GoPASS®

GPT-810 Bluetooth GPS Trip Recorder

GPS Trip Recorder

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Before you begin

1.1 Notes and Warnings

- GPT-810 uses Lithium battery. If GPT-810 is used in temperature lower than -10℃ or higher than 60℃ , its battery charging capability will decrease. Please leave the GPT-810 far from heat or high temperature environment. If you do not follow these rules, the battery inside GPT-810 may overheat, explode or burn itself, and this will lead to very serious damage. The Lithium battery inside the GPT-810 should be recycled.

- While in the hospital, turning off the GPT-810 is recommended. Wireless GPS receiver may interfere with medical equipments which use radio frequency.

- For a long period not using GPT-810, take out the battery and store it in dry/cool places.

- For safety, keep the GPT-810 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 GPT-810, 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 GPT-810 yourself. Unauthorized hacking may damage the unit, and void your warranty.

1.2 Introduction

This GPT-810 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 time/ distance/ speed. Through user friendly software utility, it shows your track on Google Earth.* This data logger is small and robust, ideal to carry everywhere for applications such as route tracking, mountain climbing or fleet management.

1.3 Features

1. MTK GPS chipset **51** channels.
2. 18 hrs operation time.
3. Embedded with **32Mb** memory for saving up to 150,000 way points.
4. Dual modes for both route recording and navigation.
5. Smart power saving function for long operation time.
6. Smart auto sleep & wake up mode.
7. Tracks can be shown on Google Earth.
8. WAAS and EGNOS supported for better accuracy.
9. Support NMEA-0183 GGA, GSA, GSV, RMC, VTG, GLL.
10. Fully compliant with Bluetooth V1.2
11. Support NMEA compliant mapping softwares like TomTom, Route66…etc.
12. 3 recording methods: by time, by speed, or by distance.

    * Google Earth is the trademark of Google Inc.,
      other trademarks are the property of the respective companies.

1.4 Applications
- Route recording
- Business trip expense management
- Fleet management
- Driving behavior monitoring
- Save Point of Interest

## 1.5 Appearance
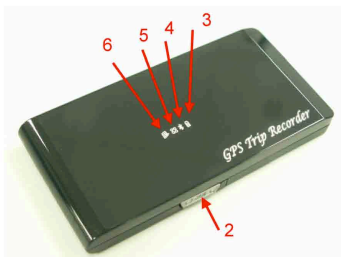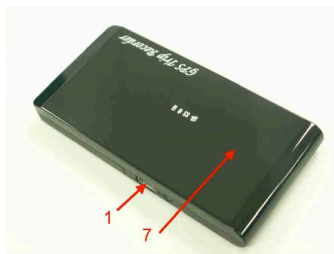
1. Power jack (mini USB type)
2. **Power & Log Button**
3. Battery status LED (red/green)
4. Bluetooth status LED (blue)
5. GPS status LED (orange)
6. Log status LED (blue)
7. Internal antenna

1.7 LED Display

The Bluetooth GPS data logger has 4 LED lights, one is Bluetooth Status LED, the 2nd one is Battery Status LED, the 3rd one is GPS Status LED, the 4th is is LOG Status LED/ Memory used LED:

Category	SYMBOL	COLOR	STATUS	Function
Bluetooth Status LED		Blue	Always on:	Bluetooth on, but not connected to any Bluetooth devices yet
			Slowly blinking:	Sleeping mode
			Quickly blinking:	Bluetooth is connected and ready for data transmission
Battery Status LED		Red	Blinking:	The battery is too low
		Green	Light On:	The battery is charging
		Green	Blinking:	The battery is fully charged
GPS Status LED		Orange	Always on:	Acquiring satellites, GPS position not fixed
			Quickly Blinking:	GPS position is fixed, Navigation
LOG Status LED		Blue	Slowly Blinking:	LOG enable
			Quickly Blinking:	The memory space is too low (20% left now)
			Solid	The memory is full and stop

2.1 Getting Started

Please follow the procedure step by step.

