GPS Car Alarm & Tracking System

USER MANUAL

(Model: TT-G110Q)

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Brief Introduction

This GPS Car Alarm & Tracking System is not only an advanced car security product but also a precise GPS tracking system. It is a combination of Global Positioning System (GPS), Short Message System (SMS), and Radio Frequency Identification Solution (RFID). It provides a very safe solution for protecting the vehicle.

This system is specially designed for protecting & tracking individual vehicle by mobile via SMS. It has most functions of normal car alarm system, it can also call the user's telephone and send the car's location to user's mobile in case of alert. User could supervise, control and locate the car by telephone without the third party. It means that the system can work separately without the support of the center.

On the other hand, if the management center is set up, many useful & interesting functions can be realized, such as monitoring many vehicles together by map, converting the GPS coordinate into the real address automatically. If user has MAPINFO map with detailed landmarks, the software can translate the car's location automatically into the real physical address (such as city name, street name, building, etc.), then send this real physical address to user's mobile by SMS.

Read it Firstly:

Please read this manual thoroughly before you use the device; please keep it for future reference.

Attention:

(1) Please keep the device away from the water, humidity or high temperature.

(2) Please prepare a valid GSM SIM card in advance. The SIM card can not be set with any PIN code.

Warning:

It is strongly suggested that the installation is done by the qualified professional car electrician.

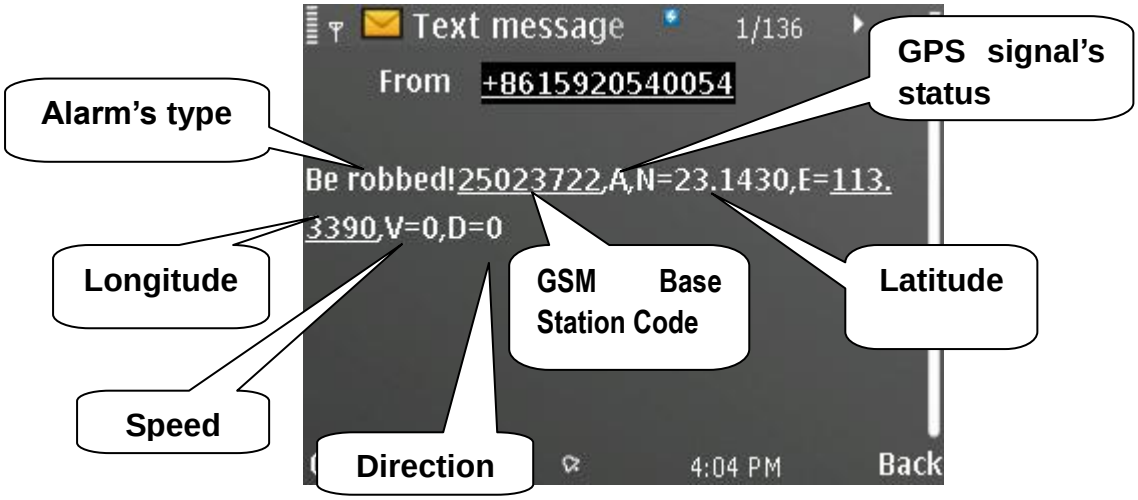
Functions & Features

1. Track by SMS or by GPRS.
2. Automatically send alert SMS to your mobile in case of theft.
3. Monitor the voice around the car via telephone
4. Cut off the car power/fuel supply by SMS command, so as to stop the car
5. Anti-robbery switch, send out alert SMS for help in case of hijack
6. Lock/unlock the car door by the transmitter or by phone
7. Normal car alarm function
8. Central lock automation
9. Mute-arming function. When the car is mute-armed, once the alarm is triggered, the siren will not sound, the car light will not flash, the system will send alert SMS to user's mobile secretly.
10. Check the car door's status, engine's status, car's location, speed & direction via SMS
11. Two kinds of location information, user could locate the precise location by GPS. At those place where there is no GPS signal, user could also locate the car by GSM network;
12. Track the car by SMS & Google map, or by center software (The center software is optional).
13. Geo-Fence function. If the car oversteps the fence of the preset zone, the system will send out alert SMS.
14. Over-speed alert function, if the car is running over the speed limitation, the system will send out alert SMS. (Optional function of the management software).
15. Anti-tamper design with back up battery, stable and reliable.
16. The system could work separately without the center support. User can operate the system easily just by SMS.
17. If the center is setup, you can monitor & control many vehicles at the same time in the center.

