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MEITRACK®

Plug & Play Vehicle GPS Tracker



TC68S

User Guide



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1. Notice

1.1 Usage Information

- This is a wireless communication terminal product, please turn off device when enter gas station, hazard zone, or where wireless products are prohibited.
- This product can't be installed where exposed to rain or high temperature.
- This is a GPS positioning product, therefore only function wherever GPS is available, can be interfered by poor weather or GPS Blind Spots.
- Since this is a wireless device, in order to achieve a better reception, when using OBD extender, two end tips can't come in contact with martial surface.
- The operating voltage of this product is DC12V, and can't be installed with 24V or 36V, otherwise it will damage the unit, and it will not be covered by the warranty.
- Turn off the engine prior to installation, plug in the terminal and then start the vehicle.
- If the OBD connector is located far reach under the dash, this might also contributed to poor receptionist, and can be improved by using an extender.
- In order to prevent unwanted damage or removal, consider using the OBD extender to relocate and place the unit at a more ideal location.

1.2 Product and Accessories

Take count of the package against the following list, and notice of optional accessories.

Standard Package			Optional Accessories		
Number	Item	Quantity	Number	Item	Quantity
1	TC68S Device	1 pc	1	OBD Extender	1 pc
2	USB Cable	1 pc	2	Velcro	1 pc
3	Quick Start	1 pc	3		
4	Warranty Card	1 pc			
5	Certificate of Quality	1 pc			
6	CD (Including Use Manuals, Software)	1 pc			
7	Gift Box	1 pc			



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2. Specifications and Functions

2.1 Introduction

The TC68S is a user-friendly GPS vehicle tracker plugged into the vehicle's OBD connector which can provide vehicle positioning, tracking and anti-theft.

With standard OBD II plug, the TC68S can be easily and quickly installed.

When TC68S is being removed, it will send alert notification to mobile devices or servers.

The TC68S is suitable for all private cars and other vehicles with OBD II connector.

2.2 Specifications

Items	Specification
Dimension	69.8*51.8*31.8 mm
Weight	60g
Input Voltage	DC 12V/1A
Back-up Battery	150mAh/3.7V
Power Consumption	65mA
Operating Temperature	-20°C~55°C
Humidity	5%~95%
Work Time	7 hours in power-saving mode and 1.5 hours in normal mode
LED	2 LED lights to show GPS/GSM status
Button	1 pc SOS button, 1 pc power button
Microphone	Internal microphone
Memory	8MB
Sensor	Tremble sensor
GSM Frequency	GSM 850/900/1800/1900MHz
GPS Chipset	Latest SIRF-Star IV
GPS Sensitivity	-163dB
Positioning Accuracy	10 meters
Input/ Output	1 port for USB cable

2.3 Functions

2.3.1 GPS Tracking

Function	Description
Real Time Tracking	Send command to get real time location.
Timing Tracking	Set time interval, the unit will, in accordance with the preset time, report location



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	information to the platform or mobile phone.
Distance Tracking	Set distance interval, the unit will, in accordance with the preset distance report location information to the platform.
Turn Report	Set turn angle, when the vehicle turn angle is greater than the preset angle, the unit will report location information. It will implement the real trace in turn corner.

