

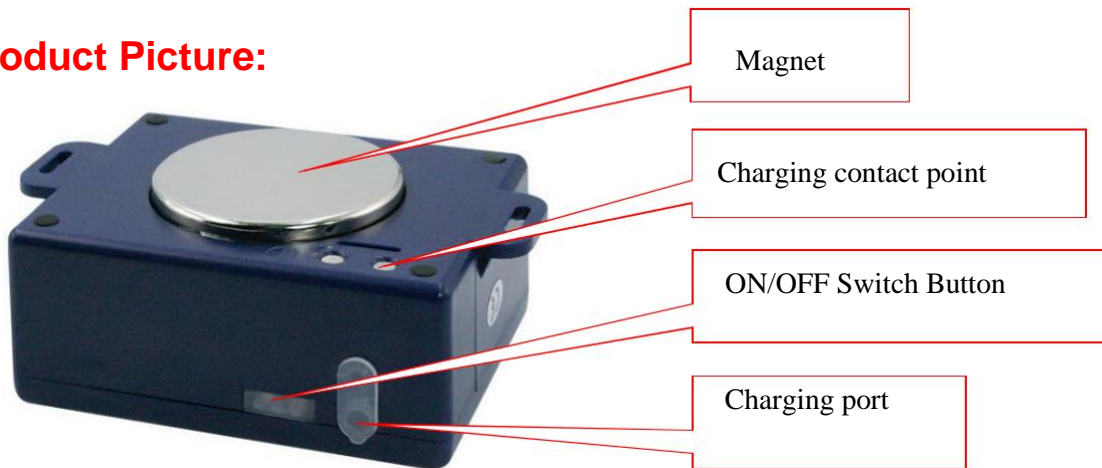
4G GPS Portable Tracker

User Manual

PL641



Product Picture:



Car Adapter & charging wires



External power supply box

Function Specification:

- Portable Design, No installation, Easy using;
- Big Li-battery(6000mAh) standby time up to 30-60 days;
- SMS/App/Web Locate;
- Low Battery Alarm;
- 2G/3G/4G global network coverage;
- GPS + BeiDou dual mode module;
- Can be worked without platform;
- Built in shock sensor for shock alarm;
- User change work & report mode by sms
- Auto configure APN;
- Use external power box connect to car battery can be used as car gps tracker;
- Suit for personal or vehicle tracking;
- LED light to indicate charging is ON or OFF.

LED Indicator:

- | | |
|-------------------------------------|--|
| ● Green Power LED Flash once | : working well |
| ● Green Power LED Flash twice | : 2/3/4G working well and GPS signal weak |
| ● Green Power LED Flash three times | : 2/3/4G and GPS working well but battery is low |
| ● Green Power LED Flash four times | : 2/3/4G working well, battery low & no GPS signal |
| ● Green Power LED ON continuously | : 2/3/4G Searching network |

- Green Power LED OFF continuously : Power off
- Red GSM LED Flash once : Upload location to server OK
- Red GSM LED Flash twice : Upload location to server Fail
- Red LED ON continuously : Battery is charging
- Red LED OFF continuously : Battery charging finished

Before Using:

1. At first to buy a 4G LTE / 3G WCDMA / 2G GSM SIM card which have SMS service and incoming caller ID service & internet data service, in which the SIM card phone number is the very tracker number and all the operation for the tracker is to this number, such as locating immediately, add & delete preset number, change password, enable over speed alarm, enable move alarm etc.

Note:

1. This tracker use 2G GSM or 3G WCDMA or 4G LTE network, and need about 10MB-30MB data per month according the different working mode, recommended order a internet data package for the SIM card. (Note: Most M2M SIM Card have not voice & sms function, only can locate & upload location to server, this kind of M2M SIM card can not use SMS locate & alarm)

2. This tracker use standard SIM card , please see the following diagram to select the SIM card.



3. Some SIM card need to send SMS or USSD command to enable the data service, the detail please see the SIM card manual or call the SIM card service hotline.

2. Power ON / OFF

- ◆ When power is OFF, press the “ON/OFF” button till the LED is ON, then release the button, the tracker is powered ON, when the LED flash means the tracker is working well.
- ◆ When the power is ON, press the “ON/OFF” button till the Green LED Flash fast, and then release the button, and press the ON/OFF 3 times, the tracker will turn off LED & tracker.

