

LTI TruPulse 200X Interface to



Arrow Gold Receiver

Quick Reference Guide



Overview

LTI's TruPulse 200X high-precision mapping laser has BT output to any mobile device. Eos has written a laser interface into their Tool Pro app. Through the standard Offset function in Collector, laser measurements can automatically be recorded.

Compatible LTI products

- TruPulse 200X
- TP200X/TruAngle system

iOS Software used

- Eos Tools Pro (version 1.x)
- Esri Collector (version 18.x)

Basic Steps

- Connect Laser to iOS Device
- Initiate Point Offset in Collector
- Record Laser Data with EOS Tools Pro
 - Range-Range/Intersect
 - Range-Backsight
- Store Offset Location in Collector



Connect Laser to Device

The TruPulse 200X's Bluetooth module is compatible with Windows, Android and Apple iOS. The first time you connect the laser to your device, it will need to be paired.



1. In the laser Settings menu, turn Bluetooth “On” when using the laser alone; and “Enc” mode when using it with the TruAngle (Figure 1)
2. On the device, turn Bluetooth **On** and discover the TruPulse 200X (Figure 2)
3. Select it from the list, enter the passcode “1234” and tap **Pair** (Figure 3)
4. Confirm the laser is paired to the device and exit the Settings menu (Figure 4)



Figure 1

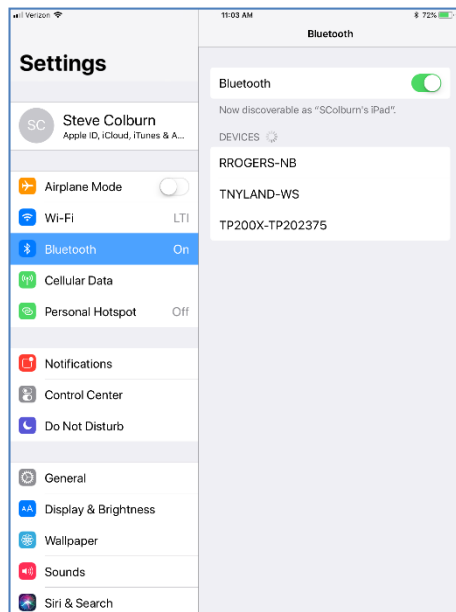


Figure 2

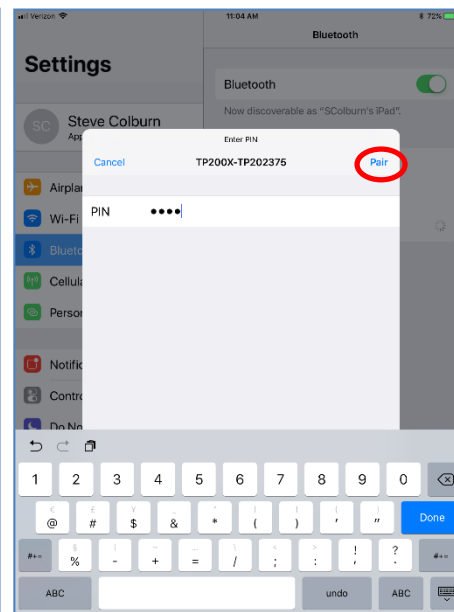


Figure 3

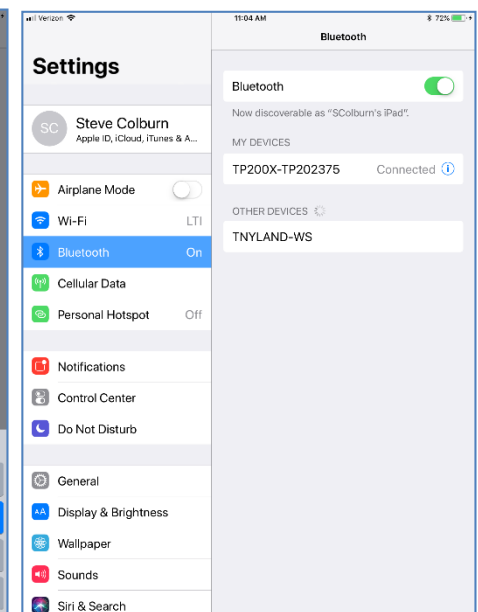


Figure 4

Initiate Point Offset in Collector

Esri's Collector app can be configured to allow a Laser offset position to be calculated when using Eos's Arrow Gold GNSS product. This guide assumes the user has installed Eos's Tools Pro app and connected their Eos Arrow Gold receiver to the device

