

Operating and Instruction Manual

Model **PG-70A-0.5**



WARNING:

THIS INSTRUMENT IS NOT INTENDED TO BE A SUBSTITUTE FOR VISUALLY IDENTIFYING BURIED METALLIC OBJECTS PRIOR TO COMMENCING EXCAVATION OR EARTH-MOVING ACTIVITIES.



DANGER:

THIS DEVICE IS NOT INTRINSICALLY SAFE AND IS NOT EXPLOSION PROOF AND COULD BE AN IGNITION SOURCE OF AN AREA WITH DANGEROUS CONCENTRATIONS OF FLAMMABLE GASES OR DUST.

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OVERVIEW

The POINT GUARD is an instrument designed to help determine the location of buried metallic objects such as pipelines and electrical conduit by insertion of the POINT GUARD into an existing probe hole. While the POINT GUARD can distinguish between a metallic and non-metallic object, the information gained from use of this instrument must not be considered absolutely reliable. Sensing distance from the tip of the POINT GUARD to the surface of the metallic object is limited to 0.25 inches. Should coatings or other material between the POINT GUARD tip and surface of the buried metallic structure be thicker than 0.25 inches, the POINT GUARD may not identify the item as metallic.

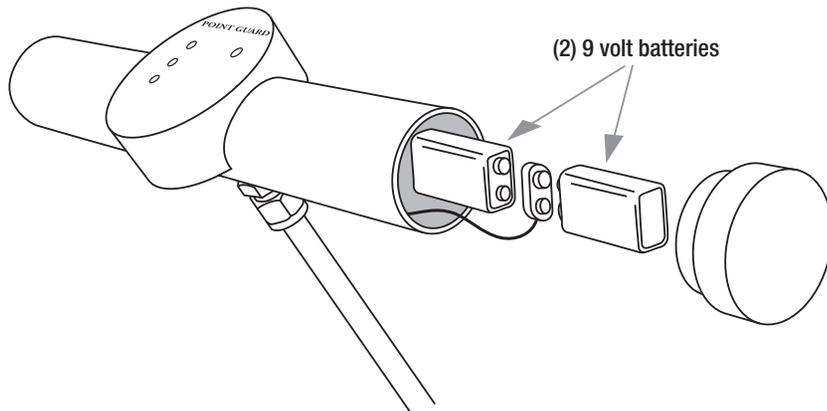
The POINT GUARD is not to be used as the primary probing tool, as damage to the sensing tip may occur from excessive pressure. After probing with a conventional probe rod and encountering a non movable object, pull the conventional probe rod out of the hole and place the POINT GUARD into the hole and lower until reaching the object. By pressing and holding the power button, the POINT GUARD will display battery condition by lighting one of the 3 LEDs on the left side of the dashboard and will illuminate the “Metallic Object Detected” LED should the POINT GUARD detect a metallic object near the sensing head.

OPERATION

NOTE: It is important to test the functionality of the POINT GUARD before every use.

Battery Installation

The POINT GUARD operates using two (2) conventional 9 volt alkaline batteries. To install or replace batteries first open the battery cover located on the right side of the handle.



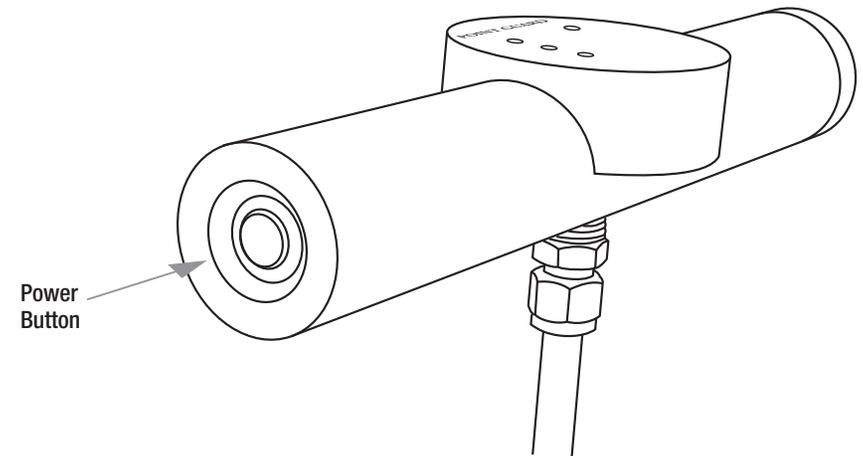
It may be necessary to disconnect the inside 9V battery before removing the battery from the instrument. **Do not pull on the battery cord as this may result in damage to the internal circuitry.**

Once connecting two 9V batteries to the electrical cord, gently insert the battery assembly into the device making sure the inside battery is rotated properly to fit the battery shaped holding area.

