

USA **MULTI-SENSOR PRO**

User Manual



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USA Multi-Sensor Pro User Manual 11/13/2007

Depth and type of target govern the type of tool (detector) needed.
At **ACCURATE LOCATORS** we offer a wide variety of Imagers, so you will know both.



Thank you for purchasing the **MULTI-SENSOR PRO**
with Target ID Sound

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MULTI-SENSOR PRO with Target ID Sound

The **MULTI-SENSOR PRO** is a state of the art ground imaging instrument that is well suited for both the utility locator as well as the professional treasure hunter. It has advanced software which makes operating the unit and data analysis much simpler than the other brands available. The software renders color representation of the surveyed field, as well as in real time. Added as an additional imager the **MULTI-SENSOR PRO** can detect the strongest and weakest point of a target as well as estimating depth, and can penetrate deeper than most other instruments.

The **MULTI-SENSOR PRO** is simple to operate. The control unit plugs into the antenna and the UMPC (Ultra Mobile PC), just plug the battery into the control unit, open the program and you are ready to go. The system comes complete with all you need to survey with confidence and accuracy, and is available with optional equipment for even more convenient operations.

Packing Contents

- * Multi-Sensor Antenna
- * Control Unit
- * Carrying case for antenna
- * USB Cable for connecting control unit and the computer
- * Tablet Personal Computer (complete with Windows XP or Vista, Wireless and Bluetooth)
- * Field Pack

Optional equipment includes:

