MEITRACK T311 User Guide

Change History

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Contents

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2 Product Overview

The T311 is an anti-theft GPS tracking device specially designed for motorcycles and electric vehicles. The T311 is equipped with a wireless remote control and a buzzer, so that vehicle arming, disarming, and keyless start can be implemented. In arming state, if a vehicle is faulty, the buzzer will generate an alarm, and thus the engine is stopped and the vehicle is locked to prevent stealing.

3 Product Function and Specifications

3.1 Product Function

3.1.1 Location Tracking

- GPS + GSM dual-module tracking
- Real-time location query
- Track by time interval
- Track by distance
- Track on a mobile phone
- Speeding alarm
- Direction change alarm

3.1.2 Anti-Theft

- (Optional) Remote control SOS alarm
- Arming/Disarming
- Towing alarm
- (Optional) Electric vehicle anti lock motor
- (Optional) Remote engine stop
- GPS blind spot alarm
- External power cut-off alarm
- Buzzer alarm
- Geo-fence

3.1.3 Other Functions

- SMS/GPRS (TCP/UDP) communication (Meitrack protocol)
- Built-in 8 MB buffer for driving trace recording
- Low battery alarm
- Waterproof IP65
- (Optional) Electric vehicle keyless drive
- (Optional) Motorcycle keyless start/flameout
- (Optional) Vehicle garage tracking

3.1.4 Optional Accessory Function

Accessory	Function
Wireless remote control	Arming/Disarming Keyless start/flameout Keyless drive Vehicle garage tracking
External GPS antenna	Strengthen the GPS signal.

3.2 Specifications

Item	Specifications
GSM frequency band	GSM 850/900/1800/1900 MHz
GPS sensitivity	-162 dB
Positioning accuracy	10m
Dimension	86 mm x 65 mm x 25 mm
Weight	165g
Coordinate system	WGS-84
Input voltage	DC 11–90 V/1.5 A
Built-in battery	730 mAh/3.7 V
Normal power consumption	60 mAh
Operating temperature	-22°C to 55°C
GSM antenna	Internal antenna
GPS antenna	Internal antenna (the side with the logo facing upwards) (Optional) External antenna
Built-in memory chip	8 MB
Sensor	Acceleration sensor (for vibration wakeup and vehicle stealing alarm)
Wireless remote	RF 433 MHz

control	
Port	1 ACC output 1 input for motorcycle flameout 1 output for motorcycle flameout/electric vehicle lock motor 1 output for motorcycle start 1 input for electric vehicle motor start detection 1 output for a buzzer alarm 1 USB port 1 wireless remote control antenna 1 negative terminal connection cable

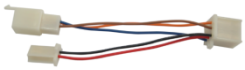
4 T311 and Accessories

T311 and standard accessories:

T311 with a built-in battery

Motorcycle cable

Buzzer



Electric vehicle cable

USB cable

CD

3M double sided tape

Optional accessories:

External GPS antenna

Wireless remote control

Relay

5 First Use

5.1 Installing the SIM Card

1. Remove the back cover.

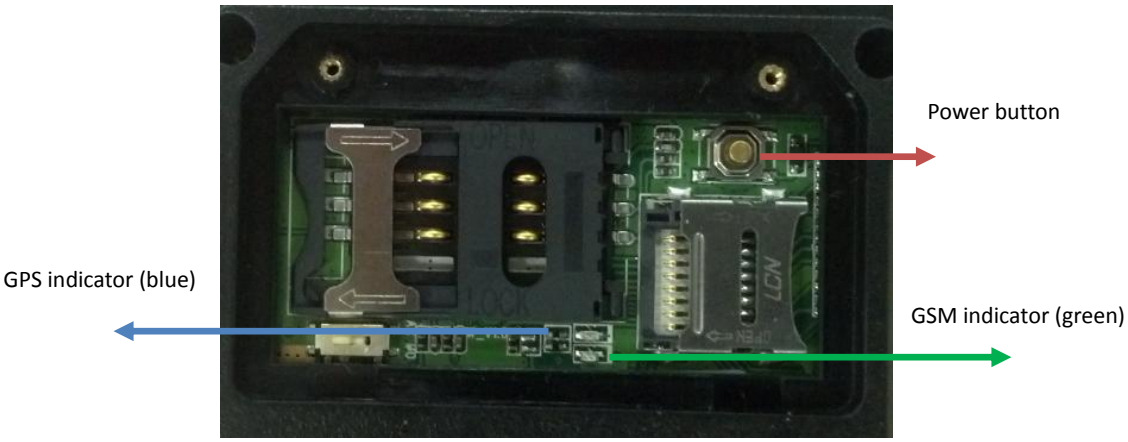
Turn off the device. With the back panel facing you, use the mini screwdriver to remove the two screws to release the back cover. Then lift up the back cover from the notch at the bottom of the device.