Explanation on SMS Message

When the alarm is triggered, it will send the alert SMS message to the authorized mobile. This SMS alarm message includes:

- ✧ Alarm type. “Be robbed”, “Power failure”, etc..
- ✧ Base station’s code of GSM signal relay tower. The GSM operator can tell you the location by this code because they have the related database. In some countries, this function is not open to the public.
- ✧ Latitude & longitude. User could locate the car’s precise position by help of GOOGLE MAP (http://maps.google.com/) or GOOGLE EARTH (Download link: http://earth.google.com/).
- ✧ GPS signal’s Status: A : GPS’s signal is available, the car is at broad outside place; V: GPS’s signal is shielded, the car is at the underground; H: The car pass through 10 GSM base stations, but the received GPS’s data doesn’t change, it means that there is no GPS signal or GPS’s receiver is damaged
- ✧ Speed. The car’s speed in KM/H.
- ✧ Direction: The car’s direction is showed in this message. (In coordinates, start from line of the north direction, turn over an angle in the certain degree clockwise.)



Example: The above message shows that: the SOS anti-robbery button is pressed down. The GSM base station code of the car is 25023722, the car is at outdoors & GPS signal is available, the latitude is 23.1430N, the longitude is 113.3390E, the car’s speed

is 0KM/H, and the car's direction is north.

How to Operate It

Arm/Disarm by Phone Calling

User could also use the **first** alarm-received mobile phone to call the system SIM card number, so as to arm/disarm the system.

Arm: After hearing several ring tones, if the systems hang up the call automatically, and call back you, it means that the system is armed.

Disarm: After hearing several ring tones, if the system hangs up the call automatically, and don't call back you, it means that the system is disarmed.

Note:

(1) There is no communication fee for this operation, it is a very convenient way to arm & disarm the system.

(2)The SIM card inside the device must have the function of Caller ID Display.

(3) Only the 1st authorized mobile phone can realize this function.

SMS Control Instructions

User can send SMS instruction to operate the tracker by any mobile phone, the format of the instruction is:

User Password(******)+ Control Code(XXX)

The default user password is 111111.

If the user password is changed, user should send the SMS instruction with the new user password instead of 111111.

XXX is the control code, all the letters must be capital letters or small letters.

There is no space between the user password & the control instruction.

Authorize the Alert-received Mobile

In case of alarm, if user wants to get the alert SMS from the tracker, he/she needs to send the following SMS to program the system firstly:

111111*10 Mobile #1*20 Mobile #2*

Other functions:

Mobile #1: When it is used to call the tracker No., system will be armed /disarmed

Mobile #2: When it is used to call the tracker No., system will send back location SMS to the mobile #2

Example: User sends the SMS **111111*10 13922713571*20 13711189059*** to the tracker's SIM card number, if there is any alert, system will send alert SMS to both of these two mobiles. If user uses mobile 13922713571 to call tracker No., system will be arm/disarm; if user uses mobile 13711189059 to call the tracker No., system will send back location SMS to the mobile 13711189059.

- **111111PSWnnnnnn**

This instruction is used to change the user password. The length of the user's password is 3~6 digits. Users are suggested to change to the new password in use.

Example: User sends the SMS "111111PSW12345" to the system SIM card number, and gets the confirmed SMS "111111PSW12345" in 3 seconds. It means that the user password has been changed to 12345.

Remark: Please keep the password deep in mind if it is changed.

- **111111ARM**

This instruction is used to arm the system.

The system will send back the confirmed SMS to you, such as "Unit Armed! ……"

- **111111DSM**

This instruction is used to disarm the system, to stop receiving the alert SMS from the tracker.

