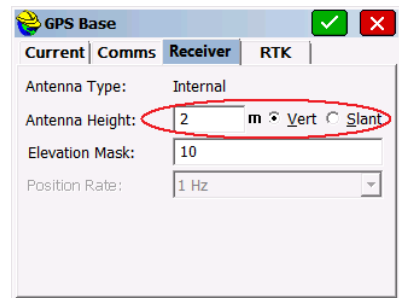
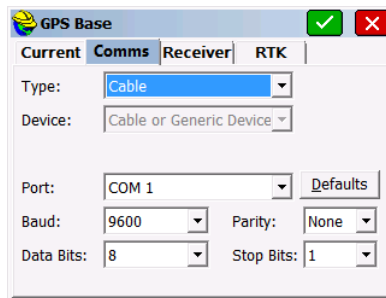
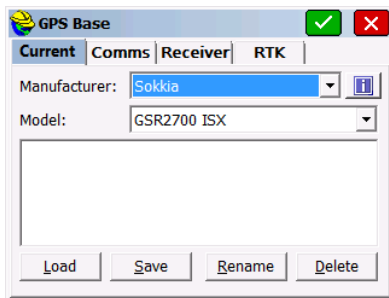
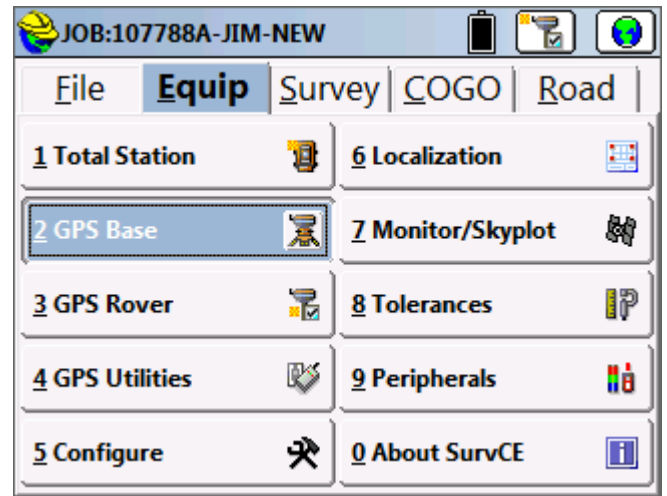


Setting the base on the same location everyday

Method 1 – Setup base on same location everyday

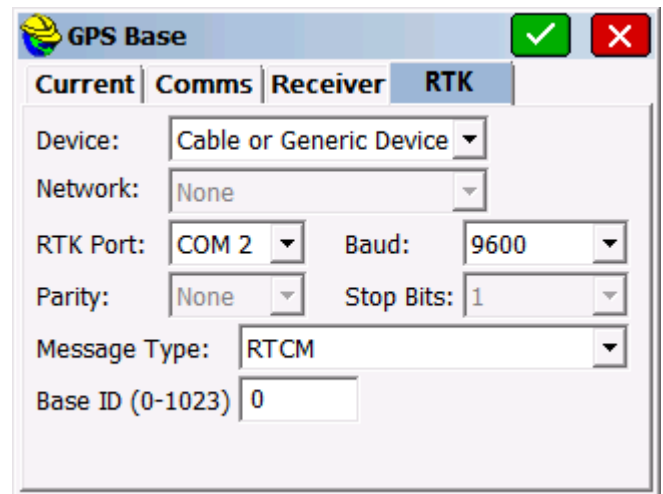
- 1) First day - Setup base on identifiable location and measure height of base GPS antenna
- 2) In SurvCE go to EQUIP 2- GPS Base to configure base tabs:

