GPS Bluetooth Receiver

IGO-08A

User's Guide

Version 1.0

FCC GUIDELINES

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.
- Use only shielded cables to connect I/O devices to this equipment.

FCC Warning:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution:
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Information to user:
The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Table of Content

Introduction

IGO-08A is a GPS receiver with Bluetooth interface adopts advanced ATMEL ANTARIS 4 Super Sense GPS IC, and built-in active antenna for high sensitivity to tracking signal, there's also an external MMCX aerial terminal for users adding higher MMCX antenna. GPS Heading will be correct in low speed and stop through built -in Digital compass.

The data logger function is powerful for recording which place you have been. User can download logger data and transfer to GOOGLE EARTH format in PC.

The IGO-08A is well suited to system integrations including PDA, Smart phone, Table PC and Notebook PC with Bluetooth devices. It satisfies a wide variety of applications that are purposes in automotive, and outdoor recreation navigation systems.

Features

- Adopts advanced satellite located core ATMEL ANTARIS 4 Super Sense.
- Quick location and 16 satellites tracing ability.
- Built in WAAS/EGNOS demodulator, no need extra hardware to receive WAAS/EGNOS signal.
- Built in MMCX connector.
- Battery capacity display

- Digital Compass provides the function of immediate indication of the North.
- Built in Data Logger function
- Support NMEA0183 version 2.2 for exporting data.
- Easy wireless Bluetooth transmission is available in 10 meters distance.
- Flexible design, easy connection with auto-navigation, motorcade control, AVL, personal navigation, tracking system and map service industry.

Package content

Please make sure of your package includes the following items, If any item is damaged or missing, please contact your dealer at once.

1. Bluetooth GPS receiver IGO-08A x 1
2. Lithium rechargeable battery x 1
3. USB cable x 1
4. Slipperiless pad x 1
5. Car charger x 1
6. Travel charger x 1
7. Application Disc with user's guide x 1

Hardware Description

There are four LEDs to show different status:

①Bluetooth（Blue）

Fast blink: Indicates this Bluethooth GPS is waiting for pairing or master device' connection.
Slow blink: Indicates this Bluetooth GPS is connecting successfully.

② Power LED（Red）

Lighten: Charging
Darken: Charging complete

③ GPS （Green）

Lighten: GPS power on
Darken: GPS power off

④ Circle LED (Red)

Digital compass & battery capacity display

⑤ Charge socket

⑥ Battery bolt

⑦ Switch 1 (◀◀)

Long press: Digital calibration On/ Off
Short press: Digital compass function On/Off

⑧ Switch 2 (▶▶)

Long press: PC connecting mode On/Off
Short press: BT function On/OFF

⑨ Power switch

Long press: Power On/ Off
Short press: Power capacity display on circle LED

⑩ MMCX Antenna Socket

Technology Specification

Satellite receiving	Receiving and tracking 16 satellites at the same time Receiving frequency: 1575.42MHz Receiving code: L1, C/A code
Accuracy (Precision)	General positioning: 2.5m CEP DGPS/SBAS: 2.0m CEP
Acquisition	Cold start: 34 sec (Average) Warm start: 33 sec (Average) Hot start: 1 sec (Min)
Sensitivity:	-158dBm (Super sense mode)
Dynamics:	Altitude: max. 18,000m (Max.) Velocity: max. 500m/sec (Max.) Acceleration. Max. +/-4g (Max.)
DGPS	WASS/EGNOS
Navigation update rate:	Once per second
Baud Rate:	9600bps
GPS protocol	NMEA 0183 V2.2, GGA, GSV, GSA, RMC
Bluetooth spec.	Blue Tooth V2.0

Compass	Digital compass (2 AXIS)
Data logger	25806 records
Power supply:	DC 5.0V ±5%
Power consumption	77mA (Average)
Operating Temp.	-10°C~ +60°C
Storage Temp.	-20°C~ +85°C
Humidity	5%~95%
Size:	64(L) x 41 (W) x 19 (H)mm
Weight	54g (include battery)
Battery:	Nokia 6100 compatible (spec. 3.7V / 700mA)
Operating Hour	Up to 9 hours at battery full charge condition
Output connect	Mini-USB (TTL Level)

Operation

1. How to use battery

1-1 Charging battery more than 8 hours

Before first time using IGO-08A's battery, user has to charge the battery more than 8 hours. Connect travel charger or car charger with this device DC5V charge socket. The Power LED（Red）lighten indicates charging, the red LED goes off indicates finish charging.