The system will send back the confirmed SMS to you, such as “Unit Disarmed! ……”

- **111111CHK**

This instruction is used to inquire the vehicle’s location & system’s status.

The system will send back the SMS, includes the similar information, such as “Unit Disarmed……”

- **111111STP**

This instruction is used to cut off the car’s power supply or fuel supply, so as to stop the car.

The car will be controlled to stop gradually.

Attention: It is very dangerous to stop the car when the vehicle is running at high speed. We do not take any responsibility to the consequence caused by this action.

- **111111STPN** or **111111STP(N)**

This instruction is used to stop the car under the condition of speed limitation.

If the car is running at speed higher than N (KM/H), the instruction will not be carried out. System will send back feedback SMS “No parking, vehicle …”; If the car’s speed is less than the value N , it will be controlled to stopped gradually.

Example: N =40. The car is running at speed of 50KM/H, user send 111111STP40 or 111111STP(40) to system, the system will send back SMS “No parking.” to warn user that the condition is not met. Once the car’s speed is about 39KM/H, the system will automatically carry out this instruction & stop the car.

The Minimum value of N is 30KM/H

- **111111RES**

This instruction is used to restore the car to normal status after stopping the car.

It is also used to stop the receiving of SOS alert SMS once the anti-robbery SOS switch is pressed down.

- **111111MONP**

This instruction is used to monitor the voice around the car. The SIM card

inside the system pays for the communication fee.

The P is the telephone which is used to monitor the voice. When user sends out this SMS to the system, the system will call back the telephone P, user could listen in the voice around the car upon picking up the call.

If you use the present mobile to carry out the monitoring, you can let the P as blank, sending 111111MON is OK.

Example: P =13780012345. If user sends 111111MON13780012345 to system, the system will call back the phone 13780012345 immediately. Once upon pickup the call from the system, user can hear the voice around.

- **111111MON:Phone No.**

This instruction is used to monitor the voice around the car. The user's telephone pays for the communication fee.

Example: User uses the telephone 38351400 to carry out monitoring and pay the communication fee, user can send 111111MON:38351400 to the tracker firstly, then use this phone 38351400 to call the tracker, it will be connected automatically to monitor the voice. This setting is stored all the time until you change it to another phone no.

Remark: please do not set the user's 1st alert-received phone no. for this function.

SOS Anti-robbery Alert

If you program the 2nd alert-received mobile already, once the SOS switch is pressed down & hold for at least 3 seconds, the system will send alarm SMS to the 2nd alert-received mobile. User can send command 111111RES to release it.

Movement Alert

111111MOV0 to disable the movement alert

111111MOV1 to enable the movement alert, the present location is the center.

111111MOV? to check the center's position.

Once the system is armed, the movement alert will be automatically enabled. Once the system is disarmed, the movement alert will be automatically disabled.

111111RAD:XR:a,YR:b to define the distance for triggering the alert

Example: If you want to set the radius in latitude as 60meters, radius in longitude as 80 meters, you can send 111111RAD:XR:60,YR:80 to the tracker. This setting will be stored in the tracker all the time until you change it again.

Geo-Fence Alert

Format of SMS instructions:

111111FEN0 Disable the Geo-fence

111111FEN1 Enable the Geo-fence, using the stored setting

111111FEN1() Enable the geo-fence, using the latitude & longitude of present location, the distance of latitude & longitude are 1000 meters.

111111FEN? Check the setting of geo-fence

111111RAL:XR:a,YR:b,X:c,Y:d

Or **111111RAL:XR:a,YR:b**

Or **111111RAL:X:c,Y:d**

XR:a, a is the distance of latitude (Meter)

YR:b, b is the distance of longitude (Meter)

X:c, c is latitude(degree), the range of the value is 0-90）

Y:d, d longitude (degree), the range of the value is 0~180）

Remark: (1) RAL, XR, YR, X, Y must be in capital letter.

(2) The Setting will be stored.

