Carlson SurvPC Listen-Listen with NTRIP

This document details how to use Carlson's Listen-Listen service and a BRx6/6+/7 as a base to provide correction services for an RTK capable drone.

Requirements

1) Licensed copy of Carlson SurvPC or Carlson SurvCE version 5.0 or higher
2) RTK Capable drone
3) Carlson BRx6, BRx6+, or BRx7 to use as a base receiver, including GSM modem and activated SIM card
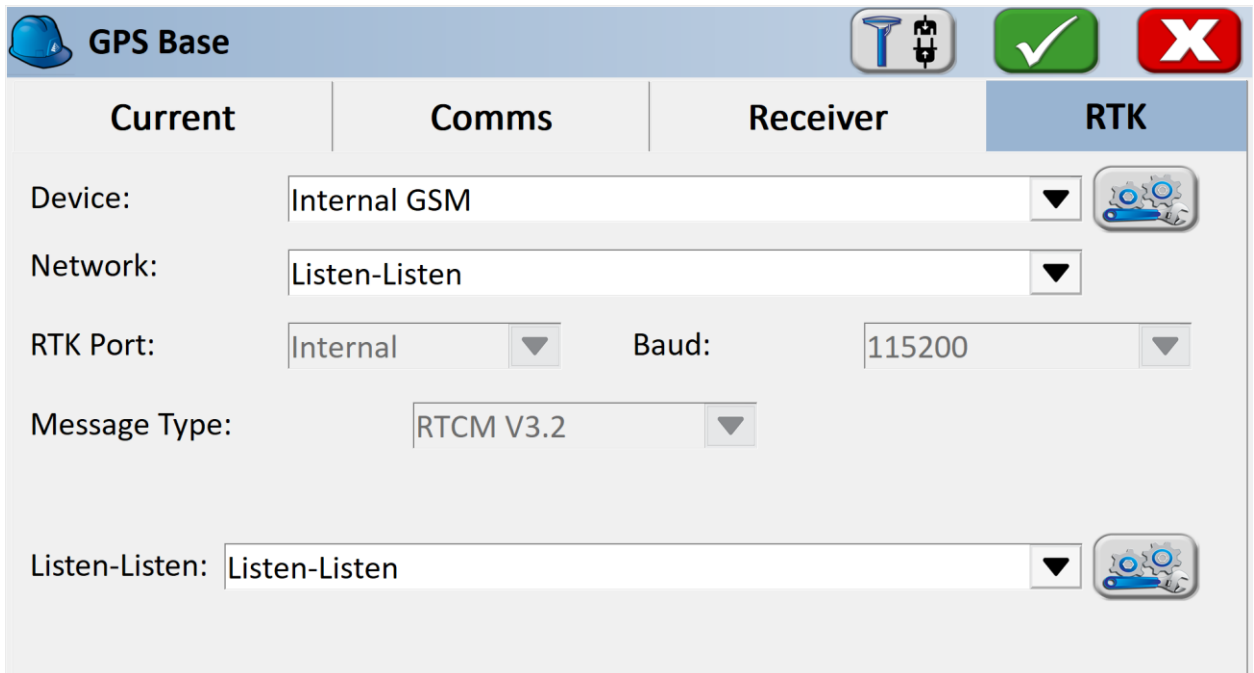4) Subscription to NTRIP capable Listen-Listen service through Carlson Software

Setting Up the Base

1) Set the base receiver over a known GPS Position. This can be a coordinate already known to you, or if necessary, use the GPS receiver as a rover on a known NTRIP network to measure a point before starting.

