

# PITTSBURGH®

## Stud/Voltage Detector

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-800-444-3353 as soon as possible.

Item 67801



### INSTRUCTIONS AND PRECAUTIONS

Visit our website at:  
<http://www.harborfreight.com>

#### **⚠ WARNING**

**Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.**

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**For technical questions,  
please call 1-800-444-3353.**

### Specifications

Battery	1x 9V
Stud Range	<3/4" Deep
Ferrous Metal Range	<1-1/2" Deep
Copper Pipe Range	<1-3/16" Deep
Voltage Range	90-250 V~, 50-60 Hz (unshielded) <1-1/2" Deep

### Important Safety Information

1. This device may not detect items that are shielded, behind dense materials (such as plywood), or are deeper than its listed detection depths.
2. This product is not a toy. Do not allow children to play with or near this item.
3. Inspect before every use; do not use if parts are loose or damaged.
4. Maintain product labels and nameplates. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
5. Position batteries in proper polarity and do not install batteries of different types, charge levels, or capacities together.

## Instructions



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this document before set up or use of this product.



**Figure A: Controls**

1. Use the **Mode Switch** to select what type of material you want to detect.
2. The **Power Button** activates the detector while pressed. Release it to turn the detector off.
3. The **Indicator LED's** show what type of material is detected: Metal, Voltage or Stud.
4. The **Power LED** shows that the unit is on and ready to start detecting.
5. The **Low Battery LED** lights when the battery voltage is low. Low battery voltage may effect performance. **DO NOT USE IF BATTERY VOLTAGE IS LOW.**

## Stud Detection

### **⚠️WARNING**

**TO PREVENT SERIOUS INJURY AND ELECTROCUTION:**

**Turn off all circuits with wires inside the wall before working. Depending on the proximity of electrical wiring or pipes to the wall surface, the scanner may detect them in the same manner as studs. Use caution when nailing, cutting, or drilling in walls, floors, and ceilings that may contain these items.**

Studs or joists are normally spaced 16" or 24" apart and are 1-1/2" wide. Anything closer together or of a different width may not be a stud, joist, or firebreak.

1. Slide the Switch to the "STUD" position.
2. Hold the detector flat against the wall. Press and hold Power Button.
3. The Power LED lights when the detector is ready to operate.
4. Slowly slide unit horizontally across wall, left to right. Keep the unit base in contact with the wall. The Stud LED lights and the unit starts emitting a steady tone when it detects the edge of a stud. When that happens, mark the spot over the top center of the detector.

5. Place the unit on the wall a few inches to the right of where it detected the stud. Then move it slowly from right to left, horizontally across the wall and mark the spot when stud detects again. Between the two spots is the stud position.
6. Repeat the process to confirm position of studs.

## Metal Detection

1. Slide the switch to the "METAL" position.
2. Press and hold Power Button. Calibrate the unit in air away from metal objects.
3. The Power LED lights when the detector is ready to operate. Position unit flat against wall.
4. Slowly slide unit horizontally across wall, left to right. Keep the unit base in contact with the wall. The Metal LED lights and the unit starts emitting a steady tone when it detects the edge of a metal object. When that happens, mark the spot over the top center of the detector.
5. Place the unit on the wall a few inches to the right of where it detected the metal object. Then move it slowly from right to left, horizontally across the wall and mark the spot when Metal detects again. Between the two spots is the metal object's position.
6. Repeat the process to confirm position of metal objects.

## Voltage Detection

### **WARNING**

#### **TO PREVENT SERIOUS INJURY AND ELECTROCUTION:**

**The unit will not detect live wires inside metal pipe or metal conduit, behind metallic wall covering, or behind some plywood or other dense materials. Use extra caution in these construction situations. Always turn the power off when nailing, cutting, or drilling near electrical wire.**

NOTE: Because the unit is sensitive it may indicate metal while passing through the air. Simply release Power Button, place on the wall, and press Power Button on again. This effectively re-calibrates the electronics.

The unit detects from 90 to 250 V at 50 to 60 Hz AC in a HOT unshielded electrical wire that is within 1-1/2" of wall surface. The sensor is located in the center of the back of the unit.

1. Turn power on in the wall you will try to detect voltage in. The power must be turned off later after detection and before work to reduce the risk of accidental shock.
2. Slide the switch to the "VOLT" position.
3. Press and hold Power Button. Calibrate the unit in air away from metal objects.
4. The Power LED lights when the detector is ready to operate. Position unit flat against wall.
5. Slowly slide unit horizontally across wall, left to right. Keep the unit base in contact with the wall. The Volt LED lights and the unit

starts emitting a steady tone when it detects the edge of a live wire. When that happens, mark the spot over the top center of the detector.

6. Place the unit on the wall a few inches to the right of where it detected the live wire. Then move it slowly from right to left, horizontally across the wall and mark the spot when Volt detects again. Between the two spots is the live wire's position.
7. Repeat the process to confirm position of live wires.
8. **WARNING! TO PREVENT SERIOUS INJURY AND DEATH FROM ACCIDENTAL SHOCK: Turn off all circuits within the wall after detection and before working on the wall.**

## Battery Replacement

Before first use or if Low Battery LED lights up, then replace the batteries:

1. Open battery door on back of case.
2. Connect a 9-volt battery to battery clip.
3. Insert battery into case and replace battery door.

### Record Serial Number Here:

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**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Replacement parts are not available for this item.