

GUEST COLUMN

Surge protection... is it something I need?

New Enterprise Rural Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 



One of 14 electric
cooperatives serving
Pennsylvania and
New Jersey

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by Ron Houck
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SURGE PROTECTORS can extend the lifetime of sensitive electronic equipment by protecting against many different types of electrical disturbances. Surge protectors can “smooth out the bumps” from everyday electrical fluctuations. “Invisible” power disturbances have a tendency to build up damage over time and can lead to early failure of the entire

piece or part of the equipment. Many disturbances can originate from inside the home. Typical lightning strikes can be tamed with these devices.

Surge protection may be suggested or required by your homeowner’s insurance policy (or your policy covering contents), depending on your claim history. Even if you have a low deductible, such as \$250, several occurrences of losing equipment are costly and inconvenient. Purchasing surge protection for a one-time cost can prove to be just as valuable as paying your yearly insurance premiums.

When a lightning storm is near, the best way to protect your equipment from a lightning strike is to unplug the equipment from the electrical, phone or cable/satellite outlets. For those times when you aren’t home when a storm hits or if unplugging certain items is an inconvenience, having your equipment protected by surge protection gives you peace of mind.

Using top-quality surge protectors will give you a very high percentage of protection from everyday electrical issues and typical lightning strikes. But when lightning hits directly, all bets are off.

Helpful hint: *A plug strip is not necessarily a surge-protection device. It may be acting only as an extension cord that provides you with extra outlets.*

The following descriptions seem to fit

most situations that cooperative consumer-members encounter:

Surge — A voltage surge is a temporary increase in normal electrical line voltage, which is usually not more than 500-600 volts. Surges don’t only travel through the electrical wires, but through television antennas, telephone cables or any other object that acts as a conductor. Appliances and electronics aren’t the only things that surges can destroy. They can ruin electrical outlets, light switches, lightbulbs, air conditioner components, garage door openers...and more.

Spike — Same as a surge, but for a very short period of time; can be measured in thousands of volts and be caused by downed power lines, transformers, lightning, electric power grid switching, etc.

Voltage sag — A voltage dip happens when higher-power electrical devices (air conditioners, dishwashers and refrigerators) come on and create a sudden, brief demand for power, which interrupts the steady voltage flow in the electrical system.

How they protect

Proper grounding is important for surge protectors to work. Most are made with metal oxide varistors (MOVs). They are designed to activate at a given voltage level. When a surge protector detects voltages over a certain amount, it immediately tries to push the surge to the ground. Surge protectors must be plugged into three-prong outlets and the grounding system must be in working order. If there are any grounding problems, a capable electrician should be consulted to make the necessary repairs and/or changes. Unfortunately, MOVs will wear out. The newer, high-quality suppressors come with lights and audible alarms that tell you when the MOVs have worn out. Both the “service

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entrance” and “point-of-use” surge suppressors are available with this convenient feature.

How you can protect yourself

***No matter where you purchase surge protection equipment, you should look for the following information:**

Transient Voltage Surge Suppressor (TVSS): TVSS units are rated and designed to be used after the main disconnect (main breaker or switch). In the United States, they are tested according to Underwriters Laboratory standard (UL 1449). UL 1449 assigns a clamping voltage to the TVSS, which can be used for comparison from one product to the next. The clamping voltage is the maximum amounts of voltage that a surge protector will allow through it before it will try to “squash” the surge. The plug strip styles fall under this category.

Diagnostic lights: Diagnostic lights are very helpful in monitoring the effectiveness of the surge protector. For instance, a ground indicator light displays whether or not the device is properly grounded — you will not be protected if it isn't.

Telephone and coax protection: Look for a surge protector with telephone and coax cable jacks for protection of these lines. Remember, surges can enter through the telephone or cable/satellite lines.

Response time: This rating indicates how fast a surge protector can react. The faster, the better.

Circuit breaker: A breaker stops the flow of electricity when a circuit is over-

There are basically two types of surge protectors:



Service entrance surge protectors – These are hard wired to the service panel (main electrical panel) where your circuit breakers are located, or installed in your meter base ahead of (before) your electric meter. These devices are designed to stop harmful surges before they can travel toward the electronic equipment in your home.



Point-of-use surge protector – These devices are used near the appliance that is being protected. It includes the type of surge protectors that plug into a wall outlet and contains protection for telephone, cable and satellite, which must be installed properly.

UPS - WHAT IS THE DIFFERENCE BETWEEN A SURGE PROTECTOR AND A UPS?



A UPS (uninterrupted power supply) usually has surge protection built in. It also has a battery backup that offers you 10-15 minutes (if not longer), to save your work and turn off your computer (or other device) properly.

loaded and is not related to surges or spikes.

Co-op consumer-member Dave Potchak of New Enterprise has experienced equipment loss in the past. After his third television was damaged, Dave visited the cooperative to investigate available surge protectors.

Dave decided on plug strips with phone and television cable protection to use in the areas where most of his critical electronic equipment is kept.

