

GPS Tracker User Manual



Preface

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.

Contents

1	SUMMARY.....	5
2	APPLICATIONS	5
3	HARDWARE DESCRIPTION.....	5
4	SPECIFICATIONS	6
5	START TO USE.....	6
5.1	TERMINAL INSTALLATION	6
5.2	SIM CARD INSTALLATION	7
5.3	TURN ON THE DEVICE.....	8
5.4	DEVICE STATUS LIGHT.....	8
5.5	GPRS CONFIGURATION FOR LIVE REAL-TIME TRACKING.....	8
5.5.1	Configure APN setting	8
5.5.2	Configure user name and password of GPRS.....	9
5.6	MOBILE APP.....	9
5.6.1	Scan the QR code to download APP.....	9
5.6.2	Register.....	10
5.6.3	Bind device.....	11
5.6.4	Position.....	11
5.6.5	Control.....	12
5.6.6	Device management.....	13
5.7	BAANOOL IOT'S WEB VERSION	14
5.7.1	Register.....	14
5.7.2	Login.....	16
5.7.3	Add device.....	16
6	FUNCTION DETAILS	17
6.1	CHANGING PASSWORD	17
6.2	AUTHORIZATION	18
6.2.1	Authorizing:	18
6.2.2	Deleting authorized number	18
6.3	SINGLE TRACKING.....	18
6.4	CONTINUOUS INTERVAL TRACKING	19
6.4.1	Limited times tracking at a time interval	19
6.4.2	Unlimited times tracking at a time interval.....	19
6.4.3	Unlimited times tracking at a distance interval.....	20
6.4.4	Smart tracking at both time and distance interval.....	20
6.4.5	Cancel interval tracking	20
6.5	SMART ANGLE UPDATING	20
6.6	GPS DRIFT SUPPRESSION.....	21

6.7	EXACT STREET ADDRESS	21
6.8	LOCATION BASED SERVICE (LBS) / CELL-ID TRACKING.....	21
6.9	AUTO ANSWER	22
6.10	FORWARDING INCOMING SMS MESSAGES	22
6.11	SIM CARD BALANCE ENQUIRY.....	22
6.12	ACC ON/OFF ALERT	23
6.13	REMOTE IMMOBILIZING	23
6.14	FUEL SENSOR CALIBRATING	24
6.15	CONFIGURE TIMES OF ALARM SMS	25
6.16	ALARMS.....	25
6.16.1	Low battery alarm.....	25
6.16.2	Power disconnection alarm	25
6.16.3	Blind area alarm.....	26
6.16.4	SOS alarm.....	26
6.16.5	Geo-fence.....	26
6.16.6	Movement alarm	27
6.16.7	Over speed alarm.....	27
6.16.8	Fuel alarm	28
6.17	REMOTE CONTROL FUNCTION (FOR B MODEL).....	28
6.18	ARMING	28
6.18.1	Arming by SMS	28
6.18.2	Arming with remote control (For B model)	29
6.19	SILENT ARMING	29
6.19.1	Silent arming by SMS.....	29
6.19.2	Silent arming with remote control (For B model).....	29
6.20	DISARMING.....	29
6.20.1	Disarming by SMS	29
6.20.2	Disarming with remote control (For B model)	30
6.21	ALARM FUNCTION IN ARMING STATE.....	30
6.21.1	Door opening alarm	30
6.21.2	ACC (Ignition / voltage) alarm.....	30
6.21.3	Acceleration Sensor Alarm	30
6.21.4	No GSM network alarm	31
6.22	SLEEP.....	31
6.22.1	Sleep mode.....	31
6.22.2	No sleep mode.....	32
6.23	CHECK STATUS.....	32
6.24	CHECK IMEI.....	32
6.25	LOCAL TIME SETTING	32
6.26	RESET HARDWARE.....	33
6.27	GPRS CONFIGURATION FOR LIVE REAL-TIME TRACKING.....	33
6.27.1	Configure APN, GPRS login user name and password	33
6.27.2	Configure domain name and port	34
6.27.3	GPRS / SMS mode switch	34

6.28	ACTIVATE FUEL VALUE IN GPRS DATA.....	35
6.29	CONFIGURE SMS MANAGEMENT CENTER NUMBER.....	36
6.30	CONFIGURE HEARTBEAT PACKAGE INTERVAL	36
6.31	INITIALIZATION	36
7	CAUTIONS.....	37
8	TROUBLESHOOTING.....	37

1 Summary

This product is based on the GSM / GPRS network and GPS satellite positioning system. It integrates anti-theft alarm, positioning, first aid and tracking functions in a brand new product which can locate and manage remote targets through SMS text messages, mobile app and web platform.

Features

- Built-in GSM, GPS antenna, small size, beautiful and elegant.
- Support GPS and LBS (Location based service) dual tracking solutions.
- Support transferring the position data through SMS, GPRS and internet
- Support remote configurations
- Support to update the firmware over-the-air (OTA)

2 Applications

Mainly used in the positioning and tracking services of vehicles and other moving objects.

3 Hardware Description



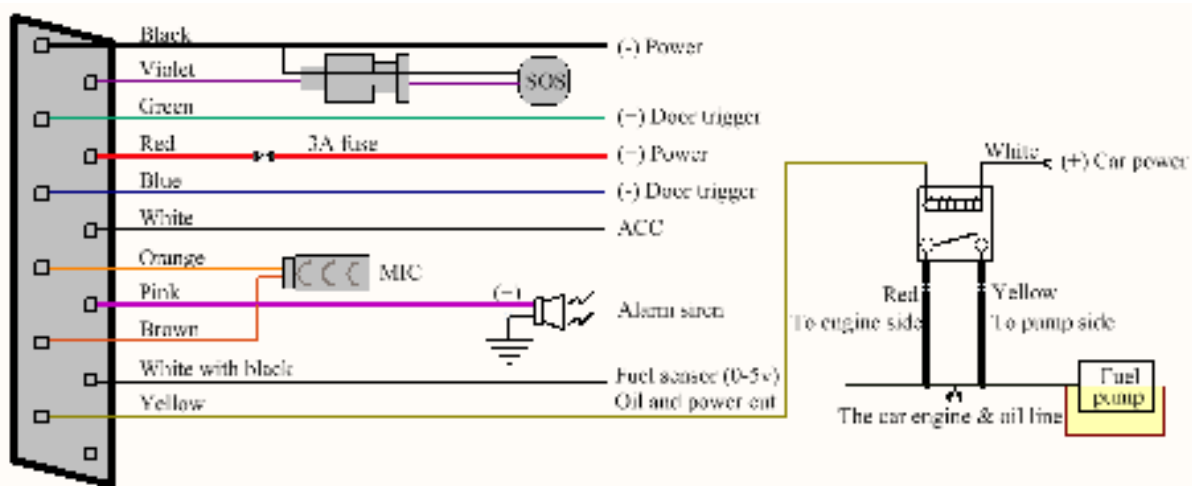
4 Specifications

Product name	LTE wireless data terminal
Model	403
DIM.	9.6×5.3×1.8cm
Weight	70g
Network	GSM/GPRS/LTE
Band	4G (B1/B2/B3/B4/B5/B7/B8/B20/B28) 2G (1900/1800/900/850 MHz)
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 changeable 3.7V 350mAh Li-ion battery
Storage Temp.	-40°C to +85°C
Operation Temp.	-20°C to +55°C
Humidity	5%--95% non-condensing

5 Start to use

5.1 Terminal installation

- Please ask a qualified engineer to install it.
- The installation environment should not exceed the GSM performance index.
- Please do not install it in a dusty and humid environment.
- Find the 12PIN 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 figure:



Wiring Diagram

- The pink wire can be connected to the original car alarm horn or the alarm horn purchased together.
- Understand that the vehicle door trigger type is positive trigger or negative trigger. Connected to the green wire if it is positive trigger, and connected to the blue wire if it is negative trigger.
- Please install the SOS button where the driver can touch it.

