1. What is a GFCI?

A GFCI receptacle is different from conventional receptacles. In the event of a ground fault, a GFCI will trip and quickly stop the flow of electricity to prevent serious injury.

Definition of a ground fault:
Instead of following its normal safe path, electricity passes through a person’s body to reach the ground. For example, a defective appliance can cause a ground fault.

A GFCI receptacle does NOT protect against circuit overloads, short circuits, or shocks. For example, you can still be shocked if you touch bare wires while standing on a non-conducting surface, such as a wood floor.

GFCI’s contain a lockout feature that will prevent RESET if:
• There is no power being supplied to the GFCI.
• The GFCI is miswired due to reversal of the LINE and LOAD leads.
• The GFCI cannot pass its internal test, indicating that it may not be able to provide protection in the event of a ground fault.

2. The combination GFCI/Switch’s features

Grounding Terminal (Green): Connection for bare copper or green wire
Back wire grounding hole (Green): Connection for bare copper or green wire
LINE White terminal (Silver): Connection for the LINE cable’s white wire
LOAD White terminal (Silver): Connection for the LOAD cable’s white wire
Back wire holes

3. Should you install it?

Installing a GFCI receptacle can be more complicated than installing a conventional receptacle.

Make sure that you:
• Understand basic wiring principles and techniques
• Can interpret wiring diagrams
• Have circuit wiring experience
• Are prepared to take a few minutes to test your work, making sure that you have wired the GFCI receptacle correctly

4. LINE vs. LOAD

A cable consists of 2 or 3 wires.

Cable | Wires
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LINE cable: | Delivers power from the service panel (breaker panel or fuse box) to the GFCI. If there is only one cable entering the electrical box, it is the LINE cable. This cable should be connected to the GFCI’s LINE terminals only.
LOAD cable: | Delivers power from the GFCI to another receptacle in the circuit. This cable should be connected to the GFCI’s LOAD terminals only. The LOAD terminals are under the yellow sticker. Do NOT remove the sticker at this time.

5. Turn the power OFF

Plug an electrical device, such as a lamp or radio, into the receptacle on which you are working. Turn the lamp or radio ON. Then, go to the service panel. Find the breaker or fuse that protects that receptacle. Place the breaker in the OFF position or completely remove the fuse. The lamp or radio must turn OFF.

6. Identify cables/wires

Procedure: box with three (3) cables (6-9 wires):
(a) Detach two of the cable’s white and hot wires from the receptacle and cap each one separately with a wire connector. Make sure that they are from the same cable.
(b) Re-install the receptacle in the electrical box, attach faceplate, then turn the power ON at the service panel.
(c) Determine if power is flowing to the receptacle. If so, you have identified the LINE cable (go to step d). If not, the LINE is one of the other cables with the capped wires. Tag this cable and repeat this procedure with the two remaining cables until you have identified the LINE.
(d) Turn the power OFF at the service panel, label the LINE and LOAD wires, then remove the receptacle.
(e) Go to step 7A.

Placement in circuit:
The GFCI’s place in the circuit determines if it protects other receptacles in the circuit.

Sample circuit:

Placing the GFCI in position A will also provide protection to all other receptacles B and C. On the other hand, placing the GFCI in position C will not provide protection to receptacles A or B. Remember that receptacles A, B, and C can be in different rooms.
Connect the LINE cable wires to the LINE terminals:
- The white wire connects to the WHITE terminal (Silver).
- The black wire connects to the HOT terminal (Brass).

Connect the LOAD (Receptacle) cable wires to the GFCI LOAD terminals:
- Remove the YELLOW sticker to reveal the LOAD terminals.
- The black wire connects to the HOT terminal (Brass).
- The white wire connects to the WHITE terminal (Silver).
- The other black lead connects to the hot side of the load.
- The LOAD must be properly connected to NEUTRAL and ground.

Connect the switch leads to the switch controlled LOAD (not GFCI protected, shown in diagram):
- For a switch with a grounding terminal (diagram above): Connect a 6-inch bare copper wire to the grounding terminal on the GFCI.
- For a switch without a grounding terminal (diagram above): Connect the ends of the white wire to the LINE cable's bare copper wire. Screw these wires if necessary, and check the connections.

Connections to the GFCI:
- Connect a 6-inch bare copper or (GREEN) wire to the grounding terminal on the GFCI. If the box has a grounding terminal, also connect a similar wire to the grounding terminal on the box.
- Connect the ends of these wires to the LINE or LOAD cable's bare copper or (GREEN) wire using a wire connector. If these wires are already in place, check the connections.

Complete the installation:
- Fold the wires into the box, keeping the grounding wire away from the WHITE and HOT terminals. Screw the receptacle to the box and attach the faceplate.
- Go to step 8.

LOAD must be properly connected to NEUTRAL and grounded.

If you mistakenly connect the LINE wires to the LOAD terminals, the GFCI will not reset and will not provide any protection to any receptacles fed from the GFCI.

Procedure:
(a) This GFCI is shipped from the factory in the tripped condition and cannot be reset until it is wired correctly and power is supplied to the device. Plug a lamp or radio into the GFCI (and leave it plugged in). Turn the power ON at the service panel. Ensure that the GFCI is still in the tripped condition by pressing the TEST button. If the indicator light on the GFCI receptacle face is ON and the lamp or radio is OFF, go to the Troubleshooting section because LINE and LOAD wiring connections have been reversed. You will not be able to RESET the GFCI in this condition.
(b) Press the RESET button fully. If the lamp or radio turns ON and the Indicator Light turns ON, the GFCI has been installed correctly. If the GFCI cannot be reset, go to the Troubleshooting section.
(c) If you installed your GFCI using step 7B, press the TEST button, then plug a lamp or radio into surrounding receptacles to see which one(s) is in addition to the GFCI, lost power when you pressed the TEST button. DO NOT plug life saving devices into any of the receptacles that lost power. Place a “GFCI PROTECTED OUTLET” sticker on every receptacle that lost power, then press the RESET button to reset the GFCI.
(d) Press the TEST button (then RESET button) every month to assure proper operation. If the Indicator light does not go out and come back on or if the GFCI cannot be reset, then it must be replaced.

Troubleshooting
Turn the power OFF and check the wire connections against the appropriate wiring diagram in step 7A or 7B. Make sure that there are no loose wires or loose connections. Start the test from the beginning of step 8 if you rewired any connections to the GFCI.

General Information
Cat. No. 7299
GFCI ratings:
- 15A max. – 125V AC, 60 Hz
- 20A feed-through only

Switch ratings:
- 15A max. - 120V AC, 60 Hz
- 20A feed-through only

This product is covered by U.S. Patents Nos. 6,069,975; 6,449,550; 6,382,370; 6,381,112; 6,437,953; 6,864,768; as well as other U.S. and foreign patents pending.

For Technical Assistance: 1-800-654-3333 (Canada Only)

For Warranty Information: 1-800-405-5320 (Canada Only)

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