

Portable GPS Tracker

User Manual



Thank you very much for purchasing our GPS tracker. The user manual will explain in detail how to operate this product. Therefore please be sure to read it carefully before using the product. Subject to change without prior notice, each change will be published in the latest product sale. The manufacturer assumes no legal responsibility for errors and omissions in this manual

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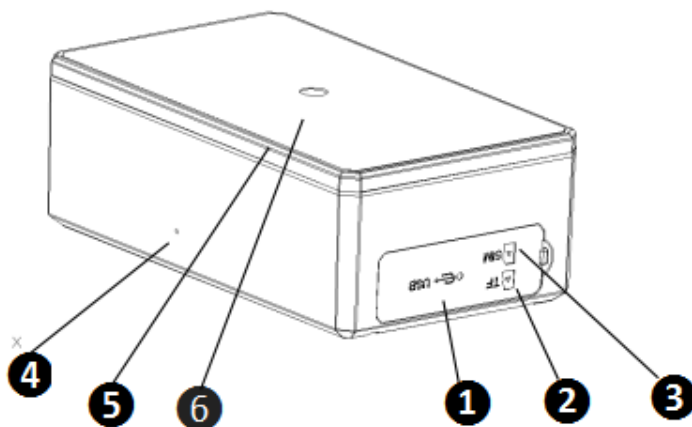
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1. SPECIFICATIONS

Product name	GPS TRACKER
Model	408
DIM.	106mm * 63mm * 37.5mm
Weight	343g
Network	GSM/GPRS/WCDMA/LTE
Band	4G (B1/B2/B3/B4/B5/B7/B8/B28A/B28B/B40) 3G (B1/B2/B3/B5/B8) 2G (850/900/1800/1900Mhz)
GPS sensitivity	-165dBm
GPS accuracy	5m
Time To First Fix	Cold status 45s Warm status 35s Hot status 1s
Battery	Chargeable 3.7V 10000mAh Li-ion battery
Storage Temp.	-40 ℃ to +85 ℃
Operation Temp.	-20 ℃ to +65 ℃
Humidity	5%--95% non-condensing

2. HARDWARE DESCRIPTION



- ① USB port ② TF card slot ③ SIM card slot
- ④ Microphone ⑤ Rear cover of magnet ⑥ Infrared induction

The USB port can be connected to a computer for charging. It can also be used for program upgrades.

3. QUICK CHARGER

This device supports maximum 2A current quick charger.

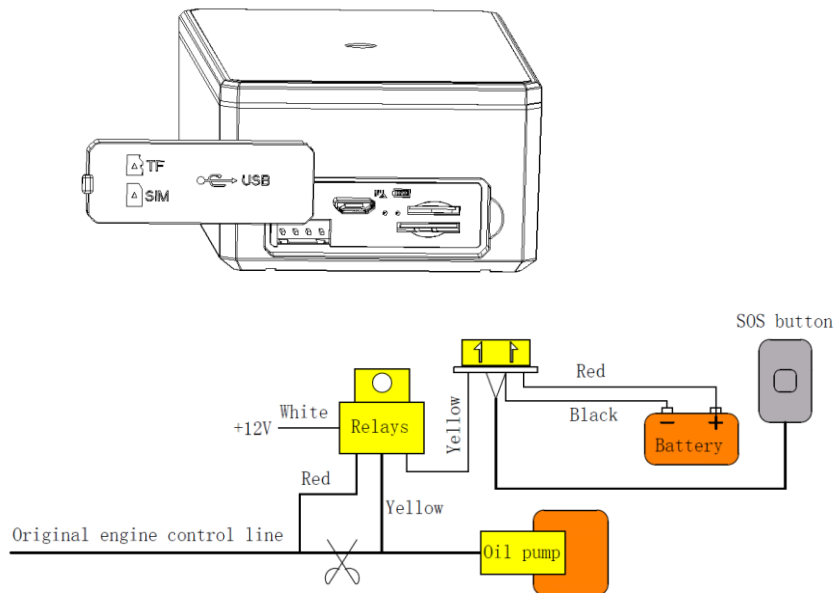
Charging way :

Connect the device to the AC adapter (Output voltage: 5V, current: >2A) with the original MICRO

USB cable.