Current – Comms - Receiver – RTK

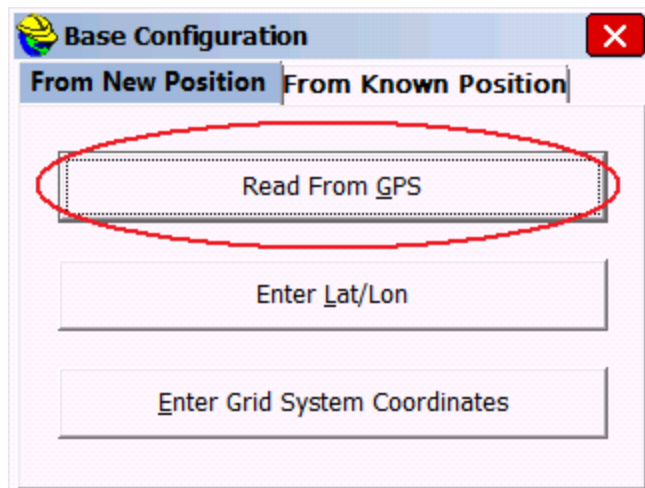


After selecting and setting up properly: Current – Comms – Receiver and the last tab RTK,

Pick the green check for OK. (Don't forget to measure the Antenna height and input that in the Receiver tab shown highlighted in red above.) Your Current – Comms – Receiver – RTK tabs may be setup differently but these steps must be done.



The “Base Configuration” screen appears below with two tabs “From New Position”



and “From Known Position” shown below:

To start broadcasting the GPS Base position the first time always use the tab titled “**From New Position**” and never use the “From Known Position” the first

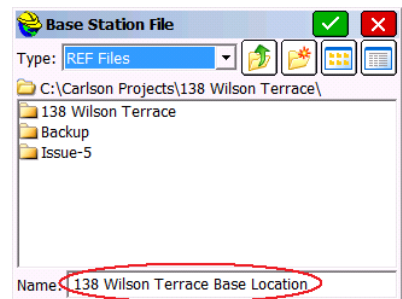
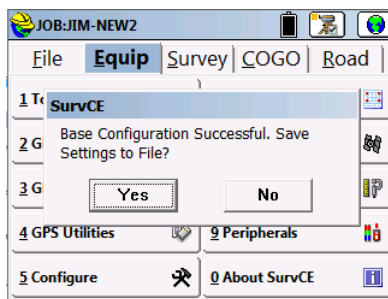
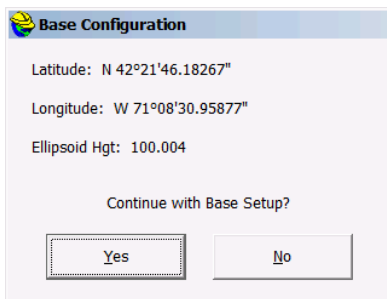
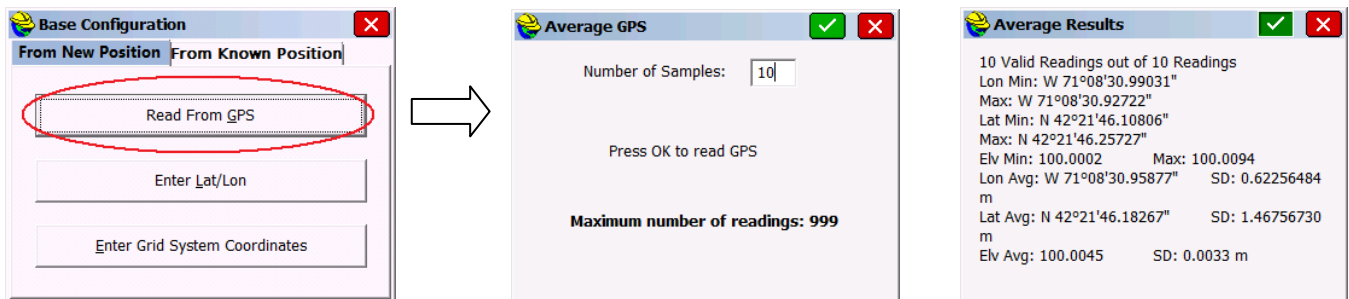
time. ("From Known Location" tab is only to be used if the site has been previously surveyed with the Rover fixed using Carlson SurvCE.)