Dave properly installed the plug strips into grounded 120-volt AC outlets.

He connected the phone and cable source inputs into the proper portion of the strip. Finally, he connected the output connections from surge strip to his equipment output with the extra cabling provided.

Dave has experienced many severe lightning strikes during the past several years and has not lost any equipment protected by our surge-protection devices.

“I have been very pleased with the protectors that I purchased,” Dave reports. “They have proved themselves at least three times over the past several years. Others nearby unfortunately had problems during these events.”

Hopefully this information can help you when faced with the question.... Do I need surge protection?

Please call me at 814/766-3221 or 800/270-3177, extension 227, email me at rhouck@newenterpriserec.com or stop by the office if you have questions or would like more information regarding the products available through the cooperative. ☀

Co-op notes

- ▶ The billing and meter reading due date is Aug. 28, 2008.
- ▶ Accounts will be disconnected for non-payment on Aug. 27, 2008.
- ▶ Have you returned your Pennsylvania Sales Tax Exemption Certificate yet? If not, complete and return it right away to avoid paying sales tax on your electric bill.

2008 Youth Tour highlights



KIDZCORNER



Staying safe

August is here already. To parents, this may be a relief because fighting siblings will be returning to school. To children, August means their free time is almost over. Soon it will be time to go back to their "jobs." Safety may not be the first thing that springs to mind during this month.

According to the National Highway Traffic Safety Administration (NHTSA), 24 million students nationwide start their school day with a trip on the school bus. Although NHTSA reports that riding on a school bus is nearly eight times safer than riding in a passenger vehicle, accidents do happen. Whether riding the bus or traveling by car, students should practice these tips to keep them safe this school year.

TIPS FOR SCHOOL BUS RIDERS

- ▶ Line up facing the bus, not along side it.
- ▶ Do not play in the street while waiting for the bus.
- ▶ Carry all loose belongings in a bag or backpack.
- ▶ Never reach under the school bus to get anything that has rolled or fallen beneath it. The bus driver may be sitting too high up to see you.
- ▶ After getting off the bus, move immediately onto the sidewalk and out of traffic. If there is no sidewalk, try to stay as far to the side of the road as possible.
- ▶ Wait for a signal from the bus driver before crossing the street. Walk at least 10 steps away from the front of the bus so the driver can see you.
- ▶ Never cross the street or play behind the school bus.

By following these few easy steps, you can make your school year safer. Remember to keep your eyes open before you or your friends run in front of the school bus. Be sure all vehicles are stopped before going onto the road.

On the fun side

TONGUE TWISTERS

If a noisy noise annoys an onion, an annoying noisy noise annoys an onion more!

Growing gray goats graze great green grassy groves.

The butter Betty Botter bought could make her batter bitter, so she thought she'd better buy some better butter.

Black bug bit a big black bear. But where is the big black bear that the big black bug bit?

A big bug bit the little beetle but the little beetle bit the big bug back.

Question: What kind of animal needs oil?

Question: Why was the baby ant so confused?

Question: How do bees comb their hair?

Answers: A mouse, it squeaks; because all of his uncles were ants; with a honey comb.

Dehumidifiers & humidifiers

Relative humidity can determine how comfortable we feel. Humidity is the quantity of water in the air. Too much humidity makes you feel hotter. By removing water from the air, we can "cool" it down without changing the temperature of the air.

Humidifiers and dehumidifiers work to either add or remove water from the air. In some homes these devices are essential for maintaining comfort and healthy air, but they can also add significantly to your electric bill.

By knowing how to use them properly and using a humidity gauge (hygrometer), you can properly regulate your humidity and manage your electric bill.

The most common humidifier is the evaporative, or wick, humidifier. It works by evaporating water into the air, thereby increasing relative humidity levels. As the humidity level rises, less water will evaporate.

The process regulates itself very efficiently. Another type of humidifier is called the forced-air humidifier. This unit attaches to your home's furnace. There are two styles – drum and flow-through.

Unfortunately most modern, high-efficiency, forced-air furnaces don't run long enough when heating to let much water get absorbed into the air. Many people choose to supplement the forced air humidifier with a room humidifier.

Dehumidifiers remove moisture from the air. The usual technique used to remove the moisture is to condense the moisture onto a cold surface. A dehumidifier is simply an air conditioner that has both its hot and cold coils in the same box.

A fan draws the room's air over the cold coil of the air conditioner to condense the moisture (which normally drips into a bucket). The dry air then passes through the hot coil to heat it to its original temperature. If you have a room that is air conditioned, it should not need a dehumidifier.

By maintaining proper humidity, you can avoid respiratory problems, insomnia, fungal skin infections, dry noses and dry skin. High humidity aids the spread of mold. Mold spores become dormant or die when the relative humidity is low. Dust mites (another common cause for allergies and asthma) also die when the humidity stays below 50 percent.

Clean your humidifier on a regular basis using the manufacturer's guidelines. Ensure you have the proper settings by checking the humidity setting against a room humidity gauge.