

# GPS Personal Tracker

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User Manual

V7.1

GT60

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## 1. Product Overview

The GT60 is a GPS/GPRS based personal tracking device, which is compact and easy to use.

GT60 has inbuilt GPS module to obtain accurate position data. This device utilizes its GSM capability to send the position data to a specified mobile phone or server base. Thus allowing users to monitor people or pets using the tracker.

One unique feature of GT60 is the inbuilt microphone and loudspeaker that supports two way voice communications, similar to a mobile phone. This feature can be activated either by the guardian calling the tracker or the tracker holder activating the SOS button. The tracker can also be configured to report its location to the server base or mobile phone at preset intervals.

GT60 has the following functions and features:

- SMS and GPRS TCP/UDP Communication (Meiligao Protocol)
- AGPS ( with GSM Base Station ID)
- Track on demand
- Show location directly on mobile phone
- Track by time interval
- Track by Distance
- Two-way audio
- Listen-in (voice monitoring)
- Inbuilt motion sensor for power saving
- SOS panic button
- Movement alarm
- Geo-fencing control
- Low battery alarm
- Speeding alarm
- GPS blind area alarm
- Three buttons for making phone call and/or sending message



## 2. For Your Safety

Read these simple guidelines. Not following them may be dangerous or illegal.

<b>Switch on safely</b>	Do not switch on GT60 when wireless phone use is prohibited or when it may cause interference or danger.
<b>Switch off in hospitals</b>	Follow any restrictions. Switch GT60 off near medical equipment.
<b>Switch off in aircraft</b>	Follow any restrictions. Wireless devices can cause interference in aircraft.
<b>Switch off when refueling</b>	Do not use GT60 when at a refueling point. Do not use near fuels or chemicals.
<b>Switch off near blasting</b>	Follow any restrictions. Do not use GT60 when blasting is in progress.

<b>Qualified service</b>	Only qualified personnel can repair GT60.
<b>Water resistance</b>	GT60 is not fully water resistant. Keep it dry. Use a waterproof bag if necessary.

### 3.GT60 Characteristics

Items	Specification
Charging Voltage	DC 4.2-5.5V/400mA (Mini USB port)
Internal Battery	Rechargeable and removable 950 mAh battery (3.7V)
Dimension	78 mm × 45 mm × 21 mm (14mm)
Weight	70g (with battery)
Operating temperature	-20° to 55° C
Humidity	5% to 95% Non-condensing
GSM module	Quad Band GSM 850/900/1800/1900Mhz
GPS Chipset	latest GPS SIRF-Star III chipset
GPS Sensitivity	-159Db
GPS Frequency	L1, 1575.42 MHz
C/A Code	1.023 MHz 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
Default datum	WGS-84
Reacquisition	0.1 sec., average
Hot start	1 sec., average
Warm start	38 sec., average
Cold start	42 sec., average
Altitude Limit	18,000 meters (60,000 feet) max.
Velocity Limit	515 meters/second (1000 knots) max.
Acceleration Limit	Less than 4g
Jerk Limit	20 m/sec
Work time	50 hours in power-saving mode and 10 hours in normal working mode
LED	3 LEDs to show power, GPS, GSM and other status
Button	3 buttons(SOS/B/C) for making phone calls and sending SMS

## 4. Getting Started

This section will describe how to set up your GT60.

### 4.1 Hardware and Accessories

GT60 is supplied in a box which includes:



GT60



Battery



Wall Charger



Car Charger



USB Cable



CD

## 4.2 View



Front View



Side View



Back View

## 4.3 Functional Parts

Your GT60 has four buttons and three LED lights, with three different colors to indicate the status of the unit.



