

MicroSurvey FieldGenius 10

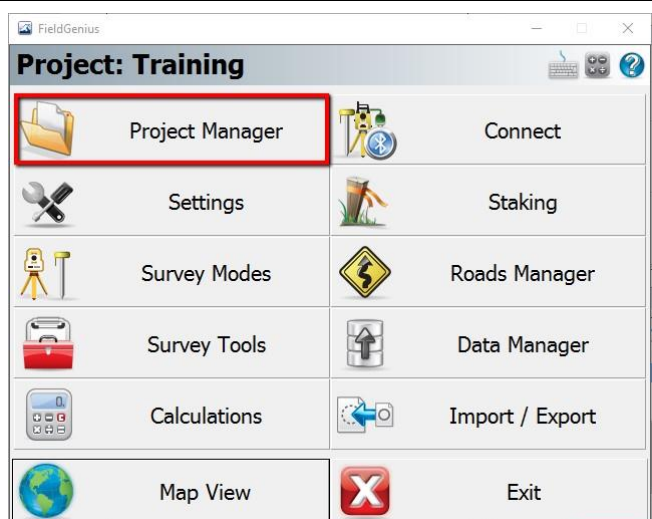
Basic Setup Guidelines for Base and Rover Operation with a Harxon 35W Radio

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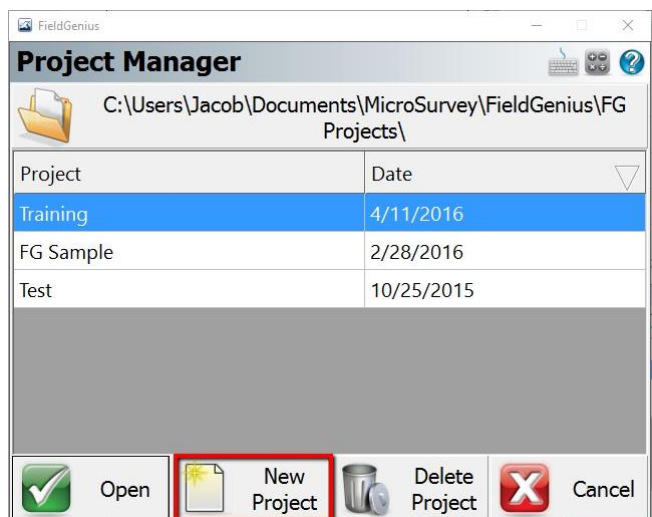
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Creating a New Project

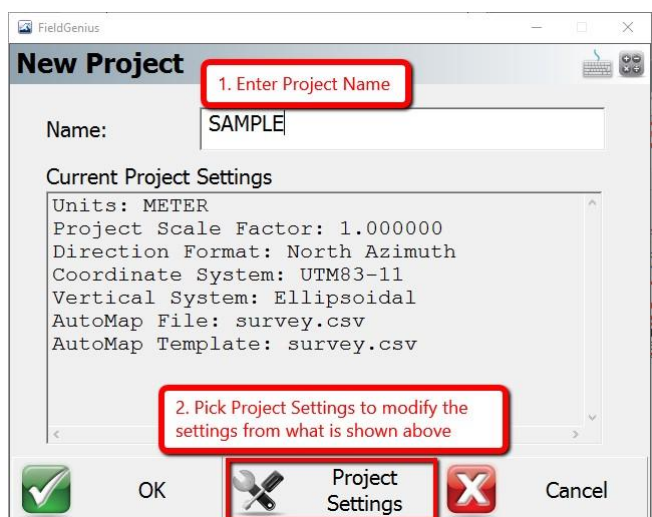
1. When you start MicroSurvey FieldGenius, the **Project Manager** will open. Also from the Main Menu you can choose the **Project Manager** option:



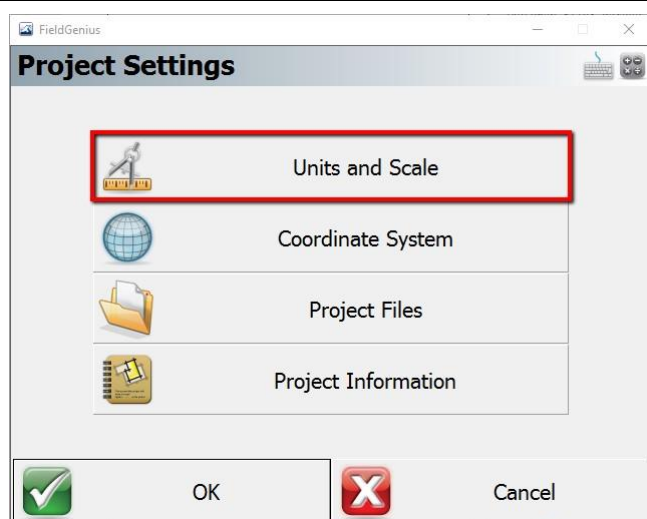
2. Pick **New Project** to create a new project:



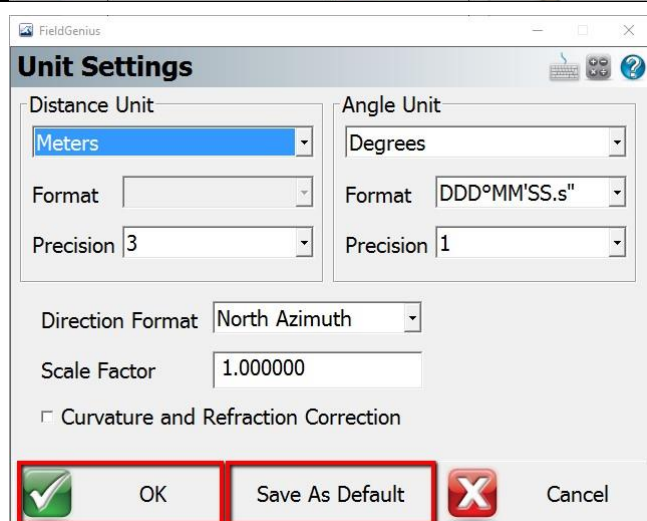
3. Enter a Project Name, then pick **Project Settings** to modify the project settings:



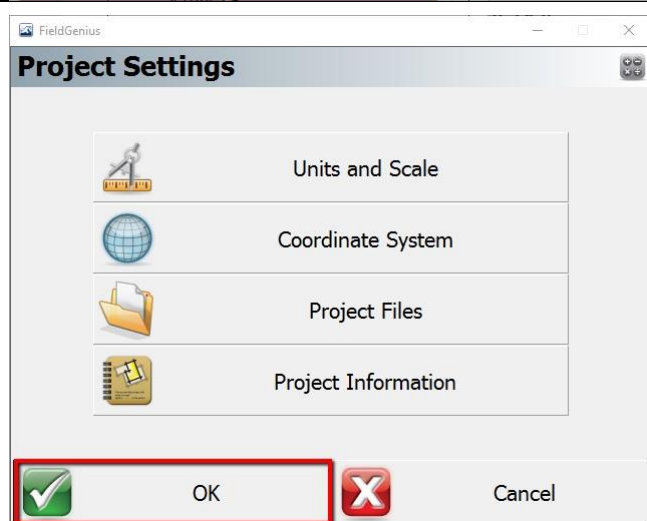
4. The **Units and Scale** settings may need to be modified:



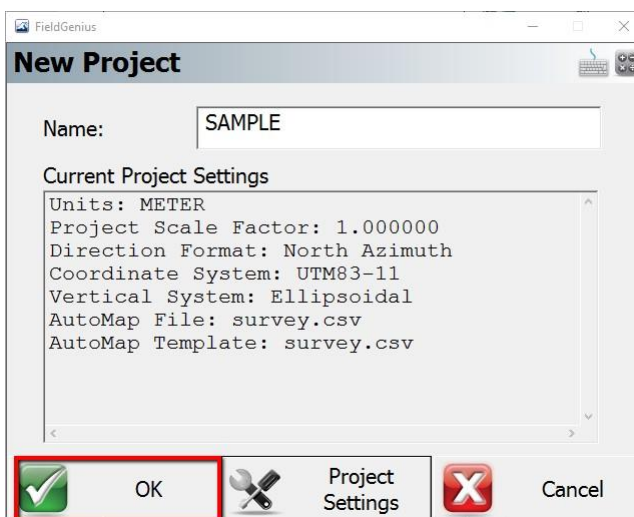
5. Set your preferred settings, and optionally **Save As Default** values for all future new projects, then pick **OK**:



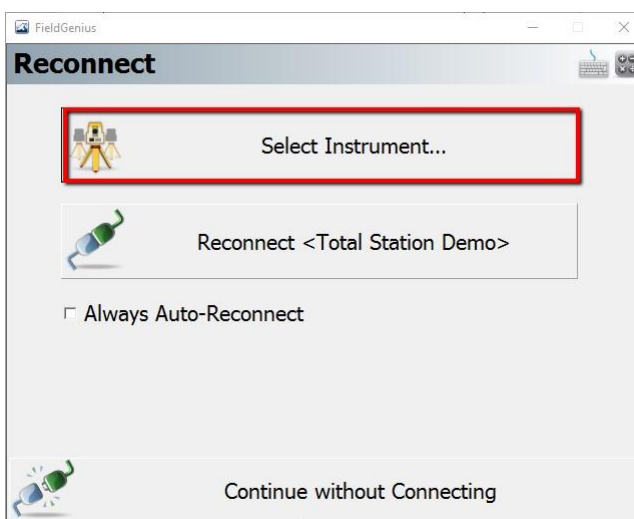
6. Pick **OK** to finish with the Project Settings:



7. Pick **OK** again to create the project:



8. New project has been created, and the Connection screen appears. You can use the **Select Instrument** here, or select **Connect** from the Main Menu later if you choose to **Continue without Connecting**:



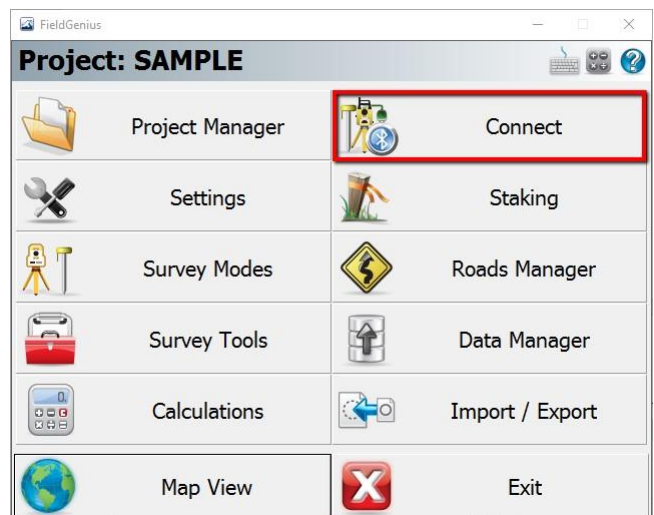
Creating an Instrument Profile for the GPS Base - and Connecting

1. Plug in the radio to the power/radio cable and to the antenna cable.

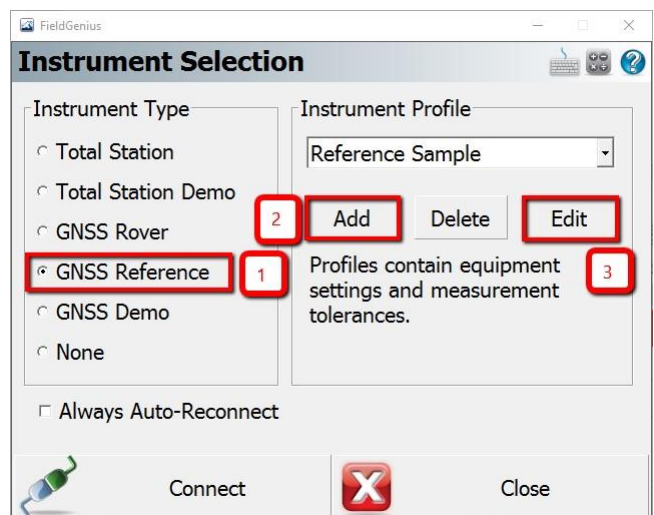
Plug in the receiver to the power/radio cable.

