RONDRAGON

DRAGON BRIDGE (SZ) TECH CO., LTD

Application :Rental cars, insurance cars, trucks, buses

Wireless Fleet management Solution Invator

GSM/GPRS/GPS Tracker

User Manuel
M-T009

ROADRAGON
路特龙 ®

Contents

1 Introduction

1.1 product description

The is M-T009 a universal version of the miniature positioning terminal designed for automobiles, motorcycles and electric bicycles. It is compact and easy to install concealed. It combines GPS and GPRS communication technology with real-time positioning tracking, track playback and illegal movement. Alarm, power off and vibration alarms.

2 Product Overview

2.1 Parts List

Item	Photo
Main product	
3M sticker	
hidden install OBD cable (Optional)	

2.2 Interface Definition

2.2.1 Host interface

Property	color	description
1	Yellow	Oil road negative
2	Orange	ACC
3	Black	battery negative
4	Red	battery positive

1. Relay white wire connected to battery positive
2. Relay yellow wire is connected to the position yellow line
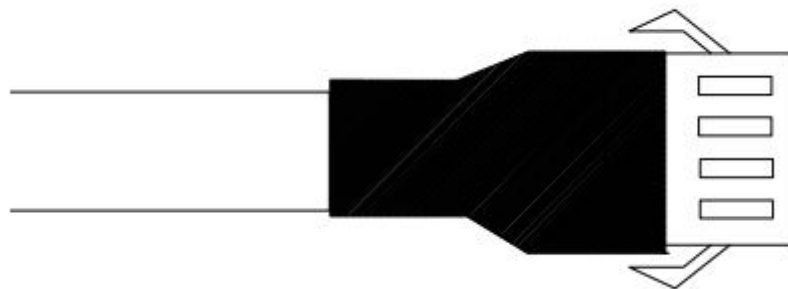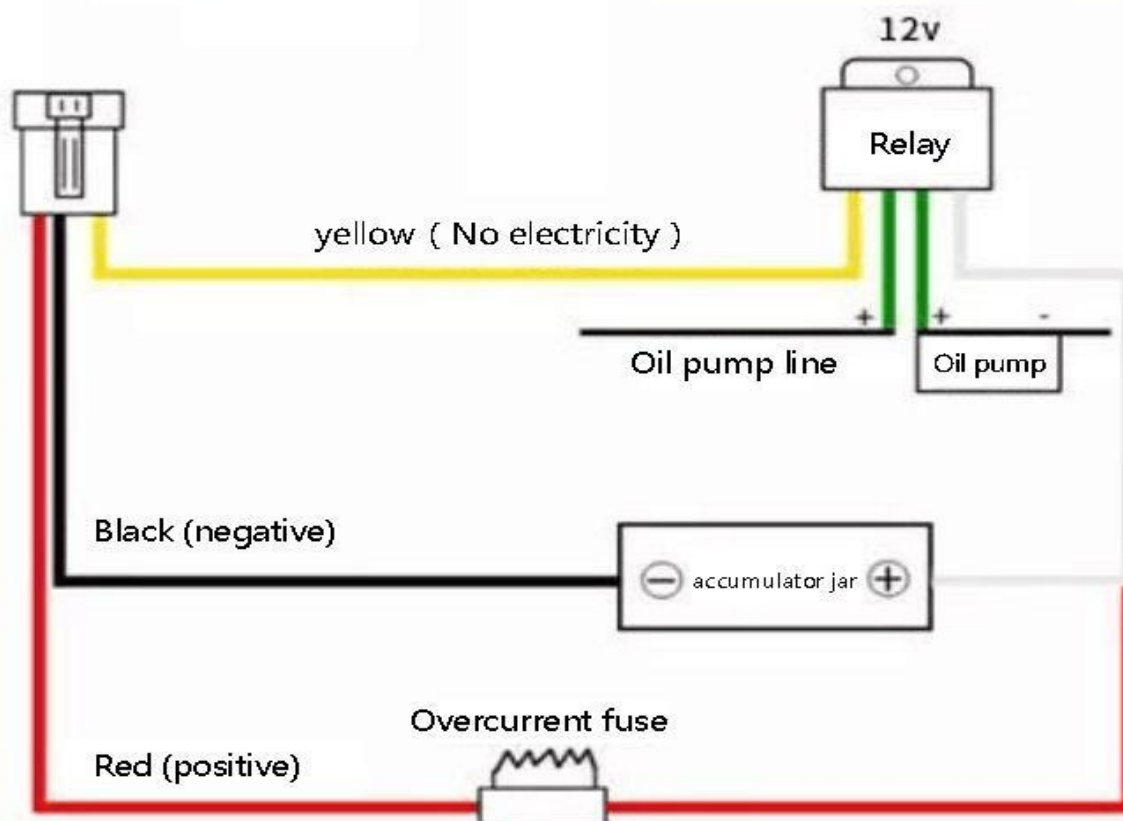3. The two green wires of the relay are respectively connected to the oil pump line (the oil pump line needs to be disconnected). The direct red line without the relay is connected to the positive pole of the battery, and the negative line of the black line can be used.