Reinstall the battery cover by rotating clockwise until tight.

Turning On Instrument

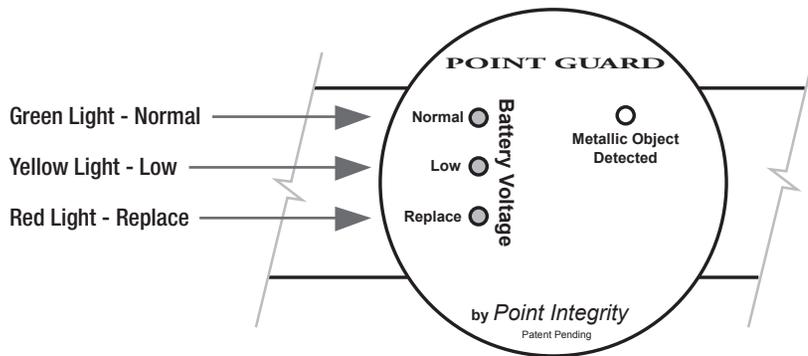
The power button for the POINT GUARD is located in a recess at the left end of the handle. Power to the instrument is only supplied while pressing and holding the power button.



WARNING:

DO NOT LOOK DIRECTLY INTO THE LIGHTS ON THE INSTRUMENT AS SERIOUS EYE INJURY OR BLINDNESS COULD OCCUR. THE INSTRUMENT LIGHTS ARE VERY BRIGHT TO ALLOW FOR VIEWING IN FULL SUNLIGHT.

Immediately upon pressing and holding the power button, one or more LEDs on the left side of the dashboard will illuminate indicating battery health. Normal battery voltage will illuminate the top LED which is green. The middle LED is yellow and indicates battery voltage is becoming low. The third LED is red and will illuminate when batteries must be replaced with new batteries. As battery voltage decreases over time the LEDs will transition from green only, to green and yellow, then yellow only, next yellow and red, and finally red only. The POINT GUARD will operate correctly when the yellow (LOW) indicator is illuminated. Illumination of the red LED requires the user to replace the two 9V batteries to ensure proper operation of the instrument.



Testing Operation of Instrument

Before each use of the POINT GUARD, the operator shall verify proper operation of the instrument using the following procedure.

1. Ensure the probe tip assembly is tight by attempting to rotate the polycarbonate tip clockwise into the stainless steel housing.
2. Press and continue to hold the power button for each of the following steps.
3. Verify satisfactory battery condition by observing the Battery Voltage LEDs.
4. With the sensing tip of the POINT GUARD away from any metallic object, verify the *Metallic Object Detected* LED is not illuminated.
5. Place the tip of the POINT GUARD over a metallic object and verify that the *Metallic Object Detected* red LED becomes illuminated.
NOTE: The *Metallic Object Detected* LED may illuminate approximately 5% of its full brightness when power is supplied to the sensor. This is normal and does not indicate a metallic object has been detected.
6. Move the tip of the POINT GUARD away from the metallic object and verify the *Metallic Object Detected* red LED then turns off.

Locating a buried metallic object

Upon determining a location to probe in search of a buried object, probe through the earth using a standard probe rod ½ inch or greater in diameter.

NOTE: Pouring water into the probe hole may reduce the effort needed to move the probe rod

After encountering a buried object that provides unusual resistance to the probing, pull the conventional probe rod out of the ground being careful to maintain the probe hole.



WARNING:

BE SURE TO USE A PROPER PROBING TECHNIQUE AT ALL TIMES WHERE PROBING ACTIONS ARE COMPLETED BY USING LEG AND ARM MUSCLES AND NOT BY LIFTING WITH THE BACK. IMPROPER PROBING TECHNIQUE MAY CAUSE SEVERE INJURY.

