

R3-FT400 Bluetooth Box User Manual

V1.3 (October 25, 2020)

After June 2020, the Bluetooth module supports **SPP** and **BLE**



The role of the Bluetooth box:

The Bluetooth box has a built-in Bluetooth module. The APRS beacon data decoded by the FTM400 or FTM100 is output to the Bluetooth module in the box through the 10-pin to 6-pin cable. The aprs software is installed on the mobile phone or tablet to search for the Bluetooth module in the connection box. For example, APRSDROID is connected to the Bluetooth box. The beacon received by the FT400 or FT100 can be transmitted to the APRSDROID to see the map position, direction distance, etc.

Supported platform models: FTM-400D, FTM400XDR, FTM-100D

*You can also use DIY other cables to connect to KenwoodTM-D710 or other APRS stations with **PACKET** or **NMEA WAYPOINT** output.

FT M-400D Set the use steps:

1, Connect the FTM400 or FTM100 radio and power supply according to the picture.



2, Set the serial output format of the radio station to: **WAYPOINT** or **PACKET**, rate: **9600**

For example, the FTM400 settings are shown in the picture:



*Select : **waypoint**, the beacon output has a call sign and GPS coordinates.

*Select : **packet**, the beacon output has call sign, GPS coordinates and beacon text.

3, mobile phone Bluetooth pairing, search conversion box

Bluetooth name : FT400BT-SPP or FT400BT-BLE

pairing password : 1234

Note1: IOS system uses FBT400-BLE, Android system uses FBT400-SPP or FBT400-BLE

The red LED inside the box will flash or light up when the power is on. If there is no flash or long light, there is no power supply to the box.

Red LED **Blink** = **Bluetooth is not connected**

Red LED **Long light** = **Bluetooth is connected**

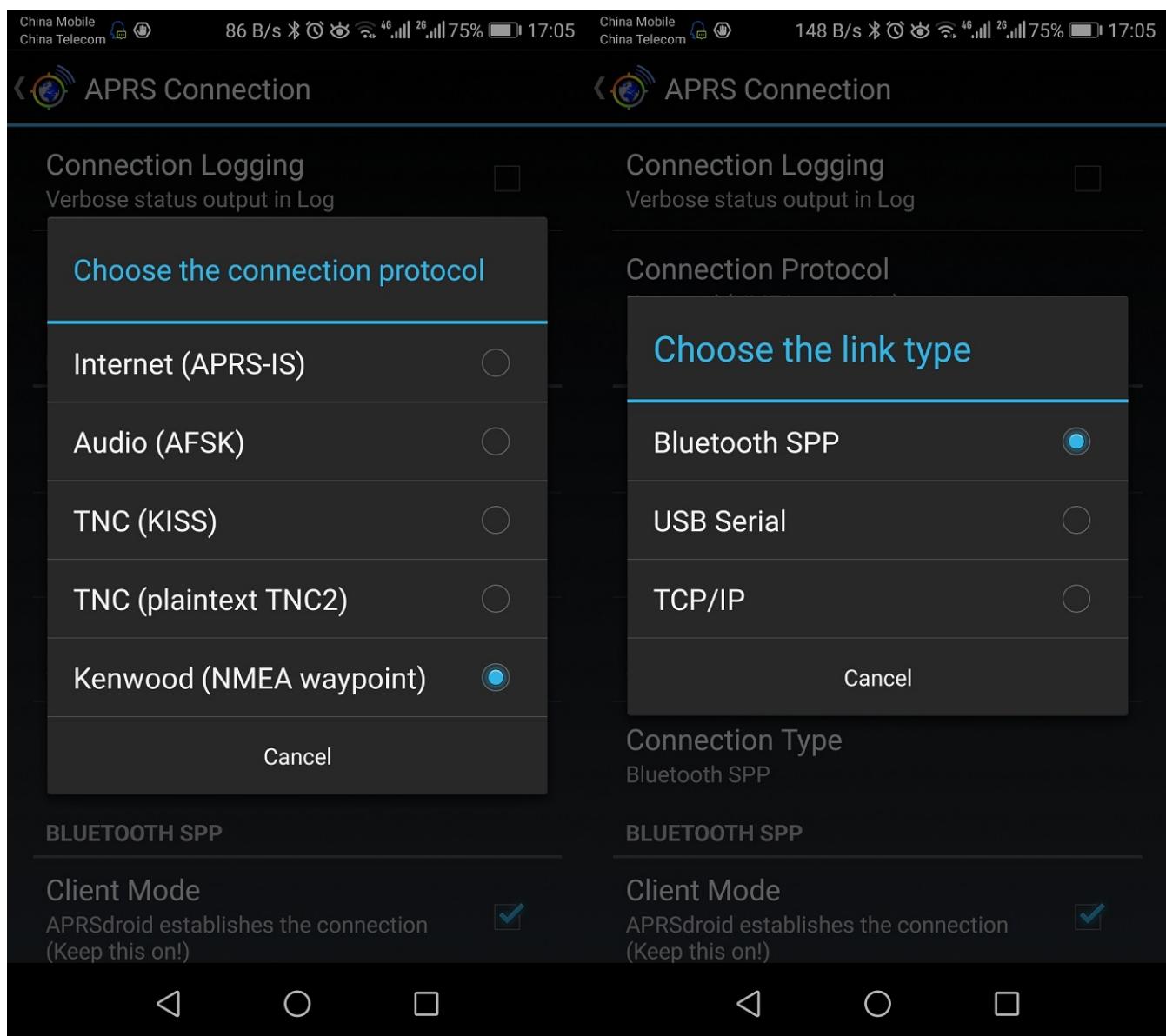
4. After the Bluetooth pairing is completed, the APRS program can be used in conjunction with (NMEA WAYPOINT format).

