

GPS Personal Tracker

USER MANUAL

(Model: PG99)



Version 3.0

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Preface

PG99 GPS tracker is the tracking device for person or asset for anti-theft.

It has three types of working mode for different applications. The device working in sleep mode has extreme power saving design; it can be used as personal tracker or asset tracker with long standby time.

Read it Firstly:

Please read this manual thoroughly before you use the device; please keep it for future reference.

Attention:

(1) Please keep the device away from heavy water, high temperature, heavy dust or strong magnetism.

(2) Please prepare a valid GSM SIM card in advance.

(3) For safety, please keep the SIM number of your tracker in secret

Warning:

We strongly suggest user let the professional car electrician to install the system.

I. Features & Functions

1. Track on command or by time interval;
2. Arm/disarm by SMS/platform or phone call;
3. Track by mobile SMS to get the latitude, longitude, speed, direction & odometer etc.;
4. Vibration alarm;
5. SOS alarm;
6. A-GPS function, strong ability of receiving GPS signal;
7. Check the coordinates via LBS, even there is no any GPS signal;
8. Voice monitoring & two-way talking;
9. Built-in shock sensor for power saving & triggering alarm;
10. Battery low-level alarm;
11. There are 3 types of working mode for power saving flexibly. In power save mode, the tracker could work for several days.

II. How to Operate it

The default user password is **111111**.

If the user password is changed, user should send the SMS command with the new user password instead of **111111**.

XXX is the control code, all the letters must be **capital letters or in small letters**, command with mixed capital letter & small letter is not recognized by system

Authorize the Alarm-received Phone No.

SMS command: **111111*10** **Mobile #1** ***20** **Mobile #2***

In case of alarm, if user wants to get the alarm SMS from the tracker, he/she needs send the following SMS to program the tracker firstly, otherwise, the alert information can't be received correctly.

Example: User sends the SMS **111111*10** **13922713571** ***20** **18902267400*** to the tracker's SIM card number, if there is any alarm, system will send SMS to both of these two mobiles.

Arm/Disarm by Phone Calling

User could also use the 1st alarm-received mobile phone to call the tracker's SIM card number, so as to arm/disarm the system.

Arm: After hearing several ring tones, if the systems hang up the call automatically, and call back you, it means that the system is armed.

Disarm: After hearing several ring tones, if the system hangs up the call automatically, and don't call back you, it means that the system is disarmed.

Note:

- (1) There is no communication fee for this operation, it is a very convenient way to arm & disarm the system.
- (2) The SIM card inside the device must have the function of Caller ID Display.
- (3) Only the 1st **alarm-received mobile phone** can realize this function.

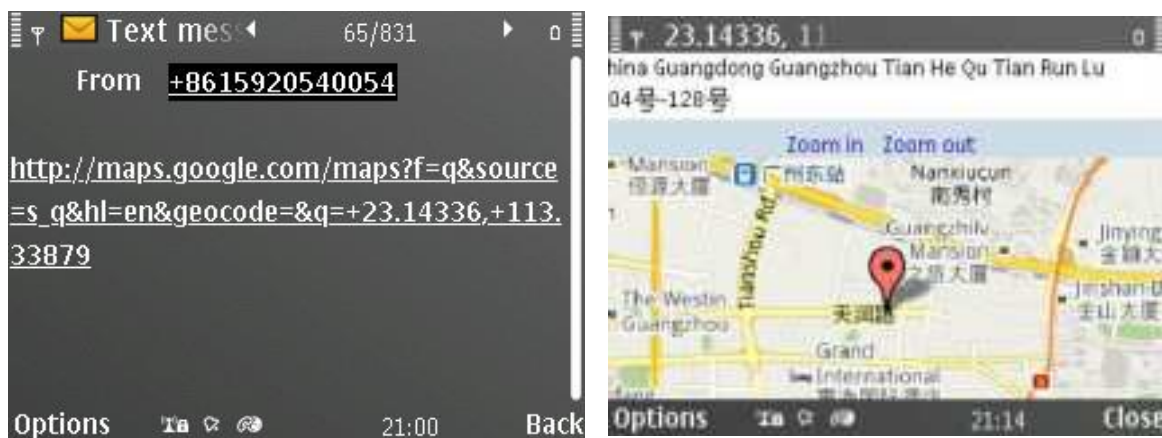
Check the Vehicle's Status

SMS command: **111111CHK** (or **111111chk**)

This instruction is used to inquiry the vehicle's location & system's status.

The system will send back the SMS, includes the similar information, such as "Armed....." **including a Google map's URL for location.**

Upon receiving the SMS command, the tracker will automatically send back the SMS including the Google map's URL, user can use smart phone (GPRS data service is enabled) to open the URL link, the car's location will be showed on the Google map.



Arm/Disarm the System by SMS

SMS command: **111111ARM** (or **111111arm**)

This SMS instruction is used to arm the system

SMS command: **111111DSM** (or **111111dsm**)

This command is used to disarm the system & stop sending alert SMS..

