# Speed Governor GPS Vehicle tracker
# Tachograph
# G-V803

# User manual

# I. Preface

Based on years of experience in vehicle electronic industry and a long term of hard work, our company has researched and developed GPS vehicle Tracker with tachograph and speed Governor function G-V803, which is a high performance digital and electric recording device with a set of embedded MCU.

The Speed governor is a newly designed function, when the car speed is trying to be more than a setted data, the engine will be slow down. It is works both for electronic & Mechanical speedometer, so that means is workable for all vehicles.

**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 water, humidity, high temperature, heavy dust or strong magnetism.
(2) Please prepare a valid GSM SIM card in advance.

**Warning:**

We strongly suggest user let the professional car electrician to install the system.

## II. Features & Functions

### 1. Features

❖ Real-time GPS tracking
❖ Real-time vehicle status monitoring
❖ Vehicle Immobilization Control
❖ GPS mileage report and mileage pulse report (Traffic black box)
❖ Accident doubtful points and record analyzing function
❖ Geo-Fence with 108 rectangle area
❖ Fleet management, 8 routes of vehicle tracking
❖ Two audio interfaces for microphone and handset
❖ Rich smart interface, can realize the automatic bus stops, the LED screen advertisement issue.
❖ Build-in printer for vehicle information printing
❖ The driver IC card identification
❖ More I/O interfaces for 19 User-Defined Report Alarm
❖ Build-in voice prompt and TTS speech broadcast
❖ Smart power protection
❖ Remote firmware upgrade via GPRS
❖ Dual data communication capability through GPRS and SMS
❖ TCP/UDP dual mode communication

| Basic Function | Detail |
|---|---|
| GPS Tracking | Real-time: fixed time return, return current GPS information in fixed interval. |
| | Fixed-distance tracking: fixed distance return, return current GPS data in fixed distance. |
| Speed limiter/Governor | When the car speed is more than 80kh/hr, the car will stop generally |
| Remote cut fuel | Remote control supply/cut fuel |
| Accident speed data | The real-time vehicle's running speed value and brake status in 20seconds before every parking, collecting one data every 0.2 seconds. |
| Parameter setting and checking | VIN, vehicle No., vehicle classification, driver's code, driver's license No., characteristic parameter. |
| Speed record | The terminal record the vehicle speed every 1 minute in the last 360hs. |
| Mileage statistics | Electronic mileage: the terminal calculates the driving mileage by the vehicle speed sensor. |

| | |
|---|---|
| ID record | Use IC card to record the driver's code and driver's license code to identify and record the ID. |
| Fatigue driving | Check whether the current driving achieve to the fatigue driving threshold value, and will have fatigue alarm |
| Printer function | Print the vehicle information(include vehicle No., driver's code, driver license No., print time etc) average speed in the last 15 minutes and fatigue driving record. |
| SMS | The monitoring center can send SMS to the terminal. |
| Listen-in | The center can monitor the voice information in the car |
| Hands off Voice communication | The terminal dial: Driver can dial telephone number by terminal preserved number. |
| | Pick up phone: can pick up the call from the center |
| SOS alarm | SOS function, driver can use this function in emergency. |
| Over speed alarm | Set the over speed alarm to the designated vehicle, if the driving speed over this value, it will alarm. |
| Power-save function | Into the preset save time, auto-shut down GPS function, it will auto-start when emergency occurs. |
| Blind area added upload | When in blind area, auto-save GPS information (1,000pcs), auto-upload when vehicle leaves blind area. |
| Remote-reset | The monitor center can remote reset the car terminal |
| Self-checking | When the terminal powers on, it will auto-check working status, and send the self-checking information. |
| Alarm mode | 3 ways: 1. Buzzer; 2. TTS; 3. Buzzer+TTS |

## 2. Functions

| No. | Function | Detail |
|---|---|---|
| 1 | Remote monitor function | Real-time tracking: GPRS online, real-time checking current position. |
| | | Real-time: fixed time return, return current GPS information in fixed interval. |
| | | Fixed-distance tracking: fixed distance return, return current GPS data in fixed distance. |
| 2 | Remote control cut off engine | Remote control supply/cut oil |
| 3 | Accident data | Accident spot data: remotely collect the last 10 seconds, the real-time vehicle's running speed value and brake status before every 20 seconds parking, collect one data every 0.2 seconds. |

| 4 | Parameter setting and checking | Remote parameter setting and check: VIN, vehicle No., vehicle classification, driver's code, driver's license No., characteristic parameter. |
|---|---|---|
| 5 | Status record | The terminal record the vehicle's driving status in 360 hours use<=1 minute as the interval. |
| 6 | Mileage statistics | Electronic mileage: the terminal calculates the driving mileage by the vehicle speed sensor. |
| 7 | ID record | Use IC card to record the driver's code and driver's license code to identify and record the ID. |
| 8 | Fatigue driving | Check whether the current driving achieve to the fatigue driving threshold value, and will have fatigue alarm |
| 9 | Printer function | Print the average speed, vehicle information(include vehicle No., driver's code, driver license No., print time etc) in 15 minutes when in parking status. |
| 10 | SMS | The monitoring center can send SMS to the terminal. |
| 11 | Listen-in | The center can monitor the voice information in the car |
| 12 | Hands off Voice communication | The terminal dial: Driver can dial telephone number by terminal preserved number. |
| | | Pick up phone: can pick up the call from the center |
| 13 | SOS alarm | SOS function, driver can use this function when in emergency situation |
| 14 | Over speed alarm | Set the over speed alarm to the designated vehicle, if the driving speed over this value, it will alarm |
| 15 | Power-save function | Into the preset save time, auto-shut down GPS function, it will auto-start when emergency occurs. |
| 16 | Blind area added upload | When in blind area, auto-save GPS information (1000 pcs), auto-upload when vehicle leaves blind area. |
| 17 | Remote-reset | The monitor center can remote reset the car terminal |
| 18 | Self-checking | When the terminal powers on, it will auto-check working status, and send the self-checking information. |
| 19 | Alarm hint | 3 ways to choose: 1. Buzzer; 2. TTS; 3. Buzzer+TTS |

## 3. Operation specification

### 1) Parameter setting
   a) Set the parameter by port when the car in parking status
   b) The parameter can be set wireless.