2. Insert the SIM card.

Gently push the SIM card into the slot until you hear a click with the gold-colored side facing down.

Note: Before inserting the SIM card, turn off the device. Ensure that the PIN lock of the SIM card is closed, and the SIM card has sufficient balance and has subscribed the call ID service. If you want to use the GPRS function, learn about the SIM card GPRS charging first.

5.2 Indicator



To start the T311, press and hold down the power button for 3s to 5s, or connect the T311 to external power supply.

GPS Indicator (Blue)	
Steady on	One button is pressed or one input is activated.
Blink (0.1s on and 0.9s off)	A GPS signal is received.
Off	No GPS signal is received.

GSM Indicator (Green)	
Steady on	A call is coming in or busy.
Blink (0.1s on and 0.1 off)	The T311 is being initialized.
Blink (0.1s on and 0.9s off)	A GSM signal is received.
Blink (1s on and 1s off)	No GSM signal is received.

5.3 Configured on a Computer

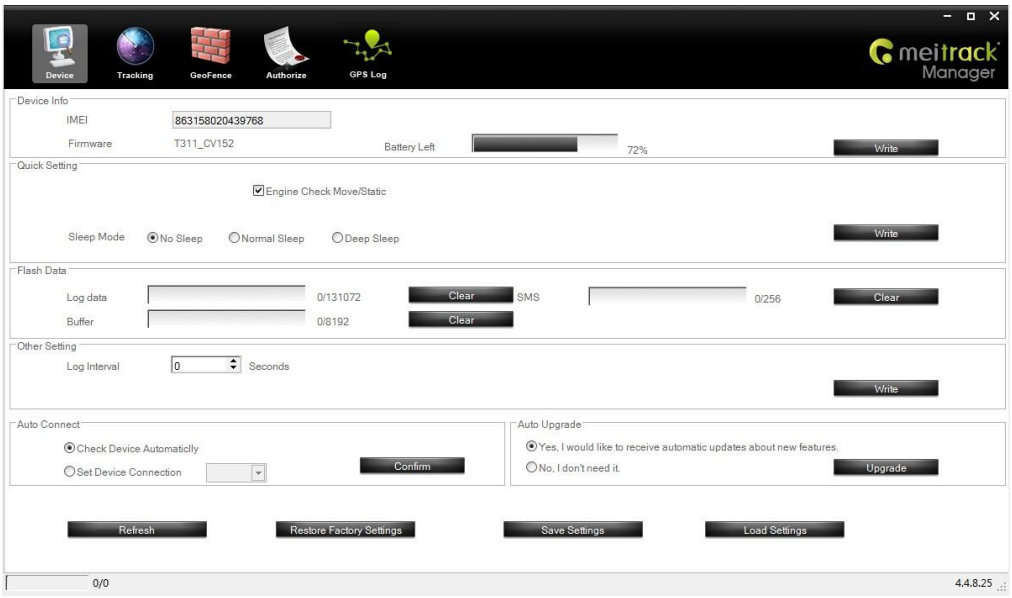
This section describes how to use MEITRACK Manager to configure the T311 on a computer.

Procedure:

1. Install the PL2303 driver and Meitrack Manager.
2. Connect the T311 to a PC by using a USB cable.

3. Run Meitrack Manager. The following dialog box is displayed:

Meitrack Manager will automatically detect the device, and the **Device** tab page for default parameters is displayed.



