



## **GPS Data Logger**

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## 1 Accessories

- GPS Bluetooth Data Logger
- Lithium-Ion Rechargeable Battery
- 2 PIN AC Adapter
- Car Charger (Optional)
- User Manual

## 2 Before you begin

### 2.1 Notes and Warning

- RT-8B uses Li-ion battery. Operating in lower than  $-10^{\circ}\text{C}$  or higher than  $60^{\circ}\text{C}$ , its battery charging capability will decrease. Please leave the RT-8B far from heat or high temperature environment. In addition, do not expose your RT-8B in temperature higher than  $140^{\circ}\text{F}/60^{\circ}\text{C}$ . If you do not follow these rules, the battery inside RT-8B may overheat, explode or burn itself, and this will lead to very serious damage. The Li-ion battery inside the RT-8B should be recycled.
- While in the hospital, turning off the RT-8B is recommended. Wireless GPS receiver may interfere with medical equipments which use radio frequency.
- For a long period not using it, take out the battery and store it in dry/cool places.
- For safety, keep the RT-8B and all accessories out of children's reach.
- The manufacturer assumes no responsibility for any damages and loss resulting from the use of this manual, or from deletion of data as a result of malfunction, dead battery, or from misuse of the product in any way.
- Use only the supplied and approved accessories. Unauthorized accessories, modifications or attachments could damage the RT-8B, and may violate regulations governing radio devices.
- Use a dry, clean soft cloth to clean the unit. Do not use harsh cleaning solvents, chemicals, or strong detergents.
- Do not attempt to open the RT-8B yourself. Unauthorized hacking may damage the unit, and void your warranty.

### 2.2 Introduction

This RT-8B logger features an all-in-one, cost-effective portable GPS logging solution. With its on-board memory, it allows you to log your routes by ways of distance/ time. Through user friendly software utility, it shows your track on Google Earth. Moreover, you can use it as a portable navigator by connecting with your smart mobile phone or PDA with a mapping software installed and the Bluetooth function. This data logger is small and robust, ideal to carry everywhere for applications such as route tracking, mountain climbing or fleet management.

### 2.3 Features

- 1 SiRF III GPS chipset 20 channels.
- 2 11hrs with only Data logging on; 10hrs with Bluetooth on together.
- 3 With an effective transmission distance of 10 meters.

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- 4 Embedded memory for saving maximum 54,000 way points.
  - 5 Download the waypoints by USB cable and Bluetooth.
  - 6 Dual modes for both route recording and navigation.
  - 7 2 data recording methods: by time, by distance.
  - 8 3 data reading methods: by time, by speed and in combination of these two.
  - 9 Tracks can be shown on Google Earth.
  - 10 Support NMEA-0183 GGA, GSA, GSV, RMC, GLL.
  - 11 Fully compliant with Bluetooth V1.2
  - 12 Support NMEA compliant mapping softwares like TomTom, Route66...etc.

## **2.4 Applications**

- Route recording
- Business trip expense management
- Fleet management
- Driving behavior monitoring
- Navigation

## **3 Get Started**

Please follow the instructions step by step.

### **3.1 Charge Battery**

Please Charge the tracker for 3~4 hours to its full capacity with the adapter supplied by the manufacturer. For the 1st time use, please charge battery for at least 8 hrs.

### **3.2 Install Software**

In the CD supplied, there is a driver, a PC suite for logger and a software for Bluetooth. The user can download the waypoints and set up the tracker by: USB cable & Bluetooth. The driver is for USB cable connection. The Bluetooth software is for Bluetooth download. Please install the three software properly!

### **3.3 Operation**

#### **A. Startup**

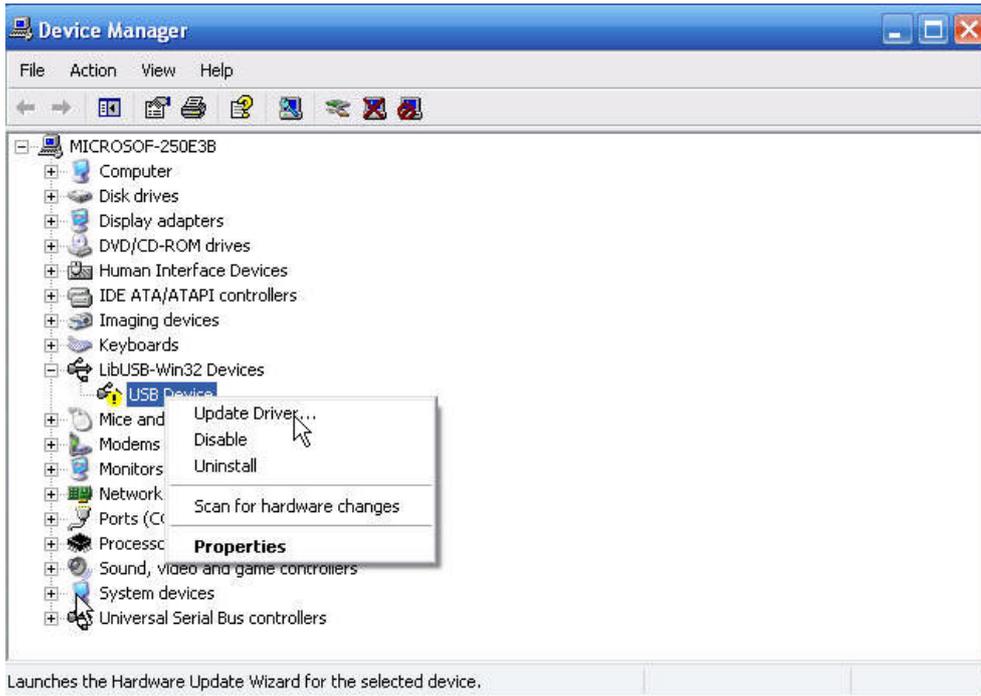
- a) Press the power button to start up RT-8B. After startup, the red power light will flash slowly, the blue Bluetooth light will flash quickly, and the green GPS light will stay on and change to flash slowly until fixing the GPS.
- b) Press the power button for 4 seconds to turn off RT-8B.
- c) If the Bluetooth is “on” in default, pressing the power button will start the Bluetooth at the same time. Double press the power button will turn off the Bluetooth.
- d) If the Bluetooth is “off” in default, pressing the power button will not start the Bluetooth. Double press the power button will turn on the Bluetooth.
- e) Double press the power button after startup will turn on / off the Bluetooth.

