

887 photoMate

User's Manual



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Chapter 1 Before you begin

1.1 Note and Warning

- 887 uses + Lithium-Ion battery. If 887 is used in temperature lower than -10°C or higher than 60°C , its battery charging capability will decrease. Please leave the 887 far from heat or high temperature environment. In addition, do not expose your 887 in temperature higher than $140^{\circ}\text{F}/60^{\circ}\text{C}$. If you do not follow these rules, the battery inside 887 may overheat, explode or burn itself, and this will lead to very serious damage. The + Lithium-Ion battery inside the 887 should be recycled.
- While in the hospital, turning off the 887 is recommended. Wireless GPS receiver may interfere with medical equipments which use radio frequency.
- For a long period not using 887, take out the battery and store it in dry/cool places.
- For safety, keep the 887 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 887, 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 887 yourself. Unauthorized hacking may damage the unit, and void your warranty.

1.2 Introduction

This 887 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. Dual mode for both Data record and Navigation.
2. Smart LOG function (User can record the date by setting the interval of time, distance and speed.)
3. 125,000 waypoints.
4. AGPS available.
5. Fuzzy Auto on/off.
6. Phototagger software.
7. G-Mouse function

1.4 Applications

- Record your travels
- Manage business trip expense
- Concerned about one's driving behavior
- Geo-photo

1.5 Appearance



1. DC jack (mini USB type)
2. Button (Power off/ Navigation/ Navigation&log)
3. Bluetooth status LED (blue)
4. Battery status LED (red/green)
5. GPS status LED (orange)
6. Recorder LED (green)

1.6 Power On/Off and Push Button



Difference between NAV and LOG:

NAV	Working as a Bluetooth GPS receiver.
LOG	Both of navigation and logging functions are enabled.





After you into the log mode, the 887 will automatic start smart log function.

What is the Smart log function?

The 887 will auto adjust log frequency depend on speed.

1.7 LED Display

887 photoMate has four LED lights, one is Bluetooth Status LED, the 2nd one is Battery Status LED, the 3rd one is GPS Status LED, the 4th one is Log LED. The status table of LED shows as follows:

Category	SYMBOL	COLOR	STATUS	Function
Bluetooth Status LED		Blue	Always on:	Bluetooth on, but not connected to any Bluetooth devices yet
			1/5Hz blinking:	Sleeping mode
			1/2Hz blinking:	Bluetooth is connected and ready for data transmission
			Off	In LOG mode
Battery Status LED		Red	Blinking:	The battery is too low
		Green	On:	The battery is charging
		Green	Off	The battery is fully charged
GPS Status LED		Orange	Always on:	Acquiring satellites, GPS position not fixed
			1Hz Blinking:	GPS position is fixed, Navigation
LOG Status LED		Green	1/3Hz Blinking	In LOG mode.
			Always on:	The memory has been full.

Chapter 2 Getting Started

2.1 Checking the package content

Congratulations on your purchase of the 887 with built-in + Lithium-Ion chargeable battery. Before you start using 887, please make sure if your package includes the following items. If any item is damaged or missing, please contact your dealer at once.

- photoMate - 887 x 1
- USB to mini-USB cable x 1
- Car charger x 1
- Strap
- CD Tool x 1 (user manual, software utility, driver)
- Quick start guide x 1

*Unit package contents may vary depending on countries without prior notice.

*NOTE: The Cigarette Adapter can only be used to charge 887. Please don't make use of it with devices other than 887.

2.2 Getting Started

Please follow the procedure step by step.

Step 1 Charging Your Battery

To charge your 887 data logger, you have to plug your USB cable into the power source. Charging time is about 90 minutes and you can charge from PC/ Notebook's USB HOST or from cigarette-lighter in car.

For the 1st time you use the 887, please charge battery until it is full (the green LED is off). 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 no LED light display, that means battery is fully charged.

Step 2 Turning on the power (NAV/ LOG)



Difference between NAV and LOG:

NAV	Working as a Bluetooth GPS receiver.
LOG	Both of navigation and logging functions are enabled.

Step 3 Connecting your handheld device with 887

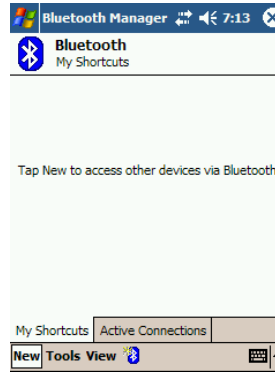
Please refer to the user manual of PDA to enable the Bluetooth connectivity. If the connection between your device and 887 is successful, the blue LED of 887 will be blinking.

