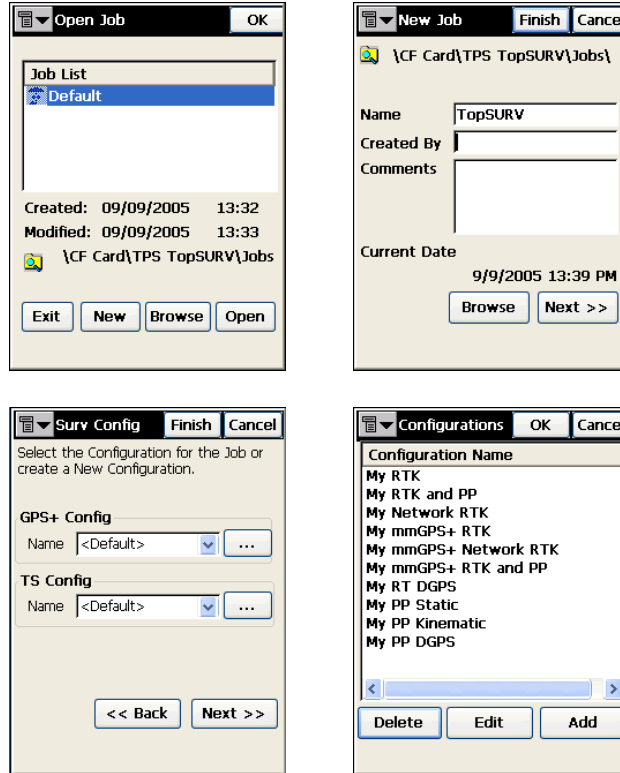
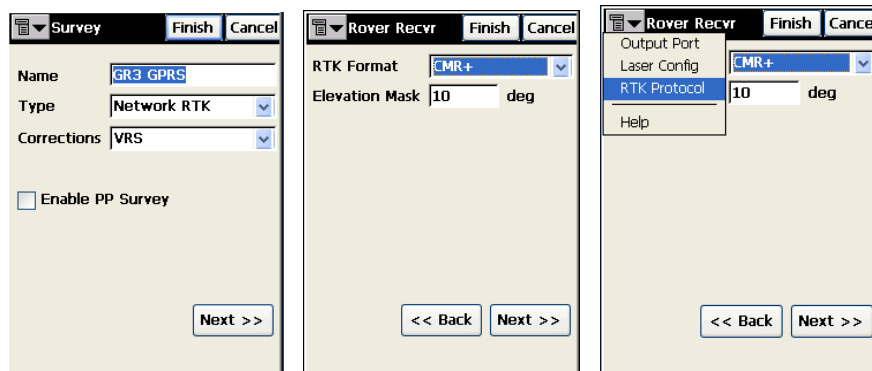


# TopSURV GR-3 GPRS NTRIP

- I. Job Setup.  
a. Open **TopSURV** on your data collector.



- b. In the *Open Job* screen, Click on **New** and the *New Job* screen will appear.
- c. In the *New Job* screen, enter the **Name** and *all other appropriate information*. Click **Next** and the *Survey Config* screen will show up.
- d. In the *Survey Config* screen, click on the ... Configuration button.
- e. In the *Configuration* screens, click on **Add**.



- f. Enter the desired **Name**, choose the type as **Network RTK**, and the appropriate **Correction type**. Click **Next**.

The first screenshot, titled 'Rover Recvr', shows the 'Elevation Mask' set to '10 deg' and the 'Protocol' set to 'NTRIP'. The second screenshot, titled 'Config: Modem', shows 'Modem Connect' set to 'Receiver'. The third screenshot, titled 'Rover Radio', shows 'Radio Modem' set to 'Internal GPRS', 'Receiver Port Connected to Radio' set to 'C', 'Parity' set to 'None', 'Data' set to '8', 'Baud' set to '38400', and 'Stop' set to '1'. Each screenshot includes 'Finish' and 'Cancel' buttons at the top and '<< Back' and 'Next >>' buttons at the bottom.

- g. Under the *Rover Receiver Screen*, choose the appropriate **RTK Correction Format** and **Elevation Mask**. Choose the *context menu* (*Pull-down menu in the upper left corner*) and choose **RTK Protocol**. Select the RTK Protocol as **NTRIP**. Click **Next**.

- h. Choose Modem is connected to the **Receiver**. Click **Next**.