**Note:** If the red light flashes quickly on starting the unit, it means the logger’s memory is full. Please erase the data first!

## B. For USB Checking

a) Install the Driver

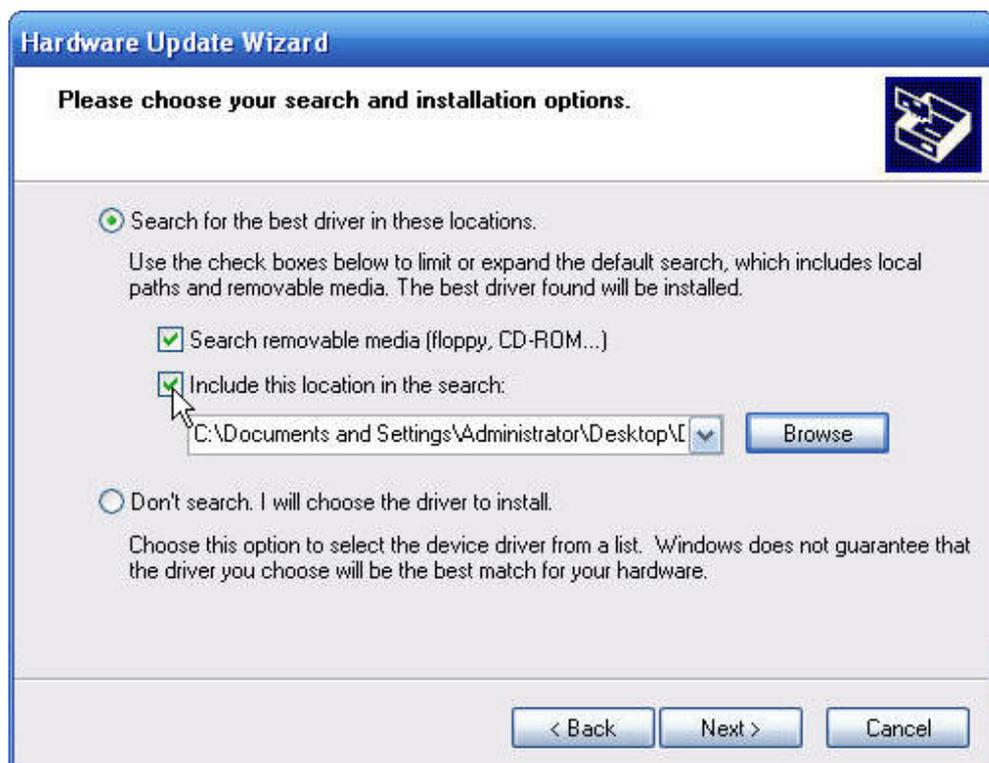
Before using USB to download the waypoints, please install up the Driver. Connect the logger with computer by the USB cable and turn on the unit. Then go to “My computer” and right click and choose the “properties”, and move to “hardware” and choose “devices manager”, to see “USB Device” in yellow exclamatory mark, and right click as below:



Choose “Update Driver”, and choose option advanced:

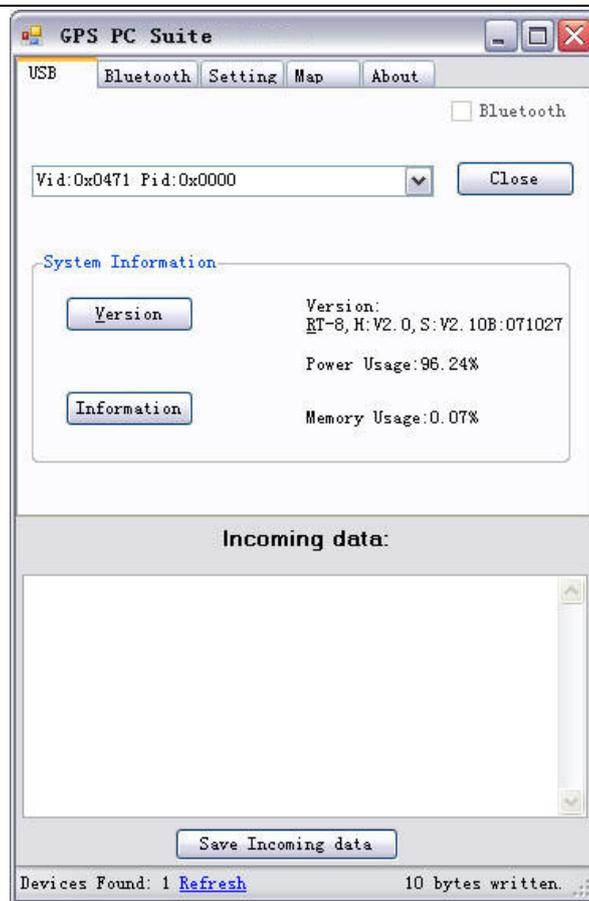
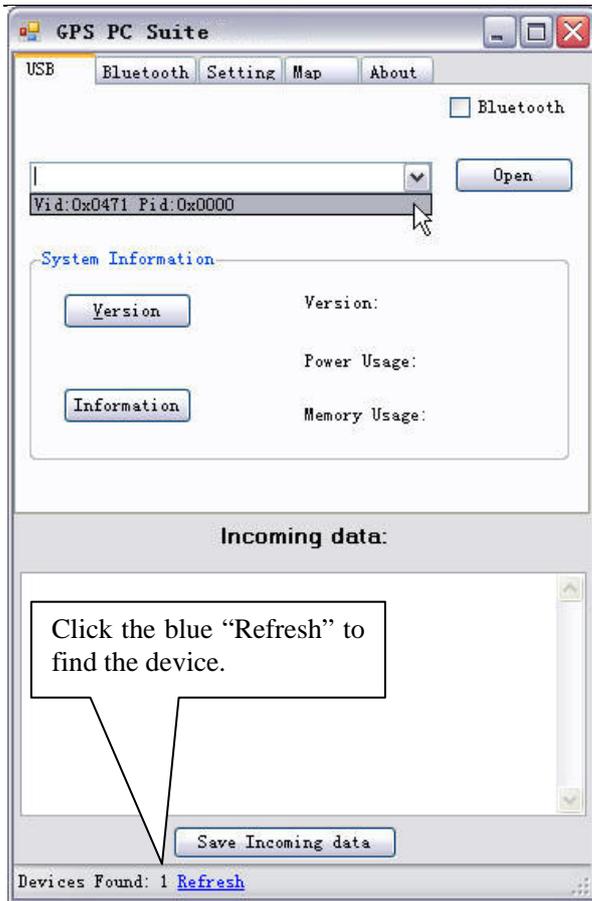