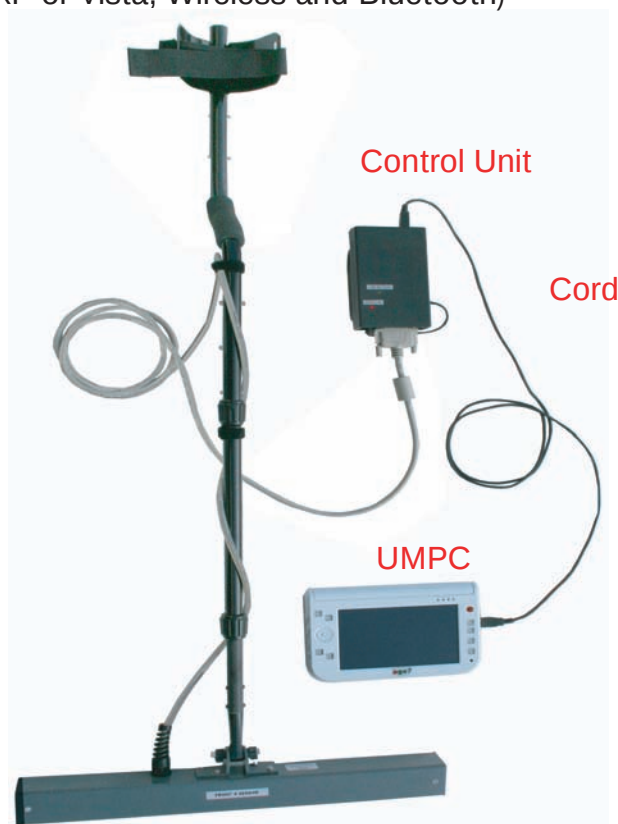
- * PC video glasses
- * GPS systems



Antenna Bag



Field Pack



Multi-Sensor Antenna

It's that simple

Getting Started

Quick Start Multi-Sensor Pro
PC Brand Subject to Change Without Notice

Training

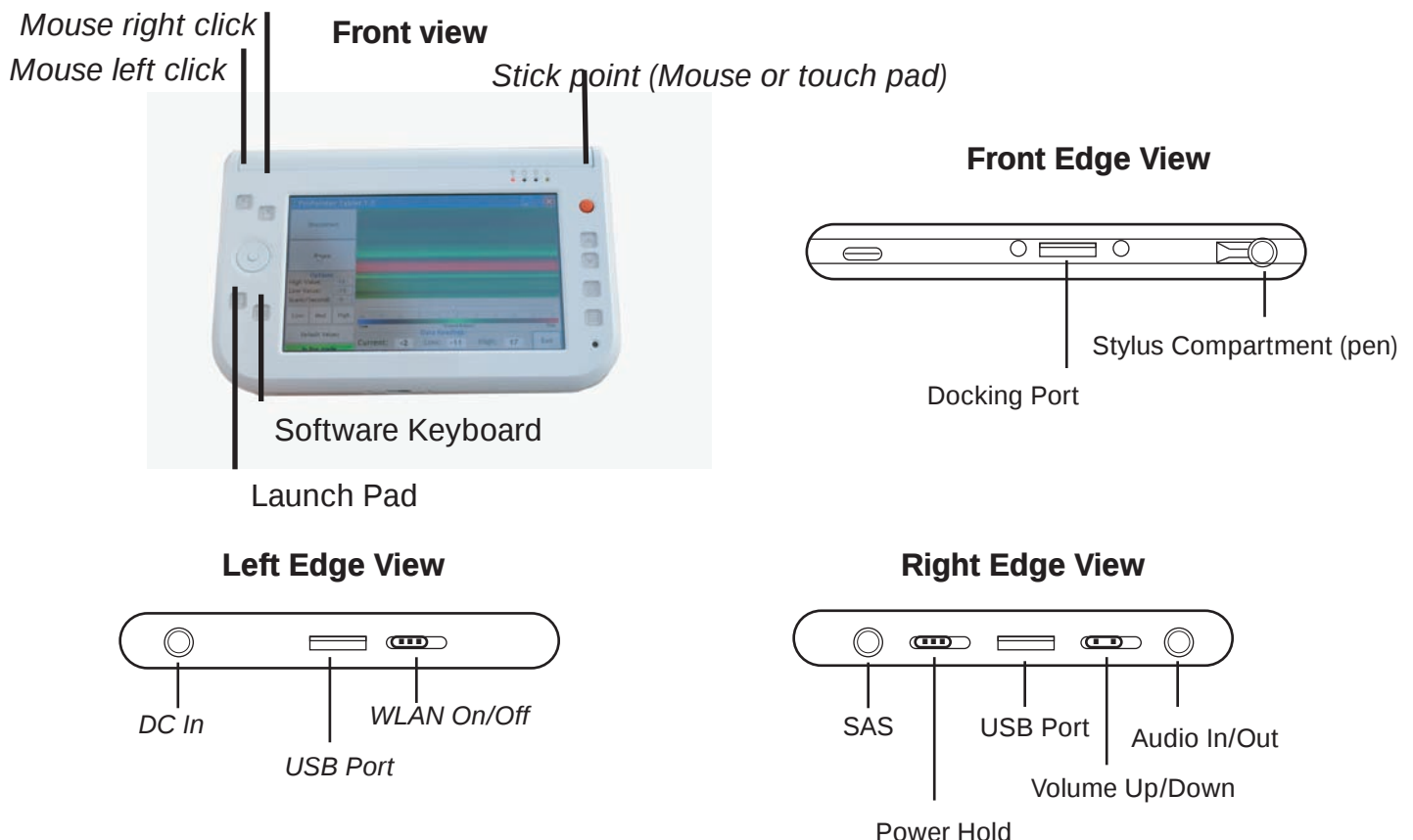
Training is available with the purchase of a unit, and one hour of technical assistance is offered after purchase.

Software

The software included with the **MULTI-SENSOR PRO** is installed and ready to go to work for you.

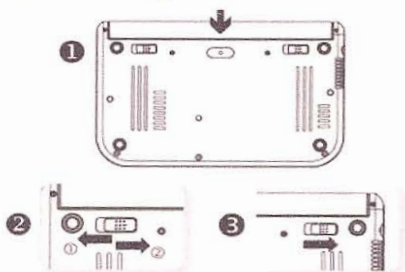
Quick Start Procedure

1. With the cable supplied plug the USB end into PC USB port (left edge view) then plug the other end of the cord into the control unit, and then plug the multi-sensor antenna into the control unit. Plug the battery connector into the control unit
2. Turn on UMPC or laptop computer (left edge view) and start software
3. Allow a few moments for the programs to communicate with each other
 - A. Click on recommended resolution of 800X480 (if not preset)
 - B. Using stick point button or stylus move over Multi-Sensor Pro shortcut and left click (front view)
4. When it's ready, click Connect then click Start, now you may begin scanning
5. Keep antenna parallel and as close to the ground as possible and scan in the same direction as where you started, without rotating the antenna for best results.



