MEITRACK T333 User Guide

Change History

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Contents

1   Copyright and Disclaimer

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2   Product Overview

The T333 is the latest vehicle tracker supporting the 3G (WCDMA) network. In addition to real-time location tracking, the T333 has two-way audio and remote listen-in functions. The T333 features excellent and stable work performance. It used for vehicle tracking and fleet management.

3   Product Function and Specifications

3.1   Product Function

3.1.1   Location Tracking

- GPS + GSM dual-module tracking
- Real-time location query
- Scheduled tracking
- Tracking by distance
- Turning report
- Overspeeding alarm
- Tracking on a mobile phone

3.1.2   Anti-Theft

- SOS alarm
- GPS antenna cut-off alarm
- External power supply cut-off alarm
- GPS blind spot alarm
- Remote vehicle fuel/power cut-off alarm
- Engine or vehicle door status alarm

- Towing alarm
- Geo-fence alarm
- Fuel monitoring

3.1.3   Other Functions

- SMS/GPRS (TCP/UDP) communication (Meitrack protocol)
- Built-in 8 MB chip for recoding driving routes (storing 8,192 GPRS caches, 256 SMS caches, and 131,072 GPS logs)
- Mileage report
- Low power alarm
- Build-in vibration sensor and acceleration sensor
- Support for Over-the-Air (OTA)

3.1.4   Optional Accessory Function

Accessory		Function
A53 resistive voltage-output mode fuel sensor		Check fuel.
A52 digital temperature sensor + A61 sensor box		Check temperature.
Super magnet		Fix the device.
One RS232 port	Handset	Used for two-way audio, SMS sending and receiving, and remote monitoring
	Camera (Used with the TF card)	Take photos.
	RFID reader	Identify drivers and control vehicle starting. Monitor driver attendance by RFID report.
	LED display	Play advertisements and put notification.
	A21 LCD player	Used for real-time vehicle scheduling and management.

3.2   Specifications

Item	Specifications
Dimension	105 mm x 65 mm x 26 mm
Weight	190g
Input voltage	DC 11 V to 36 V/1.5 A
Standby battery	850 mAh/3.7 V
Power consumption	65mA standby current
Operating temperature	-20°C to 55°C
Humidity	5% to 95%
Working hour	43 hours in power-saving mode and 10 hours in normal mode
Indicator	The green indicator shows the GSM signal.

	The blue indicator shows the GPS signal.
Button/Switch	One SOS button (for sending SMSs or dialing)
	One power button
Storage	8 MB byte
Sensor	Vibration sensor (for vibration, wake-up, and towing alarms)
	Acceleration sensor (determine whether the vehicle is moving or stops)
Frequency band	T333-E:
	UMTS/HSDPA: 900/2100MHz
	GSM/GPRS: 900/1800MHz
	T333-A:
	UMTS/HSDPA: 850/1900MHz
	GSM/GPRS: 850/900/1800/1900MHz
	Note: Select proper device according to the local 3G (WCDMA) or 2G (GSM) frequency band.
GPS chip	56-channel ublox7 high-sensitivity chip
GPS sensitivity	-161 dB
Positioning accuracy	10 m
I/O port	Three digital inputs (two negative inputs and one positive input)
	Two analog detection inputs
	Three outputs
	One RS232 port
	One USB port
	One digital temperature sensor port

4   T333 and Accessories

T333 and standard accessories:

| T333 with a built-in battery | GPS antenna | 3G antenna | I/O cable + SOS button | USB cable | CD |
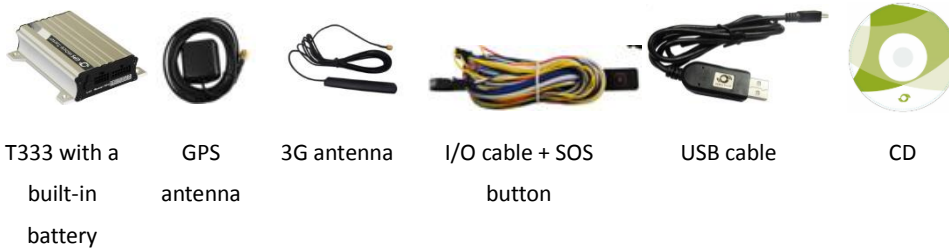
Optional accessories:

| Camera | Handset | RFID reader | A21 LCD player (dialing and SMS display) | A53 fuel sensor |

