

# Home Electrical Wiring

---

Types of Receptacles and Wiring them for 120v – 15Amp



# Standard 15amp Receptacle

---



Different quality, you get what you pay for.

Cheap receptacles have plastic that breaks easily and have little metal.



# 20amp Receptacle

---

- A 20 Amp receptacle can be used for heavy duty appliances
- The additional horizontal slot ensures a 20Amp appliance can only be put into this receptacle
- A 20 amp circuit breaker will be installed in the service panel and a larger gauge wire will be used.
- Other appliances can still use this receptacle



- A GFCI compares the current running to the load (eg power tool) with the current coming from the load. They should be equal. If the 2 are different it will trip the circuit with as little as .006Amp.
- It trips in 1/25 to 1/30 of a second. You will still feel a mild shock (pin prick)
- Should be installed in kitchen, bathroom, decks, porches, garages, crawlspace, job site. Required in Bathroom or on kitchen counter tops near sink.

---

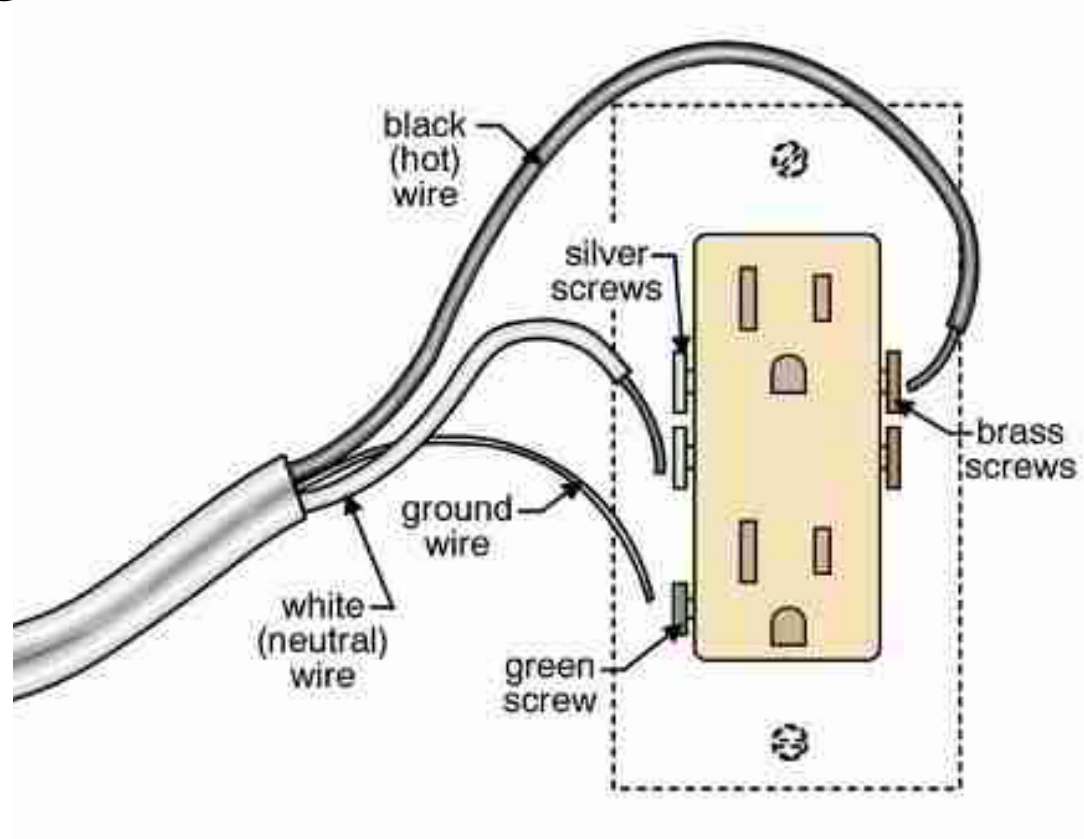
# Ground-Fault Circuit Interrupt

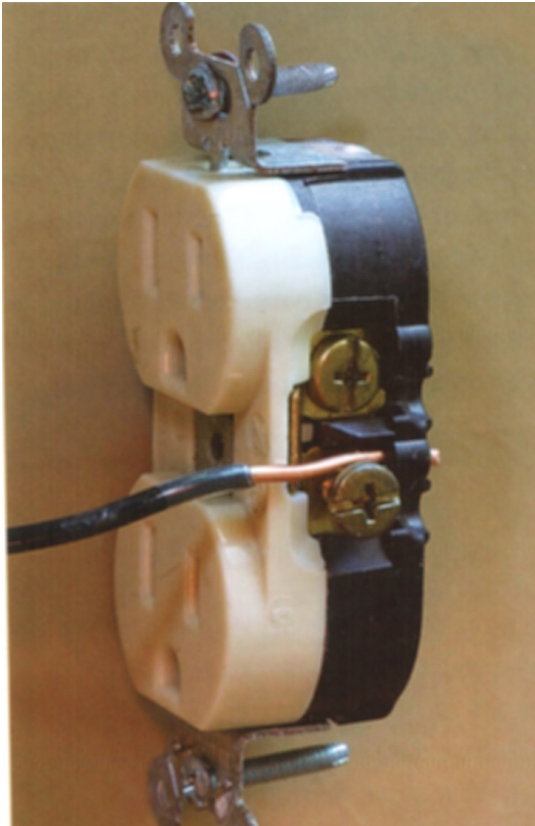


# Installing wires on a Receptacle

---

- Hot (Black) is Brass screw
- Neutral (White) is silver screw
- Ground (Bare) is green screw