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

->Next

-->



Tap 887 GPS

2. Explore a Bluetooth device, and find the “887”



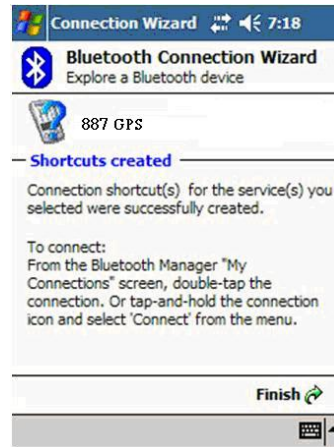
Passkey 0000 (if your PDA asks for the passkey)

3. (Optional)



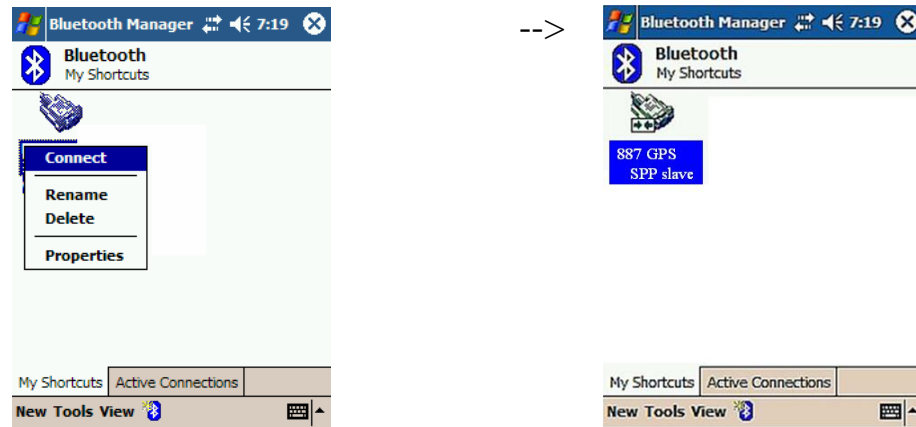
Select SPP slave->Next

-->



Finish

4. Connect to Serial Port Profile (SPP) Slave



Tap and Hold 887: SPP slave,
Connect

Done

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 887 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.

2.3 Helpful Tips

- It's better to turn off the 887 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 887 may affect signal receptions.
- Please check the correct “COM” and “Baudrate” of your PDA.
- 887 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 887 may not work indoors where it can not see the sky.
- For the 1st time you use the 887, 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, 887 will do Cold Start again.
- If your 887 can't fix your position for more than 20 minutes, we suggest you change to another spot with open space and then try again.

Chapter 3 How to configure your GPS Record ?

The GpsView program only supports the Microsoft Windows based platform.

3.1 Driver Installation

Before the USB connector plugs in 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 (USB / Bluetooth :115,200bps) to configure GPS.

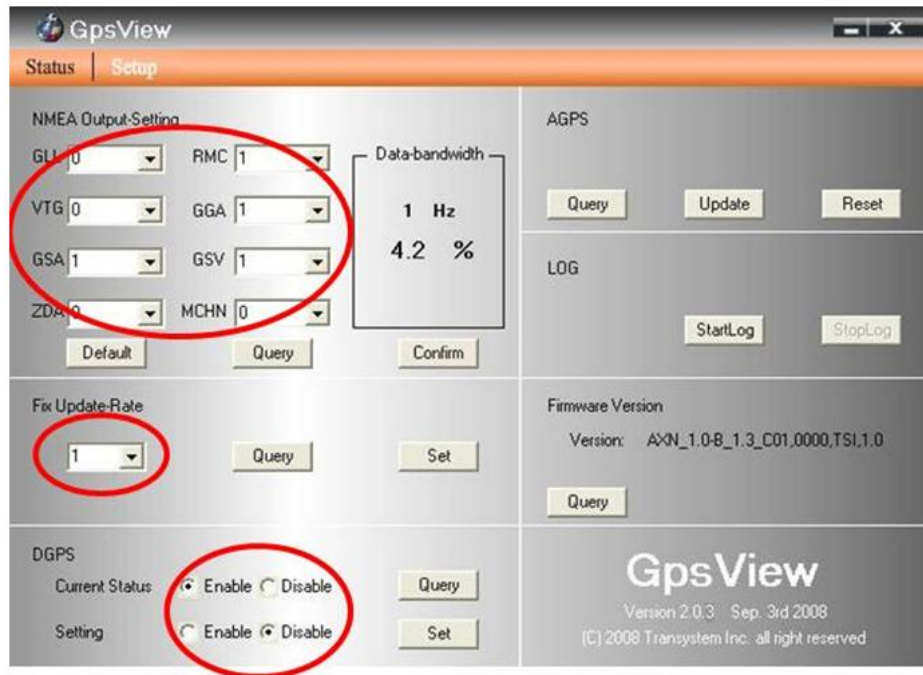
3.2.1 Connect USB cable between GPS and laptop



