760 GPS Recorder

User's Manual

Published 18-March-2010

*Specifications subject to change without prior notice.

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1. Before you begin

1.1 Note and Warning

- If 760 is used in temperature lower than -10℃ or higher than 60℃, its Lithium-Ion battery charging capability will decrease. Please leave your 760 far from heat or high temperature environment. In addition, do not expose your 760 in temperature higher than 140℉/60℃. The battery inside 760 may overheated and explode or burn itself, and this will lead to very serious damage. The Lithium-Ion battery inside the 760 should be recycled.

- It is recommended to turn off 760 while in the hospital. Wireless GPS may interfere with medical equipments which use radio frequency.

- Remove the battery from 760 and store it in dry/cool places if you are not using 760 for a long period of time.

- Keep the 760 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 your 760, 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 760 yourself. Unauthorized hacking may damage the unit, and void your warranty.

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1.2 Introduction

GPS 760 features commercial grade GPS receiver to help manage your field team effectively. Its water-proof, durable all-in-one design includes audible feedback and motion sensor to give maximum battery life.

GPS 760 allows you to log your route by setting the interval of time/ distance/ speed. Easy to use and durable button allow field personal to record point of interest by push of a button. Through user friendly utility, it can display your track on Google Earth.

1.3 Features

- Durable push button for POI recording
- Smart log of time, distance and speed
- Log up to 250,000 waypoints
- High receiving sensitivity with AGPS capability
- IPX3 water-proof
- Embedded sensor for smart operation
- Smart auto on/off
- Vibrator / Buzzer (optional) for POI confirmation
- Rechargeable battery
- Optional BT connection capability

1.4 Applications

- Record your travels
- Manage trip expense
- Manage field team
- Point of interest recording

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1.5 Package content

Congratulations on your purchase of GPS 760 with Lithium-Ion chargeable battery. Before you start using 760, please make sure your package includes following items. If any item is damaged or missing, please contact your local dealer at once.

1. 760 GPS Recorder (include Li-Ion battery) x 1
2. USB cable x 1
3. Power adapter x 1
4. CD Tool x 1 (user manual, software utility, driver)
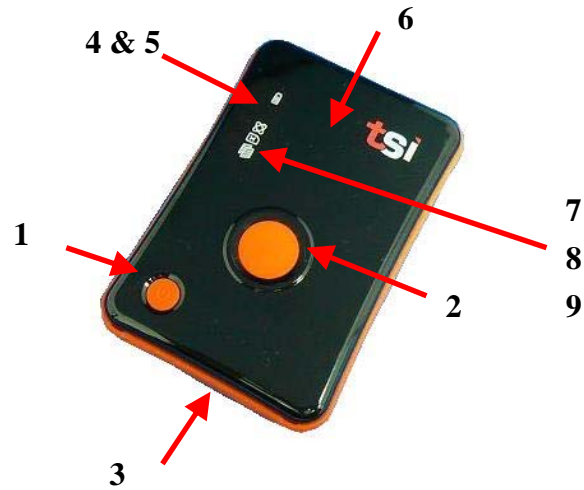5. Quick start guide x 1

* Unit package contents may vary depending on countries without prior notice.
* The power adapter can only be used to charge 760. Please don't make use of it with devices other than 760.

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2   Getting Started

2.1 Appearance

1. Power bottom
2. Push to log (POI) bottom
3. USB connector (with cover)
4. Battery status LED (Red/Green)
5. GPS status LED (Orange)
6. Internal GPS antenna
7. Memory capacity LED (Red)
8. Mode LED (Blue)
9. BT LED (Blue) - Optional

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2.2 Buttons

Name	Description
Power	Press and hold 2 seconds to turn On and Off your device
POI	Push button to record Point of Interest (POI), Memory status LED will blink 3 times to confirm button pressed
Power + POI	Press both buttons at the same time will display battery level

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2.3 LED Display

The 760 GPS Recorder has following LED displays for status update.

