

## Preventative Maintenance Tips for Your PC

The average PC user doesn't think much about problems that can occur with a computer until a problem actually occurs. Once a failure happens, the repairs can be both costly and time-consuming. The good news is that there are some preventive measures that you can take to decrease the likelihood of running into problems with the computer's smooth and efficient operation and also to lessen any damage that does occur despite best efforts to avoid failures.

Computer failures occur for a variety of reasons, sometimes because of human error and sometimes because of factors in the environment that cause a computer to malfunction — or a combination of both. These factors can include excessive buildup of dust, heat or magnetism; viruses picked up from the Internet or from storage media shared between different computers; static electricity shocks or power surges; carelessness, such as spilling liquids into a computer or bumping or dropping the hard drive casing; software that has not been configured correctly or a PC's setup that has been handled incorrectly, such as incorrect handling of upgrades.

The following tips will serve as a basic guideline to keep your PC maintained to run efficiently, increase component lifespan and also will help lessen the likelihood of PC failure:

### Operating & Environment Conditions

- Do not place a PC directly near a heating or cooling source, such as heating vents or air conditioners. Both excessive heat and cold can damage a PC. This includes putting the PC in the path of direct sunlight.
- Manufacturers often recommend that PCs be in a humidity-controlled environment, but again the PC should not be positioned so that an air conditioner is blowing cool air directly onto the unit (as temperature drops, the likelihood of static electricity increases).
- Keep the PC's air vents and fans unobstructed and free of dust.
- Do not smoke around a PC. Cigarette smoke can damage exposed metal contacts.
- Do not place a PC near water sources that can splash onto the components or drip down into them. This includes open windows through which rain can come and also under plants that can drip water down into them.
- Do not connect power sources directly into wall outlets but rather connect them first to some form of surge protector. Surge protectors prevent electrical surges from destroying hard drives and erasing data.
- Buildup of dust can seriously hamper a PC's capability to cool down, and even if you never open your computer's case dust can still get in through the drive openings. Dust also compromises the lifespan of your PC's hardware. An efficient way to clean dust from the inside of a computer is with compressed air, blowing dust away from the motherboard and other components. You should **never** blow air directly into a floppy drive as this can cause dust to lodge in the drive and cause it to malfunction. Users who are not familiar with working inside a computer case should take the unit to a professional for cleaning because it is possible to do more harm than good to a computer if you do not know how to safely work inside of a case.
- Always turn off and unplug the system before you clean any of the components inside the case. It is also important to ground yourself to prevent static electricity discharge before touching any components inside.
- Be extremely careful when moving a PC from one location to another. Even small jolts can dislodge chips and expansion boards, so be sure to power off the system

- before moving it — even if it's only going from one side of your desk to another.
- Save all documentation that comes with your PC and its components. You may need to refer to the documentation if something goes wrong.
- Always shut your system down properly (in Windows use the *Start --> Shutdown* method) whenever possible. It is also important to respond to warnings and error messages to prevent possible data loss or corruption.

### **Operating System & Data Maintenance**

- Always ensure you have downloaded and installed the latest patches and service updates for your operating system, especially on a Windows-based PC. These updates will fix bugs and security exploits.
- Keep the root directory organized. Only keep your system's startup and software initialization files in the root directory. Application files and their data belong in a separate directory from the root directory.
- Do not store data files in the same directory that you store the software. This will eliminate the possibility of accidentally erasing or overwriting a software file.
- Keep a set of backup rescue disks for the operating system.
- Keep meticulous records of default settings, any changes you make in a system's CMOS setup that differ from the default settings, and any maintenance you perform on the system. You can often use this record to backtrack when you are troubleshooting a problem and will become valuable if you decide to upgrade any of the system's components. It is also possible for the CMOS to lose settings and you will want a record of the setup to reconstruct it.
- Keep backup copies of any important data on a removable medium. Hard drives can fail and having important data on more than one medium can save a lot of stress and headaches.
- If possible use a secondary hard drive in your system for saving files. Your main drive, which is accessed more frequently is prone to mechanical drive failure sooner than your less frequently accessed secondary hard drive would be.
- Over time when you add and remove software, devices and drives, you'll be left with extraneous system registry entries, which can lead to slower performance. You can use system utilities (purchased or good shareware) that will help you keep your Windows system registry cleaned.

### **Hardware & Hard Drive Maintenance**

- Keep records of any expansion cards you install and the procedures you follow to install them.
- Windows has a disk clean up function which will remove temporary files created by programs. This can free up additional hard drive space.
- Defrag your hard drives. A PC runs better with regular disk Defrag. Defragging your hard drive organizes your hard drive so that access to files and programs is more efficient.
- If you are using a trackball mouse be sure to frequently clean the rollers inside to keep the mouse moving smoothly.
- Clean your CRT monitor with standard glass cleaner and a lint free cloth. Be sure to spray the cloth with cleaner and then wipe — do not spray cleaner directly on the monitor.
- Most LCD displays can be cleaned with isopropyl. However, you should check your manual for the manufacturer's cleaning recommendations.
- Extend the lifespan of your computer monitor by shutting it off when not in use.
- Be sure to update drivers and software for your expansion cards, such as video or sound cards. By using updated drivers your hardware usually will run better.

## **Software Maintenance**

- Keep a backup copy of original software, either on CD or DVD. This type of software copying is perfectly legal.
- Be wary of installing file sharing and other peer-to-peer software as they represent a security risk to your PC. While the software itself may very well be virus-free and not represent a security risk, sharing your files and downloading other users' files can be.
- Purge your software. Getting rid of unused software frees up additional system resources and hard disk space. To uninstall software on a Windows PC, use the "Add/Remove Programs" function from the Control Panel.
- For better system performance avoid using shareware (or freeware) wallpaper, screensavers, and similar audio and visual apps. These will usually require extra system resources to run.

## **Antivirus Protection**

- Install a virus scan program that automatically scans for viruses when the system boots.
- Once you have an antivirus program you will need to update the virus definitions daily to ensure your system is protected against the latest threats.  
Do not download any files from the Internet unless you are certain the source is not transmitting a virus to you.
- Do not use any storage media that has been used in another computer unless you are certain the other computer is free of viruses and will not pass the virus on to your system.
- Never open e-mail attachments from people you don't know; and don't open any file attachment that ends in '.exe.'. All downloaded files should be scanned by your anti-virus application before you run or install it.