To USB port on PC/Laptop

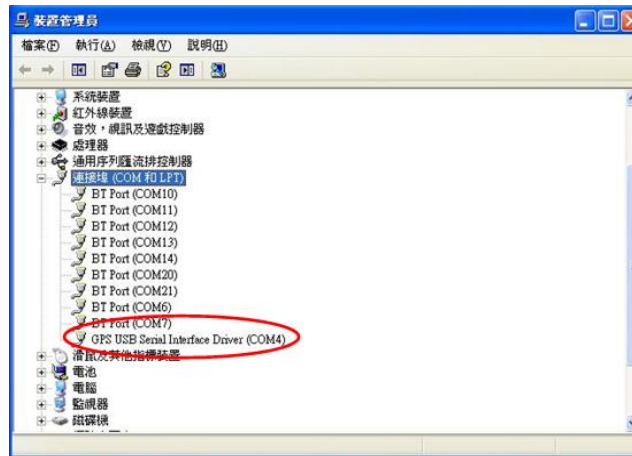
3.2.2 Executing GpsView Program

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.

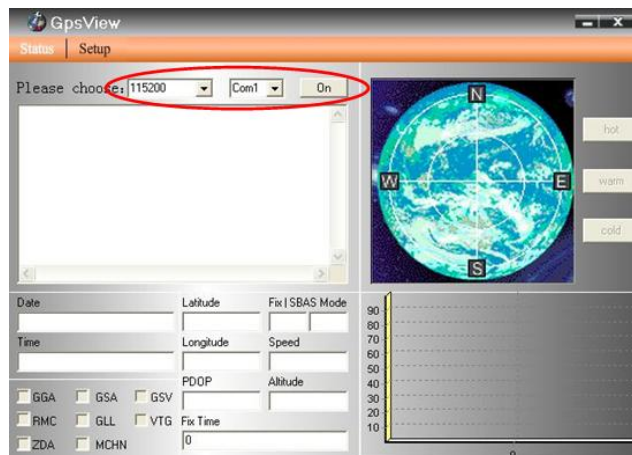


3.2.3 Download AGPS

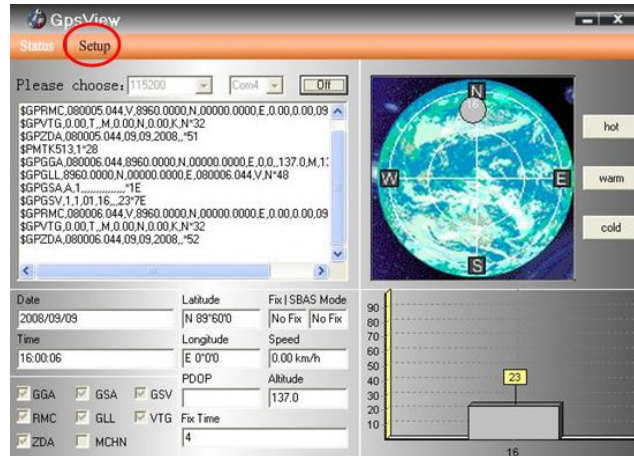
1. Start→Control Panel→System→Hardware→Device Management→Connector (COM and LPT) Check Com port position ◦



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



3. Choice Setup



4. Choice 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.

Chapter 4 Using Photo Tagger software

4.1 Execute and install software utility Photo Tagger

Complete GPS Photo Tagger and USB drivers installation (Refer to CD)

4.2 Google Earth

If your computer is not yet installed with Google Earth. Google Earth has a free download version, go download it on the internet first. For more information, please visit <http://earth.google.com/>.

