# *** USER'S MANUAL ***

## FCC ID : SRKWPBT77X

# The Federal Communication Commission 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 instruction, may cause harmful interference to radio communication.  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 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.**

Use only shielded cables to connect I/O devices to this equipment.  You are cautioned that change or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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.

# Bluetooth GPS Receiver

Contents

# 1. Introduction

## 1.1. Overview

The BT-77 Bluetooth GPS receiver is a Global Position System Receiver with Bluetooth wireless technology. This BT GPS receiver allows you to receive GPS data on mobile handhelds wirelessly. By sending GPS position data over Bluetooth, you can position the receiver for the best possible reception all without wires. The advent of Bluetooth GPS receiver will become the next level of GPS receivers. The BT GPS receiver integrates Bluetooth module into GPS device. It shows the high performance, low power consumption, easily portable, rechargeable & removable battery function and wireless data transmission. If you have a Pocket PC or other portable devices enabled with Bluetooth function, for example ASUS-620, iPAQ 2210, HP and Palm , you can take advantage of your device's Bluetooth capability to wirelessly add GPS positioning technology. When you choose suitable navigation software, you can apply to personal, vehicle tracking, and marine navigation. If you use this Bluetooth GPS receiver, you will ignore the messy cords and antenna and add the portability of your Pocket PC. In addition, This Bluetooth GPS receiver can change the exhausted battery to full battery like battery of mobile phone.

## 1.2. Main Features

- ◆ 16 Channels "All-In-View" Tracking
- ◆ Cold/Warm/Hot Start Time: 45/38/10 Seconds : Reacquisition Time: 0.1 seconds
- ◆ Support Standard NMEA-0183 at 9600 bps baund rate
- ◆ Compatible with Bluetooth devices with Serial Port Profile (SPP)
- ◆ Small, sleek, and lightweight design easily fits in your hand
- ◆ Two LEDs at the top of the device show Bluetooth and GPS. & On/off push button
- ◆ Fleet management/Asset tracking
- ◆ Personal/Portable Navigation (PDA, Pocket PC etc.)
- ◆ Location Based Services enabled devices
- ◆ Ultra low power-up to 16 hours after fully charged (850mA Li-ion Battery)
- ◆ High sensitivity-147dBm Integrated GPS receiver, Active antenna, and Bluetooth transceiver

## 2.TECHNICAL SPECIFICATIONS

### General

| | |
|---|---|
| GPS technology | NEMERIX GPS module |
| Frequency | L1, 1575.42 MHz |
| C/A code | 1.023 MHz chip rate |
| Channels | 16 channels all in view tracking |
| Antenna (internal) | Built-in low noise |
| External Antenna Port active MMCX antenna | |

### Sensitivity

to -147 dBm tracking, superior urban canyon performance

### Accuracy

| | |
|---|---|
| Position | 3 meters CEP (50%), without SA (horizontal) 7 meters (90%) |
| Velocity | 0.1 meters/second, without SA |
| Time | ±100 ns synchronized to GPS time |

### Datum

WGS-84 (or by demanded)

### Acquisition Rate

| | |
|---|---|
| Cold start | 45 sec, average |
| Warm start | 38 sec, average |
| Hot start | 10 sec, average |
| Reacquisition | 100ms, average |

### Dynamic Conditions

| | |
|---|---|
| Altitude | <18,000 meters |
| Velocity | <515 meters/second |
| Acceleration | <4g |
| Motional Jerk | 20 meters/second |

### Interface

Communication protocol

Communicate with host platform via Bluetooth (Class 2) serial port profile

Bluetooth communication distance 10M. Typ.

