WT-216

GPS / GSM Car Alarm & Tracking

User Manual



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Brief Introduction

The GPS/GSM Car Alarm system (Model: WT-216) is the advanced car security with GPS Position , It can be operated by telephone/SMS/remote control. This system is designed for individual user and Group.
Users can track the car by our management & Monitoring software or free Google-map!





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Main Features & Functions

1) Car owner can monitor cars in real time

Car owner can directly monitor everything in the car, including sounds of people talking, noises of damage, etc after inputting password. He/she can provide information to guard the car against theft and ask for help without anyone knowing it.

2) Short messages will be sent to car owner's mobile phone and the center if the car is shocked gently and illegally.

If the car is shocked gently, for example, external shock, collision, drag and tow, hit etc, short messages will be sent by the system to the first alarm number (namely the car owner's mobile phone number). Car owner will receive them in about 5 seconds so that he/she can deal with the situation in time.

3) Users get informed if the car is open illegally

System will automatically give alarms to the assigned alarm telephone if car doors are open illegally (not open by remote control). It will tell everything to the person who answers the phone whether it is shocked or car doors are open illegally.

4) Alarms will be given to the center if the door is illegally open .

System will automatically give alarms to the assigned central telephone to tell everything about it, whether the car is shocked or the door is illegally open (not by remote control)

5) Alarms will be given to users when the car is dragged or towed illegally

Cars are shocked terribly, for example, hit with hostility, hit by things dropping from high places, dragged and towed, bumped terribly with hostility, etc. system will give alarms to the assigned alarm telephone, after which the owner can monitor the car or deal with the situation with other ways in time.

6) Car owner can control the car remotely to cut off power and gas supply.

If the car or the person in the car is in danger, if necessary, telephones are used to control it remotely to cut off power and gas supply. The car will be power off slowly or cannot start.

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7) Long-distance network of the center can remotely control the car to cut off power and gas supply (The Monitoring software support is necessary)

If the car or the person in the car is in danger, if necessary, the center can remotely control the car to cut off power and gas supply. The car will be power off slowly or it can not start.

8) Emergency button

When the car owner or the person in the car is in emergent situation, for example, car robbery, robbery in the car etc, drivers can press the emergency button set in a hidden place, then system will automatically send information to the alarming center that will immediately send it to the emergent contact person car owner assigned for quick settlement.

9) Car owners can exactly position the car with GPS.

Car owner can send short messages or call monitor center at any time to position the car. Information received can be: your car is on XX road, near XX hotel, orientation XX meters, precision 25*25 meters. The time interval between the position information sent and received is about 10 seconds.

10) Car owner can test the speed of the car with short messages in real time (The Monitoring software support is necessary)

Car owner can set a maximum speed for the car. System will send short messages to his/ her mobile phone to tell him/her the maximum speed and the present speed if the car exceeds the set speed.

11) Center control the management if the car is over speed and crosses the boundary (The Monitoring software support is necessary)

Car owner can tell the center to set an area for the car. If the car crossed the area, short messages will be sent to the assigned telephone number (the owner's) to tell the owner about it.

12) Car owner control the car to emit sounds and lights to give alarms (The Monitoring software support is necessary.)

There are a lot of places do not allow car owner to turn on the alarm because of the restriction from various administrative provisions. So if the owner receives alarm telephone and confirm that the car is being attacked, he/she can use telephone to turn on the audible (from horns) and visual (from lights) alarm function, thus terrifying the thief effectively.

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13) Remote control the central control lock .

Can match with the products to achieve alarm activation, alarm disarmament, etc.

14) Brake And Lock

In the process of every open the door –close the door—drive the car, system will automatically lock the car when first brake. If the car doors are not close suitably, turn signal will remind the owner. the key is in the OFF place when the car is power off, the car door will automatically open, which will make you and your drive safer. Robbers never ever have a chance at all.

15) Lock and unlock the door with telephone

Telephones of the car owner can be set to open and close the door, set and disarm guard. (Need SIM card to support the display function of calling numbers)

16) Check cars over the internet.