ago7 Quick Start

Installing the Battery Pack

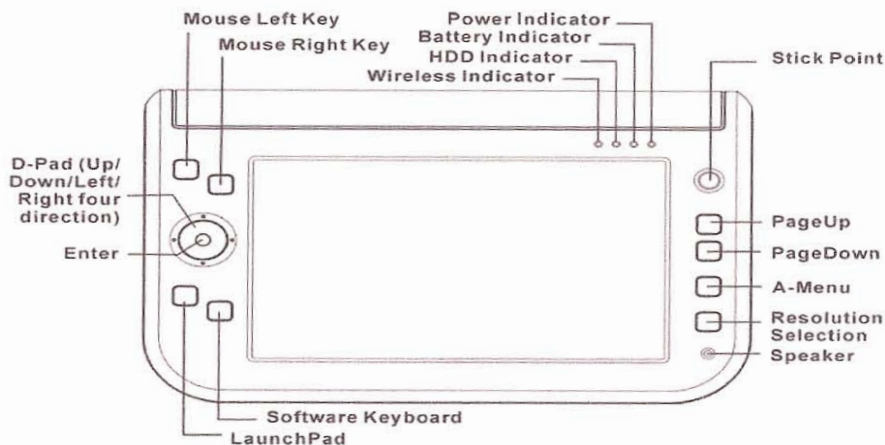


- ❖ Turn over the computer and place it on a solid, flat surface.
- ❖ Align the battery into the battery compartment and gently push until locked (clicks) into place ①.
- ❖ When the battery is properly installed, the latch shown in ② will self-lock.
- ❖ Slide the battery lock into the direction of the arrow ③ as shown in the illustration.
- ❖ **WARNING:** Do NOT press on screen when installing or removing battery pack.

After inserting the battery, **you must fully charge the battery before using computer.** It takes approximately 2 hours to charge the battery using the AC adapter. When using the battery for the first time after charging, fully discharge the battery, and then recharge.

With a fully charged battery, you can operate the computer for approximately 2 hours under typical conditions (with WiFi off).

Getting to Know Your Computer



Mouse Left/Mouse Right Key

D-Pad (Direction + Enter)

- [↑]/[↓] To scroll the image up or down.
- [←]/[→] To pan the image left or right.
- Enter Button

Launch Pad: Opens Launch Pad Menu

Software Keyboard: Opens onscreen keyboard

Power On Indicator

- Green LED indicates it is in On status
- Blinking indicates it is in Standby mode

Battery Charge Indicator

- Amber LED indicates charging
- Green LED indicates full charge; AC adapter plugged in
- LED off indicates the AC adapter is not plugged in

HDD (Hard Disk Drive) Indicator

Blinking amber LED indicates HDD activity

Wireless Indicator

Amber LED indicates your wireless is on.

Stick Point: This is an eraser mouse providing controls typical to a regular mouse or touchpad.

Page Up: Scrolls document up one full screen

Page Down: Scrolls document down one full screen

A-Menu: Press to enable the A-Menu display

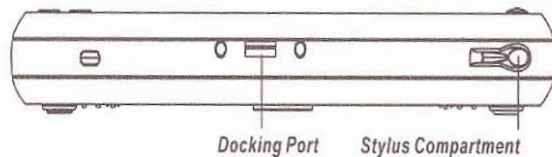
Icons from left to right:

- Brightness Adjust
- Screen Resolution Adjust
- Unused
- Volume Adjust
- Mute

Resolution Selection: To adjust the resolution of your screen (1024x600, 800x600, or 800x480)

Speaker: Sound output for the computer

Front Edge View



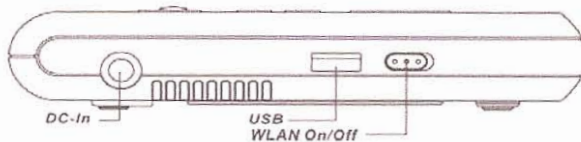
Docking Port

Use this port to connect to the system docking station.

Stylus Compartment

Use this to store the stylus (pen) in the computer.

Left Edge View

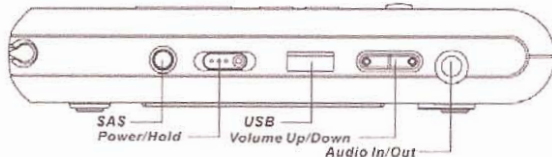


DC-In: Plug the AC adapter into this jack.

