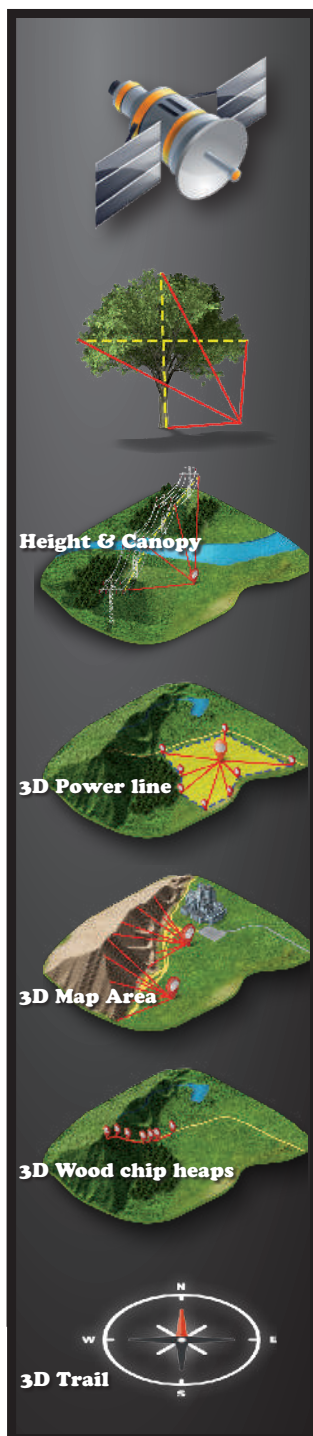




# The Vertex Laser Geo <sup>NEW!</sup>

**Foresters,  
surveyors,  
engineers,  
landscape  
architects,  
constructors...  
New instrument  
models with  
extreme  
functionality -  
programmable  
and including  
GPS and compass.  
Measure, map,  
process, store!**

- Complete, compatible and communicative instrument systems for various measurement applications in forest and field.
- Long range measurement with high quality precision laser.
- Measure, map, process and store in the instrument.
- Built-in GPS and 5-position numeric ID attribute to tag important data with coordinates.
- Built-in compass sensor allowing for accurate 3D measurements.
- USB 2.0/SSD Disk, connectivity to any PC/Apple computer.
- Excellent customization possibilities.
- Reinforced, shock- and drop proof, brightly colored instruments.
- Angle compensated/horizontal distance value and tilt sensor.
- Bluetooth®, IR and USB 2.0.
- Heads-up display and external graphic display.
- Non-magnifying red dot aim for easy spotting of tree tops.
- Adjustable laser filter: closest-farthest-strongest.
- Rechargeable built-in Li-Ion battery.
- Easy operation field adapted keypad and step-through menu.
- Perfect in the forest, for logging, wood and timber industry, utility applications...
- Measure in dense forests with built-in proven reliable ultrasonic distance meter and tilt sensor (Vertex Laser Geo).
- Reverse prism factors (BAF-factors) 5-50 (English) / 0.5-9 (Metric).
- Accessories include transponder T3, monopod for transponder T3 (Vertex Laser Geo). Monopod with foot bracket (Vertex Laser Geo/Laser Geo).



- Distance -
- Tree heights -
- Canopy -
- GPS coordinate -
- Azimuth -
- 3D Map Area -
- 3D Trail -
- 3D Terrain slope -
- 3D Wood chips/Stone heaps -
- Store 2000 datasets on SSD memory-
- USB and Bluetooth -
- KML and CSV files -
- Open and view in Google Earth -

Tree heights, canopy, position, map area, trail, terrain slope, wood chip piles... Work wireless, open in Google Earth. User specified applications are swiftly downloaded through standard USB from your PC to the Vertex Laser Geo. Versatility in your routines - added value for your investments!

*The VL Geo is an efficient instrument system in circular sample plot measuring and for reverse prism cruising. GPS and compass function incorporated in instrument with accuracy down to <1.5 degrees RSME (Root Square Mean Error) and heads-up display for real-time measurement update.*



All specifications are subject to change without prior notice.

# Vertex Laser Geo/ Rangefinder/Hypsometer/ Bluetooth/Compass/GPS/Usb 2.0/SSD disk

Hagl f Sweden introduces the new Vertex Laser models with outstanding capacities for your most accurate and efficient field measurement operation.

## Features

Long range measurement with high precision laser and integrated tilt- and compass sensors for accurate 3D measurements. Results are presented in an integrated heads-up display and external, graphic display.

## GPS and Mapping

The built in GPS-receiver and a 5-position numeric ID-attribute allow you to tag important data with coordinates with a simple key press. Your data is stored on a built in SSD drive and immediately available for further processing when connecting a standard USB 2.0 interface to any PC or Apple computer. No installation routines, converting software or special drivers are needed. Your field data can be opened straight in your favorite GIS- or spreadsheet application. Complex operations such as area measurement, 3D mapping of targets and Trail mapping have integrated functions that also are available to you without any external tools. The 3D Vector function allows you to measure horizontal targets such as canopy width.