Example: If the fence is a circle with Radius of 5000meters, the coordinates of the circle's center is: latitude:+23.1400, longitude:+113.4500, then the SMS instruction is: 111111RAL:XR:5000,Y:5000,X:23.1400,Y:113.4500 . If the vehicle is running across the boundary of the fence, the system will automatically send out Alert SMS.

Over-speed Alert

111111SPD:X or **111111OVF:X** x is the speed in KM/H , maximum

value is 300KM/H

(For example: 111111SPD:120, if the car speed is over 120KM/H, it will send SMS to warn you)

111111SPD:? to check the setting of over-speed alert.

Default setting: 200KM/H

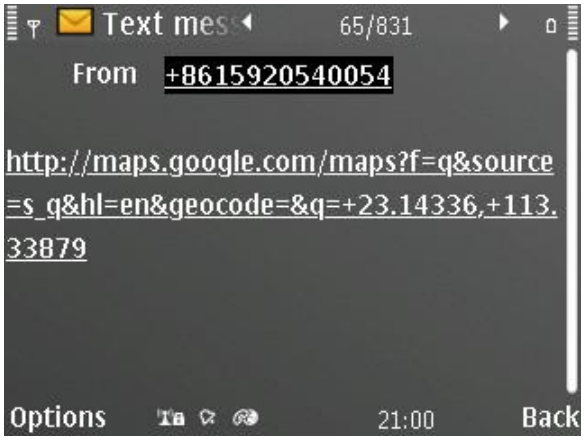
How to disable this function: You can send 111111SPD:290 to disable this Over-speed Alert

Remark: this function is just for reference, because there might be some delay or error in detecting the car's real speed by GPS.

Check the Location with Google Map's link

W111111,100 (or **w111111,100**)

Upon receiving the SMS command, the tracker will automatically send back the SMS including the Google map's URL, user can use smart phone (GPRS data service is enabled) to open the URL link, the car's location will be showed on the Google map.



Program a New Transmitter

(1) Please send 111111STD or 111111std to the SIM card number in the device. (If you change the default password to the new one, you should use the new password instead of 111111).

(2) About 5-8 seconds later, the main unit will sends out one sound "Di", it means that the system is in programming status.

(3) About 2-3 seconds later, please double-click any key on the 1st

transmitter, you will hear 2 sounds “DiDi”, it means that the 1st transmitter is programmed successfully. Another 2-3 seconds later, double-click any key on the 2nd transmitter, you will hear another two sounds “DiDi”. If you still want to add more transmitters, you can do the same process as before.

(4) Please wait for about 10 seconds, the main units will send out 3 sounds “Di…DiDi”, and send a text “OK?” to the mobile. It means that the total process is finished.

Working Process

The process of arming the system

There are 3 ways to arm the system:

- ✧ Press the arm button or mute-arm button for 0.5 second;
- ✧ Use the 1st alarm-received mobile to call the system’s SIM card number;
- ✧ Use any mobile to send the SMS control instruction (such as “111111ARM”) to the system’s SIM card number;

Responses:

- ✧ The direction lights will flash once, the siren will sound once; (if it is mute-armed, there is no signs)
- ✧ The car door will be locked automatically; if the car door is not closed well, the siren & the direction lights will hint for 17 seconds, the system will send SMS to warn that the door is not closed.
- ✧ If the ignition key is at ON position, the car door can be locked, but the system can not be armed.
- ✧ If user arms the system by phone call. The system will automatically call back the users mobile, after several ring tones it will hang up the calling.

The process of disarming the system

There are 3 ways to disarm the system:

- ✧ Press the disarm button for 0.5 second;
- ✧ Use the 1st alarm-received mobile to call the system's SIM card number;
- ✧ Use any mobile to send the SMS control instruction (such as "111111DSM") to the system's SIM card number.

