GPS Tracker

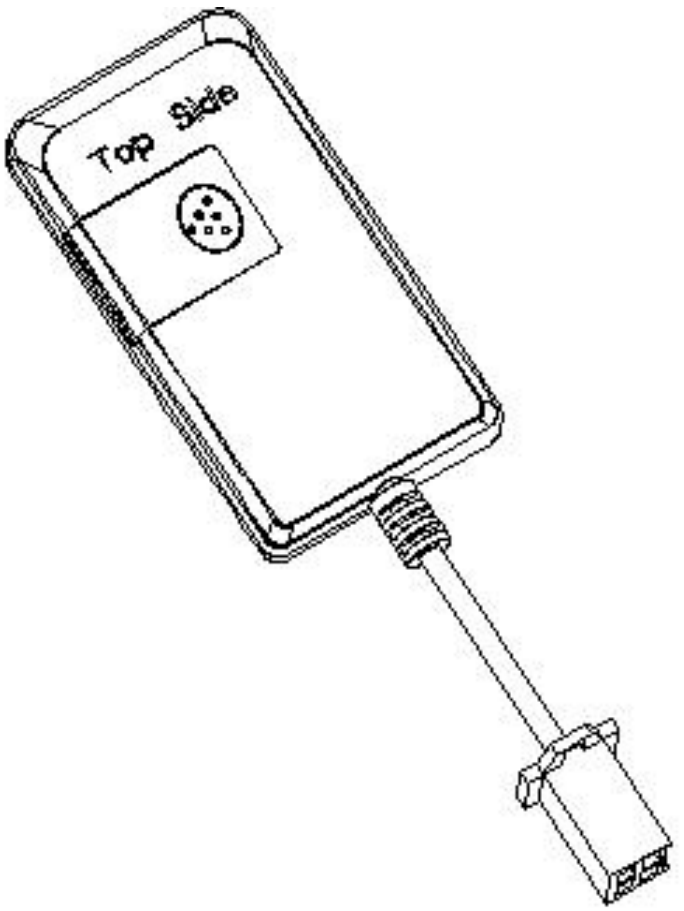
For Vehicle

<GPS+GSM+SMS/GPRS>

User Manual

V1.6

MODEL： TK115



Professional Tracking System

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Welcome to use our terminal ,please read this manual carefully to install and operate terminal exactly. This user manual is for reference only. If some contents and operation steps are inconsistent with those for the actual product, the latter will prevail.

Using GPS tracker, we can position, monitor and control the vehicle on the position server via GPRS, GPS and Internet. It can help customers to manage transparently, reduce cost, maintain security and raise efficiency. Now it is widely used in business traffic, logistics distribution, automobile lease, intelligent transportation, shipping market, army and police, rescuing, Safety Supervision, Intelligent city…

I. Product Features

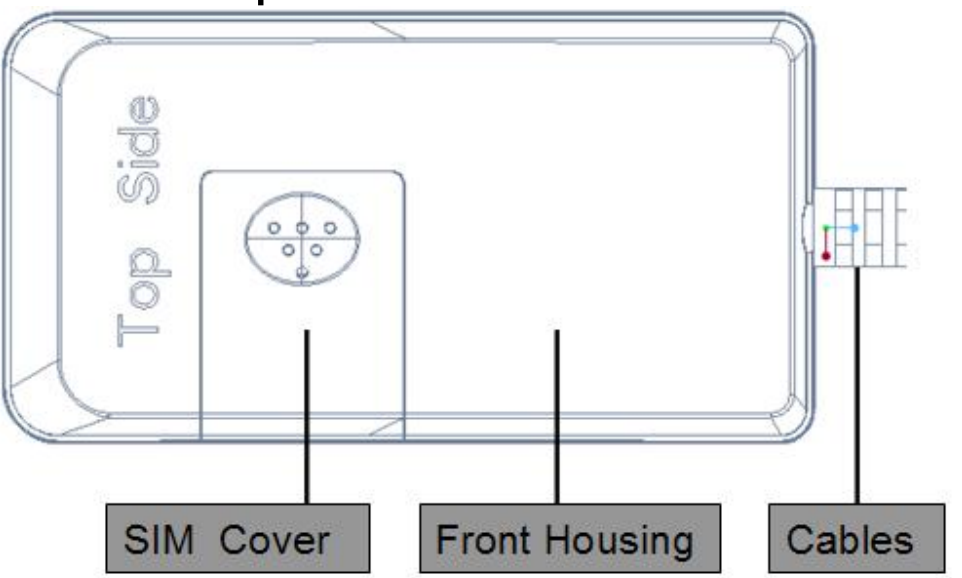
- Supports quad bands, i.e. 850/900/1800/1900MHz, universal in the world.
- Wide Input Voltage： 9-60V DC.
- GPS precise positioning with A-GPS and uploaded by GPRS regularly, Supports real-time tracking and history track playback.
- Web browser platform, Smart phone app platform and SMS query.
- Supports multiple alarm,acceleration sensor can be added (B models, optional component), so as increase vibration, collision and falling alarm.
- Supports ACC status checking and vehicle status notifying.
- Use relay to remotely control the vehicle.
- Multiple protocol support, OTA upgrade program.

