GR-9028/GR-9029

User's Guide

Bridging by BLE

Ver. 0.1

Revision History

Ver.	Date	Description
0.0	Oct. 13th, 2023	Draft for reference purpose only

Navisys Technology Corp.
Tel : +886-3-5632598
Sales contact: sales@navisys.com.tw
Address: 2F, No.56, Park Ave. II, Hsinchu Science Park, 30844, Taiwan (R.O.C.)

https://www.navisys.com.tw/
Fax: +886-3-5632597
Technical support: service@navisys.com.tw

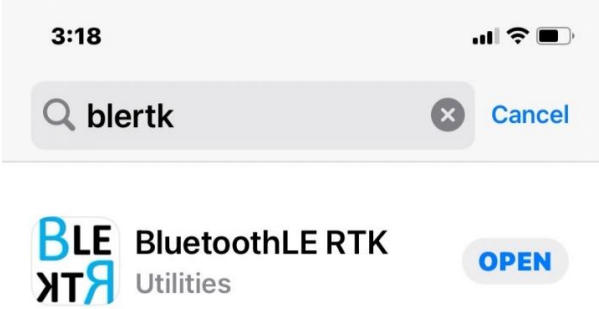
Contents

1 Bridging RTK Base and Rover by BLE

1.1 Where is the APP

APP BLERTK for both iOS and Android are available for RTK base and rover configuration. Devices running this APP could communicate with GR-9028 via BLE to configure it as a local base, receive the RTCM RTK correction data, and forward it to a caster or a rover.

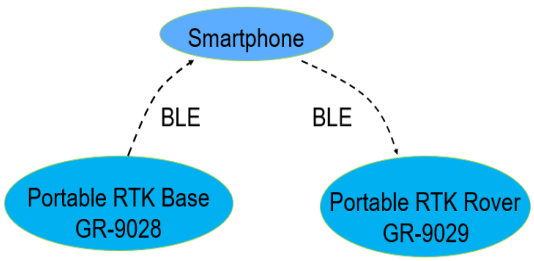
- Download BLERTK from **APP Store** for iOS devices.



- Download BLERTK from **Google Play** for Android devices.

1.2 Application Overview

BLERTK running on a smartphone/pad with BLE capability could be used to bridge RTCM correction data from RTK base (GR-9028) to RTK rover (GR-9029) via BLE.



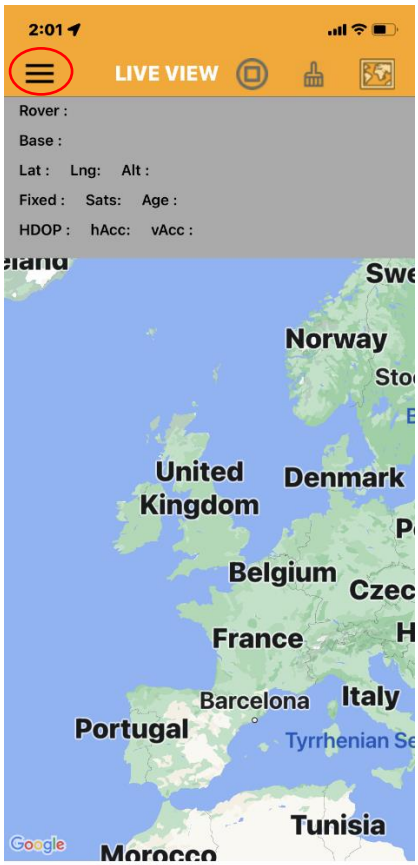
What we need to do is

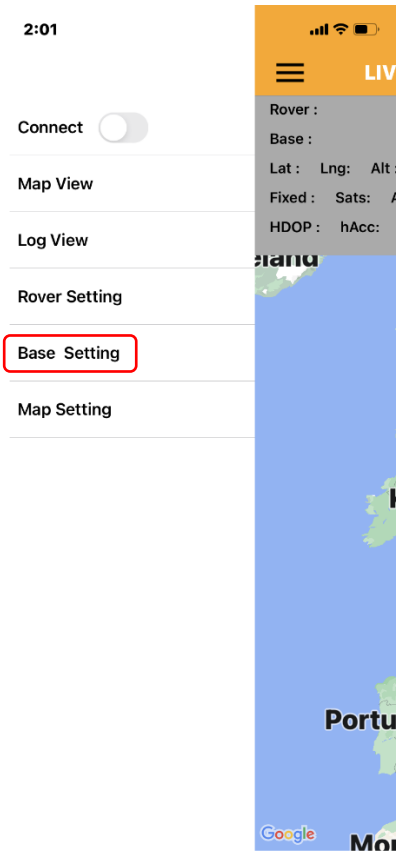
- Power on GR-9028, enable RTK base settings first.
- Power on GR-9029, enable RTK rover settings next.

