

# GPS TRACKER USER MANUAL



## **Preface**

Thank you for purchasing GPS Tracker. This manual shows how to operate the device smoothly and correctly. Make sure to read this manual carefully before using this product. Please note that specification and information are subject to changes without prior notice in this manual. Any change will be integrated in the latest release. The manufacturer assumes no responsibility for any errors or omissions in this document.

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## 1 Summary

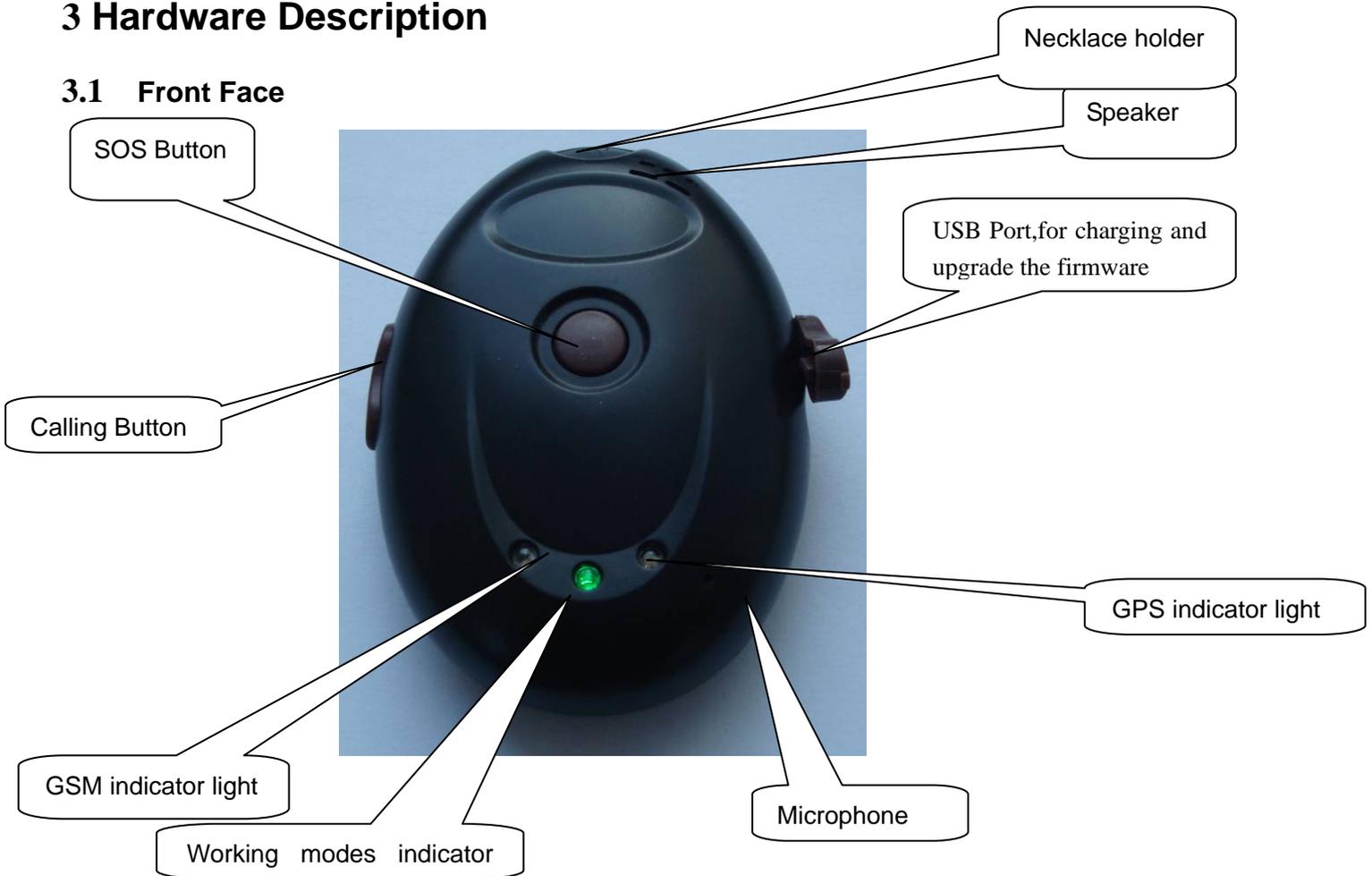
Working based on existing GSM/GPRS network and GPS satellites, this product can locate and monitor any remote targets by SMS or GPRS, and guard against theft of Vehicle.

