

Technical Note

(tcpgps_windows_hitarget_en_v4_002_setting_up_base_rover_in_rtk_mode_using_internal_uhf_radio)

Setting up base/rover in RTK mode using internal UHF radio

Update Date

03/05/2019

Requirements

Hardware:

GNSS receiver: SatLab SL700 / SL900
HiTarget V90+ / iRTK5

Tablet / Laptop: Device with **ARM** processor architecture and **Windows CE** or **Windows Mobile v4+** operating system or device with **x86** processor architecture and **Windows 7 / 8 / 8.1 / 10** operating system

Software:

TcpGPS v4.2.5+ for Windows

Objective

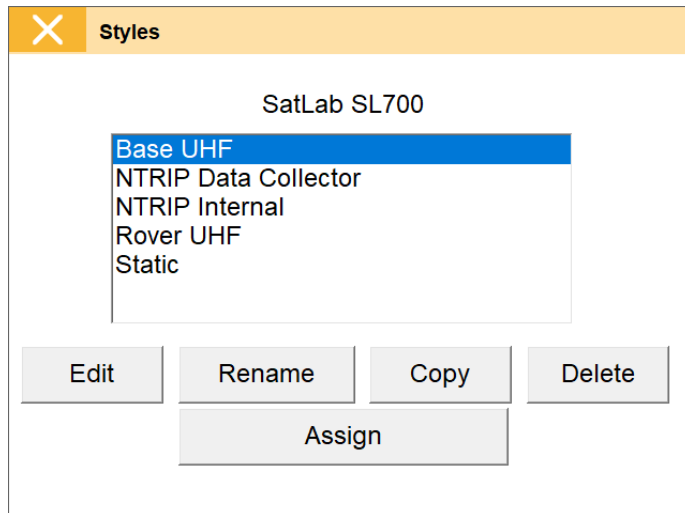
Setting up the base and rover GNSS receivers in RTK mode using the internal UHF radio

Details

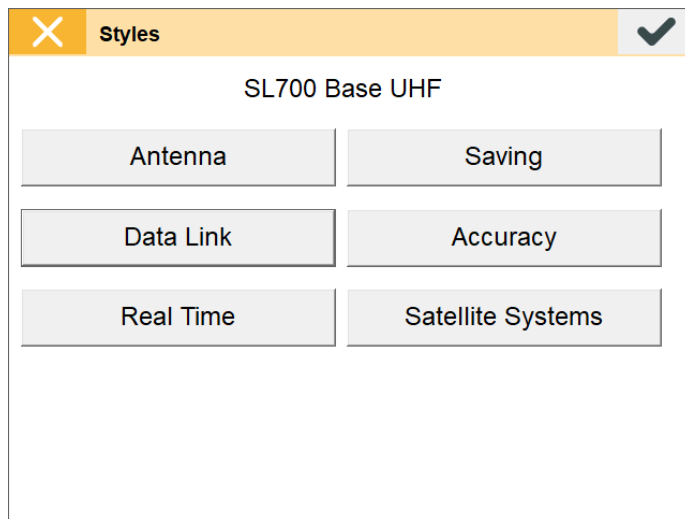
- Run TcpGPS

Base GNSS receiver setup

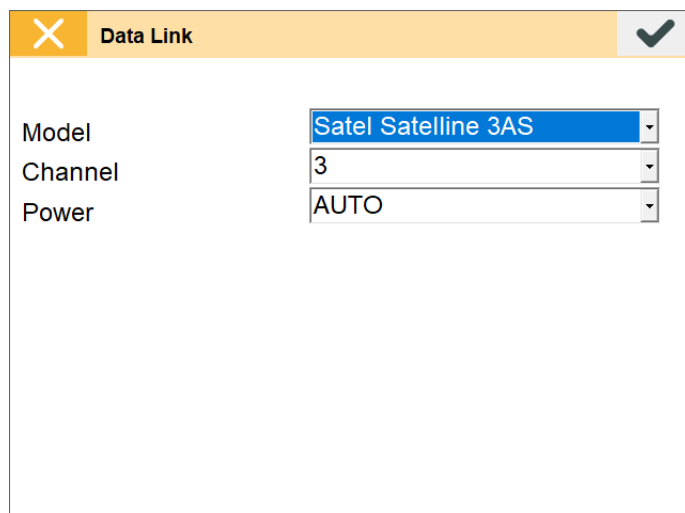
- Connect to the base GNSS receiver
- Go to *GPS > Styles*, select *Base UHF* and click on *Edit* button



