

## Electronics Care Guide

By

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Over the past thirty-one years, I have learned and experienced a vast amount of knowledge relating to the care and maintenance of laptops, desktops and electronics in general. Most, if not all, is based on what I see when troubleshooting a problem for a customer. Almost all of these tips and suggestions are based on common sense and if used should help keep your systems running smoothly for a long period while reducing the trips to my repair shop. Just so you will know. I am the ONLY repair technician. When I repair your unit I am the only one who has to answer your questions.

I know that by telling you about these common sense items, I have cut my own throat when it comes to earning a living from troubleshooting and repairing your electronics. However, there are still many repairs, upgrades and adjustments that will need to be made by technicians like myself that I don't worry about this for now.

### TIPS

1.} The number one killer of electronics which does include computers is dust and dirt. Clogged fans and heat sinks cause overheating, which causes damage to the systems processor. Especially to the internal devices like the hard disk drive, video chip, the North Bridge and south bridge (2 of the main chips on the motherboard). Modern CPUs are designed to shut the system down if they get too hot. When this situation occurs, it doesn't ask if you want to save your work, it just shuts down. This is done automatically to prevent damage to the processor. Sometimes it's too late for other parts.

2.} Avoid smoking around your computer. Nicotine and tar is a sticky substance and is very bad for electronics. These two elements will coat the surfaces inside which in turn acts like a magnet to dust and dirt. When this condition occurs it adds to the overheating issues. I have seen cooling fans coated with these substances so thick that the fan blade could not turn.

3.} Try not to eat or drink while using your laptop or keyboard to your PC. You would not believe the stuff one can find inside a laptop or keyboard. I see laptops and keyboards where parts don't work because they have food gummed up in them. Food also attracts roaches, which is very unpleasant and can short out electronics. The same goes with liquids. Too many times have I seen a laptop completely ruined by a spilled liquid. Once the liquid gets in, usually there is nothing you can do. Use common sense and consider where you place your drink in relation to your laptop. Don't risk it.

4.} Don't use the laptop on a bed, couch, chair, carpet, pillow, or any other surface that contains fiber. This includes your lap. Though it is called a laptop it is NOT made for your lap. Almost all laptops draw in air from the bottom and exhaust from the rear or the side. If these vents are blocked, overheating happens fast. If they are sucking up dirt, pet hairs, fibers and so forth, it will clog and overheat. You should always use the laptop on a clean, flat, hard surface, such as a table top. If you like using it in bed set it on a large book or consider one of those trays used for eating in bed.

5.} Even if you observe the suggestions listed above, inevitably, dust will accumulate inside the computer's cooling fan(s) and heat sink. Every 4 to 6 weeks, depending on the environment, blow compressed air through the bottom and side or rear vents ***{Please be sure to shut down you system before doing this operation}***. This will prevent buildup and keep the cooling system doing its job. You can get cans of compressed air from many major retailers that carry computers, office supplies or even online. Make sure you read the directions and hold the can upright when using. If you don't it can spray water, which is VERY bad for the computer ***{If this happens, wait at least 4-6 hours before restarting your system}***.

6.} I have seen a lot of laptops with damaged power jacks, headphone jacks, USB ports and so forth. All of these can be avoided. Don't jerk devices out. Grasp them by the plug and gently pull straight out. When using the AC adapter, avoid bumping the plug or allowing undue strain on it. This includes not allowing the weight of the adapter brick to pull on the plug, such as allowing it to hang off the desk. ***{NEVER pack & TRAVEL with your laptops power adapter plugged into your laptop.}*** There should never be any sort of tension on the cable. Broken power jacks are the number one damage I see and much of it is preventable.

7.} A laptop or desktop LCD is a very delicate and sensitive device. It is also one of the most expensive parts in your computer. It is important to keep it clean. When cleaning, do not use cleaners such as Windex or similar products. It will eat the top layer of film over time and damage the LCD. Use a screen cleaner that can be purchased in many of the same places as the compressed air. Make sure the cleaner has no ammonia. Avoid pressing on the LCD with the tips of your fingers. This can cause pressure spots that are permanent. Touching the screen in general is a BAD idea. Also, avoid placing anything on the top of a laptop when it is closed. Too much weight can crack the LCD or cause damage to the circuit board attached to the back of the LCD which can cause lines in the LCD.

8.} Don't leave the DVD drive open when not inserting or removing a disk. Dirt can collect on the laser lens (a small round glass looking device). ***DO NOT*** touch the laser as oil and dirt from your finger will

prevent it from working correctly and you could knock it out of alignment. Avoid using cleaning disks as they are more likely to scratch the lens rendering it useless. There are ways to clean the laser lens, but it requires a special technique and a microscope to do it properly and is best left to a professional. You can gently dust it with compressed air if needed but, again, don't tilt the can because if water shoots out, it could get trapped under the lens and it might stop working.

Also, always make certain the disks you insert are properly seated all the way down on the spindle, otherwise the disk could break inside the disk drive. As a final note, make sure that the disk does NOT have any type of foreign material on it as that foreign material could also damage the laser. If the disk contains foreign material, try using water and a clean cotton cloth to clean it. If the foreign material cannot be removed with plain water, use a mild detergent to try and remove the substance. If the foreign material cannot be removed using these methods, **DO NOT TRY TO PLAY THIS DISK!**

9.} Laptop batteries are considered consumable devices, even though they are rechargeable. Eventually they will stop taking and holding a charge as they originally did and will eventually fail. You can extend your battery life by allowing the battery to drain down as far as you can at least once a month and then fully recharging it overnight. Another suggestion is to remove the battery and run the laptop on its AC power adapter when you are in a stationary position. This prevents overcharging of the battery and will help extend its life. The biggest killer to a laptop battery is **HEAT**. Once you have the battery **FULLY** charged, place it into a zip-lock freezer bag and store it in the freezer until needed.

10.} Taking care of your operating system is important too. If you use Windows, keep it updated with Windows Updates. Install and use a firewall. Install and use an antivirus program and keep it updated and run scans regularly. Be careful of what programs you download. Some programs, like file sharing programs such as Limewire, Bearshare, Kazza and others contain or open the door to spyware, adware, malware, viruses, Trojans and worms. Most social network programs like MySpace, Facebook and Twitter have become breeding grounds for many of the same fore-mentioned problems. There are programs that try to remove these, but once the damage is done, the system is never the same until you reinstall Windows.

11.} Run disk clean up and disk defragmenter on a regular basis. These will keep the system running smoothly and provide less strain on the hard drive.

### Summary

I hope that you will find these tips useful. All it takes is a little common sense to protect your electronics. If you truly care about your investment and want to take good care of it, it should perform for you for a long time. Most people neglect their electronics and then wonder why it failed on them. Almost all of

the repairs I perform are not caused by hardware defects, but by neglect of the user which could have been prevented.