A52 digital temperature sensor + A61 sensor box

LED display

5 Appearance

Power button   3G indicator   GPS indicator

3G antenna connector   GPS antenna connector

USB port   Handset/RFID reader port   Power/Input/Output port

6 First Use

6.1 Installing the SIM Card

Pay attention to the following items before installing the SIM card:

● Ensure that the SIM card has sufficient balance.
● Ensure that the phone card password lock has been closed.
● Ensure that the SIM card in the T333 has subscribed the caller ID service if you want to use your authorized phone number to call the T333.
● Power off the T333 before installing the SIM card.

To install the SIM card, perform the following operations:

1.   Loosen the screw, and remove the front cover of the T333.
2.   Insert the SIM card to the slot. Ensure that the card chip is facing up to the Printed Circuit Board (PCB).
3.   Close the cover, and tighten the screw.
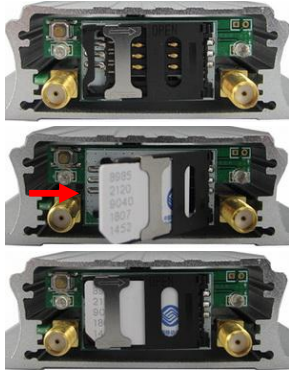
6.2   Charging

When you use the T333 for the first time, connect the T333 GND (-Black) and Power (+Red) wires to 12 V or 24 V external power supply for charging. Ensure that the T333 is charged at least three hours. Eight hours are recommended.
The T333 can be installed on a vehicle only after it is configured and tested.

6.3   Indicator

Press and hold down the power button for 3s to 5s to start the T333.

GPS Indicator (Blue)	
Steady on	One button is pressed or one input is activated.
Blink (every 0.1s)	The T333 is being initialized or the battery power is low.
Blink (0.1s on and 2.9s off)	A GPS signal is received.
Blink (1s on and 2s off)	No GPS signal is received.
3G Indicator (Green)	
Steady on	A call is coming in or a call is being made.
Blink (every 0.1s)	The T333 is being initialized.
Blink (0.1s on and 2.9s off)	A base station signal is received.
Blink (1s on and 2s off)	No base station signal is received.

6.4   Location Tracking

Make a call to the T333 SIM card number. A positioning SMS will be received.
Click the SMS link. The location is displayed on Google Maps on your mobile phone.

SMS example:

Now,061314 10:36,V,26,0Km/h,96%,http://maps.meigps.com/?lat=22.513781&lng=114.057183

The following table describes the SMS format:

Parameter	Description	Remarks
Now	Indicates the current location.	Alarm type
061314 10:36	Indicates the date and time in **MMDDYY hh:mm** format.	None
V	The GPS is not positioned.	None
26	Indicates the 3G signal value.	None
0Km/h	Indicates the speed.	Unit: km/h
96%	Indicates the remaining battery power.	None
http://maps.meigps.com/?lat=22.513781&lng=114.057183	This is a map link. Latitude: 22.513781 Longitude: 114.057183	None
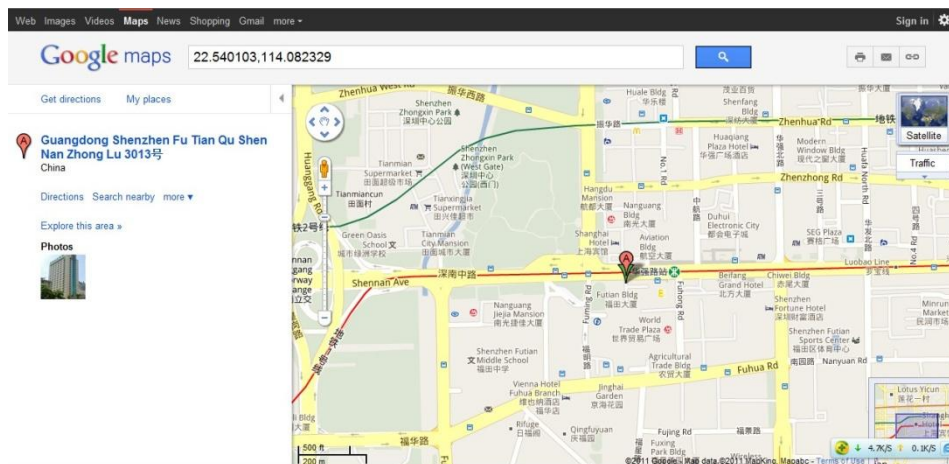
More SMS commands

You can configure the T333 on a mobile phone or on a computer by using Meitrack Manager. For details, see section 6.5 "Configured on a Computer."

