# Cloud services + double kernel + double localization

# GPS terminal



Thank you for purchasing our series, GPS + base station (assist) locating and tracking device. Use manual will be detailed instructions how to operate this product. So be sure to please you in the use of the products of a carefully before reading the manual. If there is any change, please go to the official website or the local agent consulting without prior notice. Every time change will unify in the latest a product sales released in. Producers use manual for the errors and omissions don't bear legal responsibility.

# Directory

![SANTS GROUP logo]

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## 3.Hardware description

## 4.Terminal function

## 1、 Description, equipment

GPS + base station (assist) gt06 positioning tracking device by a GPS circuit and GSM/GPRS circuit of the remote location of vehicles and track management device. It is a kind of small size, high precision of the remote location equipment. On the basis of GPS satellite GSM base station assistant position, in the dynamic conditions for you provide the accurate inside and outside of the correct location information. The remote vehicle positioning device sends the coordinates and the vehicle, latitude location information service platform and authorized to mobile phone. You can use these features to locate the management of their vehicles.

## 2、 The product main function

2.1, vehicle positioning tracking

Can real-time or timing will GPS positioning information (including latitude, longitude, speed and direction, etc) and the information back to the service platform or cell phone, in monitoring the terminal of the vehicle real-time state.

2.2, driving track playback

Can playback vehicles in the past a certain time, on the track, speed and distance somewhere retention period related information.

2.3, historical data backup

In the historical database, the vehicle driving data (including travel time, running track, movement speed, etc) can save 100 days or longer, to keep the data service response speed, the system will automatically every time the current database into the historical database.

2.4, mileage, fuel consumption statistics

Through the satellite measurements out vehicles pass each of the distance between the two, the system will automatically calculate the process of vehicle mileage and fuel consumption.

2.5, SOS call the police

But through a key alarm button, can realize the vehicle FanJie security. When is there danger occurs. The driver press hidden installation of a key alarm button, timely will alarm information sent to pre-set number stored. But through the cell phone remote broken oil control power.

2.6, the original car security

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Make full use of your love car to existing security system speaker tip the pulse signal, without any increase in any cost of simple after installation, can make your car in any illegal invasion or external shocks, as long as your original horn can call, the equipment can first time send text messages to your phone, remind your car or target current status, and the report state to center the server, the position we service platform will continue to remind you, at the same time, record all the alarm process and related data (*).

2.7, speeding the police

In the service platform of the car you can set the vehicle safety exercise speed parameters, in your driving overspeed, equipment first time send text messages to you to set the center number, and the report center server record you all the time and speeding state, for you or vehicle managers access (*).

2.8, cross the border police

In the service platform of the car you can set vehicle safety use area, if your car without your prescribe the scope authorized, equipment first time send text messages to your phone report your vehicle current status, and upload the data to a central server, for your when positioning tracking, monitoring, in the future the access (*).

2.9, vibration alarm

Your love car to install the equipment with the vibration of the sensor (choose function), you can make your car in any illegal invasion or external shocks, as long as the car has a slight vibration, the equipment can first time send text messages to your phone, remind your car or target current status, and the report state to center the server, the position we service platform will continue to remind you, at the same time, record all the alarm process and related data (*).

2.10, low voltage alarm

Our equipment in a back-up battery (optional) cases, such as with illegal cut vehicle power supply, equipment will immediately detected voltage changes, immediately through text messages to your phone report the current state of vehicle, and report to the central server for your data in the future reference (*).

2.11, vehicle control

Vehicles in your managers or permission, but through the center service platform or mobile phones to send control instruction, control vehicle fuel lines or circuit, this situation general is to prevent theft in vehicles, through the disconnect oil or circuit forcing the target vehicle stop (in safety, suggest you use the function of the broken oil) (*).

2.12, monitor/the intercom

A. authorized number can call the SIM card number equipment, 10 seconds into the automatic answer state, then authorized number to call on the intercom car (horn can pick up the car horn, also can separate intercom horn with professional, this product belongs to choose accessories).