Basic Specifications

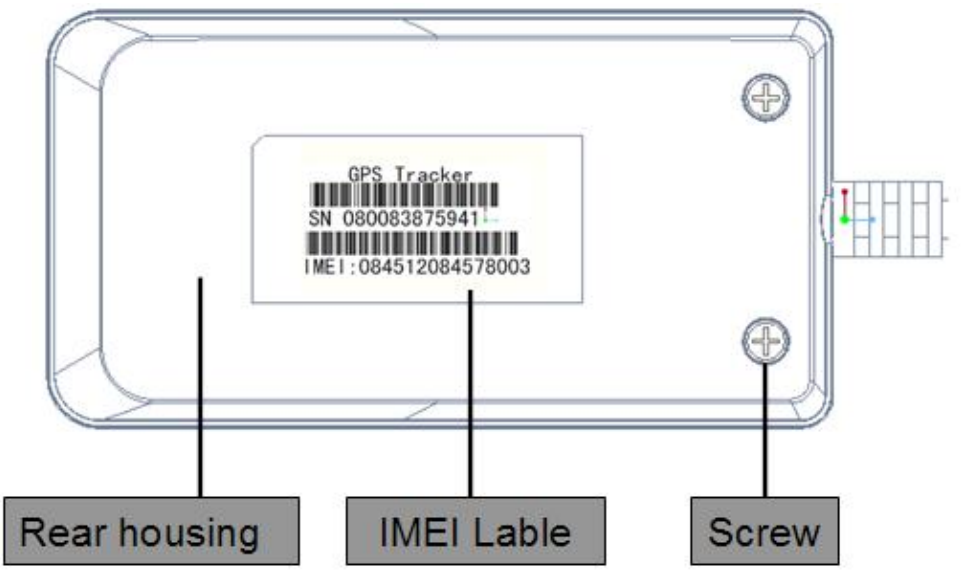
Voltage	12VDC/24VDC/48VDC/60 VDC
Standby Current	<10mA@12V
Work current	<30mA@12V
GPS positioning accuracy	15m
GSM positioning accuracy	100m
GPS Frequency	1575MHz
GSM Frequency	850/900/1800/1900MHz
Hot/warm/cold start time	<3s，<15s，<60s
Dimensions (mm)	71.8(L)X38.5(W)X10.5(H)
Operating temperature	-20℃~70℃
Operating humidity	20%～80%RH
Net Weight	42 g

II. Components and Accessories

2.1 Components



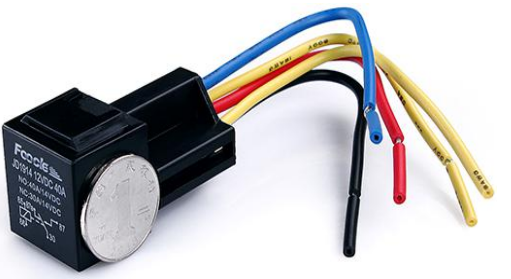
-Top Front-



-Top Back-

Accessories （reference pictures）

Power Cables （Default）



Relay （Optional）

Relay for remote cut off / resume oil, Please note that function need the device equipped with the matched accessories.

