Bluetooth GPS Receiver

BT-821 User Manual

Version 1.1

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1. Product Information

1.1 Product Description

BT-821 is a high performance Bluetooth GPS receiver. It uses MTK high performance chipset, which can track up to 14 satellites simultaneously. With a high-performance antenna built-in, BT-821 ensures excellent signal reception.

BT-821 takes advantage of the Bluetooth technology to offer hassle free installation. It connects wirelessly to your Bluetooth enabled PDA, laptop, or other devices.

BT-821 uses a high capacity rechargeable lithium ion battery which can last for up to 23 hours of continuous operation. BT-821 is the best companion of your PDA, mobile phone, or other portable devices for navigation purposes.

1.2 Product Features

- ✓ MTK high performance chipset
- ✓ 32 parallel channels
- ✓ Extreme fast TTFF at low signal level
- ✓ Bluetooth enabled
- ✓ High capacity rechargeable battery
- ✓ NMEA-0183 compliant protocol (Default: GGA, GSA, GSV, RMC, VTG, GLL, and ZDA) RTCM
- ✓ SBAS (WAAS, EGNOS, and MSAS) supported
- ✓ Three LED indicators

1.3 Product Specifications

GPS Receiver	
Frequency	L1, 1575.42 MHz
Chipset	MTK high performance chipset
Code	C/A Code
Protocol	NMEA 0183 v3.01 (Default: GGA, GSA, GSV, RMC, VTG, GLL, ZDA) RTCM
Available Baud Rate	38400
Channels	32
Antenna	Built-in Patch Antenna
Sensitivity	Acquisition:-146dBm, Tracking:-158dBm
Cold Start	36 seconds
Warm Start	33 seconds
Hot Start	1 second
Reacquisition	＜1 second
Accuracy	Position: 3 m / 2.5 m with DGPS Velocity: 0.1 m/s Time: 1ms RMS
Maximum Altitude	＜ 18,000 meter
Maximum Velocity	＜ 515 meter/second
Maximum Acceleration	＜ 4G
Update Rate	1 Hz
DGPS	WAAS, EGNOS, MSAS
Bluetooth	
Version	1.2
Range	10 Meter (Class 2)
Support Profile	SPP Profile
Physical Characteristics	
Dimensions	43mm X 24.5mm X 73.6mm
Weight	90 g (battery included)
DC Characteristics	
Power Supply	5.0Vdc
Battery	Rechargeable Li-ion, 1100mAH
Battery Life	23 Hours
Environmental Range	
Humidity Range	5% to 95% non-condensing
Operation Temperature	-10°C to 60°C
	0°C to 45°C while charging
Storage Temperature	-20°C to 70°C

2. Hardware Description

2.1 Top View and Bottom View

2.2 LED Behaviors

Bluetooth LED (Blue)

Status	Description
Blink once per three seconds	Not linked
Blink once per second	Linked

GPS LED (Green)

Status	Description
Blink once per second	Position fixed
Steady on	Position not fixed

Power LED (Red/Orange)

Status	Description
Red light steady on	Battery low
Off	Battery good
Orange light steady on	Battery charging

2.3 Power Button

Action	Function
Press and hold the button for 1 second while off	Power turned on
Press and hold the button for 1 second while on	Power turned off

2.4 Power-saving function

When you start the power of the Bluetooth GPS Receiver BT-821, if the Bluetooth is not connected to any devices within 10 minutes, BT-821 will turn off the power automatically, and all the LED will go off simultaneously.

3. Package Contents

- ✓ BT-821
- ✓ Car Charger
- ✓ AC Charger (Optional)
- ✓ Software Utility and User Manual CD

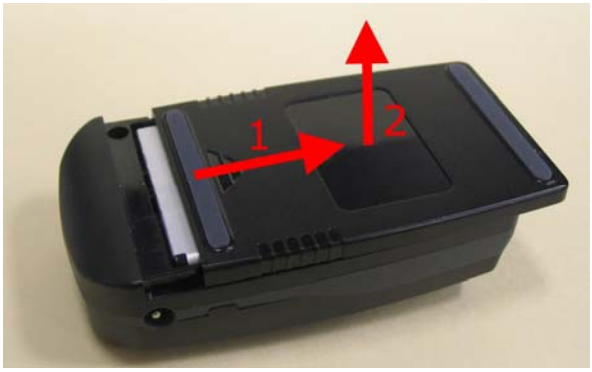
Car Charger

AC Charger (Optional)

4. Getting Started

Step 1: Charging Battery

Please place the included battery in your BT-821 and charge it by the included charger till the orange LED goes off before using BT-821 for the first time.