USB Port: Universal Serial Bus (USB) 2.0 port

WLAN On/Off: This is your wireless network on/off control. Turning it off will help extend your battery life.

Right Edge View



Secure Attention Sequence (SAS): Starts up Windows Task Manager. Equivalent to "CTRL-ALT-DEL"

Power/Hold Switch: Slide and hold the power switch for 1 to 2 seconds to turn on the computer (the POWER LED will be lit to indicate its present status). Slide and hold this switch for 1 to 2 seconds to resume normal status when the computer is in *suspend* mode. Slide and hold this switch for 6 to 10 seconds for emergency power off. Use **Start Menu** for normal Turn Off.

USB Port: Universal Serial Bus (USB) 2.0 port (download pictures from a digital camera, use a wired keyboard or printer)

Volume Up/Down: Push the top button to increase volume. Push the bottom button to decrease volume.

Audio In/Out: To input stereo sound from other devices, such as a radio, CD, or DVD or used as an output source by connecting a headset or desktop speaker.

Turning On the Computer for the First Time

Slide up and hold the power switch (right edge) for 1 to 2 seconds (the POWER Indicator will light up green in the upper right corner of the computer). Microsoft Windows will go through a series of first-time start up screens. To reach the NEXT button in the lower right hand corner of the screen, you may need to move the on-screen keyboard by using the Stick Point and Mouse Keys.

When Windows finishes its start-up process, you will need to calibrate the stylus before you will be able to use it. Double-Click on the Tablet and Pen Settings [icon](#) in the Notification Bar (lower right hand corner of the Windows XP screen-first icon to the left of the time). Under the "Settings" tab, click on "Calibration" and follow directions (you will need to use your stylus to complete the calibration).

Turning Off Your Computer

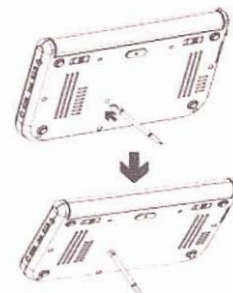
Click **Start menu** then choose **Turn Off**.

Using the Stand



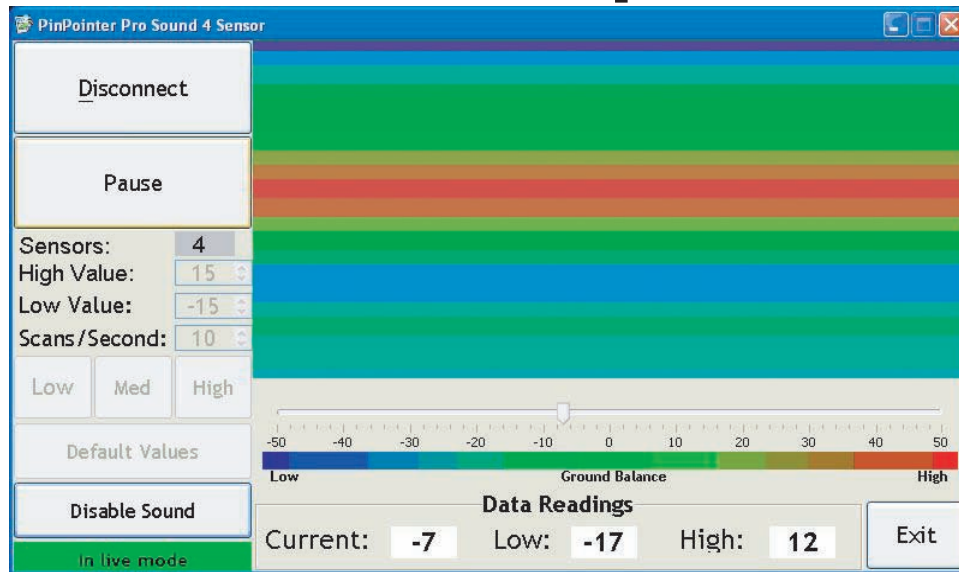
Your computer includes a stand which will serve as a support. ←

You can also use the stylus as your stand. →



For more detailed information on using your **ago7**, please refer to the User's Guide provided with your computer.

PC Set Up



Green - Background
Targets (common ground)

Blue - Weak Target
(void, cave or tunnel)

Red - Strong Targets
(metal chest, metal pipes)

Scans / Second

Scans per second is default set at 5, for normal walking speed of scan (how fast you travel). The highest setting of 10 would be for running or vehicle speed scanning.

