SPK ELECTRONICS CO., LTD.

Power magnetic GPS Tracker
MODEL: SPK-TRACKER-V002

Preface

Thank you for purchasing the 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.
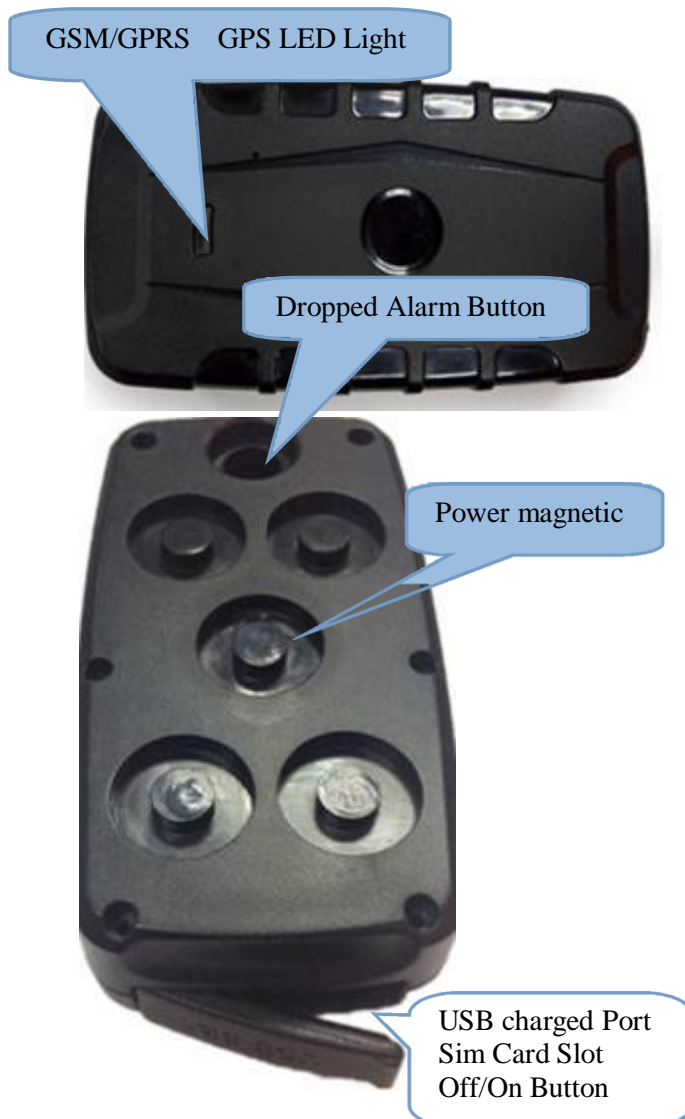
1. Summary

Working Based on existing GSM/GPRS network and GPS satellites, this product can locate and monitor any remote targets by SMS or internet. The most advanced technology of GPS and AGPS dual positioning.

2. Applications

1. Vehicle rental / Fleet management etc

2.Container/cargo/asset tracking

3.Hardware Description

GSM/GPRS   GPS LED Light

Dropped Alarm Button

Power magnetic

USB charged Port
Sim Card Slot
Off/On Button

4. Content Specs.

Content	Specs.
Dim.	120mm x 65mm x 35mm
Weight	250g
Network	GSM/GPRS
Band	850/900/1800/1900Mhz
GPS chip	UBLOX
GPS sensitivity	-159dBm
GPS accuracy	5m
Time To First Fix	Cold status 35-80s Warm status 35s Hot status 1s
Wall charger	110－220V input 5V output
Battery	Chargeable changeable 3.7V 10000mAh Li-ion battery
Standby	120 days
Storage Temp.	-40℃ to +85℃
Operation Temp.	-20℃ to +55℃
Humidity	5%--95% non-condensing

5.Userage:

5.1 SIM card installation

1.Open the rubber plug

2.Insert the GSM SIM card.

3.close the rubber plug.

5.2 Battery and Charger

Do charge the battery to capacity in 8 -12 hours for first time. Please use the battery and charger provided by the manufacturer. This unit adopts built-in Li-ion battery, and full battery can standby 120days. After first use, the battery usually should be charged fully in 5--8 hours.

