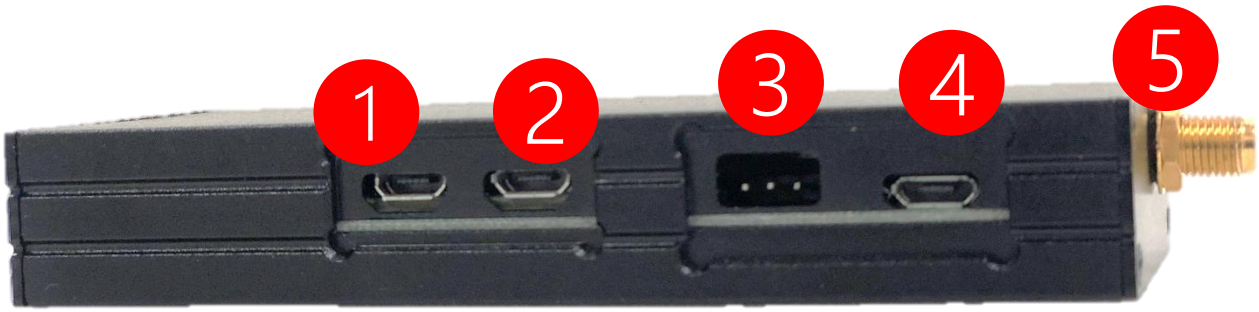
S100 Radio Quick Guide

S100 Radio Interface Overview



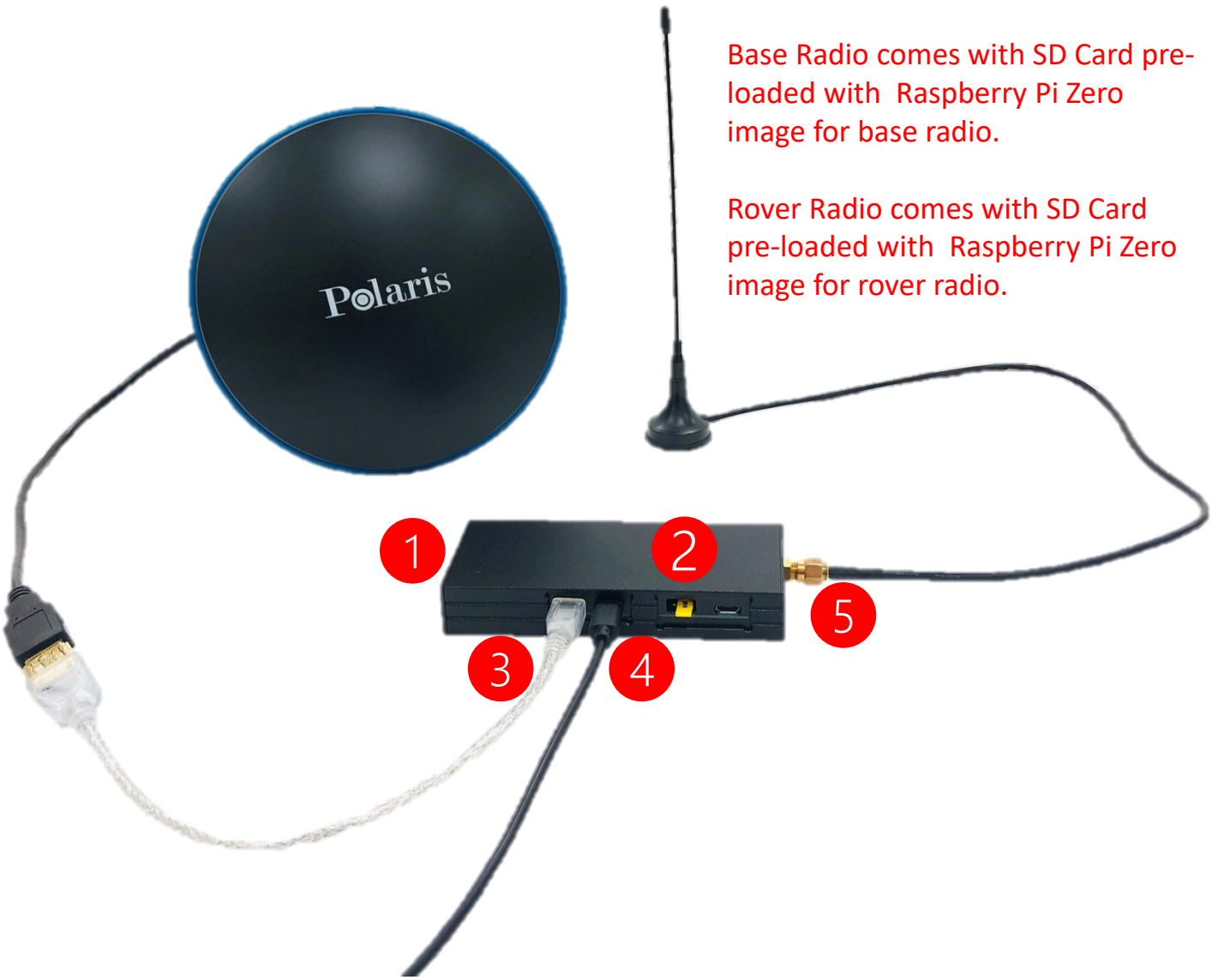
1. Connect to S100 RTK Receiver
2. Connect to Power Bank (5V Power Input)
3. Radio Mode Select
4. Radio Configuration Port
5. SMA Connector for Radio Antenna
6. SD Card (Base Image or Rover Image)