2.2.2 Matters needing attention in equipment wiring

a. power supply, ACC, oil and electricity control line (4Pin)

b. the equipment standard power supply for 12V-100VDC power line, please use the original offer, the red line for the positive power supply, black for the cathode of the power supply; please choose the cathode of the power supply grounding alone or ground installation, not with other ground together;

c. equipment orange line to the ACC line, be sure to pick the ACC vehicle terminal will switch, according to the ACC state to determine whether to enter the fortification; if no ACC line will allow vehicles to enter the default fortification state, vehicle vibration occurs, will trigger a vibration alarm. If the anti-theft function is not needed, the ACC line can be directly connected with the positive pole of the power supply.

d. break the oil and electricity control line (yellow line) to connect the yellow line on the relay.

2.3 Parameters

2.3.1 Parameters details

Property	description
Product size	145*23*12mm
Shell material	plastic
Product renderings	

Product Application	Balance car, electric bicycles, electric motorcycle, motorcycle, rental cars, loan vehicles and logistics vehicles tracking, positioning.

2.3.2 Characteristic parameter

Property	description
Content	Specifications
Terminal size	145mm*23mm*12
weight	24g
network	GSM/GPRS
Network frequency band	850/900/1800/1900Mhz
GPS module	UBLOX
GPS sensitivity	-159dBm
GPS position accuracy	10m
First positioning time	Cold start 35-80s Warm start 35s Hot start 1s
working voltage	9－100V
Storage temperature	-40°C to +85°C
working temperature	-20°C to +55°C
humidity	5%--95% Non freezing

2.4 Function

2.4.1 Functions Explaination

function	Function breakdown	description
Location data report	Location tracking	The positioning information such as latitude and longitude is returned according to the set interval time.
Vehicle status detection	Ignition/extinguish state	The ACC switch status is included in each uploaded packet.
	Vehicle power failure reminder	Turn on the backup battery. When the host detects that the vehicle voltage is less than 5V, it will report the power failure reminder.
	Low pressure alarm	When the host detects the vehicle voltage 5-10V, it reports a low-voltage alarm reminder.
	Over Speed alarm	The platform sets the maximum speed limit value. When the GPS speed is greater than the set value, the overspeed alarm is reported.
	Oil line detection	Support platform and SMS to cut off oil and gas, oil and gas function
	Illegal removal of the alarm	When the terminal generates a power failure alarm or triggers the light status, if both conditions are generated within 2 minutes, the illegal removal alarm is reported.
	3D Collision alarm	When the collision threshold alarm occurs, the x axis, y axis, z axis acceleration data of the acceleration sensor can be sent to the customer platform, as well as the speed of ten seconds before and after the collision, and other information.
Other Functions	Blind zone re-transmission function	The terminal is located and not online, and the data is stored up to 300. Upload when the signal is online normally
	EPO assisted positioning function	The terminal supports the EPO assisted positioning function to enhance the positioning effect.
	Inflection point	When the device orientation angle changes more than a certain angle, immediately upload a position data to optimize the trajectory.
	Remote upgrade	Upgrade the housekeeper remote upgrade.
Low power_consumption	Sleep mode	G-sensor senses the vibration state of the vehicle in real time, and the power is in the sport mode. When the host has no vibration for 5 minutes, it enters the static mode, and the GPS module is turned off, and the vibration enters the sport mode.

