GPS Tracking Device

Model NO.: M508

User Manual

Version 1.5

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Notes:

- Please mount the device steadily on the flat place before using;
- Please make sure the voltage value is right before connecting with battery, and placing the wires to where shouldn't be trodden;
- Please power off when plugging or taking out of any module or connector;
- Please keep the device dry and don't let any liquid fall into the device in case any damage caused in the device or circuit;

If any problem caused as follows, please turn to professional technician:

- When power wire, keyboard, or socket are damaged;
- When liquid infiltrating into the device;
- When the device work unusually or cannot resume to normal even operated according to the instruction;
- When the device cannot work as usual after falling, throwing or breaking;
- When there is obvious damage in the device.

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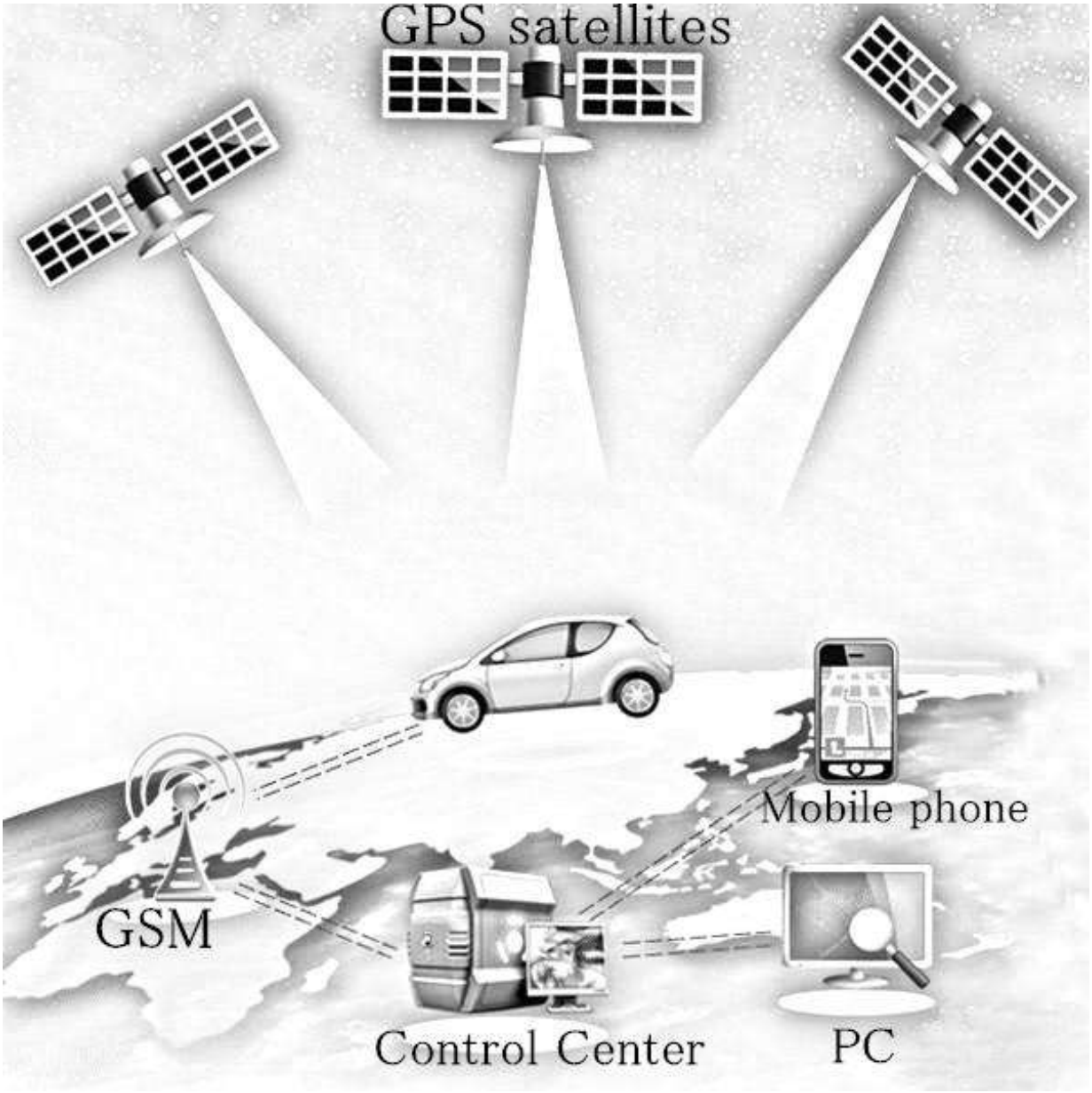
1. Product Introduction

