

GPS Tracking Device

Model NO.: M508

User Manual

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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.

1. Product composition and interface definition

1.1. Product introduction

M508 GPS intelligent terminal built-in industrial high-performance 2G communication module, adopts GPRS and SMS dual-mode communication party, supports GPS+BD+LBS triple positioning, terminal operation is stable, reliable, full-featured, rich interface, can be applied to logistics, freight, Different fields such as public transportation and group vehicles can also be customized according to different industries and different user needs.

1.2. 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.

1.3. Specification

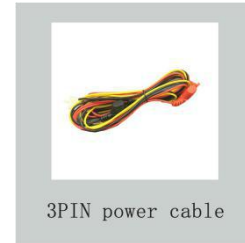
Main Specification	
Work Voltage	9VDC ~ 55VDC
Work Temperature	-25°C ~ 70°C
Storage Ambient Temperature	-40°C ~ 85°C
Size	101mm×50mm×24mm
Weight	580g
Internal Battery	400mAh/3.7V
Communication Channel	TCP/IP
Work Current	50~100mA@12V
GPS Specification	
GPS Chip	TD1030
Hot Boot Sensitive	-145dBm
Cold Boot Sensitive	-156dBm
GPS Channels	20 channels examine track
Position Accuracy	5m
Speed Accuracy	0.1m/s
Hot Boot Sensitive	<1.5s
Cold Boot Location Time	<32s
Maximum Altitude	18000m
Maximum Speed	515km/h
GSM Specification	
GSM Chip	MC20
GSM Frequency	GSM 850/900/1800 /1900
Dynamic Output Range	-15 ~ -108dBm
Receiving sensitivity	-107dBm
Maximum Frequency Deviation	±0.1ppm

1.4. Product standard list

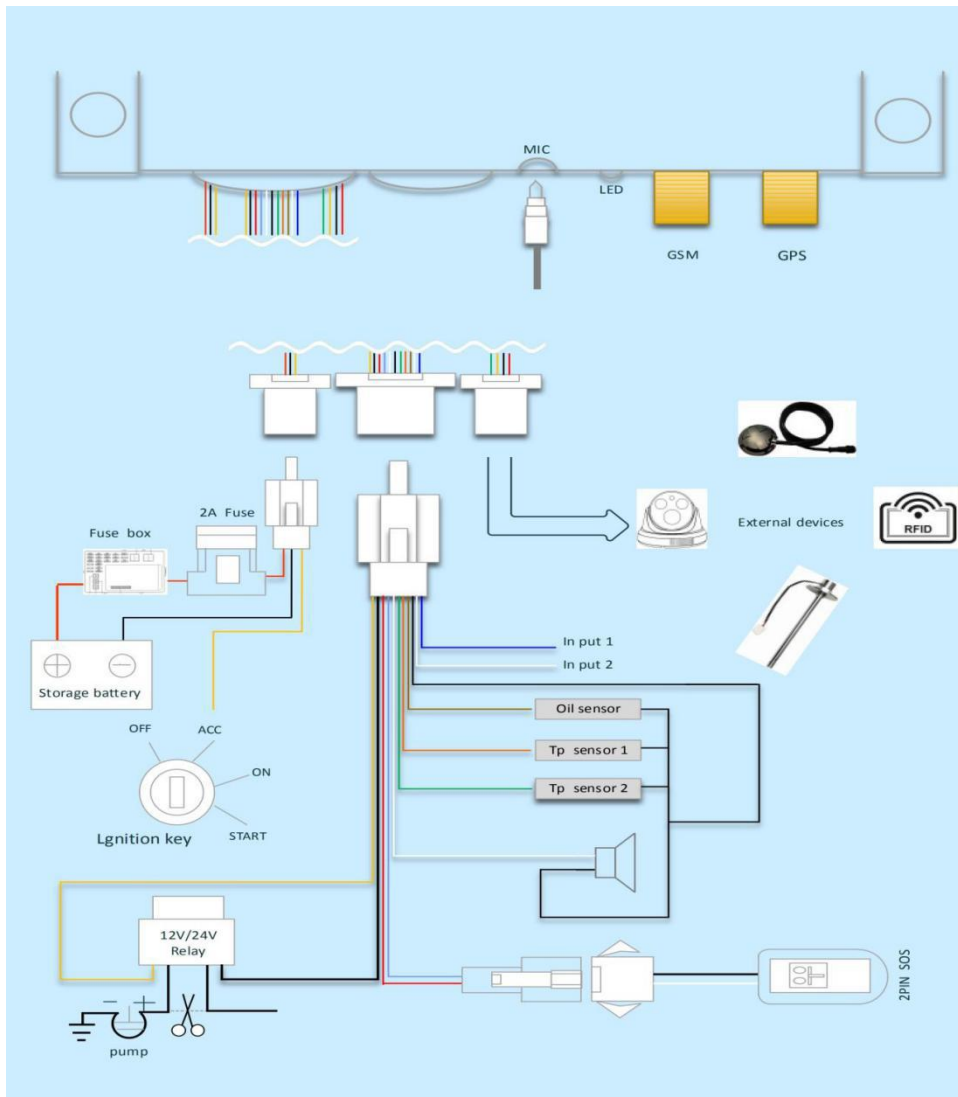
No.	Name	Quantity	Unit
1	528G mainframe (including built-in battery)	1	pc
2	Warranty card, certificate	1	pc
3	GPS antenna	1	pc
4	GSM antenna	1	pc
5	3 pin power line	1	pc
6	528G-9P extension line	1	pc