High and Low Value

The high and low value is default set at 15 and -15 and can be changed for the strength of the target. The value settings are: Low = 10/-10, Med. = 25/-25 and High = 50/-50, the arrow boxes next to the value squares fine tune to precise numbers. Clicking on the default value returns the values to the default settings. For the weaker targets the high and low settings (under options) can be decreased to detect the weaker targets (example 10/-10 or 5/-5 for even weaker targets). The stronger targets dictate raising the values to separate the surrounding background from the target.

The high and low data readings capture the highest or lowest signals for that scan. While scanning a small difference in the numbers can mean a target is detected. When using in sound mode be sure to increase the high and low value to avoid excessive target ID response.

Current

The current reading is where the antenna is reading at the time. The current (current signal strength) reading can assist in relocating the highest / lowest reading point (like a tunnel). The highest and lowest numbers captured as data readings can be matched with the current reading to relocate or confirm target. The color bar is indicating the current reading also.

Monitor Indicators

The colors indicate: Green as ground or background targets. Blue indicates weak targets such as voids, tunnels, caves and possible non-ferrous metals. Yellow / Orange indicates medium targets or the edge of a strong target. Red is a strong target such as ferrous metals. If a weak target isn't indicated in red on the monitor then lowering the values will result in showing the target colors.

6 STATUS BAR

Indicates the connected or not connected status of the antenna.

