



ET017 USER GUIDE

GPS TRACKING SYSTEM



Product Overview

Thank you for purchasing ET07S. This device is a waterproof IPX66, innovative miniature size personal remote positioning device with built-in U-blox GPS and GSM/GPRS technology. It's for monitoring and protecting people and property. It can be used in all walks of life from traveling lone workers and mobile nursing staff to children and the elderly, Dementia



etc.

Getting to know your device



SIM card Installation

The SIM card is not included in the package. A **Micro SIM card** is available from the user's local operator.

- Unscrew the back cover and remove the cover.
- Insert SIM card and make sure it's activated with credits

- Put the cover back and tighten the screws.

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

Device Charging

For the first time use, please fully charge the battery for around 2~3 hours

Using the USB charger or using docking station to charge

- Place the device on the docking station.
- Connect the Micro USB side of the cable to the docking station port and connect the other end of the cable to the designated AC power source (USB/AC adaptor).
- When charging, the RED LED (on docking station) will be blinking (solid). After fully charging, the RED LED will solid.

Switching the device on and off

- **To turn on the device:** press the side power button for 1 second, all the LEDs will flash rapidly. Device can be also turned on automatically by charging via USB or put it into the docking station.
 ※ To get an initial location, use outdoors or near a window so the device may fix onto the satellites.
- **To turn off the device:** press and hold the side button and SOS button together for 1 second until the LEDs off.

What do the lights mean?

Power Status LED

LED	Blue ON(solid)	Blue Blinking Quickly	Blue Off or blinking slowly
State	The device is charging	Battery power is lower than 15%	Device has been fully charged or not charging

GSM LED--GREEN

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

GPS LED--BLUE

LED	Light shows a single flash rapidly every 3 seconds	Light shows a slow flash every 3 seconds (every 1 second on and 3 seconds off)	Blue Off(when device not charging)
State	The device has a GPS positioning fix	The device has no GPS fix	The GPS chip is sleeping

Activating an SOS Alarm

Press and hold the SOS button for 3 seconds until the device vibrates, and then green light will start to flash rapidly to confirm the request. After that, an SOS Alarm "Help me!" will be sent to all authorized phone numbers and to the platform. It will also dial the 3 authorized numbers in sequence. If the tracker fails to connect to the first number, it will call the second one. In case the second number fails to be connected as well, the system will connect to the third number. If device fails to call all 3 numbers, it will start to dial the numbers again after 5 minutes. This will continue until one of the phones answer the call. To end the call, press the SOS button.

Making a Phone Call

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

Configuration and Operation by SMS**1. To Set the Authorized Number**

※ It is not mandatory for all three of the 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 of the device, it will reply: **·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: **·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: **·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 must amounts 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,Emma, 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?q=loc:22.647379,114.030998

※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: Donghuan 1st road, Bao’an, UK;

5. Low battery alarm

When the unit’s battery is less than 15%, it will send an SMS alarm “BAT: LOW!” to all authorized numbers. If battery is less than 15%, the blue light will flash rapidly to warn the user to charge the device as soon as possible.

Command: Low1

To turn off this function, please send **Low0** the device.

6. PIN LOCK

Command: 123456lock

After send this command, then it will require a password in front of all commands (except reboot and RESET!). For example 123456LOC, 123456A1 etc. (default password is 123456)

Remove password protection, just simply send **123456unlock**

7. Change password:

Command: Old password + H + new password

Example: 123456H666666

The password now is changed to 666666

※ The pre-set password won’t be erased by changing a new sim card.

※ Be sure keep the new password in mind, otherwise you have to ask your distributor to restore the original setting in case of losing the new password.

※ Make sure the new password is in 6 digits, or else the tracker can not recognize the password.

8. GEO-Fence Alarm

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

Example: G1,1,1,100M

Notes: No spaces 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

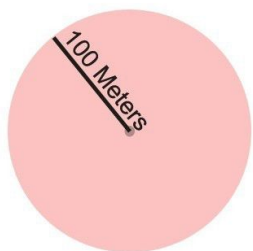
Z=1 means to set alarm when the tracker enters the preset area

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 the blue light is flashing rapidly.)



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

9. Over-Speed alert

Command: speed1,+ Speed

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

Example: speed1,100

Suppose the over-speed alert that we want to set is 100km/h, when the device exceeds 100km/h, it will send the message "Over-speed! +GPS Info" to all registered phone numbers.

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

10. Movement Alert

Command: M1, xxxM/KM

Notes: **xxx** must be 3 digitals. M means meters, KM means kilometers

The tracker must be stationary when setting this function

Example: m1,100m

When the tracker moves beyond 100 meters, it will send an SMS alarm to all registered phone numbers.

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

(The settings must be at least 50 meters)

11. Listen-in (Voice wiretapping)

Command: L1

A1, B1, C1 can make a silence call to the tracker, the track answers the call automatically and allows the caller to hear what is happening 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.

12. Motion alarm

Command: V1, xx S/M/H

Note: No spaces in between, S means seconds, M means minutes, H means hours, xx means the time you set and must be two digitals.

Example: V1,05M

Device will detect motion every 5 minutes and will send an SMS warning alarm to all registered phone numbers.

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

13. Turn off 3 LEDs

Command: LED1

The device will reply “LED off” and later LEDs will stop flashing, but the device is actually on.

To turn on LEDs, please send **LED0**

14. 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**

15. Fall detection

A simple fall may cause a devastating consequence. The authorized numbers will be alerted without the user pushing SOS button when the fall sensor is activated.

Command: FL1

The device must sense both impact and angle.

To turn off this function, please send **FL0**

16. 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; LED:0; TZ:2.0; LI: 1; PS:1; DS:0,3M; FL:1; Bat: 95%; SMS:0;LOCK:0

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 5 working modes

1. Live Tracking Mode (1)

Command: PS0

In this mode, Both GSM and GPS are on all the time, Battery can last 18~24 hours.

2. Smart Power Saving Mode (2) (default working mode)

Command: PS1

In this mode, the gsm chip is working and receives calls, SMS and transmits location. The GPS chip is activated by motion, incoming calls and SMS. The GPS chip is off when there is no movement or no phone usage. Battery life is not wasted when the device isn't moving.

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

3. Deep Sleeping Mode (3)

Command: DS1 or DS1,xxM/H

Both GSM and GPS chip will be off to save power, the device is unable to receive calls or SMS.

It can be only activated by movement. Once movement is detected, it will run for the set time and sleep again if no movement is detected.

Battery can last 40 days if no movement at all.

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

4. Working mode (4)

Command: Mode4

In this working mode, device can always receive SMS, calls. But GPS chip only wakes up and updates location to the tracking platform if user press button or receive phone call/text message.

Without press button or phone call/text message, GPS chip will always sleep.

5. Time interval working mode (5)

Command: Mode5,xxS/M/H

Example: Mode5,10M

Device will update location to the tracking platform every 10 minutes.

In this working mode, device can always receive SMS, calls. And it updates location to the tracking platform according to the time you set.

Real time tracking on www.smart-tracking.com Test Account:Username:ET-Safe1 Password:123456

Our web based tracking system incorporates the TCP/IP protocol and allows users to monitor it in real time over the internet or sends an e-mail to the

predefined e-mail address.

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 the website www.smart-tracking.com and login with your account.

3. On the left side, click "Manage→Add Tracker”

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: TIxxS/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: TI01M

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

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

Disable SMS alert**Command: SMS0**

It only send alarms via GPRS to the platform and without text message to the authorized numbers.

Enable SMS and GPRS alarms, just simply send **SMS1** (default setting)

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.

Delete stored tracking history data**Command: flush**

The device will stop sending the stored tracking history data to tracking platform.

Cautions:

Please comply with the instructions to extend the unit life:

1. Don't use & store the unit in dusty places.
2. Don't put the unit in overheated or over cooled places.
3. Clear the unit with a piece of dry cloth. Don't clean in chemicals, detergent.
4. Don't disassemble or refit the unit.
5. Using other batteries will cause unwanted situation

Hardware Specification:

Content	Specs.
Mainframe Dimension	61mm*43mm*16mm
Net Weight	15g
GSM Frequencies	900/180/850/1900Mhz
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 800mAh
Standby Current	≤2mAh
Storage Temperature	-40°C to +85°C
Operation Temperature	-20°C to +80°C
Humidity	5%-95% non-condensing