

Re: Is it safe to use computer during lightning/thunder storm?

Source: <http://sci.tech-archive.net/Archive/sci.electronics.equipment/2004-09/0308.html>

From: Suraj Singh (surajs21_at_yahoo.com)

Date: 09/23/04

Date: 23 Sep 2004 16:12:57 -0700

Surprised to see that no body talked about the capacitance of the earth in this discussion.

Lightening do not bother to hit the airplane. Even if it does it do not damage anything. Airplane capacitance is too small so a very minute flow of charge can change its potential to match the cloud potential. flow of minute change means little current (micro amp) which wont damage anything.

Imagine a situation where the plane has just taken off the ground, lightening strikes its body and discharge to the earth through bottom including pointed antennas in the wings; you can imagine the damage to the circuit from where the antenna is connected.

As per the lightening is concerned one can not ignore earth if you are close to it. You can dare to ignore if you are a much bigger mass than earth.

You can raise the common mode potential of the system (say PC and Modem), it helps but up to what extent? The charge on it will seek the earth and if a short and quick high conducting path in not provided, it may break down the air gap and discharge to the nearest path to earth through the mouse wire.

Concept of GPR will provide much better protection if the whole house is considered as a sub system. It will be economical too. Power strips provide protection but for small surges only.

Best regards,
Suraj

"Ron Reaugh" <rondashreaugh@att.net> wrote in message
news:<[ah64d.618488\\$Gx4.201449@bgtnsc04-news.ops.worldnet.att.net](mailto:ah64d.618488$Gx4.201449@bgtnsc04-news.ops.worldnet.att.net)>...
> "w_tom" <w_tom1@hotmail.com> wrote in message
> news:4150E3FE.67C9A30C@hotmail.com...
>

sci.electronics.equipment: Re: Is it safe to use computer during lightning/thunder storm?

- > > *A surge protector is only as effective as its earth*
- > > *ground. A fact well proven even before WWII.*
- >
- > *Clueless. This wacko has been stalkin large numbers of NGs for many years*
- > *spreading this garbage.*
- >
- > *A well know fact is that good surge protection of electronic equipment has*
- > *little to do with the earth ground. Just ask yourself how things are*
- > *protected on an in-flight airplane. That technology is what is involved in*
- > *good protection. When you are on the ground then providing a safe place for*
- > *that lightning bolt to find earth ground is a real good idea for safety*
- > *reasons but that has little to do with protecting electronic equipment like*
- > *computers. Protecting such equipment depends entirely upon shunting any*
- > *overvoltages to common mode and the chassis.*