MEITRACK TC68S/TC68SG User Guide

Change History

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Contents

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2 Friendly Reminder

2.1 Terms of Use

- Power off the device before you go to a gas station, hazard zone, or a place where wireless products are prohibited.
- Do not expose the device to rain or extremely hot temperatures.
- The device's tracking function may be unavailable due to force majeure (like bad weather and GPS blind spots).
- To strength the device signal, keep away from a metal covered place when you use an extension cord.
- The device's operating voltage is DC 12–14 V and you can install it into a 12 V/24 V vehicle.
- Ensure that the vehicle engine is cut off before installation.
- The device's extension cord you purchase additionally can be used to strength the GPS signal.
- To prevent the device from removing deliberately, place it on a hidden cool place with a valid GPS signal using extension cord.

2.2 Device and Accessories

Check whether the product and standard accessories are included according to the following table. You can additionally purchase optional accessories as required.

Device and Standard Accessories				Optional Accessories		
NO.	Item	Quantity		NO.	Item	Quantity
1	TC68S/TC68SG tracker(Include a Backup battery 170 mAh/3.7 V)	1		1	OBD extension cord	1
2	Quick Start Guide	1		2	Velcro	1
3	CD download card	1		3	USB cable	1
4	Packing box	1				

3 About the Product

3.1 Product Introduction

The TC68S/TC68SG is a plug-and-play GPS vehicle tracker without wiring. It supports vehicle positioning, tracking, and anti-theft.

With a standard OBD II plug, it can be easily installed.

When the device is removed, you will receive an alert message.

It is a perfect choice for all private cars and other motor vehicles with an OBD II connector.

3.2 Specifications

Item	Specifications
Dimension	69.8 mm x 51.8 mm x 31.8 mm
Weight	60g
Power supply	DC 12 V/24V 1A
Backup battery	170 mAh/3.7 V (24 hours in power-saving mode; 1.5 hours in normal mode)
Power consumption	Current in standby mode: 68 mA
Operating temperature	-20°C to 55°C
Operating humidity	5% to 95%
LED indicator	2 indicators showing WCDMA, GSM and GPS status
Button/Switch	1 SOS button 1 power button
Memory	8 MB buffer
Sensor	3-axis accelerometer
GSM frequency band	850/900/1800/1900 MHz Note: The TC68S supports the GSM frequency band only.
WCDMA frequency band	TC68SG: UMTS/HSDPA: 800/850/900/1900/2100 MHz GSM/GPRS: 850/900/1800/1900 MHz TC68SG_A: UMTS/HSDPA: 850/1900 MHz TC68SG_E: UMTS/HSDPA: 900/2100 MHz GSM/GPRS: 900/1800 MHz
GPS sensitivity	-161 dB
Positioning accuracy	2.5m
I/O port	1 USB port

3.3 Product Functions

3.3.1 Position Tracking

Function	Description

Real-time tracking	Send a command to obtain the current device location.
Track by time interval	After you set the time interval, the device will report location information to the platform or mobile phone at the preset time interval.
Track by distance	After you set the distance, the device will report location information to the platform based on the preset distance.
Cornering report	Set the cornering angle. When the vehicle cornering angle is greater than the preset value, the device will report location information.

3.3.2 Alerts

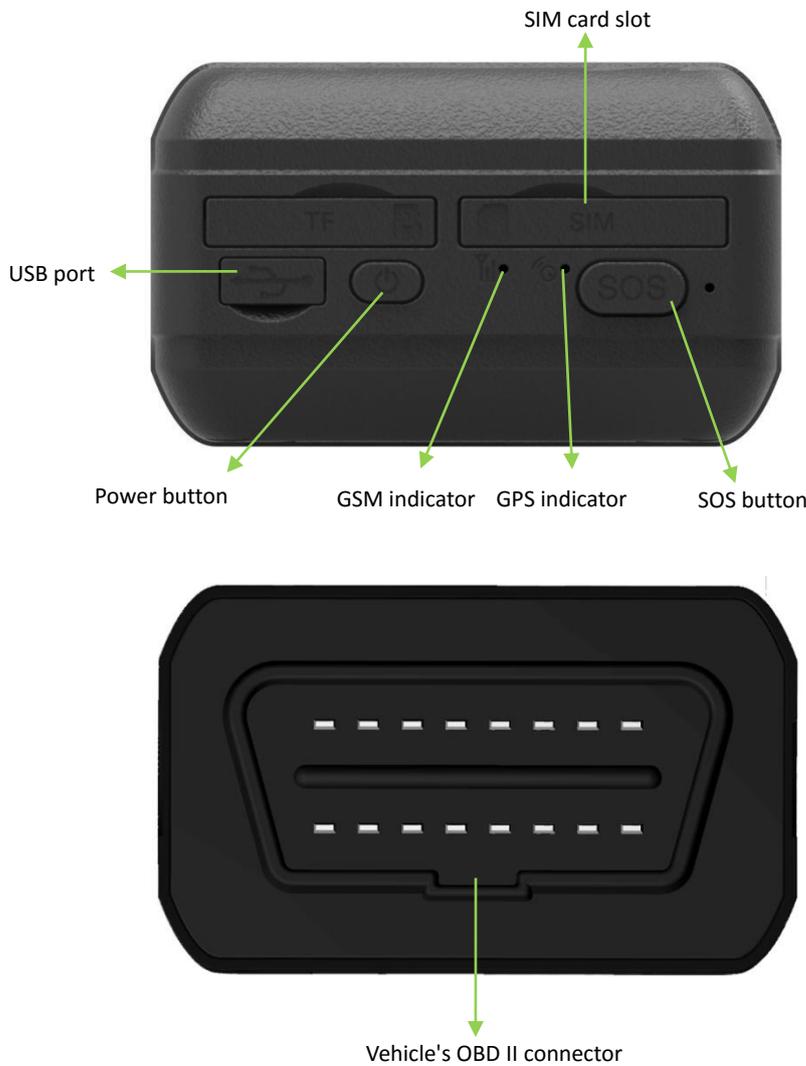| Function	Description
Disconnect alert	An alert will be generated and sent to the platform or user when the device is removed from the OBD connector.
Speeding alert	Set the upper limit by platform. When the vehicle speed exceeds the preset value, an alert will be generated.
Geo-fence alert	With a coordinate and radius, you can set a circular geo-fence. Enter/Exit Geo-fence alerts will be reported to the platform or notified to the user by SMS. At most 8 circular geo-fences are allowed.
SOS alert	An alert will be generated when the SOS button is pressed.
Low power alert for the external power supply	An alert will be generated when the voltage of the external power supply is lower than 11.6 V.
Device status alert	An alert will be generated when the device is powered on or restarted.

3.3.3 Other Functions

Function	Description
Over-the-Air (OTA) update	Update device firmware by OTA.
GPS log	When the GPS is valid, the device will record the driving routes at the preset time interval. You can use Meitrack Manager software to read these records (at most 130,000 records).
GPS + LBS positioning	When the GPS is invalid, the GSM base station will be used for assisted positioning, ensuring that the vehicle can be located at any time.
GPS blind spot report	When you enter or exit an area without GPS signal, the device will send a report to the platform.
GSM blind spot storage/resend	When data fails to be sent to the platform in the GSM blind spot, the data will be automatically stored. When the GSM becomes valid, the data will be automatically sent. Built-in 8 MB flash memory can store 8,000 GPRS records and 256 SMS records.
Mileage report	Each GPRS record contains the vehicle mileage. For the first use, you can change the default mileage.
ACC ON report	Select the ACC ON report function. The device will send the ACC ON report to the platform or mobile phone while ACC ON.
ACC OFF report	Select the ACC OFF report function. When the ACC is off for more than 150

	seconds, the device will send the ACC OFF report to the platform or mobile phone.
Maintenance report	Set the maintenance mileage and duration by platform. When the vehicle maintenance mileage or duration reaches the preset value, the device will send a maintenance alert.
External power protection	When the device detects that the external power supply's voltage is lower than the rated voltage and the device stops moving, it will enter the deep sleep mode.

Note: The ACC ON and OFF reports depend on the vehicle battery's voltage. If the vehicle battery's voltage only has a slight change, maybe you will not receive the ACC ON and OFF reports.

4 Appearance

NO.	Item	Description
1	SIM card slot	SIM card slot

2	USB port	Used for charging the device, configuring parameters, and upgrading software.
3	Power button	● When the device is turned off, press and hold down the button for 2 seconds. The device will make a sound, indicating that it will be turned on. ● When the device is turned on, press and hold down the button for 2 seconds. The device will make a sound, indicating that it will be turned off. ● In the sleep mode, press the button to wake the device up. Then the power indicator will blink for 10 seconds.
4	GSM indicator (green)	Indicates GSM status. For details, see section 5.2 "LED Indicator."
5	GPS indicator (blue)	Indicates the GPS status. For details, see section 5.2 "LED Indicator."
6	SOS button	Press and hold down the button for 2 seconds in the case of emergency. The device will beep once. The device will also dial three authorized phone numbers in sequence. It will stop dialing when one phone number answers. Meanwhile, the device will send an SMS with positioning information to authorized phone numbers. If the GPRS function is enabled, the device will send a GPRS message to the server. In the sleep mode, press the button to wake the device up.
7	Vehicle's OBD II connector	Plug the device into the vehicle's OBD II connector. The device is always powered on by vehicle's battery.

5 How to Use

5.1 Installing the SIM Card

To install the SIM card, open the SIM card cover, insert the card (card chip facing down), and close the card cover.

Note:
● Power off the device before installing the SIM card.
● Ensure that the SIM card has sufficient balance.
● Ensure that the phone card PIN lock has been closed properly.
● Ensure that the SIM card in the device has subscribed the caller ID service if you want to send an SMS.

5.2 LED Indicator

To start the device, press and hold down the power button for 2 seconds. Once the device is plugged into the vehicle's OBD II connector, it will make a sound.

GPS Indicator (Blue)

Steady on	A button or an input is triggered.
Blink (every 0.1 seconds)	The device is being initialized or the battery power is low.
Blink (0.1 seconds on and 2.9 seconds off)	A GPS signal is received.
Blink (1 second on and 2 seconds off)	No GPS signal is received.
GSM Indicator (Green)	
Steady on	A call is coming in or a call is being made.
Blink (every 0.1 seconds)	The device is being initialized.
Blink (0.1 seconds on and 2.9 seconds off)	A GSM signal is received.
Blink (1 second on and 2 seconds off)	No GSM signal is received.

Note: The GSM and GPS indicators will be off when the device is in sleep mode.

5.3 Tracking by Mobile Phone

Call the device's SIM card number, and hang up after the dial tone rings 2–3 times. The device will reply to an SMS with a map link.

Click the SMS link. The device's location will be displayed on Google Maps on your mobile phone.

SMS example:

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

The following table describes the SMS format:

Parameter	Description	Remarks
Now	Indicates the current location.	SMS header: indicates the current location or the alert type. For details about the SMS header, see the *MEITRACK SMS Protocol* and *MEITRACK GPRS Protocol*.
110727 02:48	Indicates the date and time in **YYMMDD hh:mm** format.	None
V	The GPS is invalid.	A = Valid V = Invalid
16	Indicates the GSM signal strength.	Value: 1–32 The larger the value is, the stronger the signal is. If the value is greater than 12,

		GPRS reaches the normal level.
23Km/h	Indicates the speed.	Unit: km/h
61%	Indicates the remaining battery power.	None
http://maps.google.com/maps?f=q&hl=en&q=22.540103,114.082329	Indicates the map link. Latitude: 22.540103 Longitude: 114.082329	None

If your mobile phone does not support HTTP, enter the latitude and longitude on Google Maps to query a location.

More SMS commands

You can configure the device on a mobile phone or on a computer by using Meitrack Manager. For details, see section 5.4 "Configuring Device Parameters by Meitrack Manager."

Note:

1. The default SMS command password is 0000. You can change the password by using Meitrack Manager and SMS command.

2. The device can be configured by SMS command with a correct password. After an authorized phone number is set, only the authorized phone number can receive the preset SMS event report.

5.3.1 Setting Authorized Phone Numbers – A71

SMS sending: 0000,A71,*Phone number 1,Phone number 2,Phone number 3*

SMS reply: IMEI,A71,OK

Description:

A phone number has a maximum of 16 bytes. If no phone numbers are set, leave them blank. Phone numbers are empty by default.

Phone number 1: Set phone number 1 to an SOS phone number. When you call the device by using the phone number, you will receive SMS notification about the location, geo-fence alert and low power alert.

Phone number 2/3: When you call the device by using these phone numbers, you will receive SMS notification about the location.

If you need to delete all authorized phone numbers, send **0000,A71**.

When the SOS button is pressed, the device will dial phone numbers 1, 2, and 3 in sequence. It will stop dialing when one phone number answers. Meanwhile, the device will send alert information to phone number 1.

Example:

Sending: 0000,A71,13811111111,13822222222,13833333333

Reply: 353358017784062,A71,OK

5.3.2 Setting the Smart Sleep Mode – A73

SMS sending: 0000,A73,*Sleep level*

SMS reply: IMEI,A73,OK

Description:

You are not advised to use the sleep function of the device because it is equipped with an OBD II plug and is always powered on by vehicle's battery.

When the sleep level is **0**, the sleep mode is disabled (default). You can use the device for 1.5 hours when it is not in sleep mode.

When the sleep level is **1**, the device enters the normal sleep mode. You can use the device for 4 hours when the device's battery is full. The GPS module works every five minutes, the device will stop working for five minutes. While, the GSM module always works. GPRS and SMS scheduling functions are not affected.

When the sleep level is **2**, the device enters deep sleep mode. You can use the device for 24 hours when the device battery is full. If no event (SOS/button changes/incoming calls/vibration/messages) is triggered after five minutes, the GPS module will stop working and the GSM module will enter sleep mode. Once an event is triggered, the GPS and GSM modules will be woken up. After that, it will repeat above processes.

In any condition, you can disable the sleep mode. Then the device exits the sleep mode and switches back to the normal working mode.

In deep sleep mode, if you want to obtain the location by SMS/call, the device will reply to a link. When the GPS is invalid, it will reply to the latest location link.

After the device enters the deep sleep mode, functions of Track By Time Interval, Track By Distance, and GPSLog are not available until you manually disable the sleep mode.

The device can be woken up from the sleep mode by pressing a key, call, or SMS. After an event is handled, the device will enter the sleep mode again.

Example:

Sending: 0000,A73,2

Reply: 353358017784062,A73,OK

5.3.3 Setting the SMS Time Zone　–　B35

SMS sending: 0000,B35,*SMS minute*

SMS reply: IMEI,B35,OK

Description:

The default time zone of the device is GMT 0. This command is used to change the SMS time zone to the local time zone. The time zone of SMS reports is different from that of GPRS data packets. In addition, the GPS Log time zone is GMT 0.

When **SMS minute** is **0**, the time zone is **GMT 0** (default time zone).

When **SMS minute** is a value ranging from -32768 to 32767, set time zones. Set the China time zone value to **480**.

Example:

Sending: 0000,B35,480

Reply: 353358017784062,B35,OK (set the Beijing time)

For details about SMS commands, see the *MEITRACK SMS Protocol*.

5.4 Configuring Device Parameters by Meitrack Manager

This section describes how to use Meitrack Manager to configure the device on a computer.
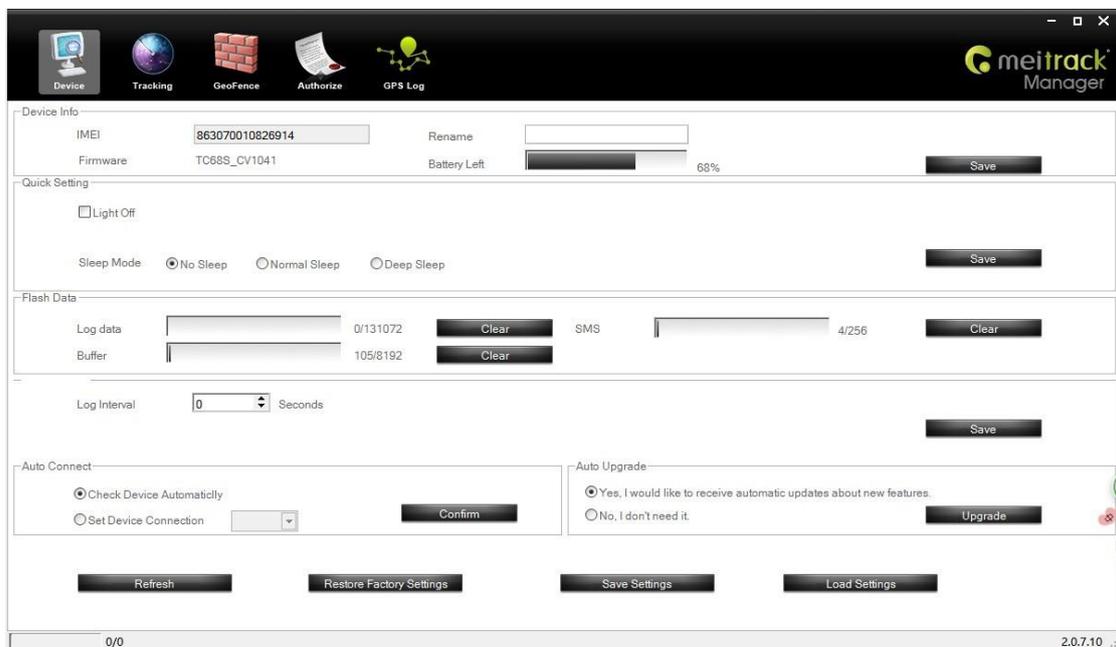
Procedure:

1. Install the USB driver and Meitrack Manager.

2. Connect the device to a computer with the USB cable.

3. Run Meitrack Manager, then the following dialog box will appear:

4. Turn on the device, then Meitrack Manager will detect the device model automatically and the parameter page will appear accordingly.

For details about Meitrack Manager, see the *MEITRACK Manager User Guide*.

5.5 Logging In to MS03 Tracking System

Visit http://ms03.trackingmate.com, enter the user name and password, and log in to the MS03. (Purchase the

login account from your provider.)

For more information about how to add a tracker, see the *MEITRACK GPS Tracking System MS03 User Guide* (chapter 4 "Getting Started").

The MS03 supports the following functions:

- Track by time interval or distance.
- Query historical trips.
- Set polygonal geo-fences.
- Bind driver and vehicle information.
- View various reports.
- Send commands in batches.
- Support OTA updates.

For details, see the *MEITRACK GPS Tracking System MS03 User Guide*.
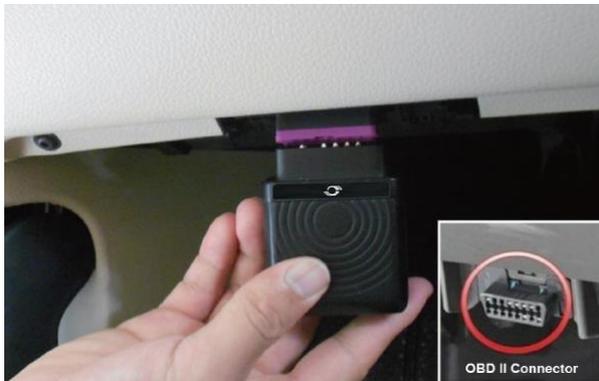
6 Installing the Device

You can use any of the following ways to install the device.

6.1 Plugging the Device into the Vehicle Connector

The device is a plug-and-play device without wiring.

After the device is plugged into the vehicle's OBD II connector, the device will beep once, and all indicators will blink, which indicates that the device is installed successfully.

Note: Ensure that the device is firmly connected to the vehicle connector.

## 6.2 (Optional) Installing the Device by Extension Cord

The extension cord is an optional accessory. If you additionally purchase this accessory, use this method to install your device.

This installation method is a better choice on the conditions of narrow installation space and weak GPS signal, or for hidden purpose.

Perform the following operations to install the device:

1) Stick two small suede Velcros to the labeled device surface and the connected surface of the extension cord.
2) Plug the male side of the extension cord to the vehicle OBD II connector.
3) Find a hidden place under the dashboard, and stick the big Velcro to the vehicle.
4) Attach the device with Velcro to the Velcro of the vehicle.

Note: You can also use cable ties and other ways to secure the device when there is enough space in the vehicle.
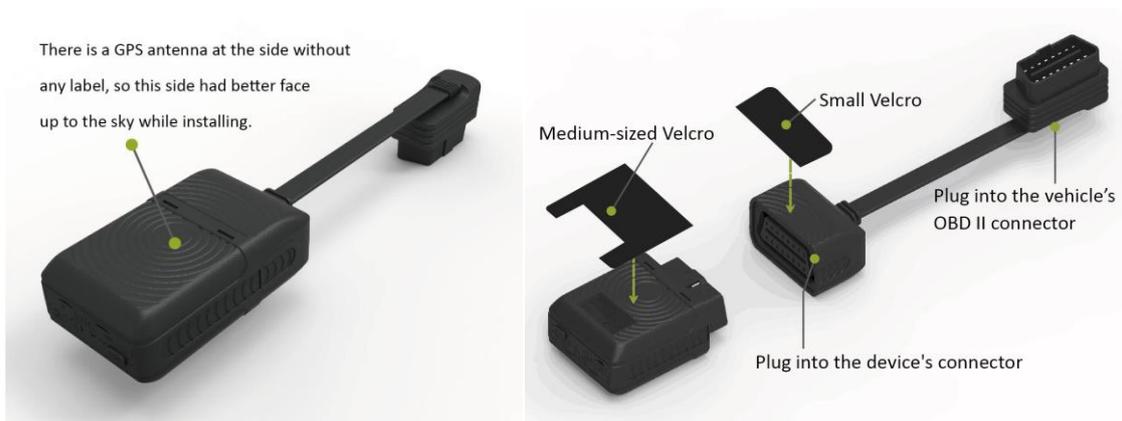
If you have any questions, do not hesitate to email us at info@meitrack.com.