

# PERSONAL GPS TRACKING SOLUTION



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## 1. Introduction

This tracker is a personal remote location device with small size, build-in long standby time battery and easy to use. This tracker can be used as an emergency cellular phone and allows speed dialing 5 numbers for 2-way voice communication. This tracker sends alert and call the preset numbers for immediate assistance. The alerts include Date, Time, Coordinate, Speed and Map URL link. It will send the coordinate to the designated server by GPRS and then displaying the location by tracking software.





### **3. Main Features**

- ◆ Locating and tracking via SMS or GPRS
- ◆ Support voice call
- ◆ Listen in function
- ◆ SOS alert
- ◆ Geo-fence alarm
- ◆ Speeding alert
- ◆ Low battery alert
- ◆ Power saving mode
- ◆ Vibration function
- ◆ Combine the GPS coordinate and Cell ID (customer should offer the base station data)
- ◆ Position transmit

### **4. Applications**

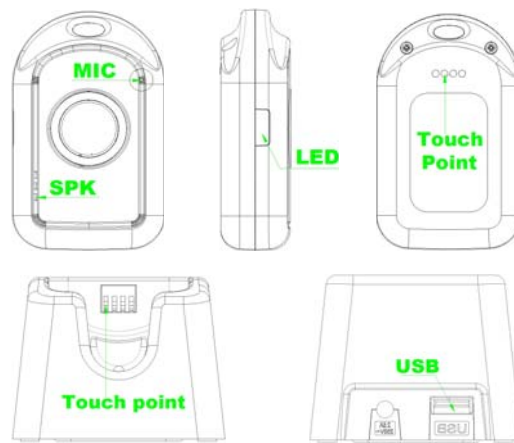
- ◆ Protect the child/elderly/disabled/pet etc.
- ◆ Personnel management
- ◆ Track the vehicle/ equipment etc.
- ◆ Provide peace-of-mind for businessmen
- ◆ Tracking system for Express/Carriers/Logistics

## 5. Specification

Content	Specs.
Dimension	65mm x 40mm x 18mm
Weight	56.4g
Network	GSM/GPRS
Band	850/1900Mhz (2G&3G)
GPS sensitivity	-159dBm
GPS accuracy	5-15m
Cold start	38 sec.
Warm starts	35 sec.
Hot start	1 sec.
Battery	Chargeable 3.7V 1200mA/h
Operation temperature	-20°C to +55°C
Humidity	5%--95% non-condensing

## 6. Start up

Do charge the battery for 8 -12 hours after first use. Then the battery can be charged fully in 3 hours. In order to protect the device please use the battery and charger come with the tracker.



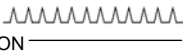


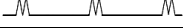

There are blue and red lights under the ON/OFF button.

**Switch on:** Please take the unit outdoors or near the window.

Press the ON/OFF button till the lights blinking fast.

**Switch off:** Please press the power button till the two lights blinking fast. It will take five seconds.

30 seconds after switching on, the unit will begin working and each LED will blink as follow:

Blue Red		The device gets started
Red(GSM)		Work in SMS mode
Red(GSM)		Connecting GPRS
Red(GSM)		Work in GPRS mode
Blue(GPS)		GPS valid
Blue(GPS)	OFF	GPS invalid

Blue light indicate GPS, Red light indicate Power, GSM, GPRS

## 7. Get the position by calling the tracker

You can use the authorized numbers to call the tracker SIM number for at least 2 seconds, and then hang up the call before the tracker hangs up or receives it. The tracker will reply a google position URL SMS. You can visit this URL to see the position. The tracker will not reply the SMS If you did not hang up the call before the tracker hangs up or receives it.

**Note:** The tracker will reply to any incoming call number if you have not set the authorized numbers yet. Once you have set the authorized number, the tracker will reply SMS to the authorized



numbers only.

**Note: All the letters in any commands must be English in capital and make sure there is no space in the command.**

#### **8. Set the authorized number.**

Totally, there are 5 numbers you can use.

SOS number: A1, A2, A3, Call number: A4, A5

Send SMS "**123456A1,phone number**" to set the 1<sup>st</sup> number.

Send SMS "**123456A4,phone number**" to set the 4<sup>th</sup> number.

**E.g.** send SMS "**123456A1,+8613812345678**" is to set +8613812345678 as the first number. +86 is the country code of China. Please do not use '00' instead of '+'.

**Delete authorized number: 123456A1,D (delete 1<sup>st</sup> number)**

It doesn't mean that you have to set all five authorized numbers, but at least one authorized number. Then the device will only accept the SMS commands from this particular authorized numbers. Besides, you can set one phone number as A1 to A3. So please set at least one authorized number before send other commands. 123456 is the default password of the tracker and we will take 123456 as the password to explain all the commands in this document.