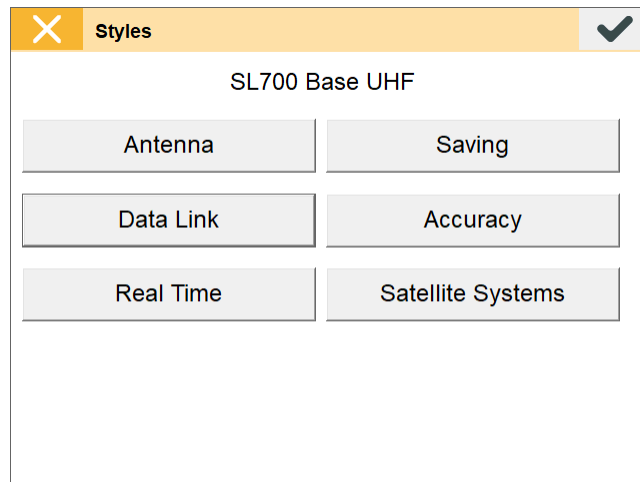
- Click on **Data Link** button



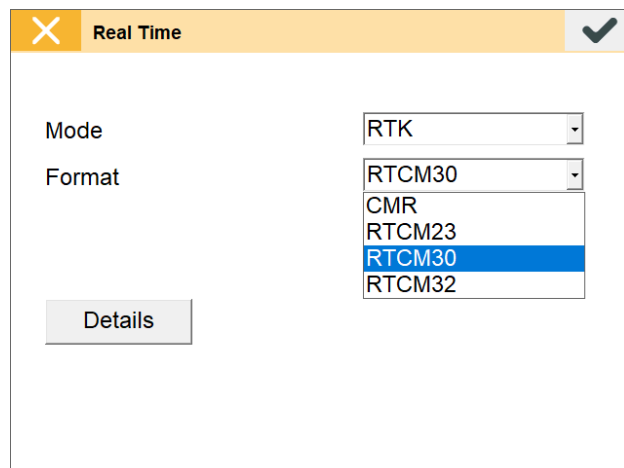
- Select the UHF radio **Model** and protocol, the **Channel** number and the output **Power**. Then, click on accept button 



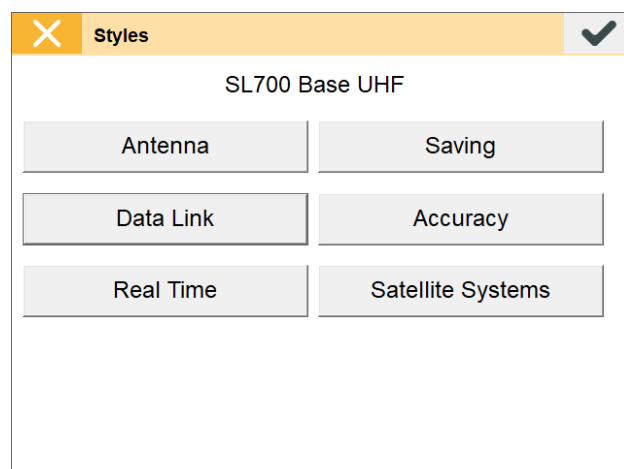
- Click on **Real Time** button




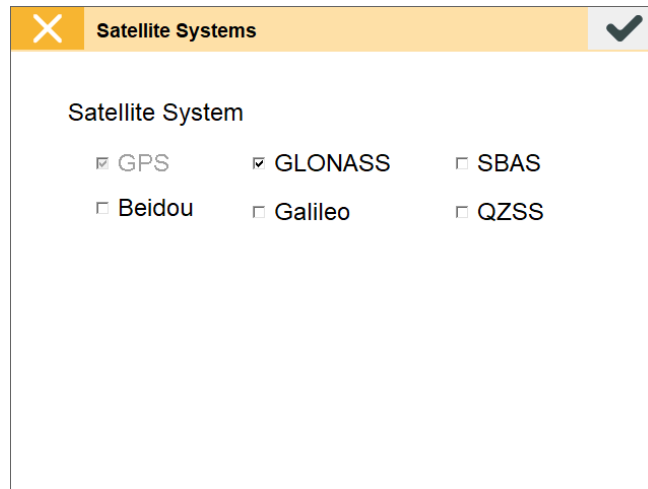
- Select the RTK **Format** and click on accept button