Note:

1. The default password is 0000. You can change the password by using Meitrack Manager and SMS commands. For details, see section 6.5"Configured on a Computer."

2. The T333 can be configured by SMS commands with a correct password. After an authorized phone number is set, only the authorized phone number can receive the preset SMS report.

6.4.1 Setting a Combined Function Phone Number – A71

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

SMS Responding: IMEI,A71,OK

Description:

A phone number has a maximum of 16 bytes. Phone numbers are empty by default.

Set phone number 1 to an SOS phone number. When the tracker is called by using the phone number, a location SMS, geo-fence alarm, and low power alarm are received.

If all combined function phone numbers need to be deleted, send **0000,A71**.

When the SOS button is pressed, the tracker dials phone numbers 1, 2, and 3 in sequence. The tracker stops dialing when a phone number responds.

Example: 0000,A71,13811111111,13822222222,13833333333

Responding: 353358017784062,A71,OK

6.4.2 Setting a Listen-in Phone Number – A72

SMS sending: 0000,A72,*Listen-in phone number* 1,*Listen-in phone number* 2

SMS Responding: IMEI,A72,OK

Description:

When the authorized listen-in phone number is used to dial the tracker, the tracker answers the call automatically and enters the listen-in state. In this way, the tracker makes no noise.

A maximum of two phone numbers can be set. One phone number has a maximum of 16 digits. Phone numbers are empty by default.

If no phone number is entered, remain commas and delete related phone numbers.

If all phone numbers need to be deleted, send **0000,A72**.

Example: 0000,A72,13844444444,13855555555

Responding: 353358017784062,A72,OK

6.4.3 Setting the Smart Hibernation Mode – A73

SMS sending: 0000,A73,*Hibernation level*

SMS Responding: IMEI,A73,OK

Description:

When the hibernation level is **0** (default value), disable the hibernation mode.

When the hibernation level is **1**, the tracker enters the general hibernation mode. The 3G module always works, and the GPS

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module occasionally enters the hibernation mode. The tracker works 25% longer in the general hibernation mode than that in the normal working mode. The mode is not recommended for users who set the scheduled tracking in a short interval. In this way, the mode will affect trace integrity.

When the hibernation level is **2**, the tracker enters the deep hibernation mode. If the tracker is not activated (SOS, button changes, calling, incoming calls, SMSs, or vibration) after five minutes, the GPS module is stopped, and the 3G module enters the hibernation mode. If the tracker is activated, the GPS and 3G modules are waken up.

Note: In any condition, you can use an SMS command to disable the hibernation mode, and then the tracker exits the hibernation mode and returns back to the normal working mode.

Example: 0000,A73,2

Responding: 353358017784062,A73,OK

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

6.5   Configured on a Computer

This section describes how to use MEITRACK Manager to configure the T333 on a computer.

Procedure:

1.   Install the USB driver and MEITRACK Manager.

2.   Connect the T333 to a PC by using a USB cable.

3.   Run MEITRACK Manager, and start the T333. Meitrack Manager will automatically detect the T333 port number and read T333 parameters.
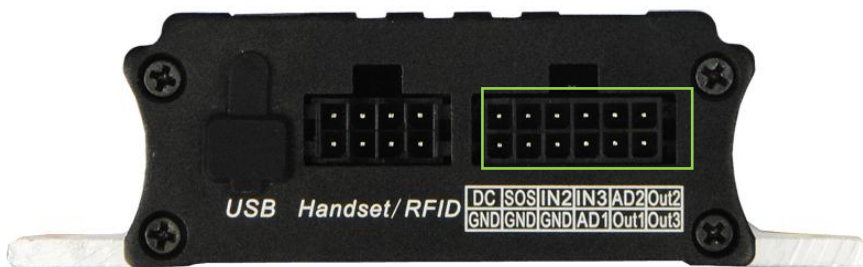
For details about MEITRACK Manager, see the *MEITRACK Manager User Guide*.