5.2 SIM card installation

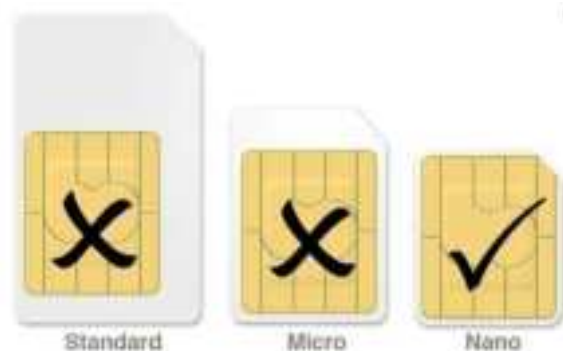
Open the rubber plug of the SIM card slot and insert SIM card.

Please make sure the SIM card is of GSM network, and you have topped it up with credit.

Make sure that there is no call transfer and call display is on, the PIN code is locked.

The format of the SMS message must be text format because device cannot recognize the PDU format.

Note: The tracker will only accept a Nano size SIM card – ‘standard’ or ‘Micro’ SIM cards will not work in the tracker.



5.3 Turn on the device

Connect the positive and negative (red and black) wires of the power supply to the 12V or 24V power supply of the car. Wait the device works normally After 1 minute of power-on.

5.4 Device status light

Red light: Always on when charging, and turns off after being fully charged. Red light flashes quickly when battery is low.

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 (at least 4 satellites with a signal-to-noise ratio of more than 38), and turns off if lost fix to satellites.

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 without a space and "space" between two words means you should leave one character space between two words.

5.5 GPRS configuration for live real-time tracking

Usually, the device can automatically recognize and select the APN, user name and password of GPRS settings. If the device cannot connect to the web platform, then you need to use the mobile phone text message to configure the settings according to following steps.

5.5.1 Configure APN setting

APN is an abbreviation for Access Point Name and changes depending on which mobile network you are using. For more information about your local APN, please check with your local wireless carrier.

SMS command: **APN+password+space+local APN**

Tracker response: **APN OK**

Example: **APN123456 CMNET**

Note: 123456 is the default password, please change password on APP or refers to 6.1. CMNET is the APN of China mobile.

5.5.2 Configure user name and password of GPRS

In the most countries, the user name and password of GPRS are not necessary; therefore, you can ignore this step if it is not necessary for your local network. For those countries requiring user name and password, please configure as following:

SMS command: **up+password+space+user+space+password**

Tracker response: **user, password ok!**

Example: **up123456 Jonnes 666666**

Note: 123456 means the password of the device, Jonnes means the user name of gprs, and 666666 means password of gprs, please configure it according to the user name and password of your local ones, you can check this information with your local wireless carrier.

5.6 Mobile APP

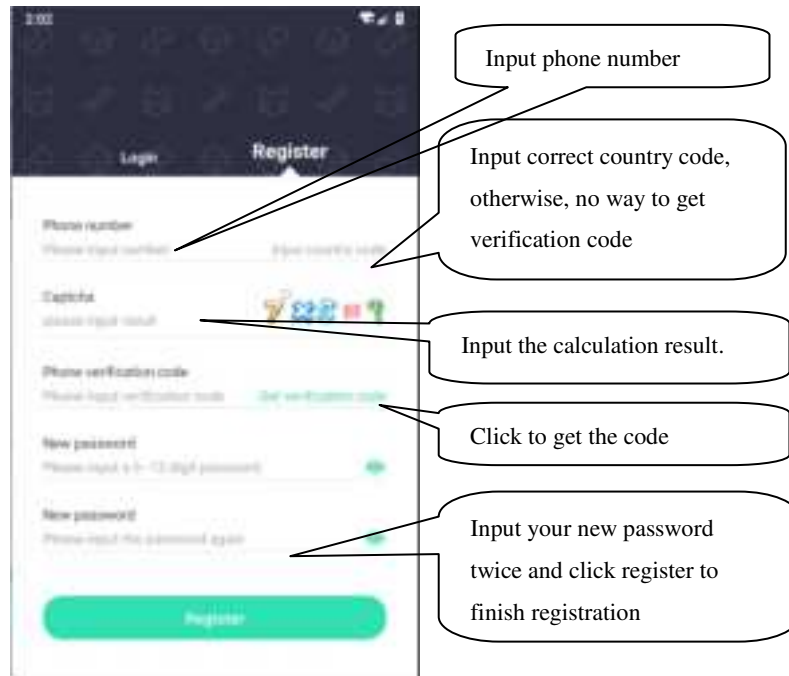
5.6.1 Scan the QR code to download APP



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

5.6.2 Register

5.6.2.1 Open BAANOOL IoT, register a new account and login.



The screenshot shows the registration interface of the BAANOOL IoT application. The screen has a dark header with 'Login' and 'Register' options, with 'Register' being the active tab. Below the header, there are several input fields and a 'Register' button at the bottom. Callout boxes provide instructions for each field:

- Phone number:** Input phone number. This field includes a dropdown for country code and a text input for the phone number.
- Captcha:** Input correct country code, otherwise, no way to get verification code. This field shows a captcha image with the text 'Please input result'.
- Phone verification code:** Input the calculation result. This field has a text input and a 'Get verification code' button.
- New password:** Click to get the code. This field has a text input and a green eye icon to toggle password visibility.
- Repeat password:** Input your new password twice and click register to finish registration. This field has a text input and a green eye icon to toggle password visibility.

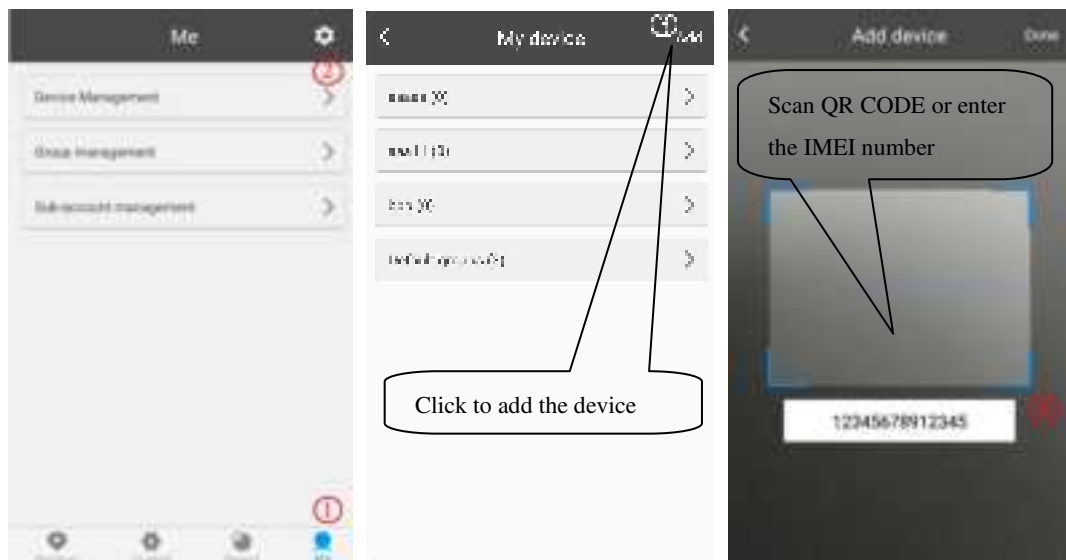
The 'Register' button is a large green button at the bottom of the form.

