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.

2. The GFCI’s features

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
• Can interpret wiring diagrams
• Have circuit wiring experience
• Are prepared to take a few minutes to complete the installation.

keeps both the receptacle and any plugs dry.

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. If you see one cable (2-3 wires), it is the LINE cable. The receptacle is probably in position A (see diagram to the right). Remove the bracket and go to step 7A.

Next, plug in and turn ON the lamp or radio at the receptacle. If you can still be shocked if you touch bare wires while standing on a non-conducting surface, such as a wood floor.

4. LINE vs. LOAD
A cable consists of 2 or 3 wires.

Procedure: box with two cables (4-6 wires)
(a) Detach one 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 the faceplate, then turn the power ON at the service panel.
(c) Determine if power is flowing to the receptacle. If so, the capped wires are the LOAD wires. If not, the capped wires are the LINE wires.
(d) Turn the power OFF at the service panel, label the LINE and LOAD wires, then remove the receptacle.
(e) Go to step 7B.

6. Identify cables/wires
Important:
Do not install the GFCI receptacle in an electrical box containing (a) more than 4 wires (not including the grounding wire) or (b) cables with more than two wires (not including the grounding wire). Contact a qualified electrician if either (a) or (b) is true.

If you are replacing an old receptacle, pull it out of the electrical box without disconnecting the wires.

Next, plug in and turn ON the lamp or radio at the receptacle. If you can still be shocked if you touch bare wires while standing on a non-conducting surface, such as a wood floor.

If you see one cable (2-3 wires), it is the LINE cable. The receptacle is probably in position C (see diagram to the right). Remove the receptacle and go to step 7A.

If you see two cables (4-6 wires), follow the procedure to the right. The receptacle is probably in position A or B (see diagram to the right).

Procedure: box with two cables (4-6 wires)
(a) Detach one 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 the faceplate, then turn the power ON at the service panel.
(c) Determine if power is flowing to the receptacle. If so, the capped wires are the LOAD wires. If not, the capped wires are the LINE wires.
(d) Turn the power OFF at the service panel, label the LINE and LOAD wires, then remove the receptacle.
(e) Go to step 7B.

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

Sample circuit:

Place the GFCI in position A if it protects other receptacles in the circuit. 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.

A yellow sticker covers the LOAD terminals. Do not remove the sticker at this time.

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.

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.

Procedure: box with two cables (4-6 wires)
(a) Detach one 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 the faceplate, then turn the power ON at the service panel.
(c) Determine if power is flowing to the receptacle. If so, the capped wires are the LOAD wires. If not, the capped wires are the LINE wires.
(d) Turn the power OFF at the service panel, label the LINE and LOAD wires, then remove the receptacle.
(e) Go to step 7B.

Placement in circuit:
The GFCI’s place in the circuit determines if it protects other receptacles in the circuit. Placing the GFCI in position A will also provide protection to “load side” 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.

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.

Procedure: box with two cables (4-6 wires)
(a) Detach one 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 the faceplate, then turn the power ON at the service panel.
(c) Determine if power is flowing to the receptacle. If so, the capped wires are the LOAD wires. If not, the capped wires are the LINE wires.
(d) Turn the power OFF at the service panel, label the LINE and LOAD wires, then remove the receptacle.
(e) Go to step 7B.

Placement in circuit:
The GFCI’s place in the circuit determines if it protects other receptacles in the circuit. Placing the GFCI in position A will also provide protection to “load side” 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.

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.
**About wire connections:**

- **Sidewire:**
  - 7/8 inch (2.22 cm) Wire Connector
  - Wire 11/8" (2.95 cm)

- **Backwire:**
  - 11/8" (2.95 cm)

**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.

**Grounding connections to box (if box has a grounding terminal):**

- Connect a 6-inch bare copper (or green) wire directly to the grounding terminal on the box (if box has a grounding terminal).
- Connect the ends of these wires to the LINE and 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:**

- Insert bare end fully, tighten screw firmly

**Insert  bare  end  fully way around screw**

**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 cable wires to the LOAD terminals:**

- The black wire connects to the Hot terminal (Brass)
- The white wire connects to the White terminal (Silver)

**Connect the grounding wires (only if there is a grounding wire):**

- The yellow Correct Wiring/Trip Indicator comes on. To restore power, press the RESE button.
- If you installed your GFCI using step 7B, now plug a lamp or radio into surrounding receptacles to see which ones, in addition to the GFCI, lost power when you press the TEST button. Do not plug life saving devices into any receptacles that lost power. Place a “GFCI Protected” sticker on every receptacle that lost power.

**Connect the LOAD cable feeds power to the receptor(s):**

- Connect the ends of these wires to the LINE and LOAD cable's bare copper (or green) wire using a wire connector. If these wires are already in place, check the connections.

**Connect the LOAD cable wires to the LOAD terminals:**

- The black wire connects to the Hot terminal (Brass)
- The white wire connects to the White terminal (Silver)

**About wire connections:**

- **Sidewire:**
  - 7/8 inch (2.22 cm) Wire Connector
  - Wire 11/8" (2.95 cm)

- **Backwire:**
  - 11/8" (2.95 cm)

**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 cable wires to the 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)

**Connect the LOAD cable feeds power to the receptor(s):**

- Insert bare end fully, tighten screw firmly

**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)

**Complete the installation:**

- Insert bare end fully, tighten screw firmly

**TROUBLESHOOTING**

- Turn the power OFF and check the wire connections against the appropriate wiring diagram in step 1A or 7B. Make sure that the power OFF switch is disconnected from the LINE and LOAD connections.
- Reverse the LOAD and LINE connections if necessary. Start the test from the beginning of step 8 if you reviewed any connections to the GFCI.

**NOTE:** If this Eaton GFCI has tripped and no longer can be reset, it has reached its “End of Life” and will no longer provide power. Replace with the same model Eaton GFCI to continue to provide ground fault protection.

**General Information**

GFCI ratings:
- 15A-125V AC Duplex Receptacle
- 20A-125V AC Duplex Receptacle
- 20A-125V AC Blank Face

All rated 20A fed-through 125V Class A