### 9. Get position by sending SMS command.

Send SMS "**123456F**" to the device and it will reply its position by SMS, it will take some time if the gps signal is poor. Only the authorized number can get the reply.

### 10. Continuous tracking function

Send SMS "**123456M0/M1,xxxS/M/H**" to the unit, the tracker will reply the position message according to the time interval. If the device has been connected to the server, the reply SMS will be sent to the server only, which means the server has the priority.

M0 means turn off, M1 means turn on

xxx means time interval and must be three digits, 030S means 30S.

S means second, M means minute, H means hour

H should be ≤90, S,M should be <255

**E.g.** send "**123456M1,030S**" to the tracker means every 30 seconds send back a position coordinate to the A5 number. Send "**123456M0,030S**" to stop the continuous tracking.

### 11. SOS function

It will send a SMS of "**HELP ME ! + Position URL**" to A1, A2, A3 authorized numbers if the SOS button is being pressed till the **RED LED** blinking fast. A few seconds later, it will dial the 3

authorized numbers (A1, A2, A3) continuously for 30 times (each number 10 times) till picking up.

The 1<sup>st</sup> number will take priority over the 2<sup>nd</sup> and the 3<sup>rd</sup> one. If the tracker fails to connect to the 1<sup>st</sup> number, it will switch to the 2<sup>nd</sup> one, In case the 2<sup>nd</sup> number fail to be connected too, it will connect to the 3<sup>rd</sup> number, This will go on and on until one of the telephones picks up, then two-way communication starts.

## 12. Listen in function

If authorized numbers call the tracker or in the listen-in mode, the sounds around the tracker can be monitored.

## 13. Speeding alert

Send SMS "**123456J0/J1,Speed**" to set the Speeding alert.

J1 means turn on; J0 means turn on.

Speed should be <250 and must be 3 digits.

**E.g.** send "**123456J1,080**" to tracker. When the speed exceeds 80 km/h, the unit will send SMS as "Over speed! +GPS IM" to the A1,A2,A3 number. Send "**123456J0,080**" to tracker means turn off this function.

## 14. GEO-FENCE

Send SMS "**123456xyz,aabbccddefffgghhijklmmnnneppp**"

**qqrssj**" to set up the geo-fence for the device to restrict its movement within an area. The device will send the message to the A1, A2, A3 numbers as "Stockade +geo IM" when it goes into or out the area.

5 groups GEO-FENCE areas can be set for the tracker.



x is the NO. of GEO-FENCE(1-5)

y=1 means ON, y=0 means OFF

z=0 means go into, z=1 means go out

e=N means north latitude, e=S means south latitude

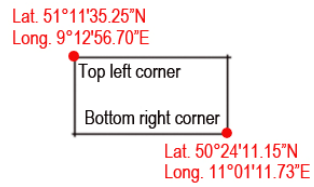
j=E means east longitude, j=W means west longitude

aa,bb,cc,dd,kk,ll,mm,nn,qq,rr,ss must be 2 numbers.03 means 3.

fff,ppp must be 3 numbers, 011 means 11.

**E.g.** The first Lat.51°11'35.25"N, Long.9°12'56.70"E

The second Lat.50°24'11.15"N, Long.:11°01'11.73"E



So the SMS command should be

**"12345611,1,1,51113525N009125670E50241115N011011173E"**

### 15. Low battery alert

Send SMS **"123456N1/0,xx"** to set the low-battery alert.

N0 means turn off this function;

N1 means turn on this function.

xx should be <45 and must be 2 digits.

**E.g.** send **"123456N1,30"** to the tracker means when the battery is lower than 30%, it will send an alert to the authorized number.

Send **"123456N0,30"** to the tracker means turn off the low battery alert function.

### 16. Set the local time

Send SMS **"123456L,time zone"** to set the local time

'+' in the time zone means east, '-' in the time zone means west.

Time zone must be 2 numbers.

**E.g.** send "123456L+08" to set the time to the Beijing time  
send "123456L-08" to set the time to Los Angeles time  
**Note:** Please send "**123456L+05:30**" to set the India time.

### 17. Modify the password

Send SMS "**123456H\*\*\*\*\***" to change the password.

**Note:** \*\*\*\*\* is the New password. (Default password: 123456)

**E.g.** send "**123456H456789**" change the password to 456789

The password can't be erased by changing SIM card, as all the IM is recorded in the tracker, not sim card.

Please remember the password, otherwise you have to update the software to default the setting. The password must be 6 digits so that the tracker can recognize it.