### 2) The basic parameter setting
After installed, the device has set up the system time, date, vehicle's characteristics etc. If you put this device in operation, you must set some vehicle's and driver's information.

Set the device's parameter: the vehicle's maximum speed limit, vehicle's No., VIN, vehicle's classification, fatigue driving time (default as 4 hours), the shortest relax time.

### 3) Data collection

You can use USB stick and RS232 port to collect the data. Data collection would not change or delete the saved data in running recorder.

USB download data operation:(you must formatting USB stick to FAT32 format before you use it). After inserting USB stick, the display will show USB connection status, you can press display—advanced instructions "import data to the USB". If the device finish downloading the data, the display will show import data successful.(Note: do not remove the USB stick before download finishes).
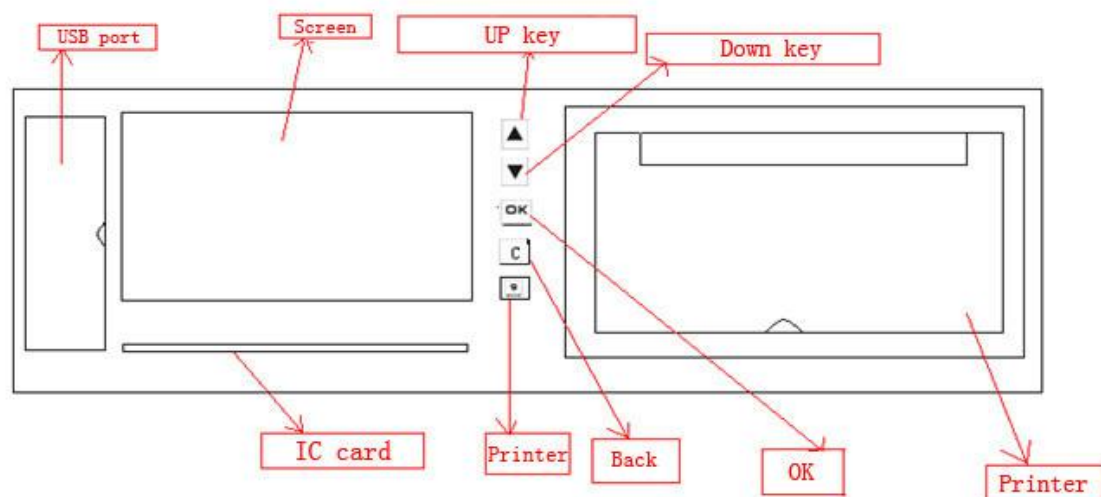
The port data collection: Using the computer with data analysis software or the handheld device to collect data.

