

This is in regards to using a Carlson BRx6+ base GPS receiver with the Internal GSM modem and a Carlson Listen-Listen subscription to send corrections through cellphone internet to a Rover connected to the internet.

**** Before using this service you will need to contact your Carlson dealer or your Carlson sales representative to sign up for our Listen-Listen subscription service so you can be assigned Listen-Listen Port numbers to use in the field.*

After obtaining your Listen-Listen port numbers you can follow the steps below:

1) Insert a Sim Chip underneath the battery door of your BRx6+ base using the sim chip slot on the left with the label facing you and the notch on the right. Then Insert the battery and close the battery door.



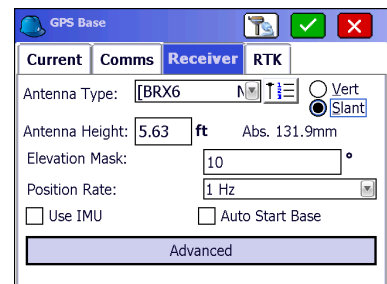
2) Attach the shorter / wider GPRS antenna to the port labeled "UMTS" on the right side of the unit as your looking at the display panel.

3) After inserting the sim chip and attaching the GPRS antenna = power on your BRx6+ base and run SurvCE 5.09 or higher on your data collector

4) Then tap **Equip / GPS Base** and set it for Manufacturer: **Carlson** and Model: **BRx6+**

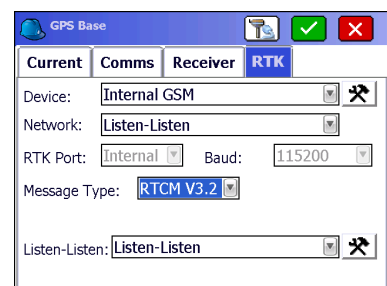
5) Tap the **"Comms"** tab and set it for "Type: Bluetooth" and "BT Type: Windows Mobile" and tap the "wrenches" icon to the right. Tap "Find Device" and follow the prompts to select the serial number of your BRx6+ base then tap the Bluetooth plug icon in the top middle

6) Then tap the **"Receiver"** tab and tap next to **"Slant"** and measure up to the line where the top Blue cap meets the bottom Grey housing to use for your base Antenna height



7) Tap the RTK tab and set it for "Device: **Internal GSM**" and set it for "Network: **Listen-Listen**" and "Message Type: **RTCM V3.2**"

8) Tap the "wrenches" icon next to "Device: Internal GSM" and select "AT&T Broadband" or the appropriate cellphone provider from the list and tap "Green Check" to save your changes



9) Then tap the "wrenches" icon in the bottom right corner next to "Listen-Listen"

10) Type the **Base port number** you were assigned in the **"Port:"** box and set it to "RTK Message Type: **RTCM V3.2**" then tap the Green Check in the top right

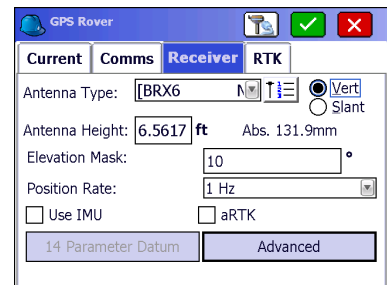
11) Then tap the Green Check in the top right and follow the normal procedure to start your GPS Base

12) After your BRx6+ Base is started the 2nd light from the left on the top row will flash once a second

13) Now you can power on your GPS Rover and tap **Equip / GPS Rover** set it to the proper Manufacturer: and Model: to match what you are using as your GPS rover receiver.

14) Tap the “**Comms**” tab and set it for “Type: **Bluetooth**” and “BT Type: **Windows Mobile**” and tap the “**wrenches**” icon to the right. Tap “Find Device” and follow the prompts to select the serial number of your Rover GPS receiver then tap the Bluetooth plug icon in the top middle

15) Then tap the “**Receiver**” tab and type in 6.5617 feet for the Antenna Height if you are using a standard 2 meter pole

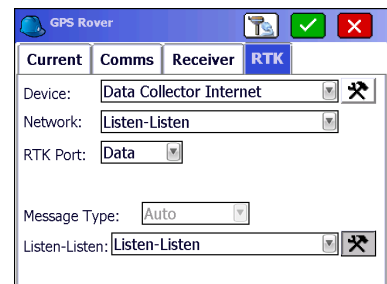


The screenshot shows the 'Receiver' tab in the GPS Rover application. The 'Antenna Type' is set to 'BRX6'. The 'Antenna Height' is set to '6.5617 ft' with an absolute height of '131.9mm'. The 'Elevation Mask' is set to '10°'. The 'Position Rate' is set to '1 Hz'. There are checkboxes for 'Use IMU' and 'aRTK', both of which are unchecked. At the bottom, there are buttons for '14 Parameter Datum' and 'Advanced'.

16) Then tap the RTK tab and set your GPS Rover to the appropriate “**Device:**”:

16a. Set it to **Internal GSM** if you are inserting a sim chip into your GPS rover receiver at the top of the pole

16b. Set it to **Data Collector Internet** if you are connecting your data collector to the internet through a Wifi hotspot or the data collector’s internal modem

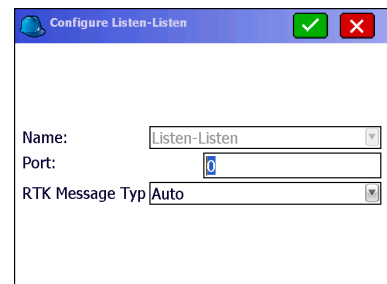


The screenshot shows the 'RTK' tab in the GPS Rover application. The 'Device' is set to 'Data Collector Internet'. The 'Network' is set to 'Listen-Listen'. The 'RTK Port' is set to 'Data'. The 'Message Type' is set to 'Auto'. The 'Listen-Listen' field is also set to 'Listen-Listen'. There are wrench icons next to the Device and Listen-Listen fields.

17) Set it to “Network: **Listen-Listen**” then tap the “**wrenches**” in the bottom right corner

18) Type the **Rover port number** you were assigned in the “**Port:**” box and set it to “RTK Message Type: **Auto**” then tap the Green Check in the top right

19) Then tap the Green Check again in the top right to initialize your Rover and connect to your BRx6+ base



The screenshot shows the 'Configure Listen-Listen' dialog box. The 'Name' is set to 'Listen-Listen'. The 'Port' is set to '0'. The 'RTK Message Typ' is set to 'Auto'. There are green check and red X icons in the top right corner.

20) If you are outdoors with a clear view of the sky you can tap Equip / Monitor Skyplot and verify if you are getting a Fixed position with a Latency: value less than 5.0 seconds.