5.6.2.2 Choose BAANOOL IoV to enter it.



5.6.3 Bind device

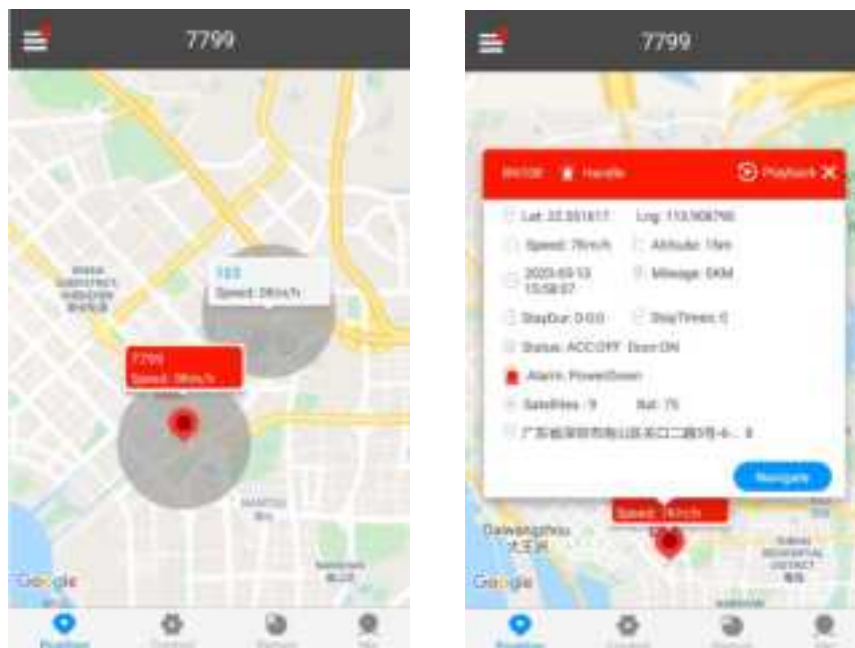
Click “Me”→ “Device Management”→ “Add”, scan the QR CODE on the device or enter the IMEI manually to bind the device.



5.6.4 Position

1. Check the device: Click “Position” to enter the position page to see all the

devices on the map, click the icon of the device to see the details including latitude & longitude, speed, altitude, time, ACC status, door status, and alarm status, etc. and you can click “Navigate” to navigate you to that car.

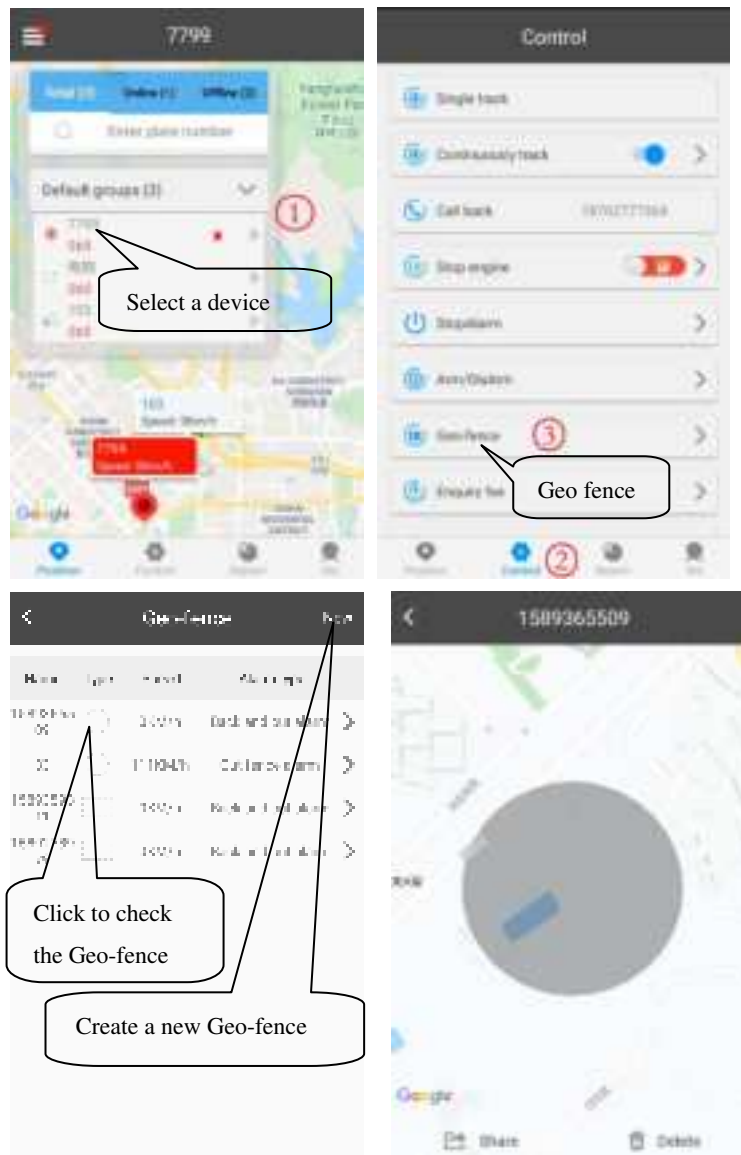


2. Select the device: Click “≡” at the upper left corner to select a device, Then its position, Geo-fence and trace (need to configure the “continuously track” settings of the “Control” page) will be showed on the map.



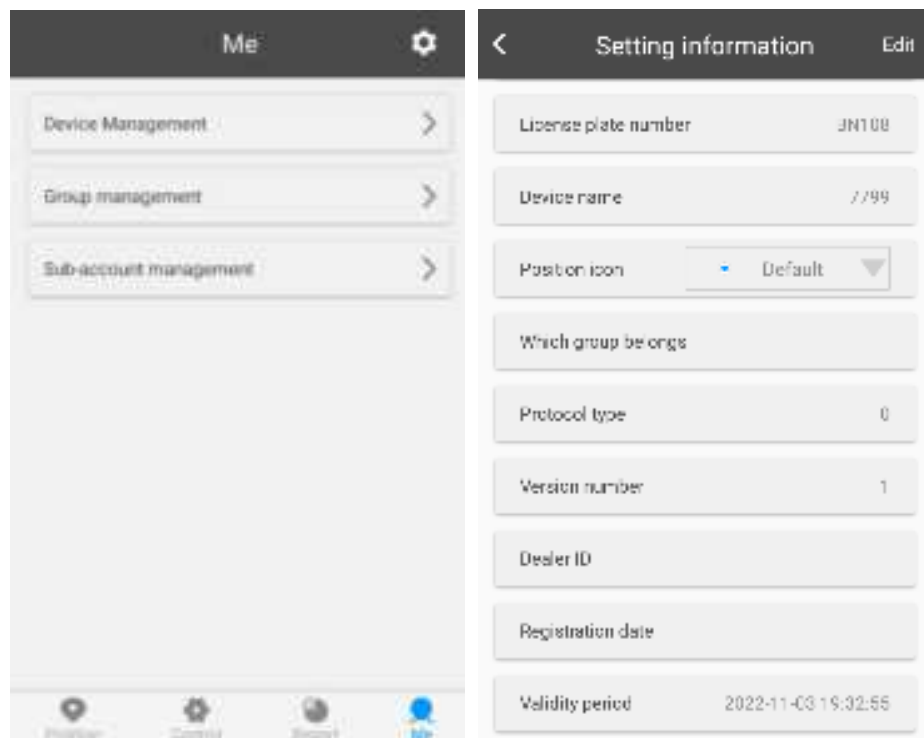
5.6.5 Control

After selected the device, then click “Control” to enter control page to use function of single track, continuously track, Arm / Disarm and Geo-fence, etc.



