COMPUTER CARE AND SAFETY

Computers, like any other piece of electronic equipment, need special care and attention in order to perform properly and safely. There are several specialized tasks such as defragmenting, scanning and reformatting that computer experts can do to keep the internal system of a computer working well. However, we'll leave these tasks to the experts for now and concentrate on some daily do's and don'ts that any computer user should know.

A Clean Machine

This may seem like a simple topic, but computers require special cleaning even on the outside. Keeping your system free of dust, dirt and liquids is the first step to computer care. Your system's user guide is the best place to find information on how to clean your outer components; but here are some general tips that you should always remember:

Keyboard Care: Computer Keyboards can get dirty very easily. Cleaning the surface of a keyboard is very straightforward.
♦ Make sure your computer is turned off before you work on your keyboard.
♦ You can use compressed air to blow debris out of your keyboard, or turn it upside-down and shake it gently. Do not disassemble it.
♦ Cleaning materials such as pads or swabs that contain a cleaning liquid can be used on the keys and upper surface.
♦ To prevent a buildup of dust and dirt inside a keyboard, use a can of compressed air to blow it out. Although keyboards are inexpensive, you don’t want to be wasting valuable time with a problematic keyboard.

Disk and CD Care: Disks store important information you need to use your computer. You want to make sure you don’t risk losing all the data you have stored on a disk. It is important to understand the proper care required when handling these storage devices.

Disks:
♦ Always remember the golden rule with disk handling - never allow anything to contact the magnetic surfaces of a disk. A fingerprint for example, will leave an oil residue and minute scratches sufficient to permanently damage a disk.
♦ Always store 5.25" floppy disks in their disk jacket, and avoid compressed storage situations such as overloaded diskette boxes.
For ideal long term disk storage, avoid high humidity environments and choose a location at room temperature which is free from fumes, dust and vibration. Also ensure that the storage area is kept free from tools or electrical equipment which may cause disk corruption due to magnetic fields.

CD Care:

- Compact disks should not be subjected to temperatures exceeding about 100 degrees Fahrenheit. They are made of plastic, and will very easily warp if left in direct sunlight. Any warping of a disk effectively makes it useless.
- CDs can be exposed to very low temperatures, but they should be allowed to acclimate to room temperature before using. Disks burned using CD-R drives are even more sensitive to temperature and are best kept as close to room temperature as possible.
- The less handling that is done of the compact disk, the better. Unlike floppy disks, which have all or most of the media surface protected by an external jacket, the CD has the entire media area exposed, and thus vulnerable. This is one reason why CD systems that use caddies prolong the life of CDs--they in essence form a "jacket" for the CD that protects it. Handling CDs causes dirt and scratches that can eventually interfere with reading. CDs should be handled by the edge or the inner hub whenever possible.
- You should in general not put stickers, labels or tape on CDs, or write on them with regular pens, etc. The only exception would be labeling kits specifically designed for CDs. Abusing the label side of the disk can damage the data layer, which is right under the top surface. This is especially true of CD-R disks, which should only be written upon with a soft, felt-tip marker, preferably in the designated spaces on the top surface of the disk.
- CDs are made of plastic, so they basically laugh off moisture. Spill coffee on a CD? No problem. Rinse it in warm water, wipe it with a soft cloth, good as new. Try that with a floppy disk! (Actually, don't. :^) ) Mind you, CD-R disks are better off not being exposed to liquids.
- Compact disks encode information non-magnetically. They are wholly unaffected by magnetic fields.
- CDs are rigid and will tolerate very little in the way of flexing. They can be bent five or ten degrees, but beyond this they run the risk of cracking or breaking altogether.
- Compact disks can be cleaned effectively, but this should be done in the correct manner. CDs should always be cleaned radially, which means starting at the inside of the disk and moving outward, not by rubbing in circles. In other words, you would clean it the way you would clean the spokes of a bicycle wheel. The reason for this is that cleaning in circles can cause long scratches over a single section of the data track, which will cause signal loss. Small scratches across many tracks can easily be handled by the error-correcting capabilities of the drive.
- Cleaning is best done using a simple cloth, with perhaps a bit of warm water if necessary. That's it. Remember that this is plastic, and many solvents and cleaners will damage plastics. I have never found a need to use specialized CD cleaning kits. Never clean the label side of a disk; that can lead to more damage than you might expect, because the data is actually recorded right under the label of the disk.
- Scratches can actually be repaired on CDs using special kits that essentially polish them out of the bottom of the disk. This might be surprising to some; wouldn't doing this remove part of the information that is stored on the disk? The reason it doesn't is that the actual pits and lands that
encode the information on the CD are not on the underside of the disk, the surface that is read by
the lens. They are stamped into the top of the CD, right under the label. This is what gives CDs
some immunity to scratches and dirt; if the data were on the bottom surface a single scratch would
cause a great deal of problems.