1-2. Battery capacity check

Press the Power Switch for 1 second when the IGO-08A is power on; the circle LED shows battery capacity. Each LED equals 12.5% power. Eight LED lighten shows full battery. We strongly recommend user to charge while under three LEDs.

2. Turn on IGO-08A and wait for Bluetooth device' connection.

LED will show below status:

- Bluetooth LED（Blue）will blink quickly if it is used first time or link switch have been activated by users.（waiting for pairing or connecting with other Bluetooth device）
- Bluetooth LED（Blue）will blink slowly if it is connecting successfully.
- The GPS LED（Green）will blink slowly two second later

after positioning successfully.

3. How to active Bluetooth enabled device

There are many Bluetooth enable devices like PDA or Bluetooth dangle on the market, which direct connect with IGO-08A. Each one may have different Bluetooth setup procedure. Please refer to their user manual for detail instruction.

Activate Bluetooth search and connect function of Bluetooth PDA or dangle. A virtual comport will be assigned after Bluetooth connection is successful.

Every time you want to connect IGO-08A with a new Master Bluetooth device, which never pair before, user has to push pairing switch of your master bluetooth device first. (Bluetooth LED will blink quickly) Second, enable Master Bluetooth device' *search Bluetooth device function*, master Bluetooth device will take few seconds fo find GPS and ask for keying pass key. After entering valid PASS KEY, connection will be setup. (Please refer to Bluetooth PDA or other master Bluetooth device for details).

The PASS KEY (or PIN CODE) for IGO-08A is "0000".

4. Running GPS navigation software

Verify and select Bluetooth virtual comport with default baud rate for navigation software, then start to run navigation software.
Note: Make sure the comport number of PC is the same as Bluetooth virtual comport number.

5. How does GPS Compass work?

5-1.GPS Compass Calibration

Calibrate the GPS receiver before using.

1. Long press the Switch 1 (◅◅) for 2 second to enter Calibration mode, the Circle LED will lighten. Set GPS receiver on your car and turn around for 360°. Fix the bottom (Battery bolt) of IGO-08A to the same direction as your car's head to run Compass calibration. Long press Switch 1 (◅◅) again for 2 second to finish calibration. Digital Compass function is on now.

2. Do not put magnetic object close to GPS receiver to avoid of Compass function inefficacy.

3. Set the GPS receiver horizontal during using Compass function.

4. In order to get the best accuracy, please run Compass calibration each time you place IGO-08A on different cars.

5-2. GPS Compass setting

1. Short press Switch 1 (◅◅) to switch Compass On/OFF

2. IGO-08A will check the direction when Digital Compass is on. When the moving speed is over 20km, GPS receiver's direction adopts the satellite's data; if the speed is less than 20km, GPS receiver's direction adopts the Digital Compass's data.

3. The GPS get miscarriage and wrong direction easily

during low speed. Switch to Digital Compass mode to increase GPS Navigation efficiency.

