

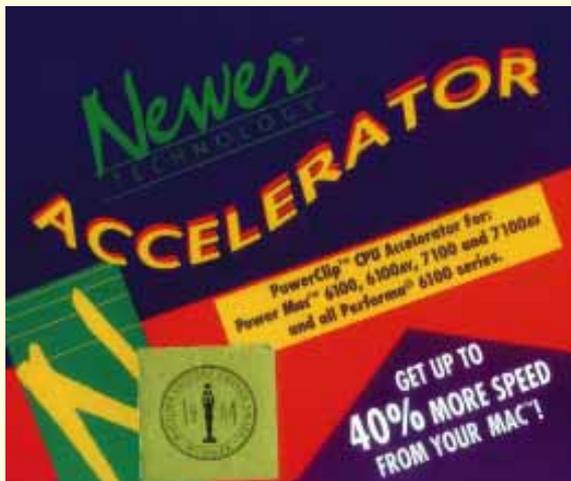
You've got the power

If you're feeling left behind by the latest round of machines with increased clock speeds, Chris Cain tells you how to boost the performance of your current Mac with the addition of an easy-to-fit 'bolt-on' goody. And if you're bored with waiting for Doom II, try Dark Forces to while away the time.

As regular readers of PCW may remember, I upgraded my trusty Centris 650 to a PowerMac 7100/66AV just prior to last Christmas. At the time, its 66MHz clock speed put it firmly in the middle of the PowerMac range, with the 60MHz 6100 at the entry level and the 8100/80 firmly on top. I was pleased as punch with the performance, and especially impressed by the almost flawless backwards compatibility with my existing 68K applications.

Seven months down the line, and Apple has revamped its machines and 66MHz is now the slowest PowerMac it sells. Even the new, entry level Performa 5200 moves along at 75MHz, and in some cases, it's possible to write programs for the newer 603 processor that run slightly faster than they would on an equivalent 601. The 7100 now sports an 80MHz chip and top of the range is the 604-based PowerMac 9500/132.

Things certainly move fast in this industry, so two months ago I decided to redress the balance: I can't afford a new machine but a quick phone call to the US resulted in the arrival of a PowerClip from famed Mac hardware developer, Newer



Technologies. The PowerClip is a small device that fits over the top of the clock chip on 6100 and 7100 motherboards, and allows you to crank up the speed of your Mac.

I've seen advertisements for this type of product in the past but have never quite had the guts to install one. Most required

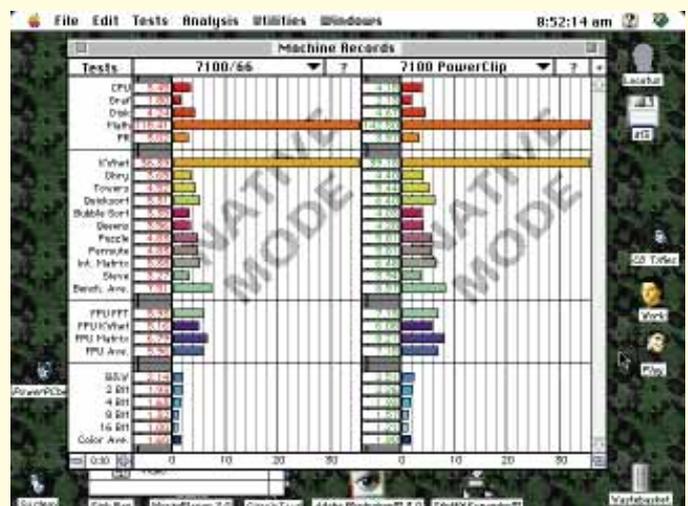
a "black belt" level of precision soldering or the complete replacement of the main CPU, and once you'd fitted it into your machine that was that. PowerClip, on the other hand, requires no soldering and can be removed as easily as it is installed.

Installation is a matter of opening up your case, locating the clock and attaching the clip. Switches on the side allow you to set the speed anywhere between 20 to 100MHz, and for the 7100 Newer Technologies recommends starting in the 72MHz range and moving up until your machine begins to exhibit problems on booting.

Once you hit this stage, the last stable speed is the best for your system; component tolerances change from motherboard to motherboard, so some experimentation is required. Cranking up the processor will make it run hotter, so Newer provides a small CPU fan which

Left Keep up with the Joneses with PowerClip from Newer Technology

Below Old and new clock speeds compared



takes its power from the hard drive power lead.

Nothing ever goes quite as smoothly as it should: getting to the clock on the 7100 requires the removal of the hard disk and the drive bay chassis, then everything has to be put back before you can see if it works. To try another speed, you have to repeat the whole process. I started at 72MHz and worked my way up to 80MHz, becoming increasingly annoyed with Apple internal design.