3) Base Configuration

- a) Read From GPS – Uses the Autonomous GPS position that is accurate to within 3 to 30 meters horizontally and double that vertically but is accurate enough to start any RTK GPS working session.
- b) Enter Lat/Lon – If the base is setup on a known Lat/Lon you can use this option to manually input the Lat and Lon.
- c) Enter Grid System Coordinates – If the base is setup on a known UTM Grid system Coordinate you can use this option to manually input the coordinates

The most common method the first time getting started broadcasting the GPS base position is to use "**Read from GPS**". This method always broadcasts the Autonomous GPS position accurate to 3 to 30 meters horizontally and double that vertically which is plenty accurate to get started. The advantage of this method is the base position can be selected with the best view of the sky and broadcasting view of the area. Inputting the known positions Lat/Lon or Grid coordinates can lead to typo mistakes and many known GPS positions don't have an optimal clear view of the sky or surrounding view of the broadcasting area.

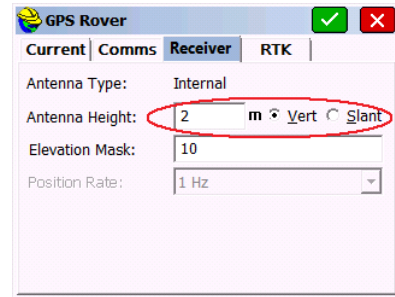
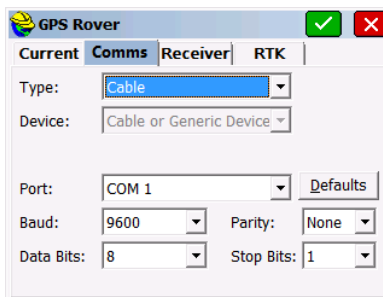
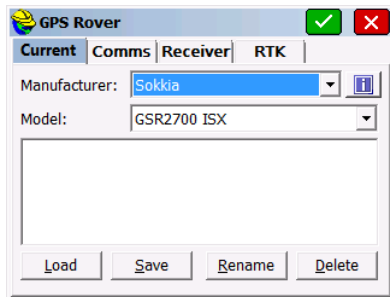
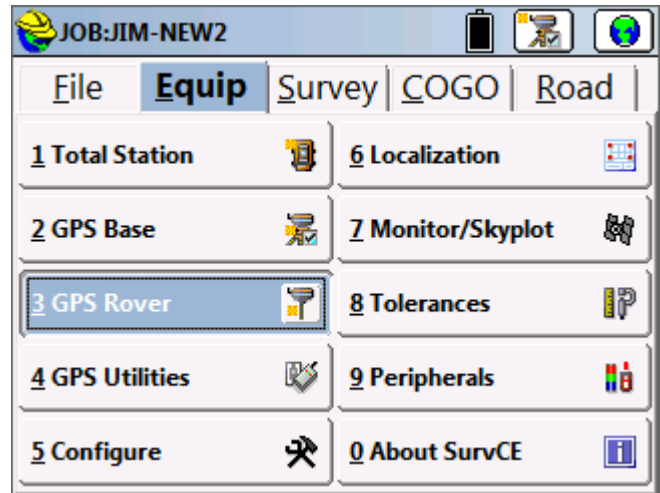
Once "**Read From GPS**" is done it is mandatory that you store this base position as a base REF or REF file if you plan to return and continue surveying this site another day.



Input your "Base Station File" e.g. 138 Wilson Terrace Base Location.REF filename (you do not need to type .ref after the input filename, this is automatically added to your input REF filename.) With the base properly setup the first time and broadcasting a fixed single location, from one averaged autonomous position, the base REF file is stored.