The APRS program APRSDROID is set as follows:

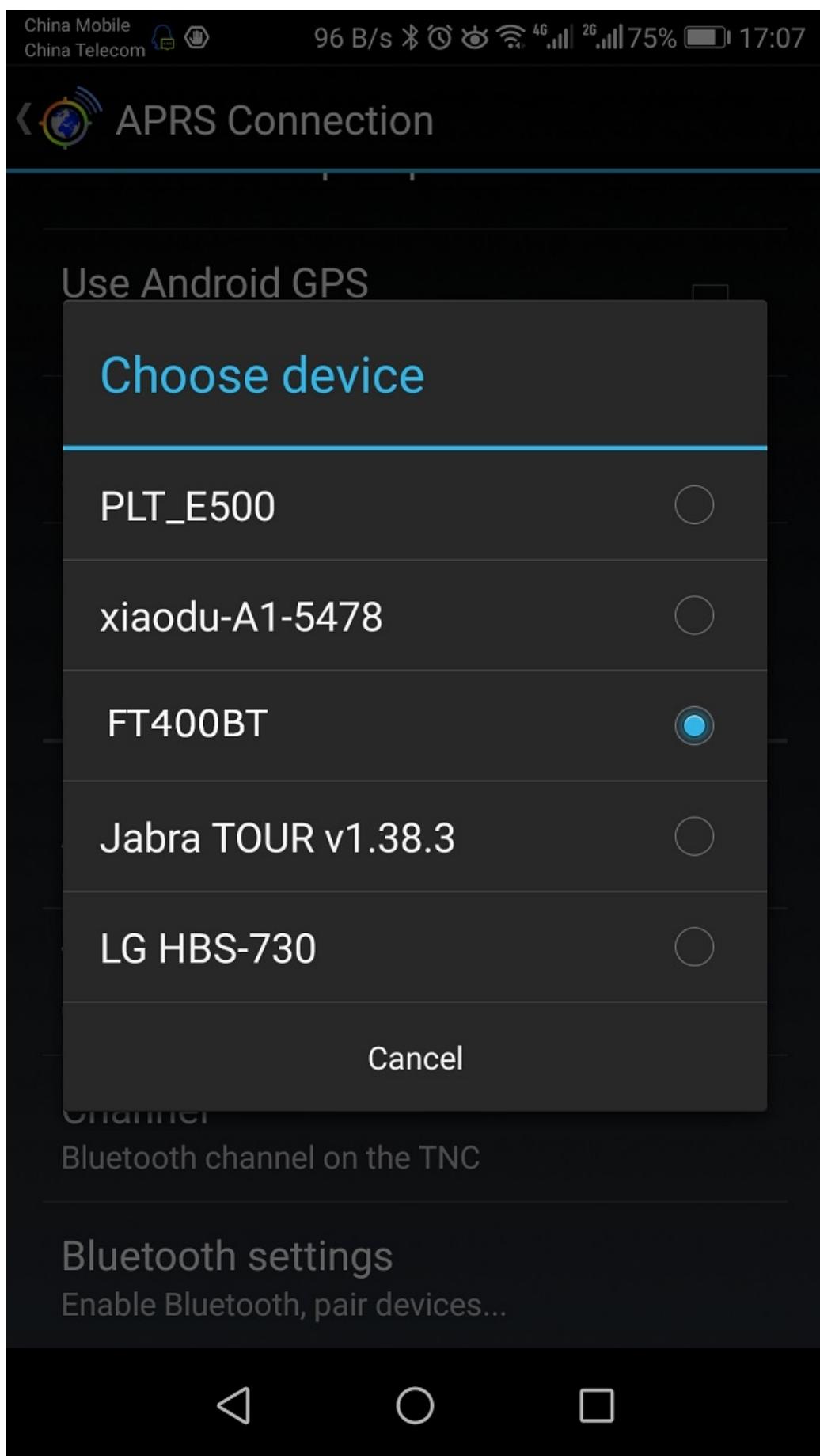
Connection protocol selection: **NMEA waypoint**