Insert the POINT GUARD into the existing probe hole and lower until the probe tip reaches the buried object resisting further downward movement.

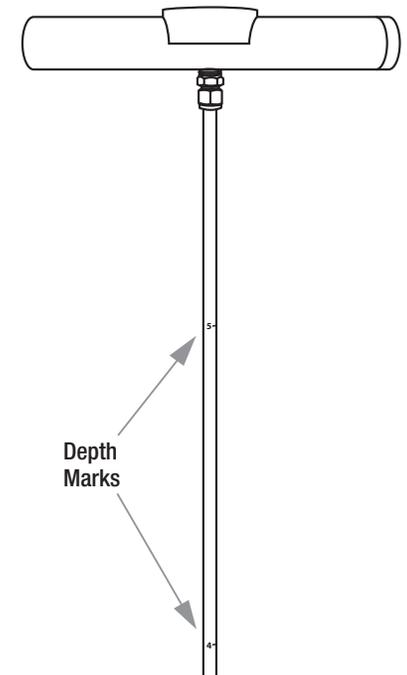
Turn the POINT GUARD clockwise several rotations to ensure the sensing tip displaces all soil between it and the encountered object.

Press and hold the POINT GUARD power button and examine the instrument dashboard to determine if the *Metallic Object Detected* red LED has illuminated.

The operator can also raise and lower the POINT GUARD while holding in the power button to see that the *Metallic Object Detected* red LED turns on and off should a metallic object be within the acceptable sensing distance of the instrument tip.

NOTE: The entire probing shaft and sensor tip assembly are water proof. The POINT GUARD handle is water resistant.

Depth of encountered object can be determined by reading the depth marks on the side of the POINT GUARD shaft in relation to the ground level while the POINT GUARD is inserted into the ground and against the encountered object.



PROBE TIP REPLACEMENT

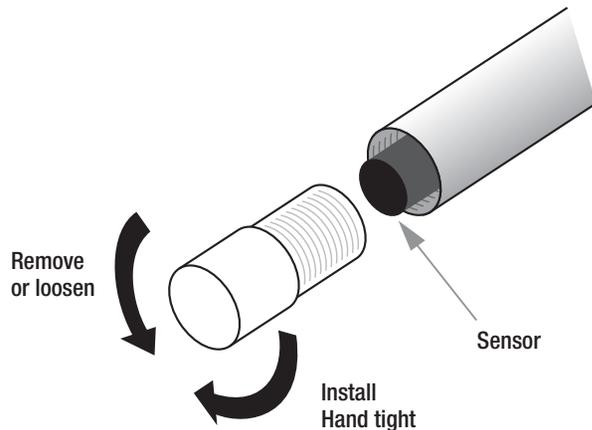
Should the polycarbonate probe tip show excessive signs of wear or any indication of damage, a new sensor protector tip should be installed.

Remove the worn tip by turning counter clockwise until removed from the probe assembly. Be sure to remove any dirt or contaminants that may be on the internal sensor or threads of the metallic probe assembly.

Do not attempt to remove the sensor from the probe assembly as damage to the internal circuitry will occur requiring return to Point Integrity Solutions for repair.

Install a new sensor protector tip by placing over the sensor and rotating clockwise until all threads are embedded inside the metallic assembly and the sensor protector tip is hand tight.

Do not over tighten as damage to the sensor protector tip will occur.



TROUBLESHOOTING

Problem	Possible Causes	Likely Solutions
No Power/LEDs do not light	<ol style="list-style-type: none"> 1. Discharged Batteries 2. Battery not properly connected 3. Internal circuitry issue 	<ol style="list-style-type: none"> 1. Replace two 9V batteries 2. Ensure batteries are fully seated in battery connector 3. Return to Point Integrity for repair
Not sensing rated distance	<ol style="list-style-type: none"> 1. Loose sensor cover 2. Low battery voltage 	<ol style="list-style-type: none"> 1. Check that polycarbonate sensor cover is screwed tightly into stainless steel sensor housing 2. Replace two 9V batteries
"Metallic Object Detected" LED Always ON	<ol style="list-style-type: none"> 1. Damaged sensor 	<ol style="list-style-type: none"> 1. Return to Point Integrity for repair

GENERAL SAFETY

The use of this probe instrument requires the operator to use industry recognized safety practices.