5. Start Collector and navigate to the **Settings/Collection Settings/Offset** screen and select the Eos Tools Pro app (Figure 5)
6. Open your Map and choose to **Add** a Point feature (Figure 6)
7. Edit the notes for the point and tap the **Location** icon (Figure 7)
8. Select **Offset from Location** (Figure 8) and this will start the Eos Tools Pro app

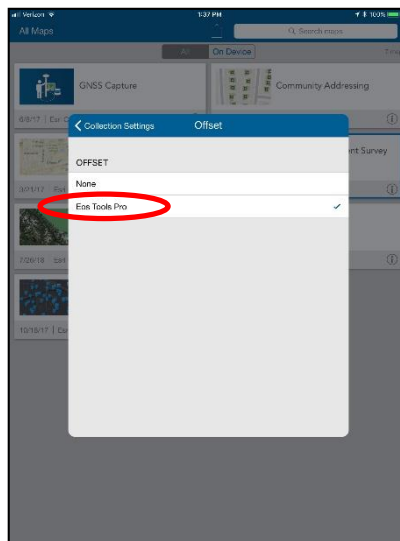


Figure 5

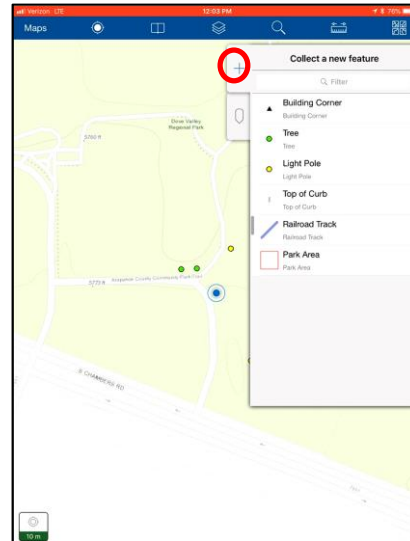


Figure 6

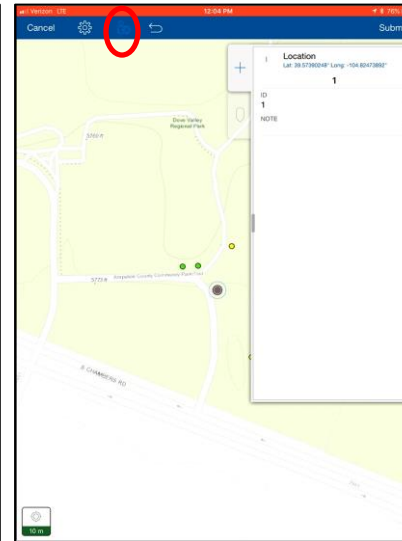


Figure 7

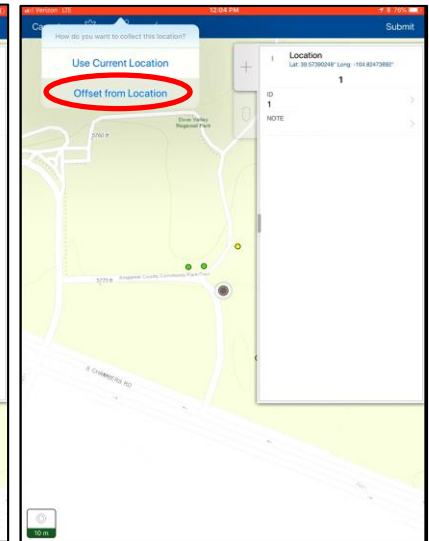


Figure 8

Record Laser Data with Eos Tools Pro



Eos's Tools Pro app will record data from the laser and generate the remote position for the feature. The TruPulse 200X alone can be used in a very accurate, 2-shot method.