No matter where your car is, no matter what the time is, as long as there is a place for you to surf the internet, you can check your car on our carefully designed car checking system: input your user name and your vehicle card number, you can check the exact position of your car.

Remark: The Monitoring software and electronic maps need extra orders.

Hardware Specifications

Dimensions	190.0 x 80.0 x 29.0 (mm) ---
GSM Module Bandwidth	EGSM900：TX880-915MHz，RX 925-960MHz --- DCS1800：TX 1710-1785MHz，RX 1805-1880MHz GSM1900：TX1850-1910MHz，RX 1930-1990MHz
Maximum RF Output Power	EGSM900、GSM850：33 dBm(2W) GSM1800、GSM1900：30 dBm(1W)
Resistance	50Ω
Transmission Speed	Circuit switched 4.8/9.6 kbps
GPS Module	SiRF Star III
Frequency	L1，1575.42MHZ
Channels	20
Position Accuracy	10 meters CEP without SA
Speed Accuracy	0.1 meters/second，without SA
Coordinate System	WGS-84

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Hot Start	< 8 Seconds
Warm Start	< 38 Seconds
Cold Start	< 60 Seconds
Height	18000 meters（60000 feet）max.
Speed	515 meters / second（1000 knots）max.
Acceleration	4g max.
Working Voltage	5 to 24 VDC
Power Consumption	0.8W
Power Consumption	1.5~2W
Housing	Metal
Operation Temperature	-20°C to +70°C
Storage Temperature	-30°C to +80°C
Humidity	0~95%, non-condensing

Remote Control Study Method

a) On test panel remote control study method

Withdraws from a defended position under the condition in the vehicle carrier vehicle circular telegram, holds down the gate to control the key not to put, presses the ACC key in the uniform speed 7 about, saw the main engine indicating lamp shines, hears to vehicle carrier vehicle ”di”, enters the remote control study condition, presses in 10 seconds must study the remote control the free key, hears to the vehicle carrier vehicle "di di" two prompts, then this remote control studies successfully The user may continue the study next remote control in the next 10 seconds, if in 10 seconds not any remote control study signal, then automatically withdraws from the study condition, and prompts 3.

b) On automobile remote control study method

Withdraws from a defended position under the condition in the vehicles, turns on the vehicle door, continuously moves about ignition lock 7, saw the main engine indicating lamp shines, hears to the vehicle carrier vehicle "di", enters the remote control study condition, presses in 10 seconds must study the remote control the free key, hears to the vehicle carrier vehicle "di di " two prompts, then this remote control studies successfully The user may continue the study next remote control in the next 10 seconds, if in 10 seconds not any remote control study signal, then automatically withdraws from the study condition, and prompts 3.

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Operation Procedure

1) **Remote control**

: Arm **: Disarm** **: Emergency help button** **:Car finder**

2) **Operation**

Operating mode	GPS/GSM System Status	Indicator Status	Vehicles Status	Vehicle owner short note/telephone
Arm operation Method 1. Press Arm key on the remote control for 0.5 seconds. **Or** Method 2. Use car owner mobile phone to call vehicle GSM SIM card. **Or** Method 3. Use any mobile phone to send Arm command message to vehicle GSM SIM.	1. After arming successfully, the indicator flash quickly twice a second. 2. If there is alarming, the indicator Would flash slowly once a second	1. The turn light would flash once, siren sound once.	1. If vehicle door is not closed well after door lock, the siren and turn light would remind for 17 seconds. 2. If key in ON position(ignition status), it can only lock 3. After forewarns for 10 seconds, the vehicle vibrates due to external force, the vehicle light would glitter and siren sound. 4. Open the door and ignite after forewarn, the vehicle light glitters, and siren sounds	No message in normal status. If use car owner mobile phone to call the system to arm, the vehicle would automatically call back to car owner, and hang up after several sounds. No expense caused during this operation.
Disarm operation Method 1:	Disarm	1. The indicator won't light after disarm.	1. The vehicle turn light flashes twice, and siren sounds twice.	1、2、3 No message 4. Show message of disarm