### 18. GPRS setting

Send SMS "**123456B**" to get the IMEI number of the unit.

**E.g.** send SMS "**123456B**"

**Note:** Before you execute the following GPRS connection, please confirm that IMEI # has been registered.

In order to use GPRS function, the user needs to set APN (Access Point Name), IP and Port by sending SMS commands. Make sure that the SIM card in the tracker has the GPRS function activated.

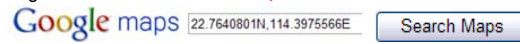
Send SMS "**123456C\$\$\$IP:Port**" to set the APN, IP and port.

**Note:** Please get APN from your local GSM operators and the APN is case sensitive. Ignore IP&Port if it is in the firmware.  
**E.g.** "123456CCMNET".CMNET is the APN of China Mobile.  
**Note:** The APN should be in wap mode.

Send SMS "123456D" to turn on GPRS connection  
Send SMS "123456E" to turn off GPRS connection

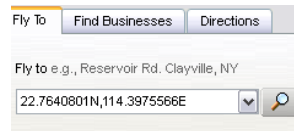
### 19. Displaying location on Google map

Go to <http://maps.google.com> and type in the latitude and longitude like this: 22.7640801N,114.3975566E



Click search button, then you can see the position.

Download Google earth software from <http://earth.google.com/>.  
Type the coordinate: 22.7640801N,114.3975566E, click search.  
Then you can see the position.

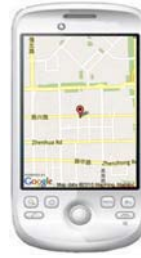


## 20. Displaying location on your cell phone

It will reply a location URL SMS like:

<http://maps.google.com/maps?f=q&hl=en&q=22.7647333,114.3978316&ie=UTF8&z=16&iwloc=addr&om=1speed:000.0.&imei=012207009017010>

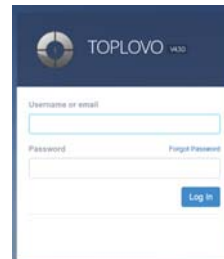
Click the URL, then you can see the location



## 21. Real time tracking on website

The device can be tracked on our tracking platform, please contact us for more information.

**Note:** alternative from Tracking website and PC software

A screenshot of a web login page for 'TOPLOVO V630'. The page has a dark blue header with the logo and name. Below the header, there are two input fields: 'Username or email' and 'Password'. To the right of the password field is a link that says 'Forgot Password'. At the bottom right of the form is a blue button labeled 'Log In'.





### SMS commands list

➤ name	➤ Sentence content	➤ Description
➤ Set authorized numbers	➤ 123456A1,phone number ➤ 123456A2,phone number ➤ 123456A3,phone number ➤ 123456A4,phone number ➤ 123456A5,phone number	➤ A1,A2,A3 is for setting the 3 SOS numbers. ➤ A4,A5 is for the call center number Phone number must include the country code like +8613812345678. +86 is the country code of China. Please do not use '00' instead of '+'
➤ Sample of setting authorized numbers	➤ 123456A1,+8613812345678 ( 'A' and the comma must be English )	➤ Set +8613812345678 as the first SOS number (A1).
➤ Delete authorized numbers	➤ 123456A1,D ➤ 123456A2,D ➤ 123456A3,D ➤ 123456A4,D ➤ 123456A5,D	➤ A1,A2,A3 is for deleting the 3 SOS numbers. ➤ A4,A5 is for deleting the call center number
➤ Switch to the Talking mode	➤ 123456U0 Calling in 2-way voice mode	➤ The tracker will pick up the incoming call then the call center can talk to the driver.

➤ Switch to the Listen-in mode	➤ <b>123456U1</b> (Default Mode) Calling in listen-in mode	➤ The tracker will pick up the incoming call then the call center can hear the sound around the tracker.
➤ Switch to the Listen-in mode	➤ <b>123456U2</b> SOS Call in listen-in mode	➤ When you make the SOS call, just the call receiver can hear the sound around the tracker
➤ Switch to the Talking mode	➤ <b>123456U3</b> (Default Mode) SOS Call in 2-way voice mode	➤ The mode is 2-way voice communication after hitting the SOS
➤ Calling out automatically	➤ <b>123456V31,phone number</b> Calling phone number in listen-in mode	➤ Tracker will call this number auto in listen-in mode
➤ Calling out automatically	➤ <b>123456V30,phone number</b> Calling phone number in 2-way voice mode	➤ Tracker will call this number auto in two-way voice mode
➤ Get position by SMS	➤ <b>123456F</b>	➤ It will reply the latitude and longitude as well as a link to the cell phone