Cautions:

a: For it's Li-ion battery, which contains harmful chemicals and may burst, please don't bump, puncture it violently and keep it off fire.

b: Please charge the battery in time to keep it working normally.

5.3Startup

- Put the SIM card and battery in place.
- Turn on the unit outdoors by Pushing the button to"On"the indicator is on.
- Set admin number,APN , IP and open GPRS

  Eg: Step1.admin123456+space+your phone number

  Step2.apn123456+ space+local apn content

  Step3.adminip123456+space+101.1.16.228+space+7700

  Step4. gprs123456

- In 10 or 40 seconds, the unit will begin to work and acquire the GSM signals as well as the GPS signals. The indicator will keep flashing every 3 seconds when the unit has received the signals.
- When this unit receives GPS signals normally, you can use it and do any setting as the instructions of this manual.
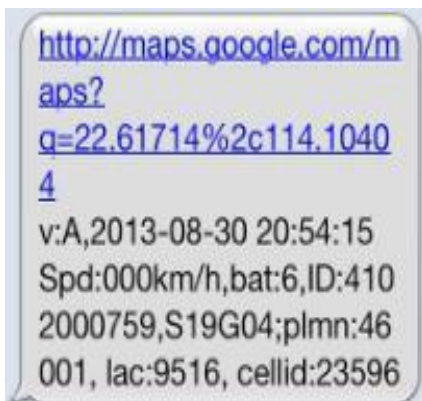
green LED for GPRS working status

Status of indicator	Meaning
Slow flash (flash 1s after every 2s)	GSM / GPRS conversation start
Continuously in bright status	No GPRS signal
Green Led off	Device fault or dormant

Blue LED for GPS working status

Status of indicator	Meaning
Slow flash (flash 1s after every 2s)	GPS location successful
Continuously in bright status	Searching GPS signal
Blue led off	Device fault or dormant

Red LED for power charging status

Status of indicator	Meaning
Red led on all the time	Charging
red led off	Full battery or charged full

http://maps.google.com/maps?
q=22.61714%2c114.10404
v:A,2013-08-30 20:54:15
Spd:000km/h,bat:6,ID:4102000759,S19G04;plmn:46001, lac:9516, cellid:23596

1.Google link: click link, there is map when positioning ok, no map means no positioning.
2.V:A GPS signal ok.**V:V**   no GPS signal
3.2013-08-30 20:54:15: the last time receive GPS signal.
4.Spd:000km/h: the speed of tracker ran.
5.**Bat:6** battery balance（the range is from 1 to 9）
6.ID:4102000759: ID code of device(used for connect tracking website or APP)
7.S19G04；plmn：46001 GSM operator data
8.Lac：9516，cellid:23596 LBS data

5.4Change the password

5.4.1 Set Password: Send sms: "password+old password+space+new password" to the unit to change the password.
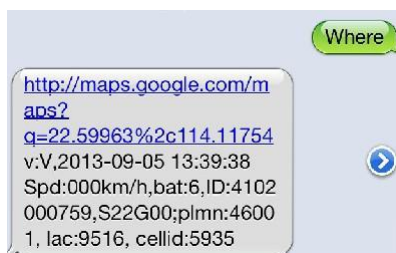
For Example, pls send sms: " password123456 000000" to terminal device, it will reply sms: "password OK". New password 000000 changed in success.

5.4.2 Be sure keep the new password in mind, you have to upload the software to restore the original setting in case of losing the new password.

5.4.3 Make sure the new password is in 6 digits Arabic numbers, or the tracker can not recognize the password.

5.4.4 Make sure that all the symbol "＋" in sms commends is just for quick understanding, which don't need to enter "+" in sms, and "space" means press the spacebar button of the cell phone.
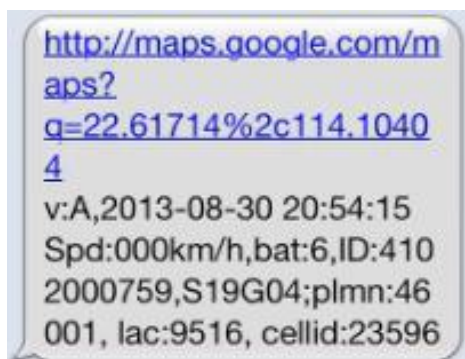

5.5Authorization

5.5.1 Send SMS：" admin+password+space+cell phone number" to set up a authorized number. The other authorized numbers should be set by the first authorized number. If the number is successfully authorized, the unit will reply "admin ok!" in SMS.