### 4) Data print

When you in the parking status, you can press "**print**" key, then printing will be finished automatically.
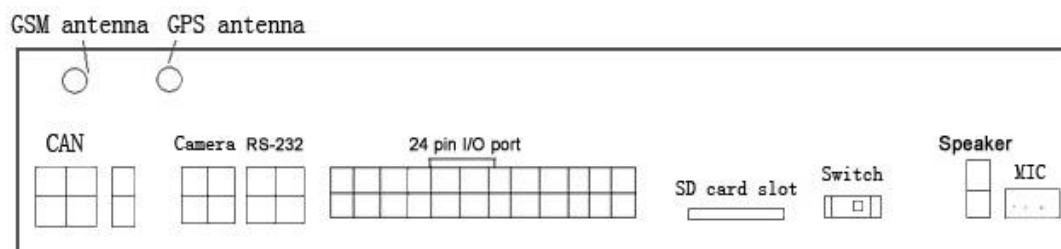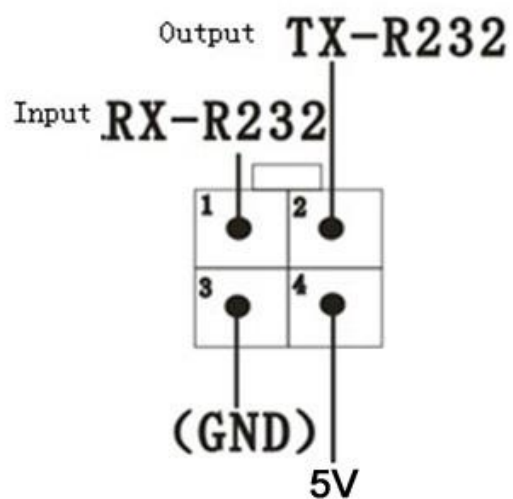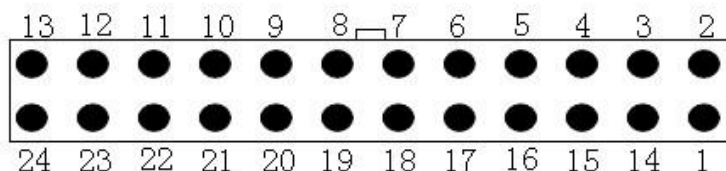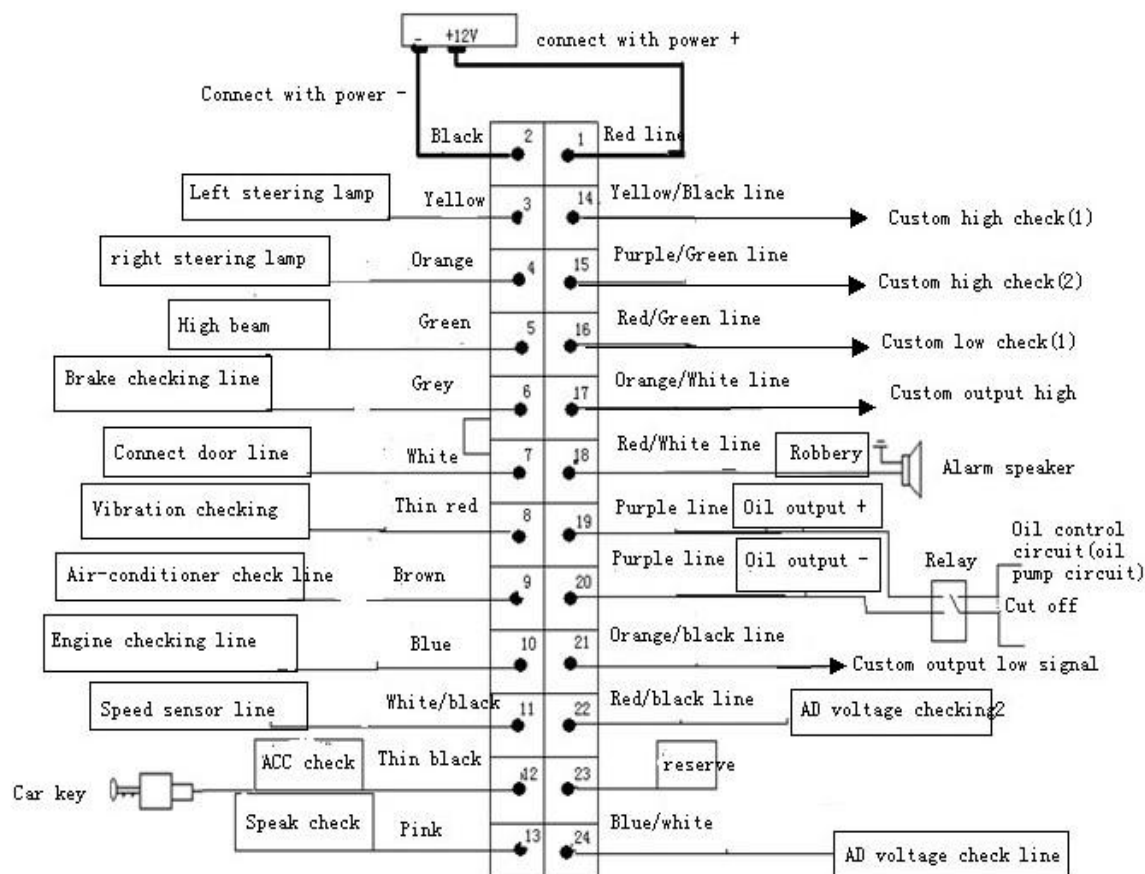
## III. View & Wiring Diagram

**1. View**

## 2. I/O ports



## 3. Serial ports

## 4. Wiring diagram

| Pin | Function | I/O | Specification | Note |
|-----|----------|-----|---------------|------|
| 1 | Power + | I | DC 9V~36V | |
| 2 | Power - | I | Negative signal | |
| 3 | Left steering lamp | I | Detect 8V-36V effective | |
| 4 | Right steering lamp | I | Detect 8V-36V effective | |
| 5 | High beam line | I | Detect 8V-36V effective | |
| 6 | Brake signal line | I | Detect 8V-36V effective | |
| 7 | Magnetometer signal line | I | Check door open or not | |
| 8 | Vibration sensor check line | I | Check taking iron effective | |
| 9 | Air-conditioner check line | I | Detect 8V-36V effective | |
| 10 | Engine check line | I | Detect 8V-36V effective | |
| 11 | Speed sensor detect line | I | Detect electronic impulse effective | |
| 12 | ACC checking line | I | Detect 8V-36V effective | |
| 13 | Horn check line | I | Detect 8V-36V effective | Used for horn checking alarm |
| 14 | Custom high checking line 1# | I | Detect 8V-36V effective | When in security, use this center control to lock door |
| 15 | Custom high checking line 2# | I | Custom high checking line 1# | When in security, use this center control to open door |
| 16 | Custom low checking line 1# | I | Detect taking iron effective | |
| 17 | Custom output high | O | Output voltage is the supply voltage 2V | |
| 18 | Robbery checking | I | Detect taking iron effective | |
| 19 | fuel control output + | O | External connect with | |
| 20 | fuel control output - | O | relay to control the | |

| | | | signal line | |
|---|---|---|---|---|
| 21 | Custom output low signal | O | Output ground signal that means taking iron | |
| 22 | AD voltage checking 2 | I | Checking 0-24V voltage | |
| 23 | Ground | I | | |
| 24 | AD voltage checking | I | Detect 0-24V voltage | |