My 80MHz 7100 ran fine for the next week and the difference was clearly noticeable in applications, such as Microsoft Word and Adobe Photoshop, and graphically intensive games like Marathon. Finally I could have a full screen display, albeit in low resolution, without any annoying graphical glitches. Everything was great until I downloaded and installed Apple's System 7.5 Update 1.0.

Due to the nature of this update (reported in *Hands On Mac*, PCW June '95) any accelerated Mac running at the same speed as another official model will not load the system software properly once the update has been installed. The first and most obvious give-away is a missing Mac OS splash screen on startup. This situation forced me to remove the PowerClip and go back down to 66MHz.

Thankfully, there's now a software patch from Newer Technologies, and anyone in the same boat can download a copy of this from the company's page on eWorld. My machine is back up to speed and has been working well — so far. If your old 6100 or 7100 seems a bit slow and you want to boost the performance, I can heartily recommend the PowerClip.

Dealer Dilemma

While reinstalling the PowerClip this month, I had to pay a visit to my local Apple Centre, having damaged one of the connections on the Mac's internal SCSI lead. With rapidly approaching deadlines a quick replacement was in order, so I shot down the road to sort things out.

After 15 minutes of waiting, and having explained to three different people exactly what internal SCSI was, the sales staff finally told me the lead was an engineering spare and that Apple Centres don't keep them in stock, as standard. I could place an order for one, which would arrive in a couple of days, but then I would have to bring my machine into town for it to be fitted. The whole thing, including service, would have set me back £19.95.

Diving into another dealer, which also sold various brands of PC-compatible,

resulted in the same story — although they at least knew what SCSI was. I was just about to leave when I saw internal leads hanging on the wall of the PC counter. There's no difference between a Mac cable and a PC cable, but as an official Apple dealer, the shop couldn't sell me one to use with the Mac. I walked out, walked back in, asked for a PC internal SCSI lead, and paid £14.95. The 7100 was up and running in minutes.

As someone who uses PCs regularly, as well as Macs, this situation beggars belief. Apple really needs to sort out its dealers and what items they stock. The company is selling computers, not televisions, and it is not unreasonable to expect that users will want to open them, add new hardware and generally improve performance. Treating people with kid gloves is fine, until it starts to get in the way.

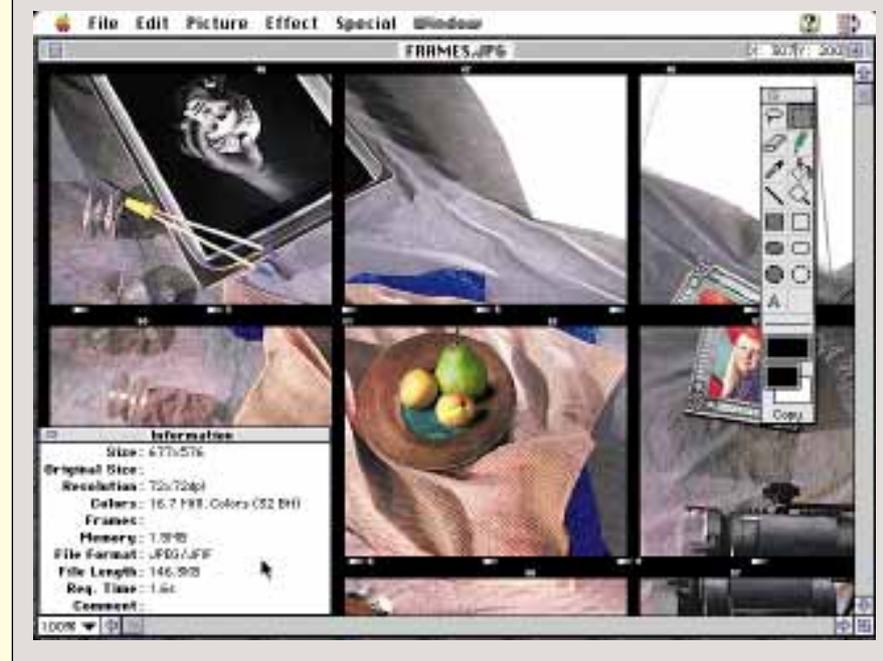
Utility of the Month

Winner of the September "Utility of the Month" award is the shareware package, Graphic Converter, by Thorsten Lemke. Currently in version 2.1.3, this is a top-notch piece of image editing software that is now accelerated for PowerMac. Thorsten has kept his code up to date with Mac system changes and this is the best release yet.