3. Install SIM card: Pulling out the long narrow rubber stopple beside the tracker, you can see the SIM card socket, beside which, press the yellow switch button with a tool and then the holder will come out. Pull it out and put the SIM card in the holder and then push the holder into the tracker (Pay attention to that the SIM card metal contact pin can not face down to the holder), and push the long narrow rubber stopple into the

tracker to cover the SIM card socket.

Note: Before install or uninstall the SIM card, please power off the tracker.

4. Recharge the tracker

- ◆ We recommend using OEM charger to recharge the tracker. this tracker use the 5V DC voltage to recharge, so too high voltage or AC voltage may damage the tracker or even cause accidents.
- ◆ Use the car adapter or home charger or PC USB to recharge the tracker: insert the USB wire into the charging port bedside the tracker, the other side connect to the home or car charger, If the LED on the charger is RED, it means it is recharging, if the LED on the charger is GREEN, it means the recharging is finished. This will take about 10-20 hours.



5. Battery Low Alarm

When the battery voltage in the tracker is too low, the tracker GREEN LED will flash 3 or 4 times, and send battery low alarm information to authorized number, and later if the battery power is too low, it will power off automatically.

6. Back to Factory Setting (Default Setting)

Sending SMS "FACTORY*12345678" to the tracker SIM card number, the tracker , the tracker will delete all the user setting (authorized number / Alarm setting / Password / APN / Working mode etc), reset to factory default setting, and then re-power on. Also you can use a other way back to factory setting: turn off the tracker, then press the "ON/OFF" button till the led flash faster finished, then release the button, the tracker will re-power on.

7. Antenna

- ◆ The Antenna of 2G/3G/4G and GPS+BeiDou are built in the tracker.
- ◆ Please leave the tracker away from big metal, this will reduce the GSM/WCDMA and GPS signal.

8. Using Condition

The working temperature is -20°C to 60°C , over this range the specification of the tracker maybe can not reach the standard level, the storage temperature can reach to -40°C to 80°C .

Simply Using


1. First to buy a 2G GSM or 3G WCDMA or 4G LTE mobile phone SIM card, which needs SMS service and incoming caller ID display and internet function, this SIM card phone number is the tracker number and all the operations to the tracker is this number (M2M card that has no voice & SMS also can be used, this kind of SIM card can not send SMS command or receive SMS alarm information).

2. Press any ON/OFF button till the tracker power on, first time using please put the tracker outdoor for easy get GPS & 2/3/4G signal.

3. Check the LED flashing to confirm the tracker work well (Refer the above **LED Flash Indicator**).

4. This tracker default working mode is 1, the tracker locating & uploading is controlled by shock sensor, if the tracker is moving , the tracker will upload the location to server every 30 seconds (time interval can be set, please refer **Locate Instruction**), if the tracker stop moving, 2 minutes later, the tracker will stop locating & uploading location to server. if the tracker stop moving, 10 minutes later, the tracker will turn off and go to sleep mode .

5. This tracker can auto configure APN & GPRS user name & password, if the auto configuration is not right, the tracker can not visit internet, so the tracker location can not update on the app & website, and the red LED will flash twice, then you need send SMS to tracker to change the APN & GPRS manually, send SMS "CHECK*12345678" to tracker to check the APN configuration, call the tracker SIM card supplier to confirm the APN & GPRS is right. Send "APN*12345678*apnname" and "USERNAME*12345678*username*password" to tracker can change the APN & GPRS setting, please refer the following **Tracker Setting Instruction** for detail.

6. Visit & login the tracking platform www.999gps.net, click  can select different language, check current location, playback history tracking etc can be operated, platform user name and password is the last 7 digital numbers of the tracker's ID (for example ID is : 800201912345678, the user name is : 2345678, password is :2345678 or 123456, user can change the password, send SMS "ID*12345678" to tracker can check tracker ID).

7. iPhone Android App also use the same user name and password with website login, visit www.999gps.net with mobile phone, click the app icon on the login page, or scan the QR code on login page, the iPhone & Android app can be download & installed, please refer the platform operation guide.

