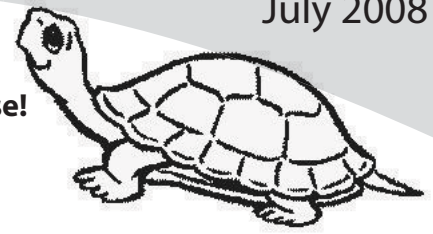


Turning Turtle

Carlson Leica SOKKIA
Geosystems

July 2008



Brings You Measure News You Can Use!

Turning Point Systems Group is accredited by the Better Business Bureau

6480 N. Industrial Road, Milwaukee, WI 53223 • (414) 353-8774

24/7 EMERGENCY & SUPPORT LINE (414) 324-5850

About the Company

Turning Point Systems Group provides consultative sales, rentals and training of measuring systems products and software for Reality Capturing. Our staff offers extensive experience in the sales of Surveying, Construction, Forensic and Engineering HDS, TPS and GPS technologies. We know that measuring sales takes 10% Sales, but 90% Surveying Product Knowledge and Experience!

Turning Point is an Authorized Distributor for Leica Geosystems HDS, SOKKIA Corporation and Carlson Software, serving the Great Lakes Region with staff in Milwaukee and Chicago. Additionally, to support our clients, we supply products by Rust-Oleum, Crain, Presco Products, CST, Stan's Industrial Woodworking and Seco Manufacturing from our Milwaukee Warehouse. Turning Point is the only Wisconsin instrument supplier accredited by the Better Business Bureau and is veteran-owned.



MEAT, GREET AND LEARN! Turning Point Annual Event and SOSEWLS Chapter Meeting

Thursday, September 11, 2008

An almost all day event with friends, seminars and meat!

Monthly Giveaway

July Prize: **Fat Max!**

Great For Basic Measuring Needs!

Tru Laser Light Technology
for the **MOST ACCURATE**
measuring!



- Large LCD Graphical Display
- Single Point and Push ON/Measurement
- Impact Resistant

Every time you visit the Turning Point Milwaukee store, enter the monthly drawing for a chance to win!! A different prize every month, just for visiting us with your smiling face.

Mobile Reference Station (Mrs.)

What is it? We have all heard about CORS and GPS RTK Base Stations. But what is a Mobile Reference Station (Mrs.)? "Mrs." as we like to call it is a CORS site that can move and adjust to your work site requirements. It creates an instantaneous and adaptable RTK infrastructure. Regularly, we get projects that are just outside the range of permanently broadcasting RTK Reference stations, perhaps because cell coverage or the ppm is higher than we like for our working distance. Or, the reference may not be operating GNSS and we are in conditions that require it. Also, in some cases the monthly fees to use the references are higher than our projects will allow. And don't forget a reference can be shut down in the middle of the project and leave us without RTK. We can call on the Mrs. to help in these situations.



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continued from page 1

The Mrs. can be set up and easily run 24/7, then moved after the project is complete. This is almost like a mobile base station, but the Mrs. is more secure and multiple communications techniques may be used. The Mrs. can stay at the office, work from home or operate out of a job site trailer. The range of coverage is limited to GSM modem area (30km) or range of a broadcast radio. Internet is preferred in urban areas, but not always accessible. The Mrs. shines when there is no Internet because it will work using traditional radios just like most RTK systems!

To check a Mrs. you can log on to any Internet PC and check the data or view the display screen. Not only do you get broadcast RTK, but static data is being stored and can be shared

over a range of users.

Set up time for a Mrs. is approximately 4 hours. The antenna needs to be mounted securely; plug it into the Internet if available. A cable is run to the Mrs. from the antenna, then 2 hours of data is collected and submitted to OPUS. Afterwards, set up what type of RTK and static data you need. Then, start using RTK with your rovers using GPS and GNSS.

An additional advantage to having your own CORS is that you control the data, access, and accuracy of the system. When pulling a chain, I like to know the guy at the other end. I also need to know his skill level. GPS has two ends of a chain. They are the Rover and the Base. As a Surveyor you need to put your name on the measurements and

plat. Broadcast RTK corrections are great when available, but normally these broadcasts are not backed by a Surveyor's signature for accuracy. Your own CORS using a Mrs. is backed by a name. It is your name.

The cost to own a Mrs. is under 15k and you can use your existing RTK units. Every Surveyor needs a Mrs. to keep them running smoothly with GPS and GLONASS. The Mrs. works as hard as you do in Surveying and Construction.



Leica Geosystems is Extending the Very LOW Financing on All Your High-end HDS Needs Through September 30th, 2008

Available on all new orders greater than \$25,000 in Leica Geosystems HDS products purchased through September 30th, 2008.

No other promotions can be used in conjunction with this program.

Pricing is based on approved credit and the application must be received by Irwin Commercial Financial no later than September 30th, 2008.

Rates are as low as 3.48% based on a 24-month term, monthly payments, first in advance. (Longer terms are available.) Please inquire about additional financing terms.

1. The above rates are based on an 4.05% subsidy from Leica Geosystems.

Equipment Cost	24	36	48	60
\$25,000 - \$49,999	3.48%	5.20%	5.92%	6.35%
\$50,000 - \$ 99,999	3.48%	4.95%	5.67%	6.10%
\$100,000 +	3.23%	4.71%	5.43%	5.86%



2. Rates are subject to change if there are significant fluctuations in market conditions.
3. Promotion expires September 30th, 2008.
4. All transactions are subject to credit approval by Irwin Commercial Finance.
5. Above rates are for qualified customers only and are subject to change.
6. No other promotions can be used in conjunction with this program.



