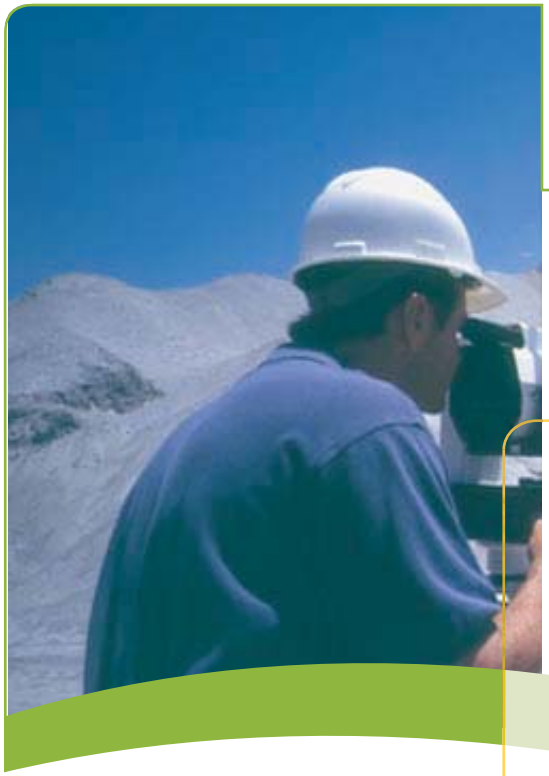
MPH
Measurement Systems for Professionals



Advantage™ Stockpile/Volume System

Fast, Accurate Stockpile Measurements

Save money and operate more efficiently with the Volume II Measurement solution

- **New:** Bluetooth Technology Now Available
- Simple to use, plain-language menu
- Safely measure Stockpiles from a safe position
- Super-rugged design guards against accidental damage
- Internal compass and inclinometer
- Lightweight, compact system in a portable, durable carrying case
- Measures to a vertical surface 2,000 feet/600 meters away and prisms up to 30,000 feet/9,100 meters
- Perfect for inaccessible and dangerous areas
- A few moments to get data for accurate Stockpile Measurements
- 3 Point Repositioning - reposition the Advantage laser at any time just by re-shooting the same 3 basepoints
- Volume II software for windows - computes volume from the base plus stockpile points.
- 8X Monocular Scope Available

Fast and Accurate Measurements

Conventional stockpile measurement methods do not calculate surface irregularities typical in pile slumping. The Volume II System can take a full surface reading , mapping every ton and capturing millions of Dollars in inventory valuations. With the Volume II, a single operator can now gather complete and accurate measurements of your tailing or stock piles in less time than traditional methods.

- In most cases, no climbing on the stockpile is needed to accurately measure total volume
- Misrepresentation of volume by traditional methods could be costing you millions of dollars.

Easy to use menu and clearly displayed readings on screen and in head-up display

- Single-person operation or use
- Displays raw measurement values in head-up display and on rear LCD screen
- Record values to an Recon and compute volume on your PC using the Volume II software
- Measures volumes removed or stockpiles

Easy to Use

The Volume II System allows the user to determine the volume of a Stockpile or excavated area, by surveying the base perimeter plus the surface of the stockpile or excavation itself. The perimeter points are used to form a TIN (Triangulated Irregular Network) which represents the base of the stockpile. The base points plus stockpile points are used to form a second TIN, which represents the surface of the stockpile. The volume between the two surfaces is then computed.

Internal Compass

- Measures bearing, angles or horizontal distances

Internal Inclinometer

- Gathers incline, vertical and elevation measurement data

High-precision Encoding Tripods

- Vertical, horizontal or dual encoder bypasses compass and/or inclinometer functions for accuracies of ±.1 degrees

External Data Integration

- Tripod and Data Collector brackets provide hands-free field data collection for handheld computers or other data collection devices

Collect Data in 3D Using Laser Atlanta's Proven Pocket Zone, Laser, and Recon Combination.

