Name _____ Date _____

Period _____

Engineering Technology Department

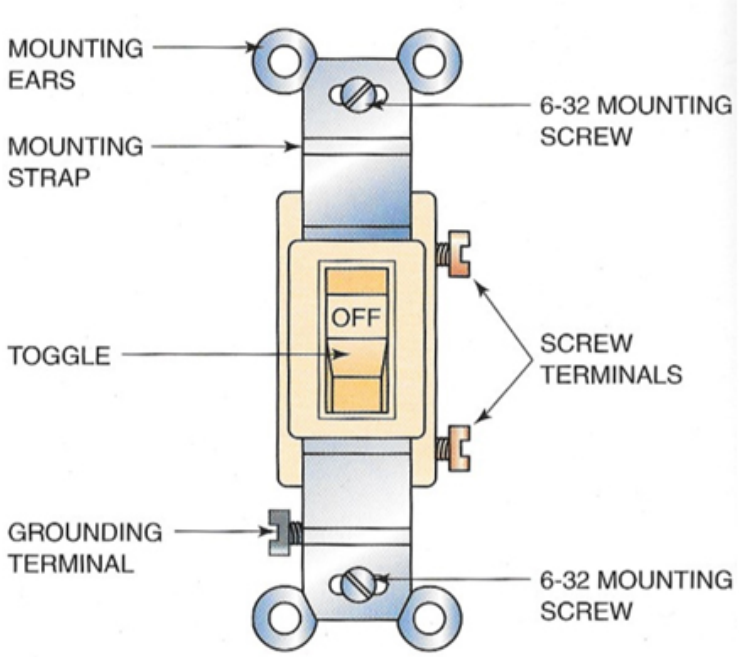
Devices – Switches

Switches

The most common type of switch used in residential wiring is called a **single-pole switch**. This switch type is used in 120-volt circuits to control a lighting outlet or outlets from only one location.

The main parts include the following:

- **Switch Toggle:** used to place the switch in the ON or OFF position
- **Screw terminals:** Used to attach the lighting circuit wiring to the switch. On a single-pole switch, the two terminal screws are the same color, usually bronze.
- **Grounding screw terminal:** Used to attach the circuit-grounding conductor to the switch. The terminal is green in color.
- **Mounting ears:** Used to secure the switch in a device box with a 6-32 size screws.

