**SGT909 GPS Vehicle Tracker**

**Instructions for use**

**Head   record**

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Introduction**

**First, an overview**

   This product is GSM and GPS technology, the perfect combination of precise size and simple appearance, is the communications products and GPS tracking devices with the typical design of dollars.

   Products in the GSM and GPS areas of advanced technology, as a professional security and positioning the company, we will provide you with more and better products and services.

   Before you use, please take a few minutes to read the operating instructions to understand the details and get better service .

**Second, note**

   1 ,  please read this manual carefully and use the correct method of operation, to prevent any errors.

   2 ,  you need to choose a safe place to install your product, some dangerous places, such as automobile airbags, easy to damage to the driver and passenger areas, and all areas not suitable for placement of products.

   3 ,  this manual is for reference only, subject to a number of steps and the actual content and products are different, according to the actual product.

**Chapter   Equipment**

   This product is from the GPS and GSM / GPRS combo modules of the vehicle remote positioning device. It is a smart size, high accuracy remote positioning devices. In the GPS satellites, based on the dynamic conditions to provide you accurate and unambiguous location information. Remote vehicle positioning device launch longitude and latitude coordinate to authorized cell phone, you can use to locate these features to manage their own vehicle.

**A  Quick Locator**

   1 ,  external wiring definition, as shown in Figure 1

Figure 1 pin from left to right

   Pin1: Positive output relay control , voltage +12 V, the course is strictly prohibited ground . ( Brown)

   Pin2:. external state signal input TA, normal, low , high input external events that occurred pieces (yellow)

   Pin3: emergency alarm signal input SOS, normal high , low input trigger SOS alarm . (blue)

   Pin4: debug port to send data TX signal . (white)

   Pin5: debug port to receive data RX signal . (Green)

   Pin6: positive external power input , voltage range DC +6 V-+24 V. (red)

   Pin7: external power supply input and negative , and GND connected . (Black)

Figure 2 relay connection

**2 , Installing SIM card**

      Open the shell, into the SIM card as shown below 3 :

 

    Figure 3 SIM card slot

**3 , installed SIM card, close the shell, wiring boot.**

Note: According to the need to define themselves according to wiring diagram on the diagram to choose to install various functions, such as targeting only the most basic functions, you can just pick up power.

     Optional accessories: breaker, SOS alarm switch, MIC , as Figure 4

Figure 4 breaker and SOS switch

**4 , common commands:**

**( 1 ) by SMS command:** Edit SMS **9.85 million** sent to the final end SIM card number to check the machine's location, as Figure 5

    Figure 5 SMS query location

**( 2 ) set the APN** : # **# # # 802 # CMNET 0000 #** # ( APN factory default CMNET , used in China without setting)

**( 3 ) set the IP and port number** : # **803 # www. gps03.com # 7018 # 0000 #** # , IP address can be replaced with a domain name

**(4) set the GPRS mode: # 703 # 0000 # #** return a text message is: # 700 # 0000 # #

**( 5 ) set the positioning time: # 730 # 60 # 1 # 0000 # #** This directive positioning time is 60 seconds 

**Second, product characteristics**

* GPS vehicle location, cargo tracking
* General worldwide
* GSM Band: 900/1800 / 850/1900MHz
* High sensitivity, new technology and the most advanced GPS chip
* Even under the weak signal can be accurately positioned
* Low-energy
* Fast signal capture
* Support a single location and continuous tracking
* Support alarm
* Support fence alarm
* Support SMS and the Internet to check the location information
* The holder positioned over the phone or SMS
* In an emergency press SOS button in precise positioning

**Third, the product specifications**

**3.1 Technical Specifications**

|  |  |
| --- | --- |
| GSM module | GSM900/18000/850/1900MHz |
| GPS chip | The latest GPS chip |
| GPS Sensitivity | -159dBm |
| GPS center frequency | L1, 1575.42MHz |
| GPS positioning accuracy | 15 meters |
| Speed ​​Accuracy | 0.1 m / s |
| Time accuracy | And GPS time synchronization |
| Default data | WGS-84 |
| Hot Start | 1 seconds |
| Cold start | 38 seconds |
| Maximum altitude | 18,000 m |
| Maximum Speed | 515 m / s |
| Acceleration of gravity | < 4G |

**3.2  Other**

|  |  |
| --- | --- |
| Operating Temperature | -30 ~ 85 ℃ |
| Humidity | 5% ~ 95% |
| Dimensions ( mm ) | 81 × 38 × 12 |
| Voltage | 12V-24V |
| Average standby current | 25ma |
| External alarm switch | SOS emergency button |

**Chapter III detailed setting method**

**A text message (network) settings**

**1 , restart the terminal: # 000 # < current password > # #**

   a , the terminal receives restart command to restart the terminal, no return;

   b , message format error or password error, return ERROR ;

**2 , version reads: # 600 # < current password > # #**

   a , the terminal received commands, back to version data:

   Ver: < version number >

   Build: < Compile Time >

   Modal: < product configuration model >

   ACC:

   SOS:

   OIL:

   b , message format error or password error, return ERROR ;

**3 , configured to read: # 620 # < current password > # #**

   a , the terminal receives commands, return to configuration data:

   Imei:

   User: < User Name >

   Apn:

   Server: < server name or IP>: < port number >

   Upload: < sampling time > < number of samples >

   Offset: < longitude offset > < dimension offset >

   b , message format error or password error, return ERROR ;

**4 , port settings: # 700 # <ACC port > # <SOS port > # <OIL port > # < current password > # #**

   ACC port:

   Range: Digital

   Length limit: 0 to 3

   Factory value: 251

   SOS Port:

   Range: Digital

   Length limit: 0 to 3

   Factory value: 270

   OIL Port:

   Range: Digital

   Length limit: 0 to 3

   Factory value: 281

   Note: <ACC port > format for the DDN , which DD is the port number, N is <ACC effective level > ( ACC effective when the input level);

   Note: <SOS port > format for the DDN , which DD is the port number, N is < the effective level alarm > (valid alarm input level);

   Note: <OIL port > format for the DDN , which DD is the port number, N is < the effective level off the oil > (off the oil when the desired output level);

   Note: <ACC port > , <SOS port > and <OIL port > is empty or a value of 0 , it will not use the port;

   Note: GPIO25 for the drop-down port; GPIO27 to pull port; G PIO28 to pull port;

   a , the terminal receives commands, return OK ;

   b , message format error or password error, return ERROR ;

**5 , password settings: # 770 # < new password > # < current password > # #**

   Password:

   Range: letters, numbers

   Length: 0 ~ 8

   Factory value: 0000

   a , the terminal receives commands, return OK ;

   b , message format error or password error, return ERROR ;

**6 , the user name setting: # 801 # < user name > # < current password > # #**

   User Name:

   Range: letters, numbers, phone numbers recommended

   Length limit: 0 to 20

   Factory value: < blank >

   a , the terminal receives commands, return OK ;

   b , message format error or password error, return ERROR ;

**7 , APN settings: # 802 # <APN> # <GPRS user name > # <GPRS password > # < current password > # #**

   APN :

   Range: operator APN

   Length: 0 ~ 32

   Factory value: CMNET

   GPRS User Name:

   Range: letters, numbers

   Length: 0 ~ 32

   Factory value: < blank >

   GPRS Password:

   Range: letters, numbers

   Length: 0 ~ 32

   Factory value: < blank >

   Note: <APN> is empty, restore the factory APN settings;

   a , the terminal receives commands, returns OK , the terminal will automatically reconnect to the server;

   b , message format error or password error, return ERROR ;

**8 , the server settings: # 803 # < server name or IP> # < port number > # < current password > # #**

   Domain:

   Range: non-" # "all characters

   Length: 0 ~ 128

   Factory value: [www.gps03.com](http://www.gps03.com/)

   Port Number:

   Range: Digital

   Length: 0 ~ 65535

   Factory value: 7018

   a , the terminal receives commands, returns OK , the terminal will automatically reconnect to the server;

   b , message format error or password error, return ERROR ;

**9 , automatically upload parameter settings: # 730 # < sampling time > # < the number of samples the amount of > # < current password > # #**

   Sampling time:

   Range: Digital

   Length: 0 ~ 65535

   Factory value: 60

   Number of samples:

   Range: Digital

   Length limit: 0 to 20

   Factory value: 1

   a , the terminal receives commands, return OK ;

   b , message format error or password error, return ERROR ;

**10 , the offset is set: # 905 # < longitude offset > # < dimension offset the amount of > # < current password > # #**

   Longitude offset:

   Range: Digital

   Value limit: 0000 - 9999

   Factory value: 0

   Dimension Offset:

   Range: Digital

   Value limit: 0000 - 9999

   Factory value: 0

   Note: This offset format SDDD four digits. Which S = 1 indicates a negative bias shift amount, S = 0 indicates a positive offset. 0.00DDD the actual offset value.

   Note: This offset will be used to generate the Google Maps website (see < SMS command / Google Map search > );

   Note: Offset is set in Shenzhen: # 905 # 1532 # 0270 # 0000 # # ;

   a , the terminal receives commands, return OK

   b , message format error or password error, returns ERROR

**Second, the SMS command**

**1 , power off the oil instruction: 222 < password >**

   a , the terminal receives the control command, the <OIL port > set < off the oil an effective power level > ;

   b , message format error or password error, return ERROR ;

**2 , open circuit command: 333 < password >**

   a , the terminal receives the control command, the <OIL port > set < send oil effective power level > ;

   b , message format error or password error, return ERROR ;

**3 , ACC statistical query: 950 < password >**

   a , the terminal receives the query command returns <ACC port > valid when the total time between:

   Acc:

   Acc:

   b , message format error or password error, return ERROR ;

**4 , address lookup: 985 < password >**

   a , the terminal receives the query command, the return address text messages (see < network protocol / to address query protocol > );

   b , message format error or password error, return ERROR ;

   c , no Internet access or the server is not responding, two minutes later, return NO RESPONSE ;

   Note: To ensure the GPRS network is working correctly, the command will force the disconnect and reconnect to the network.