Make sure that all cables are plugged in to the receiver and radio before you connect the power cable to power.

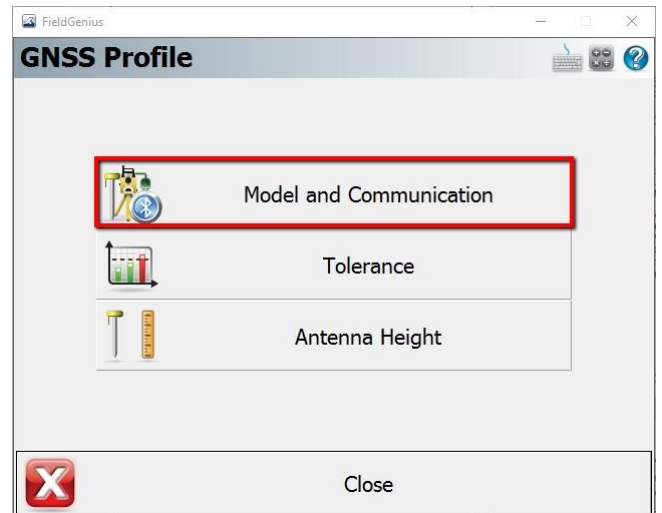
2. From the Main Menu pick **Connect**:



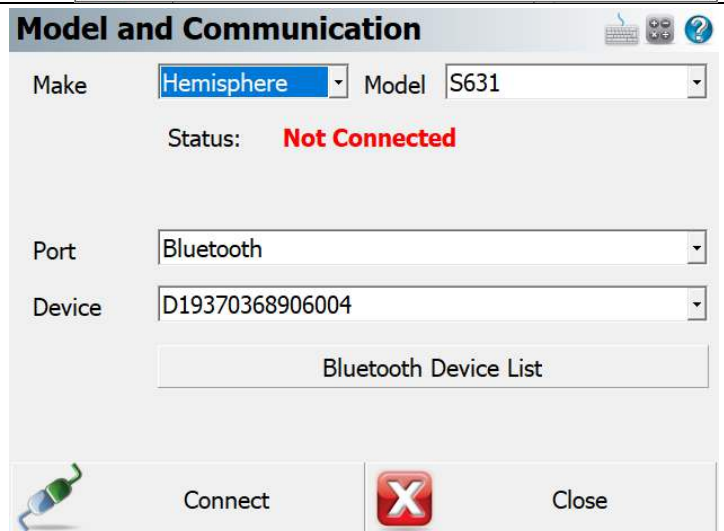
3. First, pick the GNSS Reference **Instrument Type**, then pick **Add** to create a new profile.



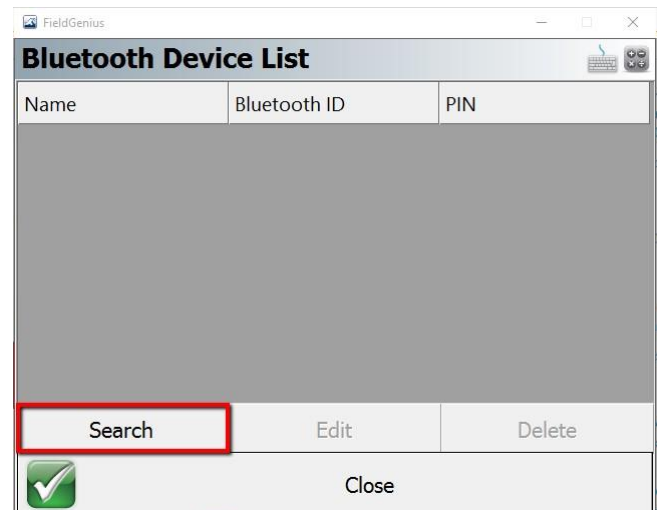
4. After entering a name for your profile pick **Edit** to configure the profile, and select **Model and Communication**.



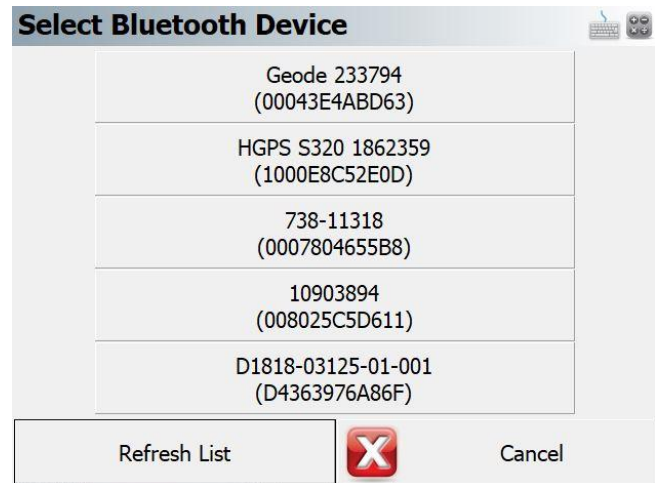
5. Select the Make and Model of your device, and the connection Port. If connecting by Bluetooth, pick **Bluetooth Device List** to search for Bluetooth devices:



6. **Search** for Bluetooth devices and select your device:



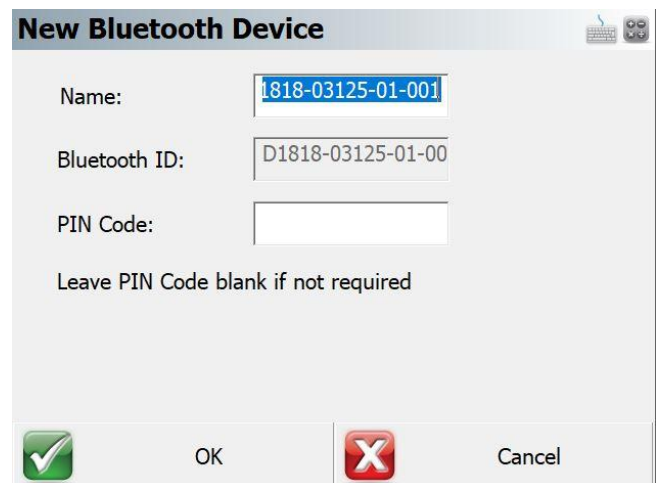
7. The Bluetooth ID of your Device will contain the device serial number in case there are multiple devices found and you're not sure which one to pick



A dialog box titled "Select Bluetooth Device" with a list of five devices. Each device entry shows a name and a Bluetooth ID in parentheses. At the bottom, there is a "Refresh List" button, a red "X" icon, and a "Cancel" button.

