# Surge Protection-It's Not Just for Computers Anymore

By now most people are aware of the need for surge protection for their computers and TV's, but is there more in the modern home that you should be concerned with when it comes to power surges? Technology is finding its way into more and more of the items we use every day. Manufacturers are incorporating circuit boards and delicate microprocessors into the design of appliances, dimmer switches, ceiling fans, garage door openers, flood lights, and the list goes on and on. These devices and equipment make surge protection a necessity rather than a luxury.

Power surges, also known as transient voltage, are an increase above the standard voltage normally found in an electrical system. The average home experiences several dozen minor surges each week. These surges are usually the result of changes in demand on the power grid from the utility company. They may also come from within the home as a result of large appliances cycling on and off such as air conditioners, washers, dryers, and refrigerators. Often times you will see the evidence of these surges as a slight flicker in the lights as the voltage fluctuates in conjunction with the start up of these appliances. Although these minor surges do not cause immediate or dramatic damage to the electronics in your home, over time they will shorten the life of appliances and electronic devices by as much as 20%. Of course, another major cause of surges and one that often immediately destroys electronic devices and their associated wiring is lightning. Even a lightning strike that is close to, but does not directly hit the electrical system will cause severe damage to unprotected devices.

Surge protection works by blocking or diverting to ground any increase in voltage above a safe threshold thus protecting the equipment before the surge has a chance to do any damage. When an increase in voltage is detected by the surge protection device, special conductors become active within the surge protector that are normally dormant. These conductors serve as an alternate route to bypass the increased flow of electricity from reaching the equipment or devices that are being protected by the surge protectors. All surge protectors are not created the same. Some units incorporate "line conditioning" components that help smooth out the small fluctuations in voltage that can cause problems for certain types of equipment. Still others can be found as part of a UPS (Uninterruptible Power Supply) system.

Whole House Surge Protector

To properly protect all of the vulnerable appliances and devices in the average home, a multi layered approach to surge protection should be considered. In addition to the familiar point of use surge protection, also called "surge strips", a whole house surge protector is necessary to provide protection to the appliances and devices that are hard wired or have outlets in locations that limit the use of surge strips. This unit is installed at the main breaker panel or the meter and will afford protection to the wiring and panel in your electrical system. It is the first line of defense for surges coming in on the utility company wiring. Surge protection is a necessity in homes given the design of today's modern appliances and electronics.