

# **UPS – It's Not Just For Shipping!**

**By Gregory S. Michaels**

Anyone who has lived in Colorado for more than a year or two knows that summertime and lightening go together like milk and cookies. You just can't have one without the other. Unfortunately, lightening also can wreck havoc with your computer by literally frying its circuitry. So, it comes as no surprise that most computer owners I've worked with have taken the precaution of protecting their computer components with a surge protected power strip. What most computer owners don't realize is that power surges such as those caused by lightening are only one of several power anomalies that can cause damage to a computer. When it comes to these other types of power problems, the surge protected power strip is not going to provide sufficient protection.

Other non-lightening related power anomalies that can affect your computer include brownouts, blackouts, spikes, swells, and line noise. Have you ever noticed your lights dim or flicker when you turn on your air conditioner, dishwasher, or copy machine? This occurrence is caused by an under-voltage of power and is commonly referred to as a brownout. A brownout is a period of insufficient power-line voltage. It is the most common power problem, accounting for 80% of all power disturbances. Voltage coming from your wall outlets can sag or swell from moment to moment without noticeably affecting other electrical devices. Computers on the other hand are much more sensitive to the ebb and flow of voltage. Line noise caused by poor connections, interference or cross talk from other circuits, or electrical storms can cause voltage irregularities and also disrupt communications lines.

The effects of these power anomalies on your computer can be just as devastating as a lightening strike. Lost data, hard drive crashes, and damaged motherboards are not uncommon. And let's not forget to mention the occasional keyboard lockup, dropped internet connection, or spontaneous reboot. What is really needed to protect your computer against all types of power problems is an Uninterruptible Power Supply (UPS) with Automatic Voltage Regulation (AVR).

A UPS is nothing more than a large battery with a very fast switching mechanism. When power gets disrupted to your computer for any reason, the UPS switching mechanism turns on its internal battery to provide your computer with backup power. The switch occurs so fast that your computer doesn't even notice. The UPS will keep your computer running until you have a chance to shut it down gracefully without damaging components or losing any data. AVR insures that minor ups and downs in the voltage coming from your wall outlet gets monitored and is smoothed out so your computer gets a constant, steady, and balanced diet of voltage. The AVR is working all the time to keep voltage to your computer regulated.

Like anything else all UPS devices are not created equal. A low end consumer grade UPS may only have one or two battery backed-up power outlets with a back-up power supply of as little as 5 minutes and no AVR. The higher end UPS will have six to eight power outlets with half of those providing AVR and battery back-up power. These outlets

should be used to power data sensitive equipment such as your computer, monitor, and external drives. The remaining outlets will be surge-only protected outlets. These outlets will not provide AVR or back-up battery power. Equipment such as printers, fax machines, and scanners should be connected to these outlets. A higher end UPS will also offer longer battery back-up times from fifteen minutes to as much as several hours. Internet, phone, fax, DSL, and network cables can also transfer dangerous surges and spikes. So, it's a good idea to choose a UPS that includes surge-protected outlets for these types cables. Another desirable feature is shutdown management software. This software can provide for unattended, orderly shutdown of the computer in the event of a power anomaly when nobody is there to respond.

A decent UPS will run you from \$60-\$100. This is a small price to pay for the ultimate in power protection. So, why get caught with your power down?

By Line:

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