Choose the directory of the Driver and move to the next, and until finishing installation:



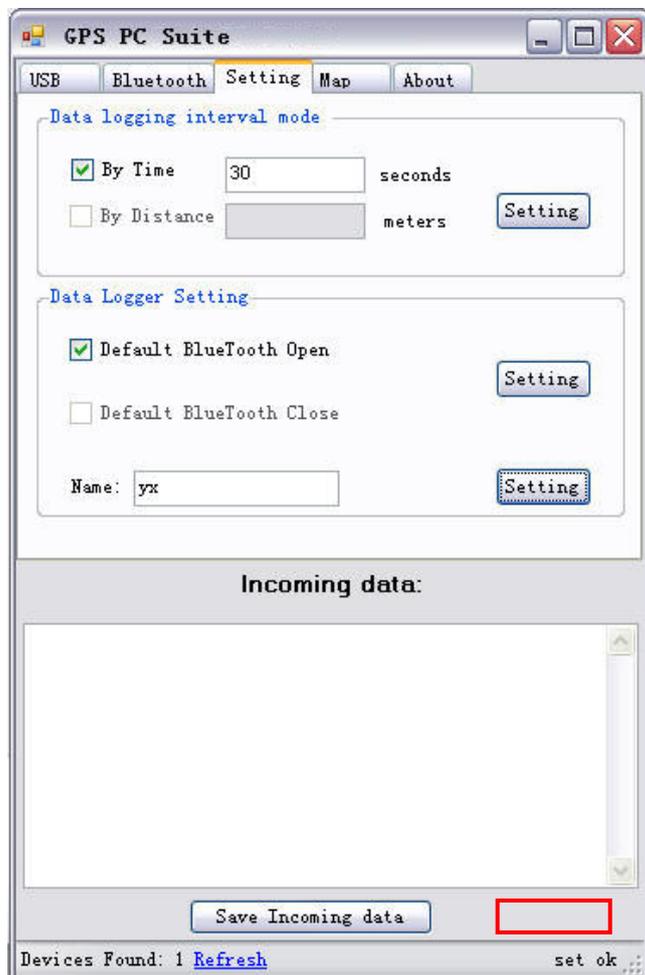
#### b) Connection Operation

Connect RT-8B with the PC, and click open PC Suite. Make sure to choose “**Vid:0x0471 Pid:0x0000**”, and then click “**Open**” to connect. Now you can check the “**System Information**” as below:



**Note:** Please click “Close” to turn off the connection properly when you don’t want to use it.

### c) Setting

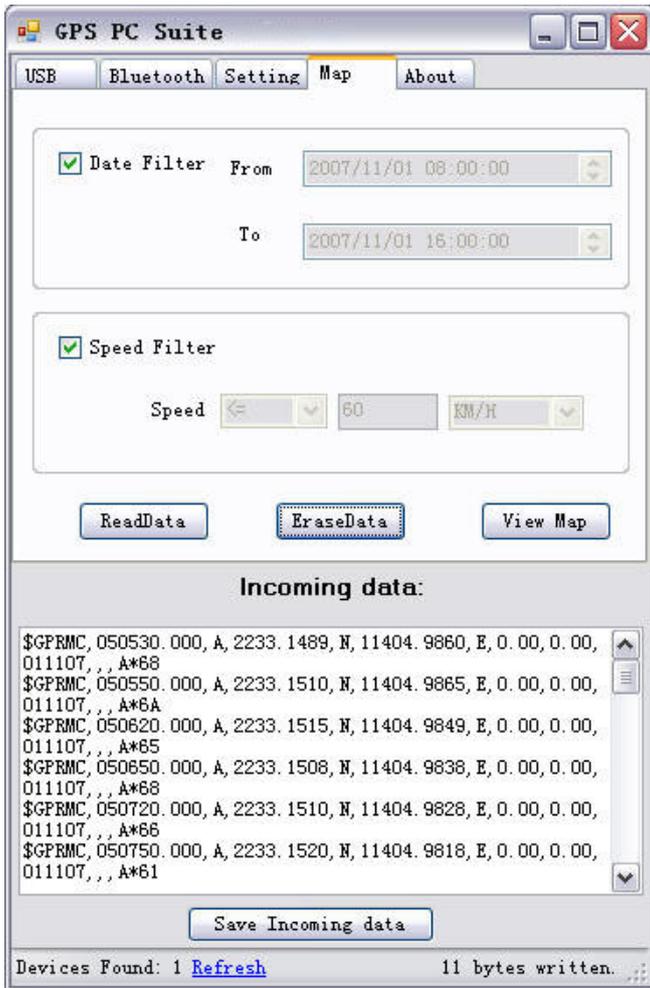


The user can set up the time or distance, by which RT-8B will record the waypoints. Also the user can set up the default Bluetooth status, and designate a name for its logger.

#### **Note:**

- Click “**Setting**” to activate the setting.
- The range of the “Time” is “1-99999s”, and the “Distance” is “50-65000m”. Distance below 50m will cause drift.
- Click “**Read Setting**” to check the logger setting.

#### d) Download the Waypoints



With the option “**Map**”, the user can view the map according to specific date range and/or speed. After choosing the date range and the speed range, click “**ReadData**”, to download the waypoints and display the readings in the below window, and click “**View Map**” to view the recorded route on the map.

You can erase all the data saved in RT-8B by clicking “**EraseData**”.

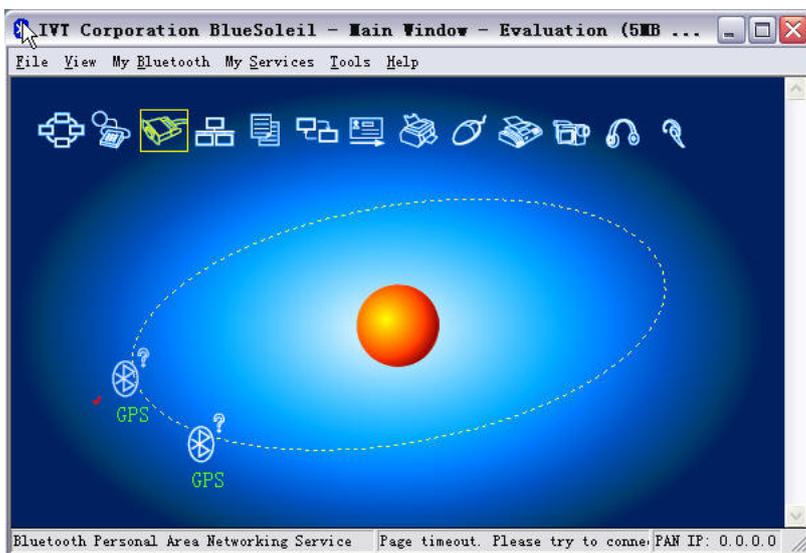
You can also save all the incoming data in the computer.

