

GFCI and AFCI: Small Devices That Make a Big Safety Difference

Electricity is something most of us take for granted. Flip a switch, and the lights turn on. Plug in a cord, and the power flows. But behind the walls of your home is a network of wiring that, if not properly protected, can lead to dangerous shocks or even fires. That's where two small but powerful safety devices come in: **GFCI** (Ground Fault Circuit Interrupter) and **AFCI** (Arc Fault Circuit Interrupter).

What is a GFCI?

A GFCI is designed to protect people from electrical shock. It constantly monitors the flow of electricity in a circuit. If it detects even a slight imbalance of a few milliamps—like when electricity is escaping through a person or water—it will shut off power in a fraction of a second. GFCI receptacles can be found in the kitchen, bathrooms, garages, laundry rooms and any other “wet” locations such as outdoors and basements or crawlspaces. Additionally, GFCI protection should be used on any outdoor feature such as pools, spas and fountains. These are all areas where electricity and moisture are more likely to mix—a dangerous combination. GFCIs have the familiar “TEST” and “RESET” buttons on the face of the outlet, making them easy to identify and maintain.

What is an AFCI?

While GFCIs protect against electrical shock, AFCIs are designed to prevent electrical fires. They detect dangerous arcing conditions—tiny sparks that can occur when wiring is damaged, loose, or deteriorating over time. If an arc is detected, the AFCI cuts power before the spark can ignite surrounding materials. AFCI protection is typically found in bedrooms, living rooms/family rooms, hallways and other general living areas of the home. Additionally, AFCIs can be installed at the electrical panel (as a breaker) or as combination AFCI/GFCI outlets for even more protection.

Common Warning Signs to Watch For:

- Outlets that feel warm or have burn marks
- Tripping breakers or outlets that won't reset
- Lights flickering for no obvious reason
- Outlets that don't power devices properly
- Buzzing or crackling sounds from outlets or switches

These symptoms can signal faulty wiring or failing protective devices. Addressing them early can prevent serious damage and protect your family's safety.

Why Maintenance Matters

Like any safety device, GFCIs and AFCIs need regular testing and occasional replacement to stay reliable. They can wear out, trip improperly, or fail silently over time.

Homeowners should:

- **Test monthly:** Press the “TEST” button to make sure power shuts off, then press “RESET” to restore it.
- **Replace if faulty:** If the outlet doesn't trip or reset, it may be time for replacement.
- **Label circuits:** Knowing which outlets and breakers are protected helps in troubleshooting.

- **Schedule periodic inspections:** An electrician or certified home inspector can test the entire system to ensure everything is functioning properly.

GFCI outlets typically last around 10 years, while AFCI breakers may last 15 years or more, but testing is the best way to know if they're still protecting your home.

Code and Upgrade Considerations

Modern building codes require GFCI and AFCI protection in most parts of the home. If you live in an older house, it may not have full coverage. Upgrading is a relatively simple and affordable way to dramatically improve safety. In some cases, combination devices can be installed to meet both requirements in one outlet or breaker.

Bottom Line

GFCIs and AFCIs are small investments with huge safety benefits. By testing them monthly, replacing them when needed, and upgrading older systems, you can significantly reduce the risk of electrical shock and fire in your home. Regular electrical inspections are also a smart way to ensure these critical devices are doing their job. If it's been a while since your home's electrical system was checked, consider scheduling a professional inspection to keep your home safe and powered with confidence.

If you have questions about your electrical system or any other aspect of home construction or maintenance, feel free to reach out. We're here to help in any way we can!

Arden "Chip" Anderson is the owner of the Anderson Property Group, Inc., a property inspection and consulting firm in Star.

986-226-5355

arden@theandersonpropertygroup.com

www.theandersonpropertygroup.com