2.3.2 Alarms

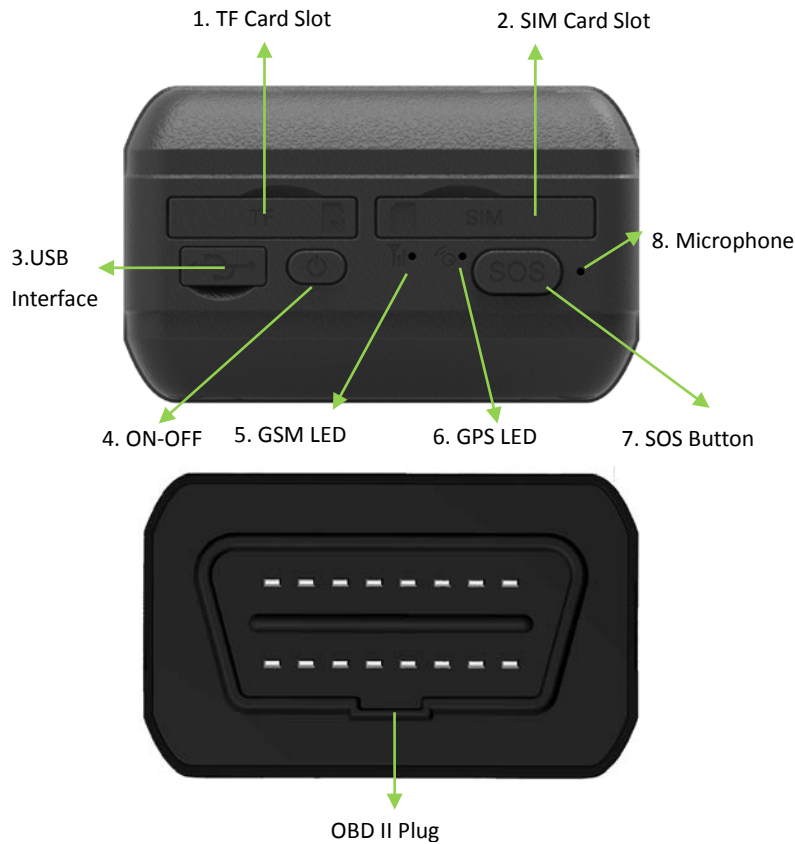
Function	Description
Disassemble Alarm	An alarm will be generated when the device is removed from the OBD socket.
Speeding	An alarm will be generated when the speed exceeds preset speed value.
Geo-Fence	Geo-fence can be set with center coordinate and radius. In or out of the Geo-fence can be reported to platform or mobile phone. User can set up to 8 circular Geo-fence.
SOS	Press the SOS button to generate alarm.
Low Power Alarm	An alarm will be generated when the external power is less than 11.6V.
Terminal Status Alarm	Terminal power on, restart alarm etc.

2.3.3 Integrated Functions

Function	Description
Listen-in	Helps driver to know the status inside the car when it has been stolen.
OTA	OTA (Over the Air) enable terminal firmware upgrade to match the latest firmware.
GPS Log	When tracker obtained a valid GPS position, the terminal will record the log into buffer by interval. Tracking log can be read by Meitrack Manager and stored up to 130,000 records.
GPS&GSM (LBS)Tracking	Wherever GPS position is not available, GSM base station will use signal tower to provide an approximate coordinate to ensure it can be located anytime.
GPS Blind Spot Report	When entering and exiting an area without GPS signal, the terminal will send report to platform.
GSM Blind area Storage/Replenish Alarm	Within a GSM blind area when normal report can't be sent to platform, reports will be automatically stored and resume sending out reports wherever GSM signal available. Built-in flash memory 8M, maximum GPRS 8,000 and SMS 256 reports.
Mileage Report	Each GPRS data contains mileage of the vehicle. When first use, user can modify tracker's default mileage value to match the vehicle odometer value.
ACC ON Report	Select ACC ON report, the device will send ACC ON report to platform or mobile phone while ACC ON.
ACC OFF Report	Select ACC OFF report, the device will send ACC OFF report to platform or mobile phone while ACC OFF. SMS Text (This Trip) : Mileage, average speed, time so start, max speed, etc.
Maintenance Report	Set mileage and time of maintenance via platform, the device will prompt maintenance while time is up.

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3. View



NO.	Name	Function
1	TF Card Slot	TF maps card slot (Only applicable in China market)
2	SIM Card Slot	SIM card slot
3	USB Interface	USB Interface enables to charge and connect to the computer for configuration and firmware upgrade.
4	ON-OFF	In the case of shutdown, press and hold the ON-OFF power switch for two seconds, until the device is beeping and on. In the case of turn on, press and hold the ON-OFF power switch for two seconds, until the device is beeping and off. In the case of sleep, use a short press to wake up the device. The indicator flashes slowly for 10 seconds.
5	GSM LED (Green)	GSM LED indicates that the device receives GSM signal. Details in "4.3 LED Indicators"
6	GPS LED (Blue)	GPS LED indicates that the device receives GPS signal. Details in "4.3 LED Indicators"

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7	SOS Button	<p>In the case of emergency, press and hold the button for two seconds, and the device will beep to alert users.</p> <p>Meanwhile, device will dial 3 authorization phone numbers in turn until one of them pick up the phone. In addition, SMS will be sent to the authorized number. GPRS will be sent to the platform when the GPRS is available.</p> <p>In sleep mode, use a short press to wake up the device.</p>
8	Microphone	The microphone is automatically turned on when listen-in function is activated.
10	OBDII Plug	Insert the OBD II connector, powered by vehicle's battery.