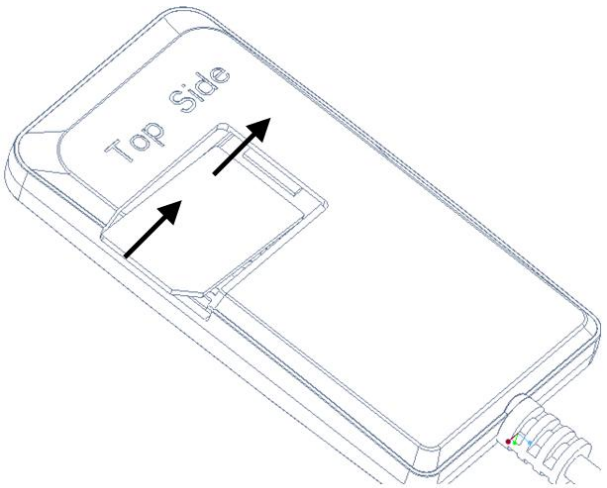
III. SIM card Installation

3.1 Before Installation

Check device and accessories are intact, or please contact your dealer;

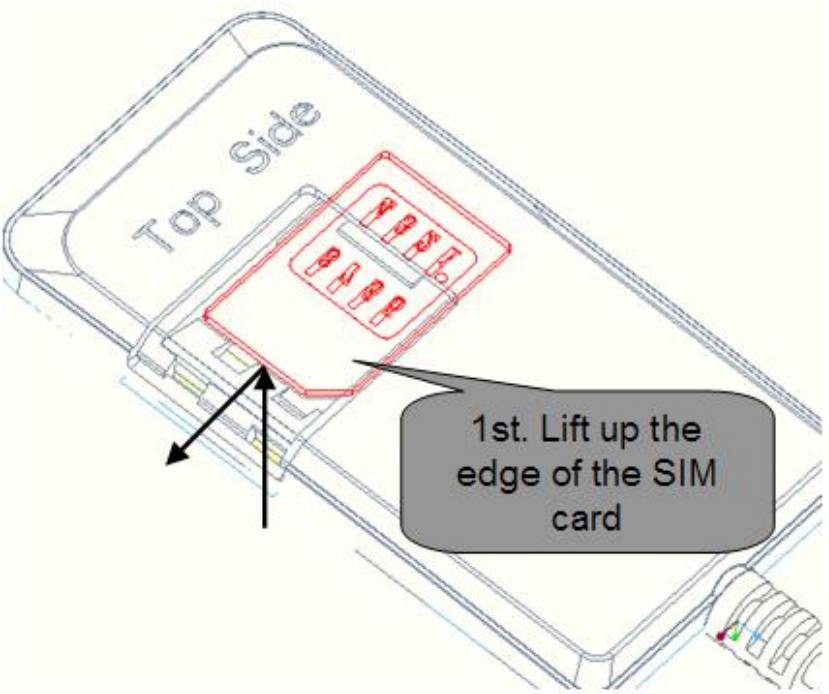
3.2 Install SIM card

A suitable SIM card needed for using terminal;



1. Insert the SIM card until cannot move it inside anymore;
2. Pull the SIM card back a bit;

3.3 Uninstall SIM card



1. Lift up the edge of the SIM card;
2. Pull out the SIM card.

Note:

- Please cut off the power before installing or uninstalling the SIM card.

- The SIM card should support GPRS and the GPRS should be opening.

- Inquiry by call needs the SIM card supporting the calling line identification presentation.

