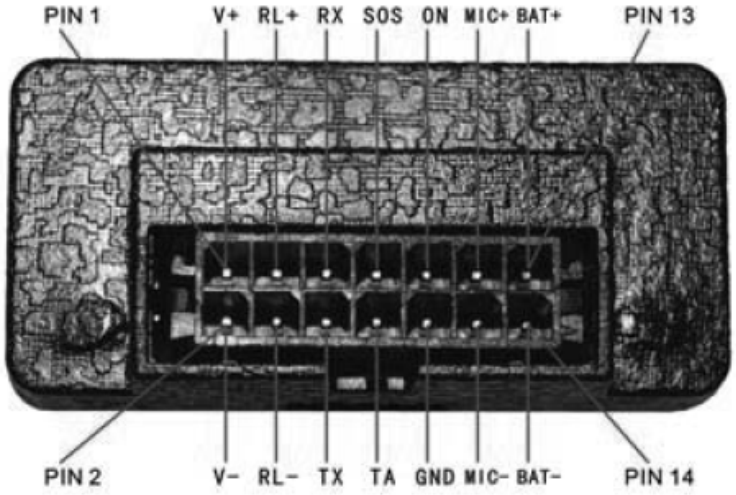
Subminiature GPS Vehicle Tracker

User Manual

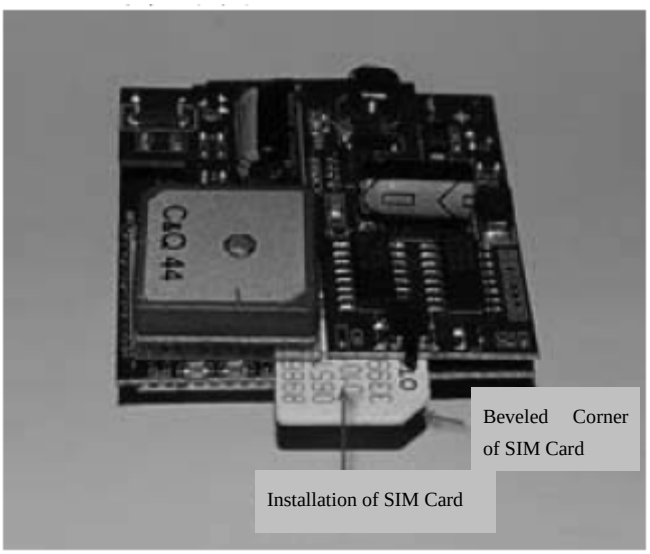
1. Definition of external wiring



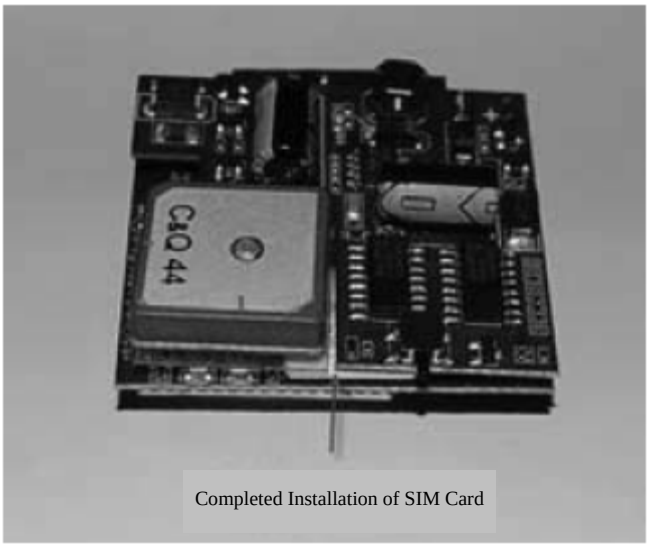
Pin 1: External power input (positive), voltage range: DC +6V - +24V.
Pin 2: External power input (negative), connected to GND
Pin 3: Relay control output (positive), voltage: +12V, forbidden from connecting to GND during operation
Pin 4: Relay control output (negative), connected to GND
Pin 5: Debug port RX signal
Pin 6: Debug port TX signal
Pin 7: Emergency alarm signal input SOS; high level under normal circumstances; low level input to enable SOS alarm.
Pin 8: External status signal input TA; low level under normal circumstances; high level input indicates occurrence of external events.
Pin 9: Overall power-on signal input ON, high level under normal circumstances; low level input to enable power-on.
Pin10: External input signal reference ground, connected to GND
Pin11: External microphone input (positive) MIC+
Pin12: External microphone input (negative) MIC-
Pin13: External battery input (positive) BAT+; input voltage: +3.6 - 4.2V; the equipment may be permanently damaged if the input voltage exceeds the specified range
Pin14: External battery input (negative) BAT-, connected to GND

2. Installation of SIM card

Remove the shell, and install the SIM card as illustrated below:

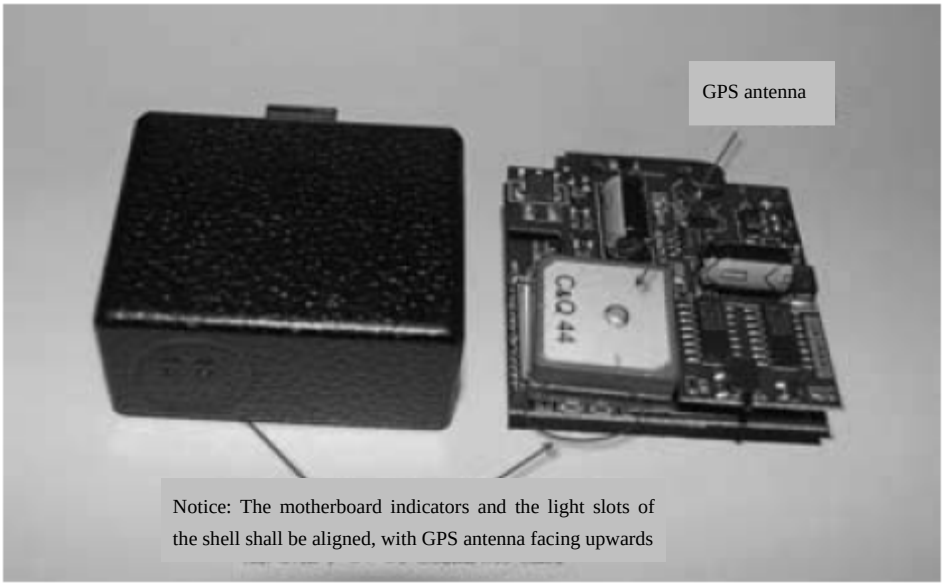


Installation of SIM Card



Completed Installation of SIM Card

3. After the SIM card is installed, close the shell tightly, connect the wires and turn on the equipment.



For the most basic positioning function, just connect to the vehicle power supply.

Product Characteristics

- GPS vehicle location
- GSM 850/900//1800/1900MHz
- High sensitivity, highly integrated GPS chip
- Low energy consumption
- Fast signal acquisition
- Support single location and continuous tracking
- Support the fence alarm
- Support location information query through SMS and the Internet
- Locate the user by telephone or through SMS

Product Specifications

GSM module	GSM 850/950//18000/1900MHz
GPS sensitivity	-159dBm
GPS center frequency	L1, 1575.42MHz
GPS positioning accuracy	5 - 25 m
Speed accuracy	0.1 m/s
Time accuracy	In sync with GPS
Default data	WGS-84
Hot start	1 s
Cold start	38 s
Maximum altitude	18000 m
Maximum speed	515 m/s
Acceleration of gravity	< 4g

Operating temperature	-20---65℃
Humidity	5%---95%
Dimensions (mm)	50*45*21
Voltage	12V - 24V
Average standby current	Less than 80MA
LED	Power supply, work status indication

Operating instructions of SMS positioning

Send the message instruction "666+user password" to the terminal, and then the terminal will return a message about the latitude and longitude

For example: When "6660000" is sent, the returned data format is as follows:
Lat: latitude (N/S); latitude value (accurate to five decimal places)
Long: longitude (E/W); longitude value (accurate to five decimal places)
Speed: KM/H (accurate to two decimal places)
Direction: direction of course (accurate to two decimal places)
Date: YYYY-MM-DD
Time: HH: MM: SS (Greenwich time)
BS: base station information
FIX: location status (A/V)
ID: IMEI
STATE: information state

Example of valid data:
Lat: N22.6189
Long: E113.6333
Speed: 0.17 KM/H
Direction: 62.58
Date: 2008-06-17
Time: 09: 39: 45
BS: 27970eb3
FIX: A
ID: 123456789000001
STATE: SMS

Query through mobile phone

When you call the terminal with a mobile phone (phone number: preset number) and hang up the phone after ringing 2 - 5 times, the terminal will return a message about the latitude and longitude (To use this function, the calling number display function of the SIM card shall be subscribed).

#710#center number#user password##	Description: The center number setting instruction is set by the operator for the normal operation of the terminal under the center mode. e.g.: #710#1066512000#0000## After the instruction is executed, the center number is set as: 1066512000. After successful setting, the terminal returns "710 CONFIG OK" to the mobile phone; if the password is wrong, "710 PASSWORD ER" will be returned.
#711#phone number 1#phone number 2#phone number 3#user password##	Set the preset numbers through the message sent by a mobile phone. After successful setting, the mobile phone will receive the message "&711&CONFIG OK&&" returned by the terminal. e.g. 1: #711#13800000001#13800000002#13800000003#0000## e.g. 2: #711#13800000001###0000## After successful setting, the terminal returns "711 CONFIG OK" to the mobile phone; if the password is wrong, "711 PASSWORD ER" will be returned.
#720#alarm mode0-3#user password##	Set the terminal alarm mode: Alarm mode 0: No alarm Alarm mode 1: Dialing alarm Alarm mode 2: Message alarm Alarm mode 3: Dialing alarm + Message alarm Note: When the back cover is removed. The terminal will give an alarm according to the preset alarm mode. e.g.: #720#3#0000##. After the instruction is executed, the terminal alarm mode is set as "dialing alarm + message alarm"; when the alarm message is sent, the first preset number will also be dialed. After successful setting, the terminal returns "720 CONFIG OK" to the mobile phone; if the password is wrong, "720 PASSWORD ER" will be returned. Note: The default alarm mode of the terminal is 0, that is, no alarm.