7	packing box	1	pc
8	magic tape	2	pc

* Fitting real object diagram:



1.5. Interface definition list



9Pin extension line interface definition list

NO.	Colour	Interface definition
1	Blue	Input detection 1 (supports high and low level detection)
2	white	Input detection 2(supports high and low level detection).
3	brown	Resistive oil positive stage
4	Orange	Temperature sensor 1 positive stage
5	Green	Temperature sensor 2 positive stage
6	Black	Resistance and temperature sensor negative
6	2PIN interface	SOS alarm button

7	Long yellow	Oil cut-off electric positive trigger output
8	Long white	Positive trigger output connectable buzzer (overspeed alarm)
9	Long black	Cut off oil negative electrode

4Pin RS232 interface definition list:

NO.	Colour	Interface definition
1	Red	Controllable 5V power output
2	Black	Power ground
3	Yellow	Equipment 232 data reception
4	Green	Equipment 232 data reception

3Pin power cord definitions list:

NO.	Colour	Interface definition
1	Red	Positive power supply(9V~48V)
2	Black	Negative power supply
3	Yellow	ACC

List of LED definitions:

LED type	LED status
GSM status indication: red light	always dark: No power / equipment failure
	send data: 0.3 second flash
	connected to server flashing interval 1s
	not connected to server flashing interval 1s
GPS status indication: green light	always dark: No power / equipment failure
	Inposition: Scintillation interval: 0.5s
	Positioning: always bright

2. Product whole machine function list

NO.	Funtion		Function declaration	Remarks
1	Basic funtion	Timed return	Beidou GPS dual-mode positioning data back transmission.	Interval unit: s; default timing interval: 30s; The maximum interval is 300 s.
2		ACC status	The terminal detects the ACC status in real time and carries the report in the location data.	
3		Remote upgrade	Remote lifting of devices can be triggered by SMS / transmission instructions Class.	
4		Blind area retransmission	When the terminal is in the blind area of the network signal but can be located, the positioning data is stored and uploaded to the platform when the signal is normal.	
5		Inflection point supplementary transmission	In the driving of the vehicle, the turning is greater than a certain angle, and the terminal immediately uploads a stroke of position data to optimize the trajectory.	
6		Electronic fence	Draws a circle, rectangle, polygon area.	
7		Mileage statistics	The terminal supports mileage statistics based on Beidou GPS.	
8	Extended function	Fuel consumption data acquisition	Add oil collection equipment	
9		Temperature data acquisition	Installation of temperature acquisition equipment	
10		Image acquisition	The external camera can realize the function of timing and capture.	
11		Information scheduling function	External TTS function external horn can realize voice broadcast	
12		SOS one-key alarm		

13	Vehicle alarm	Overspeed alarm	Set the overspeed value and the number of alerts sent by the terminal to the platform during overspeed	
14		Low voltage alarm of main power supply	When the external voltage (vehicle supply voltage) is less than 10V, the final, and the terminal reports the low-voltage alarm.	
15		Power down (disassemble) alarm	when the terminal is manually removed, the terminal reports the power down immediately (disassemble) alarm.	
16		Fatigue driving alarm	Default driving for 4 hours, 20 minutes rest.	
17		Incoming and outgoing area alarm	Platform settings are required to support rectangular, circular and polygonal areas report to the police	
18		Parking time-out alarm	If the stop exceeds the set time, it will give an alarm to the platform.	
19		Temperature alarm	If the temperature exceeds the range set, it will give an alarm to the platform.	
20		Oil quantity change alarm	If the oil quantity changes beyond the set range, it will give an alarm to the platform.	