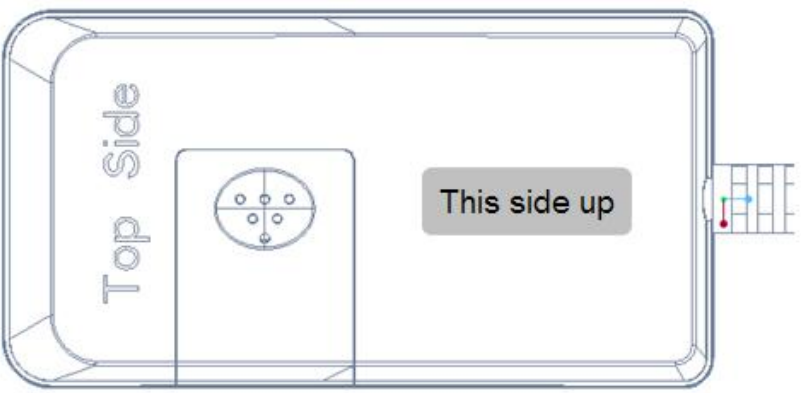
- If you enable the PIN code of the SIM card, please use your mobile phone to disable the PIN code.

- Please make sure that the SIM card has sufficient balance.

IV. Terminal Installation

4.1 Install terminal

4.1.1 Suggest to install terminal concealed by the dealer designated professional body.



Please make sure to install terminal with this side

upward, and use wide strong double-sided adhesive sponge to fix it.

4.1.2 Installation Notice

- Hide terminal properly inside the car body in order to avoid damages.

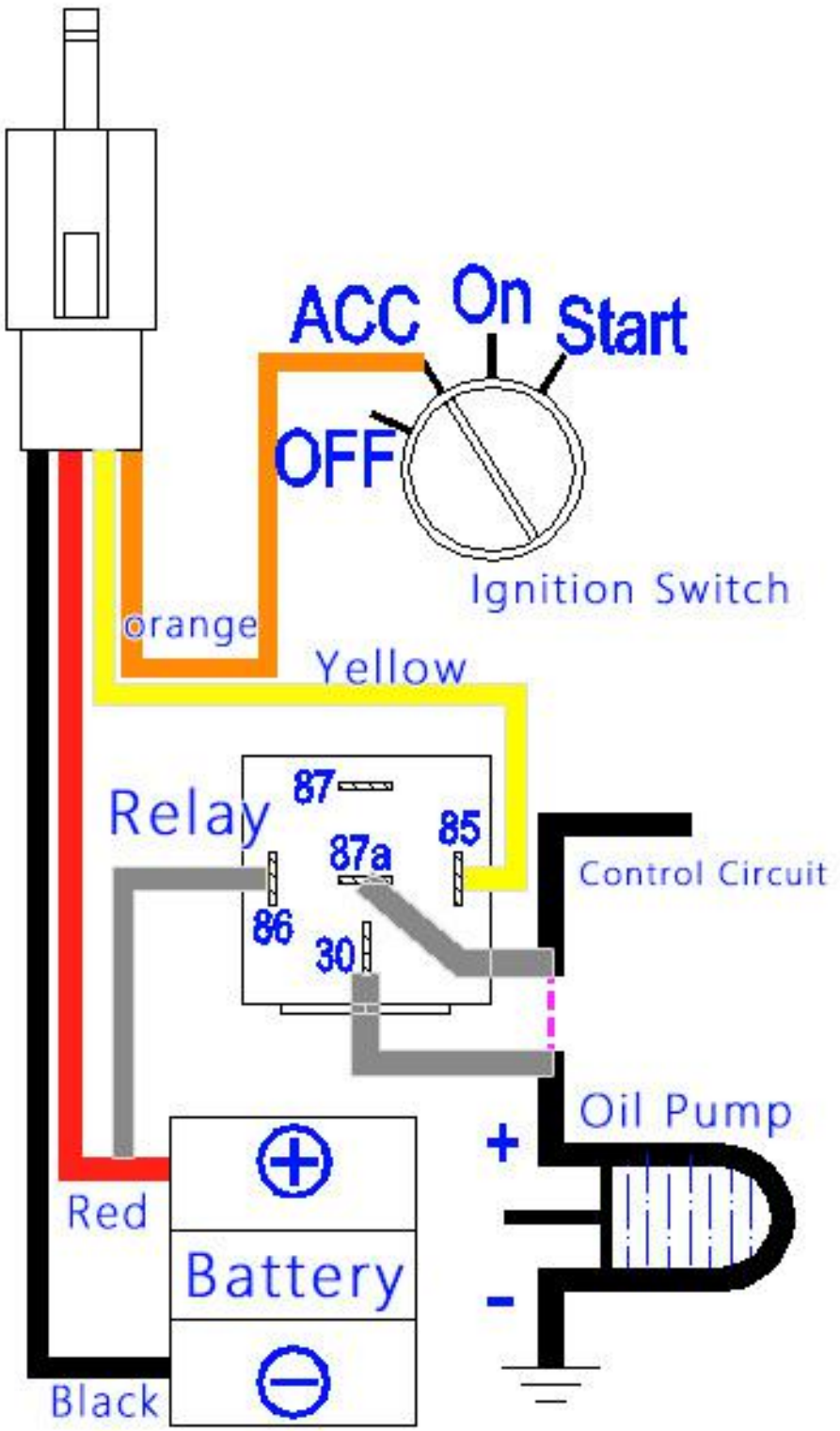
- Keep terminal away from RF emission sources such as backing radar, car burglar alarm and other vehicle mounted communication devices.

