Technical Support Notes   August 2008

Configuring a TruPulse 360B Laser Rangefinder

Purpose: The TruPulse 360B Laser Rangefinder is a very portable device that will return a distance, slope, and azimuth reading via a Bluetooth connection. By connecting this to a GPS unit, it is possible to perform offsets. This is very useful for obtaining readings in locations where GPS is not readily available. It is also useful for obtaining points in areas that are difficult to get to.

Results: This Support Note goes through the three elements of setting up your laser.

1) Creating the Bluetooth connection
2) Configuring the connection in TerraSync or ArcPad
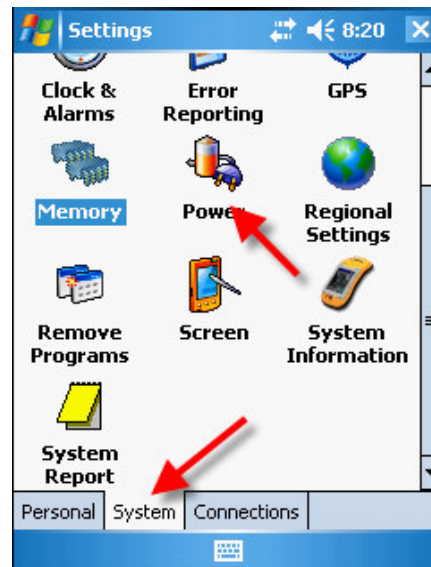3) Collecting the offset information in TerraSync or ArcPad
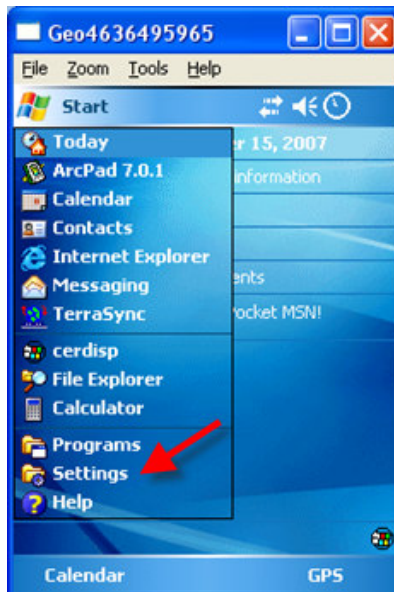
Creating the Bluetooth Connection

From the desktop of the GeoExplorer.
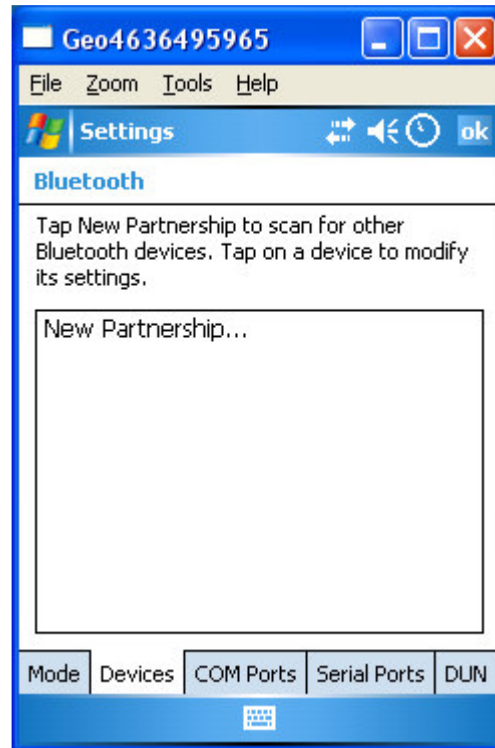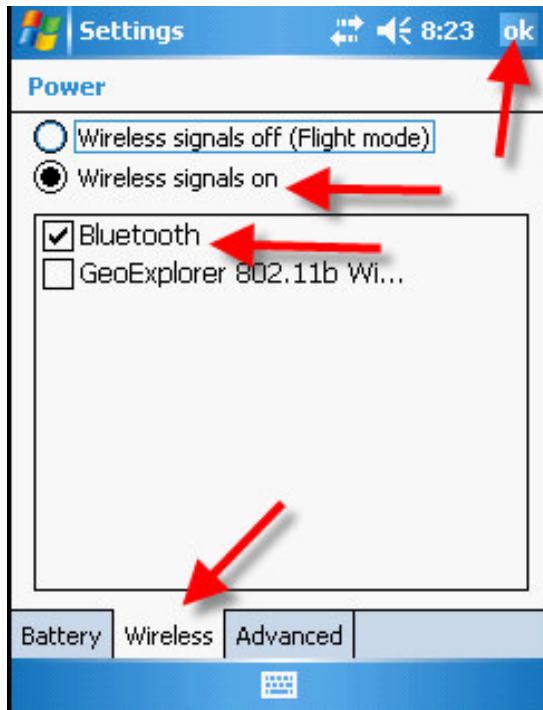Tap on Start.
Click Settings.   Click the Systems, then click on Power.