Printer Care: While printer care can vary greatly depending on the type of printer you are using, it is
important to understand some general guidelines when dealing with any printer.

♦ Be careful with printer jams. Don’t ram the paper out if you have a
paper jam. This can damage the printer. Look at guides on the
manufacturer site, if you don’t have time to do that, remember that
you want to get the paper out smoothly. Many printers have a hatch
attached at the back that can be removed. You will then have access
to the paper wheels, and you should be able to see the paper that is
jammed in there. Remove the paper this way, and it is unlikely that
you will damage the printer.

♦ Power down correctly. Turn your printer off when not in use. This can prevent drying of ink and
also help keep the printer functioning at high quality. Remember to use the printers power button,
and then remove at the plug if need be. Don’t power off if you are in the middle of something.
These will just cause problems for you.

Mouse Care: This input device may quite possible be the most used next to the keyboard, and
therefore needs attention as well to keep it operating properly.

♦ To clean a mouse with a rubber ball on the bottom, use a can of compressed
air and some alcohol wipes. Once a month, remove the mouse ball from the
mouse and clean it with the alcohol wipes. Then use the compressed air to
remove any dirt and debris that may have found its way into the mouse.

♦ If you have a different type of mouse, see the instructions that came with it.

Monitor Care: There are a variety of monitors in use today, but all require attention to keep them
functioning properly. It is important to understand what type of monitor you have (flat-panel versus
non-flat panel) before performing any type of maintenance.

♦ Non-flat panel monitors: Most office products stores carry sprays
or wipes for this equipment. Never spray directly onto the monitor
itself; spray onto a cloth and then wipe the cloth over the screen or
monitor cabinet. Be sure your product is meant for your type of
monitor.

♦ Flat panel monitors: These monitors usually have plastic screens
and other components, and can be damaged by cleaning products that
use chemicals (benzene, thinner, ammonia, acetone), abrasives, or
compressed air. Dell recommends lightly dampening a soft, clean cloth
with water, and using that to clean the screen. The monitor cabinet can be cleaned with a cloth lightly dampened with a mild detergent.

Additional Usage Tips

There are certain things you should know when working with delicate PC components. Make sure you are following these three tips.

1. Use the open/close button when using the CD/DVD-ROM drive. Putting a CD/DVD into the tray and pushing it closed may be easier than pushing that button, but you risk breaking the drive. Although it is a little more work to find the open/close button, you will ensure that the mechanical parts that control the drive tray are not damaged by accidentally pushing the tray too hard. Additionally, keep the CD/DVD-ROM drive closed when not in use. A quick twist of the chair is all it takes to bump the drive tray and render it worthless.

2. Power the computer off only when necessary as the power supply is a surprisingly fragile unit, and excessive power cycling (On/Off) can cause it to fail. To keep power supplies working properly, you should refrain from turning the computer off and on as though it were a light switch. Since the computer uses very little power when it is running, it will be much better to simply leave it on all day long.

3. It is important to remember that your computer is connected to electricity. If you have an Internet connection that also means that your computer is connected to a telephone line or cable connection. These are also conductive connections. That means that lightning could be conducted to your computer through any of these connections. For safety reasons, you should never use your computer during a storm.

4. For those of us who work with computers on a daily basis, it’s common knowledge that you should shut down Windows before turning off your computer. However, many users simply turn the power off when they’re finished using the computer without shutting down Windows. This was okay with DOS but not with Windows. The only time you should turn the power off with Windows still running is when the system is locked up and there is no other choice.

5. Sometimes, installing a new program can cause conflicts within your system. These conflicts will need to be worked out or else the program will have to be uninstalled so that your system will work correctly. If you install 2 or more programs before you realize there is a problem, it will be very difficult to determine what the problem is and which program caused it. Instead, try installing one program, then use your computer long enough to see how your system responds to the installation before loading the next program.