886 mobileMate

User's Manual

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Ver 1.2

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Note and Warning

- 886 uses + Lithium-Ion battery. If 886 is used in temperature lower than -10℃ or higher than 60℃, its battery charging capability will decrease. Please leave the 886 far from heat or high temperature environment. In addition, do not expose your 886 in temperature higher than 140℉/60℃. If you do not follow these rules, the battery inside 886 may become heat, explode or burn itself, and this will lead to very serious damage. The + Lithium-Ion battery inside the 886 should be recycled.
- While in the hospital, turning off the 886 is recommended. Like other common equipments do, wireless GPS receiver may also affect these medical equipments which use radio frequency and make these equipments malfunction.
- For a long period not using 886, please store it in dry/cool places.
- For safety, keep the 886 and all accessories out of small children's reach.
- We assume no responsibility for any damages and loss resulting from the use of this manual and also by deletion of data as a result of malfunction, dead battery, or misuse of the product in any way.
- Use only the supplied and approved accessories. Unauthorized accessories, antenna, modifications or attachments could damage the 886, 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 886 yourself. Unauthorized hacking may damage the unit, and void your warranty.

Chapter 1 Before you begin

Thank you for purchasing the mobileMate 886, a global positioning system receiver with Bluetooth wireless technology. 886 is well suited to system integrations including PDA, smart phone, Tablet PC and Notebook PC with Bluetooth devices. It can satisfy a wide variety of applications such as PDA and smart phone navigation, automotive vehicle tracking, personal positioning and sporting. With the dimension of 44 x 26 x 15 mm and weight only 18g (w/ battery), 886 is an ideal solution to carry along everywhere.

886's chargeable battery can save satellite information such as the status of the satellite signal, most recent location and the data and time of its last use. The low-power design has extended the operation time up to 11 hours and brought you the most convenient and longest usage of its kind. With the lead-free production process (starting Jan. 1, 2006), 886 is the most environmentally friendly wireless GPS receiver in the market.

886 has distinguished features others don't have. With our patent pending **Smart Power Save Mechanism** and **Fuzzy Auto On/Off** features, our 886 consumes 65% less power than other Product, and can extend the operating time up to 11 hours.

1.1 Appearance

1. Power jack (mini USB type)
2. Mode switch (Power off/ Navigation/ USB)
3. Battery status LED (red/green)
4. Bluetooth status LED (blue)
5. GPS status LED (orange)

1.2 Checking the package content

Congratulations on your purchase of the 886 with built-in + Lithium-Ion chargeable battery. Before you start using 886, please make sure if your package includes the following items. If any item is damaged or missing, please contact your dealer at once.

- mobileMate - 886 x 1
- Car charger x 1
- USB to mini USB cable x 1
- Strap x 1
- Quick start guide x 1

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

Chapter 2 Getting started

Please follow the procedure step by step.

Step 1 Charging Your Battery

For the 1st time you use the 886, please charge battery until it is full (no LED light display). Take the power cable and connect it to the power jack (mini USB type). This will begin to charge the battery. The LED that represents the battery is the green light battery 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 LED is blinking, that means battery is fully charged.
- When you plug into the mini USB cable to charge your unit, it will takes 1~2 seconds then you can see the green LED is on.

Step 2 Turn on/off 886

Push button 3 sec to turn on/off 886.

Power off

Power on

Step 3 Connecting your handheld device with 886

Please refer to the user manual of PDA to enable the Bluetooth connectivity. If the connection between your device and 886 is successful, the blue LED of 886 will be blinking.

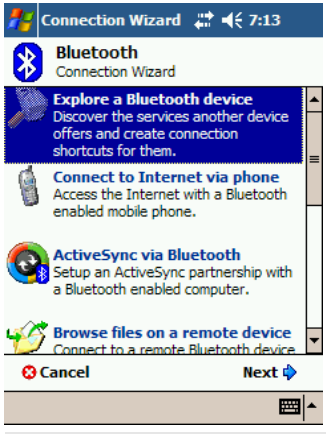
Below, we provide a common procedure of software installation to set up your PDA. (For other PDA, the steps may be a little bit different. Bluetooth Manager is one of popular program used for Bluetooth device.)