Click the Wireless tab. Make sure that "Wireless signals on" is checked.
Check Bluetooth.
You may uncheck GeoExplorer 802.11b unless you are using a Wi-Fi connection.

Click on the Connections tab
Click on the Bluetooth Icon
Click the Devices tab

**Set-up the TruPulse Laser to output Bluetooth**

(NOTE: As a factory default, Bluetooth is turned off)

1. Turn on the TruPulse laser by pressing the Fire (Power) button.
2. Press and hold the down arrow button on the left side of the laser for 4 seconds to access the System Setup Mode. "Units" will appear in the Main Display.
3. Press the down arrow button to display the "bt" option.
4. Press the Fire button to select the Bluetooth Enable Mode.

Now press "New Partnership" on your Geo (see above). The GeoExplorer will start scanning for Bluetooth Devices.

You should see TP360B with its Serial Number listed in Select a Bluetooth Device. If you don't see the TP360B listed, confirm that you have turned on Bluetooth on the laser (see above) and hit Refresh on your Geo.

Tap on the TP306B-Serial Number. Tap on Next.
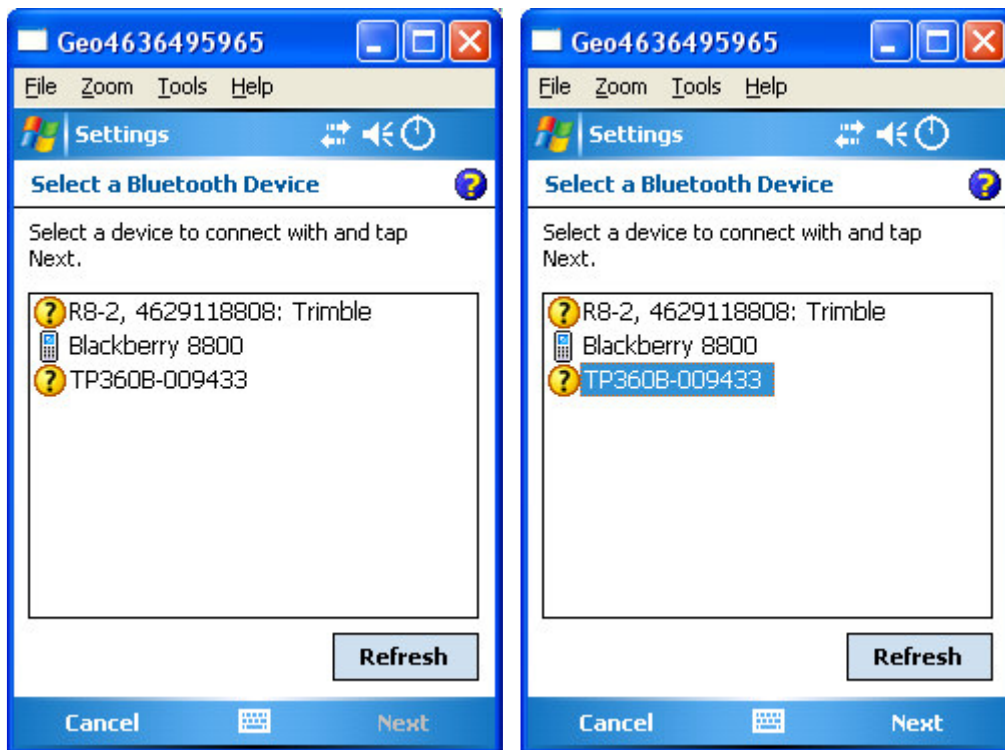
Enter 1111 for the Passkey which is the default for the TruPulse Laser and tap Next.
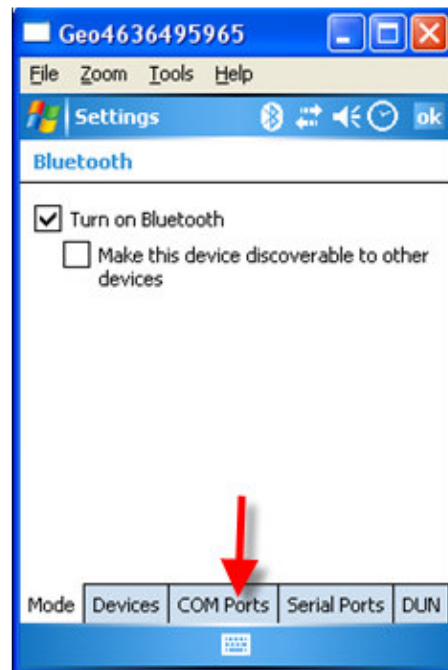
Tap in the box for Serial Port.   Tap on Finish.
Tap on OK at the top right of the screen.

