BAANOOL 403-V1.7 GPS Tracker User Manual

403-V1.7 GPS Tracker
User Manual

Contents

403-V1.7 GPS Tracker

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.

Specifications

| Product name	GPS TRACKER
Model	403
DIM.	9.6×5.3×1.8cm
Weight	70g
Network	GSM/GPRS/LTE
Band	4G B1/B2/B3/B4/B5/B7/B8/B28A/B28B/B40 2G 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 350mAh Li-ion battery
Storage Temp.	-40°C to +85°C
Operation Temp.	-20°C to +65°C
Humidity	5%–95% non-condensing

Hardware Description

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 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 Wiring Diagram:
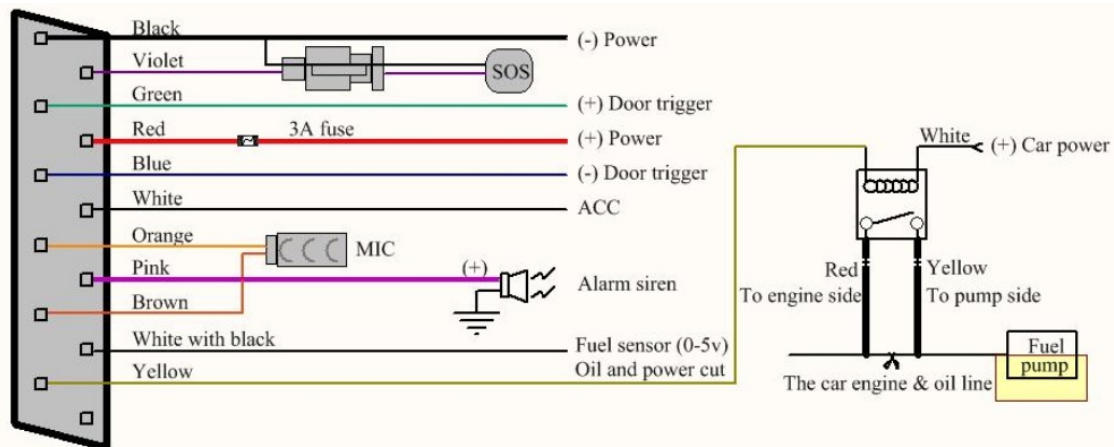
5. The pink wire can be connected to the original car alarm horn or the alarm horn purchased together.

6. 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.

7. Please install the SOS button where the driver can touch it.

8. SIM card installation

   Open sealed buckle of sim card, insert the sim card , then ,Put sealed buckle back.

   Please be sure to confirm that the SIM card network frequency band is the network frequency band supported by the device. Caller ID must be turned on and the PIN code must be turned off. The call forwarding function cannot be turned on.

9. After inserting the SIM card, 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

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 is normal, 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.

This GPS Tracker Supports Mobile APP, Web Server

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

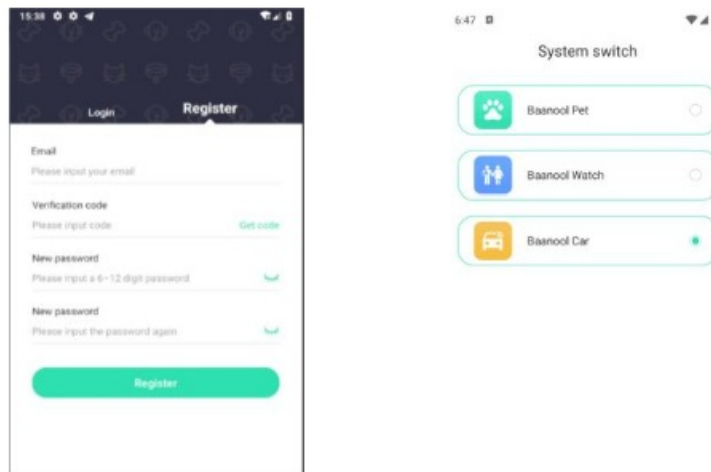## Mobile APP

Scan the QR code to download APP

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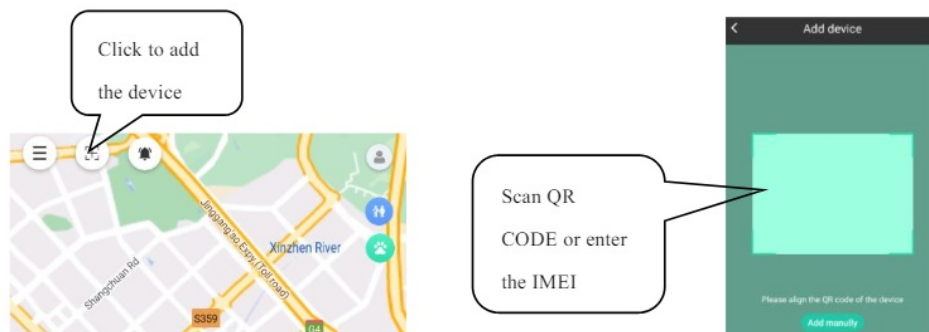**Register**
Open BAANOOL IOT, register a new account and login, Choose "BAANOOL car "to enter it.