LASER ATLANTA®

Measurement Systems for Professionals

Advantage™ Volume II Mapper Specifications

Dimensions:	w4.5 x h7.5 x l8.4 in. *(w11.5 x h19.0 x l21.5 cm)*
Weight:	4.8 pounds with battery *(2.2kg)*
Temperature:	Operating: -22°F to 140°F *(-30°c to 60°c)* Storage: -40°F to 176°F *(-40°c to 80°c)*
Humidity:	90% non-condensing
Environmental:	Water and dust resistant
Head-up display:	LED aiming sights and 1 line x 4 character readout
Rear panel display:	4 line x 20 character LCD
Keyboard:	Membrane keypad
Data:	RS-232 serial port PCMCIA slot for SRAM Type 2 card
Power source:	Rechargeable battery handles, Nickel Metal Hydride (Nimh)
Recharge time:	Standard: 8-10 hours Smart charging station: 2 hours for 2 batteries
Light source:	Semiconductor pulsed laser 904nm
Laser:	FDA Class 1 eye-safe (21 CFR 1040)
Divergence:	3 milliradians *(30cm/100m)*
Measurement type:	Time of flight, averaged across at least 72 pulses
Measurement time:	0.33 seconds minimum
Range:	2,000 ft *(600m)* passive 30,000 ft *(9,100m)* to prism
Accuracy:	+/- 0.50 feet (15.2 cm) 3 sigma +/- 0.25 feet (7.6 cm) 1 sigma
Resolution:	0.1 ft *(1cm)*

Compass

Type:	Triaxial magnetometer
Range:	0.0° to 359.9°
Accuracy:	± 1° RMS when level
Resolution:	0.1°
Repeatability:	± 0.3°

Inclinometer

Type:	Dual Axis Liquid
Range:	± 50° from level
Accuracy:	± 0.4°
Resolution:	0.1°
Repeatability:	± 0.3°

Advantage Volume II System Description

The Laser Atlanta **Advantage Volume II** laser system has GE Lexan ABS alloy housing constructed with space between outer case and inner components for shock resistance. Rubber bumpers guard against damage if dropped.

The head-up display LED has aiming sights and the user can select to view readings for range/ distance, inclination, bearing or rotate between all three values. The rear LCD screen also displays these continually updated measurement values and presents a plain-language system menu.

Inclinometer and compass functions are internal and can be augmented with an encoding tripod. Onboard PCMCIA slot for memory card captures shot data simultaneously with the RS232 port to which a data collection device can be attached. Unit is compatible with most GPS systems and RS232 devices. Power is supplied by a rechargeable nickel metal hydride battery handle. The unit includes a one-year warranty.

Encoding Tripod Specifications

Horizontal Encoder

Immune to magnetic influence

Type:	8,000 count optical
Range:	0.00° to 359.95°
Accuracy:	± 0.1°
Resolution:	0.01°
Repeatability:	± 0.05°

Vertical Encoder

Type:	8,000 count optical
Range:	limited to tripod movement
Accuracy:	± 0.08°
Resolution:	0.01°
Repeatability:	± 0.05°

Ordering

Advantage CI Base Package
p/n 3RC1
Includes Advantage CI Laser, One Battery Handle, 120VAC Charger, Advantage Manual

Volume II System
p/n 6V00
Includes Handheld PC, Horizontal Encoding Tripod, 3D Field Data Collection Software, Flat Plate Cradle Assembly, Data Collector Level Bracket, Handheld to Laser Cable, Windows Volume Software and Volume II Users Manual

Options

Bogen Tripod
Part Number: 5TB0

Dual encoding tripod
Part Number: 5TD0

Smart charging battery station
Part Number:5CS0
Includes 120VAC and 12VDC cigarette lighter power cords.

Battery handle
Part Number: 5HT0
Spare battery for extended use.

8x monocular scope
Part Number: 5MR0
Scope on tip-off mount.

Hardshell Case
Part Number: **5PS0**

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