WhatsGPS

GPS Tracker Mode:S21L

User Manual

Statement

Hello! Thank you for using the S21L vehicle terminal (mobile user terminal) product. Please read this manual carefully before you use it. Please pay attention to all precautions and warnings mentioned in this manual, and keep this manual properly for reference.

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Category

1.Product Introduction

S21L is a GPS positioning terminal based on 4G communication technology and adopts AT6558R module, which features stable communication, high positioning accuracy, small static drift and low power consumption, etc. In addition to supporting GPS/BDS satellite navigation and positioning technology, the equipment also supports single base station and multiple base station positioning modes.

With intelligent power-saving mode based on the built-in 3-axis sensor design, it supports flexible switching of multiple working modes and can be applied to a variety of different applications. With the global positioning service platform, the location of the device can be checked anytime and anywhere.

2. Product Features

- Support the global 4G network;
- Support global Beidou and GPS satellite positioning mode;
- Adopt AGPS auxiliary positioning to speed up positioning;
- SIM card plug and play, no electricity leakage without card inserted;
- Support SOS button and timely report to SOS alarm;
- Support multiple working modes: tracking mode, intelligent mode, and power-saving mode;
- Built-in high-sensitivity GENSOR sensor, supporting

vibration alarm;

- Support remote OTA upgrade;
- Support remote switch on/off;
- Support remote pickup;
- Support Data supplementary transmission in the blind areas;
- Support overspeed alarm;
- Support single fence and multiple-fence alarms;
- IP65 waterproof design;

3. Product Specifications

Project	Specifications
Working Current	≈65ma 4V (Quiescent current≈8mA)
Positioning Model	GPS+BDS
Position Error	<10 Meters
Network Frequency Band	LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM:850/900/1800/1900MHz
GPS Positioning Time	Cold boot≈32　Hot boot≈1s
Working Temperature	-20℃～ +75℃
Working Humidity	10%-85%
Specification and Size (Optional)	78mm*39mm*29mm
Weight	≈123g
Waterproof Grade	IP65
Warranty	1 year

4. Appearance Diagram

By looking at the status indicator, you can understand the working condition of the device. The status of the indicator is as follows:

LED Models	LED Light Status	Meaning
Red	Normally On	Charging
	Off	Battery full or off
Yellow	Normally On	Devices works normally
	Flash once in 2 seconds	GPRS searching
	Off	GPRS shut down/dormant
Blue	Normally On	GPS/BDS positioning succeeded
	Flash once in 2 seconds	GPS/BDS positioning
	Off	GPS/BDS sleep mode
Yellow and Blue	The yellow light and blue light flash twice in one second at the same time (Automatically shutdown after 5 seconds)	SOS triggered
	Lighting	SOS not triggered
	Off	SOS not triggered/sleep mode/Off

5.Instruction for Use

5.1.Startup and Card Insertion Process

Open the waterproof cover of the SIM card, insert the SIM card in the direction shown in the figure. After the device is inserted into the SIM card, insert the card and assemble the SIM card cover. Wait for the indicator light goes on, then you can log in through the APP or platform to view the location.

Precautions:

If no SIM card is installed, the communication part of the terminal will not be opened; When the SIM card is installed, the device will be powered on and work; When the SIM card is taken out, the communication terminal will be closed automatically; The terminal SIM card needs to enable SMS and network communication functions;

Please ensure that the terminal SIM card has credits; If your SIM card is turned on and SIM PIN is required, please refer to your mobile phone user manual to turn off the SIM PIN input function.

5.2.Charging Instructions

The device needs to be fully charged before use. It is recommended to use 5V charger that supports fast charging mode. The charging time is about 6 to 8 hours. Different chargers will vary. The red LED always lights up when charging, and the red LED goes out when the battery is full. The charging cable is the standard Type-C charging cable.

5.3.Working Mode Description

Normal Tracking Mode	the working state transmits position once in 30 seconds by default, and then enters standby after 5 minutes of rest. The standby state device transmits a heartbeat every 5 minutes to keep the server connected. The device can be woken up to working state by vibration.
Smart Mode	Set the data upload interval, the device works according to the set interval of 2 minutes each time. The device is in sleep mode during the non-working time, and the vibration can not wake it up.

Power-Saving Mode	The device transmits data once in 30 seconds by default in this working mode, and then goes into sleep mode after 2 minutes of rest. The device in sleep mode does not transmit data. It disconnects the server to save power, and the device can be woken up to working state by vibration.
SOS Alarm	The device comes with external SOS button. By pressing the button 4 times continuously, the device sends an emergency alarm to the server. If the device sets a SOS number, it will send a distress message to the master number and call the set family number.
Remote Power On/Off	The device will be turned off by sending commands, and the device will be offline and cannot be woken up by vibration, so it needs to be turned on manually.

