Skypatrol SP1824 User Manual V2.0

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Content

Preface

Thank you for choosing the company's AT100 GPS tracking products, please carefully read the instructions before operating.

Please check the items in package with packing list, contact with the distributor when you found something leave out.

⚠ Disclaimer：

- Read this user manual carefully please. When you start use this product, then you are deemed to have read this user's manual.
- This Product used as assistant tool for Security only, can't prevent all kinds of deliberately theft or malicious damage vehicles. For the safety of your assets, you still need keep necessary vigilance and security awareness after you installed this product. We do not bear responsibility to any loss except product itself. Thanks!

1. Product Introduction

AT100 is 4G CAT1 tracking device, which combined with positioning, monitor, alarm and tracking functions, with small size it's easy to use and operate, main applies to vehicles and other mobile object location and tracking service, with widely voltage support, it can used with motorcycle and Electric vehicles.

Product Features:

- Support 9-95V widely power supply.
- Support external power cut alarm.
- Build-in GSM/GPS antenna.
- Vehicle mileage statistic.
- Remote Cut/Recover Engine.
- Support remote upgrade by OTA.
- Support vibrate alarm.
- Support over speed alarm.
- Support remote configure by SMS/GPRS.

Note:

- ✓ This product function based on GPRS network; need a SIM card which have GPRS data transmit and SMS functions.
- ✓ SIM card is not include in the packing list, please prepare SIM card before you use this device.
- ✓ This product work voltage is (9-95V/DC), lower or higher will make device work improper.

2.Technical Parameters

Name	Parameters
4G CAT1 (SIMCOM)	Optional: SIMCOM A7670C LTE-FDD:B1/B3/B5/B8 LTE-TDD:B34/B38/B39/B40/B41 GSM:900/1800 MHz A7670E LTE-FDD: B1/B3/B5/B7/B8/B20 GSM: B3/B8 A7670SA LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM: B2/B3/B5/B8 A7670(OPEN) LTE-FDD:B1/B3/B5/B8 LTE-TDD:B34/B38/B39/B40/B41
Color	Black
GPS module	XM1010/AT6558D
Working Voltage	9V~95V
Working Current	Around 50mA@12V
Standby current	Around 10mA@12V
Back-up Battery	140mAh(optional)
Back-up Battery working time	About 2 hours
Tracker size	80mm*38m*17mm
Tracker weight	50g around
Working temperature	-20℃ - +75℃
Moisture	10% - 85%
Locate Sensitivity	10m
Locate time	Hot start(average): <1s Cold start(average): <32s
GPS Sensitivity	-162dbm
GPS frequency	L1:1575.42±1.023MHz
LED Indicator	Use yellow/blue two color LED indicator to show the status of power/GSM/GPS.
Blind area data	5000 records

3. Define of LED indicator

	LED Color	Status	Status describe
GSM status	Yellow/orange	Light static	GPRS communicate normal, Online
		Fast blinking (2s blink once)	initializing
		LED OFF	GSM in sleep/device OFF
GPS status	Blue	Light static	GPS Located
		Fast blinking (2s blink once)	Finding GPS signal
		LED OFF	GPS in sleep

4. Device Installation

Before you start install the device, Please check the product you get with the packing list, if you have any problem please contact us or distributor in time.

4.1 Prepare works

- ✧ GPS product AT100
- ✧ Local GPRS SIM card
- ✧ 12V/24V DC power supplier

4.2 SIM Card Installation

This device need install a SIM Card, which must have 4G/GPRS data transmission and SMS function.

Note:

- Do not install SIM Card in opposite way.
- SIM Card must open 4G/GPRS data transmission function
- Confirm the SIM Card have enough balance inside.
- Test SIM card by cellphone to check if it can connect network
- Please do not remove or insert SIM Card without power off, to avoid the damage to SIM card and device

4.3 Device Connection Description

	Color	Describe
4PIN	Red	Power(9-95V)
	Black	GND
	Orange	ACC
	Yellow	OUTPUT(relay)
2PIN(Optional)	White	SOS+
	White	SOS-

4.4 Device Install Position

To install this device you need have some necessary knowledge about Car Electronics. So please make sure you have right person to make the first installation.
In the installation process, do not power on device. The following is some problem may facing in the installation process, please note:

There have two kind of way to install the device: Hidden install and Open type install. When install in special-purpose vehicle you can select hidden install, and when install in temporary vehicle you can select Open type install.