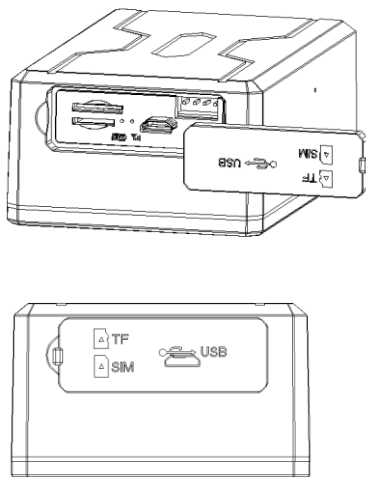
4. INSTALLATION (MODEL B)

If you need to connect the external power, stop the engine and SOS function, please find the 4 PIN connector wire (optional accessories) to connect it as following diagram:



Note: Please install SOS button on the hidden place driver can touch.

5. INSERT SIM CARD, TURN ON THE DEVICE



- ❶ Open the soft glue plug.
- ❷ Insert SD card as the picture shows.
- ❸ Insert SIM Card as the picture shows, and tracker will be turned on.

- ❹ Cover the soft glue plug

The device automatically turns on after inserting the card. Please bring the device outdoors for the first time to wait for about 10-40 seconds to search for GSM and GPS signals to start work normally.

6. DEVICE STATUS LIGHT

Indicators	Status	
Power LED (Red)	Flash	Low battery
	ON	Charging
	OFF	Fully charged
GSM Light (Green)	ON	No GSM signal
	Flash 1 time each second	GSM mode
	Flash 2 times each second	GSM mode, GPS fixed

7. THIS GPS TRACKER SUPPORTS MOBILE APP, WEB SERVER PLATFORM AND SMS FOR MANAGEMENT IN MULTIPLE WAY

If you use the APP and web platform, you need a sim card to open a data plan or use a data card.

The data consumption is about 10-30MB per month.

If you use SMS, you need a SIM card to enable SMS, voice calls, and caller ID.

8. MOBILE APP

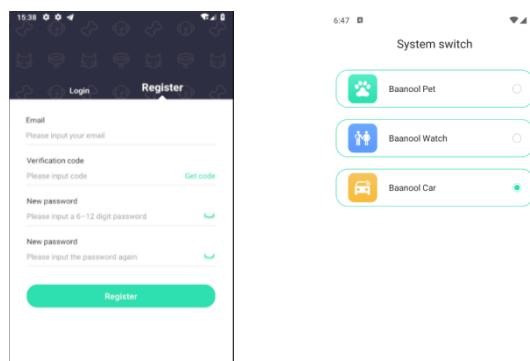
Scan the QR code to download APP



Google Play、App Store search “BAANOOL IOT” to download it

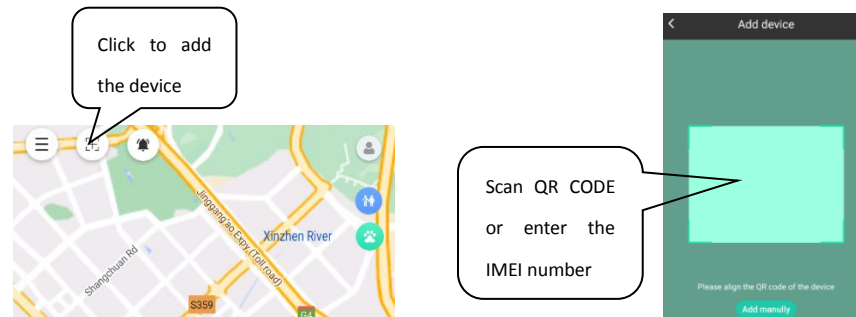
Register

Open BAANOOL IOT, register a new account and login, Choose “BAANOOL car “to enter it.



Bind Device

Click the 'Add Device' button on the home page and scan the IMEI number to bind a new device. Note that the IMEI number is attached to the side of the device, and the IMEI of the device can also be manually entered for binding.

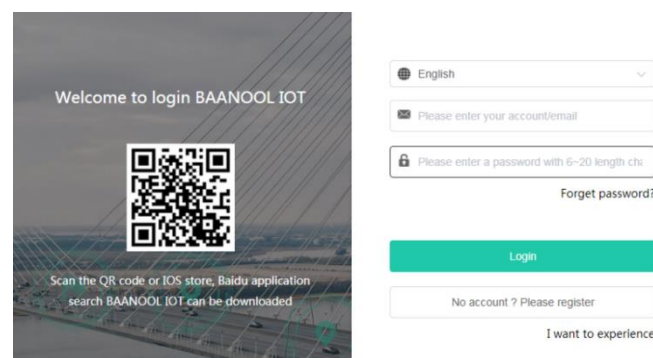


Using tracker

Under normal circumstances, the device can automatically select the APN, username and password without setting it. If the device is still offline after 3 minutes of binding, you need to set the APN and username and password according to 11.21 and 11.22. After the device comes online, you can view and manage the device.