Change User Password

SMS command: **111111PSW**nnnnnn (or **111111psw**nnnnnn)

This instruction is used to change the user password. The length of the user's password is 3~6 digits. Users are suggested to change to the new password in use.

Example: User sends the SMS "111111PSW12345" to the system SIM card number, and gets the confirmed SMS "111111PSW12345" in 3 seconds. It

means that the user password has been changed to 12345.

Remark: Please keep the password deep in mind if it is changed.

Monitor the Voice around the Car

SMS command: **111111MON!** (or **111111mon!**)

This instruction is used to monitor the voice around the car. The user's telephone pays for the communication fee.

Example: User uses the mobile 13780012345 to send 111111MON! to the system, then use the mobile 13780012345 to call the tracker, it will be connected automatically, and user can monitor the voice around.

Two-way Talking

SMS command: **111111MON:P1*** (or **111111mon:P1***)

This instruction is used to program the phone number which is used to carry out two-way talking function.

After sent this command, within 4min to use P1 to call the tracker, it will directly pickup to do two way talking.

SOS Alert

Pressing the button two times, it will trigger SOS alarm; the tracker will send SOS alert SMS to both of the alarm receive phone number.

Working Mode

The tracker could be set into 2 different working modes.

SMS command: **11111PWR:X**

SMS command	Working mode	Descriptions & Behaviors	current consumption
11111PWR:0	Live tracking mode	GSM & GPS module are always powered up. it will report to platform according to the time interval of "RPT"(moving) & "SLP"(stopped);	30mA
11111PWR:1 (default setting)	Power Save Mode	1. Engine on(Continuous vibration for 15sec): GPS work& report platform according to "RPT" value; 2. Engine off(Static for 30sec): Power off GPS module most of time, power on and report to platform according to the time interval of "SLP" value.	8~20mA
11111PWR:2	Power Save Mode	Vibrate sensor closed. No detect for engine status & no vibration alarm. Power off GPS module most of time, power on and report to platform according to the time interval of "SLP*60" value.	5~10mA

IMPORTANT:

The tracker has a button on the panel.

1. Keep press it for 3 seconds, it will turn on the tracker.
And when it is on, keep press for 3 seconds, it will turn off the tracker.
2. When the tracker is on, press the button two times continuously, it will trigger SOS alarm, to send SOS alert to alarm receive phone number.
3. In the mode 11111PWR:1&2, press the button one time, it will power on the GPS module immediately and get location report to platform, if the tracker cannot get GPS signal within 4 minutes, it will power off GPS module again.

PWR:0 could be used for continuously tracking for vehicle/person, PWR:1 AND PRW:2 is suggested for person tracking or asset protection with long standby time.

Other SMS Command List

Note: ***** is user's password and the default password is 111111. The tracker will only accept commands with the correct password.

Functions	SMS Command	Example
Set the Shock Sensor	*****SHK:X	111111SHK:3
It is to set the sensitivity of the shock sensor. X=1~5. (X=5, most sensitive; X=1, less sensitive; default X=5).		
Odometer Setting	*****ODO:X	111111ODO:5000
It is to set the initial odometer reading. (X: meters) 111111ODO: is to read the present odometer reading (with : at the end)		
Check Vehicle battery	*****ADC	111111ADC
It will reply the voltage of built-in battery.		
Set Heart-beat time	*****WWW:HRT:X;	111111WWW:HRT:3;
It is to set the heart-beat time interval. (in minutes)		
Clear the Parameters	*****CLR	111111CLR
Remarks: it will reset all the parameters to the default settings.		
Reboot the Tracker	*****STR	111111STR
It will reboot the tracker immediately.		

Check software version & gprs setting	*****WWW:	111111WWW:
It will reply the currency info. for tracker. Eg: 111111WWW:VER:PT99V1.11T20210610;IMEI:860675046097349;IPN:www.51track.com;COM:8500;APN:cmnet,,;RPT:20;SLP:120;HRT:3;TZN:8.0;		

III. The Setting for GPRS Connection

The GPRS setting is necessary for using the following functions:

(1) Online tracking service by web-based tracking platform

SMS format:

111111WWW:IPN:X;COM:X;APN:apn,user,password;RPT:X;SLP:X;RUN:X;

- IDN: The tracker's ID, it is the last 14 digits of IMEI which can't be changed.
- IPN: The IP address or domain name of the GPRS server
- COM: The communication port for the GPRS server
- APN: The Access Point Name for the GSM SIM card.
- RPT: The interval for the uploading GPRS packet (Unit: sec.)
- SLP: The interval for uploading GPRS packet when car is parked (Engine is OFF and no vibration). (unit: sec.);
- RUN: GPRS connection setting. 0=close, 1=TCP, 2=UDP.
- IDN: The tracker's ID, it is the last 14 digits of IMEI which can't be changed.