3 Getting Started

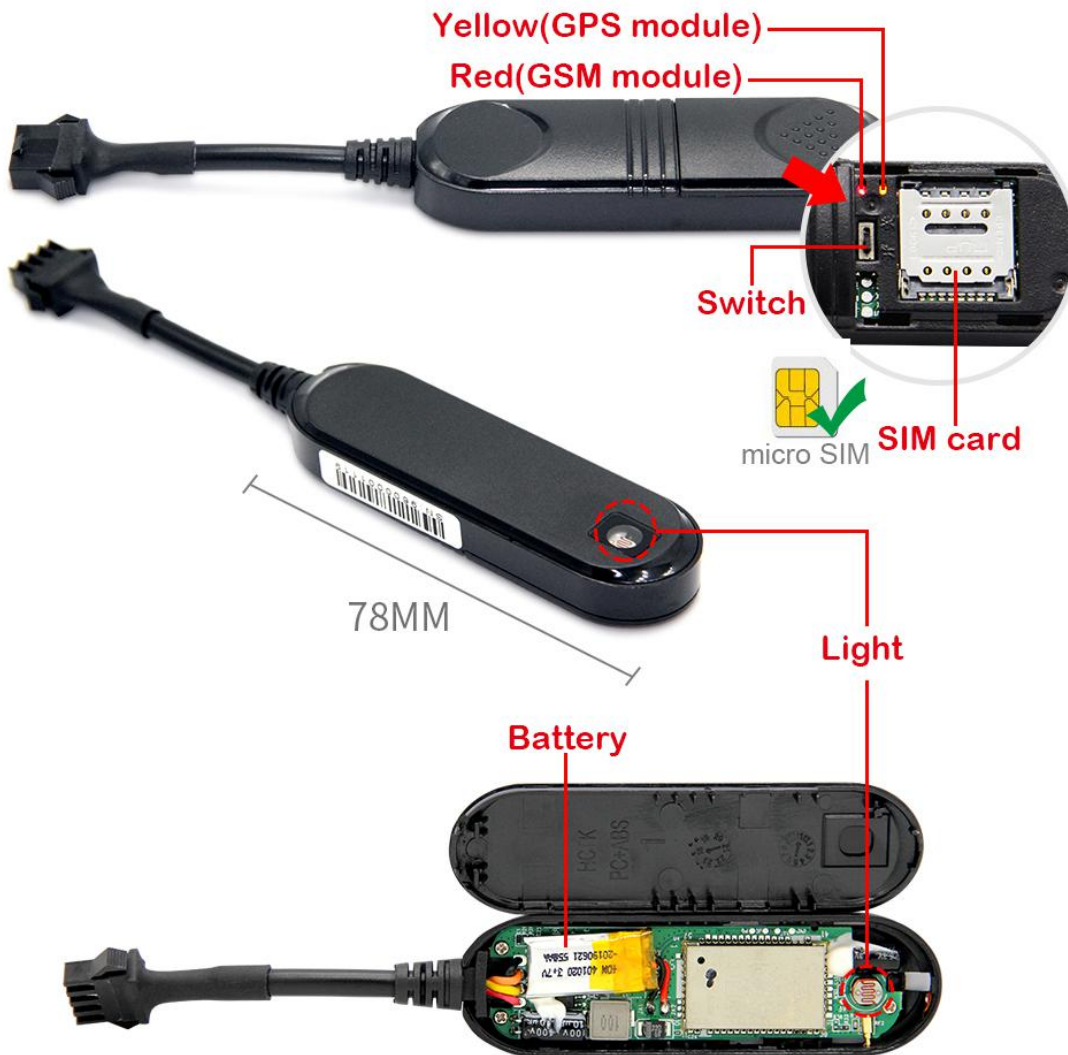## 3.1 Installation

3.1.1 Installing a SIM Card
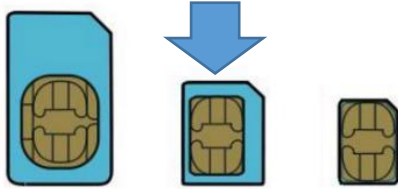
	长（mm）	宽（mm）	厚（mm）
SIM卡	25	15	0.76
Micro SIM卡	12	15	0.76
Nano SIM卡	12	9	0.67