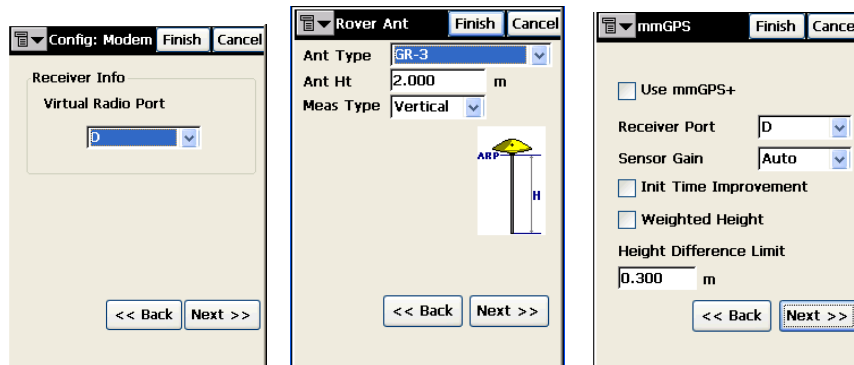
- i. Choose the Radio Modem as Internal GPRS. Configure the following, once finished, click Next:
- i. Port: **C**
  - ii. Parity: **None**
  - iii. Data: **8**
  - iv. Baud Rate: **38400**
  - v. Stop: **1**

The first screenshot, titled 'Config: Modem', shows 'Internet Info' with 'IP Address' set to '111.111.111.111/8008' and 'IP Address list' containing '111.111.111.111/8008'. The second screenshot, titled 'Config: NTRIP', shows 'NTRIP Server' with 'Server' set to '111.111.111.111:8008', 'User ID' set to 'user1', and 'Password' set to 'topcon'. The third screenshot, titled 'Config: Modem', shows 'Provider' set to 'T-Mobile GPRS', 'Dialup Num' set to '\*99#', 'User ID' and 'Password' fields empty, 'PIN' set to '0000', 'APN' set to 'internet2.voicestre', and 'HiPer XT/GR-3' checked. Each screenshot includes 'Finish' and 'Cancel' buttons at the top and '<< Back' and 'Next >>' buttons at the bottom.

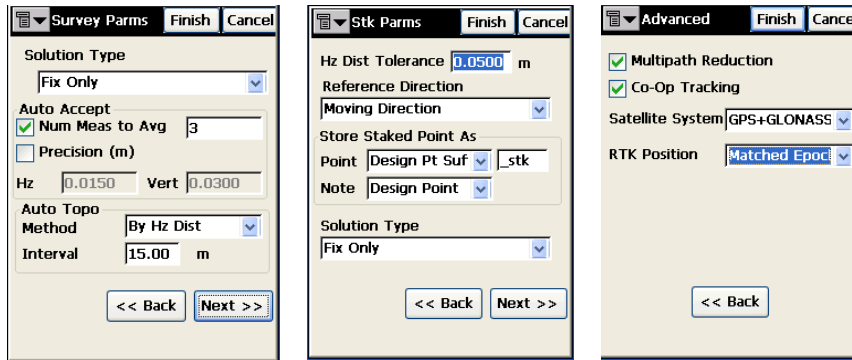
- j. Enter the **IP address** and **Port number** of the network you are connecting to in the following format: *IP address/port number*. Note: The Port will coincide with the NTRIP Port of the network. Click **Add**.

- k. Once the desired IP addresses are entered, click **Next**.

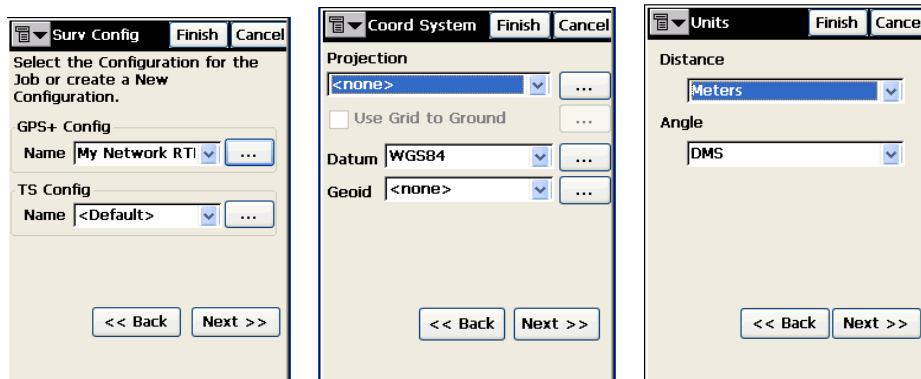
- l. Enter the NTRIP User **ID** and **Password** assigned to you by the *network administrator*. Click **Next**.
- m. Choose the Service Provider Associated with the Internal SIM Card. *Note: for T-Mobile and Cingular, these configurations are already provided.* Click **Next**.