5.6.6 Device management

After selected the device, click “Me” to management page to add device, change device’s information, delete settings, group management and sub-account management.

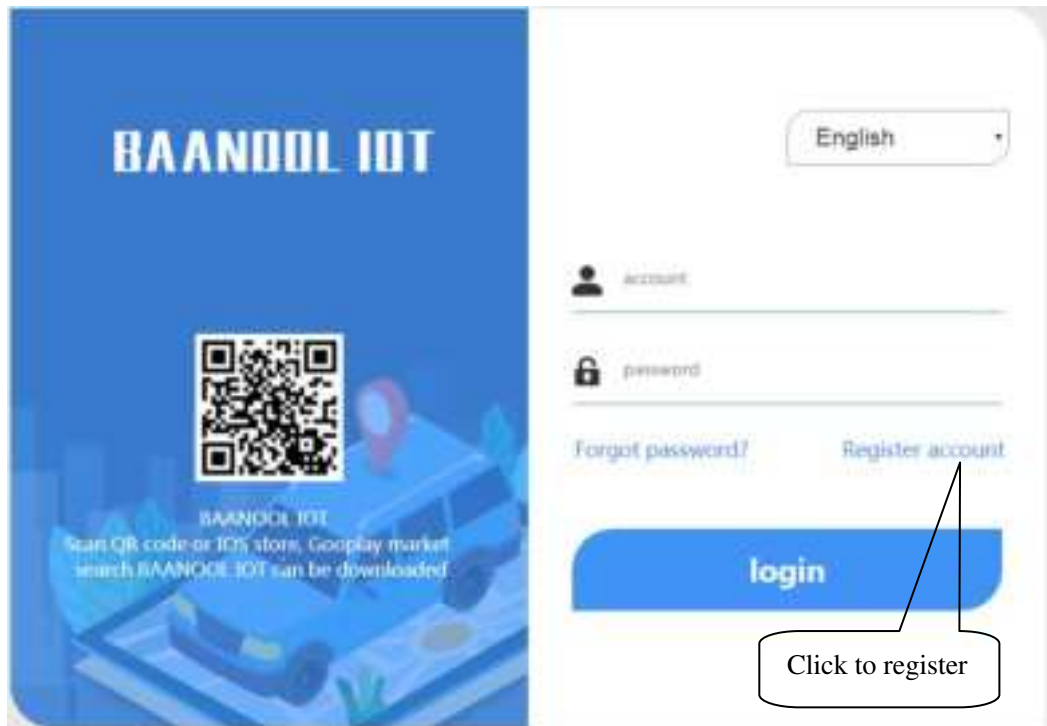


5.7 BAANOOL IOT's Web Version

Account name and password are the same on mobile App and web version

5.7.1 Register

Open <http://www.baanool.net> to register a new account.



The image shows the BAANDOL IOT app interface. On the left is the splash screen with a blue background, a QR code, and the text "BAANDOL IOT" and "Scan QR code or IOS store, Gooplay market search BAANDOL IOT can be downloaded". On the right is the login screen with a white background. It features a language dropdown set to "English", input fields for "account" and "password", and links for "Forgot password?" and "Register account". A blue "login" button is at the bottom. A callout bubble points to the "Register account" link.

English

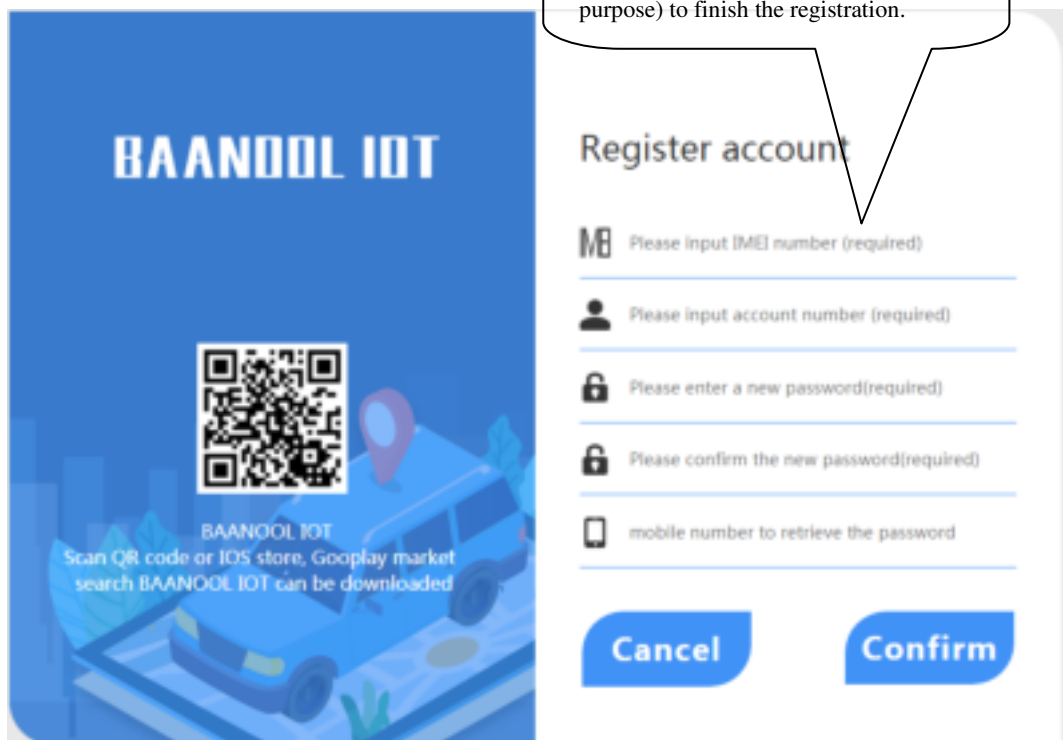
account

password

Forgot password? Register account

login

Click to register



The image shows the BAANDOL IOT app registration screen. On the left is the same splash screen as in the previous image. On the right is the "Register account" screen with a white background. It has a title "Register account" and five input fields with labels: "Please input IMEI number (required)", "Please input account number (required)", "Please enter a new password(required)", "Please confirm the new password(required)", and "mobile number to retrieve the password". At the bottom are "Cancel" and "Confirm" buttons. A callout bubble points to the first input field.