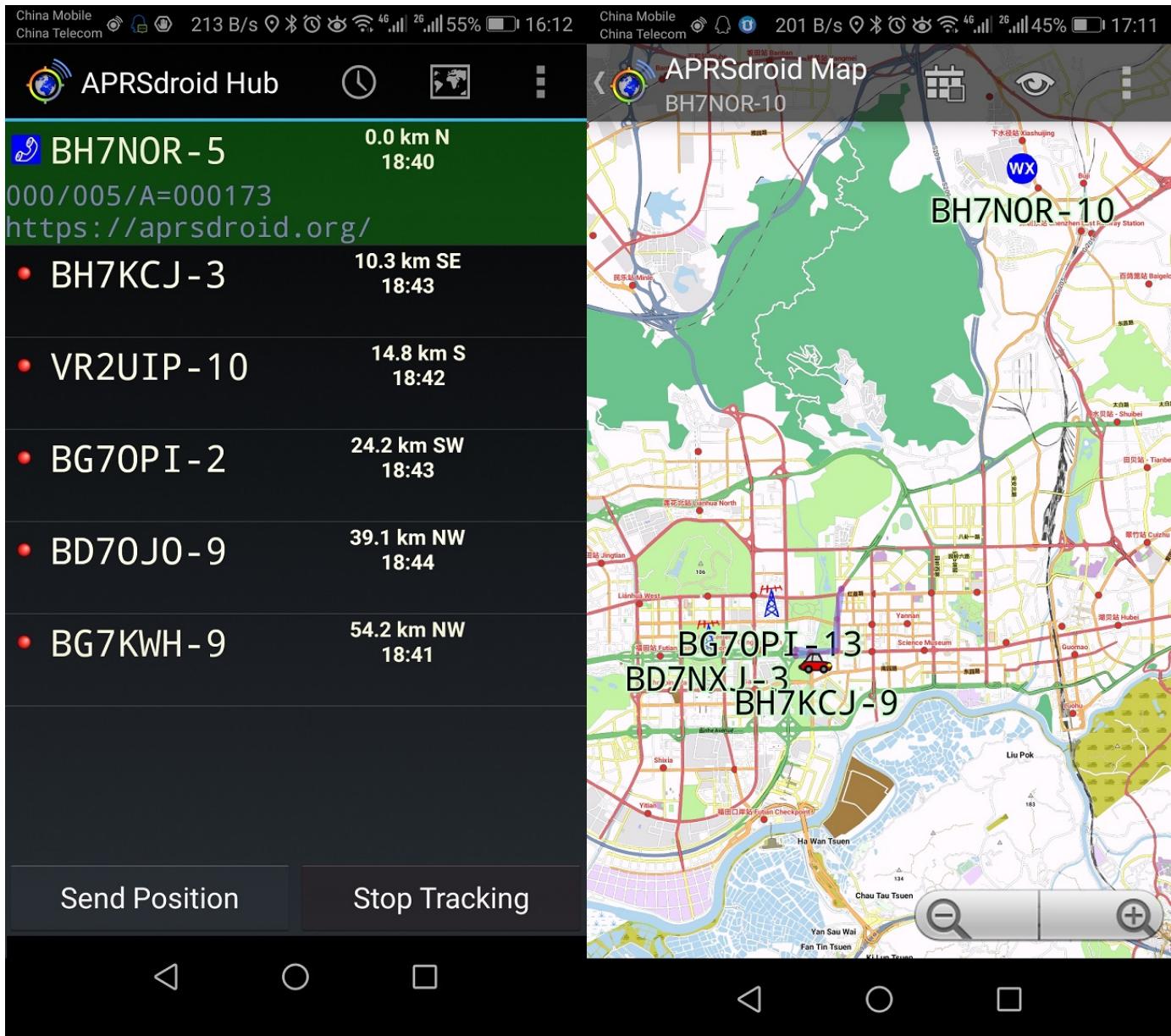
Link type selection: **Bluetooth SPP**

Device selection: **FT400BT-SPP**



Note2: APRSDROID program can only "choose" NMEA waypoint" ; Other APRS APP, please test and verify by yourself!





After the setting is completed, enable: start Tracking. At this time, the red indicator light inside the Bluetooth converter box is long, indicating that the APRSDROID is connected to the Bluetooth converter box. When the FT400 receives the decoded beacon, it will immediately transmit to the APRSDROID via Bluetooth. To the APRS list, you can also see the specific location or trajectory of the other party through the APRS map in real time.

Note 3: The APRSDROID version of the above screenshot is the OSM version.

iPhone test FT400BT-BLE (October 25, 2020)

Test Conditions: iPhone 7 IOS version: 10.3.2

Note 4: In IOS system, R3 internal Bluetooth BLE mode does not support Bluetooth manager search. The APP needs to support the Bluetooth BLE mode, and the R3-BLE connection will be automatically found in the APP

R3 Bluetooth serial port transparent transmission test 1,

Serial debugging APP name: JDY-LED or LIGHTBLUE , Download in the Apple Store.

