Talking Computers

Computers; CPU (Central Processing Unit) is a common name. Has a motherboard, RAM, ROM, Hard Drives, CD and DVD readers and burners, PCI card slots for expansion, Video card, and other stuff.

Input (mouse, keyboard, midi/audio interface, microphone, scanner); **Output** (monitor, midi/audio interface, printer, speakers). These devices are sometimes called **peripherals.**

Speeds (measured in GHz); Higher speeds don't always mean a faster computer, if the computer has to do a lot of system work or if it's connected to a network.

RAM; Random Access Memory is the working space. RAM is fast, speeds measured in nanoseconds. RAM is volatile, forgets everything when you turn it off. RAM is like the desktop in your office, the larger the surface, the more things you can keep open at once. Measured in MB or GB.

ROM; Read Only Memory is the boot information, hardwired into a chip. It tells the computer how to _be_ a computer when the computer first boots up. Measured in KB or MB.

Hard Drives; Storage, NOT working space. Like the drawers in a filing cabinet. Open the drawer, take out a file, put it on the desktop (into RAM), work with it, save it (put the new version back in the cabinet. Currently measured in GB and TB. Speeds of 5400 rpm (typical on an internal drive, and fast enough for normal use), 7200 rpm (faster, this speed is necessary for audio and video media).

USB; Cable connection for slower peripherals, like mouse, keyboard, midi interface, simple audio interface, hard drive, CD-ROM. Cross Platform standard, makes it very useful. Hot swappable. USB devices can often be powered by the USB buss, without having to plug them into an outlet. **USB 1** very slow, about 12mbps. **USB 2** much faster, up to 480 mbps. USB 2 is suggested minimum for reliable audio.

Firewire; Cable connection for hard drives, CD and DVD drives. Cross Platform standard, makes it very useful. Much faster than USB. Hot swappable. Firewire devices can often be powered by the USB buss, without having to plug them into an outlet. **Firewire 400** good speed (400mbps). **Firewire 800**, even faster, 800 mbps.

Bandwidth; In the digital world, this is a measurement of how much data can be pushed thru a system at any given moment. It is related to processer speed, but it is not the same. EXAMPLE — a 2-lane highway compared to a 4-lane highway. Though the speed limit stays the same, twice as many cars get through at a time.

Windows vs Mac; Which is better? Artists have used Mac for a long time, so Mac has a lot of good creative software. Windows is much more common, especially in the business world, so more support. Mac has insisted on consistency in software design for years (e.g. Apple-S to save, Apple-Q to quit) which means that when you know one Mac program well, you are familiar with many basic functions in another Mac program. **Rule of Thumb** — decide which software you really want to use, and buy the computer that lets you use it.