GPS Watch Tracker

User Manual

V6.2

WT200B

ASCEND GROUP CO.,LTD

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1. Product Overview

Thank you for your purchase of WT200B GPS Tracker. The WT200B GPS/GSM Tracker is a remote position device with build-in GPS and GSM/GPRS modules. It is a small size, high accuracy remote location tracking device. Based on GPS satellite, it provides accurate position information under dynamic conditions.

Function List:

- Real time tracking via SMS or GPRS
- Track on demand
- Track by time interval
- Listen in (Voice Monitoring)
- SOS panic button
- Geo-fencing control
- Two way voice communication

Applications:

WT200B GPS/GSM tracker can be used for children, adult, senior citizen. The devices built in antenna, integrative machine and easy to assemble.

For your safety:

In order to realize the full functions of this product, please read this manual carefully before starting to use the product.

1.	This product can only be maintained and repaired by qualified professional service personnel. If you detach this product for maintenance or repair, your warranty will be invalidated.
2.	When connecting the other devices, read carefully their instruction manuals, so as to carry out correct installation; do not connect incompatible device.
3.	Please use genuine original parts and qualified batteries and peripheral equipments, so as to avoid damage to this product.
4.	As this product is a high-tech product, please read carefully this manual before starting to use the product, so as to avoid inappropriate operation.
5.	Drivers should not operate this product while driving a vehicle, thereby, affecting safe driving.
6.	This product can work properly only when GSM communication is in good condition.
7.	Please reduce electromagnetic wave interference to the product; and use it properly.
8.	GPS communication is liable to be affected by environmental shielding; may fail to carry out positioning during certain circumstances. It will resume the positioning function as soon as it leaves the shielding environment. This is normal. Please do not worry when encountering such problem.
9.	Each signal sent out from the system will be confirmed for successful transmission in the

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	base station of the mobile operator. However, if system stoppage occurs or if the mobile telephone is preset to a switch off state by the customer, it cannot ensure successful transmission.
10.	For safety reason, do not tell the other people your WT200B mobile number, without taking precautions. Otherwise, your privacy may be compromised along with other safety problem.

2. Specification

Hardware	WT200B
GSM module	MTK program, GSM 850/900/1800/1900 dual-band or quad-band Support the TCP protocol
GPS Chipset	SIRF-Star III chipset
GPS Sensitivity	-159dBm
GPS Frequency	L1,1575.42MHz
C/A Code	1.023MHz chip rate
Channels	20 channel all-in-view tracking
Position Accuracy	10 meters, 2D RMS
Velocity Accuracy	0.1 m/s
Time Accuracy	1 us synchronized to GPS time
Datum	WGS-84
Reacquisition	0.1 sec.,average
Hot start	1 sec.,average
Warm start	38sec.,average
Cold start	42sec.,average
Altitude Limit	18,000 meters (60,000feet) max.
Velocity Limit	515 meters/second (1000knots) max.
Acceleration Limit	Less than 4g
Jerk Limit	20m/sec
Operating temperature	-20° to 70° C
Humidity	5% to 95% Non-condensing
Dimension	61.8mmx41mmx18mm
Voltage	Rechargeable 600 mAh battery(3.7V)
Charging connector	DC 5V

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3. Wiring Installation

3.1. Product Parts List

GPS Tracker Unit	
USB Cable and Charger	
Battery	
User Manual(CD)	

3.2. Precaution before Installation

1	Check if all the parts are included.
2	Prepare a SIM card for GSM communication. Use some other mobile phone to confirm that the PIN code has not been set and that it can dial out and receive telephone calls and SMS without problem.
3	Before install the SIM card; make sure to cut off power from the GPS Tracker unit. The correct installation method is to push the tray completely into the GPS Tracker unit, until you feel it is hooked by something.
4	Find a suitable place inside the car for installing the unit.
5	Check if all the wiring has been connected correctly; then connect the GPS Tracker unit to the power source.

