

# Ungrounded Electrical Receptacles

## The Issue and the cure

Prior to the mid-1960's home electrical receptacles contained a standard 2 slot connection for connecting household items such as lamps and small appliances. These receptacles were powered by 2 wires, a hot and a neutral line that together supply approximate 120 volts of AC power. These receptacles lacked an important safety feature and that was how to discharge excess energy.



Electricity is always looking for ways to discharge, or return, to ground. Electricity conducts through a circuit from the source on the 'Hot' wire and then returns on the 'Neutral' or 'Ground'. In the event the neutral wire is damaged, comes loose or breaks, Electricity searches for an alternate pathway. If no alternate path exists, such as a direct to ground connection, a "Short Circuit" occurs. Electricity continues to search for the completed pathway, often finding its way through other components such as building materials, often causing electrical fires. When a person comes into contact with the circuit during this search process, that person usually becomes the easiest path to ground causing a shock.

More and more of today's electrical appliances are constructed with safety features that help protect the end user from the chance of electrical shock. Several do not utilize a 3<sup>rd</sup> prong on the appliances power cord that is intended to create that pathway to ground in the event of excess voltage or a short circuit within the appliance.

Now, what do you do if there are no grounded electrical receptacles in the room you want to connect that new computer system in? A mistake that is made by way too many people, as I see it in nearly every Pre-1960 home I inspect, is to simply replace those 2 prong receptacles with newer 3 prong type, allowing those newer items to easily plug in. It will work, but these are also considered unsafe. They give the appearance of having a grounded outlet, when in fact it's just an ungrounded 3 prong outlet providing a false sense of security.



How do you properly fix this issue? From here I will now refer you to a great article on this subject by *Reuben Saltzman with Structure Tech Home Inspection in Minneapolis/St. Paul Minnesota.*

[Options for repairing ungrounded three-prong outlets](#)

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