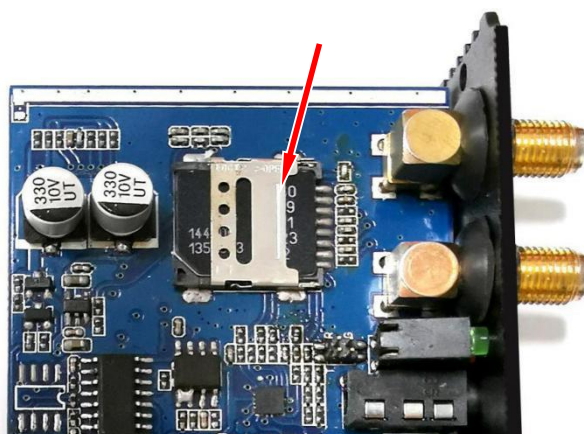
3. Equipment installation

3.1. Inspection of equipment

Check the appearance of the equipment is good, related accessories are complete.

3.2. Install the SIM card

Open the front cover of the device, and pull out the PCB board, put the SIM card into the card holder, pay attention to "do not plug and unplug the SIM card in the power state of the device." Please make sure that the SIM card has GPRS Internet access function.



3.3. Terminal installation location requirements

- A. Waterproof, should choose not easy to enter the water position to ensure the terminal dry, should pay attention to stay away from the air conditioning outlet to prevent in the temperature difference change At the same time, there is condensed water gathering in the terminal inside seriously affect the service life of the product.
- B. Shock protection: the terminal can not be suspended and installed in a position where long-term vibration is large.
- C. Anti-interference: the terminal should stay away from electronic equipment such as audio, video and intercom to prevent conduction and radiation interference.
- D. Avoid the full closed space of the 4-face metal, otherwise the GPS positioning effect of the terminal will not be used normally.

3.4. Terminal construction

Secure the cable to the vehicle circuit, and then turn on the circuit. (installation requires professionals to ensure that the circuit is fully connected.)

4. Message command

Command meaning	Command format	Example	Successful reply	Instruction description
Online message 1	s,*apn*,*ip*,*port* ,*id*,*Protocol set*,*password* *	S,*CMNET*,*120.26.197.152*,*9999*,*13043210027*,*am=0*,*123456*	APN=CMNET name= Password= Server Ip=120.26.197.152 Port=9999	Protocol set: am=0,equipment operation company agreement. set: am=1, the device runs the 808

			Driver Id=13043210027 ACCON=30s ACCOFF=120s Protocol type=SJCX	protocol.
Online message 2	ss,*apn*,*user_name *,*user_code*,*ip*, *port*,*id*,*Protocol set *,*password *	SS,*ineternt*,*123*,*4 56*,*120.26.197.152*,*9 999*,*13043210027*,*am=1*,*123456*	APN= ineternt name=123 Password=456 Server Ip=120.26.197.152 Port=9999 Driver Id=13043210027 ACCON=30s ACCOFF=120s Protocol type=808	
Set the plate number	Z,* bus Number,* terminal ID ,* provincial ID,* city ID,* colour of license plate,*password *	Z,* 粵 B8PR68,*99664 55,*30,*20 *,*0,*2,*123456*	Bus Number=粵 BPR68 Terminal ID=9966455 Province ID=30 City ID=20 Bus Colour=2	For the on-line use of the 808 protocol.
recovery oil circuit	Restore oil,*password*	restore oil,*123456*	Enable engine	
Cut off the oil circuit	Close oil,*password*	close oil,*123456*	Disable engine	
Set up defences	arm,*password*	arm,*123456*	Deviec is defend	
Cancel defences	disarm,*passwo rd*	disarm,*123456*	Deviec is undefend	
Check network related parameters	Param,*passwor d*	param,*123456*	APN=CMNET name= Password= Server Ip=120.26.197.152 Port=9999 Driver Id=13043210027 ACC ON=30 s ACC OFF=100	

			sProtocol type=SJCX	
Modify the password	c,oldpwd,newpwd	c,*123456*,*654321*	CODE=654321 Change OK	
Check Location	tgoogle,*password*	tgoogle,*123456*	http://maps.google.com/maps?q=22.58632,113.90907	
Check the current running status of the car	Status,*password*	status,*123456*	GSM=29 GPRS=1 GPS=13 ACC=ON SPEED=0km/h VCC=14.34V Vehicle static state	GSM signal strength Registered on the network Number of effective star searches 13 Fired state Speed 0 Original vehicle level The vehicle is in motion

5. Web based tracking online activation

- 1.Open website **www.overseetracking.com** and login with the user & password that created by Rope
 - 2.Click **Information Management**
 - 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**.