2) Launch SurvPC and navigate to **Equip->GPS Base**. Select the appropriate driver on the **Current** tab and use the **Comms** tab to make a Bluetooth connection to the base receiver.
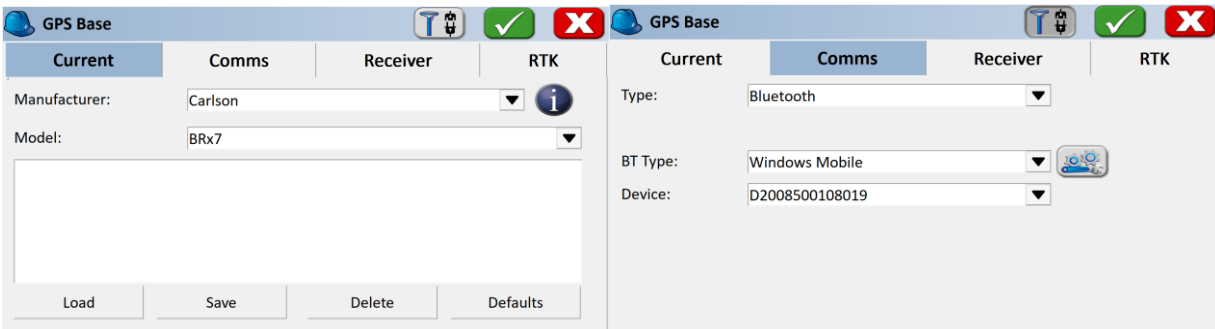
3) On the RTK Tab, choose Device: Internal GSM. If you have never used the internal GSM before, use the tools icon to the right of the device name to configure the correct APN Provider for your account (Hint: This is usually AT&T Broadband).
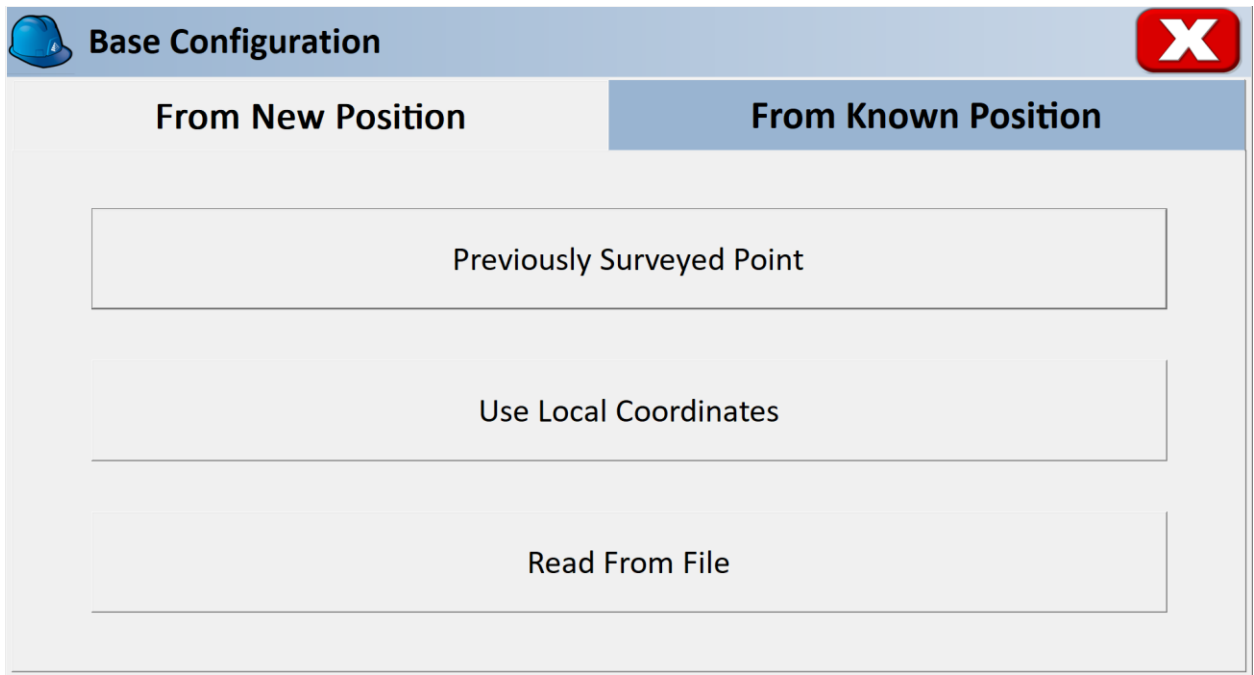
4) For Network, choose Listen-Listen:

5) Choose the tools icon to the right of the Listen-Listen combo box at the bottom. Use the next screen to select the RTK Correction type and enter the four-digit Base Listen-Listen port provided to you by Carlson. To use all four constellations, choose RTCM 3.2 as the RTK type.