Symbol	Function / Color	Status	Description
	Battery Status /Red	Blinking	Low battery level
		On	During power charging via USB port
		Off	Charging is completed
	Green	On / Off	Power gauge when both POI and Power buttons are pressed at the same time
	GPS Status /Orange	On	Acquiring satellites, GPS position not fixed
		Blinking	GPS position is fixed
	Memory capacity /Red	Blinking	The device is logging position
		Blink 3 times	POI button is pressed
		On	The memory is >80% full
	Mode /Blue	On	Mode 1
		Slow blinking	Mode 2
		Fast blinking	Mode 3
	Bluetooth Status /Blue (Optional)	Off	Bluetooth disconnected
		Blinking	Bluetooth is connected for data transmission

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2.4 POI confirmation

GPS 760 uses following methods to confirm press of POI button:

- ☐ Vibrator (default)
- ☐ Memory capacity LED blinks 3 times (default)
- ☐ Sound buzzer alarm (Optional)

2.5 Getting Started

Please follow the procedure step by step.

Step 1 Charging Your Battery

Connect your USB cable between 760 and 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 or home adapter.

For the 1st time you use the 760, please charge battery until it is full. Red Power LED will be On during charging cycle and turns Off once the charging is completed.

Step 2 Turn on your GPS 760 and get position fix

Turn on your GPS 760 by press-and-hold the power button for 2 seconds. Power LED will turn on after power on sequence is completed. The orange GPS status LED will stays on before 760 get GPS position fix. Make sure your GPS 760 has clear sky view at this stage of acquiring satellite signal. Depending on your surroundings, it normally takes around 40 seconds to 1.5 minutes before GPS status starts to blink which means 760 has acquired necessary satellite signals and get position fix..

Step 3 Log your position

GPS 760 will start logging your position once it locks to satellites signal. It will log and mark

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position upon press of POI button. A vibrator is used as means of confirmation. Optional buzzer can also be used for confirmation purpose. This is only valid for specific setting when ex-factory.

Step 4 Download logged data

Download your logged data via USB port to your PC. You can use utility AP included in the CD-ROM for data downloading. Further management and analysis of the data can be done via application specific application program. GPS 760 outputs in popular .csv or .bin format for easy interface to application program.

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2.6 Helpful Tips

- Some vehicles using heavy metallic sun protecting coating on windshields may affect GPS signal reception.
- Streets with high rising buildings may affect GPS signal reception.
- Tunnel and indoor parking garage may affect signal reception.
- In general, GPS signal reception best in open space where it can see clear sky. Weather condition will also affect GPS reception – rain & snow contribute to worse sensitivity.
- Low battery status may affect signal reception.
- This device outputs coordinates data every second, therefore the actual position and the position shown on your map may have slight time delay. This may happen when you drive at higher speed or make a turn around a corner.
- For the device not in use over several days, allow it 1~3 minutes to obtain satellite constellation information and fix your position, this is called "Cold Start". Upon battery replacement, GPS device will do Cold Start again.
- If your device can not fix position for more than 20 minutes, please change to another location with open space and then try again.
- When using AGPS function, it is recommend to use GPSView to download the AGPS data to your device via USB port. AGPS data will valid for 6 days for each download.

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3   Configure your GPS Recorder

GpsView program only supports Microsoft Windows based platform.

3.1 Driver Installation

Before the USB connector plugs into your PC/ Laptop, please have your USB Driver installation ready. (Install InstallDriver.exe driver for USB port from CD-ROM.)