Ground Balancing and Scan Method

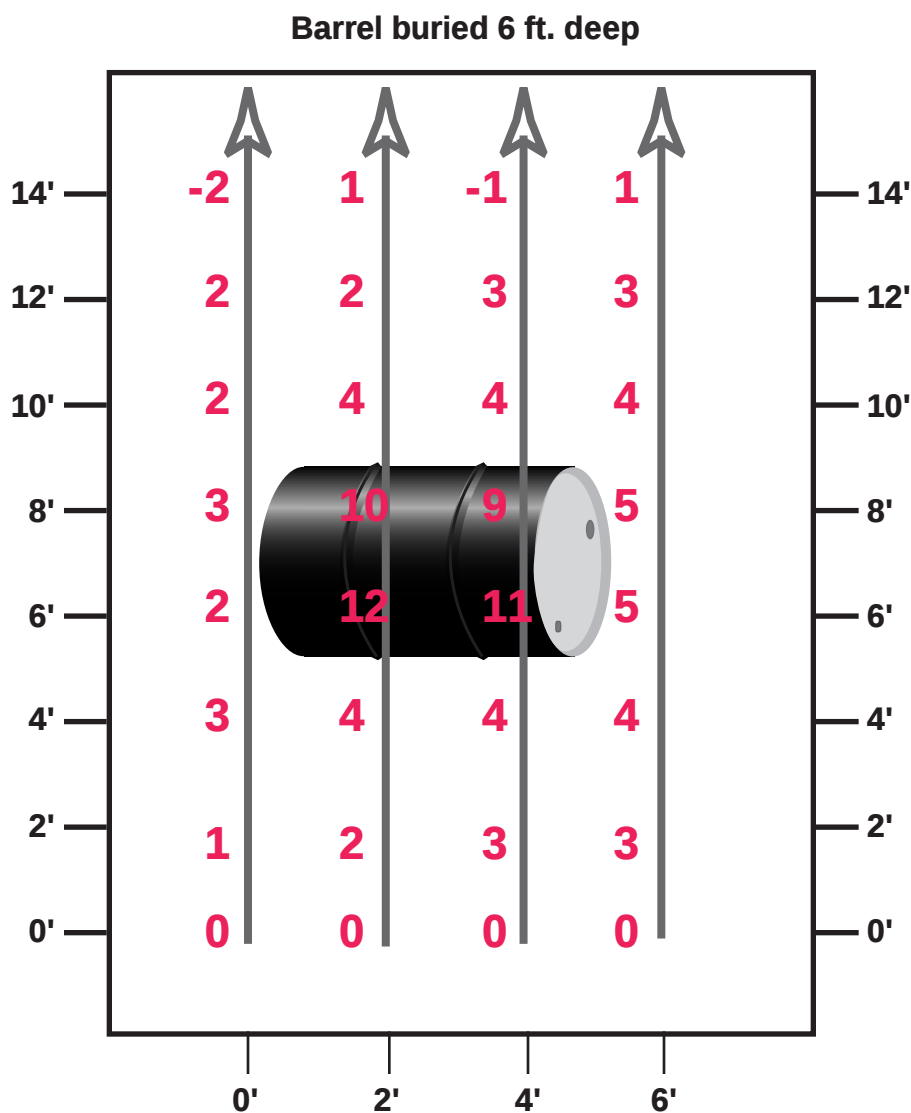
Ground Balancing

Pause and without turning the antenna (clockwise or counter clockwise) set PC at "0" over ground that is known not to have a target (referred to as ground balancing). You can repeat the Ground Balancing during scan to clear past high and low readings (but ground balancing starts over). Mark a starting point on the ground far enough from the suspected target to have sufficient background readings and proceed in a straight line toward desired point (past target area). It's recommended laying out a grid marked on the ground for an organized accurate scan (with a GPS it can be laid out on it). To continue a gridded scan return to the beginning point and move to the right of that point (about 2 ft. or less increments) and repeat the scan once again. Repeat this technique as many times as desired. If possible scan south to north for best result, but any direction works well, forward, backwards, left or right. Please don't turn antenna clockwise or counter clockwise, because it is sensitive to magnetic north. The data is captured in live mode is realtime, showing what you are scanning currently and is not in the memory of the PC. Antenna is always best to be pointed in the same direction, horizontal and as close to the ground as possible.



Scan Method and Samples

When detecting hollow objects or objects with disturbed ground you can read both negative and positive numbers as it can detect the metal or the void, also the direction (north, south) the antenna is facing can influence the numbers. The indicating numbers may not be large, it is the difference in numbers that is the indicator. The monitor will show red when detecting a metallic object and blue will be a void (or negative milligauss reading) when the values are set correctly. When a target is located mark the ground and approach the target area from different angles and try to repeat the scan results to confirm target location (this will assist in depth of target equation also). Gold silvewr and other non-ferrous metals shield the millegauss from the sensor, large caches of gold or silver would show as negative or blue reading

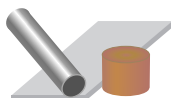
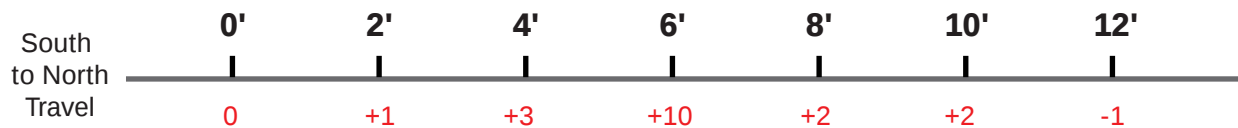


For depth estimation mark the ground over target (largest Number) then walk away from target until you get "0" reading. Then measure distance to target, that distance will be approximate depth. Repeat several times at different angles of approach to affirm depth estimation.