S100 Radio Hook Up

1. SD Card Should Already Be In the SD Card Slot
2. Jumper to Transceiver Mode (Connect Right 2 Pins)
3. Connect to S100 RTK Receiver
4. Connect to Power Bank
5. Connect to Radio Antenna

Base Radio comes with SD Card pre-loaded with Raspberry Pi Zero image for base radio.

Rover Radio comes with SD Card pre-loaded with Raspberry Pi Zero image for rover radio.



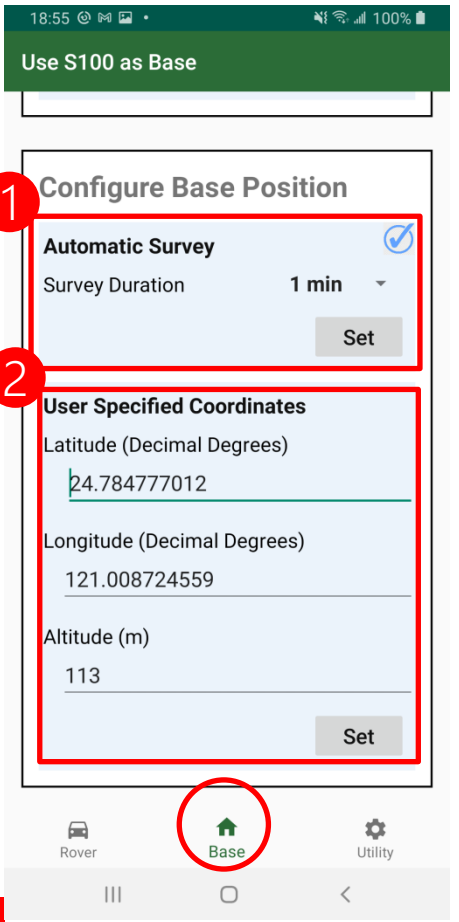
Polaris Connect App Setup

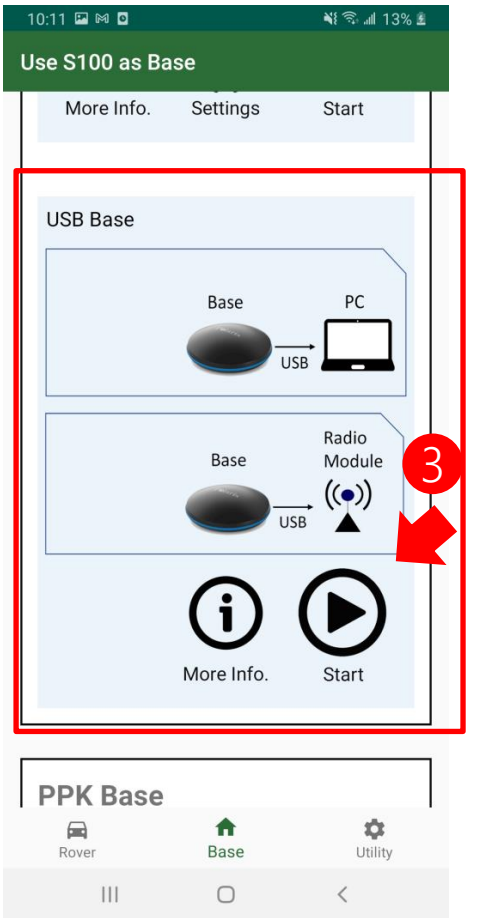
Base Radio Setup