- Suggest to use wide strong double-sided adhesive sponge to fix it, or use cable ties and other liable methods to fix it.

- Device Built-in GSM antenna and GPS antenna, Installation should ensure that the receiving side facing up (towards the sky) without metal cover on the top of it, otherwise may weaken the antenna signal,Cause the device to not work correctly.

The recommended installation location:
1） The hiding place below the front windshield trim panel;
2） The hiding place around the front dash(if the surface is not made of metal);
3） The place under the rear windshield;

4.2 Terminal wiring definition



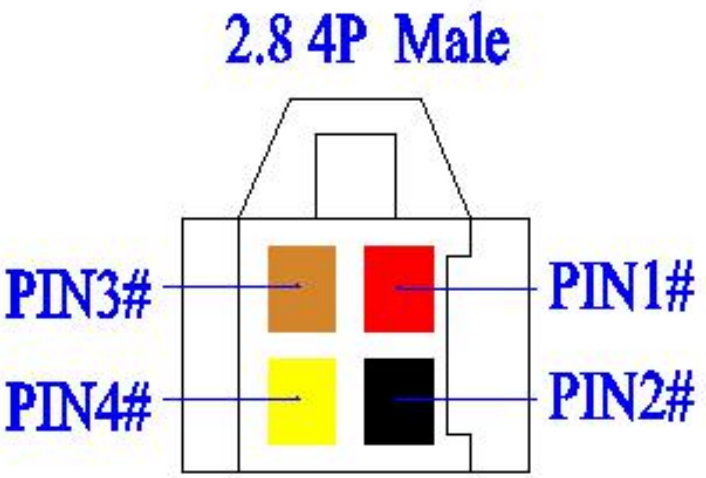
Total schematic wiring terminal

4.2.1 Power cables and other interface for remote control

The standard input voltage of terminal is 9V-60VDC, so please choose the our original power cables, the red cable is positive and the black cable is negative; Please ground the negative pole separately or ground it to ground connection, not to any other ground.

Connect the ACC cable (orange cable) to ACC switch of the vehicle, then the position server can get the information about the vehicle power; the ACC cable can also be connected directly to the positive pole of the vehicle power, then the position server think that the vehicle is always ignited.

Connect the 4# cable (yellow cable) to the 85 terminal(with small yellow cable) of the relay. Use cable ties to fix the relay to waterproof place, or use plastic bags to cover the relay..



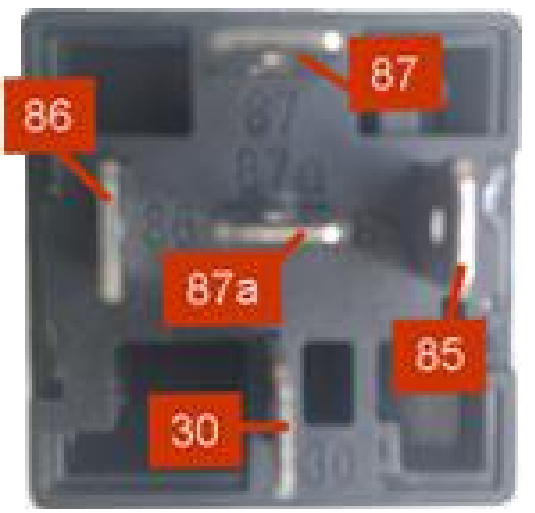
1#	Power +, Red	
2#	Power −, Black	
3#	ACC, Orange	
4#	Relay, Yellow	

4.3 Relay wiring

Relay wiring diagram shows how to wire the relay to control the fuel pump:

4.3.1 Connect the 86 port to the positive pole of the vehicle power (+12V/+24V), connect the 85 port to the 4# cable (Yellow) of terminal .

