# BTT-100
# User Manual

Version 0.9.02

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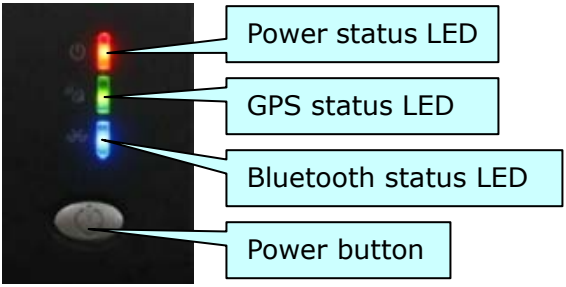
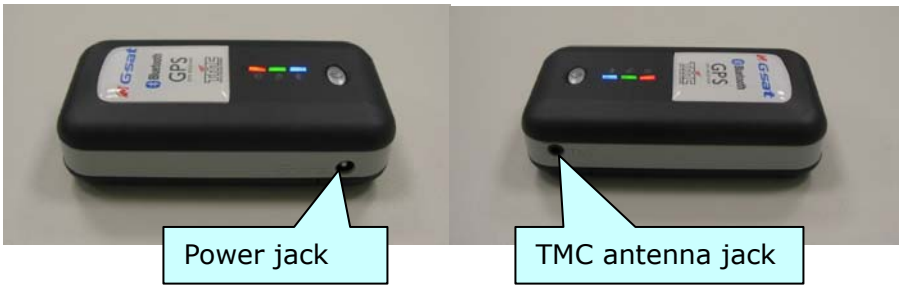
# Overview


Power status LED
GPS status LED
Bluetooth status LED
Power button


Power jack
TMC antenna jack

# Features and Specification

## Features

- New SiRF GSC3 high performance and low power consumption chipset
- Communication with Host Platform via Bluetooth Serial Profile
- Built-in ceramic patch antenna
- Support NMEA 0183 data protocol
- 3 LED to show the status of GPS/Bluetooth/Battery
- Rechargeable Li-ion battery
- Operation time: 14 hours, in continuous mode
- Auto power-off, if Bluetooth is not connected to any device within 10 minutes
- Bluetooth operation range: 10m

## Specification

| | |
|---|---|
| **Standard:** | Bluetooth V2.0 |
| **Voltage:** | Rechargeable and removable battery with 5V DC input charging circuit |
| **Operation Time:** | 14 hours after fully recharged, in continuous mode |
| **Connection:** | Communication with host platform via Bluetooth Serial Port Profile |
| **Dimension:** | 82mm x 42mm x 22mm |
| **Weight:** | 70g |
| **Operating temperature** | -20 ° to 60 ° C |
| **Humidity:** | 5% to 95% Non-condensing |
| **Output message:** | NMEA-0183 output protocol (Output format : GGA, GSA, GSV, RMC) + Globalsat TMC protocol 1.0 |
| **GPS Parameters General** | |
| **GPS Chipset:** | SiRF Star III |
| **Frequency:** | L1, 1575.42 MHz |
| **C/A code:** | 1.023 MHz chip rate |

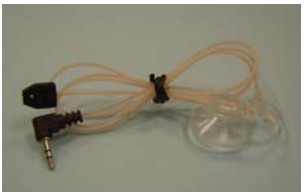
| | |
|---|---|
| **Channels:** | 20 channel all-in-view tracking |
| **Antenna Type:** | Built-in patch antenna |
| **Position:** | 10 meters, 2D RMS<br>5 meters, 2D RMS, WAAS enabled |
| **Velocity:** | 0.1 m/s |
| **Time:** | 1 us synchronized to GPS time |
| **Default datum:** | WGS-84 |
| **Reacquisition:** | 0.1 sec., average |
| **Hot start:** | 1 sec., average |
| **Warm start:** | 38 sec., average |
| **Cold start:** | 42 sec., average |
| **Altitude Limit:** | 18,000 meters (60,000 feet) max. |
| **Velocity Limit:** | 515 meters/ second (1000 knots) max. |
| **Acceleration Limit:** | Less than 4g |
| **Jerk Limit:** | 20 m/sec3 |
| **RDS-TMC Parameter General** | |
| **FREQUENCY** | 87.5Mhz~108Mhz US/Europe |
| **RF Sensitivity:** | 30uV emf (BQR >=95%) |
| **FM ANTENNA** | Length=75 cm, 75 Ohm |
| **CONNECTOR** | 2.5Φ Right Angle Phone Jack |

# Accessories

Before you start up, make sure that your package includes the following items. If any item is missing or damaged, please contact your dealer immediately.