### C. For Bluetooth Checking

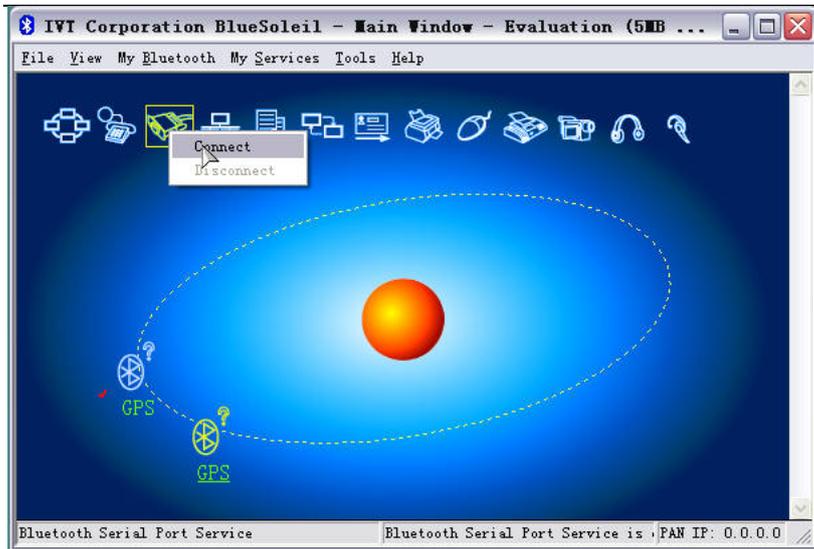
If the computer does not have the Bluetooth function, please plug a Dongle to fulfill this connection.

a) Activate the Bluetooth Connection between PC and Logger

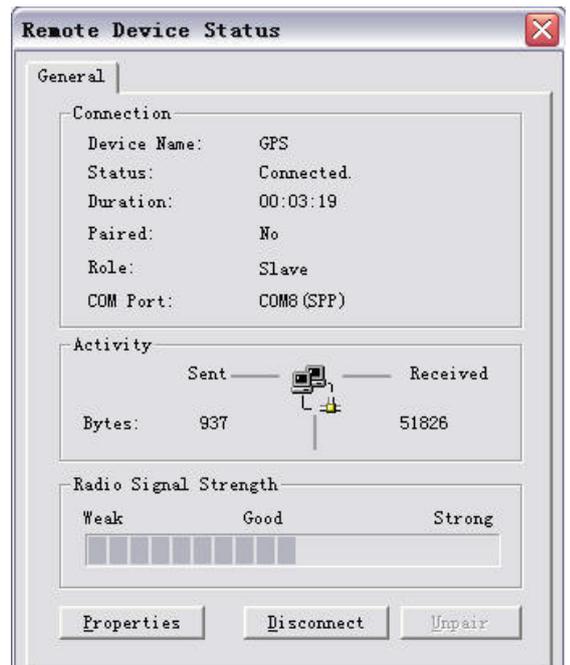
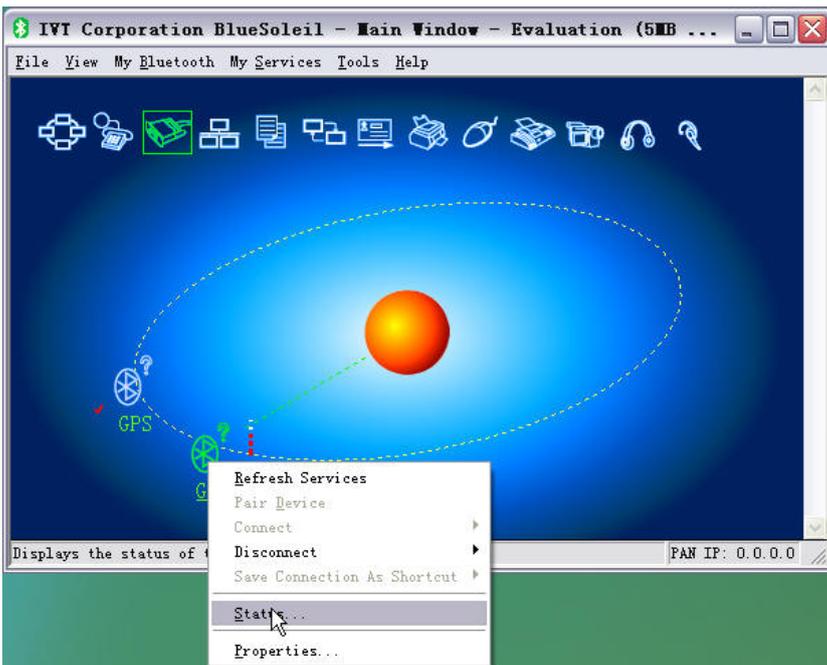
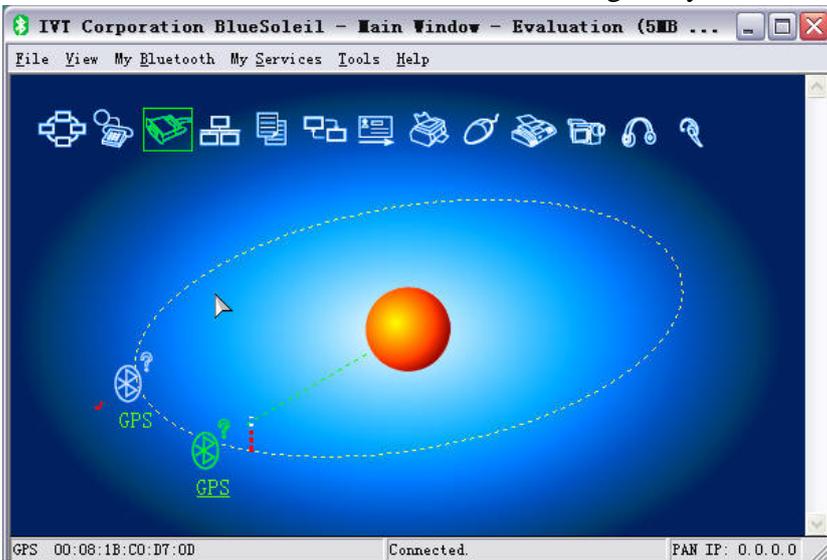
Turn on the logger and the blue indicator will flash, and then open the “BlueSoleil” on computer, and you will find the logger device as below:



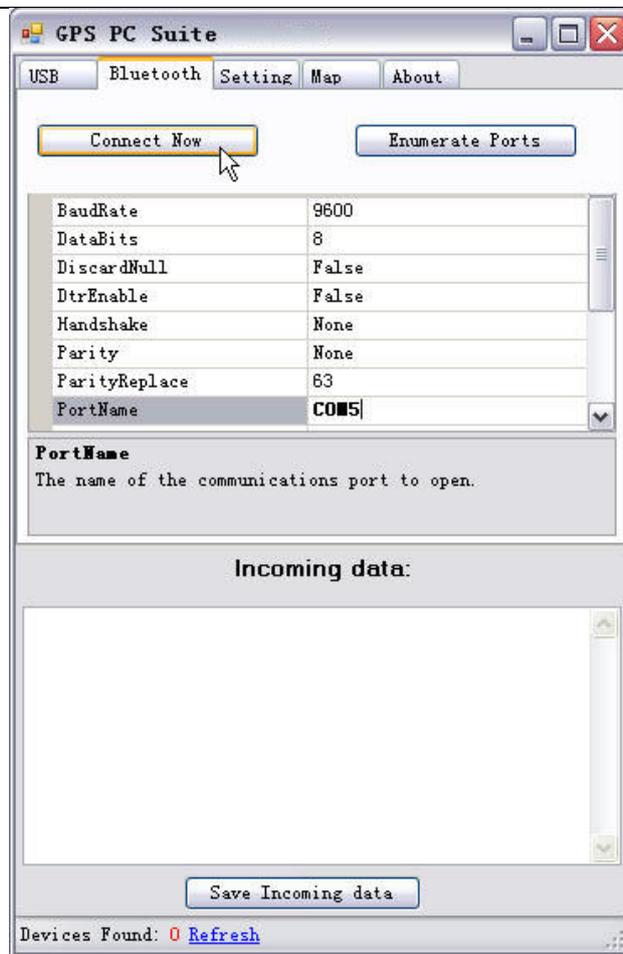
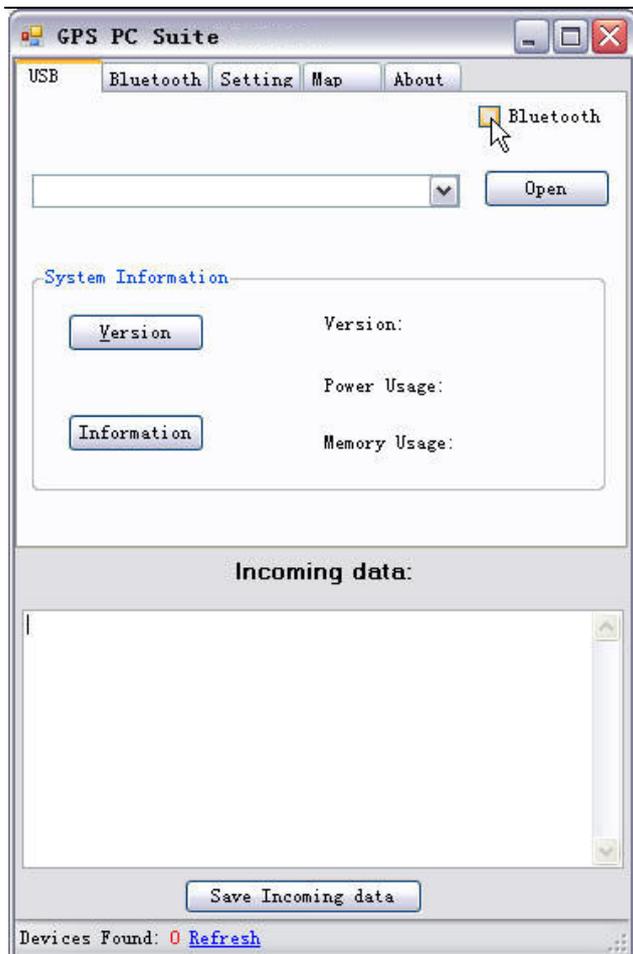
Move the cursor to , and click the right key of mouse and press on “connect” as below:



Then it connects to the RT-8B, and click the right key and choose “Status”, to check the COM Port.



And then open the “PC Suite”, and check “Bluetooth” as below, and it will change to menu “Bluetooth” automatically. Input the “PortName” in accordance with the above, and click “Connect Now”.



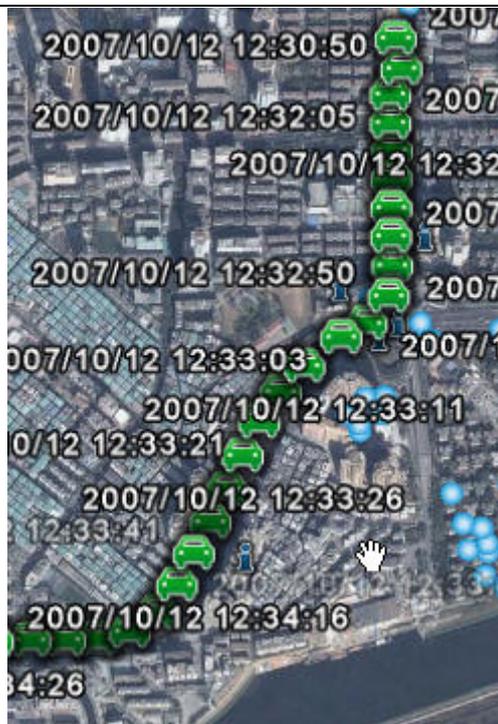
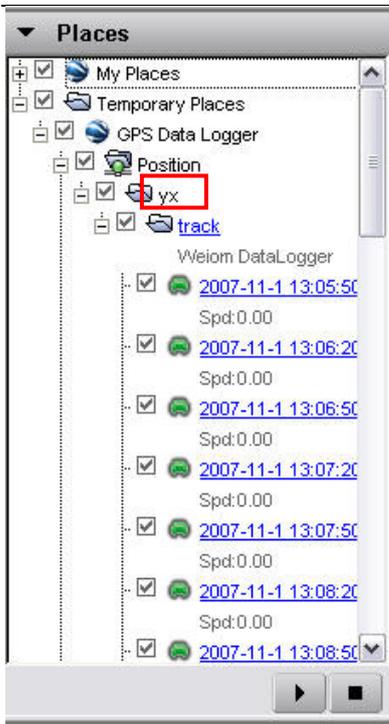
**Note:** Please come back here after done with the logger and disconnect the logger with computer to release the occupied PortName.