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.
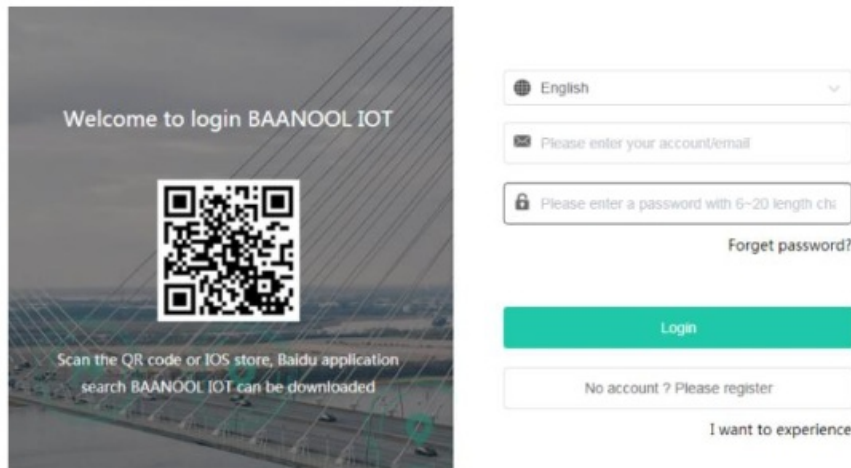

Using tracker
Under normal circumstances, the device can automatically select the APN, username and password without setting it. If the device is still offline after 3 minutes of binding, you need to set the APN and username and password in Bluetooth or SMS according to 11.17 and 11.18. After the device comes online, you can view and manage the device.

BAANOOL IOT's Web Version

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

http://www.baanool.net/BAANOOL_Oline/download.html

Mobile APP and BAANOOL IOT's Web

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

8.1.1 Working mode

Working mode	Description
Real time online	The device is online in real time and reports its location according to the set motion/stationary intervals. The device is online in real time by default and reports its location at intervals of 10 seconds of motion and 1 hour of stationary.
Smart mode	Offline when stationary (Phone calls, SMS, and alarms can trigger online. After SOS, door open alarm and illegal ignition alarm are triggered, the device will be online in real time until the alarm is canceled). Wake up an d go online when in motion. Whether it is stationary or moving, the device will report at the set interval.

8.1.2 Positioning interval
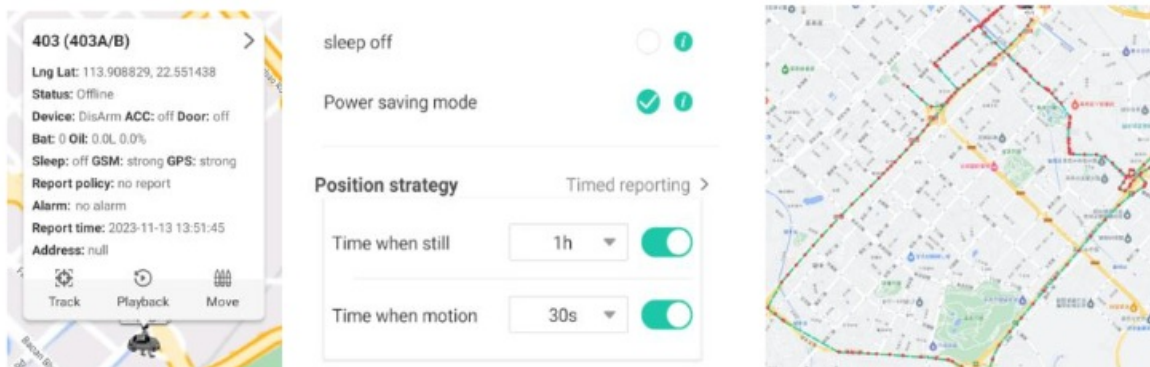
8.2 History playback
You can click the playback button to view the historical track
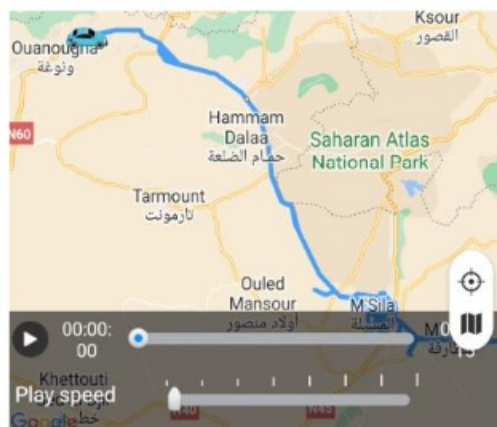
8.3 Remote immobilizing
Cut oil and power off delayed mode, Cut of foil and power immediately mode, Resume oil and power