- 4) The next step is to configure the Rover.
- 5) In SurvCE go to EQUIP 2- GPS Rover to configure Rover tabs:

Current – Comms - Receiver – RTK

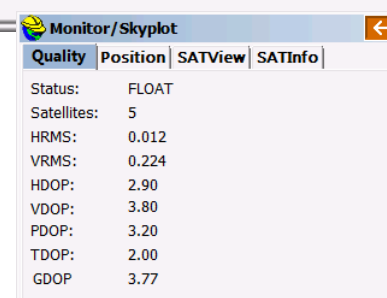
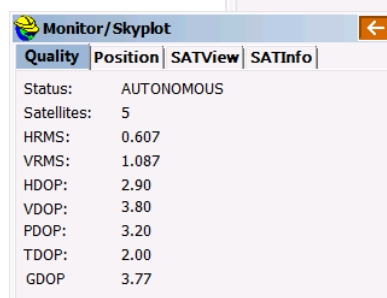
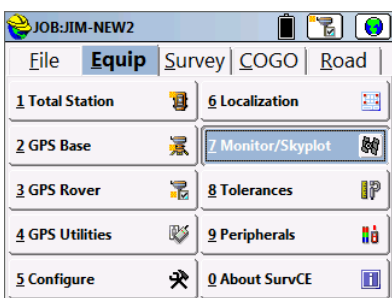
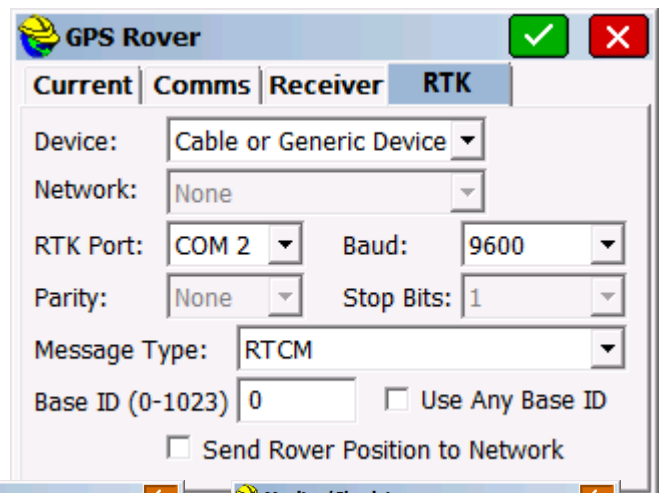


At the RTK tab after setting up correctly:

Current – Comms – Receiver -RTK

At RTK tab select the green check OK to configure the rover to start accepting the base corrections.

Go to 7 Monitor/Skyplot to confirm the rover is receiving the base signal corrections and that it will go from Autonomous, Float to Fix. If the

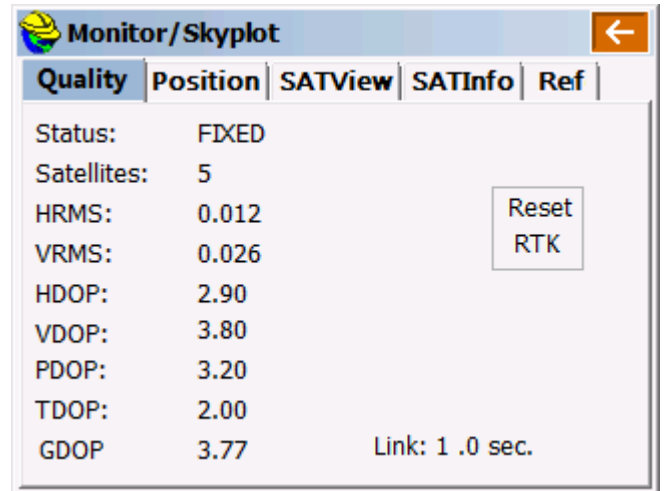


Rover is receiving base corrections the latency should hover at 1.0 seconds.

When the Rover is Fixed in the Monitor screen as shown to the right the Rover is ready to store the Localization file.

(The Ref Tab when monitoring the Rover can store the base location. This is handy if you plan to setup a total station and occupy or backsight this location later.)

