

New season's Apples

It's all go this month, from the launch of yet more PowerMacs to the MacWorld Expo in Boston. Chris Cain checks out the new machines, catches up with Speed Doubler from Connectix, and – most importantly – gets down to Doom II.

Following the successful introduction of the high-end 9500, Apple has released a further range of three new "next-generation" PowerMacs. The 7200, 7500 and 8500 boast high clock speeds, new internal and external designs, PCI bus and improved upgradability.

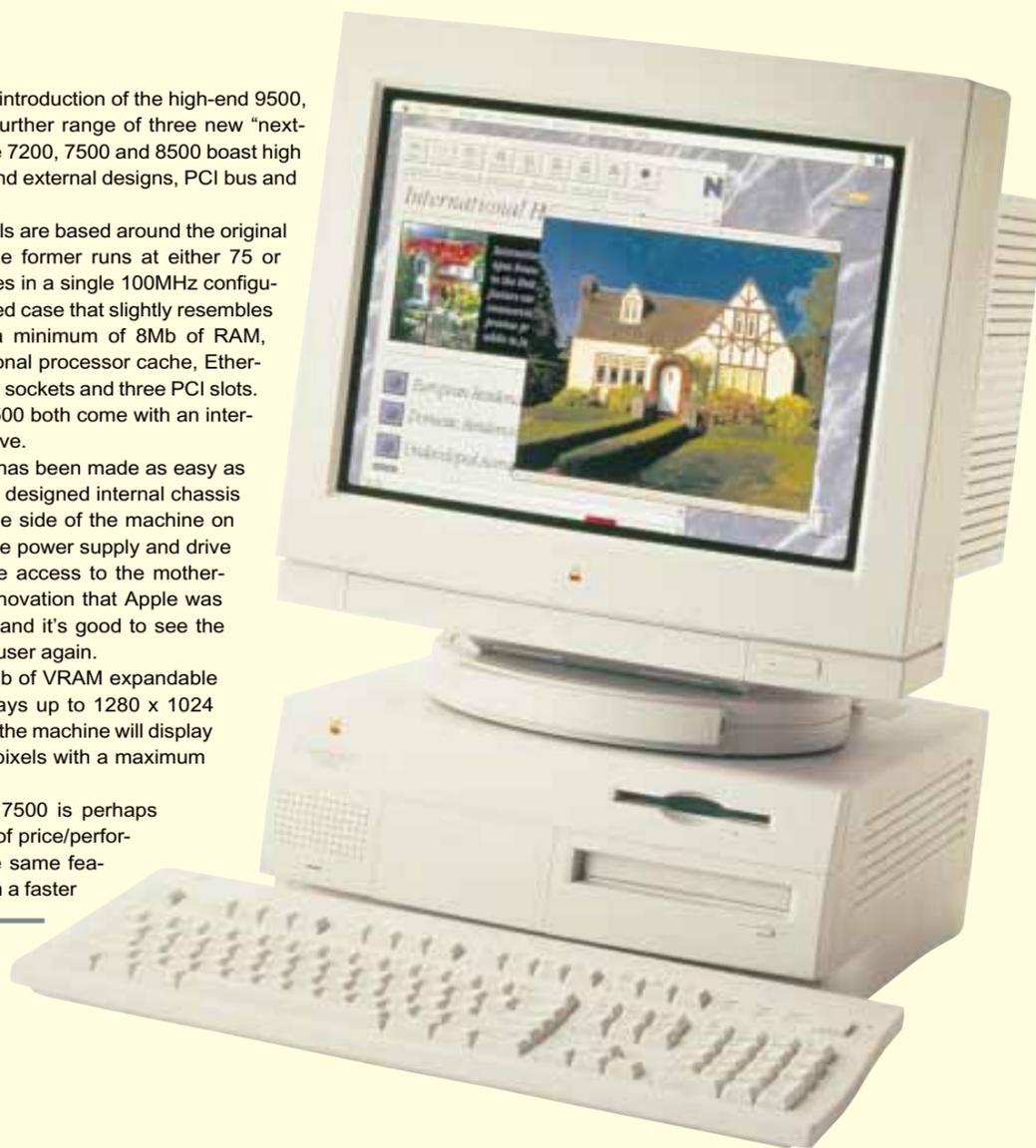
The 7200 and 7500 models are based around the original PowerPC601 processor. The former runs at either 75 or 90MHz, while the latter comes in a single 100MHz configuration. Both have a redesigned case that slightly resembles the 7100, and come with a minimum of 8Mb of RAM, 500Mb SCSI hard disk, optional processor cache, Ethernet, GeoPort compliant serial sockets and three PCI slots. The 90MHz 7200 and the 7500 both come with an internal quad-speed CD-ROM drive.

