



THE ELEMENTS OF **PERFORMANCE**

Basically, there are 3 major components inside your computer that affect performance:

Processor - The first component is your processor or CPU. Think of your processor as a hired handyman; someone you can instruct to do things around your house. You can hire someone who is lazy or you can hire someone with a good work ethic who gets things done quickly. The speed of a processor is measured in GHz (GigaHertz). Modern processors range between 2 to 3.5 GHz. Nowadays, you can even get a dual-core processor, which is like having two processors in one.

Hard Drive - Think of your hard drive as a garage, or a place to store all your stuff, like pictures, programs, email, etc... When you click on a program icon, you are asking your processor to go get all the tools (or files) necessary to complete a project (or run a program). The processor needs to be able to access these files from your hard drive. If your hard drive is full, you can imagine how difficult it would be for your handyman to retrieve a tool buried inside a full garage. And, even if you don't have a full garage, it can take longer for him to locate a specific tool if the stuff in your garage is not organized. A good rule of thumb is to keep at least 25% of your hard drive free and keep all the rest organized. This helps your CPU locate necessary files faster, thus increasing your overall efficiency. Hard drives are measured by size in GB (Gigabytes). Modern hard drives can range anywhere from 80GB to 500GB.

Memory – Imagine your memory is like a wheelbarrow or a laundry basket. Memory works like a temporary holding container for data. If you don't have enough memory, your CPU will need to make multiple trips back and forth, which can be devastatingly slow. Let's say you ask your handyman to start a project, like digging a hole in your backyard. You've given him a list of 27 tools he'll need for the job: a shovel, a pair of gloves, a pick ax, etc... When he goes to the garage (hard drive) to get all these items, he finds that he only has enough space in his wheelbarrow (memory) to carry 3 tools. In order to complete the task, he'll have to make 9 trips to get all the tools. A faster, more efficient way would be to increase the size of his wheelbarrow, so that he could simply make one trip. Memory is one of the least expensive ways to increase your computer's performance, provided your system hasn't reached its limit. Memory is measured in GB (Gigabytes). Today, a well-equipped system might use 1GB to 2GB of memory, on average.

Maintaining Performance

As with just about anything, a good maintenance program can give your computer years of long life. So what do you do? Have your computer checked out every six months to diagnose any potential problems and do a comprehensive bit of house cleaning. Preventative maintenance is the key to a good experience with your computer. The check-up cost is minimal...the results are priceless.

Are you ready for a checkup? Call Fast Rhino today at (520) 818-9650 and schedule a time for our Bi-Annual Maintenance program to help you sail smoothly through 2008. We'll make sure you're getting the most from your handyman, garage and wheelbarrow.

What's Inside!!! THE BEST OF THE DOWNLOAD Keep it ON or Turn it OFF? A Hot Processor is Dirty Business Pulling the Plug on USB Rhino Thesaurus Tips & Tricks

The Best of "The Download" reprints covered in this Issue!

Over the past year, we've had a lot of people asking us to reprint some of our more popular articles. Since many of you have requested it, we've included them in this issue.

Got a question you'd like to see covered in The Download? Send it to info@fastrhino.com.

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"Success is a lousy teacher. It seduces smart people into thinking they can't lose."

"Your most unhappy customers are your greatest source of learning."

"The obvious mathematical breakthrough would be development of an easy way to factor large numbers."

"Microsoft has had clear competitors in the past. It's a good thing we have museums to document that."

"It's not manufacturers trying to rip anybody off or anything like that. There's nobody getting rich writing software that I know of."

"There are people who don't like capitalism, and people who don't like PCs. But there's no one who likes the PC who doesn't like Microsoft."

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Keep it ON or Turn it OFF? Power Savings vs. Hardware Longevity

Back in the 80's, most everyone lived like there was no tomorrow. Fast forward 30 years and all that has changed. Today, we are thinking greener and we're more conscious about the things we do because of the high price of energy. Most all of us think twice before leaving a light on or a door open.

But what about our computers? Does it make sense to turn our PCs off when we're not using them? How do we weigh the potential savings of energy bills against the possibility of replacing expensive hardware?

As for saving money on your electric bills, most new computers today come standard with "Energy Saver" features, so we're not talking about a lot of energy being spent. According to some estimates, by simply turning off your monitor, you can save 75 percent of the overall energy consumption of a PC.

We tend to agree that regularly turning your computer off can, over time, weaken links between components and damage hardware such as your hard drive. Turning your PC on causes an initial surge of electricity through the circuits, and can be traumatic on the components.

Each time you power down, the read/write head on your hard drive drops, thus causing potential damage to the platter, where your data is magnetically stored. Although we live in a very dry climate, temperature variances have also been known to encourage condensation, which is a hard drive's nemesis.