- 9A. Pull down the **Measurement Method** menu; select **Range-Range** (Figure 9A) and tap **Next**
- 10A. **Step #1:** Confirm the Number of Positions to Average is correct, tap **Start** (Figure 10A) and when the GPS data is recorded, tap **Next**
- 11A. **Step #2:** Increase or decrease the **Number of Targets** (Figure 11A) and tap **Next**
- 12A. **Step #3:** Aim at the target, measure HD with the TruPulse 200X, confirm values for Slope Distance and Inclination come through (Figure 12A) and tap **Next**

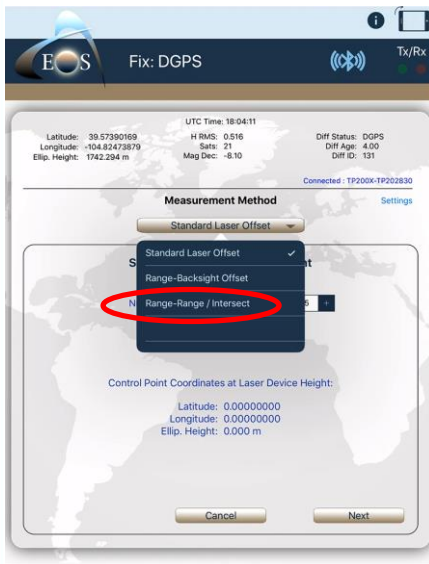


Figure 9A

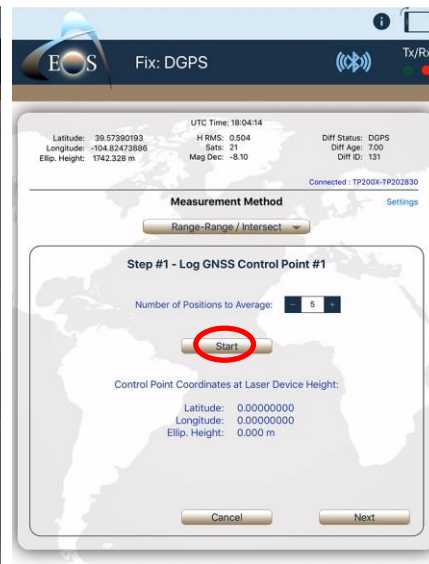


Figure 10A

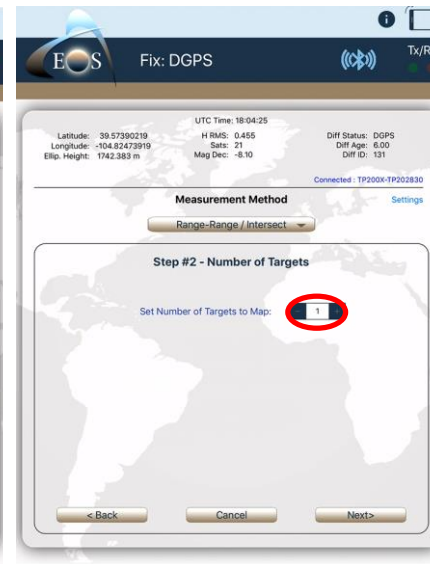


Figure 11A

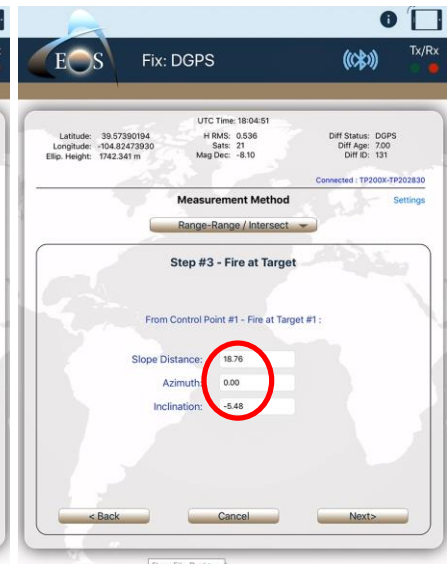


Figure 12A

Record Laser Data with Eos Tools Pro

Range-Range/Intersect method continued...