Step 1 Charging Your Battery

To charge your GPT-810 data logger, you have to plug your USB cable into the power source. Charging time is about 3~4 hours and you can charge from PC/ Notebook's USB HOST or from cigarette-lighter in car.

For the 1st time you use the GPT-810, please charge battery until it is full (the green LED blinks). The LED that represents the battery is the ▤ icon (shown in below).

- If the LED is red, that means battery power is critically low. Charge immediately.
- If the LED is green, that means battery is charging now.
- If the green LED is blinking, that means battery is fully charged.

Step 2 Turning on the power / perform LOG

Power off (Before)   Power on (After)   Data record

Power Button	
Power On	To turn on the power, press the power button for 3 seconds, you can see the **blue LED and orange LED turning on**.
LOG Enable	To enable LOG mode, please click the Log Button, then you can see the **blue Log status LED blinking**. Enable log mode, navigation function is supported as well.
Log Disable	To disable LOG mode, please click the Log Button again, then you won't see the blue Log status LED blinking.
Power Off	To turn off the power, please please press the power button for 3 seconds, you can see the blue LED and the red LED blink 3 times, then turn off.

Difference between LOG disable and LOG enable:

| LOG disable	You can use the GPT-810 as a Bluetooth GPS receiver to navigate when you have a Bluetooth enabled PDA/ Smartphone in your car. But the logging is off.
LOG enable	In this mode GPT-810 works as a logger, navigation function is supported as well.

**For more details about downloading the routes to PC, please refer to user's manual: Photo Tagger software > Help > User's Manual

Step 3 Connecting your handheld device with GPT-810

Please refer to the user manual of PDA to enable the Bluetooth connectivity. If the connection between your device and GPT-810 is successful, the blue LED of GPT-810 will be blinking.

Below, we provide a common procedure of software installation to set up your PDA. (For other PDA, the steps may be different. Bluetooth Manager is a popular program used on Bluetooth device.)

-->
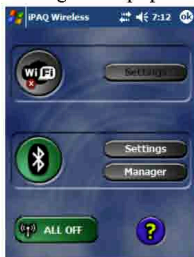
Start -> Bluetooth Manager   New

1. Open "Bluetooth Manager" on your pocket pc, and establish a new connection.

 -->

Explore A Bluetooth device   Tap BT-GPS
->Next

2. Explore a Bluetooth device, and find the "BT-GPS"

Passkey 0000 (if your PDA
asks for the passkey)

3. (Optional)

 -->

Select SPP slave->Next   Finish

4. Connect to Serial Port Profile (SPP) Slave

 -->

Tap and Hold BT-GPS: SPP   Done
slave, Connect

5. Finish Bluetooth Manager Setup

Step 4 Loading your GPS mapping or routing software
You should have mapping software on your PDA/ Smartphone/ laptop or you need to install it before using the GPT-810 for navigation.

Step 5 Starting the application
Select the correct COM port & baud rate within the application

Note: The Bluetooth device in most of the applications has an "auto-detect" feature so that you do not need to select the Baud Rate.

2.2 Helpful Tips

- It's better to turn off the GPT-810 when you don't use it, or the serial Flash's life can't last long.
- Some vehicles having heavy metallic sun protecting coating on windshields may affect GPS signal receptions
- Driving in and around high buildings may affect GPS signal receptions.
- Driving in tunnels or indoor park may affect signal receptions.
- In general, any GPS receiver performs best in open space where it can see clean sky. Also weather will affect GPS reception – rain & snow contribute to worse sensitivity.
- Low battery of a PDA or of an GPT-810 may affect signal receptions.
- Please check the correct "COM" and "Baudrate" of your PDA.
- GPT-810 output data updates every second, therefore the actual position and the position shown in your map may have slight time delay. This may happen when you drive at higher speed or make a turn around a corner.
- Note that GPT-810 may not work indoors where it can not see the sky.
- For the 1st time you use the GPT-810, it will take 1 to 3 minutes to obtain the satellite constellation information and fix your position, this is called "Cold Start". If you replace the battery, GPT-810 will do Cold Start again.
- If your GPT-810 can't fix your position for more than 20 minutes, we suggest you change to another spot with open space and then try again.