I. To avoid be broken, the install position of the device should be hidden. The suggest positions are:
   ① Covert within the dalle below the front windshield glass;
   ② Covert around the front instruments panel (the cover of the instruments should not be metal)
   ③ Place Under the dalle below the rear windshield glass of the car.
II. Avoid the positions round emitters, such as reverse sensor, burglar alarm and other vehicle-mounted communication devices.
III. Use the ribbon or sponge powerful double-sided adhesive to fasten the device.
IV. The device GSM Antenna and GPS Antenna are build-in, please make sure the GPS receiving surface (the side with LED indicator) face to sky and no metal shelter above when install.

Note:

✧ If there have metal thermal-protective coating or warm up coating on the windshield glass, the GPS signal will be damped. That may cause the device work abnormal, please change install position.
✧ If you want to install the device by Open type, you can paste the Velcro tape on the dalle below the front windshield glass, and then fasten the device on it.

5.Common Fault analysis

Issue	Analysis	Describe
Can't get online	Power supply abnormal	
	Sim issue	No balance,no GPRS, Install incorrect
	Setting issue	IP,PORT,ID,APN wrong
	GPRS signal weak	
	Server issue	
Can't get location	GPS signal weak	Test with open sky area
	Installation reversed	The antenna side need face to sky

6.Commands

- **A-Telematics Protocol SMS commands**

Name	Command	Reply	Instruct
Enable log	AT%TEST=*1234,280*1#		
Set server IP/Port	AS1234*269#1,120.24.225.253,5577,1#	120.24.225.253;5577,1; OK	Reply content is "IP" "Port", connection type: 0: UDP; 1: TCP
Set URL/domain	AS1234*269#1,tracking.skypatrol.com,5577,1#		
Set IP2	AS1234*269#I2,120.24.225.253,5577,1,x#		X=0: close IP2; X=1: 2 IP work same; X=2: IP2 only work as backup server(IP1 can't connect then connect IP2).
Set IP2 as url	AS1234*269#I2,url,5577,1,x#		
Set Device ID	AS1234*269#2,12007845#	12007845;OK	Current "ID"
Set APN	AS1234*269#3,CMNET,,,#	CMNET,,;OK	APN setting
Restart Device	AS1234*269#B#	GSM/restart; OK	Device restart

Factory set	AS1234*269#F#	Reset OK;	All parameters recover to factory, beside IP/Port/ID/APN
Check connection info	AS1234*269#C#	*U:122.114.126.6,6666,1*A:cmnet,,*N:3423180 1,M6,N1,60,3600,Q25 ,G1,8,Z+0,AT08FV1.0	*N: device ID; M6: Online; G1,8: G1 locate, G0 not locate, 8 located satellite; Z+0: Timezone, GMT+0.
Change SMS password	AS1234*269#4,5678#	PWD:5678,OK	
Angle upload	AS1234*269#9,X#	Angle:30, OK	
Position query2	AS1234WHERE2#	http://maps.google.com/maps?hl=en&q=+22.59303,+113.87110	
Open/close Sleep mode	AS1234*269#I,SX#	X=0, close sleep mode; X=1, open sleep mode	When open this function, device will turn to sleep mode when ACC off for 5 mins. and wake up when ACC on or alarm or SMS trigger.
Check FW version	AS1234*269#V#	Version:TFB402 V1.5 Jul 31 2017 11:13:27	
Set the authorized SIM number	AS1234*269#5,XXX,XXX, XXX,#	XXX,XXX,XXX,XXX, set ok	
Authorized SIM number query	AS1234*269#P#	8612345678912,,,,;OK	To check the authorized numbers.
Cut fuel	AS1234ENGINE:OFF#	ENGINE:OFF;OK	**IMMOBILIZE at once**
Cut fuel with condition	AS1234*269#O1,1#		IF speed>30km/h, do not immobilize; If speed<=30km/h, immobilize with duration(5times ON/OFF),and cut oil totally after 30s.
Recover fuel	AS1234ENGINE:ON#	ENGINE:ON;OK	**Recover at once**
Recover fuel with condition	AS1234*269#O1,0#		IF speed>30km/h, do not recover; If speed<=30km/h, recover with duration(5times

