



Like a good neighbor, State Farm is there.®

statefarm.com®

WELCOME MY ACCOUNT INSURANCE BANKING MUTUAL FUNDS PLANNING & LEARNING AGENTS ABOUT STATE FARM

insurance & financial learning [**prevention & safety**] life events & stages retirement planning college planning small businesses calculators taxes kid stuff

Search
statefarm.com®

GO

Powered by Google™

Prevention & Safety

Vehicle & road safety

Child passenger safety

Dangerous intersections

Home safety

Good Neighbor House®

Natural disasters

Educational programs

Business safety

Find an agent by
zip/postal code

GO

Advanced Search

How to Choose Surge Protection for Your Home

You may not realize it, but your stereo system, home computer, television, VCR, microwave oven -- anything with internal electronic circuits -- is under attack every day. The attacks are silent, but destructive.

The culprit -- **POWER SURGES**. Power surges are extremely brief spikes in electrical power that burn up the electrical circuits inside appliances and electronics. For more detail about what power surges are and where they come from, read ***Facts about Power Surges***.

Not only can power surges destroy appliances and electronics, they can ruin electrical outlets, light switches, light bulbs, air conditioner components, and garage door openers. How can you protect yourself?

Surge protection devices can prevent the damages from most power surges. There are two types:

1. Service entrance surge protection device, which is mounted at or near the incoming electrical service
2. Point-of-use surge protection device, which is used at the appliance being protected and includes the type of surge protectors that plug into a wall outlet

For the typical home, many experts recommend a minimum surge protection network consisting of:

1. Service entrance surge protection device protecting the incoming electrical power line, incoming telephone line, and cable TV and satellite dish cable.

This can be done with a single surge protection device that is capable of protecting all types of incoming lines (electrical, telephone, cable TV, and satellite dish cable) or separate surge protection devices at each incoming line. Protection of the incoming electrical line can be located at the main electrical panel or electric meter.

2. Point-of-use surge protection devices with a 330-volt clamping voltage at all expensive electronics and appliances, such as TVs, VCRs, stereos, and computers; all have electronic circuits which are susceptible to power surges.

Susceptible appliances can be identified because many times they have electronic push buttons, electronic clocks, or digital displays. If the appliance has other wires connected to it (such as telephone lines, cable TV cable, antenna cable, or satellite dish cable), those wires or cables must run through the point-of-use surge protection device as well to provide protection on all lines.

- For home office or special medical needs, additional and different protection from other types of electrical power interruptions may be appropriate as well.

There is no surge protection device or system that can protect against all power surges. A direct lightning strike to the house's electrical system may be too great for the surge protector(s) to handle. The two-stage surge protection system recommended in this article should protect against most of the power surges.

Why is it Better to Have a Two-Tiered Surge Protection System?

By combining a service entrance surge protector with point-of-use surge protectors located at all sensitive electronics, a better protection system is created.

1. Using a service entrance surge protection device provides protection for the entire electrical system. They protect things such as motors, lights, outlets, light switches, and all the other "hard wired" items in the house that do not plug into an electrical outlet and can't be connected to a point-of-use surge protection device.
2. If the power surge is created by a lightning strike or power fluctuation on the utility lines, the service entrance surge protection device can reduce the power surge to a lower level before it gets to the point-of-use surge protection device. This helps:
 - a. Prevent damage to the point-of-use surge protection devices from surges too strong for them to handle
 - b. Reduce the level of the power surge at the appliance being protected. (The power surge's energy level is reduced at the service entrance device and again at the point-of-use device.)
3. **Service entrance surge protection devices do not eliminate the need for point-of-use surge protection devices.**
 - a. The power surge may not be generated on the incoming utility lines. For example, lightning may hit an outside light fixture creating a power surge on the circuit powering the light. If there are outlets on the same circuit as the outside light fixture, any electronics plugged into those outlets will be better protected if a point-of-use surge protection device is used.
 - b. The point-of-use surge protection devices help protect appliances against surges that are generated within the home.
 - c. Good quality point-of-use surge protection devices have the ability to reduce power surges to lower levels than typical service entrance surge protection devices.

Examples of Service Entrance Surge Protection Devices

There are service entrance surge protection devices that mount in or on your main electrical panel, or at the base of the electric meter. Several examples are shown in this article. Only one service entrance surge protection device is needed if it protects all incoming lines, including electrical, telephone, and cable TV lines. As an alternative, separate devices can be installed on each incoming line.



Service Entrance Surge Protection at the Main Electrical Panel

(Both of these devices will require additional surge protection devices on the incoming phone and cable TV lines)