B. authorization number hair directive "LISTEN + password + number" SIM card to equipment, equipment will automatically dial the specified number, after answering to the listening state, this time authorized number can hear the voice of the 5 m near within.
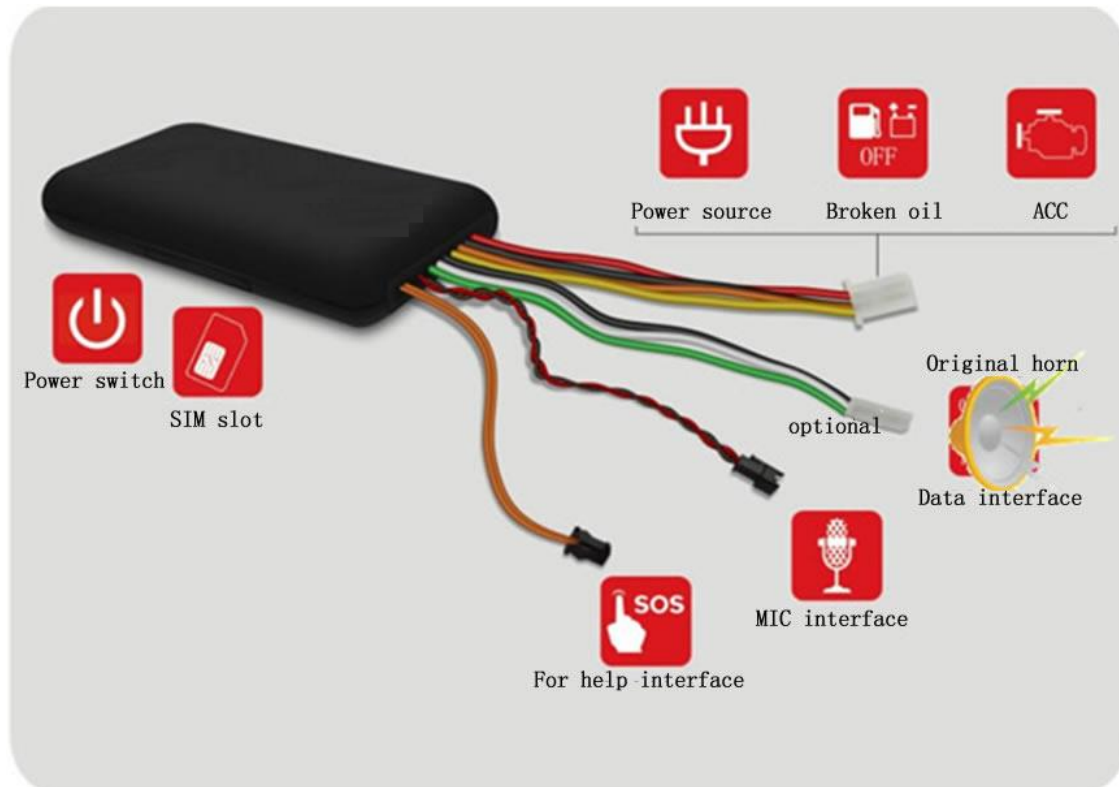
2.13, repair itself function

Repair including mobile network and self-inspection outside environment of the normal work in not (the hardware damage).

# 3、  hardware description

3.1, components description



Explanation: the red line connect the power is board, the black line across the connect power.

3.2, the product characteristic

GPS personal or team orientation (GPS + base station auxiliary)

World wide availability

Support four frequency 850/900/1800/1900 MHz

High sensitivity, new process and the most advanced GPS chip

Even in weak signal can also positioning

In the limited space such as cities intolerance zone under can also work well

The size of the compact, easy to conceal

The low consumption

Quick capture signal

Supporting SMS positioning and GPRS trajectory tracking two patterns

Support alarm (optional meet remote fault, power off oil tube car)