Assigning the TruPulse Laser to a COM Port
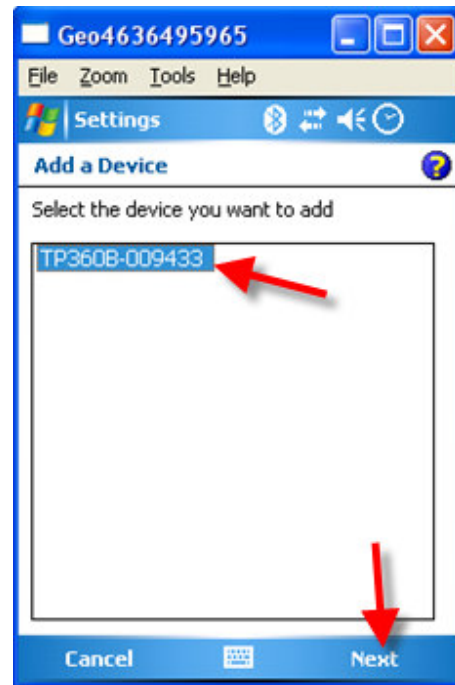
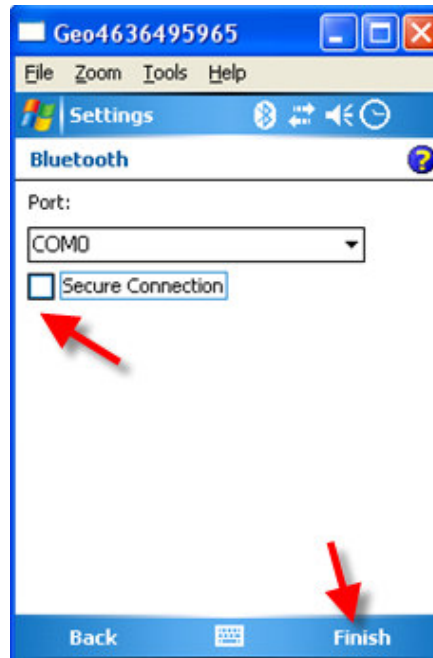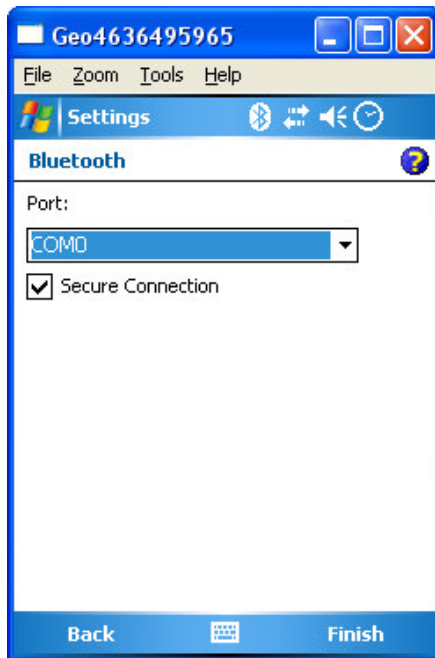Go to Start/Settings/System/Connections   Click on the COM Ports tab
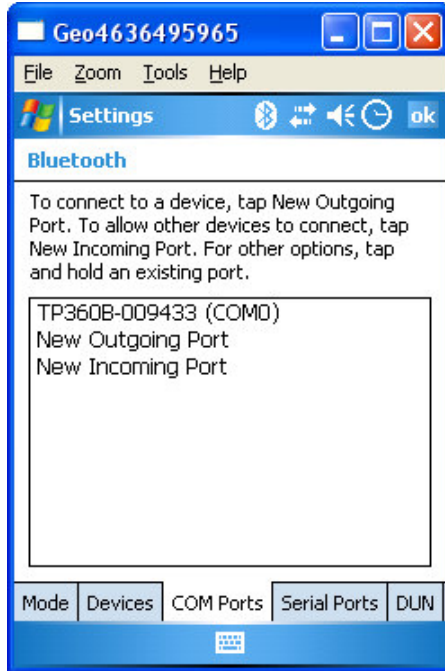
Click on New Outgoing Port

