LPI Lightning Protections



An easy to understand handout on the effects of lightning on a home.

The Nuts & Bolts of Lightning Protection



Key Elements Of The System

1 air terminals (lightning rods) spaced according to safety standards



2 down conductors cables connecting the terminals to grounds



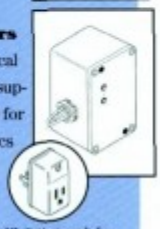
3 bonding joining metallic bodies and roof components to ensure conductivity



4 grounds minimum of two ground rods at least 10 feet deep into the earth



5 surge arresters installed at electrical panels and surge suppressors provided for in-house electronics



All materials must bear the UL-listing mark for lightning protection installation in accordance with nationally recognized safety standards.

How Lightning Enters

A single bolt of lightning can carry over 30 million volts of electricity.

A direct strike to a structure can rip through roofs and chimneys, explode brick and concrete and ignite fires.

An indirect or secondary lightning strike to a nearby tree or power line can induce unwanted surges into a home.

Lightning can also enter through phone, cable lines and computer modems, as well as roof projections such as weathervanes, antennas and satellite dishes.

Home extras like irrigation systems, invisible fences and electric gates can provide a low-resistance pathway for lightning's destructive energy.

How the System Works:
A lightning protection system provides a specified path on which lightning can travel. The destructive power of the lightning strike is directed safely into the ground, leaving the home and occupants unharmed. A properly installed lightning protection system dissipates the dangerous electrical discharge to eliminate the chance of fire or explosion of nonconductive materials (wood, brick, mortar, tile, etc.).

Who Can Install:
Lightning protection is not a do-it-yourself project. Only experienced and reputable UL-listed and LPI certified lightning protection contractors should install lightning protection systems. Qualified specialists use UL-listed materials and ensure that methods of installation comply with nationally recognized safety standards of LPI, NFPA and UL.

The Lightning Protection Institute • Saving Lives & Protecting Property Since 1955 • www.lightning.org