#730# Sampling interval # Pieces of uploads # User password ##	The defaulted upload interval of this product is 0, meaning that the defaulted GPRS is closed. The user may change the parameter according to actual demand. Example: #730#20#4#0000## Notes: The parameter "20" indicates getting one point every 20s; after getting points accumulatively for 4 times, upload one piece of positioning information with the upload interval as 20*4=80s. The user may change this parameter as the case may be. #730#0#1#0000##, the GPS is turned off, and the timed return function is deactivated.
#803#fixed IP address#port number#user password ##	This instruction is used to set the GPRS center server address. The server address can either be a fixed IP, whose format is xxx. xxx. xxx. xxx; or a domain name, whose length is less than 64 bytes. After successful setting, "&803& CONFIG OK &&" will be returned to the phone; if the password is wrong, "&803& PASSWORD ER &&" will be returned. e.g.: #803#120.149.139.114#30000#0000## It can also be set through the domain name: e.g.: #803#www.xxx.com#30000#0000##
666+user password	Single location query; a message about the latitude and longitude will be returned.

#770#new password#old password##	Description: After the instruction is executed, the terminal will change the user password according to the user's requirements. After successful setting, "770 CONFIG OK" will be returned to the phone; if the password is wrong, "770 PASSWORD ER" will be returned. e.g.: #770#1111#0000##. After the instruction is executed, the user password changes from 0000 to 1111.
#801#letters or numbers (0-20 digits)#user password	Change the user name under the GPRS mode Description: After the instruction is executed, the user name of the terminal under the GPRS mode will be set according to the requirements.

	After successful setting, "801 CONFIG OK" will be returned to the phone; if the password is wrong, "801 PASSWORD ER" will be returned. e.g.: #801#13900139000#0000## After the instruction is executed, the user name is 13900139000.
#802#APN (letters or numbers, 4-26 digits)#login user name (letters or numbers, 4-20 digits)#login password (letters or numbers, 4-20 digits)#user password##	Set the APN Description: After the instruction is executed, the terminal APN under the GPRS mode will be set according to the requirements. After successful setting, "802 CONFIG OK" will be returned to the phone; if the password is wrong, "802 PASSWORD ER" will be returned. e.g. 1: #802#CMNET###0000##. After the instruction is executed, the terminal APN is CMNET, the login user name and password are blank. e.g. 2: #802#CCDLEN#QIUXIA.21#RX#0000##. After the instruction is executed, the APN is CCDLEN, the login user name is QIUXIA.21 and the login password is RX. Note: The default APN of this product is CMNET.

#751#fence radius (meter)#sampling interval (minute)#latitude#longitude#user password##	Set the electronic fence. Description: After successful setting, "751 CONFIG OK" will be returned; if the password is wrong, "751 PASSWORD ER" will be returned. e.g.: #751#5000#5#2232.6208N#11354.6378E#0000## After the instruction is executed, the fence of 5 km radius is set for the terminal; when the terminal leaves the area, the fence alarm message will be sent to the center number.
#752#user password##	Read the electronic fence After the instruction is successfully sent, the terminal reads the work status data of the fence and returns it to the phone. If the password is wrong, "&752& PASSWORD ER &&" will be returned. e.g.: #752#0000## The following will be returned:

	#open:1#lat: 22.54368N#lng:113.91063E#distance:500#time:5#status:2 Wherein, open:1 refers to the activation of the fence, open:0 refers to the deactivation of the fence. lat: 22.54368 refers to the latitude (N/S). lng: 113.91063 refers to the longitude (E/W). distance: 500 refers to the radius of the fence. time:5 refers to the sampling interval. status:2 refers to that the terminal gets valid satellite data, and the fence works normally. status:1 refers to that the fence is activated, but the terminal fails to get valid satellite data. status:0 refers to that the electronic fence is not set.

#760#user password##	Cancel the electronic fence Description: After the instruction is executed, the terminal cancels the fence function. After successful setting, the terminal returns "760 CONFIG OK" to the phone. If the password is wrong, "760 PASSWORD ER" will be returned. e.g.: #760#0000##
#901##	Read the user parameters
#902##	Read the GPRS parameters
#904##	Connect to the GPRS
#905##	Disconnect to the GPRS

Precautions:

1. This equipment is of non-waterproof design;
2. The equipment shall work under the GSM/ GPRS network environment;
3. Make sure that there is sufficient balance in the SIM card account, so as to avoid inconvenience;
4. The equipment can not work under power-off status or outside the service area, even you are a registered user;
5. This equipment supports GPS and GSM/GPRS dual positioning mode;
6. Please use this equipment in the areas permitted by law. Any consequence arising from violation of the laws shall be solely borne by the user.

Note: As this product adopts a GPS module of high sensitivity, it is normal for drift in the case of weak GPS signal.