## 2 Applications

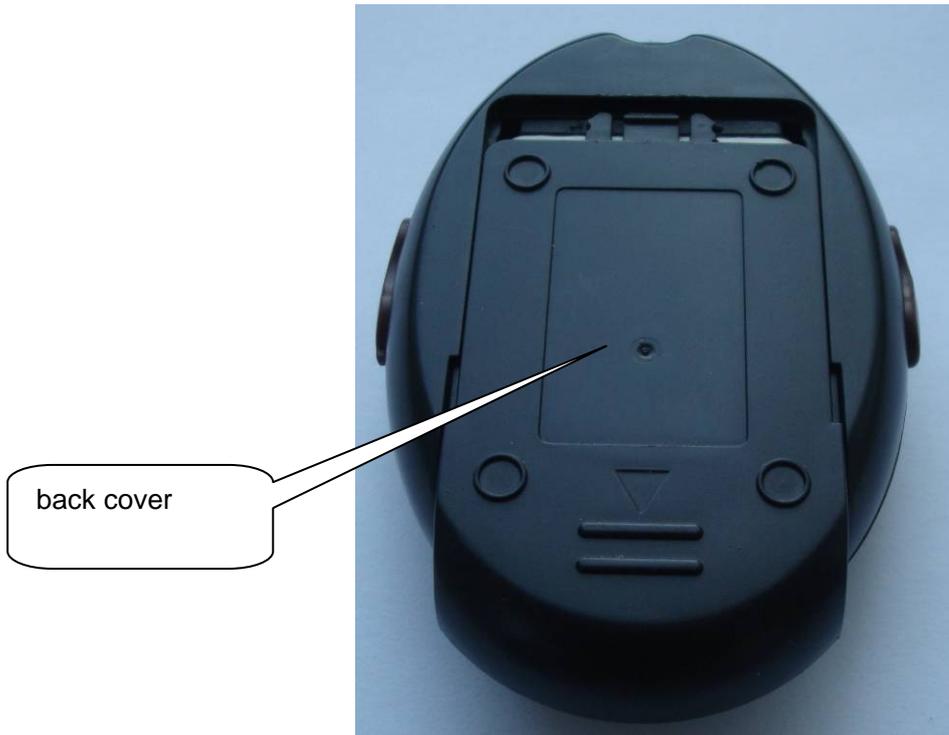
- Vehicle rental / Fleet management, etc.
- Protect the child / the elder / the disabled / pet, etc.
- Businessmen safety.
- Personnel management.
- Covert tracking.