Red LED - indicating battery status	
Off	Power is off or charging is complete
Flashing (every 0.1 second)	Low battery
On	Charging
Flashing (1 second on and 2 seconds off)	Working
Blue LED - indicating GPS status	
On	One button is being pressed
Flashing ( every 0.1 second)	The unit is being initialized
Flashing (0.1 second on and 2.9 seconds off)	GT60 has a GPS fix
Flashing (1 second on and 2 seconds off)	GT60 has no GPS fix
Green LED - indicating GSM status	

<b>On</b>	A call is coming in / a call is being made
<b>Flashing ( every 0.1 second)</b>	The unit is being initialized
<b>Flashing (0.1 second on and 2.9 seconds off)</b>	GT60 is connected to the GSM network
<b>Flashing (1 second on and 2 seconds off)</b>	GT60 is not connected to the GSM network
<b>Buttons</b>	
<b>Power On/Off Button</b>	Press and hold it for 3-5 seconds to turn on/off GT60
<b>SOS Button</b>	To make a phone call and/or send an SMS to the preauthorized phone number Press it to receive an incoming call Press it to increase volume during conversation
<b>Call B</b>	To make a phone call and/or send an SMS to the preauthorized phone number Press it to reject a call, cancel calling or complete a conversation
<b>Call C</b>	To make a phone call and/or send an SMS to the preauthorized phone number Press it to decrease volume during conversation
<b>Other Connectors</b>	
<b>Mini USB</b>	Used for charging, firmware update and configuration on PC. (USB Data Cable or USB-to-Serial Adaptor is required for firmware update and configuration)
<b>Lanyard Loop</b>	For connecting lanyard

#### 4.4 First Use

Please read this manual before using your GT60.

##### 4.4.1 Ensure that your GT60 has a working SIM installed.

- Check that the SIM has not run out of credit. (Test the SIM in a phone to make sure it can send and receive SMS)
- Check that the SIM Lock code is turned off.
- If you require the function of sending an SMS location report to the authorized phone number when it makes a call to the GT60, please make sure the SIM installed supports displaying caller ID.



##### 4.4.2 Put the battery in GT60 and charge the tracker for at least 3 hours in power-off status using the wall or car charger. You can also connect the tracker directly to the computer by USB for charging. Red light is on during charging and is off when charging is complete.



##### 4.4.3 Press and hold the Power On/Off button for 3-5 seconds to activate GT60. The device will then enter standby mode. It is suggested that you that you turn on the device outside of all buildings to receive a better GPS signal.



Check that the Red LED (Battery) is flashing 1 second on and 2 seconds off.

Check that the Green LED (GSM) is flashing 0.1 second on and 2.9 seconds off.

Check that the Blue LED (GPS) is flashing 0.1 second on and for 2.9 seconds off.



## 5. Change Password

**Command:** W\*\*\*\*\*,001,#####

**Description:** Change user's password.

**Note:**

1. \*\*\*\*\* is user's password and the default password is 000000. The tracker will only accept commands from a user with the correct password. Commands with wrong password will be ignored.
2. ##### is the new password. Password should be 6 digits.

**Example:**

W000000,001,123456

W123456,001,999999

## 6. Time Zone

**Command:** W\*\*\*\*\*,032,T

**Description:** Correct time to your local time

**Note:**

1. Default time of the tracker is GMT
2. This correction is applied to location reports by SMS and SMS alarms.

T=0, to turn off this function;

T=[-32768,32767] to set time difference in minute to GMT.

For those ahead of GMT, input the time difference in minutes directly.

For example, GMT+8, W000000,032,480 (8 Hours is 480 minutes).

`-`is required for those behind GMT. For example, W000000,032,-120 (2 hours or 120 minutes behind GMT).

**Example:**

W000000,032,480

W000000,032,-120

## 7. Track

### 7.1 Track by SMS

- Track on Demand - Reply with longitude, latitude, speed and date

**Command:** W\*\*\*\*\*,000

**Description:** To get the current location of the tracker, send this command as an SMS or make a telephone call directly to the tracker. After doing so, the device will report its longitude and latitude by SMS with the format as follows:

Latitude = 22 32 36.63N Longitude = 114 04 57.37E, Speed = 2.6854Km/h, 2008-12-24,01:50