6) Return to the GPS Setup page and press the green check to continue configuration.

7) Choose the "From Known Position" tab in the Base Configuration Screen. This tab provides three options for entering a known GPS Base location.

Choose **Previously Surveyed Point** if you have surveyed the GPS point in this SurvPC Job (if you used the receiver as a rover to collect the point before starting base configuration).

Choose **Use Local Coordinates** if you know the XYZ coordinates of your base setup point or the point exists in your CRD file.

Choose **Read From File** if you are reconfiguring on a previous base setup position using a saved reference file (*.ref).

8) After choosing your base location, press YES to continue with base setup. If you would like to store the base location in your CRD file before continuing, choose "Store in Point List" before continuing.

9) The base will configure as soon as you press the YES button. You should see the "Base Configuration Successful" message and return to the main menu.
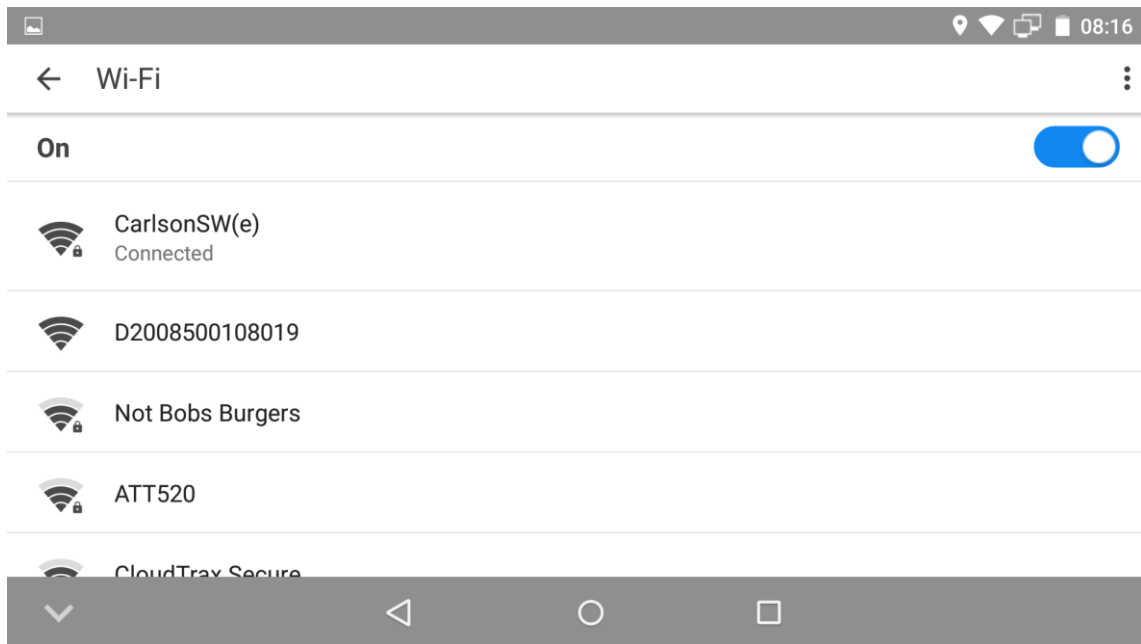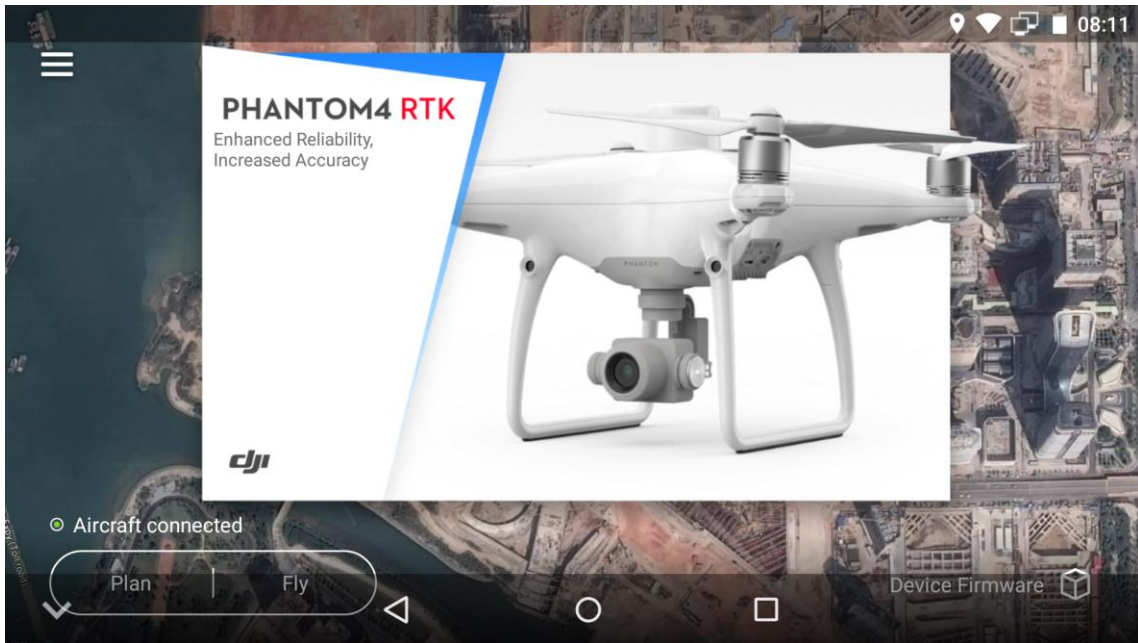
Setting Up The DJI Drone