Name	Bluetooth ID
Geode 233794	(00043E4ABD63)
HGPS S320 1862359	(1000E8C52E0D)
738-11318	(0007804655B8)
10903894	(008025C5D611)
D1818-03125-01-001	(D4363976A86F)

8. Pick **OK** to confirm Name:



A dialog box titled "New Bluetooth Device" with four input fields: "Name", "Bluetooth ID", "PIN Code", and a note "Leave PIN Code blank if not required". The "Name" field contains "1818-03125-01-001" and is highlighted. At the bottom, there is a green checkmark icon, an "OK" button, a red "X" icon, and a "Cancel" button.

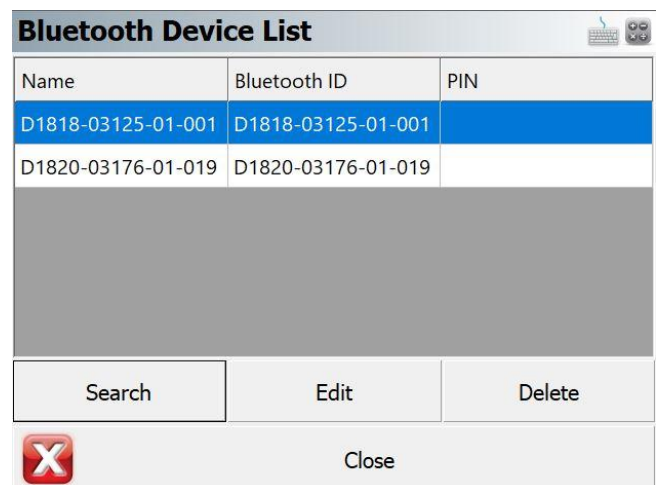
Name: 1818-03125-01-001

Bluetooth ID: D1818-03125-01-00

PIN Code:

Leave PIN Code blank if not required

9. Pick **Close** when the correct Bluetooth Device has been added to the list:



A dialog box titled "Bluetooth Device List" showing a table of devices. The first two rows are visible. Below the table are buttons for "Search", "Edit", and "Delete". At the bottom, there is a red "X" icon and a "Close" button.

Name	Bluetooth ID	PIN
D1818-03125-01-001	D1818-03125-01-001	
D1820-03176-01-019	D1820-03176-01-019	

10. With all the settings configured, pick **Connect** to connect to the device:

Model and Communication



Make **Hemisphere** Model **S631**

Status: **Not Connected**

Port **Bluetooth**

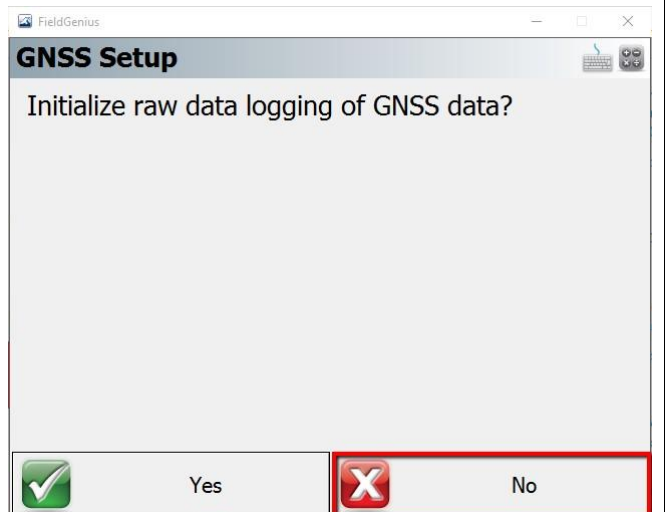
Device **D19370368906004**

Bluetooth Device List

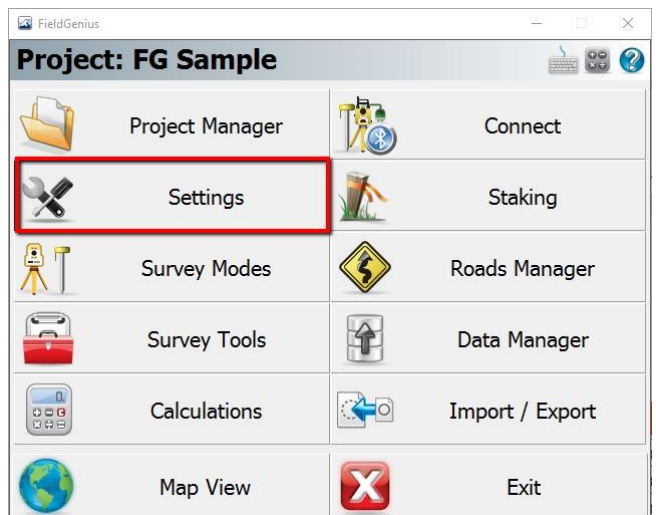
 **Connect**  **Close**

Raw Data Logging Option

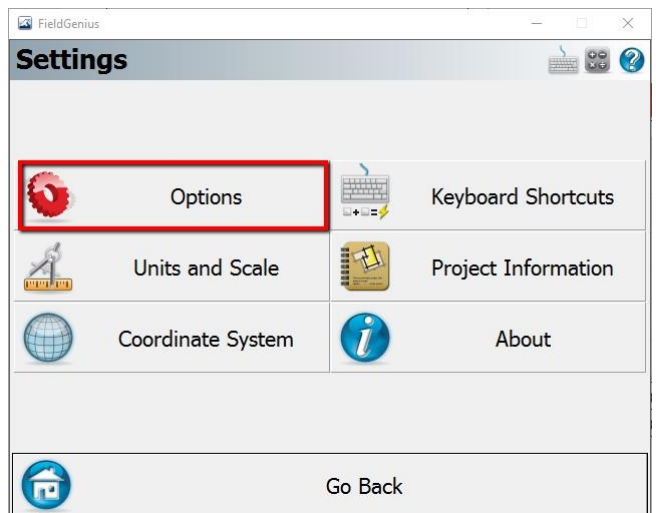
1. You may see the prompt to choose whether to initialize raw data logging of GNSS data. If you're not planning on post-processing the raw data, pick **No**. This prompt can be turned off in the Settings.