**5 , location query: 986 < password >**

   a , the terminal receives the query command returns the location message:

   Lat: < latitude > (format floating-point format, to the nearest 5 -bit)

   Long: < longitude > (format floating-point format, to the nearest 5 -bit )

   Speed: < rate > (to the nearest 2 -bit)

   Direction: < heading > (to the nearest 2 -bit)

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

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

   BS: < base station information >

   FIX: < locate state > (position / orientation is not, A / V )

   ID:

   STATE: < information state >

Note: The base encoding format aaabbbccccdddd , which aaa for the country code ( 10 hex), bbb is the network code ( 10 hex), CCC c for the area code ( 16 hex), dddd for cellular ID ( 16 hex) .

   b , message format error or password error, return ERROR ;

**6 , Google Maps queries: 987 < password >**

   a , the terminal receives the query command and return address text messages:

[http://maps.google.com/ maps? Q =](http://maps.google.com/maps?q=) < latitude > < longitude >

   Latitude: format floating-point format, to the nearest 6 -bit;

   Longitude: format floating-point format, to the nearest 6 -bit;

   b , message format error or password error, return ERROR ;

   c , is not currently positioned, the return NOT AVAILABLE ;

**Third, the network protocol**

**1 , auto-tracking protocol**

   Terminal automatically uploaded to the server to set a good sampling of the positioning data. The following format:

#

   IMEI : terminal IMEI number, 15 digits;

   Status bits: <ACC port > valid state ( 1 : have ignition; 0 : no ignition);

   Data categories: In the auto-tracking protocol, AUT normal upload state, SO S upload status for the alarm;

   Data: The upload data, that < the number of samples > ;

Base station information: phone base stations in which the current code (if near residential, will be an additional two adjacent cell base station code, separated by a comma);

   Longitude: The current format DDDMM.MMMM , to the nearest 4 -bit ;

   E / W : N / W

   Latitude: current format DDDMM.MMMM , to the nearest 4 -bit ;

   N / S : N / S

   Speed: Movement speed in KM / H , to the nearest 2 -bit;

   Heading: the direction of motion in degrees, accurate to the decimal point two places;

   Date: GPS date, format DDMMYY ;

   Time: GPS time format HHMMSS.MMM ;

Note: The alarm is defined as two cases: a, <SOS port > is in alarm; Second, the terminal when the external power supply is cut into the alarm state;

Note: The base encoding format aaabbbccccdddd , which aaa for the country code ( 10 hex), bbb is the network code ( 10 hex), CCC c for the area code ( 16 hex), dddd for cellular ID ( 16 hex) . Near the cell base station after the two countries and non-coding network coding.

   2 , address lookup protocol

Terminal server by uploading to set a good sampling of location data, the server return address information. Format with the < network protocol / auto-tracking protocol > .

   Data categories: In the address lookup protocol for SMS ;

**Fourth, the agreement calls**

**1 , automatically answer incoming calls**

   Terminal in the call 10 seconds (about ringing 3 times), the automatic answering

**Fifth, restart protocol**

**1 , automatic restart**

   Terminal in each 24 -hour restart.

**2 , no SIM card reset**

Terminal is not inserted in the SIM or invalid SIM card case, every 3 minutes to restart. Insert SIM card and successfully run 3 minutes, if the pull out SIM card, immediately restart.

Note: Invalid SIM card is defined as physically invalid SIM card or has been locked SI M card, does not mean operators have written off the SIM card.

**3 , CPU reset No response**

   Terminal CPU activities, every 10 seconds, turn the terminal pin of the specified level (currently used GPIO46 ). If the pin access Watchdo g chip from the external control terminal of the switch state to realize reboot.

**4 , timing re-connected network**

   Terminal in every 2 hours will re-establish a network connection.

**Six, LED agreement**

**1 , red**

   Not on GSM without light; on GSM network by the second search flashes; on GSM network to find successful 5 seconds flash time.

**2 , green**

   Not open GPS is not bright; on GPS satellites Search flash in seconds; on GPS positioning is successful 5 seconds to flash once.

**Chapter   Internet location service center (point to the center mode)**

**A, GPRS real-time location**

   1 , visit our location-based services platform: [**www.gps03.com**](http://www.gps03.com/) prompted, enter the user name and password, as Figure 6:

Figure 6 service platform login screen

**2 , after the successful landing of the main interface into the platform** , as Figure 7 :

Figure 7 platform, the main interface

On the right list of features in the interface with "alarm", "terminal monitor", " management by objectives "," Query Statistics "," System management "features seven home directory

Below the main interface terminal real-time information, including: current status, latitude, longitude, positioning time, the current location, etc.

1. **The History of the terminal**

Thanks for using this product