8. Fleet user can be created for easy fleet management, call your distributor to create a fleet.

In the following content, all the SMS content is mark by "", and this "" is not include in the SMS content, it is only to used to mark the SMS content.

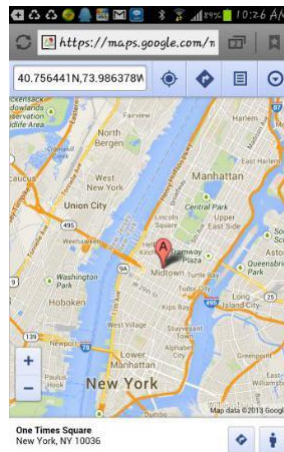
Locate Instruction

1. Sending SMS or make a call to trigger locating by Google map link

Send SMS “URL*12345678” to the tracker, “URL” is a command, “12345678” is password. If the operation is success, the tracker will send back the location information with Google map link to the sender. User click the link, the location in google map will display, the SMS example is as follow:

<https://maps.google.com/maps?q=22.67680N,114.15188E>

Battery:88%



Call the tracker SIM card number with authorized number, after ring 3 times, the tracker will hang up the call automatically and reply sms the location with Google map link same with above, if the authorized number is not added, then any call can triggered the SMS locate.

2. Arm (Shock Alarm) by sending SMS

Send SMS “ARM*12345678” to tracker, “ARM” is a command, “12345678” is password, the tracker will send back the information “Set Shock Alarm ON” to indicate the operation is success and go to arm state, if the password is not right, the operation is fault, the tracker will send back information “Wrong Password”.

After go to shock alarm state, the system will check shock sensor, if the shock sensor is trigger **(only continuously shock can trigger the shock alarm to avoid trigger by mistake)**, the tracker will send alarm and location information by SMS to the authorized phone number, and send the alarm information to the website server, also the tracker will call the authorized number A first, if no answered then B and C, if 3 authorized all no answered, then stop calling, If the tracker is triggered continually, every authorized phone will receive max 3 alarm SMS per hour.

If the authorized number have been set, use the authorized phone number to send SMS “ARM#” to the tracker also can trigger the tracker to enter arm state.

The shock alarm SMS is as follow:

Shock Alarm

<https://maps.google.com/maps?q=22.67680N,114.15188E>

Battery:88%

3. Disarm (Shock Alarm) by sending SMS

Send SMS "DISARM*12345678" to tracker, "DISARM" is a command, "12345678" is password, the tracker will send back the information "Set Shock Alarm OFF" to indicate the operation is success and disable the shock alarm, if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

4. SOS Emergency Help (No Platform Necessary)

In the normal mode press the button ON/OFF on the tracker and don't release (Press button over 6 seconds), the GREED LED will flash quickly, later it will be turned OFF, then release the button, the tracker will send SOS help information to all 3 preset phone, and then call the authorized number A first, if no answered then B and C, if 3 authorized number all no answered, then stop calling.

The SOS SMS information sample is as follow:

HELP!

<https://maps.google.com/maps?q=22.67680N,114.15188E>

Battery:91%

If no authorized number is added, the SOS information can not be sent. If the SOS information is received, please confirm the user is safety.

Settings Commands

1. Set Tracker Working Mode: (1.Shock Control, 2. Keep Online, 3.SMS Locate)

Send SMS "MODE*12345678*X" to the tracker, "MODE" is command, "123456" is password, "X" is the working mode, it is 1,2,or 3. after receive the command, the tracker will reply SMS "Mode X OK " .

The working modes are described below:

Mode 1 (Default Factory Mode) ----- Shock Control ON/OFF & Uploading

This mode is the default factory working mode. under this mode, normally the tracker is sleep, when the tracker begin to move, the tracker is triggered by shock sensor, the tracker will be turned on and the location begin to upload to the server, default every 30 seconds the tracker will upload one location to server, after the tracker stop moving 2 minutes, the tracker will turn off GPS module & stop uploading location to server, after the tracker stop moving 10 minutes, the tracker will turn off 2/3/4G module and going to sleep. The sleep mode will cost very few battery power.

