



## SURVEYING AND CONSTRUCTION CATALOG 2008



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## FLT Geosystems & LSR A Historical Perspective

The origin of FLT Geosystems began over 50 years ago. The Florida Level & Transit Co. was established in May of 1956 by the late Kenneth (Cap) MacDonald. Cap was convinced that survey instruments were integral to Florida's construction industry and that there was also a great need for someone who could repair these instruments. Cap first operated the business out of his apartment in 1956 and soon moved the business to its present location on Progresso Drive in Ft. Lauderdale, Florida. Cap quickly found himself driving 50,000 miles a year picking up instruments for repair and selling supplies while Flo, his wife, handled the walk-in trade and simultaneously kept the books. Cap's son, Dick MacDonald, joined the rapidly growing business in 1963 and began the expansion to the four branches and 40+ employees we have today. In 1972, Engineered



circa 1956



with pipe lasers, rotating lasers, and machine control products. Terry McKay, Dick's son-inlaw, came on board in 1998 and today runs the day-to-day

operations as President. Terry's son, John McKay joined the firm in 2003, adding the fourth generation commit-

Investments, Inc., our in-house leasing company, was added to assist our customers with a variety of flexible leasing products. LSR, Inc. was created in 1974 to serve the construction trades

ted to serving our customers circa 1981 with the best products and



John McKay, Terry McKay, Dick MacDonald

Cap and Flo MacDonald services possible. FLT Geosystems became the trade name of the Florida Level and Transit Co. in 2000 to reflect the evolution of the business into the digital age of total stations, GPS, reference station networks, and software.

## Who We Are and

#### What We Do

Since FLT Geosystems opened the doors in 1956, the continuing goal has been to provide the best possible products and services-at the best possible prices-to land surveyors, mappers, engineers, and

contractors. FLT Geosystems is a dealer for Leica Geosystems (full-line), Topcon (construction instruments), Nikon, Carlson, TDS, MicroSurvey, Juniper Systems, Pacific Crest, CST Berger/David White and Northwest Instruments. We also represent a wide range of survey supply manufacturers as well. Our sister company, LSR, Inc. specializes in the sale and service of construction lasers, construction layout instruments, and machine control equipment. LSR is a dealer for Spectra Precision/Trimble (construction instruments),



Ft. Lauderdale

Leica Geosystems/Laser Alignment machine control, MOBA Mobile Automation machine control, and PLS (Pacific Laser Systems) lasers. Our home office is located in Ft. Lauderdale, with branch offices in Jacksonville, Tampa and Orlando. We serve clients throughout the Southeastern United States as well as Central and South America and the Caribbean. We repair all makes of surveying instruments and lasers in our modern factory-authorized repair centers.





Jacksonville 3539 West Beaver Street Jacksonville, FL 32254

Orlando 711 S. Kirkman Rd. Orlando, FL 32811



Tampa 5468 56th Commerce Park Blvd. Tampa, FL 33610

## It All Began With Service

Cap MacDonald began Florida Level & Transit Co. over 50 years ago as an instrument repair business with a post office box for an address. After some training from a reputable instrument house in Ohio, Cap performed maintenance work and minor adjustments here and sent instruments that needed major repair to the instrument house in Ohio. Occasionally he would call Ohio and receive instruction over the phone on how to do a particular repair. Today, our eight factory-trained technicians repair all makes of surveying instruments



circa 1974

and lasers in our modern factory-authorized repair centers located around the state. Excellence in the hands-on servicing of equipment and our commitment to technical support for our customers, have kept the vision of our founder, Cap MacDonald alive through the decades.

#### The Best Products The Best Service The Best Prices

Give us a try - you won't be disappointed









#### **Ordering Options**

#### Order by phone

Order by phone is a great way to confirm product availability, check current prices, and receive information on when orders should arrive. Please call between 8:00 AM and 5:00 PM ET, Monday through Friday.

**Ft. Lauderdale**... 954-763-5300

800-327-0775 toll free

Jacksonville...... 904-388-3093

800-824-8956 toll free

Tampa..... 813-623-3307

800-282-7003 toll free

877-855-1800 toll free

#### Order by Fax

Fax your order it to the nearest branch and we'll process it promptly.

 Ft. Lauderdale...
 954-462-4121

 Jacksonville.....
 904-388-5708

 Tampa......
 813-623-2100

 Orlando......
 407-292-6203

#### Order by Email

info@fltgeosystems.com

#### Order by mail

FLT Geosystems
P.O. Box 14878

Et Lauderdale, FL 33301

Ft. Lauderdale, FL 33302-4878

#### **Payment Options**

We offer four ways to pay for your order: credit card, open account, bank wire transfer, check/money order. We accept Visa, Mastercard, AMEX, and Discover. Be sure to have the card number, expiration date, and billing address associated with the credit card when you order. With approved credit, you can charge items to your own FLT or LSR account. To open an account, request a credit application from any branch. Normal terms are 2% 15, net 30 days.











#### International Orders

If you are placing an order to be delivered outside of the United States, we accept cash or bank wire transfers only. There is no Florida sales tax on items delivered to a freight forwarder for shipment outside the U.S. Items picked up in person are subject to Florida sales tax (6% in Ft. Lauderdale). We are happy to work with your freight forwarder or can recommend one serving your area. You are responsible for any taxes or duties imposed by the importing country.

#### **Customer Service/Returns**

If you have a concern with a product purchased from us please call us immediately. We will work hard to ensure your complete satisfaction. Items returned with an original receipt within 30 days will be cheerfully accepted provided the item is from ordinary stock and is in new, saleable condition. Special order items cannot be accepted for return.

#### **Shipping Information**

Shipping via UPS ground is free of charge to customers in our service area of Florida and Georgia on orders of \$100 or more. Exceptions: We charge normal UPS ground rates for repaired



instruments and UPS oversized items like traffic cones, T-stands, over-the-top targets, and elevator tripods. These items are denoted by the UPS oversize symbol. We are glad to work

with our international customers by delivering to a variety of freight forwarders or shipping direct via UPS or FedEx.



#### **Delivery Information**

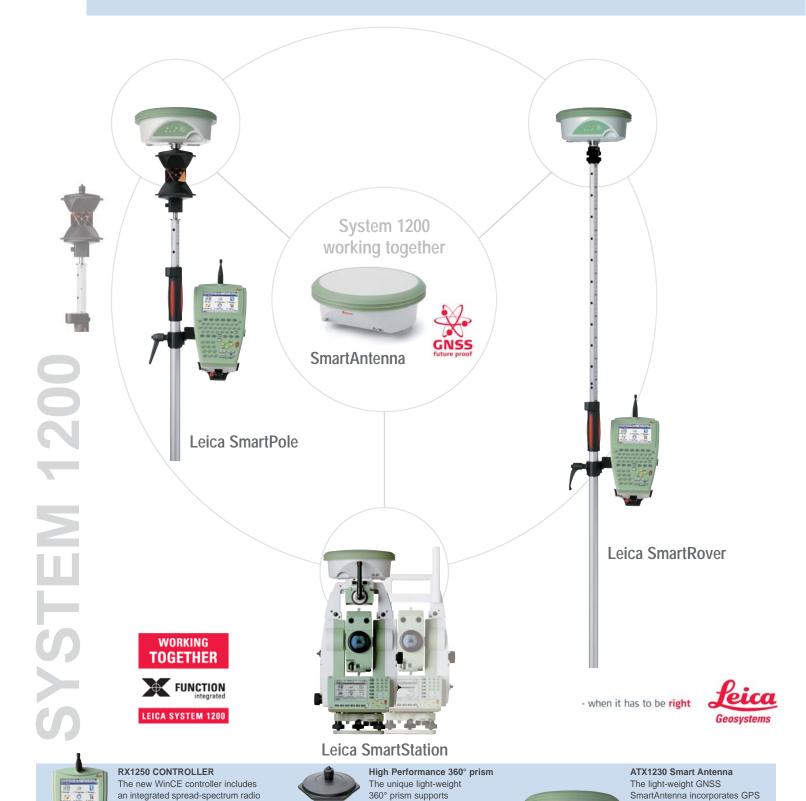
Special delivery for wood stakes, rebar, iron pipe, and concrete monuments: For orders of \$350 or more, these products are delivered free of charge to the following counties: Miami-Dade, Broward, Palm Beach, Martin, St. Lucie, Indian River, Collier, Lee, Charlotte, Hendry, and Glades

Tip: add supply items like paint, flagging, wire flags, nails and UPS oversized items to your order to reach the \$350 threshold for free delivery.



CALL TO ORDER 800-327-0775

## Leica System 1200 - GPS and TPS working together





an integrated spread-spectrum radio

RadioHandle, and a next generation

color screen for bright, high contrast

compatible with the TPS1200

visibility in all conditions.

high-accuracy measurements,

allows attachment of a Leica

SmartAntenna and easily

survives a topple-over.

SmartAntenna incorporates GPS and GLONASS technologies and

provides SmartTrack+ supreme

tracking performance. Complete flexibility for use with SmartPole,

SmartStation or SmartRover.

Leica GPS1200

Leica system 1200 receivers provide all the flexibility, power, and performance needed for every type of GNSS application.

#### **GPS1200 Features:**

- SmartTrack+ GNSS technology/SmartTrack GPS technology
- SmartCheck 30km RTK
- Exceptionally rugged and built to tough MIL specifications.
- User programmable
- GNSS Reference stations
- Track all available GNSS signals.



ultra-rugged



fully waterproof

0% FINANCING **AVAILABLE!** 







Call for the **BEST QUOTE** Today

#### SmartTrack GPS technology

GPS1200's SmartTrack measurement engine acquires all visible satellites within seconds, tracks to low elevations, and measures under trees and in areas of interference where other receivers often fail. Strong signals, highly effective multipath mitigation and advanced anti-jamming guarantee top GPS performance.

A further advantage is that GPS1200 receivers with SmartTrack technology are designed so that they can be upgraded to support GPS satellite signal developments. Your investment is secure.

#### SmartCheck 30 km RTK

RTK is faster, more accurate and more reliable than ever before. SmartCheck processes SmartTrack measurements for centimeter-accuracy, 20 Hz RTK at 30km or more. Initialize within seconds and survey under trees and where RTK never worked in the past. A unique, built-in integrity monitoring system checks all results immediately.





The world's lightest cable-free RTK GPS

Now the world's best-performing GPS system is also the world's lightest. Less weight reduces operator fatigue. Best of all, we've dropped weight without reducing performance. You still get the powerful SmartTrack measurement engine that out-performs every GPS system on the market. Count on heavyweight performance from this amazingly lightweight system.



Leica now supports GPS (including L2C), GLONASS, and the future GPS L5 and Galileo signals

- Weighs only 6.2 lbs. 25% lighter than the competition
- BLUETOOTH INTEGRATED/completely cablefree
- SmartTrack & SmartCheck for best GPS results
- All-on-the-pole convenience
- Fully compatible with Leica GPS1200 and SmartStation
- 1Hz to 20Hz operating speed
- RTK communication options:
  - -Pacific Crest Radios
  - -Intuicom Spread Spectrum Radios
  - -GSM/GPRS modems -CDMA modems







## **Continually Operating Reference Stations**

Today, many organizations in many parts of the world recognize the benefits of establishing GPS reference stations and networks to support surveying, GIS, construction, geodesy, navigation, and monitoring natural and man-made structures.

The Leica GRX1200 Series, part of Leica's new System 1200, is designed specifically for use as reference stations. With these new receivers, GNSS reference stations become more accurate, more powerful, more versatile and more reliable than ever before, yet they are easier to set up and

The Leica GRX1200 series incorporates an ultra-precise GNSS (Global Navigation Satellite System) measurement engine that supports both GPS and GLONASS-benefit from up to 100% more satellites than GPS alone.

The Leica GRX1200 Series delivers uncorrelated data of the highest quality under all conditions making them ideal for all reference station applications. The new SmartTrack+ receivers are designed to support future GNSS signals such as GPS L5 and Galileo. Your investment is secure.









**feica** reference stations currently operating in Florida

> Over 70 Leica CORS reference stations operating in Florida

Selected by state agencies, counties, cities, and private surveyors statewide

Many of these operate in the public domain and are accessible free of charge

RTCM, 2.x, RTCM 3.0 Leica proprietary, CMR and CMR+ formats are supported. Recording rates are selectable from 0.05 to 300 seconds



GRX1200 Pro with ethernet port for easy LAN/WAN connectivity







With Leica SmartPole, both TPS and GPS are available at all times to ensure every point can be measured. When GPS is restricted to overhead obstructions...use TPS; when no line-of-sight is available...use

#### **SmartPole Features:**

On-the-Fly survey and setup simultaneously...

No longer is it necessary to first measure control points and only then detail points. Avoid time consuming traverses to bring control to the survey area. Simply begin the survey and conduct the setup on-the-fly while completing the survey. Once the TPS control and detail points are known, all measured points are automatically updated.

#### Increased flexibility...

The same SmartAntenna can be used together with a TPS1200 as a SmartStation, together with a RX1250 controller as a SmartRover or together with a 360 prism and a RX1250 controller as a SmartPole.

## **RX1250 Remote Control**

With the RX1250 remote control unit you can control both the TPS1200 with the Radio-Handle and the GPS SmartAntenna via Bluetooth from the rover pole.

#### RX1250 Features:

- Optional for all TPS1200 total stations
- Collect data from GPS and TPS
- Reliable wireless communication via Radio-Handle and Bluetooth
- Perfect one-man survey system







## **Leica** SmartStation

World's first TPS and GPS perfectly combined. High performance total station with powerful GNSS/GPS receiver. No need for control points, traverses, or resections.

## SmartPole Features:

Position coordinates at the touch of a key...

Just press the GPS key and let the SmartAntenna do the rest. RTK determines position to centimeter accuracy within a few seconds at ranges up to 50 km from a reference station. Fix the position with GNSS/GPS and then survey with the total station.



You can use the SmartStation any way you like. Once the SmartStation is positioned, take off the SmartAntenna, put it on a pole, and use it with the RX1250 controller and GX1230 sensor as a fully-fledged RTK rover.

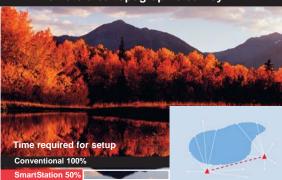




Leica SmartStation

Total station with integrated GPS

Remote area topographic survey



#### Situation

Survey company has a detail and topographic survey in a remote area. Vegetation makes kinematic RTK difficult and a total station has to be used. There are no control points but there is a reference station 40 km away transmitting RTK.

#### The advantages

- -Points occupied only once -Only SmartStation is needed
- -Only one crew is needed
- -Automatic transformations
- -Survey takes less time

#### SmartStation way

Set up SmartStation where it is convenient and determine the position with RTK. Orient to a second point that will be used but is not coordinated yet. Survey the detail from the first station. Set up at the second point and determine the position with RTK. As the bearing between the points is now known. SmartStation transforms the coordinates of all detail surveyed from the first point. Orient to the first point and survey the detail from the second point.



Leica now supports GPS (including L2C), GLONASS, and the future GPS L5 and Galileo signals

#### Rural area boundary survey



#### Situation

A farm boundary has to be surveyed with a total station. The nearest control points are 5 km away. RTK data can be received from a reference station.

#### The advantages

- -No long traverses needed
- -Less setups needed
- -Fewer people required
- -Takes less time -Uniform higher accuracy

#### SmartStation way

Set up SmartStation at a first point where one or more boundary markers can be seen. Fix the position with RTK. Orient to a second point, which is not yet fixed. Measure angles and distances to the markers. Set up at the second point, fix the position and orient to the first point. All previous measurements are transformed automatically in SmartStation. Survey the markers from the second point. Survey the boundary in this way using pairs or clusters of SmartStation points.

#### Construction site stakeout



#### Situation

A large number of markers have to be placed and many components positioned. Control points exist but often get damaged or are covered by equipment, material, vehicles etc. There is a GPS reference station but, due to obstructions and the type of construction, most points cannot be set out with RTK.

#### The advantages

- -Set up where convenient
- -No traversing needed
- -Fewer obstructions
- -Faster stakeout -Faster construction work

#### SmartStation way

Control points are not required. Simply set up SmartStation wherever it's convenient. Set up at a first point and fix the position with RTK. Set up at a second point, fix the position, use the first point for orientation, and stake out from the second point. Work in this way establishing pairs or groups of points from which to stake out. As RTK determines the positions, the groups do not have to be connected by total station measurements.



## Urban area utilities survey



Situation

The positions of all man-

holes, covers, hydrants, distribution boxes etc. for

water, gas and electricity

have to be determined. High buildings and trees along

the roads prevent the use of

RTK rover equipment. Many

ings or under trees. The city

objects are close to build-

operates GPS reference

#### SmartStation way

Set up SmartStation where RTK fixes are possible, such as at road intersections. open spaces and even on the tops of buildings. Use pairs of SmartStation setups as explained in the previous examples. Measure angles and distances to the objects that have to be surveyed.

#### WORKING TOGETHER



LEICA SYSTEM 1200

#### The advantages

stations.

-Control points not needed -No awkward traversing -RTK fixes the positions -Consistent high accuracy -Fast, flexible, convenient -Much easier, saves time

go to www.leicageosystems.com for more information

## Leica GPS900

The new Leica GPS900 uses Leica Geosystems' proven GPS technology. Consisting of a Leica RX900 Controller and a Leica ATX900 GPS Antenna the all-on-the-pole GPS900 RTK rover is ideal for one-person stakeout and topographic tasks.

With its flexible, easy-to-use onboard software, Leica GPS900 is the ideal solution for a wide range of jobs including foundation and drainage work, alignment stakeout, topographic and as-built surveys.



# One person, one case The GPS900 is ideal for oneperson stakeout and survey work. Everything that is needed for a days work can be easily transported and setup.

## **Big Ambitions on a Budget!**



#### TOPOGRAPHIC SURVEY

Record points with or without code and attribute information. Set criteria and measure points automatically. View the survey in the large, graphical map-view display. Use the Survey program for detail, topo, title surveys etc.



#### **CONTROL LINES**

Stakeout and measure relative to lines and arcs. Enter offsets and heights. Control/Reference lines can be defined using the map-view. Set checks for quality control. Ideal for buildings, drainage, foundations etc.

0% FINANCING AVAILABLE!

- EASY TO USE
- LIGHTWEIGHT
- GRAPHICAL, USER FRIENDLY SOFTWARE
- STAKEOUT POINTS AND DTMs
- COMPATIBLE WITH TPS400, 800, 1200 and GPS1200









## GIS & SINGLE FREQUENCY GPS

**Archer Field PC** 

The ultra-rugged Archer Field PC by Juniper Systems is your reliable field companion. It's rock solid and designed to be dropped, submerged in water and used in extreme field environments. The Archer was designed for Windows Mobile 5.0 and run a variety of third party data collection software such as Carlson SurvCE and Microsurvey Field Genius. Add GPS capability by purchasing the extended cap and ESRI ArcPad enabling you to run your favorite GIS software.

#### **Archer Features:**

- Expand functionality via user accessible, sealed CF and SD cards. Use extended cap for oversized CF cards and GPS capability.
- Connect points, map or navigate using GPS options. Communicate wirelessly via bluetooth, Wi-Fi, or cellular modems.
- 512 Mhz Intel XScale processor; 128Mb Flash RAM
- Waterproof, dustproof, shockproof (IP67) (MIL-STD-810F)
- Long Li-ION battery life and quickly charged showing battery status.
- Field ready. Lightweight, fits your hand, and large backlit keys.

Item	Description	MSRP
71083 JUN14802	Archer Field PC	\$1495
72266 JUN14803	Archer Field PC w/ Bluetooth	\$1605
73804 JUN15076	GPS receiver extended cap	\$350



#### **GS20 PROFESSIONAL DATA MAPPER**

The Leica GS20 combines the all-in-one simplicity of a recreational GPS handheld with the power of a professional grade mapping system.

With the GS20, powerful functionality doesn't mean difficult to use. The menu-driven interface and graphical map display make it easy to learn so field crews can start collecting data right away.

- ClearTrack Multipath Mitigation for the most accurate positions possible from a handheld-typically 40 cm in favorable conditions with optional Real-Time Coast Guard Beacon Module (WoRCS)
- Coordinate Quality Monitor-know the quality of your data while you collect it
- GIS DataPRO software combines the native shapefile format of ESRI's Map Objects
  Engine with simple internet reference download and the proven power of Leica's SKI
  PRO processing software
- Upgrades to Real-time Coast Guard Beacons Module (WoRCS) and external antenna for higher accuracy available.



#### LEICA SR20 GPS RECEIVER

The SR20 single frequency survey system performs highaccuracy static data collection for the land surveyor at a low cost.

The Leica SR20 is capable of centimeter accurate post-processed solutions, as well as sub-meter real-time Satellite Based Augmentation System (SBAS) solutions, such as WAAS and EGNOS. Built with an intuitive survey workflow that is both easy to learn and use, the SR20 offers the maximum in flexibility out of a GPS receiver. All of this coupled with the powerful Leica GPS technology makes this low-cost GPS receiver a great package.



Call for the BEST QUOTE Today



## Leica ScanStation 2

## A New Level of Versatility and Speed in Laser Scanners



#### ScanStation 2

With a 10-times boost in maximum instantaneous scan speed and the full freedom and accuracy of a total station, Leica Scanstation 2 lifts laser scanning to the next level. These speed and productivity boosts build on the already industry-leading versatility of the ScanStation class of laser scanner to make High-Definition Surveying (HDS) profitable for even more as-built and topographic survey projects.

For many as-built and topographic surveys, laser scanners have already proven to significantly reduce field labor compared to traditional methods. ScanStation 2's jump-step increase in pulsed scan speed further slashes these costs – field labor is now as little as one-fifth of that of traditional methods for many projects.

#### Features & Benefits:

- -Allows for safe, cost-effective surveys of busy intersections and other urban environments.
- -Cuts survey costs of topographic surveys and reduces site re-visits.
- -Small and large buildings can be cost-effectively surveyed, both inside and out. Digital photos can be overlaid for added realism.
- -The full dome field-of-view lets users capture overhead, vertical, horizontal, and sub-level geometry with equal ease.
- -Like a total station, users can setup over control, traverse, resection, and even stakeout with its built in dual axis (tilt) compensation.
- -ScanStation 2's detection range (300 m @ 90% reflectivity), high accuracy, small beam, and ultrafine scanning allow it to work in typical jobsite conditions.





## Leica TPS1200

TPS1200 together with GPS1200 integrates the unique Xfunction for identical data management.

#### **TPS1200 Features:**

- Fast, precise, long-range EDM up to 3 km to a single prism
- PinPoint reflectorless EDM up to 500m with an extremely small spot size
- Together with GPS1200, integrates the unique X-functions of uniform operating concept and identical data management
- Available in manual, auto target recognition, or full robotic configurations
- Time-saving measurement aids:
  - Angle and distance measurement (IR)
- PinPoint reflectorless EDM (RL)
- Automatic Target Recognition (ATR)
- Automatic Target Tracking (LOCK)
- PowerSearch (PS)



#### **Powerful Data Collection** THREE GREAT CHOICES

-Carlson SurvCE 2.0 running on an Allegro CX/RCS data collector. -Leica SmartWorx running on a Leica RX1250 data collector.

-Leica SurvCE running on a Leica RX1250 data collector.









#### Highest accuracy Longest range

TPS1200's precision angle measurement system operates continuously providing instant horizontal and vertical readings that are automatically corrected for any "out of level" by a twin-axis compensator.



#### Marks the point precisely Measures directly

PinPoint is the ideal tool for measuring to wall corners and inaccessible objects. PinPoint's tightly bundled laser marks the point exactly with a small red dot. Measurements are taken instantly and directly.



#### Automatic fine pointing Uniform measurements

With ATR, you only need to point roughly with the optical sight and trigger a measurement; TPS1200 does the rest fully automatically. The infrared beam transmitted from the telescope is reflected back by the prism and analyzed instantly.



#### Mass point surveys in record time

Lock mode is part of ATR and enables TPS1200 to track a moving reflector. After the initial ATR measurement, TPS1200 remains "locked" onto the reflector and follows it as it moves. Measurements can be taken at any time.



### Finds reflector automati-

PowerSeach finds reflectors within seconds no matter where they are. With PowerSearch activated, TPS1200 rotates and sends out a vertical laser fan. As soon as the fan strikes a prism TPS1200 stops rotating, ATR takes over and fine points-all fully automatically.



#### Operate at the prism For one-man surveys

With the remote control unit and radio modem you can control the TPS1200 from the prism. The control unit has the same display as the TPS1200 but with a touch screen and a full alphanumeric keyboard. TPS1200 transmits its current display continuously to the remote control unit.



## Leica TPS800 SERIES

#### **TPS800 Features:**

- Easy to learn and simple to use with a redesigned keyboard, display, and software
- PinPoint Reflectorless technology enables shots to any surface up to 500m away
- 2", 3", 5" accuracy available
- Multi-lingual function
- Built-in laser plummet makes setup quick and easy
- Leica optics provide exceptionally clear target visibility
- Trigger key mounted on side to avoid losing sight of the target
- Theft protection with PIN-code feature
- Electronic Guide Lights makes alignment easy
- Endless drives allows for faster operation with no awkward clamping





#### **Economical batteries**

Leica TPS800 instruments use commercially available camcorder batteries. Also available is the GKL112 quick charger that includes an AC adapter and a car charging cable.



### **Powerful Data Collection** TWO GREAT CHOICES

Increase your productivity in the field by choosing high performance Carlson or TDS mobile computers for all data collection applications.





## **CALL FOR**

## **Total Package Price** or only \$196.25 per month

Equipment	List Price
Leica 800 Series Total Station	\$8050.00
Carlson Explorer II w/ Surv CE	\$2295.00
Wood/fiberglass tripod	\$129.95
PACKAGE LIST PRICE	\$ <del>10,474.9</del> 5



#### Individual data exchange

Data exchange is easy and flexible that just about any format can be created. This allows data to be transferred to any soft-

#### **TPS400 Features:**

- Large, high resolution screen provides a clear display
- PinPoint Reflectorless technology enables shots to any surface up to 500m away
- 2", 3", 5" accuracy available
- Multi-lingual function
- Built-in laser plummet makes setup quick and easy
- Leica optics provide exceptionally clear target visibility
- Compatible with all major data collectors
- Dual axis compensation



CALL FOR **Total Package Price** or only \$142.15 per month

Equipment	List Price
Leica 400 Series Total Station	\$5695.00
Carlson Explorer II w/ Surv CE	\$1749.00
Wood/fiberglass tripod	\$129.95
PACKAGE LIST PRICE	\$7573.95



#### **Dual axis compensator**

15

A fully automatic dual axis compensator performs fine leveling and guarantees perfect horizontal alignment. For applications from mobile platforms the compensator may be deactivated.