## 3 Hardware Description

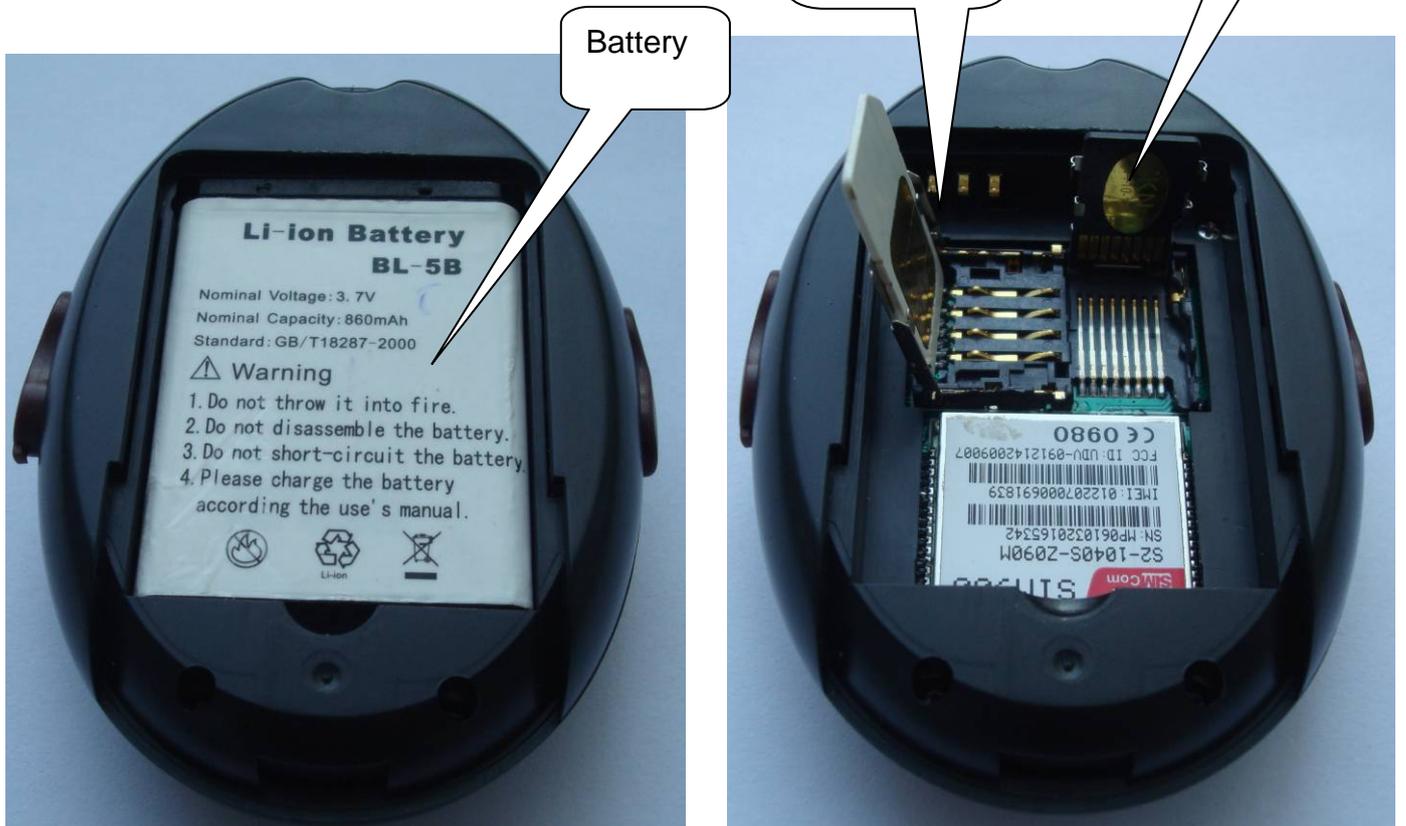
### 3.1 Front Face



### 3.2 Rear Face



### 3.3 Interior



## 4 Specs.

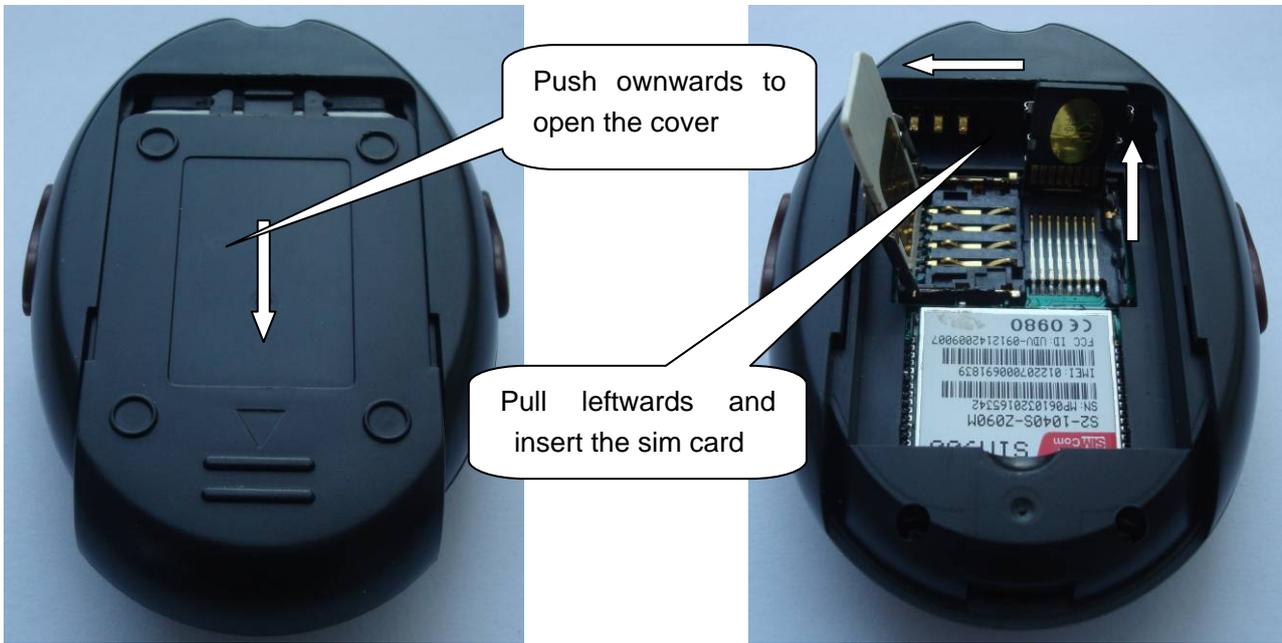
Content	Specs.
Dim.	80MM*56MM*22MM
Weight	50g
Network	GSM/GPRS
Band	850/900/1800/1900Mhz
GPS chip	SIRF3 chip
GSM/GPRS module	SIM900
GPS sensitivity	-159dBm
GPS accuracy	5m
Time To First Fix	Reacquisition 0.1s Cold status 45s Warm status 35s Hot status 1s
Power	DC5V input
Battery	Chargeable changeable 3.7V 860mAh Li-ion battery
Standby	100hours
Storage Temp.	-40°C to +85°C
Operation Temp.	-20°C to +55°C
Humidity	5%--95% non-condensing

## 5 SIM card installation

Make sure that there is **no call transfer** and **call display is on**, and **PIN code off**.

Step:

1. Open the back cover
2. Open the SIM card slot and SD card slot, and put one SIM card and one SD card

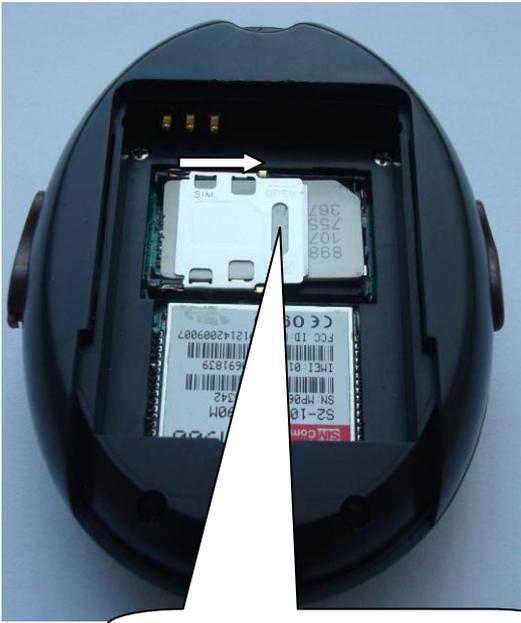


Push downwards to open the cover

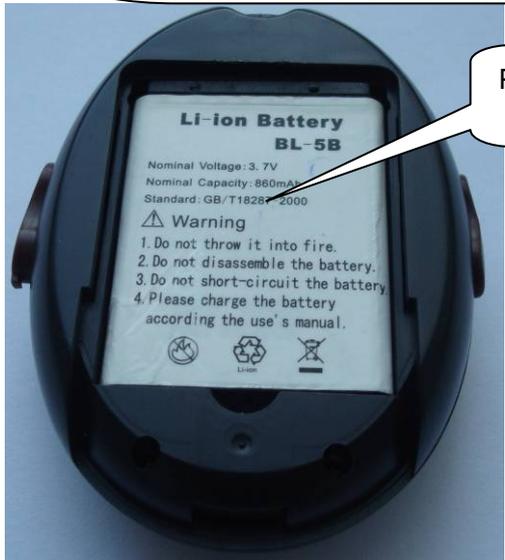
Pull leftwards and insert the sim card



Fasten downwards, make sure the SD card is mounted



SD card is mounted, then fasten the sim card rightwards



Put the battery



Fasten the cover upwards

## 6 Startup

- Put the SIM card and SD card in place, insert the battery and the tracker is on.  
The green led in the middle is power indicator, yellow led on left side is GSM indicator and blue led on right side is GPS indicator. Green indicator will be flashing quickly, yellow indicator will be on for 2 seconds and blue led does not flash when the tracker is on. Green indicator will be on for one second and off for three seconds in 20-30 seconds and yellow indicator will be on in 3 seconds' interval which means the tracker gets GSM signal already.
- Blue indicator will be flashing in 40-90 seconds which depends on the gps signal. Better gps signal makes the blue indicator flash in short time and poor gps signal make it flash in longer time. Blue indicator will not flash without gps signal.

## 7 Usage

The tracker has three working modes: TRACKING, MONITOR, double-way Communication.

## 8 Track Mode

### 8.1 Initialization

Send **"begin+password"** to the product, it will reply "begin ok" and initialize all the settings

```
TO:13188888888  
begin123456
```

```
From:13188888888  
begin ok
```

### 8.2 Password Setting

Send SMS **"password+old password+space+new password"** (default password: 123456), it will reply "password ok"

```
TO:13188888888  
password123456 888999
```

```
From:13188888888  
password ok
```

## 8.3 Authorization

8.3.1 Send SMS **“admin+ password+ space+ cell phone number”**to set the first authorized number, it will reply “admin ok”, The other authorized numbers should be set by the first authorized number.(PS: There are only 5 numbers able to be authorized)

TO:13188888888  
admin123456 13751187524

From:13188888888  
Admin ok

8.3.2 Send SMS **noadmin+password+space+authorized number** to cancel the authorized number.

8.3.3 When an authorized number send SMS or dials up the unit, it will reply as below:

Lat: 22.566901 long: 114.051258 speed: 0.00 14/08/09 06.54 F:3.85V,1,Signal:F  
imei:354776031555474 05 43.5 460 01 2533 720B

Lat: 22.566901 long: 114.051258== Coordinate

0.00 === speed

14/08/09 06.54== Date&Time

F:3.85V == battery power

1 == charging 0 means no charging

Signal:F ===== Full GPS signal L means weak GPS signal

354776031555474== IMEI

05=quantity of satellites ( from 3 to 12 )

43.5=Altitude

460 = MCC Mobile Country Code

01 == MNC Mobile Network Code

2533= LAC Location area code

720B= Cell ID

## 8.4 Auto-Track

This function can make the tracker to send sms or gprs data in fixed interval for fixed times

**8.4.1** Set up: Send SMS **t030s005n+password** to the unit, it will report the Geo-info at 30s' interval for 5 times.(s: second, m: minute, h: hour).You will receive a reply as "t030s005n OK" if the setting is successful.The setting must be in 3 digits and at maximum 255 times

TO:13188888888  
T030s005n123456

From:13188888888  
T030s005n ok

**8.4.2** Send SMS **t030s\*\*\*n+password** to the unit, it will reply sms or gprs data for unlimited times. You will receive a reply as "t030s\*\*\*n OK" if the setting is successful.

TO:13188888888  
T030s\*\*\*n123456

TO:13188888888  
T030s\*\*\*n ok

**8.4.3** Cancel: Send **notn+password** to delete the this function and it will reply "notn ok".

Remark: the interval must not be less than 5s.