The TruPulse Laser is highlighted.
Tap on Next

Select a Port from the drop down list and remove the check beside Secure Connection.
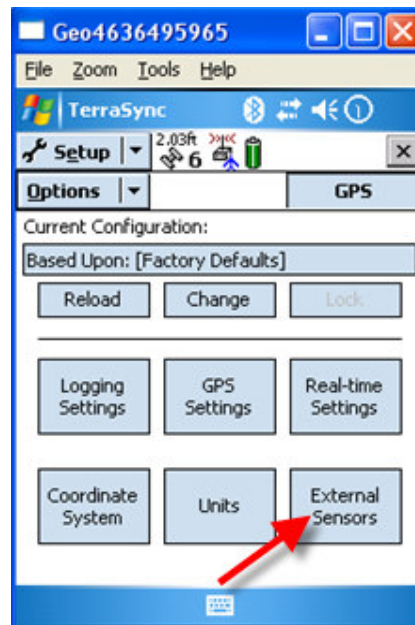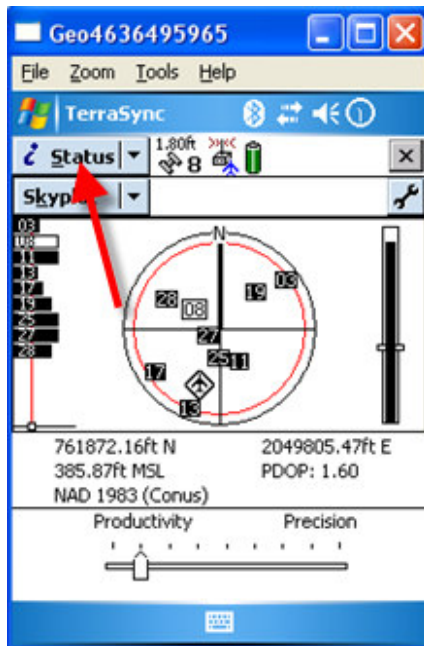Click Finish.

