Waves
APA44-M

Are all those processor-hungry convolution reverbs straining your CPU resources? Mark Cousins explores Waves' latest performance-enhancing products – the APA series.

KEY FEATURES
- Audio-processing accelerator
- Connects via gigabit Ethernet
- Multiple APAs can be stacked
- APAs can be shared across a network
- Q-Clone, IR-2 convolution reverb and L3 plug-ins included
- Uses Waves' new NetShell technology
- APA44-M can run up to 26 Renaissance Channels or 19 Q-Clones

APA44-M

Manufacturer **Waves**

Price **£1,800**

Contact **Sonic Distribution 01582 470260**

Web **www.waves.com**

As the old saying goes, you can never have too much of a good thing – at least it certainly seems that way in respect to DSP power. Despite most studios containing dual-processor computers that would have put NASA to shame ten years ago, it seems that both users and plug-in developers alike have an almost insatiable appetite for processing power. In truth, however, it's only recently that we've started to explore interesting ground with plug-in processing – whereby developers aren't forced to code DSP-efficient plug-ins, but can instead demonstrate the authenticity and superlative audio quality that can be achieved with software-based recording.

Undoubtedly, some of the finest audio plug-ins money can buy have been made by Waves. Plug-ins such as the Renaissance Channel and the L2 Ultramaximizer have defined the sound of modern software recording systems and become some of the most essential processors of the digital age. Surprisingly, however, up until the release of the APA series, Waves has avoided producing dedicated hardware – like TC Electronic's PowerCore or Universal Audio's UAD-1 – for their plug-ins to run on, preferring to make the most of the user's existing Native or TDM processing resources. But now that distributed audio processing – or, to put it another way, DSP muscle – has become some such a desirable entity, it was only a matter of time before Waves made its move...

The APA principle

Waves APA technology represents the latest and greatest in audio processing accelerators and comes in two flavours: the 'machine room-friendly' APA32 and the 1/2-rack APA44-M. Unlike the TC Electronic system (which uses FireWire or a PCI card) or Universal Audio's UAD-1 card, the Waves APA contributes its DSP muscle via Ethernet. So, rather than reserving a specific machine for processing or tying up crucial bandwidth required by other FireWire devices, the APA system is completely flexible, stackable and – given suitable network connections – sharable between a number of workstations in the same facility.

Probably the nearest comparison to the APA is Apple's Node system for Logic Pro. Again, networking technology is used as the system link between two machines, with both Apple's system and Waves' APA preferring gigabit Ethernet (although each claims to work with Ethernet connections of less than 1,000Mbps). Another feature common to both systems is that neither will run third-party software – Apple's Nodes will run only certain Logic Pro plug-ins, while the APA system will currently run only Waves plug-ins written to access the company's new NetShell technology.

In a NetShell

We tested the APA system using Waves' APA44-M processing accelerator – the APA32 is slightly cheaper than the APA44-M, although it is correspondingly noisier (hence the 'machine room' tag) and about 30% less powerful. Connecting and configuring the APA44-M with our G5 was relatively straightforward, requiring us to connect the Ethernet cable and download the appropriate NetShell'ed plug-ins from the Waves website. Interestingly, as part of the introductory offer in the UK, Waves is currently offering free versions of its IR-2 convolution reverb, Q-Clone and L3 plug-ins in NetShell format; existing registered owners can download NetShell versions of their authorised plug-ins at no extra cost.

Installing the NetShell plug-ins also offers you the option of installing the NetShell control software. During the installation process the NetShell software will configure the appropriate DHCP address as well as installing both Native/HTDM and NetShell versions of the plug-ins in question. With system initialisation complete, we booted up the APA44-M, noting a slightly worrying amount of fan noise for a 'quiet' processing accelerator – especially in this age of PCs that aspire to be silent!

Up to speed

To get a better idea of the performance improvements we could expect, we experimented with the Q-Clone plug-in

in both Native mode (on a dual-processor G5), and in its NetShell version on the APA44-M. The NetShell control software (which ideally needs to be booted before the host sequencer) scans the network for available APAs and also provides feedback on the current level of drain on its DSP resources. In Logic Pro, we inserted a series of Q-clone presets using both the Native and NetShell plug-ins respectively and watched as the performance meters crept up on both systems. Although we wouldn't want to claim any scientific accuracy in what we carried out, we did manage to run 19 Q-Clone instances on the APA, while the dual-processor G5 worked at around 50% capacity for the same number of instances.

If you're wondering about any latency issues, we're pleased to report that we didn't find any – certainly, the communication between Logic Pro and the NetShell monitor meant that any latency was taken care of with Logic Pro's plug-in delay compensator, even on the buss faders. However, do check the Waves site for platform-specific issues. We did notice, for example, that Pro Tools LE can't handle delay compensation at the time of writing.

New Wave

If you're an existing Waves user with plenty of plug-ins eating up your DSP processing power, then the APA44-M could be an ideal purchase. Even more importantly, however, the APA could easily usher in a whole new level of development for Waves' plug-ins, possibly exploiting the vast resources available with an attached APA – put simply, it could be the future of Waves.

UNDOUBTEDLY, SOME OF THE FINEST AUDIO PLUG-INS MONEY CAN BUY HAVE BEEN MADE BY WAVES.

For a new user, however, the £1,800 APA44-M could initially appear to be an expensive outlay for what is, essentially, the equivalent of strapping on another (single-processor) G5. Factor in the free promotional plug-ins (themselves worth £1,575) and attractive package deals including the APA44-M and various Waves bundles, however, and things look very different. Maybe time – and Waves' development plans – will tell... MTM

Measuring Up

As mentioned, Logic Pro users can achieve a similar distributed audio network using two Macs (ideally with gigabit Ethernet) with the main application on one machine and the Node application – included on the Logic Pro install discs – on the other. Although the system will work only with Logic plug-ins, it could be a cheaper option than the APA44-M – especially if you can get hold of some end-of-line, single-processor G5s. You could also consider TC Electronic's PowerCore (£938) or Universal Audio's UAD-1 Ultra PAK (£999). These offer much less CPU power than the APA, but they do come with a wider range of plug-ins.

SUMMARY

WHY BUY
- An excellent solution for professional media facilities
- Stackable, sharable DSP resources
- Q-Clone, IR-2 and L3 also included
- Could this be the future of Waves plug-ins?

WALK ON BY
- Currently works only with Waves plug-ins
- Expensive
- Fan a little noisy

VERDICT

As always, you can expect nothing but the best from Waves: a powerful and impressive system, but one that comes at a price.

★★★★★★★★½☆

METHOD SPOT

You might have noticed that the list of NetShell plug-ins doesn't currently encompass the full range of Waves plug-ins. This is not an oversight, however, as an already efficient plug-in will offer little performance gains once the host processor has shuttled the data back and forth to the APA. Instead, use the APA for more processor-hungry tasks such as convolution.