## 5. Installation debug specification

You should insert an effective SIM card that supplied by driver to the relevant position of the host device after you finished installing the line connection checking. You can start to debug after the system initialization(stay 10 seconds). (Note: the sim card should have GPRS data service)

## 6. Menu structure diagram:

**Menu**

- Preserved No. → Client group → Code group →
  - SMS already read
  - Configuration achieved
  - Load has completed
  - Already dispatch cars
  - Car arrived behind time
  - Already arrived safety
  - Already return safely
  - Ask change road drive
  - Come across bad weather
  - Traffic jams in the front
  - Change the plan/task
  - Police check car in front
  - Ask for help

- SMS → Read SMS →
  - Preserve SMS
  - Received SMS

- Call history →
  - Dial No.
  - Received calls
  - Unreceived calls
  - Clear all records

- Advanced →
  - Display setting
  - Check driving time
  - Speed calibration
  - Password management
  - Download data
  - Debug mode

- Parameter setting →
  - Check basic parameter
  - Check car parameter
  - IC card information
  - Recent speed record
  - Recent fatigue drive record

- Factory setting →
  - Set the terminal No.
  - Set UDP parameter
  - Set TCP parameter
  - Set DB44 IP
  - Set APN
  - Set main center No.
  - Set vice center No.
  - Set sensor factor
  - Set factory code
  - Set operator's code
  - Set speed mode
  - Vehicle factory reset

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## 7. How to Set on the LCD Screen Menu

### 1) Preserve No.

The preserved number is the number preset in the terminal.

Menu ⟶ Group team ⟶ Group numbers options (you can dial the numbers by the preserved number of the terminal)

### 2) SMS

This device can save the SMS, and send SMS.

Menu ⟶ SMS ⟶ Read SMS ⟶ Preserved SMS(The preserved SMS inG-V803)
⟶ Received SMS(save the received SMS)

### 3) Call history record

Menu ⟶ Call history ⟶ Read SMS ⟶ Dialed call
⟶ Received call
⟶ Unreceived call
⟶ Clear all records

## 8. Advanced options

### 1. Display settings

Menu ⟶ Advanced options ⟶ Display settings ⟶ Backlight mode settings(set the display's backlight), contrast ratio

### 2. Driving time query

Menu ⟶ Advanced options ⟶ Check the driving time(check the driver's driving time)

### 3. Speed calibration

Menu ⟶ Advanced options ⟶ Speed calibration(calibrate the terminal's speed)

### 4. Password management

Menu ⟶ Advanced options ⟶ Password management
⟶ Modify the factory password

⟶  Modify the User's password

## 5. Download data

Menu  ⟶  Advanced options  ⟶  Download data
When you connect with USP cable, then you can download these materials from the terminal: accidents doubt points file, USB file, USB upgrade program(you should input 666666 when you download the terminal program),

## 9. Parameter settings

### 1. Check the basic parameter

Menu ⟶ Check the parameter  ⟶ check the basic parameter: check the car terminal version, check UDP parameter, TCP parameter, DB44 IP, APN, the terminal ID, Main center No. fatigue driving time, fixed time sending time, over-speed alarm, the factory code, operator's code, vehicle VIN code, vehicle license No., vehicle classification, total mileage, sensor factor, GPS speed, and the speed type etc.

### 2. Vehicle parameter query

Menu ⟶ check the parameter  ⟶ vehicle parameter query: vehicle No., vehicle's classification, vehicle VIN No., speed type, total mileages.

### 3. IC card information

Menu  ⟶ check parameter ⟶ check the IC card's information, such as IC card code etc.

### 4. The recent speed record

Menu  ⟶ check parameter  ⟶ check the recent speed record in the last 15 minutes parking time

### 5. The recent fatigue driving

Menu  ⟶ check parameter ⟶ check the recent fatigue driving record

## 10. Factory settings

### 1. Set the terminal ID

Menu  ⟶ Factory settings  ⟶(input factory password)⟶  Set the terminal ID

Ex. you input 13812345678          Note:only can input the 11-digit number.

### 2. Set the UDP parameter

Menu ———▶ Factory settings ——— (Input factory password) ———▶ up UDP parameter
Set up the UDP IP and port and the terminal online, Format: 0,IP,port,    Ex.
0,192.168.001.001,8888 (If the IP is less than 3 bits, you can add 0 before that)

### 3. Set the TCP parameter

Menu ———▶ Factory settings ——— (Input factory password) ———▶ Set TCP parameter, Set
the terminal online, TCP IP and port, Format:0,IP,port Ex.0,192.168.001.001,8888 (If the IP is less
than 3 bits, you should add 0 before that)

### 4. Set DB44 IP

Menu ———▶ Factory settings ——— (Input factory password) ———▶
Set the terminal online, DB44 IP and port, Format:0,IP,port Ex.0,192.168.001.001,8888 (If the IP
is not the 3 bits, you must add 0 before the numbers)

### 5. Set APN parameter

Menu ———▶ Factory settings ——— (Input factory password) ———▶ et APN parameter.
Set the terminal online's APN access point. The terminal default APN is CMNET, you can modify
your APN.

### 6. Set the main center No.

Menu ———▶ Factory settings ——— (Input factory password) ———▶ Main center No. Set
GSM's main center number, 11 bits

### 7. Set secondary main center No.

Menu ———▶ Factory settings ——— (input factory password) ———▶ center number
Set GSM vice-center number 11 bits

**8. Set the sensor coefficient**

Menu ⟶ Factory settings ——(input factory password)——▶ the sensor's factors, The sensor coefficient' configuration (the vehicle's characteristics coefficient), such as 680, every vehicle's coefficient are different, you must set it according to different conditions.