Responses:

- ✧ The direction lights will flash twice, the siren will sound twice;
- ✧ If the car door is not opened in 45 seconds, the system will consider it as false operation. The system will automatically enter into arming status. If the door is opened during this period, the system will not be re-armed again;
- ✧ The car door will be unlocked automatically;
- ✧ While the system is triggered to send out the alarm (except "Robbery alarm" & "Stop the car by force"), the car's direction lights will flash twice, the siren will sound twice, the door is unlocked and the system is disarmed. The user mobile will get the confirmed SMS message.
- ✧ If the system is triggered by "Robbery alarm" or "Stop the car by force", it can't be disarmed by transmitter, it can only be disarmed by SMS instruction CEN666666#4 or by the center software.

The process of triggering the alarm

The following conditions will trigger the system to send out alarm message:

- ✧ In arming status, the car is shocked;

  Car lights flash, siren sounds, the system will send SMS such as "Shock on! Vehicle position: …… " to user's mobile, if the system is not disarmed in 3 minutes, it will send the same SMS again to user's mobile. About 6 minutes later, if it is not disarmed yet, it will call the telephones twice.

- ✧ In arming status, the car door is open;

  Car lights flash, siren sounds, the system will send SMS such as

"Door Opened! Vehicle position: …… " to user's mobile, if the system is not disarmed in 3 minutes, it will send the same SMS again to user's mobile. About 6 minutes later, if it is not disarmed yet, it will call the telephones twice.

✧ In arming status, the engine is started by ignition key;

Car lights flash, siren sounds, the system will send SMS such as "Engine on! Vehicle position: …… " to user's mobile, if the system is not disarmed in 3 minutes, it will send the same SMS again to user's mobile. About 6 minutes later, if it is not disarmed yet, it will call the telephones twice.

✧ In arming status, the car's power supply is cut off;

The system will send SMS such as "Power supply failed! Vehicle position: …… " to user's mobile twice.

✧ At any time, press Emergency Help button on the transmitter for 3 seconds;

Car lights flash 3 times quickly, siren sounds 3 times quickly, the system will send SMS such as "Urgent help! Vehicle position: …… " to the alarm-received mobiles twice; if the system is not disarmed, it will call the alarm-received mobiles twice.

✧ At any time, press the Anti-robbery Switch for 2 seconds;

Car lights will not flash, siren will not sound, the system will only send SMS message to the center's number (Mobile #3).

Specifications

GSM frequencies: 850MHz/900MHz/1800MHz/1900MHz(Quad-band)
Working voltage: +10~16 VDC
Power Consumption: Idle current :< =50mA, Working current: <= 300mA;
Maximum sending power: 1 W;
RF receiving sensitivity: -102dBm;
Working temperature: -20 ~ 80℃;
Humidity: 0 ~ 95%;
The time from alarm's triggering to receiving: <=10 seconds;
Dimension of main unit: 135.0 x 82.0 x 36 0mm;
Net weight: 0.8kg

FAQs & Troubleshooting

FAQ	Troubleshooting
The connection is failed when call the alarm's SIM card number.	(1) Check that if the SIM card is valid; (2) The SIM card is placed correctly in the slot; (3) The connection of the GSM antenna is OK;
The mobile can not recieve the alarm informations. The other functions are OK.	(1) The SIM card inside the system has no credit; (2) The SMS instruction is not in correct format; (2) The mailbox of the user's mobile is full;
The transmitter doesn't work or the distance is not long enough	(1) Check the contact of the battery; (2) Replace a new battery;
No GPS signal	(1) Please place the GPS antenna in the outdoor; (2) Please check the connection of the GPS antenna;
False alarm	(1) Door is not closed tightly (2) The door triggering switch is damaged (3) The button on the transmitter is pressed casually
There is no response while operating transmitter	(1) The system is triggered by "robbery alarm"; (2) The car has been stopped by SMS instruction.

