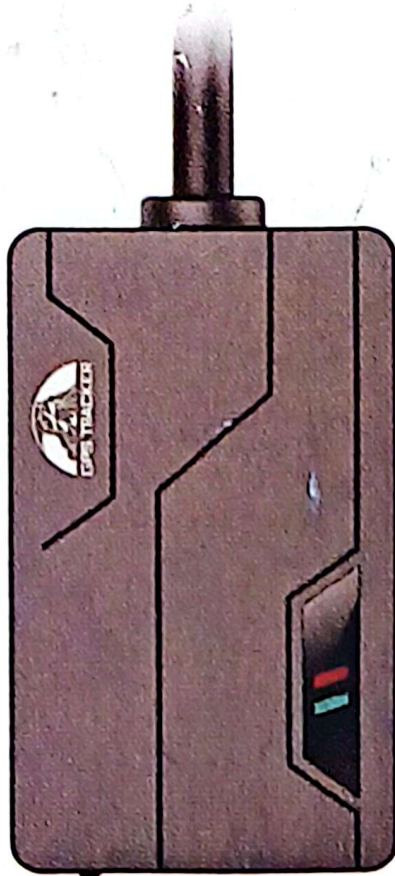


GPS Tracker User Manual



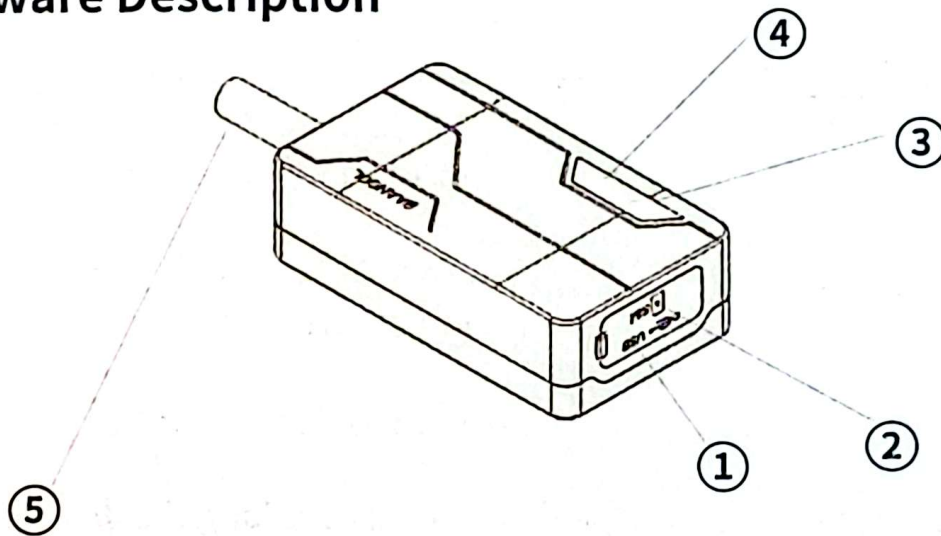
Thank you for purchasing the tracker. This manual shows how to operate the device smoothly and correctly. Make sure to read this manual carefully before using this product. Please note that specification and information are subject to changes without prior notice in this manual. Any change will be integrated in the latest release. The manufacturer assumes no responsibility for any errors or omissions in this document.

311ABC-V3.4



1 Specifications

Product name	GPS TRACKER
Model	311
DIM.	6.0×3.5×1.8cm
Weight	50g
Network	GSM/GPRS
Band	850/900/1800/1900Mhz
GPS sensitivity	-165dBm
GPS accuracy	5m
Time To First Fix	Cold status 45s Warm status 35s Hot status 1s
Applicable car power	12V-24V
Battery	Chargeable 3.7V 180mAh Li-ion battery
Storage Temp.	-40°C to +85°C
Operation Temp.	-20°C to +65°C
Humidity	5%--95% non-condensing

