



# MAC FACTS

from

## Mac Help Desk

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### *A Message from Dru*

Many of you have often heard me comment about my typing prowess (or lack thereof). Well it appears that counting should also go into the kettle, too. For those that follow such things, you may note that last month's Mac Facts was Volume 8, Number 8 and that this month's is Volume 9, Number 9. [That's a 'jump' of 13 months!]. And what brought this about was that I was considering that next January will be our 10<sup>th</sup> anniversary here at Mac Help Desk (Who'd of think it!). And what occurred to me was that our first issue of Mac Facts was in April 1992 and it was labeled Volume 1, Number 1. Wrong! It should have been Volume 2, Number 4. And counting from that we're now at V9, N9. Whew, now that that's settled...



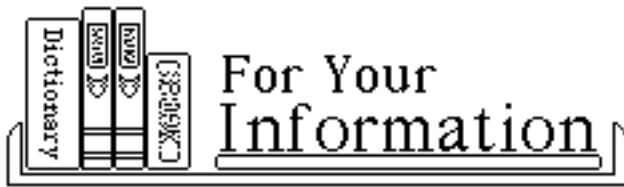
To all of our Jewish client/friends – L'Shana Tovah - May you be inscribed in the book of life, prosperity and health, for this year and many more to come. Happy New Year!



There **is** a method to my madness – A few rants: Mama always taught me that when I send a message whether it be via phone, post, or (now) e-mail that I should ALWAYS sign them with first (and last, if necessary) names. It's the polite thing to do. [Particularly since I deal with over 2700 Mac Help Desk client/friends and I know for a fact that there are more than 1 Shirley, 1 Bob, 1 Steve, and 1 Carol out among y'all]. E-mails – When sending e-mails, in particular, you should always have the courtesy to include the original e-mail with your response. I have configured each client/friend's e-mail (in either Eudora or Netscape) to do just that. If you've turned off this facility, you may find yourself getting e-mails returned because they make no sense. 'Nuff said, I hope.



We will be closed on Saturday September 11<sup>th</sup> for the Jewish holiday of Rosh Hashana and on Monday September 20<sup>th</sup> for the Jewish holiday of Yom Kippur. To learn more about Rosh Hashana go to: <http://www.jewfaq.org/holiday2.htm>. To learn more about Yom Kippur go to: <http://www.jewfaq.org/holiday4.htm>.



## Fantastic Four

with the Power Mac G4, Apple brings super power to your desktop.

By Andrew Gore

Comic books made their mark on the world by telling the stories of people with amazing and bizarre powers that place them far above the realm of mere mortals. Invisibility, superhuman strength, invulnerability, blinding speed - in the world of superheroes, no capability is too fantastic to be possible.

Though the ability to bend steel with a single thought is still firmly seated in the realm of fantasy, another kind of super power just became a reality. With the arrival of the Power Mac G4, the personal supercomputer is finally here.

Based on the new PowerPC G4 processor, which is capable of executing well over 1 billion floating-point instructions per second [*that's 1 gigaflop - Ed.*] (the requirement to qualify for supercomputer status), the Power Mac G4 is to most computers what Superman is to the average citizen of Metropolis.

### Silver Surfer

In a world where Apple spends a fortune to get just the right tone, saturation, reflection, and transparency in its plastics, little things can mean a lot. Some reviewers were underwhelmed by the look of the blue-and-white Power Mac G3, now discontinued after a whopping eight months in existence. It wasn't that they didn't like the blue-and-white G3; they simply felt it borrowed a little too much from the consumer-friendly look of the iMac to be taken seriously by the professional user it was designed for.

**Glorious Graphite** - We're happy to report that we feel no such ambivalence about the chassis of the Power Mac G4. Words like elegant, refined, and striking come to mind. Although the overall design of the case remains the same as for the G3, the Power Mac G4 replaces the blueberry front panel with a shade of gray that Apple calls graphite. The sides are now an opaque silver gray, and you can no longer see through the Power Mac's skin to the metal framework inside. Perhaps most striking are the clear handles, which beautifully offset the graphite Apple logo on the side panels.

Best of all, our favorite feature of the blue-and-white G3's design remains unchanged in the G4-- the easy-to-open door that gives users full access to all the Power Mac's internal components.

### Flame On!

By any measure, the new PowerPC G4 chip is incredibly fast. Using megahertz as a measurement is a start: these three new Power Macs clock in at 400MHz, 450MHz, and 500MHz. But those numbers don't adequately describe the speed of the G4 chip.

**The Flash** - That's because in addition to being faster than the G3 processor and offering higher clock speeds, the G4 includes a new subprocessor that Apple has dubbed Velocity Engine. The

name may be new, but the technology is something we've been hearing about for some time--a high-speed subprocessor called AltiVec by the G4's inventor, Motorola.

Although Motorola and IBM plan to produce G4 chips both with and without Velocity Engine, Apple currently plans to use only G4s that feature the subprocessor. This is a good thing, because applications have to be modified in order to take advantage of Velocity Engine features.