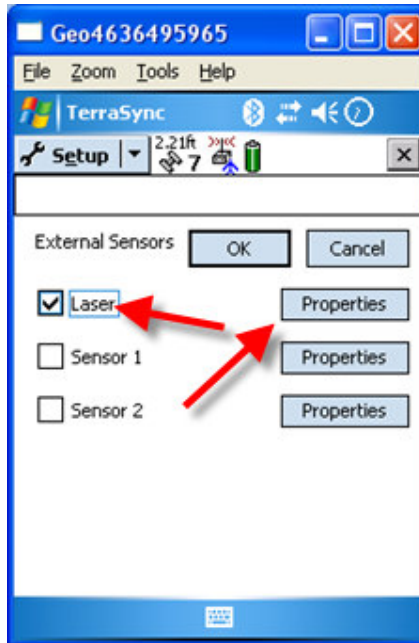Tap OK at the top right   Click the X to return to the desktop

Configuring the TruPulse 360°B Laser with TerraSync

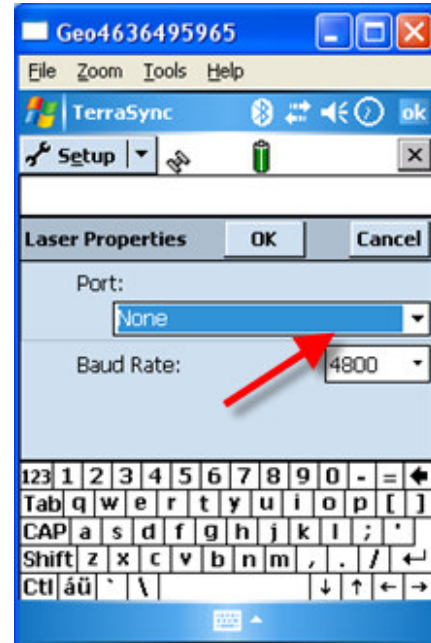Start TerraSync on the GeoExplorer.   Click on External Sensors
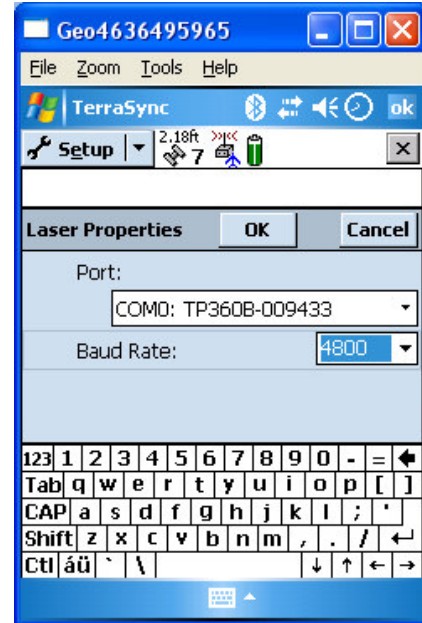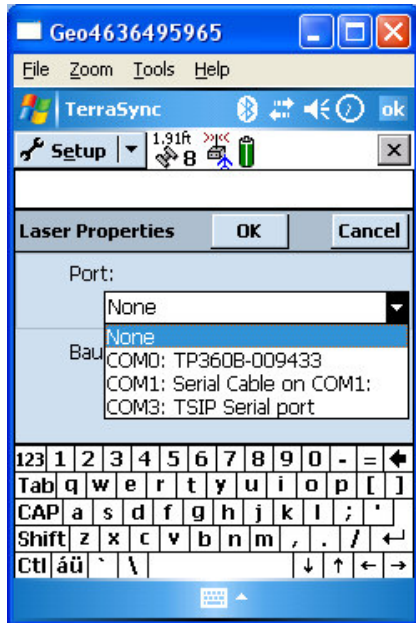Tap on Status and then tap Setup

