

# 737 A<sup>+</sup> Wireless GPS Receiver

## User's Manual

---



Published on 28-Jul-2009

# Table of Contents

---

<b>Chapter 1 Before you begin</b> .....	3
<b>1.1 Appearance</b> .....	4
<b>1.2 Checking the package content</b> .....	5
<b>Chapter 2 Getting started</b> .....	6
<b>Step 1 Charging Your Battery</b> .....	6
<b>Step 2 Turn on the power switch</b> .....	7
<b>Step 3 Connecting your handheld device with 737 A<sup>+</sup></b> .....	7
<b>Step 4 Load your GPS mapping or routing software</b> .....	10
<b>Step 5 Start the application</b> .....	10
<b>Chapter 3 How to configure your GPS Receiver ?</b> .....	11
<b>3.1 Driver Installation</b> .....	11
<b>3.2 GpsView software</b> .....	11
<b>3.2.1 Connect USB cable between GPS and laptop</b> .....	11
<b>3.2.2 Executing GpsView Program</b> .....	12
<b>3.2.3 Download AGPS</b> .....	13
<b>Appendix A. LED Display</b> .....	16
<b>Appendix B. Fuzzy Auto On/Off</b> .....	17
<b>Appendix C. Specification</b> .....	17
<b>Appendix D. Frequently Asked Questions</b> .....	20
<b>Appendix E. Helpful tips</b> .....	21
<b>Appendix F. Certification</b> .....	22
<b>Appendix G. Warranty Information</b> .....	24

## Note and Warning

- 737 A<sup>+</sup> uses + Lithium-Ion battery. If 737 A<sup>+</sup> is used in temperature lower than -10°C or higher than 60°C, its battery charging capability will decrease. Please leave the 737 A<sup>+</sup> far from heat or high temperature environment. In addition, do not expose your 737 A<sup>+</sup> in temperature higher than 140°F/60°C. If you do not follow these rules, the battery inside 737 A<sup>+</sup> may become heat, explode or burn itself, and this will lead to very serious damage. The + Lithium-Ion battery inside the 737 A<sup>+</sup> should be recycled.
- While in the hospital, turning off the 737 A<sup>+</sup> 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 737 A<sup>+</sup>, take out the battery and store it in dry/cool places.
- For safety, keep the 737 A<sup>+</sup> 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 737 A<sup>+</sup>, 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 737 A<sup>+</sup> yourself. Unauthorized hacking may damage the unit, and void your warranty.

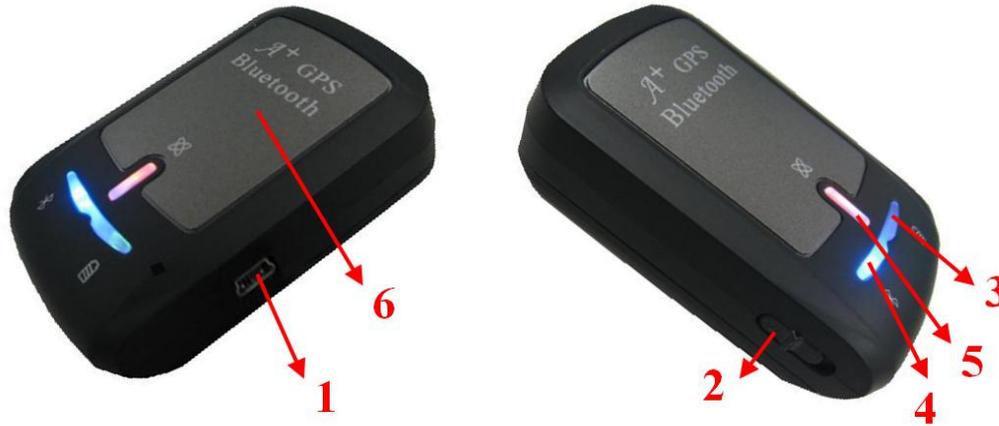
## Chapter 1 Before you begin

Thank you for purchasing the Wireless GPS Receiver, 737 A<sup>+</sup>, a global positioning system receiver with Bluetooth wireless technology. 737 A<sup>+</sup> 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 72.2(L) x 46.5(W) x 20(H) mm and weight only 64.7g (w/ battery), 737 A<sup>+</sup> is an ideal solution to carry along everywhere.

737 A<sup>+</sup>'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 32 hours and brought you the most convenient and longest usage of its kind. With the lead-free production process (starting Jan. 1, 2006), 737 A<sup>+</sup> is the most environmentally friendly wireless GPS receiver in the market.

737 A<sup>+</sup> has distinguished features others don't have. With our patent pending **Smart Power Save Mechanism** and **Fuzzy Auto On/Off** features, our 737 A<sup>+</sup> consumes 65% less power than other wireless GPS receivers, and can extend the operating time up to 32 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)
6. Internal antenna

## **1.2 Checking the package content**

Congratulations on your purchase of the 737 A<sup>+</sup> with + Lithium-Ion chargeable battery. Before you start using 737 A<sup>+</sup>, please make sure if your package includes the following items. If any item is damaged or missing, please contact your dealer at once.

- 737A<sup>+</sup> Wireless GPS Receiver x 1
- + Lithium-Ion chargeable battery x 1
- Car charger x 1
- USB to mini USB cable 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 1<sup>st</sup> time you use the 737 A<sup>+</sup>, 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 right-most 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 off, that means battery is fully charged.
- When you plug into the mini USB cable to charge your unit, you can see the green LED is on.

## Step 2 Turn on the power switch



Power off



Power on

## Step 3 Connecting your handheld device with 737 A+

Please refer to the user manual of PDA to enable the Bluetooth connectivity. If the connection between your device and 737 A+ is successful, the blue LED of 737 A+ 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.**



Explore A Bluetooth device

->Next

-->



Tap BT A+ GPS

## 2. Explore a Bluetooth device, and find the “BT A+ GPS”



Password 0000 (if your PDA ask for the password)

## 3. (Optional)



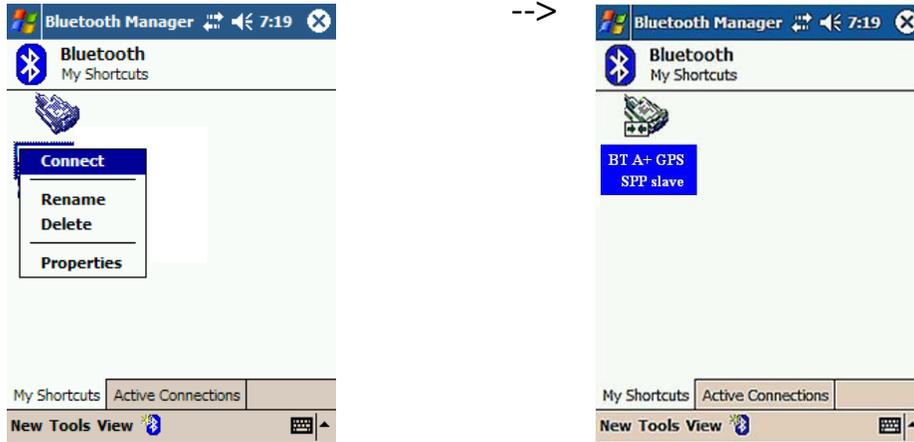
Select SPP slave->Next

-->



Finish

## 4. Connect to Serial Port Profile (SPP) Slave



Tap and Hold BT A+ 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 737 A<sup>+</sup> 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 737 A<sup>+</sup>, 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.

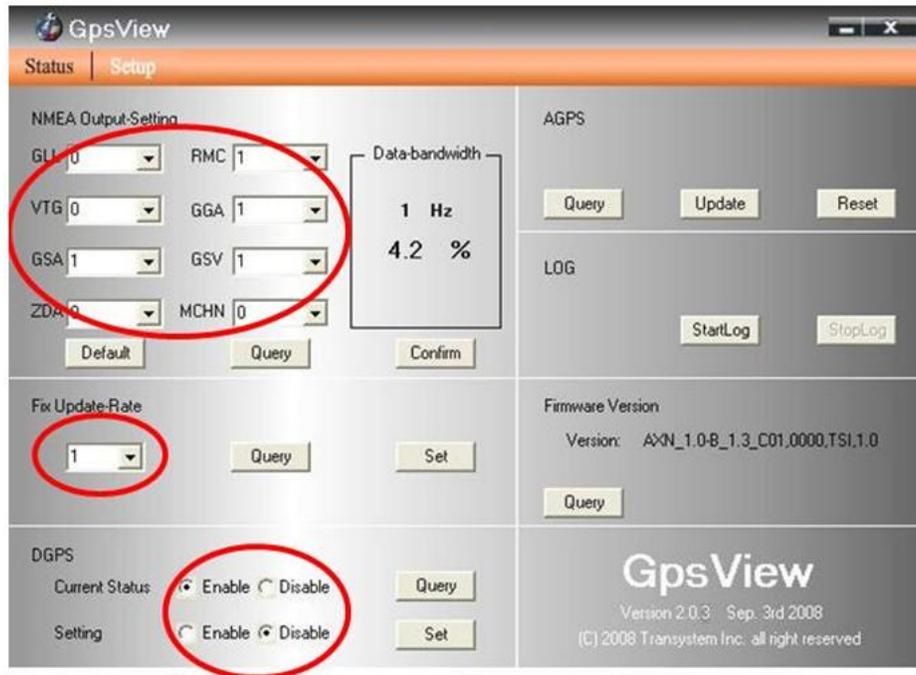
#### 3.2.1 Connect USB cable between GPS and laptop