Supporting SMS and Internet inquires the position information

Holder to by phone or mobile phone short message positioning

In an emergency situation can press SOS button positioning

## 3.3, product specifications

### 3.3.1, technical parameters

850 MHz band GSM / 900 MHz / 1800 MHz / 1900 MHz
SIRF Star III GPS chips
GPRS Class 12, TCP/IP build in GSM MODULE
GPS sensitivity-159 dBm
GPS positioning accuracy 10 m (2 D RM)
GSM positioning accuracy 50-200 meters
Speed precision 0.1 m/s
Cold start-38 seconds
A warmer-32 seconds
Hot start-2 seconds
Maximum altitude of 18000 meters
The maximum speed of 515 meters per second
Gravity acceleration  <  4 g
Appearance size 90.00 (L) x 45.0 (W) x12.0 (H) mm
Weight 45 g

### 3.3.2, other

Working temperature-20-+ 70 ℃
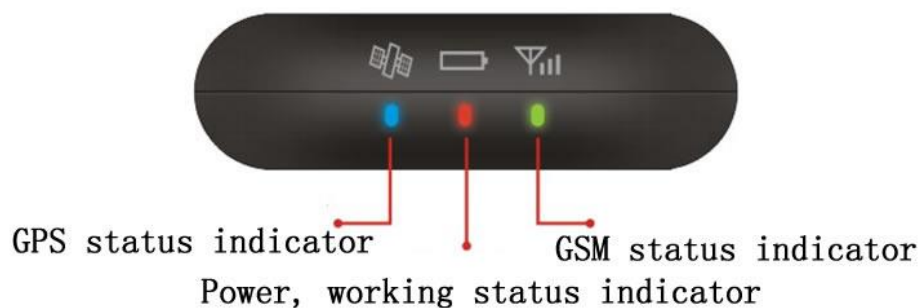Humidity 20%-80% RH
7-24 v DC voltage
Current ~ 60 mA (12 v DC) to 35 mA (24 v DC)
Standby average current less than 80 mA
LED LED lights that GPS, GSM work situation and other conditions

### 3.3.3 trace, three colors LED lights show the description



GPS status indicator   GSM status indicator
Power, working status indicator

Red LED- - - (power/working state)
The light of the state meaning

Long bright power supply instructions, normal work

Shining abnormal work

Don't light missed power/internal fault

The blue LED- - - show GPS signals

The light of the state meaning

Slow ablaze GPS receiving signal to normal

Fast ablaze not positioning

Green LED-shows GSM signal

The light of the state meaning

Slow ablaze GSM receiving signal to normal

Fast shining no GSM signal

## 3．3．4 product accessories



power



relay



microphone



SOS alarm button
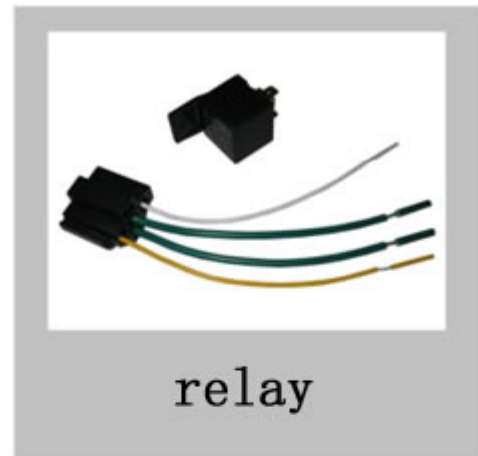
## 3.4, install and use

The preparing work before installation

3.4.1 track of product inspection, open the packing box, check terminal model is correct, accessories are complete, otherwise please contact your dealer;

3.4.2 make sure your SIM card didn't open calls through and open call display and PIN code is in the closed position. Mobile phone short message must be pure text format, can't identify PDU format. The rule

3.4.3 SIM card of the installation, use the soft rubber hand uncovered the terminal, the card slot in the direction of the illustrations indicating next to insert the SIM card,

Note:

**Terminal**：SIM card according to shell design direction insert; Terminal SIM card need to open

GPRS function; If your SIM card has open asked to enter SIM PIN, please refer to your mobile phone user manuals will input SIM PIN function to shut down; Please ensure that SIM card have charges; By mobile phone test GPRS network connection.

