GSM/GPRS/GPS TRACKER

PST-PT102B

User Manual



Preface

Thank you for purchasing the tracker. This manual shows how to operate the device smoothly and correctly. Make sure to read this manual carefully before using this product. Please note that specification and information are subject to changes without prior notice in this manual. Any change will be integrated in the latest release. The manufacturer assumes no responsibility for any errors or omissions in this document.

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1. Summary

Working Based on existing GSM/GPRS network and GPS satellites, this product can locate and monitor any remote targets by SMS or internet.

2 Applications

- Vehicle rental / Fleet management etc
- Powerful magnet + water proof, adsorbing in the hidden place of car for tracking secretly.
- Protect child / the old / the disabled / pet etc
- Provide peace-of-mind for businessmen
- Personnel Management
- Criminals Tracking

3 Hardware Description

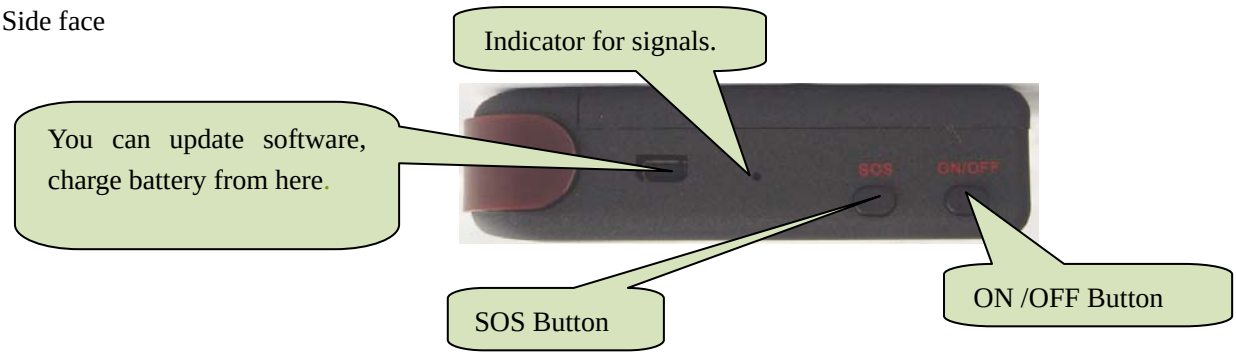
3.1 Front face



3.2 Rear face

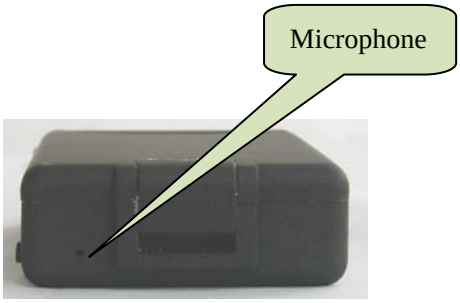


3.3 Side face



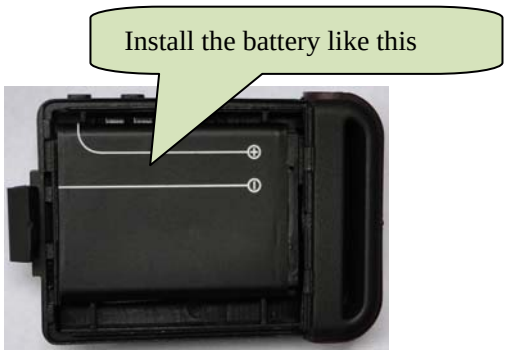
3.4 Bottom face





3.5 Interior





4 Specs.

Content	Specs.
Dim.	64mm x 46mm x 17mm(1.8”*2.5”*0.65”)
Weight	50g
Network	GSM/GPRS
Band	850/900/1800/1900Mhz
GPS chip	SIRF3 chip
GPS sensitivity	-159dBm
GPS accuracy	5m
Time To First Fix	Cold status 45s Warm status 35s Hot status 1s
Car charger	12—24V input 5V output
Wall charger	110－220V input 5V output
Battery	Chargeable changeable 3.7V 800mAh Li-ion battery
Standby	80hours
Storage Temp.	-40°C to +85°C
Operation Temp.	-20°C to +55°C
Humidity	5%--95% non-condensing

5 Usage

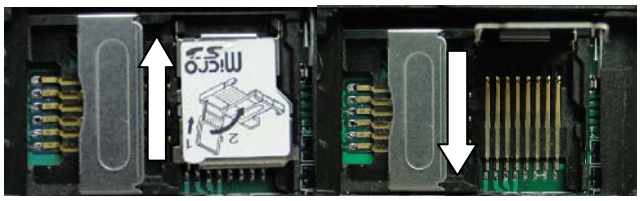
5.1 SIM card installation

Make sure that there is no call transfer and call display is on, and PIN code off. The SMS message must in Text format, can't be identified for PDU format.