Setup Base Position:
Go Base page,

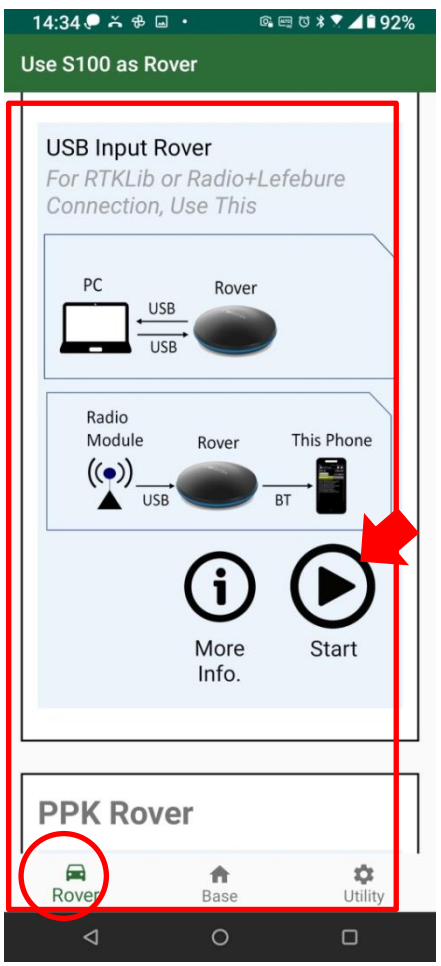
1. Set Position by survey duration
2. **Or** Set Position by entering coordinates manually
3. Press Start, start to broadcast

If want to log base RTCM data for PPP processing, do page-8 procedures before above #3 Press Start.





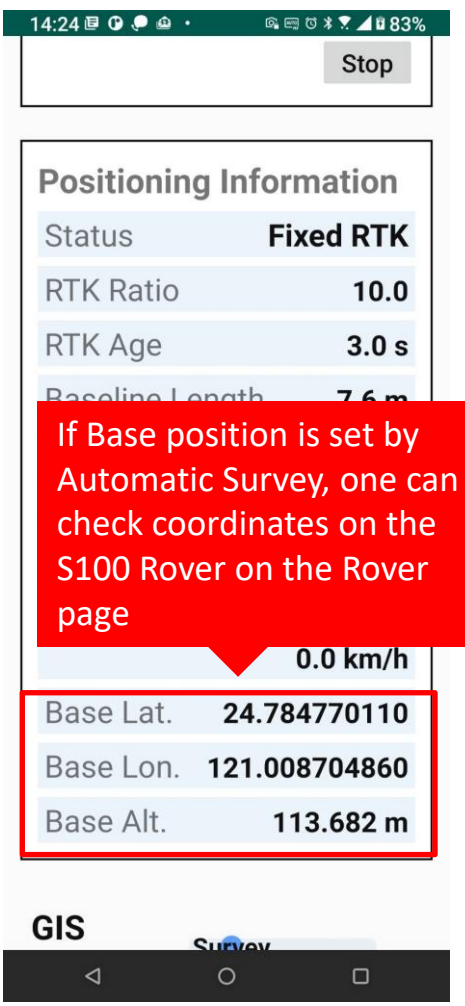
Rover Radio Setup



After Polaris Connect App has been setup for both base radio and rover radio, the S100 rover will be able to receive S100 base data transmitted over radio.