3.2 GpsView software

Open the GpsView software, please select correct COM port and Baud Rate 115,200bps to configure GPS.
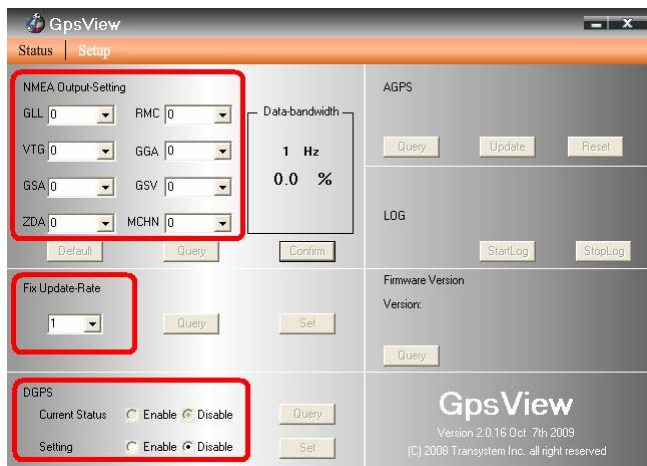
### 3.2.1   Connect USB cable between GPS and laptop

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3.2.2 Execute GpsView Program

Click "Command" tap. Update Rate 1 ~ 5Hz is user configurable. And still more options for choice of NMEA output, DGPS…etc. all available through pull-down menus.

3.2.3 Download AGPS

1. Start→Control Panel→System→Hardware→Device Management→Connector（COM and LPT）Check Com port position。

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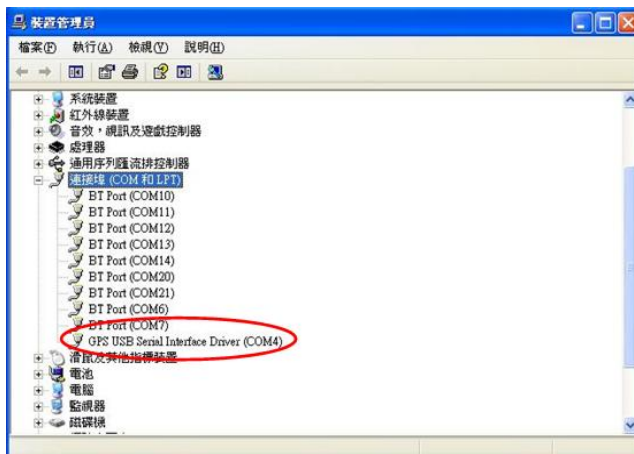
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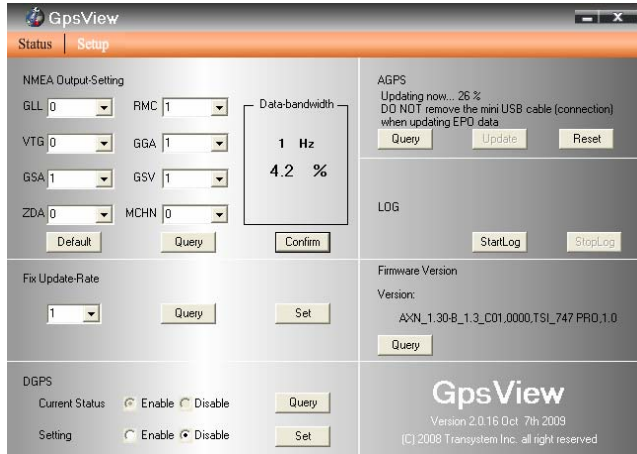2. Open GpsView.exe→Check Baud Rate and Com port→click On

3. Choose Setup
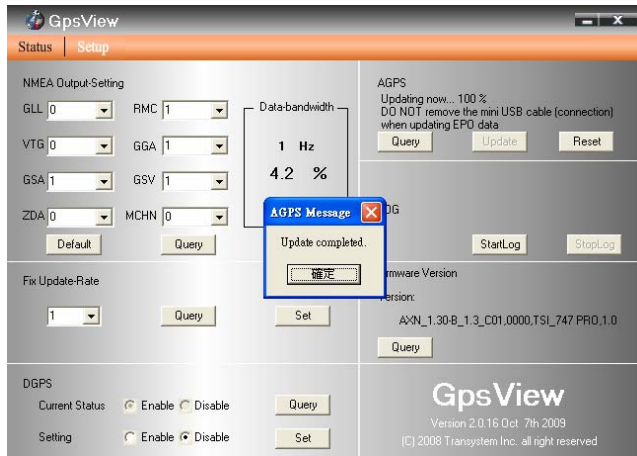
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4. Choose Update