9. BAANOOL IOT'S WEB VERSION

Open www.baanooliot.com, The login account name and password are the same as phone app's



10. MOBILE APP AND BAANOOL IOT'S WEB

10.1 Positioning strategy

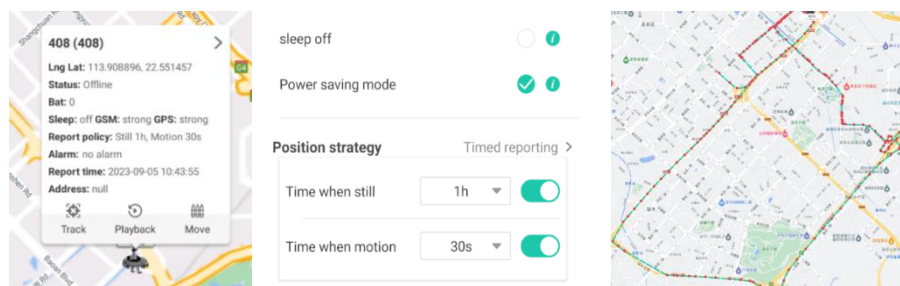
You can click the positioning button to select the working mode and positioning strategy. When stationary, you can set a longer period of time to report location information (such as 2 hours), and when it moving, you can set a short period of time to report location information frequently (such as 3 minute). When the tracker moves, the movement trajectory will be displayed.

10.1.1 Working mode

Working Mode	Description	Standby Time
Real time online	The tracker is online in real time and reports its location according to the set motion/stationary intervals. The device defaults to this mode, but not default tracking strategy	Online without positioning standby for about 50 days; 3 minutes interval when motion, 2 hours interval when stationary positioning standby for about 33 days
Smart mode	Offline when stationary (the tracker turns off GSM. SOS, tamper alarms and vibration alarms can trigger online. After SOS and tamper alarms are triggered, the device will be online in real time until the alarm is canceled). Wake up and go online when in motion. Whether it is stationary or moving, the device will report at the set interval.	3 minutes when stationary 2 hours interval when stationary positioning standby for about 45 days
Power saving mode	After setting the wake-up time and reporting interval, the device goes offline (the device turns off GSM, SOS, tamper alarm, and shock alarm can trigger the online operation. After the SOS and tamper alarms are triggered, the device will be online in real time until the alarm is canceled). After the wake-up time is reached, the device wakes up to report the location and work 3 minutes, and then wake up regularly according to the set period to report the location.	Report once a day standby for about 180 days

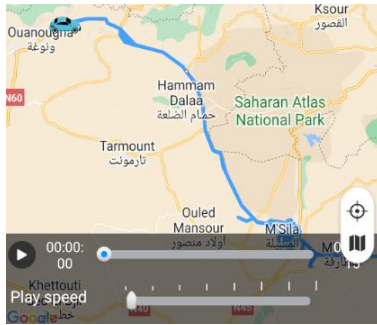
* The above standby time is measured by the laboratory and is for reference only. In actual use, there may be differences due to different signal strengths and positioning frequencies.

10.1.2 Positioning interval



10.2 History playback

You can click the playback button to view the historical track



10.3 Geo-fence

After multiple geo fences are set up on the APP or platform, the geo fence alarm will be triggered when the device enters or leaves the set fence.



10.4 Movement alarm

Draw a circle centered on the current location of the device. When the device leaves the current position and exceeds the range, the movement alarm will be triggered.



10.5 Over speed alarm

After setting the overspeed value, overspeed alarm will be triggered when the device speed exceeds the set threshold.

10.6 Shock alarm

Turn on shock alarm function when the device is stationary, the shock alarm will be triggered when the device moves or vibrates.

10.7 Low battery alarm

When the tracker's built-in battery voltage is close to 3.55V, tracker will send a low battery alarm

every 15 minutes, a total of 2 times.

10.8 External power disconnection alarm (Model B)

This function is turned off by default. When it is activated and the external power supply is disconnected, the device will send an external power disconnection alarm.

10.9 SOS Alarm (Model B)

Press the SOS button for 3 seconds and the device will send SOS alarm.

10.10 Tamper alarm

The tracker has a built-in light sensor. When the tracker is removed after installation, tamper alarm will be triggered. This function is turn off by default.

10.11 Remote immobilizing (Model B)

Cut oil and power off delayed mode, Cut off oil and power immediately mode, Resume oil and power

10.12 Listen

Listen for 15 seconds per request

10.13 Other function settings

You can control the device to stop alarming, check sim card balance, update firmware, reset the device, restore factory settings, set shock sensitivity, authorization number, times of alarms, time zone, external power on/off, tamper alarm on/off, vibration alarm on/off, Vibration sensitivity, smart angle updating settings, tracker password, check device details, operation records, and installation information.

