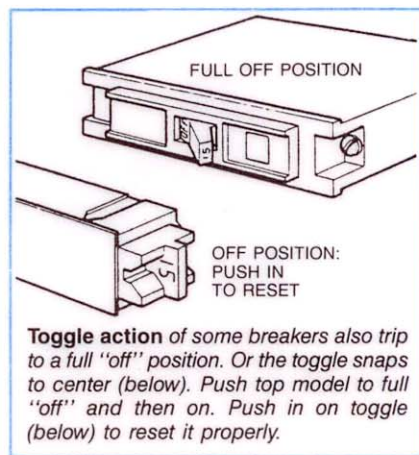
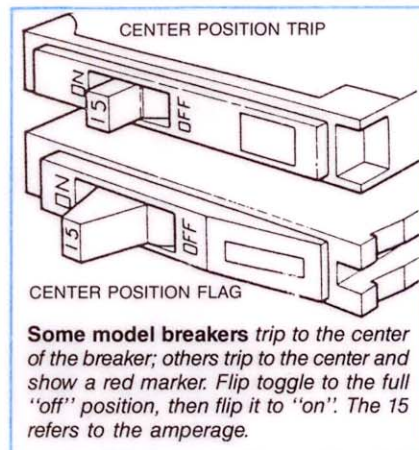
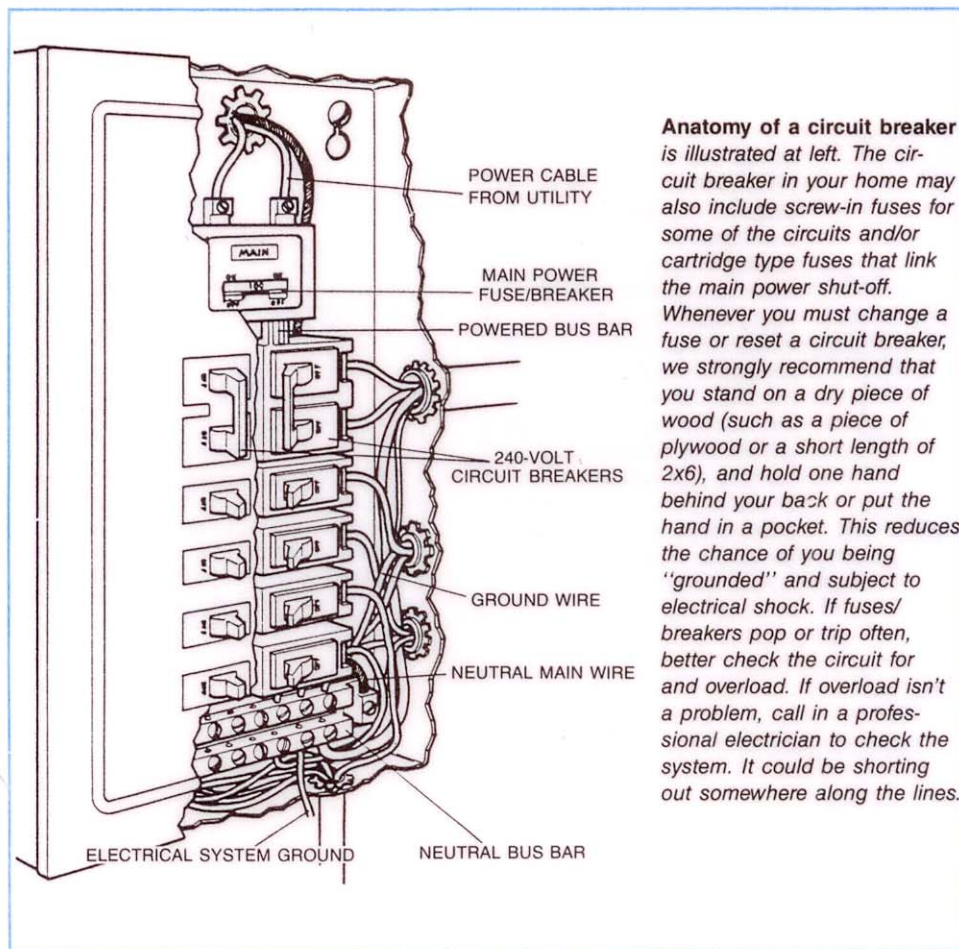


CIRCUIT BREAKERS

TOOL & MATERIAL CHECKLIST

New Breakers/Correct Amp Size to Fit Breaker Box • Standard Slot and Phillips Head Screwdrivers • Electrician's Wire Cutters • Wire Strippers



Reactivating Breakers

A tripped circuit breaker may have four different configurations, depending on the brand of circuit breaker installed in your home. (See drawing above.)