5.5.2 Send SMS：" noadmin+password+space+authorized number" to delete the authorized number.

5.5.5 When the authorized number call the device, it will hang up your phone and reply a real-time latitude and longitude information, as below:

5.6Single Locating

5.6.1 If there is no authorized number, when any number dials up the unit, it will report a Geo-info; If there is already an authorized number, then it will not respond when an unauthorized number calls it up.

5.6.2 Single message inquires the latitude and longitude information, any telephone number can send instruction

"where" to the equipment, then the equipment will reply the latitude and longitude information to this telephone.

5.6.3 When an authorized number dials up the unit, it will hang up and report a real-time Geo-info as below:

*Tracking location, When GPS signals is weak, the position of latitude and longitude included in the SMS is the position that the tracker received GPS signals at last. If it is different with its exact current location, pay attention to check the time included in the SMS you got.

5.7 Auto Track

5.7.1 Send SMS command "t030s005n+password" to the tracker device, it will report the "no reply" at 30s intervals for 5 times. (s:second, m:minute, h:hour). This command setting must be in 3 digits and the maximum value is 255.

5.7.2 Unlimited times auto track: Send SMS "t030s***n+password" to the tracker device, it will reply the "no reply" continuously at 30 seconds intervals.

5.7.3 Cancellation: Send SMS "notn+password" to the tracker device, it will report the "notn ok".
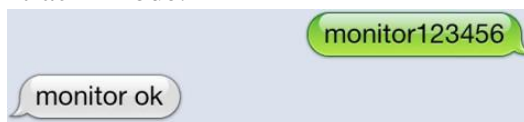
Note: the interval must not less than 20s.

5.8 Monitor (Voice Surveillance)

5.8.1 The command to switch between Track and Monitor are "tracker" and " monitor".

5.8.2 The default mode is "track" (Track mode).

5.8.3 Send SMS "monitor+password" to the unit, and it will reply "monitor ok!" and switch to "monitor" mode.

5.8.4 Send SMS "tracker+password" to the unit, it will reply "tracker ok!" and restore to "track" mode.

5.9 Geo-fence

Set up a geo-fence for the unit to restrict its movements within a district. The unit will send the message to the authorized numbers when it breaches the district.

5.9.1 Set up: When the unit stays immobile in a place for 3-10 minutes, the user can Send SMS: "stockade+password+space+latitude,longitude; latitude,longitude" to unit to set the restricted district.

Remark: The first latitude&longitude is coordinate of the top left corner of the Geo-fence, while the second latitude&longitude is the coordinate of the bottom right corner.
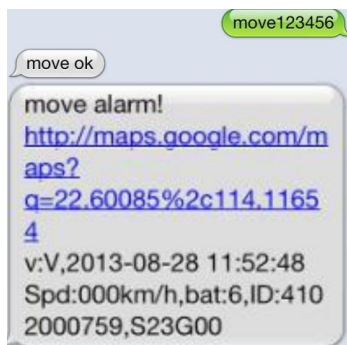
5.9.2 Cancel: Send SMS:" nostockade+password" to deactivate this function,tracker will reply "nostockade ok".

5.10Movement alert

5.10.1 Set up: When the unit stays immobile in a place for 3-10 minutes, the user can send SMS: "move+password" to the unit, then the unit will reply "move ok!". In case of such a movement （the unit default distance is 500M）, it will send SMS "Move ALARM+ Latitude and longitude" to the authorized number

5.10.2 Cancel: Send SMS:" nomove+password" to deactivate the movement alert, tracker will reply "nomove ok".

5.11 Overspeed alert:

5.11.1 Set up: Send SMS: "speed+password+space+080" to the unit (suppose the speed is 80km/h), and it will reply "speed ok!". When the target moves exceeding 80 km/h, the unit will send SMS :"speed ALARM !+ Latitude and longitude" to the authorized numbers every 5 minutes.

