Using a Laser Rangefinder in DataPlus® Mobile
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An external laser rangefinder can be connected through Bluetooth® to a GPS device running DataPlus® Mobile to collect height or distance measurements. A serial port data entry must be configured in your application for DataPlus to automatically import the data from the laser rangefinder. For this example we will be using a TruPulse™ 360 from Laser Technology.

Select Data Entry Option

1. Open the DPM Generator under Start> All Programs> DataPlus Mobile.

2. Make sure an application is open.

3. Select desired level in the Hierarchy window.

4. Create TotalHght in the Data Format under Branch Tabs

5. Select the Data Entry under Column Tabs.

6. Click on the dropdown arrow for User Data Entry Type and choose Serial Port.

7. In the Serial Parameters, select Standard for the Input Type.

8. For the Port, select the COM port that you have the laser connected to through Bluetooth. For this example it's COM 6.

4. The baud rate, parity, data bits, stop bits will be determined by the laser you are using. Please refer to the documentation for your laser.

5. Click the Advanced button.

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9. Use the pull-down arrow to set Qualifier Type to Word.

10. Use the pull-down arrow to set Parsing Method to Parse NMEA-type.

11. Type the Qualifier String in the provided box. Please refer to the documentation for your laser for this information.

12. Set Parsing Delimiters to "," (comma).

13. Select Single-Column Store.

14. Enter 2 in the Use Parse Element box.

15. Click OK to close the Advanced Window.

Test New Columns

1. Click the Compile icon in the toolbar.

2. Click the Test icon, click OK.

3. Press the F5 key to move to level with the TotalHght field

4. Press the right arrow till you get to the TotalHght field.

5. Observe how it tries to open the Com Port to the laser. An error may appear due to your computer not being able to connect to that port.

Configuration of Laser Rangefinder

Bluetooth Connection

1. On the laser rangefinder, turn on the Bluetooth by pressing the down button for four seconds to access the system setup menu.

2. Units will appear at the top of the screen when looking through the eye piece. Press the up or down button till it displays bt.

3. Press the fire button to select.

4. Use the up arrow till it displays bt_on.

5. Press the fire button to select.

6. On your mobile device, go to the Bluetooth settings. That is usually located under Start> Setting.

7. Click on Add new device.

8. Wait for it to search and find all available Bluetooth devices. Select your laser rangefinder from the list and press Next.

9. Enter in the passcode then press Next. The default passcode is 1111 or 0000.

10. You will receive a message that it successfully connected and click finish.

11. In the Bluetooth settings, tap over to the COM Ports tab.

12. Click on New Outgoing Port.

13. Select your laser rangefinder from the list and press Next.

14. In the dropdown, select the COM port that you want to assign it to. This COM port will need to match the COM port that you set up in the serial parameters in DPM Generator. For this exercise I selected COM 6. Click Finish.

Selecting Measurement Units

1. You will now want to select the correct measurement unit on the laser rangefinder.

2. Press and hold the down arrow for four seconds to access the system setup menu.

3. Units will appear at the top of the screen when looking through the eye piece.

4. Press the fire button to select.

5. Use the up arrow to display the measurement unit you want to use.

6. Press the fire button to select.

Selecting Measurement Mode

1. If you look at the bottom of the screen through the eye piece, you will see the measurement modes.

2. Press the up arrow till it displays HT (height route).

Using the Laser Rangefinder During Data Collection

1. Go to the TotalHght column.

2. You will get a message that it's Opening Com Port. Wait till the message disappears.

3. If you get a message asking if you would like to connect to your laser rangefinder using Bluetooth, select Yes.

4. With you laser rangefinder, you are ready take shots for you height routine.

5. For your first shot, point the laser rangefinder at the middle of the feature you are collecting the height for then press the fire button to record the distance.

6. The distance measurement will appear at the top of the screen then switch to Ang_1.

7. You will now want to point the laser rangefinder at the top of the feature then press the fire button to record the distance.

8. The first angle measurement will appear at the top of the screen then switch to Ang_2.

9. You will now want to point the laser rangefinder at the base of the feature then press the fire button to record the distance.

10. The second angle measurement will appear at the top of the screen then it will switch to the height measurement.

11. You should hear a beep for the mobile device and see the TotalHght column populated with the height measurement from the laser rangefinder.