



S45SGGMPA

USER GUIDE

Personal/Asset GPS TRACKING SYSTEM



Product Overview

This device is an innovative miniature size personal remote positioning device with built-in GPS and GSM/GPRS technology for monitoring and protecting people and property. It can be used in all walks of life from traveling lone workers, mobile nursing staff the elderly and persons with dementia etc.

What's New?

1. Unique design, combination of style and technology.
2. Supports A-GPS for accelerated positioning.
3. Supports GPS and Cellular tracking.
4. Two way voice communications.
5. Fall detection via 3D G-sensor
6. Firmware upgrade over the air.
7. Built-in 8MB flash memory.
8. GPRS blind area data re-upload function.

What's in the box?

This device is supplied in a box which includes:



Docking Station (optional):



Getting to know your device



SIM card Installation

Note: Before installing the SIM card, please check if the SIM card has PIN code or not, if yes, please use a mobile phone to unlock the card's PIN code.



Usages

- When using for the first time use, please fully charge the battery for around 4 hours.
- When charging, the RED LED will be on (solid). When the unit is fully charged, the RED LED will be off.

Switching the device on and off

- **To turn on device:** Press and hold the power button for 3 seconds, all LED will flash rapidly.
 - ※ To get the units initial location, power outdoors or near a window so the device can fix onto the satellites.
- **To turn off device:** Press and hold the power button for 3 seconds, after you hear beep sound, device is turned off.

What do the lights mean?

GSM LED--GREEN

Light shows a single flash rapidly every 3 seconds	The device is connected to GSM network
Light shows a double flash rapidly every 3 seconds	The device is registered to GPRS network
Light shows a slow flash every 3 seconds	The device is connecting to GSM network
Light Solid (not flashing)	No SIM Card detected

GPS LED--BLUE

Light shows a single flash rapidly every 3 seconds	The device has GPS positioning fix
Light shows a slow flash every 3 seconds (every 1 second on and 3 seconds off)	The device has no GPS fix
No flashing	GPS chip is sleeping

Activating an SOS Alarm

Press and hold the SOS button for 3 seconds, you will hear the beep sound. The green light will start to flash rapidly to confirm the request. After that, an SOS Alarm "Help me!" text message will be sent to all authorized phone numbers. It will also dial the 3 authorized numbers. The first number will take priority over the second, the third one. If the tracker fails to connect to the first number, it will switch to the second one, in case the second number fails to be connected too, the system will connect to the third number. If the device doesn't get an answer from all 3 numbers, it will wait for 5 minutes and start calling again.

This will be repeated until one of the mobile phones answers the call, then two-way communication starts.

To end the call, press the SOS button.

Making a Phone Call

To make a call, press and hold the call button for 3 seconds, you will hear beep sound, the green light will start to flash rapidly to confirm the request, and then it will dial the **second number**. To end the call, press the SOS button.

Low battery alarm

When device battery is runs below 20%, it will send a SMS alarm "BAT: LOW!" to all authorized numbers. If battery lowers than 15%, the blue light will flash rapidly to warn the user to charge the device as soon as possible.

Configuration and Operation by SMS

1. To Set the Authorized Number

It is not compulsory for all three authorized numbers to be set, however a minimum of one must always be set.

① Command: **A1 or A1,phone number**

Note: With no spaces in the text, case-insensitive.

Example: **A1** or **a1,123456789**

※ Using your mobile phone, send A1 to the phone number in the device, it will reply you a message:

Set mobile number 1 OK!

To delete this number, you can send **A0** to the tracker.

② Command: **B1 or B1,phone number**

Example: **B1** or **b1,123456789**

The device will reply you a message: **Set mobile number 2 OK!**

To delete this number, you can send **B0**

③ Command: C1 or C1,phone number**Example: C1 or c1,123456789**

The device will reply you a message: **·Set mobile number 3 OK!**
To delete this number, you can send **C0**

2. Modify the Time zone**Command: TZ+ +00/-00**

Note: the time values must be in 2 digits and at maximum 23 hours in value. “+” in the “time zone” portion of the text indicates east.
The symbol “-” in the “time zone” indicates west.

Example: tz+02, the system will add 2 hours based on the UTC time.

tz-02, the system will minus 2 hours based on the UTC time.

※ UTC time has been set as default time.