Plate Number/Name	Tracker Model	Tracker Information	Installed Accessories	My Service Expiring Date	Sub-user's Service Expiring Date	Vehicle Owner	Tracker Status	Operation
	DJ808	ID: 13000000157 IMEI: 094027849470 Phone number:					Unactivated	
 M-23 UAQ 248K	DJ808	ID: 13000000158 IMEI: 011653707339 Phone number: +25619666820185	 RL12: 12V Relay  Mic-Rope: Mic-phone		2019-07-24	Stephen Kibuuka Tel:	Activated 2018-09-08 06:03:18	 this is edit
 unknown	DJ808	ID: 13000000159 IMEI: 011752301171 Phone number: +25611752301171	 RL12: 12V Relay  Mic-Rope: Mic-phone				Activated	
 H 10	DJ808	ID: 13000000166 IMEI: 011752301172 Phone number: +25611752301172	 RL12: 12V Relay  Mic-Rope: Mic-phone		2019-07-24		Activated 2018-09-08 06:04:00	

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



Use Default Icon

Belongs to Group

None Group

Plate Number/Name*

Required

Country*

Please select

Vehicle Type*

Please select

Login Password via Plate Number/Name

123456

Purchasing Date

Vehicle Brand

Starting Mileage

0

Manufacturer Official Fuel Consumption(L/100Km)

0

Owner Name

Mobile of Owner

> Next Step

✕ Cancel

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

Installed Tracker Information

Please complete the blanks with "*" behind.

Tracker Model*

M588T(Standard vehi

IMEI of Tracker*

Inserted SIM Card's Phone Number*

+93

Phone number

Time Zone*

Please select time zone

Installation Date

Please select installed accessories:

Digit Input for SOS

No accessory co

Digit Output for Engine

No accessory co

Mic-phone Portal

No accessory co

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.

SIM Card Operator Information

System can not get the APN information , Please enter the SIM card APN information, so the system can generate the correct configuration SMS for you. Please complete the blanks with "*" behind.* (If the APN contains username and password, please enter them too)

Telecom Name*

Please select telecom

Enter Telecom Name

APN*

APN Username

APN Password

< Back

> Next Step

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.

Tracker Activation

The information has been saved successfully, Please send these SMS commands below one by one to the tracker, if configure successfully, the tracker will show online in tracking map.

SS,example,eg,eg,at1.trackurcar.com,7000,13000000157,123456

✓ Finish

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

6. Analysis of Common problems and after-sales Service

6.1. Elimination of common problems

NO.	Fault phenomenon	Troubleshooting
1	Unable to log on to the network or GPS vehicle terminal, the field observation indicator is off.	➤ detecting whether the power supply is the proper access device; ➤ Check whether the power cord is loose or falling off at the connection between the power cord and the automobile power supply; ➤ If the testing is normal and the equipment may be damaged, please contact the equipment supplier to resolve the problem.
2	Can log in to the GPRS network or GPS car terminal name is normal, but the display GPS does not locate	➤ Check if the car is in the blind spot of the GPS signal, leave the blind spot or you can observe it after a while; ➤ If all the above tests are normal and the failure has not been eliminated, please contact the equipment supplier to resolve the problem.
3	Unable to login GPRS network or GPS car terminal name is not online	➤ Check whether the car is in the GSM signal blind zone at that time, leave the blind zone or observe it after a while; ➤ Check the SIM card for looseness; ➤ Check whether the SIM card is in arrears; ➤ Check if the SIM card is burnt out; ➤ If all the above tests are normal and the failure has not been eliminated, please contact the equipment supplier to resolve the problem.

6.2. Precautions

- A. Electronic products pay attention to waterproof.
- B. Whether the terminal can successfully upload to the platform depends on whether the GSM network environment, whether the SIM is enabled for GPRS, whether the SIM has sufficient fees, and the normal operation of the platform server. If the line is dropped, it is generally necessary to check the platform server; if the batch is dropped at the beginning of the month, you need to check whether the SIM is in arrears.
- C. The selected installation location is closely related to the terminal location, and the construction service performs location verification on the selected location.
- D. The external power supply of the device must be DC 9V~48V. Please make sure that the user's power system is within this range when installing. If the range is exceeded, the terminal will not be able to work with the external power supply.
- E. During construction, the terminal opening key should be moved from "OFF" to "ON" .
- F. When the vehicle is in an underground garage or tunnel, it will affect the GPS positioning signal, which may affect the network communication signal, resulting in temporary unmonitored. When the vehicle leaves the above area, the device will automatically resume normal operation.