- n. Select the **Virtual Radio Port**. *Note: The Virtual Radio Port is a port on the receiver that is not being used. Remember, B is the Bluetooth Port and C is the Radio modem port.* Click **Next**.
- o. Enter the following information once finished, click **Next**:
  - i. **Antenna Type** being used
  - ii. **Antenna Height**
  - iii. **Measurement Type**
- p. Enter the following information once finished, click **Next**:
  - i. **Check** whether using mmGPS or not. If not, just click **Next**.
  - ii. If using mmGPS, enter the **receiver port for the PZS-1** as A (or D depending on which port the CDMA is on.)
  - iii. Sensor Gain – **Auto**
  - iv. **Check** Init Time Improvement.
  - v. **Check** Weighted Height.
  - vi. Enter desired **height difference limit** between GPS and mmGPS determined height. Default is 0.3m



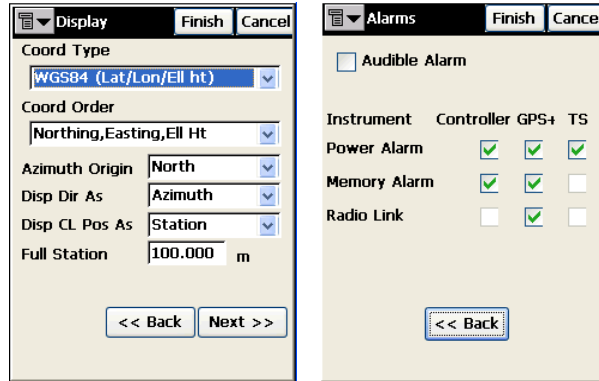
- q. On the *Survey Parameters* screen, enter the following, once finished click **Next**:
- i. Solution Type – **Fix Only**
  - ii. **Desired Auto accept parameters**
  - iii. **Desired Auto-topo parameters.**
- r. On the *Stakeout Parameters* screen, enter the following, once finished, click **Next**:
- i. **Desired Horizontal distance tolerance**
  - ii. **Desired Reference direction**
  - iii. Solution Type – **Fix Only**
- s. On the *Advanced* screen, enter the following, once finished click **Finish**:
- i. Multipath Reduction – **checked**
  - ii. Co-Op Tracking – **checked**
  - iii. Satellite System – **GPS + GLONASS**
  - iv. RTK Position – **Matched Epoch.**



- t. Click **Next** on the *Survey Config* screen.
- u. On the *Coordinate System* screen, enter the following, once finished click **Next**:
- i. **Desired Projection**
  - ii. **Desired Datum**

iii. **Desired Geoid Model that you wish to add.**

v. On the *Units* screen, enter the desired **distance and angular units**. Click **Next**.

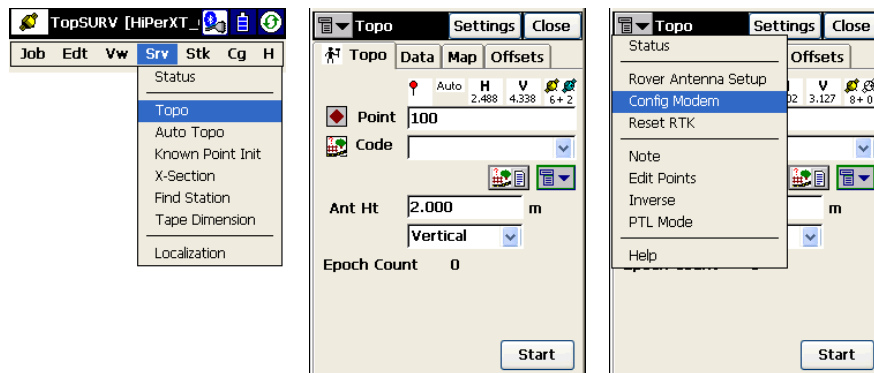


w. On the *Display* screen, enter the desired **coordinate type, order, etc.** Click **Finish**.

x. On the *Alarms* screen, enter user Preferences.