Proper lifting practices must be used to reduce the risk of back injury while performing probing activities. Use of the following general guidelines will help minimize the risk of back injury.

Lift close to your body.

You will be a stronger and more stable lifter if the object is held close to your body rather than at the end of your reach. Make sure you have a firm hold on the object you are lifting, and keep it balanced close to your body.

Feet shoulder width apart.

A solid base of support is important while lifting. Holding your feet too close together will be unstable, too far apart will hinder movement. Keep the feet about shoulder width apart and take short steps.

Bend your knees and keep your back straight.

Practice the lifting motion before you lift the object, and think about your motion before you lift. Focus on keeping your spine straight--raise and lower to the ground by bending your knees.

Tighten your stomach muscles.

Tightening your abdominal muscles will hold your back in a good lifting position and will help prevent excessive force on the spine.

Lift with your legs.

Your legs are many times stronger than your back muscles--let your strength work in your favor. Again, lower to the ground by bending your knees, not your back. Keeping your eyes focused upwards helps to keep your back straight.

If you're straining, get help.

If an object is too heavy, or awkward in shape, make sure you have someone around who can help you lift.

Wear a belt or back support.

If you are lifting in your job or often at home a back belt can help you maintain a better lifting posture.

Tips:

- Never bend your back to pick something up.
It's just not worth the damage that improper lifting technique can cause.
- Hold the object close to your body.
You are a much more stable lifter if you're not reaching for an object.
- Don't twist or bend.
Face in the direction you are walking. If you need to turn, stop, turn in small steps, and then continue walking.
- Keep your eyes up.
Looking slightly upwards will help you maintain a better position of the spine.



DANGER: DO NOT PROBE NEAR OR AROUND BURIED ELECTRICAL LINES. A SEVERE RISK OF SERIOUS BODILY INJURY OR DEATH EXISTS FROM ELECTROCUTION.

Always place a state one call or dig safe prior to probing or commencing excavation activities.



**Know what's below.
Call before you dig.**

ONE CALL CENTERS

United States

Alabama
Alabama 811
811 or 1-800-292-8525
www.al811.com

Alaska
Alaska Digline, Inc.
811 or 1-800-478-3121
www.akonecall.com

Arizona
Arizona Blue Stake
811 or 1-800-782-5348
www.azbluestake.com

Arkansas
Arkansas One Call
811 or 1-800-482-8998
www.arkonecall.com

California (North & Central)
USA North
811 or 1-800-227-2600
www.usanorth.org

California (South)
Dig Alert
811 or 1-800-227-2600
www.digalert.org

Colorado
Colorado 811
811 or 1-800-922-1987
www.co811.org

Connecticut
Call Before You Dig
811 or 1-312-744-7000
www.cbyd.com

Delaware
Miss Utility of Delmarva
811 or 1-800-282-8555
www.missutilitydelmarva.com

District of Columbia
District One Call
811 or 1-202-265-7177
www.missutility.net

Florida
Sunshine 811
811 or 1-800-432-4770
www.sunshine811.com

Georgia
Georgia 811
811 or 1-800-282-7411
www.georgia811.com

Hawaii
Hawaii One Call
811 or 1-866-423-7287
www.callbeforeyoudig.org

Idaho
Dig Line, Inc.
811 or 1-800-342-1585
www.digline.com

Idaho (Bonner/Boundry/
Kootenai/Shoeshone/Benewah)
Pass Word
811 or 1-800-626-4950
www.passwordinc.com

Illinois (Outside of Chicago)
JULIE
811 or 1-800-892-0123
www.illinois1call.com

Illinois (Chicago)
Digger - Chicago Utility Alert
Network
811 or 1-312-744-7000
egov.cityofchicago.org