- Click on **Satellite Systems** button




- Select the satellite systems to be used and click on accept button 

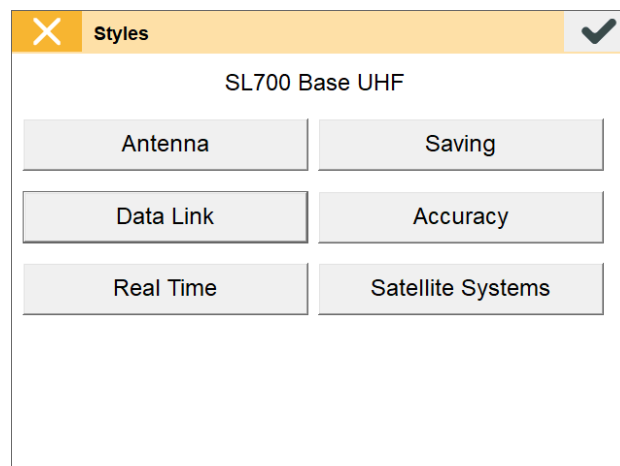


Satellite Systems

Satellite System

GPS GLONASS SBAS
 Beidou Galileo QZSS

- Click on accept button  to save the changes in the working style

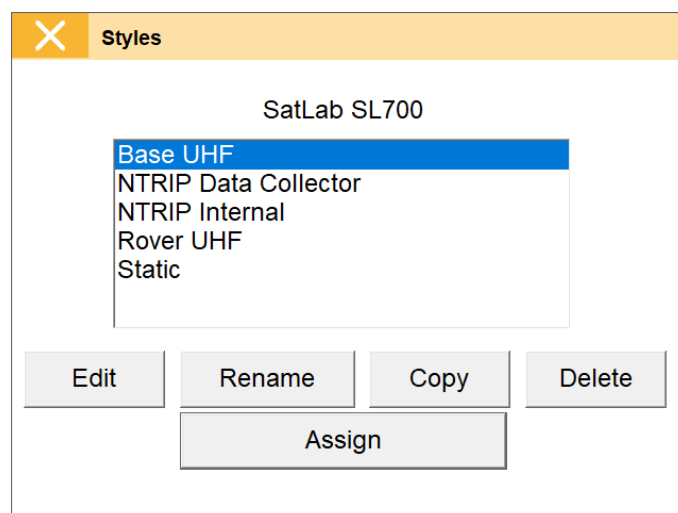


Styles

SL700 Base UHF

Antenna Saving
Data Link Accuracy
Real Time Satellite Systems

- Click on **Assign** button to select the working style for base mode




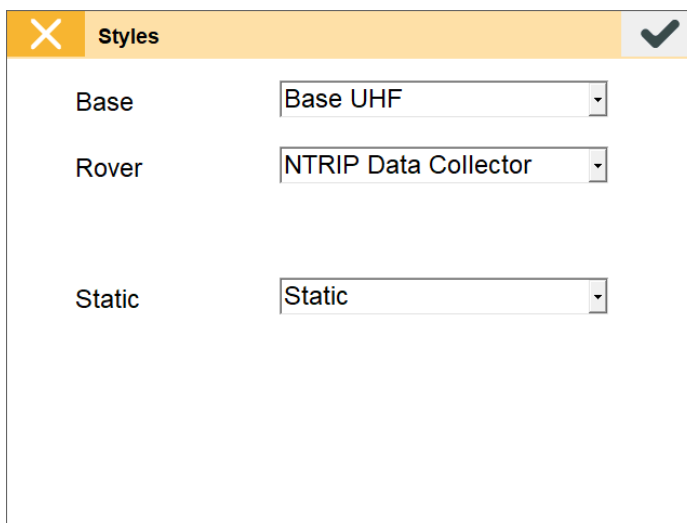
Styles

SatLab SL700

Base UHF
NTRIP Data Collector
NTRIP Internal
Rover UHF
Static

Edit Rename Copy Delete
Assign

- Select the **Base UHF** working style in **Base** list and click on accept button 