5.11.2 Cancel: Send SMS "nospeed+password" to deactivate the overspeed alarm, tracker will reply "nospeed ok".

Remark: The recommended speed should be not less than 50km/h. For below that rate, it will be effected the accuracy by gps signals drift etc.

5.12 Low battery alert

When GPS device battery is going to be about 3.7V, it will send SMS: "bat:l" at 30 minutes interval.

5.13 Terminal (local) Time Setting

Send SMS "time+space+zone+password+space+local time".

For example, Send SMS "time zone123456 8" (time zone of China).

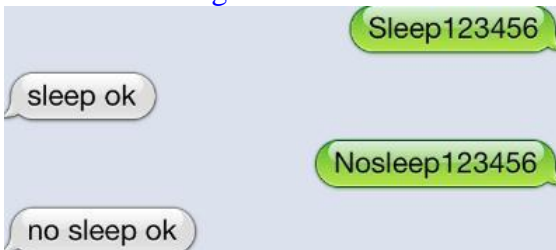If the local time zone is negative as "-3", then it should set as SMS: "time zone123456 -3".

5.14 Sleeping power-save mode

On normal status, when the unit stoped over 10minutes, it will change to sleeping mode, on this mode, the power consumption is 4mah/h only. When it get any command or been moved, it will start GPS locating automatically.

Forced sleeping mode, Setting: Send SMS "sleep+password", the unit will reply "sleep ok", it enter to forced sleeping power-save mode.

Start device, send SMS "nosleep+password",the unit will reply "nosleep ok", it start GPRS and GPS locating.
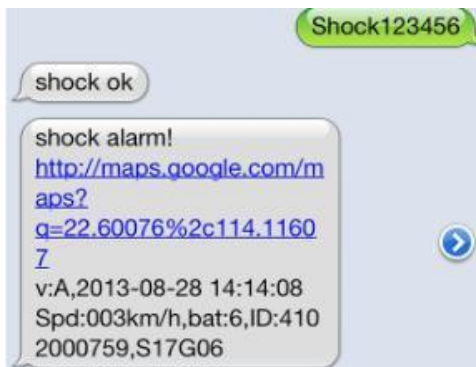

5.17 Shock alert

Note: It is effective sending by authorized number

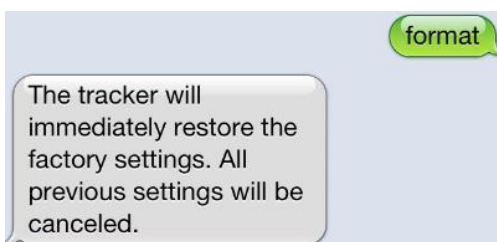Send SMS command"shock+password", the unit will reply "shock ok."

Cancel: Send SMS command "noshock+password", the unit will reply "noshock ok."

Note: It is effective sending by authorized number
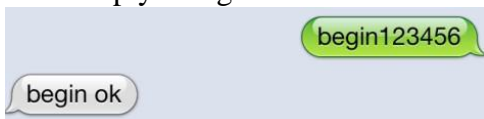
Send SMS command "format", the unit will reply "The tracher will immediateiy restore the factory settings.All previous settings will be canceled."

or

Send "begin+password" in SMS to the unit, it will reply "begin ok" and initialize all the settings. (Default password: 123456)

For example, send SMS " begin123456" to the tracker via a cell phone, If succeeded, it will reply "begin ok".

5.16 GPRS setting

User must send SMS via cell phone to set up IP, port and APN before starting GPRS.

5.16.1 Setting up APN

5.16.1.1 APN standards for Access Point Name and differs from country to country. For more information about the local APN, inquire with your local GPRS network operator.

5.16.1.2 Text the tracker a SMS "apn+password + Space + your local APN" via a cell phone and if succeeded in setup, the tracker will return the message "apn ok".

5.16.1.3 e.g. send SMS command "apn123456 cmnet". If succeeded, "apn ok" is returned by the tracker in SMS.

Notes: 123456 refer to password of tracker and CMNET is the APN of China Mobile (One of GSM Operator in china).