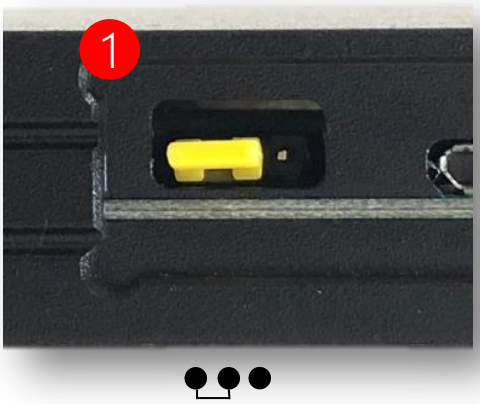
Polaris Connect App will exist after setting up the Base Radio.

Polaris Connect App stays after setting up the Rover Radio. One can keep Polaris Connect App running in background and use 3rd party GIS App.



If Base position is set by Automatic Survey, one can check coordinates on the S100 Rover on the Rover page

Radio Configuration (Advanced)



The shipped base radio and rover radio pair is plug-and-play, no need for any radio configuration.

This radio configuration information is provided only for situation such as if another user has a pair of radio operating nearby causing interference, and needing to change to a different radio channel (net ID) from default.

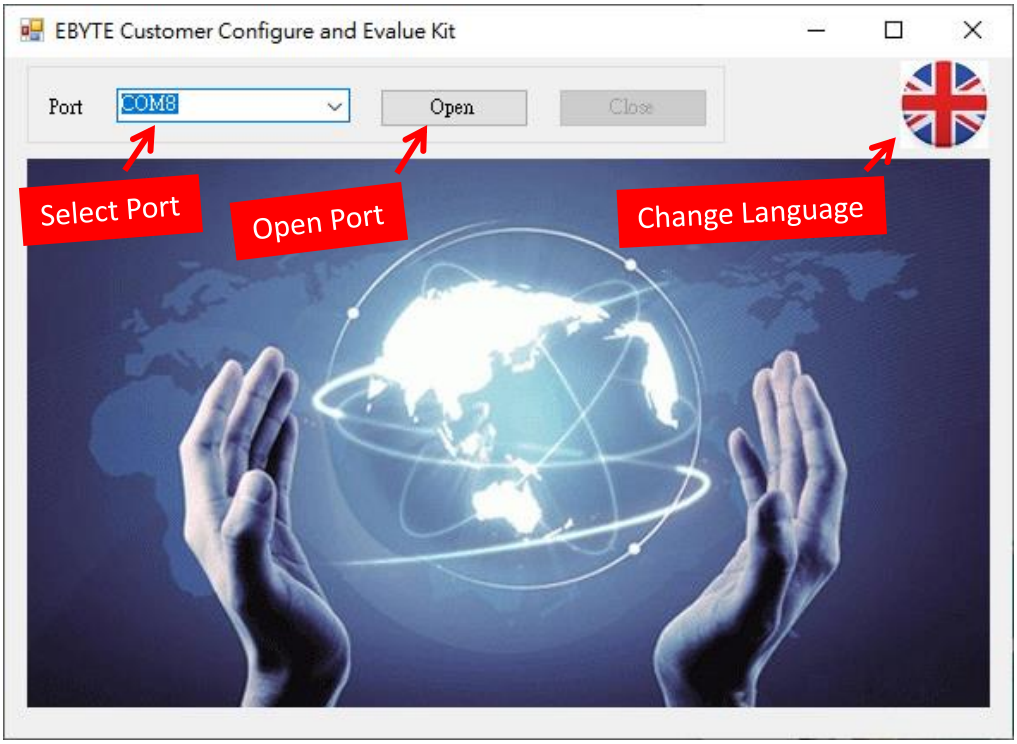
1. Jumper to Radio Configuration Mode (Connect Left 2 Pins)
2. Connect to Windows PC
3. Go to Radio Configuration Tool (see next page)