b) Others

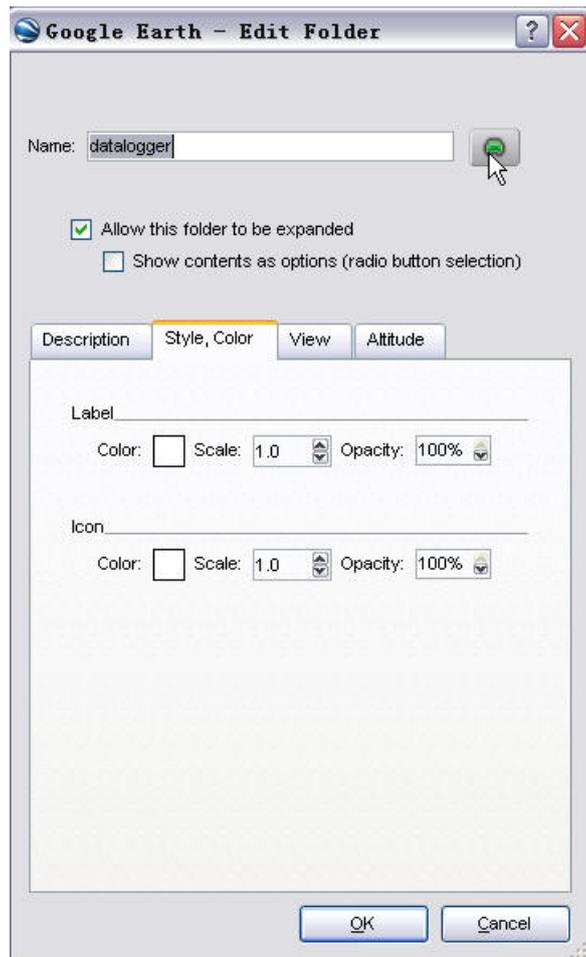
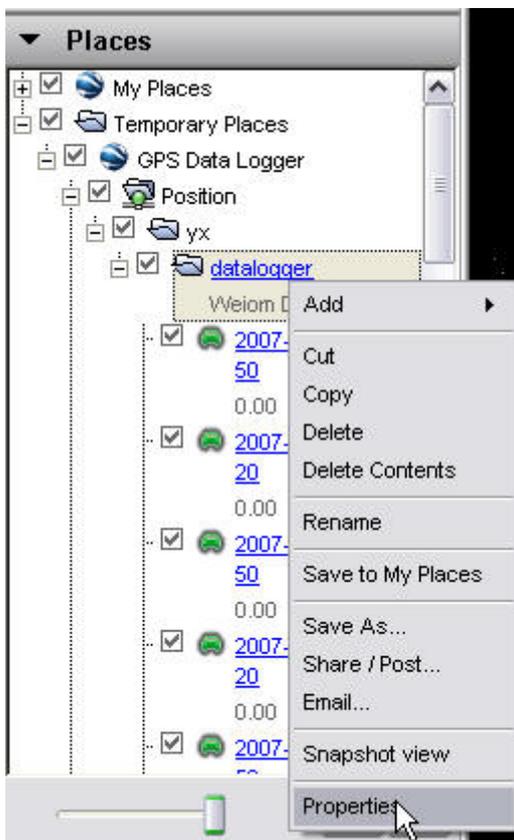
Please refer to the above in “For USB Operation” for the setting the logger and viewing the recorded route.

#### D. View the Route On Map

After click the “**View Map**”, it will automatically start the Google Earth. Expand the “**Temporay Places**” on the left Google Earth and double click “**Position**” to display the waypoints on the map.



You can customize the viewing mode, such as change the icon , change the color of icon, choose to view only the route without the icon or choose to view the waypoints point-by-point with an icon marked etc.



## E. Navigation

Make sure the mobile phone or PDA has a NMEA compliant mapping software installed, and then establish the connection between RT-8B and the mobile phone or PDA by Bluetooth, to receive the location data and display

the location on the map.

## 4 Photo Logging

When you record the waypoints outside, you can take photos at the points of interest. After coming back, you can synchronize the photos and the points of interest recorded on the data logger, to view the photos and the waypoints simultaneously on the map.

### A. Set the GPS data logger and Camera

First thing to do is synchronize the time of your data logger and camera. You can do in two different ways:

1). If you didn't change its setting, your GPS data logger records the track log with the GMT time (Greenwich Meridian Time) also know as UTC (Universal Time Co-ordinated). Set the time of your camera to GMT. You can see the actual GMT time at the bottom of this webpage (be precise at the second level): <http://wwp.greenwichmeantime.com/>

Setting your camera to GMT is practical since you won't have problems for summer/winter time or when you travel through time zones. Also set the camera date if necessary.

2). Set the local time of the camera precisely to the same local time indicated by the GPS data logger. Also set the camera date if necessary.