GPS protocol

Default: NMEA-0183 (V3.01) —GGA, GSA, GSV, RMC, the update interval 1 second (Default)

Band rate 9600 bps(Data bit : 8,stop bit : 1)

### Power

Built-in rechargeable 850mA/h Li-ion battery and 5V DC input charging circuit

| | |
|---|---|
| Operation current | 45mA (Typical) |
| Operation time | 20hrs, after fully charged, in Continuous mode |
| Charging time | 2.5hrs. (Typical) |

### Device Size

81(L) x 44(W) x 20(H) mm
3.2 (L)x 1.75 (W) x 0.79 (H) inch

Accessories    AC adaptor(5.3V output ,500mA)

### Environmental

| | |
|---|---|
| Operating Temperature | -20°C to + 60°C |
| Relative Humidity | 5% to 90% non-condensing |

## 3. Operation and Test

3.1. Hardware Description



The Bluetooth GPS has two LED light which each has three colors.
One is GPS (LED2) & Charge status (LED 1) . The status table of LED shows as follows:

| LED | Color | Status |
|---|---|---|
| LED 1 | RED | Power On |
| | GREEN | Battery is charging until full |
| | GREEN (Flashing) | Low Power |
| LED 2 | BLUE ( Flash quickly) | Detecting satellites , GPS position not fix. |
| | BLUE ( Flash slowly) | GPS Position fix , Navigation |

## 3.2. What do you get in the box?

- ✓ BT GPS receiver
- ✓ A Adapter , 5.3V/500mA output
- ✓ A user's manual ( CD disc )
- ✓ A Li-Polymer rechargeable battery 850mAh

## 3.3.1 Software Install - Pocket PC CE
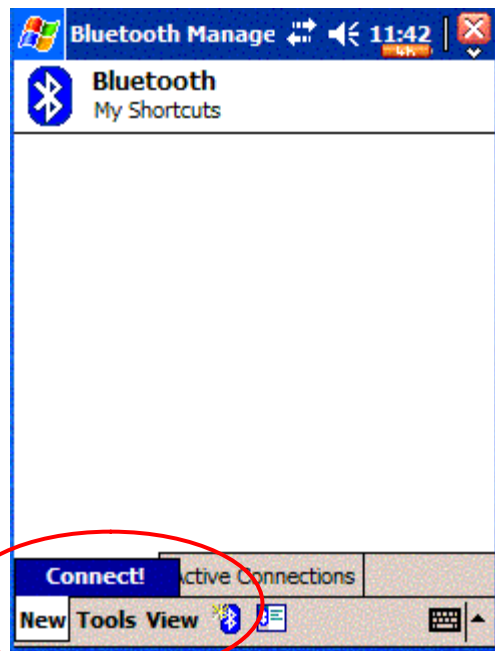### iPAQ Bluetooth fuction setup with Pocket PC software
**<Note 1> On the client, make sure the Bluetooth device is available.**

<1> Tap Bluetooth pop-up menu,
    Turn Bluetooth ON and select Bluetooth manager.

<2> Established new connection , click .



<3> Select "Explore a Bluetooth device " ,Then,
    turn Bluetooth GPS on before going next step .

<4> Tap device , then click " next " .
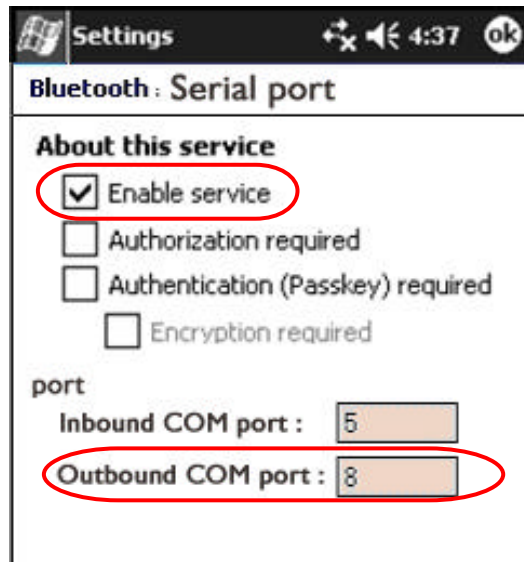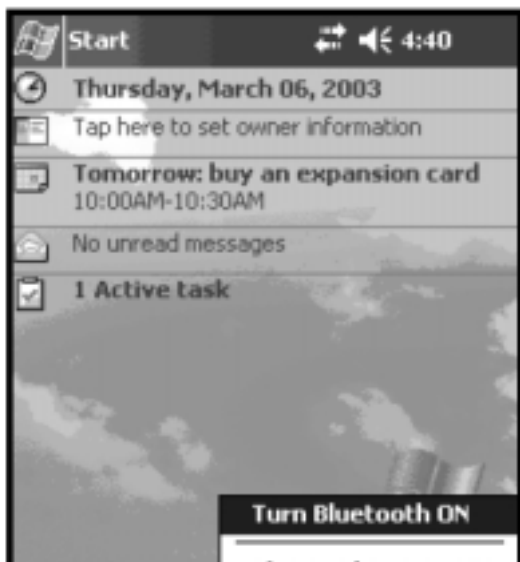


