

## 1. Start Guide

### 1.1 Accessories

- Main device
- Power cord
- 4-pin relay
- 5-pin relay\*2
- Microphone
- SOS cable
- Extension cable
- Speaker

### 1.2 Main Functions

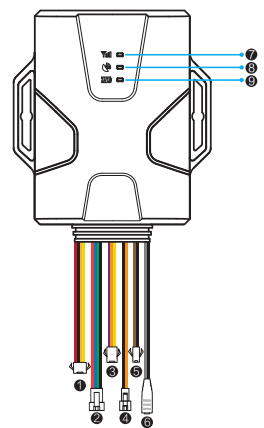
- Real-time GPS+AGPS tracking
- IP66 dust and waterproof
- 50000 pieces of data storage
- Track by time interval or distance
- Remotely fuel/power cut-off control
- Voice monitor
- SOS alarm
- Geo-fence alarm
- Vibration alarm
- Movement alarm
- External power supply cut-off alarm
- Two way communication
- Door status-detection
- Multiple analog & digital input/output
- Find the car by triggering light and buzzer

## 1.3 Specifications

Frequency	GSM 850/900/1800/1900MHz
GPRS	Class 12, TCP/IP
Operating Voltage	9-36VDC / <300mA
Location Time	Cold Start: <35s
Storage	Hot Start: <2s
Battery	64MB
Location Accuracy	800mAh
Operating Temperature	<10 meters
Dimension	-20°C ~ +70°C
Weight	83 ( L ) ×76 ( W ) ×18 ( H ) mm
	95g

## 2. My Device

### 2.1 Appearance



- Power
- Oil/electricity
- ACC
- Data
- Extension interface
- SOS button
- MIC
- Speaker
- GSM LED indicator
- GPS LED indicator
- Power status

## 2.2 LED Indicators

GPS LED Indicator - Blue		
● - ○	0.1s ON & 0.1s OFF	Searching GPS signal
●	Steady on	GPS is fixed
○	OFF	No GPS fixed or initializing

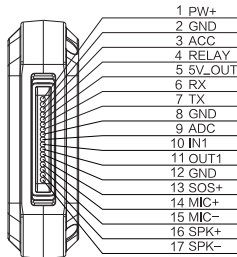
GSM LED Indicator - Green		
● - ○	0.1s ON & 0.1s OFF	GSM initializing
● - ○	0.1s ON & 1.9s OFF	Receive GSM signal normally
●	Steady on	Connected to GPRS network
○	OFF	No GSM signal

Power Status - Red		
● - ○	0.1s ON & 0.1s OFF	Low battery
● - ○	2s ON & 2s OFF	Full charged
● - ○	0.1s ON & 1.9s OFF	Normal operating
●	Steady on	Device is charging
○	OFF	Low battery/Power off

● - ●	Flash in a loop	Device is in defense status
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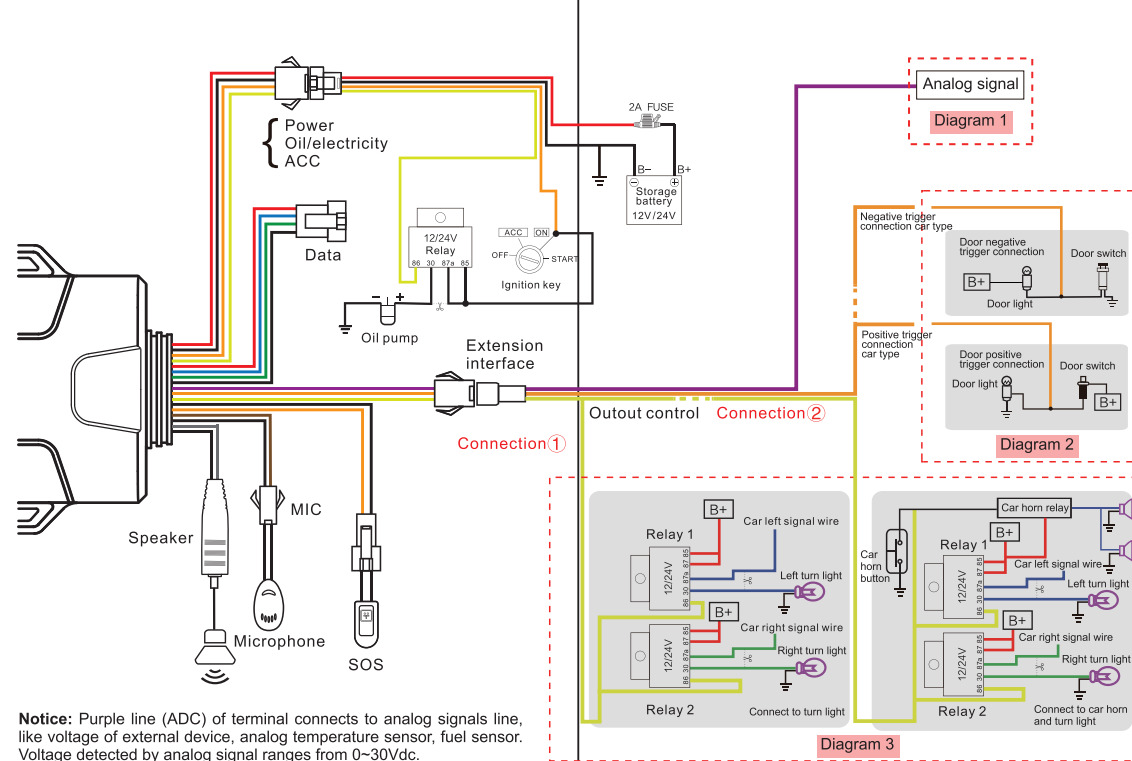
## 3. Wire Connection

