GPS Tracking Device

Model NO.: M508

User Manual

**Version ： Rope-E17021701**

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.

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.
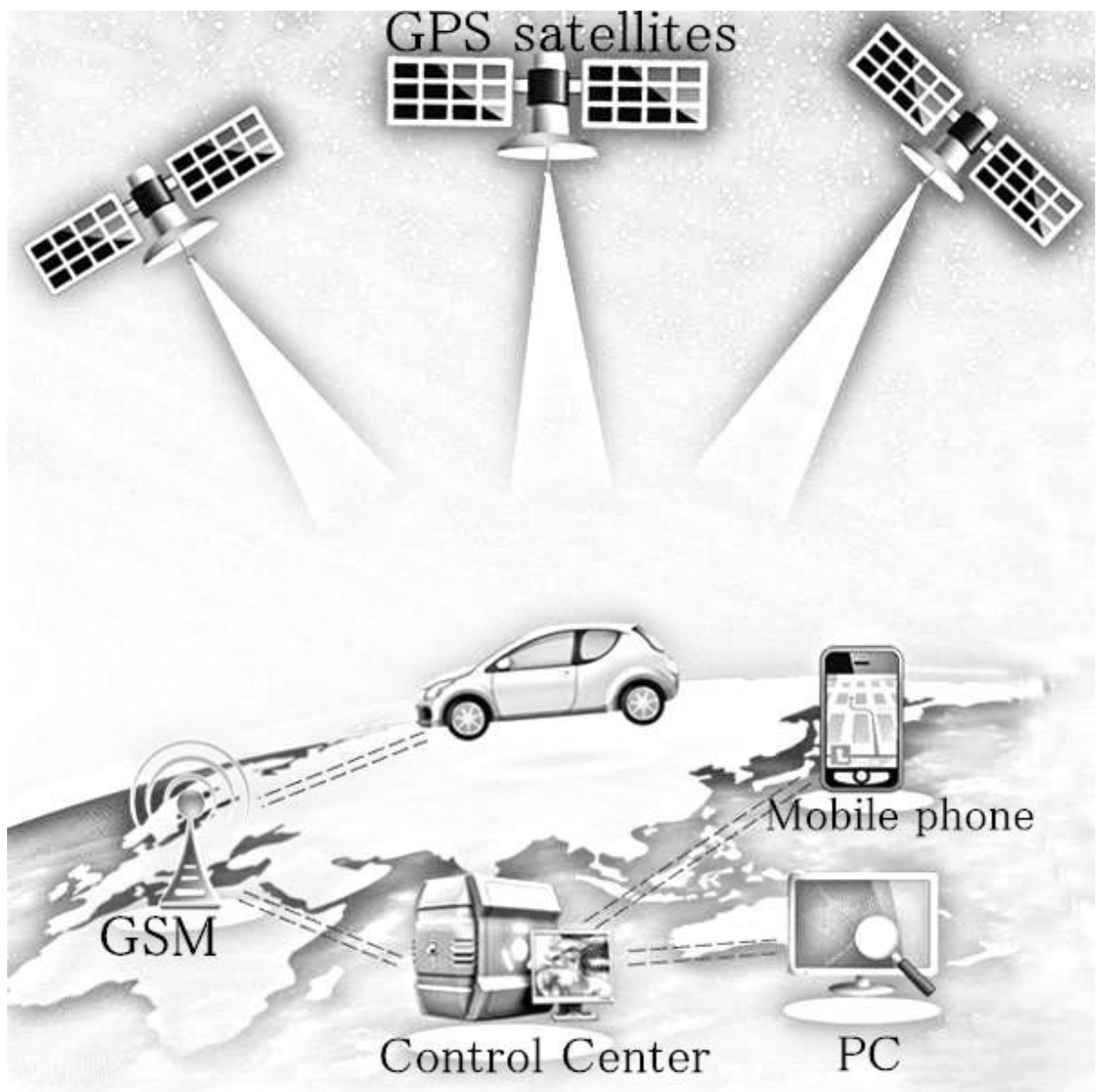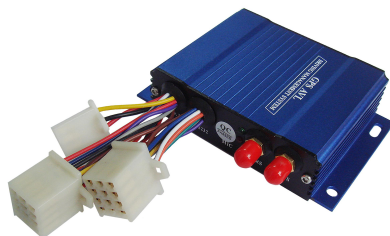

Picture1-1

2．Characteristics

1) Metal cover;

2) External antenna;

3) Track by SMS or GPRS;

4) Real time tracking at intervals;

5) Resend data from signal dead zone;

6) Voice monitoring;

7) Two way voice communication;

8) SOS alarm;

9) Low power alarm;

10) Over speed alarm;

11) Geo-fence alarm;

13) Illegal start alarm;

14) Parking alarm;

15) Idling alarm;

16) Tired driving alarm;

17) Fuel or temperature monitoring;

18) History playback;

19) Mileage statistics;

20) Reports statistics;

21) Remotely update firmware;

22) Serial ports for 3 peripherals.(Three serial peripherals to connect with accessories: handset, scheduling screen, camera, LED, navigation screen, RFID device and ultrasonic sensor.)

