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.

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 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**

**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.

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 should turn OFF.

Next, plug in and turn ON the lamp or radio at the receptacle's other outlet to make sure the power is OFF at both outlets. If the power is not OFF, stop work and call an electrician to complete the installation.

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 wires) or (b) cables with more than two wires (not including the grounding wires). 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.

- **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), the receptacle is probably in position A or B (see diagram to the right). Follow steps a-e of the procedure 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:

A: LINE
B: LINE
C: LOAD

Place 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.
This is a Self-Test GFCI receptacle. It conducts an automatic test every five seconds, ensuring it’s always ready to provide the protection. The GFCI receptacle has reached its end of life when GFCI repeatedly trips and can no longer supply power to the load, or LED illuminates Orange in color, or LED repeatedly flashes Red. The GFCI receptacle must be replaced.

Turn the power ON at the service panel. Press the RESET button fully. The RESET button should stay in. The LED load side voltage indicator will illuminate green in color. If the RESET button does not stay in, go to Troubleshooting. If the power goes OFF, you have installed the GFCI receptacle correctly. To restore power, press the RESET button.

Press the TEST button in order to trip the device. This should stop the flow of electricity, making the radio or lamp shut OFF. The Green LED load side voltage indicator will turn OFF. Note that the RESET button will pop-out. If there is no power, go to Troubleshooting.

If you installed your GFCI using step 7B, plug a lamp or radio into surrounding receptacles to see which one(s), 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.

Press the TEST button (then RESET button) every month to assure proper operation. If the GFCI cannot be reset, then it must be replaced.

About wire connections:
- Wire Terminal
- Black Wire Hole
- Back Wire Hole

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 grounding wire (only if there is a grounding wire):
- For a box with a grounding terminal: (Diagram shown above) Connect the LINE cable’s bare copper (or green) wire directly to the grounding terminal on the GFCI receptacle.
- For a box with a grounding terminal: (Diagram shown above) Connect a #8 gauge copper (or green) 12 or 14 AWG wire to the grounding terminal (GFCI) on the GFCI. Also connect a similar wire to the grounding terminal on the box. Connect the ends of those wires to the LINE cable’s bare copper (or green) wire using a wire connector. If those wires are already in place, check the connections.

Complete the installation:
- Feed 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 decals.
- Go to step 8.

Reading other side completely

About wire connections:
- Wire Terminal
- Black Wire Hole
- Back Wire Hole

Connect the LOAD cable wires to the LOAD terminals:
- The white wire connects to the White terminal (Silver)
- The black wire connects to the Hot terminal (Brass)

Connect the grounding wires as shown above (only if there is a grounding wire):
- Connect a #8 gauge copper (or green) 12 or 14 AWG wire to the grounding terminal (GFCI) 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 those wires to the LOAD cable’s bare copper (or green) wire using a wire connector. If those wires are already in place, check the connections.

Complete the installation:
- Feed 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 decals.
- Go to step 8.

Troubleshooting

General Information
- GFCI Rating:
  - 15A: Receptacle rated 15A
  - Feed through 20A
  - 20A: Receptacle rated 20A
  - Feed through 20A

Warranty
- USI Electric, Inc. (Universal Security Instruments, Inc.) (“USI”) warrants this product to be free from defects in material and workmanship for a period of two years from the date of purchase. This warranty shall not apply to any damage which may be caused by this product. This warranty applies only to the original consumer purchaser and only to this product used in normal residential use and service. If a product is found to be defective, USI’s sole obligation, and your exclusive remedy is to repair or replace the defective product, at USI’s discretion, provided the product has not been damaged through misuse, abuse, accident, modifications, alteration, neglect or mishandling. This warranty does not cover liability for personal injury, property damage or loss of use. This warranty shall not apply to any product that has been tampered with, altered, set up, or used in any way not in accordance with the instructions supplied with the product.