1. The toggle of the breaker will be in the center of the breaker. To reset the breaker, turn the toggle to its full "off" position. Wait several seconds. Then snap the toggle to the full "on" position.
2. The toggle of the breaker will be in the center of the breaker and a red-colored "flag" will appear along side of the toggle indicating a "tripped" position. To reset the breaker, flip the toggle to the full "off" position, wait a couple of seconds, and then flip the toggle to the full "on" position. You may hear a couple of snaps as the toggle goes through the sequence. Make sure that the toggle is over to the "on" position even though the toggle may "sound" as if it has been reactivated.
3. The toggle will be on the full "off" position—not halfway as detailed in items 1 and 2. Simply flip the the toggle to the full "on" position.
4. The toggle is in the "off" position. Push the toggle in and release the toggle to reset the circuit. Sometimes in resetting tripped breakers, the individual breaker will become loose in the circuit breaker box.

What most likely has happened is that the breaker has become loose in its mounting inside the circuit breaker box. To reset the breaker:

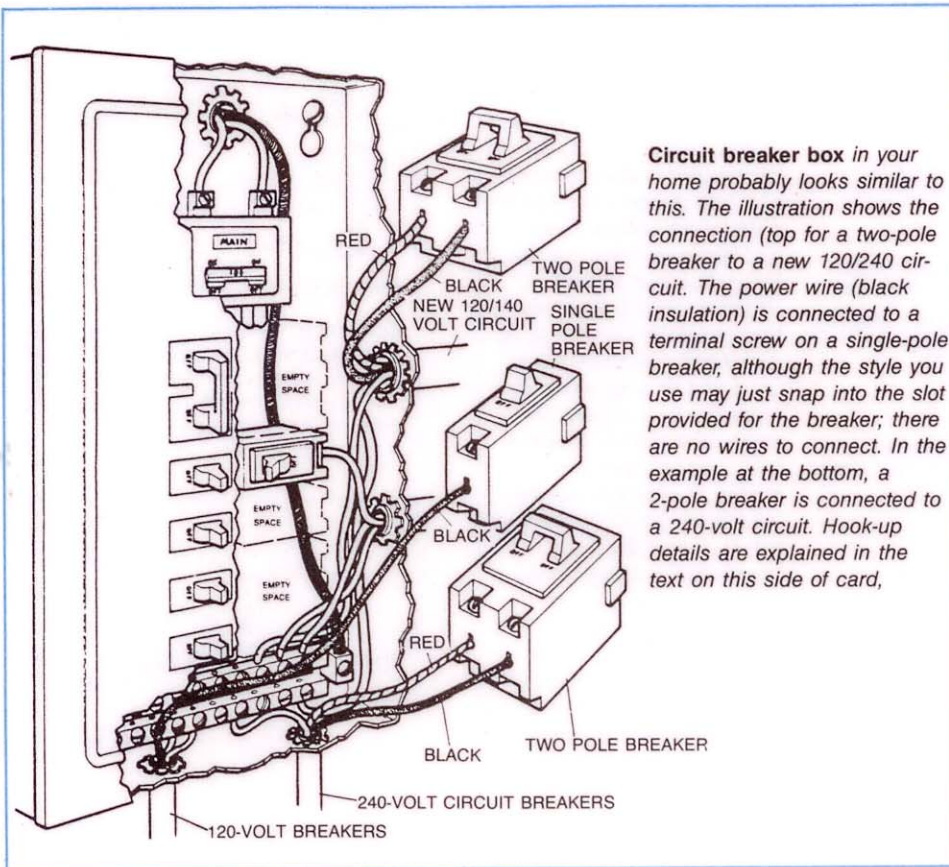
1. Turn off the power at the main power shutoff (see the drawing, Anatomy of a Circuit Breaker).
2. Remove the metal cover panel of the circuit breaker box. It will be held with screws that turn counter clockwise to back out.
3. With your fingers (there is no power so you are safe), push the loose breaker back into slot in the breaker box. you may hear it snap which indicates that it is properly seated.
4. Replace the box cover and turn on the main power shutoff.