3. User defined name in SMS content**Command: name1, user name**

Example: name1,Dermot, the tracker will reply “**Add name ok!**”

※ To delete name, you can send **name0**

4. Location request**4.1 Reply with coordinates and web link****Command: loc**

The device will reply "GPS Info! Time: xxxxx; Lat: xxxx; Lon: xxxx; Spd: xxxxx, Altitude:xxxx Bt: xxx
maps.google.com/maps?g=loc:53.3678703,-6.2551946

Put coordinates to Google earth or Google maps. Click on search button, then you will find the position fixed.
Click on the link then the location can be shown directly on Google Map on your mobile phone.

4.2 Reply with Address

Command: add

Notes: This function needs GPRS function support.

The device will reply "Add: 53 Cooleen Avenue, Beaumont;

5. GEO-FENCE Alarm

Command: G+X, Y, Z, xxxM/KM

Example: G1,1,1,100M

Notes: No space in between.

X=No. of Geo fence (1~3), user can set 3 Geo fences

Y=0 means to turn off the function

Y=1 means to turn on the function

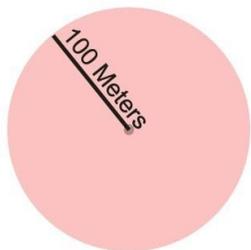
Z=1 means to set alarm when the tracker enters the preset area

Z=0 means to set alarm when the tracker breaches the district

xxx is the preset distance to the tracker's original place, must be 3 digitals. M means meters, KM means kilometers

The device will send the message to the authorized numbers as "Geo fence alarm!+GPS info" when it **enter** the area you set.

(User must set this function when tracker already fixed GPS signal)



To turn off this function, please send **G1,0** or **G2,0** or **G3,0**

6. Over-Speed alert

Command: **speed1,+ Speed**

Notes: The speed must be in value of speed and in 2 or 3 digitals. (01~255km/h)

Example: **speed1,100**

If we want to set the over-speed alert that to 100km/h, when the device moves exceeds 100km/h, it will send message “Over-speed! +GPS Info” to all preset numbers.

To turn off this function, please send **speed0** to the device.

7. Movement Alert

Command: **M1, xxxM/KM**

Notes: **xxx** is the preset distance to the tracker’s original place, must be 3 digitals. M means meters, KM means kilometers

Example: **m1,100m**

When the tracker moves out of 100 meters, it will send SMS alarm to the preset numbers.

To turn off this function, please send **M0** to the device.

8. Listen-in (Voice wiretapping)

Command: **L1**

Only A1, B1, C1 number can make a silence call to the tracker, the track answers the call automatically and allows the caller to listen to what happens around the tracker. There is no voice indication that the call is in progress.

To turn off this function, please send **L0** to the device.

9. Motion Alarm/No Activity

Command: **V1, xx S/M/H**

Note: No space in between, S means second, M means minute, H means hour, xx means the time you set and must be two digitals.

Example: V1,02H

If the user turns on this function, if the device does not detect for 2 hours (in this example) it will send SMS alarm to all registered phone numbers to warn them.

To turn off this function, please send **V0**

10. Shut down LEDs

Command: **LED1**

The device will reply "LED off" and later LEDs will stop flashing, but device is actually running.

To turn off this function, please send **LEDO**

11. AGPS

Command: **AGPS1, latitude, longitude**

Example: **AGPS1,22.647606,114.022583**

Assisted GPS (abbreviated generally as A-GPS and less commonly as aGPS) is a system that is often able to significantly improve the startup performance or time-to-first-fix (TTFF) and improve the GPS location to be more precise, of a GPS satellite-based positioning system.

To turn off this function, please send **AGPS0**

12. Fall detection

A simple fall may cause a devastating consequence. A Fall Sensor can help you get immediate help.

Command: **FL1**

FL1 to turn this feature on.

The device must sense both impact and angle, after that, device must remain in a lying position after 10 seconds, it will raise alarm.

To turn off this function, please send **FLO**

13. Check settings

Command: **status**

The device will reply **E.g.** A+8613812345678 B13912345678 C13712345678; Speed: 0,100km/h; GEO:0,0,0; VB:1,10S; MV:1,100; LBS:1; LED:0; TZ:2.0; LI: 1; PS:1; DS:0; FL:1; Bat: 95

To recognize the meaning of “0” & “1”

The number “0” implies that the function is turned off; whilst “1” indicates that the function is turned on.

Device three working modes

1. No Power saving mode

Command: PS0

In this mode, Both GSM and GPS chip will keep working to fix signal all the time. Battery can last 18~24 hours.