#### Laser plummet

Easy to center over a set up point thanks to the laser plummet. The intensity of the laser point can be adjusted step-by-step to maintain visibility even in critical lighting conditions.





0% financing available

TPS400 series

#### **NIKON DTM-302 Series:** DTM-362/352/332

- IPX6 weatherproof rating that withstands wind-driven rain
- Long-lasting battery for up to 16 hours of measurements
- World renowned Nikon optics
- EDM type: Standard IR EDM
- Distance Accuracy: 3mm + 2 ppm
- Angle accuracy: 3"/5"/5"
- Compensator: Dual axis (DTM-332 single axis) Keyboard: Dual sided (DTM-332 single keyboard)







TOTAL STATIONS







#### **NIKON NPL-302 Pulse Laser Series:** NPL 362/352/332

- IPX6 weatherproof rating that withstands wind-driven rain
- Long-lasting top mount battery up extending up to 24 hours with continuous use
- Limi-Guide tracking light
- NPL Series allows you to switch between prism and prismless modes
- EDM type: Pulse laser (reflectorless)
- Distance Accuracy: 3mm + 2 ppm (prism)
- Angle accuracy: 3"/5"/5"
- Compensator: Dual axis (NPL-332 single axis)
- Distance range: 650 ft. reflectorless, 16,400 ft. prism
- Keyboard: Dual sided (DTM-332 single keyboard)

**Powerful Data Collection TWO GREAT CHOICES** 

Increase your productivity in the field by choosing high performance Carlson or TDS mobile computers for all

data collection applications.

AS LOW AS



Fax 954-462-4121

## **CALL FOR**

## **Total Package Price** or only \$118.63 per month

Equipment	List Price
Nikon DTM 302 Series Total Station	\$6495.00
TDS Recon NX w/ Survey Standard	\$1495.00
Wood/fiberglass tripod	\$129.95
PACKAGE LIST PRICE	\$811 <del>9.95</del>



## **Trimble**

#### LM80 Layout Manager

The Trimble LM80 pocket-sized, personal Layout Manager lets you carry, manage, work with, and lay out your jobsite blueprint, regardless of the method and instrumentation you use. The LM80 allows you to input blueprint dimensions to build a digital replica of the layout plan. Stakeout of unknown points is easily accomplished when attached to Trimble construction total stations. The LM80 desktop software is an easy-to-use support tool allowing you to create and modify points quickly from a digital DXFdrawing, then upload them to the LM80 enabling you to layout the drawing quickly and accurately.



Easily enter your blueprint dimensions into the LM80 to build a digital replica of your project and a portable reference for your layout tasks





The LM80 graphically guides you through your building layout, navigates you to your critical building alignments, and creates as-built records of all layout

#### Call for the BEST QUOTE Today

#### RUGGED DESIGN

Can survive multiple drops from 4 feet and submerged in water.

#### **ENTRY OF BLUEPRINT AND LAYOUT POINTS**

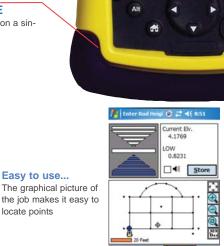
Store multiple jobs and eliminate reliance on paperwork. Quickly and easily check for blueprint errors.

#### **EASY INTERFACE**

The LM80 graphically guides you through the layout process and has a low learning curve.

#### LONG BATTERY LIFE

Can work an entire workday on a sinale charge.



Compute Down & Out

Select Ref. Line: Start Pt

Trimble

Down: 36' 7'

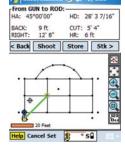
Help Close

Out: -57' 1"

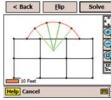
End Pt

#### Cut or fill...

An elevation is also recorded with each point and given as a simple cut or fill



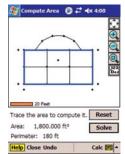
Seg. Number -5 Store Center Pt: 15



Layout arcs... Laying out arcs becomes easy when you enter the radius from the plans

Easy to use...

locate points



Calculate area... Simple area calculations help calculate building materials needed



LAYOUT OF CONTROL

Handle control points-on or offset to construction lines-faster, and more cost-effectively than using third party.



LAYOUT OF EXCAVATION

Lay out all lines from one reference location with no string lines, transits or theodolites. No need to set up over each control point making layout faster



LAYOUT OF CONCRETE FORMS AND ANCHOR BOLTS

Layout concrete forms or anchor bolts from any location. The software makes this process simple even for novice



AS-BUILT CHECKS

Check reference lines and dimensions faster, easier and more precisely. Direct reflex capabilities even allow one-person operation on as-built checks.



LIGHT TOPOGRAPHICAL **MEASUREMENTS** 

For applications such as cut/fill balance, ditch your tape grid and laser. You'll increase your speed and cut costs by measuring in 3D.





## SPS700 Robot

Patented MagDrive servo motors allow this robot to be one of the fastest, most accurate, and most responsive on the market making it less likely to loose lock on the prism

#### SPS700 features:

#### Increase productivity and eliminate mistakes...

With the LM80 at the rod, construction stakeout is faster and simpler which increases productivity and minimizes mistakes. High-quality prism lock on with fast tracking capability enables you to work quickly even at close range.

#### Advanced communication...

The SPS700 uses the latest in radio technology and communicates with the LM80 via 2.4 GHz spread spectrum radio which eliminates interference associated with traditional robotic systems.

#### Long battery life...

The Li-ION battery mounts in the side panel and give 6-hours of continuous instrument operation.





The Trimble LM80 Desktop office software allows you to generate a digital replica of your blueprint in the office for use in the Trimble LM80. The program allows you to place points anywhere on the linework of dxf and dwg AutoCAD drawings. Upload the plan into the LM80 via USB cable and the LM80 lets you carry your blueprints in your pocket, and does all your layout calculations for you in the field.



## TS415 total station

The Trimble LM80 and TS415 are conventional. two-man systems that lets contractors take control of their construction layout. When the LM80 is used in conjunction with the TS415, the time it takes to layout major points is significantly reduced.

#### **TS415 Applications:**

- -Layout of control points on or offset to construction lines
- -Checking or tying into property boundaries
- -Layout of excavation lines
- -Layout of concrete forms and anchor bolts
- -As-built checks
- -Layout of control lines on concrete pad
- -Light topographical measurements for cut/fill balance





## TOTAL STATIONS



#### **GTS-230W SERIES TOTAL STATION**

Topcon's GTS-230W Series is loaded with standard features including a long life 10 hour NiMH battery, a "Point Guide Feature" to allow fast alignment in staking tasks, and a laser plummet to help make setup fast and easy. Even wireless operation is standard with the GTS-230W Series. On board data collection, handy application programs, and increased distance range and EDM accuracy are all standard with this package. And the rugged, waterproof/dustproof design, (IP-66), will stand up to the harshest construction site environment.

#### **GTS-230W Series Features:**

- Bluetooth wireless technology
- Large, easy-to-read screen
- Dual display on 5" models
- 9000' and 6000' range for 5" and 9" models, respectively
- Long life 10 hr battery
- Laser Plummet
- Waterproof and dustproof (IP66) rating

PACKAGE INCLUDES:
Total Station
Tribrach
NiMH battery (BT-52QA)
Charger (BC-27)
Carrying case
Plumb bob
Rain cover
Instruction manual

## **Total Package Price** or only \$154.97 per month

Equipment	List Price
Topcon GTS 230 Series Total Station	\$5790.00
Carlson Explorer II w/ Surv CE	\$2295.00
Wood/fiberglass tripod	\$183.00
PACKAGE LIST PRICE	\$8,268.00

Item	Description	MSRP
11534 TOPGTS235W	Topcon GTS239W 5" Total Station	\$7090
32838 TOPGTS239W	Topcon GTS239W 9" Total Station	\$5790



#### **GPT-3000W SERIES REFLECTORLESS TOTAL STATION**

Wireless operation is standard on the GPT-3000W series reflectorless total stations. On board data collection, handy application programs, and increased distance range and EDM accuracy are all standard with this package. And the rugged, waterproof/dustproof design, (IP-66), will stand up to the harshest construction site environment.

#### **GPT-3000W Series Features:**

- Bluetooth wireless technology
- Reflectorless EDM
- Laser Pointer
- 9900' EDM range (prism) 820' (reflectorless)
- 4 hr battery life
- Laser Plummet
- Waterproof and dustproof (IP66) rating

PACKAGE INCLUDES:	
Total Station	
Tribrach	
NiMH battery	
Charger	
Carrying case	
Plumb bob	
Rain cover	
Instruction manual	



Item	Description	MSRP
56005 TOPGPT3005W	Topcon GPT3005 5" Total Station	\$8195
78546 TOPGPT3007W	Topcon GPT3007 7" Total Station	\$7090







## DIGITAL THEODOLITES



#### **DT-200 SERIES ELECTRONIC THEODOLITE**

Topcon's new DT-200 series integrates the latest technology in both electronics and optics. The DT-200 series allows more than 140 hours of continuous measurement in the angle mode and can stand up to any "wet-weather" condition (IP66) that can occur in the field. The DT-200 series is extremely compact in its size for easy portability and weighs under 10 lbs. The DT-200 series is so easy to operate that anyone at the site can use it without the need of any special training.

#### **DT-200 Series Features:**

- Long battery life 140h
- Easy to operate
- Waterproof and dustproof (IEC60529)
- Compact and lightweight
- Easy layout with laser theodolite

PACKAGE INCLUDES:
Digital Theodolite
Tribrach
Battery pack (4 AA batteries)
Carrying case
Plumb bob
Rain cover
Lens cleaning cloth
Instruction manual



Item	Description	MSRP
73635 TOPDT207	Topcon DT207 7" Digital Theodolite	\$3490
48496 TOPDT209	Topcon DT209 9" Digital Theodolite	\$2590







#### ETH203 ELECTRONIC THEODOLITE

The NETH203 from Northwest Instruments is a 10" theodolite equipped with an incremental encoder to measure horizontal and vertical angles accurately and precisely. A double-sided keyboard comes standard on the ETH203 allowing quick and easy readouts. The powerful 30x telescope produces crystal clear images and the optical plummet allows for fast and accurate set-up.

#### ETH203 Series Features:

- Dual keyboards
- Easy to operate
- 30x telescope
- Optical plummet
- Compact and lightweight

PACKAGE INCLUDES:
Digital Theodolite
Tribrach
Battery pack (5 AA batteries)
Carrying case
Plumb bob
Adjusting kit
Lens cleaning cloth
Instruction manual

Description Item 96503 NWTETH203 Northwest ETH203 10" Digital Theodolite \$1795 \$1395



## **AUTOMATIC LEVELS**



#### NA2/NAK2 ENGINEER'S LEVEL

Regarded as one of the finest auto levels ever designed, the NA2 universal automatic level meets all requirements regarding precision and reliability. It was designed by surveyors with years of experience who know how an instrument must perform. The NA2 can be used for all types of surveying jobs-even geodetic control at all levels of accuracy. The NAK2 has an internal glass circle for reading horizontal angles allowing for more detailed surveying work. Accuracy based on standard 1 km double run.

Item	Description	MSRP
32731 LCANA2	Leica NA2 32x magnification, 0.7mm accuracy	\$2195
21726 LCANAK2	Leica NAK2 32x magnification, 0.7mm accuracy	\$2315



#### **NA 700 SERIES LEVEL**

The Leica NA700 series auto level is the most robust and reliable level on the market. The world renowned Leica optics come standard on all NA700 auto levels which allow a sharper contrast and brighter image giving you high precision and increasing your productivity. And the extremely short minimum focusing distance enables you to work in the tightest corners. Accuracy based on standard 1 km double run.

Item	Description	FLT PRICE
93875 LCANA720	20x telescopic magnification, 2.5 mm accuracy	\$495.00
20355 LCANA724	24x telescopic magnification, 2.0 mm accuracy	\$695.00
15237 LCANA728	28x telescopic magnification, 1.5 mm accuracy	\$895.00
62936 LCANA730	30x telescopic magnification, 1.2 mm accuracy	\$995.00





#### **AL 200 SERIES**

The Spectra Precision optical AL200 series auto levels are easy-to-use tools designed to deliver a level of accuracy for a wide range of applications. Featuring metal housing and easy-to read displays, the AL100 and AL200 series levels provide a combination of durability and economical price. Packages include: auto level, grade rod (inches), aluminum tripod.

Item	Description	MSRP	FLT PRICE
97468 TRMAL220	20x magnification, 2.5 mm accuracy	\$350	\$329.00
36979 TRMAL220-2	20x level package	\$430	\$395.00
85085 TRMAL224	24x magnification, 2.0 mm accuracy	\$440	\$395.00
24328 TRMAL224-2	24x level package	\$520	\$459.00
14636 TRMAL228	28x magnification, 1.5 mm accuracy	\$500	\$449.00
88640 TRMAL232	32x magnification, 1.2 mm accuracy	\$560	\$495.00







#### **NCL SERIES**

Northwest NCL series auto levels are easy-to-use and accurate. This instrument is ideal for leveling and grading applications including foundations and footers, concrete slabs, driveways, pools, and pipe laying. Angles can also be turned with 10 minute accuracy. A hard-shelled carrying case is included. Packages include auto level, aluminum tripod, 9' grade rod, carrying case, and instruc-

Item	Description	MSRP	FLT PRICE
89899 NWTNCL22X	22x auto level, 2.5mm accuracy	\$239	\$179.00
10107 NWTNCL26X	26x auto level, 1.5mm accuracy	\$299	\$219.00
57381 NWTNCL32X	32x auto level, 1.2mm accuracy	\$395	\$269.00
44324 NWTNCLP26	26x auto level package	\$375	\$309.00





## **CONSTRUCTION INSTRUMENTS**

#### **David White**

#### LT8-300 LINE TRANSFER UNIT

The LT8-300LTU with 360 degree telescope rotation allows you to see directly below the instrument for pipe laying applications.

#### SPECIFICATIONS:

26X telescope; Horizontal circle graduated in single degrees Glass reticle stadia (ratio of 1:100)

Level-transit, plumb bob, carrying case and owner's manual

Range: 400 feet (61m); Accuracy: ± 3/16" @ 150 feet (5mm @ 46m)

Item	Description	MSRP	FLT PRICE
81445 DW LT8-300 LTU	David White line transfer unit	\$1133	\$949.95

#### LT8-300 LEVEL-TRANSIT

A dependable 5 minute instrument for precise horizontal and vertical layout applications. The LT8-300 OP has all the features of the LT8-300 plus an optical plummet. SPECIFICATIONS:

- -26X telescope; Horizontal circle graduated in single degrees
- -Glass reticle stadia (ratio of 1:100)
- -Level-transit, plumb bob, carrying case and owner's manual
- -Range: 400 feet (61m); Accuracy: ± 3/16" @ 150 feet (5mm @ 46m)

Item	Description	MSRP	FLT PRICE
96021 DW LT8-300	Level transit w/out optical plummet	\$891	\$769.95
40617 DW LT8-300 OP	Level transit with optical plummet	\$1050	\$899.95

#### DAVID WHITE TRIPOD ADAPTER

This aluminum tripod adapter adapts older style 3 1/2" x 8 thread instruments to a modern 5/8" x 11 tripod.

Item	Description	MSRP	FLT PRICE
64939 NWT010	David White tripod adapter	\$38	\$32.95





LT8-300 OP



#### **NSL100B BUILDERS LEVEL PACKAGE**

This easy to use level is ideal for leveling foundations, patios, and grading applications such as streets, curbs, and landscape drainage. A hard-shelled carrying case is included. Package includes 20x level, aluminum tripod, 9' grade rod, carrying case, and instructions.

Item	Description	MSRP	FLT PRICE
98991 NWT100	Northwest NSL100B level	\$215	\$179.00
51232 NWTP100	Northwest builders level package	\$320	\$249.00

_	NSL100B Level	
	Magnification	20x
	Minimum focus	5 ft
	Stadia ratio	1:100
	Horizontal circle	360 degrees
	Accuracy	1/4" @ 100 ft

#### **NSL500B BUILDERS TRANSIT LEVEL PACKAGE**

This accurate and easy-to-use transit level is ideal for leveling, turning angles and plumbing applications. Ideal for squaring up foundations, layout work, leveling foundations, running fence and pipe lines, and plumbing walls and columns. A hard-shelled carrying case is included. Package includes 20x Level-Transit, aluminum tripod, 9' grade rod, carrying case, and instructions.

Item	Description	MSRP	FLT PRICE
12794 NWT500	Northwest NSL500B transit level	\$319	\$249.00
26557 NWTP500	Northwest NSL500B package	\$439	\$299.00

#### NSL500B Transit Magnification 1:100 Stadia ratio Horizontal circle 360 degrees 1/4" @ 100 ft Accuracy Transit +/- 45 dea



NWTP500

#### **NCL AUTO LEVEL PACKAGE**

Northwest NCL series auto levels are easy-to-use and accurate. This instrument is ideal for leveling and grading applications including foundations and footers, concrete slabs, driveways, pools, and pipe laying. Angles can also be turned with 10 minute accuracy. A hardshelled carrying case is included. Packages include auto level, aluminum tripod, 9' grade rod, carrying case, and instructions. Accuracy is based on a 150' shot.

Item	Description	MSRP	FLT PRICE
89899 NWTNCL22X	Northwest 22x auto level, 2.5mm accuracy	\$239	\$179.00
10107 NWTNCL26X	Northwest 26x auto level, 1.5mm accuracy	\$299	\$219.00
57381 NWTNCL32X	Northwest 32x auto level, 1.2mm accuracy	\$395	\$269.00
44324 NWTNCLP26	Northwest 26x auto level package	\$375	\$309.00

#### NRL800 SELF-LEVELING LASER PACKAGE

The NRL800 Rotary Laser is self-leveling in both the horizontal and vertical axis and is a one-person leveling system designed for indoor and outdoor projects. It generates a bright beam horizontally and vertically. If tilted or jarred, the rotation and laser beam stops automatically until the height of the laser is verified. The NRL800 has a working range of 800 ft with a detector (included) with an accuracy of 1/8" @100 ft. A slope of +/- 5 degrees can also be set in the X or Y axis using the slope button. The NRL800 laser package includes the laser, detector, tripod, 9' laser rod (10ths or inches), carrying case, instructions and 1 yr warranty.

Item Description		MSRP	FLT PRICE
36145 NWTNRL800	Northwest NRL800 laser	\$699	\$599.00
92910 NWTNRL800P	Northwest NRL800 package	\$1018	\$769.00



**\$179**\_00

9

NWTNRL800P



## DIGITAL LEVELS



- when it has to be right

#### **DNA DIGITAL LEVELS**

Cut your time in half and eliminate costly errors using Leica's second generation digital levels! These digital levels have a large LC-Display, cutting edge electronic technology, and excellent optical and mechanical systems. The large

LC-display presents measured data and shows the next step to take. The instrument allows you to save your work automatically in the internal memory and additionally, after the measurements have been taken, on a PCMCIA card. Leica Survey Office and LevelPak-Pro software are included and controls data exchange, code lists, line calculation, adjustment, and the creation of reports. Accuracy based on double km level run.

Item	Description	MSRP
27951 LCA723289	DNA03 1.0mm accuracy	\$5490
42135 LCA726540	DNA10 1.5mm accuracy	\$3990
21013 LCA522793	GKNL4F 13.3' digital barcode level rod	\$315









- when it has to be right

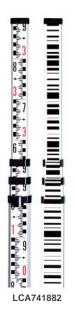
#### SPRINTER ELECTRONIC LEVEL

Measurements have never been so easy to perform with the new Leica Sprinter Electronic Level. The Sprinter is a reliable and accurate electronic level that provides error free measurements. The Leica Sprinter bar code automatically determines height (2mm accuracy) and distance (260' range) from the barcode rod. Simply aim and focus, measure with one key press and the data is displayed almost instantly. All measurements can be viewed and deleted onboard. The data can also be transferred to a personal computer simplifying the field to finish process. Package includes barcode rod, rechargeable NiCAD batteries, charger, and cable for downloading measurements. Accuracy based on double km level run.

Item	Description	MSRP
20823 LCA742857	Sprinter 100M 2mm accuracy	\$1295
25821 LCA741883	16' dual face; barcode rod & 10ths/100ths	\$80
37728 LCA741882	16' dual face; barcode rod & metric	\$80











## DATA COLLECTORS

## **<b>©** Carlson.

#### **CARLSON EXPLORER**

#### Features Include:

- Two models the economical Explorer and the more powerful Explorer II
- Powerful performance Explorer (400 Mhz Xscale processor), 128 Mb memory; Explorer II (400 Mhz Xscale processor), 256 Mb memory
- Windows CE.NET 4.2 professional operating system
- New and improved non-glare keyboard with handstrap and stylus (Explorer II)
- Improved weather resistance (IP65) to withstand wind-driven rain (Explorer II)
- 2 yr warranty

#### **EXPLORER**

Item	Description	FLT PRICE
38543 CSW6000.601	Explorer 400 Mhz, 128 Mb w/ SurvCE Total Station	\$1749
19272 CSW6000.602	Explorer 400 Mhz, 128 Mb w/ SurvCE Total Station w/ Adv Roading	\$2295
79758 CSW6000.603	Explorer 400 Mhz, 128 Mb w/ SurvCE Total Station w/ Robotics	\$2295
76865 CSW6000.605	Explorer 400 Mhz, 128 Mb w/ SurvCE GPS	\$2795

#### **EXPLORER II**

Item	Description	FLT PRICE
17703 CSW6000.610	Explorer 400 Mhz, 256 Mb w/ SurvCE Total Station	\$2295
56326 CSW6000.611	Explorer 400 Mhz, 256 Mb w/ SurvCE Total Station w/ Adv Roading	\$2795
90182 CSW6000.612	Explorer 400 Mhz, 256 Mb w/ SurvCE Total Station w/ Robotics	\$2795
15850 CSW6000.614	Explorer 400 Mhz, 256 Mb w/ SurvCE GPS	\$3295

#### **CARLSON EXPLORER 600+**

#### Features Include:

- High speed 624 Mhz Xscale processor
- More memory 512 Mb flash memory
- Windows CE.NET 5.0 professional operating system
- Improved weather resistance (IP65) to withstand wind-driven rain
- Bright Display QVGA-TFT color, sunlight readable touch screen
- 2 yr warranty

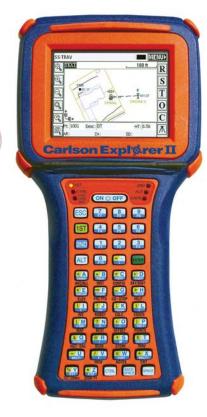
#### **EXPLORER 600+**

Item	Item Description		FLT PRICE
16573 CSW6000.	803 Explorer 600+ Mhz, 5	512 Mb w/ SurvCE Total Station	\$2975
86242 CSW6000.	,		\$3995

#### **CARLSON ACCESSORIES**

Item	Description	MSRP	FLT PRICE
58615 TDS148WLDCAB	Connects Leica instruments to Carlson data collectors	\$80	\$70.00
55792 TDS148LTZCAB	Connects Topcon/Sokkia instruments to Carlson data collectors	\$80	\$70.00
24233 TDSRGR-CNULLCAT	Connects Carlson data collectors to PC (9-pin)	\$20	\$15.00
46899 CSW6100.001	Carlson 1650mAh battery pack	\$85	\$75.00
42622 CSW6100.433	Carlson 2500mAh battery pack	\$110	\$105.00
23219 SEC5196-07	Seco aluminum tripod bracket for Carlson Explorer	\$50	\$44.95
45259 CSW6100.014	Carlson AC wall charger	\$40	\$35.00
44748 CSW6100.010	Carlson screen protectors	\$20	\$17.00
66849 CSW6100.013	Carlson stylus (pack of 3)	\$10	\$8.00











## DATA COLLECTORS



#### **TDS RECON**

#### Features Include:

- Two models the economical Recon NX-Series (no CF slots) and the more powerful Recon X-Series
- Bluetooth and 802.11g wireless available
- More flash memory 128Mb (Recon 400NX) and 256Mb (Recon 400X)
- Powerful performance 400 Mhz Xscale processor
- Meets military specifications (MIL-STD-810F) for drops, vibration, and weather resistance (IP67)

#### **RECON NX-Series**

Item	Description	FLT PRICE
30357 TDSRE3-SY4CMN-SS	Recon 400NX 400 Mhz, Survey Standard	\$1495
59475 TDSRE3-SY4CMN-SP	Recon 400NX 400 Mhz, Survey Pro	\$1895

#### **RECON X-Series**

Item		Description	FLT PRICE
34011 TDSRE3-SY4CMB-SS	Recon 400X	400 Mhz, Survey Standard	\$1695
78255 TDSRE3-SY4CMB-SP	Recon 400X	400 Mhz, Survey Pro	\$2095

# AS LOW AS \$1495.00

#### **TDS RANGER**

#### Features Include:

- Two models the economical Ranger NX-Series and the more powerful Ranger X-Series
- Bluetooth and 802.11g wireless included (Ranger X-Series only)
- Meets military specifications (MIL-STD-810F) for drops, vibration, and weather resistance (IP67)
- Windows operating system with large screen and keyboard
- Flash memory 128Mb (Ranger NX); 256Mb (Ranger 300X); 256 Mb (Ranger 500X). Expandable CompactFlash (CF) slots for additional memory (Ranger X-Series only)
- Data is kept safe with sealed CompactFlash (CF) slots designed to keep out water and dirt (Ranger X)

#### **RANGER NX-Series**

Item	Description	MSRP	
64838 TDSST2-SY3BMXA-SS	Ranger NX 312 Mhz, Survey Standard	\$2249	
25844 TDSST2-SY3BMXA-SP	Ranger NX 312 Mhz, Survey Pro	\$2399	

#### **RANGER X-Series**

Item	Description	MSRP
71279 TDSST2-SY3CMBB-SS	Ranger 300X 312 Mhz, Survey Standard (Bluetooth)	\$2899
84493 TDSST2-SY3CMBB-SP	Ranger 300X 312 Mhz, Survey Pro (Bluetooth)	\$3299
32229 TDSST2-SY5GMBB-SP	Ranger 500X 512 Mhz, Survey Pro (Bluetooth)	\$3799
46375 TDSST2-SY5GMBB-SM	Ranger 500X 512 Mhz, Survey Pro, GPS & Robotics (Bluetooth)	\$5099

#### **RECON and RANGER ACCESSORIES**

Item	Description	FLT PRICE
58615 TDS148WLDCAB	Connects Leica instruments to TDS data collectors	\$70.00
55792 TDS148LTZCAB	Connects Topcon/Sokkia instruments to TDS data collectors	\$70.00
24233 TDSRGR-CNULLCAT	Connects TDS data collectors to PC (9-pin)	\$15.00
68392 TDSREC-APOWERBOOT	NiMH Recon power boot module	\$95.00
76912 TDSREC-ABRACKET	Recon tripod bracket	\$50.00
43853 TDSREC-AN1POWERSUP	Recon AC power supply and charger	\$20.00
93972 TDSREC-AAVCHRG12VCBL	Recon vehicle charger cable	\$35.00
25308 TDSREC-S STYLUS	Recon stylus pen (3-pack)	\$6.00
10243 TDSREC-AUSCBL	USB cable for Recon/Ranger	\$15.00
95680 TDSREC-SLCDPROTECT	Recon screen protectors (pack of 10)	\$10.00
39555 TDSRGR-ALCDPEELOFF	Ranger screen protectors (pack of 10)	\$10.00
19029 TDSRGR-BRACKET	Ranger tripod bracket	\$80.00
88104 TDSRGR-S-ARECHARGER	TDS Ranger AC charger	\$60.00





## DATA COLLECTORS & CALCULATORS

#### ALLEGRO CX/RCS

#### Features Include:

- Two models the Allegro CX and the Allegro CX/RCS with built-in radio modem for robotic total stations
- Ultra-ruggedized The most rugged and shock resistant data collector on the market utilizing gaskets which completely seal the unit (Yes, it floats!)
- Proven spread spectrum radio technology (RCS version) makes this the lightest, cleanest robotic system available
- Monochrome display option offers 18% more viewing area making applications easier to see
- Powerful performance Intel 400 Mhz Xscale processor provided speed and performance
- Secure data storage 128 Mb, 512 Mb, and 1 G of non-volatile flash memory
- Windows CE.NET 4.2 professional operating system

#### ALLEGRO CX/RCS

Item	Description	MSRP
29950 LCA8215667	Allegro CX Monochrome display 64 MB RAM/128 MB storage	\$2475
97420 LCA8215669	Allegro CX Color display 64 MB RAM/128 MB storage	\$2775
53974 LCA8218015	Allegro CX Color display 128 MB RAM/512 MB storage	\$3475
87571 LCA8215668	Allegro CX/RCS Monochrome display 64 MB/128 MB storage	\$4995
88315 LCA8215670	Allegro CX/RCS Color display 64 MB RAM/128 MB storage	\$5250
59640 LCA8216775	Allegro CX/RCS Color display 128 MB RAM/512 MB storage	\$5975

#### **Software Options**

Item	Description	MSRP
11143 LCA8212081	Carlson SurvCE Total Station	\$995
54359 LCA8212084	Carlson SurvCE Robotic Total Station	\$1495
76069 LCA8212085	Carlson SurvCE GPS	\$1995
52700 LCA8212086	Carlson SurvCE Complete	\$2495



#### **Construction Calculators**

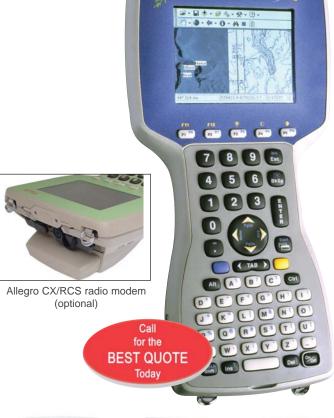
Find accurate, time and money saving tools from the leading manufacturer of specialty construction calculators, including the Construction Master Pro, distance measuring tools and estimating devices. Get accurate, time and money saving results.