Mode2 ----- Keep Online Continuously & Uploading

Under this mode, normally the tracker always keep the internet connecting, the tracker will keep online & uploading information to server, when the tracker begin to move, the tracker will turn on GPS & upload location to the server, default every 30 seconds the tracker will upload one location to server, after the tracker stop moving 2 minutes, the tracker will turn off GPS module, but still upload heart beat shake hand message to server every 1 minutes to keep the server online. This mode will cost very more battery power & SIM card data.

If the tracker is always online, the tracker will send tracker status to platform all the time, this will exhaust more data charge and car battery power, and if the car will park long time or the car battery is old, this maybe cause the car battery power low and can not start car engine, we do not recommend this working mode.

Mode 3 ----- SMS Locate

Under this mode, normally the tracker only keep voice and SMS standby, the tracker will not initiative to locate and upload location to server, unless user send sms to tracker to trigger the tracker locate & reply location to user with Google Map link, so normally the GPS is OFF, and the 2/3/4G module only is voice & sms standby, the tracker will not cost any data charge, only SMS charge is needed.

This mode is suit for outdoor personal using, the working time can be very long, the standby time can be reach over 1 month, it will not exhaust any data charge, only SMS charge is necessary.

2. Set APN

This tracker can download & config APN & GPRS username password automatically after power on, if the APN & GPRS user name password are not right, then you need sending SMS to tracker to change them, if the tracker can not upload location to platform (Red LED flash twice), please confirm the auto configuration of APN & GPRS user name password is right, the APN name and GPRS user name & password please call your tracker SIM card mobile phone company to confirm, the auto configuration APN & GPRS of the tracker please sending SMS "CHECK*12345678" to tracker to check. if the APN & GPRS are not right, please set by the following description.

Send SMS "APN*12345678*apnname" to the tracker, in which, "APN" is the fixed command, "12345678" is the password and "apnname" is the APN name of a mobile phone company. Having successfully been made, there will be a SMS "APN: apnname".

Send SMS "USERNAME*12345678*username*password" to the tracker, "USERNAME" is a command, "12345678" is the password of the tracker; "username" is the mobile company GPRS user name, "password" is the mobile company GPRS password, if the operation is success, the tracker will

send back the information "Username:username, Password:password", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

3. Check Tracker ID:

The tracker ID is print on the label of the tracker, the S/N number on the label is the ID, Also if the label is missing, send SMS "ID*12345678" to tracker, in which, "ID" is the fixed command and "12345678" is the password. Having successfully been made, there will be a SMS "ID: 830201512345678", in which, "830201512345678" is the ID and every tracker corresponds to the only number. This number is used to differ the tracking uploaded to the website from others. the last 7 digital number of the tracker ID is the user name and password of the tracker on the platform, for example the tracker ID is : 830201512345678, and then the user name on the platform of this tracker is : 2345678, and the platform password for this user name also is :2345678,user can login the platform to change the password.

4. Add / Delete / Check Authorized Number:

The authorized phone number is used to send alarm information by SMS, or use mobile phone to locate the tracker without platform, if the authorized phone number is not set, then the alarm information can not send to user by SMS (alarm information, SOS, etc).

4.1. Add authorized phone number by SMS

Send SMS"ADDPHONE*12345678*A*number"(Not including the quotation marks " ", Number means the telephone number you want authorized, the following is same) to tracker is OK, "ADDPHONE" is a command; "12345678" is password; "A" is authorized number location, every tracker have 3 authorized phone number, A and B, and C, so you can set 3 phone numbers, if the add operation is success, the tracker will send back the information "Add Authorized Phone OK", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

4.2. Delete authorized phone number by SMS

Send SMS "DELETEPHONE*12345678*A" to the tracker, "DELETEPHONE" is a command; "12345678" is password; "A" is authorized phone number location, there are 3 locations "A" and "B" and "C"; if the delete operation is success, the tracker will send back the information "Delete Authorized Phone OK", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

4.3. Check authorized phone number by SMS

Send SMS "CHECKPHONE*12345678" to tracker, "CHECKPHONE" is a command;

“12345678” is password; if the operation is success, the tracker will send back the information “Authorized Phone A: 13987654321; B: 13876543210; C: 13765432101”, the phone number is just an example. if the password is not right, the operation is fault, the tracker will send back information or “Wrong Password”.

