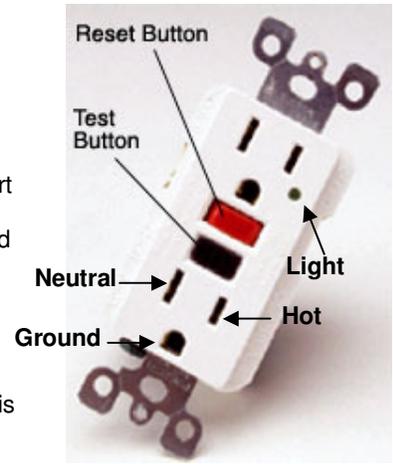


GFCI Protection Information

What the heck is a GFCI? A "GFCI" is a ground fault circuit interrupter which is an inexpensive electrical device that monitors the amount of current flowing from hot to neutral. If there is any imbalance, it trips the circuit. It is able to sense a mismatch as small as 4 or 5 milliamps, and it can react as quickly as one-thirtieth of a second.

The Problem: If you've ever experienced an electrical shock it probably happened because some part of your body contacted a source of electrical current and your body provided a path for the electrical current to go to the ground. The inadvertent electric path between a source of current and a grounded surface is referred to as a "ground-fault." Ground faults occur when current is leaking somewhere, in effect, electricity is escaping to the ground. If your body provides a path to the ground for this leakage, you could be injured, burned, severely shocked, or electrocuted.

Here's how a GFCI could work in a real-life scenario: If a bare wire inside an appliance touches the metal case, the case is then electrified. If you touch the appliance with one hand while the other hand is touching a grounded metal object, like a sink faucet, you will receive a shock. If the appliance is plugged into an outlet protected by a GFCI, the power will shut off. You may receive a painful shock, but you should not be electrocuted or receive a serious shock injury. If installed in household branch circuits, it could prevent over two-thirds of the approximately 300 electrocutions that occur each year in and around the home. It could also prevent thousands of burns and electric shock injuries each year as well as some electrical fires.



Three common types of ground-fault circuit interrupters are available for home use:

- **Receptacle Type:** This type of GFCI is used in place of the standard duplex receptacle found throughout the house. It fits into the standard outlet box and protects you against "ground faults" whenever an electrical product is plugged into the outlet. Most receptacle-type GFCIs can be installed so that they also protect other electrical outlets further "down stream" in the branch circuit.
- **Circuit Breaker Type:** In homes equipped with circuit breakers rather than fuses, a circuit breaker GFCI may be installed in a panel box to give protection to selected circuits. The circuit breaker GFCI serves a dual purpose - not only will it shut off electricity in the event of a "ground-fault," but it will also trip when a short circuit or an overload occurs. GFCI Protection covers the wiring and each outlet, lighting fixture, heater, etc. served by the branch circuit protected by the GFCI in the panel box.
- **Portable Type:**
 - a) One is basically, a GFCI device that plugs into an outlet that has a receptacle for the appliance to be plugged into.
 - b) Another type of portable GFCI is an extension cord combined with a GFCI.
 - c) Yet, another is built-into the plug end of some appliances, now common in hair dryers.

Required locations over the years:

- 1971- Within 15 feet of interior pool walls (required) and for pool lights (recommended).
- 1973- Outdoors (residential) within 6'-6" of grade level.
- 1975- Bathrooms, Pool Lights, and Fountains.
- 1978- Garages, Spas/Whirlpools.
- 1984- Can replace 2-Prong, non-grounded outlet with GFCI.
- 1987- Within 6 feet from Kitchen Sink. // Unfinished Basements.
- 1990- Crawlspace.
- 1993- Within 6 feet of Wet bar (at countertop only).
- 1996- All Exterior Receptacles and at ALL Kitchen Countertop outlets.
- 2008- effective 2011- ALL Receptacles within a garage, WITHOUT EXCEPTION!

Home owners or occupants of homes that do not have GFCIs installed in all the critical areas specified in the latest version of the Code should consider having them installed, such as the bathroom, kitchen, Dining Room, basement, crawlspace, garage, and outdoor circuits. For broad protection, GFCI circuit breakers may be added in many panels of older homes to replace ordinary circuit breaker, but obviously not in fuse protected panels. A GFCI should be used whenever operating electrically powered garden equipment (mower, hedge trimmer, edger, etc.). Consumers can obtain similar protection by using GFCIs with electric tools (drills, saws, sanders, etc.) for do-it-yourself work in and around the house.

Installing GFCIs: Circuit breaker and receptacle-type GFCIs may be installed in your home by a qualified electrician. Receptacle-type GFCIs may be installed by knowledgeable consumers familiar with electrical wiring practices who also follow the instructions accompanying the device. When in doubt about the proper procedure, contact a qualified electrician. Do not attempt to install it yourself. // The portable GFCI requires no special knowledge or equipment to install.

Testing the GFCIs: All GFCIs should be tested once a month to make sure they are working properly and are protecting you from fatal shock. GFCIs should be tested after installation to make sure they are working properly and protecting the circuit. To test the receptacle GFCI, first plug a night light or lamp into the outlet. The light should be on. Then, press the "TEST" button on the GFCI. The GFCI's "RESET" button should pop out, and the light should go out. If the "RESET" button pops out but the light does not go out, the GFCI has been improperly wired. Contact an electrician to correct the wiring errors. If the "RESET" button does not pop out, the GFCI is defective and should be replaced. If the GFCI is functioning properly, and the lamp goes out, press the "RESET" button to restore power to the outlet.



A standard home inspection is Not a Code Inspection.

Brought to you courtesy of...

(949) 275-4950

20/20
Advanced
Property & Mold
Inspections