1. Overview

1.1 Main Functions

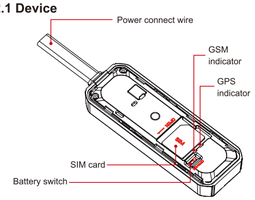
- GPS + LBS positioning
- Remote cut-off (petrol/power)
- Multiple alarms
- 9-72V voltage range
- ACC detection for ignition status
- Compact size

1.2 Specifications

Frequency	GSM 850/900/1800/1900MHz
GPRS	Class 12, TCP/IP
Location accuracy	<10 meters
TTFF (open sky)	Avg. hot start ≤1sec Avg. cold start ≤32sec
Battery	100mAh/3.7V industrial grade li-ion polymer battery
Working voltage/current	9-72VDC/8mA(36V DC)
Operating temperature	-20℃— +70℃
Dimension	73.8(L) x 25.9(W) x 12.2(H) mm
Weight	26.5g

2. Overview

2.1 Device



2.2 Device

- GPS tracker
- User Manual
- Power cable
- 12V electronic relay

3. LED Indicator

Blue LED (GPS)

Status	Meaning
Flash quickly	Searching signal
Solid	Positioning succeed
Dark	Sleep

Green LED (GSM)

Status	Meaning
Quick flashing	GSM initialization
Slow flashing	Normal network signal/Online
Solid	Calling
Dark	Abnormal network/No SIM card

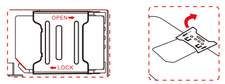
4. SIM card

SIM card should have access to GPRS and SMS service.

Before insert the SIM card, please disconnect the external power supply and turn the battery switch to OFF.

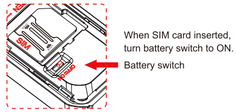
1. Find the notch and remove bottom cover

2. Insert the SIM card as shown below



5. Power on

Remove top cover and turn battery switch to ON.
Terminal starts up by using backup battery. Connect the device to external power, then power indicator lights up and battery is charging.

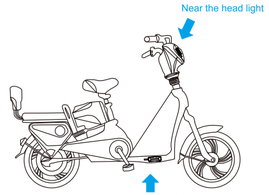


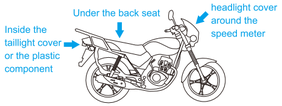
6. Power off

Disconnect external power and turn battery switch to OFF.
Power LED is off and charging stop after device power off.

7. Installation

Please install the device under the guidance of professional personnel.





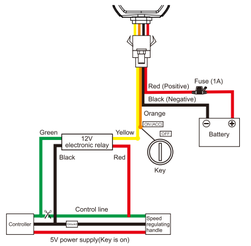
Note:
The device should face up to the sky.
Metal thermal barrier or heating layer of the windshield affects the signal. Please change installation places to receive better signal.

8. Wiring definition

No.	Definition	Color	Illustration
1	V+	Red	Positive pole(9-72V)
2	V-	Black	Negative pole
3	ACC	Orange	ACC on
4	Relay	Yellow	Power cutoff (relay needed)

9. Power cutoff (electromobile)

9.1 Wiring diagram



(1) Use multimeter to find out the battery's positive and negative side.
Note: Whether the key is in the position of ON/OFF, current battery voltage will show in the multimeter.

(2) The way to find ACC line: Use multimeter red pen to connect with the ACC wire while the black pen connects with the ground wire. When the ignition key switches to OFF, the voltage is 0V; when the ignition key switches to ON, the current voltage will show up.

(3) Power cable connects to the positive and negative pole of the battery.

(4) ACC cable connects to electromobile ACC line. If the electromobile has burglar alarm, the orange line is the ACC line.

9.2 Wiring way

(1) Let the rear wheel hang in the air. For safety reason, do not let the wheel touch the ground.

(2) Find the control line of the speed regulating handle.
Method: the control line is in green or white and on the 3PIN of controller.

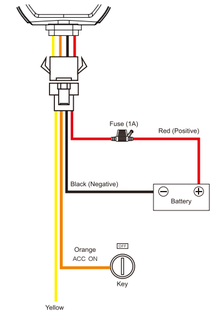
(3) Use multimeter to detect the voltage of the speed regulating handle. The voltage of the speed regulating handle (ACC ON/ Motionless) is 0.8V in default and 4.3-5V at maximum when the speed is at maximum speed.