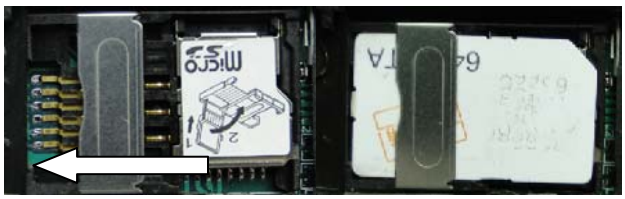
Steps:

5.1.1 Open the rear cover, and pick out the battery.

5.1.2 Push the foil up according the arrow on the foil and load the miscro SD card and push back.



5.1.3 Put the SIM card into the holder as picture shows.



5.2 Battery and Charger

Do charge the battery to capacity in 8 -12 hours for first time. Please use the battery and charger provided by the manufacturer. This unit adopts built-in Li-ion battery, and full battery can standby 80 hours. After first use, the battery usually should be charged fully in 3-5 hours.

Cautions:

a: For it's Li-ion battery, which contains harmful chemicals and may burst, please don't bump, puncture it violently and keep it off fire.

b: Please charge the battery in time to keep it working normally.

5.3 Startup

- Put the SIM card and battery in place.
- Turn on the unit outdoors by pressing the “on/off” button until the indicator is on.
- For first use, please initialize the unit and restore it to default setting. (Please refer to 5.4 for instruction.)
- In 10 or 40 seconds, the unit will begin to work and acquire the GSM signals as well as the GPS signals. The indicator will keep flashing every 3 seconds when the unit has received the signals.
- When this unit receives GPS signals normally, you can use it and do any setting as the instructions of this manual.

5.4 Initialization

Send “begin+password” in SMS to the unit, it will reply “begin ok” and initialize all the settings. (Default password: 123456)

For example, send SMS“ begin123456” to the tracker via a cell phone, If succeeded, if will reply“begin ok”.

5.5 Change the password

5.5.1 Set Password: Send sms: “password+old password+space+new password” to the unit to change the password.

For Example, pls send sms: “ password123456 888888” to terminal device, it will reply sms: “password OK”. New password 888888 changed in success.

5.5.2 Be sure keep the new password in mind, you have to upload the software to restore the

original setting in case of losing the new password.

5.5.3 Make sure the new password is in 6 digits Arabic numbers, or the tracker can not recognize the password.

5.5.4 Make sure that all the symbol“+”in sms commends is just for quick understanding, which don’t need to enter “+” in sms, and “space” means press the spacebar button of the cell phone.

5.6 Authorization

There are only 5 cell phone numbers able to be authorized, be sure to set the authorization phone number before use.

5.6.1 Call the tracker for 10 times continuously and get position correctly, then it will make the cell phone number as the authorized number automatically.

5.6.2 Send SMS：“ admin+password+space+cell phone number” to set up a authorized number. The other authorized numbers should be set by the first authorized number. If the number is successfully authorized, the unit will reply “admin ok!” in SMS.

5.6.3 Send SMS：“ noadmin+password+space+authorized number” to delete the authorized number.

5.6.4 For roaming purpose, you have to add your country code ahead of the cell phone number, for example, please send：“ admin123456 +8613322221111” to tracker to set 13322221111 as an authorized number.

5.7 Single Locating

5.7.1 If there is no authorized number, when any number dials up the unit, it will report a Geo-info; If there is already an authorized number, then it will not respond when an

unauthorized number calls it up.

5.7.2 When an authorized number dials up the unit, it will hang up and report a real-time Geo-info as below:



*Tracking location, When GPS signals is weak, the position of latitude and longitude included in the SMS is the position that the tracker received GPS signals at last. If it is different with its exact current location, pay attention to check the time included in the SMS you got.

5.8 Auto Track

5.8.1 Send SMS command “fix030s005n+password” to the tracker device, it will report the Geo-info at 30s intervals for 5 times. (s:second, m:minute, h:hour). This command setting must be in 3 digits and the maximum value is 255.

5.8.2 Unlimited times auto track: Send SMS “fix030s***n+password” to the tracker device, it will reply the Geo-info continuously at 30 seconds intervals.