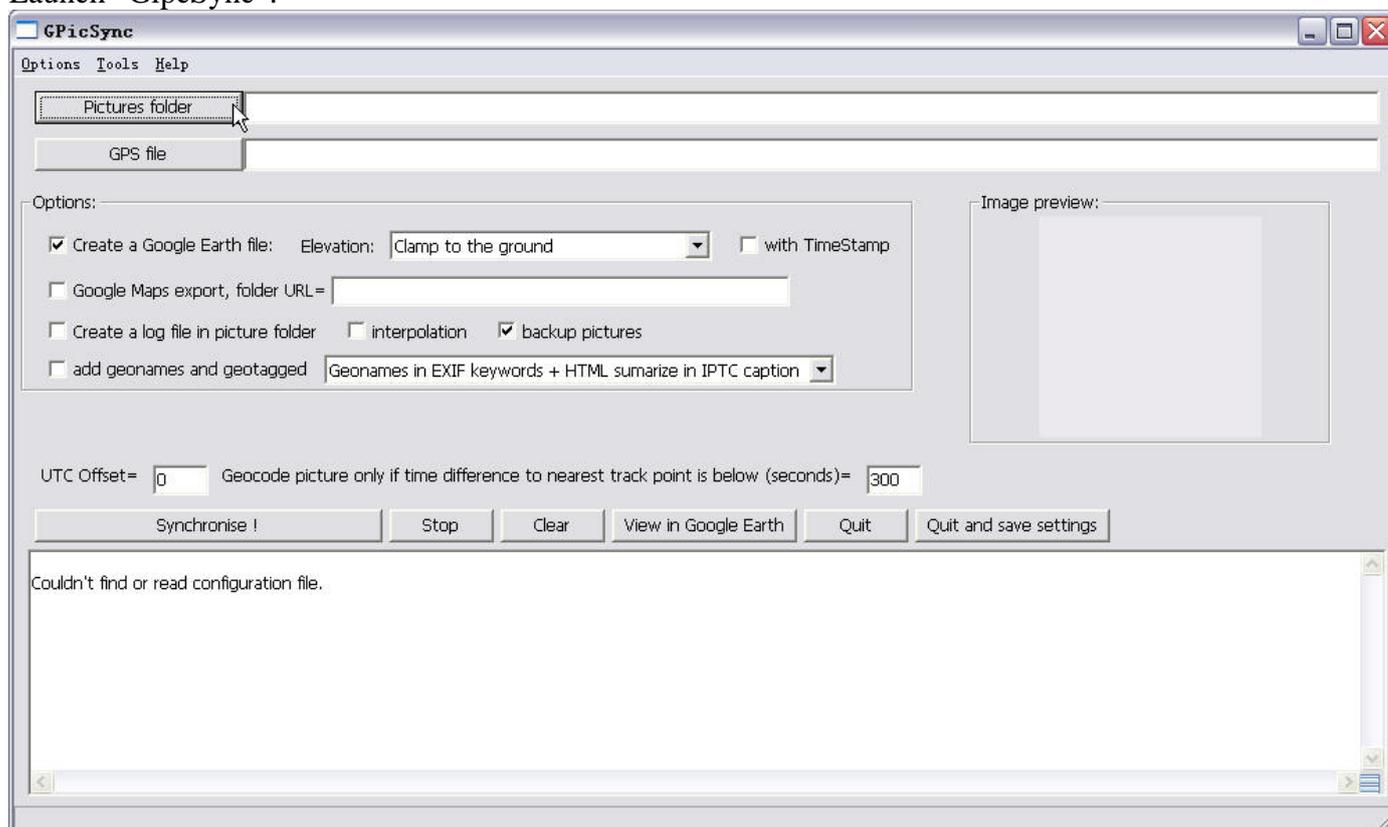
### B. Go outside and Shoot

Take your GPS data logger with you and make sure that it is recording a track log. Keep your GPS data logger ON during all the time you take pictures.

### C. Come back home and sync

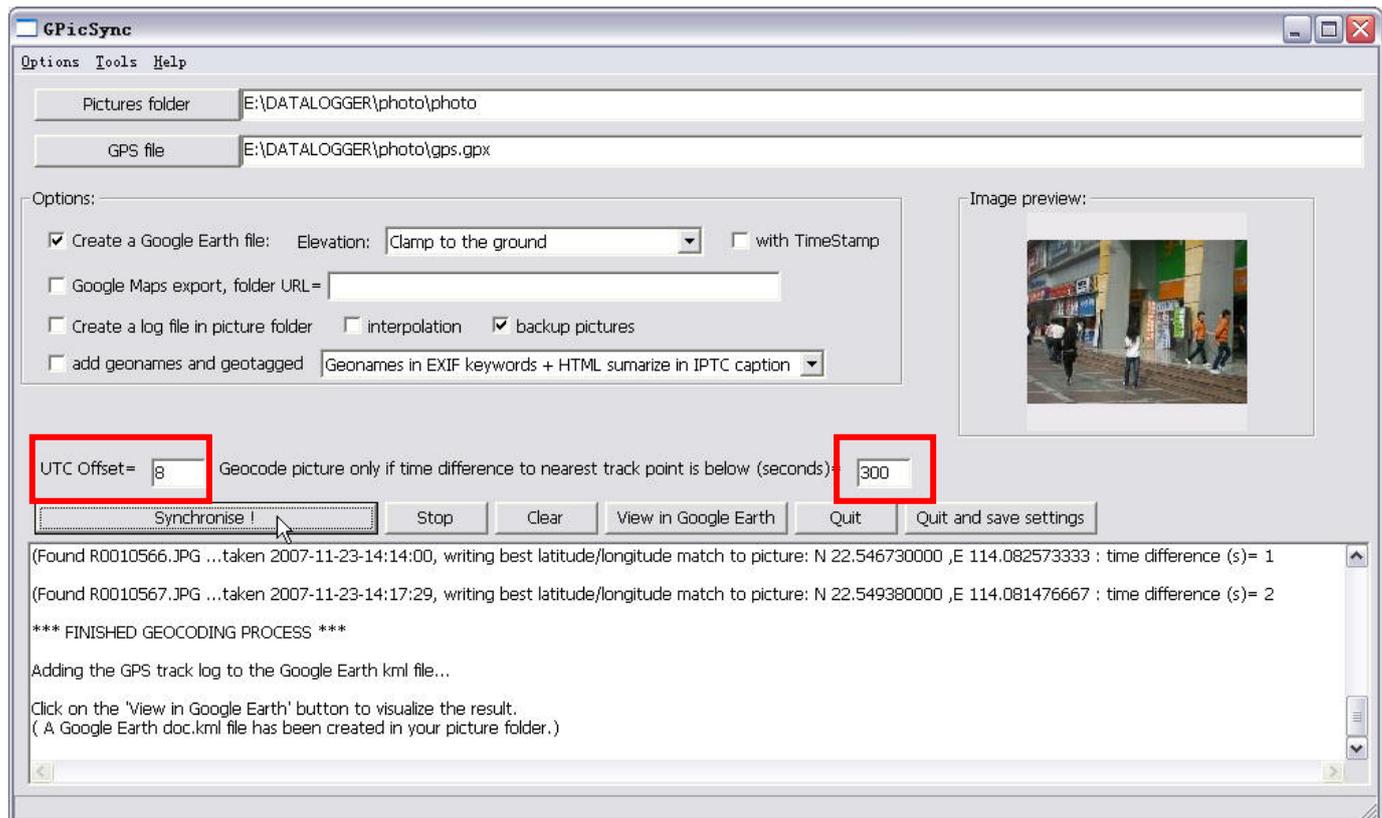
Please download the photos from the digital camera, and save the recorded waypoints in format: \*\*.txt.