- 13A. **Step #4:** Move to the 2nd control point, tap **Start** (Figure 13) and when the GPS data is recorded, tap **Next**
- 14A. **Step #5:** Aim at the target again and measure the HD, confirm values for Slope Distance and Inclination come through (Figure 14) and tap **Next**
- 15A. **Step #6:** Choose which solution is correct by tapping the corresponding **Pt1/Pt2** icon so it turns green (Figure 15) and tap **Next**
- 16A. Tap the **Send** button (Figure 16) to transfer the offset location back to Collector

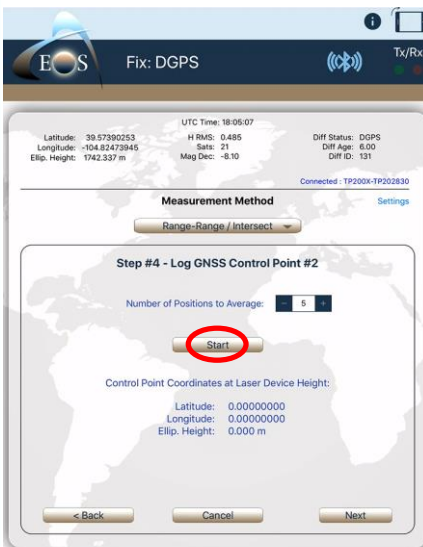


Figure 13A

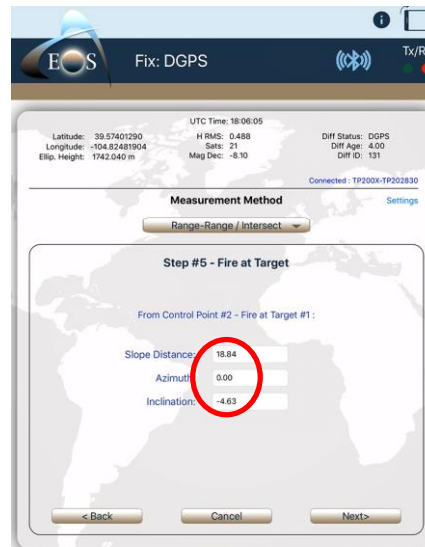


Figure 14A

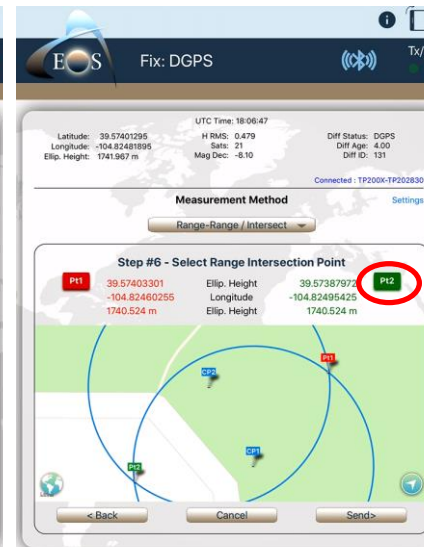


Figure 15A

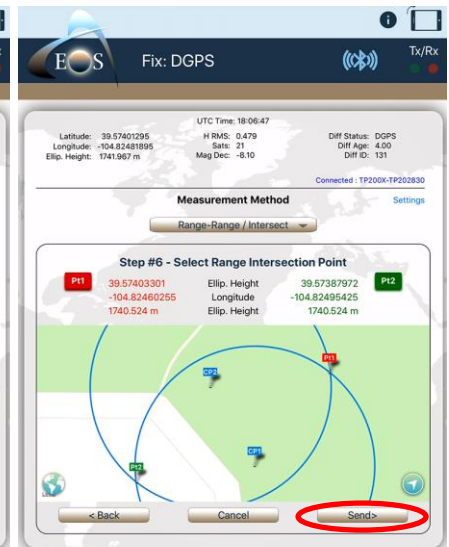


Figure 16A

Record Laser Data with Eos Tools Pro



To measure offset locations with a single laser shot, the Range-Backsight measurement method can be implemented in Tools Pro. This guide assumes the TruPulse 200X and TruAngle are configured, powered On and connected to the device.