4.3 Software Utility --- 887 Photo Tagger

For further function to use the Photo Tagger software in detail, please refer to Photo Tagger user manual:

Photo Tagger software > Help > User Manual

To use a mini-USB cable to connect the 887 to your PC, you have to power on the 887 unit. Please keep in mind to switch to LOG mode while using Photo Tagger software.

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	1.5s
Warm start	34s
Cold start	35s
AGPS	<15s
Sensitivity	Acquisition:-148dBm Max.
	Tracking:-165dBm Max.

Update	1Hz
Dynamic	
Altitude	Maximum 18,000m
Velocity	Maximum 515m/s
Acceleration	Maximum 4g
Power	
Input Voltage	Vin : 5.0V±10%
Battery	Built-in chargeable + Lithium-Ion battery
I/O	
Available Baud Rates	115200 bps
Protocols	NMEA 0183 v3.01
Environment	
Operating Temperature	-10 ~ 60C
Storage Temperature	-20 ~ 60C
Charging	0 ~ 45C
Bluetooth	
Standard	Fully compliant with Bluetooth V1.2
Output Power	0dBm (Typical),ClassII
Range	Over 10 meters
Bluetooth Profile	Serial Port Profile(SPP)
Frequency	2.4G ~ 2.4835GHz ISM Band
Security	Yes

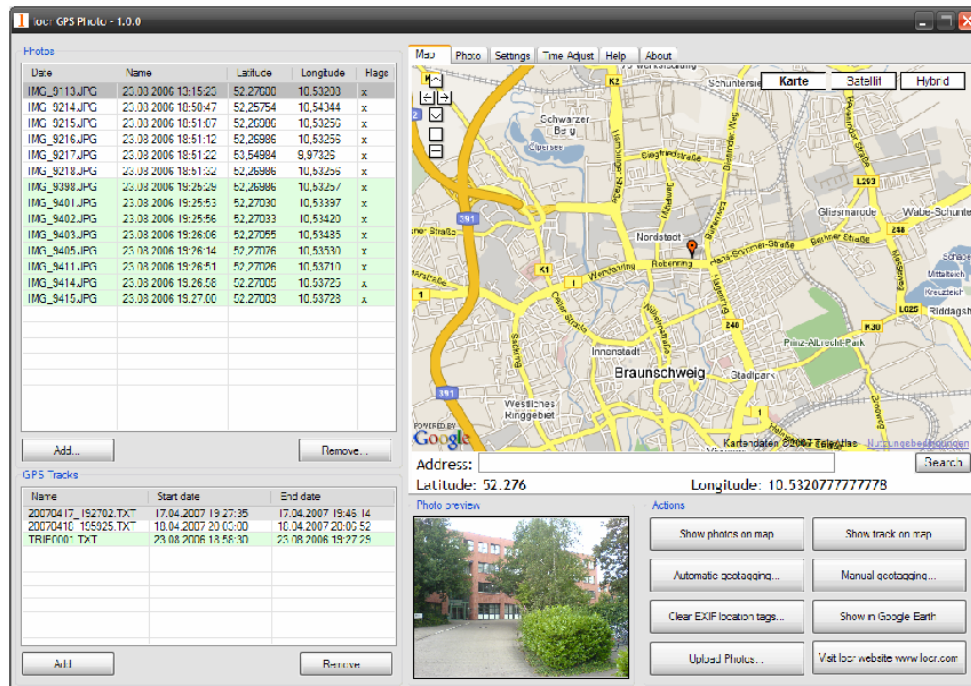
USB Bridge	
Standard	Fully compliant with USB2.0
Full speed	12Mbps
Dimension	44 x 26 x 15 mm
Data Log	
32Mb serial Flash ROM	
125,000 way points.	
Log GPS data by time interval/ distance/ speed limit.	
User can configure settings by using utility.	

*.Citation MTK original chipset spec.

Appendix B. locr GPS Photo

With 887 data logger and locr GPS Photo software, users are allowed to import geotagging adds information to photos. The position (latitude/longitude) then be written into the EXIF header for the further application. Also, locr GPS Photo can integrated travel log and digital photos by date/time to show photos on the map directly.

Please find the installation file for Windows XP/ Vista in CD tool, or go to <http://www.locr.com> for further information.



Appendix C. 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.

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE 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 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.

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.

FCC RF Exposure requirements:

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

CE Notices

CE 0984 

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 89/336/EEC.

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)
- EN 50371: 2002
- EN 60950: 2000

Appendix D. 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 for special, incidental punitive or consequential damages, or loss of use.