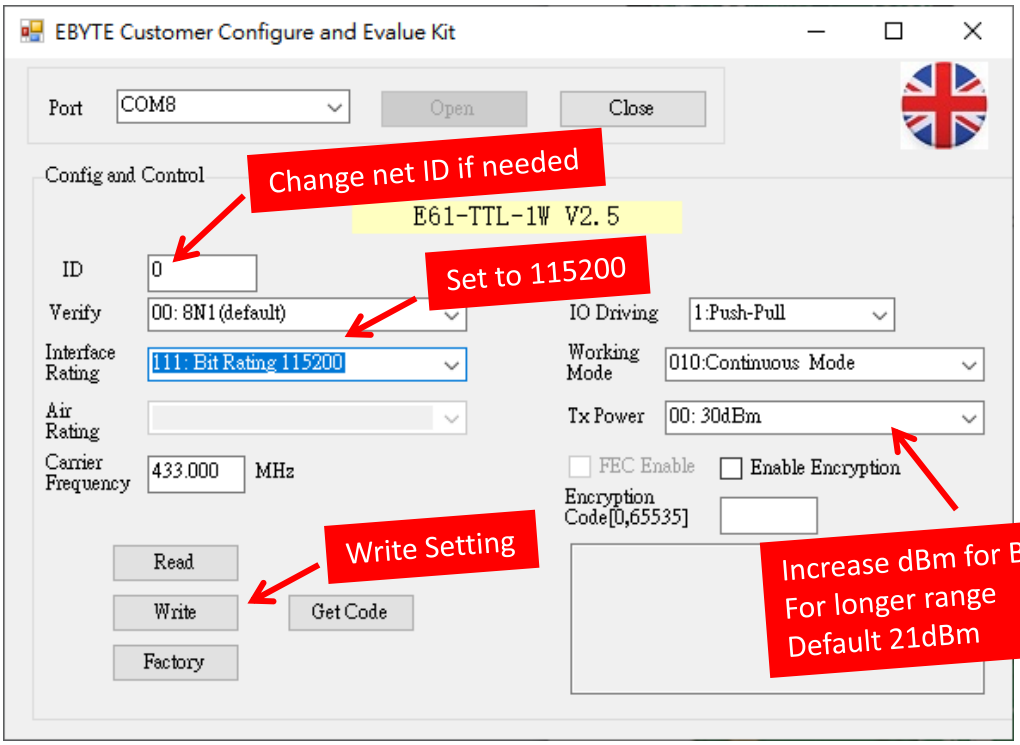
Radio Configuration (Advanced)

Download Link:

https://www.ebyte.com/en/pdf-down.aspx?id=201

Connect Radio to Windows PC then Open the Configuration Tool:





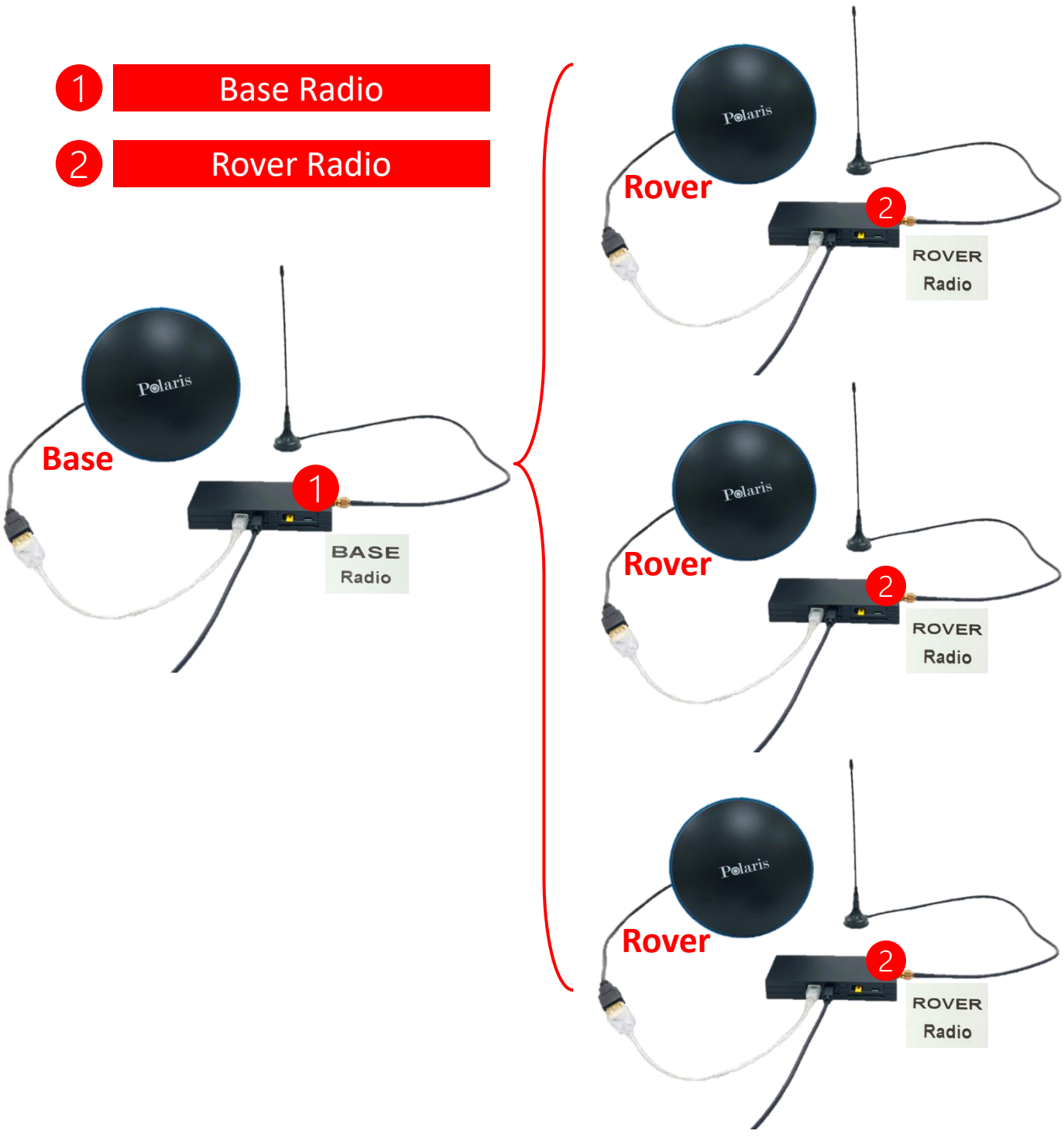
Multiple Rover Application

In this case, **Only** needs **One Base** to broadcast RTCM data, sending RTCM data to **One** or **More** Rover.