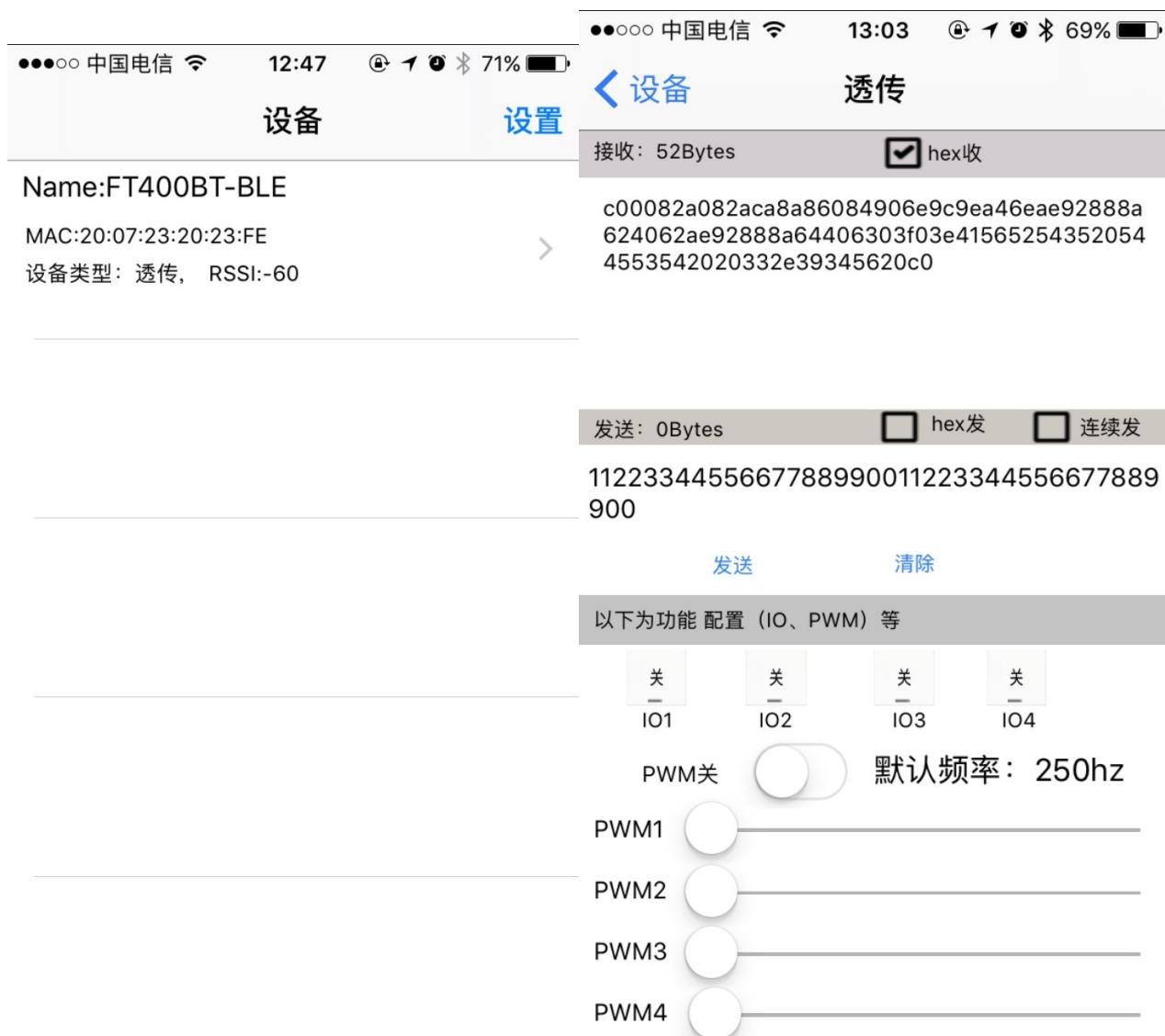
JDY-LED Installed normally.

LIGHTBLUE Installation prompt, Apple system version is low and not supported

Below is a screenshot of the JDY-BLE test

Left picture: APP found BLE,

Right: FT400 receives APRS beacon data and transmits it to APP via BLE



Note5: JDY-LED is only to verify that the Bluetooth BLE mode is used normally. It is not an APRS application

R3 Bluetooth BLE test 2: APRS software test

APP name: **OvitalMap**

APP URL: <https://www.ovital.com/> <https://en.ovital.com/>

Note 6: Accepted by China's Apple ID, only China's APP test

Enter the peripheral device manager, select Bluetooth

Left picture: " **OvitalMap** " peripheral device manager, Bluetooth device scan, search list has
FT400BT-BLE

Right picture: " **OvitalMap** " peripheral device manager, select "FT400BT-BLE", and automatically
bind the Bluetooth device "FT400BT-BLE"



Choice: Universal APRS device, the default communication mode of the program is KISS,
compatible with FT400 radio output KISS

Peripheral Device Manager, BLE is connected

●●●○○ 中国电信

13:37

锁 1 电池 56%

关闭

外围设备管理

操作

设备名称: FT400BT-BLE

UUID: 6925C93C-BAA6-46DC-8023-3CF236746C68

设备类型: APRS终端[通用APRS设备]

接口类型: 蓝牙BLE

连接状态: 已连接

添加

查看

删除

连接

断开

OvitalMap I, normal use in China. I don't know if it can be used in other regions. Please find the APRS program available in the current region to connect "R3-BLE"

This manual download URL: <http://avrtx.cn/> File Directory: R3

BH7NOR E-MAIL: bi7nor@yahoo.com ; yupopp@163.com

October 25, 2020