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

5.4 Positioning, Tracking, and Anti-Theft

5.4.1 Querying a Location by Using a Mobile Phone

This section describes how to query the current location of the T311, ensuring that the GPS is working normally.

Call the SIM card phone number embedded in the T311, and hang up after it rings 2–3 times.

Note: If an authorized phone number was set by SMS command A71, only this phone number can receive SMS reports.

A location SMS is received. Click the link in the SMS to query the location.

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 alarm 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	This is a map link. Latitude: 22.540103 Longitude: 114.082329	None

If no GPS signal is valid for the tracker, the tracker will reply the most recently location that is positioned successfully.

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

Note: The default password of the tracker is 0000. The password can be changed by using Meitrack Manager or SMS commands. After the password is changed successfully by using SMS command, only the authorized phone number can receive SMS reports. The common format of an SMS command is: *Password,Command,Parameter*.

More SMS commands

You can configure the T311 on a mobile phone or on a computer by using Meitrack Manager. For details, see section 5.3 "Configured on a Computer."

Note:

1. The default password is 0000. You can change the password by using Meitrack Manager or SMS commands. For details, see section 5.3 "Configured on a Computer."

2. The T311 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.

5.4.2 Setting a Function Phone Number

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

SMS Responding: IMEI,A71,OK

Description:

A function 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, SMSs of locations, geo-fence alarms, low power alarms, and speeding alarms are received, and calls and SMSs of car towing and stealing alarms are received.

If all 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

5.4.3 Arming/Disarming

SMS sending: 0000,B21,*Status*

SMS Responding: IMEI,B21,OK

Description:

When **Status** is **1**, enable the arming function. In arming state, activating the engine is an unauthorized operation. If the operation is performed, the tracker will send an alarm SMS to the preset authorized phone number.

When **Status** is **0**, disable the arming function. In disarming state, all anti-theft alarms will be cleared.

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

5.5 Remote Control Functions

5.5.1 Definitions of RF Remote Control Keys

Function Key	Current Vehicle State	Description
 Arming Key	Disarming state/ACC OFF	Press the key when the engine stops. If the buzzer sounds “beep” once, the vehicle enters the arming state. In this state, a vehicle stealing alarm will be generated if the vehicle vibrates and starts.

 Disarming Key	Arming state	Press the key. If the buzzer sounds “beep” twice, the arming state will be disabled.
	Start state	If the vehicle is started by pressing  on the remote control, press  to stop the vehicle. If the vehicle is started by using the vehicle key, the Disarming Key does not take effect.
 Start Key	ACC OFF	Press the key twice to start the vehicle. If the vehicle is started by using the remote control in the arming state, the arming state will be automatically disabled.
 Horn Key	Any status	Press and hold down the key for 2s. An SMS/GPRS SOS alarm is generated.
	ACC OFF	Press the key. The buzzer sounds for 4s, and the vehicle owner is notified of the vehicle location.

5.5.2 RF Remote Control Code Matching Function

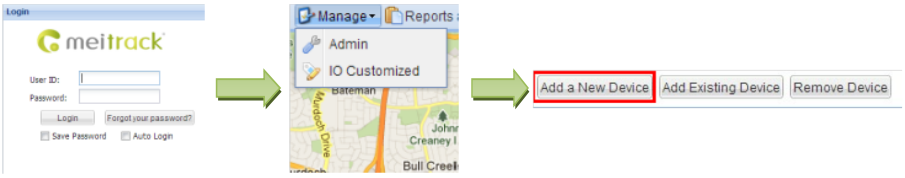
If the remote control does not match the tracker, match the code manually. There are the following two code matching modes:

1. **ACC code matching mode**
   a) In disarming state, turn the vehicle key in the lock for 8 times from ACC OFF to ACC ON, and stay on the ACC ON state. After 3s, the buzzer will sound “bi” 3 times to enter the code matching state. Note that if it takes more than 3s to turn the key twice, the number of key turning times will recount.
   b) Press any key on one remote control. If the buzzer sounds 3 times, the code is matched successfully. Then press any key on the other remote control, the buzzer sounds 3 times. In this way, you can exit the code matching state. If a same remote control is pressed twice, code matching performed later for other remote controls does not take effect.
   c) The code matching must be completed within 20s. Otherwise, the code matching state exits automatically.
   d) When more than one remote controls are implemented code matching, if a same remote control is pressed twice, code matching performed later for other remote controls does not take effect.
2. **Command code matching mode**
   a) Send the SMS/GPRS command **000,B24,1** to enter the code matching state. After the tracker receives the command, the buzzer will sound 3 times.
   b) If you have two remote controls, press any key on one remote control. If the buzzer sounds "bi" 3 times, the code is matched successfully. Then press any key on the other remote control, the buzzer sounds 3 times. In this way, you can exit the code matching state.
   c) The code matching must be completed within 20s. Otherwise, the code matching state exits automatically.
   d) When more than one remote controls are implemented code matching, if a same remote control is pressed twice, code matching performed later for other remote controls does not take effect.

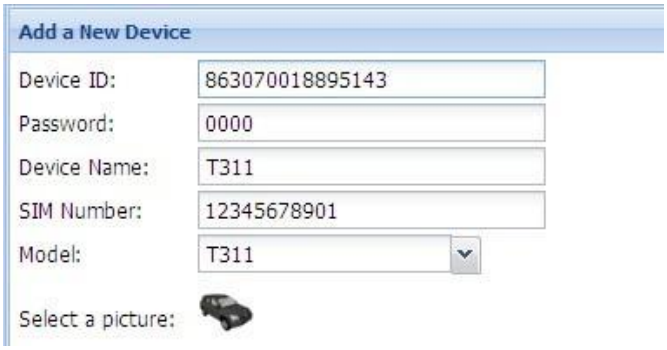
5.6 GPS Tracking System

Perform the following operations:

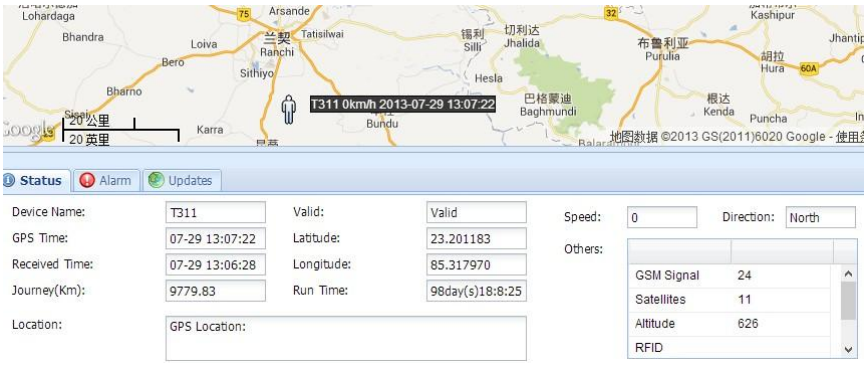
1. Configure parameters in any of the following ways:
   - Configured by SMS: Send SMS commands **0000,A21,1,114.112.54.134,8800,CMNET,,** and **0000,A12,6,0** to the tracker SIM card phone number.
   - Configure by Meitrack Manager: Connect the tracker to a PC, and run Meitrack Manager to enter the main interface. Then select **GPRS Tracking**, and set parameters including Server IP, Port, APN, Turn on TCP, and Time Interval.
2. Visit ms02.trackingmate.com, and enter the user name and password. Contact us if you have no user name and password or forget your user name and password.
3. Go to the map, and choose **Manage** > **Admin**.
4. Select a user, and Click **Add a New Device**.



5. Obtain the tracker IMEI from Meitrack Manager, register a device, and set the parameters shown in the following figure.



6. Double-click a device in the panel on the right, and check whether data is updated in **Status**.



6 Installing the T311

6.1 (Optional) Installing the GPS Antenna

Connect the GPS antenna to the GPS port on the side panel of the tracker. It is recommended that the antenna should face up to the sky and the antenna side with words should face downwards. Secure the antenna by using double sided tapes.