2 Hardware Description



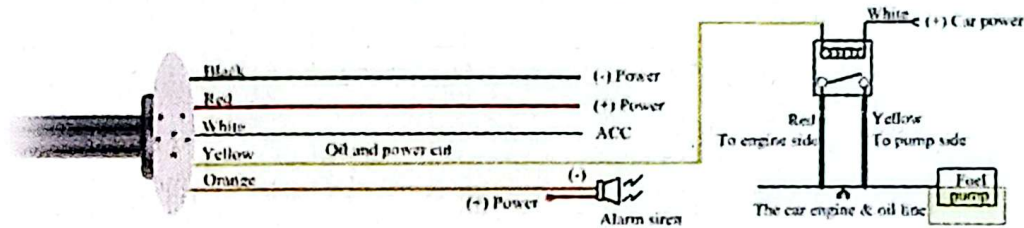
USB port ②SIM card slot ③GSM indicator ④GPS indicator ⑤ Harness

Difference Model	Basic tracking	Engine stop	Remote control 
A	●		
B	●	●	
C	●	●	

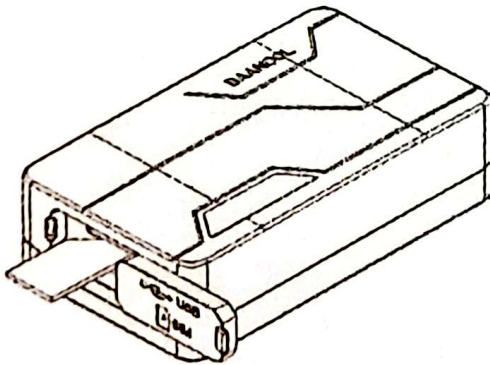
Comparison Table for Model A, B and C
 Note: Model C supports an optional siren.

3 Terminal Installation

1. Please ask a qualified engineer to install it.
2. The installation environment should ensure that the GSM and GPS signals are good.
3. Please do not install it in a dusty and humid environment.
4. Find the wiring harness provided with the product, insert it into the corresponding wiring hole of the product, and connect to the original car circuit as shown in the following Wiring Diagram:



5. Model A doesn't have Yellow wire and orange wire, Model B doesn't have orange wire.
6. Figure out the type of vehicle door trigger is positive trigger or negative trigger. Connect the positive trigger to the green wire and the negative trigger to the blue wire.
7. Please install the SOS button where your hands can touch it.



- ① Open sealed
- ② Insert the SIM card, the device will turn on automatically.
- ③ Put sealed buckle back.

9. After inserting the SIM card, take the device at outdoor, the device will find GSM and GPS signal and work normally after 10-40 seconds.

4 Device Status Light

- Green light: Flashes every 1 second when GSM network signal normally, flashes every 3 seconds when works in GPRS mode; always on when no GSM network.
- Blue light: Flashes every 1 second when GPS signal is normal; flashes 3 times per second when GPS signal is very good and turns off if lost fix to satellites.

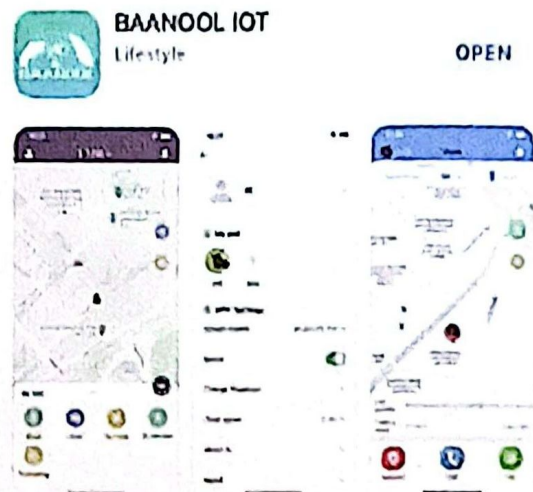
5 This GPS Tracker Supports Mobile APP, Web Server Platform and SMS for Management in Multiple Ways

If you use the mobile APP or web server platform, you need a SIM card to open a data plan or use a data card.