Example, if server is: www.51track.com, TCP port is 8500, APN is web.gprs.mtnnigeria.net, apn user: web, apn password: web, time interval is 60 seconds, Then the command is:

111111WWW:IPN:www.51track.com;COM:8500;APN:web.gprs.mtnnigeria.net,web,web;RPT:60;RUN:1;

User can send one or more options at the same SMS commands, such as:

✧ **111111WWW:IPN:X;COM:X;**

This is to set the server's address and port separately.

Example: 111111WWW:IPN:www.51track.com;COM:8500;

✧ **111111WWW:APN:X;**

This is to set the APN (access point name). Please use “,” to separate the APN, APN username & APN password.

Example: 111111WWW:APN:web.gprs.mtnnigeria.net,web,web;

✧ **111111WWW:RPT:X;**

This is to set the upload time interval. The unit is second, the minimum value is 10 seconds. The default setting is 60

Example: 111111WWW: RPT: 60; (Upload time interval is every 60s)

✧ **111111WWW:RUN:X;**

X=0; is to close down the GPRS;

X=1; is to open the GPRS via TCP

Eg: 111111WWW:RUN:1; (Open the TCP connection)

✧ **111111WWW:**

You can send 111111WWW: to check the GPRS settings.

Default GPRS Setting

The default GPRS setting is:

- ✧ IPN: www.51track.com , COM:8500
- ✧ APN: cmnet RPT: 20 seconds
- ✧ SLP:120 RUN:1

VI. Alarm Types

Vibration Alarm

In arming status, if the car is vibrated, it will send out alarm SMS.

Low battery Alarm

If the battery is lower than 10%, it will send out low battery alarm.

SOS Alarm

In any condition, if the SOS button is pressed & hold for 3 seconds, the red & blue LED turn on, it will trigger the SOS alarm.

V. Hardware Usage



Notes:

- (1) Please pay attention to the direction of the SIM card
- (2) **Change the SIM:** please do it according to the following sequence, otherwise it might not work properly.
"Power off the device → insert the SIM card → power on the device"
- (3) Please use regular android phone charger to charge the device (output 5VDC, $\geq 1.5A$)
- (4) **Power ON:** Keep press SOS button for 3 seconds, it will turn on the tracker.
- (5) **Power OFF:** When device is on, keep press SOS button for 3 seconds, it will turn off the tracker.

LED behavior:

- ✧ GPS LED(Blue color):
 - Valid GPS signal -----> flash once every 3 seconds.
 - Invalid GPS signal -----> flash once slowly every 1 second.
- ✧ GSM LED(Red color):
 - Valid GSM signal -----> flash once every 3 seconds
 - Invalid GSM signal -----> flash once slowly every 1 second.

VI. Specifications

Items	Specifications
Working voltage:	+3.4~4.2VDC
Backup battery:	Rechargeable 3.7V 1100mAh Li-ion battery
Dimension (main unit):	124.0*64.0*32.0 (mm)
Weight (main unit):	347g
GSM frequency:	2G: 850MHz/900MHz/1800MHz/1900MHz (Quad-band)
GPS chipset:	U-blox7 chipset
GPS sensibility	-162dBm
GPS receiving channel	56 channels
Working frequencies	1575.42Mhz C/A (GPS)
Positioning accuracy	≤10m (wide-open area)
Speed accuracy	≤0.1M/S (wide-open area)
Positioning mode	Auto 2D/3D
Hot start	1 sec., average
Warm start	2 sec., average
Cold start	<30sec., average
Working temperature:	-20 ~ 85℃
Humidity:	0 ~ 95%

VII. FAQs & Troubleshooting

FAQ	Troubleshooting
I call the tracker, it does not ring	(1) The GSM SIM card has no credit; (2) The SIM card is protected by PIN code; (3) Please power up correctly; (4) The SIM card is placed correctly in the slot;
I call the tracker, it rings, but it doesn't response with SMS	(1)The user password is wrong, please use the correct password or reset the password to test; (2) Low power, please use outside power supply to power on the unit to test
I can not get the alarm message	(1) The SIM card inside the device has no credit; (2) The alert-received mobile number is not programmed correctly, or the SMS command is not in correct format;
I can not get the correct GPS coordinates or the location is wrong	(1) Please make sure there is no metal obstacles above the tracker. (2) Please check it at broad place;

	(3) Please check if the GPS LED flash once every 3 seconds; place the tracker to other place, so as to make sure that it can receive the GPS signal well (4) In cloudy condition, it is a little hard to get the GPS signal, and the GPS coordinate might have some errors.
Tracker fails to connect to server by GPRS	(1) The SIM card must be activated with GPRS function; (2) Do the correct setting for GPRS connection

VIII. Maintenance

- ✧ Please use normal android phone charger (output: 1A, 5VDC) to charge it.
- ✧ Please do not put the device in hot & wet place for long time;
- ✧ Please do not place it together with metal items; it might affect the receiving of GPS signal.
- ✧ When it is indoors or nearby a tall building, the GPS signal might be weak or completely disable.
- ✧ Please check the balance of the tracker's SIM card periodically.
- ✧ The battery is replaceable, please use screwdriver to open the back panel carefully.