Pick the orange back button upper right to exit the Monitor screen

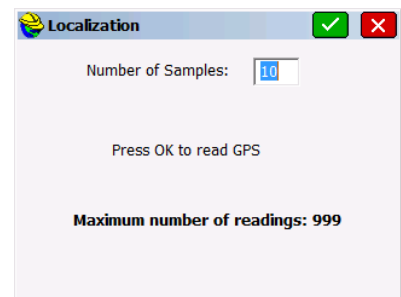
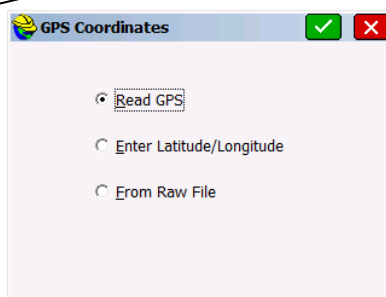
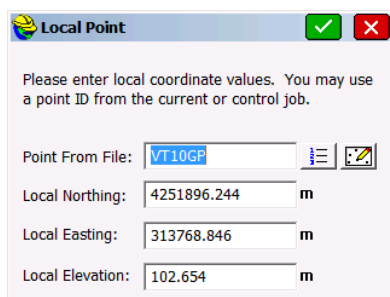
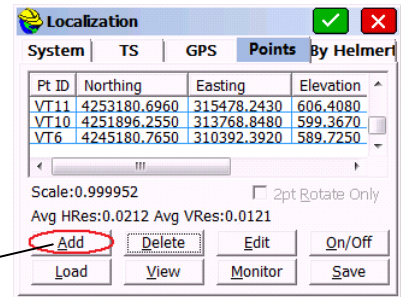
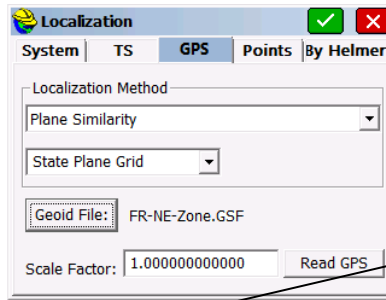
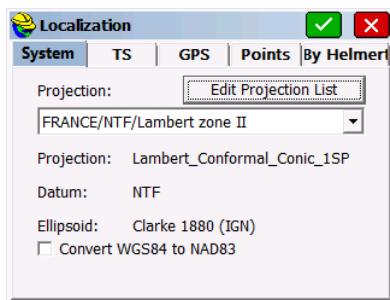
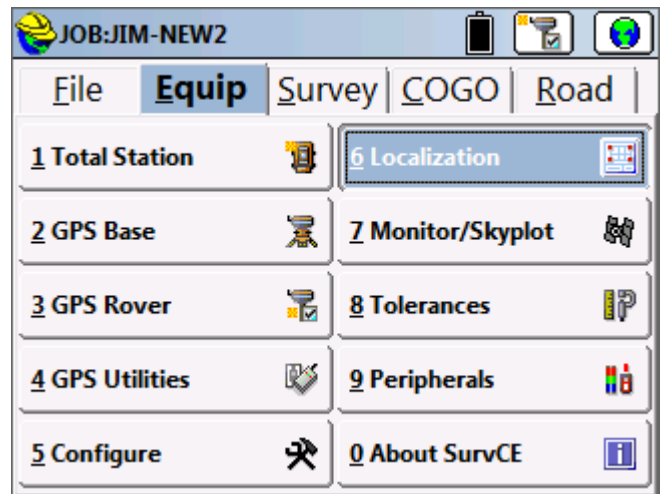