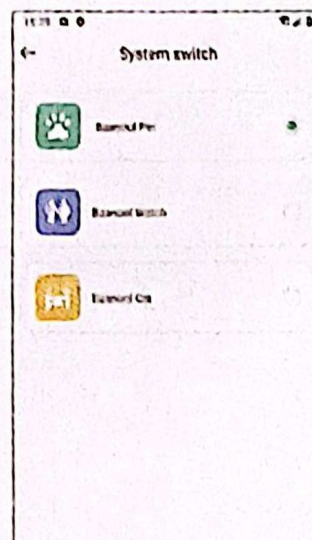
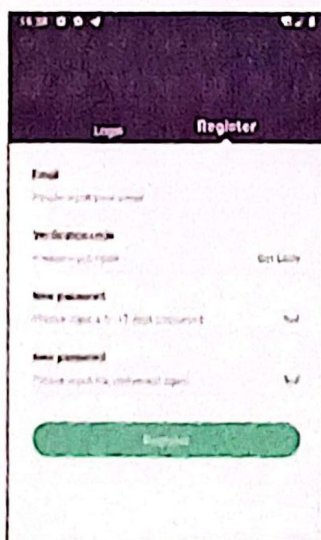
If you use SMS, you need a SIM card to enable SMS, voice calls, and caller ID.

6 Mobile APP

Scan the QR code to download APP

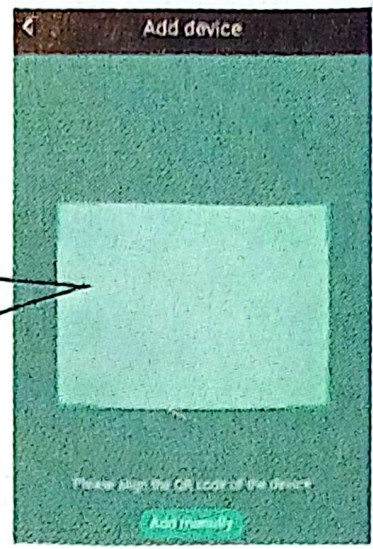
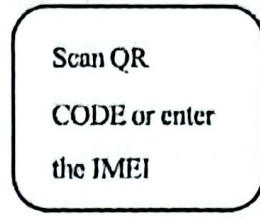


Google Play, App Store search “BAANOOL IOT” to download it Register
Open BAANOOL IOT, register a new account and login, Choose “BAANOOL
car “to enter it.



Bind Device

Click “Add the device”, scan the QR CODE on the device or enter the IMEI manually to bind the device

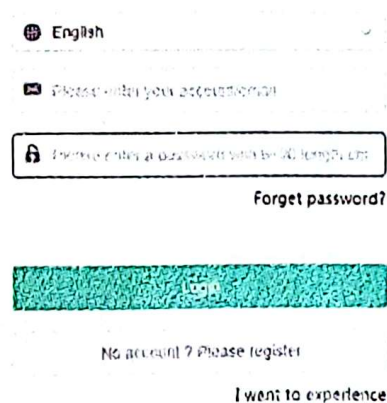


Using tracker

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 10.16 and 10.17. After the device comes online normally, you can view and manage the device.

7 Web Platform Version

BAANOOL IOT' s Web Version Website: www.baanooliot.com, the login account name and password are the same as phone app' s



8 Function details of mobile APP and web version

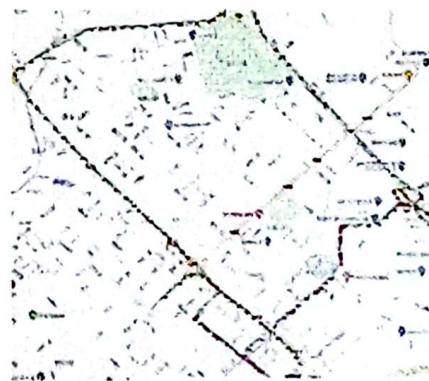
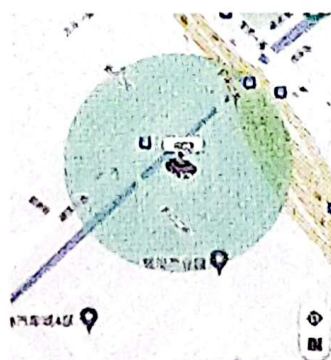
8.1 Positioning strategy

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 1 hours), and when it moving, you can set a short period of time to report location information frequently (such as 10 second). When the tracker moves, the movement trajectory will be