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disarm key on the remote control for 0.5 seconds **Or** Method 2. Use car owner mobile phone to call vehicle GSM SIM card. **Or** Method 3. Use any mobile phone to send disarm command message to vehicle GSM SIM card instruction to the vehicle		2. If there has been a alarming, the indicator flash quickly once a second	2. If not opening the door to enter the vehicle within 45 seconds after disarm the system would auto "Arm" (the second anti-burglary). Open the door to cancel Arm. 3. If key in ON position (ignition status), it can only unlock 4. If it has already alarmed (except robbery and forcibly disable vehicle), the vehicle turn light would flash twice, siren sounds twice, and door unlock, and alarming cancelled. 5. If already alarm the robbery alarming or vehicle stops, it is invalid to use remote control to cancel Arm. You need to ask center to cancel.	successfully and position. 5. No message
Emergency help operation Press	Emergency help (can use this function in both Arm or Disarm	The indicator flash quickly 5 times, after alarming, the	The siren sounds quickly 3 times, turn light flash quickly 3 times.	show message of emergency help and position. The system would send a

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emergency help button " " on remote control for 3 seconds	Status)	indicator would slowly flash once a second		alarming message to car owner and center once per 20 minutes until the alarming is relieved.
Search Vehicle Operation Press car finder button on the remote for 0.5 seconds	Search the vehicle	The indicator flash once	The vehicle turn light flash 5 times, and siren sounds 5 times.	No message
SOS Alarm Operation press the robbery button of the system for 5 seconds	Robbery alarming	The indicator doesn't light.	The vehicle turn light doesn't flash, siren doesn't sound. It is "voiceless alarming".	No message. The robbery alarming only alarm to designated center. The system would send a alarming message to center once per 20 minutes until the alarming is relieved.

Vehicle Owner Mobile Phone Control

a) **Short note to control vehicle**

(i) Message of Setting Center number & Car owner number is:

CEN666666＊10owner mobile phone number**＊20＊30**center phone number**＊**

(Among this message, 666666 is the initial center code. CEN (in capital) is control command code. **No any space in this message**)

For example, if input CEN666666＊10**13566666666**＊20＊30**13700000000**＊, it means the owner number the alarming system would identify is 13566666666, the center number is 13700000000

Use any mobile phone to send this message to vehicle SIM card, if it send back same message to your mobile phone, it means the set-up is successful.

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(ii) If you are not in China, please set up the next step.

You need sent the message **CEN666666#78:＊** to vehicle SIM card.**＊** is stand for the number of cell number.(if the total number is singular(eg:11) you need to add one number. If even number is even numbers(eg:12),do not need add.eg.)

For example, the phone number is 13812345678,it have 11 numbers, then add one. It became 12.

finally you can send **CEN666666#78:12** to vehicle SIM card, the device will send back **CEN666666#78：9168.** But if you just need the position function and monitor phone function you do not need setting,

SMS Control Instructions

The user controls the vehicles through the short note with content of: 111111XX

The format of the instruction is: user password (111111) + control code (XXX)?

The default user password is 111111.
XXX is the control code; it could be capital letter or small letter.

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

111111PSWnnnnnn

This instruction is used to change the user password. The length of the user password is 2~6 digits. Users are suggested to change to the new password in use.
Example: User sends the SMS ?11111PSW1234?to the system SIM card number, and gets the confirmation SMS 111111PSW1234 in 10 seconds. It means that the user password has been changed to 1234.

111111ARM

This message aims to arm the system. The system would send back a message of arm set and the current position of vehicle.

111111DSM

This message aims to disarm the system. The system would send back a message of disarm set and current position of vehicle.

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111111STP

This message aims to disable vehicle. The system would send back a message of disable vehicle and current position of vehicle.