4. We recommend user to turn off Digital compass heading in magnetic field. (Short press Switch 1 (◅◅))

6. Data logger

1. GPS Receiver could save 25806 data by build-in flash memory.

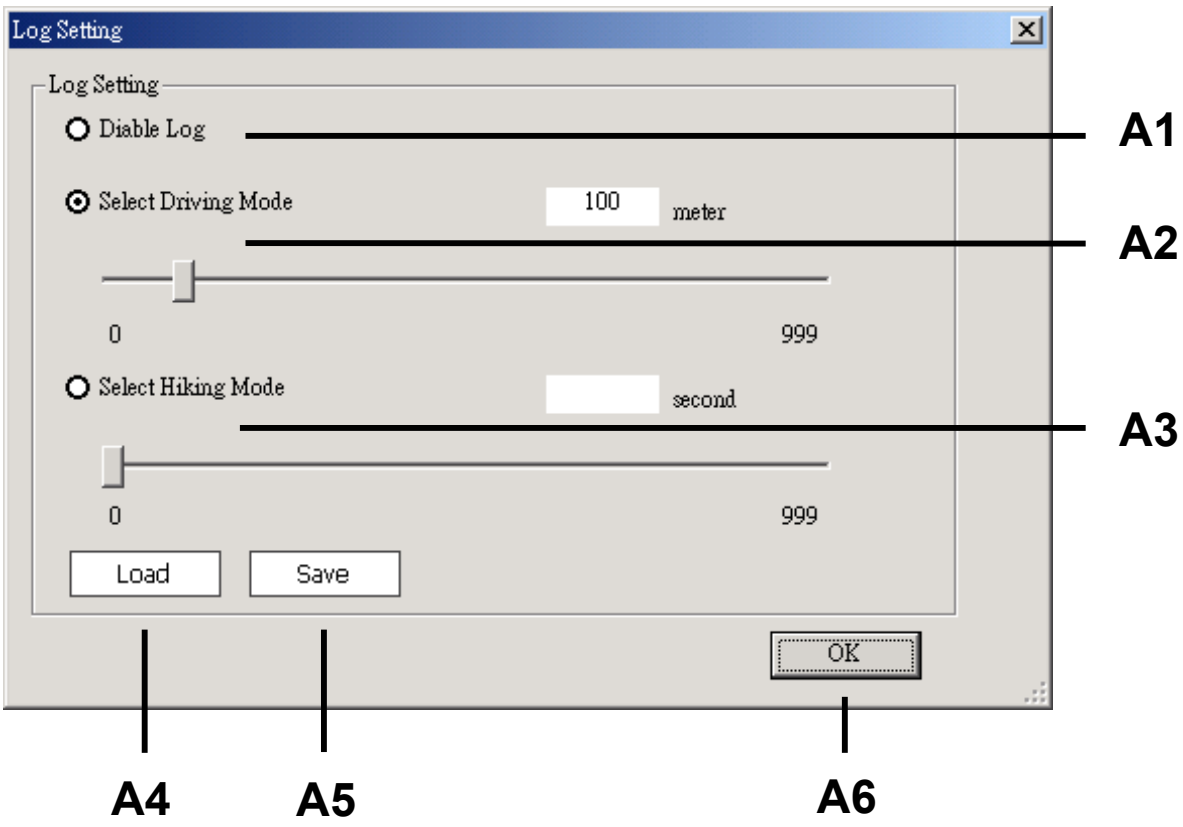
2. When 25806 data is full, it will save from the beginning and original data will be covered.

3. IGO-08A supports two kinds of recording mode
   Driving mode: distance unit
   Hiking mode: time unit

4. Before connecting IGO-08A with your PC to run Data logger setup and download, please shut down the GPS Receiver. (Long press Switch 2 (➢➢) for 2 seconds)

5. You could shut down BT function (Short press Switch 2 (➢➢) key) to extend the battery's operating hour when using Data logger but not navigation function.

A



A1. Stop Data logger

A2. Start Driving Mode

A3. Start Hiking Mode

A4. Read the GPS setting

A5. Save the GPS setting

A6. Close the window

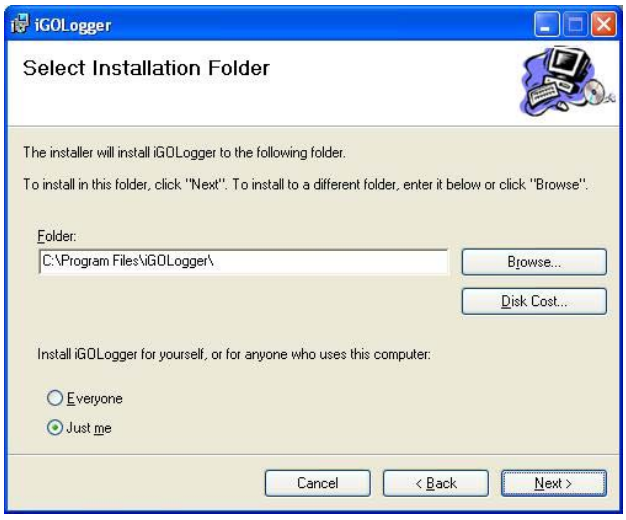
Attention

1. Users could choose to start Data logger function or not.
2. Recording mode could divide into driving mode and hiking mode.
3. Driving mode is recorded by steady distance.
4. Hiking mode is recorded by steady time.