## Forestry

Choose the Vertex Laser Geo instrument system with incorporated ultrasound technology if your work mainly takes place in the forest. Ultrasound is superior compared to alternative methods, as it can be used in dense forests and where underbrush is thick. The Vertex Laser system works with an ultrasonic transponder. Use in circular sample plots to quickly and accurately determine if a tree is in or out!

## Heights

3-point, 2-point or 1-point or direct measuring - choose preferred method to work with in the easy-to-follow menu system. A non-magnification dot sight helps you to identify individual targets such as tree tops and power lines.

## Upgrades and customizations

New functions can be implemented and alternative firmwares for user specified utilization standard applications can be offered to you. Contact us for details and offer!

## Communication and energy

The built-in Bluetooth V4 Low Energy transceiver enables long range wireless data transfer to your favorite handheld device. The instruments have built-in, long-lasting Li-Ion battery and charging is made with mini USB interface.

Art. no 15-103-1101 Vertex Laser Geo 360  package/set incl. VL Geo instrument, transponder T3, plot center staff, adapter, and charging cable.  
Art. no 15-103-1102 Vertex Laser Geo 60  package/set incl. VL Geo instrument, transponder T3, charging cable and adapter.  
Art. no 15-103-1103 Vertex Laser Geo measuring instrument. Aluminum transport case. Built-in Li-Ion battery in measuring instrument. Transponder uses AA battery.



The proven reliable ultrasound method is mainly used to measure short range distances in dense terrain, when working in sample plots and to measure tree heights in the forest with great precision. The potent laser sensor in the VL Geo instrument is preferred to measure without transponder and for longer distances in open terrain. The measuring instrument includes a built-in mounting point for camera-type monopod if a steady aim is required for longer distances.

### VERTEX LASER GEO



<b>Size:</b>	93x63x72mm/3.7x2.5x2.8"
<b>Weight:</b>	243 g/8.6oz.
<b>Battery and consumption:</b>	Rechargeable Li-Ion 3.7V, built-in, approx. 2000 measurements. Charging time max 3.5h. USB mini B interface wall charger 110/220AC/5VDC; car charger adapter 12VDC. Cable Usb mini B Male/Usb Type A Male, 0.5m. Consumption max 0.9W.
<b>Communication:</b>	IR, Bluetooth� class 2, Spp (serial profile), pin-code 1234, USB 2.0/SSD Disk.
<b>Temperature:</b>	-20� to +45� C/ -4�F-113�F.
<b>Height:</b>	0-999 m/ft. Resolution height: 0.1 m/ft.
<b>Angle:</b>	-90� - 90�. Unit: Degrees 360�, Grads 400� and %. Resolution: 0.1�. Accuracy: 0.1� typical.
<b>ULTRASOUND:</b>	Distance: 30 m/98 ft. With 360� adapter: 20 m/60 ft. Accuracy distance: 1% or better typical. Resolution distance: 0.01m/0.1ft.
<b>LASER:</b>	Distance: 46cm/1.5ft - 700m/2000ft depending on target. Accuracy: 4cm/0.1ft typical. Resolution: 0.1m/ft (0.01m/0.1ft in DME-mode).
<b>Areal</b>	0<area<5000m2 or 0.5ha<area<10000ha 0<area<20000f2 or 0.5acre<area<10000acre
<b>GPS</b>	33-channel high sensitivity receiver. Supports GPS, Glonass, Galileo, QZSS. Built-in real time correction w SBAS (EGNOS, WAAS, MSAS, GAGAN) Accuracy down to 2.5m/8.19ft in open terrain. Satellite position prediction for up to 3 days. Host Based multi-global navigation satellite system GPS(USA)/GLONASS(Russia)/Galileo(EU)/QZSS(JAPAN) SBAS Satellite-based augmentation systems: WAAS(US) EGNOS(EU) GAGAN (India) MSAS(Japan). Built-in self-generated orbit prediction (Faster TTFF up to 3 days), built-in jamming removing. Accuracy: Automatic position 2.5m CEP (circular error probable) (50% 24 hr static, -130dBm. Speed 0.1m/s (50%/30m/s).
<b>Compass</b>	Azimuth compass 0-360�, resolution 0,1�, accuracy <1.5 RSME�.
<b>Classification:</b>	MIL-STD-810E. Housing frame material glass filled poly carbonate, IP67, NEMA6, Laser class 1, 7mm (FDA, CFR21) Class 1m (IEC 60825-1:2001).
<b>Sight:</b>	Red dot aim 1 x magnification.
<b>Display:</b>	External Graphic LCD 100x60pixles. Internal Heads-up display.
<b>Dataformat:</b>	Nmea or Ascii. IR, Bluetooth�.
<b>File Format:</b>	CSV and KML Google Earth.
<b>Memory:</b>	2000 datasets, non-volatile.
<b>Other information, details, accessories etc.</b>	Monopod staff with foot bracket for steady aim. Transponder T3 for ultrasound measuring (1 ea AA 1.5V alkaline battery necessary for T3, power consumption 9mW). Adapter and monopod staff, 4-parts (33-140cm) weight approx. 270g/9.5oz. Aluminum transport/storing case. See user manual for more details.