111111RES

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

111111CHK

This instruction is to inquiry the system status & information.
The system will send back the SMS, includes the similar information as Arm set, vehicle position

111111MON＊

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

111111ZD＊

If ＊ is 1, the instruction 111111ZD1 is to enable the shock sensor
If ＊ is 5, the instruction 111111ZD5 is to disable the shock sensor

111111FWD ＊

This instruction is to enable/disable the function of forwarding message.
If ＊ is 0, the function of forwarding is disabled, if ＊ is 1, the function is enabled. The system will send back the SMS set OK

111111FWD: Mobile #1, Mobile #2, Mobile #3,

The system will send back the confirmed SMS 111111FWD: Mobile #1, Mobile #2, Mobile #3,It means that the setting is successful. After that, if the mobile #1 & mobile #2 send the message to the system, the system will automatically forward the message to mobile #3.

Note:

1) **Use a new GSM SIM card, as all info in this card would be automatically cleared in this alarming system.**
2) **Use a GSM SIM card with service of Incoming Telephone Number Display.**

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The owner can use his mobile phone number which set up by Center to Arm or Disarm the vehicle

Attention: the car owner mobile phone number is set by Message of "CEN666666＊10owner mobile phone number＊20＊30center phone number＊". After this message, the system would recognize the car owner number is its owner, and center number is its center.

1）Arm

Use the owner mobile phone to call system GSM SIM card, hang up after several sounds. The alarming system would automatically call back to car owner, and hang up after several sounds. It shows the arm setting is successful. The remote control would also return to Arm status.

2) Disarm

Use the owner mobile phone to call system GSM SIM card, hang up after several sounds. The alarming system won't call back to car owner. It shows the disarm setting is successful. The remote control would also return to disarm status.

Note: 1) User can operate the above function in repeat to arm or disarm.
2) It is invalid for center number to operate the above function. Only owner number works.
3) The above operation does not cause any expense.

Installation

The GPS antenna chooses the position and is fixed

1) The GPS antenna installs when should guarantee the receive face on (sky), also place above does not have the metal to cover, shield
2) The GPS antenna suggested installs the position

Underneath first windshield hideaway

First gauge board (epidermis for nonmetallic material quality) underneath hideaway
Underneath the latter windshield plays the part of under the board
The first bumper (epidermis is nonmetallic material quality) in

Attention: If the windshield will glue has the thermal insulation layer to reduce the GPS receive signal, will create GPS to work abnormally, this time please will replace the GPS antenna to install the position.

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3) The GPS antenna may adsorb on the metal object, or glues reliably with the width sponge force two-sided rubber, please note the GPS antenna not to be possible to tear down the outer covering.

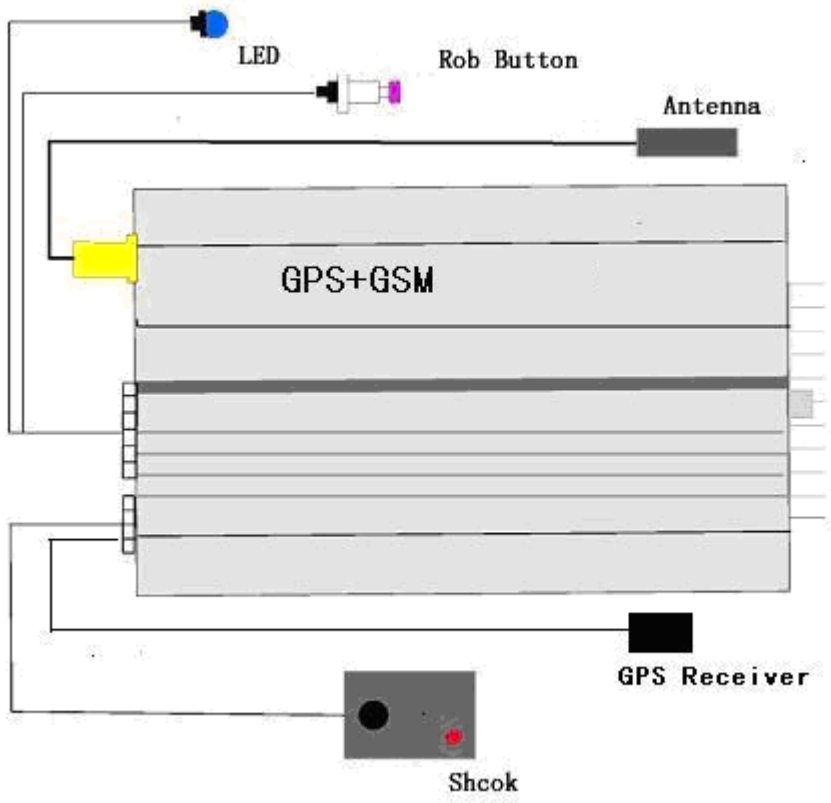
4) The GPS wire hideaway and pulls to the main engine nearby, antenna plug insertion main engine corresponding plug.