<5>Choose "BT_GPS", click it.

<
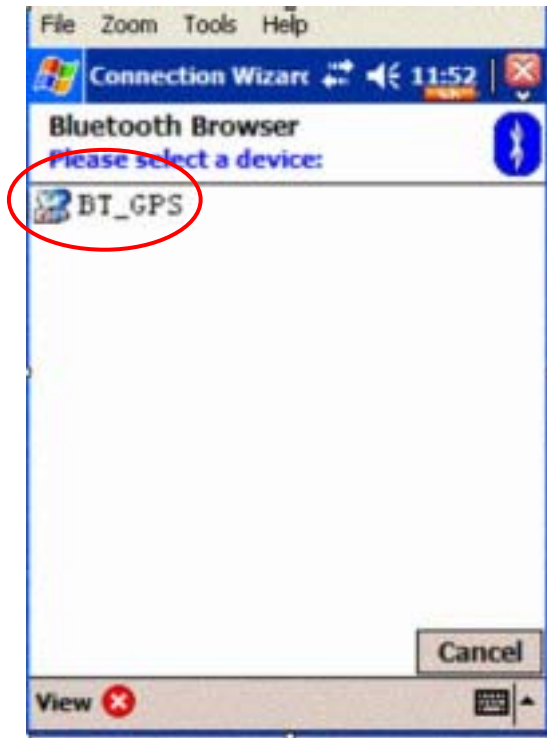
<7> Select "SPP slave", click "Next" → "Finish" And BT-GPS connection Established successfully.
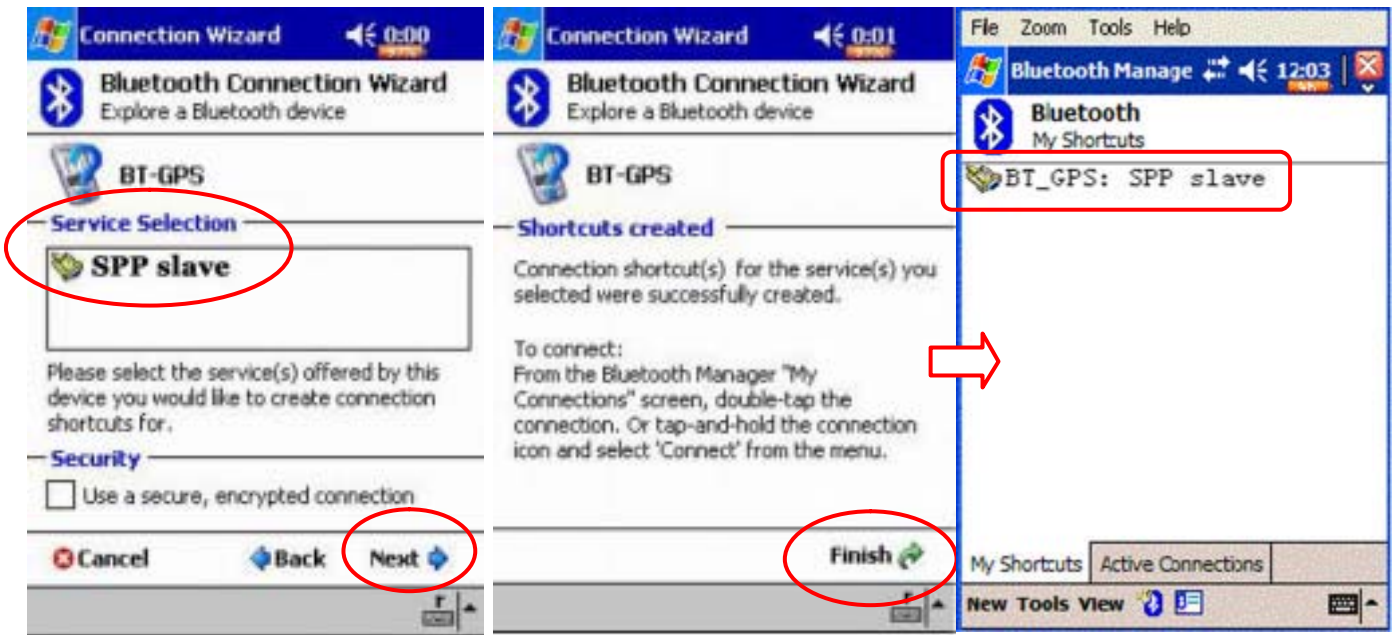