TO:13188888888  
Notn123456

TO:13188888888  
Notn ok

## 8.5 Tlimit Function

**8.5.1** Send **"tlimit+password+ 50"** (50M is the distance, 1-6000M set), reply **"tlimit ok"** (note: this function is for auto-tracking function only. If the later position is 50M away with the position before, it will send sms or gprs data. If less than 50M, it will not send in order to save SMS or gprs fee

**8.5.2** Send **"tlimit+password+ 0"** to cancel this function, the tracker will **"tlimit ok"**.

## 8.6 GPS-refresh setting

Send SMS **"GpsAutoSearch+password+space+120"**, it will reply **"GpsAutoSearch ok"**. The tracker will search gps signal in 120s interval after setting this.

The refreshing time is between 120-600 seconds(120<interval <600)

Longer standby time for longer refreshing time and shorter standby time for shorter refreshing time.

## 8.7 Reboot remotely

**Restart+passworded** can be sent to the tracker to make the CPU restart when GPRS is stopped. The tracker will turn off and restart in 3 minutes after sending this command.

## 8.8 Geo-fence

Set up a geo-fence around of the tracker and it will send message to the authorized numbers when the tracker goes out of the area .

**Notes:** This function will be invalid if the unit moves outside of the district. You need to re-set it if you want this function again. But if the tracker is in this district again, it will send alert again.

**8.8.1** Send SMS **stockade+password+space+longitude,latitude;longitude,latitude** to the unit to set the restricted district.

Remark :The first longitude & latitude is coordinate of the top left corner of the Geo-fence, while the second longitude & latitude is the coordinate of the bottom right corner. It will reply stockade ok.

```
TO:13188888888
stockade123456
114.124845e,22.56718
5n;114.777888e,22.555
666n
```

```
From:13188888888
stockade ok
```

**8.8.2** Cancel: Send SMS **"nostockade+password"** to deactivate this function. It will reply "nostockade ok".

TO:13188888888  
nostockade123456

From:13188888888  
nostockade ok

**8.8.3** Response SMS format: stockade!+geo-info. It will alarm one time in each setting.

From:13188888888  
lat: 22.566923 long: 114.051331  
speed: 0.00 28/11/10 03:33  
F:4.32V,0, Signal:F stockade  
imei:359587011016261 05 41.5  
460 01 2533 720B

## 8.9 Movement Alert

This function is used for the owner to get alarm when the tracker is moved.

**8.9.1** Setup: Send SMS **move+password** to the unit to set the movement alert, it will reply move ok

TO:13188888888  
move123456

From:13188888888  
move ok

**8.9.2** Cancel: Send SMS **nomove+password** to deactivate the movement alert,it will reply move ok

Response SMS format: :move!+geo-info. It will alarm one time in each setting.

```
From:13188888888  
  
lat: 22.566923 long: 114.051331  
speed: 0.00 28/11/10 03:33  
F:4.32V,0, Signal:F move  
imei:359587011016261 05 41.5  
460 01 2533 720B
```

## 8.10 Overspeed Alert:

This function is used to control the user's driving speed.

8.10.1 Setup: Send SMS **speed+password+space+ the speed**, For example: speed123456 080,it will reply" speed ok"

```
TO:13188888888  
  
speed123456 080
```

```
From:13188888888  
  
speed ok
```

**8.10.2** Cancel: Send SMS"**nospeed+password** "to deactivate the overspeed alert,it will reply" nospeed ok"

```
TO:13188888888  
  
nospeed123456
```

```
From:13188888888  
  
nospeed ok
```

Response SMS format: speed+080!+Geo-info (suppose the speed is 80km/h).  
The tracker will check the speed in 3 minutes interval and alarm if it is overspeed.

From:13188888888  
  
lat: 22.566923 long: 114.051331  
speed: 0.00 28/11/10 03:33  
F:4.32V,0, Signal:F speed080  
imei:359587011016261 05 41.5  
460 01 2533 720B

Remark: It is recommended that the speed alarm is set at not less than 80km/h in order to make this function accurate

### 8.11 IMEI Checking:

Send SMS" **imei+password**: to the unit,it will reply imei35000112222222 ok.