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

6.2 Installing an I/O Cable

6.2.1 Port Definition

The I/O cable includes the power cable, positive and negative input, and output.

Port	Color	Description
Positive power supply	Red	Connected to the positive power supply 11–90V input with the 10 A fuse.
Negative power supply (GND)	Black	Connected to the negative electrode.
Ignition start cable	Orange	Connected to the positive output line (that is, the ACC cable) of an electronic door lock on an electric vehicle or motorcycle. Used to detect whether the vehicle key switch is turned on or to output positive electricity by simulating the original electronic door lock when the vehicle is started remotely. The head of the positive electricity on a motorcycle use the same type of cable as the electronic door lock on an electric vehicle.
Upper flameout cable	Pink	Used for remote flameout (only for motorcycles. For details, see the wiring diagram.)
Lower flameout cable	Grey	Used for motorcycle remote flameout and electric vehicle anti lock motor.
Start	Blue	Used for remote start. Positive electricity is output upon the start. A relay is connected to a negative start vehicle to change the positive start line to a negative start line. (Only for motorcycles. For details, refer to the wiring diagram.)
Motor pulse line	Green	Connected to the motor pulse signal cable. Used only for electric vehicles.

Buzzer output	Brown	PWM output
USB232 port	Black	Parameter configuration and program upgrade
Remote control antenna	Blue	RF remote control antenna for signal receiving
Ground antenna	Black	

