MEITRACK T333 User Guide

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Contents

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2 Product Overview

The T333 is a brand new 3G vehicle tracker. In addition to real-time tracking, the T333 has two-way calling and remote listen-in functions. The T333 provides excellent and stable performance in vehicle tracking and fleet management.

3 Product Functions and Specifications

3.1 Product Functions

3.1.1 Position Tracking

- GPS + GSM positioning
- Real-time location query
- Track by time interval
- Track by distance
- Cornering report
- Speeding alarm
- Track by 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
- 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 buffer for recording driving routes (Store 8,192 GPRS cache records, 256 SMS cache records, and 131,072 GPS logs)
- Mileage report
- Low power alarm for internal battery
- Build-in 3-axis accelerometer
- Over-the-Air (OTA) update

3.1.4 Functions of Optional Accessories

Accessory		Function
iButton		Identify the driver ID and grant permission to start the vehicle.
A53 resistive fuel level sensor		Check the fuel level.
A52 digital temperature sensor + A61 sensor box		Check temperature.
Super magnet		Fix the device in place.
1 RS232 port	Handset	Used for two-way calling, SMS sending and receiving, and remote monitoring.
	Camera (Used with a Micro SD card)	Take photos.
	RFID reader	Identify drivers and control vehicle starting. Monitor driver attendance by RFID report.
	LED display	Display advertisements and announcements.
	A21 LCD display	Used for real-time vehicle dispatching and management.

3.2 Specifications

Item	Specifications
Dimension	105 mm x 65 mm x 26 mm
Weight	190g
Power supply	DC 11–36 V/1.5 A
Backup battery	400 mAh/3.7 V
Power consumption	Current in standby mode: 8 mA
Operating temperature	-20°C to 55°C
Operating humidity	5% to 95%
Working hour	47 hours in power-saving mode 4.7 hours in normal mode
LED indicator	Green indicator showing the GSM signal Blue indicator showing the GPS signal
Button/Switch	1 SOS button (for sending SMSs or dialing) 1 power button
Memory	8 MB byte
Sensor	3-axis accelerometer (used to wake the device up by vibration and detect towing alarms)
Frequency band	T333-E:

	UMTS/HSDPA: 900/2100 MHz
	GSM/GPRS: 900/1800 MHz
	T333-A:
	UMTS/HSDPA: 850/1900 MHz
	GSM/GPRS: 850/900/1800/1900 MHz
	T333-T:
	UMTS/HSDPA: 850/2100 MHz
	GSM: 850/900/1800/1900 MHz
	Note: Select proper device according to the local frequency band.
GPS sensitivity	-161 dB
Positioning accuracy	10m
I/O port	3 digital inputs (2 negative inputs and 1 positive input)
	2 analog detection inputs
	3 outputs
	1 RS232 port
	1 USB port
	1 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 download card |

Optional accessories:

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

| A52 digital temperature sensor + A61 sensor box | LED display | iButton |

5 Appearance

6 First Use

6.1 Installing the SIM Card

1. Loosen the screws, and remove the front cover of the device.
2. Insert the SIM card into the card slot with its gold-plated contacts facing towards the Printed Circuit Board (PCB).
3. Close the cover, and tighten the screws.

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 use your authorized phone number to call the device.

6.2 Charging the Device

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 LED Indicator

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

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.
3G 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 base station signal is received.
Blink (1 second on and 2 seconds off)	No base station signal is received.

6.4 Configuring Device Parameters by Meitrack Manager

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

Procedure:

1. Install the USB-to-serial cable driver and Meitrack Manager.

2. Connect the T333 to a computer by using the USB-to-serial cable.

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

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*.

6.5 Tracking by Mobile Phone

Call or send the **0000,A00** command by SMS to the device's SIM card number. 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.

Note: Ensure that the device's SIM card number has subscribed the caller ID service. Otherwise, the tracking function by mobile phone will be unavailable.

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.	SMS header: indicates the current location or the alarm type.
061314 10:36	Indicates the date and time in **MMDDYY hh:mm** format.	None
V	The GPS is invalid.	A = Valid V = Invalid
26	Indicates the 3G 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.
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	Indicates the map link. Latitude: 22.513781 Longitude: 114.057183	None

6.6 Common SMS Commands

6.6.1 Setting Authorized Phone Numbers – A71

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

SMS reply: IMEI,A71,OK

Description:

Phone number: 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 1/2/3: SOS phone numbers. When you call the tracker by using these phone numbers, you will receive SMS notification about the location, geo-fence alarm and low power alarm.

If you need to delete all authorized phone numbers, 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:

Sending: 0000,A71,13811111111,13822222222,13833333333

Reply: 353358017784062,A71,OK

6.6.2 Setting Listen-in Phone Numbers – A72

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

SMS reply: IMEI,A72,OK

Description:

When you call the tracker by using the authorized listen-in phone number, the tracker will answer the call automatically and enter the listen-in state. In this way, the tracker will not make any sound.

A maximum of two phone numbers can be set. Each phone number has a maximum of 16 digits. If no phone numbers are set, leave them blank. Phone numbers are empty by default.

If no phone numbers are set and commas are remained, phone numbers set before will be deleted.

If you need to delete all listen-in phone numbers, send **0000,A72**.

Example:

Sending: 0000,A72,13844444444,13855555555

Reply: 353358017784062,A72,OK

6.6.3 Setting the Smart Sleep Mode – A73

SMS sending: 0000,A73,*Sleep level*

SMS reply: IMEI,A73,OK

Description:

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

When the sleep level is **1**, the tracker enters the normal sleep mode. The 3G module always works, and the GPS module occasionally enters the sleep mode. The tracker works 25% longer in the normal sleep mode than that in the normal working mode. This mode is not recommended for short interval tracking; this will affect the route precision.

When the sleep level is **2**, the tracker enters deep sleep mode. If no event (SOS, button changes, incoming calls, SMSs, or vibration) is triggered after five minutes, the GPS module will stop, and the 3G module will enter sleep mode. Once an event is triggered, the GPS and 3G modules will be woken up.

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

Example:

Sending: 0000,A73,2

Reply: 353358017784062,A73,OK

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

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 commands with a correct password. After an authorized phone number is set, only the authorized phone number can receive the preset SMS event report.

7 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*.

8 Installing the T333

8.1 Installing GPS and 3G Antennas

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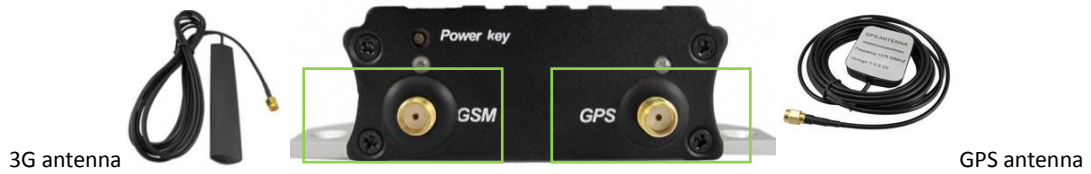
Connect the 3G antenna to the connector which is labeled "GSM". The 3G antenna is non-directional, so you can hide it in any place of a vehicle.

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 metal covered place.

8.2 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 interfaces.
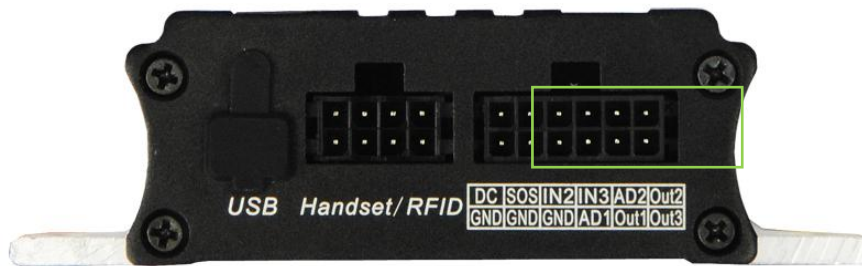

1 Power (+)	3 Input 1	5 Input 2	7 Input 3	9 Fuel level sensor	11 Output 2
2 GND (-)	4 GND (-)	6 GND (-)	8 AD input 1	10 Output 1	12 Digital temperature sensor

| Pin Number	Color	Description
1 (Power +)	Red	Positive charge of the power input, connected to the positive charge of the vehicle battery. Input voltage: 11–36 V. 12 V is recommended.
2 (GND)	Black	Ground wire, connected to the negative charge of the vehicle battery or to the negative terminal.
3 (Input 1)	White	Digital input 1, negative trigger (SOS button by default)
4 (GND)	Black	Ground wire, connected to input 1 (SOS button)
5 (Input 2)	White	Digital input 2 (negative trigger) Connect to a door trigger 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 trigger) Connect to the vehicle ACC cable by default to detect the vehicle ACC status.
8 (AD Input 1)	Blue	Analog input 1 with 12-bit resolution and valid voltage 0–6.6 V Connect to an external sensor, such as the fuel level sensor.
9 (Fuel level 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 level 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 Connect 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 Connect to an external relay to remotely cut off the vehicle fuel cable or engine power supply.
12 (Digital temperature sensor or iButton input port)	Yellow	TTL3.3V level Connect to the A52 digital temperature sensor or iButton by default by using the A61 sensor box. Note: The DC or AC voltage that is greater than 3.3 V is not allowed. Otherwise, the device may be damaged.

8.2.1 Power Cable/Ground Wire (Pin 1/2)

Connect the power cable (red) and ground wire (black) to the positive and negative charges of the vehicle battery respectively.
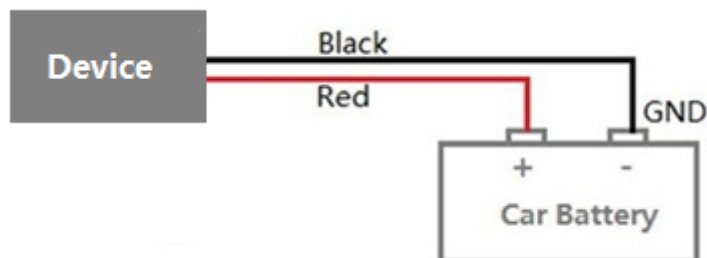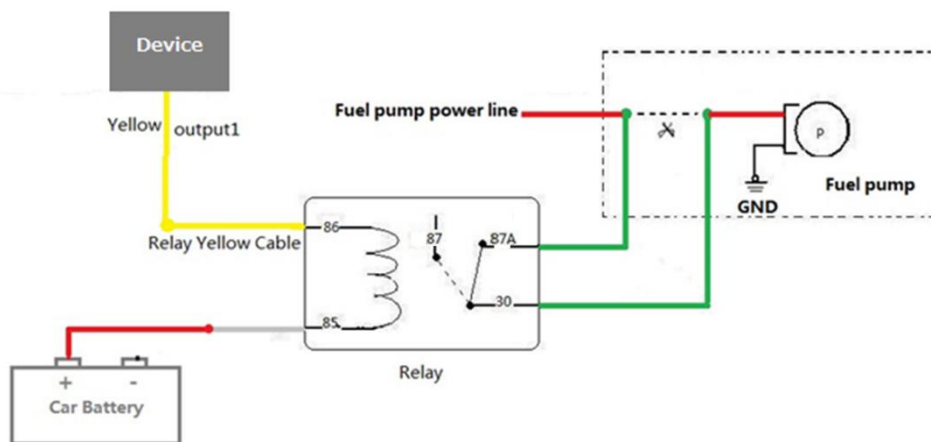
8.2.2 ACC and Door Detection (Pin 5/7)
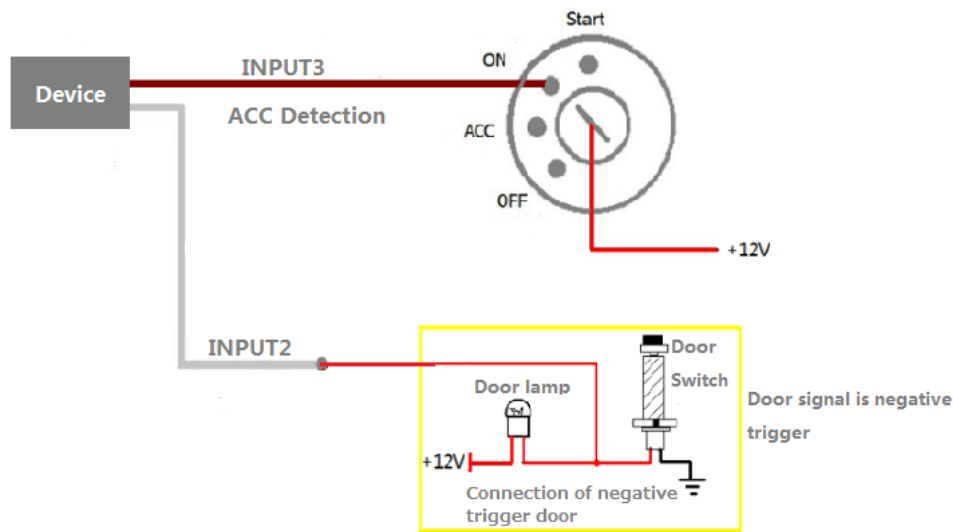
Note: If input 3 is connected to the "ACC" position, after the engine is started, the platform will read it as ON-OFF-ON. If input 3 is connected to the "Start" position, after the engine is started, the platform will read it as OFF-ON-OFF. If installed correctly, after the engine is started, the platform will read it as OFF-ON.

8.2.3 Output (Pin 10/11)

Note: To implement remote fuel/power cut-off, connect the relay to the fuel pump power cable or to the engine power cable in series.

8.2.4 Sensor Input

For pin 8 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

Pin 10 is connected to the A53 fuel level sensor by default. You can install the sensor without calculation formula added on the platform. For details, see the *MEITRACK Fuel Level Sensor User Guide*.

Pin 12 is connected to A61+A52 temperature sensor or iButton by default. For details, see the *MEITRACK Temperature Sensor User Guide* and *MEITRACK iButton User Guide*.

Note:

● The white plug on the T333 harness consists 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, see the *MEITRACK Temperature Sensor User Guide*.
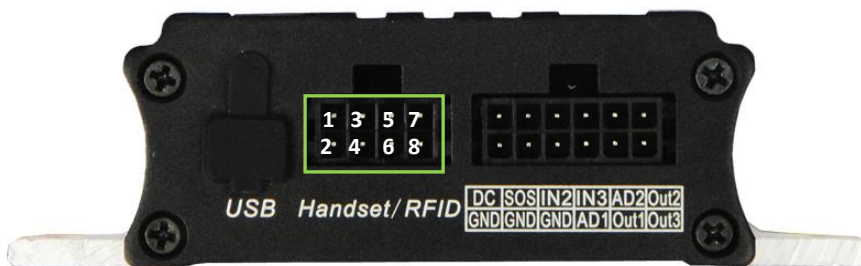
8.3 Installing the Handset (RS232 Port)
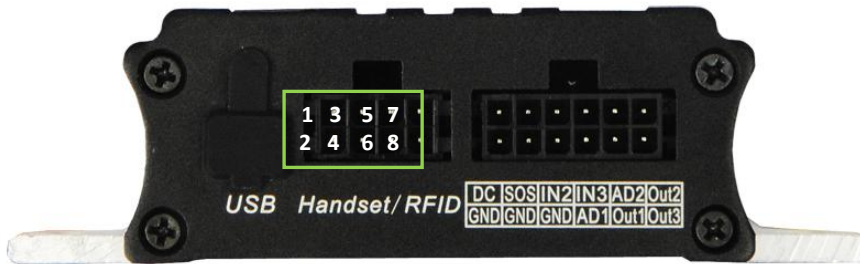
Pin Number	Color	Description
1	Red	Power output Output voltage: 5 V
2	Black	Ground wire
3	Orange	RX, T333 receiving data from the handset.
4	Yellow	TX, T333 sends data to the handset.
5	Blue	Positive charge of the microphone
6	Green	Negative charge of the microphone
7	Purple	Positive charge of the speaker
8	White	Negative charge of the speaker

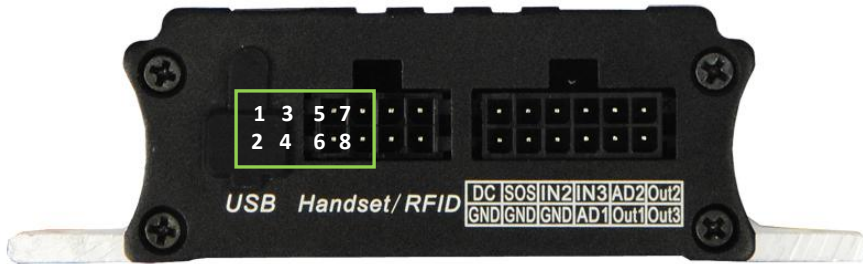Note: The RS232 port can be used with either the RFID reader or the camera at a time.

8.4 Installing the RFID Reader (RS232 Port)

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

Note: The RS232 port can be used with either the handset or the camera at a time.

8.5 Installing the Camera (RS232 Port)

Pin Number	Color	Description
1	Red	Power output Output voltage: 5 V
2	Black	Ground wire
3	Green	RX, T333 receives data from the camera.
4	White	TX, T333 sends data to the camera,

To connect T333 to a camera, an 8 pin to 4 pin conversion cable is required.

Connect the device to the 8-pin interface. ← → Connect the camera to the 4-pin interface.

Note: The RS232 port can be used with either the handset or the RFID reader at a time.

8.6 Mounting the T333

Tighten the four screws shown in the following figure.
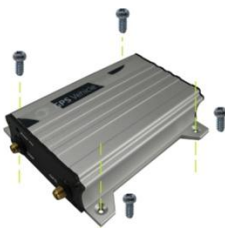
If you have any questions, do not hesitate to email us at info@meitrack.com.