The one and installation terminal

## 3.4.4 possible actions

The terminal is high-tech GPS products, suggest you choose dealers designated specialized units, personnel for installation and commissioning.

Please follow the following order terminal installation, don't the cart before the horse. In the process of installation, please don't give terminal power supply.

Terminal installation way into a hidden installation and open installation. Terminal used in special vehicles can choose a hidden on installation, terminal in temporary vehicle use can choose to open the installation.

3.4.4.1 terminal of the hidden installation recommendations specified by the dealer the professional organization to installation, pay attention to the following items:

1) to avoid the thieves damage, terminal one should try to concealment, Suggestions are as follows:

Front windscreen below hiding places in the decorative plate;

Former dashboard (nonmetal material for skin) hiding places around;

The windshield after below plaque.

2) avoid and its source in together, such as backing radar, devices and other car communication terminal;

3) can use firm with fixed, or with a wide double stick adhesive sponge can;

4) terminal with GSM antennas and GPS antenna, installation shall ensure that GPS receiving face (in the air), and no metal keep out above things.

Note: if the windshield paste have the metal thermal insulation layer or the heated layer, will reduce the GPS receiving signals, cause GPS work wrong, please replacement terminal installation position.

3.4.4.2 terminal open installation, first will soft rubber magnets (such as product fitting chart) paste in front windscreen the following board, and then will end on soft glue can be fixed.

Wiring in installation here:

Install the following steps: (for the terminal operations are no electric power, otherwise will appear dangerous)
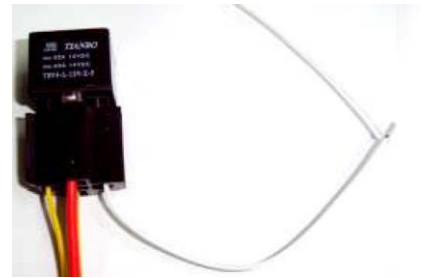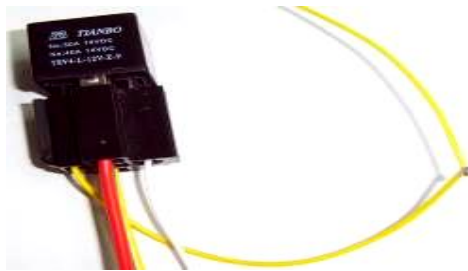
Terminal power lines: white connected relay 86 feet, 85 feet by 12 V dc battery positive, 87 feet series power supply circuit.
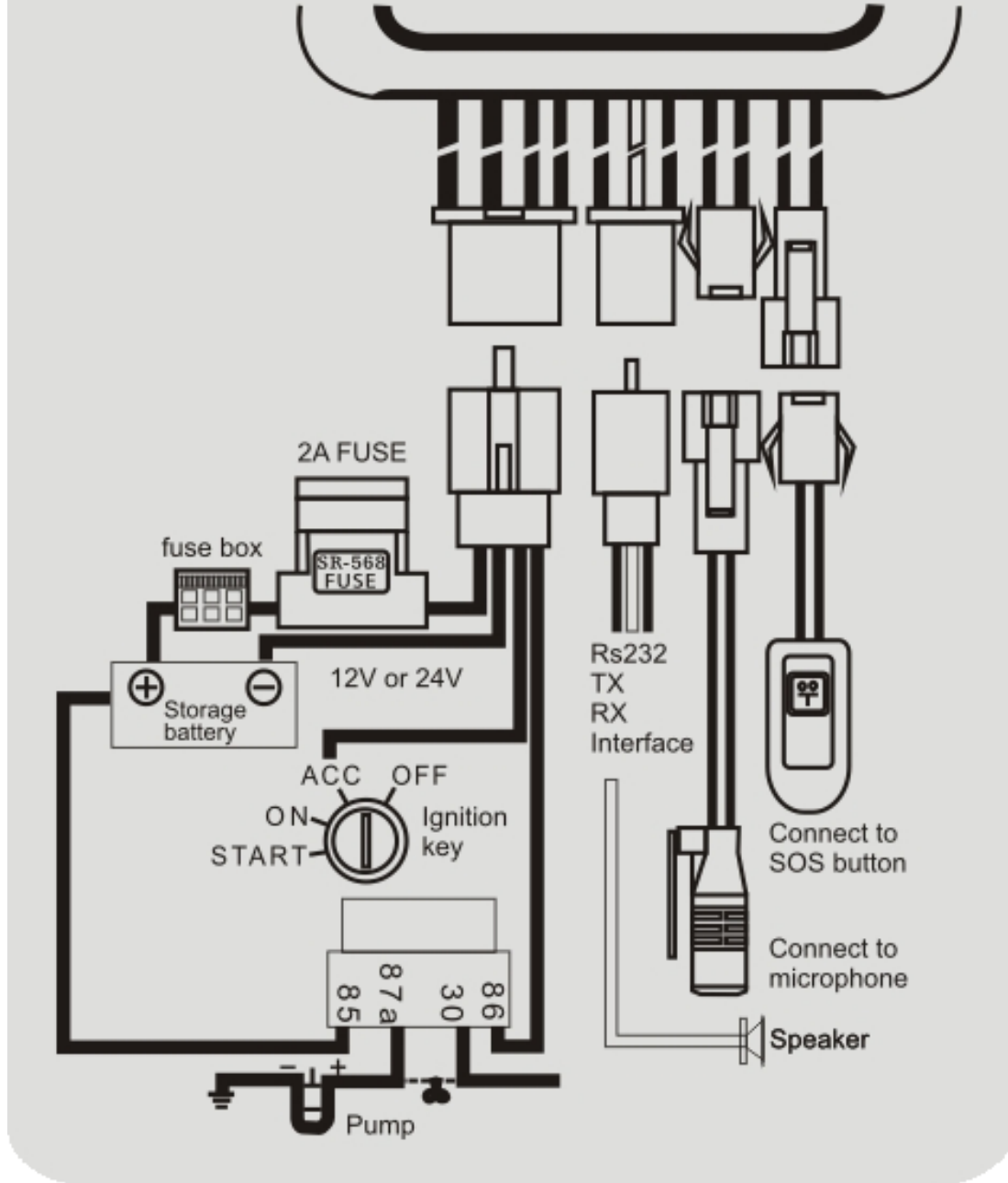
## 3.5, terminal wiring requirements

The terminal standard power supply,

# Wiring diagram

2A FUSE

fuse box

SR-568 FUSE

12V or 24V

⊕ Storage battery ⊖

ACC  OFF
ON      Ignition
START   key

87a  30
85   86

Pump

Rs232
TX
RX
Interface

Connect to SOS button

Connect to microphone

Speaker

3.5.1 track for 7 V-24 V, red line for power supply positive, the black line for power negative;

3.5.2, power supply, negative please choose single grounding or by iron, don't and other ground altogether; the

3.5.3, connect the finished, could harness the power plug pulled to near terminal, installation is completed to the terminal again power supply;

3.5.4, hidden installation, power source jumper choose the Lord of the original provide power

supply cord (such as product fitting chart), the red line of contain silk box (2 A FUSE), can have A short circuit over-current protection;

3.5.5, open installation, power source jumper choose the original factory of cigarette power point provide (such as product fitting figure), some cigarette butts were 2 A FUSE, the short circuit over-current protection.

## 3.6, terminal work

3.6.1 track, boot: terminal electric automatic startup, this time the red power indicator light says normal power supply power long, long bright yellow GPS indicator said GPS already positioning; Blue GSM indicator slow ablaze says GSM SouWang success.

3.6.2, work abnormal: commissioning work after period of time, red power indicator light shining, yellow in bright lights GPS, says GPS closed or failure, blue GSM indicator light not bright, shiny or intermittent, says GSM received signal is unusual, please refer to the troubleshooting methods for ruled out problems.