*The TruAngle needs to be zeroed in any direction and ready to fire

- 9B. From the **Measurement Method** menu, select **Range-Backsight** (Figure 9B) and tap Next
- 10B. **Step #1:** Occupy the Backsight point, confirm the Number of Positions to Average is correct, tap **Start** (Figure 10B) and when the GPS data is recorded, tap **Next**
- 11B. **Step #2:** Occupy the Control Point, confirm the Number of Positions to Average is correct, tap **Start** (Figure 11B) and when the GPS data is recorded, tap **Next**
- 12B. **Step #3:** Aim and fire the laser system at the Backsight point, confirm values for Slope Distance, Azimuth and Inclination come through (Figure 12B) and tap **Next**

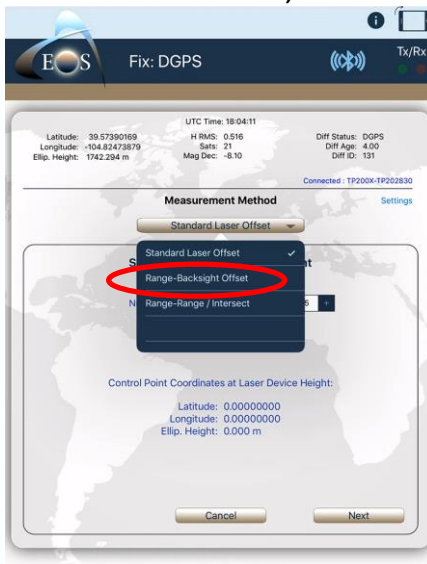


Figure 9B

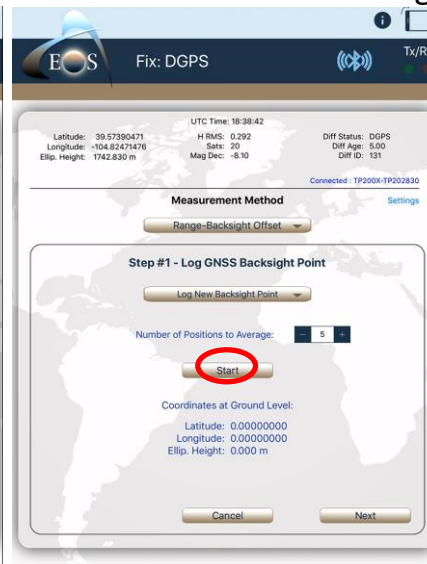


Figure 10B

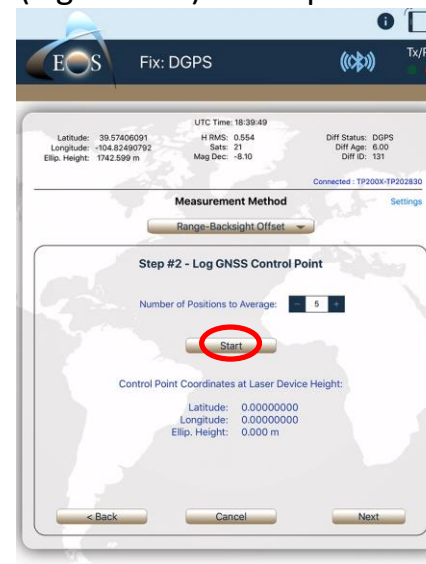


Figure 11B

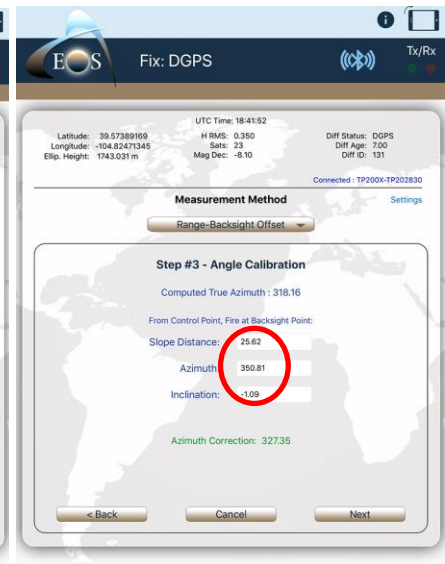


Figure 12B

Record Laser Data with Eos Tools Pro

Range-Backsight method continued...

