

Ground Loops

(Difference in ground potential)

Ground Loop: An errant galvanic path within a system or instrument caused by unwanted circuit connections provided by the earth or chassis ground.

Ground: Common reference point having a potential that does not change as a function of current supplied to or withdrawn from it.

Ground loops are not stopped by TVSS (transient voltage surge suppressor) in fact some surge suppressors can introduce a ground loop to an already isolated circuit. Take the video security installation shown below as an example of an isolated camera powered by an outlet. What would happen if you installed a TVSS device that required grounding at the camera location? Do you see the ground loop it would create. Note, the camera is mounted to be isolated from the pole it is mounted on.