Note: The CD delivered with the tracker contains MEITRACK Manager. The software language will be automatically changed according to the operating system language. Press **Ctrl + L** to manually change the language.

7 Installing the T333

7.1 Installing an I/O Cable

The I/O cable is a 12-pin cable, including the power, analog input, digital temperature sensor input, and negative/positive input and output.

1 Power (+)	3 Input 1	5 Input 2	7 Input 3	9 Fuel sensor	11 Output 2
2 GND (-)	4 GND (-)	6 GND (-)	8 AD input 1	10 Output 1	12 Digital Temperature Sensor

Pin Number	Color	Description
1 (Power +)	Red	Positive electrode of the power input, connected to the positive electrode of the vehicle storage battery. Input voltage: 11 V to 36 V. 12 V is recommended.

| 2 (GND)	Black	Ground wire, connected to the negative electrode of the vehicle storage battery or to the negative terminal.
3 (Input 1)	White	Digital input 1, negative triggering (SOS button by default)
4 (GND)	Black	Ground wire, connected to input 1 (SOS button)
5 (Input 2)	White	Digital input 2 (negative triggering) Connects to a door triggering signal cable to detect vehicle door status. (Most Chinese, Korean, and Japanese cars are negative edge-triggered.)
6 (GND)	Black	Ground wire It can be used as a ground wire connected to an analog sensor.
7 (Input 3)	White	Digital input 3 (positive triggering) Detect the vehicle ACC status by default.
8 (AD Input 1)	Blue	Analog input 1 with 12-bit resolution and valid voltage 0–6.6 V Connects to an external sensor, such as the fuel sensor.
9 (Fuel sensor input)	Blue	Analog input 2 with 12-bit resolution and valid voltage 0–6.6 V The AD cable is connected to the white plug. The cable is connected to the A53 fuel sensor by default.
10 (Output 1)	Yellow	Output 1 Valid: low level (0 V) Invalid: open collector Maximum voltage for output open collector (invalid): 40 V Maximum current for output low voltage (valid): 400 mA Connects to an external relay to remotely cut off the vehicle fuel cable or engine power supply.
11 (Output 2)	Yellow	Output 2 Valid: low level (0 V) Invalid: open collector Maximum voltage for output open collector (invalid): 40 V Maximum current for output low voltage (valid): 400 mA Connects to an external relay to remotely cut off the vehicle fuel cable or engine power supply.
12 (Digital temperature sensor input)	Yellow	TTL3.3V level Connects to the A52 digital temperature sensor by default by using the A61 sensor box. Note: The DC or AC voltage that is greater than 3.3 V is allowed. Otherwise, the device may be damaged.

7.1.1 Power Cable/Ground Wire (PIN1, PIN2)

Connect the power cable (red) and ground wire (black) to the positive and negative electrodes of the vehicle battery respectively.
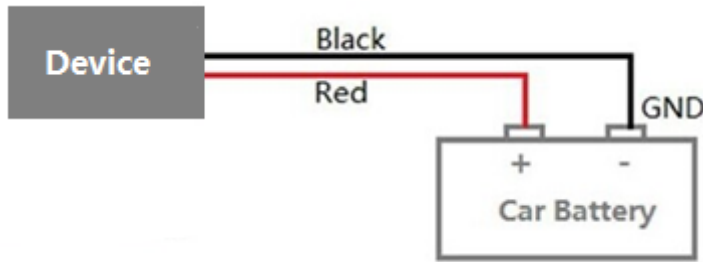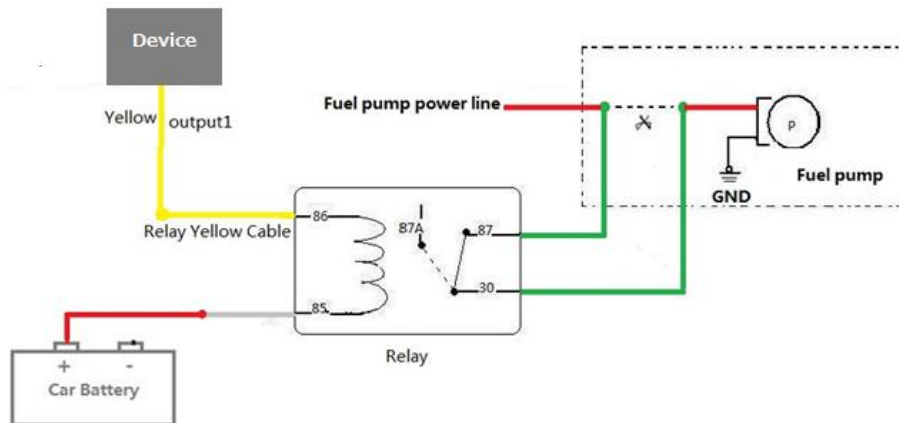