Installation

Packing List

Component name	Quantities (pcs)
Main unit	1
Transmitters	2
GPS antenna	1
GSM antenna	1
Emergency SOS Switch	1
Shock sensor	1
Cut-off relay	1
Siren	1
Wiring	1

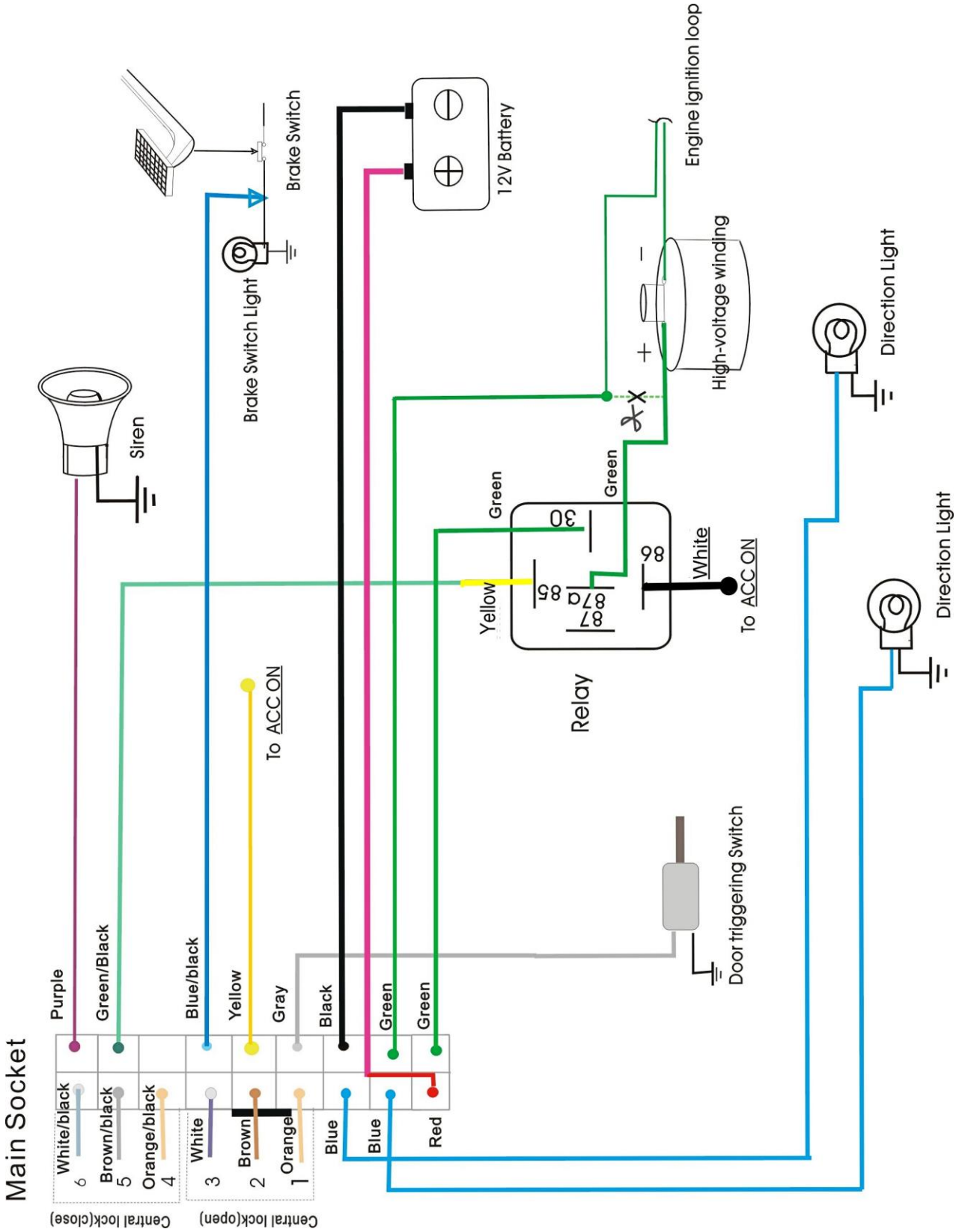
Notice on Mounting the Antennas

✧ While mounting the GPS antenna, the side with sticker must be placed upside to the sky so as to receive the GPS signal very well.