These instructions are customized for the DJI Phantom 4 RTK Drone, however, a similar process should work with any RTK Capable drone.
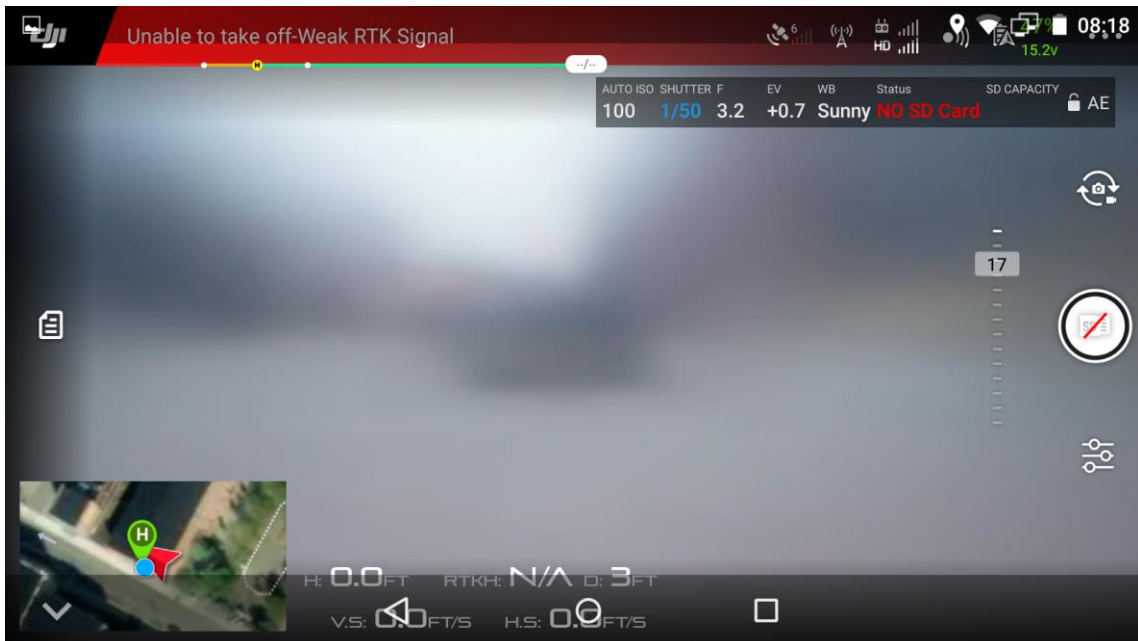
1) Turn on the Drone Controller. Ensure that your controller is connected to a Wifi hotspot by swiping down from the top bar and configuring Wifi:
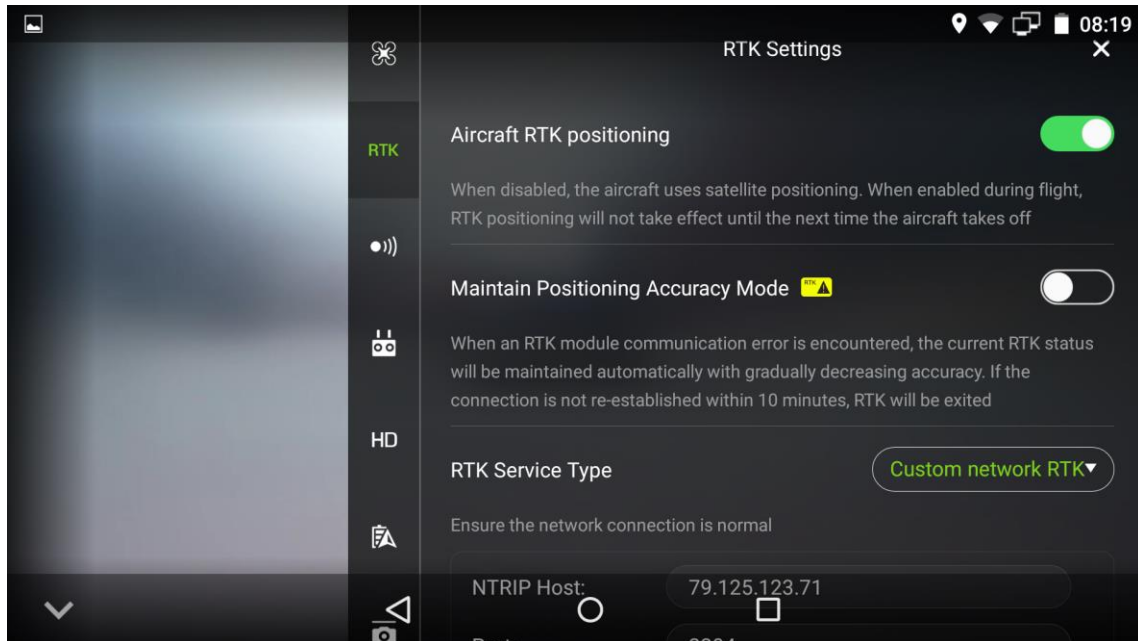
2) Press the "Fly" option to prepare for flight.