Launch "GpicSync":



Click "Pictures folder" to import the photos, and click "GPS file" to import the waypoints saved in the

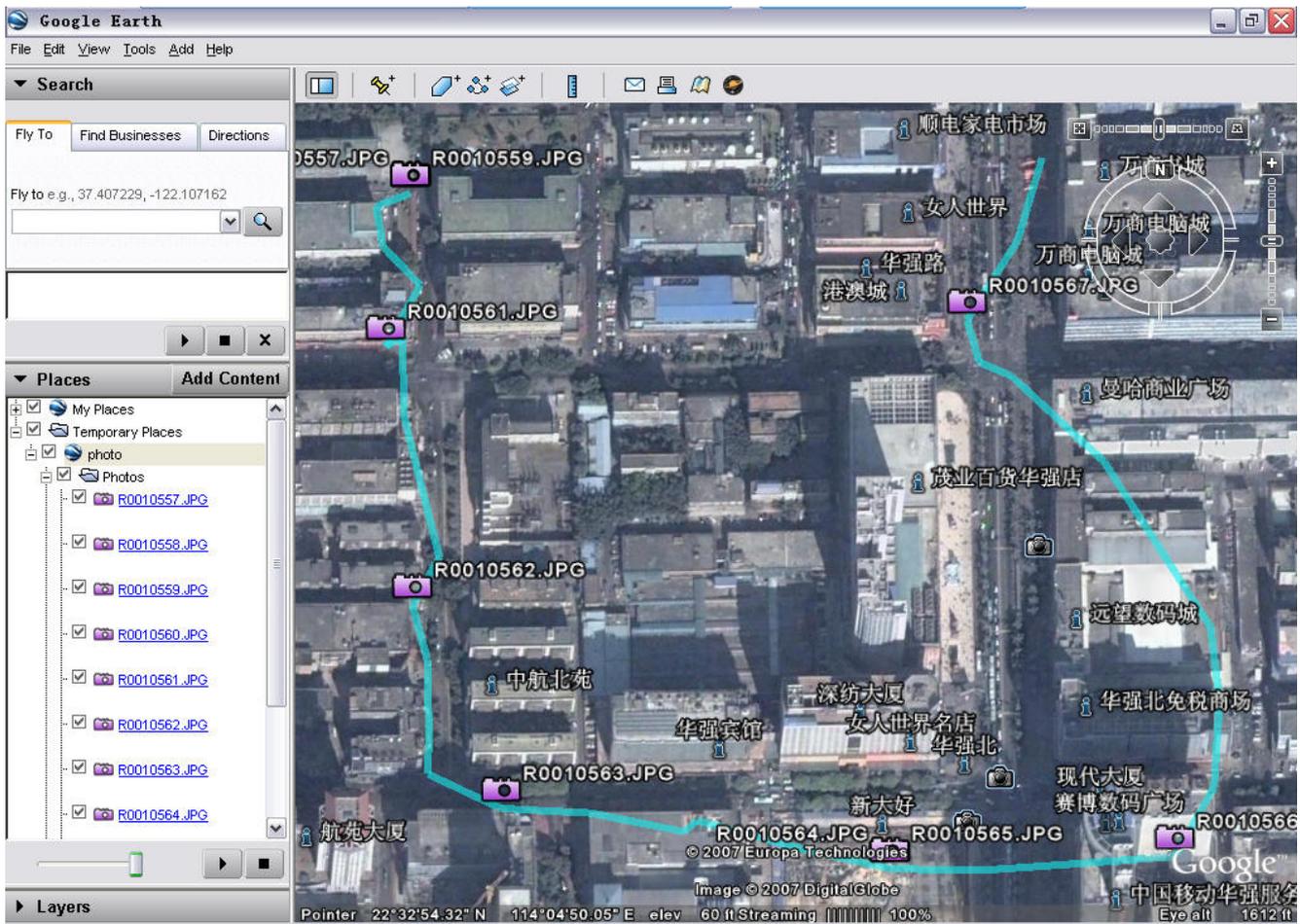
file:\*\*.txt. And press “Synchronise” to synchronize the photo and the waypoints:



**Note:**

- Depending on the way you've set your camera and GPS data logger, please indicate the UTC Offset as below:  
+1 in France, 0 in the UK, -8 for PST, -5 for EST,etc, You may need to add an hour for summer local time depending of your country policy. 0 if your camera is at GMT time.
- There's also an indication of the time difference between the nearest track point and the picture (you should see a few seconds difference). If this difference is important (above a hundred seconds) there's probably something wrong in your time setting. In particular check that you've indicated the right UTC offset (and maybe add an hour if you are in a summer daylight saving zone). By default GPicSync doesn't Geocode photos if the time difference is above 300 seconds but you can adjust this threshold in the interface ("Geocode only if time difference is less than (seconds)="). This could be useful on some GPS if you make a pause and the GPS stops recording.

Then click “View in Google Earth” to start the Google Earth automatically:



Click on the icon to view the photo:



## 5 Specifications

<b>GPS</b>	
GPS module	SiRF III 20 channels
Protocol	NMEA-0183 compliant protocol
GPS Antenna	Build-in active high sensitivity antenna
Accuracy	1-5m
Update rate	1 HZ
Start time	Cold start: 42s Warm start: 35s Hot start : 1s
<b>Bluetooth(optional)</b>	
Protocol	Support standard NMEA-0183 at 9600 bps baud rate
Connect	Compatible with Bluetooth devices with Serial Port
<b>Electrical</b>	
Operating Voltage	3.3V
Charge voltage	4.5~5V
Standby	15mA
Operating	80mA
Battery	Li-ion 900mAh
Time to full recharge	4 hours
<b>other</b>	
Product Size	74.5 (L) X 45(W) X 19 (H) mm
Weight	53.8g(including battery)
Box Size	17.5cm*12cm*8.5cm
Box Weight	260g
Carton Size	53cm*38cm*47cm(for 40pcs)
Weight	11KG