Several companies have already announced plans to support Velocity Engine--in fact, an Adobe Photoshop plug-in for Velocity Engine will come with every Power Mac G4. The first day the G4 arrived, several other companies announced Velocity Engine support in their products, including Casady & Greene's SoundJam MP and Terran Interactive's Media Cleaner Pro.

Depending on the program, users could see up to a fourfold improvement over non-Velocity Engine versions in the speed of certain functions, such as complex encryption, graphics filters, and multimedia compression. That's undoubtedly why SoundJam MP (MP3 audio compression) and Media Cleaner Pro (QuickTime compression) made the jump to Velocity Engine so quickly.

**Speed Racer** - However, the speed improvements from the G4 don't end with Velocity Engine. According to Apple, even applications that aren't Velocity Engine-savvy will see significant performance boosts. Some of this has to do with the faster speed of the G4 chip itself, but some of it also has to do with improvements in the logic board on certain models of the G4 (see the section "The Invisible Mac" below).

And keep in mind that the Power Mac G4 is a supercomputer even though there's only one processor inside that gray-and-silver box. Apple stopped shipping Macs with multiple processors mostly because the G3 chip didn't work with multiprocessing. However, the G4 has no such limitations--meaning that G4 Macs with several processors inside are a distinct possibility down the road, especially considering the powerful multiprocessing abilities that will be built into Mac OS X.

## The Invisible Man

Not everything about these new Power Mac G4s is as crystal-clear as their curved handles, however. That's because while all these models share the same G4 moniker, some striking differences become apparent when you open their side doors.

**Wonder Twins** - In the initial Power Mac G4 lineup there are two different configurations, one an intermediate step between the faster G4s and the blue-and-white Power Mac G3, the other a high-end configuration featuring impressive new technologies.

In order to get one model in the G4 lineup down under \$2,000--and to get it out to customers as soon as possible--Apple placed a 400MHz G4 processor onto a slightly modified version of the blue-and-white G3's logic board, and put it in the new Power Mac G4 case. In almost all other respects, the low-end Power Mac G4 is exactly the same as the G3 Power Macs. One notable exception: none of the Power Mac G4 models features an ADB port; the last vestige of old Mac input-output technologies from the G3 is now gone.

As a result of using the older logic board design, Apple was able to pack a lot into the low-end G4, considering its \$1,599 price tag - a 400MHz G4 processor with 1MB of L2 cache, 64MB of RAM (expandable to 1GB), ATI Rage 128 2-D/3-D graphics acceleration with 16MB of graphics memory, a 10GB Ultra ATA hard drive, and a CD-ROM drive. A version of the low-end G4 featuring a 450MHz processor will be available in October, according to Apple.

**Clobberin' Time** - The high-end G4s, initially running at either 450MHz or 500MHz, are based on a totally new logic board design and include some impressive refinements. For instance, the 66MHz PCI graphics card slot in the blue-and-white G3 and the 400MHz G4 has been replaced by a 133MHz AGP 2x slot. AGP (Advanced Graphics Port) is a high-performance PC industry standard for connecting graphics cards, and, according to Apple, with the right driver software, any of the ultrafast AGP cards currently available for Intel PCs will work in the 450MHz or 500MHz G4s.

The combination of the G4 processor, Velocity Engine, and the AGP slot is so powerful that the high-end G4s don't have any video decoder hardware built in. That means these models can play back DVD movies all by themselves, without needing an extra boost from an MPEG decoder chip.

Memory bandwidth has also been doubled on the higher-end G4s--to 800 MBps (up from 400 MBps on the low-end system)--with the maximum amount of RAM increased to a whopping 1.5GB. That translates to systems that are much faster reading to and writing from RAM--which means RAM-intensive applications, such as Photoshop, will receive major speedups with these models.

**Connection Colossus** - Even USB will run faster on these systems: while maximum throughput remains at 12 Mbps, there is now a separate USB controller for each USB port, giving users with multiple USB devices two independent 12-Mbps data connections, so all USB devices no longer need to share a single connection. Apple has even added an internal FireWire port on the high-end G4s, so you'll be able to add fast internal FireWire devices later.

Taking a play out of Apple's own iBook announcement, the high-end Power Mac G4s come with an AirPort wireless networking slot and an AirPort antenna built into their handle. For \$99, you can add an AirPort card that will let the G4 hop on a high-speed wireless network.

What's more, software that will come with the high-end G4s will allow them to act as an AirPort hub, negating the need to buy the \$299 AirPort base station. Apple is still testing the maximum number of wireless connections a Power Mac G4 can handle, but the company expects this capacity to be the same as the hardware base station's (up to ten clients with a range of 150 feet).

**With Great Power** - At what price comes all this computing muscle? A 450MHz model with 1MB of L2 cache, 128MB of RAM, an ATI Rage 128 AGP graphics card with 16MB of graphics RAM, a 20GB Ultra ATA hard drive, a DVD-ROM drive, and a Zip drive will sell for \$2,499, according to Apple.