TO:13188888888  
  
Imei123456

From:13188888888  
  
imei35000112222222 ok

### 8.12 Time Zone setting

Send "**time zone+password + GMT time**" ,reply " time zone ok". (note: if GMT time is positive, just write the number. If time zone is negative, have to write"-").

TO:13188888888  
  
Time zone123456 1

TO:13188888888  
  
Time zone123456 -1

From:13188888888  
  
time zone ok

## 8.13 SOS Button

Press the SOS button for 3 second, it will send “help me !+ Geo-info” to all the authorized numbers every 3 minutes. It will stop sending SOS sms or gprs data when one of the authorized numbers reply SMS ”help me+password” to the tracker.

(note: the default software only send one SOS alert. Pls contact with our company for the firmware with several SOS alerts )

## 8.14 SMS LINK

### 8.14.1

Send “**smslinkone+password**”, This product will reply a GOOGLE MAP link to admin numbers. The position can be checked directly on the smartphone

Format: [http://maps.google.com/maps?f=q&hl=en&q=22.567610,114.051227&speed: 0.00](http://maps.google.com/maps?f=q&hl=en&q=22.567610,114.051227&speed:0.00) 12/11/10 14:36 F:4.22V Signal:F imei:012207000691839

### 8.14.2

Send “**smslink+password**”, it will reply “smslink OK” .The tracker will send the following SMS format always.

[http://maps.google.com/maps?f=q&hl=en&q=22.567610,114.051227&speed: 0.00](http://maps.google.com/maps?f=q&hl=en&q=22.567610,114.051227&speed:0.00) 12/11/10 14:36 F:4.22V Signal:F imei:012207000691839

### 8.14.3

Send “**smstext+password**”, it will reply “smstext OK”. The tracker will reply normal SMS format for this command

## 8.15 SMS ONE

Send “**smsone+password**”.The tracker will reply one SMS to admin number or gprs server. The same function with real-time tracking, but no need to call to the tracker

## 8.16 Low Battery Alert

When the battery inside is less than 3.7 V, it will send low battery alert to admin number

## 8.17 SMS Center

**8.17.1** Setup: Send SMS **adminsms+password+space+cell phone number** to SMS center.

The tracker will reply Geo-info & authorized number to sms center number even if the admin numbers call or send command to the tracker

**8.17.2** Cancel: Send SMS **noadminsms+password** to cancel the SMS center.

Response SMS format: authorized number+Geo-info

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**Note:**

- ◆The SMS message must in Text format, can't be PDU format.
- ◆Please use the tracker outside for the first time so that It can get gps signal easily and quickly

## **8.18 GSM ID ( this function can be add or delect for customization.)**

GSM ID are in each sms or gprs data. The tracker can be found by GSM ID without gps signal. But the customers have to ask their GSM operator for data base of the GSM ID.

## **8.19 Motion Sensor**

This function is for protecting the vehicel or tracker when it is touched.

**8.19.1** Setup: Send **shake+password+space+1-10** to the tracker to set up this function.(1-10 means the level of intensity)

**8.19.2** Send SMS **shake+password+space+1** is the least sensitivity . Have to shake the tracker strongly to get the alert.

**8.19.3** Send SMS **shake+password+space+10** is the most sensitivity . Have to shake the tracker slightly to get the alert

**8.19.4** Cancel: Send SMS **shake+password+space+0** to remove this function.

## **8.20 SD card function**

A mini SD card can be put in the tracker's SD card slot. The GPRS data can be saved in the SD card if GPRS is off. It will send data to the GPRS server again when GPRS is on.

**8.20.1** Setup: Send SMS **sdlog+password+space+1** to activate the sd card-saving function

Cancel: Send SMS **sdlog+password+space+0** to the tracker to deactivate this function

**8.20.2** Setup: Send SMS **readsd+password+space+1** to ask the tracker to send data in the SD card to the GPRS server.

Cancel: Send SMS **readsd+password+space+0** to ask the tracker to stop sending data in the SD card to the server.