➤ Set continuous tracking	➤ <b>123456Mx,yyyz</b>	➤ x=1 means on, x=0 means off ➤ yyy means time interval. If z=S/M it should be <=255. If z=H, it should be <=090. It must be three numbers, 030S means 30S ➤ Z means time unit, z=S means second, z=M means minute, z=H means hour
➤ Sample of Setting continuous tracking	➤ <b>123456M1,030S</b>	The tracker will reply the position according to the time interval you set (30 seconds). If the tracker has connected to server it will send to the server by GPRS or it will be sent to the cell phone by SMS
➤ Set the speeding alarm	➤ <b>123456Jx,yyy</b>	➤ x=1 means on, x=0 means off ➤ yyy means the alarm speed, it should be <250 and must three digital, e.g. 080=80km/h.
➤ Sample of setting speeding alarm	➤ <b>123456J1,080</b>	➤ The tracker will send a speeding alarm to server if it is over the 80km/h

➤ Set GEO fence	<p><b>1234561x,y,z,</b>  <b>aabbccddefffgghhij</b>  <b>kkllmmnnppppqqrrs</b>  <b>sj</b></p> 	<p>➤ x=NO. of the GEO-fence(1-5),5 GEO fence can be set</p> <p>➤ y=1 means on, y=0 means off</p> <p>➤ z=0 means go in, z=1 means go out</p> <p>➤ e=N means the north latitude, e=S means the south latitude</p> <p>➤ j=E means the east longitude, j=W means the west longitude</p> <p>➤ aa,bb,cc,dd,kk,ll,mm,nn,qq,rr,ss must be 2 numbers.03 means 3.</p> <p>➤ fff,ppp must be 3 numbers.011 means 11</p>
➤ Example of setting GEO fence	<p>12345611,1,1,511135  25N009125670E  50241115N011011173  E</p> 	<p>➤ The tracker will send an alarm data if it is in/out the district you set.</p>

➤ Set the time zone	➤ 123456Lxyy	➤ x=+ means east x=- means west ➤ yy means the time zone, must be 2 numbers
➤ Sample of setting the time zone	➤ 123456L+08	➤ Set the east 8 zone
➤ Set the low battery alarm	➤ 123456Nx.yy	➤ x=1 means on,x=0 means off yy means battery lower then yy% then send the alarm. It must be<45.it must be 2 numbers.
➤ Sample of setting the low battery alarm	➤ 123456N1,40	➤ The tracker will send a low battery alarm if the battery is lower then 40%
➤ Modify the password	➤ 123456H456789	➤ 456789 is the new password, new password must be 6 numbers
➤ Set the APN,IP and port	➤ 123456C\$\$\$\$,IP:Port	➤ \$\$\$\$ is the APN, you can get the APN from your local GSM provider.
➤ Sample of setting the APN	➤ 123456CCMNET, 119.122.101.91:9289	➤ CMNET is the APN of China mobile.

➤ Set the username and password for APN	➤ <b>123456O&amp;&amp;&amp;&amp;, @@@@</b>	➤ &&&& is the username and @@@@ is the password. ➤ If the SIM card doesn't need username and password for the APN, pls ignore this command
➤ Sample	➤ <b>123456Ointernet,internet123</b>	➤ The user name is internet and the password is internet123.
➤ Open ➤ GPRS	➤ <b>123456D</b>	➤ The tracker will start to connect the server by GPRS. It will send back an SMS to confirm after it has connected the server successfully.
➤ Close GPRS	➤ <b>123456E</b>	➤ The tracker will close the connection with the server.
➤ Get the IMEI number	➤ <b>123456B</b>	➤ It will reply the IMEI number of the tracker.
➤ Check the setting	➤ <b>123456G</b>	➤ Check all parametres set in tracker

### **Cautions**

Please comply with the instructions to extend the unit life:

1. Keep the unit dry. Any liquid, i.e. rain, moisture, may destroy or damage the inside circuitry.
2. Don't use & store the unit in dusty places.
3. Don't put the unit in overheated or overcooled places.
4. Handle carefully. Don't vibrate or shake it violently.
5. Clear the unit with a piece of dry cloth. Don't clean in chemicals, detergent.
6. Don't paint the unit, this may cause some foreign materials left in between the parts.
7. Don't disassemble or refit the unit.
8. Please use the battery and charger provided by manufacturer. Using other batteries and chargers will cause unwanted situation.
9. Don't dismount the antenna randomly, or use other antennas. This maybe interfere the transmission, and increase the radiation as well.

§ 15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.105 Information to the user.

Note: 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.

Specific absorption rate (SAR)

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. The exposure standard for wireless devices



employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg

#### Body-worn Operation

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of 0.5 cm must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna