



When you own a home, occasional electrical repairs or changes will be necessary. For any electrical repair, it is important always to remember proper safety.

A properly installed home electrical system is safe. Any accidental overload will blow a fuse or trip a circuit breaker. The job of wiring a home is rigidly controlled by local code requirements and safety standards. It should be done by an electrical contractor.

To simplify repairs, keep a card showing which circuits activate which outlets in your home taped to the door of the main service panel. This will save repair time.

Safety

When making any electrical repair, always shut off the power to the main service panel to the wires you will be touching. To ensure that no one accidentally flips the circuit breaker back on during the repair, put a warning sign on the circuit box.

Test for electricity with a neon circuit tester before disconnecting any wires. Be sure all tools you use are well insulated. Work only in dry areas and make sure you and your clothing are not wet. Buy only the best switches, wiring, and outlets—those approved by Underwriters Laboratory

Fuses and Circuit Breakers

A blown fuse or tripped circuit breaker is a sign that lights and appliances are drawing more power than the circuit can safely handle. Or it may indicate a short circuit. Be sure to locate and eliminate the problem before you restore power. Otherwise it will recur.

When a circuit fails, note how long the appliances connected to it had been operating. If the items were operating for just a few moments, you probably have a current overload. Plug appliances into other outlets on different circuits. Then install a duplicate fuse or switch the lever of the tripped breaker fully to off, then back to on.

Always replace the fuse with one of the same amperage.

Short Circuits

Electricity is dangerous only when it flows outside your wiring system. Pulled by the earth's magnetic force, it automatically seeks to return to earth along the most convenient path. If electricity leaks and finds a path outside of the established wires, shock or fire can occur.

To prevent leaks, otherwise known as short circuits, electrical networks depend upon a grounding system. If circuit wires fail, the grounding system provides a channel for electricity to safely follow.

When a circuit fails the instant an appliance is plugged in or a switch is turned on, the problem is probably a short circuit. Short circuits are usually caused by damaged wiring or connections in the circuit, item, or switch. If a fuse or breaker continues to

blow after you have reduced the amount of current going to the circuit, an electrical contractor should check the wiring and make the necessary repairs before the circuit is used again.

Unplug all items and turn off all wall switches on the circuit until you repair the faulty area. If you see sparks, you've found the short. To see if the fault is in one of your appliances, check them individually with a continuity tester or have an electrical contractor locate and correct the problem for you.

Circuits near water, plumbing, or outdoors should be protected with a safety device known as a ground fault circuit interrupter (GFCI). A GFCI senses minute changes in current flow and quickly shuts off the power before shock can occur.