8.1.1 Working mode

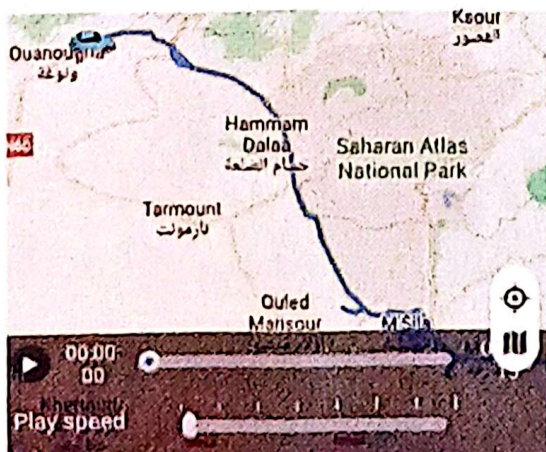
Working Mode	Description
Real time online	The tracker is online in real time and reports its location according to the set motion/stationary intervals. The tracker is online in real time by default and reports its location at intervals of 10 seconds of movement and 1
Smart mode	Offline when stationary (phone call, SMS, alarms can trigger online. After SOS, ACC 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.

8.1.2 Positioning interval



8.2 History playback

You can click the playback button to view the historical track



8.3 Remote immobilizing (Model BC)

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

8.4 Arming/Disarming

Arming、 Silent Arming、 Disarming

8.5 Alarm function in arming state

8.5.1 ACC Alarm

In arming state, if the ignition of the vehicle has been switched “ON”(Key is rotated to “ACC ON” position or vehicle is started, ACC alarm is triggered. The siren will beep for 20 seconds, and if the ignition is still on, then the siren will beep for another 20 seconds with 20 seconds pause, disarming to quite the alarm.

8.5.2 Shock alarm

In arming state, the tracker detect the movement and shock, will send “Sensor alarm + latitude / longitude” to authorized numbers, and only send once in 3 minutes. Siren will beep for 5 seconds for the first trigger and second trigger, and then siren beep 10 seconds for another trigger.

8.6 Other alarm functions

8.6.1 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.

8.6.2 External power disconnection alarm

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

8.6.3 SOS Alarm (Model C)

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

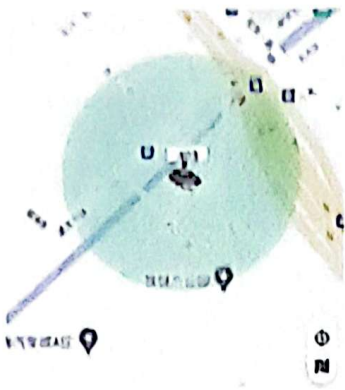
8.6.4 Geo-fence

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.



8.3 Remote immobilizing (Model BC)

Draw a circle with the current position of the device as the center. When the device leaves the current position and exceeds the range, movement alarm will be triggered.









8.6.6 Over speed alarm

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

8.7 Other Functions setting

You can control the device to stop alarming, check balance, restart the device, restore factory settings, set shock sensitivity level, authorization number, times of alarm, time zone, external power on/off, vibration sensitivity, and Smart angle updating setting, device password, and check device details, operation records, and installation information.

9 Remote Controller (MODEL C)

Key	Function	Descriptions
	Arming	Press for 0.5 second, siren beep one time. If the vehicle is in the ignition state, the tracker can not enter arming state, the siren won't beep.
	Disarming	Press for 0.5 second, siren beep 2 times. Stop all alarms.
	Silent arming	Press for 0.5 second when it is in disarm state, siren beep one time. In silent mode, the siren will not sound even if an alarm is triggered. DISARM will quit from silent mode.
	SOS	Press for 3 seconds, tracker will send SOS alert to authorized phone numbers. Siren won't sound.
	Deterrence /Car locate	Press for 0.5 second when it is in arm state, siren will beep 10 seconds, press disarm key  to stop.

* 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.

10 SMS Functions

The device turns on GPRS & SMS by default, If you only use SMS to manage the device, it is recommended to turn off GPRS by referring to the 10.20 command to save power and data.

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.

10.1 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.

10.2 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.

10.3 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 .