Item	Description	MSRP	FLT PRICE
31234 CAL4065	Construction Master Pro Advanced Construction	\$80	\$72.95
45865 CAL4225	Concrete Calculator Pro	\$70	\$64.95
87978 CAL44080	Construction Master Pro Desktop	\$100	\$74.95
87466 CAL4080	Construction Master Pro Trig III	\$100	\$74.95
72305 CAL4020	Measure Master Pro	\$40	\$36.95

#### Scale Master

Perform Instant Linear, Rectangular Area and Volume Takeoffs; 72 Built-in Scales -Architectural, Engineering, Map Metric; Small, Lightweight and Totally Portable; Use it Like a Pen - Just Roll and Measure; Easy-to-Read Display Shows Measurement in Feet-Inches, Metric and Other Dimensional Units; Convert Between Scales and Dimensions; Custom Scales for Plans that are Reduced/Enlarged; Calculate Rectangular Area/Volumes (LxWxH); PC Interface kit is available for the Scalemaster II to transfer rolled values from the Scale Master II directly into commonly used spreadsheets or estimating programs.

Item	Description	MSRP	FLT PRICE
51604 CAL6020	Scale Master Classic	\$70	\$64.95
94346 CAL6130	Scale Master II	\$100	\$92.95
37699 CAL6215	Scale Master II Interface Kit	\$80	\$73.95









CAL4080

CAL4065

CAL4225





CAL4020

CAL44080









## DATA COLLECTION & PC SOFTWARE

## Carlson.

#### **CARLSON SURVEY 2008**

Carlson Survey is now available in two forms: Inside AutoCAD® or AutoCAD® Inside. And the standalone Carlson Survey now matches all major features of the inside AutoCAD® version. Both include SurvNET Network Least Squares, now essential for survey adjustment. Carlson Survey 2007 has been designed to run inside AutoCAD 2007. It will also install and work inside AutoCAD 2006, 2005, 2004, 2002 and even 2000. It is so versatile that it also installs and works with the newest and even older versions of AutoCAD Map, Land Desktop and Civil 3D. We've even added a new Network Least Squares program called SurvNET.

Carlson Survey 2008 combines the surveyor's private language of point-based coordinate geometry (or COGO) commands within the AutoCAD drawing environment better than any other survey software in AutoCAD. Using Carlson Survey 2007, surveyors can download and upload to all popular field data collectors, process raw field data, check closures, adjust field data and map by Field-to-Finish using field coding. The surveyor can also input, rotate and translate boundaries, perform lot layouts, calculate and label areas and execute flawless curve data and line work labeling. Surveyors will use the point-based CAD/COGO commands found in Carlson Survey 2008 extensively as these CAD/COGO commands are the essence of the surveyor's private professional survey language.

Item	Description	FLT PRICE
71963 CSW1000.020	Carlson Survey 2008 Stand-Alone	\$1995.00
20611 CSW2000.899	Carlson Survey 2008 add-on software for AutoCAD	\$1459.00

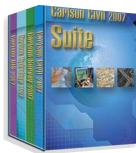
#### **CARLSON CIVIL 2008**

Carlson Civil 2008 is designed for civil engineers by civil engineers, based on 23 years of experience in the software industry serving this market. Carlson Civil 2008 takes the lessons of these years in civil feature development, adds in the comprehensive experience in the overlapping markets of survey, construction and mining, and distills the highest level of robust automation and ease-of-use of any civil design solution available today. As part of the new Carlson 2008 product line, Carlson Software has also introduced the Carlson Civil Suite 2008. This new, powerful bundle is made up of: Carlson Survey 2008, Carlson Civil 2008, Carlson Hydrology 2008 and Carlson GIS 2008.

Item	Description	FLT PRICE
52924 CSW2000.826	Carlson Civil 2008	\$1465.00
99053 CSW2000.825	Carlson Civil 2008 Suite	\$3495.00

# Carlson Survey 2008 \$1459.<sup>00</sup>







#### **CARLSON SurvCE 2.0**

New Carlson SurvCE 2.0 combines advanced functionality, ease-of-use, and sheer capability to make it the first choice in data collection software. Carlson SurvCE 2.0 is a complete data collection system for Real Time (RTK) GPS and Total Stations with in-field coordinate geometry. It supports the widest range of popular and new release RTK GPS and conventional/ robotic total stations.

Item	Description	FLT PRICE
79625 CSW6501.001	Carlson SurvCE 2.0 (Total Station)	\$995.00

#### **TDS FORESIGHT**

TDS ForeSight computer-aided office surveying software helps you analyze, adjust, plot and manage your field data so you can prepare for your project's next phase. ForeSight's easy-to-use tools help you complete your projects faster and easier-at the office and in the field. ForeSight's expanded CAD tools include basic point editing, DTM surfaces and road layouts. You can use ForeSight to produce complete, artistic plats. And ForeSight gives you multiple recording and exporting options-including AutoCAD DXF and DWG files.

Item	Description	FLT PRICE
74252 TDSFORESIGHT	Basic COGO and Drafting Package	\$949.00



#### **CARLSON TAKEOFF 2007**

Carlson Takeoff is the most complete and powerful site estimating software on the market -- available as an AutoCAD-based stand-alone product or as a module of Carlson SurvCADD.

Carlson Takeoff offers critical Drawing Cleanup features and advanced 2D to 3D routines that streamline the estimating process. It can input all data formats, including DWG, DXF, LandXML, and all formats of Centerline, Profiles, and Section Data. Takeoff calculates cut/fill material volumes and has 3D simulation as well as comprehensive reporting. In addition, roadwork, trenching, drill-holes, and sub-grades capabilities are all included for one affordable price.



## eica - when it has to be right DATA COLLECTION & PC SOFTWARE

#### Geo Office Surveying and Engineering Software

Exploit the full potential of your data with LEICA Geo Office. View and manage your TPS, GPS and Level data in an integrated way. Process independently or combine your data. LEICA Geo Office ensures you get the best result.

All components have a similar look and feel and interact seamlessly with each other. GPS, TPS and level data are handled in a similar way with standardized tools and dataflow. The embedded HELP contains useful tutorials and provides advice and information whenever needed. LEICA Geo Office assists you at every step.

LEICA Geo Office includes the following standard functionality:

- -Data Management
- -View and Edit
- -Flexible Reporting
- -Flexible Import and Export
- -Tools for GPS, TPS and levels



#### **DATA MANAGEMENT**

The different management components for projects, coordinate systems, GPS antennas, report templates etc. provide a very logical separation of important information and a clear overview of all data. They enable you to manage your data and work easily and efficiently in a consistent manner. Choose the way you want to work. Configure and set the software for your preferences and requirements. Set panels and screens to display the information that you need and in the formats you prefer. Define import and export masks for the way you have to handle data.

#### COORDINATE TRANSFORMATIONS (Optional)

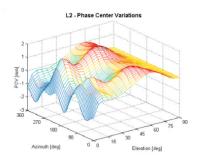
LEICA Geo Office has a complete range of libraries and tools for defining coordinate systems and transforming coordinates from one system to another: libraries of ellipsoids, projections and geoidal models, as well as six different transformation methods that give you the flexibility to select the transformation technique that suits your project best.

Convert ellipsoidal to orthometric heights and vice versa using imported and user defined geoidal models. A special feature of LEICA Geo Office is the support of country specific coordinate systems that are based on grids of correction values for the conversion of WGS84 to local coordinates. With the LEICA Geo Office coordinate management component and transformation module you can work in any system, WGS84 or local coordinates, and convert easily from one to the other.

#### GPS POST PROCESSING (Optional)

This module processes all types of GPS raw data. One of the main applications is the classical processing of baselines in geodetic control networks. It is also used for processing kinematic data, especially for "filling in gaps" when RTK coordinates are not available due to breaks in the radio link. As well as utilizing the integrity checks in the GPS1200 field system, LEICA Geo Office post processing allows extended user control over what has to be processed and how it is processed. For routine baseline computations, processing can be set to run fully automatically using default settings. For critical lines or special investigations, processing can be manually controlled, in which case advanced users have ample scope to set parameters and use their own processing scenarios. Results Manager contains a range of graphical analysis tools and report logs that allow the results to be viewed and examined in depth before they are accepted and stored.





## **HP48 SOFTWARE**

#### TDS SURVEY PRO for HP48GX

Survey Pro gives is fast, reliable and easy to use, so you can work more productively in the field. Survey Pro adds several advanced features to Survey Standard like intuitive and powerful slope staking and road layout routines. You can also view DTM files, stake using the DTM surface and collect feature/attribute data, helping you save time in the field and in the office.

Item	Description	MSRP	FLT PRICE
14966 TDS48SURVPRO	Survey Pro for HP48GX	\$799	\$639.00

#### TDS SURVEY STANDARD for HP48GX

Survey Standard is complete data collection software for surveyors. You can get a complete COGO suite including triangle solutions, map check and predetermined area, as well as traverse, sideshot and staking routines. And you can easily upgrade Survey Standard to any other Survey Pro level.

Item	Description	MSRP	FLT PRICE
90550 TDS48GX	Survey Standard for HP48GX	\$699	\$545.00

#### TDS COGO FOR HP48GX

TDS COGO is the perfect supplemental tool for surveyors. TDS COGO's intuitive graphical interface enables you to easily move on to more advanced TDS surveying software—with TDS you can always move up to more advanced software as your needs change.

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Item	Descrip	tion	MSRP	FLT PRICE
30652 TDSCOGO-48	Cogo Card for HP48G	<	\$249	\$209.00

#### TDS FORESIGHT DXM for HP48GX

TDS ForeSight DXM (Data eXchange Manager) computer-aided office surveying software lets you bridge the data management gap between field data collection and computer-aided design (CAD) software. ForeSight DXM allows easy data transfer from Survey Pro software to a laptop or PC so you can display survey data graphically. It also helps you manage project files, checks data for accuracy and prepares data for CAD development

Item	Description	MSRP	FLT PRICE
39356 TDSPCS-FSDXM	Foresight DXM w/ USB lock	\$399	\$359.00
55149 TDS512KGX	512k RAM card for HP48GX	\$199	\$179.00
24292 TDS1MEG	1 Mb RAM card for HP48GX	\$299	\$269.00
42033 TDS148	Environmental hard case for HP48GX	\$99	\$89.00



## **PRISMS**





CHI64-2000



CHI63-3020







CHI65-1505RL

CST/berger

#### **UNIVERSAL SERIES PRISMS**

Universal series single tilting prism with metal (aluminum) yoke features 0/-30mm offset and precision ground glass up to 2 arc seconds. Lifetime warranty (aluminum yoke only). Available in chartreuse/black (shown), orange/white, and yellow/black.

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Item	Description	MSRP	FLT PRICE
90757 CHI63-2010	Single tilt prism assembly, plastic yoke	\$178	\$112.95
59328 CHI63-2010M	Single tilt prism assembly, aluminum yoke	\$183	\$119.95
78335 CHI63-2012M	Metal yoke and target only	\$81	\$67.95
48490 CHI63-2015	Target only for 63-2010(M)	\$36	\$33.95
43495 CHI63-2011	2 1/2" prism in canister for 63-2010(M)	\$124	\$104.95

#### **RETRO PRISMS**

Single and triple "retro" prisms use aluminum holders which are precisely machined and electrostatically painted for a long-lasting finish. Each prism is encased in a rugged Lexan container. Red and white sighting pole is included. –30mm offset.

Lexail Collianier. Net	exam container. Ned and write signting pole is included30mm onset.		
Item	Description	MSRP	FLT PRICE
14648 CHI64-2010	Single prism assembly, aluminum mount	\$189	\$115.95
75630 CHI64-2000	Triple prism assembly, aluminum mount	\$442	\$299.00
33462 CHI64-2012	Single prism assembly mount only	\$80	\$69.95
53744 CHI64-2013	Triple prism assembly mount only	\$92	\$75.95
72150 CHI64-2011	Retro prism in lexan container	\$145	\$102.95
33773 CHI64-2018	Lexan container only	\$22	\$19.00
25937 CHI64-2017	Sighting pole	\$16	\$13.95

#### LEICA COMPATIBLE PRISMS

Leica compatible "snap in" prism. GPH1 type coaxial single tilting copper-coated prism with lexan GZT4 type target. Push-button mounting -34mm offset with Leica type H.I.

Item	Description	MSRP	FLT PRICE
24900 CHI63-3020	Tilting prism with coaxial target	\$229	\$199.95
61845 CHI63-3023	Tilting prism with fixed target	\$300	\$199.95

#### **PEANUT PACK MINI PRISMS**

Leica compatible "snap in" prism. GPH1 type coaxial single tilting copper-coated prism with lexan GZT4 type target. Push-button mounting -34mm offset with Leica type H.I.

Item	Description	MSRP	FLT PRICE
85368 CHI65-1500	Plastic prism assembly	\$159	\$119.95
73617 CHI65-1500M	Metal Prism assembly	\$180	\$129.95
44089 CHI65-1505RL	Reflective mini prism for short range shots	\$85	\$79.95



#### PRISM BAGS AND ADAPTERS

SECO bags & cases are made to exacting standards from heavy-duty, waterrepellent, 1000 denier nylon. These nylon bags are heavily padded for prisms, tribrachs, and prism/target assemblies.

Item	Description	MSRP	FLT PRICE
22179 FLTPRISM BAG	Triple prism bag 12" x 10"	\$35	\$20.95
98028 SEC8130	Extra tall triple prism bag 18" x 10"	\$59	\$46.95
96565 CHI61-2525	CST rotating tribrach adapter	\$59	\$45.95
84923 SEC2020	Rotating tribrach adapter	\$84	\$57.95











eica - when it has to be right

#### **CIRCULAR PRISMS**

The GPR1 is Leica's standard round prism. The glass is cut and polished to high surface accuracy and coated with a copper surface for improved reflectivity. -34mm offset.

Item	Description	FLT PRICE
42382 LCA362830	GPR1 single circular prism in container	\$240.00
28184 LCA362820	GPH1 prism holder, fiber reinforced polymer	\$70.00
74347 LCA362823	GZT4 prism target plate for GPH1	\$55.00

#### **FLAT PRISMS**

The CPR105 flat prism provides back-to-back reflectors, both having 0 offsets. One side is a cat-eye type reflector with a similar distance range as a mini prism with both infrared and reflectorless EDM. The other side is a reflective tape with target lines for close measurements. The prism has two 1/4" threads and requires an adapter if mounting on a pole or rod.

Item	Description	FLT PRICE
36945 LCA731346	CPR105 flat prism	\$59.95

#### **360 DEGREE PRISMS**

This 360° prism consists of six individual prisms joined together. The arrangement allows the measuring beam to reflect directly back to its source evenly from any position on the prism set. The even distribution of the prisms provides similar offset and accuracy readings from any side.molded into a fiberreinforced housing. -11 mm offset with Leica mounting stud.

Item	Description	FLT PRICE
40892 LCA639985	GRZ4 360 degree reflector	\$990.00
49189 LCA644327	GRZ101 360 degree mini prism	\$630.00

#### MINI PRISM WITH STAKEOUT POLE

Leica mini prism with 4 screw-on aluminum rods permitting five different prism heights and easy construction stakeout. -16 mm offset.





Leica's GRT144 tribrach adapter is ideal for GPS antennas, and prisms

Item	Description	FLT PRICE
91137 LCA667216	GRT146 tribrach adapter with 5/8" x 11 screw	\$110.00
22133 LCA667313	GRT146 tribrach adapter with Leica stud	\$115.00
	91137 LCA667216	91137 LCA667216 GRT146 tribrach adapter with 5/8" x 11 screw

## PRISM POLES & BIPODS









#### PRISM POLES/BIPODS/ADAPTERS

Seco's lightweight quick change prism poles are designed to be compatible with all targets, prisms, and GPS antennas. By using the correct SECO adapter a correct target height can be achieved with any pole in the 'Quick Change' series. The 'Quick Change' pole system features the TLV™ locking system with a 40-minute vial built in, dual metric/10ths graduation, and is available with or without a locking pin.

no roting graduation, and is available with or without a looking pin.				
Item	Description	MSRP	FLT PRICE	
38483 SEC5507-15	8.5' aluminum pole without locking pin	\$170	\$159.95	
47800 SEC5507-16	8.5' carbon fiber pole with locking pin	\$270	\$249.95	
21749 SEC5507-17	8.5' carbon fiber pole without locking pin	\$280	\$259.95	
29538 SEC5010-00	1' mini stakeout pole	\$80	\$69.95	
65357 SEC5195	Prism pole adjusting jig	\$55	\$49.95	
45445 SEC2090-10	Leica GPH1 quick change prism adapter	\$22	\$16.00	
92794 SEC2080	Adapts Leica prisms to 5/8" x 11 thread	\$22	\$19.95	
49480 SEC2090	Adapts 5/8" x 11 prism to Leica style prism pole	\$27	\$25.95	
76226 SEC5191	Topo shoe for prism poles	\$13	\$9.95	
97346 SEC5192	Extra-wide topo shoe for prism poles	\$25	\$21.50	
76975 SEC5217-04	Seco thumb release bipod	\$167	\$136.95	

## SEC5195 SEC5192 SEC2090





SEC2080 SEC2090-10

#### **ALUMINUM PRISM POLES/BIPODS**

CST's Quick-Lok prism poles employs a unique clamping system to create a tight clamp and the Collet Lock pole features a mechanism that clamps the pole when turned by the hand. Both prism poles feature sturdy aluminum imprinted with 10ths and metric graduations. Each pole includes a circular level vial, steel point, and an 5/8" x 11 mounting stud (TMA style) or Leica stud (TML style). CST's Maxi-Lite prism pole weighs only 2.1 lbs and utilizes a soft rubber knob making it easy to tighten or loosen the pole. The prism pole has 10ths and metric graduations, circular level vial, steel point, and an 5/8" x 11 mounting stud.

Item	Description	MSRP	FLT PRICE
87007 CHI67-4508TMA	8', 2 section Quick-Lok, 5/8" x 11 stud	\$155	\$89.95
30904 CHI67-4512TMA	12', 3 section Quick-Lok, 5/8" x 11 stud	\$185	\$119.95
89077 CHI67-4515TMA	15', 4 section Quick-Lok, 5/8" x 11 stud	\$240	\$185.95
32527 CHI67-4508TML	8', 2 section Quick-Lok, Leica stud	\$155	\$89.95
17408 CHI67-4515TML	15', 4 section Quick-Lok, Leica stud	\$235	\$185.95
99692 CHI67-4209TMA	8', 2 section Collet Lock, 5/8" x 11 stud	\$160	\$113.95
19386 CHI67-4512TML	12', 3 section Quick-Lok, Leica stud	\$180	\$134.95
27541 CHI67-4212TMA	12', 3 section Collet Lock, 5/8" x 11 stud	\$192	\$136.95
87775 CHI67-4708TMA	Maxi-Lite 8', 2 section Screw Clamp, 5/8" x 11 stud	\$147	\$109.95
61622 CHI67-4712TMA	Maxi-Lite 12', 3 section Screw Clamp 5/8 x 11 stud	\$185	\$139.95
36658 CHI68-3740	CST hardened steel prism pole point	\$10	\$7.95

#### CRAIN

#### **PRISM POLES** Crain's composilite pole is constructed of lightweight composite fiberglass. The Grip-Tite locking system prevents slipping and eliminates errors. The pole is imprinted with permanent 10ths and metric graduations, circular level vial, self-storing Topo Boot replaceable steel point, and an 5/8" x 11 mounting stud.

Item	Description	MSRP	FLT PRICE
98022 MND90280	8' quick clamp prism pole with 5/8 x 11 stud	\$200	\$149.95
59681 MND90282	12' quick clamp prism pole with 5/8 x 11 stud	\$264	\$196.95
93756 MND91605	Ultra lightweight prism pole/GPS rover pole point	\$21	\$19.95



#### **PRISM POLES**

Leica's Professional Series GLS11 Prism Pole is constructed with high-quality aluminum and superior components making it one of the lightest prism poles on the market at 1.3 lbs. The pole extends to 7.1 ft. and is imprinted with permanent 10ths and metric graduations. It comes with a circular level vial, and hardened aluminum point.

Item	Description	FLT PRICE
46986 LCA385500	7' prism pole with compression clamp, Leica stud	\$195.00

#### CST/berger **BIPODS/TRIPODS**

Item	Description	MSRP	FLT PRICE
74161 CHI67-4260X	Bipod, thumb release	\$140	\$112.95
51516 CHI67-4260	Bipod, quick release	\$135	\$112.95
57343 CHI67-4250X	Tripod, thumb release	\$180	\$169.95
76565 TRUR.P. TRIPOD	Heavy-duty prism pole/range pole tripod	\$90	\$69.95



SEC5010-00 SEC5507-17 SEC5507-15 CHI67-4708 CHI67-4209 MND90280 CHI67-4508 LCA385500

## **TRIPODS**



#### CRAII

Crain's combination of durability and value has made its wood/fiberglass tripod a best-seller.

Item	Description	MSRP	FLT PRICE
12834 MIND22211	42" Closed, 1 / Ib.		\$134.95
<b>93846</b> MND22219	Wood fiberglass, dual clamp (clamp & wing nut) 5/8" x 11 stud, 72.5" open, 42" closed, 17 lb.	\$197	\$144.95

#### CST/berger

Another best-selling tripod. A combination of hard maple legs with fiberglass dowels gives these wood/fiberglass tripods extra stability and guards against shrinking and swelling. CST's heavy-duty aluminum tripods offer rigidity and strength. Extension legs are anodized silver to resist corrosion. All metal parts are powder painted to prevent corrosion. Shoulder strap is included.

Item	Description	MSRP	FLT PRICE
<b>55156</b> CHI60WDF20	Wood fiberglass, quick clamp 5/8" x 11 stud, 72" open, 42" closed, 16 lb.	\$188	\$129.95
<b>44520</b> CHI60WDW20HV	All wood, wing nut clamp $5/8" \times 11$ stud, $72"$ open, $42"$ closed, $17$ lb.	\$199	\$139.95
<b>38909</b> CHI60ALW20	Heavy-duty aluminum, wing nut clamp 5/8" x 11 stud, 65" open, 42" closed, 13 lb.	\$140	\$119.95
<b>77606</b> CHI60ALQR20	Heavy-duty aluminum, quick release clamp 5/8" x 11 stud, 65" open, 42" closed, 12 lb.		\$119.95
<b>86493</b> CHI60ALW25	Heavy-duty aluminum, wing nut clamp 3-1/2" x 8 stud, 65" open, 42" closed, 13 lb.	\$160	\$145.95

#### CST/berger

These new heavy-duty tripods are built specifically for machine control applications. Their rugged aluminum alloy construction is lightweight enough for easy transport and set-up. The 5/8" x 11 mounting adapter on the top of the elevator column can be removed for easy attachment to the base of your laser.

Item	Description	MSRP	FLT PRICE
			\$755.00
<b>50936</b> CHI60-MCTE	Extra tall machine control tripod, 14' 3" open, 7' closed, 34 lbs.	\$1295	\$1230.00



Leica's robust, well-established tripods are ideal for levels, lasers, total stations, and GPS. The proven long life tripods are twist proof and have good vibration characteristics. The GST120-9 is self-closing utilizing special clamps to keep the tripod legs closed during transportation.

Item	Description	MSRP	FLT PRICE
19/6/ LCAbb / 301	GST120-9 heavy-duty all wood wing-nut clamp, 5/8" x 11 stud, 72" open, 42" closed, 15 lb.	\$375	\$346.95





## **TRIPODS**







Nedo wooden tripods use the finest European hardwood to ensure the utmost in stability, durability, and reliability. All wooden parts are sealed with a high-tech plastic material that keeps moisture out. The sturdy design and 100 years experience make Nedo wooden tripods the ideal tripod for the toughest conditions.