Graphic Converter is best described as a simplified shareware Photoshop, with all the drawing tools you would expect from a traditional bitmap painting program. There are image enhancing routines like sharpening, dithering, gamma correction, and resolution and bit depth alteration. Over 50 image import filters are built in, including GIF, TIFF, Windows Clipboard, BMP, PCX, JPEG and Autodesk FLIC format.

The package also has a Slideshow option which displays all the pictures in a specific folder. The time between each picture displayed can be set in seconds, or you can choose to use a mouse click — ideal for presentations. The title of an image and its details can be displayed on the same screen or an additional one, in any font size and style available on your Mac.

There's much more to Graphic Converter than there is space available here in which to write about it. So if you're interested in image editing, I strongly suggest you take a close look at this latest version.



Quality Quicktime

During the last few issues, we've looked at QuickTime 2.0 and the quality of its software video playback. This varies greatly depending on the type of compression used during recording, and recently I came across what has got to be the best system I've yet seen. The compression is TrueMotion S, developed by US-based The Duck Corporation.

In tests with the standard Apple Movie Player, TrueMotion S sequences mastered for thousands of colours ran extremely smoothly on my 7100, in some cases at full screen, by only drawing every other line; a trick employed by many new games to speed up graphics (including Electronic Arts' Super Wing Commander



*Why are they smiling?
They've just been
encoded with
Trumotion S*

and Dark Forces from LucasArts). Any developers who want to improve the quality of video in their products would be well advised to check this out.

The demo clips I looked at were from Horizons Technology, of San Diego. Full details are given in the *PCW Contacts* box below.

Dark side of the Mac

While everyone who likes playing games on their Mac is still waiting for Doom II (currently suffering distribution problems), Virgin Interactive and LucasArts have released Dark Forces. Set in the Star Wars universe of George Lucas, it casts you as Kyle Katarn, a ruthless mercenary now employed by the Rebellion.

Using a Doom-like 3D engine, the game has you running around trying to find information on the Empire's latest secret weapon. More dangerous than the Death Star, with which you

Forces plays extremely well on the Mac. The graphics on our test version don't move quite as smoothly as the original, even on a PowerMac, but the increasingly addictive gameplay cannot be faulted. All the atmosphere of the movies is there, complete with sampled laser sounds, digitised voices and stirring Star Wars music. Characters in the game include Darth Vader, the legendary bounty hunter Boba Fett, Imperial Probe Droids, and that funny sewer monster from the first film.

The arrival of this game on the Mac, and especially the PowerMac, is a significant step towards getting more machines into people's homes. Consumers looking for a home computer want to play fast-moving action adventures, as well as balance their bills in a spreadsheet and write letters in a word processor. Apple needs to support firms like LucasArts if it wants to

Get a big gun, take on the Empire and be home in time for tea, with Dark Forces

expand out of the DTP, education and multimedia markets. Other titles planned for the Mac by LucasArts include Full Throttle (reviewed in this issue on page 281).

Dark Forces requires a 68040 Mac or PowerMac, System 7.1 or higher, 256-colour 13in monitor (or larger), CD-ROM drive, 8Mb of RAM and 5Mb minimum available hard disk space. Potential players on eWorld can download a demo of the first level, à la Doom, from the commercial game demos folder on ZiffNet.

Softly does it

A recent visit from those nice people at Insignia Solutions resulted in a Beta copy of the eagerly awaited SoftWindows 2.0 for PowerMac. SoftWindows is a Microsoft Windows emulator for the Mac, and up until now has only emulated Real Mode as used on a 286 processor. SoftWindows aims to give full 386 Enhanced mode emulation.

Early tests carried out in the VNU Labs reveal that the new version achieves what it sets out to do and even runs hardware-intensive multimedia titles and games like Doom, albeit slowly. Is it a feasible alternative to Apple's 486 DOS Card? Look out for a full review of the finished product as soon as I receive it.

And that's it for another month. In the next issue, along with the latest news from the Apple world, we'll be looking at customising your desktop for that personal look and feel. Until then... *may the force be with you.*



PCW Contacts

Chris Cain welcomes all comments, questions and suggestions from Mac users and can be contacted via the usual PCW address or by email as chris_cain@pcw.ccmil.compuserve.com, chris@cix.compulink.co.uk or cain@eworld.com

Apple 0181 569 1199

Newer Technologies

001 316 685 4904 (US)

Dark Forces costs £49.99 from Virgin Interactive Entertainment on

0181 960 2255

Insignia Solutions 01494 459426

Horizon Technology, 3990 Ruffin Road, San Diego, CA 92123, USA

Graphic Converter is downloadable from the Hot Files section of eWorld, and costs \$30 to register in Europe (\$31 in Germany with tax).

Lemke Software, Insterburger Str. 6, 31228 Peine, Germany.