* If you prefer to use the mobile APP and web version to manage your device, you do not need to pay attention to the following content.

11. SMS FUNCTIONS

The device turns on GPRS by default. If you use only SMS to manage the device, it is recommended to turn off GPRS by referring to the 11.25 command.

Attention:

When reading this user manual, you will notice that we have used "+" and "space" between some words; "+" between two words means they should be written together as one word and "space" between two words means you should leave one character space between two words.

11.1 Changing password

SMS command: password+old password+space+new password, Response: password ok

The default password is 123456, which must be changed when using it for the first time.

11.2 Authorization

Set up: admin+password+space+Mobile phone number, Response: admin ok

Cancel: noadmin+password+space+authorization number, Response: noadmin ok

Call the tracker 10 times in succession, the number will be authorize automatically as the first number and tracker response “add master ok”

Up to 5 numbers can be set and authorized, and only authorized number can receive alarm message.

11.3 Single Tracking

SMS Command: position+password, tracker reply with the location information and click the link to view the device location on the map.

Make a call to the tracker, and the tracker will automatically hang up and reply with a positioning message.

If there aren't any authorized numbers set-up, it will reply all calls with a location report; if there are authorized numbers set-up, then it will not respond when an unauthorized number calls it.

11.4 Positioning strategy

11.4.1 Working mode

Real time online: online+password, GSM always online, the location can be queried at any time, and whether the device is stationary or moving, the location will be reported at set intervals.

Smart mode: sleep+password, sleep when the tracker is stationary (The tracker cannot be contacted by call or SMS. SOS, tamper alarm, and shock alarms can be triggered. After the SOS and dismantling alarms are triggered, the device will not be able to sleep until the alarm is cleared), the tracker will be awakened when it moves, and whether it is stationary or moving, the device will report its position according to the set multiple positioning intervals.

Power saving mode: psm+password+space+wake-up time (hour: minute)+space+reporting interval (hour), After setting the wake-up time and reporting interval, the device sleeps(The tracker cannot be contacted by call or SMS. SOS, tamper alarm, and shock alarms can be triggered. After the SOS and tamper alarms are triggered, the device will not be able to sleep until the alarm is cleared). When the wake-up time is reached, the device wakes up and reports position and work for 3 minutes, and then wake up regularly according to the set period to report the position. For example, psm+password+space+9:30+space+2 means that the device wakes up at 9:30 to report and then wakes up and reports every 2 hours.

11.4.2 Positioning interval

SMS Command: fix+020s+002h+005n+password, tracker will report at 20 seconds interval when

the device is moving, and 2 hour when it is stop , and only report 5 times, 005n means limited to 5 times of positioning, * **n means unlimited times.

Cancel: nofix+password, response: nofix ok

11.5 Movement alarm

SMS command: move+password+space+radius, response: move ok

Cancel: nomove+password, response: nomove ok

Draw a circle with the current location of the tracker as the center. Once the tracker exceeds the radius, a movement alarm will be triggered.

11.6 Over speed alarm

SMS command: speed+password+space+speed value, reply: speed ok

Cancel: nospeed+password, response: nospeed ok

When the speed exceeds the set speed value, overspeed alarm will be triggered.

11.7 Shock alarm

Turn on shock alarm function when the device is stationary, the shock alarm will be triggered when the device moves or vibrates.

Turn on: shock+password, response: shock ok

Turn off: noshock+password, response: noshock ok

Vibration sensitivity defaults to level 2, which can be set to 1, 2, or 3.

SMS command: sensitivity+password+space+2

11.8 Low battery alarm

This feature is activated by default, when the tracker's built-in battery voltage is close to 3.55V, tracker will send a low battery alarm every 15 minutes, a total of 2 times.

Turn off: lowbattery+password+space+off, response: lowbattery off ok

Turn on: lowbattery+password+space+on, response: lowbattery on ok

11.9 Extpower disconnection alarm (Model B)

It is turned off by default. When turned on and the external power supply is disconnected, the device will trigger an external power disconnection alarm.

Turn on: extpower+password+space+on, Response: extpower on ok

Turn off: extpower+password +space+off, Response: extpower off ok

11.10 SOS alarm (Model B)

Press the SOS button for 3 seconds and the device will trigger an emergency alarm.

11.11 Tamper alarm

The terminal has a built-in light sensor. When the terminal is removed after installation, a tamper

alarm will be triggered. It is turned off by default.

Turn on:tamper+password,Response:tamper ok

Turn off:notamper+password,Response:notamper ok

11.12 Stop alarm

Command: stopalarm+password, Response:stopalarm ok, The device will stop all alarms.