For the most part, we recommend you keep your computer turned on; however, turning off your computer under certain circumstances can really save the day, not to mention a lot of your hard earned money:

When to turn your PC off:

If storms are brewing. It not only makes sense to turn it off, but if you can, unplug it from the wall. Lightning can just as easily shoot through a surge protector as any non-protected circuit if it hits the electrical grid. A plugged-in system can get damaged by lightning even if it is turned off.

If you plan on being away for an extended period of time. It's difficult to predict the weather here in Tucson when you're visiting your cousin in Idaho. It's best to turn it off if you plan to be away for more than a day.

Twice a month. By shutting your computer off once every 2 weeks, the internal memory (RAM) is cleared and Windows runs more efficiently once memory has been flushed.





A Hot Processor is Dirty Business

Living in a dusty, desert climate like Tucson can put an added strain on your home computer. No matter how well you keep your floors clean or furniture dusted, your computer's processor is vulnerable to unseen build-up.

Today's computer cases are designed with powerful fans to keep the air flow moving inside the tower. Good air flow keeps your CPU from overheating, but it also pulls unwanted particles from the outside air. Many of these particles find themselves attached to your heat-sink, a device specifically designed to displace heat from your processor.

Over time, these tiny particles can increase to resemble a week's worth of lint from your clothes dryer. The accumulation prevents the heat-sink from doing its job, thus causing your processor to overheat and malfunction. The damage done to your computer can be severe and costly. Just like your automobile's air filter or your home air conditioner filter, your heat sink should be free from debris to keep a proper amount of air flow.

Your computer's location can also play an important role in its health. If you keep it near an open window or directly on the floor, dust can build up quickly. Needless to say, if you have pets, the battle to keep your computer free from build-up is even harder. While a lot of computer desk manufacturers provide areas under the desk with enclosure doors to store your CPU, they quite often are not designed with good ventilation. Consider an opening in the back of the desk with at least 6 inches of breathing room between the desk and the wall. If your computer desk will not support an open back, consider keeping the enclosure doors open, especially while the computer is running.

Since there is no way to keep dust out of your system, we recommend that you have your system checked on a regular basis, have any build-up removed, and get the processor tested at least twice a year. If you plan to do it yourself, you should power your system down completely, unplug the power cable and ground yourself before attempting to open the side panel on your case. Several retail office-supply stores sell bottles of canned air which can make the process of blowing out the dust a little easier. If you have a lot of build-up, you might consider using your vacuum cleaner to aid in the removal process, but be careful to avoid any wires or ribbon cables. If you feel more comfortable, you can also just pick up the phone, call Fast Rhino and let our professional technicians do the work for you.





Pulling the Plug on USB

With the convenience of USB ports, it's possible to simply add or remove external devices from your PC without turning your computer off or opening the case. USB devices can include keyboards & mice, sound, video capture, modems, network devices, removable drives and more. USB stands for Universal Serial Bus and it provides hot-swappable technology to make it easy for devices to be added or removed while the computer is running. Most people don't realize that there's a utility within Windows called "Safely Remove Hardware", located in your system tray near your clock, which is an important, required step before you remove a USB device. Without using "Safely Remove Hardware", you can easily damage your USB devices or, in some cases, your USB ports on your computer.

Physical damage may also be caused by repeatedly inserting or wiggling the plug, causing electricity to jump to the wrong parts of the connection. In most cases, the damage involves devices that store or transfer information.

You may have seen USB devices such as chargers or fans available. Since these devices don't transfer information to or from the computer, Windows won't show the safely remove hardware icon. The safely remove hardware feature is typically required for removable drives. Removable drives include thumb drives, external hard drives, and card readers, but can include gadgets with built-in storage like digital cameras and cell phones. The reason these devices depend on the safely remove feature is because they need to finish communicating with the computer to prevent incomplete or corrupted data. You may remember using floppy disks before thumb drives were available. In order to prevent losing information on the floppy disk, it should not be ejected until the light turns off. Since the computer sends information faster than the USB port, removable USB drives work the same way. The only sure way to prevent damage to your files is to click "Safely Remove Hardware" on the lower right corner of the screen and choose the removable device.

It's easy to remember or make a habit to use the Safely Remove Hardware feature, but sometimes you'll end up in a situation where the device has been removed unexpectedly. There's a way to prevent damage in the future. Windows works faster than the USB drives do, so it says it's finished transferring information early. In the background, Windows is usually still transferring information that is stacked up and waiting in memory until it makes its way through the USB port. To make Windows safer for these devices, right-click "My Computer", Choose "Properties". An the top of the next window, click the "Hardware" tab. Click "Device Manager". Click "Disk drives", look for the removable device and "right click" on it. Choose "Properties". Choose "Policies" at the top. Make sure "Optimize for Safe Removal" is selected. Click "OK" and close everything.

There are many things that can affect your valuable information. Dangerous removal of hardware is a situation that is easily preventable. Remember, just a few mouse clicks can save hours of work before a simple removal.

