

#### PURPOSE

Surge control is important because even small surges or spikes can eventually destroy or affect the performance of expensive electronic equipment, such as computers, phones, faxes, TVs, DVD players, stereos and microwaves. Damage can occur either instantaneously or over time as smaller surges cause the gradual deterioration of internal circuitry. The common use of microprocessors (chips) has increased the need for surge protection. These chips are generally very sensitive to voltage fluctuations.

#### **SURGES AND SPIKES**

Surges and spikes are an increase in normal electrical line voltage, often caused by a sudden change or demand for more electricity, such as turning on a large appliance, garbage disposal, air conditioner, washer, dryer, etc.

- A surge typically measures less than 500 volts and lasts less than two seconds.
- A spike, by definition, is much shorter in duration less than one-thousandth of a second (millisecond) but can measure into the thousands of volts.

Either type of disturbance can damage electronic equipment beyond practical repair. In addition to change in demand for electricity, bad weather (lightning) and everyday electric utility maintenance can produce damaging electrical surges on the power line.

# HOW THEY WORK

Surge protectors act like an electrical sponge, absorbing dangerous excess voltage, and preventing most of it from reaching your sensitive equipment. Like a sponge, surge protectors have a limited capacity to absorb. Once the capacity is reached, the unit is no longer protecting your equipment and should be replaced immediately.

# **CONSUMER TIP**

When shopping, note the difference between a power strip and a surge protector. Power strips offer additional outlet space. Surge protectors provide protection from changes in electrical current.

#### **SAFETY TIPS**

- 1. Use surge protectors indoors, in a dry location.
- 2. Don't exceed the electrical rating of the product.
- 3. Don't use surge protectors with aquariums.
- 4. If the surge protector features a power cord:
  - Uncoil the cord before use.
  - Do not cover the cord with any material.
  - Keep children and pets away from the cord.
  - Don't plug a surge protector into an extension cord.

\* Please follow the factory instructions that came with your surge protector. Their recommendations always take precedence over these general guidelines.

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