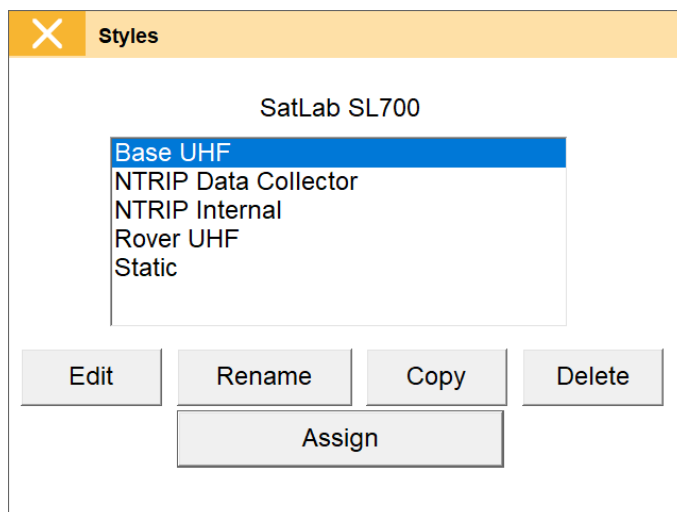
Styles

Base: Base UHF

Rover: NTRIP Data Collector

Static: Static

- Close the working styles screen to return to the main menu




Styles

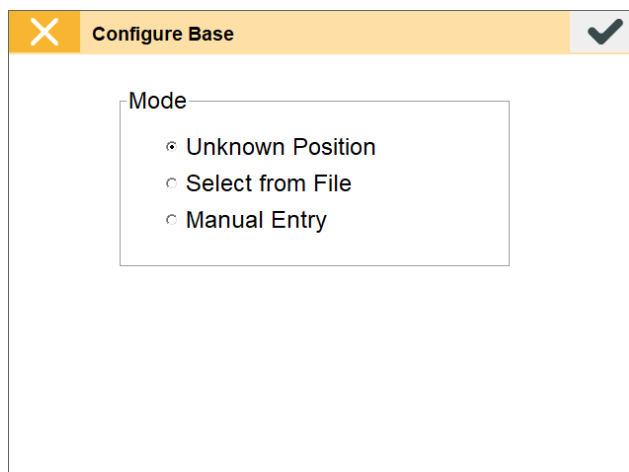
SatLab SL700

- Base UHF
- NTRIP Data Collector
- NTRIP Internal
- Rover UHF
- Static

Edit Rename Copy Delete

Assign

- Go to **GPS > Configure Base**, select the mode of entering the coordinates and click on accept button 



Configure Base

Mode

- Unknown Position
- Select from File
- Manual Entry

- Enter the **Antenna Height** and the name/number of the point (**N**), then, click on **Auto** button to get the current coordinates.

Configure Base

Antenna Height 0.000 ↑
h

N BR-2 Auto

E 368914.116

N 4066196.233

h 153.189

Coordenadas

Geographic WGS84 Projected

Start

- Click on **Start** button to set up the GNSS receiver as base and return to the main menu
- Click **GPS > Disconnect**

Rover GNSS receiver setup

Note: *If the rover GNSS receiver model is different from base GNSS receiver, go to **Settings > Communications** to select the new model*