The top-of-the-line 500MHz configuration offers 256MB of RAM, a 27GB Ultra ATA hard drive, and a Matsushita DVD-RAM drive (offering both DVD playback and up to 5.2GB of writable DVD storage), all for \$3,499. Interestingly enough, this high-end configuration offers a 56K modem only as an option, rather than as a standard component. Perhaps Apple assumes that anyone who can venture into the rarefied air of the 500MHz G4 shed the shackles of analog Internet connections long ago.

## **The Last Word**

If you're itching to rush out and buy one of the high-end Power Mac G4s, hold your horses. While Apple says the low-end 400MHz system is shipping now, at press time the company was predicting shipment of the 450MHz G4 model sometime in September and the 500MHz unit in October.

Unless you absolutely can't afford the pricier models or can't wait another minute, we suggest you bide your time and wait for the high-end G4 configurations to appear. Although the G4

processor does account for a lot of the performance improvements in the new models, the niceties of the new logic board design will also have major impacts on speed. And, if you opt for the low-end model, you won't be able to play with cool new capabilities like using an AirPort card, internal FireWire devices, two separate USB ports, or the new Apple Cinema Display

**Beauty, speed, flexibility** - the new Power Mac G4 could put even the most powerful comic book superheroes to shame. Able to leap the fastest Pentium PCs in a single bound, this new Mac proves that Apple is truly a superpower in the desktop computer world.

#### POWER MAC G4's AT A GLANCE

<b>Suggested Configuration*</b>	<b>Power Mac G4/400 (low-end)</b>	<b>Power Mac G4/450 (high-end)</b>	<b>Power Mac G4/500 (high-end)</b>
Estimated Price	\$1,599	\$2,499	\$3,499
Processor Speed	400MHz	450MHz	500MHz
RAM (Maximum)	64MB (1GB)	128MB (1.5GB)	256MB (1.5GB)
Maximum Memory Bandwidth	400 MBps	800 MBps	800 MBps
Cache RAM	1MB	1MB	1MB
Graphics Slot	66MHz PCI	133MHz AGP	133MHz AGP
Hard Drive	10GB Ultra ATA/33	20GB Ultra ATA/66	27GB Ultra ATA/66
CD/DVD Drive	CD-ROM	DVD-ROM	DVD-RAM
Zip Drive	No	Yes	Yes
FireWire Ports	2	3 (1 internal)	3 (1 internal)
USB Ports	2	2**	2**
56K Modem	Yes	Yes	Optional
AirPort Option	No	Yes	Yes

- \* = Models can be configured differently at the online Apple Store (<http://store.apple.com>).
- \*\* = Each port on these models is on its own bus, doubling the potential USB throughput.

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## NEWSLINE

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### Apple shares jump to all-time high

CUPERTINO, California--For two years, Apple Computer's advertising has urged people to "Think Different."

Investors who listened are reaping the payoff. Apple's shares rose 4.16 percent to a new all-time high of 73 on September 3<sup>rd</sup>.

The company's previous all-time high of 68 per share was set in 1991, according to company records. That's a long way from the low of around 13 in January of 1997 after executive departures and falling sales left some predicting the company that revolutionized the industry either had to find a buyer or close.

Much of the credit goes to cofounder Steve Jobs, who returned in August 1997, spearheading a turnaround by slashing costs, trimming products, and firing more than 20 percent of the workforce, although many of those plans were initiated under his successor, Gil Amelio.

As interim CEO (iCEO), he revived sales and enthusiasm with brightly colored iMac machines and powerful computers designed for professionals. Revenue in the year ending this month will be more than a year ago, the first increase since 1995.

"This is a transformed company," said Tony Maramarco, manager of the David L. Babson Value Fund, which owns about 750,000 shares of Apple. "It went through a lot of pain and agony to get here, but they've got products now and earnings."

The company just unveiled new professional machines this month, more than three months earlier than analysts expected. Pre-orders for the iBook, which is being shipped this month, top 140,000. Analysts expect a faster iMac soon.

### **Profit rising**

Earnings are forecast to rise to 76 cents a share in the September quarter, and 89 cents in the December quarter, according to First Call. That compares with 68 cents and 78 cents in the year-earlier periods. Market share is ticking back up, and Apple showed the biggest rise in U.S. retail PC sales for July, more than doubling its shipments.

Jobs became interim CEO when Amelio left in 1997 and has kept the post ever since. Jobs sold all but one of his Apple shares shortly after joining, and he now holds options to buy 10,000 shares. The board repeatedly has said it isn't concerned about removing the temporary part of Jobs' title. Jobs, whose salary is \$1 a year, won't discuss it.

Jobs is also chairman and CEO of Pixar, the animation studio that made *Toy Story* and *A Bug's Life*. His 30 million shares of Pixar are worth about \$1 billion.