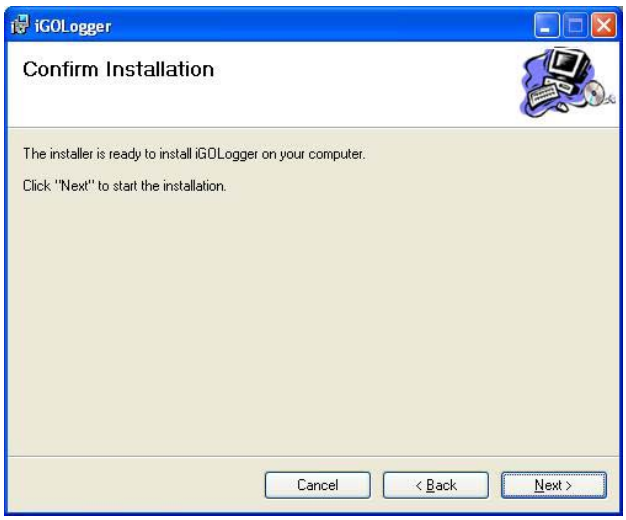
7. IGO-08 Download software

7-1 Install the IGO Logger

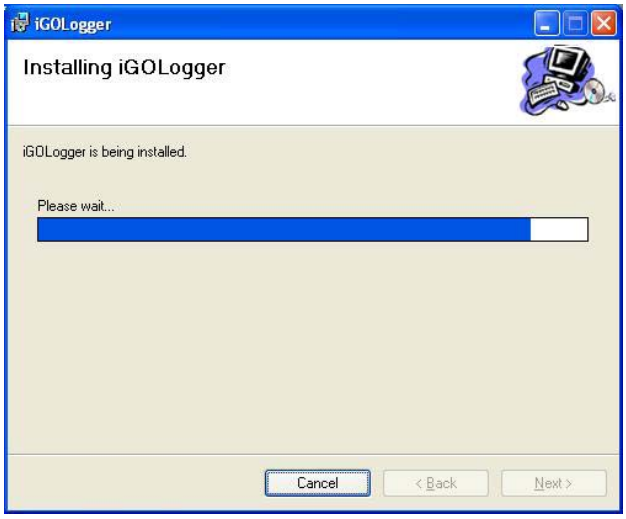
7-1-1 Please insert the application disc. Select “iGO Logger” file and click Next to continue



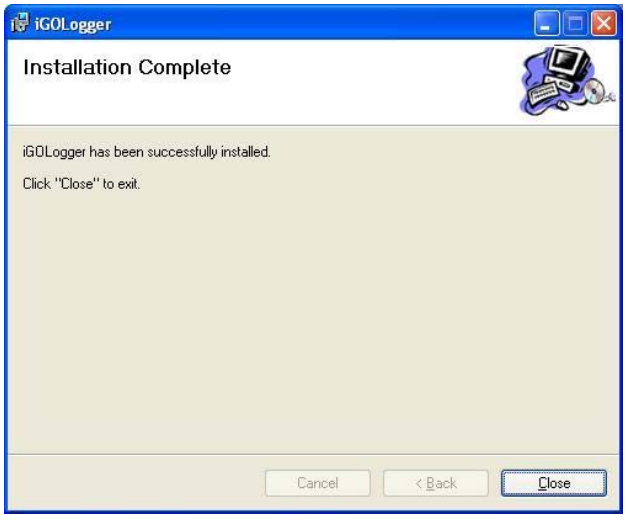
7-1-2 Select “Myself” and click Next.



7-1-3 It's ready to install, please click Next.



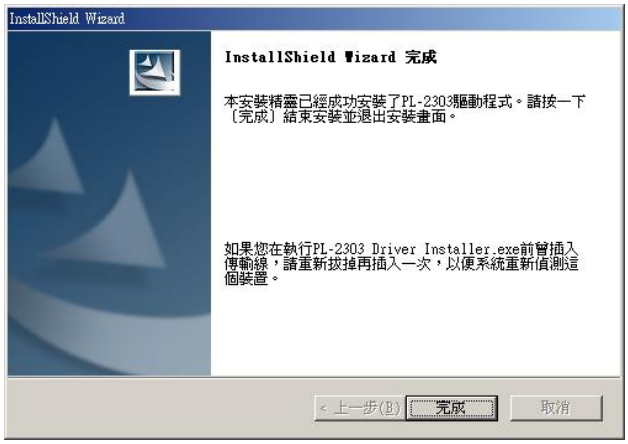
7-1-4 Please wait.



