

SIERRA COLLEGE

Residential Wiring

Energy Instructor

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Lesson Plan

- Lab 02: Residential Wiring

- Next Week
 - Continuation of Electricity Basics

Lesson Plan

- Service Entrance
- Feeders
- Branch Circuits
 - Lamp circuits
 - Outlet circuits
 - Special circuits
- Receptacles and switches
- Conductors
- Electrical Code
- Load Demand Calculation



Wiring an Outlet, Single Pole Switch, and Light

Brian Hurd



15 amp duplex
outlet
Living areas
14g/12g conductor



20 amp duplex outlet
Small appliances
12g conductor



Duplex outlet circuits have three wires from the power source:

- Black, or hot, wired to the gold set screw
- White, or neutral, wired to the silver set screws
- Bare copper or green, wired to the grounding screw





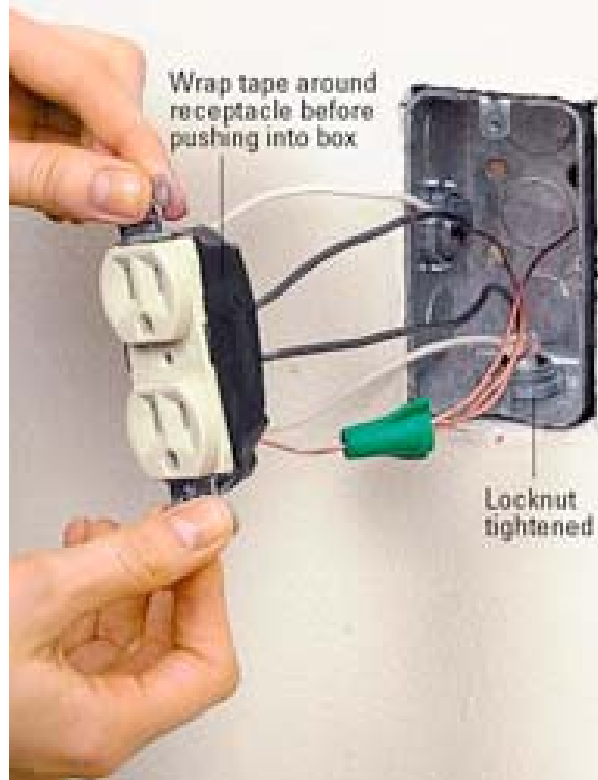
**Gold set screws for
the hot or black
wire**



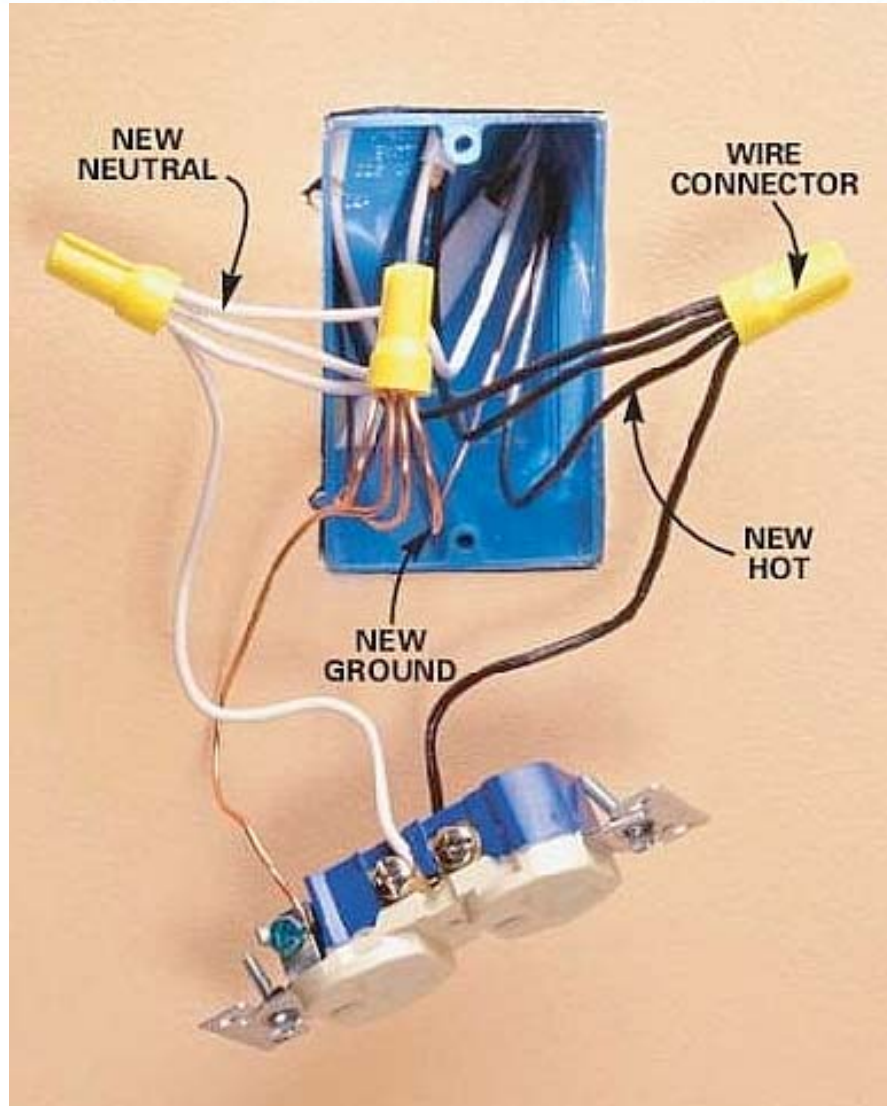
Silver set screws for
the white wire



These terminals are wrapped with electrical tape to prevent shorting to the bare ground wire



This is not required by code, but is good practice.



You can use "Pig Tailing"



With Pig Tailing you connect all of the same colored wires in a wire nut



With a short jumper wire to the outlet.
This makes it easier to push the outlet and wire bundles back into the box.



For Wire Nut Connections



1. Make sure wires are the same length, stripped to ~ 5/8"
2. Hold firmly together and push the wire nut while turning clockwise until the wires twist.
3. Pull on each wire to make sure there is a snug connection



Wiring a single pole switch