### 3.1 Wire Definition



Line	Color	Description	Definition
1	Red	PW+	12V/24V car battery positive
2	Black	GND	12V/24V car battery negative
3	Orange	ACC	ACC ignition
4	Yellow	RELAY	Relay
5	Red	5V-OUT	External power supply
6	Blue	RX	Data receiving / backup interface
7	Green	TX	Data sending / backup interface
8	Black	GND	GND(negative)
9	Purple	ADC	Analog input
10	Orange	In1	Digital input
11	Yellow	OUT1	Output, Relay
12	Black	GND	GND
13	Orange	SOS+	SOS button
14	Brown	MIC+	Microphone
15	Black	MIC-	Microphone
16	Grey	SPK+	Speaker
17	Black	SPK-	Speaker

## 3.2 Wiring diagram



**Notice:** Purple line (ADC) of terminal connects to analog signals line, like voltage of external device, analog temperature sensor, fuel sensor. Voltage detected by analog signal ranges from 0~30Vdc.

## Wiring Instruction

1. The standard power supply ranges from 9V to 36VDC. Please use the power cord manufactured by the original factory. Red line means positive side while black line means negative side. During installation, negative side should connect to the ground, do not connect with other ground wires at the same time.
2. ACC line (orange) connects to vehicle's ACC switch, detecting ignition on and off.
3. Device's oil and electricity control line (yellow) connects to relay's 86. (thin yellow line of relay socket)

### Relay wiring instruction

Relay wiring way of oil pump open circuit: On each end of the wire is thin white line (85) and thin yellow line (86). Thin white line (85) connects to the positive side of battery (12V) while thin yellow line (86) connects to the device relay control. There is an oil pump in the vehicle. Cut off the positive line. The positive side of oil pump connects to the close-end of relay. (Thick green line 87a), and the other side connects to relay's common (green thick 30).

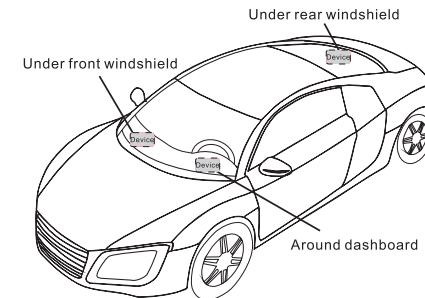
**Notice**  
12V relay is standard. The device is suitable for vehicles with 12V battery. If the vehicle has 24V battery, then 24V relay is needed.

4. To monitor analog signals, the purple line (ADC) of extended port should be connected to the analog line.
5. To check status of car door, orange line (IN1) should be connected to where between the door light and door switch (See the diagram).
6. To find car remotely, please connect the yellow line (OUT1) of extended port to external relay.

### Wiring instruction for remote trigger car light and buzzer

Thin white line (85) and thick green line (87) of relay should be connected to car battery's positive pole. The thin yellow line (86) is connected to the yellow line (OUT1) of extended port. Cut off the line of car turn light first and then connect one side with turn light to the common terminal (thick green line 30) and other side to closed terminal (thick green line 87a). See diagram for wiring way.