3. Setup GPS Photo Tagger Software

3-1 GPS Photo Tagger supports only Microsoft Windows XP/ Vista.

3-2 Install the GPS Photo Tagger for GPT-810 Data Logger

Please insert the Driver CD, and find the folder GPS Photo Tagger.

Then double click "setup.exe" to install the software GPS Photo Tagger.

3-3 Install Google Earth

GPT-810 Data Logger supports to show your travel path directly on Google Earth.

Please go to http://earth.google.com to download Google Earth, and install it to your computer.

4. Start to use

4-1 Fully charge the battery when using at the first time

A fully charged battery can last up to 25 hours continuously operation (under optimum conditions).

4-2 Connect GPT-810 Data Logger with your PC

1. Please connect GPT-810 Data Logger with your PC by mini USB cable, and then switch GPT-810 Data Logger to Power ON <LOG> position.

2. Auto check the COM port number, your PC assigned to GPT-810

4-3 Read GPT-810 log from device

Step 1 – Connect GPT-810 Data Logger to PC USB port.
Please make sure the GPT-810 Data Logger
switch is turned on Power ON <LOG> mode.

Step 2 – Menu command "File" -> "Read log…" Users have to input Pass key at the first time. The product key is on the cover of installation CD.

GPS Photo Tagger will automatically detect the port and baud rate and read in the GPS tracks.
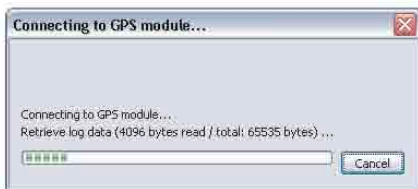
A track list window will be popped up. Select the tracks to import.

Notes

If error message "connection failed....." prompts, please check the followings:

1. Verify the COM port.

2. Check if GPT-810 is connected properly to the USB port.

3. Check if the blue log status LED is blinking.

   Please click the Log Button, or reboot GPT-810 to enable Log mode.

4. Pull out GPT-810; and plug it to the USB port again.

   Please make sure you use the right USB cable for the connection.

5. Please take another USB port for the test.

6. After the de-bug, select "File" - "Read Log..." from the software main screen to resume the operation.
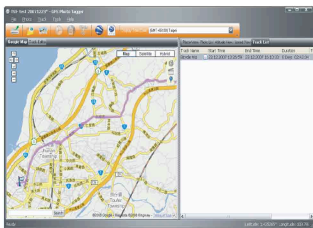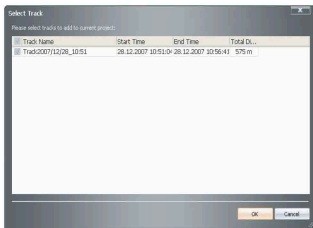
◉ A track list window will be popped up. Select the tracks to import.

◉ Tracks will be shown on the Google Map window.

* There is no track data before you record it.

Clear Data Logger Memory

Menu command "File" -> "Clear log" will clear the data stored in device, so the device will have enough memory space for the next usage.
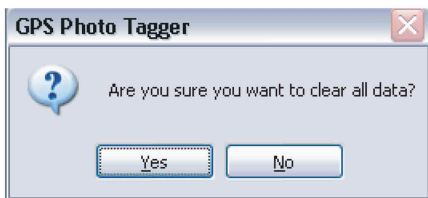
Data Logger Configuration

Connect Data Logger to PC and **turn on Data Logger.** Menu command "File" -> "Config GPS…" If Data Logger is not connected, the GPS Log Setting area will be disabled. Please make sure the Data Logger power switch is turn on when connect.

