

What Are Surges?

Surges, also known as transient surges or spikes, are momentary increases in ordinary household voltage.

They occur over 2,000 times a year in the average home.

Surges can be generated externally and internally. Appliances such as furnaces, air conditioners, washers and dryers can generate surges that travel back to your electric panel and throughout your home, causing damage and shortening the life of expensive electronics and appliances.

Surge Strips Aren't Enough

The WireNut recommends a 2-stage approach to surge protection:

(1) **External Protection** reduces externally generated surges before they enter a residence through power lines. Things that can cause external surges are lightning strikes (within 1 mile), downed utility poles, squirrels, birds coming in contact with power lines, and utility company surges. Hardwiring a Surge Protector to your electrical panel provides excellent household protection against external surges, at an affordable price.

(2) **Internal (Secondary) Protection** protects equipment from stray surges generated inside your home. But, even this isn't enough because surges can still enter your home through phone and cable TV lines. For that reason we recommend protecting phone and cable TV lines outside your home

Two-tier protection is necessary for COMPLETE equipment protection.

How Does a Surge Protection System Work?

The heart of most modern surge protection systems is a Metal Oxide Varistor (MOV). An MOV is a disk made up of metal particles suspended in a ceramic compound. When the MOV begins to conduct electricity, hazardous voltage flows through it and safely into the ground, while safe voltage continues to flow into your home. Simply put, it's like an automatic door that opens and closes. Without surge protection, all the surge energy goes into your appliances and anything connected to a power source. Although damage may not be noticed immediately, surges shorten the life of expensive appliances and electronic equipment, especially if submitted to recurrent surges or a single large surge (like a lightning strike).

Although the most intense surges originate from outside the home, nearly 70% come from within. You'll often notice surges as flickering or dimming lights when running appliances, but most surges are unnoticeable. In addition to primary surge protection installed at your electrical panel, it's important to have TV's, computers, answering machines, fax machines, and stereo equipment plugged into a high quality surge strip for backup protection.

What's Your Equipment Worth?

Kitchen

Refrigerator	\$1,300
Dishwasher	\$ 600
Range/Oven	\$ 800
Microwave	\$ 150
Toaster	\$ 50
Coffee Maker	\$ 50
Telephone	\$ 50
TOTAL	\$3,000

Family Room

Television	\$ 500
VCR	\$ 150
DVD Player	\$ 200
Stereo System	\$1,200
Cable TV Box	\$ 100
Telephone	\$ 50
<u>Speakers</u>	<u>\$ 300</u>
TOTAL	\$2,500

Bsmt/Gar/Laundry

Hot Water Htr	\$1,200
Furnace/AC	\$2,000
Washer/Dryer	\$1,000
Sump Pump	\$ 200
Security System	\$ 500
Garage Opener	\$ 150
Sprinkler Cntrl	\$ 100
Ext. Lighting	\$ 150
Treadmill	\$1,200
TOTAL	\$6,500

Home Office

Computer	\$1,500
Monitor	\$ 500
Printer	\$ 300
Copier	\$ 450
Fax	\$ 150
<u>Telephone</u>	<u>\$ 100</u>
TOTAL	\$3,000

TOTAL EQUIPMENT = \$15,000