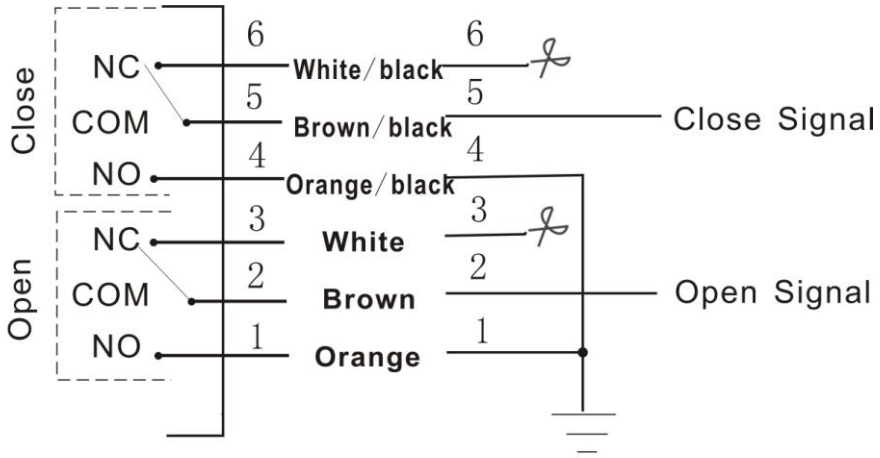
There could not be any metal or shielded obstacles around the upside of the GPS antenna, the GPS antenna should be placed at broad & secret place too. It should be drew straight and kept away from the sound box or speaker.

- ✧ While mounting the GSM antenna, it should be placed at broad & secret place where there is no shielded obstacle.
- ✧ The GSM antenna can't be placed along with the GPS antenna in parallel. It should be drew straight and kept away from the sound box or speaker.
- ✧ After installation, please test the system & make sure that it can get GSM signal & GPS signal very well. Otherwise, fix the GSM antenna or GPS antenna at other places until the signals are OK.
- ✧ For security, please fix the GSM & GPS antenna in secret places.
- ✧ Please draw straight the RF antenna on the main unit, so that the transmitter can work at longer distance.

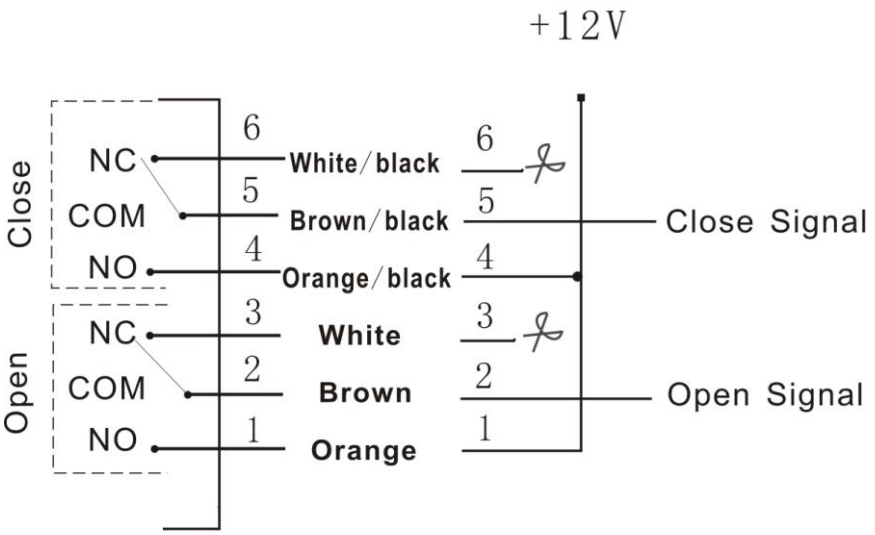
Wiring Diagram


Main Socket
Purple
Green/Black
Blue/black
Yellow
Gray
Black
Green
Green
White/black
Brown/black
Orange/black
White
Brown
Orange
Blue
Blue
Red
6
5
4
3
2
1
Central lock(close)
Central lock(open)
Siren
Brake Switch
Brake Switch Light
12V Battery
Engine Ignition loop
High-voltage winding
Direction Light
Direction Light
Relay
30
87
87a
85
86
Green
Green
Yellow
White
To ACC ON
To ACC ON
Door triggering Switch