## 3.3 Device Installation



**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.

## 4. Operation of device

### Power on/ Power off

**Power on:** Insert a valid SIM card. Connect to external power OR toggle on the power switch. Power LED will flash first. During signal searching process, GSM LED and GPS (blue) LED will flash. Once Blue GPS LED keeps steadily ON, the device is located and it starts to work.  
**Power off:** Just toggle off the power switch.

**Notice:**  
When device is connected with external power, please toggle on the power switch to keep the built-in battery charged. If the power switch is OFF, battery cannot be charged. Device will turn OFF if external power supply disconnects.

## 5. Main Functions

### 5.1 SOS alarm

In case of emergency, press and hold the SOS button for 3 seconds to activate SOS alarm. Defaulted alarm method is GPRS+SMS+CALL, which means SOS alarm message will be uploaded to platform first and sent to SOS number. Finally device will call the SOS numbers in a loop (Maximum 3 times) till someone picks it up.

### 5.2 Vibration alarm (default OFF)

When vibration alarm is ON, device detects multiple times vibration within 10 seconds, and ACC keeps OFF for 3 minutes. Alarm will be activated.  
To turn on the alarm: **SENALM.ON,M#**  
M=0~2, Alarm method. 0=GPRS; 1=GPRS+SMS; 2=GPRS+SMS+CALL.  
To turn off the alarm: **SENALM.OFF#**

### 5.3 Voice monitoring

When MIC is connected while speaker is not, use pre-set SOS number to dial the device, after 10 seconds, device enters into monitoring mode automatically. The caller can hear the voice inside the vehicle.

**Notice:**  
1. Pre-set SOS number is necessary.  
Non-SOS number cannot activate this function.  
2. SIM card of device must have caller ID service.

### 5.4 Two-way communication

When MIC and speaker are both connected well, use pre-set SOS number to dial the device, after 10 seconds, device enters into two-way talk mode.

## 5.5 Moving alarm (Default OFF)

When ACC is OFF and vehicle moves out of pre-set distance, alarm will be activated.

To set the alarm: **MOVING.ON,R,M#**

R=100~1000; Distance radius; Unit: meter  
M=0~2, Alarm method. 0=GPRS; 1=GPRS+SMS; 2=GPRS+SMS+CALL.  
E.g. MOVING.ON,200,2#  
To turn off the alarm: **MOVING.OFF#**

## 5.6 Oil/Electricity cut-off/restore

When vehicle is stolen, oil/electricity cut-off command can be sent by platform, APP or SMS.

### Notice:

1. Make sure ACC is correctly connected.
2. When ACC is OFF, command will be executed immediately.
3. When ACC is ON, but GPS is not fixed, command will be postponed.
4. When ACC is ON, GPS is fixed, command will be executed when vehicle speed is less than 20km/h.

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.  
Set center number: **CENTER,A,mobile number#**  
Delete center number: **CENTER,D#**

### Notice:

1. Only the SOS number can be used to set center number.
  2. Only the SOS number can be used to delete center number.
  3. There is only one center number can be set.
- SMS command to cut off/restore petrol connection: **RELAY,A#**  
A=0/1; 0= restore petrol; 1=cut off petrol  
E.g. **RELAY,1#** to cut off petrol

## 5.7 Power disconnection alarm

When the external power supply is disconnected unexpectedly, alarm will be activated. Defaulted alarm method is GPRS+SMS.

## 5.8 Low battery alarm

When device's battery is too low to support the use, device will send an alert. Defaulted alarm method is GPRS+SMS.

## 5.9 Restart device

If GPRS is abnormal (device is offline), user can send SMS command **RESET#** to restart the device. Device will reboot after 20 seconds after receiving the command.

## 5.10 Door detection

The device can upload the change of door status (OPEN/CLOSE) to platform and APP timely. (See 3.3 diagram-2 for wiring method.)

SMS command to choose the triggering type for your car: **DOOR,A#**  
A=0/1; 0=negative triggering; 1=positive triggering.  
Usually Chinese, Japanese and Korean Series belong to negative triggering. European and American Series belong to positive triggering. Defaulted setting is negative triggering.