<9> Tap " Bluetooth icon " again ,
and select " Bluetooth setting ".

<9> Tap " Serial port " , Enable service first , then
, set up outbound COM port to be "8".



3.3                                  io! 5)

<1.> Find Navigator software in programs , and tap PaPaGo! 5 Navigator

<2.> Tap "tools" and select "setup".





<Note2> The Navigator of map is Chinese version ,and shows as follow. The English version should be similar with Chinese.

<3.> Tap "GPS" table , as following setup.

<4.> Return to PaPaGo main screen . tap "tools" and select "GPS" → " GPS position "







<5.> GPS position fixed ans start navigating.

**Appendix A Test Reference for Only**

PC Bluetooth Setup with Widcomm BTW

<Note>This software does belong to copyright reserved of Widcomm company and you have to get the authorized software to use it. The follow method is only for reference.

The Bluetooth Serial Port service allows two Bluetooth devices to establish a wireless connection through virtual communications ports and then use that connection as if it were a hardwired serial cable between the devices.
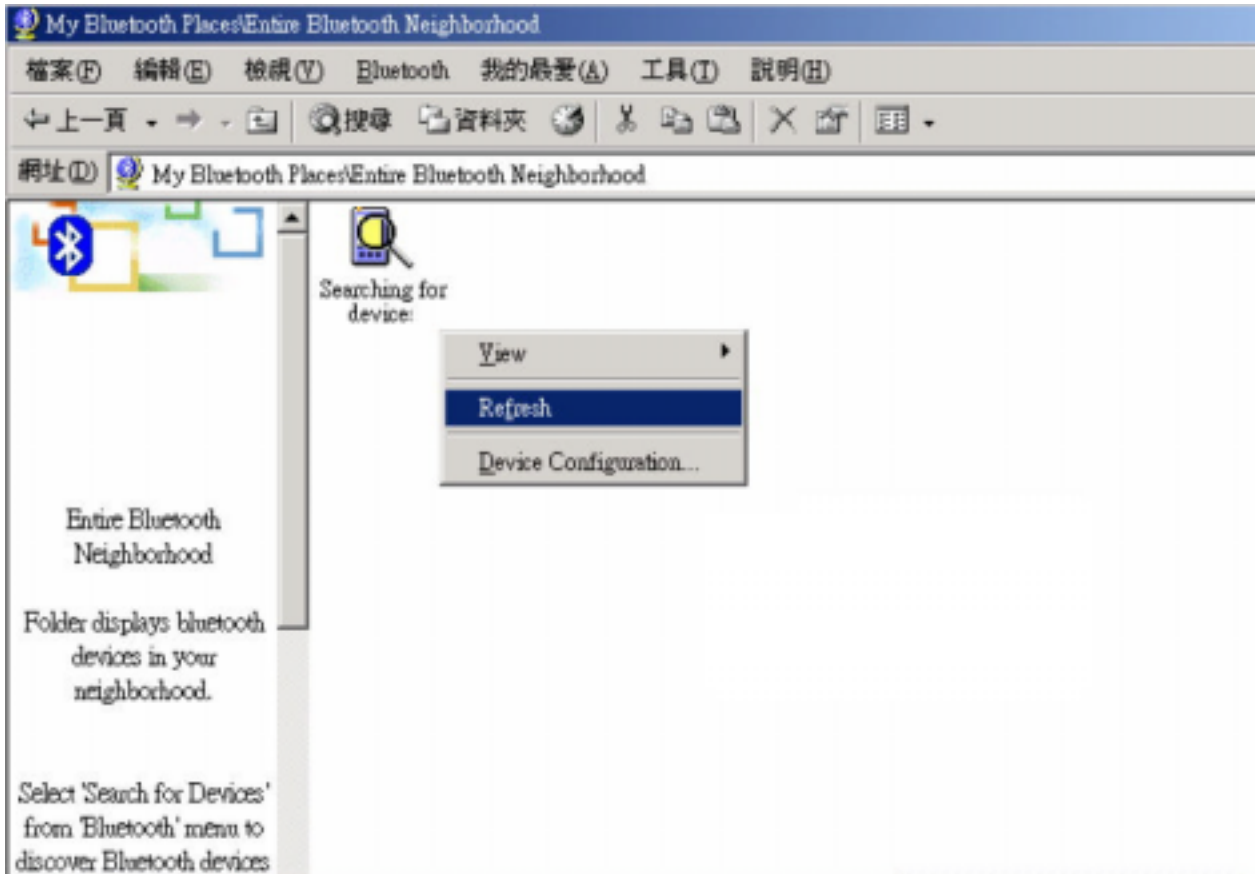
To establish a Bluetooth serial port connection:

Connections are initiated from the client:

<1> On the client, in the Folders pane of My Bluetooth Places, select Entire Bluetooth Neighborhood.
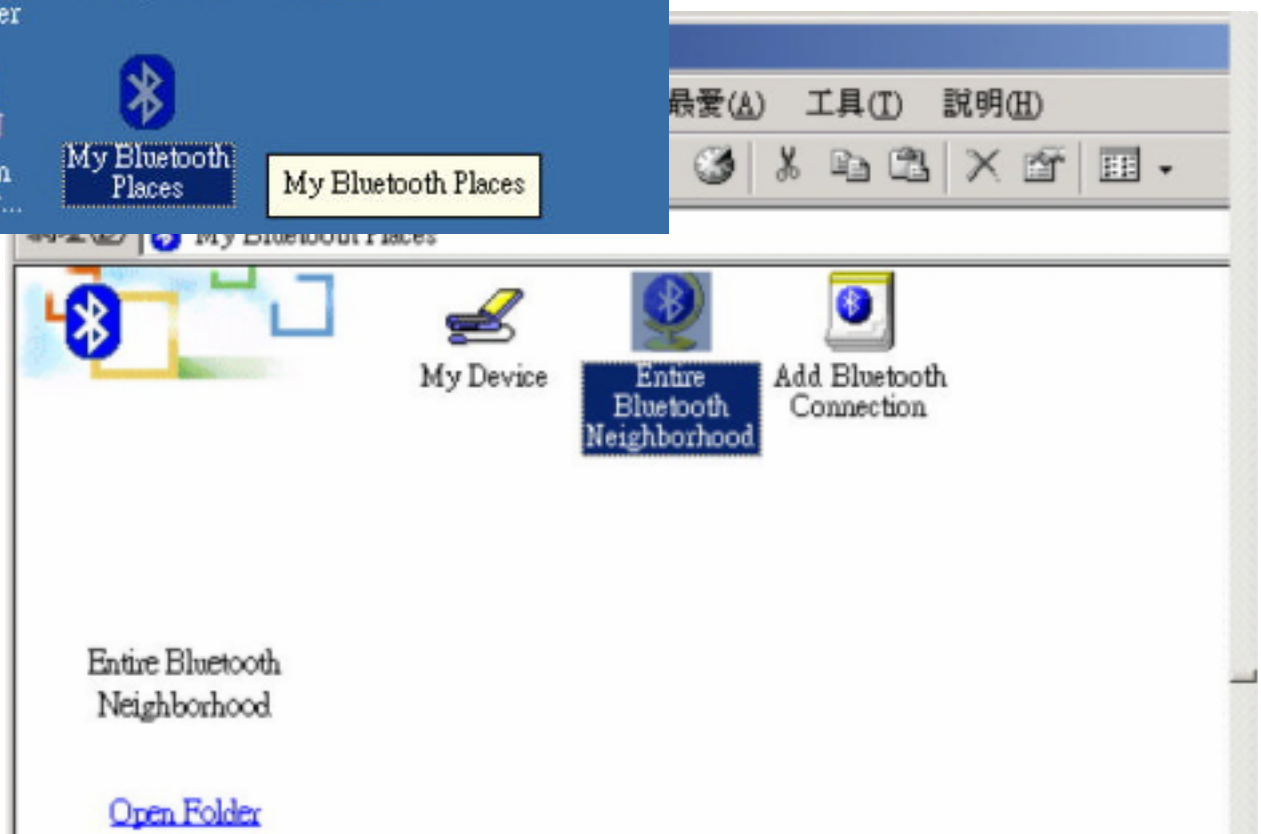
<2> In the right pane of Entire Bluetooth Neighborhood, right-click anywhere except on a device name and select Refresh from the pop-up menu.