3.1.2 Device installation Precautions

a. Please pay attention to waterproof products.
b. Please keep the car battery fully charged.
c. The power supply of the device is between 9V and 36V DC. The installation should first determine whether the user's power system is within this range. Exceeding the maximum voltage of the terminal will damage the terminal.
d. When the ambient temperature exceeds the normal operating temperature range of the terminal, it is Recommended to power off.
e. When the vehicle is in an underground parking lot, tunnel or garage, it will affect the positioning signal. And the communication network signal blind zone may cause the device to be unable to monitor; when the vehicle drives out of the above area, the device will automatically resume normal operation.
f. In case of abnormal situation, please do not repair it yourself. The manufacturer is not liable for damage caused by connecting non-original accessories or unplugging the connections between the various components.

3.1.3 Attention to Equipment Wiring

Power supply, ACC、 power supply line (4 Pin)
1. If the standard power supply of this equipment is 12 V-100VDC, please choose the power line provided by the original factory, the red line is the positive pole of the power supply, and the black one is the negative pole of the power supply; when installing, please choose separate grounding or lap iron, do not connect with other ground wires;
2. The orange line of the equipment is the ACC line, be sure to connect the ACC switch of the vehicle, the terminal will judge whether to enter the fortification according to the ACC state; if the ACC line is not connected, the vehicle will enter the default fortification state, the vibration will occur in the operation of the vehicle, and the vibration alarm will be triggered. If the anti-theft function is not required, the ACC line can be directly connected with the power positive pole;
3. Oil cut off electronic control line (yellow line) connected to the relay on the yellow line.

3.2 Precautions

3.2.1 Meaning of the indicator

Color of the lamp	Flashing frequency	Description
red (GSM module)	Constantly lit (5 seconds)	GSM module is online (connected to the server)
	1 second	GSM module is logging in to the network
	10 seconds in 1 second	GSM module is not inserted into SIM card
	Often off (5 seconds)	GSM module is in hibernation
Yellow (GPS module)	Constantly lit (5 seconds)	GPS module is positioned
	1 second	GPS module is not positioned
	10 seconds in 1 second	GPS module is abnormal
	Often off (5 seconds)	GPS module in hibernation
Firmware upgrade	Red, green and blue three colors simultaneously (similar to white), the frequency is 1 second 1 time	
Note: The lights are switched in 5 second intervals according to the order of "red-green-blue".		

3.2.2 installation instructions

The installation mode of terminal is suggested to be concealed installation. The hidden installation of terminal equipment should be installed by the professional agency designated by the dealer, and pay attention to the following matters:

a. in order to avoid thieves damage, equipment selection should be concealed as far as possible;

b. avoids putting together with emission sources, such as reversing radar, burglar alarm and other vehicle mounted communication equipment;

c. can be fixed with tie tape or with double adhesive with wide sponge;

d. equipment is equipped with GSM antenna and GPRS antenna, installation should ensure that the receiving face up (air empty), and no metal shielding above, recommended installation position:
1.   The front windshield below the decoration box cover;
2.   Before the instrument panel (epidermal non-metallic material) around the shelter;
3.   The rear windshield trim down below.
e. If there is a metal insulation layer or heating layer on the windshield of the car, it will reduce the GPS receiving signal and cause GPS malfunction. Please change the installation position of the equipment.