Connection Setting:

Auto Scan GPS Module (Recommended)

The program will automatically detect the com port and the baud rate. It is recommended to set to auto scan.

Manual Setting

Users can also manually set the port and baud rate. Although it can speed up the initial connect time, but it is not recommended unless users understand the valid port and baud rate.

GPS Log Setting

There are 4 log modes: Generas l mode, vehicle mode, cycling mode, and hiking mo de. Users can also change the default setting of these 4 modes.

Log every () seconds:

Specify the log period. For example, if specify 3 seconds, the GPS device will log every 3 seconds.

Log every () meters:

Specify the log distance. For example, if specify 10 meters, the GPS device will log every 10 meters.

Log over () km/h:

Specify the log speed. For example, if specify 20 km/h, the GPS device will log when the speed is over 20 km/h.

Note: GPS device will log only when the log period, log distance, and log speed all meet the criteria.

Data Log Memory

A bar show how many percentage of memory is   used in the Data Logger device. Users can use "Clear Log" to clear all the memory.

When data logger memory is full

Overwrite: Overwrite the earliest logged data.

Stop Log: Stop data logging.

Add Place Mark

To add a new place mark, please click on the blue balloon icon, and then click on the position of new place marker. The "Place Mark Property" dialog will be pop up for editing.

Add Photos

Users can add photo from a file folder, or selected files.

Add photo from a folder: Menu command "Photo" -> "Add Photo…" -> " From Folder". Select a folder to add photo.

Add photo from selected files: Menu command "Photo" -> "Add Photo…" -> " From Files". Use Ctrl-Click, or Shift-Click to select multiple files.

The photo will show on the Photo View window. Users can add comments to each photo. Users can also rotate, delete photo.
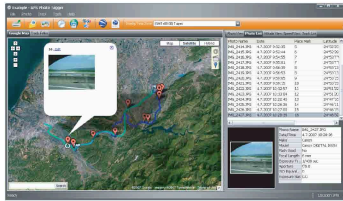

When photos are added, GPS Photo Tagger will automatically match photo and GPS logged waypoints by time. Place marks will be created as a placeholder for photos.

Browse photos

Click on the "next photo" and "prev photo" buttons to browse the photos.

Current photo and current place mark will be synchronized.

Upload Photos to Flickr

Menu command "Photo" > " Upload Photos to Flickr..." will invoke upload wizard. Users can set "Title", "description", "Tag", "Public or Private", and "Upload photo size".

If you want to upload geotagged photos directly on Flickr web site:

You have to turn on the following option. "Your Account">"Privacy & Permissions">"Import EXIF location data: Yes"

After the option is turned on, the uploaded photo will be put on map.

Go to Flickr > "You" > "Your map", you can browse your photos on the map

Shift Photo Time

Menu command "Photo" -> " Shift photo time..." will invoke the shift photo time window. All the photo will be added (or subtracted) the specified time. The data will be saved in the Exif

parts of Jpeg or Tiff file. After the shift, GPS Photo Tagger will automatically match the photo and track waypoints again. User can put more than 365 in days.
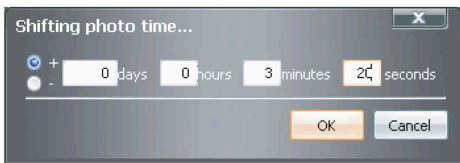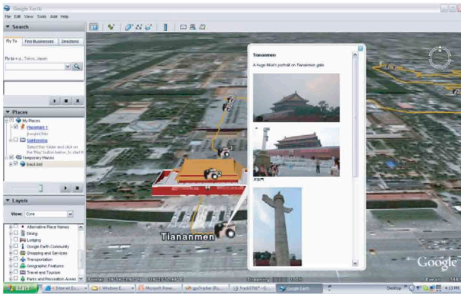

