B/T GPS RECEIVER

(BGP-2000)

OPERATING GUIDE

Acknowledging Special Precautions and the FCC Industry Canada Notice Cautions

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC compliance Information

This device complies with part 15 of 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.

Information to User

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.

J Communications Co., Ltd.

Getting Started

1. Introduction

This GPS Receiver is the mobile GPS receiver integrated with Bluetooth technology. The BGP-2000 offers flexible and various location awareness application for both consumer and corporate usages.

2. General Features

Your BGP-2000 is an excellent navigation and positioning aid tool when using with mobile terminal devices of Bluetooth enabled, which the host with GPS application software installed. The general features are

- Best mobile GPS receiver for consumer and corporate
- GPS receiver with Bluetooth transceiver built-in
- Provides fully interoperability with Bluetooth integrated mobile devices
- Ultra-low power consumption
- Long operation time (8 hours)
- LED lights indicate GPS status, Bluetooth connection and battery condition
- Embedded high sensitivity GPS active antenna and Bluetooth antenna
- Compatible with all GPS map running on various hardware platforms
- Navigating freely without wire connection to host mobile devices.

3. Prepare to use you BGP-2000 Receiver

To help you begin to use your BGP-2000 receiver, read this user guide in the first step. This user guide explains the detail how BGP-2000 operates, functions, and common features of the BGP-2000.

Before you begin using your BGP-2000, you must complete the application software installation tasks on your host device like PDA mobile phone, MMS mobile phone, handheld PC, and portable PC hardware. For information about the hardware operation and application software installation, please refer to the documentation that accompanies each product.

4. GPS signal reception

The BGP-2000 offers high position accuracy and fast Time-To-First-Fix (TTFF), which rely on environment circumstances where receiver located as well as initial

states of the receiver. During attempting to a position fix, the receiver needs to lock on to at least 3 satellites and, uses the signal can be received as well as the data of latest position stored in the receiver's digital memory in order to compute the location of the device.

Environmental factors that influence the position accuracy and TTFF including such as

Tall buildings,
Narrow street and passageway,
Protection film on glass,
Heavy foliage,
Large cliffs,

and other obstructions where the satellite signals may blocked, and, poor satellites geometry situation. Initial state of the receiver, means latest status in memory of the receiver, may mainly determine the time of TTFF. Position can be quickly fixed within only 10 seconds from a hot-start state and needs 45 seconds typically from a cold-start state. Or, might need at least 3 to 5 minutes from a completely restart-state, for example, flying a distance over 500 kilometers from initial origin.

BGP-2000 uses the satellite signals to calculate an exact geodetic location through triangulation method, contained in 10 meters CEP accurateness devoid of Selective Availability (SA), which is good enough for general location awareness purposes. The position data is then converted within the receiver to latitude and longitude coordinates, which is usually provided in the geodetic datum on which GPS is based (WGS84). Position offsets of hundreds of meters or much more can result from using the wrong datum.

In addition to datum used, there are number of positioning errors can occur, limiting accuracy. The major errors including satellites orbiting error, poor satellites geometry, multi-path signals, atmospheric delay and receiver clock timing.

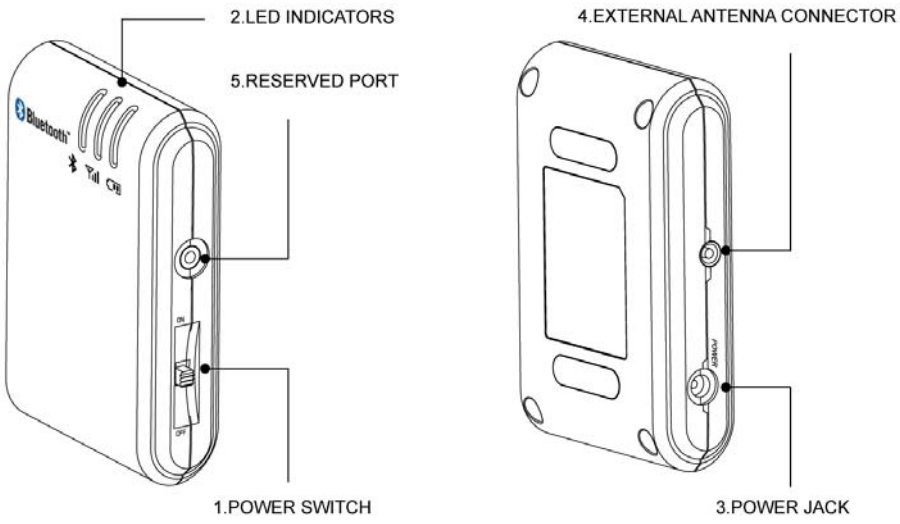
5. Caution and Warning

BGP-2000 contains a rechargeable Ni-MH battery which supplies the power for the of GPS and Bluetooth operation. Care and caution must take into account are :