3.2.3 Analysis and elimination of common problems

Fault phenomenon	Cause Analysis	Approach
The center cannot monitor	SIM card arrears stop	Contact the network operator to pay
	Is the SIM card connect well	Re install SIM card
	Online parameter setting error	Refer to the manual to reset the parameters.
	vehicle is in underground par king lot, tunnel signal is wea k	Leave the signal difference area
Light false alarm	The installed position is in visible light	Installed in the light position
Unable to locate	The vehicle is in an underground parking lot, tunnel	Open the above area
	Terminal antenna face is not facing up	Re-adjust the terminal placement

3.3 Scenario

4 Short message instructions

all instructions must be input in English status

Send SMS code with mobile phone to GPS vehicle communication terminal SIM card number, se parated symbol is comma. The comma in the following short message instruction format is Englis h input state format, the letters are not written by the instruction, and the comma is input in Eng lish state.

4.1 basic operation settings

4.1.1 center number settings

(that is, the owner number must be done, otherwise it can not do other operations):

4.1.2 settings center number

you must use the owner number to send SMS to the terminal SIM card number

SMS format: admin123456158********

The "155********" is the number of mobile phone SIM card which needs to be bound. After rec eiving the message that the center number is set successfully, the owner can perform other short message instructions on the terminal or check the car on the internet.

4.1.3 modify the terminal password

please remember the password, such as forget the owner's center number can be sent to restore th e factory settings instructions

The default terminal password is: 123456

Modify the terminal password instruction: pwd123456 666888 (666888 is a new password, must b e six digits)

Reply message: password modification successful, new password: 666888, please be careful to kee p!

4.2. anti-theft alarm location query settings

4.2.1 location query

The center number sends instructions to the SIM card of the terminal device, and the terminal rep lies the last Chinese position information to the central number.

Instruction format: DW or 123

Reply information: Shenzhen city of Guang-dong Province, Long-gang District, Cloth Dragon Road, Bantian Metro (Shenzhen) 12 meters southeast

4.3. Garrison fortification

a. defense instruction format: SF   reply message: SF OK

b. instruction format: CF   reply message: CF OK

4.4. Vibration alarm：

When the automobile flameout tube enters the automatic fortification, the continuous vibration for more than 3 seconds will trigger the vibration alarm.

4.4.1 open vibration SMS alarm: 125# (default)

  Reply SMS: OK

4.4.2 closed vibration SMS alarm: 126#

  Reply SMS: OK

4.4.3 open vibration alarm: 122#

  Reply SMS: OK

4.4.4 turn off the vibration phone alarm: 121# (default)

  Reply SMS: OK

4.4.5 set vibration alarm duration SMS instructions, 1-15 seconds.

Instruction: vibtime123456, n reply: vibtime set OK

N (0~15), 0 cancel vibration alarm, default 3 seconds, that is, vibration lasts 3 seconds alarm

4.5 shift alarm:

4.5.1 shift alarm setting instruction: move123456 300 (default) unit: meter reply: move OK

4.5.2 closed instruction format: move0

SMS: displacement alarm: closed

4.5.3 overspeed alarm:

4.5.4 over speed SMS alarm speed limit: speed123456 080 set speed limit of 80 km / h.

4.5.5 shut down speeding SMS Notifications: speed123456 000 (default) reply: speed OK

4.5.6 speeding SMS notification: speed123456 080

reply: speed OK reply SMS: overspeed alarm: 80km / h

4.6 Open oil cut off

When the vehicle theft occurs, the monitor can send out the oil and electricity instructions initiatively, and cut off the oil circuit of the stolen vehicle under the premise that the vehicle is in safe driving, so that the vehicle can not be started.

Note: to ensure the safety of vehicles, only in the GPS terminal in the effective positioning state, and to meet the vehicle speed is less than 20KM/H under the condition when the vehicle is stationary or interruption oil electric operation.

When the robbery alarm is released, the oil and electricity instructions are manually sent back by the monitoring background, and the terminal performs the oil and electricity recovery operation, and the vehicle can continue to run.

SMS break oil: DY
SMS open oil: KY

4.7 Device recovery query settings

a. restore factory settings instruction format: format

Reply SMS: alarm will immediately restore the factory settings, all previous settings will be cance led.

b. restart instruction format: CQGPS

c. query device information:

Instruction format: CXZT

Reply information: version, ID, IP, port, domain name, APN