

## BASICS & BEYOND -- Session # 10 -- Nov. '08

### THE BIOS

The Basic Input / Output System, commonly referred to as the “BIOS”, is a small computer program that resides on the BIOS chip, which is located on the motherboard of the computer. As soon as you push the start button on your computer the BIOS is the first thing that jumps into action. It does many things but first It will check to see if you have a keyboard attached, whether you have a video card and monitor attached, whether you have RAM installed, whether you have a hard drive installed and will check to see what other types of peripherals you have installed. It will, during this process, initialize these various components so that they will begin to function. One of the last things the BIOS does is to check to see if you have an operating system installed (Windows, Linux, etc.) and then it starts this system.

**“BEEPS”** -- If you do not have a keyboard attached, or a monitor is not plugged in, or you do not have RAM installed, etc., the BIOS may respond to this abnormality by sounding a series of “beeps” signifying there is a problem with the start up of the computer. The number of “beeps” that sound will indicate wherein the problem lies. For example, if you did not have a keyboard attached you might hear three “beeps”. The manual for the mother board of your computer will tell you what the different number of “beeps” stand for and what the problem is. However, If you have a computer manufactured by Dell, HP, Sony, etc., you will probably not find information relating to the sounding of the “beeps”. And, possibly you may not even hear a “beep” at all, even though there is a start up problem.

**FLASH MEMORY -- AND A BATTERY** -- The BIOS maintains its built in program when your computer’s power is off because it is stored on “flash memory”, which does not require constant power. Think of it like the memory card in your digital camera. When you take the card out of the camera the pics do not fly off into cyber space, they remain right on the card even though there is no power being supplied to the card. The BIOS’s flash memory works in the same manner.

But , , , the BIOS does, in fact, require battery power to be supplied to it when your computer is off. Have you ever wondered how your computer knows exactly what time it is, and what day it is every time you turn it on? Part of the BIOS program is the time and date function, which does need power to maintain its correctness. So, built into the motherboard is a very small battery, about the size of a quarter. This battery supplies the electricity to maintain the time and date function. The “big kids” say that you can tell when this battery is starting to die when your computer time starts to slow down and is incorrect. It’s a very simple procedure to replace this battery, which can be found at any drug store, hardware store or computer store. Normally this little C-2025 battery will last 5 years or longer. For most of us our computers don’t last that long and so we don’t have to be concerned about the battery.

**ENTERING THE BIOS** -- Why would we want to enter the BIOS program? Well, actually there are a number of reasons. It gives us the option of setting a number of parameters that effects the operation of our computer. It also gives us the opportunity to check for problems that our computer might be experiencing. To enter the BIOS we look for the key to push that will put us into the BIOS setup. Your computer’s manual should give you this info, but, it doesn’t it can almost always be found on the initial startup screen. It will vary by the computer manufacture, but many times it is the “delete” key. On a

Compaq it might be the F-10 key. and on a HP it might be the F-2 key. You can hit the “pause” key during initial startup to freeze the screen so that you can read which key to push to enter the BIOS, or “setup”.

Unfortunately, many computer manufacturers limit the amount of information they provide, or the parameters that they allow you to adjust or change in the BIOS setup. This is especially true for laptops. For the most part, they are telling you that they do not want you to mess with the BIOS settings. So, what happens if you do make a change and it creates a problem with your computer? You can re-enter the BIOS and undo the change that you made or simply restore your computer BIOS settings to their “default” parameters. Every BIOS setup has a means to set the BIOS settings to the “default” mode.

Don’t be afraid to look into your BIOS. Unless you try real hard it is rather difficult to actually mess it up. And, if you have made any changes, when you leave the BIOS it will always ask you if you want to “save your changes”, or “exit without making any changes”.

### **CLEANING UP YOUR PC -- ADDITIONAL TIPS**

**DISK CLEANUP** -- We have talked in the past about the importance of doing a “Disk Cleanup”, so we will not dwell on that again. Just be sure and perform this function periodically.

**SHRINKING THE RECYCLE BIN** -- By default the Recycle Bin reserves 10% of each of your hard drives to store the items that you send to the bin from each individual hard drive. This is a very large part of your hard drive and unless you remove very large files and “store” them, so to speak, in the Recycle Bin you really don’t need to set aside 10% for this function. And, if you perform a Disk Cleanup periodically all the files in the bin are removed during that process. So, basically, very few of us need a Recycle Bin that reserves 10% of our hard drive in order to function. In most cases 5% will be more than adequate.

In Win-XP to change the size of the space reserved for the Recycle Bin right click on the Recycle Bin icon and then click “Properties”. On the ensuing dialogue box you can click on the “Global” tab to set the parameters for all of your hard drives, or you can select a tab for a particular hard drive. Use the slider to set the amount of space you want to reserve for the Recycle Bin. Finish by clicking “Apply” after each change you make.

In Win-Vista right click on the Recycle Bin icon and left click on Properties. The hard drives on your computer will be shown. Hi-lite a drive, select the “Custom Size” radio button and it will show you how much space is being reserved. An adequate amount of space is probably 5%. Change the size in the “Maximum Size” box to 5% of your total hard drive size.

**SCALE BACK “SYSTEM RESTORE”** -- The System Restore feature automatically sets aside 12% of your hard drive to perform its function. The “big kids” say that is more space than it needs, and should be adjusted to a smaller percentage.

In Win-XP to adjust this percentage click on Start, right click My Computer, left click on Properties and then select the System Restore tab. Under “Available drives” hi-lite a drive and then click on Settings.

Use the slider bar to adjust the percentage of your hard drive reserved for System Restore. Six to eight percent should be adequate. Click "ok".

If you are really tight on hard drive disk space you can also delete all of the Restore Points except the last one created. To do this open Disk Cleanup by clicking on Start > All Programs > Accessories > System Tools and then "Disk Cleanup" Click on the "More Options" tab and on the "System Restore" option click on "Clean Up".

(I did not find info for Win-Vista on how to set the amount of disk space used).

**DON'T FORGET TO DO A "DISK DEFRAGMENTATION"** -- After doing any program removal or major cleanup you will have bits and pieces of programs scattered all around your hard drive. To keep your computer running at its fastest be sure and do a Disk Defrag to "reconnect" these bits and pieces. And, remember, it is best when you do a defrag that you do not use your computer for other functions as it will slow down the defrag process. To get to Disk Defrag go Start > All Programs > Accessories > System Tools > Disk Defragmenter. Hi-lite the drive you want to defrag and click on "Defragment". The defrag process might well take several hours.

### **REVO UNINSTALLER**

Revo Uninstaller is a neat little "free" program that does exactly what its name implies, it uninstalls programs from your computer. We have all used the "Add / Remove" function of Control Panel to remove an unwanted program, and it does a pretty good job. Revo Uninstaller, however, goes one step further and removes all of the "tail ends" that are left on your computer when you use Add / Remove, or a programs own built in uninstaller.

An excellent example of this is in the removal of a Norton software program. Yes, the built in Norton uninstaller takes out the main program, but it does not always remove all of the registry entries that it put into the registry when you installed the program. Revo goes into the registry, finds, and removes all of the leftover unwanted registry entries. I have also heard that Revo will uninstall a program whose built-in uninstaller refuses to remove the program.

When you open Revo it finds and gives you a very clear and intuitive picture of all of the programs that you have on your computer. You may be surprised as to how many you actually have. If you see a program that you want to delete just click on the icon and Revo will begin the removal process. I have used it with good success and have found no problems with it, so far. To download Revo Uninstaller just google "revo uninstaller" or go to [www.revouninstaller.com](http://www.revouninstaller.com)