Indiana
Indiana 811
811 or 1-800-382-5544
www.indiana811.org

Iowa
Iowa One Call
811 or 1-800-292-8989
www.iowaonecall.com

Kansas
Kansas One Call
811 or 1-800-344-7233
www.kansasonecall.com

Kentucky
Kentucky 811
811 or 1-800-752-6007
www.kentucky811.org

Louisiana
LA One Call
811 or 1-800-272-3020
www.laonecall.com

Maine
Dig Safe
811 or 1-888-344-7233
www.digsafe.com

Maryland
(West of Chesapeake Bay)
Miss Utility of Maryland
811 or 1-800-257-7777
www.missutility.net

Maryland
(East of Chesapeake Bay)
Miss Utility of Delmarva
811 or 1-800-282-8555
www.missutilitydelmarva.com

Massachusetts
Dig Safe System, Inc.
811 or 1-888-344-7233
www.digsafe.com

Michigan
Miss Dig
811 or 1-800-482-7171
www.missdig.org

ONE CALL CENTERS continued

Minnesota
Gopher State One Call
811 or 1-800-252-1166
www.gopherstateonecall.org

Mississippi
Mississippi 811
811 or 1-800-227-6477
www.ms811.org

Missouri
Missouri One Call System
811 or 1-800-344-7483
www.mo1call.org

Montana
Montana 811
811 or 1-800-424-5555
www.montana811.org

Montana
(Flathead and Lincoln Counties)
Montana One Call Center
811 or 1-800-551-8344
www.udig.org

Nebraska
Diggers Hotline of Nebraska
811 or 1-800-331-5666
www.ne-diggers.com

Nevada
USA North
811 or 1-800-227-2600
www.usanorth.org

New Hampshire
Dig Safe System, Inc.
811 or 1-888-344-7233
www.digsafe.com

New Jersey
New Jersey One Call
811 or 1-800-272-1000
www.nj1-call.org

New Mexico
New Mexico 811
811 or 1-800-321-2537
www.nm811.org

New York (North of 5 Boroughs)
Dig Safely New York
811 or 1-800-962-7962
www.digsafelynewyork.com

New York
(5 Boroughs and Long Island)
New York 811, Inc.
811 or 1-800-272-4480
www.newyork-811.com

North Carolina
North Carolina 811
811 or 1-800-632-4949
www.nc811.org

North Dakota
North Dakota One Call
811 or 1-800-795-0555
www.ndonecall.com

Ohio
Ohio Utilities Protection Service
811 or 1-800-362-2764
www.oups.org

Oklahoma
Call Okie
811 or 1-800-522-6543
www.callokie.com

Oregon
Oregon Utility Notification
Center
811 or 1-800-332-2344
www.digsafelyoregon.com/

Pennsylvania
Pennsylvania One Call System,
Inc.
811 or 1-800-242-1776
www.paonecall.org

Rhode Island
Dig Safe System, Inc.
811 or 1-888-344-7233
www.digsafe.com

South Carolina
South Carolina 811
811 or 1-888-344-7877
www.sc811.org

South Dakota
South Dakota One Call
811 or 1-800-781-7474
www.sdonecall.com

Tennessee
Tennessee 811
811 or 1-800-351-1111
www.tennessee811.com

Texas
Texas811
811 or 1-800-344-8377
www.texas811.org
Lone Star Notification Center
811 or 1-800-669-8344
www.lsnconecall.com

Utah
Blue Stakes of Utah
811 or 1-800-662-4111
www.bluestakes.org

Vermont
Dig Safe System, Inc.
811 or 1-888-344-7233
www.digsafe.com

Virginia
Virginia 811
811 or 1-800-552-7001
www.va811.com

Washington
Utility Notification Center
811 or 1-800-424-5555
www.callbeforeyoudig.org

West Virginia
WV811
811 or 1-800-245-4848
www.wv811.com

Wisconsin
Diggers Hotline
811 or 1-800-242-8511
www.diggershotline.com

Wyoming
One-Call Of Wyoming
811 or 1-800-849-2476
www.onecallofwyoming.com

Canada

Alberta
Alberta One Call
1-800-242-3447
www.alberta1call.com

British Columbia
BC One Call
1-800-474-6886
www.bconecall.bc.ca

Ontario
Ontario One Call
1-800-400-2255
www.on1call.com

Quebec
Info Excavation
1-800-663-9228
www.info-ex.com

Saskatchewan
Sask 1st Call
1-866-828-4888
www.sask1stcall.com



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www.gopointguard.com



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