LTI Laser Interface to Carlson's SurvCE

> for Windows Mobile Quick Reference Guide



BLATER TECHNOLOGY

Overview



Carlson's SurvCE is a Windows Mobile application serving the mapping and GIS industry. In addition to a full interface to conventional surveying equipment and GPS, it also supports the LaserTech TruPulse instruments.

Compatible products

- TruPulse 200, 360, 360R & 200X
- SurvCE ver 6.x

Type of Laser Methods available in SurvCE 6.0

- Distance/Angle Measure Slope Distance, Inclination & Azimuth
- Intersect

Measure Azimuth from two known locations

• 2 Point

Measure Distance from two known locations

Setting up the Connection

- 1. Using the Bluetooth Manager on your Windows Mobile device, connect your TruPulse laser and note the COM port number assigned to it. For more info on this procedure, see:
- 2. Start the SurvCE app and open a new or existing Job (Fig.1)
- 3. Tap the Equip button and tap Peripherals or type 9 (Fig.2)
- 4. Select the Laser tab, check the Active box and choose TruPulse from the pull-down list for Type (Fig.3)
- 5. Tap the Comm Setup button and choose Type: Bluetooth; BT Type: Windows Mobile; and select your laser from the list under Device (Fig.4).
- 6. Tap the Green check marks back out to the main menu
- 7. If using a TruPulse 360 model, make sure Declination is applied in the laser

SurvCE	* 📯 Y	x ♣ 4:03	SurvCE	* <u>\$</u>	x 🕂 🎟 4:03	SurvCE	B 📯 🏹 🕂 💷 4:03	SurvCE	🔉 📯 🏹 帐 🎟 4:03
NEWJOB	Î	D	NEWJOB	Î	6	Periphera	s 🔀 🔀	Configu	re 🔽 🔀
Survey	COGO	Road	<u>S</u> urvey	COGO	Road	Laser De	oth Sounder Light Bar	Type:	Bluetooth
File 1 Job 2 Job Setting 3 Points 4 Raw Data 5 Feature Coo List	Image: Second secon	port/ ort ete Job ut vCE	File1 Total Stati2 GPS Base3 GPS Rover4 GPS Raw0 Only5 Configure	on 📳 6 Loc 又 Moi 又 Sky 子 8 Tole 子 9 Per	Equip alization 🔛 nitor/ 🕷 erances 🔐 ipherals 👫	Laser H Imp Target Imp Mar Alignm Sok	To Avg.: 1 Pulse a Disto pulse (CR400) pulse (IP200) ft pulse	BT Type: Device:	Windows Mobile 💽 🛠 TP360RB-00034 TP360RB-000348
Figure 1			Figure 2		Figure 3		Figure 4		

Taking a Distance/Angle Offset

- 1. From the main screen, choose the Survey tab (Fig.5)
- 2. Tap the Store Points button to open the live map screen(Fig.6). If GPS is active you will see coordinates displayed at the bottom and a triangle around your location on the map
- 3. To measure an offset to a point with the laser, tap the "O" button and then select Distance/Angle from the Method tab (Fig.7) *NOTE: this method works with any of the TruPulse 360 models with an electronic compass
- 4. Aim at the target with the laser and tap the Read Laser button to fire it. (Fig.8)

SurvCE	೫ 📯 🏹 🕂 🎟 4:03	SurvCE 🚯 📯 🤸 🛲 4:03	SurvCE	🕈 👷 🏹 🗲 🋲 4:09	SurvCE *	<u>♀</u> Ү _× ң ш 4:04
NEWJOB	Î 🐻 💽	STORE PTS	Distance/Angle	0	Distance/Angle	_
Eile	Equip	SAOC 🖉	Laser	Offset	Results	Method
<u>Survey</u>	OGO Road	Fixed I+116/19 20 ft	Results	Method	Laser	Offset
1 Store Points 2 2 Stake Points 2	o Auto by © Interval © Z Leveling →	گ ³ 328 ³ .06 ³⁸	Distar	nce/Angle	Horz Offset: Vertical Offset: Offset Azimuth: Offset Distance: Zenith Angle: rAZ Reference	
3 Stake Line/Arc		Nu E→ Pt: 4 Desc: 7100		Point	North O Point Get Point Read Multiread Laser N: 418151.013	Laser Read GPS Store HRMS: 0.017
5 Elev Difference		N:418151.0007 E:1779488.9015 Z:328.0995 HRMS:0.016 VRMS:0.035 PDOP:2.37 GDOP:3			E: 1779488.884 Z: 328.054	VRMS: 0.031 FIXED
Figure 5		Figure 6	Figure 7		Figure 8	