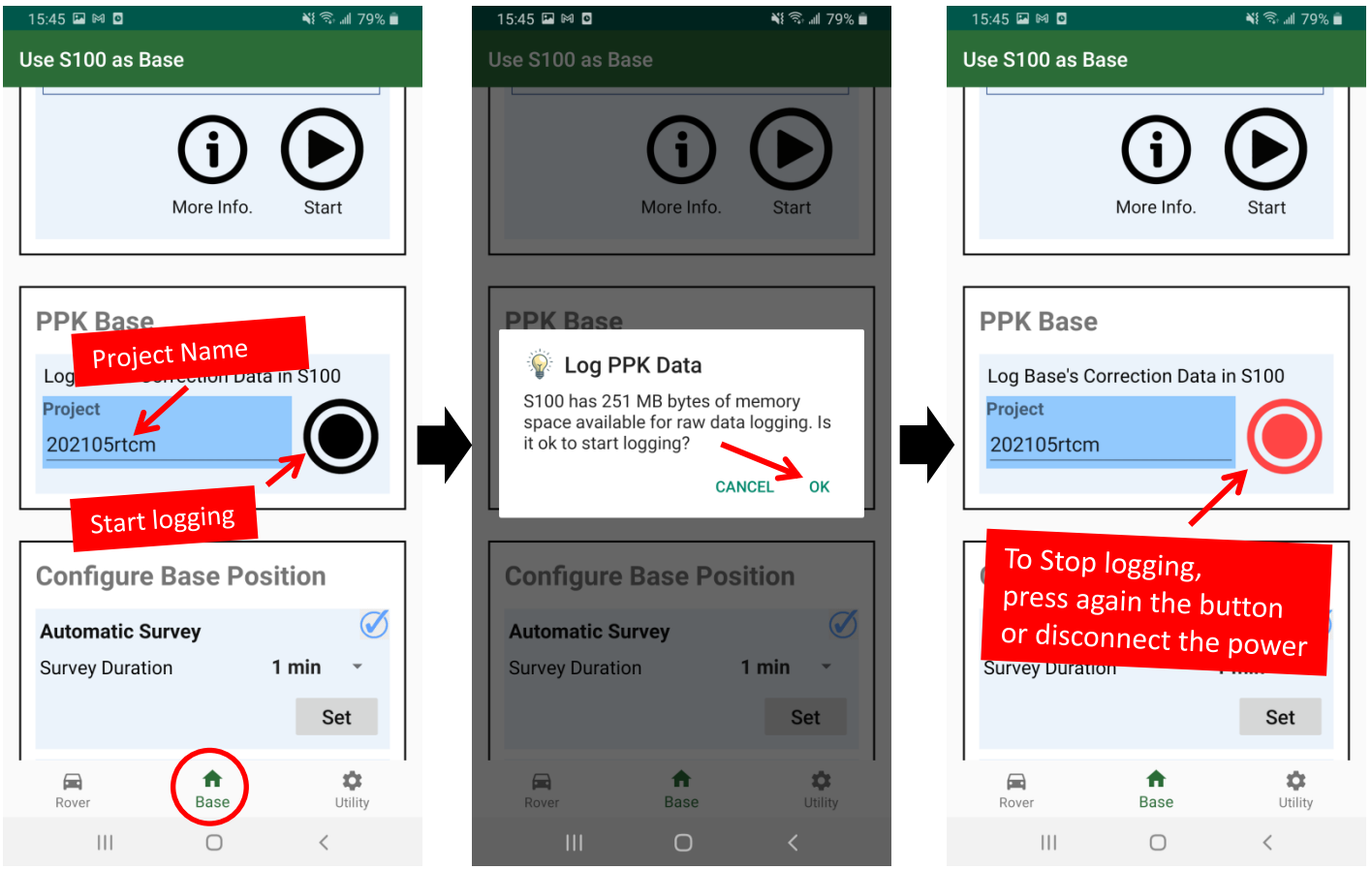
1. Setup all S100 Radio with **same net ID** (see page-5 & 6)
2. Setup Base (see page-3 & 4)
3. Setup Rover (see page-3 & 4)