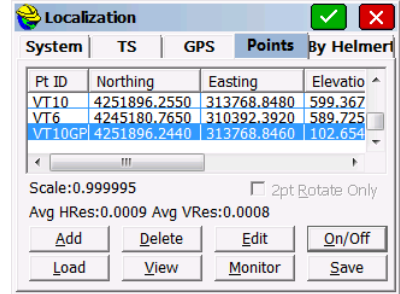
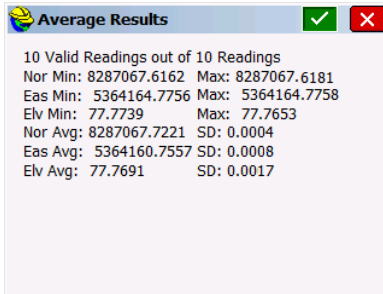
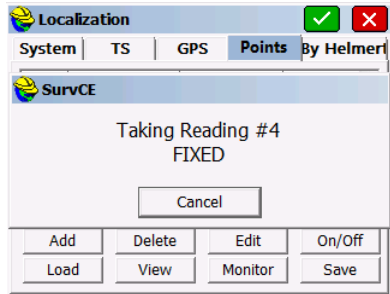
- Once the Rover is fixed in Monitor go to EQUIP 6 Localization to store the localization file with the Rover.

Setup the Localization tabs:

System – GPS - Points

Use Points and Add to create your localization LOC file.

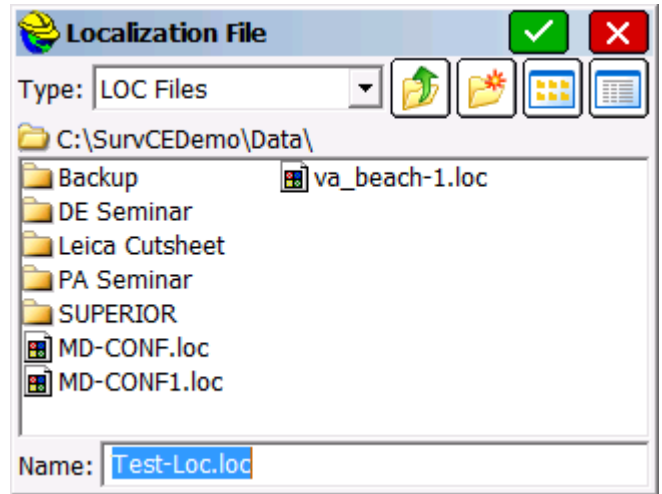




After storing all your point pairs using Add to reuse this localization file the next day it is mandatory to store the LOC file e.g. Test-Loc.LOC

With the localization saved the Rover GPS can be used to collect and layout survey data and locations all day long.

This completes setting up and getting started with the base and rover GPS receivers and antennas on the first day.

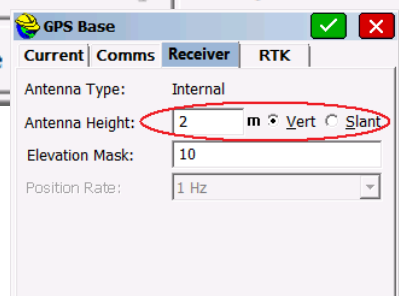
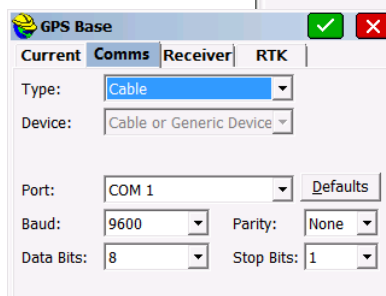
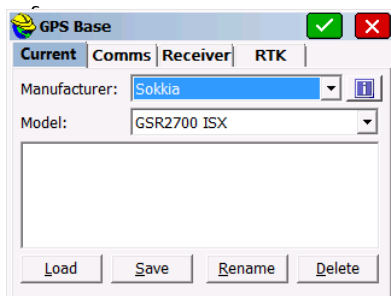
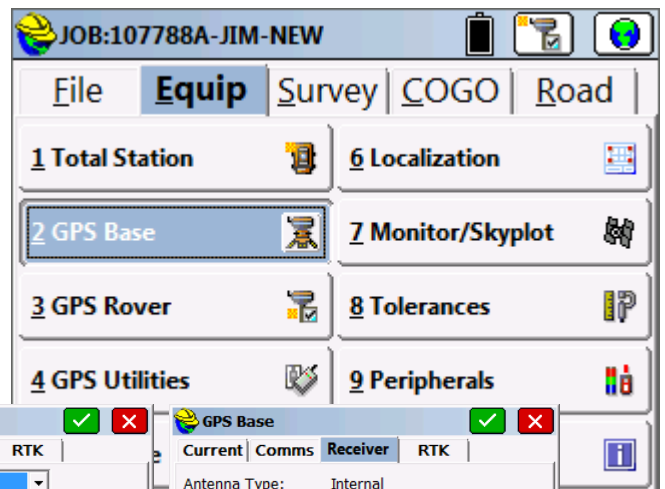