			ON/OFF),and cut oil totally after 30s.
Set TIMEZONE	AS1234*269#I,Ex/Wx#	X is 0-12.	Example: set GMT+8 Command: AS1234*269#I,E8#
SMS set ACC ON/OFF upload interval	AS1234*269#7,x,y#	x=ACC ON upload interval， y=ACC OFF upload interval	
SMS set over speed	AS1234SPEED:x,y#	SET SPEED:30(Km/h), 5(s);OK	unit：km/h；x is speed； Y: duration time trigger over speed, unit is seconds;
Set mileage value	AS1234*269#m,x#	X=mileage value, unit is KM.	AS1234*269#m,1111# MILEAGE:1111(Km);OK
Check IMEI	AS1234*269#T# AS1234*269#S#	IMEI: 460079155373814	
Upload by distance	AS1234*269#d,x#	Unit is meter.	if you enable upload by distance, then distance and time base will work both, which condition matched, then upload position once.
Set mileage ratio	AS1234*269#L,1,X,#	X range: 100-200	AS1234*269#L,1,110,#
Check mileage ratio	AS1234*269#L,0#		MileageRate:110;OK
Set over speed	AS1234*269#OS,x,y,#	X=over speed value; Y=duration trigger time, unit is seconds.	
Set Move alarm(ACC OFF)	AS1234*269#mv,x#	x=move distance, unit is m(ACC OFF, x>100m)	
Set idle alarm	AS1234*269#i,x,y#	x is idle speed, y is duration, unit is minute;	IDLE:8,5;OK
Enable position ACK	AS1234*269#*M,x#	X=1,Open ACK; X=0, close ACK.	
Set harsh accelerate	AS1234*269#a1,X,#	Default: Accelerate:14km/h/s	
Set harsh brake	AS1234*269#a2,X,#	Default: Decelerate:20km/h/s	
GPS harsh corner	AS1234*269#a4,x,y,z#	X=speed, unit is km/h; Y=angle; Z=duration time.	Need update FW.
Query harsh	AS1234*269#a#		

acc/brake parameters			
OTA CMD	AS1234*269#W,120.24.225.253,2002;#		
Check alarm parameters	AS1234*269#R#	D:200m; sp:50,3s; idl:8,3; mv:500; sleep:0; ack:0; acc:0; sos:0; power:0	D:upload by distance; Sp: over speed; idl: idle; Mv: ACC OFF moving alarm distance; Sleep: 1 sleep mode on; Ack: 1 enable position ack; Acc: 1=ACC ON; SOS: 1= SOS ON; Power: 1 main power normal
Set heartbeat interval	AS1234*269#K,x#	k is small case, Unit is seconds	
Query heartbeat interval	AS1234*269#K#		
Mileage unit	AS1234*269#*y,x#	X=0, unit is KM(default); X=1, unit is 0.1km	

ACC detect by speed	AS1234*269#0,a,b,c,d#	a=SPEED for trigger ACC ON;
		b=speed duration time for trigger ACC ON;
		c=speed for ACC OFF, speed need be>=1, 0 means disable detect ACC OFF;
		d=speed duration time for trigger ACC OFF
			Please note:
			Command code is number 0, but not character o
			
			Unit is seconds.

QUERY	AS1234*269#0#		
SMS alarm enable	AS1234*269#ESMS,A,B,C,D,E,F,G,H,I,J,K#	A=Over-speed; B=ACC ON; C=ACC OFF; D=Idle; E=Move F=Enter Geo-fence G=Exit Geo-fence H=Harsh accelerate I=Harsh decelerate J=Harsh corner	1=enable;0=disable.

7.Serial Port configuration

Default Baud rate:115200;
Tool: SSCOM;
Via: USB port.
Enable log cmd: AT%TEST=*1234,280*3#