ELECTRICAL MARKETPLACE

# GFCI Receptacle Installation and Testing Manual

TURN 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 of 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.
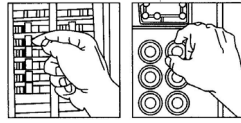
IDENTIFY CABLES/WIRES

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 wire). Contact a qualified electrician if either (a) or (b) is present.

• If you are replacingan 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). Remove the receptacle and go to next step.

• 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.

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: 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.
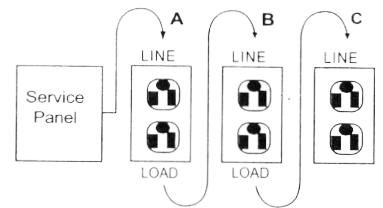
CONNECTION WIRES (Choose A or B)... only after reading the other side completely

A: One cable (2-3 wires) entering the box

Connect the LINE cable wires to the LINE terminals:

• The white wire connects to the White terminal (silver)

• The b;ack 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 not shown): 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 6-inch bare copper (or green) 12 or 14AWG wire to the grounding terminal on the GFCI. Also connect a similar wire to the grounding terminal on the box. Connect the ends of these wires to the LINE cable's bare copper (or green) wire using a wire connector. If these wires are already in place, check the connections.

B: Two cables (4 or 6 wires) entering the box

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 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 6-inch bare copper (or green) 12 or 14AWG 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 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.

Test your work.