7-1-5 IGO Logger has installed successfully.

7-2 Install the USB Bridge Driver (PL-2303)

7-2-1 Please insert the application disc. Select “PL-2303 Driver Installer” file and click Next.



7-2-2 USB Bridge Driver has installed successfully, please click **Finish**.

7-3 Connect with USB cable

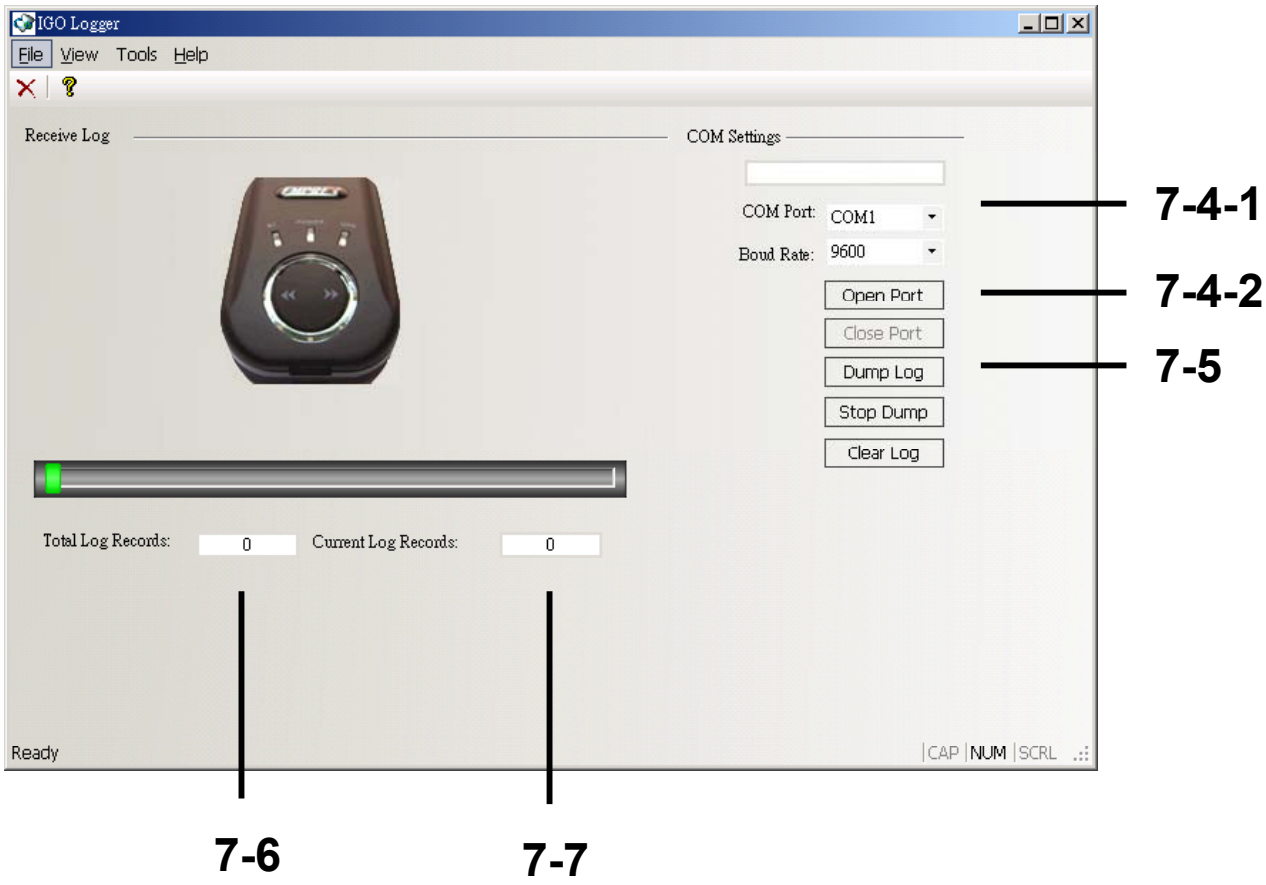
Plug one end of the USB cable to the USB port on your computer. Connect the other end of the USB cable to the USB socket of IGO-08A.

7-4 Check your comport number

1. Move the cursor to My Computer and press the right button of your mouse. Select ***"Content → Hardware → Device Manager."*** Check USB to serial COM port number.