	Push the battery cover toward the direction shown as arrow mark, and then lift it up.
	Pull the plastic tab to remove the battery.
	While installing the battery, make sure the metal contacts of BT-821 and battery are aligned.

	Insert one end of the charging cable into BT-821 to charge the battery.

Step 2: Turn on the power

Press and hold the power button for one second to turn on your BT-821.

Step 3: Wait for GPS fixed

Put your BT-821 in a place where can directly see the sky and check the GPS LED. If the GPS LED starts blinking, your position is fixed.

Step 4: Connect to your Bluetooth-enabled devices

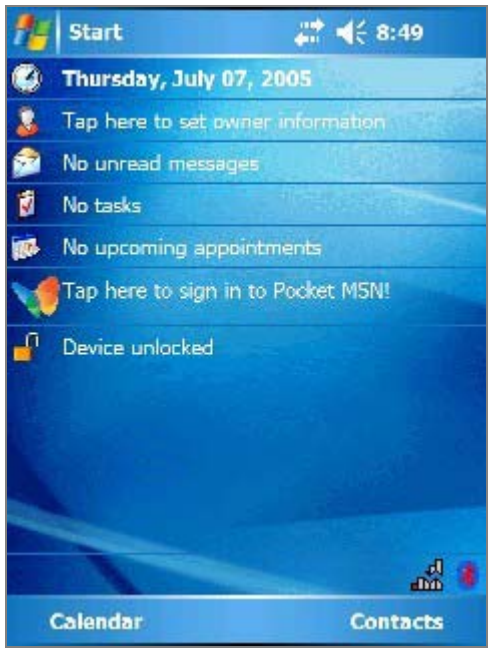
Run the Bluetooth manager from your Bluetooth enabled device, search Bluetooth devices, select device (BT-821), and connect it to your BT-821. Once the Bluetooth LED is blinking once per second, the link is established successfully. If a passkey is asked, please enter 0000.

Step 5: Start Navigation Software

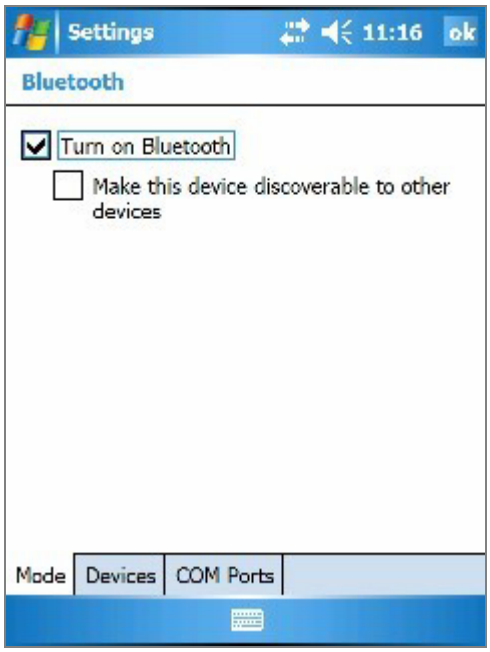
Start the navigation software on your Bluetooth enabled device.