5. Change / Check Password

5.1. Change tracker password

Send SMS “CHANGEPASSWORD*12345678*888888” to tracker, “CHANGEPASSWORD” is a command; “12345678” is old password; “888888” is new password; if the operation is success, the tracker will send the information “New Password: 888888” to every authorized phone number, if the password is not right, the operation is fault, the tracker will send back information “Wrong Password”.

Note: Only authorized phone can change the password.

5.2. Check tracker password

Send SMS “CHECKPASSWORD” to the tracker, “CHECKPASSWORD” is a command, if the operation is success, the tracker will send back the information “Password: 88888888”; “88888888” is an example.

Note: Only authorized phone can check or change the password.

6. Set Alarm by Calling: ON/OFF

Send SMS “CALLON*12345678” (Call to authorized number) or “CALLOFF*12345678” (No calling) to the tracker, “CALLON” or “CALLOFF” is a command, “12345678” is the tracker password, if the operation is success, the tracker will send back the information “Alarm by calling : ON” or “Alarm by calling :OFF”, if the password is not right, the operation is fault, the tracker will send back information “Wrong Password”. If the alarm by calling is ON, then when the alarm is triggered, the tracker will call the authorized number to notice the alarm, the default setting is ON.

7. Set Alarm by SMS: ON/OFF

Send SMS “SMSON*12345678” (Sending SMS to authorized number) or “SMSOFF*12345678” (No SMS) to the tracker, “SMSON” or “SMSOFF” is a command, “12345678” is the tracker password, if the operation is success, the tracker will send back the information “Alarm by SMS : ON” or “Alarm by SMS :OFF”, if the password is not right, the operation is fault, the tracker will send back information “Wrong Password”. If the alarm by SMS is ON, then when the alarm is triggered, the tracker will send SMS to the authorized number to notice the alarm. the default setting is ON.

8. Set Upload Time Interval

Send SMS "INTERVAL*12345678*xxx" to tracker, "INTERVAL" is a command, "12345678" is password, "xxx" is the interval time, which can be set from 30 to 999 seconds. The tracker will send back information "Set Interval xxx OK", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password". 30 seconds is the default interval time. Longer upload interval time can save battery and GPRS data cost, but this will make the total mileage to more error.

9. Set Server IP

Send SMS "IP*12345678*58.64.155.133,8011" to the tracker, in which, "IP" is the fixed command, "12345678" is the password and "58.64.155.133,8011" is the IP address of the server computer of our website. Having successfully been set, there will be a SMS "IP: 58.64.155.133,8011". However, the IP address may be changed with the upgrade of our server, so please see to the notices on our website.

Notice: The tracker IP address has been set to default : 58.64.155.133,8011 in factory, it is not necessary to set again, unless our IP address has been changed or user need upload the location to other server, If our server IP is changed, we will notice on the website.

10. Check tracker setting

Send SMS "CHECK*12345678" to tracker, "CHECK" is the fixed command, "12345678" is password. The tracker will send back information including software version, ID S/N number, IP address, authorized phone number, GPS and GSM signal etc. if the password is not right, the operation is fault, the tracker will send back information "Wrong Password". The following is an example :

```
V Mar 18 2019,CC830,000830019820800,58.64.155.133,8011,30,A:13987654321,
B:13876543210, GPS OK,+00,-95dBm,ShockControl,CMNET,User>Password,46000,e1d/24a0,93%
V Mar 18 2019,                ;Software version date
CC830,                        ;TCP/IP Protocol name
000830019820800,              ;ID S/N number
58.64.155.133,8011,           ;Server IP and Port
13987654321,                  ;Authorized number (A/B/C)
GPS OK ,                      ;GPS status
+00,                          ;Time Zone (00 means GMT time)
-95dBm,                       ;GSM signal strength
ShockControl,                 ;GPRS is controlled by shock sensor
CMNET,                        ;APN name
User,                         ;GPRS user name
Password,                     ;GPRS password
46000,                        ;Sim Card MCC+MNC
```

e1d/24a0, ;Current Cell ID

Note: This command usually be used to check the tracker current status & configuration, if the tracker can not work well, this command can check what the problem is.