**Example:** W000000,000

**- Track on Demand - Reply with a link to Google Maps**

**Command:** W\*\*\*\*\*,100

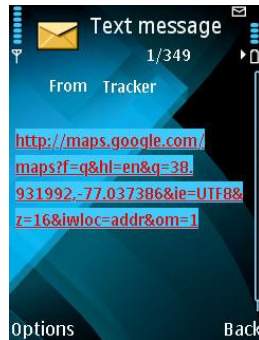
Send this command to the tracker and you will receive an SMS with an http link. Click on the link and the location will be shown directly on your mobile phone using Google maps. For example:

<http://maps.google.com/maps?f=q&hl=en&q=22.540103,114.082329&ie=UTF8&z=16&iwloc=addr&om=1>

**Note:** Only smart phones and PDAs support this function.

**Example:**

W000000,100



**7.2 Track by Calling**

Make a missed call to the tracker and it will report its longitude and latitude by SMS with the following format:

Latitude = 22 32 36.63N Longitude = 114 04 57.37E, Speed = 2.6854Km/h, 2008-12-24,01:50

**7.3 Track by Preset Interval**

**Command:** W\*\*\*\*\*,002,XXX

**Description:** Set an interval for the tracker to continuously report its location by SMS

**Note:**

- 1. XXX is the interval in minutes;
- 2. XXX=000 to turn off tracking by time.

**Example:**

W000000,002,030

The tracker will send location data back to your mobile phone every 30 minutes.

**7.4 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 received from the tracker by SMS and click the search button. Google Earth or Google Maps will display the location for you.

Example:

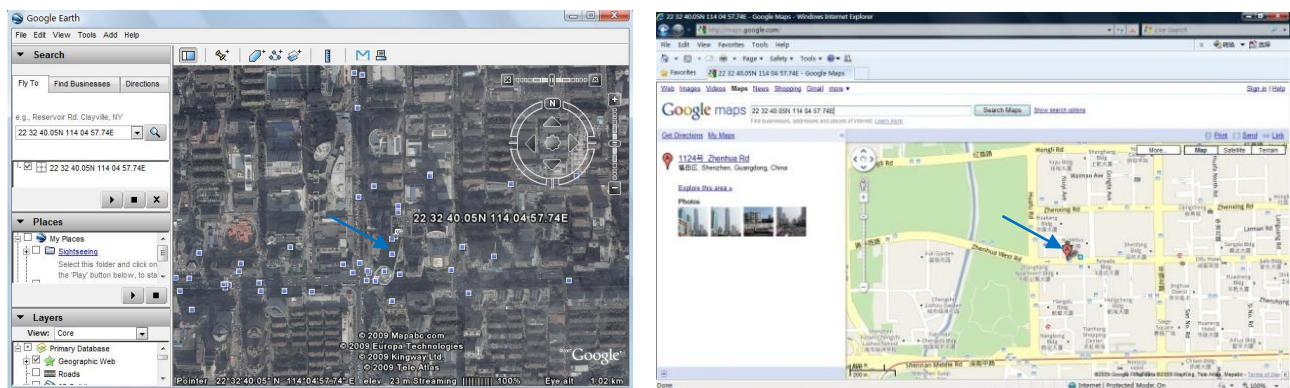
When you receive: Latitude = 22 32 40.05N Longitude = 114 04 57.74E

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:

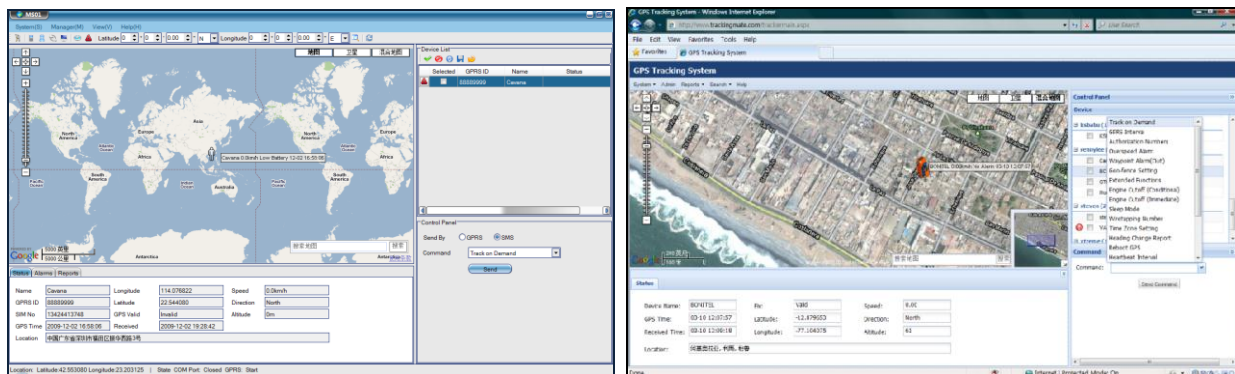


You can also use local map software on PDA or car navigation device to input the coordinates.