Upgrading these models has been made as easy as possible thanks to a cleverly designed internal chassis that swings up and out to the side of the machine on hinges. Once the lid is off, the power supply and drive bays lift up to give complete access to the motherboard. This is the kind of innovation that Apple was known for in its early days, and it's good to see the company thinking about the user again.

The 7200 comes with 1Mb of VRAM expandable to 4Mb, and supports displays up to 1280 x 1024 pixels. When fully upgraded, the machine will display 24-bit colour at 1024 x 768 pixels with a maximum refresh rate of 75Hz.

The middle-of-the-range 7500 is perhaps the most attractive in terms of price/performance, sharing many of the same features as the 7200. Apart from a faster

The 7500 offers a powerful 100MHz PowerPC601 and is upgradable to 604 to ensure a long life.



processor speed, the main differences include a higher maximum RAM capacity, internal Fast SCSI with a transfer rate of up to 10Mb/sec, a 24-bit video capture card supporting both PAL and NTSC formats, and a new internal digital audio/video (DAV) connector for video compression and decompression cards.

For improved sound quality there are RCA phono audio outputs as well as the standard 3.5in mini jacks found on other Mac models. You may not have thought the type of connector would make much of a difference, but Apple claims that using line-level phonos cuts down considerably on interference and noise during recording and playback. Older Macs with 8-bit audio certainly suffer from this. Graphics support on this model is 2Mb VRAM as standard, with 24-bit colour at 1152 x 870 pixels when fully expanded.

As well as being easy to upgrade thanks to the new chassis design, the processor in the 7500 is on a daughter-board and can be swapped out for a PowerPC604 at a later date. Once again, it's nice to see Apple thinking about the future and providing users with an upgrade path so that they don't feel left behind.

Finally, supplied in the company's cute mini-tower casing, the 8500 is PowerPC604 based and designed with multimedia in mind. It features a 256Kb second-level cache as standard, a maximum RAM capacity of 512Mb, 1Gb or 2Gb Fast SCSI drive, and three PCI slots. As with the 7500 there are RCA audio input and output jacks, a DAV slot and a video input, but there's also a multi-standard flicker-free video output complete with S-VHS connectors.

All the new models look promising, and for the full story and details, check out the reviews starting on page 112.

More from MacWorld

In other MacWorld news, Microsoft was showing enhanced 1995 versions of Encarta, Cinemania and a number of its other Home titles. The company announced an upgrade growth of 288 per cent for Office for Macintosh and Power Macintosh. Over 3.6 million copies of Microsoft Word for Macintosh have been shipped, making it the all-time best-selling word processor for the Mac. It's also just about the all-time slowest word processor for the PowerMac, but funnily enough they didn't mention that.

A number of PCI cards for the new Macs were on display, and Diamond Multimedia was offering an impressive graphics solution with the Javelin 3000 series.

Utility of the Month

Perhaps the most interesting product at the MacWorld Boston 95 show, and November's Utility of the Month, is Speed Doubler from Connectix, authors of RAM Doubler which was the first product to win this prestigious award. As its name implies, Speed Doubler can literally double the speed of your Mac, allowing you to work faster and be more productive. Speed Doubler has three main components: Speed Emulator, Speed Access and Speed Copy.