Click on the Laser box
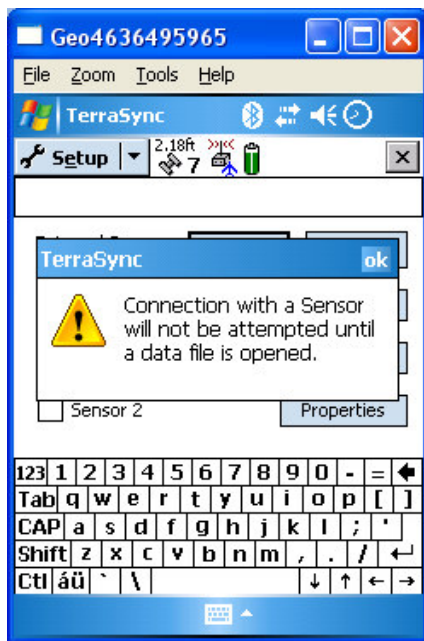Click Properties next to the Laser   Tap in the drop-down list for Port
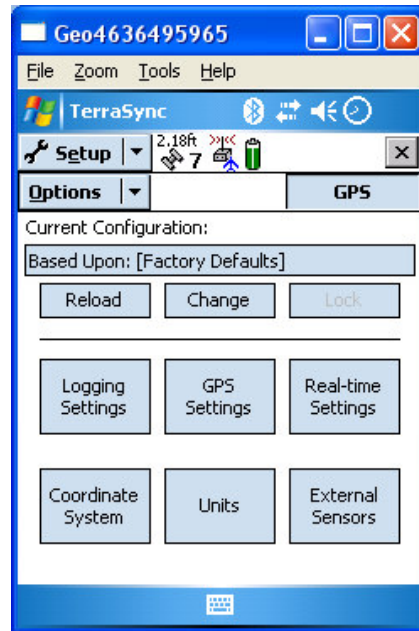

Select the TP360B – Serial Number and its associated COM Port. Tap OK.

Tap OK to this message

You now have successfully configured the TruPulse to work with TerraSync.

Configuring the TruPulse 360°B Laser with ArcPad
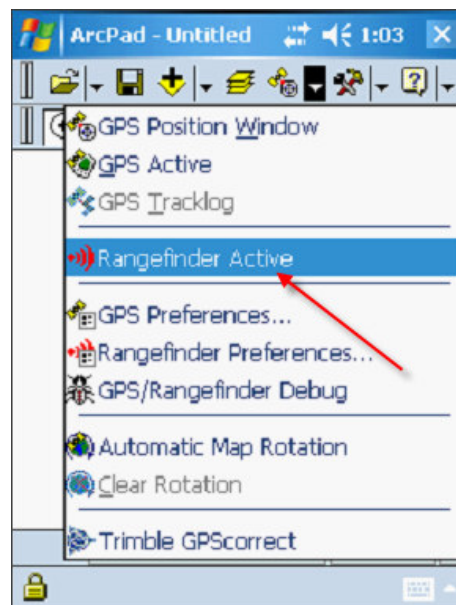
Start ArcPad and open a map (either a new map or preexisting)

Tap on the GPS Dropdown and select Rangefinder Preferences

Apply the following settings, where the COM settings will be dependant upon your Bluetooth setup. Then tap "OK".
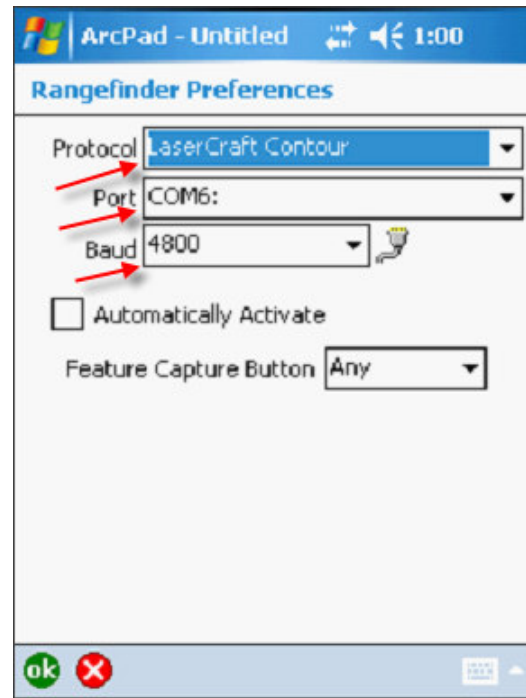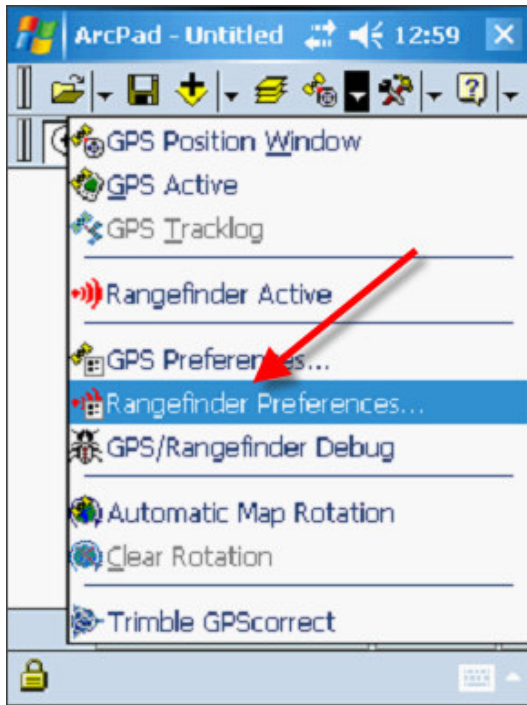
Tap the GPS Dropdown again and select 'Rangefinder Active'. The rangefinder is now active and ready for use.