GPS Tracking device mainly consists of two parts such as GPS module and GSM module. GPS module is for getting location data from satellite, and GSM module is for transferring data to server so that people can check the information via PC or mobile phone. Our GPS Tracking device M508, with the best quality, stable performance and versatile functions，can be applied to various kind of fleet management like construction trucks, rental cars, logistics vehicles and public transportation, anti-theft system and security purpose.



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2. Characteristics

1) Small size, easy to install;
2) Accurate GPS positioning, dynamic positioning deviation is less than 5 m;
3) GPRS and SMS tracking mode, adopt UDP / TCP communication protocol in GPRS mode;
4) Get current location immediately, and support real-time tracking (GPS data uploading at interval);
5) Two way voice communication via handset/dispatching screen;
6) Two way SMS communication via Mobile and PC software;
7) Voice monitoring;
8) Protect the device from high level voltage;
9) Resend data from signal dead zone;
10) Remotely disable engine;
11) 2 digital inputs for detecting the status of engine, door, air condition, etc.;
12) Remotely control door open/close.
13) SOS alarm, power-off alarm, over-speed alarm, parking alarm, Geo-fence alarm, fatigue driving alarm
14) Fuel changing alarm;
15) Temperature changing alarm;
16) Mileage statistics;
17) Remote update firmware;
18) Connect with oil collector/uncuttable fuel sensor/cuttable fuel sensor/ultrasonic fuel sensor to detect fuel consumption remotely;
19) Connect with temperature sensor to detect the temperature;
20) Three serial peripherals to connect with accessories:camera, RFID device and ultrasonic sensor.

3. Specifications

3.1、Hardware parameter	
working voltage	8VDC～36VDC
Working current	50mA~160mA
GSM module	Four Band: GSM 850/900/1800/1900Mhz Quectel M50
Communication protocol	UDP/TCP(can customize)
GPS module	Ublox chipset

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GPS sensitivity	-159dBm
GPS frequency	L1, 1575.42 MHz
C/A coding	1.023 MHz chip rate
Channels	20 channels for tracking
Position accuracy	10 meter, 2D RMS
Speed accuracy	0.1 meter/second
Time accuracy	GPS synchronization
Default data	WGS-84

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Recover	Average 0.1 second
Hot start	Average 1 second
Warm start	Average 38 second
Cold start	Average 42 second
Height limit	18,000 meter (60,000 feet) max
Speed limit	515 kilometer/second (1000 knots)max
Acceleration limit	Less than 4g
Expansion peripheral	Peripherals can be accessed by an extension (such as: Handle / scheduling screen / camera etc.)
3.2、Others	
Work temperature	-20°～ 70° C
Storage temperature	-30°～ 85° C
Humidity	5% ～ 95% non-condensing
Terminal size	10.1×6×2.4 cm
Inside battery	Continuing working not less than 4 hours
LED light	Red: power status; yellow: module status

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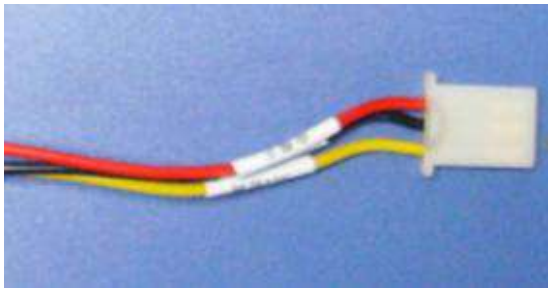
4. Connector Description