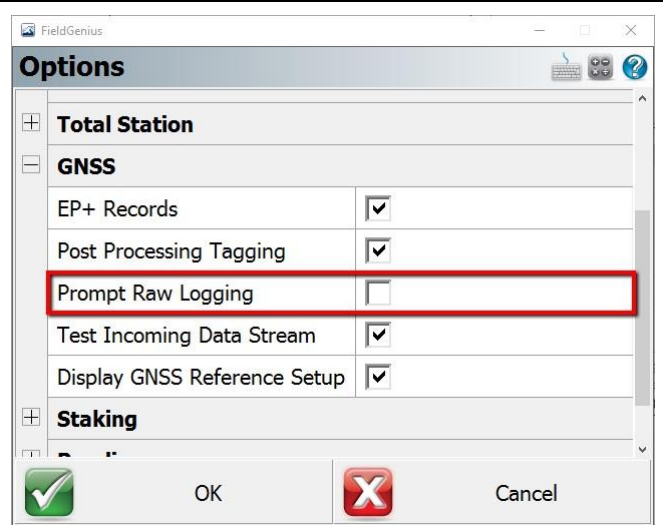
2. Pick **Settings** from the Main Menu:



3. Pick **Options**:

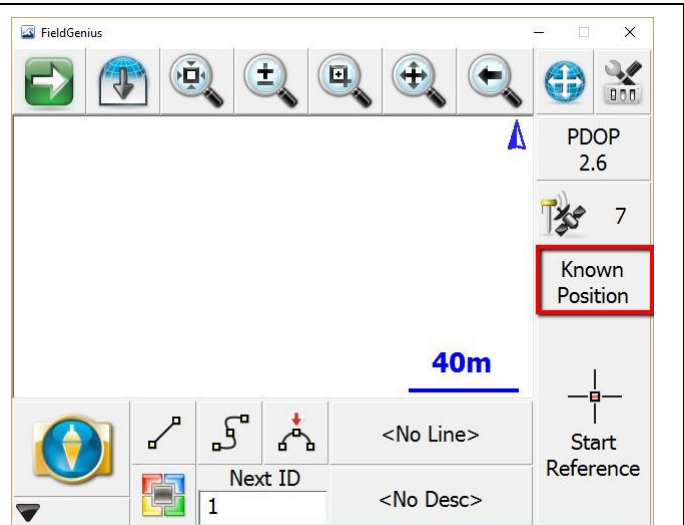


4. Under the GNSS category, uncheck the **Prompt Raw Logging** option and the **Test Incoming Data Stream** option:

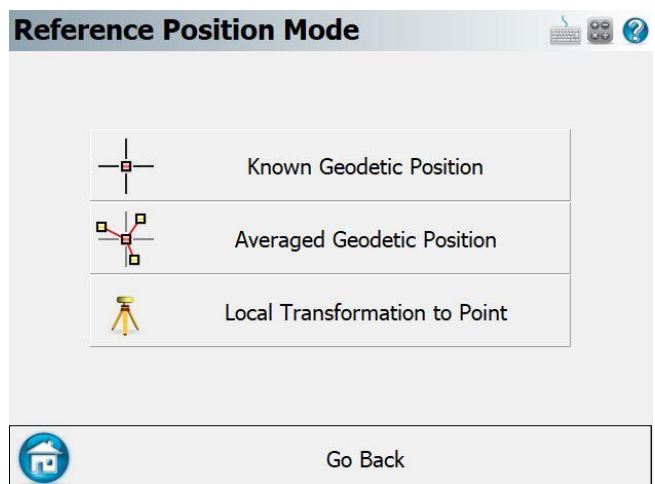


Setting the Base Position - and Configuring the Radio Link

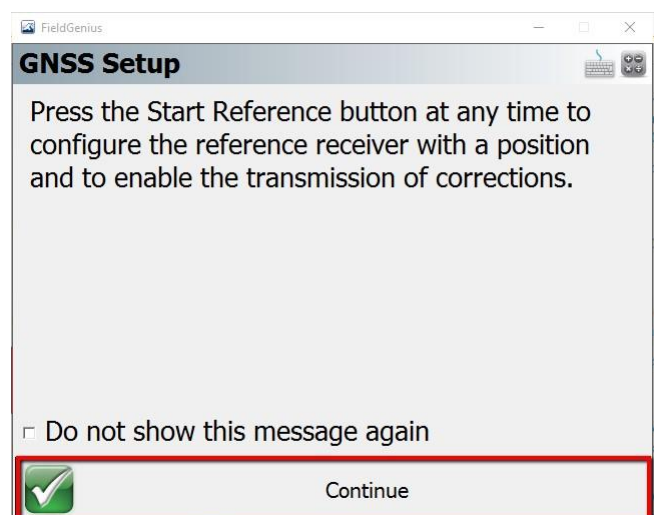
1. Once connected to the Base and on the Map Screen, pick the Measurement Mode button labeled **Known Position** by default:



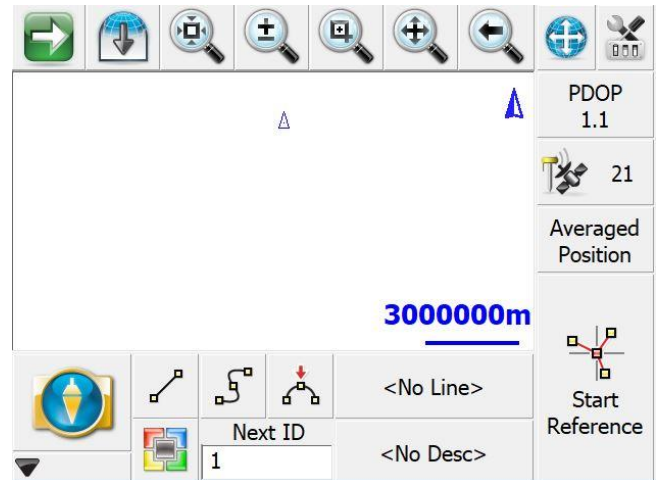
2. Pick **Averaged Geodetic Position** as the method to set the Base Reference Position:



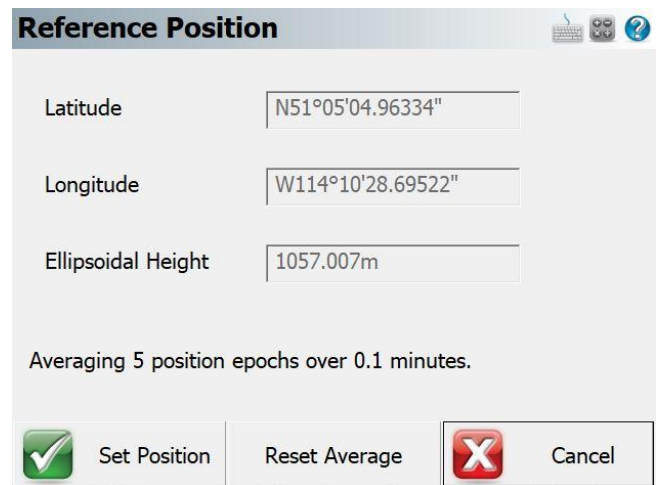
3. A message will appear indicating that you are ready to start the reference. Check the box to not show this screen in the future:



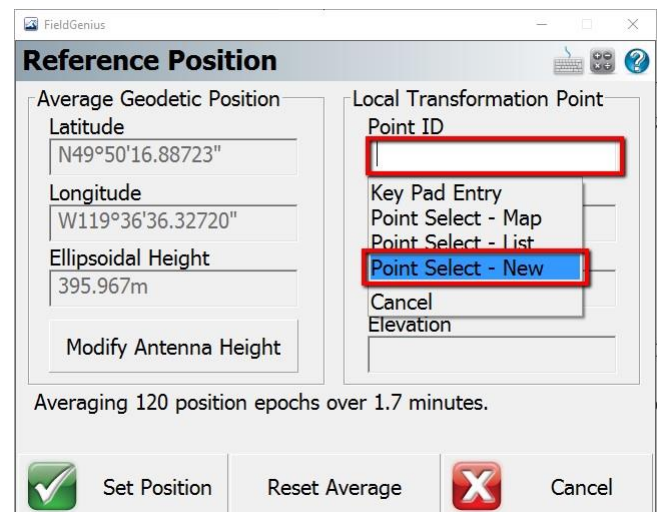
4. Pick **Start Reference** to begin:



5. Immediately measurements are started, and the program will average all the observations taken until the position is set:



6. Click on **Set Position** when you are happy with the number of points averaged:



7. You will be given the option to store the averaged point. Click **Yes**:

Reference Position

Save the averaged geodetic position to the points database?



Yes



No

8. Enter the point details and click on **Store Pnt**:

Reference Position

Point ID	1			
Description	BASE	List		
Northing	5663042.732m			
Easting	697876.472m			
Elevation	1057.023m			
Store As	User Point			
		Review Measurement		
		GIS Attributes		
		Advanced		
		Enter Note		
	Store Pnt		Cancel	

9. Measure the HI of the base and record it under **Measured Height**, select where you measured to under **Measure Point**:

Take note of the diagram on the following page for the locations that you can measure to.

Antenna Height

Model	S631
Measured Height	1.620m
Measure Point	Bottom of antenna mount
Offsets	
Measure Point to ARP Offset - Horizontal	0.0mm
Measure Point to ARP Offset - Vertical	0.0mm
ARP to APC (L1) Offset - Vertical	70.1mm
	OK



10. The Link Configure screen appears immediately after the base position has been set. Select the Link Device as appropriate and pick **Connect** to configure the base:

The screenshot shows the 'Link Configure' dialog box in the FieldGenius software. The dialog has a title bar 'FieldGenius Link Configure'. It contains three sections: 'Device', 'Communication Parameters', and 'Correction Data'. The 'Device' section has 'Device Type' set to 'Other Device' and 'Device Port' set to 'Serial'. The 'Communication Parameters' section has 'Baud Rate' set to '38400' and 'Flow Control' set to 'None'. The 'Correction Data' section has 'Message Type' set to 'Hemisphere ROX' and 'Base Station ID' set to '0'. At the bottom, there are three buttons: 'Connect' (with a radio icon), a red 'X' button, and 'Close'.

11. Pick **Disconnect** to disconnect from the Base receiver, the radio link will continue to transmit corrections.

The screenshot shows the 'Project: SAMPLE' screen in the FieldGenius software. The screen has a title bar 'FieldGenius Project: SAMPLE'. It displays a grid of icons and labels for various functions. The 'Disconnect' button, which features a radio icon and a red 'X', is highlighted with a red rectangular box. Other buttons include 'Project Manager', 'Settings', 'Survey Modes', 'Survey Tools', 'Calculations', 'Map View', 'Staking', 'Roads Manager', 'Data Manager', 'Import / Export', and 'Exit'.

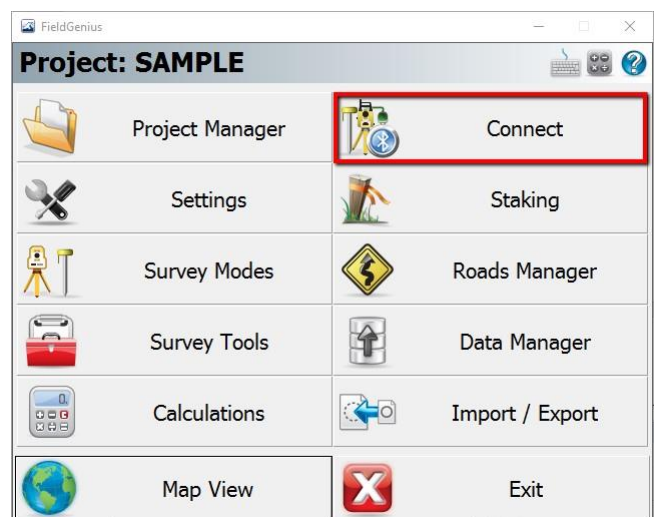
Creating an Instrument Profile for the GPS Rover – and Connecting

1. Screw the UHF Antenna (QT400-T) into the port labelled UHF.

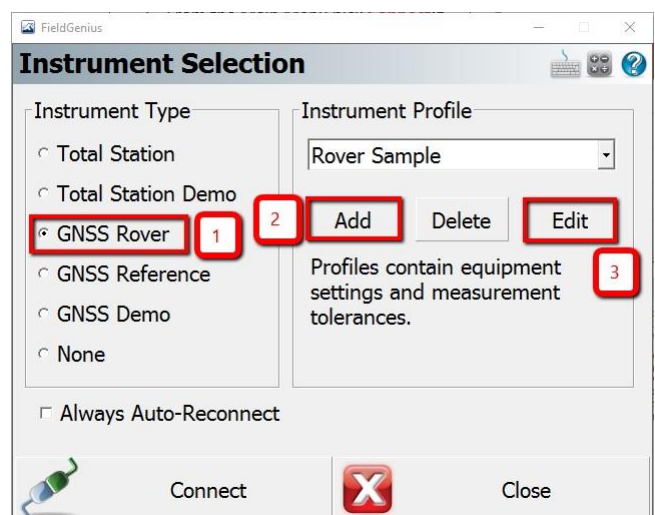
Once completed, the receiver should look as follows:



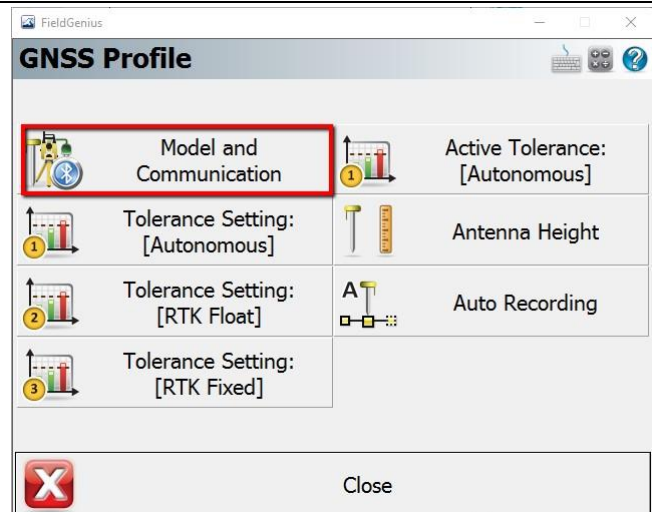
2. From the Main Menu pick **Connect**:



3. First, pick the GNSS Rover **Instrument Type**, then pick **Add** to create a new profile.

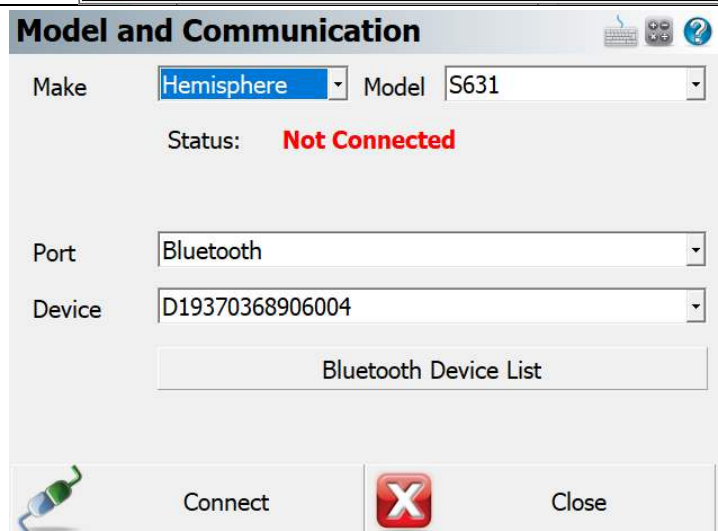


4. After entering a name for your profile pick **Edit** to configure the profile, and select **Model and Communication**.



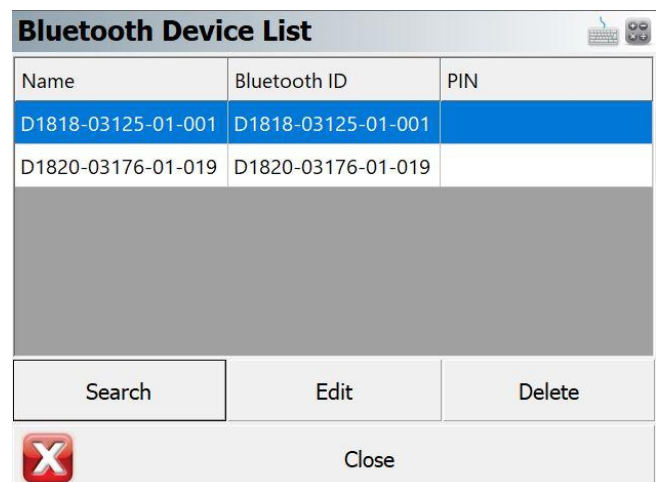
The 'GNSS Profile' window in FieldGenius shows various settings. The 'Model and Communication' tab is highlighted with a red box. Other settings include 'Active Tolerance: [Autonomous]', 'Antenna Height', 'Auto Recording', and three 'Tolerance Setting' options: '[Autonomous]', '[RTK Float]', and '[RTK Fixed]'. A 'Close' button is at the bottom right.