Communications

GNSS Receiver

SatLab SL700

Cable Connection

Receiver Port SL700

SL800

SL900

Handheld Port COM7

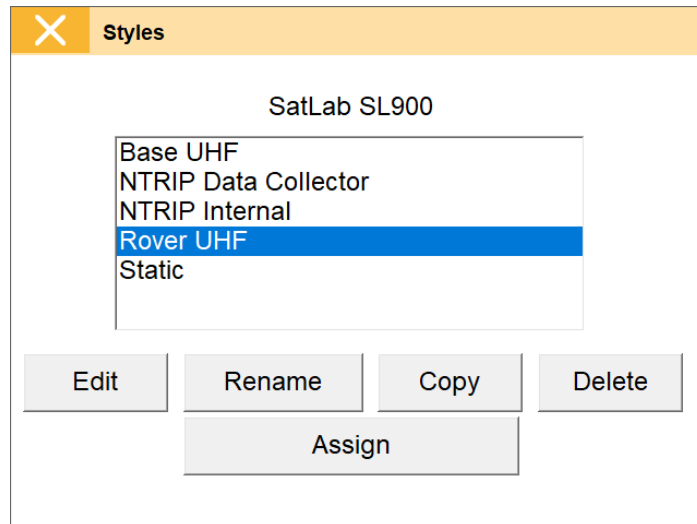
Parameters

Bluetooth Connection

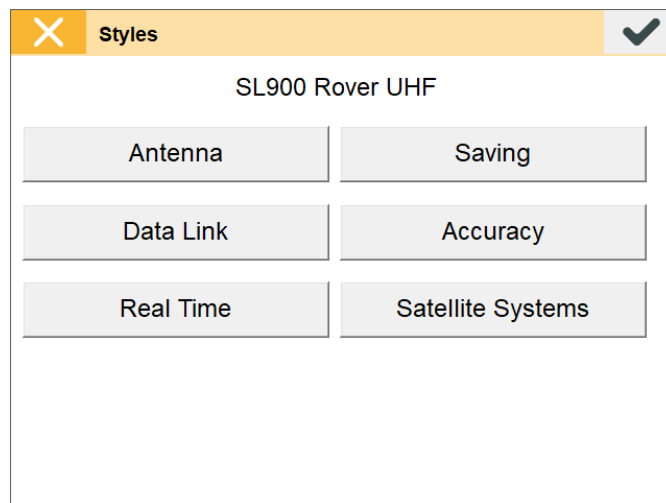
Receiver Port

Handheld Port COM29

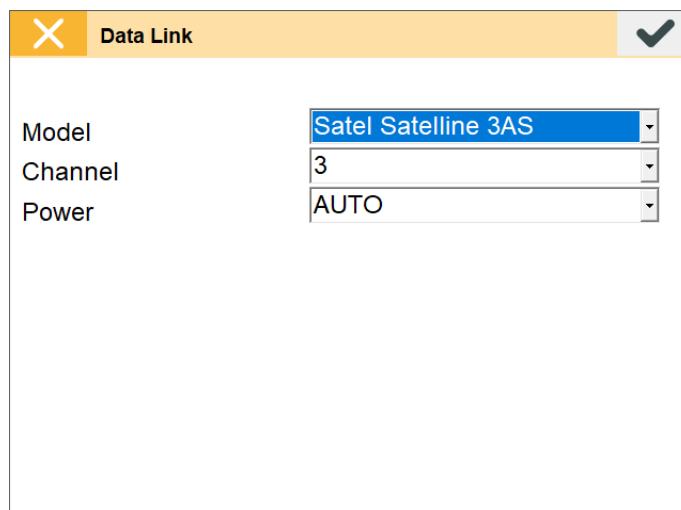
- Connect to rover GNSS receiver
- Go to **GPS > Styles**, select **Rover UHF** and click on **Edit** button



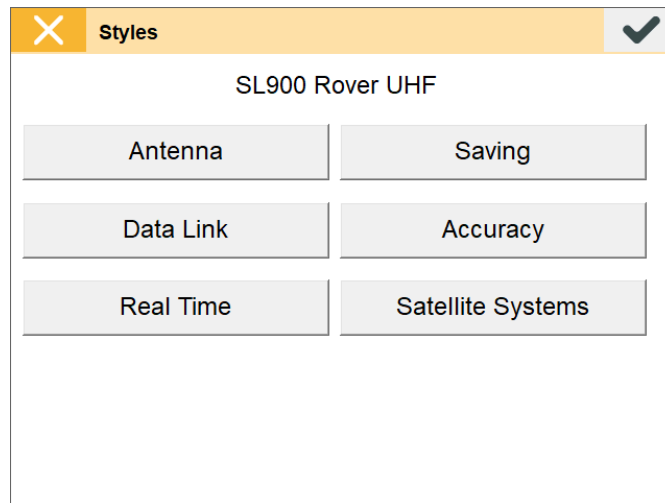
- Click on **Data Link** button



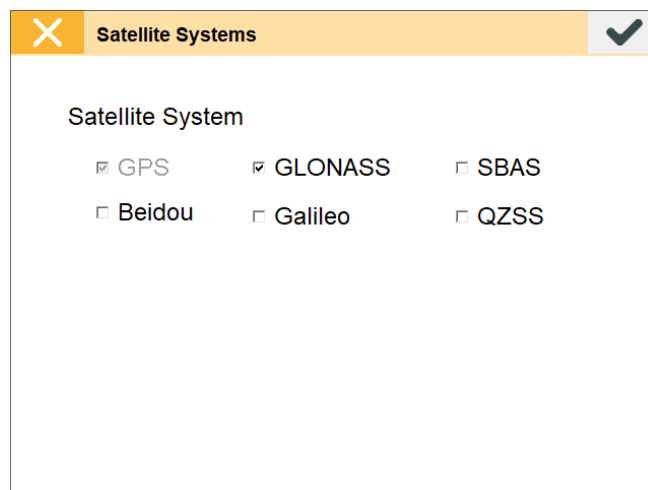
- Select the UHF radio **Model** and protocol, the **Channel** number and the output **Power**. Then, click on accept button ✓