Turning Point Surveying Rental Plans

The Availability and Flexibility You Need!

Rental Plans are designed for firms with changing equipment needs. You get the availability of various types of Surveying items to meet your specific project needs without the cost of ownership.

Need a different piece of equipment every week? Fantastic!

Need to use one item for a whole month? Go ahead!

Example: A project starts on Monday and you pick up a GPS to set control. The following Monday you return the GPS and pick up a Robot to stake some points. The next week you get a Digital Level. All this equipment is INCLUDED in your monthly Rental Plan Cost!



MONTHLY RENTAL PLAN COST ONLY - NO ADDITIONAL FEES!

THE PLANS	
6 Month Plans	
TPS and GPS	\$2,000 / month for 6 months
TPS, HDS and GPS	\$3,000 / month for 6 months
1 Year Plans	
TPS and GPS	\$1,500 / month for 12 months
TPS, HDS and GPS	\$2,500 / month for 12 months

The Equipment:

TPS includes: Notbots, Robots, Data Collectors, Levels, Digital Levels

GPS includes: RTK

HDS includes: Leica 3000 Laser Scanners (does not include Leica ScanStation or 6000 Laser Scanners)

Note - To participate in HDS Rentals, you must:

- 1) Own Leica Cyclone Software with Maintenance from Turning Point.
- 2) Have attended a Training Class.

Easy! Flexible! Available!

1. Choose a Rental Plan.
2. Pay your monthly Rental Plan Cost each month.
3. Start 'checking out' equipment at your convenience... just like a library book!
4. Return a piece of equipment to 'check out' a different item.

Service and Repair

Determining "Plumbing Accuracy" of Prism Pole Vials

Plumbing Accuracy (target over the Point at a known height) is determined by both the sensitivity of the vial and the height above the Point. The type of vial used should be determined by the accuracy required, as well as how high the target needs to be. The chart below shows the Plumbing Accuracy of vials. (Assumes vial is dead centered and in perfect calibration).

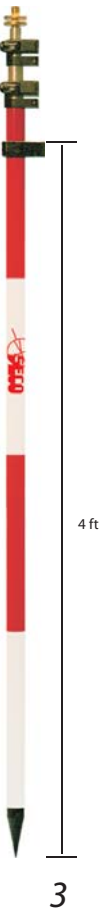
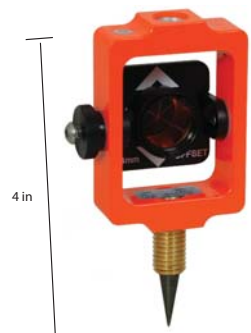
The error (per inch, foot, meter) x height (in same units) of target = plus or minus error.

Examples:

- To determine the accuracy of a prism pole with a 40-minute vial at 8.4 ft.: $0.0024 \times 8.4 = \pm 0.020$ ft.
- For greater accuracy, using a 10-minute vial: $0.0006 \times 8.4 = \pm 0.005$ ft.
- With a 130-minute vial at 0.25 ft. (mini prism stakeout): $0.008 \times 0.25 = \pm 0.002$ ft.

Caution: Many errors are made by not using the correct units of measure or converting incorrectly. Be sure to understand the units of measure.

Non-plumb Detection			
vial type:	per inch:	per foot:	per meter:
10-minute	± 0.0006	± 0.0006	± 0.0006
40-minute	± 0.0029	± 0.0024	± 0.0024
130-minute	± 0.008	± 0.008	± 0.008



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4 ft

3

50% Price Reduction on Safety Vests

ORANGE COLOR IN STOCK
Good for surveying, **Better** for hunting

	List price	Reduce Price
Part # 8063-54	\$48.95	\$24.48
Part # 8072-54	\$48.95	\$24.48
Part # 8072-58	\$109.95	\$65.97

*** LIME GREEN IS THE NEW ORANGE *
BUT ORANGE IS STILL HOT**

A NEW LEVEL OF VERSATILITY & SPEED IN LASER SCANNERS

- Reduce time spent in hazardous locations
- Collect data in tighter time windows
- Collect even more complete data
- Provide project results faster

Leica
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The four programs that make up the Suite for ACAD

Carlson Survey
Carlson GIS

Carlson Hydrology
Carlson Civil



Post your Job Openings online
at Turning Point's Job Board!

Free and easy!

Contact Paula at 414-353-8774 for
submission details.

Congratulations!

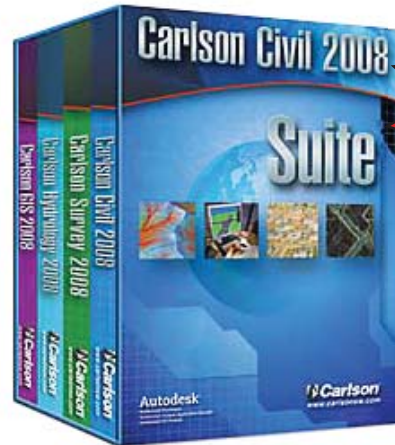
June Winner

Carl Chaput

of R.A. Smith National

You have won a free Mobile Guard Dog

(Value \$495)



**Special
\$1995**

Harley-Davidson 105th Anniversary Celebration

August 28 - September 1, 2008 Milwaukee, WI

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a place to stay? Maybe we can help!**

Tent camping and RV hookup available.

Call 414-353-8774; ask for Cliff