4.3.2 Cut off the positive pole of the fuel pump, next serial connect the positive pole to the 87a port of the relay, and connect another pole to 30 port, showing as in the figure.



Bottom of relay Wiring Diagram

Notice: Be sure that the voltage of the vehicle power should match up to the working voltage of the relay, or relay will be damaged.

V. Power on terminal

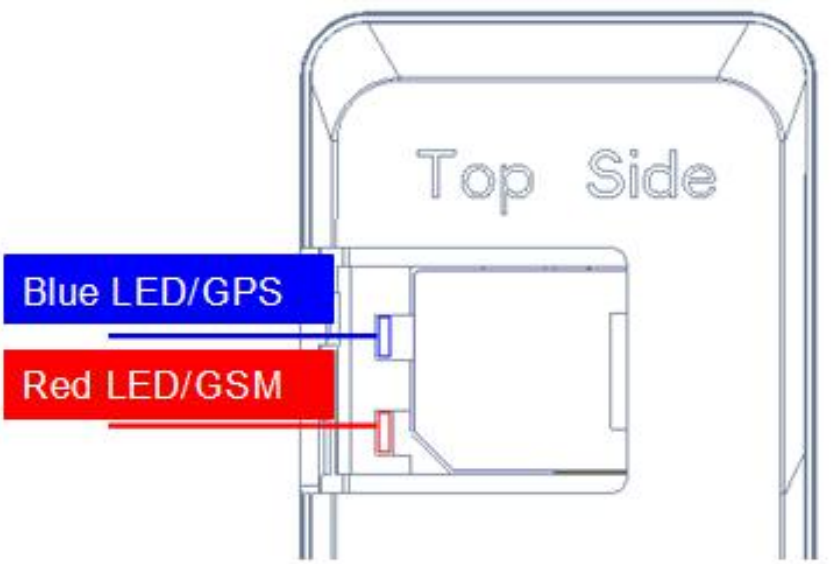
5.1 Power on

Power on: insert a valid SIM card and wire all the cables, then terminal power on itself.

5.2 LED Indicators

The red LED flickers fast when terminal is searching for GSM network, it flickers intermittently when terminal has registered GSM network successfully.

The blue LED flickers fast when terminal is searching for the GPS satellite signal, it flickers intermittently when terminal when terminal has searched the satellites and can be positioned.



1. Red LED(indicates GSM working state)

fast flicker	Searching for GSM network
intermittently flicker	GSM/GPRS works normally

2. Blue LED(indicates GPS signal state)

fast flicker	Searching GPS Satellites
intermittently flicker	GPS works normally

VI. Inquiry/Monitoring/Cut Oil

6.1 Inquiry by SMS

You can write a positioning SMS sending to terminal to inquiry terminal position, terminal will reply position SMS or map link. The SMS commands please refer to the Operation Commands

6.2 Inquiry by service platform

6.2.1 Web platform

You can login the service platform and Register & enter your ID and password to check the position of your terminal. Ask your dealer about the URL of Web platform.

6.2.2 Smart phone APP

You can use a smart phone to check terminal's

position.We have prepare for you the Android client (Android), Apple clients (IOS), please check with your dealer to get installation package.

6.3 Cut off/Recover Oil circuits

6.3.1 Cut off oil circuits

Server(GPRS) or Center number (SMS)can send cut-off fuel commands when needed. The fuel of the vehicle will be cut off on the premise of safety.

To make sure the safety of vehicle, the fuel of the vehicle will be cut off only if terminal has positioned by GPS and the speed of the vehicle is less than 20KM/h or the vehicle is not moving.

