Surviving the Surge

Homes and businesses are filled with electronic devices that make our jobs and lives easier. The technology of these electronics has advanced to the stage where many of them are sensitive to even the slightest fluctuation of electrical current.

While you may be most familiar with power surges from electrical disturbances, phone lines connected to modems in home computers, dish satellite receivers, and TV cable connections can also pose a threat. Transient surges can produce instantaneous results: a crashed computer, for example. But, often the damage goes undetected, only to surface later in a detrimental way, such as a microwave that suddenly stops working.

Power fluctuations occur more often than you think, Whenever any appliance-such as a furnace, electric heater, refrigerator, freezer, washer or dryer, comes on during its operation, it can cause a slight variation in the power current and impact your computer, stereo, big screen TV or microwave. Power fluctuations even enter equipment that you may think is turned off and safe.

With all of the delicate microprocessors that drive modern appliances, computers, copiers and home entertainment systems, proper use of surge suppressors can save you the expense of replacing damaged equipment. As the term implies, these devices suppress an erratic power supply by diverting excess voltage to a ground wire.

A surge suppressor mounted at your home's main electrical panel or the base of your electric meter protects equipment inside your house or business from surges coming through "ports of entry," such as an outside electric, telephone, and cable TV or satellite dish line. They add a layer of protection for large, motor-driven appliances.

Point of use surge protection devices do not suppress or arrest a surge but divert it to ground. They're designed to protect your sensitive electronic appliances, and resemble a regular plug strip. However, don't assume your plug strip offers surge protection unless it specifically says so. Some devices claim that they can save energy as well; use caution, as these claims are generally false.

Suppressors are available for a multitude of applications, from single-plug wall units to rack-mounted setups that cover an entire entertainment system. For those who don't like continually stooping to flip the switch on a power strip, some models even include remote controls. You can also find pivoting protectors that adjust to accommodate a variety of adapters, letting you plug all of your gadgets into one strip.

Here are some features to look for when buying a surge suppressor:

- Underwriter's Laboratories (UL) tested, with a UL 1449 listing and the term "Transient Voltage Surge Suppressor." This rating requires the suppressor to clamp the surge at 330 volts or less.
- A clamping voltage of 330 volts per UL standards. This means the suppressor will divert power, or start to work, as soon as it detects more than 330 volts. The lower the clamping level, the better the protection.
- An energy rating of 700 or better joules. A joule rating measures the amount of energy it can handle and typically ranges from 100-1000. The higher the joule rating, the better.

Above, a point-of-use surge suppression device that resembles a simple power strip that you plug into the wall and then plug your appliances into.
Source Tripp-Lite

Left, a meter base surge suppressor mounted beneath a circuit breaker panel.
Photo by James Dulley

- An indicator light or some other feature is needed to show whether the device has experienced a power spike. If the light is lit, you are protected. If it is out, your equipment is at risk and the suppressor should be replaced.
- The suppressor must discharge excess energy to ground, not to neutral.
- A quick clamping response time; the amount of time it takes the suppressor to respond to a surge.

As a CVEA member, it is your responsibility to purchase surge suppressors that are adequate to protect your sensitive electronic equipment. Your best bet is to purchase a high-quality surge suppressor and one that is rated to protect the equipment that will be plugged into it. While you will likely pay more, many manufacturers of high quality point-of-use surge protectors may offer lifetime warranties and generous insurance policies. They may reimburse the cost of damaged equipment and give you a new suppressor if damaged by a surge in voltage. ■

Damage Claims at CVEA

CVEA tries to deliver consistent quality power. We perform regular maintenance on all of our equipment and take other preventative measures (see the article 'Not All Outages Are Created Equally' in the October 2010 issue of Ruralite at www.cvea.org).

Even with those efforts we do experience outages and sometimes those affect electronic equipment. If an outage is related to negligence on CVEA's part, by going through the CVEA damage claim process, you may be reimbursed for the loss.

Please be advised that Section 5.9 of the Tariff reads: "it is the consumer's responsibility to provide suitable protective equipment for the devices and appliances on his premises. If three-phase equipment is used, it is the consumer's responsibility to protect such equipment against single phase operation and under and over voltage conditions".

If you believe you have equipment that may have been damaged by negligence of CVEA, please contact Customer Service in Glennallen at (907) 822-3211 or Valdez at (907) 835-4301. A Customer Service Representative will collect pertinent information from you and provide you an insurance form. When you receive the form, complete and return it to CVEA. Please document all expenses related to the claim with receipts, photos, or other relevant information. CVEA will file the claim with the insurer, and you will receive a letter acknowledging receipt of your claim.

Using a third party to investigate claims helps maintain the integrity of the damage claim process at CVEA. The insurer will accept or deny any claims. The claim may be settled at actual cash value, cost to repair or replacement cost.

Call the Cooperative at the numbers above for additional information.

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