10.4 Positioning strategy

10.4.1 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 The device sleeps when it is stationary (phone calls, text messages, and alarms can trigger it to go online. After the ACC alarm is triggered, the device will be online in real time until the alarm is lifted). It wakes up when it is moving. Whether it is stationary or moving, the device will report its position according to the set multiple positioning intervals.

10.4.2 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

10.5 Remote immobilizing (for Model B /C)

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.

Remote fuel resume

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

10.6 Arm/Disarm

Arm: arm+password, Response: Tracker is activated, the vehicle terminal enters the armed state. If the vehicle is in the ignition state (ACC is ON) , it cannot enter the armed state , and then reply "set up fail! pls turn off ACC"

Silent arming: silent+ password, Response: silent ok!, the terminal enters the silent arming state. After the alarm is triggered, the siren does not sound, but an alarm text message will be sent to the authorized number

Disarming: disarm+ password, Response: Tracker is deactivated, The device will stop all alarms

10.7 Alarm function in arming state

10.7.1 ACC Alarm

Tracker will send "ACC alarm + latitude / longitude" to authorized numbers if the ignition of the vehicle has been switched "ON" (Key is rotated to "ACC ON" position when tracker works in arming state. The siren will beep for 20 seconds, and if the ignition is still on, then the siren will beep for another 20 seconds with 20 seconds pause, disarming to quit the alarm

10.7.2 Shock alarm

In Arming state, tracker will send SMS notification " sensor alarm+longitude& latitude" to authorized phone numbers when device moves or vibrates, shock alarm will send once in 3 minutes. The siren will sound for 5 seconds for the first time within three minutes, and will sound for 5 seconds for the second time, and will sound for 10 seconds when triggered again.

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

SMS command: sensitivity+password+space+2

10.8 Other alarms

10.8.1 Low battery alarm

This feature is activated by default, when the battery voltage is close to 3.55V, tracker will send alert message to authorized numbers for 2 times at 15 minutes interval.

Deactivate: lowbattery+password+space+off, Tracker response: lowbattery off ok

Activate: lowbattery+password+space+on, Tracker response: lowbattery on ok

10.8.2 External power disconnection alarm

It is activated 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

10.8.3 SOS alarm (for Model C)

Press remote control button for 2 seconds, the device will trigger an emergency alarm

10.8.4 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

10.8.5 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

10.9 Configure times of alarm

The number of times of SOS、 external power、 fuel alarm、 door open、 Illegal ignition alarms can be set

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

Send once by default.

10.10 ACC ON/OFF Alert

This function is turned off by default. After turn on this function, the vehicle will ignite If tracker detect "ignition on" signal , tracker will send "ACC on+latitude& longitude" to authorize number to tell you the vehicle has been started; When detect "ignition off" signal, it will send "ACC off+ latitude & longitude" to tell you the vehicle has been stopped.

Activate: ACC+password, Tracker Response: ACC ok

Deactivate : noacc+password, Tracker response: noacc ok.

10.11 SIM Card Balance Enquiry

Way 1

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

10.12 Check status

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

10.13 Check IMEI

Command: imei+password, reply: device IMEI

10.14 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

10.15 Hardware Reset

Command: reset+password, response: reset ok

10.16 APN Setting

Command: apn+password+space+local apn, response: apn ok
Settings are only required when using the APP and web versin

10.17 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

10.18 Set Server IP/DNS

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

10.19 TCP/UDP Switch

Command: tcp+password, response: tcp ok

Command: udp+password, response: udp ok

No setup required to use our BAANOOL IOT server

10.20 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

10.21 GPRS mode

Command: gprs+password

Device response: gprs ok






10.22 Initialization

Command: begin+password

Device response: begin ok

All commands setting will return to default factory settings

11 Accessories

No.	Picture	Name	Specifications	Applicable model
1		Harness	3PIN	For model A
2		Harness	5PIN	For Model B ,C
3		Relay	12V/40A or 24V/40A	For Model B ,C
4		Siren	24V/48V	Optional for Model C
5		Remote controller	433MHz	Optional for Model C

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?
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.
Fail to stop engine	Please check whether the engine stop wiring connected correctly?
Remote control cannot be used	Turn off tracker, and turn it on to program the remote control again.