The GSM antenna chooses the position and is fixed

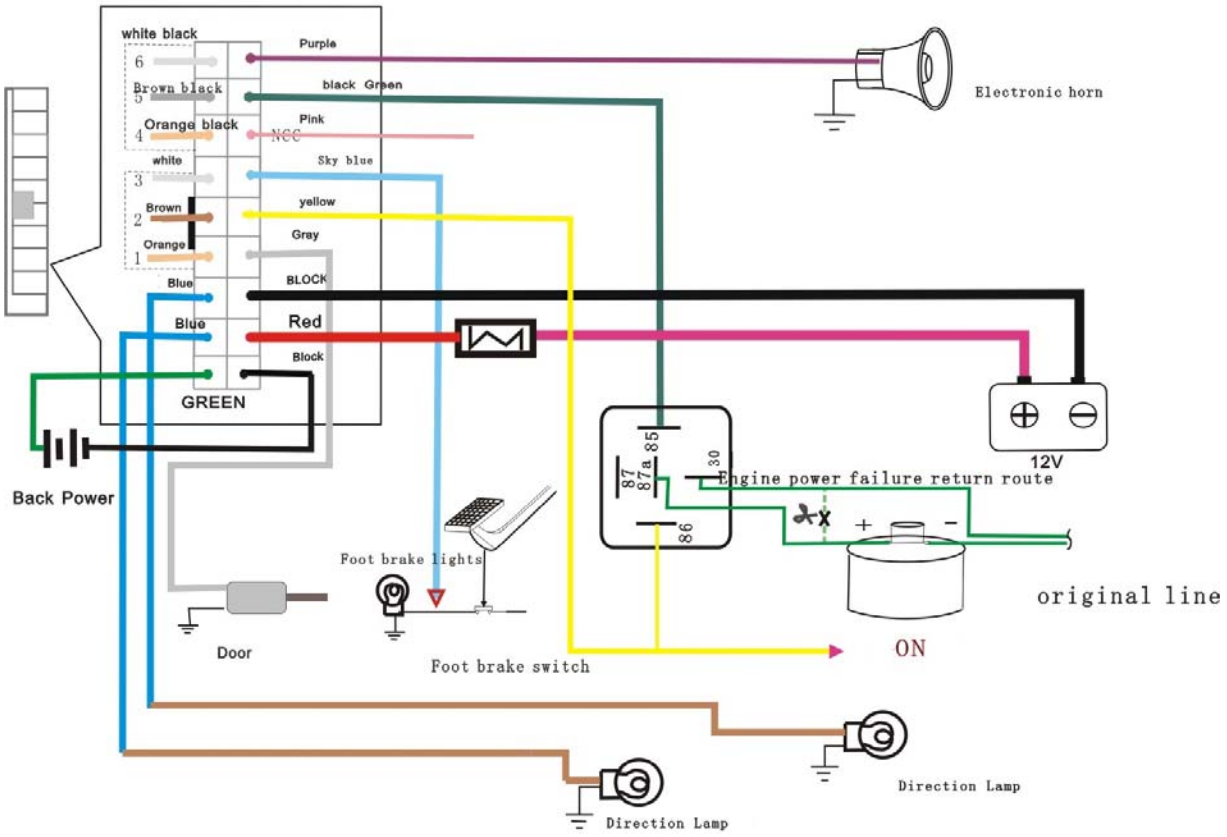
The GSM antenna suggested installs the position
Underneath first gauge board hiding place
Underneath the latter windshield plays the part of under the board
Underneath chair hideaway