11. Reset the tracker

Send SMS "RESET*12345678" to tracker can make the tracker power off and power on again, "RESET" is the fixed command, "12345678" is password. The tracker will send back information "Cancel all alarm setting and re-power on", then the tracker will power off and power on automatically, if the password is not right, the operation is fault, the tracker will send back information "Wrong Password". some time the tracker can not work properly, send the reset command, the tracker will re-power on a few minutes later.

12. Restore to factory setting (Back to Default)

Send SMS "FACTORY*12345678" to tracker can make the tracker power off and power on again, "FACTORY" is the fixed command, "12345678" is password. The tracker will send back information "Setting back to factory default", then the tracker will delete all user setting, and restore all setting to factory mode, just like a new tracker, then the tracker will re-power on after delete user setting. If the user have changed the setting, such as APN, IP, authorized number, etc, you need set this again after back to factory mode. if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

Notes:

1. Please confirm that the SIM card PIN code has been disabled, it means if mobile phone use this SIM card, it is not necessary to input any password. Otherwise the tracker can not find GSM or CDMA network, the Green LED will keep ON .

2. This tracker use 2G GSM & 3G WCDMA network, and it upload tracking only through internet, it can not work in CDMA network CDMA2000 network, if the 4G SIM card can use in 2G GSM or 3G WCDMA network, then this kind of 4G SIM card can be used in this tracker.
3. The antenna of GSM and GPS is built in tracker, please note that the install location of the tracker must can receive the GPS signal, if the OBD socket place can not receive GPS, please add an external OBD wires to install the tracker to other place. please leave away the tracker from big metal, and keep away from the magnetic components.
4. The GPS need 10-200 seconds to locate the position, when the GSM signal is weak or the network is very busy, the SMS maybe delay to send by the GSM network, this is normal.
5. The tracking data on our server will keep 6-12 months, the old data will be deleted.

Trouble Shooting

1. The tracker auto power off: please confirm the tracker power supply is connect properly .
2. After power on the tracker, the tracker RED LED keep on, and it has not any repose, and no ring, please confirm the SIM card has been installed properly, the SIM card PIN code is disable, and the SIM card has enough charge, and the mobile phone can work well in that place. If the tracker work well the Green LED will flash once every 4 seconds.
3. If the tracker can not upload location to website, please confirm the SIM card GPRS function is enabled, and the APN or GPRS username & password have been set properly (call the mobile phone to confirm the APN & GPRS username and password). if the tracker do not move, the tracker will not upload tracking, try to move the tracker.
4. If the tracker can not send back information by SMS, please confirm the SIM card has ID caller display function and SMS service function, and you have set the center or slave center number (only center or slave center number can send SMS), and please read the SMS information of the tracker sending back, and check the instruction & password is right or not.
5. Can not login the platform: use SMS to check the ID of the tracker, and try it again, if not success please contact distributor.
6. After go out the under ground park, some tracking maybe lost, the GSM and GPS module will take a few minutes to receive signal and re-locate, some tracking maybe lost, this is normal.
7. Some time some location point is lost, this is normal, in the transmit process, some point

maybe it is lost, but this will not happen very often.

Specification:

Working Voltage	5V DC	Communicate Module	EC20
Communicate Network	2G GSM / 3G WCDAM / 4G LTE	2G GSM Band	900M / 1800 MHz
3G WCDMA Band	B1	4G TD/FDD LTE Band	B1/B3/B38/B39/B40/B41
GPS + BeiDou Dual module	N303	2/3/4G & GPS Antenna	Internal & Internal
Locate precision	5-10 Meters	GPS Hot Start Time	1 second average
GPS Cold Start Time	36 seconds average	Tracking Current	<100mA /12V
Standby Current	< 10 mA /12V	Recharging Current	<100mA 5V
Battery	6000mAH (2x18650)	Working Temperature	-20 ⁰ C to +55 ⁰ C
Absolute Working Temperature	-40 ⁰ C to +80 ⁰ C	Storage Temperature	-40 ⁰ C to +80 ⁰ C