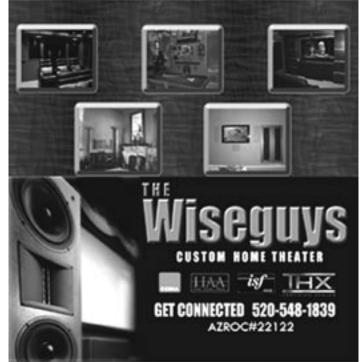
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TECH Product Review iPhone

OK, so we're not Mac fans, but Apple's new iPhone is something to consider if you're in the market for a new cell phone. With a generous 3.5 inch touch screen display, the iPhone takes full advantage of making its features available in brilliant colors and sharp graphics. You won't need a stylus, even if you have large fingers. The iPhone fares well, allowing you to tap out messages with an onscreen keyboard. Plus, it even has spelling correction software built right in. Thanks to the handset's accelerometer (a fancy word for motion sensor), the iPhone's display orientation will adjust automatically when you flip the iPhone on its side while using the music and video players and the Internet browser. Also, a proximity sensor turns off the display automatically when you lift the iPhone to your ear for a conversation. It also supports Wi-Fi, which is a great feature for those who already own a wireless router. Retails for \$399.00.

Canon Digital Rebel XT



For most photographers, the advent of digital cameras became a point-and-click nightmare. It seems going digital meant losing out on all the great features that SLR (single lens reflex) cameras delivered. For those who want the best of both worlds, and at a price you can afford, check out the Canon Digital Rebel XT. This camera is exceptionally small and lightweight. The Rebel XT offers four basic exposure modes, a depth-of-field priority mode, a fully automatic mode, and six scene options: Portrait, Landscape, Close-up, Sports, Night Portrait, and Flash Off. The XT provides color-space options of either Adobe RGB or the default sRGB. It also allows tinkering with sharpness, contrast, and color through the menu's Parameter settings. At 8-megapixels, it was specifically designed for the amateur photographer, yet it delivers the responsiveness and image quality you'd expect from a semipro model. Average Price - \$549.00.

Pioneer 50" PDP-5080 Plasma TV

Black-level performance is one of the most important aspects of picture quality. When a display can produce a deep shade of black, it not only improves the realism and the punch of dark scenes, it also makes colors look richer and more saturated. This 50-inch plasma produces the darkest shade of black from a non-CRT TV, whether plasma, LCD, or projection. It also offers a "smooth" video-processing mode that works relatively well, one of the best antireflective screens. and numerous picture controls. On the downside, it has lessthan-perfect color accuracy and incomplete color temperature controls, but those issues don't prevent it from earning high praise. It does have a higher price compared to that of other similar resolution plasmas on the market. If you can stomach the extra payout, the Pioneer PDP-5080HD delivers a jawdropping home theater picture. Average price - \$2,199.00. Call The Wiseguys Custom Home Theater here in Tucson @ (520) 548-1839 for professional sales and installation!

PDP-5080





There are so many adjustments and refinements that you can make to customize your computer to your specific needs that you may not know. Here are some useful tips.

The On-Screen Keyboard

Want to use an on screen keyboard?

Well it is this simple - Click on the start button and select run. Then type in osk in the box and click OK.

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Keyboard Shortcuts

When speed counts, the keyboard is still king. Almost all the actions and commands you can perform with a mouse you can perform faster using combinations of keys on your keyboard. These simple keyboard shortcuts can get you where you want to go faster than several clicks of a mouse. You'll work faster on spreadsheets and similar documents, too, because you won't lose your place switching back and forth between mouse and keys.

Here are some of the most useful keyboard shortcuts:

- Copy. CTRL+C
- Cut. CTRL+X
- Paste. CTRL+V
- Undo. CTRL+Z
- Delete selected item permanently without placing the item in the Recycle Bin. SHIFT+DELETE
- Copy selected item. CTRL while dragging an item
- Rename selected item. F2
- Highlight a block of text. CTRL+SHIFT with any of the arrow keys
- Select all. CTRL+A
- Search for a file or folder in My Computer. F3
- View properties for the selected item. ALT+ENTER

- Close the active item, or quit the active program. ALT+F4
- Opens the shortcut menu for the active window. ALT+SPACEBAR
- Switch between open items. ALT+TAB
- Cycle through items in the order they were opened. ALT+ESC
- Cycle through screen elements in a window or on the desktop. F6
- Display the Address bar list in My Computer or Windows Explorer. F4
- Display the shortcut menu for the selected item. SHIFT+F10
- Display the Start menu. CTRL+ESC
- Activate the menu bar in the active program. F10
- Open the next menu to the right, or open a submenu. RIGHT ARROW
- Open the next menu to the left, or close a submenu. LEFT ARROW
- Refresh the active window. F5
- View the folder one level up in My Computer or Windows Explorer. BACKSPACE
- Cancel the current task. ESC



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