(4) Cut the control line of the speed regulating handle into 2 parts, one side connects to the red line of electronic relay, and the other side connects to the green line of 12V electronic relay.

(5) Yellow line of 12V electronic relay connects to the power cutoff line of device (yellow) while black line of 12V electronic relay connects to the ground line of the speed regulating handle.

Note:
1. Please use the 12V electronic relay specified by the manufacturer.
2. If you don't need the power cutoff function, it is ok to not connect the device's power line (yellow) . Electronic relay needed for power cutoff function.

10. Wiring diagram(motorcycle)



(1) Use multi-meter to find out the battery's positive and negative side.

(2) The way to find ACC line: Use multi-meter's red pen to connect with the ACC wire while the black pen connects with the ground wire. When the ignition key switches to OFF, the voltage is 0V; when the ignition key switches to ON, the current voltage will show up.

(3) Device power cable connects to the positive and negative pole of the battery.

(4) ACC cable connects to electromobile's ACC line.

11. Platform & APP

11.1 Login service platform

Please login the designated service platform to set and operate the device.

11.2 Download APP

Please download and install the APP in designated website, APP store or Google Play store.

iOS Android

12. Basic settings and functions

12.1 SOS

3 SOS phone numbers can be set. Alerts will be sent to pre-set SOS number.
(1) Add SOS number.
Send SMS command to the terminal. Command format:
SOS,A,phone number 1,phone number 2,phone number 3#
"A" means to add new numbers, for example:
SOS,A,18165542975,18165542976,18165542977#
It will reply
"OK! SOS1: 18165542975 SOS2: 18165542976 SOS3: 18165542977"after set successfully.

(2) Delete SOS number.
Command:
Send SMS command: SOS, D, phone number 1,phone number 2, phone number 3#

(3) Check current SOS number.
Command: SOS#
Respond example: SOS1: 12352***, SOS2: 132532***, SOS3:135323***

12.2 APN setting

To connect default platform www.tracksolid.com, please send the SMS command below, APN command format:
APN,APN name# or APN,APN name,user name,password#
Example:
APN,CLENTE# or APN,ORANGE,ORANGE,ORANGE#
An automatic reply OK will be sent in one minute if setup is successful.

12.3 Server setting

To connect other platform, please send the SMS commands below:
Command format:
SERVER,1,domain,Port,0#
Example:
SERVER,1,gpsdev.tracksolid.com,21100,0#
It will reply "OK" after set successfully.

12.4 Set the center number

If you want to cut off/restore oil by SMS command, you have to set a center number firstly. Only the center number can send the cut off/restore oil command to the device. You can set your own mobile number as center number.
The command for setting center number is:
CENTER,A,mobile number#
For example:
CENTER,A,1816554276#
If set successfully, there is an "OK" reply message.

⚠ Only the SOS number can be used to add or delete center number successfully. There is only one center number can be set.

12.5 Power cut-off alarm

When the electricity supply of device is cut off, alarm message will be sent to platform and SOS number.

12.6 Low battery alarm

When backup battery is low, alarm message will be sent to platform and SOS number.

12.7 Overspeed alarm (Default OFF)

Speed limitation can be set in platform or by SMS. When vehicle's speed exceeds the pre-set value, overspeed alarm will be sent.

12.8 Displacement alarm (Default OFF)

Device will send movement alarm when vehicle moves out the pre-set distance.

Vibration alarm (Default OFF)

Device is in defense status if vibration alarm turned on. When vehicle vibrates several times, the vibration alarm will be triggered.

12.9 Battery Protection

When the electromobile/motorcycle battery's voltage decreases to a certain value, the power supply between the terminal and electromobile/motorcycle will be stopped, otherwise, the electromobile/motorcycle would fail to start because of too low voltage.

