

## Re: Phone Line Interfacing – FCC Part–68

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- *From:* w\_tom <w\_tom1@xxxxxxx>
  - *Date:* Sat, 24 May 2008 10:27:22 –0700 (PDT)
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On May 22, 11:19 pm, rickman <gnu...@xxxxxxxxxx> wrote:

If your equipment does not have an electrical connection to anything else, then you don't need the fancy earth ground and transorbs. The transorbs aren't really safety related, IIRC. There are two things you need to protectphoneline equipment from, lightning caused surges (not necessarily a direct strike) and AC mains crosses. The lightning stuff is more of an equipment issue. There is not much of anything that you can do which will protect in the event of a direct strike to thephoneline. It will roll in on the wire and fry every thing connected, protection or no. But a close by strike will create a voltage/currentsurgein the line which can be protected against depending on the strength.

So a telephone Central Office computer; connected to overhead wires all over town; that surges maybe 100 surges during every thunderstorm. That computer must be replaced after every thunderstorm? Of course not. Due to a properly earth surge protector where wires enter the building, then direct lightning strikes cause no damage.

Telcos install an earthed protector to protect their equipment. Telco's protector on your end may do same for your equipment. But only as effectively as an earth ground that you have provided. Surges that do not enter a building need not cause damage. Common mode choke is easily compromised if a surge has no other path to earth. Common mode choke as secondary protection works if surges are diverted to earth via the 'whole house' protector. Surge needs a path to earth.

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