3.3. INSTALLATION

3.3.1 Step 1: Install SIM Card

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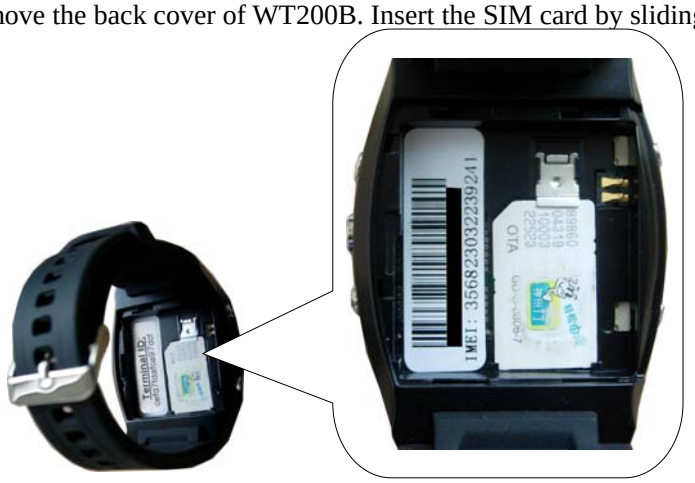
1	Remove the back cover of WT200B. Insert the SIM card by sliding it into the card slot.  Put back the back cover. Turn on the device:
2	Make sure to turn off the power before install the SIM card.
3	Make sure to deactivate the PIN code, so that the SIM card can operate without PIN protection.
4	Before install the SIM card to the GPS Tracker, please use a mobile phone to make sure the SIM card can make & receive phone calls without problem.
5	Before install the SIM card to the GPS Tracker, please use a mobile phone to empty the SMS storage of the SIM card.

3.3.2 Functional Parts：

There are 8 buttons on the gps tracker.

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Button	Means
A	1.Press and hold 3seconds to turn on / turn off GPS tracker 2.Hang up incoming call
B	Microphone
C	Charging Jack
D	1. Interface Switch: 2. Press button D for 3 seconds, you can set date/language: Then press E or F to set Press G to confirm OK Press D to back to previous menu
E	1.Press button E for 3 seconds to call the first preset phone number(Please refer to **4. 5 Two way voice communication for details)** 2. During a call, you can press button E to up the volumn.
F	1.SOS button(Please refer to **4.6 SOS Button for details)** 2. During a call, you can press button E to down the volumn.

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G	Press button G for 3 seconds to call the second preset phone number(Please refer to **4. 5 Two way voice communication for details)**
H	Speaker

3.4 Charge battery:

- **The initial use of WT200B, make sure you please turn off WT200B and charge WT200B battery for 12 hours.**
- **Below is the battery charging status icon on the GPS watch screen:**

Charging:

Charging Finished:

If the GPS tracker is turned off when charging:

If the GPS tracker is turned on when charging:

The battery icon on the screen right top will be full.

4. SMS Command List

Note: **** is user's password and the default password is 0000. The tracker will only accept commands from a user with the correct password. Commands with wrong password will be ignored.

Description	SMS Command	Example
Change Password	#770#New Password#Old Password##	#770#1234#0000##
Remarks: The password will be changed from 0000 to 1234		
Time Zone	896****DNN	8960000E08
Description: Correct the time into your local time 1. **** is the default password. Default:0000		

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2. D=E/W, E means East Longitude, ahead of GTM time, W means West Longitude, behind GMT time.
3. NN is your time zone.
For example,
Example:
8960000E08
Remarks: China is in East Longitude, GTM+8 time zone.

Authorization	#710# authorized phone number #****##	#710#008615912345678#0000##

Description:

1. There are only 1 numbers able to be authorized.

2.Tracking by call: You can call the gps tracker to get location, the gps tracker will reply location sms to authorized phone number only.

3.Receiving alert message: All the alarm message(geo-fence, SOS, low battery alert) will be send to the authorize phone number.