## II. Connecting to the Network

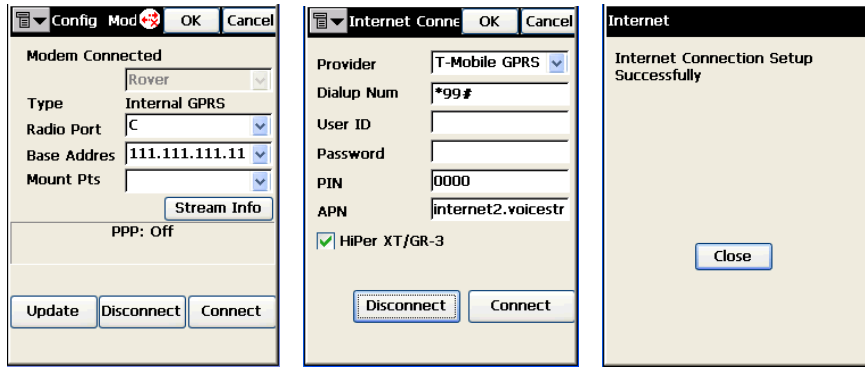
a. **Configure TopSURV Job accordingly**



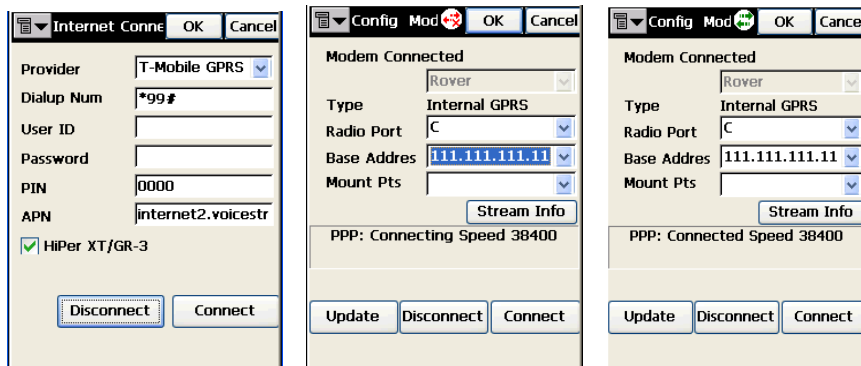
b. Connect to your **rover receiver** via Bluetooth or serial cable.

c. Click on **Survey** and then **Topo**.

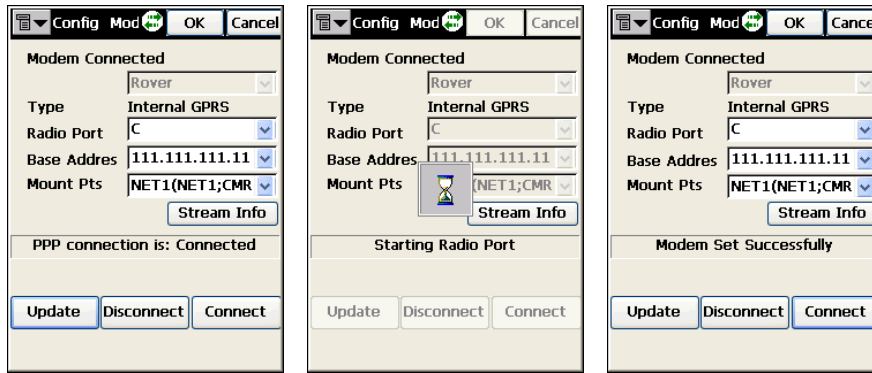
d. On the *Topo* screen, select **Config Modem**.



- e. On the *Config Modem* screen, click on the **Red icon** to the left of the **OK** button.
- f. On the *Internet Connection* screen, choose the provider of your Internal GPRS SIM Card and enter the appropriate dialup networking information. *Note: For T-Mobile and Cingular users, this information is already provided by default.* Click on **Connect** and the receiver will connect to the Internet.



- g. Click **Ok** after connecting to the Internet to return to the *Config Modem* screen.
- h. Wait for the *PPP Connection* to become **Connected** (most likely at 38400), then click on the **Update** button to generate the *NTRIP Mount Point Sourcetable*.



- i. Once the Mount Points are generated, choose the one you wish to connect to and click on **Connect** and the message should say *Modem Set Successfully*.
- j. Click **OK** to return to the *Topo* screen and after a few moments, you should receive 100% radio link and an RTK Age of 0,1 indicating you are receiving RTK correction from the network you dialed.