3.6.3, shutdown: pulled out power plug, terminal off after power off.

## 3.7, side keys function

In normal work indicator light condition, if press the button 3 S, this time the machine will be sent to the center of the current position and number information to alert information platform.

## 3.8, terminal troubleshooting

3.8.1, terminal in the background show did not online or offline state:

3.8.1.1, look first at terminal three indicator light is normal, in no condition of observation, please use mobile phone call terminal SIM card number, according to the prompt to determine the state of the terminal.

"If there is no line, tip terminal temporarily not connected or not in the service area, terminal area may not cover belongs GSM signal or in the basement of the weak signal place, please drive to have signal coverage areas use.

"If there is no line, tip terminal balance when stop or inadequate already, terminal SIM card has to owe a fee, please therefore SIM card for prepaid phone.

"If there is connected and heard" beep, beep, "sound, terminal SIM card and have not balance the correct installation, please consult the operators have opened this card whether GPRS function, you can also use mobile phone in the browser you commonly used input web site, look to whether can open the page; Or should be no open GPRS service, please contact operators open for you.

"If there is no through to tip terminal has shut down, then it should be recalled to check the work of car terminal state, processing procedure is as follows:

A. check whether the indicator light red power long on, if not bright please check whether the

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wiring terminal in fall off or power terminal fuse is burned off; Also can use the multimeter measurement 2 P the voltage power connector, if voltage normal, right now please dismantling the terminal and to send you to the dealer factory maintenance.

B. if red power indicator long bright, shiny green GSM indicator fast, at this time, please check the SIM card is installed properly, if no problem please replace the other installed a SIM card use.

3.8.1.2 observation calls terminal area, is individual drops or all calls, to determine whether operator network problems.

3.8.2, when GPS receiving signal when an exception:

General location for the first time the time needed to 1-2 minutes. If long time don't positioning, please check whether the installation of the terminal accords with a requirement, normal is installed in no metal keep out of place.

3.8.3, when GSM receiving signal when an exception:

Please check the terminal of the SIM card is correct installation, or if the place may not cover GSM signal (such as in the basement), please drive to have signal coverage areas use.

3.8.4, electric instant red power indicator light on does not shine.

Please check the power cord whether the FUSE fusing, if fusing please contact your dealer replacement with specifications and types of FUSE, and check out the internal terminal malfunction on electricity work again.

## 4、 terminal management set operation

Note: all of the following command word are irrelevant to the case. Not special instructions that between separated by a space, such as: IP + + 0000 + + space space www.abc.com+ Spaces + 8169

### 4.1, restart terminal: ROOT < current password >

A, terminal received orders to restart, restart terminal, no return;

B, message format ERROR or password mistake, return ERROR;

### 4.2, restore the factory: BEGIN < current password >

A, terminal received restore order, restore the factory Settings, return OK;

B, message format ERROR or password mistake, return ERROR;

The factory Settings: cancel to upload;

Cancel province electricity Settings (GPS to often open);

Cancel speeding set;

Cancel the fence set;

Close the current alarm;

### 4.3, remove alarm: CLEAR < current password >

A, terminal receive remove commands, clear the alarm, return OK;

B, message format ERROR or password mistake, return ERROR;

### 4.4, monitor terminal: LISTEN < current password > < telephone number >

Phone number:

Scope: telephone number

Length limitation: 0 ~ 40

The factory value: < empty >

A, terminal monitor received orders, make specified number, return OK;

B, message format ERROR or password mistake, return ERROR;

### 4.5, close the oil-way, circuit: POWEROFF < current password >

A, terminal received control command, will < port > set to "shut down effective level >;

B, message format ERROR or password mistake, return ERROR;

### 4.6, open the oil-way, circuit: POWERON < current password >

A, terminal received control command, will < port > set to "open effective level >;

B, message format ERROR or password mistake, return ERROR;

### 4.7, PASSWORD set: PASSWORD < current PASSWORD > < new PASSWORD >

Password:

Scope: letters, Numbers

Length limitation: 0 ~ 8

The factory value: 0000

A, terminal received set command, return OK;

B, message format ERROR or password mistake, return ERROR;

### 4.8, APN set: APN < current password > < APN > < GPRS user name > < GPRS password >

APN:

Scope: APN operators

Length limitation: 0 ~ 32

The factory value: cmnet

GPRS user name:

Scope: letters, Numbers

Length limitation: 0 ~ 32

The factory value: < empty >

GPRS password:

Scope: letters, Numbers

Length limitation: 0 ~ 32

The factory value: < empty >

Note: < APN > is empty, restore APN factory set;

A, terminal received set command, return OK, terminal will be to connect to the server;

B, message format ERROR or password mistake, return ERROR;

### 4.9, server binding: IP < current password > < server domain name or IP > < port >

Domain name:

Scope: the "#" of all characters

Length limitation: 0 ~ 128

The factory value: < empty >

Port:

Scope: digital

Length limitation: 0 ~ 65535

The factory value: 0

Ex 1: IP 0000 116.255.141.169 8169

Example 2: IP 0000 www.abc.com 8169

A, terminal received set command, return OK, terminal will be to connect to the server;

B, message format ERROR or password mistake, return ERROR;

## 4.10, to upload set parameters: AT < current password > < sampling time >

Sampling time:

Scope: digital

Length limitation: 0 ~ 65535

The factory value: 30

A, terminal received set command, return OK;

B, message format ERROR or password mistake, return ERROR;

## 4.11, time zone set: TZ < current password > < time zone >

Time zone:

Scope: digital

Value restrictions: 12.0 ~ 12.0

The factory value: 8.0

A, terminal received set command, return OK;

B, message format ERROR or password mistake, return ERROR;

## 4.12, OFFSET Settings: OFFSET < current password > < longitude OFFSET > < dimension OFFSET >

Longitude offset:

Scope: digital

Value restrictions:

The factory value: 0.0

Dimension deviation:

Scope: digital

Value restrictions:

The factory value: 0.0

Note: this will offset for generating Google map website (see < message command/Google map query >);

Note: in shenzhen OFFSET set to: OFFSET 0000 0.00532 0.00270

A, terminal received set command, return OK;

B, message format ERROR or password mistake, return ERROR;

## 4.13, managers to set: MANAGER < current password > < MANAGER Numbers > <

MANAGER number >

Managers Numbers:

Scope: digital (1 ~ 4)

Length limitation: 1

The factory value:

Managers number:

Scope: telephone number

Length limitation: 0 ~ 40

The factory value: < empty >

A, terminal received set command, return OK;

B, message format ERROR or password mistake, return ERROR;

Note: the command used to set the number of managers specified Numbers, can be set four managers.

### 4.14, speeding set: SPEED < current password > < SPEED limit > < SPEED limit >

Speed limit:

Scope: floating-point number (km/h)

Length restrictions:

The factory value: 0.0

Speed limit:

Scope: floating-point number (km/h)

Length restrictions:

The factory value: 0.0

A, terminal received set command, return OK;

B, message format ERROR or password mistake, return ERROR;

Note: < speed limit > and < speed limit > zero, closed speeding alarm;

### 4.15, fence set: BOUND < current password > < enclosure radius >

Fence radius:

Scope: floating-point number (m)

Length restrictions:

The factory value: 0.0

A, terminal received set command, return OK;

B, message format ERROR or password mistake, return ERROR;

Note: the fence for receiving instruction equipment center location;

Note: < enclosure radius > zero, shut off the fence alarm;

### 4.16, obtain the target address: LOC < current password >

Note: if received orders, the GPS not open or not positioning, terminal will wait for two minutes try to position.

Note: to ensure the GPRS networks working properly, the orders will be forced to connect and disconnect network.

For example: send SMS LOC 0000 to GPS tracking device

If the equipment is normal with the server

GPS tracking device will reply to a text describes the position information of the target text messages.