8.4 Arming/Disarming
Arming, Disarming, Silent arming

8.5 Alarm function in arming state

8.5.1 Door opening alarm
When the door is opened in arming state, tracker will trigger the door opening alarm. 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.

8.5.2 ACC alarm
When tracker works in arming state, if the vehicle ignition has been switched "ON" (key turned to "ACC ON" position) or the vehicle has been started directly. The tracker will trigger the ACC ignition alarm .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.

8.5.3 Shock alarm
When tracker works in arming state shock alarm will be triggered when the device moves or vibrates. The shock alarm will only be triggered once within 3 minutes. The siren will beep for 5 seconds for the first time within three minutes, for 5 seconds for the second time, and for 10 seconds after the shock alarm is triggered again.

8.6 Other Alarm functions

8.6.1 Low battery alarm
When the voltage of battery is going to be about 3.55V,tracker will send low battery alarm for 2 times at 15 minutes interval.

8.6.2 Ext power disconnection alarm
This feature activate by default. When the external power supply is disconnected, tracker will triggerman external power outage alarm.

8.6.3 SOS alarm
Press SOS button for 3 seconds and tracker will trigger 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.

8.6.5 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.

8.6.6 Over speed alarm

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

8.6.7 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, fuel alarm will been triggered. The siren will beep for 20 seconds.

8.7 Listen

Listen for 15 seconds per request

8.8 Bluetooth configuration parameters

You can click the Bluetooth icon on the App login page or the home page after login to enter the Bluetooth configuration parameter function interface, and click "Bn403" to directly modify device parameters after the connection is successful. All SMS commands can be set via Bluetooth.
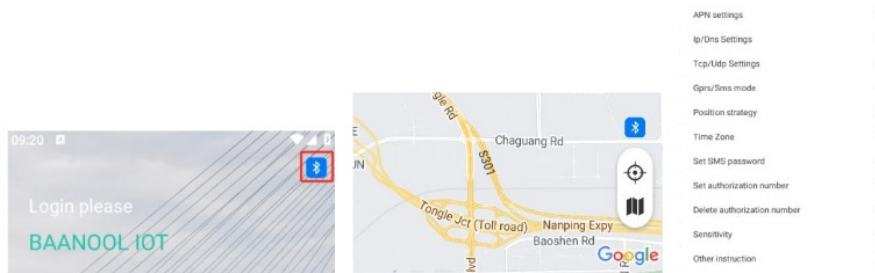
8.9 Other function settings

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.

Bluetooth automatic arm/disarm

Open the phone Settings, find the Bluetooth menu, open Bluetooth, search for Bluetooth named "Bn403", click Connect, enter the machine password, and then the pairing succeeds. When you are far away from the terminal and the Bluetooth connection is disconnected, the terminal automatically arm.

When close to the terminal, Bluetooth automatically connected, the terminal automatically disarm. Note: When using other methods (remote control, SMS command, app, web version, Bluetooth setting parameters) after deployment, Bluetooth sensor automatic deployment/withdrawal will be invalid, until through other means of withdrawal, Bluetooth sensor automatic deployment. If you do not use Bluetooth sensing, please unpair in the Bluetooth menu of your phone.

Remote controller (Optional)

Key	Function	Descriptions
🔒	Arming	Press for 0.5 second, siren beep one time. If the vehicle is in the ignition state, it cannot enter the arming state, and the siren will not beep.
🔓	Disarming	Press for 0.5 second, siren beep 2 times ,all alarms will stop
🔇	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

* 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.

SMS Functions

The device turns on GPRS & SMS by default If you use only SMS to manage the device, it is recommended to turn off GPRS by referring to the 11.21 command.