4. After press SOS button, WT200B will send call the authorized phone number for voice monitoring, and send sms alert to the authorize phone number.

Cancel Authorization:

Command: #710##****##

**** is the default password. Default:0000

Example:

#710##0000##

Set two way voice communication phone number	#711# phone number 1# phone number 2# phone number 3#****##	**Set phone number 1 only** #711#008613512345678###0000## **Set phone number 1 and phone number 2 only** #711#008613512345678#008613012345678##0000## **Set phone number 1 phone number 2 and phone number 3** #711#008613512345678#008613012345678#008613412345678#0000##

Description:

1. You can set three phone numbers.
2. Press Button E(Right top button) for 3 seconds, the GPS tracker will call the phone number 1
Press Button G(Right bottom button) for 3 seconds, the GPS tracker will call the phone number 2

Cancel two way voice communication phone number:

1. Cancel phone number 1:

Command: #711##phone number 2#phone number 3#****##

**** is the default password. Default:0000

Example: #711##008613012345678#008613412345678#0000##

2. Cancel phone number 2:

Command: #711#phone number 1# #phone number 3#****##

**** is the default password. Default:0000

Example: #711#008613512345678# #008613412345678#0000##

3. Cancel phone number 3:

Command: #711#phone number 1#phone number 2# #****##

**** is the default password. Default:0000

Example: #711#008613512345678#008613012345678##0000##

4. Cancel all phone number:

Command: #711#####****##

**** is the default password. Default:0000

Example: #711####0000##

SOS Button		

Description:

1. Press the Button F(right middle button), the gps tracker will send sos alert message to the authorized phone number in **"Authorization"**
2. And at the same time, call the phone number in **"Set two way voice communication phone number"**

It will call the phone number 1 first, if phone number 1 cannot get through, or phone number 1 hang up the phone; the gps tracker will call the phone number2, if phone number 2 an not get through, or phone number 2 hang up the phone; the gps tracker will call the phone number 3.

Voice Monitoring	555 ****	5550000

Description: User your mobile phone to send this command, after set successfully, the gps tracker will call back your mobile phone automatically, then you can hear the surrounded voice.

Example:

5550000

Track on Demand -Google Link	988****	9880000

Remarks: Send this command to the tracker and then you receive an SMS with an http link. Click on the link then the location can be shown directly on Google Map on your mobile phone. For example:

http://maps.google.com/maps?q=+22.62184,+114.03509

Track on Demand	666****	6660000

Description:

1. The GPS watch WT200B's default GPS searching time is 30 seconds, means: WT200B will stopping searching for GPS signal if it cannot find GPS signal in 30 seconds.

If you cannot get valid location report from WT200B, please first send sms command: #730#20#3#0000##

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then send the sms command: 666****

2.Get the current location of the tracker, send this SMS or make a telephone call directly to the tracker and it will report its longitude and latitude by SMS with format as follows:-

Data format:

Lat: Latitude Direction (+/-) Latitude Value (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value (Accuracy for 5 after the decimal point)

Speed: Speed KM/H (Accuracy for 2 after the decimal point)

Direction: Direction (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

STATE: Message state

Valid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

STATE: SMS

Invalid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

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Fix: V

STATE: SMS

Note: If in the cold start and GPS no position, it will return to the void of information:

eg: ERROR GPS GPRMC FRAME DATA

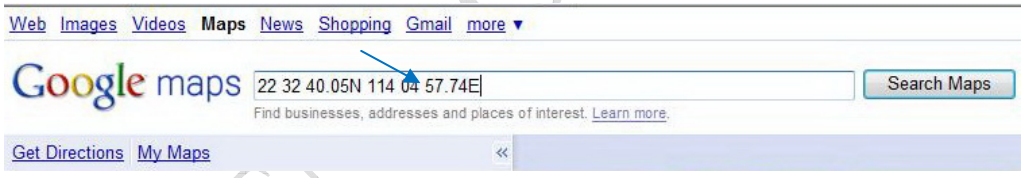
BS: 27971054”