3) A red warning in the top bar will indicate that RTK is not yet available

4) Press the three dots icon in the top right of the screen to access settings. Then on the left, tap the RTK Icon to access RTK Settings.

5) For RTK Service type, choose Custom Network RTK, then enter the following settings:

NTRIP Host: listen.carlsonsw.com
Port: 2204
User: Provided to you by Carlson
**Password**: Provided to you by Carlson
Mountpoint: Provided to you by Carlson*

*Mount point name is usually BASE_XXXX where XXXX is the Listen/Listen port you used to set up your base. Base name is case sensitive.

6) Press the Connect Button to connect to the RTK Network. You should then see the "Connection Success" message.
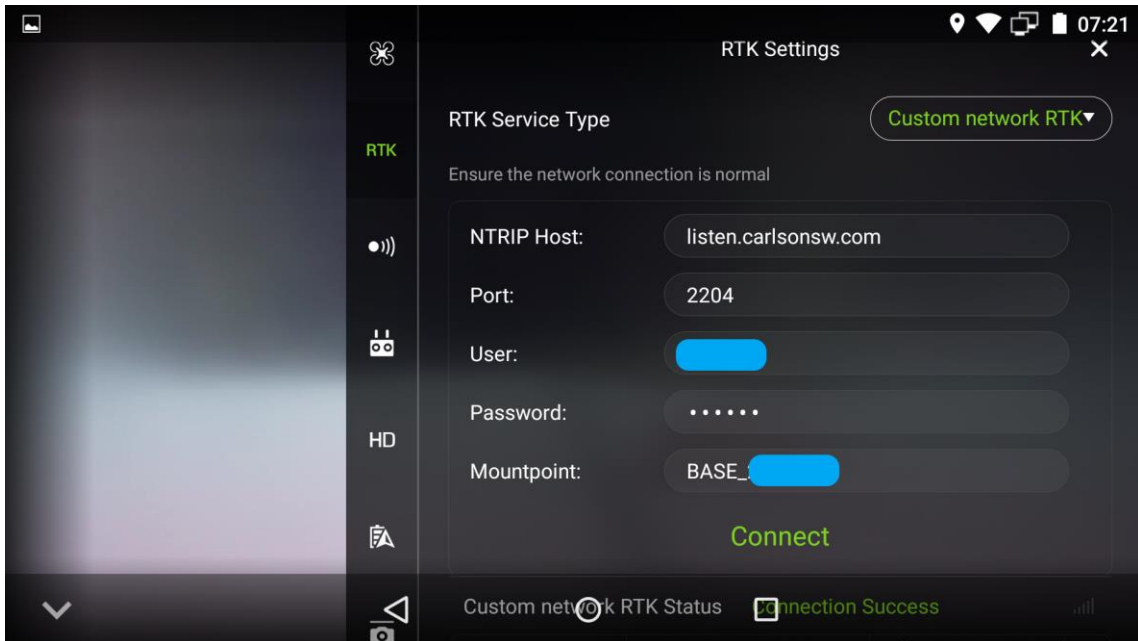
7) Scrolling down, the RTK network should indicate that it is now fixed.
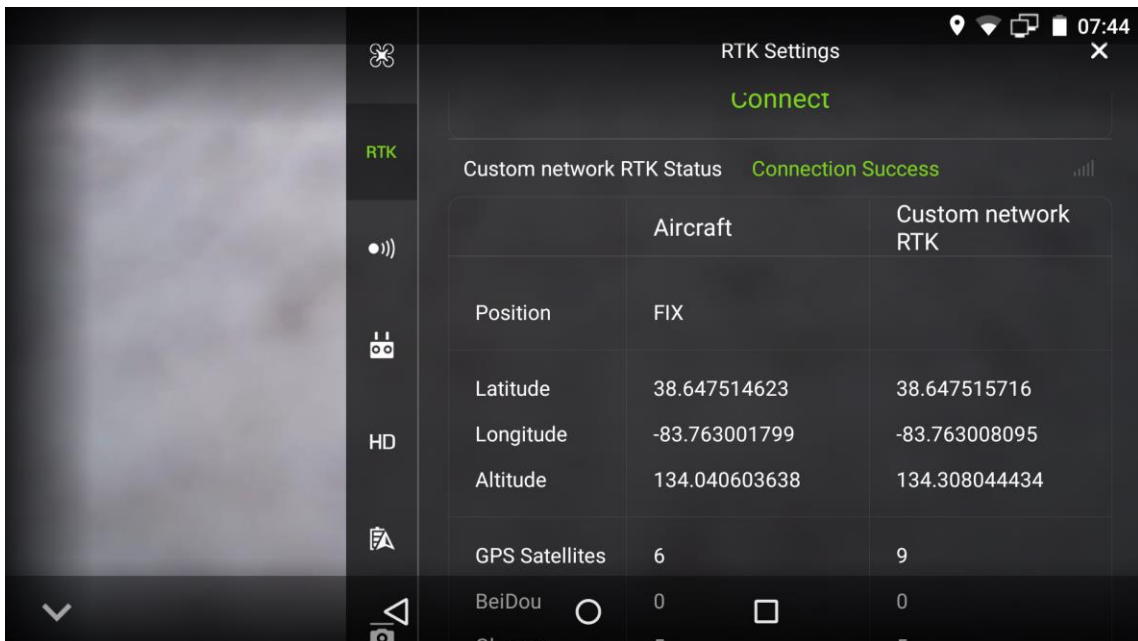
8) And the drone status now indicates Ready to GO (RTK) with a green bar. You are now ready to begin your RTK drone flight.