4. Quick Start

4.1 Insert the SIM Card

 *Notice: Please turn off TC68S before insert the SIM card*

SIM Card:

Remove the cover of SIM card and insert SIM card as picture (chip down), then refit the cover.

Notice:

- Make sure there is enough charge (test it by SMS and Call after the SIM card inserted);
- Make sure turn off the PIN function of the SIM card ;
- Make sure you have set Caller Identification function if you want so.



Insert SIM Card

4.2 Charge the Battery

Please charge TC68S for at least 3 hours by the USB cable while the first using. To shorten the charging time, please turn off TC68S while charging.

4.3 LED Indicators

Press and hold the Power On/Off button for 3~5 seconds to turn on/off TC68S. Once insert TC68S into OBD II connector in the vehicle, the buzzer will alarm BI.

GPS LED (Blue)	
Status	Description
On	Button pressed or input triggered
Fast Flashing (every 0.1 sec)	Initialization or low battery
Fast Flashing (0.1 sec on, 2.9 sec off)	GPS fixed
Slow Flashing (1 sec on per 2 secs)	No GPS fixed
GSM LED (Green)	
Status	Description

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On	A call is coming in or busy
Fast Flashing (every 0.1 sec)	Initialization
Fast Flashing (0.1 sec on, 2.9 sec off)	GSM fixed
Slow Flashing (1 sec on per 2 secs)	No GSM fixed

Notice: GSM and GPS LED indicators off in sleep mode.

4.4 GPS Tracking

This location-tracking test will ensure TC68S operates correctly and reports its real time position.

- Call the SIM card number embedded in TC68S, hang up till the dial sound 2-3 times, as follows:



Report description:

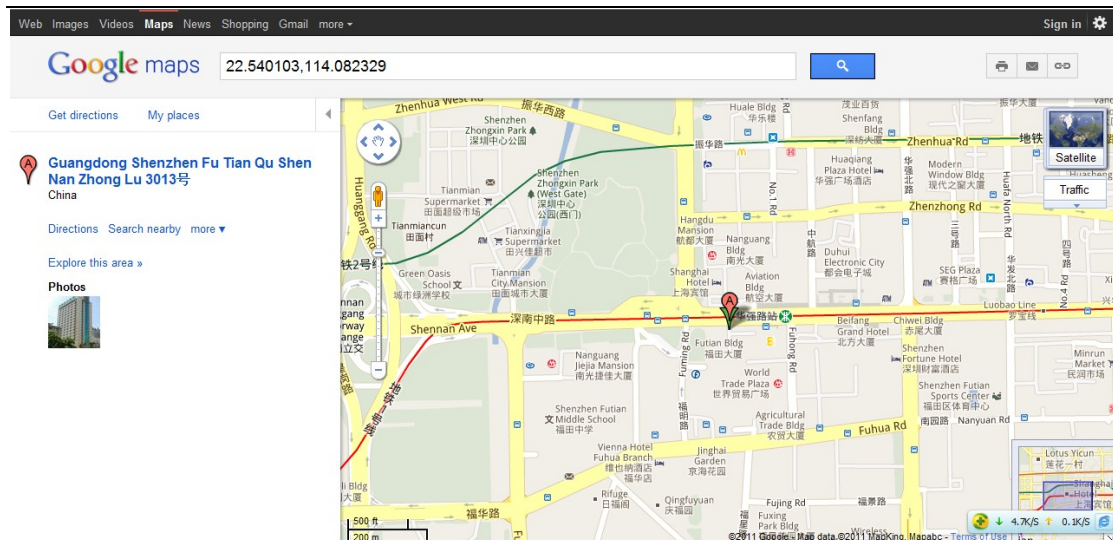
Now,110727 02:48,V,16,23Km/h,61%,http://maps.google.com/maps?f=q&hl=en&q=22.540103,114.082329
&ie=UTF8&z=16&iwloc=addr&om=1

Content	Description	Note
Now	Current Location	Alarm Type
110721 16:40	Date & Time: 21 July, 2011, 16:40pm	Date & Time in YYMMDD HH:MM
V	No GPS fixed	GPS Status: A = valid, V = invalid
10	GSM signal=10	GSM Signal (1-32). Signal is stronger while the value is larger. Above 12, GPRS achieve normal level.
0Km/h	Speed=0	KM/h. Decimal digit
97%	Battery Power: 97%	Battery Power Balance (Percentage)
http://maps.google.com/maps?f=q&hl=en&q=22.540103,114.082329&ie=UTF8&z=16&iwloc=addr&om=1	Latitude: 22.540103 Longitude: 114.082329	Google Maps Web Link with Latitude and Longitude. Click on the link to get the location.

If your mobile cannot visit HTTP websites, input the latitude and longitude into Google Maps (maps.google.com) as the following picture shows to get the position:



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More SMS commands

You can configure the TC68S by mobile phone or by computer using PC tool Meitrack Manager.

For more details, please refer to part **4.5 Configure by Computer**.

Note:

1. Password is 4 digits only and defaulted to 0000. You can change the password by Parameter Editor and SMS command.
2. The TC68S will only accept commands from a user with the correct password and report SMS report to the user. If function phone number was set, only this phone number can receive SMS reports.

4.4.1 SOS- A71

This command is to set the SOS emergency communications number, call the phone number, inform the location by SMS and other SMS additional features at the same time.

The content of Mobile Phone SMS:

0000,A71,Function Number 1, Function Number 2, Function Number 3 Sent to the embedded SIM card numbers (tips: “,” should be English comma and no space before and after the comma)

TC68S automatic reply SMS:

IMEI,A71,OK Prompts successful, successfully set SOS emergency communications number.

When you press the SOS emergency button, TC68S will dial 3 function phone numbers. It will stop dialing when one number answers.

Note: the default value is empty. The function numbers should be added “,” to avoid setting failure. The last function number doesn’t need a “,”. For example:

0000,A71,13500000000,,

0000,A71,13500000000,13600000000,

0000,A71.13500000000,13600000000,13700000000

To clear the combination of functions directly sending 0000,A71



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(If this function can't be achieved, please add your Country and Area Code before your phone number when you set the function numbers, or you can also consult your local mobile operator.)

4.4.2 Listen-in (Voice Monitoring) – A72

This command enables users to listen-in to the surrounding environment. Configuring this feature will allow the devices to confidentially and automatically answer and allow listen-in, one-way voice communication.

The Content of Mobile Phone SMS:

0000,A72,Monitor Number 1,Monitor Number 2 Sent to the embedded SIM card numbers.

IMEI,A72,OK Successfully set monitor number.

When the preset monitor number calls the TC68S, the device will answer automatically and enter into the listening state. The device will not emit any sound.

Note: the default value is empty, if the function numbers are less than three while setting, it must be added “;” to avoid setting failure. To clear the combination of monitor numbers directly sending 0000,A72

(If this function can't be achieved, please add your Country and Area Code before your phone number when you set the preauthorized numbers, or you can also consult your local mobile operator.)

4.4.3 Smart Sleep Mode – A73

This command enables the sleep mode function. In this mode, logging, timing and location are all disabled.

The Content of Mobile Phone SMS:

0000,A73,sleep levels Sent to the embedded SIM card numbers.

TC68S automatic reply SMS:

IMEI,A73,OK Prompt successfully.

To restart the Log or regular position, you must first cancel the sleep mode.

Note:

X=0, turn off sleep mode (default)

X=1, normal sleep. GSM module work, GPS module work by sleep mode intermittently. The device can work 25% longer than no sleep mode. Note: this is not recommended for users who set “track by interval” or short time interval, because it will affect the completeness of tracking.

X=2, deep sleep, the tracker will enter this mode after it is inactive or stationary(No SOS/any triggered by the button/input/incoming calls/message) for 5 minutes. GPS module stops working and GSM module enters sleep mode. The tracker remains in this mode until it is activated by SOS/any triggered by the button/input/incoming calls/message. After that, it will repeat above processes.

Note: the TC68S can enter sleep mode under movement, and movement can't wake the TC68S from sleep mode.

In any condition, the device will directly quit the sleep mode and return to normal working mode by SMS or GPRS command to turn off the sleep mode.

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4.4.4 Time Zone – B35

This command modifies the SMS report to display the correct local time. Default London time, GMT0.

Please follow below instructions for time zone modification.

The Content of Mobile Phone SMS:

0000,B35,0 Sent to the embedded SIM card numbers.

TC68S Automatic Reply SMS:

IMEI,B35,OK Set the time zone successfully.

Note: this value is your TC68S's IMEI number. The device will send this data automatically and these numbers don't represent anything significant to the functionality of the tracker. Below the same applies.

4.4.5 More Settings

TC68S can be configured by SMS commands or by a computer with Meitrack Manager to configure multiple features. For more details, please refer to Configure by Computer.

For more details regarding SMS commands, please refer to MEITRACK SMS PROTOCOL.

4.5 Configure by Computer

The chapter mainly describes the simple configuration by Meitrack Manager. Please read Meitrack Manager User Guide to know the complete functions.

Connect the USB cable to the computer and the TC68S.

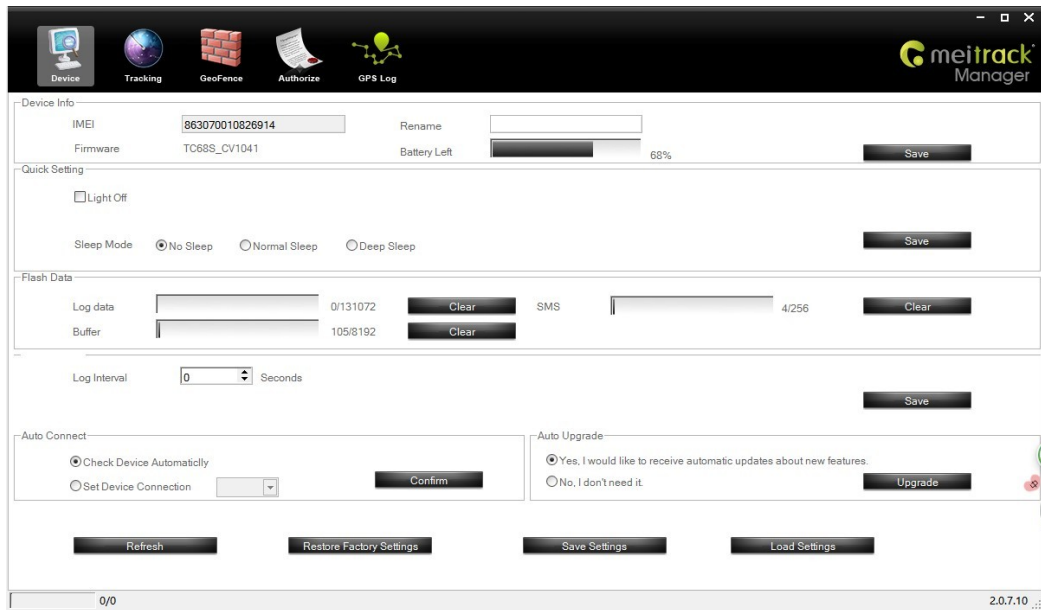
Connect the tracker to your computer via USB cable as the picture below:



Run MEITRACK Manager.exe , turn on the device and connect it to the computer via USB, the software will automatically identify the port number and read out all parameters as follow:

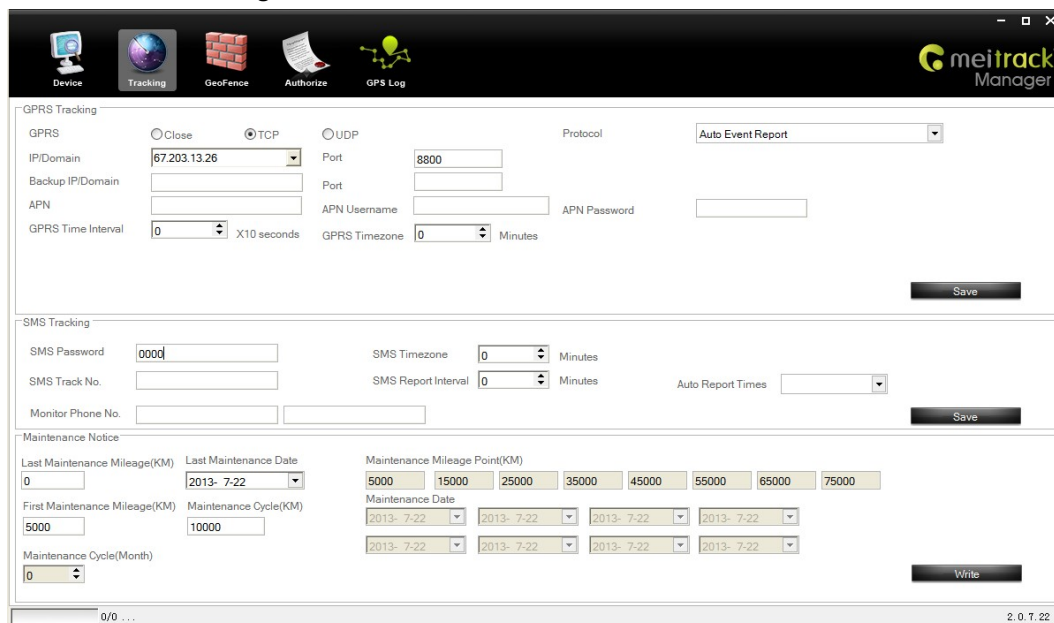


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4.5.1 GPRS/SMS Tracking

Select Column 2: Tracking



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GPRS Tracking

Item	Description
GPRS	Close: Close GPRS TCP: TCP is a stable connection. It is recommended to use. It is closed by default. UDP: UDP can save data flow, while it is unreliable.
IP/Domain and Port	Set main server's IP and port. Default IP: 67.203.13.26 Default Port : 8800
Backup IP/Domain and Port	Backup server's IP and port to avoid losing data when main server is down.
APN, APN Username, APN Password	Max 32 bytes. If no username and password, leave them blank. China Mobile APN: CMNET, China Unicom APN: UNINET, no username and password. APN set default value as CMNET, APN user name and password as blank, so CMNET users can use device once it insert the card with GPRS function.
GPRS Time Interval	Track by time interval via GPRS Set time interval for GPRS tracking, unit in 10 seconds (fill in 6 means 60 seconds) = 0, cancel GPRS tracking by time interval; max time interval = 65535*10 seconds. Default setting of GPRS interval time is 6*10s.
GPRS Report Times	= 0, no limit, unlimited times for report (Default); = [1,65535], set report times, tracker will stop reporting when reaching the preset times.
GPRS Time Zone	GPRS time zone minute = 0, GMT 0 (Default) GPRS time zone minute = [-32768,32767], set different time zones.
Save	Write current GPRS Tracking settings into the tracker.

4.5.2 Geo-fence Configuration

Select Column 3: Geo Fence



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Geo-fence: geo-fence is a circular fence which is based on a center point with preset radius. Maximum 8 geo-fence.

Enter Geo-fence: alarm while the device entering geo-fence, the left textbox will show corresponding SMS Head, default as "In Alarm".

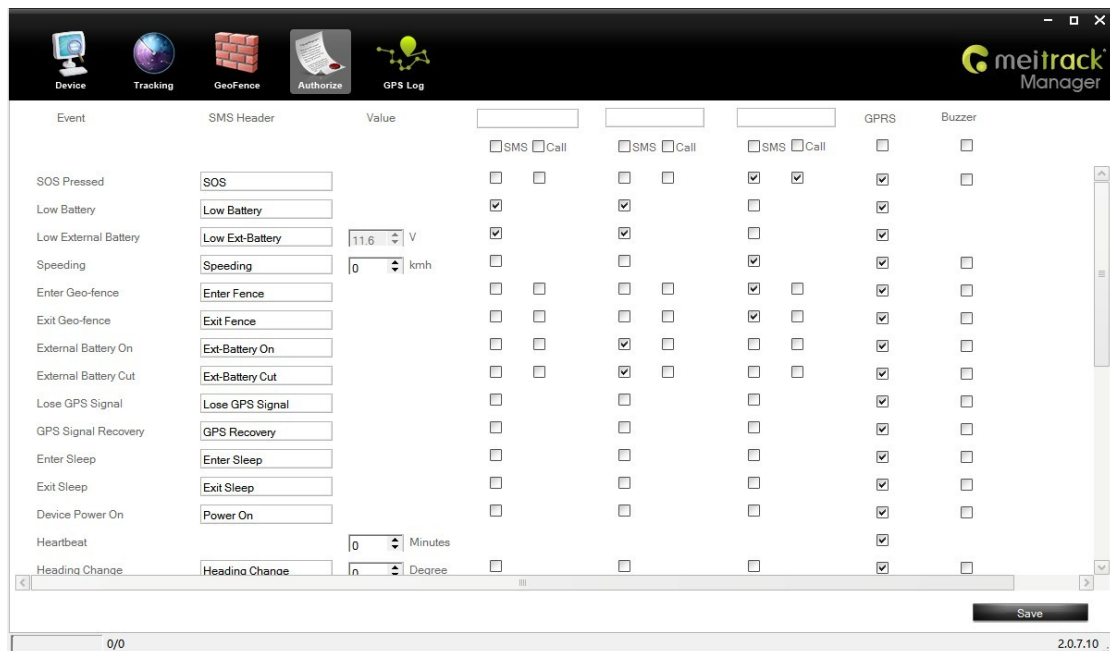
Exit Geo-fence: alarm while the device exiting geo-fence, the left textbox will show corresponding SMS Head, default as "Out Alarm".

Map: click "In Map" to make and define geo-fence.

4.5.3 Authorized Event Configuration

Select Column 4: Authorize

Set GPRS Event and Buzzer Alarm, and they can be set separately.



Please refer to MEITRACK SMS Protocol and MEITRACK GPRS Protocol, if you want to know more GPRS Setting.

4.6 Platform Tracking

PC User: Please visit Meitrack Family GPS Tracking System (www.trackingmate.com) and select MS02 , or visit directly by: <http://ms02.trackingmate.com>.

Mobile Phone User: Please download APP of Meitrack Family MS02, or visit directly by: <http://m.ms02.trackingmate.com>

User ID and Password are issued by Meitrack.

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Login



User ID:

Password:

Save Password Auto Login

5. TC68S Installation

The TC68S is a plug-and-play (PnP) device, installation requires no wiring.

After connected the TC68S into the OBDII connector in the car, it will beep once, and all LEDs will begin to blink, this indicated a successful installation.

Please ensure the device is firmly connected to avoid loosen later on.

5.1 Plug Car Connector Directly



5.2 Use the OBD Extender to Install (Optional)

Use the OBD Extender on the condition of narrow space for installation, in weak GPS signal, or for hidden purpose.

When install the OBD Extender, please plug the male side to Car's OBDII connector, plug the female side to TC68S.

Affix two small suede Velcro to the labeled TC68S surface and the connected surface of the extender.

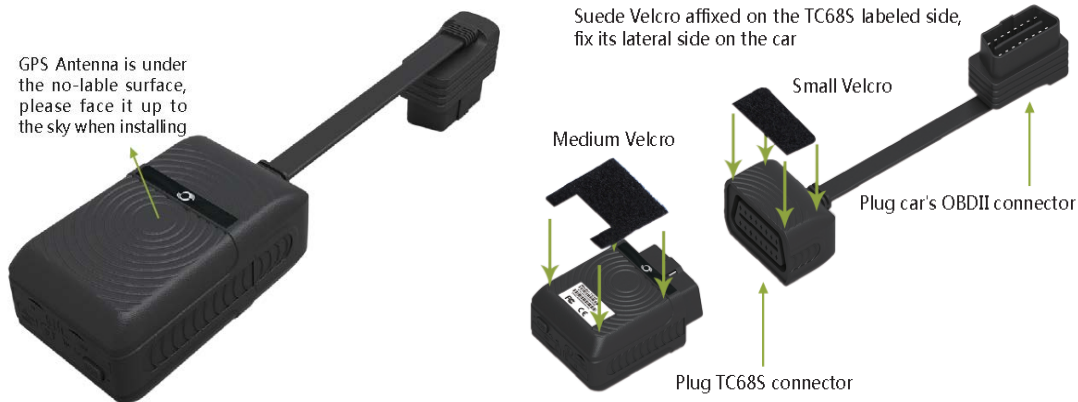
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Plug the male side of the extender to the car OBDII connector.

Find a hidden space under the dash board, and affix the biggest surface of Velcro to the car.


Affix the TC68S with Velcro directly to the car Velcro.

You can utilize other ways such as tie wraps to secure the unit to the vehicle, provided there is sufficient space.



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