ID: 353686009002030

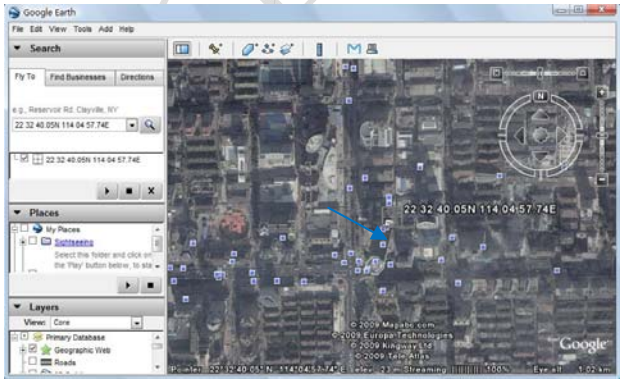
STATE: SMS

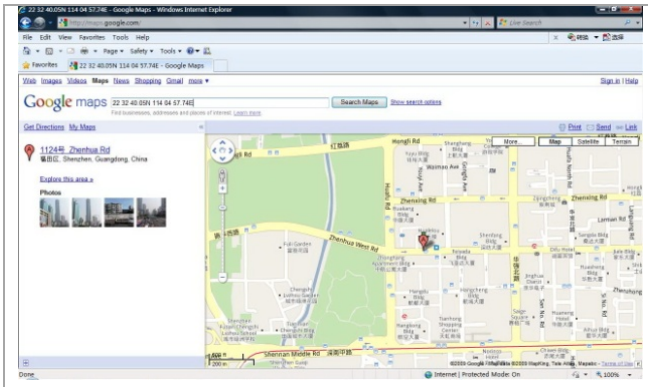
Google Earth and Google Map		

Download Google Earth from http://earth.google.com/.
Start Google Earth (For more information about Google Earth please refer to http://earth.google.com/) or go to http://maps.google.com in your Internet Explorer.
Input the latitude and longitude that you receive from the tracker by SMS and click the search button. Google Earth or Google Maps will display the location for you.
Example:
When you receive: Latitude = 22 32 40.05N Longitude = 114 04 57.74E
Type as the following picture shows:
(Note: you should input the latitude and longitude as: 22 32 40.05N 114 04 57.74E)



And then you can find the location of your tracker:





Or you can use local map software on PDA or car navigation device to input the coordinates.

Set geo-fence square	#751#Radius#Sampling Interval#Latitude #Longitude #0000##	#751#500#5#22.5442N#113.91E#0000##

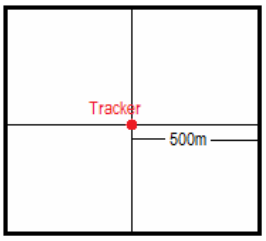
Description:

When the tracker moves out of a preset square scope, it will send an SMS alarm to the authorized phone number for SOS (**"Authorization")**

Example:

#751#500#5#22.5442N#113.91E#0000##

The GPS Tracker will send an alert message to the authorized phone number (**"Authorization") when the gps tracker is in/out the area(center point's Longtitude** 113.91E and latitude 22.5442N, radius 500 meters)



Read Geo-fence parameters	#752#****##	#752#0000##

Description:

The command to read geo-fence parameters

Example: #752#0000##

After send successfully, the gps tracker will reply:

#open:1#lat:11456.209400#lng:2233.470100#distance:500#time:5#status:2

Parameter	Description
Geo-fence status	open:1-Geo fence is open Open:0-Geo fence is closed
Longitude and latitude	Geo-fence center point
Distance	Geo-fence radius
Time	Sampling interval
Status	Status:2—GPS Tracker has valid gps signal, geo-fence works normal