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Measuring an Offset Set Point with a TruPulse 360°B Laser

Before performing any laser offsets it is recommended that you setup the laser to your specifications.

Setting up the TruPulse Laser.

1. Press and hold the down arrow button on the left side of the TruPulse laser for 4 seconds. UnitS will appear in the Main Menu display.
2. Press the Fire button to select UnitS.
3. Press the Up arrow on the left side of the TruPulse laser to select your units.
4. Press the Fire button.
5. Verify that the display for angles is in Degrees.
6. Press the Fire button.
7. Press the Up arrow to set the Measurement Mode to SD at the bottom left of the display.

TerraSync Procedure:

To measure an offset point with a TruPulse 360°B laser create a data file in TerraSync and assign a data dictionary.

Tap on your Point feature to highlight it and tap on Create.
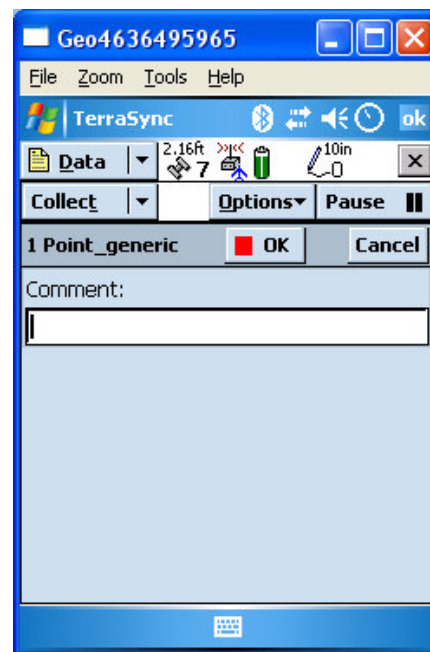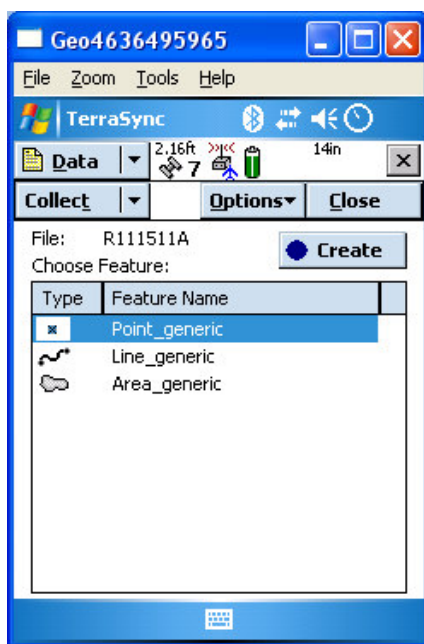
Aim the laser at the feature you wish to offset. Press and hold the Fire Button. When you see a value for distance in the display let go of the Fire button. If your offset values look correct tap on OK. If they do not look correct aim at the feature and fire the laser again. The new values will be updated in TerraSync. Enter in your attributes of the feature and tap on OK.