   7-4-1 Select the same COM

   7-4-2 Click "Open Port"



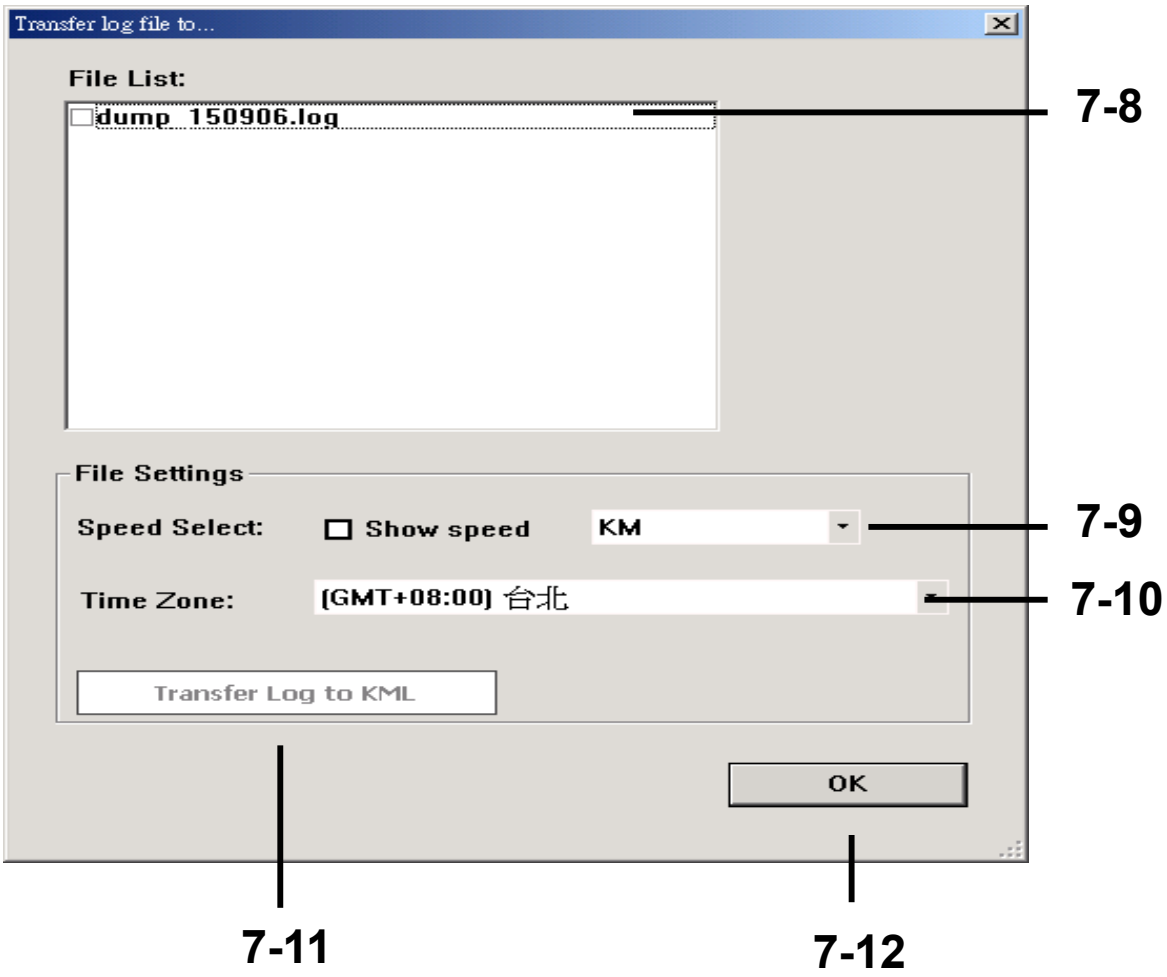
2. Click Dump log button **(7-5)** to run Data log download and check the records. **(7-6, 7-7)**

3. File list window will show up after download. **(7-8)**

   Click the file you want to transfer to Google earth, and set the unit **(7-9)** and time **(7-10)**. The default recording time is Greenwich Mean Time, that user could change time in different district.

4. Click “Transfer log to KML” **(7-11)** to Transfer log to Google earth

5. Click “OK” **(7-12)** to exit the window.



PS: PC needs to install Google earth map firstly before running data transfer.

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