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## 8.21 Switch on/off

### 8.21.1 Switch off

Press TALK button and SOS button for three seconds at same time, the green indicator will flash quickly until it is off.

### 8.21.2 Switch on

Press TALK button and SOS button for three seconds at same time, the green indicator will flash quickly until it is on.

## 9 Monitoring Mode(voice surveillance mode)

Send SMS **monitor+password**, the tracker replies “monitor ok” then the tracker will get through automatically when you call and listen to it

## 10 Talking Mode

**10.1** Send “**talk+password**”, it will reply “talk ok”, When authorized numbers call to the tracker, it will ring several tones and get through automatically to double-communicate

**10.2** Send “**volume+password+60**”, it will reply “volume ok”

The volume can be set between 0 to 99 to make the volume louder or lower

### 10.3 Dial authorized numbers automatically

TALK button can be pressed for 3 seconds until it stops flashing quickly to get help from the authorized numbers in emgency. The tracker can call to the authorized numberes one by one and you can hear the calling. The tracker will stop calling if any authorized number picks up the calling.

**10.4** Press TALK button for 3 seconds to cancel the double-communication or authorized number-calling

## 11 GPRS setting

APN(access point name), IP, PORT have to be set up for gprs function. Apn user, apn password have to be set up also if there are. So please contact with the gsm operator for them.

### 11.1 Set GPRS protocols

#### 11.1.1 Set TCP protocols:

**Gprsmode+password+space+0** to set up TCP protocol, tracker will reply GPRSMODE ok.  
(note: TCP is the default mode in the firmware)

### 11.1.2 Set UDP protocols:

**Gprsmode+password+space+1** to set up UDP protocol, tracker will reply GPRSMODE ok.

### 11.2 Set IP address and port:

Setup: **adminip+password+space+IP address+space+port.**

If setup successfully, the tracker will reply SMS "adminip ok"

Cancel: Send SMS **noadminip+password**

**Adminip+password** is the command from SMS to GPRS mode when IP, PORT are set up in the first gprs setting.

### 11.3 Set APN

Setup: **apn+password+space+specify apn content.**

If setup successfully, the tracker will reply SMS "APN ok".

Cancel: The old APN will be invalid automatically when a new APN is set.

### 11.4 Set APN's User Name

Setup: **apnuser+password+space+the sim card's user name.**

If setup successfully, the tracker will reply SMS "apnuser ok".

Cancel: The old APN user name will be invalid automatically when a new APN user name is set.

### 11.5 Set APN's Password

Setup: **apnpasswd+password+space+the sim card's password.**

If setup successful, the tracker will reply SMS "apnpasswd ok".

Cancel: The old APN password will be invalid automatically when a new APN password is set.

### 11.6 GPRS setting

The tracker will hang off the calling in gprs mode when authorized number calls to the tracker, then send gprs data to the server.

**GPRS Format explain:** serial number, the authorized number, GPRMC data, GPS signal( F is strong L is weak), alarm information, imei , satellite numbers ,altitude, battery power (F is full,L is weak) ,charging state( 1 charging ,0 no charging) ,byte numbers, checksum, MCC, MNC,LAC, CELL ID

### GPRS format:

100312033421,13145826175,GPRMC,033421.851,A,2234.0209,N,11403.0733,E,1.87,347.73,120310,,A\*62,F,help me, imei:354776036842240,03,73.5,F:4.14V,0,138,46772,460,01,2533,720B

## 12 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 may interfere the transmission, and increase the radiation as well.

## 13 Faults & The solutions

Faults	Solution
Startup Fail	Check the battery and see if it is fully charged or correctly installed.
Hangup Fail	Check if the unit received GPS signal or not, or if the SIM card there is calling display or not.
Monitor Fail	Check if the authorized number is setup or in the coverage of signals.
Location report in digits of zeros.	Don't use it in the place beyond reach of signals. Place the unit outdoors, especially when starting it up.

**(Remark: One-time alert only for normal firmware. Please contact with salesman for the firmware with unlimited times alerts. Please contact them also for the software to set up commands .)**