

# **CHC<sup>®</sup> i80 GNSS Receiver**

## **QuickTour with FieldGenius**

**(Internal UHF Base Mode)**





## 1.Prerequisites

**Hardware:** CHC i80 Base with internal radio Kit, Controller Kit,UHF Bar Antenna (450-470 MHz), Lithium Battery, Extension Pole, Tribrach with optical plummet, Auxiliary H.I. Tool, H.I. Tape, Tribrach adaptor, Tripod, LT30 handheld

**Software:** FieldGenius8

## 2.Steps to set i80 working as base in internal UHF mode with FieldGenius

### 2.1 Base installation

Set up base on known point or unknown point as shown in follow figure and screw **bar antenna** on base receiver.

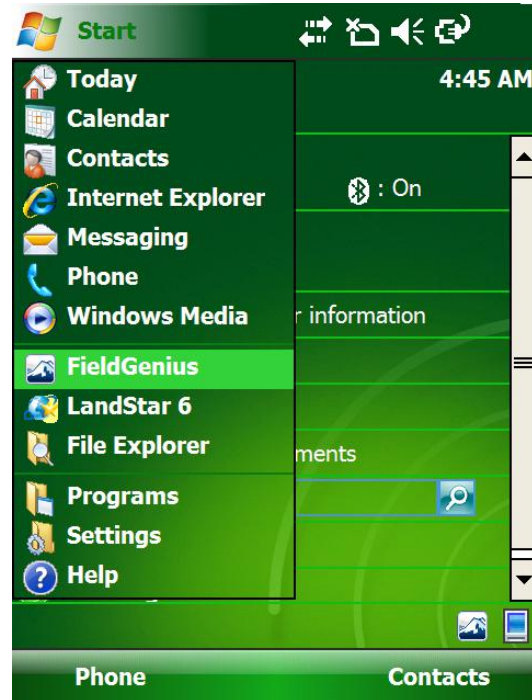


**Note:** The recommend firmware version of i80 is 1.3.36 or higher. If not, please contact local dealer or CHC Support for latest firmware.

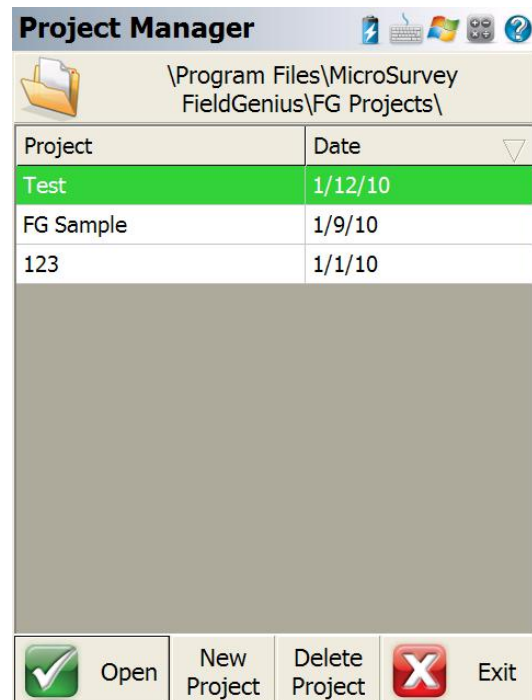
### 2.2 Base setting in FieldGenius

1. Power on the receiver  
Long press the i80 power button until the green and blue LED lights are on.

2. Click on **[start]** and then FieldGenius.



3. Click **[New Project]** to create a project or Click **[Open]** to open one exist project.





4. A project file should be selected then click **[Continue]** for next step.

**Open Project Files: T...**

Generate New Name

Active Raw File:

☐ Encrypted

☐ Copy Existing:  ...

Project Automap:

☐ Use Template:  ...

Feature File:  ...

Continue Cancel

5. Click on **[Select Instrument]**

**Reconnect**

Select Instrument...

Reconnect <GNSS Rover> Rover Sample

☐ Always Auto-Reconnect

Continue without Connecting

6. Select **[GNSS Reference]** option then click **[Edit]** to select device and linking method

**Instrument Selection**

Instrument Type

☐ Total Station ☐ GNSS Rover

☐ Total Station Demo ☒ **GNSS Reference**

☐ None ☐ GNSS Demo

Instrument Profile

Reference Sample

Profiles contain equipment settings and measurement tolerances.

☐ Always Auto-Reconnect

Connect Close

7. Click **[Tolerance]** tab to set base station satellites mask, PDOP mask and elevation mask.


**GNSS Profile**

Model and Communication

**Tolerance**

Antenna Height

Close




### Tolerance

SVs Mask:

PDOP Mask:

Elevation Mask:

 OK

### Antenna Height


Model:

Measured Height:

Measure Point:


Offsets:


Measure Point to ARP - Horz	<input type="text" value="0.0mm"/>
Measure Point to ARP - Vert	<input type="text" value="0.0mm"/>
ARP to APC (L1) - Vert	<input type="text" value="131.0mm"/>


 OK


8. Click **[Antenna Height]** to set the base antenna height

### GNSS Profile

 Model and Communication

 Tolerance

 **Antenna Height**

 Close

**Note:** if you want to measured the slant height of i80, please refer to the follow figure.





9. Click **[Model and Communication]** tab→select Make as **[CHC]**, Model as **[i80]**, Port as **[Bluetooth]** → click **[Bluetooth Device List]** to add bluetooth device

**GNSS Profile**

Model and Communication

Tolerance

Antenna Height

Close

**Model and Communi...**

Make: **CHC**

Model: **i80**

Status: **Not Connected**

Port: **Bluetooth**

Device: **GNSS-1004401**

**Bluetooth Device List**

Connect Close

10. Click **[Search]** to search the around Bluetooth device.

**Bluetooth Device List**

Name	Bluetooth ID	PIN
GNSS-1004448	GNSS-1004448	1234
GNSS-1002771	GNSS-1002771	1234
GNSS-1002521	GNSS-1002521	1234

**Search** **Edit** **Delete**

**Close**

11. Click on the device that matches your device serial number, then click it

**Select Bluetooth Device**

GNSS-2001410  
(84EB181A9C9B)

Pocket\_PC  
(0013EFD629E5)

GNSS-1004851  
(0017E99B03BC)

GNSS-1003174  
(0017E99FC2E3)

**GNSS-1004401  
(0017E9A2FB53)**

**Refresh List** **Cancel**



12. Type in the **PIN Code of the bluetooth** then click **[OK]** button to finish the device edit.

**New Bluetooth Device**

Name: GNSS-1004401

Bluetooth ID: GNSS-1004401

PIN Code: 1234

Leave PIN Code blank if not required

☒ OK ☐ Cancel

13. Then our target device can be selected in the bluetooth device list. Click **[OK]** button back to **[Model and Communication]** interface.

**Bluetooth Device List**

Name	Bluetooth ID	PIN
GNSS-1004448	GNSS-1004448	1234
GNSS-1002771	GNSS-1002771	1234
GNSS-1002521	GNSS-1002521	1234
GNSS-1004401	GNSS-1004401	1234

Search Edit Delete

☒ Close

14. The target device can be selected in the drop-down box then click **[Connect]** button. The software will build the connection to your device

**Model and Communi...**

Make: CHC

Model: i80

Status: **Not Connected**

Port: Bluetooth

Device: GNSS-1004401

Bluetooth Device List

☒ Connect ☐ Close

15. After successful connection, FieldGenius will display the following hint, please click **[OK]** button

**GNSS Setup**

Press the Start Reference button at any time to configure the reference receiver with a position and to enable the transmission of corrections.

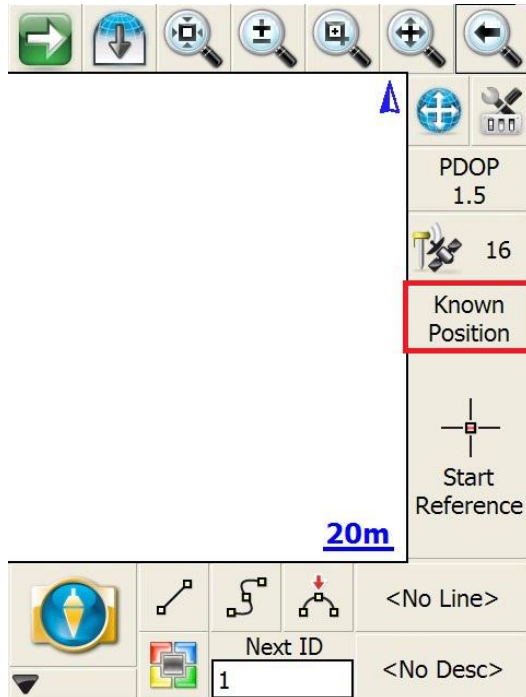
☐ Do not show this message again

☒ Continue

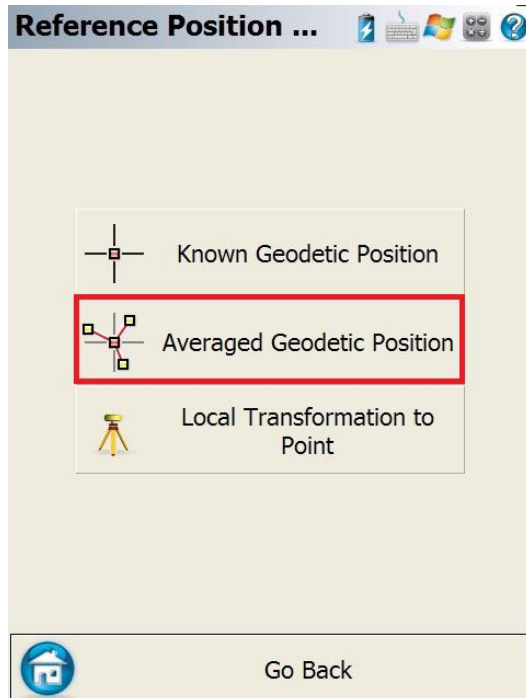




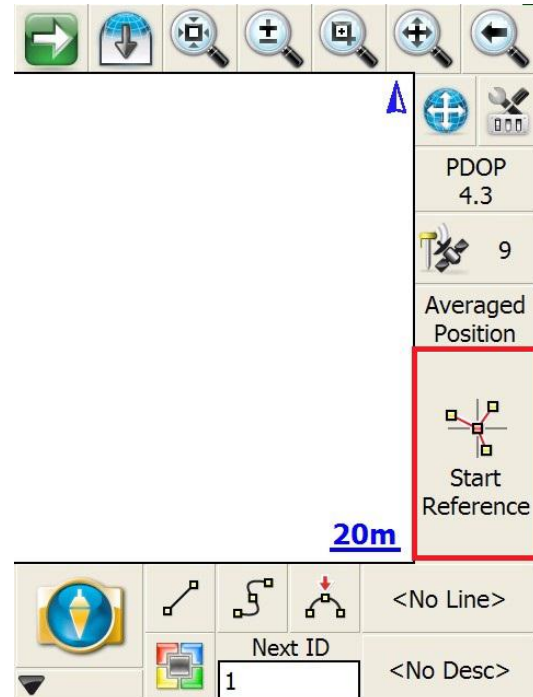
14. Click the [Known Position] icon to switch the method of starting base



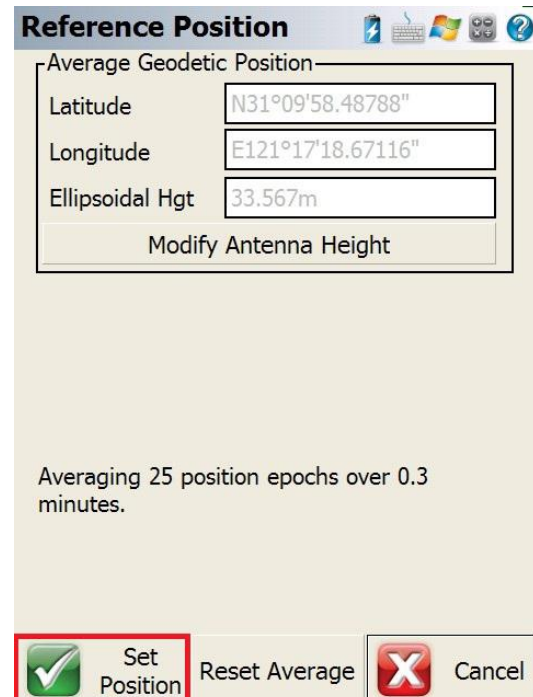
Users can start base with known points by clicking **[Known Geodetic Position]**, unknown position by clicking **[Averaged Geodetic Position]** and local coordinates by clicking **[Local Transformation to point]**



15. After select the starting method, please click **[Start Reference]** to start the base.

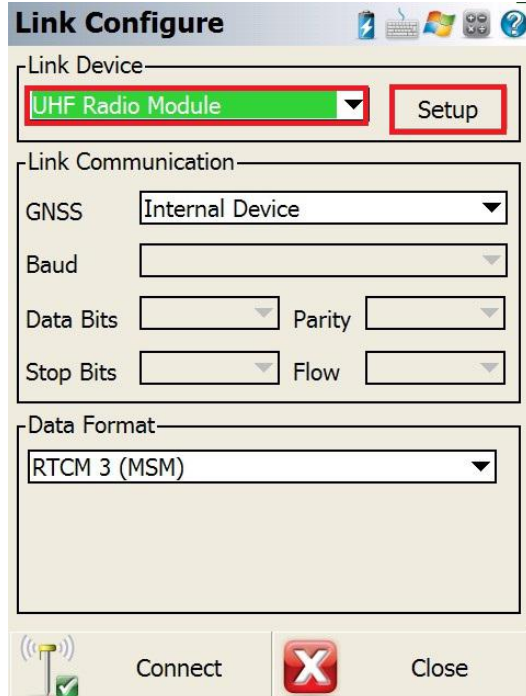


Please click [Set Position] to set the averaged result as base coordinate.