1 Base Radio

2 Rover Radio

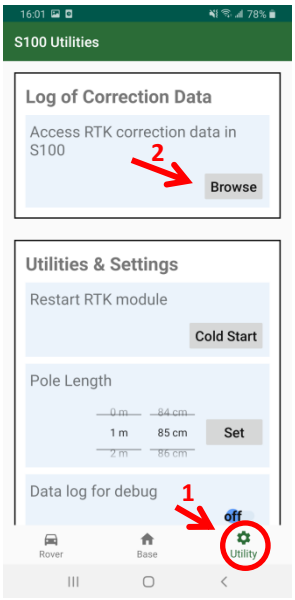


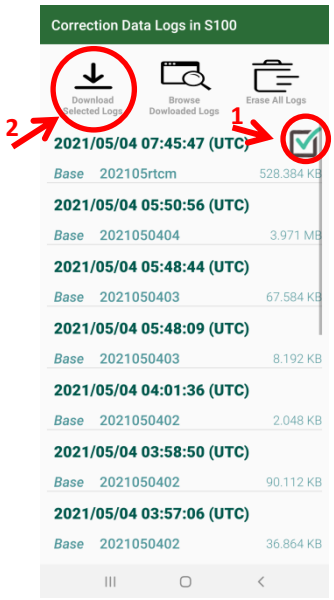
Logging Base RTCM Data

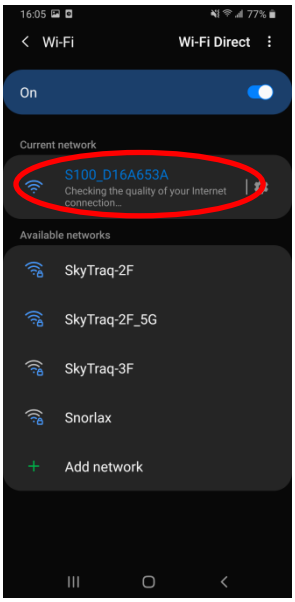


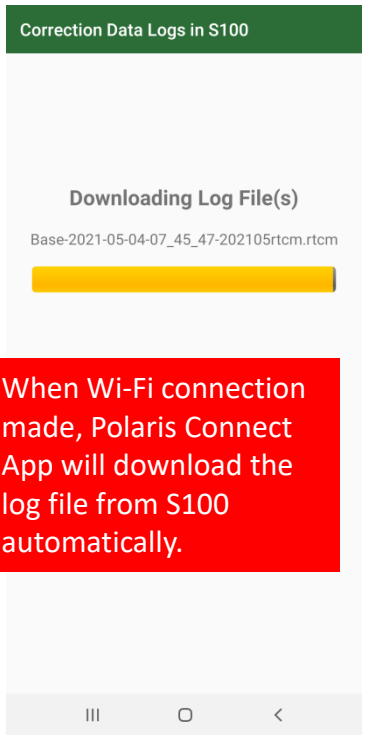
To Download file, see page-9.

Download RTCM Data

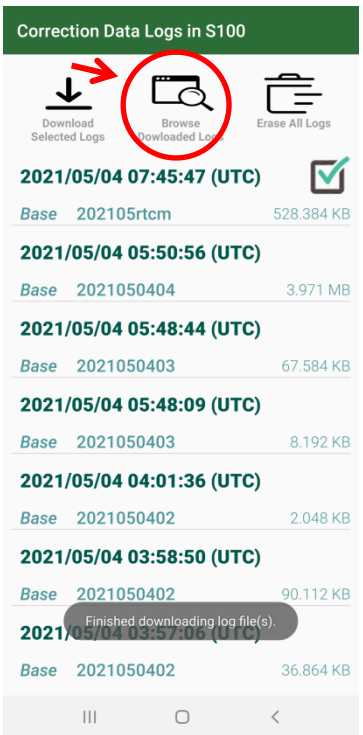


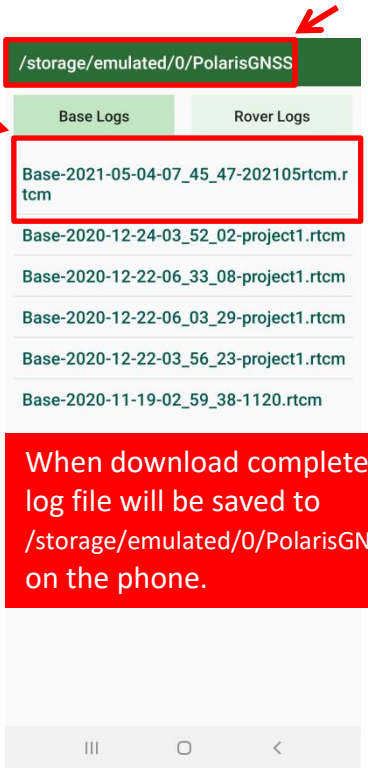






When Wi-Fi connection made, Polaris Connect App will download the log file from S100 automatically.





When download completed, log file will be saved to /storage/emulated/0/PolarisGNSS on the phone.