

# PROTECTING SENSITIVE ELECTRICAL EQUIPMENT

Even the most robust system can occasionally experience surges, blips or outages. That is why the Loveland Power Division would like to remind our customers about the importance of protecting sensitive electrical equipment from interruptions or voltage surges.

**What is considered “sensitive electrical equipment”?** Personal computers, printers, televisions, stereo systems, DVD players, cable boxes, home security systems... the list goes on.

**What causes interruptions or voltage surges?** Most voltage surges are weather-related caused by lightning strikes on the electric distribution system. Other possible causes include high-tension lines falling on a lower voltage distribution line, surges from system switching operations, momentary power outages, etc. The cause of the voltage surge is not the issue with equipment failure as much as is the absence or presence of surge protection. If your sensitive electronic equipment is not properly protected, it will be damaged. It is the **customer's responsibility** for ensuring that the equipment is adequately protected.



## **Protection at the Main Power Entrance:**

Begin power protection at the main power entrance, the point where your power, cable and phone lines enter the house. By installing a high-energy surge protection device at this location, you can knock down the first wave of high voltage spikes entering your home. Most contractors call these lightning arrestors. The lightning arrester is a device that helps divert damaging surges away from your electrical system and out through your ground rod.

The cable TV line will probably enter your home near the main power entrance as well. It's best to have all of your utilities enter your home at one point because it allows you to tie all of their ground rods together to form a single grounding system. This is required by City code but it's often overlooked by cable installers.

Unless all of your equipment ties into a single ground, protection against surges won't be as effective.

## **Protection Inside the Home:**

- Moving inside your home, the television, DVD, DVR, CD player and stereo system represent a considerable investment, and they can be easily damaged by spikes. Each should be plugged into a plugin surge protector. Use a protector that has multiple outlets allowing one device to protect your entire entertainment center.
- Everything should be protected. If you protect your stereo but leave the CD player unprotected, the connection between the two devices provides a path for spikes. Some appliances containing electronic controls (i.e. microwave ovens) may also require surge protection. Make sure you use a surge protector designed for “heavy duty use”. There are surge protectors designed especially for microwaves.
- Computers need two types of protection: Surge Protection and Battery Back-up or Uninterruptable Power Supply (UPS). Surge protectors prevent the hardware from being damaged, while battery back-ups protect against data loss during momentary power outages.
- To prevent the flashing “12:00” problem, look for clocks and DVD players with built-in battery back-up. Battery back-ups are not designed to keep the unit operating during a power outage, but it will preserve the memory and settings so they will still be there when the power comes back on.



## **You Should:**

- Always have a licensed electrician check your wiring.
- Always look for certification from an independent test lab such as UL (Underwriters Laboratories) or ETL (Electrical Testing Laboratories) for surge protectors and UPS equipment.



**Questions? Call Loveland Water and Power at (970) 962-3000**