5.8.3 Cancellation: Send SMS “nofix+password” to the tracker device.

Note: the interval must not less than 20s.

5.9 Absolute street address

5.9.1 You must set up the APN of your local GSM network for the SIM card in tracker first

before using this function, if there is user name and password for GPRS login, Please refer to 5.29.1 and 5.29.2 to configure the APN, user name and password for GPRS login.

5.9.2 After configure the APN, send:" address+password" to device, it will reply SMS including absolute street address. For example: No.113, Nantou Guankou 2nd Rd. Nanshan district, Shenzhen, Guangdong, china.

5.10 GPS drift suppression

5.10.1 Send "suppress+password" to tracker, it will reply" suppress drift ok". The GPS data stop updating if vehicle is not moving and latitude and longitude always keep same, and GPS data updates automatically when vehicle is moving.

5.10.2 This function is activated as default, send "nosuppress+password" to tracker, it will reply" nosuppress ok ".

5.11 Location based service (LBS)

When the tracker device doesn't received valid GPS signals, tracker will locate by LBS, the messages includes the GPS coordinates of the last position in SMS mode, but the LAC in message is the current new position, the location can be seen by input the LAC code in the menu "Manual Track" of web platform www.gpstrackerxy.com, you can also send command "address+password" to tracker to get the newest absolute address and newest GPS coordinates as well; tracker will automatically switch to track by location based service in GPRS mode, and actualized on the map of web server with LBS mark. And there may be some inaccuracy with actual location by LBS tracking; the bias depends on GSM reception.

Note: This feature can be used normally in most areas according to the signal of GSM network.

It may not be available in some areas.

5.12 Monitor (Voice Surveillance)

5.12.1 The command to switch between Track and Monitor are “tracker” and “ monitor”.

5.12.2 The default mode is “track” (Track mode).

5.12.3 Send SMS “monitor+password” to the unit, and it will reply “monitor ok!” and switch to “monitor” mode.

5.12.4 Send SMS “tracker+password” to the unit, it will reply “tracker ok!” and restore to “track” mode.

5.13 Data logging

5.13.1 Auto logging：When the tracker devices lost GSM signals or fall offline from GPRS, tracker will store the tracking position and alerts automatically in the flash upon the pre-set condition, when GSM signals get back, all the event alerts will be auto-sent to the authorized numbers or monitoring platform (server), but the stored tracking data should be loaded to the monitoring platform via SMS command.

5.13.2 Logging upon times: Send SMS: “save030s005n+password” to the tracker unit, it will reply “save ok”, and will store the lat, long locations every 30 seconds for 5 times. (S: second, m: minute; h: hour).

5.13.3 Multi-logging：Send sms:”save030s***n+ password” to tracker device, it will reply “save ok”.

5.13.4: logging Clearance: send SMS: “clear+ password” to tracker device, it will reply “clear ok”.

5.13.5：logging Volume: Built-in flash 1MB (store about 16,000 positions); external SD card

support 2GB at most.

5.13.6 The logged data can be copied to computer via the USB cable in the package. The route of the stored data can be seen by importing data in the menu “Data Import” of web platform www.gpstrackerxy.com

5.14 Data Load

5.14.1 Current date Load: Send SMS: “load+ password” to tracker device, it will reply: “load ok” if the device is working well under GPRS mode; if not, it will reply “load fail! Please check gprs” that means device does not work under GPRS mode.

5.14.2 Specified date Load： Send SMS: “load+ password+ space+ year month date” to tracker device, it will reply: “load ok” and load the tracking data to the monitoring platform upon the valid time you choose. For Example: send SMS: “load123456 20110425” to the tracker device, means to load the tracking data of 25th April 2011 to monitoring platform.

5.15 Shock Sensor Alarm

5.15.1 Setup: Shock sensor alarm is deactivated in default settings. If needed, please send SMS “shock+password” to tracker device, and it will reply “Shock is activated!”, it means shock sensor alarm has set up successfully. When the tracker detect vibration, it will send SMS “Sensor alarm+Geo-info” to authorized numbers.

Note: Shock sensor detect vibration one time for each 3 minutes, it will start to detect the second shock sensor alarm 3 minutes after the first alarm.

5.15.2 Cancel: Send "noshock+password" to cancel the shock sensor alarm.

5.15.3 Shock sensor sensitivity configuration:

The sensitivity of the built-in shock sensor has three different level:

First level: Alarm will be triggered after detect slight vibration, send command" sensitivity+password+space+1" .