Item			FLT PRICE
<b>68434</b> NED200513	Heavy-duty wood/fiberglass, quick clamp, 5/8" x 11 stud, 65" open, 40" closed, 17 lb.	\$295	\$189.95

Nedo elevating tripods utilize powder-coated aluminum die-casting parts with brass hinge pins to ensure stability. Includes a circular bubble for easy set-ups, an aluminum top plate and direct gear unit for smooth adjustment of the laser.

Item	Description		FLT PRICE
96867 NED210612	Medium-duty elevating tripod, quick clamp, 5/8" x 11 stud, 93" open, 44" closed, 19 lb.	\$255	\$225.95
	stua, 112" open, 34" ciosea, 25 lb.	\$315	\$295.95
<b>42146</b> NED210442	Giant elevating tripod, quick clamp, 5/8" x 11 stud, 157" open, 70" closed, 32 lb.	\$545	\$500.00

## M DUTCH HILL

Arguably one of the most durable tripods sold today, the GT-2000 is a fiberglass composite made in the USA with high-quality components. 5 yr warr.

,	Item		MSRP	FLT PRICE
	19603 DCHGT-2000	Heavy-duty fiberglass tripod, quick clamp, 5/8" x 11 stud, 71" open44" closed, 14 lb.	\$339	\$264.95

#### CST/berger

www.fltgeosystems.com

CST's elevator tripods feature all-surface rubber feet, ideal for grabbing slick surfaces and can be retracted to reveal sharp metal points for use on outdoor terrain. The adjustable column has a height adjustment range of 12" and improved gear system for smooth continuous motion.

Item	Description	MSRP	FLT PRICE
<b>40654</b> CHI60WDF20ELAZ	Wood fiberglass, quick clamp 5/8" x 11 stud, 94" open, 49" closed, 18 lb.	\$385	\$349.95
<b>79544</b> CHI60ALW20ELAZ	Heavy-duty aluminum, wing nut clamp 5/8" x 11 stud, 88" open, 48" closed, 16 lb.	\$340	\$319.95
<b>73743</b> CHI60TFG20	Aluminum floor tree enables a tripod to be	\$85	\$78.95

Northwest tripods are 100% aluminum and powder-coated for durability. A best-seller and a terrific value!

Item	Description	MSRP	FLT PRICE
	Medium-duty aluminum tripod, quick clamp, 5/8" x 11, 62" open, 38" closed, 11lb.	\$135	\$71.95
83/176 ((()/// 1 U /	Medium-duty aluminum tripod, wing nut clamp, 5/8" x 11, 62" open, 38" closed, 11lb.	\$135	\$79.95
	Adapts older style 3-1/2" x 8 thread instruments to tripods with a 5/8" x 11 screw.	\$40	\$32.95





## TRIBRACHS & RADIOS



#### **LEICA TRIBRACHS**

Leica basic series tribrachs are ideal for medium accuracy requirements. All tribrachs have a universal 5/8" x 11 base plate. The tribrach has an optical plummet with 2x magnification and a focusing range of 1.6ft to infinity. Leica professional series tribrachs are well-established, robust, and precise for highest accuracy requirements. The foot screws are maintenance-free and protected against dust. The tribrach has an optical plummet with 2x magnification and a focusing range of 1.6ft to infinity.

Item	Description	MSRP	FLT PRICE
93609 LCA667305	GDF111 Basic tribrach w/out optical plummet	\$300	\$249.95
96740 LCA667308	GDF112 Basic tribrach with optical plummet	\$400	\$349.95
32022 LCA667304	GDF121 Professional tribrach w/out optical plum.	\$425	\$384.95
43904 LCA667307	GDF122 Professional tribrach with optical plum.	\$525	\$494.00







SEC2001

The Motorola XTN™ Series of professional two-way radios is designed for commercial use. It's designed to military 810 specifications and IP54 weather resistant. Easy to operate, lightweight, 15-hr rechargeable battery and AA capable for emergencies. Package includes NiMH rechargeable battery, charger, and swivel belt holster.

Item	Description	MSRP	FLT PRICE
25356 MOTXV1100	1 watt, 1 channel VHF XTN series radio	\$235	\$184.95
84846 MOTXV2100	2 watt, 1 channel VHF XTN series radio	\$279	\$204.95
37176 MOT53862	Remote speaker microphone for XTN radios	\$70	\$60.00
32363 MOTHNN9044	Rechargeable battery for SP10/SP50 radios	\$39	\$35.00
15104 MOT53821	Belt clip for XTN series radios	\$15	\$13.00
91158 MOTHTN9014	Drop-in charger for SP10/50 series radios	\$38	\$34.50
27031 MOT53874	AC wall charger for XTN series radios	\$15	\$13.00
53872 MOT53872	Drop-in charging tray for XTN series radios	\$28	\$22.95
79058 MOT53871	Rechargeable NiCAD battery for XTN radios	\$36	\$28.95



MOT53871





Rugged and dependable all ProTalk radios feature 2-watts of power for up to 6 miles range. Compact and lightweight, meets military specifications for temperature and water. Package includes 18-hr NiMH battery, desktop charger and spring loaded belt clip. 2-yr warranty.

includes 10-11 Millin battery, desktop charger and spring loaded belt clip. 2-yr warranty.			ranty.
Item	Description	MSRP	FLT PRICE
56452 KENTK-2200V2	2 watt, 2 channel VHF Protalk radio	\$258	\$189.95
14689 KENKNB-29N	18-hr NiMH for TK-2200 radio	\$40	\$35.00
94957 KENKSC-31	Drop-in charger for TK-2200 radio	\$35	\$30.00
29287 KENKMC-21	Compact speaker microphone for Protalk radio	\$50	\$49.00
72997 KENKRA-26M	Replacement antenna for TK2200 radio	\$20	\$15.00
26481 KENKRA-14M	Replacement antenna for 2100 series radio	\$20	\$17.00
87996 KENKNB-14	8-hr NiCad battery for 2100 series radio	\$40	\$37.00
76014 KENKSC-15	Drop-in charger for 2100 series radio	\$32	\$28.00





#### CST/berger

CST Wild-type tribrachs offer precise plumbing of surveying instruments and have a universal 5/8" x 11 base plate. The tribrach has a circular leveling sensitivity of 10' and comes with an optical plummet. This tribrach offers a superior price and quality combination.

		,	
Item	Description	MSRP	FLT PRICE
33170 CHI61-3500-BLK	Standard tribrach with optical plummet (black)	\$379	\$299.00



Topcon tribrachs are compatible with most current type tribrachs in today's market. The tribrach comes with a 3x optical plummet.

Item	Description	MSRP	FLT PRICE
89953 TOP55501	Topcon tribrach with optical plummet	\$490	\$358.00

#### NW?

This tribrach with optical plummet is ideal for medium accuracy requirements. It has a universal 5/8" x 11 screw base plate, a circular leveling sensitivity of 10' and an optical plummet focusing range of 1.5 to 50 ft.

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Item	Description	MSRP	FLT PRICE
88391 NWTNTB11	Northwest tribrach with optical plummet	\$240	\$159.00
Item	Description	MSRP	FLT PRICE
88183 SEC2001	Seco tribrach adjusting cylinder	\$50	\$41.95







## LEVELING RODS

## LASERLINE MFG, INC.

#### LENKER STYLE DIRECT READING ROD

Laserline Lenker style rods are tough, lightweight, and versatile. The rods are constructed of high strength clear anodized aluminum and will not rust, split, splinter or warp in any environment. The tape lock grommets are oversized which greatly minimizes the problem of tape tearing. The tape has a heavy duty matte textured face which protects the tape numbers from

wearing and rading.		
Item	Description	FLT PRICE
15827 LLMGR10T	10' Lenker style direct elevation rod, 10ths	\$159.95
90843 LLMGR10I	10' Lenker style direct elevation rod, inches	\$159.95
55904 LLMGR1000T	Laser Lenker style direct elevation rod 10ths	\$179.95
69597 LLMGR1450T	15' Lenker style direct elevation rod, 10ths	\$260.00
98502 LLM1000-1026	Replacement tape for GR10T	\$60.00
55409 LLM1000-1301	Canvas carrying case for GR10T	\$35.00
13653 LLMBILA	Lenker receiver clamp for Leica Laser Alignment Rod Eye family	\$65.00
81545 LLMB1	Lenker receiver clamp for SPY1275, Topcon, CST/Berger, Quagriga	\$65.00
14609 LLMB2	Lenker receiver clamp for SPY1175, 1177, 3075	\$90.00
34713 LLM1000-1301	Canvas carrying case for GR1000T	\$35.00
29974 LLMB1T	Lenker receiver clamp for HR400, HR500, CR600	\$65.00
89317 LLMB550	Lenker receiver clamp for HR550	\$95.00





LLM1000-1026







CHI07-629



- when it has to be right

#### TELESCOPIC ALUMINUM ROD

Leica's 5m, 4 section, rods are constructed of high quality anodized aluminum which resists fading and weathering. Includes circular bubble and carrying case.

-	_			
Item	Description	n	MSRP	FLT PRICE
90756 LCA741882	5m, 4 section leveling rod 10	Oths/100ths	\$85	\$79.95
25821 LCA741883	5m, 4 section leveling rod E	scale metric	\$85	\$79.95

#### CST/berger

#### **FIBERGLASS PHILLY and FRISCO RODS**

Both Philly and Frisco-style fiberglass rods are dual-faced with black graduations. Foot numbers are imprinted in bright red for fast and easy location. 13' Philly rods have 2 sections and collapse to 7'. Frisco rods have 3 sections; 12' rods collapse to 4', and 15' rods collapse to 5'.

Item	Description	MSRP	FLT PRICE
79213 CHI07-628	12' fiberglass Frisco rod ft/10ths/100ths	\$160	\$136.95
14059 CHI07-629	15' fiberglass Frisco rod ft/10ths/100ths	\$180	\$152.95
74470 CHI07-635	12' fiberglass Philly rod ft/10ths/100ths	\$170	\$143.95
32651 CHI10-328-1	Nylon case for 12' Frisco rod	\$20	\$15.95
50362 CHI10-329-1	Nylon case for 15' Frisco rod	\$18	\$15.95

#### **RANGE POLES**

CST's range poles are constructed of a high strength aluminum core with alternating colors of orange and white permanently attached to the aluminum. The heavily pigmented colors resist fading and weathering under the toughest conditions. The pole is 1 1/16" in diameter with 5/8 x 11 thread joints for easy assembly. Hardened steel point is included.

Item	Description	MSRP	FLT PRICE
68851 CHI68-3708	8' range pole (2 section)	\$45	\$32.95
44338 CHI68-3712	12' range pole (3 section)	\$57	\$39.95
36658 CHI68-3740	Range/prism pole point	\$10	\$7.95
32651 CHI10-328-1	Nylon case for 12' Frisco rod	\$17	\$15.70
50362 CHI10-329-1	Nylon case for 15' Frisco rod	\$18	\$15.95

#### RANGE POLE TRIPOD

KANGET GEE TRII OD				
Item	Description	MSRP	FLT PRICE	
76565 TRUR.P. TRIPOD	Heavy-duty umbrella/range pole tripod	\$90	\$69.95	

CHI68-3708



## **EVELING RODS**

#### **SVR RODS**

Our best selling rod! The SVR (Surveyor) series heavy-duty leveling rod is constructed of strong reinforced fiberglass and its rectangular-oval shape is designed for the serious user. Scales are glare resistant and protected by an abrasion resistant coating. A special measuring scale on the backside permit users to read height at eye level. The top of the rod has a female 1/4" x 20 thread for attaching accessories. 16' rods are 4 section and collapse to 5'. 25'/7.6m rods are 6 section and collapse to 5.5'. Carrying case included.

Item	Description	MSRP	FLT PRICE
33466 MND90343	16' ft/10ths/100ths	\$183	\$151.95
33713 MND90344	16' ft/inches/8ths	\$183	\$151.95
98658 MNDSVR25	25' ft/10ths/100ths	\$214	\$169.95
91687 MND90341	25' ft/inches/8ths	\$214	\$169.95
62863 MND90385	7.6m "E" metric pattern	\$214	\$169.95
86280 MND90346	25'/7.6m 10ths/100ths & philly metric 0.5cm	\$214	\$169.95
31296 MND91412	Canvas carrying case for CR and SVR rods	\$12	\$10.95

#### **CR RODS**

The CR (Construction) series leveling rod is constructed of lightweight fiberglass in a rectangular shape with rounded back corners for a better grip. Graduations fill the entire face of the rod and a measuring scale on the backside permit users to read height at eye level. The top of the rod has a female  $1/4"\ x\ 20$  thread for attaching accessories. 8'rods are 2 section and collapse to 52"; 13' rods are 3 section and collapse to 59"; 16' rods are 4 section and collapse to 57"; 20' rods are 5 section and collapse to 58".

Item	Description	MSRP	FLT PRICE
44694 MNDCR8	8' ft/10ths/100ths	\$53	\$44.95
13886 MND92002	8' ft/inches/8ths	\$53	\$44.95
23279 MNDCR13	13' ft/10ths/100ths	\$74	\$59.95
77948 MND92022	13' ft/inches/8ths	\$74	\$59.95
54398 MNDCR16	16' ft/10ths/100ths	\$93	\$75.95
48085 MND92042	16' ft/inches/8ths	\$93	\$75.95
31296 MND91412	Canvas carrying case for CR and SVR rods	\$12	\$10.95







#### **PRISM ADAPTERS**

Item	Description	MSRP	FLT PRICE
33149 MND91258	1/4" x 20 to 5/8" x 11 prism adapter for SVR and CR rods	\$17	\$13.95
88189 MND91133	5/8" x 11 double male thread prism adapter for LR series rod	\$15	\$11.95
83305 SEC2080	5/8" x 11 to Leica stub adapter	\$22	\$19.95
48170 SEC2090	Leica stud to 5/8" x 11 adapter	\$28	\$25.95









MND91258 MND91133

The LR series leveling rod is the original fiberglass rod. The LR-STD series are round and have a small diameter allowing easy handling. The LR-PRO series rods have a larger diameter so that it is sturdier and easier to read at higher heights. Both have a 5/8" x 11 female thread on the top to attach a prism. Canvas carrying cases are included with all Pro Series Rods.

	Item	Description	MSRP	FLT PRICE
	33978 MNDLRSTD25	25' ft/10ths/100ths	\$236	\$184.95
,	32886 MNDLRPRO25	25' ft/10ths/100ths carrying case included	\$285	\$229.95
	78318 MND90026	45' ft/10ths/100ths carrying case included	\$507	\$479.95



Our

best-selling

level rod!



MNDLRSTD25 MNDLRPRO25

MND90026





## LEVELING RODS

#### :RAIN

#### **CMR SERIES MEASURING RULER**

A versatile tool for fast accurate one-person measuring, the CMR Series is the tool for measuring heights, clearances and horizontal distances up to 50 ft. The CMR Measuring Ruler is a direct reading rod at eye level. It comes with a caliper tip with a 1/4" x 20 female thread for accessories and carrying case.

Item	Description	MSRP	FLT PRICE
60620 MND90180	25' CMR measuring rod carrying case included	\$246	\$234.00

#### PIPE MIC II

Measure pipe inverts and sizes fast, easy, and accurately from above. By simply pulling a pin you can go from zero to 1 ft. vertical offset for clearance under rod. Measurements are more accurate because you are measuring with a vertically plumb rod. Made for use with Crain SVR rods.

	Taill O VI C 1000			MSRP	FLT PRICE
Item					
27774 CHNPIPE MIC II	Pipe Mic II			\$185	\$174.95
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#### **POCKET ROD**

The 1" wide steel blade removes for readings and easily retracts into the 3-1/2" square, tape-measure-sized case. Three scale types available with the same graduations printed on both the front and back of the rod

NWTNFR14ET

Item	Description	MSRP	FLT PRICE	
34652 KESPR610	Ft/10ths/100ths	\$20	\$15.95	
41415 KESPR618	Ft/inches/8ths	\$20	\$15.95	

#### **ROD LEVEL**

Heavy-duty aluminum frame with 10 minute circular vial for improved accuracy.

NWT16T

Item	Description	MSRP	FLT PRICE
58667 CHI06-750	Rod level	\$18	\$15.95

## CST/berger

#### **ALUMINUM LEVEL RODS**

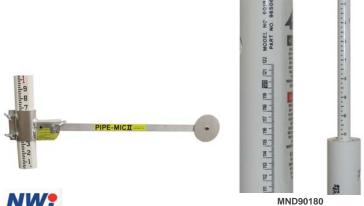
CST's telescoping aluminum rods are made of a light and durable aluminum alloy. The anodized sections are imprinted with special weather and corrosion resistant inks. Wear resistant polycarbonate buttons lock each section and a special measuring scale on the backside permits users to read height at eye level.

Item	Description	MSRP	FLT PRICE
79128 CHI06-808C	8' graduated ft/inches/8ths; 3 section	\$42	\$39.95
28351 CHI06-813	13' graduated ft/10ths/100ths; 4 section	\$59	\$54.95
76721 CHI06-813C	13' graduated ft/inches/8ths; 4 section	\$59	\$54.95
28347 CHI06-804M	4m graduated metric "E" pattern; 4 section	\$59	\$54.95
72600 CHI06-816	16' graduated ft/10ths/100ths; 5 section	\$65	\$59.95
24467 CHI06-816C	16' graduated ft/inches/8ths; 5 section	\$65	\$59.95
51753 CHI06-805M	5m graduated metric "E" pattern; 5 section	\$65	\$59.95

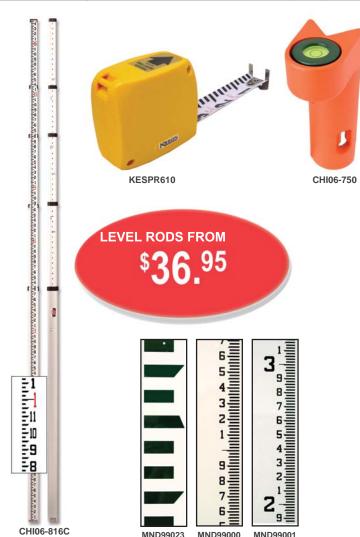
#### CRAIN

The fiberglass stream gauge is the best permanent marker for water depths of rivers, lakes, and swamps. The stream gauge is available in separate units so that any measurement may be provided. Stream gauges are available in Ft/10ths/100ths or unnumbered (10ths/100ths) allowing you to customize water elevations

unificinibeled (10ths/100ths) allowing you to customize water elevations.						
Item	Description	MSRP	FLT PRICE			
41861 MND99023	4' unnumbered ft/10ths	\$38	\$32.95			
86613 MND99000	4' unnumbered ft/10ths/100ths	\$38	\$32.95			
34956 MND99001	0-4' ft/10ths/100ths	\$38	\$32.95			
21988 MND99002	4-8' ft/10ths/100ths	\$38	\$32.95			
20442 MND99003	8-12' ft/10ths/100ths	\$38	\$32.95			
58994 MND99004	12-16' ft/10ths/100ths	\$38	\$32.95			
47464 MND99005	16-20' ft/10ths/100ths	\$38	\$32.95			
70209 MND99006	20-24' ft/10ths/100ths	\$38	\$32.95			



Item	Description	MSRP	FLT PRICE
43442 NWT09	9' aluminum graduated ft/inches/8ths	\$49	\$36.95
93447 NWT09T	9' aluminum graduated ft/10ths/100ths	\$49	\$36.95
68625 NWT14	14' aluminum graduated ft/inches/8ths	\$65	\$48.95
23659 NWT14T	14' aluminum graduated ft/10ths/100ths	\$65	\$48.95
33206 NWT16	16' aluminum graduated ft/inches/8ths	\$75	\$53.95
42552 NWT16T	16' aluminum graduated ft/10ths/100ths	\$75	\$53.95
42000 NWTNFR18ET	18' fiberglass ft/10ths/100ths front; ft/inches back	\$140	\$89.95
75399 NWT8.5E	8.5' aluminum laser rod ft/inches	\$85	\$59.95
32690 NWT8.5T	8.5' aluminum laser rod ft/10ths/100ths	\$85	\$59.95





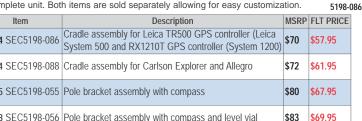


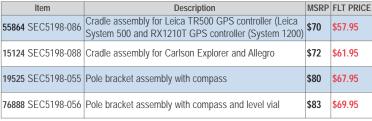
## **GPS ACCESSORIES**



#### **GPS CONTROLLER CRADLES & POLE BRACKETS**

Seco's open clamp bracket systems offers an efficient way to mount data collectors or GPS controllers to antenna or rover poles. The assembly is comprised of a cradle and a pole bracket. The user simply connects the cradle into a pole bracket for a complete unit. Both items are sold separately allowing for easy customization.





#### **GPS CONTROLLER CRADLES & POLE BRACKETS**

The quick-release Claw is a new and improved aluminum clamping system that keeps your data collecting hardware snug on the pole without crushing it.

Item	Description	MSRP	FLT PRICE
71083 SEC5200-052	Seco claw for Allegro and Explorer	\$249	\$209.00



#### **GPS 2m ROVER POLES**

Crain's Composite Carbon and Aluminum 2 meter GPS Poles are incredibly light and have an outside diameter of 1 1/4" making the poles much easier to handle and less bulky. Each pole comes standard with an innovative new Topo-Boot that protects the point and increases the area for topo shots without changing the HI. A 42 arc second level vial is standard on both poles.

Item	Description	MSRP	FLT PRICE
33255 MND90291	Carbon Composite 42 Arc GPS Pole	\$336	\$265.95
39544 MND90292	Aluminum 42 Arc GPS Pole	\$98	\$83.95



#### **CARBON FIBER SNAP-LOCK ROVER ROD**

These new rover rods are faster to setup and more user friendly compared to traditional two-piece rods. They feature a one-piece design and two locking systems for stability-the snap lock prevents slippage and the compression lock centers the telescopic inner pole and maintains straightness. The carbon fiber model locks at 2 meters, collapses to 1.354 meters and weighs 1.6 lbs. A 40-minute level vial is included

Item	Description	MSRP	FLT PRICE	
75512 SEC5128-20	2m Carbon fiber snap-lock pole	\$350	\$329.50	



#### **GPS 2m ROVER POLES**

Item	Description	FLT PRICE
77174 LCA667221	Bottom section aluminum pole with steel tip	\$80.00
70276 LCA667222	Top section aluminum pole with 5/8" screw	\$80.00
15565 LCA667224	Top section aluminum pole with Leica stud	\$80.00
65520 LCA667225	Bottom section carbon-fiber pole with steel tip	\$250.00
94144 LCA667226	Top section carbon-fiber pole with 5/8" screw	\$250.00
71388 LCA667227	Top section carbon-fiber pole with Leica stud	\$250.00



#### GRADUATED COLLAPSIBLE GPS ANTENNA TRIPOD

This tripod features a collapsible center staff with twist locking mechanism that rotates 360 degrees to check calibration of plumbing with a 10 minute vial, and quick release mechanisms on the legs. It is dual graduated and adjusts to three heights: 2 m, 1.8 m, and 1.5 m. It collapses to 50" and features an onboard compass and removable 5/8 x 11 adapter.

item		Description	IVIORE	FLI FRICE
10025 SEC5119-00-F	LY	Collapsible GPS antenna tripod	\$797	\$735.95
Item		Description	MSRP	FLT PRICE

Item	Description	MSRP	FLT PRICE
18316 SEC5114	Triple magnetic mount w/ 5/8" thread	\$260	\$239.00
44857 SEC5114-050	Single magnetic mount w/ 5/8" thread	\$60	\$56.95



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5198-055

5200-052

MSDD FIT DDICE

# CABLES, BATTERIES & CHARGERS



## Leica - when it has to be right BATTERIES & CHARGERS

Geosystems	Ditti I Ettileo di Otti ittoletto	
Item	Description	FLT PRICE
<b>70459</b> LCA667123 GEB121	Rechargeable camcorder type battery for TPS400, 700, 800, 1100, RCS 1100, GPS500, GS50, DNA03/10.	\$110.00
11083 LCA667318 GEB111	Rechargeable camcorder type battery for TPS100, 300,400, 700, 800, 1100, RCS 1100, DNA03/10.	\$80.00
<b>87927</b> LCA733270 GEB221	Rechargeable Li-ION type battery for TPS1200 and GPS1200.	\$180.00
<b>57960</b> LCA733269 GEB211	Rechargeable Li-ION type battery for RX1220 handheld data collector.	\$130.00
<b>89213</b> LCA439149 GEB77	Rechargeable camcorder type battery for old style TC400-905.	\$160.00
<b>50569</b> LCA636850 GEB87	Rechargeable camcorder type battery for TPS1000.	\$160.00
<b>97522</b> LCA727367 GEB171	Rechargeable external battery for TPS400, 700, 800, 1100, GPS500, TPS1200, GPS1200.	\$395.00
<b>42677</b> LCA739921 GKL112	Budget priced charger for single GEB111/121 battery. Car charger adapter cable included.	\$80.00
<b>71353</b> LCA639959 GKL22-1	Charger for GEB77 and other 5-pin plug batteries except GEB171 external battery.	\$90.00
<b>27042</b> LCA734752 GKL211	Charger for GEB221 and GEB211 Li-ION batteries. Car charger adapter cable included.	\$110.00
<b>70709</b> LCA733271 GKL221	Pro charger charges four GEB221/211 and GEB77, 87, 171 batteries. Requires (2) GDI221/2 charging trays.	\$500.00
<b>80746</b> LCA733323 GDI221	GDI221 Li-ION charging tray adapters charges two GEB221 and GEB211 batteries. To be used wiith G	\$60.00
<b>53124</b> LCA733322 GDI222	NiMH charging tray adapters charges one GEB121/111 batteries & GEB77/87/187/79 batteries.	\$60.00



ecca - when it has to be right

#### **CABLES**

Geosystems	ONDELO	
Item	Description	FLT PRICE
86889 LCA409678 GEV52	Leica cable connects TPS total stations or DNA levels to external battery.	\$130.00
<b>78268</b> LCA439038 GEV71	Leica 4m car battery cable that connects GPS receiver to 12V car battery.	\$210.00
<b>63758</b> LCA560130	Leica 1.8m power/data cable that connects GEB171 external battery to GPS receiver.	\$130.00
<b>15412</b> LCA560254	Leica 2.8m data transfer cable sensor/controller to PC. Lemo to 9-pin RS232 connector (GPS500 System).	\$120.00
88758 LCA563625 GEV102	Leica cable connects TPS total stations or DNA digital levels to PC (9-pin RS232 serial connection).	\$100.00
17575 LCA563809	Leica 2.8m GPS modem cable CR244 to Comlink.	\$125.00
<b>49252</b> LCA632372	Leica 10m antenna cable for GPS.	\$130.00
<b>92428</b> LCA636959	Leica 2.8m antenna cable for GPS.	\$55.00
<b>85745</b> LCA636972	Leica 0.5m cable connects GEB171 external battery to GPS receiver.	\$130.00
82608 LCA667200 GEV141	1.2m antenna cable for GPS.	\$60.00
<b>52815</b> LCA667201 GEV142	1.6m antenna cable for GPS.	\$70.00
<b>55019</b> LCA733280 GEV160	Data transfer cable connects GPS1200 or RX1220 to PC (9-pin RS232 serial connection).	\$130.00
<b>26444</b> LCA733281 GEV161	Data transfer cable connects GPS1200 or RX1220 to PC (USB connection).	\$175.00
88837 LCA733283 GEV163	1.8m controller cable connecting RX1200 controller to GX1200 receiver.	\$170.00
<b>18558</b> LCA734697 GEV186	Y-cable connects RX1200 to TPS1200 & external battery.	\$290.00
<b>58265</b> LCA734698 GEV187	Y-cable connects TPS1200 to PC (9-pin RS232 serial) and external battery.	\$250.00
96613 LCA734700 GEV189	Data transfer cable LEMO to USB.	\$175.00



**TOPCON** 

Item	Description	FLT PRICE
<b>16444</b> TOP51724 BT-32Q	Topcon BT-32Q battery for GPT1003/210/200 series total stations.	\$217.00
<b>27280</b> TOP51730 BT-52QA	Rechargeable battery for GPT3000/2000 & GTS220 series total stations.	\$217.00
<b>57262</b> TOP51741 BC-10B	Battery charger for GTS2B, 3B, 4 & external battery.	\$117.00
<b>15548</b> TOP51769 BC-19BR	Battery charger for GPT1003 & GTS210/200 series total stations. CTS-2/1 & DL-100 series total stations.	\$217.00
<b>50196</b> TOP60347 BC-27B	Battery charger for GPT8200/8000/6000/3000/2000 series and GTS800/600/220 series total stations.	\$235.00





Item	Description	FLT PRICE
<b>47913</b> PCRA00393	Automotive battery power cable to pig-tail with lug hardware and fuse.	\$21.00
<b>65018</b> PCRA00454	PDL base radio to Leica GPS receiver interface cable.	\$199.00
91683 PCRA00911	Antenna mount for PDL base station.	\$158.00
15700 PCRA00998	PDL rover to Leica GPS interface cable.	\$256.00



Item	Description	FLT PRICE
<b>55792</b> TDS148LTZCAB	Topcon/Sokkia instrument cable connects to most data collectors via RS232 serial port connection.	\$70.00
<b>58615</b> TDS148WLDCAB	Leica instrument cable connects to most data collectors via RS232 serial port connection.	\$70.00
<b>69126</b> TDS48PC9P	HP48 instrument cable connects HP48 to PC via RS232 serial port connection.	\$29.95
37461 TDSWILDCABLE	Leica instrument cable connects Leica instruments to HP48 data collector.	\$78.00

# MEASURING WHEELS



The Rolatape wheels handle the toughest measuring needs for heavy construction and large commercial operations. The professional series features all steel construction, a five digit counter, and wheel stand. Wheel circumference: 4' for model 400, 400M, 415; 1 meter for 415M; 3' for 300. 5 yr warranty.