If the loose breaker does not seat properly, it may be broken. If so, it must be replaced. Details on replacement can be found on the back page.

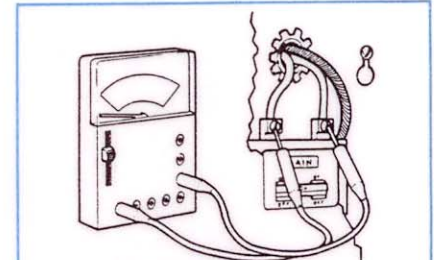
CIRCUIT BREAKERS

TOOL & MATERIAL CHECKLIST

New Breakers/Correct Amp Size to Fit Breaker Box • Standard Slot and Phillips Head Screwdrivers • Electrician's Wire Cutters • Wire Strippers



Circuit breaker box in your home probably looks similar to this. The illustration shows the connection (top for a two-pole breaker to a new 120/240 circuit. The power wire (black insulation) is connected to a terminal screw on a single-pole breaker, although the style you use may just snap into the slot provided for the breaker; there are no wires to connect. In the example at the bottom, a 2-pole breaker is connected to a 240-volt circuit. Hook-up details are explained in the text on this side of card,



Is the breaker receiving power? You can determine this with a voltmeter, but be very careful with the test. Touch the voltmeter probes to the terminal screws, after you remove the cover to the breaker/fuse box. If the meter has a reading, the power is coming to the box at this point.

Replacing/Adding Circuit Breakers

Replacing a damaged circuit breaker — or even adding a new breaker circuit to a circuit breaker box — is not a difficult job. The drawings show the basics. First, the replacement of a damaged breaker:

1. Turn off the power at the main breaker. Stand on a dry board or rubber mat as you disconnect the power and work on the replacement breaker.

2. Remove the face or cover panel from the breaker box. It is held with screws that turn counterclockwise.

3. Remove the damaged breaker. The breaker pulls out of its slot in the box. The breaker may be connected to the box with wires. Or, the breaker may be the type that does not have wire; it simply snaps into the box opening and, at the same time, automatically links with the power wires.

On replacement breakers — and breakers used to create a new circuit — refer to the View-Pak™ display to identify what (brand name) circuit breaker will fit properly into your circuit breaker box.

4. If the replacement breaker has wire connections, unscrew the terminals and remove the wires. A 2-pole breaker will have two wires attached (red and black) and a single-pole breaker will have one wire attached (black).

5. Reconnect the wires to the terminals on the new replacement breaker and reinstall the breaker in the slot, making sure that it is seated correctly.

6. Replace the cover to the breaker box and turn on the main power switch.

If you are adding a breaker for a new circuit:

1. Turn off the power at the main breaker.

2. Test to make sure that the power is off by touching the terminal screws of the main power cables with the probes of a volt meter (see drawing above). If the power is not off, call in a professional electrician to check the service panel.

3. Remove the knockout in the breaker box for the new breaker. In the side of the box, knock out the circle of metal matching the breaker location so the cable you are using may be connected properly.

4. Strip the cable insulation to allow enough wire for the connection to the neutral bus bar and the new circuit breaker. Connect the cable to the box with the proper fitting for this.

5. Run the ground wire and the white neutral wire of the cable to the neutral bus bar and connect them as shown in the illustration.

6. Attach the red and/or Black wire to the new circuit breaker, also shown. Two-pole breakers are connected with a red and black wire; single-pole breakers (in most installations) are connected with just the black wire. Then clip the breaker to one of the box's hot bus bars.

7. If the breaker is a two-pole unit, it will take up two spaces in the breaker box. It is for a 240-volt circuit. Both wires are considered power wires, and they are fastened to the breaker, as illustrated. The ground wire ONLY is connected to the neutral bus bar. Combination 120/140 breakers use the very same type of two-pole breakers. Here, the white wire is connected to the neutral bus bar.