(The device will execute the remote shutdown process when receiving remote shutdown command in the above three modes)

6.Common Instruction Specifications

6.1.Common Setup Instructions

Sequence Number	Format	Example	Explanation
1	IP,realm name,port	IP gps.whatsgps.com 6801	Set up the server Domain name; Server Domain Port; Server Port
2	APN, password , APN Name#	apn,123456,cmnet	Set APN
3	FREQ,123456,T	FREQ,123456,30	T range is 10-60, unit： second; The settings are all invalid in the timed power on/off and deep sleep mode.
4	101#130*****# 102#130*****# 103#130*****#	101#13000000000# 102#13000000000# 103#13000000000#	Set SOS alarm number 101#Indicates the owner's number 102#Indicates the first alarm number 103#Indicates the second alarm number
5	D101# D102# D103#	D101# D102# D103#	D101#Indicates to delete a number D102#Indicates to delete two numbers D103#Indicates to delete three numbers
6	CQ	CQ	Device reboot

6.2.Common Query Instructions

1	CXZT	Query device status Return content: Device software version, ID, IP, State-of-Charge, Mode, APN, GPS Status and signal value, GSM signal value, ICCID
2	CXWL	Query Network Status
3	RIMEI#	Query IMEI number
4	C10#	Query SOS number
5	G1234	Query Positioning Location

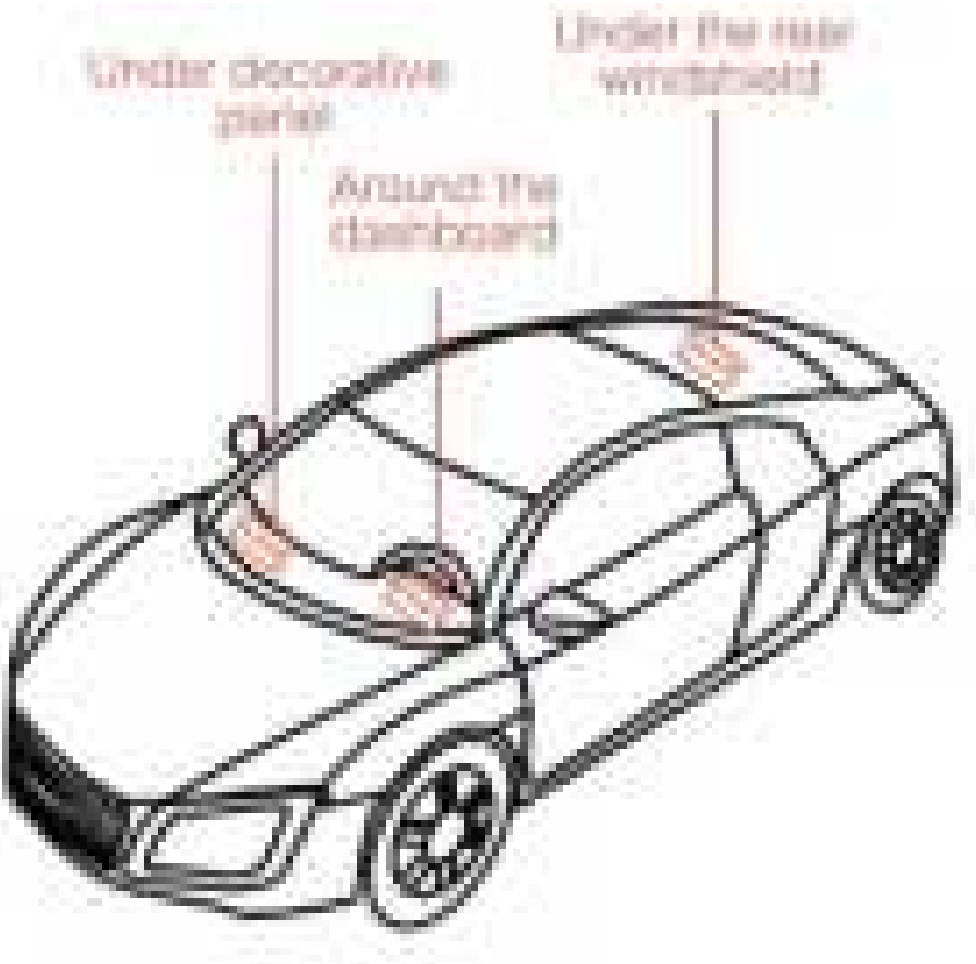
6.3.Working Mode Setting and Description

1	Tracking Mode	NMOD,123456	Enable normal tracking mode
2	Smart Mode	Tmod,123456,60	Turn on the smart mode, 60 means waking up every 60 minutes (5-720 minutes can be set)
3	Power-Saving Mode	SMOD,123456	Turn on power-saving mode
4	Remote power on/off	Power,123456,T	T. Indicates the power status, 1 is on, 0 is off

6.4.Alarm Setting and Description

1	Vibration alarm	vibtime,123456,n	A short command to set the vibration alarm duration, available in 1-15 seconds n (0-15). 0 is to cancel the vibration alarm. The default setting is 3 seconds, and the vibration alarm lasts for 3 seconds.

7.Installation Diagram



8.Troubleshooting

When operating the terminal, if you feel that the device is abnormal, please refer to the following problems and solutions. If the problem still cannot be solved, please contact the seller or service provider.

Common Problem	Reason	Solution
Poor signal reception	When terminals are used in areas with poor signal reception, such as near tall buildings or basements, the radio waves cannot be transmitted effectively	Use the terminal at the position with good signal
Unable to start	Battery depletion	Use after charging
Unable to connect to the network	SIM card is not installed properly	Check the SIM card
	There is dirt on the metal surface of the SIM card	Wipe with a clean cloth
	Invalid SIM card	Contact your network service provider
	Out of the GSM service area	Please move to the network service provider area
	Weak signal	Please move to a place with strong signal and try again
Unable to charge	The voltage is inconsistent with the range marked by the charger	Please use the voltage consistent with the charger label
	Use of non-standard charger	Please use the manufacturer's standard charger
	Poor contact	Check if the plug is connected properly

Warranty Card

Maintenance record	
Maintenance shop	
Sending date	
Fault description	
Maintenance situation	
IMEI number	
Maintenance person	

FCC Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1)this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.