- Only use the charger supplies with the BGP-2000. Use other charger can damage the BGP-2000 and even dangerous at the risk of explosion.
- Do not expose BGP-2000 to high temperatures higher than 85C such in car under direct sunshine. Expose BGP-2000 to high temperatures environment can not only shorten the life of electronic devices and melt or drape certain plastics, but also can damage the battery and even dangerous at the risk of explosion.
- Do not try to open or break the receiver. There is no service accessory part inside the receiver. Open the receiver will void the warranty.

Designation

1. Power Switch
2. LED Indicators
   - Battery Status LED (Blue)
   - GPS status (Green)
   - Bluetooth status (Red / Green)
3. Power Jack (DC 5V)
4. Optional External Antenna Connector Port (MCX type)
5. Reserved Port



1. Power Switch

ON : Power-on position of the Power Switch

OFF : Power-off position of the Power Switch

2. LED Indicators

 Symbol : Blue LED indicates Bluetooth pair/connect status

Flashing every 1 second : BGP-2000 just power-on and waiting for pair/connection

Flashing every 2 second : BGP-2000 is connected and paired with the host

 Symbol : Green LED light indicates GPS status

Constant on : When BGP-2000 just power on, attempting to fix a position.

Flashing : BGP-2000 has a position fixed.

 Symbol : Red light indicates Battery stats

Red light blinking : Battery low.

Red light constant on : During charging battery with connection to a power charger.

Green light constant on : Once battery is fully charged.

3. Power Jack

Connect a power charger to the power jack to recharge the internal battery.

4. Optional External Antenna Connector Port (MCX type)

You may use an external antenna optionally instead of a built-in internal antenna. Just

5. Reserved Port

This port is to communicate with a host device in serial.

Operation Guide

Before using the BGP-2000, first make sure to prepare following steps are ready for operation.

- The GPS application software is correctly installed in the host platform(s)
- The BGP-2000 is fully power charged
- Check the Bluetooth is ON in the host.

For information about the operation of the host and GPS application software installation procedures, please refer to the documentation that accompanies each product, respectively.

In this Chapter, a step-by-step operation procedure is described.

1. To install the GPS/MAP application software

Before operation the BGP-2000, make sure the GPS/MAP application software is properly and completely installed in the hast platform.

To install the GPS/MAP application, please consult and follow the operation guide described in the user guide of the GPS/MAP application software. Make sure the GPS/MAP application installed completely.

2. To pair/connect the BGP-2000 with the host

To pair and connect your BGP-2000 with the host platform, please consult and follow the operation guide described in the user guide of the host or PDA.

First, turn on the power of host and BGP-2000, respectively.

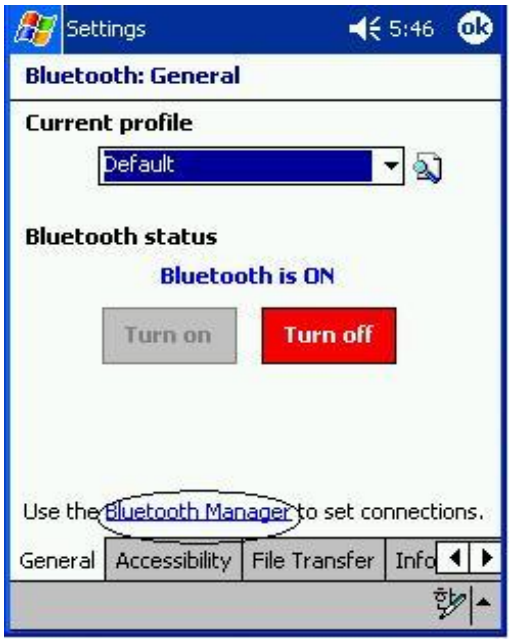
- Turn on the power of the host and ready.
- Turn on the BGP-2000
  (Make sure the battery of the BGP-2000 is fully charged.)