**9. Set the factory code**

Menu ⟶ Factory settings ——(input factory password)——▶ the factory code Modify the factory code, such as 0010.

**10. Set the service provider code**

Menu ⟶ Factory settings ——(input factory password)——▶ the operator code. Set the service provider's code, Ex. 0012, Note:every service provider's code is different

**11. Set the speed mode**

Menu ⟶ Factory settings ——(input factory password)——▶ the speed mode

**12. The car terminal factory reset**

Menu ⟶ Factory settings ——(input factory password)——▶ Factory reset settings

**13. LCD display factory reset**

Menu ⟶ Factory settings ——(input factory password)——▶ display factory reset. Reset the display save parameter to the factory default value.

## IV. Technical Parameters

| Items | Parameter |
|---|---|
| Dimension | 190mm*155mm*58mm |
| Weight | 600g |
| Input Voltage | DC 12V~36V |
| Operation current | 200mAh/12V (3,000mAh when printing) |
| Operating temperature | -20℃~75℃ |
| Humidity | 5%~95% |
| Work Time | 2 hours in normal mode |
| LCD screen | 2.3"(2.8*5.5cm) |
| Integrated thermal Printer | 1 |
| Trip mileage measurement range | 0～999,999.9km |
| Monitoring speed range | 0～255km/h |
| Accident speed data time interval | 0.2 second |
| Speed error | 1km |
| GSM frequency | GSM 850/900/1800/1900MHz |
| GPS chip | U-blox |
| GPS sensitivity | -159dB |
| Positioning accuracy | 10 meters |
| GSM Frequency | Quad-Band 850/900/1800/1900Mhz |
| Interface | 15 Digital Inputs<br>1 Relay output<br>4 Outputs<br>4 RS232 interface<br>2 Analog inputs<br>1 Voice interface<br>1 Mic<br>1 SD card slot |
| Speed error | <1km/h |
| Driver identification | IC Card |
| Switch signal | 8(vibration, brake, door magnetic, left steering light, right steering light, high beam, ACC, Fuel control) |
| Accident time | 0.2 second |

| interval | |
|---|---|
| Monitoring speed range | 0～255Km/h |
| GPS | Position accuracy: <10 m;<br>Position time: <15 seconds<br>Re-capture: <45 seconds<br>Hot start: about 20 seconds<br>Cold start: <=150 seconds |
| GPRS | GPRS Class 10: Multi-time buttress function<br><br>Support GSM900/DCS1800<br><br>GSM07.07, GSM07.05 and strength AT command;<br><br>Launch power: Class　10; |

## V. How to Set Speed Governor

Please **prepare a normally closed relay corners .**

### 1. Introduction of speed signal connection

For electronic speedometer, please connect pin 11 wire with speed sensor.
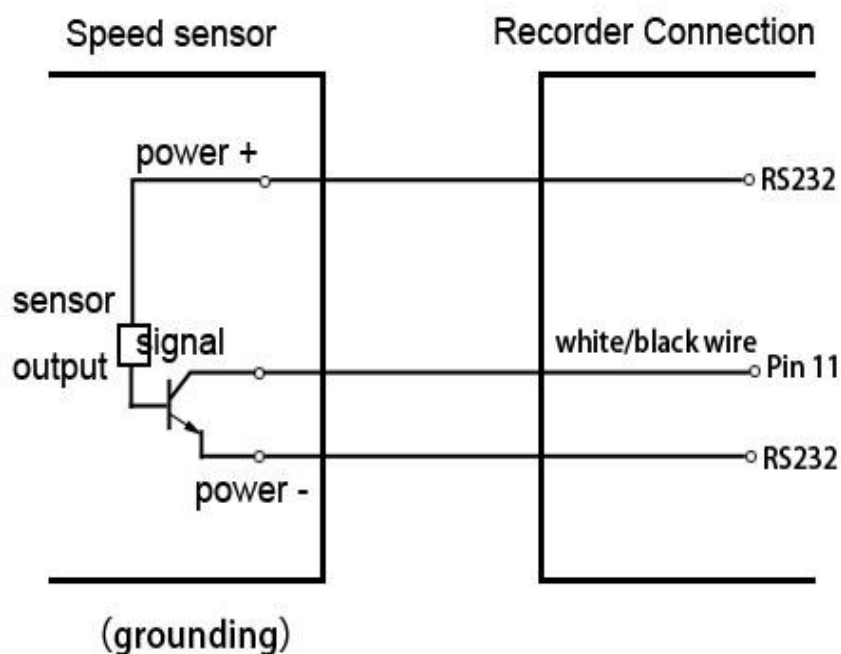
For mechanical speedometer, please install a Hall speed sensor in extra, wire diagram is as left diagram



P.S.: Hall speed sensor should connected with DC 5V, please not connect it with vehicle power.

NOTICE:　IF Under GPS Speed mode, no need to connect the speed signal wire.