- BTT-100 Bluetooth GPS Receiver
- TMC antenna
- Car charger
- CD-ROM

**BTT-100**



**TMC antenna**

**Car charger**

**CD-ROM**

# Getting Started

## ► Power Switch

**Power on:**

Press the power button 1 second until the GPS status LED is on.

**Power off:**

Press the power button 1 second until the GPS status LED is off.

## ► LED Function

**Power Status LED (Red / Yellow):**

**Red:** Battery power is critically low. Charge it immediately.

**Yellow:** Battery is charging now.

**LED off:** Battery is partially full or fully charged.

**GPS Status LED (Green):**

**Blinking:** GPS position is fixed

**Steady light:** GPS position is not fixed

**Bluetooth Status LED (Blue):**

**Blinking (Slowly):** It does not connect to any Bluetooth device yet.

**Blinking (Quickly):** It has already connected to some Bluetooth device.

## ► Power-saving Function

After you turned on the power of the Bluetooth GPS Receiver BTT-100, if the Bluetooth is not connected to any devices within **10** minutes, BTT-100 will turn off the power automatically for saving

the battery power, and all the LED will go off simultaneously.

## ► Power jack

You can use either the DC car power charger (included) or the AC adapter (optional) to connect to the power jack of BTT-100 to recharge the internal battery. Please note that the adapter rating 5V, 1.2 A, positive pole center.

## ► Usage

**Connect BTT-100 to your Bluetooth device**

(1) Press the power button to turn on the BTT-100.

(2) The Bluetooth device could be "a PDA with built-in Bluetooth", "a PDA with Bluetooth Compact Flash card", or "a Notebook with Bluetooth device"…etc.

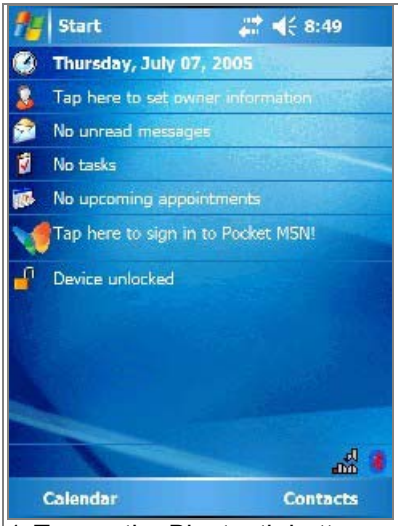
(3) Please refer to the user manual of your Bluetooth device and enable it for connecting to BTT-100. Some Bluetooth device may need the Bluetooth passkey, the passkey is "**0000**".

(4) Check the number of COM port used by the Bluetooth device.

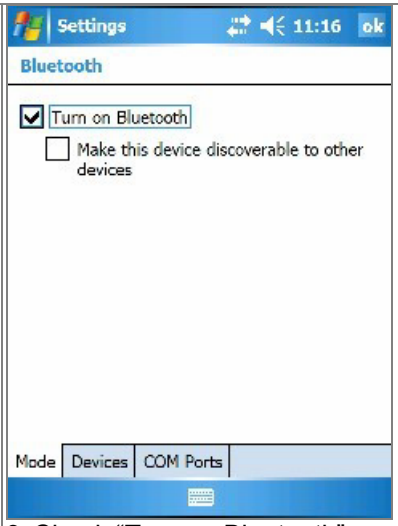
(5) Run the suitable mapping/navigation software and select the correct COM port & Baud rate: 38400.

**Note:** Most of the application software of Bluetooth device has an auto-detect feature, so you don't have to manually select the Baud rate.