[Connection with HP Ipaq Series]

(1) Tap Bluetooth icon in the task bottom bar.

(2) Tap “Bluetooth Manager”icon in the Bluetooth general screen.

(1)



(2)

(3) Click “New” at the bottom bar

(4) Bluetooth connection wizard starts. Click “Next”

(3)

(4)

(5) Click :Next”

(6) Click “BGP2000”

(5)

(6)

(7) Select “SPP slave” of device selection and click “Next”.

(8) Connection shortcuts were successfully created. Click “Finish”.

07

08

(9) Connection was successfully established with Bluetooth GPS receiver on SPP slave.

(10) To connect with BT GPS, double click “BGP2000 SPP slave” icon.

09

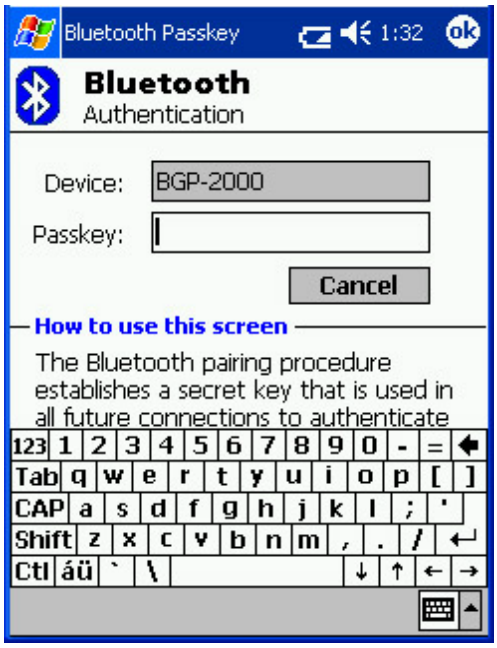
10

(11) Click “Active Connections”. You will see the connection status.

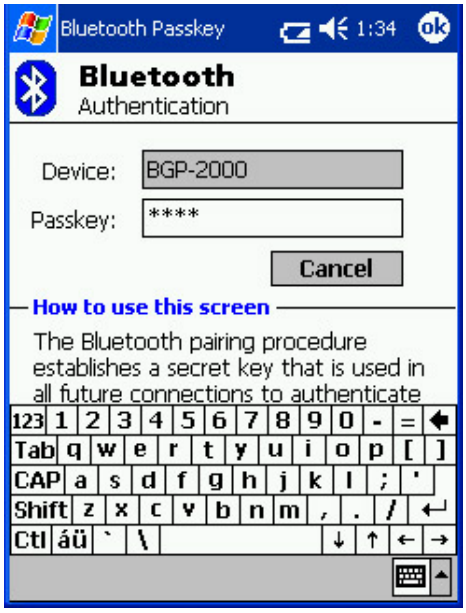
11

[NOTE]

(1) If you click security in the screen (07), you will be required to enter passkey to establish a paired relationship between devices. This is required at the first time only once.



(2) Enter “0000” (Arabic numeral 0) as the passkey and click “enter” or “OK”



3. To operate the GPS/MAP application software

To open and use the GPS/MAP application, in your PDA :

- make sure your BGP-2000 is connected with the host via Bluetooth
- Open the GPS/MAP application on the host
- Enter into the GPS/MAP application operation

You can easily use all the function of GPS/MAP application software by following the details operation guidance described in the user guide of the GPS/MAP application software.

4. To charge the battery of the BGP-2000

Before use BGP-2000, the Lithium-polymer battery inside the BT GPS must be fully charged by plugging the charger's plug into the power jack. When the Battery is fully charged, the battery indicator will be changed to green light. Approximately 3 hours are required to fully charge the batteries.

Caution : Do not use other charger to charge the BT GPS.

Troubleshooting

The solutions to some common problems

1. Sometimes, it took everything is alright, but you can not connect to BGP-2000. You should try to delete the old BGP-2000 icon on your Bluetooth manager software, and re-charging again.
2. Open and close your application on the standard procedures, it will make your Bluetooth connection is normal and functional. Otherwise, sometimes you have to reset your PDA and Bluetooth GPS receiver to bring them back.