It's pretty easy and straightforward.

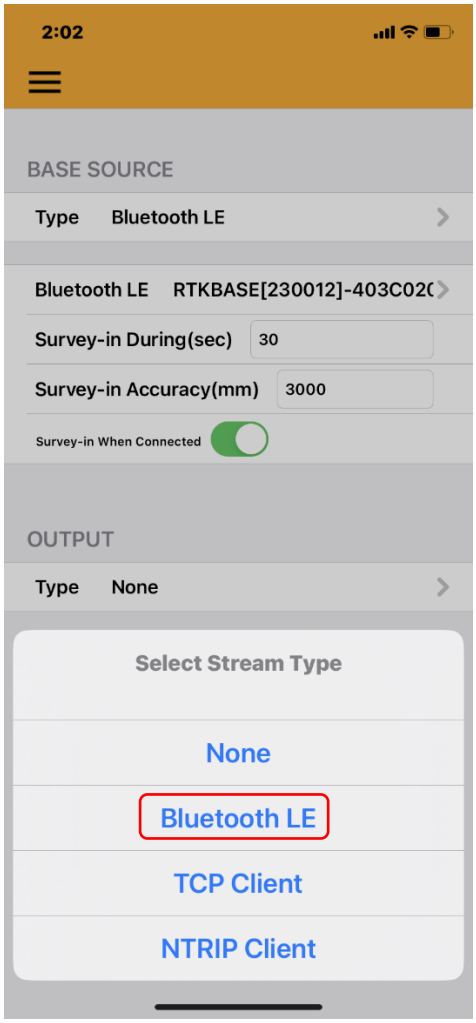
1.2.1 RTK Base Settings

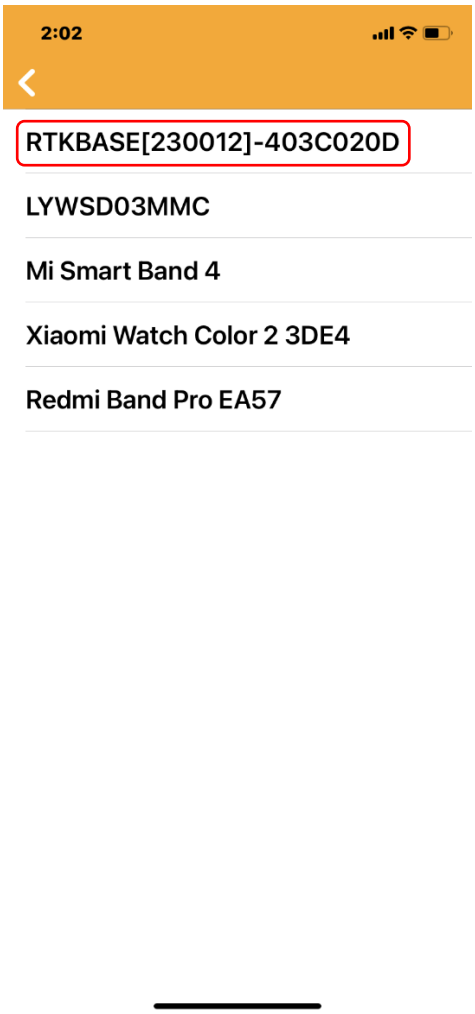
1. Tap settings circled in red as shown in following left picture.
2. Tap Base Setting rectangle in red as shown in following right picture.