- 13B. **Step #4:** Aim and fire the laser system at the Target point, confirm values for Slope Distance, Azimuth and Inclination come through (Figure 13B)
- 14B. If the data looks good, tap **Send** (Figure 14B) to deliver the offset location to Collector
- 15B. Multiple features may be mapped from this Control Point by returning to **Step #4** of the Range-Backsight screens, shooting in the next target (Figure 15B) Confirm the data comes through and tap **Send** to deliver the coordinates to Collector
- 16B. If a new Control Point or Backsight point needs to be measured, simply Back up to Step #1 and record the positions again (Figure 16B)

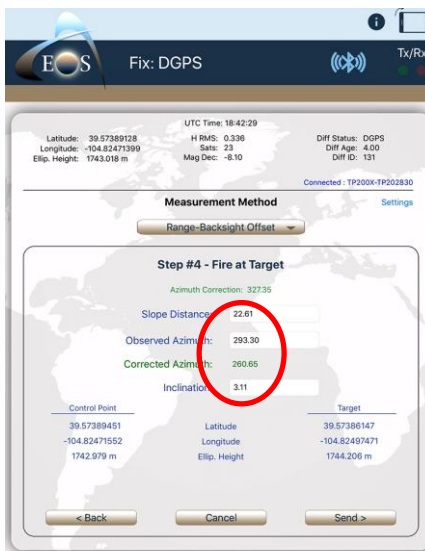


Figure 13B

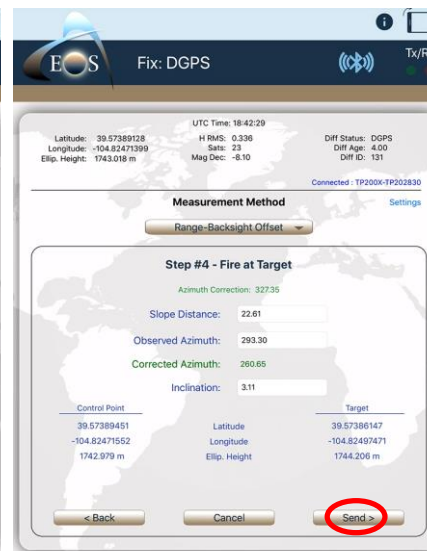


Figure 14B

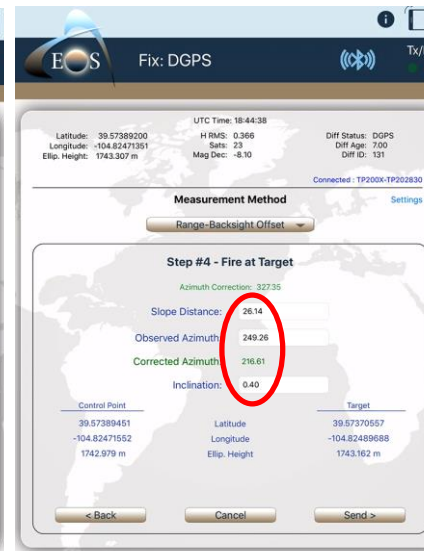


Figure 15B

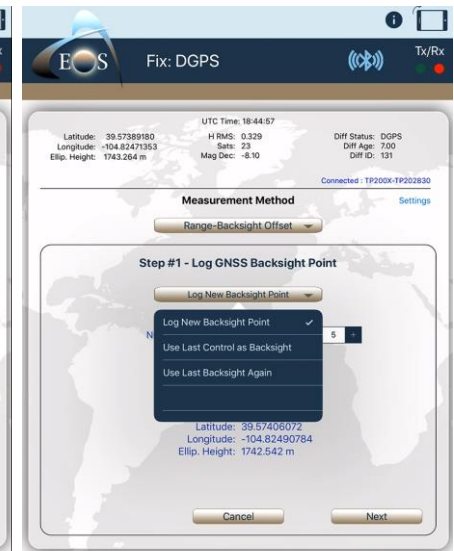


Figure 16B

Store Offset Location in Collector

Esri's Collector app will now consume the Laser Offset position calculated within the Eos Tools Pro app.