### Notice:

Negative triggering (default): when door is open, signal level is 0V; when door is closed, signal level is power voltage.  
Positive triggering: when door is open, signal level is power voltage; when door is closed, signal level is 0V.

When device is in DEFENSE status, alarm will be sent when car's door is open.  
SMS command to set the alarm: **DOORALM,A,M#**  
A: ON/OFF  
M=0~2, Alarm method. 0=GPRS; 1=GPRS+SMS; 2=GPRS+SMS+CALL.

## 5.11 Find the car by triggering light and buzzer

When you need to pick out your car from the giant parking lot, you can send a command **FIND#**. After the device receives the command, it will trigger the car's turn signal lamp and horn to help you get your car's position easily and accurately. Before that, please follow 3.3 diagram-3 to connect the wire correctly.

## 5.12 Analog signal

The analog port is currently used for measuring car battery's voltage, which will be uploaded to platform/APP in fixed time interval. Purple line (ADC) of device extended port can receive analog signal, like voltage of external device, analog temperature sensor and fuel sensor (See 3.3 diagram for wiring method). Voltage range of analog input is 0~50VDC.  
SMS command to set the report time interval: **ADT,ON,T#**  
T: upload interval; scope: 5~3600(second)  
Turn off analog upload: **ADT,OFF#** (Defaulted setting)

## 6. Platform Operation

Get registered on the designated service platform by authorized dealer, then you can start the tracking service and settings.

## 6.1 APN & Server setting

To ensure normal network operation, please confirm your APN and server setting before login.

In most countries, APN can be automatically adapted to local mobile operators. If not, please send SMS to set the APN. If username and password is required for APN, please add it into the command. (See command list 7-7)

Confirm the server address and setting with distributors. If server is incorrect, please send SMS to change. (See command list 7-8)

## 6.2 Login service platform

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

## 6.3 Download APP

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

## 7. Common Command List

Edit SMS command in the right column to the device SIM number to achieve respective function as below:

1	Device status	STATUS#
2	Device coordinate	WHERE#
3	Location URL	URL#
4	Check version	VERSION#
5	Network setting	GPRSSET#
6	Check parameter	PARAM#
7	APN setting	1. APN, [apnname]# E.g. APN,internet# 2. APN, [apnname], [user], [pwd]# E.g. APN,internet,CLIENTE,AMENA#
8	Server setting	SERVER, mode, domain, IP, port, 0# E.g. SERVER, 1, www.ydpat.com, 8011, 0# SERVER, 0, 211, 154, 135, 113, 8011, 0# mode 1 means set with domain name mode 0 means set with ip address
9	SOS setting	1. Add SOS number: <b>SOS, A, number 1, number 2, number 3#</b> 2. Delete subjected sequence of SOS number: <b>SOS, D, number sequence 1, number sequence 2, number sequence 3#</b> E.g. SOS, D, 1, 2, 3# 3. Delete the SOS number: <b>SOS, D, phone number#</b> 4. Query SOS number: <b>SOS#</b>

10	GPS data upload time interval	<b>TIMER, T1, T2#</b> T1=5~18000 seconds; ACC ON upload interval; default value: 10 T2=5~18000 seconds; ACC OFF upload interval; default value: 10 (when GPS is not sleep)
11	GPS data upload distance interval	<b>DISTANCE, D#</b> D=0, 50~10000 meter; Distance interval; default value: 300, unit: meter;
12	Delayed defense setting	<b>DEFENSE, A#</b> A: 1~60 minutes, set delayed defense, default value: 10 minutes

## 8. Trouble shooting

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 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.
Unable to boot	Low battery	Charge the device battery
Unable to connect to the network	Poor signal	Using the GPS tracker in the places that have good signal condition.
Unable to locate	Signal shielded or Poor signal	Change the installation place
No power off alarm	Built-in battery is off	Turn it on
Fail to start the car	Power cutoff / ACC abnormal	Restore power/Check ACC
Car stops driving	Abnormal power supply	Connect the device negative electrode to constant power
Offline/ Indicators off	Abnormal power supply/Indicators sleep	Check power supply/Press side key to activate indicators
No update of vehicle's location	No GPS positioning	Test the device again/ Change installation place

## 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 of 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		

## GPS Vehicle tracker

### User Manual (Version 1.0)



This user manual has been specially designed to guide you through the functions and features of your GPS vehicle tracker.