Second level: Alarm will be triggered after detect 8 times vibration in 2 seconds, send command" sensitivity+password+space+2".

Third level: Alarm will be triggered after detect 25 times vibration in 5 seconds, send command" sensitivity+password+space+3".

5.16 Geo-fence

Set up a geo-fence for the unit to restrict its movements within a district. The unit will send the message to the authorized numbers when it breaches the district.

5.16.1 Set up: When the unit stays immobile in a place for 3-10 minutes, the user can Send SMS: “stockade+password+space+latitude,longitude; latitude,longitude” to unit to set the restricted district. In case of breach, it will send SMS “stockade!+geo-info” to the authorized numbers every 3 minutes.

Remark: The first latitude&longitude is coordinate of the top left corner of the Geo-fence, while the second latitude&longitude is the coordinate of the bottom right corner.

5.16.2 Cancel: Send SMS:” nostockade+password” to deactivate this function.

5.17 Movement alert

5.17.1Set up: when the unit stays immobile in a place for 3-10 minutes with GPS signal reception, the user can send SMS“move+password+space+0200” to the tracker (Suppose area

of a radius of 200 meters, it supports 4 digits at most. Unit: Meter). It will reply “move OK”. In case of such a movement (the default distance is 200m), it will send SMS “Move+ latitude & longitude” to the authorized numbers at 3 minutes interval.

5.17.2 Cancel: Send SMS “nomove+password” to deactivate the movement alarm.

5.18 Overspeed alert:

5.18.1 Set up: Send SMS: “speed+password+space+080” to the unit (suppose the speed is 80km/h), and it will reply “speed ok!”. When the target moves exceeding 80 km/h, the unit will send SMS : “speed+080!+Geo-info” to the authorized numbers every 3 minutes.

5.18.2 Cancel: Send SMS “nospeed+password” to deactivate the overspeed alarm.

Remark: The recommended speed should be not less than 50km/h. For below that rate, it will be effected the accuracy by gps signals drift etc.

5.19 SOS alert

Press the SOS for 3 seconds, it will send “help me!+ Geo-info” to all the authorized numbers every 3 minutes. It will stop sending such a SMS when any authorized number reply SMS “help me!” to the tracker.

5.20 Low battery alert

When GPS device battery is going to be about 3.7V, it will send SMS:”low battery+Geo-info” at 3 minutes interval.

5.21. Sleep Mode

5.21.1 Sleep by time

Send "sleep+password+space+time", tracker will reply "sleep time ok" if none of the alarms listed under chapter IV has been set and no operations, tracker will fall asleep in 5 minutes, LED will be off, calling or SMS can awake the tracker. If these alarms have been set, tracker will enter sleep by detecting shock sensor. And tracker will sleep by time as default.

5.21.2. Sleep by shock sensor

Send "sleep+password+space+shock", tracker will reply "sleep shock ok", it will enter sleep mode after detect no shock, and LED will be off.

5.22 Forward the third parties' message

5.22.1 Send SMS "forward+password+space+third parties phone number" from authorized phone number, tracker will reply "forward ok", and supports 1 third parties phone numbers at most.

For example, set the phone number of the service provider of the simcard in the tracker, when charge remind message coming in, tracker will forward it to authorized phone number.

5.22.2 Cancel: Send SMS command "noforward+password".

5.23 Charges Inquiry

Send SMS command "balance+password+space+phone number+space+content" to tracker, it will forward the content to the specified phone number and return the content from the specified phone number.

5.24 State Checking

Send SMS:"check+password" to the tracker device, it will reply the recent status via SMS as: GSM: 100% GPS: OK/NO GPRS: ON/OFF battery: 100%.

5.25 IMEI checking:

Send SMS command "imei+password" to the unit. E.g.: Send SMS command "imei123456" to the unit, an IMEI number in 15 digits will be replied to your cell phone.

5.26 Terminal (local) Time Setting

Send SMS "time+space+zone+password+space+local time zone".

For example, Send SMS "time zone123456 8" (time zone of China).

If the local time zone is negative as "-8", then it should set as SMS:

"time zone123456 -8".

5.27 TCP/UDP switch

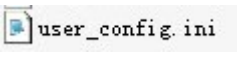
Command: "gprs123456,0,0" TCP with keep alive data, this is the default mode.