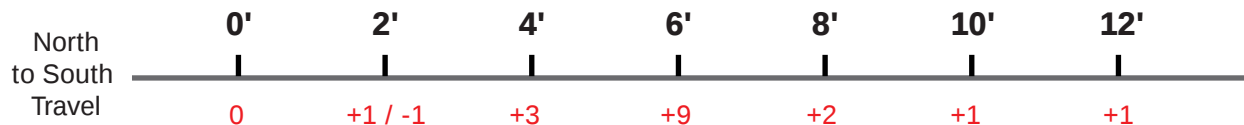
Scan Samples Using the Multi-Sensor Pro

Scans Performed in the Dry Desert Climate at Walking Speed*

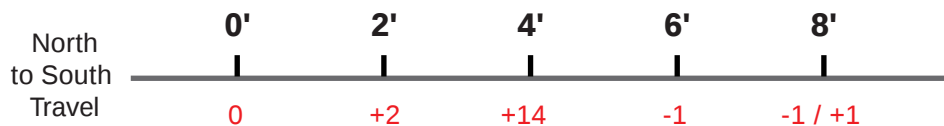
*wet climates will increase readings



Copper, Aluminum and Other Metals Buried 5 ft. Deep



Copper, Aluminum and Other Metals Buried 5 ft. Deep

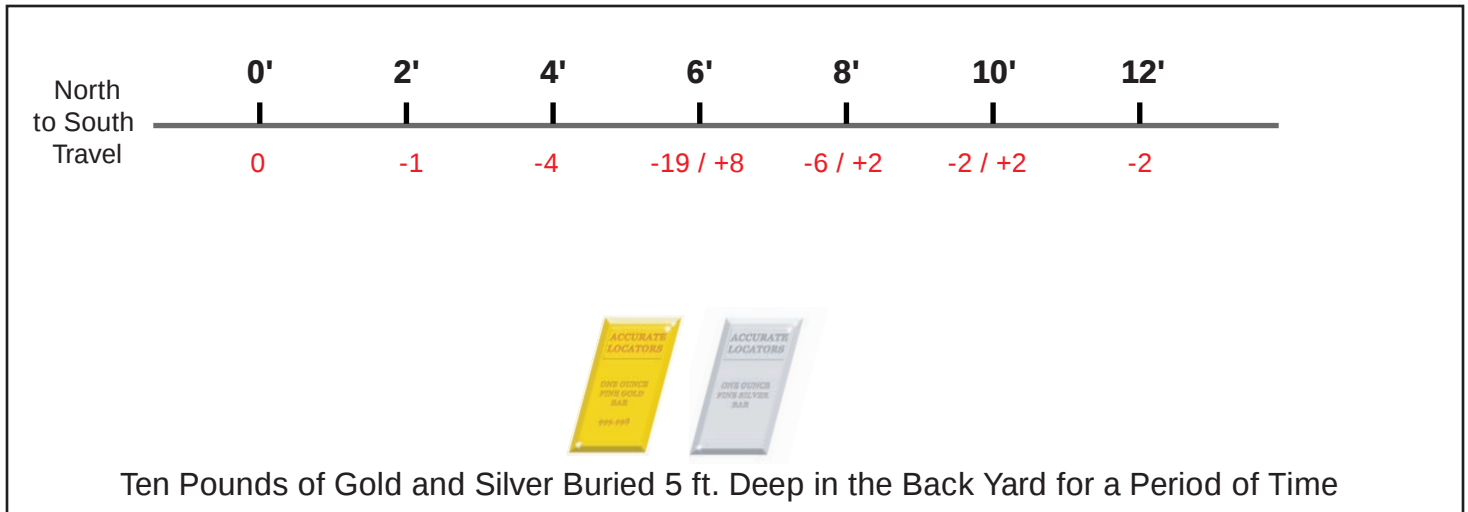


Hammer Head Buried below concrete floor

Scan Samples Using the Multi-Sensor Pro

Scans Performed in the Dry Desert Climate at Walking Speed*

*wet climates will increase readings



Optional Equipment for the Multi-Sensor Pro

*Daylight readable (can be read in the brightest sunlight)

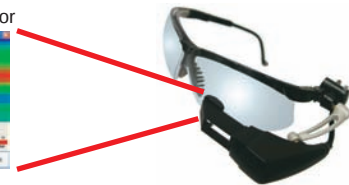
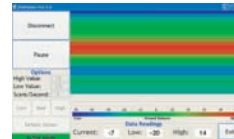
*Hands-free, heads-up viewing

*Low power consumption

*Ergonomic design

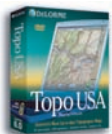
*Plug and play

Equivalent to a 17 in. monitor



Making practical portable, you can see where you are walking while viewing the results of your Imaging. The PC Video Glasses mount on eyeglasses or safety eyewear and provides a monocular color full VGA image. The viewer is a full video rate product capable of full motion video at 60 frames per second.

It features quick release mounting system so that it can be easily attached and detached from the user's eyewear. The PC Video Glasses are field-changeable to a left or right eye viewer. The focal distance can be adjusted from 2 feet to infinity. The PC Video Glasses provides convenient controls for adjusting the contrast, brightness, tint, and color of the image. The miniature controls and battery are integrated in a lightweight, sleek system that is easily clipped to a belt or carried in a pocket. Operating time on a single charge is approximately 5 hours.



In mining, GPS positioning data can be critical to mission planning, safety and legal claim.

Accurate Locators offers referrals to a number of GPS survey systems, optimized for mining surveys to acquire and stake out features with precision accuracy. GPS systems can also be used to lay out shaft connections from the surface to guide tunneling.