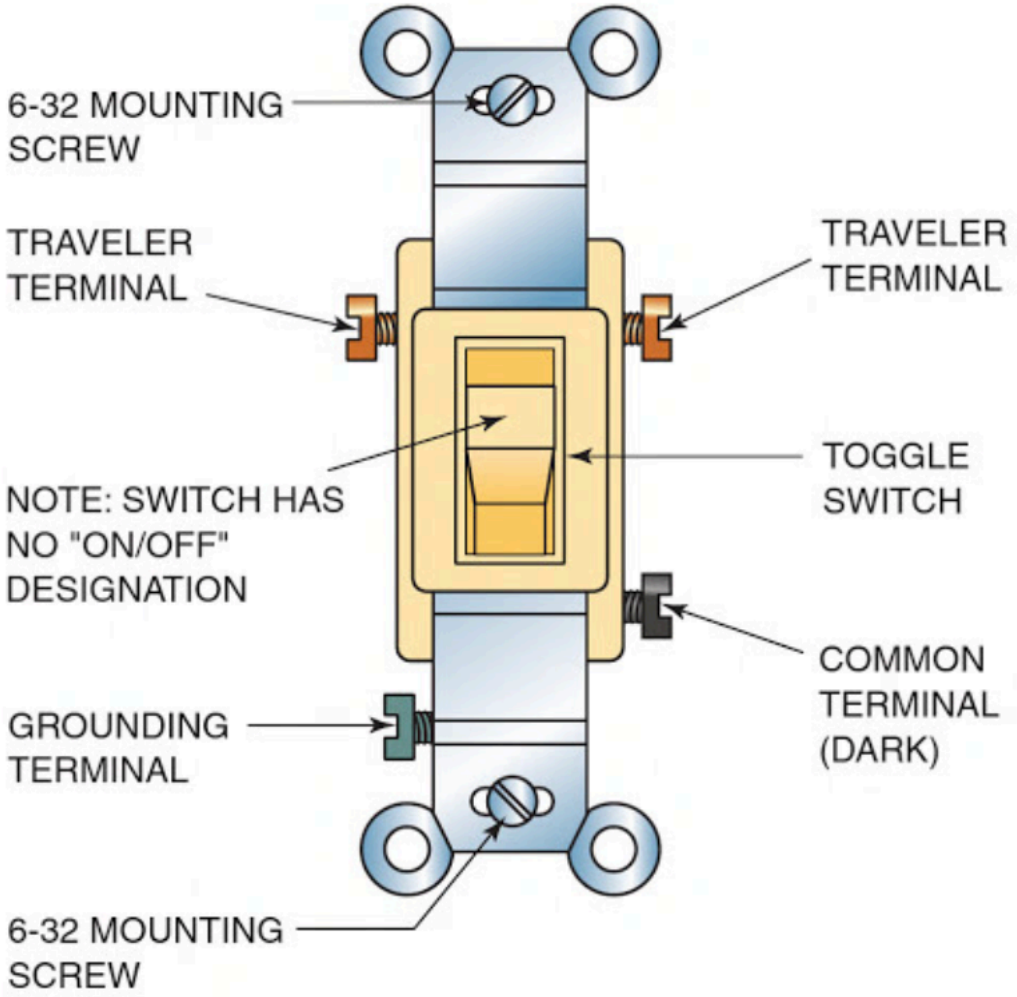


Three Way Switches

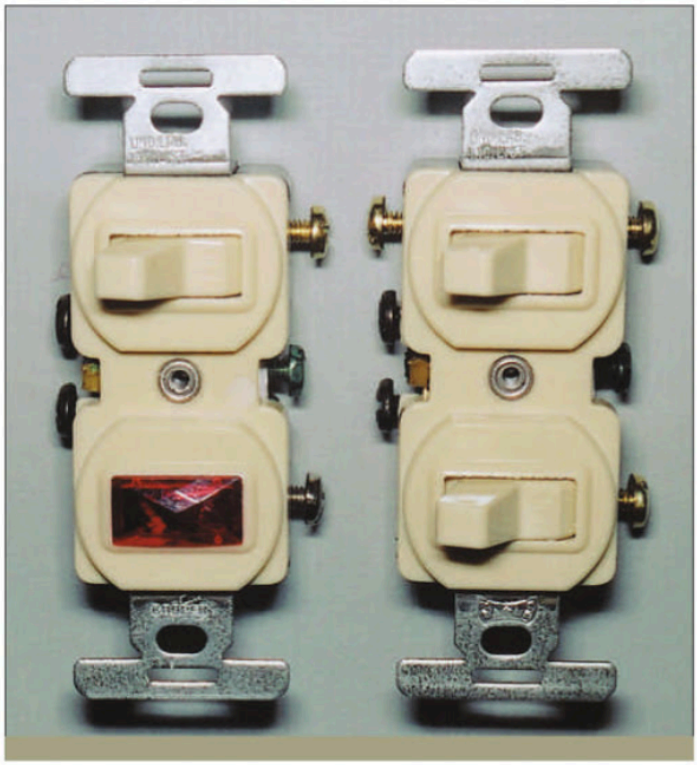
Three-way switches are used to control lighting or outlets from two locations. Three-way switches get their name from the fact that they have three screw terminals on them.

One characteristic is that three-way switches have three terminals. Two of the terminals, called "traveler terminals," typically have the same brass color and are located directly across from each other on opposite sides of the switch. The other screw terminal is usually black in color and is called the "common terminal". Identifying the common and the traveler terminals will enable you to correctly connect three-way switches in a lighting circuit.

Three-way switches must always be installed in pairs, and a three-wire cable or three wires in a raceway must always be run between the two three-way switches for proper connection.



Combination Devices
Combination devices are used when more than one device is needed at one location. This type of device has a combination of two devices, both of which are mounted on the same strap.



Dimmer switch
Dimmer switches are used to dim or brighten the light output of a lighting fixture. They come in both single-pole and three-way configurations. They are usually rated at 125 volts and 600 watts, although larger wattage ratings are available.

You can <u>NOT</u> use dimmer switches to control motors or fluorescent lights.

Low Voltage Switches & Wiring
Many owner builders are unfamiliar with the term "low voltage". It is electrical wiring and trim that does not carry the same current as the power outlets, fixtures and switches in a home.

Example of low voltage applications is: telephone wire, surround sound wiring and speakers, television cable, intercom, door bell and security pre-wires are as well.