Register account

IMEI Please input IMEI number (required)

account Please input account number (required)

password Please enter a new password(required)

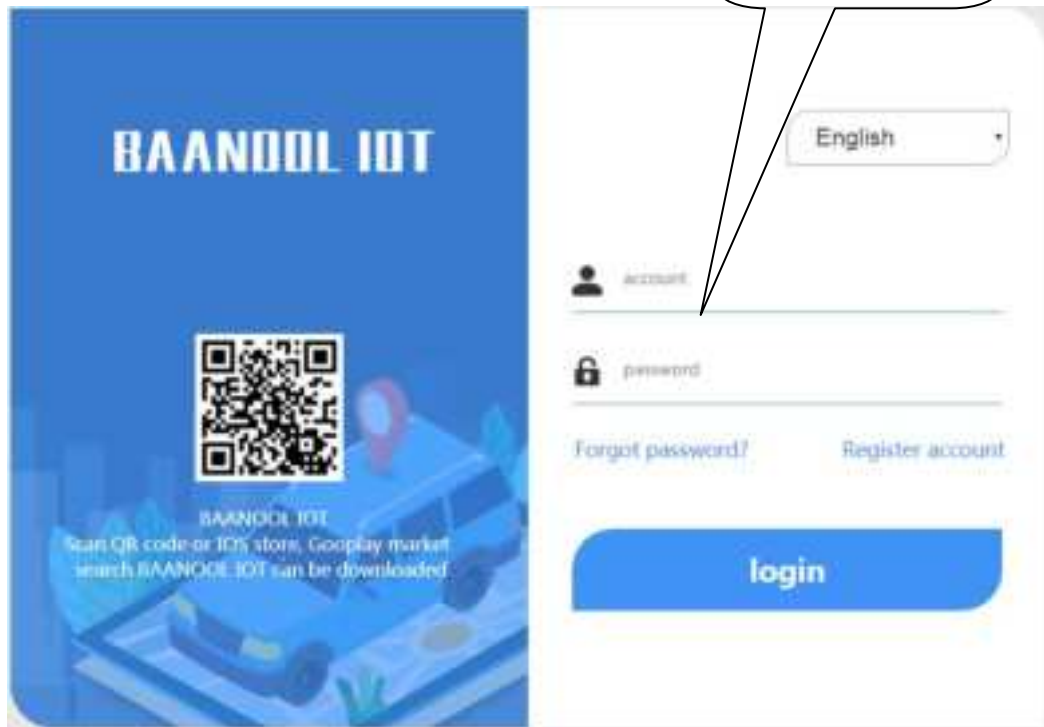
password Please confirm the new password(required)

mobile number to retrieve the password

Cancel Confirm

Enter IMEI, account, password, mobile phone No. (For forget password purpose) to finish the registration.

5.7.2 Login



The login page for BAANDOL IOT features a blue header with the logo. Below the logo is a QR code and text indicating where to download the app. The main content area is white and contains a language selector set to 'English', input fields for 'account' and 'password', and links for 'Forgot password?' and 'Register account'. A large blue 'login' button is at the bottom. A callout bubble points to the account and password fields with the text: 'Enter your account and password to login'.

5.7.3 Add device



The Device Management page has a blue header with the logo and navigation links: 'Device Management', 'Terminal Batch Setting', and 'Reports'. Below the header is a search bar with the placeholder 'Please input the device name or IMEI'. A table displays device information, including 'Device Name', 'Car Number', 'Registration Time', and 'Expiration Time'. A callout bubble points to the 'Device Management' link in the header. Another callout bubble points to the 'Add' button in the bottom right corner of the table, with the text: 'Add device'.

The image shows two screenshots from a mobile application. The top screenshot is a form titled 'Adding device information' with a close button (X) in the top right corner. The form contains the following fields:

- Device IMEI***: A text input field with a callout bubble saying 'Enter IMEI'.
- Device name***: A text input field with a callout bubble saying 'Device name'.
- Phone**: A text input field.
- Device group**: A dropdown menu showing 'Please choose a group'.
- Car number**: A text input field.
- position icon**: A dropdown menu showing 'Default device' with a callout bubble saying 'Choose an icon for device'.

 At the bottom of the form are two buttons: 'cancel' and 'Confirm'. A callout bubble points to the 'Confirm' button with the text 'Click to save it'.

The bottom screenshot shows the 'Please input the device name or IMEI' search screen. It has a search bar at the top with a magnifying glass icon. Below the search bar are three tabs: 'All (1)', 'Online (0)', and 'Offline (1)'. A callout bubble points to the 'Offline (1)' tab with the text 'This device you just added is still offline'. Below the tabs are two checkboxes: 'Add Group' (checked) and 'Inverse' (unchecked). At the bottom, there is a list of devices under the heading 'Default (1)'. The first device is 'demo' in a green bar, with a 'Rename' link and 'Offline>1D' status.

If the device is always offline (Grey color), please make sure the SIM card subscribes the GPRS service, and have credit to surf the Internet, you can put the SIM card in the phone to test if it can surf the Internet.

Besides, please also check if the configurations of APN, user name & password are correct, refers to section 6.27 for more information.

6 Function details

The configuration of following functions can be done on the App or web platform.

6.1 Changing password

SMS command: **password+old password+space+new password**

Tracker response: **password OK**

Example: **password123456 888888**

Be sure to keep the new password in mind, you have to flash the firmware to restore the initialized setting in case of losing the new password.

Attention: Make sure the new password is in 6 digits Arabic numbers, otherwise

the tracker cannot recognize it.

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.

6.2 Authorization

The authorized numbers are used to receive the various alerts, such as SOS, Geo-fence and movement alert, etc. Up to 5 numbers can be authorized. If you call the tracker 10 times in succession, the number will be authorized automatically as the first number and tracker response “add master ok”. Alternatively, you can authorize your number in the following way:

6.2.1 Authorizing:

SMS command: **admin+password+space+mobile phone number**

Tracker response: **admin ok**

Example: **admin123456 13322221111**

6.2.2 Deleting authorized number

SMS command: **noadmin+password+space+authorized number**

Tracker response: **noadmin ok**

Example: **noadmin123456 13322221111**

If you want to receive these kinds of notification alerts when the trackers moved to another country, you must put the country code before the phone number to authorize it in international format, If there is a “0” before your phone number, please remove the “0”, for example, **admin123456 008613322221111**.

6.3 Single tracking

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.

If you call it from authorized phone number, it will hang up and report a real-time location as below:



When it lost fix to satellites, the message will include the last known GPS position and a LAC code of the updated position as well.

6.4 Continuous interval tracking

6.4.1 Limited times tracking at a time interval

SMS command: **fix030s600s005n+password**

Tracker response: It will update positions at 30 seconds interval when ACC ON and 600 seconds when ACC OFF for 5 times.

Example: **fix030s600s005n123456**

Note:

The numbers in the command must be 3 digits and maximum times allowed are 255 times.

The interval unit in all fix command can be s (seconds), m (minutes) and h (hours)

6.4.2 Unlimited times tracking at a time interval

SMS command: **fix030s600s***n+password**

Tracker response: It will update positions at 30 seconds interval when ACC ON and 600 seconds when ACC OFF continuously.

Example: **fix030s600s***n123456**

Note: The time interval must be more than 10 seconds.

6.4.3 Unlimited times tracking at a distance interval

SMS command: **Distance+password+space+distance value**

Tracker response: **Distance ok**

Example: **Distance123456 0050**

Note: The distance unit is meter, and value must be 4 digits.