5. Troubleshooting

Connect Bluetooth GPS receiver with Windows Mobile Version 5 Pocket PC

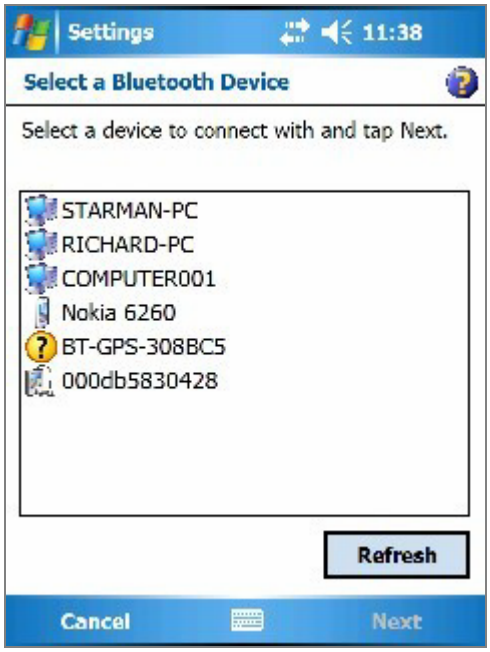


1. Tap on the bluetooth button on right lower corner.
2. Turn on your Bluetooth GPS receiver.



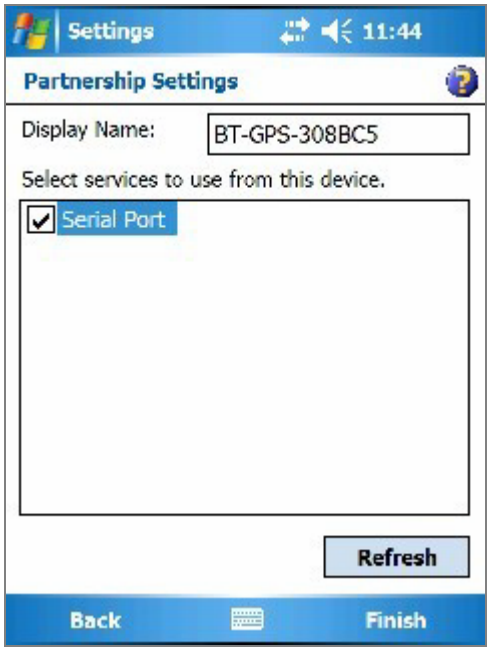
3. Check “Turn on Bluetooth”.

4. Tap the “Devices” tab, and tap “New Partnership…”.

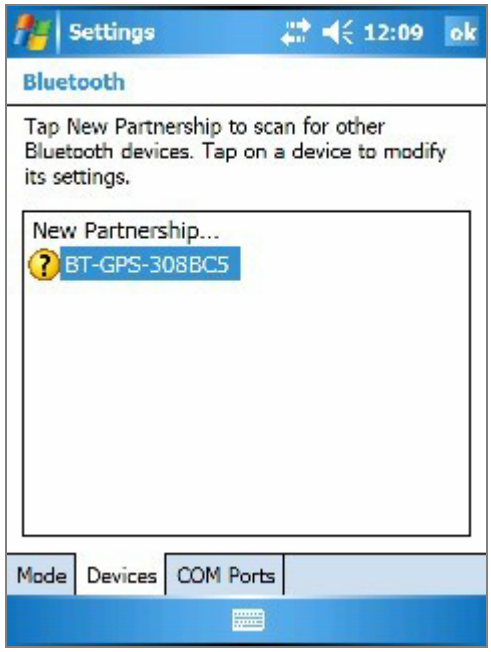


5. It will search for all the bluetooth devices.
6. Select a device (for example “BT-GPS-308BC5”) and tap Next.

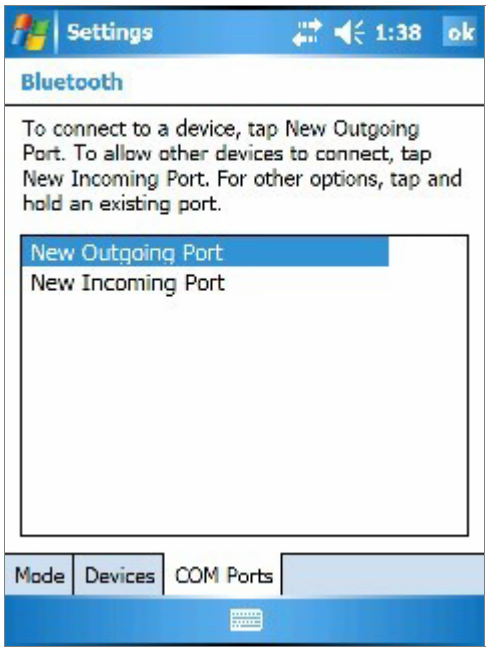
7. Enter Passkey “0000” and tap Next.