-->

Start -> Bluetooth Manager

New

1. Open “Bluetooth Manager” on pocket pc, and establish new connection.



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Explore A Bluetooth device ->Next

Tap 886 GPS

2. Explore a Bluetooth device, and find the “886 GPS”

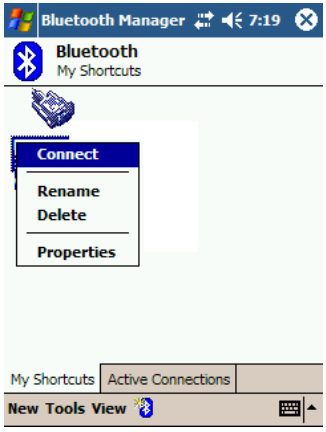
Password 0000 (if your PDA ask for the password)

3. (Optional)

-->

Select SPP slave->Next Finish

4. Connect to Serial Port Profile (SPP) Slave



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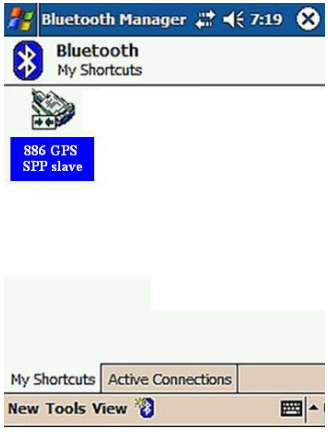


Tap and Hold 886 GPS: SPP slave, Connect

Done

5. Finish Bluetooth Manager Setup

Step 4 Load 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 886 for navigation.

Step 5 Start 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.

Chapter 3 How to configure your GPS Receiver ?

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.
[Note] GpsView software and USB driver for 886, please download them from http://www.transystem.com.tw/download/index.php

3.2 GpsView software

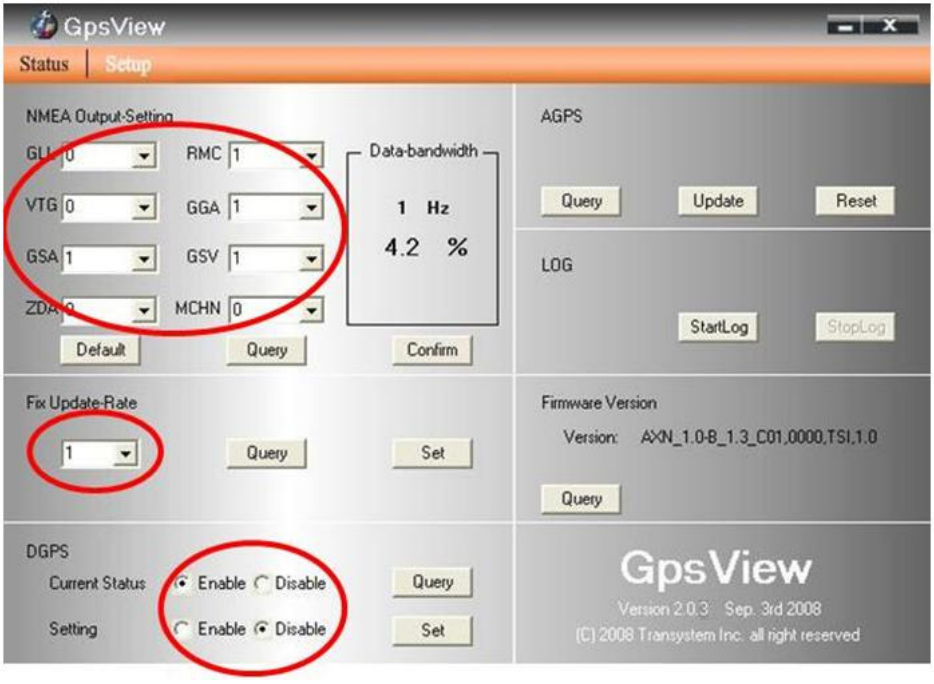
Open the GpsView software, please select correct COM port and Baud Rate (USB / Bluetooth :115,200bps) to configure GPS.

3.2.1 Connect USB cable between GPS and laptop

To USB port on PC/Laptop

3.2.2 Executing GpsView Program

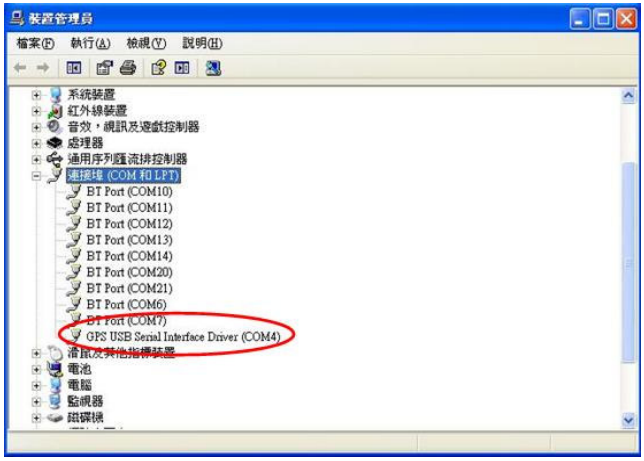
Click “Command” tap. Update Rate 1 ~ 5Hz is user configurable. And still more options for choice of NMEA output, DGPS…etc. all available through pull-down menus.



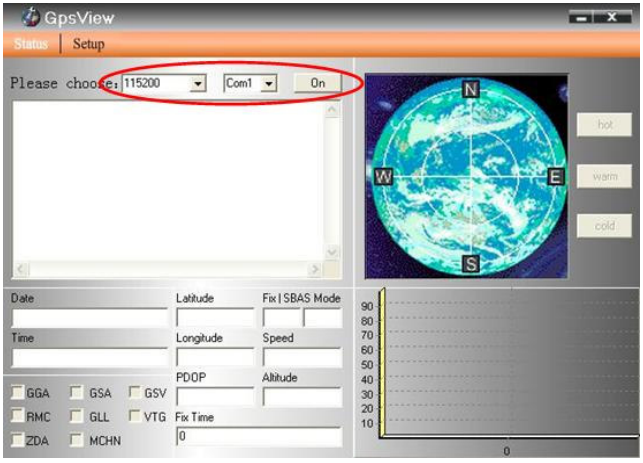
3.2.3 Download AGPS

1. Start→Control Panel→System→Hardware→Device Management→

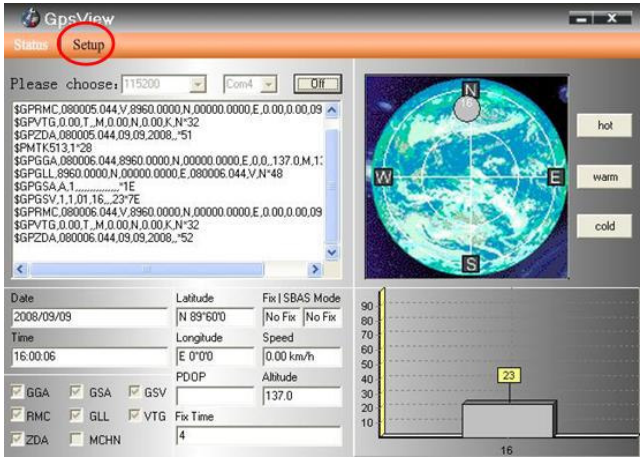
   Connector（COM and LPT）Check Com port position



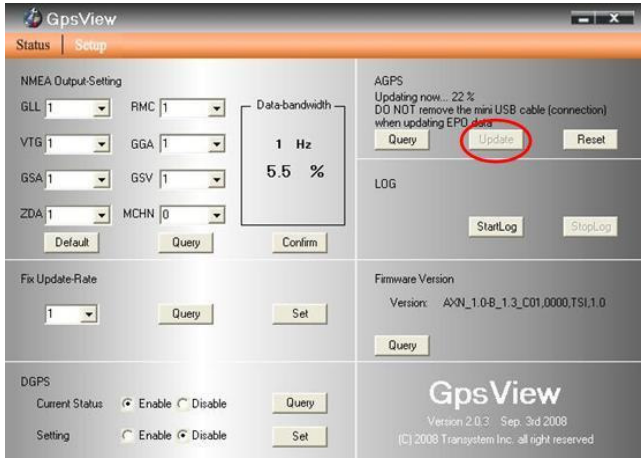
2. Open GpsView.exe→Check **Baud Rate** and **Com** port→click "**On**"



3. Choose “**Setup**”



4. Choice “**Update**”

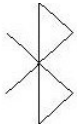
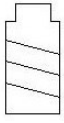
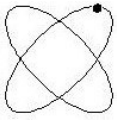


5. When Updating now…100%, click “**Enter”** to complete

[NOTE] When you use AGPS function, we suggest use GpsView to download the AGPS data via USB cable. AGPS has six day time limited.

Appendix A. LED Display

The Bluetooth GPS Receiver has three LED lights, one is Bluetooth Status LED, the 2nd one is Battery Status LED, the 3rd one is GPS Status LED. The status table of LED shows as follows:

Category	SYMBOL	COLOR	STATUS	Function
Bluetooth Status LED		Blue	Always on:	Not connected to any Bluetooth devices yet
			5sec blinking:	Power saving mode (Sleeping mode)
			2sec blinking:	Bluetooth is connected and ready for data transmission
Battery Status LED		Red	Blinking:	The battery is too low
		Green	On	The battery is charging
		Green	Blinking:	The battery is fully charged
GPS Status LED		Orange	Always on:	Acquiring satellites, GPS position not fix
			Blinking:	GPS position is fixed, Navigation

Appendix B. Fuzzy Auto On/Off

886 supports fuzzy auto on/off. It can automatically enter the sleeping mode after your turning off the Bluetooth connectivity, thus you can always power it on with very low power consumption.

With fuzzy auto on/off, if the connection between your device and 886 is successful, 886 will wake up itself and the blue LED of 886 will be quickly blinking again (every 2 sec) and the orange LED of 886 will also be on.

Appendix C. Specification

General	
Chipset	MTK MT3329
Frequency	L1,1575.42MHZ
C/A Code	1.023MHZ
Channels	66
DGPS	WAAS,EGNOS,MSAS
Datum	WGS84
CPU	ARM7TDMI
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	1~5Hz
Dynamic	
Altitude	Maximum 18,000m
Velocity	Maximum 515m/s
Acceleration	Maximum 4g
Power	
Input Voltage	Vin : DC 5.0V±5%
Battery	Built-in chargeable + Lithium-Ion battery
Protocols	
GPS Output Data	Baud rate 115200 bps, Data bit: 8, Stop bit: 1 (Default)

NMEA	NMEA0183 v3.01 Default: GGA, GSA, GSV, RMC
Environment	
Operating Temperature	-10 ~ 60˚C
Storage Temperature	-20 ~ 60˚C
Charging	0 ~ 45˚C
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
Physical Characteristics	
Dimension	44 x 26 x 15 mm
Weight	18g

＊.Citation of chipset spec. is from MTK

Appendix D. Frequently Asked Questions

Q: The GPS Demo software GpsView doesn't seem to be making any connections with my Bluetooth GPS receiver. How do I make it work?

A: You will need to make sure your PDA is paired with Bluetooth device. Follow the section "Chapter 2. Getting started > Step 3 Connecting your handheld device with the 886" to make sure that your PDA is recognizing the Bluetooth GPS receiver properly. If so, you will need to connect with the device by going to the Bluetooth Manager and double-tapping on the 886 icon.

Q: My Bluetooth GPS Receiver seems to be receiving the satellite signals, but I am unable to establish a connection between the receiver and my PDA. How can I make a connection?

A: Go to the Bluetooth Manager on your PDA. Locate the "886: SPP Slave" icon and tap and hold. A pop-up menu will appear, select Delete. Next, perform a soft reset on your PDA.
Once your PDA has finished resetting itself, go back to the Bluetooth Manager screen and perform the typical setup and connection procedures for your Bluetooth receiver (for help with connection please review the section "Chapter 2 Getting started > Step 3 Connecting your handheld device with the 886").

Appendix E. Helpful tips

Your 886 should be treated with care and properly maintained to ensure the best performance. Keep in mind these helpful tips when using your receiver:

- Some vehicles having heavy metallic sun protecting coating on windshields, which may affect signal receptions
- Driving in and around high buildings may affect signal receptions.
- Driving under tunnels or in buildings may affect signal receptions.
- Low battery of a PDA or of an 886 may affect signal receptions.
- Please check the correct “COM” and “Baudrate” of your PDA.
- 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.
- 886 output data updates every second, thus the actual position and the position in your map may have time delay. This may happen when you drive at higher speed or make a turn around a corner.
- Note that 886 may not work indoors where it can not see the sky.
- For the 1st time you use the 886, it will take 1 to 3 minutes to get the satellite constellation and fix your position, this is called “Cold Start”. If you replace the battery, 886 will do Cold Start again.
- If your 886 can’t fix your position for more than 20 minutes, we suggest you change to another open space and then try again.

Appendix F. 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.

Industry Canada Caution

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, o737

Ainable from Health Canada's website.

"www.hc-sc.gc.ca/rab"

CE Notices

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)
- EN 50371: 2002
- EN 60950: 2000

Appendix G. 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.

Warranty

Model number:	
Series number:	
Data of purchase:	
Name:	
Address:	
City, Zip code:	
State, Country:	
E-mail address:	

Distributor Stamp Here