4.1 Power interface



Description

pin	color	function explanation/connection method
1	red	Power positive input, the working voltage 9VDC ~ 36VDC, connect the positive of car battery;
2	black	Power negative input, connect with the negative of vehicle battery;
3	yellow	Check ignition status，connect to car ACC cable ;

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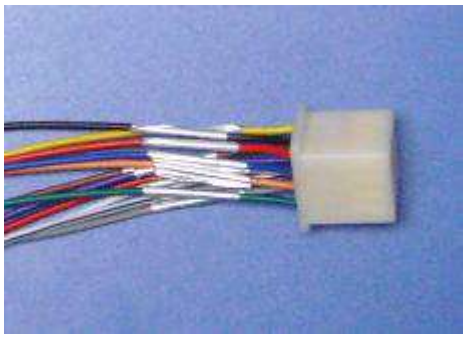
4.2 Expanding Interface 1



Description

pin	color	function explanation/connection method
1	red	SOS alarm input, low-level triggered alarm, directly connect with the wire of SOS button
2	black	Relay negative input, connect with the white wire in relay
3	yellow	Relay positive input, connect with the yellow wire in relay
4	blue	HV(high-level signal detection,) input positive voltage to detect, which should be 5DC~input power supply, connecting with effective high-level signal wire.
5	purple	GND of SOS alarm wire
6	brown	SOS alarm indicator signal, drive LED, when alarm is triggered, the LED will be on.
7	orange	Central lock cable for control door close
8	white	LV(low-level signal detection, it is described as A/C on/off signal detection).
9	Redish black	5VDC power (max output current: 220mA)
10	green	Positive pole for oil collecting signal, connecting with the added sensor of fuel volume or original sensor of vehicle
11	grey	Oil collecting control signal wire (when connecting with oil collector), please note: this wire are unable to connect with ground.
12	black	AD signal detection, detect the temperature.

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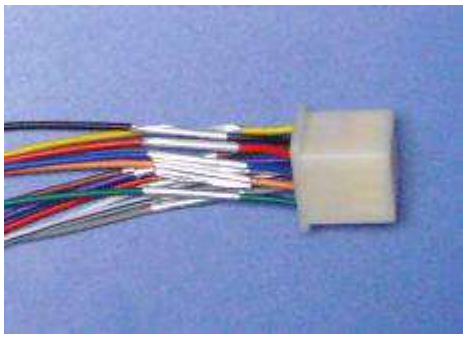
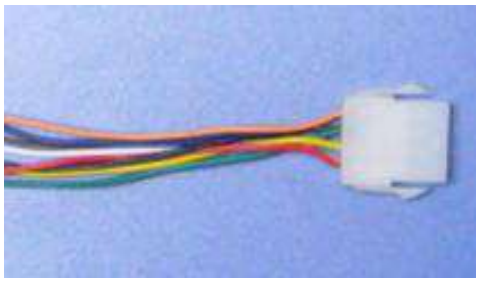
4.3 Expanding interface 2



4.4 Expanding Interface 3(Handset)



Description

pin	color	function explanation/connection method
1	red	Power positive output, 5VDC
2	yellow	RXD, serial output, RS-232 level, the baud rate 19200bps;
3	green	TXD, serial output, RS-232 level, the baud rate 19200bps;
4	orange	Detectaphone positive input, MIC＋ (with Orange line lead with the monitor DC)
5	white	Detectaphone negative input, MIC－
6	blue	Headphone positive output, SP＋
7	brown	Headphone negative output, SP－
8	black	Power negative output

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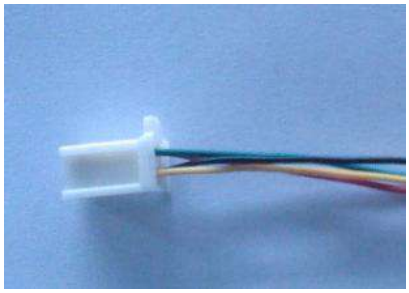
4.5. Expanding Interface 4(Serial camera)