13. Frequently Used Command List

1	Check device status	STATUS#
2	Get device GPS latitude/longitude	WHERE#
3	Check device location in Google Map link	1, URL# 2, POSITION
4	SOS number setting	**1. Add SOS number:** SOS,A,number 1,number 2,number 3# Example:SOS,A,12342***,134533***,135432***# **2. Delete the SOS number:** SOS,D,phone number# **3. Query SOS number:** SOS#
5	Vibration alarm (Default OFF)	1, SENALM,ON# 2, SENALM,OFF#
6	Displacement alarm (Default OFF)	**1. MOVING,ON,R,M#** R=100～1000; Movement radius, unit: meter M=0~3; 0: only GPRS; 1: SMS+GPRS; 2: GPRS+SMS+CALL; 3: GPRS +CALL; Default: 1 **2. MOVING,OFF#**
7	Power cut-off alarm	**1. POWERALM, A,M,T1,T2,T3#** A=ON/OFF, default:ON; M=0/1/2/3, way of alarming, 0: GPRS only, 1: SMS+GPRS, 2 : GPRS+SMS+phone call, 3: GPRS+ call, default: 1; T1=2～60 (second), power off detect time, default: 10; T2=1～3600 (second), default: 300; T3=0～3600 (second), ACC ON to OFF status step alarm prohibition time default: 0; **2. POWERALM, OFF#** Turn off the power alarm. **3. POWERALM#** Check the parameters of the alarm.
8	Low battery alarm	**1. BATALM,A,M#** A=ON/OFF, default:ON; M=0/1, way of alarming, 0: GPRS only, 1: SMS+GPRS **2. BATALM,OFF#** **3. BATALM#** Check the parameters of the alarm.
9	Overspeed alarm	**1. SPEED,A,B,C,M#** A=ON/OFF, turn on/off overspeed alarm. Default: OFF B=5～600 (second),time interval, default: 20 (second) C=1～255(km/h), speed limit, default: 100(km/h); M=0/1, alarm method, 0 : GPRS only, 1: SMS+GPRS, default: 1 **2. SPEED#** Check the parameters of over speed.
10	Restart	**RESET#** Device restart 20 seconds after receiving this command

Troubleshooting

If you are having trouble with your device, try these troubleshooting procedures before contacting a service professional.

Problems	Causes	Solutions
Poor signal	The signal waves are unable to transmit when use the GPS tracker in the places that have poor signal reception, such as: tall building around or basement.	Using the GPS tracker in the places that have good signal condition.
	Device covered by metal objects or face down	Device face up or installed in somewhere else
Unable to boot	Low battery	Connect to external power supply to charge
	Fusing	Contact supplier to replace fuse
Unable to connect to the network	SIM card inserted incorrectly	Insert SIM card again
	Dirty things exist above the SIM card	Clean SIM card
	Damaged or invalid SIM card	Replace SIM card
	Not in GSM service area	Move to service area
	Poor signal	Move to area with strong signal
Charge failure	Poor contact	Ensure device power wire connection
Fail to locate	SIM has no access to GPRS	Contact network supplier to get GPRS service
	SIM card charges owed	Charge
Parameters modification failure	Command format error	Edit and send the command again
	No reply after sending command	Check network and ensure SMS available

Warranty instructions and service

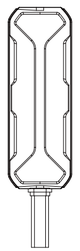
1. The warranty is valid only when the warranty card is properly completed, and upon presentation of the proof of purchase consisting of original invoice indicating the date of purchase, model and serial No.of the product. We reserve the right to refuse warranty if this information has been removed or changed after the original purchase of the product from the dealer.
2. Our obligations are limited to repair of the defect or replacement the defective part or at its discretion replacement of the product itself.
3. Warranty repairs must be carried out by our Authorized Service Centre. Warranty cover will be void, even if a repair has been attempted by any unauthorized service centre.
4. Repair or replacement under the terms of this warranty does not provide right to extension or renewal of the warranty period.
5. The warranty is not applicable to cases other than defects in material, design and workmanship.

Maintenance Record

Date		Serviced by	
Product Model			
IMEI Number			
Fault Descriptions			
Comments			

Vehicle GPS Tracker User Guide

(Version 1.3)



⚠ This device is only for use with 12V, 24V, 36V, 48V, or 72V vehicles.
One side of the device is marked "THIS SIDE TOWARDS SKY", place the unit upside down will result in connection issues.
Avoid placing the device somewhere that metal will be covering it up.