Command: "gprs123456,0,1" UDP with keep alive data

Command: "gprs123456,1,0" TCP without keep alive data

Command: "gprs123456,1,1" UDP without keep alive data

5.28 Configure parameters by USB

Find the USB cable in the package to connect tracker with computer, open the memory of the tracker, find and open the initial configuration file with notepad 

, operate according the instructions.

Note: Correct password is need every time you configure the tracker. For detailed instructions, please refer to the “102 USB configuration user manual” in CD.

5.29 GPRS setting

User must send SMS via cell phone to set up IP, port and APN before starting GPRS.

5.29.1 Setting up APN

5.29.1.1 APN standards for Access Point Name and differs from country to country. For more information about the local APN, inquire with your local GPRS network operator.

5.29.1.2 Text the tracker a SMS “APN+password + Space + your local APN” via a cell phone and if succeeded in setup, the tracker will return the message “APN OK”.

5.29.1.3 e.g. send SMS command “APN123456 CMNET”. If succeeded, “APN OK” is returned by the tracker in SMS.

Notes: 123456 refer to password of tracker and CMNET is the APN of China Mobile (One of GSM Operator in china).

5.29.2 GPRS User ID and password Setup

5.29.2.1 In most countries, the user name and password involving GPRS login are not compulsorily necessary, therefore, the entry can be skipped. For those countries requiring user name and password, please configure as following:

5.29.2.2 Send SMS “up+password+space+user+space+password”If succeeded,

“user,password ok” is returned by the tracker in SMS.

5.29.2.3 For instance, send SMS “up123456 jonnes 666666” to the tracker, and if succeeded,

the tracker returns “user, password OK”

5.29.3 IP and port setup

5.29.3.1 Send SMS as below via a cell phone: adminip +password + Space + IP Address + Space + Port Number. If succeeded, “adminip OK” is returned by the device in SMS.

5.29.3.2 e.g, Send SMS command “adminip123456 202.104.150.75 9000” to the tracker device, If succeeded, “adminip OK” is returned by the device in SMS.(123456 is default password，202.104.150.75 is IP，9000 is port).

5.30 Less GPRS traffic

5.30.1 Tracker will change to less GPRS traffic mode & sleep by shock sensor mode after parking 5 minutes, GPRS disconnect and connect again when alarm being triggered or start driving.

5.30.2 Activate this function: Send "less gprs123456 on", tracker will reply "less gprs on ok".

5.30.3 Deactivate this function: Send "less gprs123456 off", tracker will reply" less gprs off ok".

Note: 123456 is the password of tracker, and replace it with the new if you have changed.

5.31 Modes switch between “SMS” and “GPRS”

5.31.1 The default mode is “SMS”

5.31.2 Send SMS “GPRS+password” to the unit, and it will reply “GPRS ok!” and switch to “GPRS” mode.

5.31.3 Send SMS “SMS+password” to the unit, it will reply “SMS ok!” and restore to “SMS” mode.

5.32 Setup monitor center number

5.32.1 Setup: send command “centernum+password+space+number” to tracker, it will reply“centernum ok”, for example, send centernum 13800138000

5.32.2 Cancel: Send “nocenternum+password”.

Note: If monitor center number doesn’t setup, auto track messages will be sent to the cell phone which send this command.

5.33 Web platform and PC installation tracking software

5.33.1 Web based platform www.gpstrackerxy.com. Configuration IP: 202.104.150.75 Port: 9000. Please check “software platform user manual” included in the CD for detailed operation information.

5.33.2 PC based installation tracking software included in the CD in package.

6 .Cautions

Please comply with the instructions to extend the unit life:

6.1 Keep the unit dry. Any liquid, i.e. rain, moisture, may destroy or damage the inside circuitry.

6.2 Don’t use & store the unit in dusty places.

6.3 Don’t put the unit in overheated or overcooled places.

6.4 Handle carefully. Don’t vibrate or shake it violently.

6.5 Clear the unit with a piece of dry cloth. Don’t clean in chemicals, detergent.

6.6 Don’t paint the unit, this may cause some foreign materials left in between the parts.

6.7 Don’t disassemble or refit the unit.

6.8 Please use the battery and charger provided by manufacturer. Using other batteries and chargers will cause unwanted situation.

7 Faults & The solutions

Faults	Solution
Startup Fail	Check the battery and see if it is fully charged or correctly installed.
Hang up Fail	In existence of an authorized number, an unauthorized number dials up the unit. Please initialize the unit and re-set up the authorized numbers.
No GSM Signal	Please make sure SIM Card is GSM Net and installed correctly; also call display should be on; but no call transfer and PIN code off.