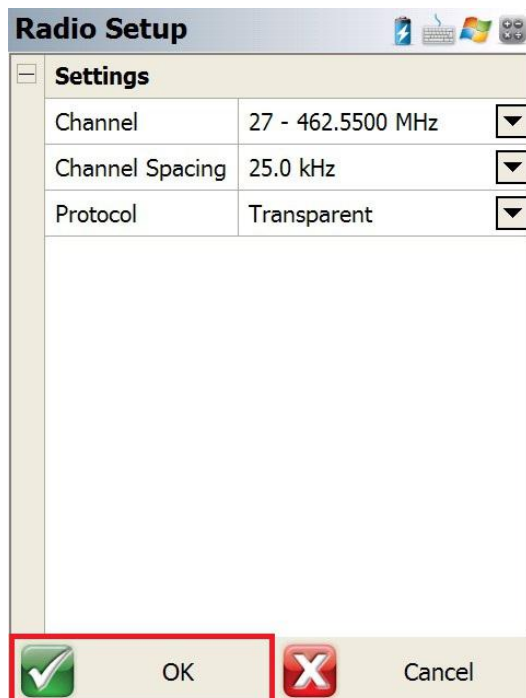


16. Select the **[UHF Radio Module]** from the drop-down box then click **[Setup]** button to set the radio protocol, working power and frequency.



The 'Link Configure' dialog box is shown. The 'Link Device' dropdown is set to 'UHF Radio Module' and the 'Setup' button is highlighted. The 'Link Communication' section has 'GNSS' set to 'Internal Device'. The 'Data Format' dropdown is set to 'RTCM 3 (MSM)'. At the bottom, the 'Connect' button is highlighted.

After setting the parameters, please click **[Ok]**



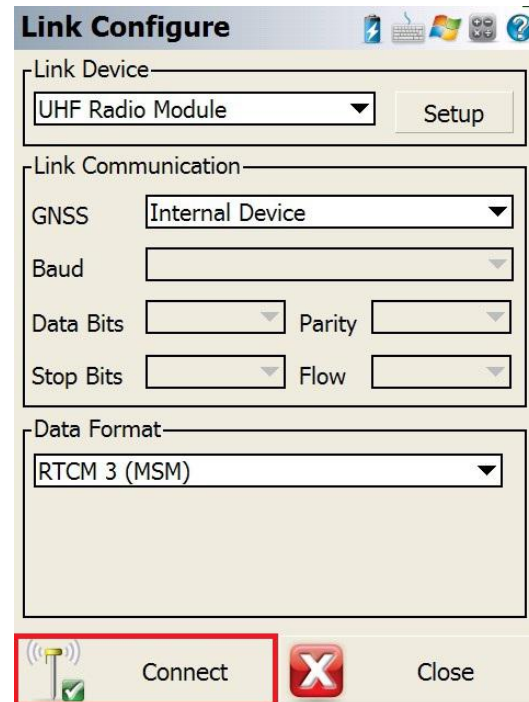
The 'Radio Setup' dialog box is shown. It has a 'Settings' section with a table:

Settings	
Channel	27 - 462.5500 MHz
Channel Spacing	25.0 kHz
Protocol	Transparent

At the bottom, the 'OK' button is highlighted.

**Note:** the protocol and the frequency must be the same between Base and Rover.

17. Click **[Connect]** to finish starting base



The 'Link Configure' dialog box is shown. The 'Link Device' dropdown is set to 'UHF Radio Module' and the 'Setup' button is highlighted. The 'Link Communication' section has 'GNSS' set to 'Internal Device'. The 'Data Format' dropdown is set to 'RTCM 3 (MSM)'. At the bottom, the 'Connect' button is highlighted.

18. Then the green LED will flash and the states will become **[Autonomous]** to **[float]** then to **[fix]**, which means the rover is getting the correction data from base.

19. The survey work can be done with the i80