(1) receive satellite. Such as:

http:// www.abc.com/maps/? Lon = 113.64472 & lat = 22.3358

 (2) have not received satellite positioning base station. Such as:

http:// www.abc.com/lbs/? MCC = 460 & MNC = 000 & lac = 14442 & cellid = 24966

Use any can on the Internet open the cell phone connection, can see a target the current position.

## 4.17, cell phone (WAP) the target position querying: POS < current password >

A, terminal receive inquires the command, return to position message:

http:// < server domain name or IP > / maps /? Lat = "latitude > & lon = < longitude >

B, message format ERROR or password mistake, return ERROR;

For example: send SMS POS 0000 to GPS tracking device

1) receive satellite

GPS tracking device will reply to a contains speed, the direction of the coordinates of the information text message. Such as:

HTTP / / www.abc.com //maps/? Lat = 22.677327 and lon = 114.120738

2) not received satellite positioning base station

GPS tracking device will reply to a text message. if

http:// www.abc.com/lbs/? MCC = 460 & MNC = 000 & lac = 14442 & cellid = 24966

Use any can on the Internet open the cell phone connection, can see a target the current position

## 4.18, mobile phone dial the equipment for the current position information equipment number

## Note:

1) requirements equipment number opened call display

2) using their mobile phone dial the equipment number, after connect 3 seconds hang up.

3) every time dial-up inquires operation time interval the current position of not less than two minutes, or equipment can't normal processing of your operation.

## 4.19, GOOGLE longitude and latitude URL link (P2P no platform positioning) target the current position:

Google map query: Google < current password >

A, terminal receive inquires the command, return the url message:

http://maps.google.com/maps? Q = "latitude >, < longitude >

Speed: < Speed > (accurate to the decimal point two)

Direction: < heading > (accurate to the decimal point two)

Date: < Date > (GPS Date, YYYY-MM-DD)

Time: < Time > (GPS Time, HH: MM: SS)

Latitude: format for floating-point number format, accurate to the decimal point six;

Longitude: format for floating-point number format, accurate to the decimal point six;

B, message format ERROR or password mistake, return ERROR;

For example: to send a text message to GOOGLE 0000 GPS tracking locator

1) receive satellite

GPS tracking device will reply to a GOOGLE MAP of links and contains speed, the direction of the coordinates of the information text message. Such as:


IMEI: 353509000924608

2) not received satellite positioning base station

GPS tracking device will reply to a text message. Such as:

http:// www.abc.com/lbs/? MCC = 460 & MNC = 000 & lac = 14442 & cellid = 24966

Use any can on the Internet open the cell phone connection, can see a target the current position

A text message format ERROR, or password mistake, return ERROR;

Note: if received orders, the GPS not open or not positioning, terminal will wait for two minutes try to position.

Note: to ensure the GPRS networks working properly, the orders will be forced to connect and disconnect network.

Five, GPS car positioning terminal warranty CARDS

Special statement:

1. If the product later have any technology to change without prior notice.

2. Product appearance, color is subject to change, in kind prevail.

3. The warranty card is only applicable to the IMEI number listed machines three services.

4. Please keep the beauty the maintenance card, please show this card guarantee and the original purchase documents.


# 5.The specific scope under warranty please see table explanation

This card is to guarantee the basic guarantee certificate, please fill in the card user and properly preserved.

User name contact phone number

address

The product model IMEI number

Buying machine date invoice number

Sales unit name

Sales unit address

Sales unit phone

1. Since the purchase date, non-artificial damage fault is guaranteed for one year.

2. The following circumstances belongs to, not warranty, but can pay for maintenance.

(a) more than the guarantee period;

(2) without our authorization, unauthorized or repair damaged;

(3) water, damage or printed circuit board burned;

(4) because of installation, use, maintenance, safeguarding, caused the damage;

(5) in the course of using the product that caused housing, lens, built-in antennas damaged

(6) products internal IMEI number was torn to or see,

(7) the warranty certificate and the product model or not guarantee certificate is alter;

(8) due to the force majeure damage.