# ► Connect BTT-100 to a "Windows Mobile Version 5 Pocket PC"

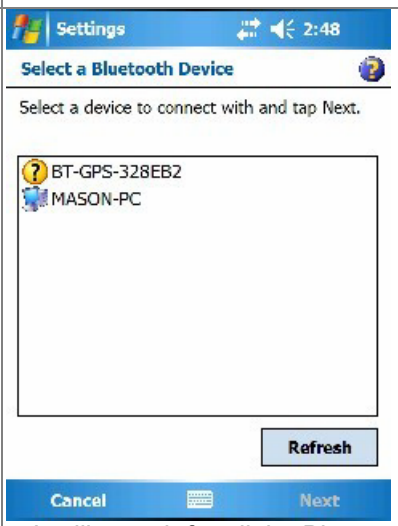



1. Tap on the Bluetooth button on right lower corner.
2. Turn on your Bluetooth GPS receiver.




3. Check “Turn on Bluetooth”.

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



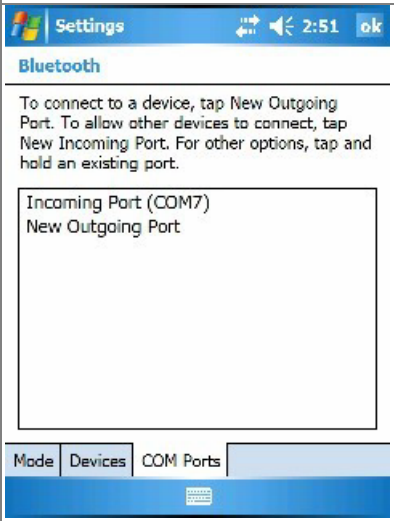

5. It will search for all the Bluetooth devices.
6. Select a device (for example

“BT-GPS-328EB2”) and tap Next.

7. Enter Passkey “0000” and tap Next.

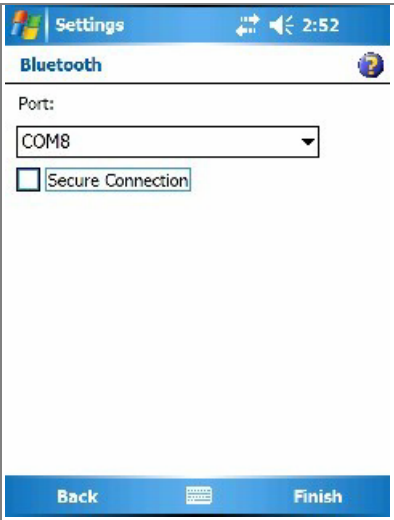
8. Check “Serial Port” and tap Finish.

9. The device will be shown on the list.

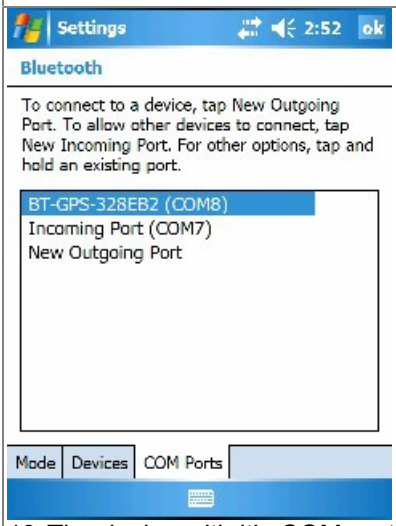



10. Tap the “COM Ports” tab, and select “New Outgoing Port”.

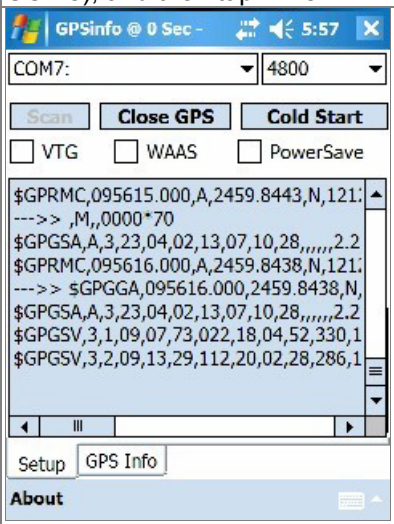
11. Select the device and tap Next.




12. Uncheck “Secure Connection” and from the drop down box select a COM port number (for example, COM8), 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.

# Software Application

## ► Connect BTT-100 with your Pocket PC

1. Tap on the Bluetooth button to enable the Bluetooth of Pocket PC and tap on the "Manager" button.

2. Turn on the power of the BTT-100.
3. Tap on "New".
4. Tap on "Explore a Bluetooth device" to search the available Bluetooth devices around you.