8. Check “Serial Port” and tap Finish.

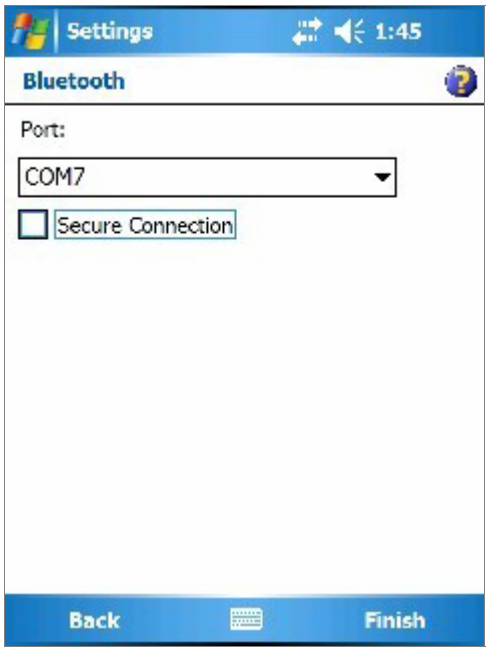


9. The device will be shown on the list.

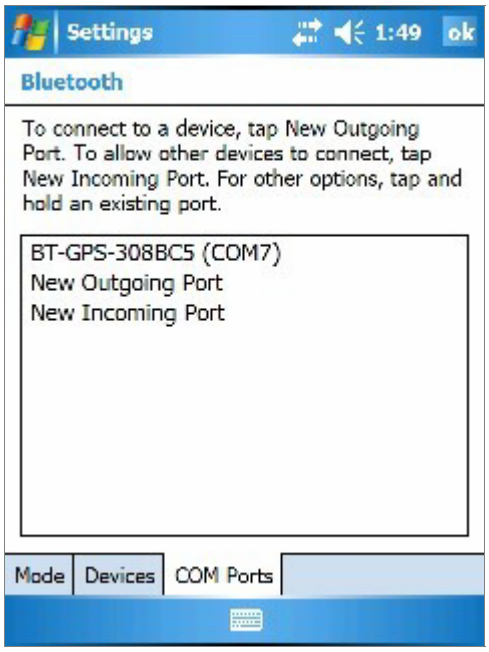


10. Tap the “COM Ports” tab, and select “New Outgoing Port”.

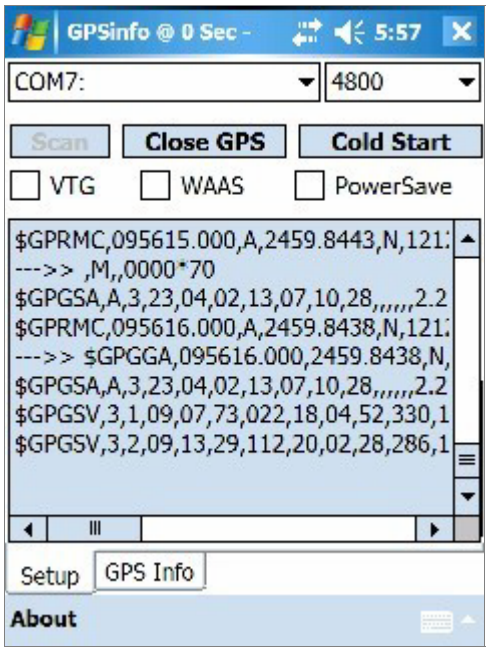
11. Select the device and tap Next.



12. Uncheck “Secure Connection” and from the drop down box select a COM port nubmer (for example, COM7), and then tap Finish.



13. The device with it's COM port number will be shown on the list.



14. Now you can go to GPSinfo program, set the correct COM port and test the GPS receiver.

Bluetooth is unable to connect

A) Check if the GPS Bluetooth indicator is flashing normally. That is, flash one per each three second means the product is under standby mode; flash once per second means Bluetooth has been online already.
B) Check if energy level is sufficient. If red LED is lid up, then the battery level is insufficient, please recharge it until the red indicator is off (recharge is complete).

GPS cannot be positioned

A) Check if GPS indicator operates normally or not. If the indicator is constantly lid up, it means that GPS is in operation; if the indicator is flashing, it means GPS is positioned already.
B) If GPS cannot be positioned for long, apply GPS info software to make a Cold Start first, and then move to an open space performing the positioning task.
C) Check if power level is sufficient. If the red LED lights up, it means the power is insufficient, please recharge it until the red indicator is off (recharge is complete).

Federal Communications Commission (FCC) Statement

15.21
You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

Operation is subject to the following two conditions:

1) this device may not cause interference and

2) this device must accept any interference, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.