### 2.Wiring diagram
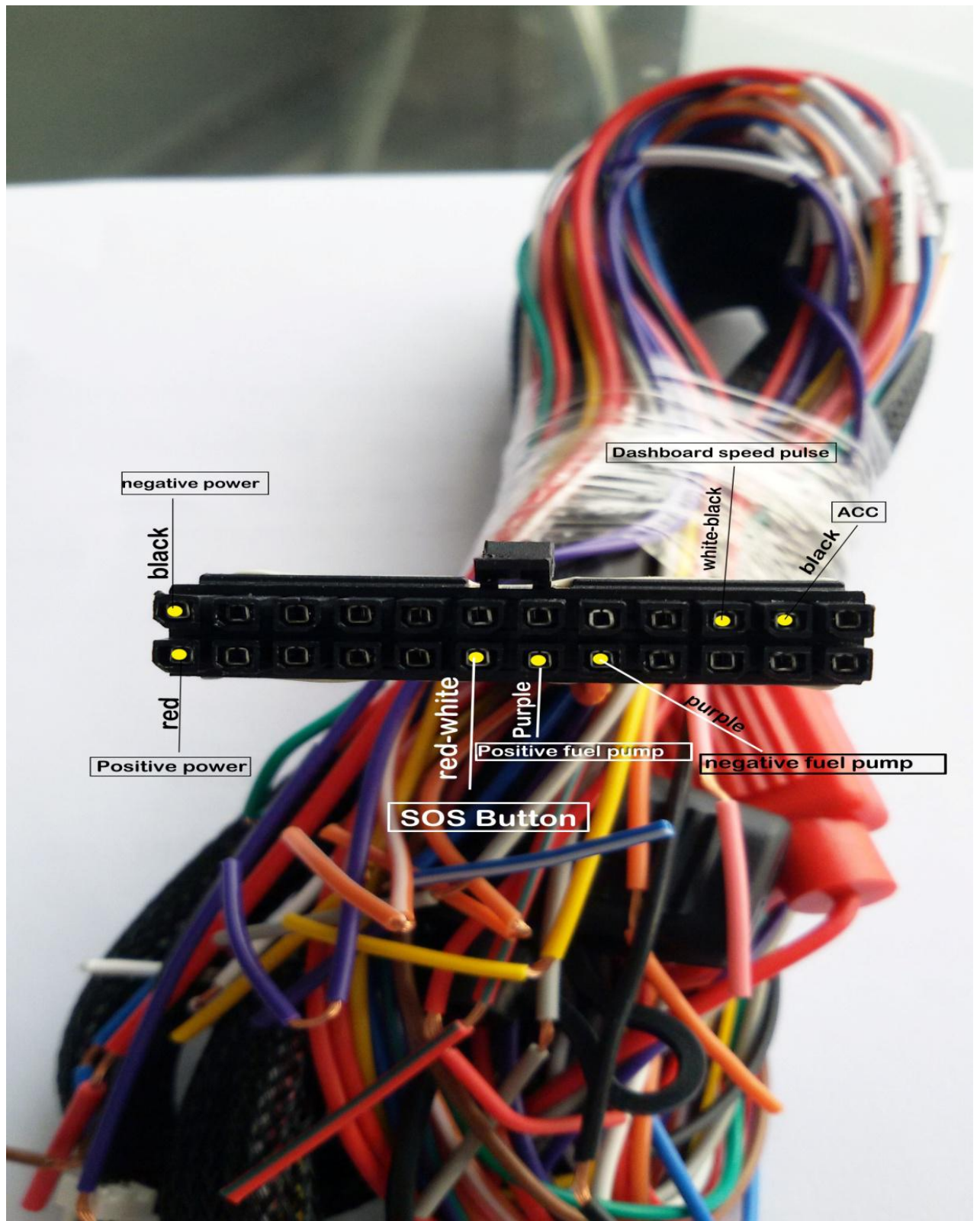
Please find the corresponding car cable connection.

P.S. : pin1 pin2 connected to the car battery.

        pin11 is connected to the vehicle speed sensor.

   *(if choose gps speed mode,do not connect the speed sensor wire）*

        pin12 is connected to the car ACC line .

        pin19 pin20 is connected to the relay 's positive and negative levels.
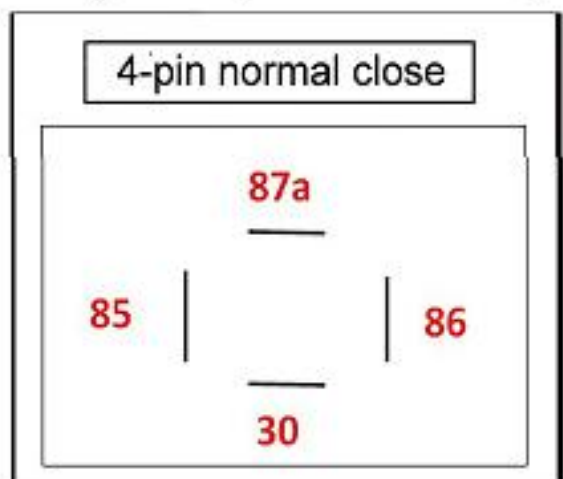
## 3. Wire connection of relay

# Wire Connection of Relay

positive 6-24V DC

negative 6-24V DC

Engine Ignition Loop

High-Voltage Inglan winding

## P.S.:

**About Relay:** There is 2 kinds of connectionof relay's output control (P1 & P2). Relay can cut off engine ignition loop or fuel pumper's power supply loop.

### About Wire connection

1. pin1 ( coarse red line ), pin2 ( thick black line ) connected to the car battery positive and negative , to ensure the power supply T01 device .