<3> In the Folders pane of My Bluetooth Places, right-click the server you want to establish a connection with and select Discover Available Services from the popup menu to update the available services list. The available services will be displayed in the right pane of My Bluetooth Places.
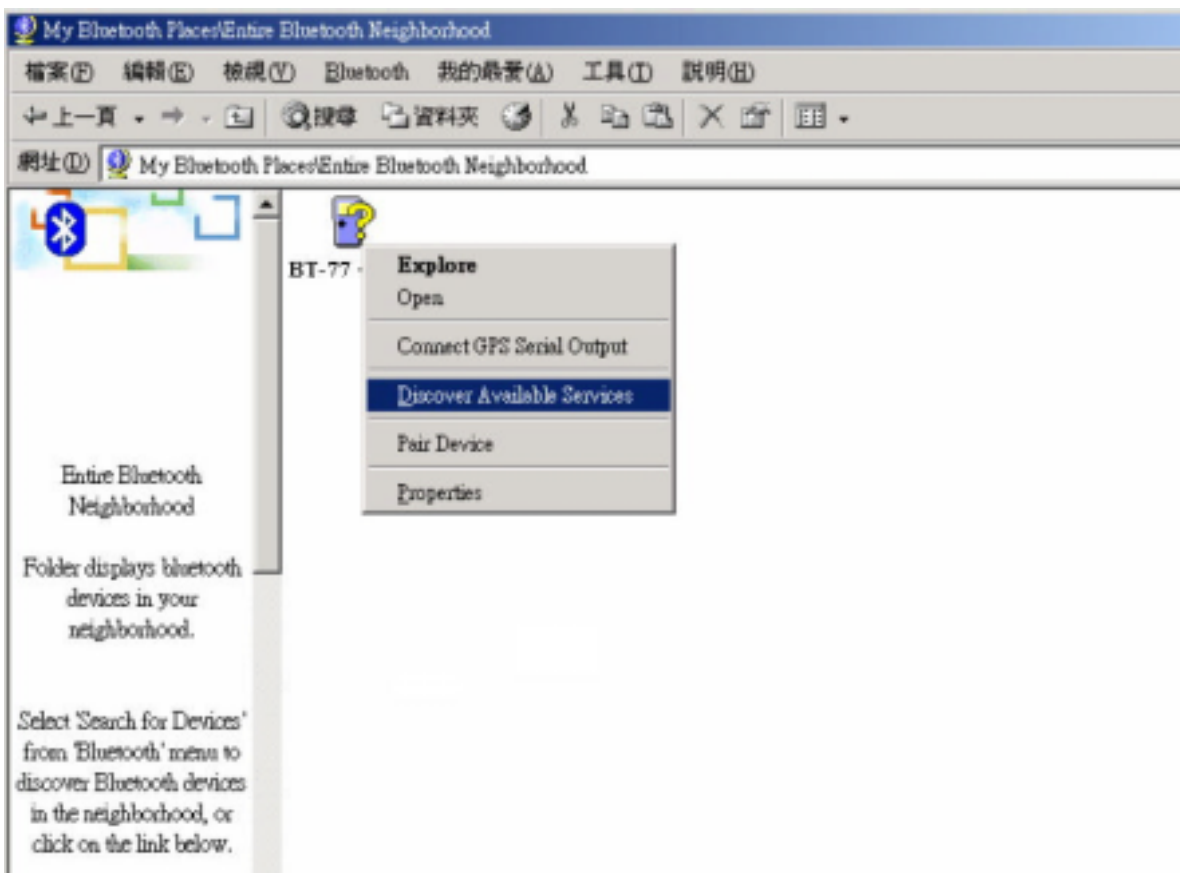