Photo Comments

Support multi-language comments. The comments will be uploaded to Flickr, packed in the kml file.
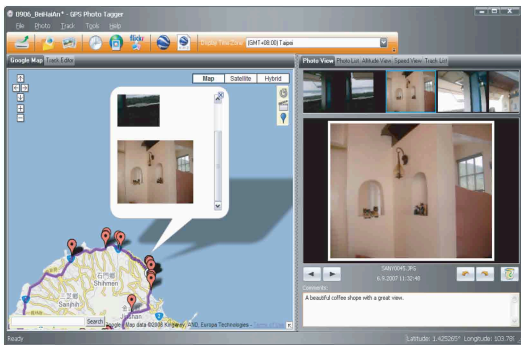
Google Earth Viewing

Command "File" -> "View in Google Earth" will invoke Google Earth to view the tracks and photos. Users have to install the Google earth. http://earth.google.com/

Save As KMZ File

Menu command "File" -> " Export as Kmz..." to save the tracks and photos in kmz file. You can import kmz file to Google Earth. You can also send kmz file to friends to share your trips with them as long as they have installed Google Earth on their computers.

The picture size packed in the kmz file can be set in the options dialog. Menu command "Tools" -> "Options" > "Google Earth" > "Photo size in KMZ".

Altitude Graph

Switch to "Altitude View " window will show the altitude graph. The waypoints with photos on it will be marked with red square. Moving cursor on red square will display the photo. You can pan left, pan right, zoom in, zoom out in the altitude graph.

Speed graph
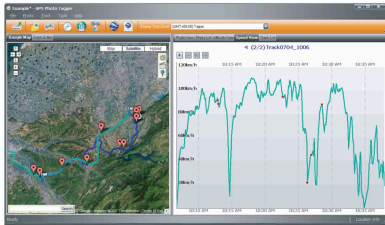
Switch to "Speed View" window will show the speed graph. The waypoints with photos on it will be marked with red square. Moving cursor on red square will display the photo. You can pan left, pan right, zoom in, zoom out in the altitude graph.

Track Editing

Switch to folder "Track Editor" on the left window. Move the cursor on the track will show the preselected waypoint time. Click on track to select the whole track.

Mouse right button menu command "Delete this point" will delete the selected waypoint. Mous e right button menu command "Delete Selected Object" will de lete the selected track.

Save and Open Project

Menu command "File" -> " Save project" will save the tracks and photo as a project file.

Menu command "File" -> 📂 Open project..." will open the saved project. The project, photos, and photo comments will be restored after the project opened.
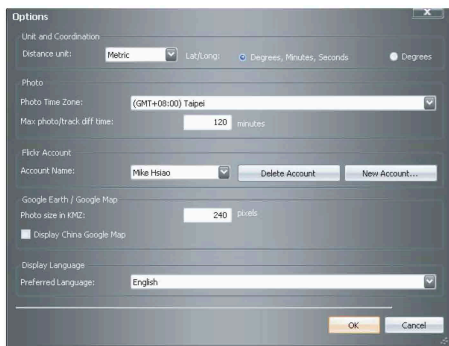
Time Zone Setting

There are two time zone settings in "GPS Photo Tagger". One is "Photo time zone", the other is "D isplay time zone". "Photo time zone" is set to the same time zone of your digital camera. The "Display time zone" is set for disp laying purpose. For example, If you are an Englishman and you travel to United State. The "Photo time zone" should be set to "England" because your digital camera time zone is in England, and the display time zone should be set to "United State".

The "Photo time zone" by default is set to the PC default value. In most of the case the default value is correct.

Menu command "Tools" -> " ✂ Options" will invoke the options dialog. You can set "PhotoTime Zone" in the dialog.