2. Step two : pin11 ( white black line ) connection speed sensor line dashboard.

3. pin12 ( thin black line ) connection ACC ON

4. pin19 and pin20 ( all purple line ) connected to the positive and negative pump relay . Which received positive pin19 , pin20 then negative .
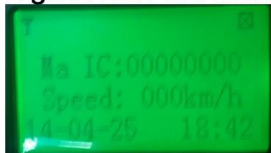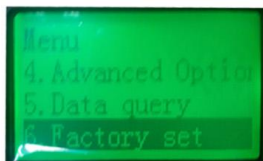
## Relay Detail (12V or 24V DC)

4-pin normal close

87a

85        86

30

## 4. Set Speed Mode & Sensing Factor

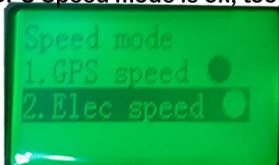Set speed & Sensing factor

1. go to LCD Screen manu

Ma IC:00000000
Speed: 000km/h
14-04-25    18:42

2. Factory Set

Menu
4.Advanced Option
5.Data query
6.Factory set

3. input password 66666666

Input Pass:
********
1234567890+,.@*#

4. Factory Set-set speed mode

Factory set
*Set speed mode
*Terminal factory
*Screen factory
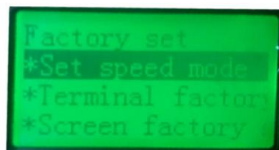
5. Factory set-set speed mode-Elec speed
(GPS Speed mode is ok, too)

Speed mode
1.GPS speed ●
2.Elec speed ○

6. elec. speed set ok:

Speed mode
1. Set ok
2.

7. Factory set-sensing factory

Factory set
*Sensing factor
*Factory code
*Operator code

8. Set sense as "0000"
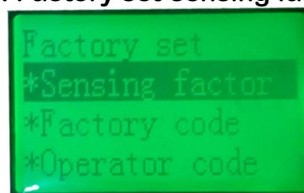
Set sense:
0000
1234567890+,.@*#
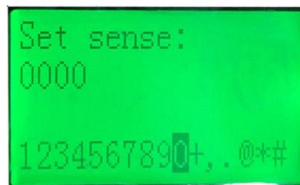
9. Sensing factory set ok:

Se
00 Sedn o
1234567890+,.@*#

   notice: Whether you choose GPS speed mode , or electronic speed mode , you need to set the correct speed sensing factor.make sure speed value displayed on the LCD screen is the same as speedometer.

   After the speed sensor coefficient set up, please keep 20kmh(or>20 kmh) and driving more than 5 minutes, the system will automatically set up a proper sensing factor. If you think that is not accurate enough , you can repeat the above steps in the 3 step-----keep 20kmh(or>20 kmh) and driving more than 5 minutes, so there will be an accurate speed sensing factor.

   after the completion of the above work , you can begin a formal test .
   In the right environment , the speed reaches 80kmh, you will find that the speed limit function starts running.

# VI. Online Tracking Setup

## 1. Set online

1)   To edit 1st SMS and send to terminal as below
<SPBSJ*P:BSJGPS*T:219.133.034.198,6690*U:219.133.034.198,6688*A:CMNET*N:1341
8181818>
SPBSJ is fixed header
P: Password
T: TCP IP&Port
P: UDP IP&Port
Note: IP should 3 digits. If not, please add 0 instead, e.g. 034 instead of 34.
A: APN
N: GPS tracker No. (We always use SIM card number)
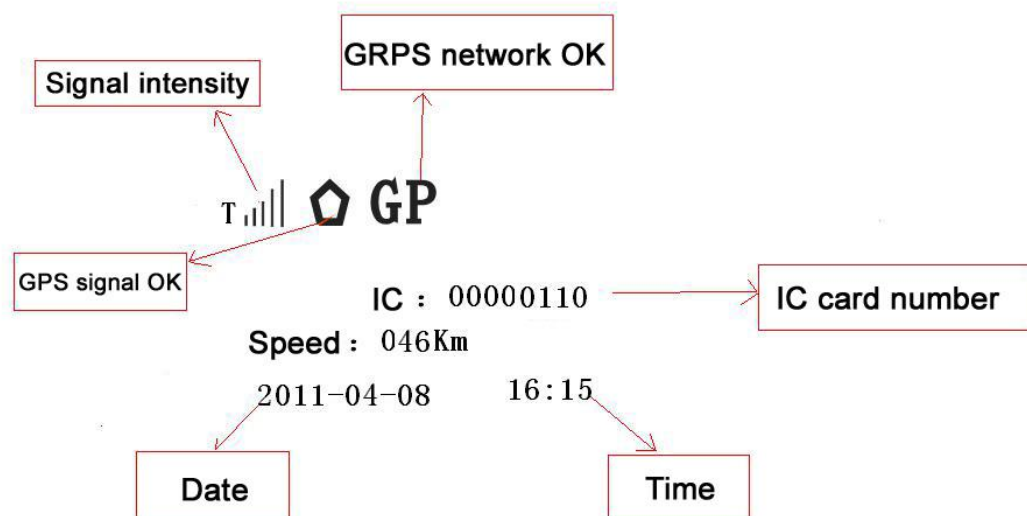
2)   To edit 2nd SMS and send to GPS tracker as below
<ACC ON 0010>
This is for setting data interval when ACC ON as 10 seconds and then one SMS "ACC ON
OK"sent back to cell phone.