7.1.2 ACC and Door Detection (PIN7, PIN5)
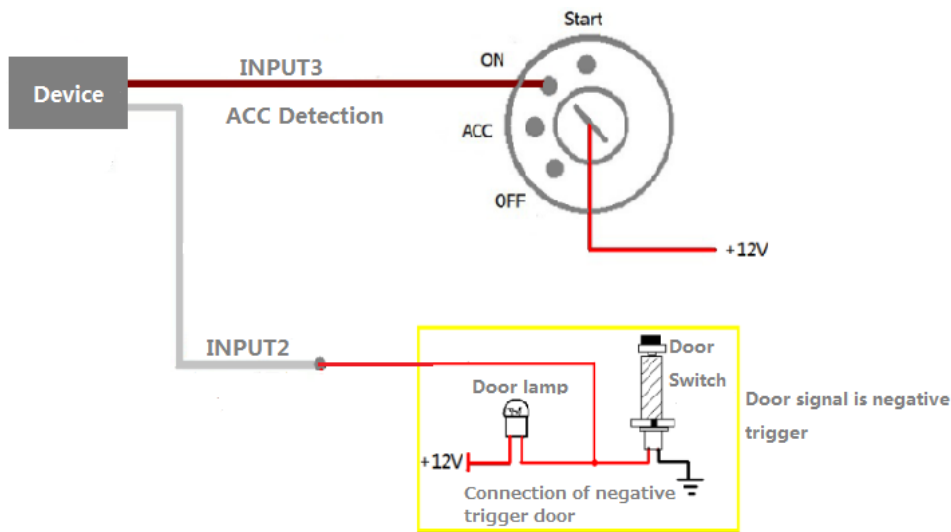
Note: If input 3 is connected to ACC and the engine is started, ON-OFF-ON conversion occurs. If input 3 is connected to Start and the engine is started, OFF-ON-OFF conversion occurs. If the device is installed correctly and the engine is started, OFF-ON conversion occurs.

7.1.3 Output (PIN10/PIN11)

Note: To implement remote fuel and power cutoff, connect the relay to the fuel pump cable or the engine cable in series.

7.1.4   Sensor Input

For the PIN8 analog input 1, a sensor whose output voltage ranges from 0 V to 6.6 V can be installed. The analog voltage calculation formula is as follows:

Voltage = (AD x 3.3 x 2)/4096

PIN10 is connected to the A53 fuel sensor by default. In this way, the formula does not need to be added on the platform. For details about the sensor installation and platform functions, see the *A53 Fuel Sensor User Guide*.

PIN12 is connected to the A61+52 temperature sensor. For details about the sensor installation and platform functions, see the *Temperature Sensor User Guide*.

Note:

● The white plug on the T333 harness consist of the power cable (red), ground wire (black), AD2 cable (blue), and SEN cable (blue).