6.2.2 Port Pictures

Motorcycle cable

Electric vehicle cable

Remote control antenna

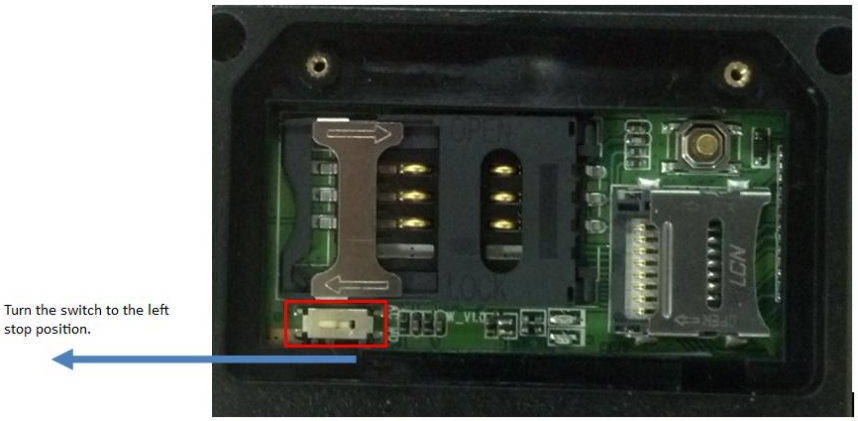
Buzzer output

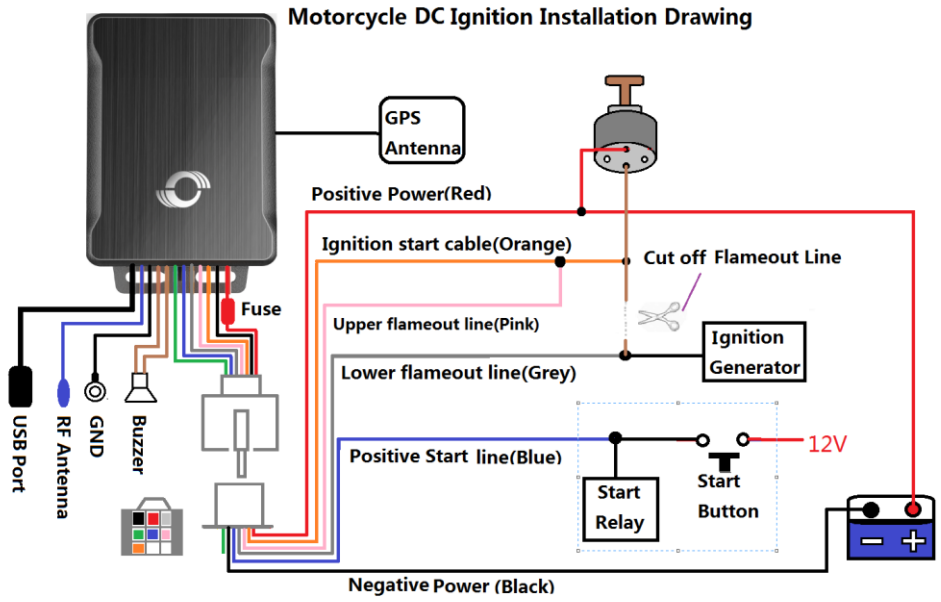
USB232 port

6.2.3 Motorcycle Wiring Diagram

6.2.3.1 DC Ignition Motorcycle Wiring Diagram

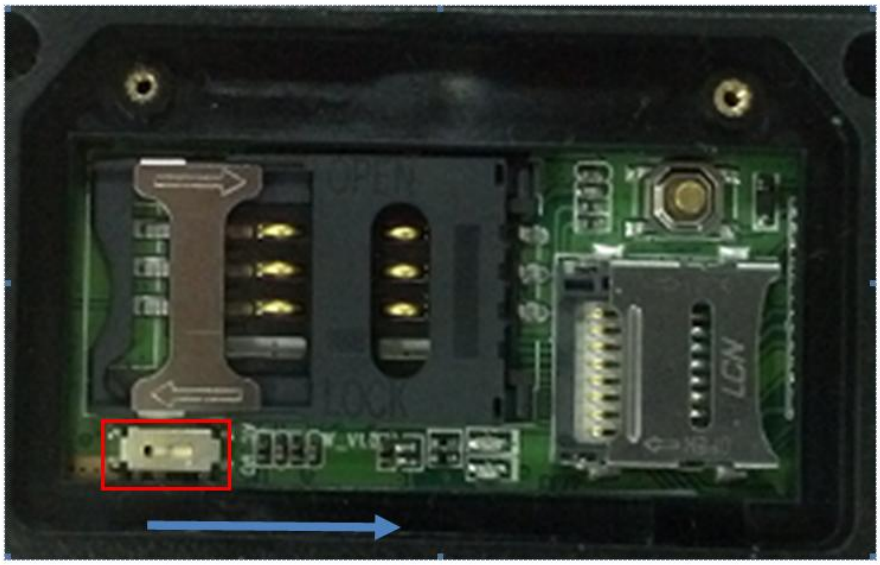
Turn the switch to the left stop position (DC ignition mode):



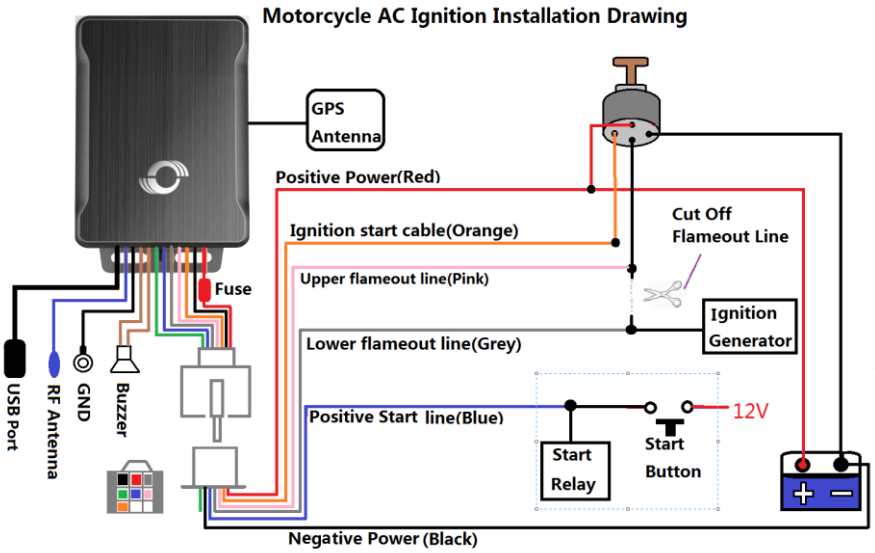


6.2.3.2 AC Ignition Motorcycle Wiring Diagram

Turn the switch to the right stop position (AC ignition mode):