17. Collector will display the new point in red and if OK, tap **Submit** (Figure 17)
18. The updates will be sent to the app (Figure 18)
19. Details for the new Point will be displayed (Figure 19)
20. Continue in this manner to store additional offset locations

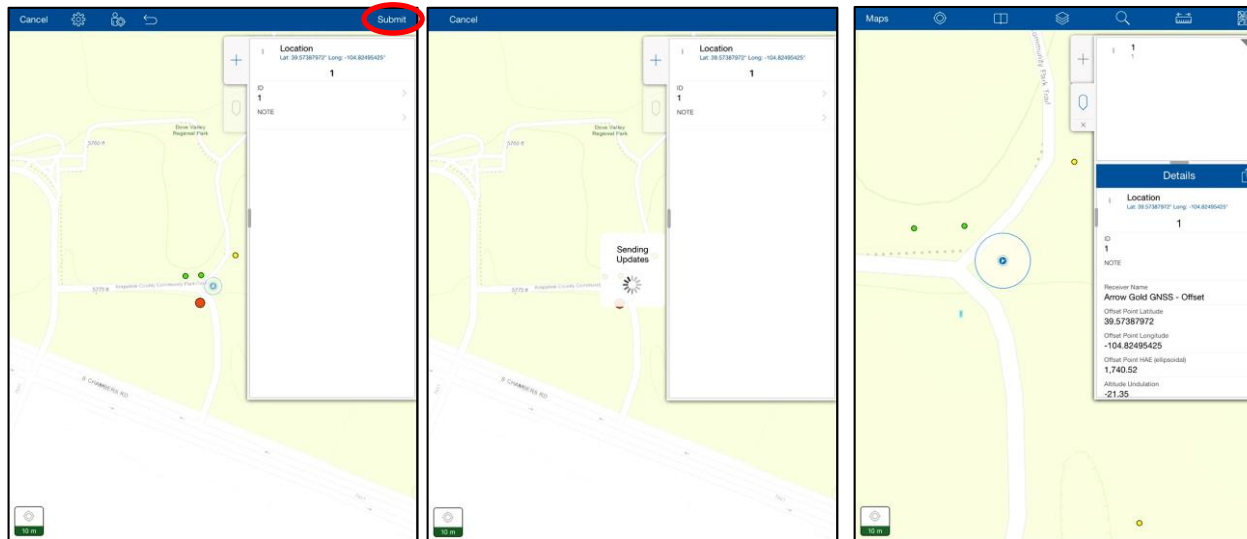


Figure 17

Figure 18

Figure 19

Product Resources

Product Page/User's Guides:

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

The screenshot shows the Laser Technology website's product page for the TruPulse Laser Rangefinder. The page features the company logo, navigation menu, and a 'Quote Request' form. The main content area includes a product image of the rangefinder, a description of the TruPulse Series as 'Compact and Affordable', and a list of features: 'Small enough to fit inside a vest pocket', 'Easy access to measurements and menus', and 'GPS and GIS software integration'. Below the product image, there are tabs for 'Overview', '200 Series', '360 Series', 'Measurement Solutions', 'Accessories', and 'Support'. The 'Overview' tab is selected, showing a detailed description of the rangefinder's capabilities and a '360°' seal of quality.

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)

<https://eos-gnss.com/product/solutions/laser-mapping/>

The screenshot displays the EOS GNSS website's 'Laser Mapping' page. It features a navigation menu, a search bar, and a main heading 'Laser Mapping'. Below the heading is a video thumbnail showing a person using a laser rangefinder at night. The page includes a section titled 'RTK LASER MAPPING' with the sub-heading 'Collect High-Accuracy Location Where GNSS Receivers Struggle'. It also lists 'Solution Partners' including Esri and Laser Technology. The page describes the solution's ability to collect high-accuracy location data in challenging environments.

<https://www.esri.com/en-us/arcgis/products/collector-for-arcgis>

The screenshot shows the Esri Collector for ArcGIS product page. It features the Esri logo, navigation menu, and a search bar. The main heading is 'Collector for ArcGIS' with the tagline 'Accurate data collection made easy'. Below the heading is a video thumbnail showing a person using the Collector for ArcGIS application on a mobile device. The page includes a section titled 'How it's used' with the sub-heading 'From damage reports and service requests to inventory and inspection of asset data, create and edit accurate data in the field.' The page also lists 'Solution Partners' including Esri and Laser Technology.

Contact Laser Technology, Inc.

Questions regarding the interface of our laser products to Esri Collector?

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