See the terrain in vivid detail using the 3-D map views and controls. These realistic views also retain the various elements you add to your customized maps – Trails, Map Notes, GPS Waypoints, and Draw Objects. Add Map Notes; draw your own claim and then measure the area of your claim (see the square footage or acreage of plots of land). Even draw in your own roads and route on them – these are amazingly powerful draw tools.

Troubleshooting

Troubleshooting

If your computer won't turn on check to make sure the battery is plugged in properly and has a sufficient charge.

If the computer stops reading or is sporadic check the plug-ins on the computer and the antenna for a secure positive connection.

If your readings are different than the previous reading your direction of scan may be different or you may have the antenna closer or further away from the ground. Or the Ground Balance location may be different (repeat scans have to be very precise in all details as this instrument is very precise). If you are attempting to read on a different day or even a different time of day the ground moisture content can effect scan readings. Another cause of different readings may be your shoes may have metal on them and you are to close to them.

Erroneous readings may be a result of the antenna being turned clockwise or counterclockwise.

Low battery can be a factor in erroneous readings although your computer will warn you with a low battery notice.

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Over the Hump in Pahrump

Web site: www accuratelocators.com

Limited Manufacturer's Warranty

Accurate Locators Inc. warrants product against defects in material or workmanship for a period of one (1) year from the date of purchase by the original purchaser. If **Accurate Locators Inc.** determines the product to be defective in materials or workmanship, **Accurate Locators Inc.** will replace or repair the product. To obtain warranty service worldwide, call 1-541-855-1590 or visit us at www accuratelocators.com. (Please include a written description of the problem). A Return Merchandise Authorization ("RMA") must be obtained prior to returning the equipment. **If equipment is returned without a "RMA", it will not be accepted.**

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Accurate Locators Inc.'s warranty is for repair or replacement of products that proves to be defective in workmanship or material subject to the warranty period and any other condition set forth on the package. Physically damaged merchandise or merchandise where control seals are removed or damaged is not covered under warranty. Customer is responsible for all shipping costs to and from **Accurate Locators Inc.**

Accurate Locators Inc. offers a limited one (1) year warranty on all products manufactured by **Accurate Locators Inc.** All other products manufactured other than by Accurate Locators will fall under those product's manufacturers warranties only.

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1383 2nd Ave
Gold Hill, OR 97525 USA**

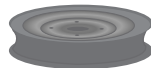
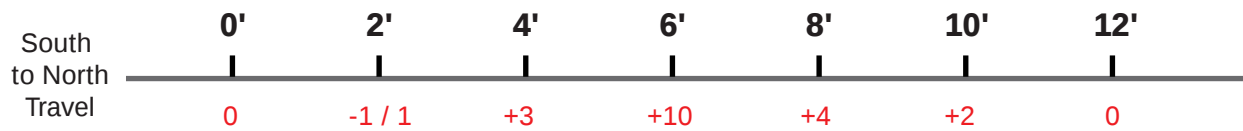
**Technical Support: tech@accuratelocators.com
1-541-326-4169**

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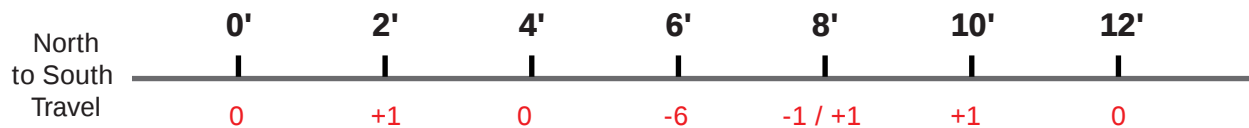
Scan Samples Using the Multi-Sensor Pro

Scans Performed in the Dry Desert Climate at Walking Speed*

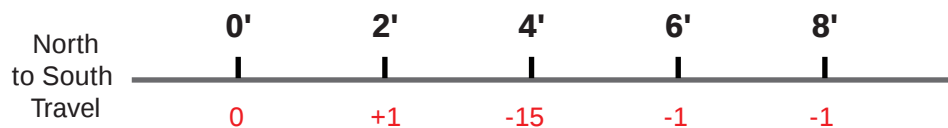
*wet climates will increase readings



Tire Rim Buried 6 ft. Deep



PVC Buried 2 ft. Deep



Note: can read +15 it depends on orientation of the object (pointing north or south)



Rebar 3 in. deep in concrete

[illegible]

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