11.13 Remote Immobilizing (Model B)

Delayed immobilizing

Command: stop+password. When the current speed of the vehicle is greater than 20km/h, the command will not be executed immediately. it will be executed only after the vehicle speed is less than 20Km/h.

Immobilizing immediately

Command: quickstop+password, no matter whether the vehicle speed is greater than 20km/h, the command will be executed immediately.

Resume fuel and power supplying

Command: resume+password, restore fuel and power supply.

11.14 Listen

The default is "track" (positioning mode). When dialing the device, positioning information will be response

Command: listen+password, switch to listening mode, dial the device, and it will enter the call state.

Command: tracker+password, return to positioning mode.

11.15 Configure times of alarm

The number of times of SOS and external power disconnection alarms can be set.

Command: xtime+password+times value, Response: xtime ok

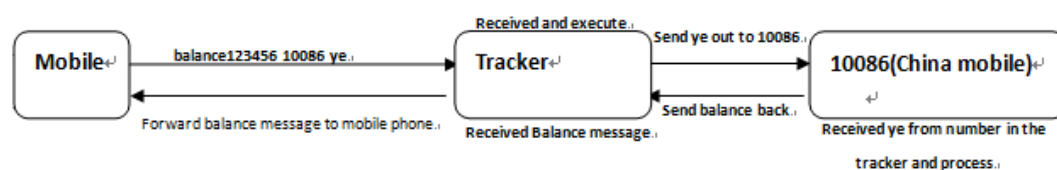
Send once by default.

11.16 SIM Card Balance Enquiry

Way1

Command: balance+password+space+operator number+space+code

The device will forward the received text message from the operator to the sender of the command



Way 2

Command: forward+password+space+operator number

When the network operator sends a text message to remind you to top up your sim card, the tracker will forward the notification message to the authorized number

11.17 Check status

Command: check+password, reply: battery level, GPS signal, GSM signal, GPRS status, APN, UP, IP, port, etc.

11.18 Check IMEI

Command: imei+password, reply: device IMEI

11.19 Time Zone Setting

The device automatically synchronizes the local time zone. If the time is wrong, you need to set the time zone.

Command: time+space+zone password+space+time zone, reply: time ok

11.20 Hardware Reset

Command: reset+password, response: reset ok

11.21 APN Setting

Command: apn+password+space+local apn, response: apn ok

Settings are only required when using the APP and web version

11.22 Configure User Name and Password of GPRS Network

Command: up+password+space+user+space+Password, response: up ok

Settings are only required when using the APP and web version

11.23 Set Server IP/Domain Name and Port

Command: adminip+password+space+IP/DNS+space+port, reply: adminip ok

No setup required to use our BAANOOL IOT server, the default is BAANOOL domain name and port

11.24 TCP/UDP Switch

Command: tcp+password, response: tcp ok

Command: udp+password, response: udp ok

No setup required to use our BAANOOL IOT server

11.25 SMS Mode

Command: SMS+password

Device Reply: sms ok

The device default mode is GPRS mode, if user prefer to sms managing gps device, please use this command to close gprs mode

11.26 GPRS Mode

Command: gprs+password

Device response: gprs ok

11.27 Initialization

Command: begin+password

Device response: begin ok

All commands setting will return to default factory settings

12. CAUTIONS

Please be sure to follow when using:

1. Keep the tracker used in a dry environment. The humid environment can easily damage internal circuits.
2. Please do not put it in a dusty environment.
3. Do not put the tracker in overheated or overcooled places.
4. Handle carefully. Don't vibrate or shake it violently.
5. Please clean with a dry cloth, do not use chemicals and detergents.
6. Please do not disassemble the device; this may lead to internal circuit failure.
7. Please read the user manual carefully before installation and operation, and understand voltage range. Otherwise, it won't work properly or damage the tracker.

13. TROUBLESHOOTING

Faults	Solution
Fail to turn on	1. Please check if the power wiring is correct? 2. Please check if the power voltage is correct?
No GSM signal	1. Check whether the SIM card is put in place. 2. Whether the SIM card is a GSM network SIM card. 3. Don't turn on the PIN code. 4. Call forwarding cannot be opened.

No GPS signal	The device needs to be in an unobstructed position to ensure that it can receive GPS signals normally.
No response for SMS command	1. No credit on SIM card. 2. The password is incorrect or the format of the SMS command is incorrect.
No response for a call/No alarm notification message	1. Did you have set up the authorized phone number? 2. If authorized number exists, did you make the call from an authorized phone number? 3. The format of the phone number is incorrect.