<4> In the right pane of My Bluetooth Places, double-click Bluetooth Serial Port. A dialog box appears that contains the communications port number assigned to this connection by the client. The application that will use this connection must be configured to send data to this port.
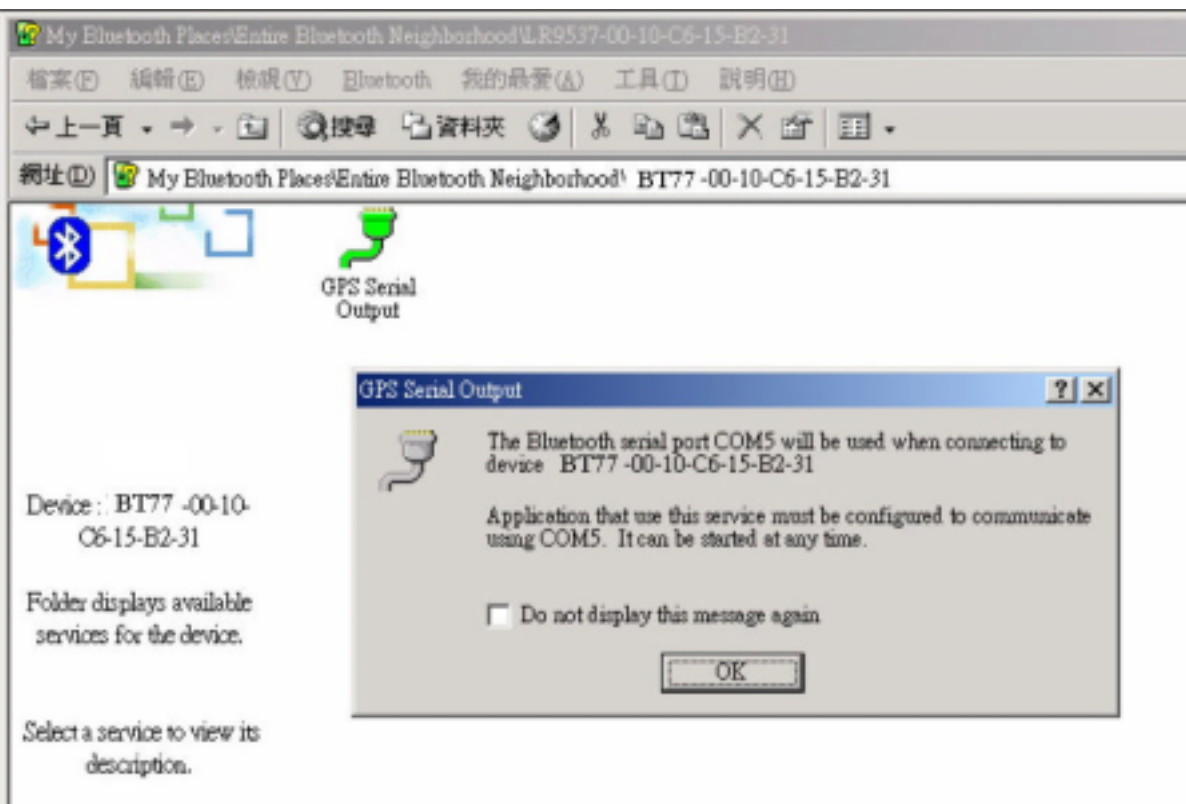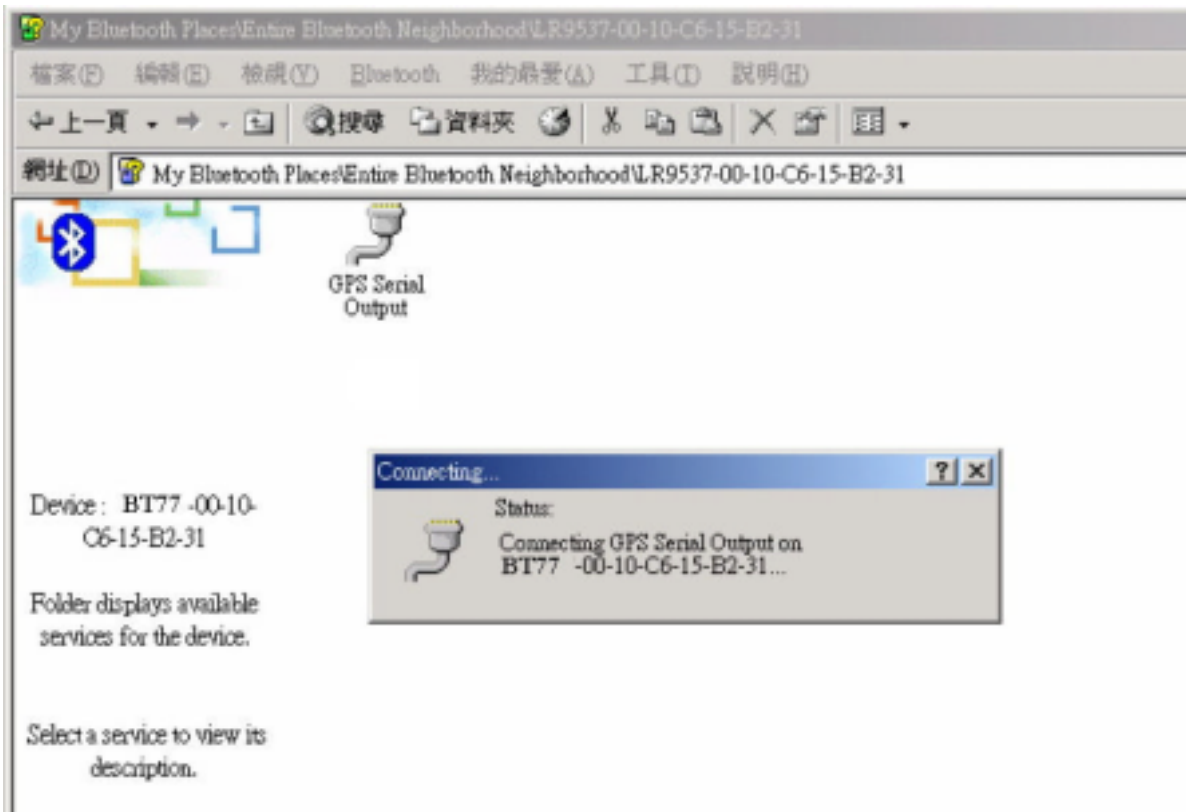
To close a Bluetooth serial port connection , Connections are normally closed from the client:
.. On the client, in the Folders pane of My Bluetooth Places, select (highlight) the device that is providing the Bluetooth Serial Port service.
.. In the right pane of My Bluetooth Places, right-click Bluetooth Serial Port and then select Disconnect Bluetooth Serial Port from the pop-up menu.