5. Select the Make and Model of your device, and the connection Port. If connecting by Bluetooth, pick **Bluetooth Device List** to search for Bluetooth devices:



The 'Model and Communication' window shows fields for 'Make' (Hemisphere), 'Model' (S631), 'Status' (Not Connected), 'Port' (Bluetooth), and 'Device' (D19370368906004). A 'Bluetooth Device List' button is present. At the bottom are 'Connect' and 'Close' buttons.

6. **Search** for Bluetooth devices and select your device. The Bluetooth ID of your Device will contain the device serial number in case there are multiple devices found and you're not sure which one to pick:

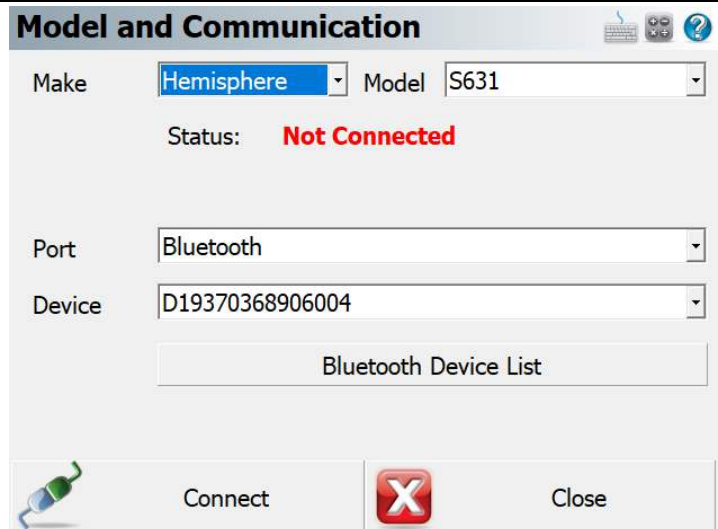


The 'Bluetooth Device List' window displays a table of discovered devices. The first device is selected.

Name	Bluetooth ID	PIN
D1818-03125-01-001	D1818-03125-01-001	
D1820-03176-01-019	D1820-03176-01-019	

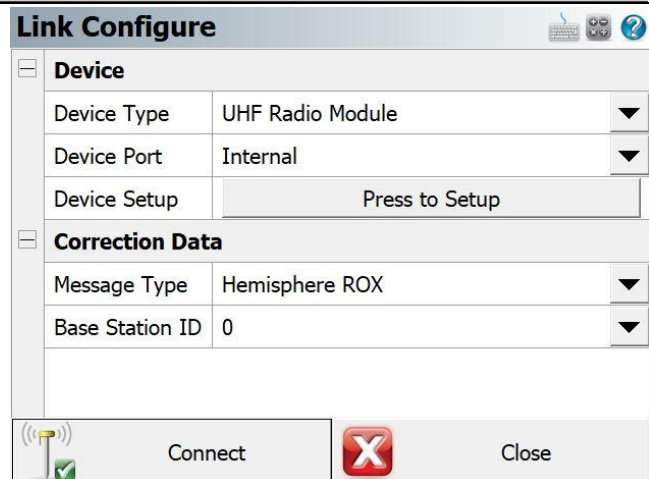
Below the table are 'Search', 'Edit', and 'Delete' buttons, and a 'Close' button at the bottom.

7. With all the settings configured, pick **Connect** to connect to the device:



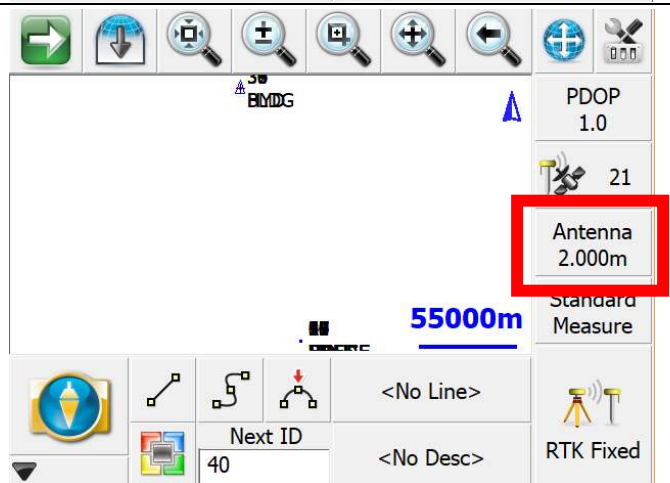
The 'Model and Communication' screen displays configuration options for a device. It includes dropdown menus for 'Make' (set to Hemisphere) and 'Model' (set to S631). The status is 'Not Connected'. Below these are dropdowns for 'Port' (set to Bluetooth) and 'Device' (set to D19370368906004). A 'Bluetooth Device List' button is present. At the bottom, there is a 'Connect' button with a green plug icon and a 'Close' button with a red 'X' icon.

8. The Link Configure screen appears immediately after the rover is connected. Select the Link Device as appropriate and pick **Connect** to configure.



The 'Link Configure' screen shows settings for the link device. It has two main sections: 'Device' and 'Correction Data'. In the 'Device' section, 'Device Type' is 'UHF Radio Module' and 'Device Port' is 'Internal'. There is a 'Device Setup' button labeled 'Press to Setup'. In the 'Correction Data' section, 'Message Type' is 'Hemisphere ROX' and 'Base Station ID' is '0'. At the bottom, there is a 'Connect' button with a green antenna icon and a 'Close' button with a red 'X' icon.

9. From the map screen, click on **Antenna** to enter the antenna height.



The map screen displays a map with various navigation and measurement tools. A red box highlights the 'Antenna' button, which shows '2.000m'. Other visible elements include a toolbar at the top with navigation icons, a 'PDOP 1.0' indicator, a 'Standard Measure' button, and a 'RTK Fixed' status indicator at the bottom right. The map shows a distance of '55000m' and a 'Next ID' of '40'.

10. From the map screen, click on **Antenna** to enter the antenna height.

Take note of the locations shown below for where to measure HI to.

Antenna Height

Model: S631

Measured Height: 1.620m

Measure Point: Bottom of antenna mount

Offsets

Measure Point to ARP Offset - Horizontal	0.0mm
Measure Point to ARP Offset - Vertical	0.0mm
ARP to APC (L1) Offset - Vertical	70.1mm

OK