Item	Description	MSRP	FLT PRICE
58820 ROL400	Model 400 (feet)	\$148	\$129.95
98356 ROL400M	Model 400 (meters)	\$160	\$139.95
84655 ROL415	Model 415 (feet/inches)	\$151	\$132.95
49332 ROL415M	Model 415 (meters/dm/cm)	\$165	\$144.95
53941 ROL300	Model 300S (feet)	\$118	\$96.95

#### **MM SERIES**

The MM-30 series wheels have a circumference of 3 ft. The lightweight materials and quality construction makes the MM-30 series the perfect choice for medium sized jobs. The MM-12 is extremely portable and gives accurate measurements on any smooth surface. Wheel circumference of 1 ft. 3 year warranty.

Item	Description	MSRP	FLT PRICE
63291 ROLMM30	MM30 measure master series (feet/inches)	\$104	\$79.95
40432 ROLMM12	MM12 measure master series (feet/inches)	\$45	\$34.95



#### **KESON ROADRUNNER**

Keson's Roadrunner 300 and 400 series wheels are very durable and built for commercial applications. Each wheel features all steel construction, a five digit counter, and wheel stand. The 318 series is a lighter version of the 300 series, more compact, and measures to the nearest inch.

Item	Description	MSRP	FLT PRICE
53491 KESMP401	400 series (feet)	\$140	\$109.95
25198 KESMP301	300 series (feet)	\$119	\$99.95
53941 KESRR318N	318 series (feet/inches)	\$70	\$62.95



#### DIGIROLLER PLUS II

With the Digiroller Plus II you can obtain fast, accurate, measurements for on-site linear, area and volume estimates. Built-in functions calculates and stores square footage and cubic volumes in Feet-Inches, Decimal Feet, Inches, Yards, Meters and Acres.

Item	Description	MSRP	FLT PRICE
21570 CAL6425	Digiroller Plus II	\$170	\$152.95



CAL6425

KESMP301

## METAL LOCATORS

## **CST**/berger

#### **MAGNA-TRAK 200 MAGNETIC LOCATOR**

Magnetic Locators locate ferrous objects underground such as PK or Mag nails, iron pipes, valve covers, cast iron water and gas lines, as well as energized power lines.

- LCD digital readout and bar graph display allow you to locate visually
- · Audio tone allows for pinpoint accuracy, even in congested search areas
- One-handed operation. Membrane switch lets you adjust volume and sen sitivity with the same

hand that holds the locator. Membrane seals out dirt and moisture.

- · Low battery indicator
- · Indicator cautions when detecting a power line
- Lightweight (3 lbs)
- Soft padded case included and 3 year warranty





>>> CST Manna-Trak 200 Series = >>>





Making Locating Easier Since 1953

#### SCHONSTEDT GA-52Cx MAGNETIC LOCATOR

Our best selling locator! Schonstedt locators have been setting the standard for reliability and dependability for over 30 years. The GA-52Cx provides an audio signal that peaks in frequency when the locator's tip is held over the

- · Rugged metal housing
- Only two controls (on/off sensitivity and volume)
- Five sensitivity settings
- Hard carrying case
- 7 year warranty





Item	Description	MSRP	FLT PRICE
76021 SCHGA52	Schonstedt GA-52Cx magnetic locator	\$885	\$679.95

#### SCHONSTEDT GA-72Cd MAGNETIC LOCATOR

The GA-72Cd also has easy-to-read digital and bar graph indicators which displays signal strength and polarity. Once you have located a target using the audio signal, the digital readout and polarity indicators will help you to visually pinpoint the target and, in some instances, even determine its orientation.

- Five sensitivity settings
- 5 year warranty
- · Hard carrying case
- Audio and visual indicators
- · Battery indicator

Item	Description	MSRP	FLT PRICE
27467 SCHGA72	Schonstedt GA-72Cd magnetic locator	\$1015	\$852.95

#### SCHONSTEDT 92XTi MAGNETIC LOCATOR

Fifteen months of research, design and testing has produced the new

the most portable magnetic locator ever made. The 92XTi provides an audio signal that peaks in frequency when the locator's tip is held over the target.

- Includes holster to carry on your hip
- Ergonomic design, one hand operation
- Detects ferrous objects up to 16' underground
- Operates in extended or retracted modes
- Battery indicator
- Lightweight (2.4 lbs)
- 7 year warranty

Item	Description	MSRP	FLT PRICE
82200 SCH92XTi	Schonstedt GA-72Cd magnetic locator	\$1015	\$852.95











## **TAPES**

## **CST**/berger

#### **PRO SERIES FIBERGLASS TAPES**

The Pro-Series tapes are waterproof and made with non-woven PVC-coated fiberglass of superior durability. Markings are not affected by casual contact with paint thinner, gasoline or similar fluid. PVC face will not collect dust. Mildew and stains wash off with soap and water. 1/2" tape width. 3:1 ratio rewind

Item	Description	MSRP	FLT PRICE
22950 CHI74-Y1001	100' ft/10ths	\$25	\$15.95
34946 CHI74-Y1008	100' ft/inches	\$25	\$15.95
86370 CHI74-Y1001M	30m 10ths/metric (2 sided)	\$25	\$15.95
31342 CHI74-Y2001	200' ft/10ths	\$49	\$29.95
25250 CHI74-Y2008	200' ft/inches	\$49	\$29.95
46683 CHI74-Y1651M	50m10ths/metric (2 sided)	\$49	\$30.95
11069 CHI74-Y3001	300' ft/10ths	\$65	\$43.95
18774 CHI74-Y3008	300' ft/inches	\$65	\$43.95
47160 CHI74-Y3001M	100m 10ths/metric (2 sided)	\$65	\$46.95



## **Lufkin**®

#### **Hi-Viz LINEAR FIBERGLASS TAPES**

Lufkin's Hi-Viz® Linear fiberglass tapes are waterproof and designed such that dirt does not collect in the case. The lightweight open reel is easy to handle and rewind. 1/2" tape width. 1:1 ratio rewind

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Item	Description	MSRP	FLT PRICE	
12752 LFK1706	100ft ft/inches	\$25	\$16.95	
91218 LFK1706D	100ft ft/10ths	\$25	\$16.95	
95619 LFKHY1730CM	30m metric	\$25	\$17.95	
38662 LFK1708	200ft ft/inches	\$65	\$26.95	
38760 LFK1708D	200ft ft/10ths	\$65	\$26.95	
15641 LFKHY1750CM	50m metric	\$65	\$26.95	
56566 LFK1709	300ft ft/inches	\$70	\$42.95	
20552 LFK1709D	300ft ft/10ths	\$70	\$42.95	

.9 1 F .1	ft/10ths
11 1 F TENSON	ft/inches
5 26 27 28 29 30 3	metric

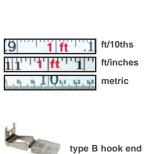


## **CST**/berger

#### **PRO-LINE NYLON CLAD STEEL TAPES**

The Pro-Line tapes are an indispensable measuring tool designed for the precision-minded user. Open reels feature new rubber reinforced, rounded design, large soft rubber grip handle, and new color combos. 1/2" tape width. Type A end (loop end) zero begins 10" from end of loop. Type B end (hook end) zero begins at hook. **3:1 ratio rewind** 

Item	Description	MSRP	FLT PRICE
83032 CHI82-10010A	100ft 10ths/100ths; type A loop end	\$54	\$26.95
84802 CHI82-10010B	100ft 10ths/100ths; type B hook end	\$54	\$26.95
84593 CHI82-10080B	100ft inches; type B hook end	\$54	\$26.95
46274 CHI82-30MA	30m metric; type A loop end	\$49	\$34.95
57544 CHI82-20010A	200ft 10ths/100ths; type A loop end	\$89	\$47.95
65474 CHI82-20010B	200ft 10ths/100ths; type B hook end	\$89	\$47.95
54866 CHI82-20080B	200ft inches; type B hook end	\$89	\$47.95
16185 CHI82-50MA	50m metric; type A loop end	\$84	\$49.95
23145 CHI82-30010B	300ft 10ths/100ths; type B hook end	\$135	\$79.95
34307 CHI82-30080B	300ft inches; type B hook end	\$135	\$79.95
83244 CHI82-100MA	100m metric; type A loop end	\$139	\$79.95



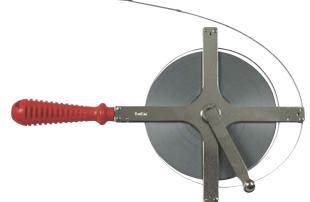


## Lufkin®

#### PEERLESS CHROME CLAD TAPES

The Chrome Clad blade is designed for engineers and surveyors who prefer a 4-arm reel. The blade is 1/4"/6mm wide and .016" thick and removes easily from the reel. The reel is nickel plated, 4-arm with rollers in each arm for smooth winding.

·			
Item	Description	MSRP	FLT PRICE
61777 LFKC1276	1/4" x 100' ft/inches/8ths	\$259	\$191.95
67869 LFKC1276D	1/4" x 100' ft/10ths/100ths	\$259	\$191.95
85447 LFKC1278	1/4" x 200' ft/inches/8ths	\$465	\$341.95
44307 LFKC1278D	1/4" x 200' ft/10ths/100ths	\$465	\$341.95



#### **SERIES NYCLAD STEEL TAPE**

Steel blade will not stretch under normal use and the blade features a durable nylon coating to resist wear under extreme conditions. 3-to-1 blade retraction saves time in the field and Hi-Viz orange case is easy to find on the job site

the field and the viz drange case is easy to find off the job site.				
Item	Description	MSRP	FLT PRICE	
94853 LFKPS1806	100ft ft/inches/8ths	\$72	\$42.95	
70277 LFKPS1806D	100ft ft/10ths/100ths	\$72	\$42.95	
71243 LFKPS1808D	200ft ft/10ths/100ths	\$92	\$69.95	
20941 LFKPS1809D	300ft ft/10ths/100ths	\$146	\$119.95	

#### **SUPER HI-WAY NUBIAN TAPES**

The Nubian blade is 5/16" wide with black background and raised markings. One foot increments except last foot graduated in 10ths/100ths. Reel sold separately.

Item	Description	MSRP	FLT PRICE
87939 LFKO9100B	5/16" x 100' Super Hi-Way Nubian	\$200	\$146.95
62061 LFK31-100	Reel for 100' tapes	\$89	\$65.95
19395 LFKO9200B	5/16" x 200' Super Hi-Way Nubian	\$384	\$282.95
11645 LFK31-200	Reel for 200' tapes	\$175	\$127.95

#### **2000 SERIES POWER TAPES**

The lightweight, high-strength, chrome finished case is designed to fit perfectly in the hand. The toggle lock is positioned for convenient operation and holds the blade securely in any position.

Item	Description	MSRP	FLT PRICE
21017 LFK2133D	33' x 1", ft 10ths, 100ths, inches	\$32	\$16.95
95823 LFK2133	33' x 1", ft inches	\$32	\$16.95
12012 LFK2338CME	8m x 3/4", inches, metric	\$28	\$14.95
75947 LFK2312D	12' x 3/4", ft 10ths, 100ths, inches	\$20	\$11.95

#### **HI-VIZ 1000 SERIES POWER TAPES**

Hi-Viz power tapes features a bright case that is lightweight and extremely strong. The toggle lock is positioned for convenient operation and holds the blade securely.

Item	Description	MSRP	FLT PRICE
13958 LFKHV1425D	25' x 1", ft 10ths, 100ths, inches	\$22	\$11.95
36088 LFKHV1425ED	25' x 1", ft 10ths, 100ths	\$22	\$11.95
86742 LFKHV1048CM	8m x 25mm, metric	\$25	\$13.95
96089 LFKHV1048DM	8m x 25mm, 10ths, 100ths, metric	\$25	\$13.95
93259 LFKHV1410CME	33' x 1", ft inches, metric	\$25	\$15.95
61332 LFKHV1433DM	33' x 1", ft 10ths, metric	\$25	\$15.95

#### **PRO-SERIES POWER TAPES**

1" x 25' Pro Series 3000 power return tape features a Ny-Clad® blade coating that extends blade life 5 times longer than standard blades and patented end hook lasts 10 times longer than ordinary end hooks.

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Item	Description	MSRP	FLT PRICE	
55246 LFKPS3425D	25' x 1", ft, 10ths, 100ths, inches	\$33	\$14.95	
41808 LFKPS3425	25' x 1", ft, inches	\$33	\$14.95	

## **CST**/berger

#### **PRO-SERIES POWER TAPES**

The Pro-Series pocket tapes features a smooth gliding action with a positive thumb lock and release. Graduations are printed in large easy-to-read black numerals with the foot marking in red.

Item	Description	MSRP	FLT PRICE
67043 CHI78-B251	25' x 1", ft, 10ths, 100ths	\$12	\$7.95

#### **ENGINEER'S SCALE WOOD RULES**

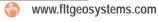
Item	Description	MSRP	FLT PRICE
13332 LFK1066D	6ft 10ths, 100ths, inches	\$21	\$14.95
91634 LFK1066DM	6ft 10ths, 100ths, metric	\$21	\$16.95

#### **ARCHITECT'S STEEL TAPE**

Item	Description	MSRP	FLT PRICE
35455 LFKW393	1/4" X 5' 1/4, 1/8 scale	\$29	\$21.95

#### **ARTISIAN NUBIAN CLAD DIAMETER TAPES**

Item	Description	MSRP	FLT PRICE
96999 LFK120TP	3/8" X 20' Artisian tape with tree hook inches	\$86	\$76.95
59936 LFK120P	3/8" X 20' Artisian tape inches	\$86	\$76.95



## TAPES





















# **DISTOS**



#### Leica DISTO A2

This compact model is designed for indoor applications. Small and compact, the A2 fits into every pocket. Shortcut keys for addition, subtraction, area and volume calculation make measuring fast and reliable.

#### FEATURES:

- -Measuring range of 0.1 ft to 197 ft.
- -Accuracy +/- 3 mm (1/8")
- -Fits into every pocket
- -Stakeout function allows you to stake-out equal distances

Item	Description	MSRP
53287 LCA750701	DISTO A2 +/- 1/8"	\$229.00

#### Leica DISTO A3

The built in Power Range Technology allows you to measure 325 ft enabling you to use it for all indoor applications and a few applications outdoors. In addition to shortcut keys are minimum and maximum measurement functions which enable horizontal and diagonal measurements.

#### **FEATURES:**

- -Measuring range of 0.1 ft to 325 ft.
- -Accuracy +/- 3 mm (1/8")
- -Power Range Technology
- -Continuous measurement feature

Item	Description	MSRP
76331 LCA740688	DISTO A3 +/- 1/8"	\$299.00

#### Leica DISTO A5

A wide range of additional features such as an integrated 2x viewfinder, trigonometry functions, and more powerful laser make the A5 the most popular Disto sold today. Designed for both indoor and outdoor applications.

#### **FEATURES:**

- -Measuring range of 0.1 ft to 650 ft.
- -Accuracy +/- 1.5 mm (1/16")
- -Measure inaccessible heights and widths using flip-out end piece enabling you to measure corners and constricted areas.

Item	Description	MSRP
69949 LCA740689	DISTO A5 +/- 1/16"	\$449.00

#### Leica DISTO A6

With the Disto A6, data can be electronically transferred to a Pocket PC or laptop via bluetooth connection. Disto transfer software (included) enables you to transfer values to Excel, Word, AutoCAD or other programs. Designed for both indoor and outdoor applications.

#### **FEATURES:**

- -Measuring range of 0.1 ft to 650 ft.
- -Accuracy +/- 1.5 mm (1/16")
- -Bluetooth capability
- -Built-in 2x viewfinder

Item	Description	MSRP
79363 LCA751962	DISTO A6 +/- 1/16"	\$649.00

#### Leica DISTO A8

The digital viewfinder and integrated tilt sensor make the Disto A8 an innovation. The tilt sensor not only indicates angles, but also horizontal distances and indirect height measurements. The digital viewfinder makes it easy to find your target. Designed for both indoor and outdoor applications.

#### **FEATURES:**

- -Measuring range of 0.1 ft to 650 ft.
- -Accuracy +/- 1.5 mm (1/16")
- -Integrated tilt sensor
- -Digital viewfinder finder with 3x zoom

Item	Description	MSRP
61905 LCA740692	DISTO A8 +/- 1/16"	\$995.00

Call for the **BEST QUOTE** Today

The Disto A2 is very ergonomical and fits into every pocket.



Makes measured values easy to read, even in the dark.



Horizontal alignment made easy, such as for electrical sockets



Power Range technology Measure distances up to 325 ft without a target plate.



The integrated optical viewfinder enables long-distance measurements.



The built in sensor automatically determines the correct zero point.



Forget paper and pen-



Disto transfer Transfers measured data to Excel and AutoCAD.



Using the tilt sensor and viewfinder heights can be determined indirectly

















Tilt sensor Any tilt or slope can be measured by placing the housing on the slope







## LASER TOOLS

#### TruPulse 200 Laser

A low-cost workhorse for professional measurement. The TruPulse 200 reflectorless laser rangefinder incorporates an integrated tilt sensor for height measurements, through-the-lens targeting, in-scope data display and advanced targeting modes to easily provide accurate distance and height data. The integrated tilt sensor provides accurate height measurements, even from the steepest angles, and the unit offers a choice between Closest, Farthest, Continuous or Filter modes for improved target acquisition. It calculates horizontal, vertical and slope distance with a single press of the fire button. The Trupulse can measure from 0 to 3280 ft (6600 ft with reflective target) with an accuracy of +/- 1 ft.

Item	Description	MSRP	FLT PRICE
77071 LTI7005055	TruPulse 200	\$749	\$699.00



#### PLS<sub>5</sub>

Lay out reference points faster than traditional, labor intensive methods. The PLS5 generates 5 perfectly square beams: up, down, left, right, out. The PLS5 system includes: PLS5 laser unit, magnetic wall bracket, pendulum target, floor stand, compact carrying case, operating manual, 1 yr warranty.

Item	Description	MSRP	FLT PRICE
82712 PLS5	PLS 5 laser level	\$495	\$329.95

#### PLS<sub>3</sub>

Lay out reference points faster than traditional, labor intensive methods. The PLS3 generates 3 perfectly square beams: up, down, and out. The PLS3 system includes: PLS3 laser unit, wall bracket, carrying pouch, floor stand, compact carrying pouch, operating manual, 1 yr warranty.

Item	Description	MSRP	FLT PRICE
22423 PLS3	PLS 3 laser level	\$265	\$184.95

#### **PLS 180**

Lay out reference points faster than traditional, labor intensive methods. The PLS180 generates either a perfectly plumb or horizontal beam or both for a full 180 degrees. The PLS180 system includes: PLS180 laser unit, carrying pouch, magnetic wall bracket, operating manual, 1 yr warranty.

Item	Description	MSRP	FLT PRICE
88089 PLS180	PLS 180 laser level	\$369	\$299.95

#### **PLS 90E**

The PLS90E is a precise 90 degree layout tool. Fully self leveling, the PLS90E is a unique laser level. No more 3-4-5. Use your PLS90E and our universal base-tripod adapter for fast, accurate and dependable square layout for flooring-tile, framing (metal stud or wood), concrete foundations, pads and more. The HVR500 package includes the laser, carrying case, RC500 remote control, ceiling bracket, laser detector, and 1 yr warranty.

#### Specifications:

- -Working range of 250'
- -Self-leveling range of 5 degrees
- -Accuracy: 1/8" @100'

Item	Description	MSRP	FLT PRICE
91194 PLS60512	PLS 90E 90 degree layout tool	\$495	\$349.00

#### TRIPOD ADAPTER

Adapts 1/4" x 20 thread found on all PLS and Leica DISTO products to a standard 5/8" x 11 thread tripod.

Item	Description	MSRP	FLT PRICE
91750 SPYQ101703	1/4" x 20 thread to 5/8" x 11 adapter	\$15	\$12.95

#### PLS HVR500

The PLS HVR 500 is a compact, mid range rotary laser designed for light commercial, residential, and remodeling projects. It can be used in both the horizontal and vertical axis. The PLS HVR 500 is versatile for short and mid range layout with an accuracy of 1/8 inch at 100 feet. The HVR500 package includes the laser, carrying case, RC500 remote control, ceiling bracket, laser detector, and 1 yr warranty.

#### Specifications:

- -Working range of 500'
- -Self-leveling range of 5 degrees
- -Accuracy: 1/8" @100'

Item	Description	MSRP	FLT PRICE
61905 PLS60510	PLS HVR500 laser level package	\$695	\$579.95

Fax 954-462-4121





















# FLAGGING & FIELD BAGS



#### **TEXAS FLAGGING**

Superior to ordinary "contractor" or "utility" grade flagging, "Texas" grade flagging is constructed of high quality PVC. Our vibrant colors are the brightest available and are UV stabilized to resist fading. Flagging is 1 3/16" wide, 12 rolls per box, 144 rolls per case. Solid colors are 300' in length. Glo colors are 150'.

Item	Description	Item	Description
42732 FLG1220	Red Glo	94613 FLG1201	Red
36051 FLG1222	Orange Glo	21029 FLG1202	Yellow
22239 FLG1206	Black	73155 FLG1203	Blue
53365 FLG1227	Blue Glo	91077 FLG1204	Green
24785 FLG1229	Pink Glo	61750 FLG1205	Orange
86928 FLG1234	Lime Glo	77166 FLG1207	White
82090 FLG1226	Yellow Glo	15047 FLG2202	Yellow/White
37536 FLG2201	Red/White striped	63648 FLG2204	Green/White striped
45590 FLG2203	Blue/White striped	79809 FLG2205	Orange/White striped
43157 FLG2206	Yellow/Black striped		
94944 FLG2229	Pink glo/White striped		

SOLID COLORS		
Quantity	Price/roll	
1-11 rolls	\$1.15	
12-143 rolls	\$1.05	
144+ rolls	\$0.99	
1441 10113	ψ0.33	

STRIPED COLORS		
Quantity	Price/roll	
1-11 rolls	\$1.59	
12+ rolls	\$1.49	



#### **WIRE STAKE FLAGS**

secured firmly to a wire 21" or 30" long. 100 flags/bundle. 10 bundles/box.

Item	Description	Item	Description
87532 PRS2321 B GLO	2" x 3" x 21" Blue glo	90455 PRS4530 B GLO	4" x 5" x 30" Blue glo
44635 PRS2321 BLUE	2" x 3" x 21" Blue	31138 PRS4530 BLACK	4" x 5" x 30" Black
76963 PRS2321 GREEN	2" x 3" x 21" Green	50070 PRS4530 BLUE	4" x 5" x 30" Blue
27695 PRS2321 L GLO	2" x 3" x 21" Lime glo	61389 PRS4530 GREEN	4" x 5" x 30" Green
83233 PRS2321 0 GLO	2" x 3" x 21" Orange glo	82104 PRS4530 L GLO	4" x 5" x 30" Lime glo
27485 PRS2321 ORANGE	2" x 3" x 21" Orange	18881 PRS4530 O GLO	4" x 5" x 30" Orange glo
93362 PRS2321 P GLO	2" x 3" x 21" Pink glo	80239 PRS4530 ORANGE	4" x 5" x 30" Orange
51273 PRS2321 PURPLE	2" x 3" x 21" Purple	14293 PRS4530 P GLO	4" x 5" x 30" Pink glo
19019 PRS2321 Red	2" x 3" x 21" Red	65021 PRS4530 RED	4" x 5" x 30" Red
54223 PRS2321 White	2" x 3" x 21" White	54796 PRS4530 White	4" x 5" x 30" White
54278 PRS2321 YELLOW	2" x 3" x 21" Yellow	58670 PRS4530 Yellow	4" x 5" x 30" Yellow

## AS LOW AS **\$5** 45 PER BUNDLE

21" STAKE FLAGS			
Quantity FLT Price			
1-9 bundle	\$5.95		
10+ bundles	\$5.45		

30" STAKE FLAGS		
Quantity	FLT Price	
1-9 bundle	\$7.45	
10+ bundles	\$6.95	



#### **AERIAL TARGETS AND PANELING**

Presco 48" aerial targets use reinforced grommets allowing you to secure it a point of reference to mark a target position for a fly-over. Presco 24" x 300' aerial paneling has one side black and the other white or each side black and white. These panels are constructed of heavy weight material and can be reused.

