User Manual

GPS Receiver with Compact Flash Interface

BC-307

BC-307 at a Glance

External Antenna Connector

LED

Internal GPS Antenna

1. Introduction

The BC-307 is a GPS receiver with Compact Flash typeⅠinterface and built-in active antenna for high sensitivity to tracking signal. Based on the SiRF star Ⅱ/LP low power chip set and supports all functions(SingleSat updates in reduced visibility, Superior urban canyon performance, FoliageLock for weak signal tracking, etc.). The BC-307 is well suited to system integration and users who use PDA, notebook PC. It satisfies a wide variety of applications for car navigation, personal navigation or touring devices, tracking and marine navigation purpose. Users can simply plug it into a PDA or other type of handheld PC running with suitable mapping and routing software for navigation.

1.1 Package

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

◆ GPS Receiver
◆ User Manual CD(including User Manual, Testing Program, Driver for PCMCIA card slot of Notebook PC)
◆ External Antenna

* Optional Accessory：CF-to-PCMCIA adapter

1.2 LED Function

LED off	Receiver switch off
LED on	Signal searching
LED flashing	Position Fixed

1.3 External Antenna

Basically, you don't need external antenna to perform GPS positioning with BC-307 since it already build-in active antenna. The only condition that you need external antenna is when BC-307 unit can not "see" the sky, For instance, when you are in a car, or any environments that GPS signal is blocked, the external GPS antenna will help to receive better GPS signal.

Plug the external antenna with MMCX connector to the plug on BC-307. Place the magnetic external antenna on the roof of the car or an outdoor open-space, and make sure place it in correct direction. That is, the side with magnetic is the bottom side, and the upper side must face to sky in order to receive better signal.

Notice:
Hold the antenna connector while you plug the external antenna into the BC-307 or unplug the external antenna from the BC-307. Do not pull the cable line.

2. Installation

The BC-307 GPS supports plug and play.
For PDA:
1. Plug in BC-307 GPS into your PDA equipped with Compact Flash interface.
2. Running the suitable mapping/navigation software and select the correct COM port & baud rate: 4800,N,8,1.

Usually the COM port is COM2 which depends on the PDA type.
User can use the testing program provided with the package to detect the COM port that the BC-307 is using.

For Notebook PC:
1. Plug in BC-307 into PCMCIA card slot of notebook PC through general
   Compact Flash to PCMCIA adapter.
2. Install the "Compact Flash to PCMCIA" drivers for WIN98, 2000, XP
3. Running the suitable mapping/navigation software and select the correct COM port
   & baud rate: 4800,N,8,1.

2.1 How to test your Compact Flash GPS for PDA?

The testing program only supports the Microsoft Windows CE & Pocket PC based PDA
platform.

1. Run the "GPSinfo.exe" to execute the installation procedure of testing program (via
   PC and ActiveSync).
2. Plug BC-307 into PDA.
3. Run the "GPS Information" program from "Start → Program files" of PDA. User
   can utilize such testing software to detect the COM port that the BC-307 is using and
   to check the GPS output data from BC-307.

Here is the description of "GPS Information" testing program as follows:

User must select COM port (CF_CARD-GENERIC), Baud Rate (4800) and click the [Star GPS] button to start receiving GPS data.
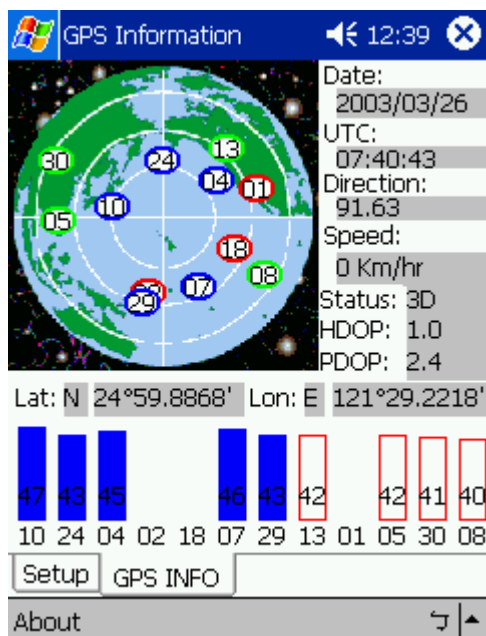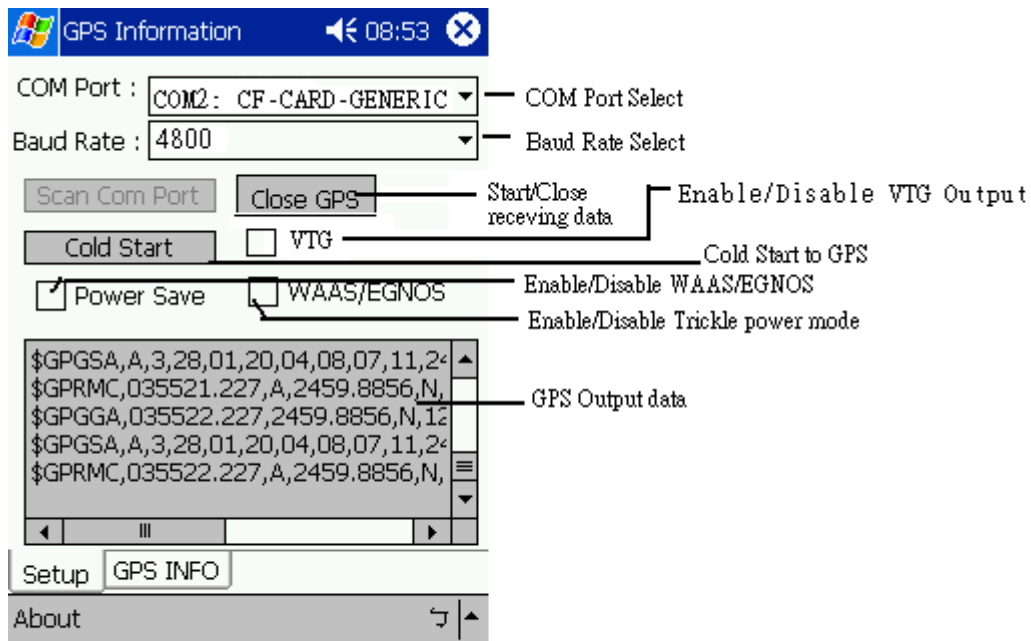
2.2 How to test your Compact Flash GPS (through CF to PCMCIA adapter) for Notebook PC ?

Users can use the Hyper Terminal program of Windows to verify that the GPS is actually configured properly and working.

The Hyper Terminal program of Window 98 can not select COM port above COM5. Users test with map software directly.

1. Run the "Hypertrm.exe" from "Program → Accessories → Communications → Hyper Terminal".
2. Select the proper COM port for your GPS device.
3. Set COM port to :

Baud rate:	4800
Data bit:	8
Parity:	None
Stop bit:	1
Flow control:	None

4. If no mistakes have been made in the configuration process there should be data being displayed in the window, which is confirmation that the communication between the GPS device and the "Hyper Terminal" software is working properly.

3. Specification

Interface:	Compact Flash type Ⅰ
Protocol:	NMEA0183 GGA, GSA, GSV, RMC, VTG, GLL
Baud Rate:	4800,N,8,1
Max. Update Rate:	1 Hz
Datum:	WGS84
Channel:	12 channel all-in-view tracking
Frequency:	L1, 1575.42MHz
Hot Start:	8 sec. Average
Warm Start:	38 sec. Average
Cold Start:	48 sec. Average
Reacquisition Time:	100 ms
Position Accuracy:	15m 2D RMS, SA off
Maximum Altitude:	18,000m
Maximum Velocity:	515m/s
Voltage:	DC 3.3V+- 10%
Power consumption:	90mA continuous mode
Antenna Type:	Built in active antenna

External Antenna Interface:	MMCX (Optional)
Dimension:	95 (L) x 47 (W) x 17 (H) mm
LED Indicator:	GPS is fix or not fix
Operating Temperature:	-10℃ to + 70℃
Storage Temperature:	- 40℃ to + 85℃
Operation Humidity:	95%, Non- Condensing