● The T333 can connect to a maximum of two A61 sensor boxes. You can install a maximum of eight A52 temperature sensor ports. For details about how to install a temperature sensor port, see the *MEITRACK Temperature Sensor User Guide*.
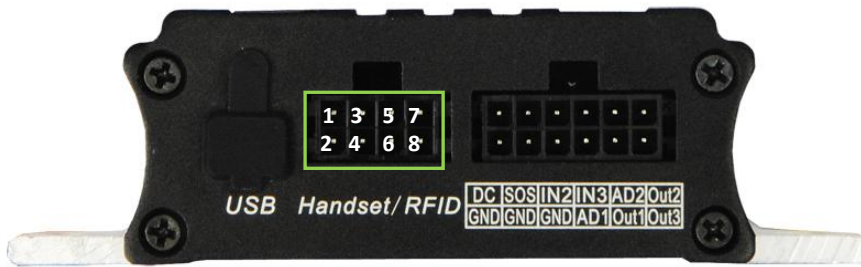
7.2   Installing the Handset (RS232 Port)
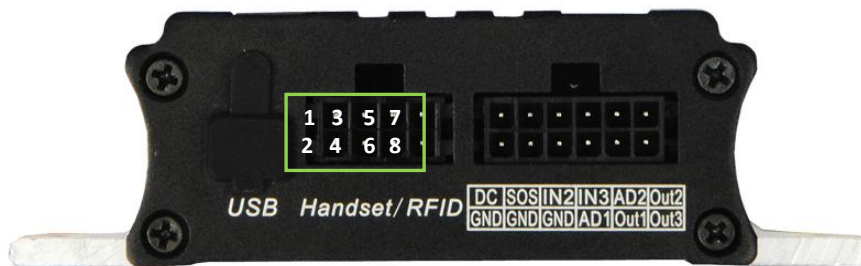
Pin Number	Color	Description
1	Red	Power output Output voltage: 5 V
2	Black	Ground wire
3	Orange	RS232 TX (T333 RX)
4	Yellow	RS232 RX (T333 TX)
5	Blue	Positive electrode of the microphone
6	Green	Negative electrode of the microphone
7	Purple	Positive electrode of the loudspeaker
8	White	Negative electrode of the loudspeaker

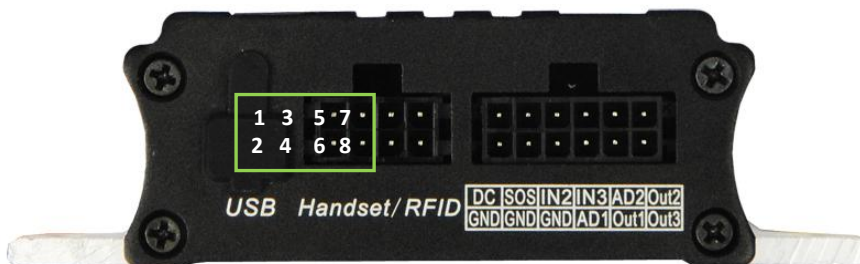Note: The RS232 port and the RFID reader/camera cannot be used at the same time.

7.3 Installing the RFID Reader (RS232 Port)

Pin Number	Color	Description
1	Red	Power output Output voltage: 5 V
2	Black	Ground wire
3	Green	The RFID reader sends data to the T333 through the RS232 port.
4	White	Reserved (The T333 sends data to the RFID reader through the RS232 port)
Remarks: The T333 RFID reader is not compatible with the MVT600 RFID reader. The MVT600 has a Wiegand port.		

Note: The RS232 port and the handset/camera cannot be used at the same time.

7.4 Installing the Camera (RS232 Port)

| Pin Number	Color	Description
1	Red	Power output Output voltage: 5 V
2	Black	Ground wire
3	Green	The camera sends data to the T333 through the RS232 port.
4	White	The T333 sends data to the camera through the RS232 port.

The 8PIN port connects to the T333, and the 4PIN port connects to the camera.

Connect the 8PIN port to the T333.   Connect the 4PIN port to the camera.

Note: The RS232 port and the handset/RFID reader cannot be used at the same time.

7.5   Installing GPS and 3G Antennas

3G antenna   GPS antenna
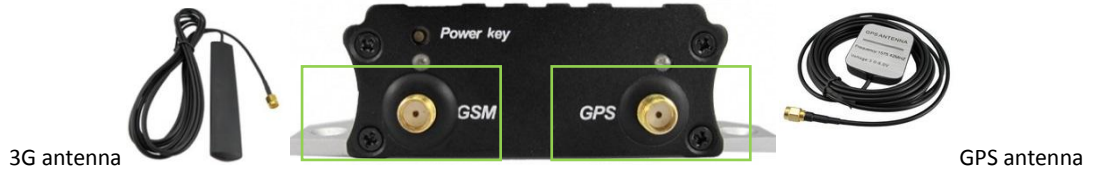
Connect the 3G antenna to the SMA connector which is labeled "GSM". The 3G antenna is non-directional, so you can hide it in any place of a vehicle.

Connect the GPS antenna to the connector which is labeled "GPS". It is recommended that the antenna is facing up to the sky and the antenna side with words is downwards. Secure the antenna by using double sided tapes.

Note: Do not install the GPS antenna at a place with metal.

7.6   Mounting the T333

Tighten the four screws shown in the following figure.

If you have any questions, send an email to info@meitrack.com.