

### What's it all About?

A generator interlock kit is a device that allows for safe powering of your home by a generator during a power outage. The kit is designed to add an external interlock onto the existing breaker panel of a home and allows the main breaker or a designated breaker to be turned on to power the home, but not at the same time. An interlock is a feature that makes the state of two functions or mechanisms mutually dependent. In this case the mechanisms are the generator and the main power that is fed to the home.

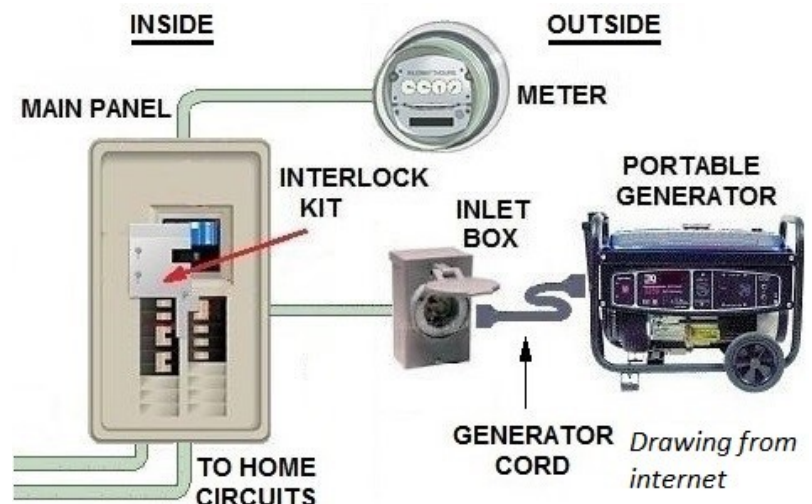
### Keys to Remember

- When the lights go out, some people reconnect an electric generator to their home's wiring in an unsafe manner. There are several low-cost ways to do this safely.
- When connecting a generator to the house wiring, the main service breaker must be turned off. This may safely be accomplished by using an interlocking circuit breaker kit. This makes it so the main breaker and generator breaker are not on at the same time. If both breakers are on at the same time, there is a danger of producing deadly high voltage on the "dead" power lines. Also, if the power line comes on, the generator may become damaged. These kits are available online and at local electric supply stores.
- The generator circuit breaker could be 30 amp, 60 amp, or 100 amp, depending on the size of the generator. (*Approximate generator size: 240 volts x 30 amps = 7,000 watt generator or smaller.*)
- Check the generator output voltage before connecting it to the house. The maximum voltage should be about 252/126 volts.
- When using a small generator, turn off the circuit breakers to the large electric (high wattage) loads. Cycle on only the circuit breakers you need.
- A small generator may have trouble starting a water pump motor. Try starting the pump when the water pressure is near zero instead of the normal 40-60 pounds of pressure (psi).

### For the Project

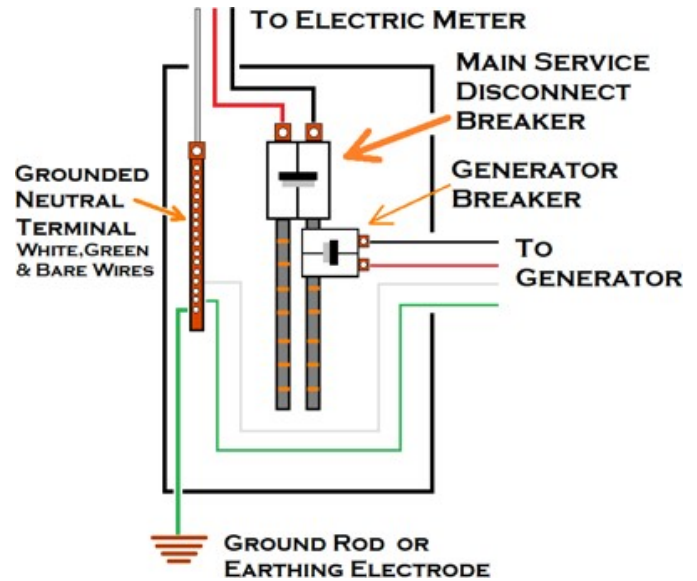
- Material List with Costs
- Explain what the project is, how it works, and advantages
- Include diagrams, schematics, and pictures
- Record sheet

Be safe! When using a generator, use a generator circuit breaker interlocking kit.



Select the proper interlocking kit for your breaker box. There are many different configurations. Only the main service breaker or the generator breaker can be on at the same time.

A two-pole 120/240V circuit breaker will need to be added and it should be placed according to the instructions of the interlocking kit. Other circuit breakers may need to be relocated.



## Other Options



### WHOLE HOUSE TRANSFER SWITCH:

These switches need to be installed between the electric meter and the main breaker panel.

### AUTOMATIC GENERATOR SYSTEM:

This is a totally automatic system. These generators will automatically start during a power outage and have an automatic transfer switch. The generator must be large enough to power everything in the house or power an essential only breaker panel.



### INDIVIDUAL CIRCUIT TRANSFER SWITCH:

This is a 10 essential circuit-only transfer switch. You may switch on only what is needed, as needed, for a small generator. It is wired to the main breaker panel.



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