3)   To edit 3rd SMS and send to terminal as below
<ACC OFF 0030>
This is for setting data interval when ACC OFF as 30 seconds and then one SMS "ACC OFF
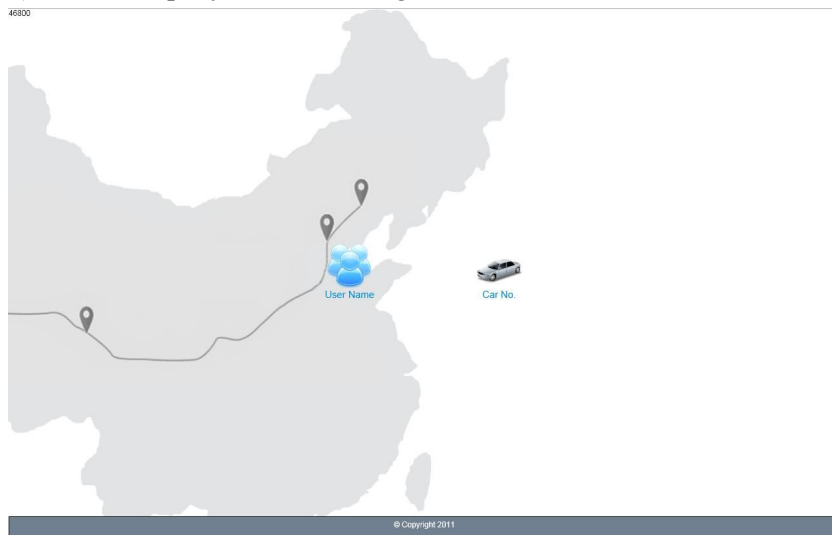OK" sent back to cell phone.

## 2. Check icon on screen

## 3. Check on platform

1) Our company's GPS tracking server add:174.142.53.69:8089/
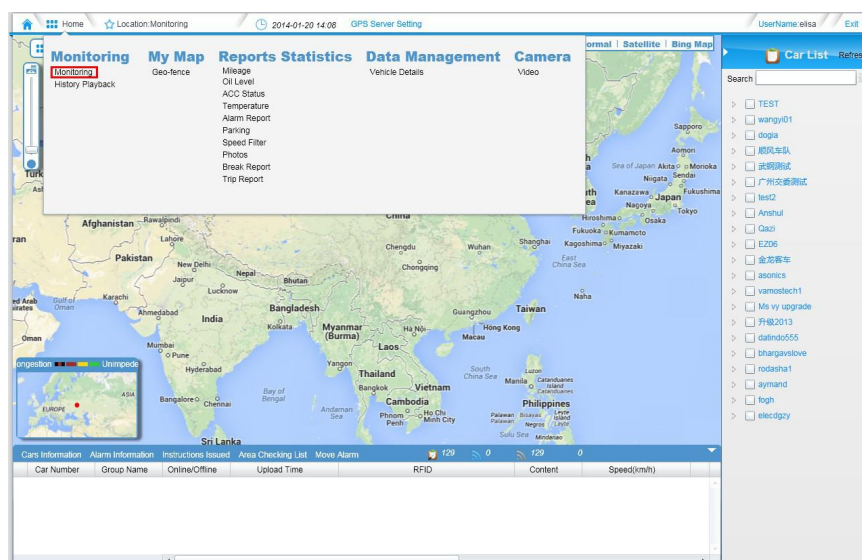


2) Input account number and password



3) Click "Home" and select your car.

4) Check the car's status



## VII. Note

◆ Do not put the device into the water.

◆ Keep the vehicle's storage battery full, working normal.

◆ Don't try to press the "SOS alarm button", you should be responsible for the false alarm.

◆ When the car under the buildings, tunnel or other tall buildings, it will influence receiving of GPS signal, GPRS, CDMA and cause the device working abnormal; when the car runs out of area, the device working will recovery automatically.

◆ The power supply of the device is between 9V-36V, recommend the working voltage is 12V or 24V. You should guarantee whether the power system is beyond in this range, the terminal will break when over the maximum voltage.

◆ When the outside temperature over the terminal normal working range, the terminal will stop

![logo](Shenzhen Dragon Bridge Technology Co,Ltd Web:www.roadragon.com)

working.

◆ Do not pull out the antenna when charge the battery to the terminal in order to avoid the terminal broken.

◆ Do not fix it by yourself when you come across the abnormal situation, the manufacturer will not guarantee these conditions as below: not use the original accessories to connect with the terminal or pull out every parts' connection.

## VIII. After-sale service

The goods will be maintained free under one year warranty，unless the conditions as below,
（1）Not use the products in accordance to "User manual"
（2）Damaged by human cause- dismounting, breaking
（3）Damaged by force majeure- fire, waterlog, crash, electronic shock

The repair fee will be confirmed and inform seller after receiving defective goods

## VIIII. Freight

The buyer shall bear the freight charges on return shipping; the seller bears the freight charges back to seller.
If only a few products need to be shipped back, we recommend DHL;
if at certain large number, we recommend postal service.

**Note:**
Our technicians will keep in touch with seller after receiving the defective products.

And buyer shall provider all the necessary information needed.

## X. Packing list

**Standar Package**              **Optional accessories**

G-V803 Vehicle tachograph * 1pc       Fuel sensor
GPS antenna * 1pc                Temperature sensor
GSM antenna * 1pc                 SOS Button
I/O cable * 1pc                  Mic.
Microphone * 1pc                  Earphone
IC card * 2 pcs                  Relay
Mounting kit * 1pc                 Speaker
                        Handset Phone
                        Camera