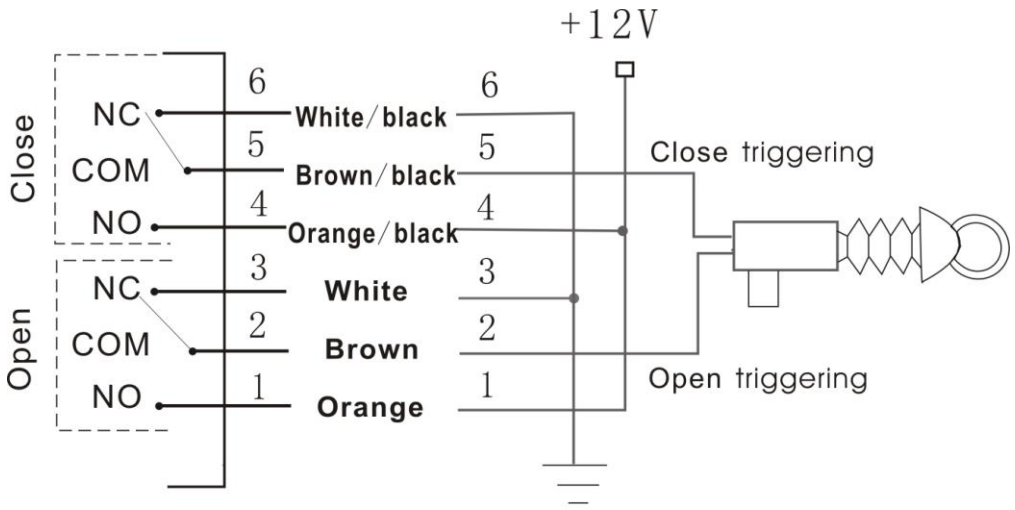
Connection with Central Lock



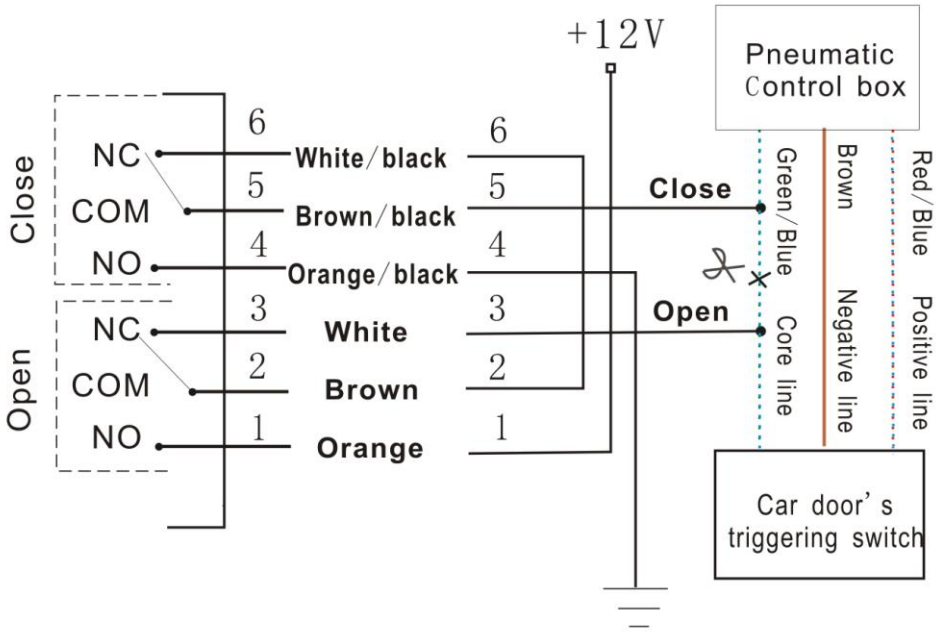
Negative Triggering



Positive Triggering



Positive/Negative Triggering



Pneumatic Lock Triggering