Item	Description	MSRP	FLT PRICE
59215 PRS48 AERIAL	48" "Iron cross" aerial target	\$15	\$10.95
53294 PRS24 AERIAL	24" wide white and black aerial paneling	\$54	\$48.95
64773 PRS24 BLACK	24" wide black aerial paneling	\$42	\$39.95
56600 PRS24 WHITE	24" wide white aerial paneling	\$42	\$39.95

#### **BARRICADE TAPE**

Item	Description	MSRP	FLT PRICE
41322 PRSCAUTION 300	300' Barricade tape	\$13	\$4.95





Seco and Crain bags & cases are made to exacting standards from heavy-duty, water-repellent, 1000 denier nylon. Prism bags are heavily padded for prisms, tribrachs, and prism/target assemblies. Crain field bags and stake bags are constructed with extremely durable, 600 denier laminated backing, polyester fabric. This material resists sunlight, mildew, abrasion, and moisture. All Crain sewn products are made in the USA.

Item	Description	MSRP	FLT PRICE
85905 FLTPRISM BAG	Triple prism bag by Crain	\$35	\$20.95
79098 SEC8130	Extra tall prism bag by Seco	\$58	\$46.95
38885 MND91453	19" stake bag	\$33	\$25.95
61218 MND91454	23" stake bag	\$35	\$27.95
50492 MND91456	34" lath bag	\$26	\$21.95
80696 MND91457	47" lath bag	\$30	\$24.95
77503 MND91469	21" wire stake bag	\$13	\$9.95
90718 MND91470	30" wire stake bag	\$14	\$10.39



Orders 800-327-0775



MND91456



# MARKING PAINT



#### "ORIGINAL WATER BASE" INVERTED PAINT

Seymour paint colors have been designed with the end user in mind. Improved colors retain their vivid color for a longer period of time, even in direct sunlight. Net wt. 17 oz. of paint in a 20 oz. capacity can. 12 cans/case.

Item	Description	Item	Description
58934 SEY20-679	Pink fluorescent	30767 SEY20-671	Red
87059 SEY20-655	Safety green	27919 SEY20-663	Black
74741 SEY20-657	Orange fluorescent	88143 SEY20-678	HI-VIZ yellow
75114 SEY20-653	Precaution blue	88069 SEY20-688	Green fluorescent
55105 SEY20-631	Clear	24078 SEY20-631	Red fluorescent
91051 SEY20-652	White	27350 SEY20-669	Blue fluorescent

SEYMORE PAINT	
Quantity	Price/roll
1 can	\$2.95
12 cans	\$2.67
72 cans	\$2.53
144 cans	\$2.40





#### "SOLVENT BASED" INVERTED PAINT

Aervoe's Survey Marking Paint is a superior upside down marking paint that is designed for survey marking. It provides the best quality paint in terms of color visibility and retention, durability, and a lasting mark of up to six months. Net wt. 17 oz. of paint in a 20 oz. capacity can. 12 cans/case.

Item	Description	Item	Description
67162 AER200	Clear	24004 AER212	Purple
39735 AER201	Red	47303 AER220	Red fluorescent
36816 AER202	Yellow	13309 AER222	Orange fluorescent
19316 AER203	Blue	13047 AER224	Green fluorescent
37399 AER204	Green	20934 AER226	Yellow fluorescent
83955 AER206	Black	87923 AER227	Blue fluorescent
47684 AER207	White	79673 AER229	Pink fluorescent

SEYMORE PAINT			
Quantity	Price/roll		
1 can	\$3.25		
12 cans	\$2.98		
72 cans	\$2.79		



#### **INVERTED PAINT MARKING APPLICATORS**

Item	Description	MSRP	FLT PRICE
23262 AER244	Hand spot marking applicator	\$15	\$11.95
37618 AER245	36" rolling marking applicator	\$24	\$20.95



#### **SPRAY CAN HOLDER**

Item	Description	MSRP	FLT PRICE
78243 SEC8098-00-ORG	Canvas spray can holder	\$11	\$8.95







# FIELD SUPPIES

## **CST**/berger

#### **PLUMB BOB SHEATHS**

Heavily stitched and riveted for long life, these sheaths are made of top grain saddle leather.

Item	Description	MSRP	FLT PRICE
80995 CHI11-556	Leather sheath for 8 to 12 oz. bobs	\$6.50	\$4.95
80492 CHI11-557	Leather sheath for 14 to 16 oz bobs	\$5.95	\$5.75
37519 CHI11-558	Leather sheath for 24 to 32 oz. bobs	\$9	\$6.95

#### **BRASS PLUMB BOBS**

Precision machined for perfect balance and lacquered for a lasting finish. Includes a hardened steel point with ASA thread.

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Item	Description	MSRP	FLT PRICE		
60251 FLT 8 OZ BOB	8 oz plumb bob	\$18	\$13.49		
46068 FLT 12 OZ BOB	12 oz plumb bob	\$20	\$13.95		
27051 FLT 14 OZ BOB	14 oz plumb bob	\$21	\$14.95		
52848 FLT 16 OZ BOB	16 oz plumb bob	\$22	\$15.49		
53830 FLT 18 OZ BOB	18 oz plumb bob	\$24	\$16.95		
42130 FLT 24 OZ BOB	24 oz plumb bob	\$30	\$22.95		
96210 FLT 32 OZ BOB	32 oz plumb bob	\$39	\$29.95		
31092 FLT 80 OZ BOB	80 oz plumb bob	\$99	\$89.95		







#### **BRASS PLUMB BOB CAPS & POINTS**

Precision machined for perfect balance and lacquered for a lasting finish. Includes a hardened steel point with ASA thread.

Item	Description	MSRP	FLT PRICE
63886 CHI11-55A	Interchangeable plumb bob cap	\$1.80	\$1.49
37890 FLTP.B. POINT	Interchangeable plumb bob points	\$1.20	\$1.09
22056 CHI65-1507	Plumb bob hook and point assembly	\$16	\$14.95

#### **PLUMB BOB TARGETS**

Item	Description	MSRP	FLT PRICE
80414 CHI11-425	4" x 4" stick-on plumb bob target	\$1.30	\$0.99
49073 CHI11-431	2" x 4" plastic notched target for plumb bob line	\$1.70	\$1.19

#### **PAPER TARGETS**

These org/wht adhesive targets are 2" x 3.5" and are often used as reference points.

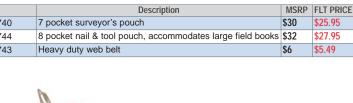
Item	Description	MSRP	FLT PRICE
64041 SEC9000-02	Stick-on targets 25/pack	\$5.95	\$4.95



### **TOOL POUCHES**

Heavily stitched and riveted for long life, these sheaths are made of top grain saddle leather

Item	Description	MSRP	FLT PRICE
49306 CHI11-740	7 pocket surveyor's pouch	\$30	\$25.95
75474 CHI11-744	8 pocket nail & tool pouch, accommodates large field books	\$32	\$27.95
37519 CHI11-743	Heavy duty web belt	\$6	\$5.49





12' Gammon Reel



**GAMMON REELS** 

www.fltgeosystems.com

An aid to set up and deploy a clean, accurate plumb. Steel clock spring zips the string back into the case.

Item	Description	MSRP	FLT PRICE
36036 GAMREEL	6.5' gammon reel	\$10.75	\$7.95
87153 GAMCONSTRUCTION	12' gammon reel	\$13.75	\$9.95
61688 GAM015	Magnetic case for reel	\$12.75	\$10.95







#### CST/berger

#### **GAMMON CORD**

Heavily stitched and riveted for long life, these sheaths are made of top grain saddle leather.

Item	Description	MSRP	FLT PRICE
70699 GAMCORD-R	Red glo gammon cord	\$5.50	\$4.29
22680 GAMCORD-Y	Yellow glo gammon cord	\$5.50	\$4.29

#### SUUNTO REPLACING LUCK.

Item	Description	MSRP	FLT PRICE
	Precision compass. Durable plastic case with sighting eye-		
<b>49967</b> SUNKB-20/360R	piece. Azimuth 0-360 deg model graduated in 1 degree units.	\$70	\$62.95
	Optical reading of bearing to target (and reverse).		
	Precision compass. Machined aluminum housing with sight-		
<b>93746</b> SUNKB-14/360Q	ing eyepiece. Quadrant 0-90-0 deg. graduated in 1 deg.	\$155	\$116.95
	units.		
	Precision compass. Azimuth 0-360 deg. model graduated in		
<b>76842</b> SUNKB-14/360R	1/2 deg. units with optical reading of bearing to target (and	\$155	\$116.95
	reverse). Machined aluminum housing with sighting eyepiece.		
	Precision clinometer. Scales: 0 +/- 90 deg. graduated in 1		
20391 SUNPM-5/360	deg. units. 0 +/- 150% (1% units). Machined aluminum hous-	\$165	\$157.95
	ing with sighting eyepiece.		

# FIELD SUPPLIES









#### CST/berger **MAGNIFYING HAND LEVELS**

Item	Description	MSRP	FLT PRICE
67035 ("HIT /-630	8" 5x level with 1:100 stadia lines, solid brass construction. 2x magnification of level bubble	\$112	\$89.95
43129 (CHI17-631	6" 2x level with internal level bubble. Padded case included.	\$63	\$48.95



#### **MAGNIFYING HAND LEVEL**

Item		Description	MSRP	FLT PRICE
<b>73040</b> SEC42	2000	The industry standard. Brass 6" 2x level with enclosed vial. Padded case included.	\$104	\$83.95

#### **DOUBLE RIGHT ANGLE PRISM**

Permits stepping off angles of 90 and 180 degrees with a center lens which permits foresight viewing. Slot in handle accommodates plumb bob cord. Leather case included

in oracour					
Item	Description	MSRP	FLT PRICE		
<b>42795</b> SEC4900-00	Double right angle prism	\$90	\$75.95		

REDIMARK



CHI17-630









#### **DIXON PERMANENT MARKERS**

Item	Description	MSRP	FLT PRICE
89624 DXN8717	Black redimarkers 12/box	\$23.40	\$14.95
60665 DXN8711	Red redimarkers 12/box	\$23.40	\$14.95

#### **DIXON LUMBER CRAYONS**

Item	Description	MSRP	FLT PRICE
63304 DXN49400	Black lumber crayon 12/box	\$9.60	\$6.95
36060 DXN52112	Blue lumber crayon 12/box	\$9.60	\$6.95
94820 DXN52600	Pink glo lumber crayon 12/box	\$9.60	\$6.95
54833 DXN52012	Red lumber crayon 12/box	\$9.60	\$6.95
55358 DXN49600	Yellow lumber crayon 12/box	\$9.60	\$6.95
75522 DXN00500	Lumber crayon holder	\$5.15	\$4.95





CHISEL TIP

Smearproof
 AP Certified







# FIELD SUPPLIES

#### **IDEAL MARKERS**

Item	Description	MSRP	FLT PRICE
29424 FLTIDEAL	Patented valve action indelible black marker w/ replaceable tips	\$2.70	\$2.39
29721 FLTTIP	Replaceable tips for Ideal markers. 12/pkg	\$7.05	\$5.95

#### SANFORD SHARPIE MARKERS

Item	Description	MSRP	FLT PRICE
54156 SAN15001	Sanford Sharpie king size. Each	\$2.29	\$1.79



#### **CONCRETE SCRIBE**

Item	Description	MSRP	FLT PRICE
98809 FLTCONCRETE SCR	Premium scribe for etching concrete	\$5.00	\$4.49



#### **TALLY COUNTER**

Four digit counter registers up to 9999; return numbers to zero with a twist of the reset knob. An audible click signals the count assuring a registered count without having to view the counter.

Item	Description	MSRP	FLT PRICE
10836 CHI30-100	4-digit tally counter	\$12.80	\$10.95

#### **CHAINING PINS**

Chaining pins have painted red and white stripes to improve visibility and resist corrosion.

Item	Description	MSRP	FLT PRICE
14598 CHI04-501	Chaining pins (set of 11)	\$26.00	\$19.95
42329 CHI04-501-SINGLE	Single chaining pin	\$2.15	\$1.95
72651 CHI04-511	Carrying ring for chaining pins	\$11.00	\$9.95

#### **FIBERGLASS PROBE**

Protection against possible electrical shock when working around buried electrical lines. T-handle has high density nylon cover. Shaft is 48" long, 1/2" dia. Steel tip measures 5/8" x 3/4".

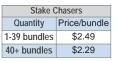
Item	Description	MSRP	FLT PRICE
22565 PEC77543	48" fiberglass probe	\$24.95	\$21.95

#### **STAKE CHASERS**

FLT

The original 6" Whisker® Flag Available in red, blue orange glo, pink glo, yellow, green. Specifically designed to resist the abuse of the road grader. Price is per bundle of 25. 40 bundles/box. (1000 chasers/box)

Item	Color	Item	Color
89576 SMCBLUE	Blue	21541 SMCPINK	Pink Glo
92338 SMCRED	Red	59617 SMCYELLOW	Yellow
18503 SMCGREEN	Green	89832 SMCORANGE	Orange Glo



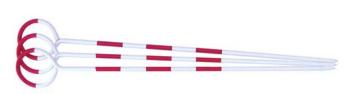


**FLTCONCRETE SCR** 











#### **SURVEYORS UMBRELLA**

Heavy twill fabric umbrella. Six rib construction with a spread of 64". Pointed three-piece 11/4" tubular steel pole measures 98". Steel is finished with a baked epoxy covered with a baked aluminum enamel to resist rust.

Item	Description	MSRP	FLT PRICE
98805 FLTUMBRELLA	Heavy twill surveyors umbrella	\$99	\$79.95
76565 FLTTRUR.P. TRIPOD	Heavy-duty umbrella/range pole tripod	\$90	\$69.95



For heavy pounding jobs. Forged, steel head with chamfered edges for added durability and 36" fiberglass handle for added strength.

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Item	Description	MSRP	FLT PRICE
92607 FLTSLEDGE-8	8 lb sledge hammer	\$22.00	\$19.75
35702 FLTSLEDGE-10	10 lb sledge hammer	\$25	\$22.45
57940 FLTSLEDGE-16	16 lb sledge hammer	\$35	\$31.45





## FIELD SUPPLIES



#### **SMART LEVELS**

Smart Tool levels are an indispensable aid for a wide variety of applications. The level will beep when level or plumb and maintain factory-perfect accuracy. It will read any angle in degrees, % slope, and pitch (in/ft: inches of rise per foot of run). Constructed of heavy duty aluminum and sealed with unbreakable ABS plastic, the Smart Level is guaranteed to last a lifetime.

Item	Description	MSRP	FLT PRICE
88503 SMR92288	24" Smart Level	\$154	\$138.95
38388 SMR92908	24" Smart Level case	\$24	\$21.95
36007 SMR92296	48" Smart Level	\$175	\$153.95
53495 JLTLC48	48" Smart Level hard case	\$14	\$12.95

#### **PLUMB ENGINEER'S HAMMER**

Double faced engineer's hammer is forged with high-quality steel, hardened and tempered for durability. The driving faces are precision machined and the Hickory hardwood handle will withstand heavy abuse.

Item	Description	MSRP	FLT PRICE
78620 PMB11-527	40 oz engineer's hammer	\$19.00	\$12.95
57030 PMB11-528	48 oz engineer's hammer	\$21.00	\$13.95
56581 PMB11-529	64 oz engineer's hammer	\$24.00	\$15.95

#### **ENGINEER'S MACHETE**

The Nicholson 24" polished machete features a high carbon steel blade for durability and a lacquer clear-coated blade to resist corrosion. The handle is made out of highimpact plastic with smooth contour and texture to improve grip.

Item	Description	MSRP	FLT PRICE
83840 NICMP12724	24" Nicholson Collins polished machete	\$10.50	\$9.95
30037 PLY460-24	24" Express machete	\$8.95	\$7.95

#### **LEATHER MACHETE SHEATH**

Item	Description	MSRP	FLT PRICE
55517 FLTMACH SHEATH	Leather machete sheath	\$20	\$17.95

#### **ACCUSHARP SHARPENER**

Item	Description	MSRP	FLT PRICE
73660 FLTACCUSHARP	Knife and machete sharpener	\$14	\$11.95

#### **MANHOLE HOOK**

Item	Description	MSRP	FLT PRICE
14058 FLTMANHOLE HOOK	26" Manhole hook	\$26	\$21.95

#### **REDTOP GAD**

Item	Description	MSRP	FLT PRICE
93981 RTGAD	Red top gad or bullpin	\$26	\$21.95

#### **FLAT BASTARD FILE**

Nicholson flat bastard cut file

Item	Description	MSRP	FLT PRICE
26757 NIC08737	12" Nicholson file	\$13	\$10.95
72124 NIC08832	14" Nicholson file	\$18	\$14.95

#### **HANSON STEEL SET**

Each stamp is placed in a separate compartment set in a plastic box. Letter Sets -Includes 26 letters (A-Z) plus an ampersand. Number Sets - Includes 9 stamps (0-9), invert the 9 for the 6

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Item	Description	MSRP	FLT PRICE	
62727 HSN20200	1/8" steel letter set	\$45	\$35.95	
68261 HSN20250	3/16" steel letter set	\$55	\$44.95	
64424 HSN20300	1/4" steel letter set	\$66.50	\$53.95	
99220 HSN20350	3/8" steel letter set	\$97.60	\$73.95	
10132 HSN20541	1/8" steel number set	\$15.25	\$11.95	
39630 HSN20561	3/16" steel number set	\$18.50	\$14.95	
47169 HSN20581	1/4" steel number set	\$23	\$17.95	
33983 HSN20601	3/8" steel number set	\$33	\$24.95	





















# FIELD SUPPLIES

## SOKKIA

#### SOKKIA BRASS SURVEY MARKERS

These premium brass markers are made of malleable alloy and accept hand stamping well.

Item	Description	MSRP	FLT PRICE
54747 SOK8134-03	2" flat	\$7.50	\$6.29
90591 SOK8134-06	2-1/2" flat	\$8.00	\$6.89
60183 SOK8134-08	3" flat	\$8.50	\$7.39
57699 SOK8134-13	2" domed	\$7.50	\$6.19
54923 SOK8134-16	2-1/2" domed	\$8.50	\$7.29
67759 SOK8134-18	3" domed	\$9.50	\$8.09

#### MARK-IT ALUMINUM REBAR MARKERS & MARKERS

Flat aluminum rebar markers with plastic insulators adhere easily and securely when installed by several strikes of a hammer. Pre-stamping is available at no charge.

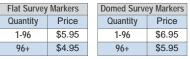
Item	Description	MSRP	FLT PRICE
48919 MRK1530	2" flat survey marker	\$3.45	\$2.29
38483 MRKRB4-1-1/2PI	1-1/2" flat top for 1/2" rebar	\$3.95	\$2.95
54296 MRKRB4-2PI	2" flat top for 1/2" rebar	\$3.95	\$3.29
49189 MRKRB5-1/2PI	1-1/2" flat top for 5/8" rebar	\$4.50	\$2.95
24199 MRKRB5-2PI	2" flat top for 5/8" rebar	\$4.50	\$3.29

#### CST/berger

#### **BRASS SURVEY MARKERS**

These brass markers have a machined finish and are a harder allov than the Sokkia markers. They are perfect for engraving, less suitable for hand stamping. Sizes of 1 3/8", 2", 2-1/2" available by special order.

Item Description	
39180 CHI20-703	3" flat head survey marker
23085 CHI20-707	3" domed head survey marker











MRK1530

MRK1555

#### PLASTIC IMPRINTED REBAR MARKERS

Up to two lines of information can be printed on the cap and allow approx 10 days for manufacturing. Markers are available in red, yellow, orange, and blue with black lettering. The minimum order quantity is 100 and additional caps must be ordered in multiples of 100.

MODEL	DESCRIPTION	PRICE
PLM-3	Fits 3/8" rebar or 1/2" pipe	\$0.27 ea
PLM-4	Fits 1/2" rebar or 3/4" pipe	\$0.28 ea
PLM-5	Fits 5/8" rebar or 1" pipe	\$0.30 ea
PLM-6	Fits 3/4" rebar	\$0.31 ea





#### **SURVEY NAIL MARKER**

Markers are available in brass, aluminum and colored aluminum (red, gold, green, blue, orange). Numbering and lettering are available is sizes of 1/16", 3/32", 1/8", 3/16", 1/4" and 1/2". Markers can have up to five lines with a center hole size of 1/8", 3/16", or 1/4".

STYLE	DESCRIPTION	ALUMINUM	COLORED ALUM	BRASS
90	3/4" marker	\$129.00 qty 500; \$179.00 qty 1000	\$149.00 qty 500; \$199.00 qty 1000	\$159.00 qty 500; \$219.00 qty 1000
85	1" marker	\$129.00 qty 500; \$179.00 qty 1000	\$149.00 qty 500; \$199.00 qty 1000	\$159.00 qty 500; \$219.00 qty 1000
91	1 1/8" marker	\$129.00 qty 500; \$179.00 qty 1000	\$149.00 qty 500; \$199.00 qty 1000	\$159.00 qty 500; \$219.00 qty 1000
137	1 1/4" marker	\$129.00 qty 500; \$179.00 qty 1000	\$149.00 qty 500; \$199.00 qty 1000	\$159.00 qty 500; \$219.00 qty 1000
81	1 1/2 marker	\$149.00 qty 500; \$209.00 qty 1000	\$169.00 qty 500; \$229.00 qty 1000	\$179.00 qty 500; \$309.00 qty 1000

#### **NAILS & SPIKES**

Item	Description	MSRP	FLT PRICE
68487 FLT40D	40D Bright Common Nail	\$1.40	\$0.99/lb
15316 FLT60D	60D Bright Common Nail	\$1.50	\$1.10/lb
51300 SOK8132-64	Galvanized 8" monument spike	\$2.09	\$1.99/ea
63872 FLTRR SPIKE-1	6" Railroad spike	\$1.50	\$0.86/ea







**FLTRR SPIKE** 

SOK8132-62

#### P.K. NAILS

Hardened masonry nails are cadmium plated to resist rust and increase visibility.

Item	Description	MSRP	FLT PRICE
78455 PK 3/4	Box of 100 3/4" x 1/8"	\$5.45	\$3.95
81756 PK 1	Box of 100 1" x 5/32"	\$9.00	\$5.95
31378 PK 1-1/4	Box of 100 1-1/4" x 3/16"	\$13.25	\$8.95
45948 PK 1-1/2	Box of 100 1-1/2" x 1/4"	\$18.00	\$11.95
69309 PK 2	Box of 100 2" x 1/4"	\$20.50	\$13.95
49408 PK 2-1/2	Box of 100 2-1/2" x 1/4"	\$25.00	\$16.95

#### **MAG NAILS**

ChrisNik's hardened MAG NAILS are becoming the preferred nail among surveyors. An induced magnetic field has quadrupled the detectability.

Item	Description	MSRP	FLT PRICE
40902 MAG 3/4	Box of 100 3/4" x 1/8"	\$5.45	\$3.95
80280 MAG 1	Box of 100 1" x 5/32"	\$8.50	\$5.95
58862 MAG 1-1/4	Box of 100 1-1/4" x 3/16"	\$11.39	\$8.95
59717 MAG 1-1/2	Box of 100 1-1/2" x 1/4"	\$15.00	\$11.95
41901 MAG 2	Box of 100 2" x 1/4"	\$18.50	\$13.95
87418 MAG 2-1/2	Box of 100 2-1/2" x 1/4"	\$22.75	\$16.95







#### **SURVEYORS (CUP) TACKS**

Steel, 3/4" length, bright finish and zinc plated. Indentation in head to guide plumb bob point. 1 Lb box (approximately 725 tacks).

Item	Description		FLT PRICE
40518 CRSTACK	Premium tacks	\$9.00	\$7.65
16599 TACKBALL	Tack ball with strap	\$8.95	\$6.95







## STAKES & SUPPLIES

#### FREE DELIVERY ON STAKE ORDERS OF \$350 OR MORE

For Monroe, Miami-Dade, Broward, Palm Beach, Martin, St. Lucie, Indian River, Collier, Lee Counties, Charlotte, Collier, Glades, and Hendry Counties

#### **WOOD STAKES**

Item	Description	Quantity	FLT PRICE
41054	1x2x6"	50 pieces	\$9.95
47678	1x2x8"	50 pieces	\$10.95
28339	1x2x12"	50 pieces	\$12.50
34544	1x2x18"	50 pieces	\$15.50
31832	1x2x24"	25 pieces	\$10.00
56248	1x2x36"	25 pieces	\$14.25
26002	1x2x48"	25 pieces	\$19.00
98260	1x2x60"	25 pieces	\$26.00
31099	1x2x72"	25 pieces	\$32.50



#### **WOOD HUBS**

Item	Description	Quantity	FLT PRICE
50065	2x2x6"	50 pieces	\$15.00
98784	2x2x8"	50 pieces	\$16.50
41099	2x2x12"	25 pieces	\$11.00
89765	2x2x18"	25 pieces	\$13.00
87042	2x2x24"	25 pieces	\$15.00



0% Quantity Discount on 40 or more bundles per order!!

#### **REBAR**

Item	Description	Quantity	FLT PRICE
65162	1/2 x 12"	10 pieces	\$8.40
27675	1/2 x 18"	10 pieces	\$12.00
14289	5/8 x 12"	10 pieces	\$9.60
72701	5/8 x 18"	10 pieces	\$14.40



#### **WOOD LATH**

_			
Item	Description	Quantity	FLT PRICE
33741	7/16x2x24"	50 pieces	\$10.00
56244	7/16x2x36"	50 pieces	\$18.75
50414	7/16x2x48"	50 pieces	\$23.50
76242	1x1x36"	50 pieces	\$19.00
21694	1x1x48"	50 pieces	\$22.00

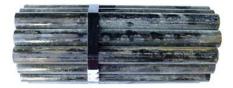


#### **IRON PIPE**

Item	Description	Quantity	FLT PRICE
55397	1/2x10"	25 pieces	\$28.00
91682	1/2x12"	25 pieces	\$30.00
62930	1/2x14"	25 pieces	\$32.00
16468	1/2x16"	25 pieces	\$36.00
63418	1/2x18"	25 pieces	\$39.00



Item	Description	Quantity	FLT PRICE
34405	3/4" per ft	25 pieces	call
20132	1" per ft	25 pieces	call
93395	11/4 per ft	25 pieces	call
36852	11/2" per ft	25 pieces	call



#### **CONCRETE MONUMENTS**

Item	Description	Quantity	FLT PRICE
61983	4x4x24"	each	\$10.00



#### **SLEDGE HAMMERS**

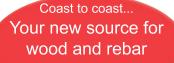
For heavy pounding jobs. Forged, steel head with chamfered edges for added durability and 36" fiberglass handle for added strength.