The "display time zone" setting is in the status bar.
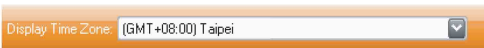
Options

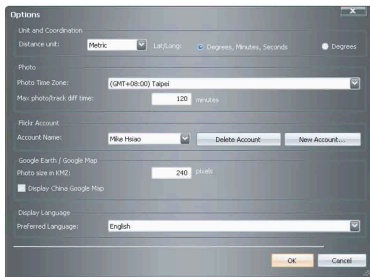Menu command "Tools" > " 🗡️ Options…"

Distance unit:

Metric: Kilometer / meters will be used for displaying.

Imperial: Miles / feet will be used for displaying.

Lat/Long:

Degrees, minutes, seconds: Latitude and longitude will be display like 23°12'20"

Degrees: Latitude and longitude will be display like 23.22152°

Photo Time Zone:

The time zone of your digital camera time setting

Max photo/track diff time:

The setting is used to match photo and track waypoints. Photo Tagger will match photos and waypoints by time. It will find the nearest waypoint time to locate the photo. Yet, if the closest waypoint time is more than the "Max photo/track diff time", it will not match the photo.

Photo size in KMZ:

The size of the photos packed in the KMZ file. It is related to the command "File" > 🔷 Export As KMZ…"

Preferred Language:

Set the languages for menu, buttons and messages.

Appendix

Appendix A. Specifications

General	
Frequency	L1,1575.42MHZ
C/A Code	1.023MHZ
Datum	WGS84
Performance Characteristics	
Position Accuracy	Without aid: 3.0m 2D-RMS
	<3m CEP(50%) without SA(horizontal)
	DGPS (WAAS,EGNOS,MSAS):2.5m
Velocity Accuracy	Without aid: 0.1m/s
	DGPS (WAAS,EGNOS,MSAS):0.05m/s
Acceleration	Without aid:<4g
	DGPS (WAAS,EGNOS,MSAS):<4g
Timing Accuracy	50 ns RMS
Reacquisition Time	<1s
Hot start	1s
Warm start	33s
Cold start	36s
Sensitivity	Acquisition:-144dBm
	Tracking:-158dBm
Update	1Hz
Dynamic	
Altitude	Maximum 18,000m

Velocity	Maximum 515m/s
Acceleration	Maximum 4g
Power	
Input Voltage	Vin : 5.0
Work Hours	25hrs
Battery	Built-in rechargeable 750mAH Lithium battery
I/O	
Available Baud Rates	115200 bps
Protocols	NMEA 0183 v3.01
Environment	
Operating Temperature	-10 ~ 60℃
Storage Temperature	-20 ~ 60℃
Charging	0 ~ 45℃
Bluetooth	
Standard	Fully compliant with Bluetooth V1.2
Output Power	0dBm (Typical),ClassII
Range	Up to 15 meters
Bluetooth Profile	Serial Port Profile(SPP)
Frequency	2.4G ~ 2.4835GHz ISM Band
Security	Yes
USB Bridge	
Standard	Fully compliant with USB2.0
Full - speed	12Mbps
Dimension	93.5 x 46 x 10.8mm

Data Log
32Mb serial Flash ROM
Up to 150,000 way points.
Log GPS data by time interval/ distance/ speed limit.
User can configure settings by using utility.

* Spec subject to changes without prior notice

Checking the package content

Congratulations on your purchase of the GPT-810. Before you start using GPT-810, please make sure if your package includes the following items. If any item is damaged or missing, please contact your dealer at once.

- Bluetooth GPS Trip Recorder - GPT-810 x 1
- USB to mini-USB cable x 1
- Traveler Power Adapter x 1 (optional)
- DC cigarette lighter adapter x 1
- Lithium rechargeable battery x 1
- CD Tool x 1 (user manual, software utility)
- User Manual x 1
- PU anti-slip pad x 1
-

*Unit package contents may vary depending on countries without prior notice.
*NOTE: The Cigarette Adapter can only be used to charge GPT-810. Please don't make use of it with devices other than GPT-810.