Speed Emulator is specifically for PowerMac users and is the most useful of the three components. It provides a new version of the Motorola 680LC40 emulator used to run non-PowerPC native software, which runs at twice the speed of Apple's original.

The new emulator works by using a technique known as Dynamic Recompilation. This involves a system of translating and caching instructions. Whenever Apple's emulator sees a 68K command, it translates it into PowerPC code and executes it. The Speed Emulator does the same thing but then stores the translated command in memory, so that next time it's used it doesn't need to go through the translation bit. The result is 800Kb less memory available for programs but much faster emulated applications. Speed Emulator allows even the 6100/60 to emulate at Quadra speeds.

Interestingly, while Apple's new 68K emulator for the PowerPC604 chip uses caching techniques for improved performance, Connectix claims that its code is still 30 percent faster.

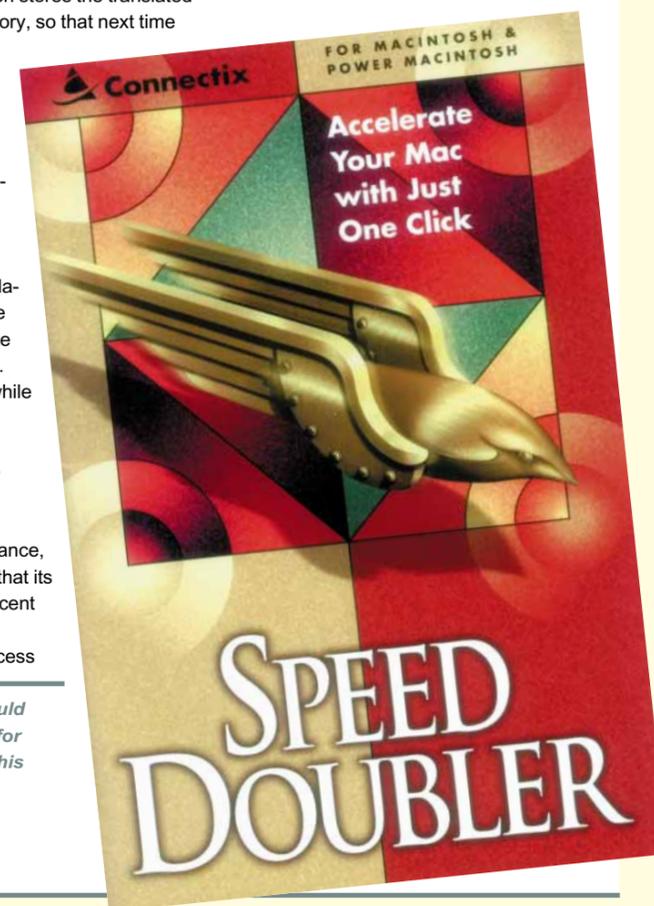
The Speed Access

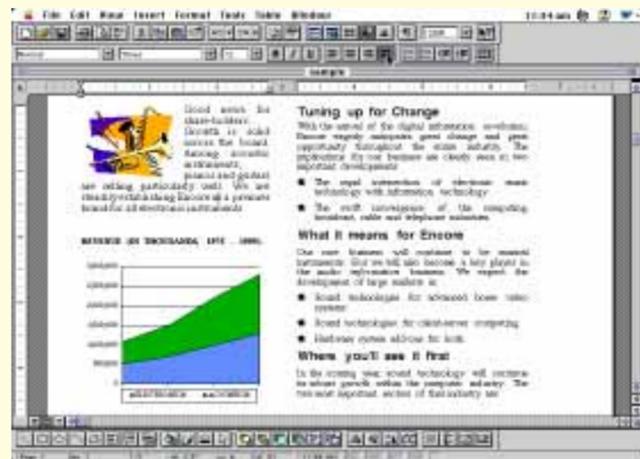
Speed Doubler could be the best utility for PowerMac users this year