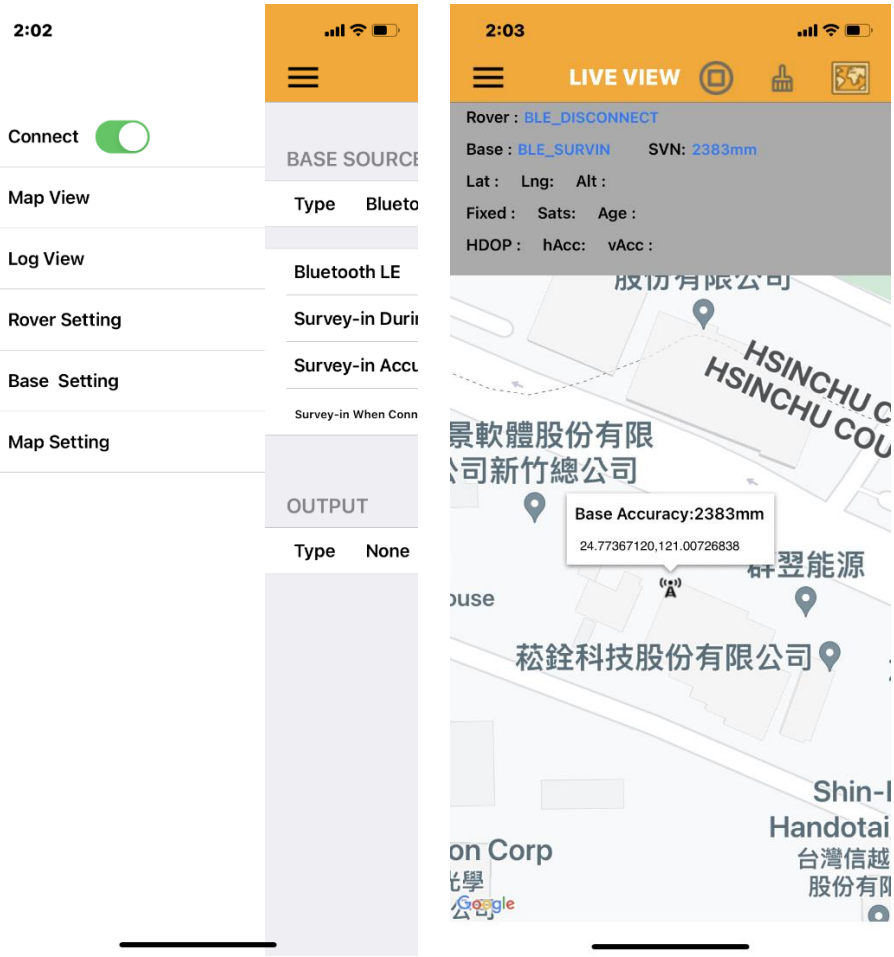


3. Set BASE SOURCE Type as Bluetooth LE which means connecting RTK Base GR-9028 to the BLERTK device by BLE.
4. Choose a BLE device with naming prefixed by RTKBASE.





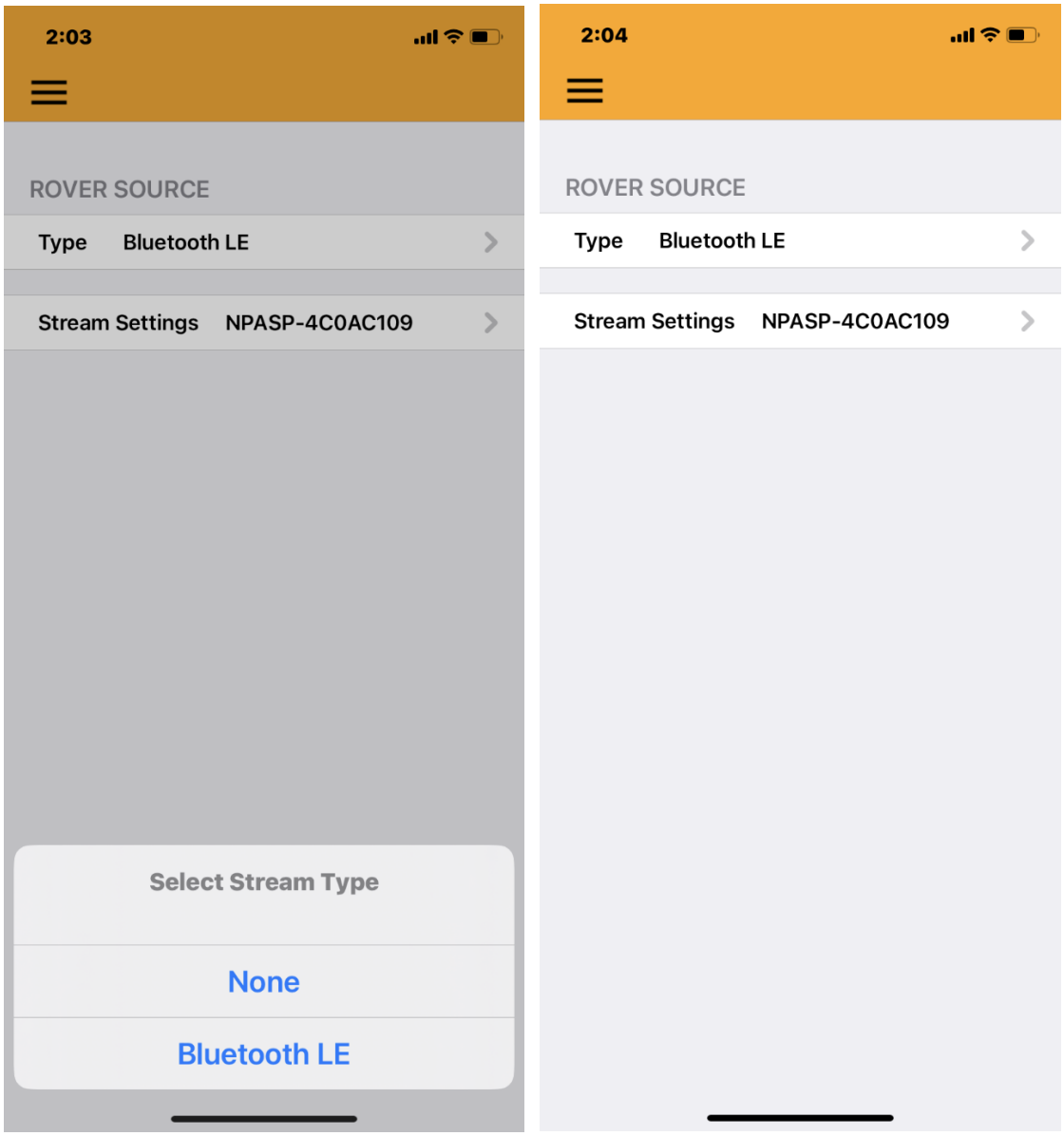
5. For OUTPUT, choose None which means it won't send RTCM correction data to a caster.
6. Go back to Setting and tap Connect
7. Tap Map View to see the RTK Base survey in status.
    i. From the right picture below,
        1. Rover is not yet connected (BLE_DISCONNECT)
        2. Base is under survey in (BLE_SURVIN).
        3. Accuracy and latitude/longitude shown above the base icon.