5.16.1.4 `Set IP` Send SMS command：`adminip123456 101.1.16.228 7700` If succeeded, "adminip ok"

5.16.1.5 Dropped Alarm

When device have been attached on metal 15 sec after (the Dropped button have been pressed 15 sec) ,if it device was dropped , it would alarm to the admin number by SMS or calling .

6.command list(pls note 123456 is the default password) .

Feature name	Active command	Reply	Cancel command	reply
Begin(blank before set)	Begin123456	Begin ok		
Admin number	Admin123456+space+number	Admin ok	Noadmin123456+space+number	Noadmin ok
Sos number	Sos123456+space+number	Sos number ok	Nosos123456+space+number	Nosos number ok
Sossms	Sossms123456	Sossms ok	Nosossms123456	Nosossms ok
Soscall	Soscall123456	Soscall123456 ok	Nososcall123456	Nososcall ok
Password	Password123456+space+new	Password ok		
Sever ip&port	Adminip123456+space+ip+space+port	Adminip ok		
APN	Apn123456+space+local apn content	Apn ok		
LBS	Addjz=1	Open LBS	Addjz=0	Close LBS
GPRS	Gprs123456	Gprs ok	Nogprs123456	Nogprs ok
Time Zone	Timezone123456+space+8	Timezone ok	Timezone123456+space+-8	Timezone ok
Language	Lag1	Switched to english		
Restore factory setting	format	No reply		
Upload frequency(10-180s)	Upload123456+time	Upload ok		
Sleep working mode	Sleep123456+space+time	Sleep time ok	Wake up by sms,call,press button	
Shock working mode	Sleep123456+space+shock	Sleep shock ok	Wake up by shock,sms,call,press button	
No sleep working mode	Nosleep123456	Nosleep ok		
Get location	Where or G123456#	Google map link		
One way communication	monitor	Monitor123456	In this mode,you could hear the voice around units after call it	
Shock alarm	Shock123456	Shock ok	Noshock123456	Noshock ok

Shock call alarm	vibcall123456	Shock call alarm ok		
Shock sms alarm	vibsms123456	Shock sms alarm ok		
Move alarm(distance:100-5000m)	Move123456+space+distance	Move ok	Nomove123456	Nomove ok
Overspeed alarm(50-120km/h)	Speed123456+space+max speed	Speed ok	Nospeed123456	Nospeed ok
Set a geo-fence (stockade)	stockade+123456+space+long,lat;long,lat	stockade ok	nostockade123456	Nostockade ok
Check setting of device	Param1	Software version,date,imei,ip&port,apn,web platform	Param2	Admin number,sos number,move distance,speed,etc
Status of device	status	Bat:4,gprs:1.gsm:3,gsm:1,acc:0,oil:0,power:1,s:0		

7. Web platform and sever ip&port
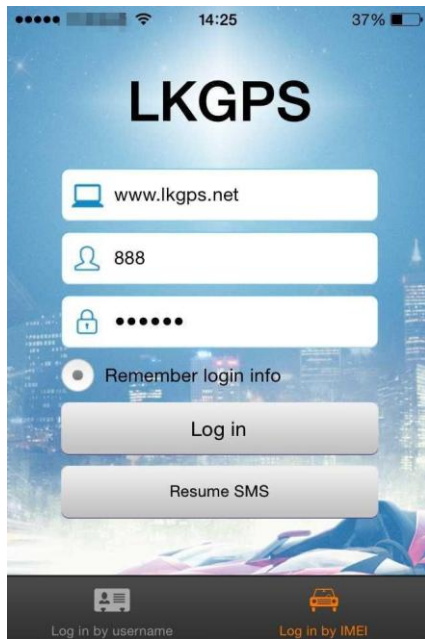
Website	Sever IP	Port
www.lkgps.net	101.1.16.228	7700

8.App download

8.1 android version: scan below QR code

8.2 ios version: search "LKGPS" in app store

9. Faults & The solutions

Faults	Solution
Startup Fail	Check the battery and see if it is fully charged or correctly installed.
Hang up Fail	In existence of an authorized number, an unauthorized number dials up the unit. Please initialize the unit and re-set up the authorized numbers.
Monitoring failure	Please check the authorization number is set to the correct time
No GSM Signal	Please make sure SIM Card is GSM Net and installed correctly; also call display should be on; but no call transfer and PIN code off.