6.3.2 Recover oil circuits

Server(GPRS) or Center number (SMS) can send recover-fuel-circuit commands to terminal when needed, terminal will recover fuel circuits of vehicle.

VII. Set up terminal

Please refer to the 《**Operation Commands**》

VIII. Terminal Alarm

8.1 Vibration Alarm(only B type)

Conditions: There is a Vehicle Vibration.

Note: You need to set vibration sensitivity and time, there are arm / disarm switch.

8.2 Collision / Falling Alarm(only B type)

Conditions: There is a Vehicle Collision or it's falling down.

8.3 Speed Alarm

Conditions: When the vehicle over and below the set speed.

Note: You need to set the low speed limit and high speed limit.

8.4 Geo-fence Alarm

Conditions: when the vehicle entry / exit / across the Geo-fence.

Note: You need to set the conditions of crossing fence, fence types and so on.

Note: When above alarm occurs,terminal will send alarm to service platform, meanwhile send a SMS message to the device administrator number if the number is set up.

Note: 8.1 and 8.2 is the alarm for B type(add acceleration sensor component); 8.3 and 8.4 alarm parameters must be set before work, Please refer to the 《**Operation Commands**》

IX. Trouble shooting

9.1 Cannot connect to the platform

terminal is never online on the position server when installed at the first time. Please check terminal:

1） If the power cables are wired correctly? Pay attention to not connect them to the controlling cables of the vehicle.

2) If the SIM card is installed correctly? Please refer to the installation instructions.

3） Check the status of the LED indicators. If terminal is OK, the red LED and the blue LED will intermittently flick.

4) Inquiry the parameters of terminal via commands and check the accuracy of the parameters.

9.2 Offline status on the platform

First check if the LED indicators are OK, if cannot check them, you can check the SIM card following next steps:

1) call the SIM card of terminal and check if you can hear the connecting ring.

2） Check if the vehicle is in the area where there is no GSM signal.

3） Check if one terminal or all terminals are offline in the area where terminal is offline. If all terminals are offline, you should ask the network operator If the network is OK.

4） Check if the SIM card has enough balance.

5） If terminal becomes offline on the last day of one month, please check GPRS is closed or not.

6） Inquiry the parameters of terminal via commands and check the accuracy of the parameters.

9.3 Not positioning for a long time

If the GPS is active, but terminal cannot be positioned for long time, please check terminal:

1） Check If vehicle is in the place where there is no GPS signal.

2） The upside of terminal should be installed with face toward the sky.

3） The GSM and GPS signal may be weakened if terminal is installed in the place with electromagnetic wave absorption material(such as

metal blocks), special attention should be paid if there is metal thermal insulation layer or heating layer on the front windshield, so that the position accuracy will decline, and the severe ones will not be positioned.

9.4 Position drift is serious

Serious position drift will be found in places where GPS signal is poor. Please drive the vehicle to the open places.

9.5 Commands receiving abnormally

1） Check the commands format.

2） Check if the vehicle is in the places where there is GSM signal.

3） Check if the SIM card is properly installed.

X. Warranty Rules

10.1 Special statement

1） Technology change without notice.

2) If the color and appearance are inconsistent with those for the actual product, Please according to the actual device received.

3） Warranty card is only valid for terminals with the following IMEI.

4） Please take care of the warranty card and show it with the original purchase receipts when enjoying the warranty service.

10.2 Warranty period

One year warranty from the purchase date if it is not artificially damaged.

10.3 After sales

Any of the following circumstances not covered by the warranty, but may be appropriate to pay repair:

1） More than the warranty period.

2） Unauthorized removal or repair damaged.

3） Damage caused by improper installation, use, maintenance, custody.

4） The IMEI label is torn or Obscure.

5） Warranty certificate and product models do not match or warranty certificate be altered.

6） Damage caused by force majeure.

Warranty Card

NAME _____

TEL _____

Address _____

_____

Model _____

IMEI Number

Selling Unit _____

_____

Purchase Date

_____YY_____MM_____DD

Maintenance Records

Date	Description	Records	Completion Date	Engineer