## Installing wires on a Receptacle

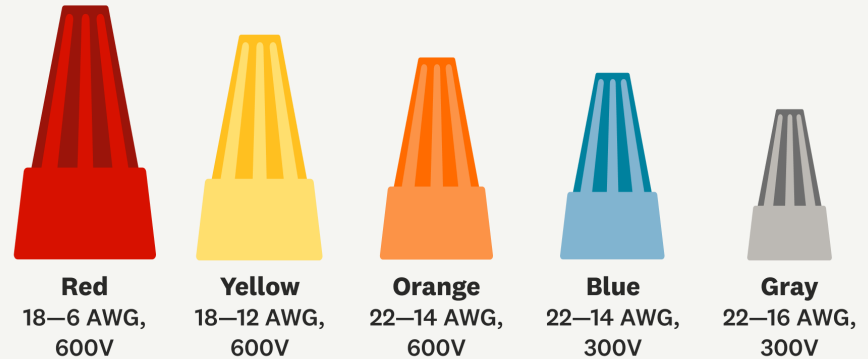
- Strip approximately 1" off the hot and neutral wires.
- Insert the wire from the front of the receptacle then bend it around the screw and out the back. Tighten the screw. Make sure there isn't any bare wire sticking out past the back of the receptacle.





# Connectors (Marette/Wire Nut)

## Standard wire nut sizes



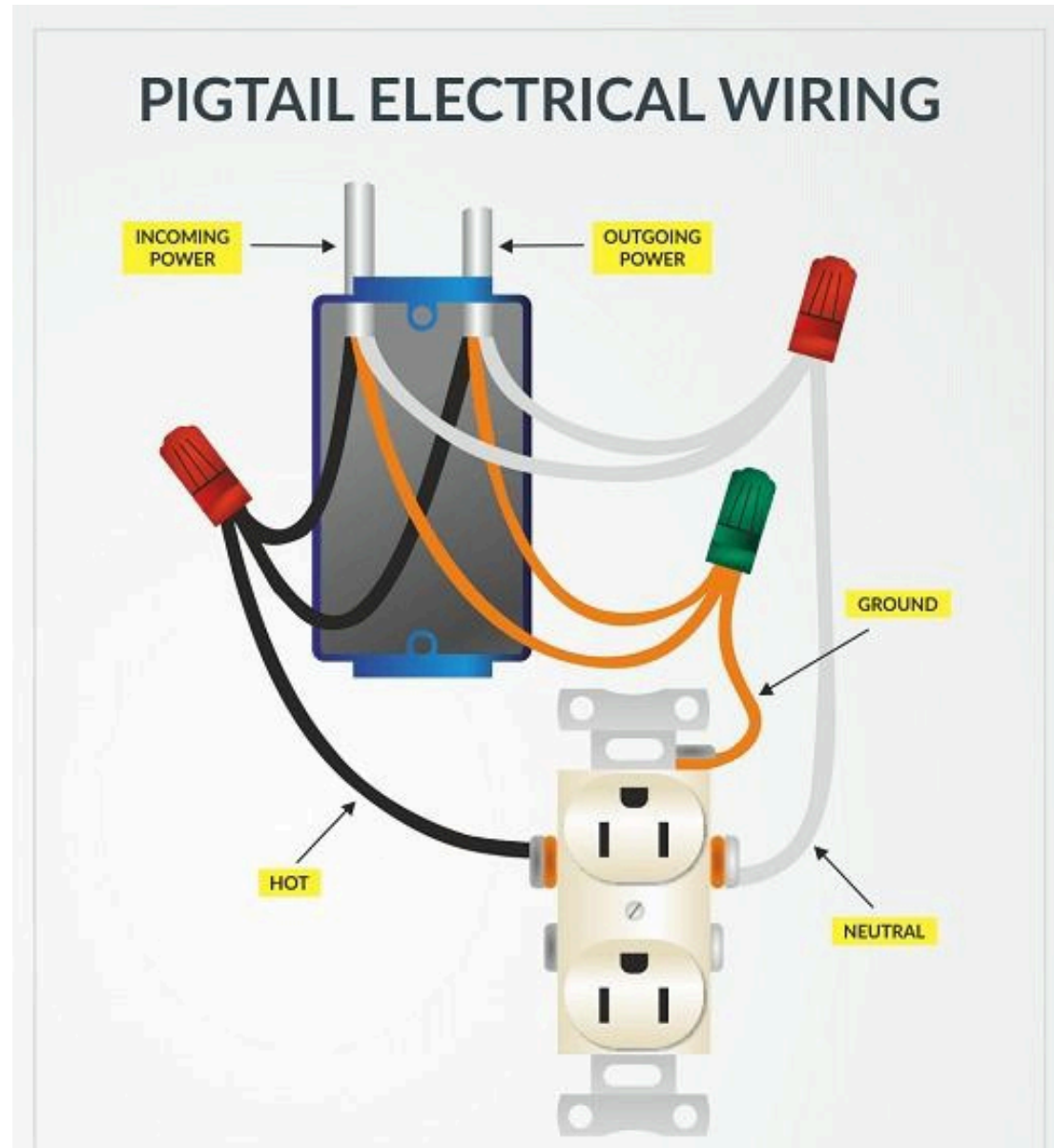
- There are many different types of connectors. They are used to connect wires together in outlet boxes. In some cases you may have to use several in one box.
- The most common are twist on. You simply bare the wires you will be joining, twist them clockwise, then twist on a connector. Just make sure the plastic covers the exposed bare wire.



# The “Pigtail”

---

- Unless the receptacle you are installing is at the end of the run, you use Pigtails to connect receptacles together



Work on Lab #4...

---