Item	Description	MSRP	FLT PRICE
92607 FLTSLEDGE-8	8 lb sledge hammer	\$24.50	\$23.95
86427 FLTSLEDGE-10	10 lb sledge hammer	\$26	\$25.95
57940 FLTSLEDGE-16	16 lb sledge hammer	\$35	\$34.95

#### **NAILS & RAILROAD SPIKES**

Item	Description	Quantity	FLT PRICE
74688	6" Spike	each	\$1.40
27175	6" Spike	100 lbs	\$160.00
68487	FLT40D	lb	\$0.99
15316	FLT60D	lb	\$1.09
92020	FLT80D	lb	\$1.39





fast delivery and superior service









# SAFETY EQUIPMENT



#### **CLASS 3 SURVEYOR'S SAFETY VEST**

ANSI compliant class 3 vest made of 100% polyester with a cool, breathable, mesh back. Solid fabric front. Vest has pockets on inside and out and comes with highly reflective stripes. Pictured in orange color.

Item	Description	MSRP	FLT PRICE
88176 MUT88100-103	Class 3 mesh back with sleeves, size L	\$36.50	\$31.95
42102 MUT88100-104	Class 3 mesh back with sleeves, size XL	\$36.50	\$31.95



#### **CLASS 2 SURVEYOR'S SAFETY VEST**

Our most popular vest! ANSI compliant class 2 vest made of 100% polyester with a cool, breathable, mesh back. Solid fabric front. Vest has pockets on inside and out and comes with highly reflective strines

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Item	Description	MSRP	FLT PRICE
15144 MUT163091	Class 2 mesh back orange, S	\$30	\$24.95
75231 MUT163092	Class 2 mesh back orange, M	\$30	\$24.95
56460 MUT163093	Class 2 mesh back orange, L	\$30	\$24.95
21568 MUT163093L	Class 2 mesh back lime, L	\$30	\$24.95
82705 MUT163094	Class 2 mesh back orange, XL	\$30	\$24.95
62876 MUT163094L	Class 2 mesh back lime, XL	\$30	\$24.95
17205 MUT163095	Class 2 mesh back orange, XXL	\$30	\$24.95
16926 MUT163095L	Class 2 mesh back lime, XXL	\$30	\$24.95





## LIGHTWEIGHT SAFETY VEST Breathable, cool, orange mesh. One size fits all. 100% polyester.

Item	Description	MSRP	FLI PRICE
20026 STY0104193	Orange mesh with reflective stripping	\$8.50	\$7.95
50237 STY0104143	Orange mesh	\$5.75	\$4.95











#### **HARD HAT**

ANSI compliant type 1 ratchet hard hat. Adjustable size using ratchet clamp. Comfortable nylon strap suspension. Padded sweat band.

Item	Description	MSRP	FLT PRICE
32569 STY3013392	White ratchet hard hat	\$10.50	\$7.95
47094 STY3013398	Orange ratchet hard hat	\$10.50	\$7.95
19917 STY3013400	Yellow ratchet hard hat	\$10.50	\$7.95

#### **DELUXE FIRST AID KIT**

Each kit contains: (100) Plastic strips; 1 1/2" x 5 Yd Tape, (1) 5" x 9" Trauma Pad; (1) 2" Gauze Roll; (1) Triangular bandage; (10) First Aid Cream Foil packs; (1) Cold Pack; (1) Tweezer; (1) Scissor; (1) First Aid Chart; (1) Pair of Gloves; (5) 3" x 3" Gauze Pads; (2) Eye Pads; (6) Antiseptic Wipes; (2) Ammonia Inhalants; (1) pack of rolled cotton.

32688 ESE532 First aid kit \$27.00 \$1	
32000 L3L332   1   15t alu kit   \$27.00	\$18.95

#### **IGLOO WATER COOLERS**

Wide mouth pressure fit lid for easy filling. Keeper cord prevents lid loss. Igloo delivers cold, clean water. Rugged, durable Igloo 400 Series Industrial Strength Water Coolers keep water cold, clean and available. Built for the real world® the 400 Series takes the abuse of the toughest job site and the most punishing work crews.

Item	Description	MSRP	FLT PRICE
22772 IGL451	Heavy duty industrial grade 5 gallon Igloo® cooler	\$59.95	\$32.95
59846 IGL431	Heavy duty industrial grade 3 gallon Igloo® cooler	\$39.99	\$27.95





## SAFETY EQUIPMENT

#### **48" HEAVY-DUTY ROAD SIGNS**

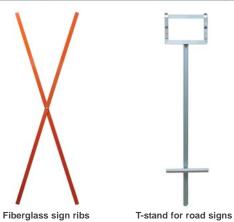
48" fluorescent mesh roll-up signs. Rib pockets are made of 18 oz durable vinyl. Ribs, flags, and "T" stand sold separately.

Item	Description	MSRP	FLT PRICE
91378 STY48 MEN WORK	"Men Working"	\$39.50	\$35.95
56487 STY48 STAYINLANE	"Stay in Your Lane"	\$39.50	\$35.95
71348 STY48 SYMBOL	Men working symbol	\$39.50	\$35.95
20425 STY48 SURV CREW	"Survey Crew Ahead"	\$39.50	\$35.95

#### **FOLDING FLAG SYSTEM**

48" sign ribs with two 18" vinyl folding flags. Mounts to "T" stand. Sign and "T" stand sold separately.

Item	Description	MSRP	FLT PRICE
69742 STY2195342	Folding flag system	\$40.00	\$37.95



#### **QUADRA FLEX SIGN KIT**

Spring loaded sign displays 48" roll-up panels 14" off the ground. Durable, lightweight, and corrosion resistant. for easy handling and long life. Sign not included.

		•	•			
Item			Description		MSRP	FLT PRICE
30404 STY2083660	Quadra	flex V sid	gn stand kit for 4	8" sign	\$215	\$209.95

#### **TRAFFIC CONES**

Tough, weatherproof orange PVC traffic cones have a tip-resistant, weighted base. Maintenance-free, non-fading PVC resists peeling, cracks and moisture. Meets MUTCD standards. 36" cones with reflective collars are DOT approved.

Item	Description	MSRP	FLT PRICE				
96537 STY12 CONE	12" traffic cone	\$8	\$5.95				
73856 STY18 CONE	18" traffic cone	\$12	\$6.95				
47634 STY28 CONE	28" traffic cone	\$18	\$11.95				
38504 STY36 CONE	36" traffic cone	\$25	\$17.95				
78148 STY12 CONE-WC	36" traffic cone with reflective collars	\$38	\$25.95				

#### **WARNING FLAGS**

Vinyl coated nylon flag on 7/8" diameter wooden staff with fluorescent red-orange

001011			
Item	Description	MSRP	FLT PRICE
12333 STYKNIT FLAG	18" mesh flag, 24" handle	\$4.50	\$3.95
78271 STYFLAG24	24" vinyl flag with stay, 36" handle	\$5.75	\$4.95
70028 STYFLAG	18" vinyl flag with stay, 24" handle	\$3.25	\$2.95



#### **48" RIBS FOR ROAD SIGNS**

Heavy-duty fiberglass ribs for road signs.

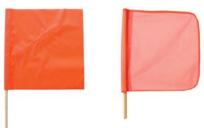
Item	Description	MSRP	FLT PRICE
32966 STYMB48	48" fiberglass ribs for road signs	\$15.50	\$12.33

#### **GALVANIZED STEEL "T" STAND**

T-stand for use with road signs and includes stainless steel clips which lock sign ribs securely into place.

Item	Description	MSRP	FLT PRICE
37667 STYTSR STAND	T stand for road signs	\$36.50	\$32.95







#### **ROTATING STROBE LIGHTS**

www.fltgeosystems.com

Item	Description	MSRP	FLT PRICE
87232 STY2057784	Heavy-duty high intensity flashing strobe with magnetic/suction pad base. Xenon flash tube with 74,000 candlepower and 60 flashes per minute. 7 1/4" tall and 4 3/4" base. Plugs into car for power.	\$209	\$189.95
<b>68253</b> STY2078829	Xenon replacement bulb for STY2057784 strobe.	\$22	\$19.75
<b>16965</b> STY2059419	Rotating light with magnetic/suction pad base. Quartz-halogen bulb with 12,000 candlepower. 7 1/4" tall and 4 3/4" base. Plugs into car for power.	\$95	\$89.95
<b>21385</b> STY0101335	Quartz-halogen replacement bulb for STY2059419 rotating strobe.	\$25	\$19.75
	Micro burst mini strobe with magnetic mount. 60 flashes per minute. 3 yr warranty including bulb. Plugs into car for power. 3 1/2" tall and 4" diameter base.	\$127	\$119.95

# FIELD BOOKS



#### **FLT CUSTOM BOOKS**

FLT field books are custom made for us by Elan Publishing. They are identical to Elan's books in every respect except for the yellow binding, FLT logo, and the outstanding price! Made with 50%cotton-content ledger paper, specially treated for maximal archival service, and protected by a water resistant surface sizing. 80 leaves, 160 pages. Yellow waterproof cover.

Item	Style	Page Size	Description	MSRP	FLT PRICE
57095 FLT8416	Field/Transit; A	4 5/8" x 7 1/2"	Standard Field Book (Elan E64-8x4)	\$7.35	\$5.95
23118 FLT8418	Field/Transit; A	6" x 9"	Large Field Book (Elan 64-8x4K)	\$11.75	\$7.95
85136 FLT8411	Cross-section; B	6 1/2" x 8 1/2"	Large Cross Section Book (Elan E10x10k)	\$11.75	\$7.95
93917 FLT8400	Level Book; C	4 1/8" x 6 1/2"	Pocket-Size Level Book (Elan E64-64M)	\$7.35	\$5.95
36253 FLT8414	Level Book; C	4 5/8" x 7 1/4"	Standard Level Book (Elan E64-64)	\$7.35	\$5.95
63267 FLT8410	Engineer's; D	4 5/8" x 7 1/4"	Standard Eng. Field Book (Elan E64-10x10)	\$7.35	\$5.95



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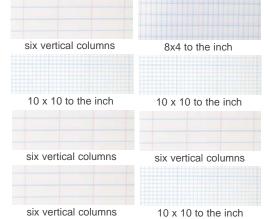
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#### **NATIONAL PRINTFAST**

National Printfast field books are printed in waterproof ink on heavy, water resistant rag stock. 80 leaves, 160 pages. Yellow vinyl cover.

Item	Style	Page Size	Description	MSRP	FLT PRICE
38117 NTL416	Field/Transit; A	4 1/2" x 7 1/4"	Standard Field Book	\$10.88	\$8.49
76268 NTL418	Field/Transit; A	5 3/4" x 9"	Large Field Book	\$17.35	\$12.95
49342 NTL411	Cross-section; B	6 1/2" x 8 3/8"	Large Cross Section Book	\$17.35	\$12.95



six vertical columns	8x4 to the inch



10 x 10 to the inch	10 x 10 to the inch
six vertical columns	8x4 to the inch

## PUBLISHING CO.

#### **ELAN PUBLISHING CO.**

Elan field books are published on a fine 50% cotton-content ledger paper, specially treated for maximum archival service, and protected by a water resistant surface sizing. 80 leaves, 160 pages. Orange waterproof cover.

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Item	Style	Page Size	Description	MSRP	FLT PRICE
69648 ELNE10X10K	Cross-section; A	6 1/2" x 8 1/2"	Large Cross Section Book	\$11	\$8.95
92600 ELNE64-8X4	Field/Transit; B	4 5/8" x 7 1/4"	Standard Field Book	\$8	\$6.95
69171 ELNE64-8X4K	Field/Transit; B	6" x 9"	Large Field Book	\$11	\$8.95

# FIELD BOOKS

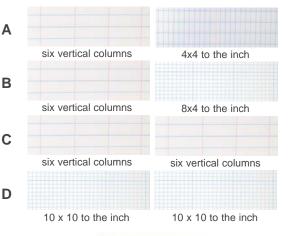




#### "Rite in the Rain"

"Rite in the Rain" field books are published with all-weather writing paper. This premium book is used around the world for recording critical data in all kinds of weather. 80 leaves, 160 pages.

reliow waterproof i	reliow waterproof Fabrikoid Cover.					
Item	Style	Page Size	Description	MSRP	FLT PRICE	
57505 RIR350F	Field/Transit	4 5/8" x 7 1/4"	Field Book	\$16.95	\$14.95	
23546 RIR300F	Field/Transit	4 5/8" x 7 1/4"	Transit Book	\$16.95	\$14.95	
91254 RIR310F	Level Book	4 5/8" x 7 1/4"	Level Book	\$16.95	\$14.95	
82582 RIR370-6F	Cross-section	6 1/2" x 8 1/2"	Large Cross Section Book	\$19.95	\$18.95	



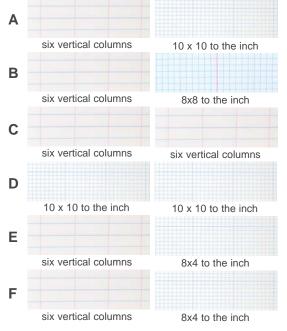


#### **FLT CUSTOM BOOKS**

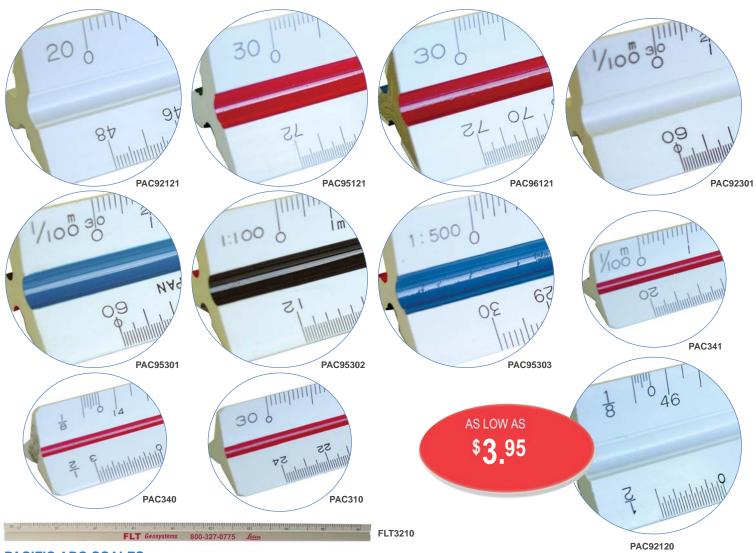
Sokkia field books with rain resistant fine quality ledger paper are hard-bound in high visibility chrome yellow coated fabric. Each book contains 80 leaves printed in water proof ink. Also included is an Appendix of 11 tables of conversions, trigonometric functions, and formulae for solving right angles and curves.

Item	Style	Page Size	Description	MSRP	FLT PRICE
39776 SOK8152-30	Engineer's; A	4 1/4" x 7 1/4"	Standard Engineer's Book	\$10.35	\$7.95
64474 SOK8152-20	Mining/Transit; B	4 1/4" x 7 1/4"	Mining Transit Book	\$10.35	\$7.95
30642 SOK8152-55	Level; C	4 1/4" x 7 1/4"	Level Book	\$10.35	\$7.95
23821 SOK8152-75	Cross-section; D	6 1/4" x 8 1/2"	Large Cross Section Book	\$16.00	\$12.95
89578 SOK8152-10	Economy; E	4 1/4" x 7 1/4"	Economy Field Book	\$5.95	\$4.95
83379 SOK8152-05	Economy; F	4 1/4" x 7 1/4"	Economy Field Book	\$5.95	\$4.95





# DRAFTING SUPPLIES



#### **PACIFIC ARC SCALES**

Professional quality scales made from high-impact plastic with white, non-reflecting dull-matte faces and tapered edges. Color-coded

Tarrows are availab	ne on some mode	10.			
Item	Style	Length	Scale	MSRP	FLT PRICE
80524 PAC92121	Engineer's	12"	10, 20, 30, 40, 50, 60 parts to the inch	\$4.95	\$3.95
81683 PAC95121	Engineer's	12"	10, 20, 30, 40, 50, 60 parts to the inch	\$9.50	\$7.95
43742 PAC96121	Engineer's	12"	10, 20, 30, 40, 50, 60 parts to the inch	\$24.95	\$184.95
17243 PAC341	Engineer's	4"	10, 20, 30, 40, 50, 60 parts to the inch	\$7.50	\$5.95
67530 FLT3210	Engineer's	6"	10, 20, 30, 40, 50, 60 parts to the inch	\$4.95	\$3.95
24076 PAC92301	Metric	12"	1:100, 1:200, 1:300, 1:400, 1:500, 1:600	\$7.50	\$4.95
25955 PAC95301	Metric	12"	1:100, 1:200, 1:300, 1:400, 1:500, 1:600	\$9.50	\$7.95
22148 PAC95302	Metric	12"	1:20, 1:33 1/3, 1:40, 1:50, 1:80, 1:100	\$9.50	\$7.95
46719 PAC95303	Metric	12"	1:100, 1:200, 1:250, 1:300, 1:400, 1:500, 1:600	\$9.50	\$7.95
19299 PAC310	Metric	4"	1:100, 1:200, 1:300, 1:400, 1:500, 1:600	\$7.50	\$5.95
71157 PAC92120	Architect's	12"	3/32, 3/16, 1/8, 1/4, 3/8, 1/2, 3/4,1, 1 1/2, 3 inches to the foot	\$4.95	\$3.95
94006 PAC340	Architect's	4"	3/32, 3/16, 1/8, 1/4, 3/8, 1/2, 3/4,1, 1 1/2, 3 inches to the foot	\$7.50	\$5.95

#### Yasutomo GRIP500 MECHANICAL PENCIL

The worlds only fully retracting tip mechanism to protect the point for longer wear. No more holes in the pocket! This pencil is equipped with a spring cushioned point that reduces lead breakage, therefore making the .5mm lead suitable even for heavy handed writing. Comes in a translucent cylindrical barrel with super strong pocket clip and refillable eraser.

Item	Description	MSRP	FLT PRICE
75468 YASGRIP500	0.5mm retractable point mechanical pencil	\$6.25	\$5.49

#### PENTEL MECHANICAL PENCIL

0.5mm "Quick-Click" slide action pencil button allows you to advance the lead without interrupting your writing. Cushioned grip.

Item	Description	MSRP	FLT PRICE
87193 PENPD345TA	0.5mm "Quick-Click" mechanical pencil	\$4.80	\$4.29

Orders 800-327-0775



## DRAFTING SUPPLIES

#### PENTEL MECHANICAL PENCILS

Pentel P205A 0.5mm "Sharp" black mechanical pencil features a push-button instant point, and a 4mm stainless steel fixed sleeve for template work.

Item	Description	MSRP	FLT PRICE
51163 PENP205A	0.5mm "Sharp" black pencil	\$6.00	\$4.69
73232 PENPDE-1	Eraser refills for PENPD345TA. Qty. 5	\$2.15	\$1.65
92916 PENZ2-1	Eraser refills for PENP205A. Qty. 3	\$1.95	\$1.40



#### Koh-i-noor TECHNIGRAPH LEADHOLDER

Item	Description	MSRP	FLT PRICE
89918 KOH5611C	"Technigraph" lead holder	\$9.40	\$8.95



#### SANFORD DRAFTING LEAD

2mm 2H drafting leads for technigraph lead holder. Standard .078" diameter; 5-7/8" long. Smooth, consistent laydown for crisp, clean lines without smearing. 12 leads per tube.

Item	Description	MSRP	FLT PRICE
85454 SAN2375-2H	2H, 2mm drafting leads for lead holder	\$10.85	\$8.95
22998 SAN2375-H	H, 2mm drafting leads for lead holder	\$10.85	\$8.95
87734 SAN2375-HB	HB, 2mm drafting leads for lead holder	\$10.85	\$8.95
86259 SAN2376-RED	2mm red lead for lead holder	\$10.85	\$8.95
24752 SAN2376-BLUE	2mm blue lead for lead holder	\$10.85	\$8.95



#### PENTEL REPLACEMENT LEAD

Pentel replacement leads fit all Pentel, Yasutomo, and KOH-I-NOOR pencils.

Item	Description	MSRP	FLT PRICE			
44260 PENC505-2H	2H, 0.5mm super hi-polymer lead	\$1.00	\$0.89			
31664 PENC505-H	H, 0.5mm super hi-polymer lead	\$1.00	\$0.89			
53150 PENC505-HB	HB, 0.5mm super hi-polymer lead	\$1.00	\$0.89			
81009 PENPPB-5	Blue 0.5mm lead	\$1.50	\$1.39			
24851 PENPPR-5	Red 0.5mm lead	\$1.50	\$1.39			



#### PENTEL PUSH BUTTON ERASER

Soft, non-abrasive eraser for all pencil lead markings. Versatile pocket clip advances/retracts eraser with a "clic". Accepts PENTEL ZER eraser refills.

Item	Description	MSRP	FLT PRICE
65771 PENZE-21	"Click" eraser	\$1.90	\$1.79
84731 PENZER	2 pack refill for click eraser	\$1.85	\$1.79





#### **POCKET TEMPLATES**

Item	Description	MSRP	FLT PRICE
13400 ALVT41	Timely pocket template	\$1.25	\$0.99
57535 ALV16R	All purpose template	\$8.00	\$5.95





ALV41

#### **ALVIN LEAD POINTER**

ALVIN 9800 Mini lead pointer will sharpen all Sanford 2mm drafting leads. Description MSRP FLT PRICE

	73989 ALV9800	Mini lead pointer
	TOTAL CO.	
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ALV16R

#### **ALVIN DRAFTING TRIANGLES**

Professional grade drafting triangles

Item	Description	MSRP	FLT PRICE
72044 ALV130F-4	4" 30/60 triangle. Fluorescent orange	\$3.30	\$2.39
76416 ALV131F-4	4" 45 triangle. Fluorescent orange	\$3.85	\$2.89
45488 ALV130F-6	6" 30/60 triangle. Fluorescent orange	\$3.90	\$2.89
77282 ALV131F-6	6" 45 triangle. Fluorescent orange	\$4.95	\$3.59



ALV130F-6 Fax 954-462-4121



ALV131F-4

\$1.00 \$0.75

## PIPE LASERS



#### **DG711 PIPE LASER**

The rugged Spectra Precision DG711 pipe laser is built tough for long lasting performance and reliability. The DG711 pipe laser is completely waterproof. Setup is fast with a full range of available mounting accessories and easy to use with straightforward, "no-instructions-required" controls. Package includes carrying case, alkaline and NiMH battery pack, smart charger, full function remote control, 8" invert plate, and small adjustable targets and 2 yr warranty.

#### APPLICATIONS:

- -installation of gravity flow sanitary and storm sewer pipelines
- -pipe jacking

Accuracy: 1/16" @ 100 ft. -tunnel boring

_		
Item	Description	LSR PRICE
27541 SPYDG711	DG711 Pipe Laser with remote	\$5595.00



#### **WIRELESS REMOTE**

The RC501 long range wireless remote allows you to move the beam left and right. The RC502 long range wireless remote allows you to perform all the functions on the pipe laser keyboard except for turning it on or off.

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Item	Description	LSR PRICE
37890 SPYRC501	RC501 wireless remote for DG711 pipe laser	\$295.00
77373 SPYRC502	RC502 wireless remote for DG711 pipe laser	\$425.00

#### **EXTERNAL POWER CABLE**

The P21 external power cable attaches to any 12V DC power source to the DG711 pipe laser.

Item	Description	LSR PRICE
67873 SPYP21	External power cable for DG711 pipe laser	\$95.00

#### **CIGARETTE LIGHTER CHARGER**

Conveniently charge the NiMH rechargeable battery pack in your truck. 14 hr recharge time.

Item	Description	LSR PRICE
19277 SPYP22	Cigarette lighter charger	\$175.00





SPY1230 & SPY1239



#### **T-BAR**

Used in manholes and large pipes with diameters of 42 to 80 inches. Use with the 1239 Universal Vertical pole if height adjustment is desired.

Item	Description	LSR PRICE	
67043 SPY1244	T-Bar for DG711 pipe laser	\$450.00	

#### **ADJUSTABLE LARGE PIPE TARGET**

Large easy to read red target with reference scales and adjustable from 15 to 30 inches. Built in frame clamp for use with 2 x 4 when the laser beam is over 30 inches from the invert. Includes level vial.

Item	Description	LSR PRICE
39473 SPY936	Adjustable pipe target	\$115.00

#### **MANHOLE MOUNT**

Attaches to a manhole cone or riser allowing any 5/8 x 11 instrument to be easily plumbed over the pipe laser.

Item	Description	LSR PRICE
29344 SPY1017	Manhole mount	\$475.00







#### PRO ALKALINE BATTERY PACK

This alkaline battery pack allows you to power the DG711 pipe laser with 4 D cell batteries.

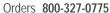
Item	Description	LSR PRICE
39443 SPYP20B	Pro alkaline battery pack	\$85.00
72256 SPYP23B	Pro NiMH battery pack	\$200.00

#### **VERTICAL POLE & INVERT PLATE**

The unique heavy-duty metal invert plate provides a simple means to self-center the laser in 10-15 inch diameter pipe. Add the 1239 vertical pole kit for standard trivet

Item	Description	LSR PRICE
66594 SPY1230	1230 metal invert plate	\$220.00
12044 SPY1239	Vertical pole assembly	\$245.00







# PIPE LASERS



#### **PIPE TARGETS**

This adjustable pipe target is designed to fit 6" to 21" diameter pipes with two target inserts. The target is optically enhanced to maximize contrast of laser beam and attached to a corrosion resistant aluminum mount.

Item	Description	LSR PRICE
66303 SPY956	Adjustable small pipe target with two inserts	\$95.00





#### **ALUMINUM TRIPOD**

Heavy-duty aluminum tripod. Extends from 3'6" to 6'1".