Part 2 -

Setting the base on the same location the next day

Method 1 - Setup base on same location next day

- 7) Second day - Setup base on same identifiable location and measure height



ase GPS antenna

8) In SurvCE go to EQUIP 2- GPS Base to configure base tabs:

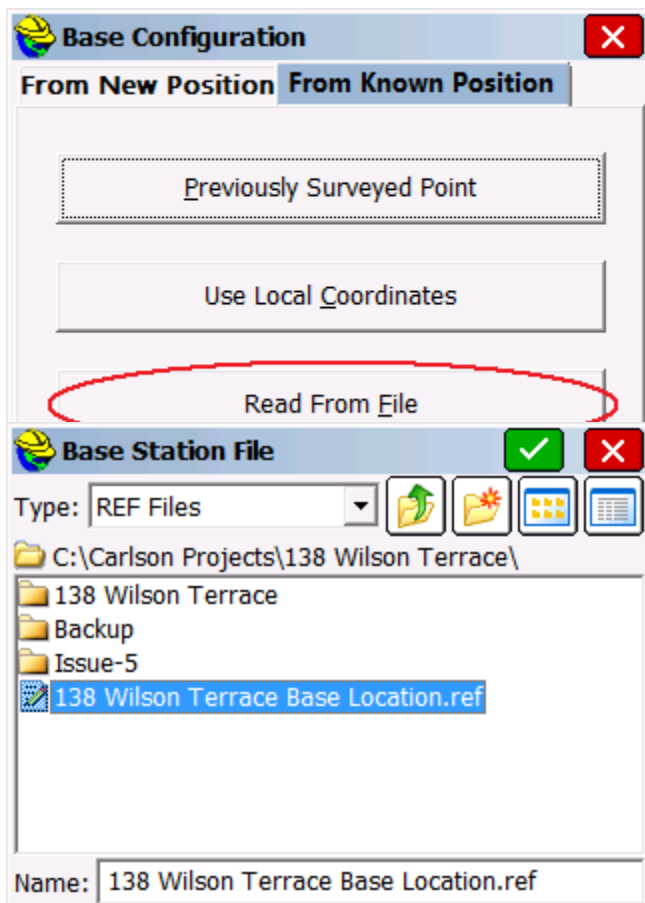
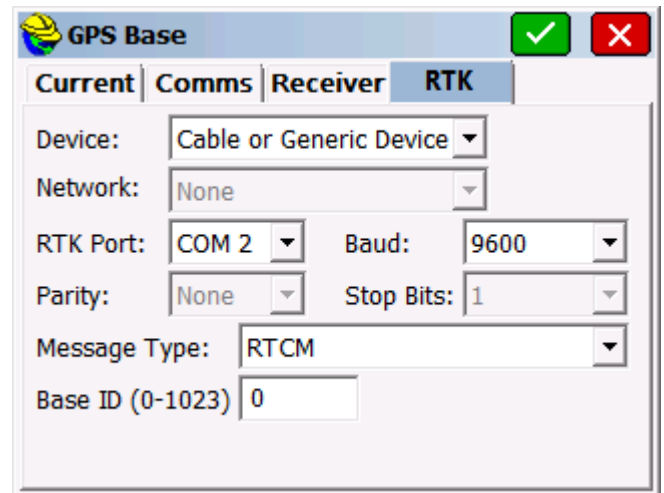
Current – Comms - Receiver – RTK

After selecting and setting up properly:

Current – Comms – Receiver and the last tab RTK

Pick the green check for OK. (Don't forget to measure the Antenna height and input that in the Receiver tab shown highlighted in red above the next day and every day after the first.) Your Current – Comms – Receiver – RTK tabs may be setup differently but these steps must be done.

