

## How Much Computer Do You Need?

- by Stan Kaplan, WB9RQR  
105 Martin Drive  
Port Washington, WI 53074-9654  
(414) 284-9346  
skaplan@mcw.edu

Boy, that is a tough question. But it is an important one, because it can easily mean a waste of money, as much as \$1,000 or even more! Why not be prudent and apply those precious dollars toward a new rig, or some peripherals for the hamshack? So what do you really need for computing power? Dave Barrow, N9UNR, who suggested this article, keeps reminding me of what he tells his customers. You may need considerably less than you think.

Prices are dropping consistently in the computer world, probably owing to the supply being greater than the demand. Nevertheless, it is very tempting to put out the bucks for that 450 MHz demon, with 256 Mb of RAM, a new printer, CD-ROM drive that can write as well as read, megablaster sound system, and so on. Nice frills, indeed, and I am just as susceptible as you are to drooling over them. But we need to be realistic and organized and analytical when buying a computer, especially BEFORE we go shopping! So, here are some features and what they mean to you.

**CPU** (Central Processing Unit, the Mother Of All Chips on your motherboard): If you do just word processing, a few ham programs and some web browsing, you don't even need a Pentium. A 486 rated at 66 or 100 MHz will do your work just fine. On the other hand, at this point in history, the 486 has become an antique! Prices for Pentiums are so low that it does not pay to look for a new 486, even if you can find one to purchase. If you have a reputable source, a used 66 or 100 MHz 486 should run around \$200, complete. If your needs are as outlined above and you want a brand-new machine, look for a Pentium 166 MHz with MMX (advanced graphics) capabilities. Even better would be a 233 MHz MMX Pentium. I have one of each in my office, and can tell the difference in speed when handling and manipulating large graphics files, though both do a fine job. Actually, the Pentium 166 is my main machine and I use the 233 MHz computer for secondary jobs and backup. You need not stick with Intel chips (Intel makes all the Pentium CPUs). An AMD K6 processor, rated for MMX and comparable in speed to those I mentioned above, will generally outperform the same class of Pentium chip and cost around 25% less. Cyrix also makes a fine family of CPU chips. There is really no such thing as a badly designed CPU on the market today insofar as I am aware, though you should know that the WinChip (C6 chip, made by IDT) is at the low end of both cost and performance.

**MEMORY:** Don't even think of getting a new computer with less than 64 Mbytes of RAM. Adequate memory can make the difference between a slow "honker" and a speed demon. Although Win95 or Win98 will work with much less, you may well be frustrated if you opt for less than this minimum. At less than \$100 for 64 MB, memory is truly cheap. Go to 96 MB if you can, or splurge with 128 MB. The cost/benefit ratio goes down rapidly after 128 MB unless you routinely edit huge graphic files. If a favorite pastime is editing pictures of your grandchildren, then consider the limit your machine can handle.

**MODEM:** Forget anything slower than a 56-kb modem. If you want the most trouble-free unit available with probably among the best customer support hierarchies, go with US Robotics (3-Com).

**MONITOR:** Sure, you can get along with that old 14-inch monitor. It is still working fine, right? Don't! Get a 17-inch, 19-inch or even 21-inch monitor. When purchased as part of a package, they are less costly, and the larger screen will really make a difference. I am editing this article

with a 20-inch (11½ high X 15¼ inch wide actual viewing area) Hewlett-Packard (made by Sony) that I just purchased used for under \$300. What a pleasure!

Other Bells and Whistles: Be sure to get a 3½ inch floppy drive, but don't bother with a 5¼-inch drive unless you have a lot of the big floppies lying around. Even then, you can probably use your old machine, or a friend's, to convert them. The 5¼-inch floppy is an antique. Get a CD-ROM drive, of course, and consider an IDE CD-ReWritable drive. Available separately now in the \$200 - \$350 range (August 1999), these will allow you to write backups to a CD-ROM disk, which you can erase and write over later when the backup is out of date. These devices read regular CD-ROMs at over 20X speed, but write at a much slower rate (2X-4X). Nevertheless, you can do a backup overnight quite conveniently. I do believe the tape drive for home PC backups is on its way out at this point. At least a 6 Gbyte hard drive is pretty much standard at this point, which is fine.

Operating System: We are all pretty much stuck with Windows 95 or 98 at this time in the history of computing. Which one to opt for? It is said that Win98 cured 500 problems found in Win95, and created 1,500 new ones. I would say opt for Win98 if you have a choice, but be sure they give you a CD-ROM with the machine, so you can re-install the operating system when you need to. And be sure to plan on purchasing and installing a copy of Norton Utilities for Win95/98. This is an absolute necessity and is well worth the grief that it will save you. It is the most important software package you can buy outside of what comes pre-installed in the machine. The box should be on your desk when the new computer arrives, and you should install it within a day or two! No, it won't spoil like an unrefrigerated fish, but you need its protection right away.

Brand: Dell and Gateway are currently the leaders in quality and customer satisfaction, but there are a number of other hardware houses out there that offer good stuff. Avoid Packard-Bell. Their quality has been low and customer satisfaction at the bottom of the heap for a number of years now. Ask anyone who repairs computers if you don't believe me.

Beyond what I have suggested in this short article, you need to read computer magazines. Want to know which printers are the best? Hewlett-Packard, of course, but you can get others that give a big bang for the buck and rival the HP quality of print. Read. Read. Read. Don't forget to consult Consumer Reports, a good, unbiased source of information. Agonize over your decisions. Then go ahead and take the step, well informed. Don't be upset though, when you read in 3 months that your brand new computer is already outdated. The field is moving so fast that you can depend on that happening. Remember, if it does what you want in a timely fashion, you have gotten your money's worth. Happy computing!