To USB port on PC/Laptop

### 3.2.2 Executing GpsView Program

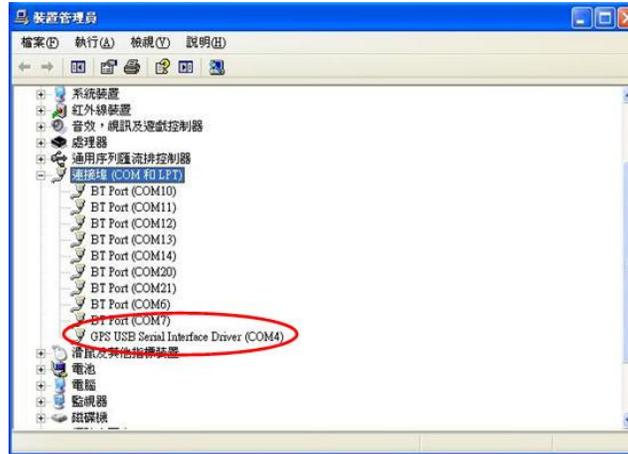
Click “Command” tap. Update Rate 1 ~ 5Hz is user configurable. And still more options for choice of NMEA output, DGPS...etc. all available through pull-down menus.



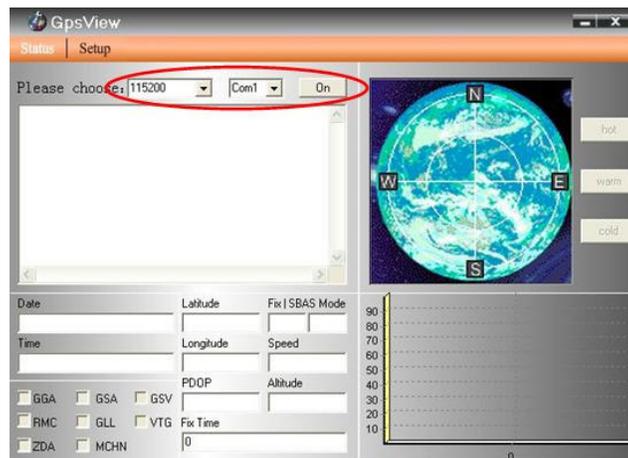
### 3.2.3 Download AGPS

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**”



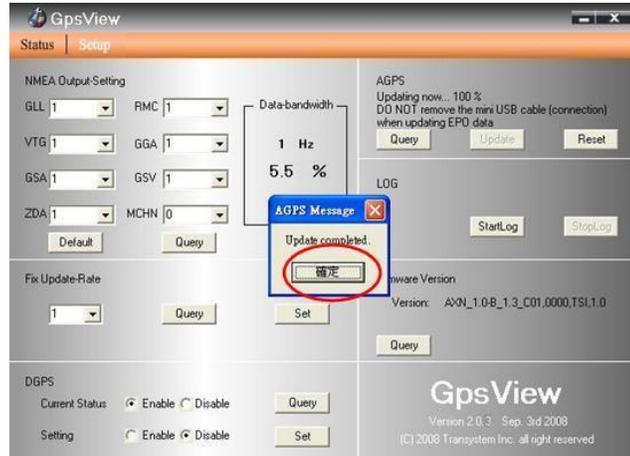
### 3. Choose “Setup”



### 4. Choose “Update”



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

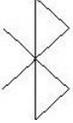
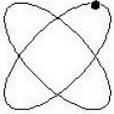


[NOTE] When you use AGPS function, we suggest use GpsView to download the AGPS data via USB cable. AGPS has 6 day time limited.

## Appendix A. LED Display

The Wireless GPS Receiver has three LED lights, one is Bluetooth Status LED, the 2<sup>nd</sup> one is Battery Status LED, the 3<sup>rd</sup> 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
			Slowly blinking:	Sleeping mode (1 time / 5 seconds)
			Quickly blinking:	Bluetooth is connected and ready for data transmission (1 time / 2 seconds)
Battery Status LED		Red	Blinking:	The battery is too low
		Green	Always on	The battery is charging
		Green	Off	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

737 A<sup>+</sup> 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 737 A<sup>+</sup> is successful, 737 A<sup>+</sup> will wake up itself and the blue LED of 737 A<sup>+</sup> will be quickly blinking again (every 2 sec) and the orange LED of 737 A<sup>+</sup> 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	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), Class II

Range Over 10 meters

Bluetooth Profile Serial Port Profile (SPP)

Frequency 2.4G ~ 2.4835GHz ISM Band

Security Yes

#### Physical Characteristics

Dimension 46.5 x 72.2 x 20 mm

Weight 64.7g

\*.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 Wireless 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 737 A+" to make sure that your PDA is recognizing the Wireless GPS receiver properly. If so, you will need to connect with the device by going to the Bluetooth Manager and double-tapping on the 737 A+ icon.

**Q:** My Wireless 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 "737 A+: 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 737 A+").

## **Appendix E. Helpful tips**

Your 737 A<sup>+</sup> 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 737 A<sup>+</sup> 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.
- 737 A<sup>+</sup> 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 737 A<sup>+</sup> may not work indoors where it can not see the sky.
- For the 1<sup>st</sup> time you use the 737 A<sup>+</sup>, 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, 737 A<sup>+</sup> will do Cold Start again.
- If your 737 A<sup>+</sup> 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](http://www.hc-sc.gc.ca/rab)"**

## **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 89/3360EEC.

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**