6.4.4 Smart tracking at both time and distance interval

SMS command: **fix030s600s***n+password+space+distance value**

Tracker response: It will update a position at 600 seconds interval when motionless, and update a position at 30 seconds when moving, besides, it will also update a position when move 200 meters away.

Example: **fix030s600s***n123456 0200**

6.4.5 Cancel interval tracking

SMS command: **nofix+password**

Tracker response: **nofix ok**

Example: **nofix123456**

6.5 Smart angle updating

It will update positions automatically to web platform when the vehicle changes driving direction over a pre set angle value to make its trace following the actual road and seem better on the map. This function is only available in GPRS mode.

SMS command: **angle+password+space+angle value**

Tracker response: **angle ok**

Example: **angle123456 030**

Note: The angle value must be 3 digits, and the default value is 30 degree.

6.6 GPS drift suppression

This function is activated by default.

SMS command to activate: **suppress+password**

Tracker response: **suppress drift ok**

Example: **suppress123456**

If you stop driving the vehicle, tracker will stop updating its position and keep sending the same latitude and longitude, and when start to driving, the latitude and longitude will update automatically again.

SMS command to deactivate: **nosuppress+password**

Tracker response: **nosuppress ok**

Example: **nosuppress123456**

6.7 Exact street address

You must set the APN of your local GSM network provider for the SIM card in the tracker before using this function, if your local GSM network provider requires user name and password for GPRS, Please set it up according to the section 6.27.

After APN has been set up, send "address+password" , it will reply in exact address including street name. For example: No.113, Guankou 2nd Rd, Nantou, Nanshan district, Shenzhen, Guangdong, china.

6.8 Location based service (LBS) / Cell-ID tracking

If the tracker cannot establish a solid GPS Fix, it will calculate its location using Cell-ID GSM locating, Location reports will include the GPS coordinates of the last known positions as well as a LAC code, You can send command "address+password" to the tracker to request exact address in SMS mode, tracker will automatically switch to tracking by LBS in GPRS mode. Accuracy of LBS depends on the distance to the nearest GSM Network Cell Tower or Base Station.

Note: This feature can be used normally in most areas according to the signal of GSM network. It may not be available in some areas.

6.9 Auto answer

Track is the default mode for position.

SMS command to switch to auto answer mode: **autoans +password**

Tracker response: **autoans ok!**

Example: **autoans123456**

Note: If there aren't any authorized numbers set-up, it will auto answer for all the incoming calls, if there are authorized numbers set-up, it will auto answer the incoming calls from authorized numbers and reject all other phone numbers.

SMS command to switch back to track mode: **tracker+password**

Tracker response: **tracker ok**

Example: **tracker123456**

6.10 Forwarding incoming SMS messages

SMS command: **forward+password+space+third party phone number**

Tracker response: **forward ok**

Example: **forward123456 10086**

The carrier's number which used to sending notification messages is recommended to set up, tracker will forward the notification message to authorized numbers when carrier send message to remind you to top up your SIM card.

SMS command to cancel: **noforward+password**

Tracker response: **no forward ok**

Example: **nofoward123456**

6.11 SIM Card Balance Enquiry

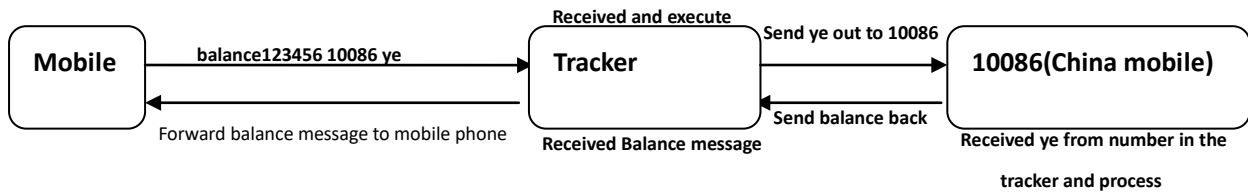
SMS command: **balance+password+space+phone number+space+code**

Tracker response: It will forward the code to the specified phone number and return the content from that number.

Example: **balance123456 10086 ye**

This function assumes that your GSM network provider has the option where you can check your SIM card's balance by sending a SMS message to a specified

number, which is 10086 in this example of China Mobile.



6.12 ACC ON/OFF Alert

This function is OFF by default.

SMS command to activate: **ACC+password**

Tracker Response: **ACC ok**

Example: **ACC123456**

If tracker detect “ignition on” signal from ACC wire (white wire), 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.

SMS command to deactivate: **noACC+password**

Tracker response: **noACC ok**

Example: **noACC123456**

It can only activate or deactivate the notification by SMS message to authorized phone numbers, the notification to web platform cannot be deactivated and will always send automatically.

6.13 Remote immobilizing

Immobilizing way set up

Immediate execution way: Tracker will immobilize the vehicle immediately

SMS command: **quickstop+password**

Tracker response: **quickstop OK**

Example: **quickstop123456**

Delay execution way (Default setting): When receiving STOP command, tracker will check speed and reply “it will be executed after speed less than 20KM/H” if speed is higher than 20KM/H, and delay executing this command until the speed is less than

20KM/H.

SMS command: **noquickstop+password**

Tracker response: **noquickstop OK**

Example: **noquickstop123456**

Remote immobilizing

SMS command: **stop+password**

Tracker response: **Stop engine succeed**

Example: **stop123456**

Once the immobilize function has been executed, it will remain immobile until you send command to resume the fuel supply

Remote fuel resume

SMS command: **resume+password**

Tracker response: **Resume engine Succeed**

Example: **resume123456**

This means tracker will now resume the fuel & power supply.

6.14 Fuel sensor calibrating

For reasons such as different fuel tank heights and specifications, tracker needs to set the proper height to zero and full values in order to read the correct percentage value.

Calibrate 0% when the fuel tank is empty:

SMS command: **oilzero+password**

Tracker response: **oilzero ok!**

Example: **oilzero123456**

Calibrate 100% after fill the fuel tank 100% :

SMS command: **oilfull+password**

Tracker response: **oilfull ok!**

Example: **oilfull123456**

You can connect the original car's voltage type fuel sensor, the applicable range is 0 ~ 5V. If the original one cannot be used, then an external voltage type fuel sensor is the solution.

6.15 Configure times of alarm SMS

The times of the message of a continuous alarm can be configured. 3 times messages by default.

SMS command: **xtime+password+times value**

Tracker response: **xtime ok!**

Example: **xtime123456 005** (It means to send messages 5 times.)

Note: The times value must be 3 digits.

6.16 Alarms

6.16.1 Low battery alarm

This feature is activated by default, when the battery is low, tracker will send message “low battery + latitude & longitude” to authorized numbers for 2 times at 15 minutes interval.

Note: The times of this alert cannot be configured by the xtime command.

SMS command to deactivate: **lowbattery+password+space+off**

Tracker response: **lowbattery off ok**

Example: **lowbattery123456 off**

SMS command to activate: **lowbattery+password+space+on**

Tracker response: **lowbattery on ok**

Example: **lowbattery123456 on**

6.16.2 Power disconnection alarm

This feature activate by default. Tracker will send “Power alarm+latitude & longitude” to authorized numbers every 3 minutes when external power disconnected

SMS command to deactivate: **extpower +password+space+off**

Tracker response: **extpower off ok**

Example: **extpower123456 off**

SMS command to activate: **extpower +password+space+on**

Tracker response: **extpower on ok**

Example: **extpower123456 on**

6.16.3 Blind area alarm

This feature is deactivated by default, tracker will send SMS notification “No gps+latitude & longitude of the last know position.” to authorized numbers if lost fix to GPS satellites.