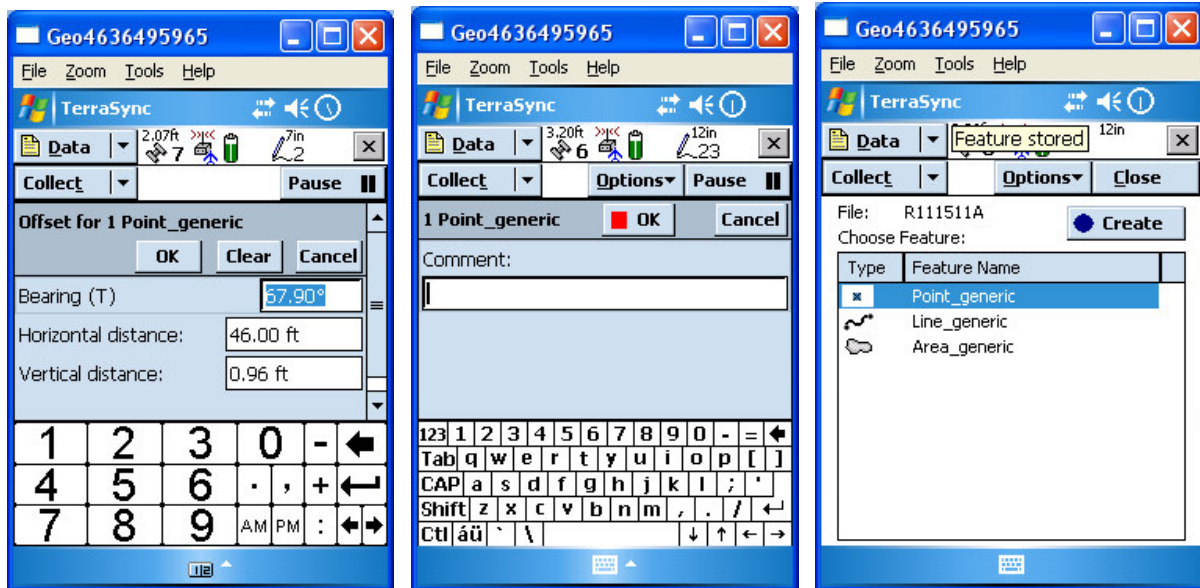
You are now returned to the main data collection screen in TerraSync. If you have other features to offset repeat the process. **Note: To properly offset features you will need to do one offset for each feature and then store the feature.**

ArcPad Procedure:

After a map is loaded and a point feature class is targeted as an editable feature class:
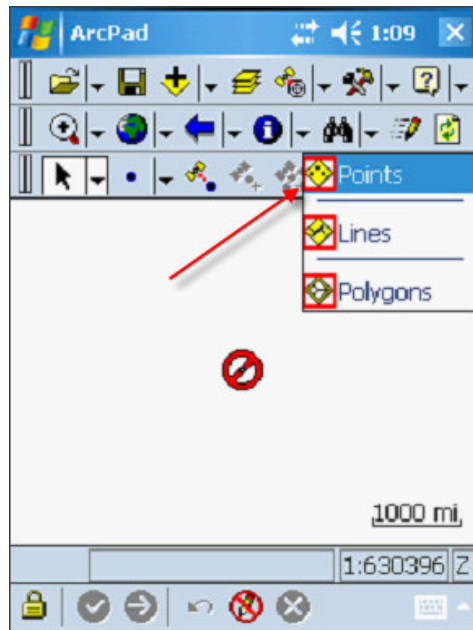

Aim the laser at the feature you wish to offset. Press and hold the Fire Button. When you see a value for distance in the display let go of the Fire button (if your sounds are enabled you will hear a high pitched ping). If your offset values look correct tap on OK. If they do not look correct aim at the feature and fire the laser again. The new values will be updated in ArcPad. Enter in your attributes of the feature and tap on OK.

You are then returned to the map view in ArcPad. If you have other features to offset repeat the process. **Note: There are other flows for which an offset may be applied using a laser rangefinder, this simply displays one method.**

Contact Seiler Instrument at 317-545-7090 (ext.30) for details or questions regarding this Support Note