Item	Description	LSR PRICE
37519 SPY2161	Heavy-duty aluminum tripod	\$129.00

#### **OVER-THE-TOP-SYSTEM**

All LSR over-the-top-target system components are constructed of 100% aluminum and consists of a story pole, insert pole, 4' ext., 6' ext., and range pole hood. The target hood is constructed of anodized aluminum that will hold up in the harshest work conditions. Each item may also be purchased separately:

conditions. Each from may also be parenased separately.				
Item	Description	LSR PRICE		
70617 LSRSTORY POLE	Story pole (requires insert pole)	\$125.00		
42414 LSR4' EXT	4' extension pole	\$25.00		
79891 LSR6' EXT	6' extension pole	\$35.00		
20221 LSRHOOD	Anodized target hood	\$125.00		
96502 LSRFOOT	Large pipe foot	\$65.00		
76386 LSRR POLE	Range pole	\$60.00		
43271 LSRINSERT	Insert pole	\$25.00		
37299 LSRO/T	Complete over-the-top system	\$385.00		



#### **PIPE TARGETS**

These targets are designed to snap into the end of pipes with diameters of 4 to 12 inches. Target is optically enhanced to maximize contrast of laser beam and constructed with aluminum components to resist corrosion. These targets are also available for green beam pipe lasers.

Item	Description	LSR PRICE
55095 LTC724	4" Snap-in target	\$42.00
34225 LTC726	6" Snap-in target	\$44.00
75736 LTC728	8" Snap-in target	\$46.00
87998 LTC730	10" Snap-in target	\$48.00
27746 LTC732	12" Snap-in target	\$50.00

#### **HEAVY-DUTY BLOWER**

Variable speed, high capacity output minimizes beam refraction to prevent beam bounce and grade sag. Operates on 12V DC.

Item	Description	LSR PRICE	
64921 SPY929	Heavy-duty blower	\$375.00	



# GENERAL CONSTRUCTION LASERS

Accuracy: 1/16" @ 100 ft.

Accuracy: 1/16" @ 100 ft.



#### LL500 GENERAL CONSTRUCTION LASER LEVEL

The world's best selling laser level: the Spectra Precision LL500 LASER is a one-person leveling system designed for the most rugged environment. Accurate, stable and reliable, the LL500 is ideal for longer range measurements across your entire site. It comes complete with a hand held or rod-mounted receiver and is also compatible with machine control receivers. Package includes carrying case, alkaline batteries, HR550 receiver with rod clamp.

#### APPLICATIONS:

-checking elevations

-setting Concrete forms (small and large jobs)

-digging footings

Working Range: 1,600 ft diameter LIST PRICE LSR PRICE Item Description 31883 SPYLL500 LL500 laser with HR550 receiver \$1495.00 \$1339.95

#### **LL400 LASER LEVEL**

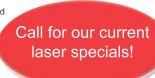
The fully automatic, self-leveling LL400 laser sets a new standard in rugged reliability, handling a wide variety of general and concrete construction applications. Even in tough jobsite conditions, the LL400 consistently delivers reliable and accurate performance. The LL400 Laser Level features easy, one-button operation for basic leveling and provides reliable, highly accurate, longrange measurements, even for machine control applications. The LL400 is designed to be durable and reliable, day in and day out, and can be operated in the rain. The rugged LL400 can withstand drops of up to 1 meter (3 feet) onto concrete and tripod tip-overs up to 1.5 meters (5 feet). Package includes HR550 receiver, alkaline batteries, carrying case.

#### APPLICATIONS:

- -Elevation control across the construction site
- -Excavation
- -Leveling forms and footers

-Concrete pours

Working Range: 2,600 ft diameter LIST PRICE LSR PRICE Description 62423 SPYLL400 LL400 laser with HR550 receiver \$1495.00 \$1329.95









optional RC601 remote





**LL300 LASER LEVEL** 

The LL300 is rugged enough to survive drops of up to 1 meter (3 feet) onto concrete and can be tipped on a tripod up to 1.5 meters (5 feet) and keep working. The LL300's self-leveling capability results in outstanding accuracy and ease of use. Since the LL300 levels itself when turned on, setting up is easy with just one button press. The optional RC601 remote control gives you the option of controlling the unit from the rod position when doing slope matching. It also offers single-axis slope mode with self-leveling in the cross axis, providing more accurate grade measurements. Package includes HR350 receiver, alkaline batteries, carrying case.

Accuracy: 3/32" @ 100 ft. Working Range: 1000 ft diameter

Item	Description	LIST P	RICE	LSR PRICE
28339 SPYLL300	LL300 laser with HR350 receiver	\$925.0	0	\$839.95



#### **LL200 LASER LEVEL**

The Spectra Precision LL200 Laser includes everything you need in a single carrying case...the laser, tripod, receiver and rod. Simple to use, the LL200 makes one-person leveling as easy as possible - putting you in control of your elevations. Package includes HR200 receiver, 9' grade rod (inches or 10ths), tripod, alkaline D battery, carrying case.

#### APPLICATIONS:

-forms, footings and foundations (residential jobs)

-septic tank or swimming pool installations

-decks and terraces

Accuracy: 3/32" @ 100 ft. Working Range: 400 ft diameter LIST PRICE LSR PRICE

Item Description 65197 SPYLL200 LL200 laser package with laser rod in 10ths \$995.95 \$865.95 46617 SPYLL200-1 LL200 laser package with laser rod in inches \$995.95 \$865.95

#### **RUGBY 50 LASER LEVEL**

Rugged, reliable, accurate. The Leica Rugby 50 is the affordable "little brother" of the popular Leica Rugby 100. The Rugby 50 provides value where ever it is used. Work gets done faster and more accurately, providing savings in labor, time and materials. As a contractor, you know the values of lasers. Built to Leica Geosystems' tough standards, you can trust the Leica Rugby 50 to provide you with the right tool to get the job done. Package includes carrying case, rod-eye receiver, and alkaline batteries.

Accuracy: 3/32" @ 100 ft.

www.fltgeosystems.com

working Range: 1000 it diame		
Item	Description	LSR PRICE
22286 LCA6000733	Rugby 50 laser package with rod eye classic receiver	\$945.00
14172 LCA6000734	Rugby 50 laser package with rod eye classic receiver and NiMH batteries	\$1060.00







## HORIZONTAL & VERTICAL LASERS



#### **HV401 HORIZONTAL & VERTICAL LASER**

The highly visible, multi-purpose HV401 laser is an advanced laser with exceptional accuracy and durability for general construction projects. The HV401 is easy to set up. A simple user interface common on the transmitter and remote control gives you automatic self-leveling and one-button operation. Designed for interior and general construction, the HV401 is your easy-to-use and an economical choice for vertical alignment tasks, especially on larger projects. Package includes NiCAD batteries, charger, wall mount, carrying case.

#### APPLICATIONS:

-Interior leveling and aligning

-Layout of construction control lines

Accuracy: 1/16" @ 100 ft.

-Interior leveling and aligning Working Range: 2,000 ft diameter

| Item | Description | LIST PRICE LSR PRICE |
| 15144 SPYHV401 | HV401 General construction interior laser | \$1925.00 | \$1699.95





#### **HV301 HORIZONTAL & VERTICAL LASER**

The automatic, self-leveling HV301 is an economical laser with exceptional versatility and visibility. Whether your job site is indoors or outdoors, the HV301 is capable of handling a wide variety of horizontal, vertical and plumb applications. Its high-visibility beam enables simultaneous rotating and plumb/perpendicular references.

Package includes carrying case, NiCAD rechargeable batteries, charger.

#### APPLICATIONS:

-Interior wall layout

-Interior finishing work

-Installation of ceilings and raised floors

Accuracy: 1/8" @ 100 ft.

Working Range: 1,000 ft diameter

3			
Item	Description	LIST PRICE	LSR PRICE
76842 SPYHV301	HV301 laser with HR350 receiver	\$1335.00	\$1199.95
20391 SPYHV301-1	HV301 laser with remote and wall mount	\$1395.00	\$1249.95
75231 SPYHV301-2	HV301 laser with remote, wall mount, HR350 receiver	\$1545.00	\$1379.95







**Leica** - when it has to be **right** 

#### **RUGBY 55 INTERIOR HORIZONTAL & VERTICAL LASER**

The Leica Rugby 55 provides the today's contractor with the tools needed for virtually any leveling or alignment job. The Leica Rugby 55 features an easy to use keypad, a watertight seal, variable head speeds, selectable scanning modes, a bright red beam and alkaline or rechargeable battery pack. Package includes interior carrying case, IR remote, wallmount, ceiling target, and alkaline batteries.

Accuracy: 3/32" @ 100 ft. Working Range: 1000 ft diameter

Item	Description	LSR PRICE
98166 LCA6000739	Rugby 55 interior laser package with rod eye classic receiver	\$1325.00





#### PLS HVR500 HORIZONTAL & VERTICAL LASER

The PLS HVR 500 is a compact, mid range rotary laser designed for light commercial and residential projects. It can be used in both the horizontal and vertical axis and a slope of +/- 5 degrees can be programmed. The PLS HVR 500 is ideal for short and mid range layout. The HVR500 laser level includes the laser, carrying case, RC500 remote control, ceiling bracket, laser detector, targets, and 1 yr warranty. The HVR500 laser level package includes all laser level accessories as well as a heavy-duty tripod and 8.5' two-section aluminum laser rod (not pictured).

Accuracy: 1/8" @ 100 ft.

Working Range: 500 ft diamete

working Range: 500 it diamete			it diameter
Item	Description	MSRP	FLT PRICE
61905 PLS60510	PLS HVR500 laser level	\$695	\$579.95
73617 PLS60510P	PLS HVR500 laser level package	\$835	\$699.95





#### NRL800 HORIZONTAL & VERTICAL LASER

The NRL800 Rotary Laser is self-leveling in both the horizontal and vertical axis and is a one-person leveling system designed for indoor and outdoor projects. A slope of +/- 5 degrees can be programmed. The NRL800 laser includes the laser, detector, carrying case, and 1 yr warranty. The NRL800 Laser Package includes all laser accessories as well as a heavy-duty aluminum tripod and 8.5' aluminum laser rod.

Item	Description	MSRP	FLT PRICE
36145 NWTNRL800	Northwest NRL800 laser with detector	\$699	\$575.00
92910 NWTNRL800P	Northwest NRL800 package	\$1018	\$659.00



NRL800 PACKAGE





## LASER RECEIVERS



#### **HR550 RECEIVER**

The HR550 receiver is designed for use by general, concrete and site preparation contractors. It is an easy-to-use tool that accurately measures elevations across the site, and is ideal for use with any rotating transmitter. The HR550 features a heavy-duty rod clamp, fine and coarse modes, unique anti-strobe sensor that stops construction strobe and flashing lights from setting off the receiver, and makes it easier to identify true laser beam signals. Its rugged, weatherproof housing withstands a drop of up to 3 meters (10 feet) on concrete for reduced downtime. The HR550 can be used as either a hand-held or rod mounted receiver.

Item	Description	LSR PRICE
60263 SPYHR550	HR550 receiver with adjustable rod clamp	\$395.00

#### **HR350 RECEIVER**

Rugged, fast and easy to use the Spectra Precision™ Laser HR350 is a receiver for basic leveling and alignment tasks. Applications include concrete footers and forms, decks, alignment of interior walls and ceilings and placing 1-meter (4 foot) marks.

Item	Description	LSR PRICE
63872 SPYHR350	HR350 receiver with adjustable rod clamp	\$225.00

#### **HR250 RECEIVER**

The HR250 laser receiver was made for basic leveling and alignment tasks to be used with the LL200 laser. Applications include concrete footers and forms, decks, alignment of interior walls and ceilings and placing 1-meter (4 foot) marks.

Item	Description	LSR PRICE
49967 SPYHR250	HR200 receiver with adjustable rod clamp	\$245.00

#### **CR600 RECEIVER**

The CR600 Receiver is ideal for contractors doing both site prep and general construction. The CR600 can be either rod or machine mounted, making it ideal for a wide range of applications. Using the magnetic mount, the CR600 receiver is easily moved between backhoes, small excavators, box blades or skid steer loaders. With such a high degree of flexibility, the CR600 is tough enough for any job.

Item	Description	LSR PRICE
10479 SPYCR600	CR600 receiver with heavy-duty magnetic mount	\$695.00

















#### **LEICA LASER RECEIVERS**

The ROD-EYE Pro is the top of the line sensor for general construction applications. It has an LCD display in the front and rear, a working diameter of 2,500 ft., user selectable fine and coarse modes, and works with any rotating laser. It comes with a 36-month warranty. The ROD-EYE Classic is a mid-range sensor for general construction applications. It also has an LCD display in the front and rear, a working diameter of 2,500 ft, and comes with a 24-month warranty.

Item	Description	LSR PRICE
81195 LCA727163	Rod Eye Pro with adjustable rod clamp	\$325.00
80342 LCA739575	Rod Eye Classic with adjustable rod clamp	\$250.00

#### **APACHE LASER RECEIVERS**

The Cyclone receiver provides stable and accurate grade information over the entire jobsite and has dual LCD 9-channel displays with three selectable volume levels with 7 distinct accuracy levels. IP67 100% waterproof rating. The Lightning receiver has dual displays with 4 accuracy settings and three volume settings. 100% waterproof. Both receivers come with a 1 yr warranty.

Item	Description	LSR PRICE
14523 ATI991550-09	Apache Cyclone receiver with rod clamp	\$325.00
62763 ATI992244-09	Apache Lightning receiver with rod clamp	\$275.00

#### **LSR400 LASER RECEIVER**

The LSR400 laser receiver is an economical and good all-around laser receiver that provides stable and accurate grade information over the entire jobsite. It has dual LCD 9-channel displays with three selectable volume levels. This receiver works with all rotating lasers sold today. 1 yr warranty

Item	Description	LSR PRICE
68862 LSR400	LSR400 laser receiver with adjustable rod clamp	\$249.00

63

## MACHINE CONTROL & GRADE LASERS



#### **RUGBY 300 & 400 MACHINE AUTOMATION LASERS**

Rugged and accurate, the Rugby 300 SG (Single Grade) and the Rugby 400 DG (Dual Grade) lasers are the optimal solution for precise grade control in level, single or dual slopes. Their operating range of 2500 ft with an accuracy of 1/16" @ 100 ft. make these ideal lasers Accuracy: 1/16" @ 100 ft. for machine automation applications.

Working Range: 2,500 ft diameter

Item	Description	LSR PRICE
14914 LCA741751	Rugby 300SG laser package with rod eye classic receiver and NiMH batteries	\$2995.00
19915 LCA741752	Rugby 400DG laser package with rod eye classic receiver and NiMH batteries	\$3995.00

#### **GL412 & 422 GRADE LASERS**

The Spectra Precision® Laser GL412 and GL422 Grade Lasers are cost-effective, automatic selfleveling lasers that do three jobs—level, grade and vertical alignment with plumb. Both lasers feature a 2-way, full-function remote control so you can make grade changes from anywhere on the jobsite for reduced setup time and faster operation. The GL412 (single grade) and GL422 (dual grade) lasers send a continuous, self-leveled 360-degree laser reference over your entire work area, and have a wide grade range so they can be used in a variety of slope applications. Package includes carrying case, NiMH batteries, charger, and radio remote.

#### APPLICATIONS:

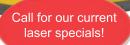
- -Grading and excavating
- -Concrete sections with runoff for sports fields, tennis courts and driveways
- -Steep slope road embankments and ditch banks
- -Parking garages, ramps and drainage

GL 412 & 422 accuracy: 1/16" @ 100 ft. GL412 range: 2,000 ft. GL422 range: 2,600 ft.

	0L+22 range. 2,000 it.		
Item	Description	LSR PRICE	
31883 SPYGL412	GL412 single slope laser with radio remote and HR550 detector	\$2395.00	
44330 SPYGL412	GL412 single slope laser with radio remote and CR600 detector	\$2695.00	
99840 SPYGL422	GL422 dual slope laser with radio remote and HR500 detector	\$2995.00	
63712 SPYGL422	GL422 dual slope laser with radio remote and CR600 detector	\$3295.00	



SPECTRA







#### **GL700 GRADE LASER LEVEL**

The GL700 Series gives you the right laser for the right job... from an economical single grade transmitter to an advanced, long-range radio remote controlled steep grade transmitter. The GL710 single grade laser is a one-person grade laser. With -0.5 to +25% grade range. The GL720 dual grade laser has +/-10% in the X axis grade range and -0.5 to +25% Y axis grade range with high accuracy. The GL722 has the same range and base capabilities as the GL720 described below but includes a full function Radio Remote with Automatic Axis Alignment capability. Package includes CR600 receiver, external power cord, NiCAD Accuracy: 1/16" @ 100 ft. batteries, carrying case.

Working Range: 3,000 ft diameter

Item	Description	LSR PRICE
71338 SPYGL710	GL710 single slope laser with HR550 receiver	\$4,495.00
28570 SPYGL720	GL720 dual slope laser with CR600 receiver	\$5,295.00
10206 SPYGL722	GL722 dual slope laser long range radio remote and CR600 receiver	\$6,995.00

#### 5 LIGHT 360 LASER RECEIVER

- -Constant Accuracy Band ( CAB-Technology) provides constant accuracy over the entire working area regardless of shape or diameter of the laser beam.
- -Shows five levels to high near center- center to low- to high
- -Memory function shows the last position where the laser signal has been detected.
- -Bright LED displays
- -Operates as manual laser system by connecting to a 12 or 24VDC battery

#### **AUTOMATIC CONTROL PANEL**

- -Can be used either as remote indicate system or for fully automatic system controlling the height of any leveling device.
- -Used mainly on machines for farm drainage, leveling sports fields, agricultural land-leveling, milling

Item	Description	LSR PRICE
10386 LCA727542	Leica 5 light 360 degree sensor with carrying case	\$1895.00
10386 LCA729366	Automatic Control Panel	\$1795.00

# 5 light 360 Receiver



**Automatic Control Panel** 

#### LEICA BASIC DIGGING SYSTEM

Leica Basic Digging System is an ideal tool for any kind of height control for excavators. Simply turn the excavator dipper into an integrated measuring stick without having to leave the cabin. It is simple to set-up and can be used with any rotating laser. The sensor mounts to either a standard excavator or backhoe - even levelling work can be done with the same sensor. Different mounting systems (magnet or brackets) allow the Leica Basic Digging System to be mounted on either side of the excavator arm. It is simple to use and achieves best results already on the first day of use.

	·	•	
Item	Description	LSR PRICE	
99286 LCA742440	Leica Basic Digging System Sensor with magnetic bracket	\$1575.00	











# LASER ACCESSORIES

## LASERLINE MFG, INC.

#### LENKER STYLE DIRECT READING ROD

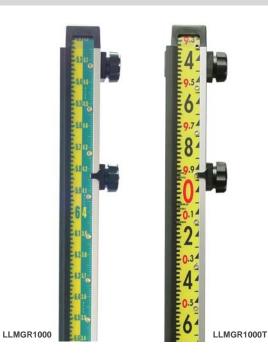
This Lenker style rod is tough, lightweight, and versatile. It is constructed of high strength anodized aluminum and will not rust, split, or warp in any environment. The tape lock grommets are oversized which minimizes the problem of tape tearing. The tape has a heavy duty matte textured face which protects the numbers from wearing and fading. The GR1000T has a track designed to accommodate a laser receiver and the GR1000 is supplied with a 10' cut/fill tape.

Item	Description	LSR PRICE	
55904 LLMGR1000T	Laser Lenker style direct elevation rod 10ths		
18753 LLM1000-1026	Replacement tape for GR1000T	\$60.00	
64773 LLMGR10I	Lenker style direct elevation rod inches	\$165.00	
13653 LLMBILA	Lenker receiver clamp for Leica Laser Alignment Rod Eye family	\$65.00	
81545 LLMB1	Lenker receiver clamp for SPY1275, Topcon, CST/Berger, Quagriga		
14609 LLMB2	Lenker receiver clamp for SPY1175, 1177, 3075	\$90.00	
34713 LLM1000-1301	Canvas carrying case for GR1000T	\$35.00	
29974 LLMB1T	Lenker receiver clamp for HR400, HR500, CR600	\$65.00	
89317 LLMB550	Lenker receiver clamp for HR550	\$95.00	
72943 LLMGR1000	Laser Lenker rod with cut/fill tape 10ths	\$185.00	



#### **RECEIVER CLAMPS**

Item	Description	LSR PRICE
76549 SPYC56	Rod clamp for HR100	\$20.00
69127 SPY1271-1	Rod clamp for HR200	\$30.00
88816 SPYC55	Rod clamp for HR300	\$20.00
19499 SPYC50	Rod clamp for CR600 and HR500	\$30.00
11005 SPYC51	Magnetic mount for HR500 and CR600	\$30.00
36731 SPYC57	Rod clamp for HR550	\$35.00
80392 SPYC59	Rod clamp for HR350	\$25.00









#### **RECHARGEABLE BATTERIES AND CHARGERS**

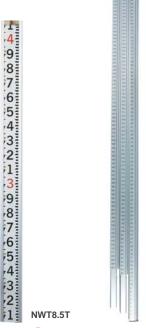
These two and three section rods are constructed of high quality anodized aluminum and snap together allowing the receiver clamp to slide up and down the rod effortlessly.

Item	Description	LSR PRICE
70277 SPY1041 BATTERY	NiCAD rechargeable batteries for LL500	\$50.00
24465 SPY1041 CHARGER	AC charger for LL500 laser NiCAD batteries	\$35.00
49508 SPYQ102734	AC charger for LL300, LL400, HV301, HV401 lasers	\$35.00
17495 SPYQ103311	NiMH battery pack for LL300, LL400, HV301, HV401 lasers	\$165.00
13160 SPYQ100227	AC charger for 1452 laser NiCAD batteries	\$43.00

#### LASER RODS

These two and three section rods are constructed of high quality anodized aluminum and snap together allowing the receiver clamp to slide up and down the rod effortlessly.

Item	Description	LSR PRICE
66391 NWT8.5E	Two section 2 m (8 ft) rod graduated in inches, case included	\$79.00
88088 NWT8.5T	Two section 2 m (8 ft) rod graduated in tenths, case included	\$79.00
83625 SPY0205-2510	Three section rod for LL200 graduated in inches	\$65.00
95256 SPY0205-2520	Three section rod for LL200 graduated in tenths	\$65.00



SPY0205-2510





## On grade...automatically

#### Concept

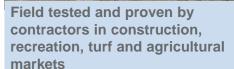
A Level Best System consists of three main components: the grading box for a skid steer or tractor, the hydraulics package and the laser controls. Add a rotating laser and tripod and your operator will reach fine grade faster, easier and more accurately than ever.

#### How it works

The laser controls take the guesswork out of fine grading. The rotating laser sends a signal to the laser receiver. The laser receiver sends information to the control panel that tells the hydraulics to automatically raise or lower the blade to grade. Precise finish grade is fast and accurate. The operator has the ability to manually override the automatic controls whenever necessary. Fine grade in automatic will deliver accuracies from 1/8" to 1/4" depending upon requirements and settings.sensitivity setting of the receiver.







- -A Level Best system eliminates material overages, giving contractors greater accuracy in estimating.
- -3 year warranty on box construction
- -More rugged and reliable than competitive systems
- -Finish grade elevation up to .12 inches



#### **Features**

Level Best boxes are built to the highest standards in the industry. 3/8" steel plate construction with a high quality powder coat finish allow Level Best boxes to stand up to the daily abuse on a construction site.

- -The cutting edge is made of high-carbon steel which can be easily reversed for twice the wear life and can be changed in minutes.
- -Field tested and proven by contractors in construction, athletic field, golf course & turf and agricultural applications.
- -A Level Best system eliminates material overage and increases yield giving contractor greater accuracy and better estimating.
- -3 year warranty on Level Best boxes
- -Highest accuracy and reliability in the industry

Ask about our monthly specials and low interest financing plans





## Leica GradeSmart 3D

3D Machine Automation Systems increase productivity and improve the quality of finish grading. Two basic types are available: Indicate Systems and Automatic Systems.

The **Indicate System** provides the operator with visual grade information. The operator monitors the blade and the display and manually controls the elevation of the blade to very accurate finish grade.

The Automatic System provides the operator with the same information as the Indicate System but automatically controls the elevation of the blade allowing the operator to run the machine at faster speeds safely and get to finish grade accurately and quickly with the ability to manually override the system whenever necessary.

## **Indicate Systems**

An Indicate System is an economical way to get started. The onboard computer calculates the GPS information I conjunction with the site plans. Position and Cut and Fill values are clearly displayed on the onboard computer screen allowing the operator greater accuracy in controlling the blade on the jobsite.

Leica GradeSmart 3D is compatible with both dozers and graders and the Indicate System can easily be upgraded to Automatic.



**GradeSmart 3D** 



LSR and Leica Geosystems offer Machine Automation for every budget. The Leica concept allows contractors to start out with a low cost system that is easily upgradeable. At LSR, we give you the options allowing you to achieve the highest level of productivity for your investment.



## Leica GradeSmart 3D

Precise results at cm level can be achieved by putting the digital design in the cab, creating a stakeless jobsite.

## **Automatic Systems**

A fully automatic system consists of a GPS receiver on the machine that will calculate multiple times per second the actual position of the blade which is then compared to the digital design (DTM) loaded into the onboard computer. GPS corrections are sent continuously to the hydraulics of the machine to automatically position the blade to the required elevation and slope.

The job design is loaded into the control box mounted in front of the operator which gives the operator an overview of design surfaces, grades, and alignments. During operation, the system will continuously display the position of the machine compared to the actual design.



#### **Control Box**

The Leica GradeSmart 3D control panel and onboard computer are the brains of the system. They give the operator an overview of all the pertinent positional information on the jobsite. The high resolution, high brightness screen is adaptable to a variety of applications. In addition to GPS, the system is compatible with laser and sonic sensors. Changing from one to the other is achieved by exchanging the sensors on the machine and the touch of a button on the panel.

#### Easy to learn, easy to use

Complete Installation and Training are included with every system along with follow up support. Additional training is available for new employees.







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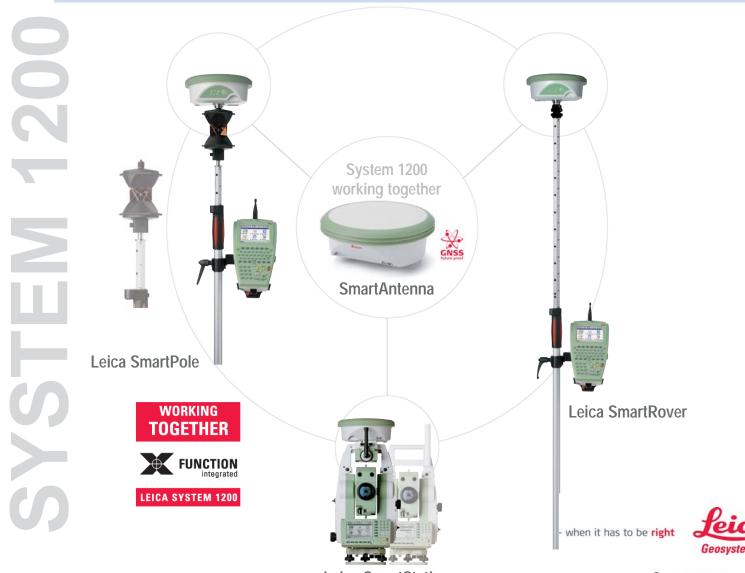
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