Taking a Distance/Angle Offset

- 1. The data will populate the fields (Fig.9)
- 2. Tap on the Results tab and enter in the Antenna Height and Vertical Diff to the point, as well as any Description (Fig.10)
- 3. Tap the Store button to save the offset point and return to the live map screen. The new point will be displayed (Fig.11)
- 4. Repeat this procedure for as many offsets points as are needed



5

Taking an Intersect Offset

- 1. From the Offset screen, choose the Method tab and select Intersect (Fig.12)
- 2. The coordinates for Point 1 should display and tap the Read Dist 1 button to measure from here (Fig.13)
- 3. Read the second GPS point and then tap the Read Dist 2 button to measure to the feature from this location (Fig.14)
- 4. Make sure the Results tab displays the correct data and Store the point (Fig.15)

GurvCE	🕅 📯 🏹 🗲 🎟 4:09	SurvCE	-€ @ 10:48 SurvCE	እ 式 🏹 🗲 🎟 10:48	SurvCE 🖁	[⊷] × √× € @ 10:47
Distance/Angle	•			•	Distance/Angle)
Laser	Offset	Offset Results Met	hod Offset R	esults Method	Laser	Offset
ResultsMethodDistance/AngleIntersect2 Point		N: 418147.4427 HRMS E: 1779488.9342 VRMS Z: 320.113 FIXEL		4427 HRMS: 0.025 9.9342 VRMS: 0.031 FIXED(Sim) 1 Dist 1: 29.000 2 5500 HRMS: 0.021 8.9211 VRMS: 0.031 FIXED(Sim)		Method 000 ft 000 ft 000 ft 000 ft
Fig	ure 12	Figure 13		Figure 14	Figu	ire 15

BLATER TECHNOLOGY

Taking a 2 Point Offset

- 1. From the Offset screen, choose the Method tab and select 2 Point (Fig.16)
- 2. Generate the coordinates for Point 1 and two by occupying them and tapping the appropriate Read Point buttons (Fig.17)
- 3. Tap the Read Dist button to measure to the feature with the laser, then specify whether the target is Straight, Right or Left of the line between the two points (Fig.17)
- 4. Make sure the Results tab displays the correct data and Store the point (Fig.18)

SurvCE *	🕵 🏹 🗲 🎟 4:09	SurvCE 🚯 +☆ 🏹 +€ @ 10:49	SurvCE *	┿╦ ॑ ┝ू 🕂 🇰 10:47
Distance/Angle		2 Point	Distance/Angle	()
Laser	Offset	Offset Results Method	Laser	Offset
Results	Method		Results	Method
Inte	re/Angle rsect Point	Read Point 1 HT: 8.00 ft N: 418147.4427 HRMS: 0.025 E: 1779488.9342 VRMS: 0.031 Z: 320.113 FIXED(Sim) Read Point 2 HT: 8.00 ft N: 418149.5500 HRMS: 0.021 E: 1779488.9211 VRMS: 0.031 Z: 320.113 FIXED(Sim) Offset: 29.000 ft Straight Settings Read Dist Store	Point: 9 Antenna HT: 8.0 Vertical Diff: 2.0 Description:	
Figur	re 16	Figure 17	Figure 1	8

Product Resources

Product Page/User's Guides:

https://www.lasertech.com/TruPulse-Laser-Rangefinder.aspx



http://www.carlsonsw.com/products/datacollection/survce/



Stay informed! Find out about Laser Technology products, updates, and training resources by keeping track of us on FaceBook (/LaserTechnologyInc), Twitter (@LaserTechPro) and YouTube (/user/LaserTechPro)

Contact Laser Technology, Inc.

Questions regarding the interface to SurvCE or our laser products?

Please contact us at:

1.800.280.6113 or 1.303.649.1000

info@lasertech.com

Laser Technology, Inc. 6912 S. Quentin St. Centennial, CO 80112

www.lasertech.com