5. Tap on “BTT-100” icon.

6. Tap on “Next”.

7. Tap on “Finish”.

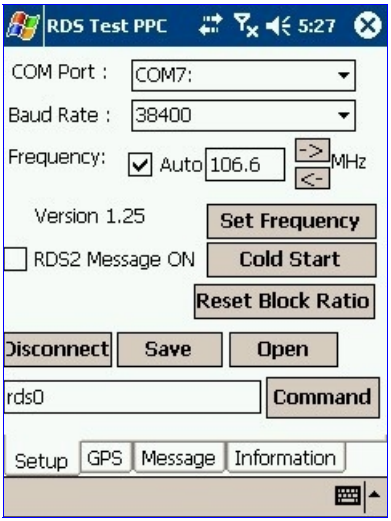
8. Tap and hold the BTT-100 icon to display its pop-up menu and tap on “Connect”

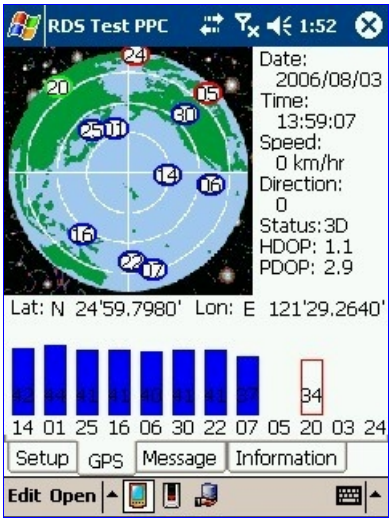
9. The Pocket PC will connect to the BTT-100.

## ► Test the RDS function

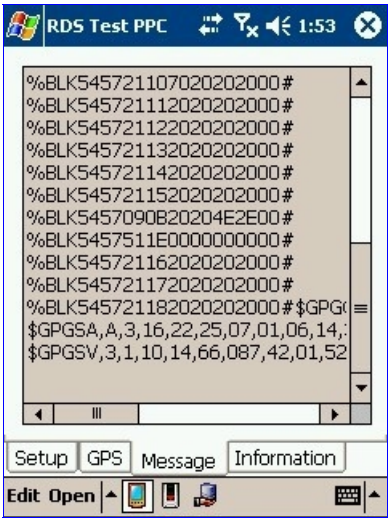
1. Copy the RDS Test program "RDS.EXE" from CD-ROM to your Pocket PC's internal memory or storage card.
2. Locate the "RDS.EXE" and tap on it to start the program.

3. Set the COM Port to “COM7:” and Baud Rate to “38400”.
4. Set your RDS frequency number and tap on “Set Frequency” button to take effect.
5. Tap on “Connect” button and check the “RDS2 Message ON”.
6. Tap the “Save” button, you can save the RDS message to a Text file.



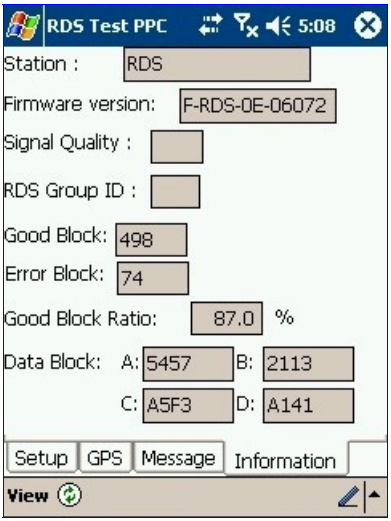




7. In “GPS” tab, it shows the GPS information.




8. In “Message” tab, it shows the received messages.

9. In the “Information” tab, it shows the RDS information.
10. Signal Quality is ranged from 0 to 15; larger value represents the better quality.



# Troubleshooting

## ► Change battery

1. Press and slide the battery cover to the direction as shown in the figure.

2. Lift to remove the battery cover.

3. Pull the plastic tag to remove the battery.

## ► Bluetooth is unable to be connected

(1) Check if the Bluetooth status LED is flashing normally.

(2) Check if the battery power is enough. If not, please recharge it.

(3) Check if the other Bluetooth device is enabled or not.

## ► GPS cannot be positioned

(1) Check if the GPS status LED is flashing normally.

(2) Check if the battery power is enough. If not, please recharge it.

(3) If GPS cannot be positioned for long, apply GPSinfo software to make it a Cold Start, and move it to an open space for performing the positioning task.

**Federal Communication Commission Interference Statement**

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 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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

**IMPORTANT NOTE:**

**FCC 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.