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	Status:1—GPS tracker has invalid gps signal, geo-fence is open but cannot work normal	
Turn off geo-fence	#760#****##	#760#0000##
The command to close geo-fence alarm. **Example:** #760#0000##		
Enable/Disable GPRS	#904## #905##	#904## #905##
1. Enable GPRS : #904## 2. Disable GPRS : #905##		
Set APN	**Format 1:**#802#APN###****## **Format 2:**#802#APN# APN user name#APN password #0000##	#802#CMNET###0000## #802# APN# APN user name#APN password #0000##
Remarks: 1.If no APN username and password are required, just input APN only. 2. Use format 2 if your APN requires APN user name and APN password. 3. APN defaulted as 'CMNET'; APN is gateway to connect internet, Each country is different, please contact your SIM card provider for APN name.		
Set IP and Port	#803#IP # port #****##	#803#58.64.205.22#8010#0000##
Remarks: IP is your server's IP and Port.		
Track by Interval	#730# sampling interval T # the number of upload data each time N #****##	#730#60#1#0000##
In this example, the tracker will send location data back to your mobile phone every 60 minutes.		
Read GPS Tracker Set Parameter	#901##	#901##
Remarks: The command to read GPS tracker Set parameter		
Read GPRS Set Parameter	#902##	#902##
Remarks: The command to read GPS tracker GPRS Set parameter		

5. Track by 900D web based tracking software

5.1. Enable GPRS

Send the SMS to the tracker as following format:

	Command	Remark
Command format:	#904##	
For example:	#904##	

5.2. Set APN

Send the SMS to the tracker as following format

	Command	Remark
Command format:	**Format 1:**#802#APN###****## **Format 2:**#802#APN# APN user name#APN password #0000##	**** is the default password. Default:0000 Use format 2 if your APN requires APN user name and APN password.
For example:	#802#CMNET###0000## #802#CMNET#abcdef#12345678#0000##	802 : Command code 0000: password, default 0000 CMNET: APN, is gateway to connect internet, Each country is different, please contact your SIM card provider for APN name.

5.3.Set IP and Port

Send the SMS to the tracker as following format:

	Command	Remark
Command format:	#803#IP#port#****##	**** is the default password. Default:0000
For example:	#803#58.64.205.22#8010#0000##	803 : Command code 0000: password, default 0000 **58.64.205.22** 900D Platform server IP **8010** 900D Platform server software Port

5.4.Upload data in preset time

Send the SMS to the tracker as following format:

	Command	Remark
Command format:	#730#T#N#****##	**** is the default password. Default:0000 (1) T= Record location by interval, from 10 to 65535 in the unit of second. (2)N= Upload Record Location Quantity Per Time, from 1-50. (3)Upload location data interval=T*N N=0, close upload data by preset interval, the gps tracker will reply "GPRS Timer Stop"
For example:	#730#60#1#0000##	730 : Command code 0000: password, default 0000 In this example: WT200B will send location every 60 seconds (1 minute), 1 location reports per time.

5.5. Please go to http://www1.igpstracking.net/

Enter the user name and password we provided.

After log in, please go to "Vehicle Manager-Vehicle List"