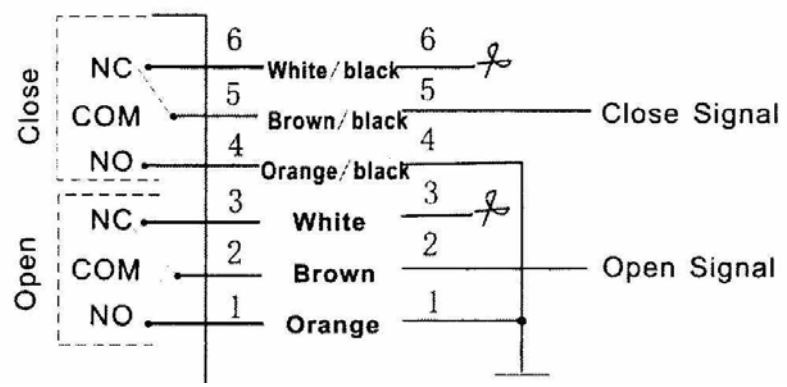
And sweeps the GSM wire hideaway pulls to the main engine nearby, antenna plug insertion main engine corresponding plug.

Attention: The GSM antenna may not to the GPS antenna juxtaposition, also the wire is sure not mutually to twine, avoids disturbing, is far away the sound box as far as possible Central lock System