2.1 Specifications

Items	Parameters
GSM Module	Quectel M50
GSM Frequency	850/900/1800/1900 MHZ
LBS Positioning Accuracy	100-500m
GSM Antenna	External
GPS Chipset	U-blox 7020
GPS Sensitivity	-159 dBm
GPS Frequency	L1, 1575.42 MHZ
Channels	20 channels examine track
GPS Positioning Accuracy	5-10m, 2D RMS
GPS Antenna	External
Speed Accuracy	0.1m/s
Time Accuracy	Synchronize with GPS
GPS Data	WGS-84
Hot Start	<1s
Warm Start	<38s
Max Altitude	18000m
Max Speed	515m/s
Gravity Acceleration	<4g
Working Voltage	8VDC～50VDC
Working Current	50Ma~160Ma
Operating Temperature	-20℃—70℃
Humidity	5%—95%
Size	96mm × 55mm × 26mm
Simcard	Normal simcard
Battery	Rechargeable lithium polymer battery 380mAh
Internal battery Standby	>4h
Input	3pcs (including ACC detection)
Output	2pcs
A/D input	1pc
Serial port	3pcs

2.2 Interface Description

Picture 2-2

2.3 Power interface
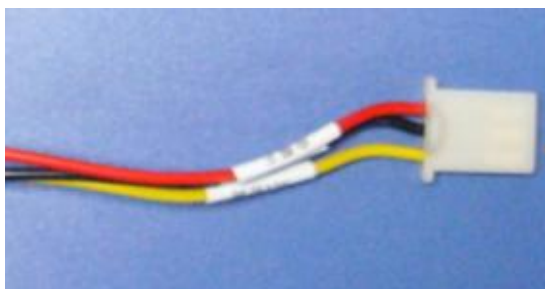
Picture2-3

Description

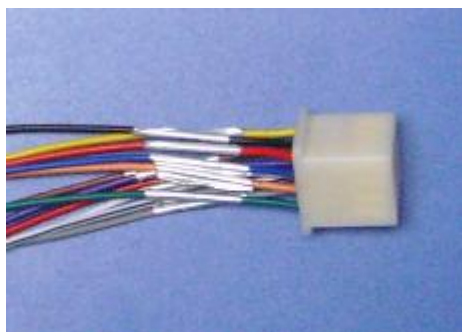| pin	color	function explanation/connection method
1	red	Power positive input, the working voltage 9VDC ~ 36VDC, connect the positive of car battery;
2	black	Power negative input, connect with the negative of vehicle battery;
3	yellow	Check ignition status，connect to car ACC cable ;

## 2.4 Expanding Interface 1

Picture 2-4

Description

pin	color	function explain/connection method
1	orange	Analog input for fuel or temperature sensor use
2	red	SOS alarm input, low-level triggered alarm, directly connect with the wire of SOS button
3	brown	SOS alarm indicator signal, drive LED, when alarm is triggered, the LED will be on.
4	white	HV1(high-level signal detection, it is described as illegal door-open, illegal engine-start signal detection), input positive voltage to detect, which should be 5DC~input power supply, connecting with effective high-level signal wire.
5	Green	High level output
6	purple	GND of SOS alarm wire
7	yellow	Relay positive input, connect with the yellow wire in relay
8	black	Relay negative input, connect with the white wire in relay
9	blue	LV(low-level signal detection).

2.5 Expanding interface 2


Picture2-5

2.6 Expanding Interface 3(Handset)
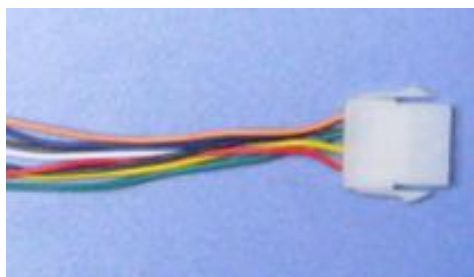
Picture2-6

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

2.7. Expanding Interface 4(Serial camera)
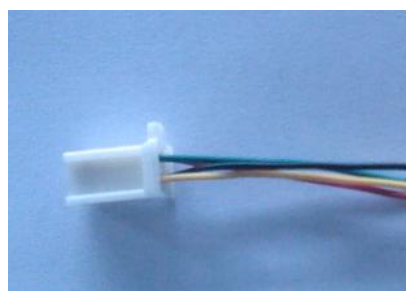
Pictuer2-7

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;

2.8. 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

3.Method of installation

3.1. Preparation before installation

3.1.1 Open the packing box to check whether the type of device is correct and whether the accessories are included, or else please contact your distributor.