SMS command to activate: **gpssignal +password+space+on**

Tracker response: **gpssignal on ok**


Example: **gpssignal123456 on**

SMS command to deactivate: **gpssignal +password+space+off**

Tracker response: **gpssignal off ok**

Example: **gpssignal123456 off**

6.16.4 SOS alarm

Press SOS button for 3 seconds (For model B, press  key on the remote control), tracker will send SMS notification “Help me+latitude & longitude”, to all the authorized numbers at 3 minutes interval.

SMS command to disable the notification: **help me**

Tracker response: **help ok**

Example: **help me**

6.16.5 Geo-fence

The Geo-fence feature creates a virtual fence. When the tracker moves out of this virtual fence, SMS notification “stockade!+latitude & longitude” will be sent to the authorized numbers.

SMS command to activate: **stockade+password+space+latitude, longitude; latitude, longitude**

Tracker response: **stockade ok!**

Example: **stockade123456 22.554459, 113.903981; 22.553002, 113.909378**

SMS command to deactivate: **nostockade+password**

Example: **nostockade123456**

Note: The first latitude & longitude is coordinate of the top left corner of the Geo-fence, and the second latitude & longitude is the coordinate of the bottom right corner.

To configure the Geo-fence the tracker must fix to satellites and be stationery for about 3-10 minutes.

6.16.6 Movement alarm

The movement feature will create a circle area with a set radius (200 meters by default). When the tracker moves out of this area, SMS notification “move!+latitude & longitude” will be sent to the authorized numbers.

SMS command to activate: **move+password+space+radius value**

Tracker response: **move ok!**

Example: **move123456 0200**

SMS command to deactivate: **nomove+password**

Tracker response: **nomove ok**

Example: **nomove123456**

Note: The unit of the radius value is meter, and the value must be 4 digits and maximum 9999 meters.

To configure the movement alarm, the tracker must fix to satellites and be stationery for about 3-10 minutes.

6.16.7 Over speed alarm

The tracker can be configured to send an alert “speed+xxx!+latitude & longitude” to authorized numbers when a certain speed is exceeded. In SMS mode, tracker only sends one alert in 3 minutes, and siren beep for one second for each trigger.

SMS command to activate: **speed+password+space+speed value**

Tracker response: **speed ok!**

Example: **speed123456 080**

SMS command to deactivate: **nospeed+password**

Tracker response: **nospeed ok**

Example: **nospeed123456**

Note: The recommended speed should not be less than 30km/h. If the speed is set lower than this you may get a false alarm due to GPS inaccuracy.







6.16.8 Fuel alarm

When the vehicle's fuel consumption exceeds the normal standard while the vehicle is running, or there is fuel leakage or fuel stealing when the vehicle is stopped, tracker will send "oil: ××%+latitude & longitude" to the authorized numbers every 3 minutes. The siren will beep for 20 seconds.

SMS command to stop the notification: nooil+password

Example: **nooil123456**

6.17 Remote control function (For B model)

Key	Function	Descriptions
	Arming	Press for 0.5 second, the siren will beep one time.
	Disarming	Press for 0.5 second, the siren will beep two times.
	Silent arming	Press for 0.5 second when it is in disarm state, the siren will 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.

6.18 Arming

6.18.1 Arming by SMS

SMS command: **arm+password**

Tracker response: **Tracker is activated**

Example: **arm123456**


Tracker will activate the ACC, shock sensor and door alarm to enter into arming state.

If you leave the ignition on (The ACC is on the "ON" position), tracker cannot enter into arming state, and will reply "set up fail! pls turn off ACC"

If the ignition is off, but the door is not closed properly, then tracker cannot

enter into arming state too, and will reply “set up fail! pls close the door”

6.18.2 Arming with remote control (For B model)

Press  key for 0.5 seconds, the car enters into arming state and the siren will beep one time, no SMS message notification.

If you leave the ignition on (The ACC is on the ON position), tracker cannot enter into arming state, and siren doesn't sound.

If the ignition is off, but the door is not closed properly, then tracker cannot enter into arming state too, and siren beeps 3 times to indicate the door is not closed.

6.19 Silent Arming

6.19.1 Silent arming by SMS


SMS command: **silent+password**

Tracker response: **silent ok!**

Example: silent123456

After tracker enters into the silent arming state, the siren doesn't sound even if an alarm is triggered, but tracker will send alarm notification to authorized numbers.

6.19.2 Silent arming with remote control (For B model)

Press  key in disarm state for 0.5 second, the siren will beep one time, tracker will enter into silent arming state, the siren doesn't sound even if an alarm is triggered, but tracker will send alarm notification to authorized numbers.

6.20 Disarming

6.20.1 Disarming by SMS


SMS command: **disarm+password**

Tracker response: **Tracker is deactivated.**

Example: **disarm123456**

After disarming, the door, shock sensor and ACC alarm will be deactivated, and these alarms won't be triggered any more.

6.20.2 Disarming with remote control (For B model)

Press  on for 0.5 second, tracker will enter into disarming state, siren beeps two times, no SMS message notification.

6.21 Alarm function in arming state

6.21.1 Door opening alarm

When the door is opened in arming state, tracker will send SMS notification "Door alarm+latitude & longitude" to authorized numbers every 3 minutes. The siren will beep for 20 seconds, and if the door is still open, then the siren will beep for another 20 seconds with 20 seconds pause, disarming to quit the alarm.

6.21.2 ACC (Ignition / voltage) alarm

Tracker will send "ACC alarm + latitude / longitude" to authorized numbers every 3 minutes 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 quite the alarm.

6.21.3 Acceleration Sensor Alarm

There is a built-in three axis acceleration sensor in the tracker to detect the movement, tilt and shock when in arming state and tracker will send "Sensor alarm + latitude / longitude" to authorized numbers, and only one message in 3 minutes when tracker works in SMS mode. Siren will beep for 5 seconds for the first trigger and second trigger, and then beep 10 seconds for another trigger, disarming to quit the alarm.

Sensor's sensitivity configuration

There are three different levels.

First level: Alarm will be triggered by slight vibration.

SMS command: **sensitivity+password+space+1 .**

Tracker response: **sensitivity ok**

Example: **sensitivity123456 1**

Second level: Alarm will be triggered by medium vibration.

SMS command: **sensitivity+password+space+2**

Tracker response: **sensitivity ok**

Example: **sensitivity123456 2**

Third level: Alarm will be triggered by severe vibration.

SMS command: **sensitivity+password+space+3**

Tracker response: **sensitivity ok**

Example: **sensitivity123456 3**

6.21.4 No GSM network alarm

When the vehicle is in the armed state (Not in the silent mode) and lost GSM signal, if an alarm is triggered (door, vibration, ACC), the siren will beep, but no notification message to authorized numbers.

6.22 Sleep

6.22.1 Sleep mode

SMS command: **sleep+password+space+on**

Tracker response: **sleep on ok!**

Example: **sleep123456 on**

When stop operating the tracker for 3 minutes, it will sleep if there aren't any alarm has been set up. Power for GPS module will be cut off, and vibration, a call or SMS can wake up.