Description

pin	color	function explanation/connection method
1	red	+5VDC power
2	black	GND
3	yellow	RXD , terminal serial port for data-reading, the baud rate 9600bps;
4	green	TXD , terminal serial port for data-typing, the baud rate 9600bps;

4.6. Expanding Interface 5 (LED AD Screen)

Description

wire	color	function explanation/connection method
1	green	TXD , terminal serial port for data-typing, the baud rate 9600bps;
2	yellow	RXD , terminal serial port for data-reading, the baud rate 9600bps;
3	black	GND

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5. Web based tracking online activation

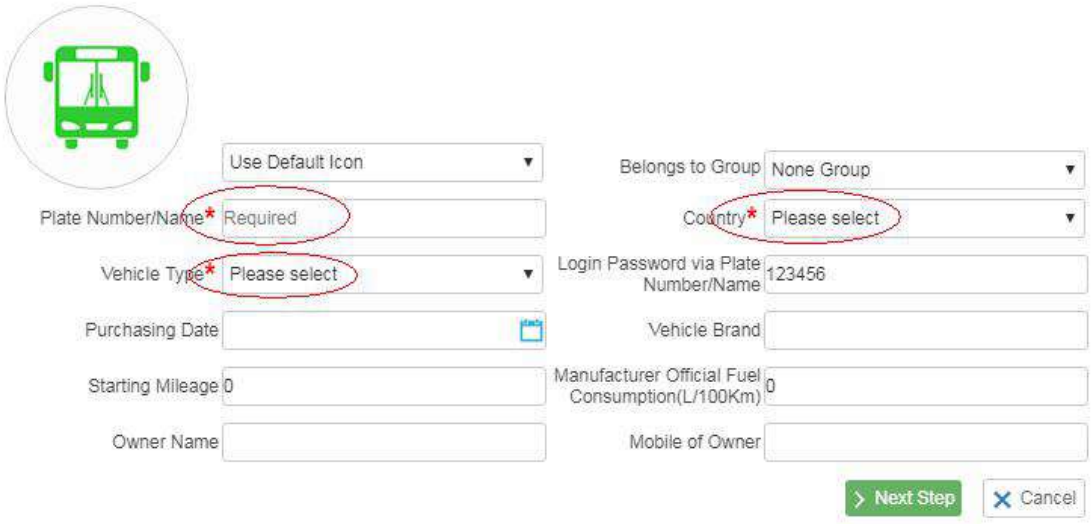
5.1 Open website **www.overseetracking.com** and login with the user & password that created by Rope

5.2 Click **Information Management**

5.3 Click **Vehicle Tracker List** and you will see all your vehicles are listed there. Please note, to add more devices, please contact your sales.

Please check the **Tracker Status**, if it is **Unactivated**, please click **Activate**. If it is **Activated**, please click **Edit**.

5.4 Click **Activate**, please fill in the blanks marked with red *. You also can fill in other blanks to complete the device information.