3.1.2 Choose SIM card: each device needs to insert a GSM SIM card.

Please refer to the distributor's suggestions to choose the SIM card.

3.1.3 Installing SIM card into the tracker, open the device with screwdriver and put the SIM card into the tracker (do not insert the SIM card backwards).

Note:

Power off before installing or removing the SIM card

The SIM card should have GPRS credit

Ensure the SIM card is able to send and receive SMS

3.2 Installation

The device installation is covert. Please refer installation to an auto electrical contractor.

NOTE:

3.2.1 To prevent theft of the device, it should be installed as covertly as possible. Covertly installation is suggested.

3.2.2 Avoid placing the device close to higher power electrical devices, such as reversing radar, anti-theft device or other vehicle communication equipment;

3.2.3 The device should be fixed into position with cable ties or wide double-side tape.

4. Web based tracking online activation

The GPRS web based tracking platform allows real time tracking with the latest Google maps.

Service platform log in website : http://211.154.139.208:8000/webgps/

Vehicle management platform website ：http://211.154.139.208:8000/vms/

After you added device successfully on the VMS platform , you can send the SMS Commands to activate device

1.   Set IP and PORT

SIM COMMAND :

SS,*APN*,*APN_Username*,*APN_Password*,*IP*,*PORT*,*System_number*,*Phone_number*,*Password*

E.g.:

SS,*CMNET*,**,**,*211.154.139.208*,*8880*,*13512345002*,*+8613418776340*,*123456*

Notes:

   If the APN has no username and password, please leave it blank, the system number should be 11 digits and begin with 13, the factory password for SMS setting is 123456.

5. SMS Configuration

Function	Command	Notes
Change SMS command setting password	C,*old_password*,*new_password* Eg : C,*123456*,*666666*	Default password is 123456 Replied SMS: Config OK=Set successfully Config failed=fail to set

Check the current location by SMS	T,*password* Eg:T,*123456*	After sending this command to device successfully , it will reply a location Google Map Link, you can check where the car is by clicking Link .
Remotely Restart	Format: R,*PASSWORD* Eg : R,*123456*	After receiving this command, the device will reboot after 1minute.
Anti-theft Command	Format: ARM,*password* Eg ：ARM,*123456*	If set anti-theft alarm, it will send illegal engine-start alarm to the monitoring cell phone No. via SMS when ACC status is on. It will send illegal moving alarm to the monitoring cell phone No. via SMS when ACC OFF and vehicle keep moving more than 10m.
Cancel Anti-theft Command	Format:DISARM,*password* Eg : DISARM,*123456*	
Require the Latest Location by Call	PE,*password* Eg ： PE,*123456*reply English address Eg :PN,*123456* close this feature	If you want the device reply the latest Location to your phone when you call the number on the device, you can send this command to realize this function. It is similar to the rollcall function. But if you opened this function, every time you call the number, you will get a location reply.
Disable Engine	CLOSE OIL,*123456*	To ensure the safety of the driver and the car, this command is valid only under two conditions: the GPS is located; the speed is less than 20km/h.
Enable Engine	RESTORE OIL,*123456*	The device will enable the engine after receiving the command
Voice Monitoring	AUDIO-EN,*123456*	Open Auto Voice Monitoring
Close voice monitoring	AUDIO-DIS,*123456*	Close Auto Voice Monitoring (Factory Default)

6．Trouble shooting

6.1. After installing it in the first time, if device cannot get connected with platform server, at this time it is "logged off" status in platform.

Follow the instructions one by one as below:

1) Call the device to see what happens.

   It rings: go to the next step.

   It not rings:

a) check whether the SIM card installed correctly or not. Check whether the connection of power-line is correction or not . (Details: If the users are testing the device in office or at home, M508 has to connect with 12V DC external power supply. If it is tested in the car, make sure the installer connect all the cable correctly.)

b) Check the LEDs' status. In normal working status, the LED on the main board will light up.

c) Check whether the vehicle is in no GSM area, such as basement;

2) Check whether the device reply after sending SMS command.
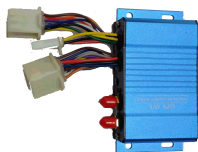
   It replied:

a) Check whether the APN is correct or not,
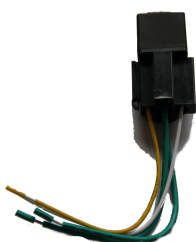
b) Whether the port is correct or not,

c) check whether the SIM card support GPRS.

It not replied: check the SMS command format, make ensure it is correction.

7. Standard Accessories

Device

Relay   Power Wires   GSM Antenna

GPS Antenna   SOS button   8pin expand cable

12Pin expand cable

12   Website: www.myrope.cn