It consumes less data in sleep mode, GPRS automatically disconnects. When tracker generates an alarm or the vehicle runs, GPRS automatically reconnects to the platform.

6.22.2 No sleep mode

SMS command: **sleep+password+space+off**

Tracker response: **sleep off ok**

Example: **sleep123456 off**

Tracker does not sleep, GSM and GPS work at all times. (Default mode)

6.23 Check Status

SMS command: **check+password**

Tracker response:

Power: ON/OFF

Battery: 100%

GPRS: ON/OFF

GPS: OK/NO GPS

ACC: OFF/ON

Door: OFF/ON

GSM Signal: 1-32 (The higher, the better)

Oil: 100%

APN: cmnet

IP: 104.250.138.146

PORT: 9000

Arm: OFF/ON

Example: **check123456**

6.24 Check IMEI

SMS command: **imei+password**

Tracker response: xxxxxxxxxxxxxxxxx (A 15 digits IMEI of your device)

Example: **imei123456**

6.25 Local time setting

Tracker works in the local time zone by default. If you find that the time zone is incorrect, you can configure the time zone.

SMS command: **time+space+zone+password+space+time zone value**

Tracker responds: **time ok**

Example: **time zone123456 8**

Note: 8 is the time zone of China, If your country time zone is minus, write the time zone value with a “-“ symbol, for example, time zone123456 -8.

6.26 Reset Hardware

This command will reboot the GSM and GPS modules of the tracker. Please note this will not restore factory settings.

SMS Command: **reset+password**

Tracker Response: **reset ok**

Example: **reset123456**

6.27 GPRS configuration for live real-time tracking

6.27.1 Configure APN, GPRS login user name and password

Usually, tracker can automatically recognize and select the APN and GPRS' user name and password without any configuration. If it cannot connect to the network,

Please configure it according to following steps.

6.27.1.1 Configure APN setting

APN is an abbreviation for Access Point Name and changes depending on which mobile network you are using. For more information about your local APN, please check with your local wireless carrier.

SMS command: **APN+password+space+local APN**

Tracker response: **APN OK**

Example: **APN123456 CMNET**

Note: 123456 is tracker's default password, you can change the

password on App or refers to section 6.1.

6.27.1.2 Configure user name and password

In the most countries, the user name and password of GPRS are not necessary; therefore, you can ignore this step if it is not necessary for your local network. For those countries requiring user name and password, please configure as following:

SMS command: **up+password+space+user+space+password**

Tracker response: **user, password ok!**

Example: **up123456 Jonnes 666666**

Note: 123456 means the password of the device, Jonnes means the user name of gprs, and 666666 means password of gprs, please configure it according to the user name and password of your local ones, you can check this information with your local wireless carrier.

6.27.2 Configure domain name and port

Tracker connects to tracker.baanool.net:8090 by default. If you need to connect to another domain name, please configure it.

SMS command: **dns+password+space+DNS domain name+space+port**

Tracker response: **dns success!**

Example 1: **dns123456 04.GPSTrackerXY.com 9000**

Example 2: **dns123456 tracker.baanool.net 8090**

Note: 123456 is tracker's password, 04.GPSTrackerXY.com is the DNS, 9000 is port.

If you want to configure IP instead of DNS, then please send SMS command: "adminip+password+space+IP+space+port"

6.27.3 GPRS / SMS mode switch

The GPRS mode is the default one, if you need to switch, pls refers to the following instructions.

6.27.3.1 GPRS mode

SMS command: **GPRS+password**

Tracker response: **GPRS OK!** (It means it has been switched to GPRS mode.)

Example: **GPRS123456**

TCP / UDP switch

TCP mode is the default one; you don't need to configure this step if the web platform works with TCP mode, but you need to configure it as following when you are using a platform which only works with UDP.

SMS command to switch to TCP mode: **GPRS+password,0,0**

SMS command to switch to UDP mode: **GPRS+password,1,1**

Tracker response: **GPRS OK!**

Example: **GPRS123456,0,0**
GPRS123456,1,1

6.27.3.2 SMS mode

Switch to SMS mode will disconnect the GPRS connection for live tracking.

SMS command: **SMS+password**

Tracker response: **SMS OK!** (It means it has been switched to SMS mode.)

Example: **SMS123456**

6.28 Activate Fuel value in GPRS data

GPRS data string has no fuel value by default, if you need the fuel value in GPRS data string, please configure it as following:

SMS command: **protocol+password 18**

Tracker response: **protocol 18 ok**

Example: **protocol123456 18**

If you want to change back to the default data string, please configure as following:

SMS command: **protocol+password 12**

Tracker response: **protocol 12 ok**

Example: **protocol123456 12**

Note: By default, tracker is connected to tracker.baanool.net:8090 with fuel value, so no need to configure this step. If you are using another IP or domain name, use this command to activate the fuel value.

6.29 Configure SMS management center number

SMS command: **centernum+password+space+phone number**

Tracker response: **centernum ok**

Example: **centernum123456 13322221111**

After the SMS management center number is set successfully, the "Continuous interval tracking" messages will be sent to this number. If the management center number needs to receive the alarm notification message, please set this number as an authorized number too.

Cancel SMS management center number

SMS command: **nocenternum+password**

Tracker response: **nocenternum ok**

Example: **nocenternum123456**

6.30 Configure heartbeat package interval

The default heartbeat interval to keep GPRS connection alive is 100 seconds; you can change it if necessary, but please be kindly informed that if the time interval is too long, it may cause GPRS disconnection.

SMS command: **heartbeat+password+space+time interval**

Tracker response: **heartbeat ok**

Example: **heartbeat123456 120**

Note: (123456 means tracker's password, 120 means the interval.

The minimum interval is 60 seconds, and tracker will continue to send heartbeat every 60 seconds if you configure it less than 60 seconds.

6.31 Initialization

If the tracker cannot work properly, you can send command to initialize it to

return to default factory settings.

SMS command: **begin+password**

Tracker response: **begin ok**

Example: **begin123456**

7 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 paint the device; this may lead to internal circuit failure.
7. Do not disassemble the device.
8. Please read the user manual carefully before installation and operation, and understand voltage range. Otherwise, it won't work properly or damage the tracker.

8 Troubleshooting

Faults	Solution
Fail to turn on	<ol style="list-style-type: none"> 1. Please check if the power wiring is correct? 2. Please check if the power voltage is correct?
No GSM signal	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. No credit on SIM card. 2. The format of the SMS command is incorrect.
No response for a call	<ol style="list-style-type: none"> 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?

No alarm notification message	<ol style="list-style-type: none"> 1. Authorized number has not been set up. 2. The format of the phone number is incorrect.
Fail to stop engine	<ol style="list-style-type: none"> 1. Please check whether the engine stop wiring connected correctly? 2. Please check whether the speed is higher than the speed to execute the stop command when using Delay execution way?
Remote control cannot be used	Turn off tracker, and turn it on to program the remote control again.
Siren doesn't work	This tracker drives the speaker output voltage DC12V/24V/1A, if it is a negative trigger speaker, it will not be driven.

Warranty Card

IMEI: _____

Distributor: _____

Date of purchase: _____

Description of the failure: _____

Distributor's stamp

FCC Warning

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.