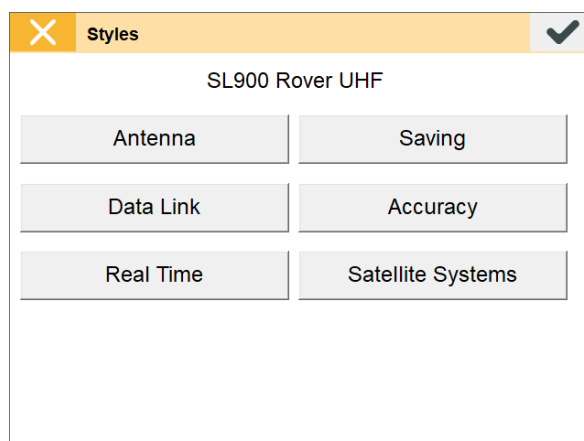
- Click on *Satellite Systems* button



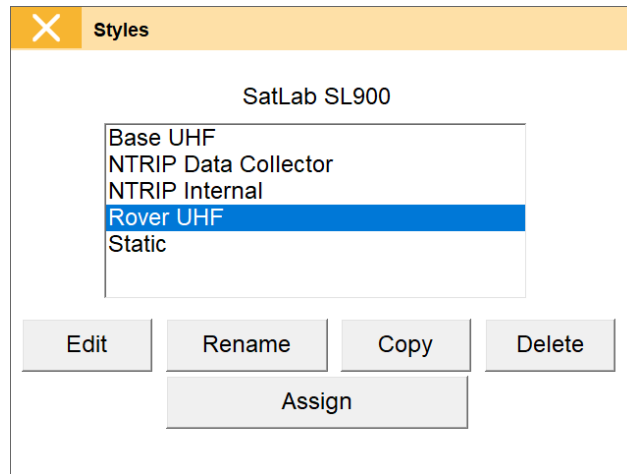
- Select the satellite systems to be used and click on accept button



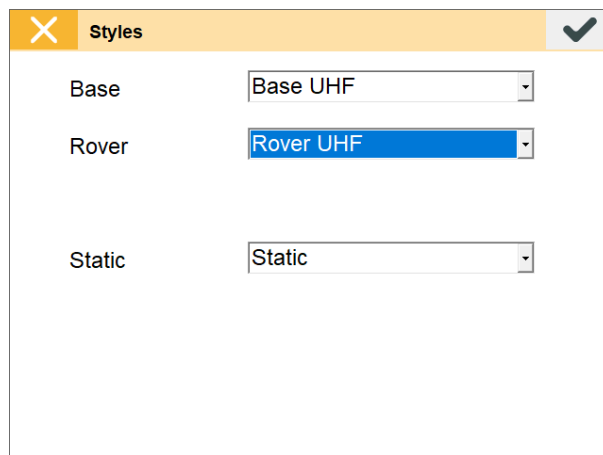
- Click on accept button to save the changes in the working style



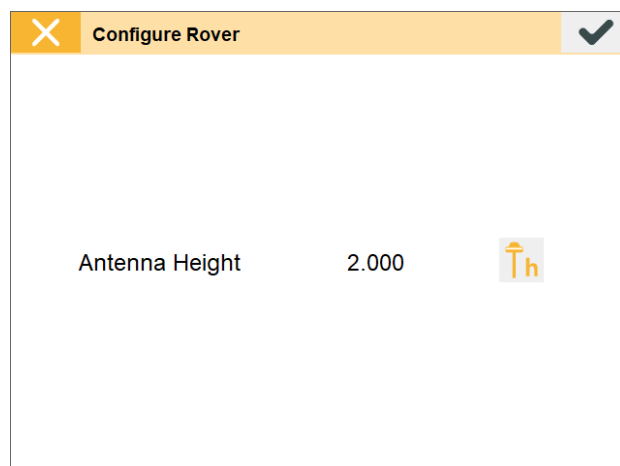
- Click on **Assign** button to select the working style for base mode



- Select the **Rover UHF** working style in the **Rover** list and click on accept button



- Close the working styles screen to return to the main menu
- Go to **GPS > Configure Rover**, enter the **Antenna Height** and click on accept button



- The rover GNSS receiver will be configured in RTK mode
- Go to *GPS > Position and Satellites* to check that RTK status is **Fix**