Attention

When reading this user manual, you will notice that we have used "+" and "space" "+" 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 and shock alarms can be triggered. After the SOS alarm is 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.

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 Remote immobilizing

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.

11.6 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

11.7 Alarm function in arming state

11.7.1 Door Opening Alarm

When the door is opened in arming state, tracker will send SMS notification "Door alarm+latitude & longitude" to authorized numbers. 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.

11.7.2 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

11.7.3 Shock Alarm

When the tracker is in the armed state, when the device moves or vibrates, it will send SMS notification "Sensor alarm + latitude and longitude" to the authorized number. The vibration alarm will only be sent once within 3 minutes. The siren will beep for 5 seconds for the first time within three minutes of the vibration alarm. The siren sounds for 5 seconds and then sounds for 10 seconds. Vibration sensitivity defaults to level 2, which can be set to 1, 2, or 3. Command:

sensitivity+password+space+2

11.8 Other alarms

11.8.1 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.

Turn off lowbattery+password+space+off Tracker response: lowbattery offok

Turn on lowbattery+password+space+on Tracker response lowbattery on ok

11.8.2 External power disconnection alarm

This feature 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

11.8.3 SOS alarm

Press the SOS button for 3 seconds (If it is a B model, press and hold the remote control button ⊕for 3 seconds)the device will trigger an emergency alarm

11.8.4 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

11.8.5 Over speed alarm

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

Cancel: nospeed+password, response: nospeed ok

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

11.8.6 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. The siren will beep for 20 seconds.

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 send SMS command: oilzero+password tracker Response"oilzero ok "At this point fuel value is 0%

Calibrate 100% After fill up the tank send SMS command "oilfull+password", tracker Response "oilfull ok "At this point fuel value is 0%

11.9 Configure times of alarm

The number of times ofSOS external power fuel alarm door open ACC alarms can be set

Command: xtime+password+times value Response xtime ok Send once by default.

11.10 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

11.11 ACC ON/OFF Alert

This function is turned off by default. 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.

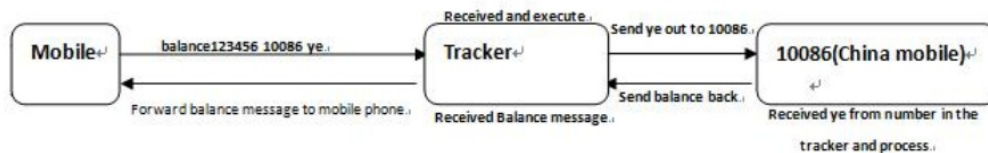Activate ACC+password Tracker Response ACC ok

Deactivate : noacc+password Tracker response noacc ok.

11.12 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

Way2

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

11.13 Check status

Command: check password, reply: battery level, GPS signal, GSM signal, GPRS status, APN, UP,

IP, port, etc .

11.14 Check IMEI

Command: imei+password, reply: device IMEI

11.15 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

11.16 Hardware Reset

Command: reset+password, response: reset ok

11.17 APN Setting

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

Settings are only required when using the APP and web versin

11.18 Configure User Name and Password ofGPRS Network

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

Settings are only required when using the APP and web version

11.19 Set Server IP/DNS

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

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

11.20 TCP/UDP Switch

Command: tcp+password, response: tcp ok

Command: udp+password, response: udp ok

No setup required to use our BAANOOL IOT server

11.21 SMS mode

Command: SMS+password

Response: sms ok

The device default mode is GPRS mode, if user prefer to SMS or calls to manage the GPS device, it is recommended to use this command to close GPRS mode

11.22 GPRS mode
Command: gprs+password
Response: gprs ok

11.23 Initialization
Command: begin+password
Device response: begin ok
All commands setting will return to default factory settings

Accessorles

No.	Photo	Name	Specifications	Applicable model
1		Harness	12PIN	Standard
2		Microphone	1.5 meters	Standard
3		Relay	12V/40A or 24V/40A	Standard
4		Alarm Siren	12V/24V	Optional
5		Fuel sensor		Optional
6		Remote control		Optional for B model

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 dissemble 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.

Troubleshooting

Faults	Solutions
Fail to turn on	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	No credit on SIM card. The password is incorrect or the format of the SMS command is incorrect.
No response for a call/No alarm notification message	Authorized number incorrect or had not setting authorized phone number yet
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

Documents / Resources

BAANOOL 403-V1.7 GPS Tracker [pdf] User Manual
403-V1.7, 403-V1.7 GPS Tracker, GPS Tracker, Tracker

References

- **BAANOOL IOT**
- **User Manual**