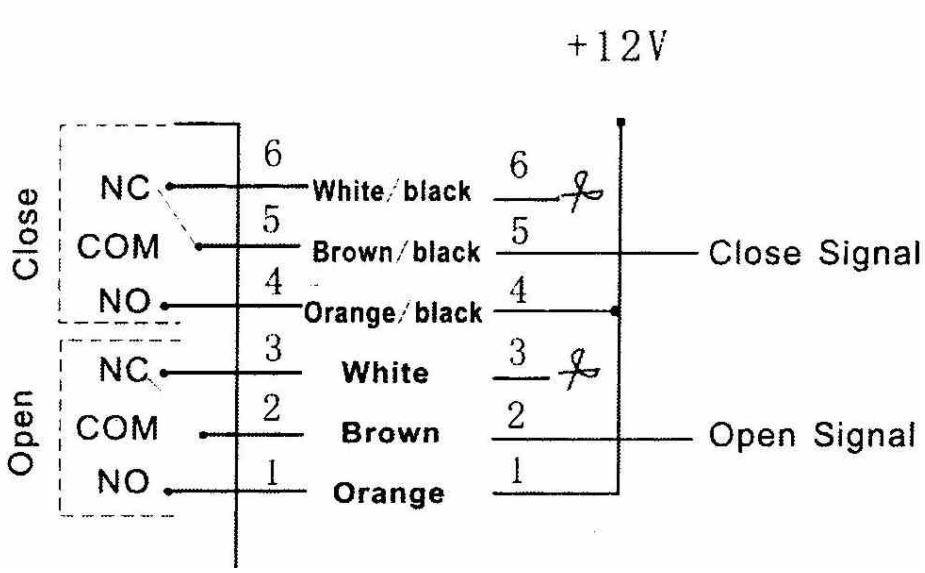


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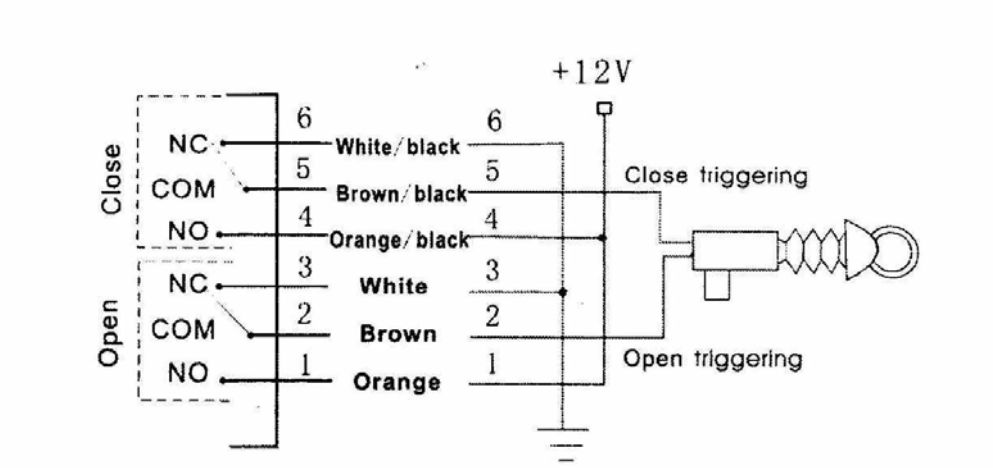




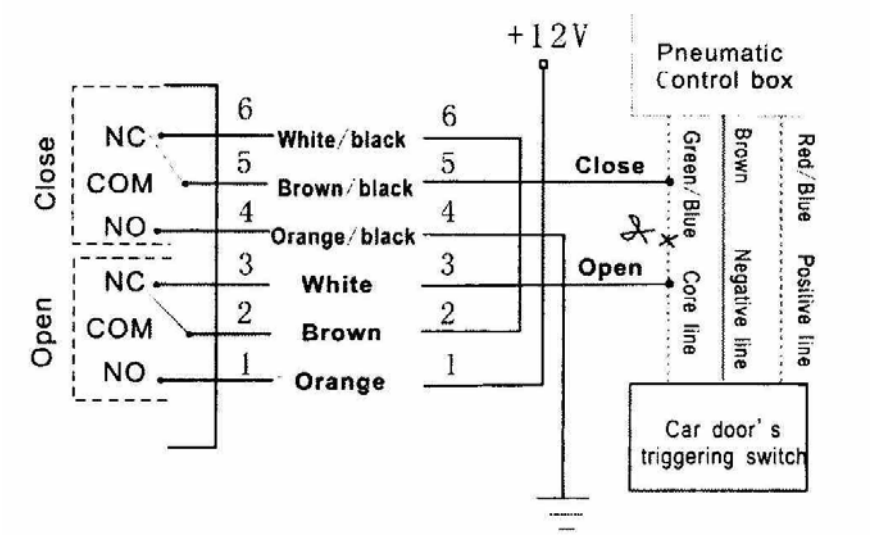
Negative Triggering



Positive Triggering



Positive/ Negative Triggering



Pneumatic Lock Triggering

How To Search Your Vehicle Position

Only suitable of this GPS+GSM Model tracker ）

As long as you remember the service code of your vehicle, you can track your vehicle everywhere through any mobile phone.

For example: if you input inquiry command：“**111111CHK**”to SIM card number of your GPS/GSM car alarm system (WT-216), you would get a message “Arm unset, vehicle position:546B6C73,V,114.05113E,22.563638N, V000.0,D000.0,”within 10 seconds. Then enter the eastern longitude, northern latitude you gained to Google-map, you would know the position of your vehicle.

Here is the installation procedure of Google-map Software.

1. First land this website:
http://earth.google.com/tour/thanks-win4.html
Click:



, download the installation procedure.

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2. After installation setup, it would show the following at desk:
Click it to enter"Google-map", click 

, and enter the interface:



3. Enter the longitude and latitude you gained from message, 

Click inquiry key 
, and you can see the position of vehicle.