The "Base Configuration" screen appears below with two tabs "From New Position" and "From Known Position" shown below:

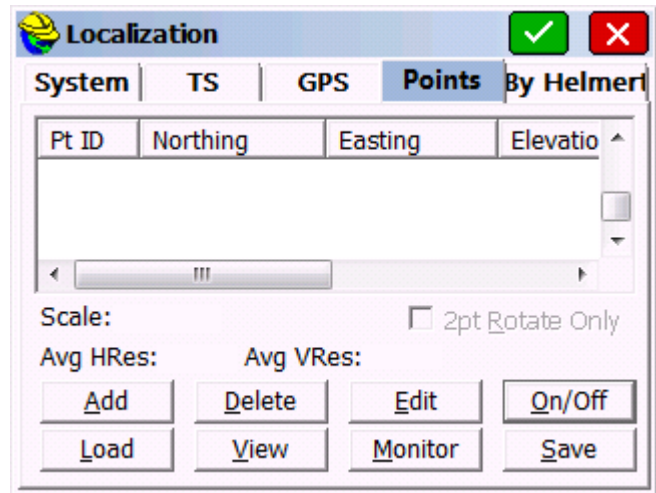


9) To locate over the same base location and reuse the Rover's Localization file it is mandatory to first set the base up over the same base broadcasting location, measure the antenna height every time and input that in the GPS Base Receiver tab and from the Base Configuration menu select "Read From File".

Select the previously stored REF file e.g. 138 Wilson Terrace Base Location.REF

Pick the green check OK to load this file and your base GPS receiver is now broadcasting the same X, Y location and Z height that it was broadcasting the previous day.

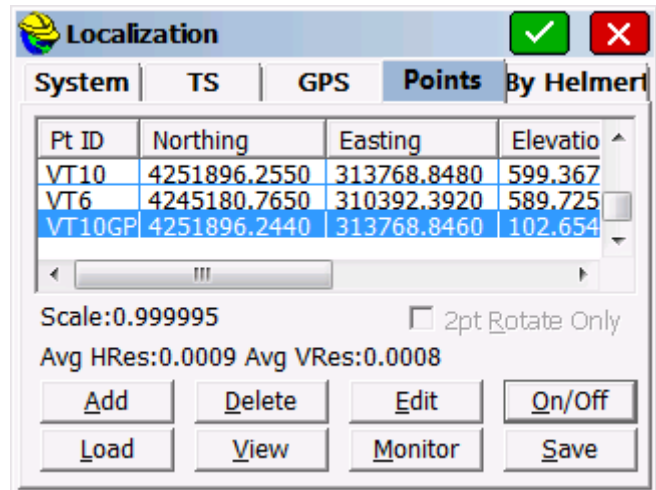
- 10) Now to configure the Rover GPS unit the next day repeat steps 4 and 5 above
- 11) Once Fixed the last step is to go to EQUIP – 6 Localization – Points and select Load



Load the previous days LOC file e.g.

Test-Loc.LOC

Pick the green check OK and layout 2 or 3 control points surveyed the previous day to verify you have their correct X, Y and Z locations within 1 to 2 cm. If all checks out you're ready to survey and add to the previous day's work.



Jim Carlson

Carlson Software

P.S. Method 2 - When it is desired to move the base to another location but still use the same Localization file (and Add to the localization file) the next day, you can setup the base on any previously surveyed point (MUST BE IN CURRENT JOB'S RW5 FILE STORED AS A SURVEYED POINT

Lat/Lon/Ellipsoid using the same REF and LOC files when stored in RW5 file -

RECOMMEND AVERAGE 30 TIMES). When prompted setting up the base in the Base Configuration pop-up box select from "From Known Position" **Previously Survey**

Point and select that point the base antenna is occupying. (Make sure the base GPS Antenna height is input in the previous Receiver screen.)

