Distribution 020 8808 2222**

Web **www.radialeng.com**

Key Features

- 8-slot rack
- 8x2 summing mixer
- Jensen transformer-balanced outputs
- XLR, TRS and D-Sub I/O
- Additional TRS Omniport for each module
- Built-in signal routing
- 1,200mA pooled power supply

Regular readers will have noticed something of a surge recently in 500-Series module reviews. The format has become incredibly popular over the past few years, no doubt as it provides project studio owners with a means to break their studio out-of-the-box. However, the general format has remained fairly static since API introduced the VPR Alliance to standardise modules.

When Radial announced just over 18 months ago at Winter NAMM 2010 that it was working on a 500-Series chassis and a series of accompanying modules, the company generated much interest, which hasn't abated in the time that's elapsed since the announcement.

So what is it about the Workhorse that sets it apart from other 500-Series chassis? Firstly, while other designs might incorporate an internal power supply, Radial has opted for an external power brick and used the space saved to build-in an eight-channel summing mixer with monitoring. But what really distinguishes the Workhorse from the competition are the advances to the module spaces themselves. If you take a look at the rear, each module has not only XLR and 1/4-inch I/O, but also a new 1/4-inch Omniport. There's also a Link switch for linking two compatible mono modules as a stereo pair, plus a Feed switch, which sends the output of one module to the next (of course, since the Feed switch is at the rear you'll have to think carefully about how you set this when installing the Workhorse in a rack).

What's in the box?

Manufacturing and part-sourcing problems led to the Workhorse 5000 – Radial's take on the 500-Series chassis design – being delayed in the UK. Despite an autumn launch in the US, we've only just managed to get our hands on one on this side of the Atlantic. But has it been worth the wait, and can the new features justify the price tag?

The Workhorse 5000 itself is little more than a solid steel chassis with a built-in summing mixer. The chassis has eight slots, which can be filled with any 500-Series-compatible modules. Modules can draw as much current as they require, with a total pool of 1,200mA available. This averages at 150mA per slot, which isn't much by comparison with API's 500-6B six-slot Lunchbox, which provides 215mA per slot. However, in the case of the Workhorse, if any unit requires considerably more power it can draw current from other modules that might not need as much.

Radial has its own range of modules, which we've been given to try out with the unit alongside a spare API 560B EQ we have in the studio. The rear of the unit sports both XLR and balanced 1/4-inch I/O for each module, as well as the new Omniport TRS socket, which may be configured as an input, output or insert by the specific modules.

Prior to this Omniport option, many modules included additional front-panel I/O for further connectivity, such as sidechain inputs on compressors, insert points or additional I/O. But given the limited space on a 500-Series panel, putting this on the rear is definitely useful. However, even with the Omniport, many Radial modules still include front-panel ports for additional I/O.

> With **the right modules**, the Workhorse 5000 will be an **excellent addition** to any studio

Further I/O is provided on the rear in the form of three eight-channel 25-pin D-Sub connectors, providing simple connection to workstations or patchbays. The first two of these are connected in parallel to the XLR I/O for each module, while the third D-Sub provides direct connection to the eight-channel summing mixer, bypassing the modules entirely. The remaining I/O on the rear provide transformer-isolated master outputs, monitor outs and TRS expansion I/O for connecting two Workhorse mixers together for a 16x2 summing mixer.

Add it up

The summing mixer is a standout feature of the Workhorse. Each module corresponds to a channel on the mixer

Measuring Up

The Workhorse 5000 is easily the most advanced 500-Series chassis on the market at the moment. Even without the summing mixer, the competition from API and BAE doesn't have the Feed options or Omniport. However, you can get up to 11 modules in the larger rackmount BAE chassis and you should still get change to buy some modules by comparison to the Workhorse 5000. There is a cheaper Workhorse available (without the summing mixer), but it still costs more than the API and BAE offerings.

and has its own engage/mute switch, level and pan knobs. Combined with the Feed switches, this design enables you to engage only the last part of the signal, or to combine it with the signal from earlier modules in order to perform tricks like parallel compression. Alternatively, you can engage only the channels at the end of any signal paths you've created. In our experiments, however, we found it easier to take a direct signal from the back of whichever modules we wanted, but we could foresee instances (when using outboard or re-amping, for example) when the mixer might come in handy, especially when used with the PhaseQ module.

As mentioned earlier, you can access the summing mixer directly, without going through any modules; however, if a module is in use it will feed the same channel on the mixer, so you need to decide how to feed the summing mixer before bouncing a mix. The other problem with using the summing mixer is that there is no obvious null point on the level knobs, nor a centre indent on the pan knobs, which means that you have to work that bit harder to get your in-the-box sub-mix to sound right going through the summing mixer. Of course, once you do push the signal through the summing mixer you get the sonic benefits of the Jensen transformer.

Shuttle space

We've included the Shuttle module here since it is only really of use with the Workhorse and not other 500-Series Lunchboxes. Radial says it will work with other units, but only in so much as it will provide a balanced effects loop. Add one to the Workhorse 5000, though, and you can add all sorts of kit to your rig via balanced/unbalanced Send/Receive pairs on the front and an unbalanced Insert loop using the Omniport. Our 560B isn't built for the Workhorse so it doesn't feed the summing mixer.

With the Shuttle module placed after it and the Feed switch engaged, the signal from the 560B can be fed to the summing mixer. What's more, we now had a choice of insert loops to feed the signal through any outboard we might want to use, with the resulting signal being fed into the summing mixer.

More than the sum of its parts

With the right modules installed, the Workhorse 5000 will be an excellent addition to any studio. But the real strength lies in the modules, not the Workhorse itself. Radial has open-sourced documentation for the extra features for other manufacturers to take advantage too, but right now it's only Radial's modules that can utilise these features.

If you choose to fill your Lunchbox with preamps, EQs and compressors from other manufacturers you might not be able to use the Feed function or access the summing mixer, although you might see this as a good thing as you'll be able to use both the modules and the summing mixer as separate tools simultaneously. **MTM**

MTM Verdict

WHY BUY

+ Fully compatible with older 500-Series modules
+ Additional features enhance Radial modules

WALK ON BY

- Older modules can't access summing mixer or Omniport

The Workhorse 5000 is the perfect choice for bringing analogue processing to a DAW-based studio.

★★★★★★★★★½

Method Spot

Because every module feeds the summing mixer, even if you are using the Feed switch to feed the next module you can balance the signal coming from one module with the signal from the one it's feeding. This is great for all manner of situations, from parallel compression to combining the dry signal with a re-amped signal. We used it with the PowerPre module feeding the Shuttle, which then fed an outboard reverb. We were then able to balance the reverb as if it was a send effect using the summing mixer.