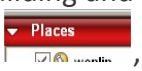


4. You can use 
to reduce the map and amplify the map

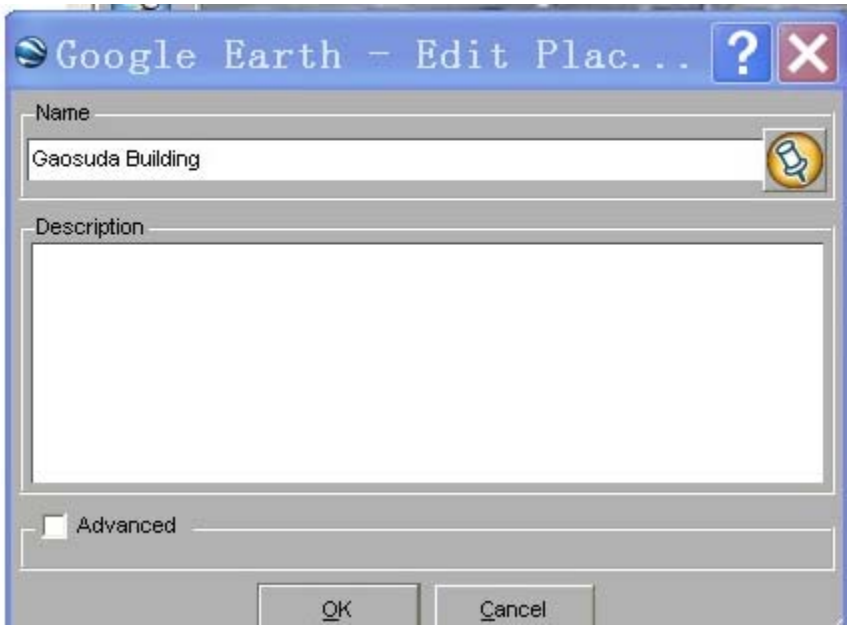




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5. You can name the building and road on the surface in your computer, and register the reference, first click 

, right –click, and enter



For example, input the reference building, Gaosuda Building, and click 

, then it would show the building you named on the map



Troubleshooting

1. After WT-216 installed, why there is no response?

Check the polarity of power connection to see if a wrong polarity is connected.

- Check the power is on or not.

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2. Why does GSM fail to communicate?

- Check if the SIM card is opened
- Check whether the SIM card has password
- Check if the SIM card is correctly placed.
- Make sure the SIM card does support GSM function.
- Make sure to cut off power, before pulling out the SIM card.
- If the vehicle is parked in a place where the GSM signal is weak.
- GSM base station of mobile operator is crashing.
- Whether this SIM card is suspended (such as forget to pay the bill…)

3. Why GPS can not calculate the position?

Check if GPS antenna is correctly installed, or if it is placed in a proper position. Make sure there is not be any metal shield, such as windshield heat insulation paper with metallic content, above the GPS antenna - which may block the reception of GPS signal.

Do not park your vehicle under shielding or under a building.

If necessary, put the GPS antenna outside the vehicle temporarily.

4. Why does GPS positioning take such a long time?

The time used for positioning is affected by many factors, such as the weather, distribution of clouds, roadside trees, elevated roads, nearby high buildings, heat insulating papers containing metal elements, and even the covering of the hands, may affect the reception effect of satellite signals. Positioning a vehicle in an idle state take less time than positioning it in motion state.

5. Does the weather affect GPS operation?

GPS system is able to overcome weather problem in its initial design. GPS satellite positioning signals consist of short waves; the transmission of short waves will not be affected by weather conditions. GPS signals may produce error factors during transmission, such as solar wind, earth rotation, and variation of aerosphere density, building reflection, etc. All of which may cause deviations to GPS short wave affect signals. But weather factors will not affect the normal function of GPS.

6. Why cannot it monitor?

- Check the memory for SMS messages in the SIM card, to see if it is full or not.
- Cannot receive GSM signal in the place where you locate.

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