5.5 Click **Next Step** and fill in the requested blanks.

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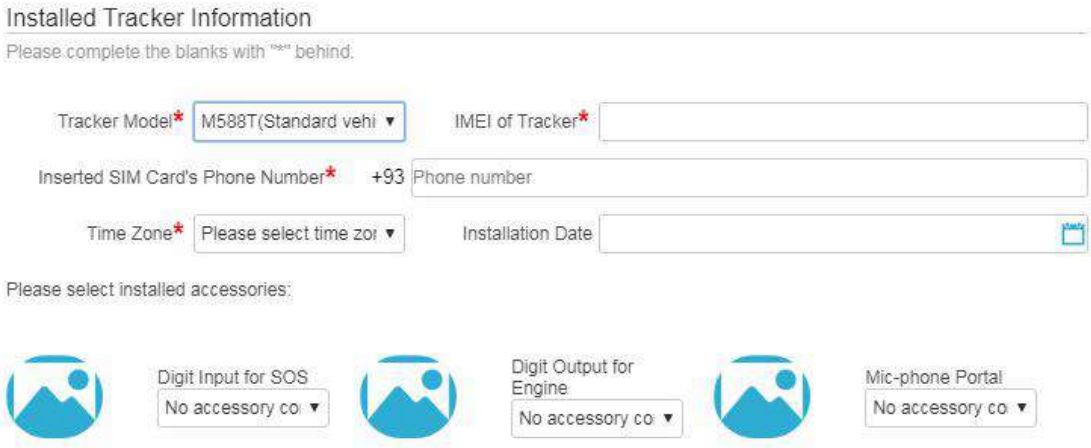
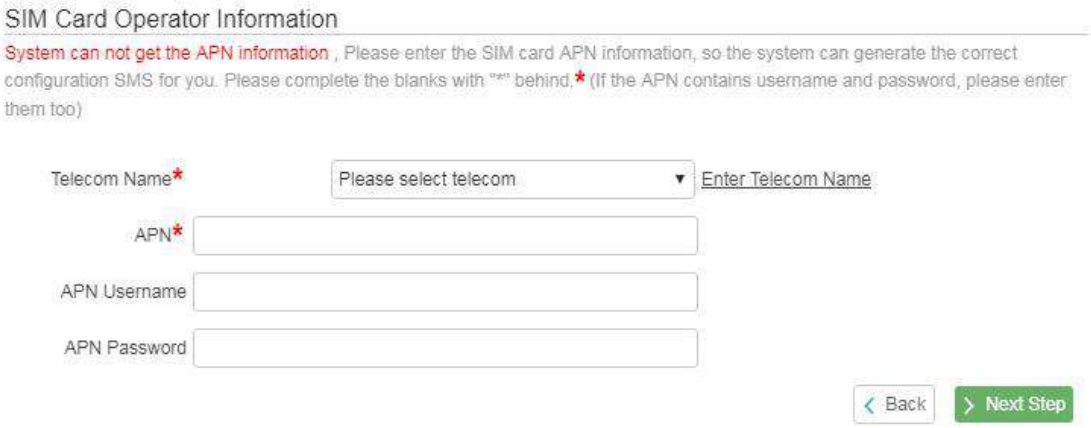
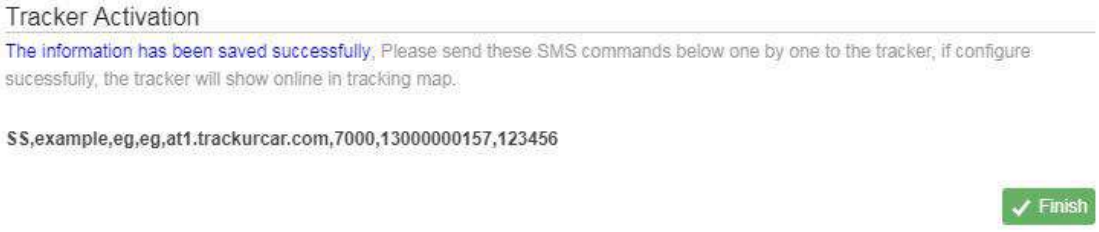


5.6 Click **Next Step** to fill in sim card APN information. Please select the telecom name, if the telecom is not listed there, please click **Enter Telecom Name** to fill in the sim card telecom name.



5.7 Click **Next Step**, OVERSEE gives the configuration SMS to you. Please copy it and send it to the gps device, after you receive reply from the gps device, it should be online.



5.8 Click **Finish--Tracking Map** to see if the gps device is online or not.

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6. Standard Accessories

Power Line, 9PIN Expanding Line 1, 9PIN Expanding Line 2, SOS Alarm Line, GPS Antenna, GPRS Antenna, Velcro, Warranty Card, Return Receipt of Warranty Card, Qualification.

7. Optional accessories

7.1 Temperature Sensor

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7.2 Relay

7.3 Serial Camera

7.3 RFID device

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7.4 Fuel Sensor

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