ii. From the picture below, one can see the Base status has changed to BLE_BASE which means survey in is done and it is ready for acting as a RTK base. Byte/s showing the RTCM data in bytes per second.

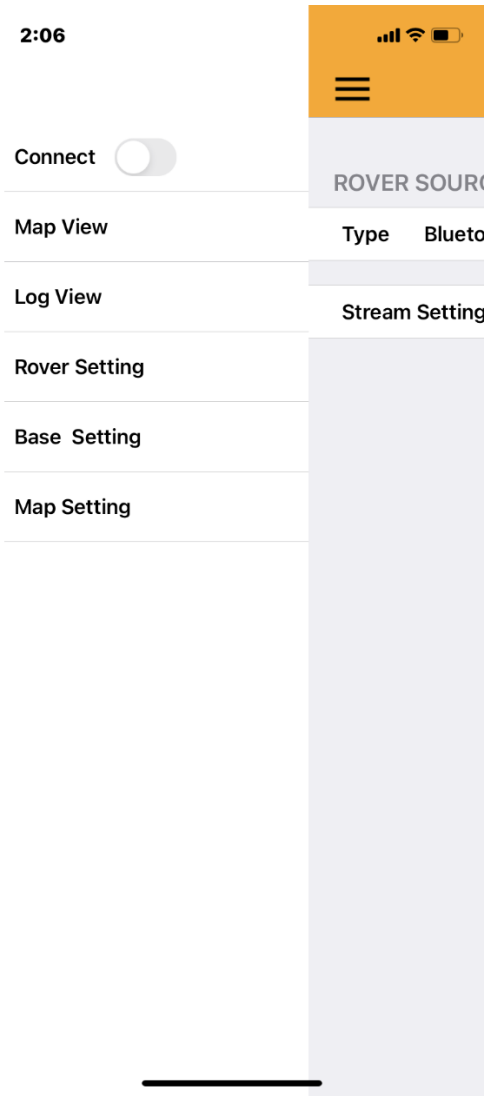
1.2.2 RTK Rover Settings

1. Tap settings and choose Rover Setting to set rover.
2. Choose ROVER SOURCE as Bluetooth LE which means connecting RTK rover GR-9029 to the BLERTK device by BLE.
3. Choose the GR-9029 BLE device whose BLE ID is prefixed by NPASP-.



4. After rover setting, go back to Setting and choose Map View.
5. As shown by following picture, the status of Rover field changed to BLE_CONNECTED and the Fixed status is FIXED_RTK.

6. One can go back Setting to tap Connect off to close the BLERTK device connections with GR-9028 and GR-9029. Be sure to close power of GR-9028 and GR-9029 if you decides to close the connections.


2:06
Connect
Map View
Log View
Rover Setting
Base Setting
Map Setting
ROVER SOUR
Type Blueto
Stream Setting