2. Smart Power saving mode (default mode)

Command: PS1

Device built-in motion sensor. Under this mode, GSM chip always working to be able to receive calls, SMS and transmit location to the platform, GPS chip activates by motion, incoming call and SMS, GPS chip off when its no motion or calling or SMS. You won't waste any battery life when device isn't moving.

Under normal use, battery can last 3 ~ 7 days.

3. Deep Sleeping mode

Command: DS1 or DS1,xxM/H

Both GSM and GPS chip will be shut down to save power, during deep sleeping, device is unable to receive any phone call or SMS.

It can be only activated by motion sensor. Once detect motion, it will running for the time you set and sleep again if no motion detected.

Battery can last 40 days if no motion at all.

To turn off this function, please send **DS0**

Real time tracking on www.smart-tracking.com

Our web based tracking system incorporates the TCP/IP protocol and allows users to monitor it in real time over the internet.

How to connect device to the platform for real time tracking via GPRS

1. Get IMEI number

Command: **version**

The device will reply" IMEI: 123456789123456; GSM CSQ:xxxx; Soft:V07.20.10.1345"

2. Go to website www.smart-tracking.com and login with your account

3. On the left side, click "Manage→Add GPS tracker"

Add GPS Tracker

Name: *

IMEI: *

User ID:

Tracker's sim number:

Driver's name:

License plate:

Remark:

Tracker type: 

Hardware version:

User name:

Receive alarm mail:

Dirvers mobile:

Installation time:

Add

- Note:
- Hardware Version: Please choose **EV07**
 - Type the name and the IMEI number. Please make sure IMEI numbers are correct.

4. GPRS Setting

In order to use the GPRS function, the user needs to setup the APN by sending SMS command.

What is APN? Access point name (APN) is the name used to identify a general packet radio service (GPRS) bearer service in the GSM mobile network. The APN defines the type of service that is provided in the packet data connection.

Make sure that the SIM card in the tracker supports the GPRS function.

The APN can be acquired from your local GSM operators.

Command: **S1, APN, user name, password**

Notes: Some access point name without user name and password, so please leave it blank.

Example: **S1,internet**

“internet” is the APN from the SIM card provider; therefore the user must set their particular APN for their own country which the unit resides.

After sending the command, the device will reply “Set APN OK! GPRS connecting”

After send S1,APN, wait for a while then you will see device is online.

Set GPRS Time interval by SMS (this can be also set from platform)

Command: **TlxxS/M/H**

The meaning of “xx”, The setting must be in 2 digitals and maximum 99 in value, which means 01~99.

xxS is the time interval in second with range(30~99)

xxM is the time interval in minute with range(01~99)

xxH is the time interval in hour with range(01~99)

Example: **Tl01M**

The device will reply “Set updating time interval OK!” and then device will update the time by every 1 minute on the website.

Disable GPRS:

Command: S0

The device will reply "GPRS OFF".

Reconnect GPRS

To reconnect the website via GPRS for real time tracking, please send **S2**

Check APN & IP, Port

Command: G1

The device will reply "APN: internet; Name: xxx; Password: xxxx; Port: 5050; IP:www.smart-tracking.com"

Change IP and Port

Command: IP1,IP/domain name,port

Example: IP1,103.21.211.11,5050 or IP1,www.smart-tracking.com,5050

Reboot device

Command: reboot

The device will restart itself without changing any settings.

Initialization:**Command: RESET!**

Note: This is to make all settings back to the factory default.

Built-in Memory

The device built in 8MB flash memory inside. It will store the GPS information when do not have GSM network coverage (i.e., very low population density areas, some mountainous terrain, underground areas etc). The device will transmit GPS locations to the WEB server automatically once the GSM network is recovered.

Cautions:

Please comply with the instructions to extend the unit life:

1. Keep the unit dry. Any liquid 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. Clear the unit with a piece of dry cloth. Don't clean in chemicals, detergent.
5. Don't disassemble or refit the unit.
6. Using other batteries will cause unwanted situation

Hardware Specification:

Content	Specs.
Mainframe Dimension	61mm*43mm*16mm
Weight	35g
GSM Frequencies	900/1800mhz/850/1900Mhz
GPS chip	U-blox 7 (Support AGPS)
GPS sensitivity	Cold start: -148dBm Hot start: -162dBm
GPS accuracy	<2.5m
Time to First Fix	Cold start 32s, Warm start 11s, Hot start 1s
Charging Voltage	5V DC
Battery	Chargeable 3.7V 900mAh
Standby Current	≤2mAh
Storage Temperature	-40°C to +85°C
Operation Temperature	-20°C to +80°C
Humidity	5%-95% non-condensing