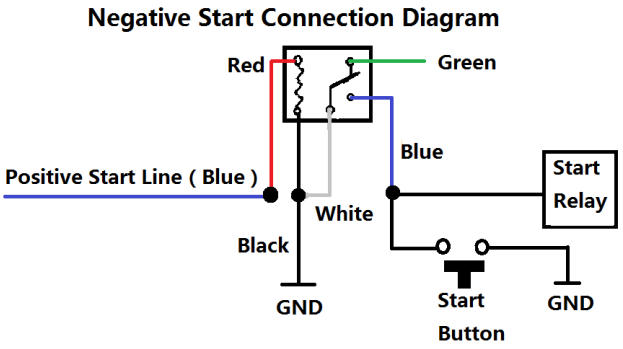


Turn the switch to the right stop position.



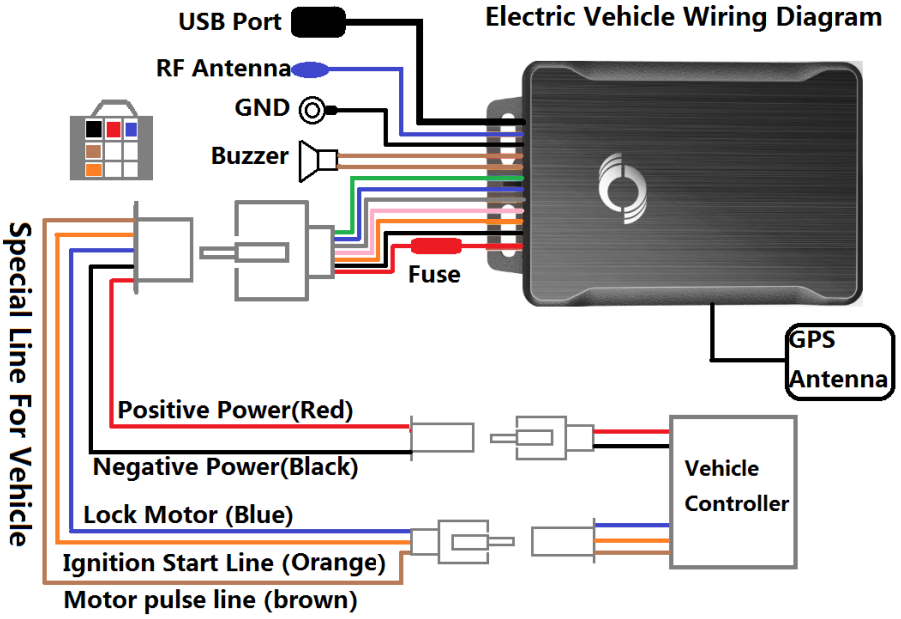
6.2.4 Negative Start Wiring Diagram

If a motorcycle is the negative start model, add a relay to change the positive start cable to a negative start cable on the basis of the positive start wiring diagram.

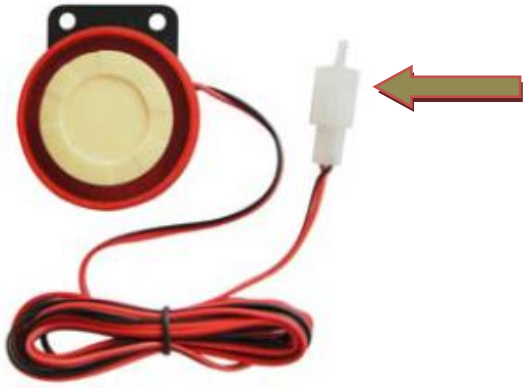


Note: If a motorcycle is the negative start model, one external relay is required.

6.2.5 Electric Vehicle Wiring Diagram



6.2.6 Buzzer



Buzzer output

6.3 Mounting the T311

Use cable ties to fasten the T311 on the motorcycle.

Note: The device side with the Meitrack logo faces upwards to strength the GPS signal.

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