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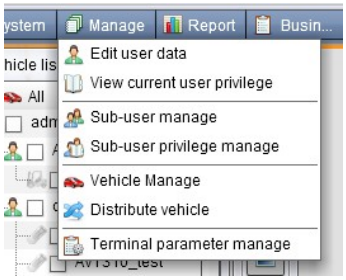
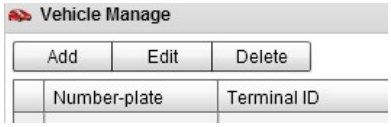
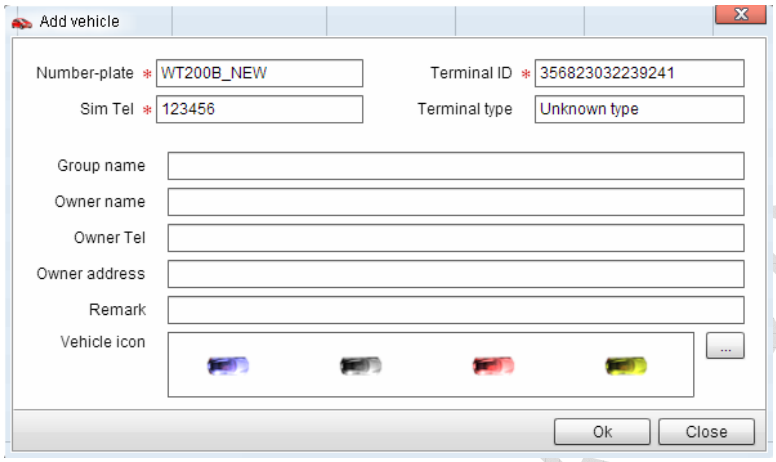


You will see the below window



Please click “Add” button, you will see the below window:



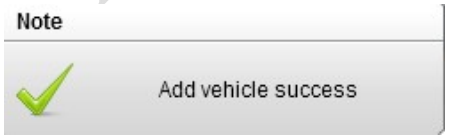
License Plate: Define by yourself; you can enter A-Z number or Numeric

900D Terminal Type: **Do not choose.**

SIM card: the SIM card phone number you put in WT200B.

Terminal ID: On the WT200B, you can find the a white label writes “ IMEI". IMEI=Terminal ID . Terminal ID is 356823032239241 here.

Click "Submit", and then you add the car successfully on the software 900D



Attention: For 900D GPS Software, "Monitor" and "Number Plate" must be checked till the font becomes blue, then the GPS tracker will update location automatically on map.Like below picture:

6. Troubleshooting

Problem: Unit will not turn on	
Possible Cause:	**Resolution:**
Wiring was not connected properly	Check and make sure wiring connection is in order.
Battery needs charging	Recharge battery
Problem: Unit will not respond to SMS	
Possible Cause:	**Resolution:**
GSM antenna was not installed properly	Make WT200B connected to GSM network.
GSM Network is slow	Some GSM networks slow down during peak time or when they have equipment problems.
Unit is sleeping	Cancel sleeping mode
Wrong password in your SMS or wrong SMS format	Write correct password or SMS format
The SIM in WT200B has run out of credit	Replace or top up the SIM card
No SIM card	Insert a working SIM card. Check in phone that the SIM can send SMS message.
SIM card has expired	Check in phone that the SIM can send SMS message. Replace SIM card if needed.
SIM has PIN code set	Remove PIN code by inserting SIM in you phone and deleting the code.
SIM is warped or damaged	Inspect SIM, clean the contacts. If re-inserting does not help try another to see if it will work.
Roaming not enabled	If you are in a different country your SIM account must have roaming enabled.
Error connecting GSM antenna	Make sure the GSM antenna is connected to the GSM interface.
Problem: SMS received starts with 'Last…'	
Possible Cause:	**Resolution:**
Unit does not have clear view of the sky	Move the antenna of the unit to a location where the sky is visible.
WT200B is in an inner place	Wait for the target to come out
Battery is low	Recharge the unit and the GPS will start working.
Error connecting GPS antenna	Make sure the GPS antenna is connected to the GPS interface.
Problem: Unit Fails to Connect to Server via GPRS	
Possible Cause:	**Resolution:**
SIM card in WT200B does not support GPRS function	Enable SIM card GPRS function.
GPRS function of WT200B is turned off	Turn on GPRS function of WT200B.
Incorrect IP address or PORT	Get the right IP address and PORT and reset to WT200B
GSM signal is weak	Move the unit to a location with good GSM reception.

7.Contacts

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If you encounter any problems when using our products, and cannot solve them by yourself, please contact our technical support team by writing an E-Mail to us. We will be pleased to help you.

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