part provides a much improved disk caching system, replacing Apple's own with more intelligent algorithms. Even under System 7.5 the current Mac disk cache performance peaks at around 256Kb, and assigning it more RAM can result in overall system slowdown in some cases. The Connectix version is not only more efficient, it improves as you give it more memory to play with – as a true cache should. The results are especially noticeable when loading, storing and sorting large files in programs such as ClarisWorks, Microsoft Excel, Adobe Photoshop and Doom II.

The final part of Speed Doubler, Speed Copy, is a general improvement to the Finder's file-copying functions. It speeds up data transfers between disks, allows copying in the background and up to three simultaneous file copies at once, to different destinations.

I've only been using Speed Doubler for a short time and I'm already convinced of its worth. With an RRP of £69, the same as RAM Doubler, it's going to fly off the shelves. Buy and install it today.





Left *Microsoft Word is now officially the biggest-selling word processor on the Mac*

Below *After much delay, the long-awaited Doom II finally appears in Mac form. The wait has been worth it*

been well worth the wait. Not only is the conversion as good as the PC version, it's even better in some places. On a PowerMac 7100/80 you can play at a good speed with 640 x 480 graphics, twice the resolution of the original, QuickTime GM MIDI music and stereo sound effects.

Doom II requires 8Mb of RAM and is a fat binary application so it will work with both 68K and PowerMacs. Network support is included for up to four players, and using MacIPX it should be possible to mix and match PC and Mac players.

Tests on different machine configurations revealed that Doom II works well on anything from a 33MHz 68040 upwards, although on a Performa 5200 it wasn't as

Based on the technology used in its Stealth series for PCs, these are 64-bit cards supporting screen resolutions up to 1600 x 1200 pixels at high refresh. Thanks to an S3 Vision968 processor, they also offer hardware video scaling and interpolation for improved QuickTime.

Prices are \$399 for the 2Mb VRAM Javelin Video 3240XL and \$569 for the 3400XL version with 4Mb VRAM.

Send in the clones

Mac clone venter Power Computing had a heavy presence at the show, with its machines starring on various third-party stands as well as its own. Chief among the clone users was Bungie, of Marathon fame, showing what the sequel to its best-seller looks like on a Power 100.

Comparable to an 8100/100, the Power machine has received generally favourable reviews from the US press and no compatibility problems have showed up so far. The machines are aggressively priced, with an 8/365 configuration coming in at \$1,699 complete with software including Claris Works and



good as I thought it would be due to the 603e processor and an internal IDE hard drive instead of SCSI. This is a pity; it would have been nice for retailers to have a couple of machines running the game in demo mode to prove that the Mac will do it.

That said, it has to be the best Mac game to date. It hadn't been released in the UK at time of writing, but will be available soon via Softline Distribution.

Did you know?

Early in its history, Apple had a legal run-in with the Beatles and their company Apple Records, which resulted in the computer giant agreeing that it would keep out of the music recording business. Later, when Apple started to explore the idea of voice recognition, it decided to bundle microphones with some Macs, technically breaking this agreement.

Knowing what they were doing, Apple engineers decided to add a new system sound to Macs with microphones. Its name? Sosumi.

Quicken, although this doesn't include Power Computing's High Performance Video (HPV) adaptor.

I did a little testing of my own and I was impressed. There's still no news of an official UK distributor at time of writing, but stay tuned and I'll let you know.

Doom Day

There's something about Doom that's so slick and addictive it knocks the competition into a cocked hat, then blows it away with a double-barrel shotgun. August finally saw the launch of GTE Interactive's conversion of Doom II for the Mac, and it's

PCW Contacts

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- Microsoft Office for Mac and PowerMac from Microsoft on 01734 270001
- Diamond Multimedia 001 408 325 7346
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