5. When Updating now…100%, click Enter complete。

NOTE: When you use AGPS function, we suggest use GpsView to download the AGPS data via USB cable. AGPS data valid for 6 days after each download

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Appendix A. Specifications

General	
Frequency	L1,1575.42MHZ
C/A Code	1.023MHZ
Datum	WGS84
Performance Characteristics	
Accuracy*	<3m CEP, without aid 2.5m DGPS (WAAS, EGNOS, MSAS)
Reacquisition Time*	<1s
TTFF*	35 / 34 / 1.5s for Cold / Warm / Hot start respectively
AGPS*	<15s
Sensitivity*	Acquisition:-148dBm max / Tracking:-165dBm max
Dynamic	
Altitude	18,000m max.
Velocity	515m/s max.
Acceleration	4g max.
Interface	
Baud Rate	115200 bps (default)
Protocols	NMEA 0183 v3.01 Support WAAS / EGNOS GGA,GSA,GSV,RMC(default); GLL,VTG(optional)
USB Bridge	

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Standard	Fully compliant with USB2.0
Speed	12Mbps
Connector	Type A female
Data Log	
Memory	32Mbit or 64Mbit (optional)
Way points	125,000 (default) or more
Log data	Date, Time, Latitude, Longitude, Velocity, Height Log GPS data by time interval/ distance/ speed limit
Update Rate	1Hz or 5Hz (optional), user configurable via utility AP
Power	
Input Voltage	Via USB type A connector, 5.0V±5%
Battery	Re-chargeable Lithium-Ion battery
Operation time	25 hrs
Environment	
Operating Temperature	-20°C to +60°C
Storage Temperature	-20°C to +85°C
Charging	-0°C to +45°C
Relative Humidity	20% ~ 80% R.H. non-condensing
Waterproof	IPX3
Physical	
Dimension	52 x 82 x 19 mm
Bluetooth (Optional)	
Standard	Fully compliant with Bluetooth V1.2

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Output Power	0dBm (Typical), ClassII
Range	Over 10 meters
Bluetooth Profile	Serial Port Profile(SPP)
Frequency	2.4G ~ 2.4835GHz ISM Band
Security	Yes

* Citation original chipset specifications

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Appendix B. Certification

FCC Notices

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 interface, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC RF Exposure requirements:

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHOURIZED MODIFICATION TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

CE Notices

C€0984①

Is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (89/336/EEC), Low-voltage Directive (73/23/EEC) and the Amendment Directive (93/68/EEC), the procedures given in European Council Directive 99/5/EC and 89/3360EEC.

The equipment was passed. The test was performed according to the following European standards:

☐ EN 300 328-2 V.1.2.1 (2001-08)
☐ EN 301 489-1 V.1.4.1 (2002-04) / EN 301 489-17 V.1.2.1 (2002-04)

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☐   EN 50371: 2002

☐   EN 60950: 2000

Appendix C. Warranty Information

Thank you for your purchase of GPS product from the company.

The company warrants this product to be free from defects in materials and workmanship for one year from the date of purchase. The warranty for accessories is six months. The stamp of distributor or a copy of the original sales receipt is required as the proof of purchase for warranty repairs. The company will, as its sole option, repair or replace any components, which fail in normal use. Such repair or replacement will be made at no charge to the customer for parts or labor. The customer is, however, responsible for any transportation costs.

This warranty does not cover failures due to abuse, misuse, accident or unauthorized alteration of repairs. The company assumes no responsibility about products which have been improperly used, abused, damaged due to accident or natural disaster, or damaged due to unauthorized uninstallation, repair or modification.