## 7.5 Track by MS01/MS02

You can also see a physical location on a map with our GPS Tracking Software MS01 or MS02.

This software is available for purchase and can be used for tracking after proper configuration.



Please refer to MS01/MS02 User Guide for more information.

## 7.6 Track by GPRS (Meiligao Protocol) between Server and Tracker

### 7.6.1 Set Tracker's GPRS ID

**Command:** W\*\*\*\*\* ,010,ID

**Description:** Set a digital GPRS ID for the tracker.

**Note:** GPRS ID must not be over 14 digits.

**Example:**

W000000,010,00001

**7.6.2 Set APN**

**Command:** W\*\*\*\*\*,011,APN,Username,Password

**Description:** Set APN details for the tracker

**Note:**

1. APN username and password are optional. If no APN username and password are required, input APN only;
2. APN defaulted as 'CMNET';
3. APN + username + password should not over 39 characters.

**Example:**

W000000,011,CMNET,Meiligao,6688

W000000,011,CMNET

**7.6.3 Set IP and Port**

**Command:** W\*\*\*\*\*,012,IP,Port

**Description:** Set the IP and Port of tracker for GPRS communication.

**Note:**

1. IP is your server's IP or the domain name.
2. Port: [1,65534].

**Example:**

W000000,012, 220.121.7.89,8500

W000000,012,www.meiligao.net,8500

**7.6.4 Set DNS Server IP (optional)**

**Command:** W\*\*\*\*\*,009,DNS Server IP

**Description:** If the domain name you set by the last command (W\*\*\*\*\*,012,IP, Port) doesn't work, your servers IP is not properly set. You can first use this command to set DNS Server IP (please check with your DNS server provider for the DNS Server IP) and then redo the command W\*\*\*\*\*,012,IP, Port.

**Example:** W000000,009,220.23.4.90

**7.6.5 Enable GPRS Tracking**

**Command:** W\*\*\*\*\*,013,X

**Description:** Enable GPRS tracking function.

**Note:**

- X=0, to turn off GPRS tracking (default);
- X=1, to enable GPRS tracking via TCP;
- X=2, to enable GPRS tracking via UDP.

**Example:** W000000,013,1

**7.6.6 Set GPRS Interval**

**Command:** W\*\*\*\*\*,014,XXXXX

**Description:** Set time interval for sending GPRS packets.

**Note:**

XXXXX should be in five digits and in unit of 10 seconds.

XXXXX=00000, to turn off this function;

XXXXX=00001~65535, time interval for sending GPRS packet and in unit of 10 seconds.

**Example:** W000000,014,00060

In this example, the tracker will send every 600 seconds (10 minutes).

***For more information regarding GPRS tracking please refer to <GPRS Communication Protocol>***

## 7.7 Track by GpsGate

The GT60 supports GpsGate Software.

Please contact our company or GpsGate for more information for settings.

## 8. Authorization

**Command:** W\*\*\*\*\*,003,F,P,T1 or W\*\*\*\*\*,003,F,P,T1,T2 (optional)

**Description:** Authorize phone numbers for the buttons/inputs, receiving location reports, SMS alarms or phone calls

**Note:**

F=0, to turn off this function; (default)

F=1, only sends SMS to the authorized phone number;

F=2, only calls the authorized phone number;

F=3, both SMS and calling.

P=1, set an authorized number for SOS button (Input 1);

P=2, set an authorized number for B button (Input 2);

P=3, set an authorized number for C button (Input 3).

T1: Preset phone number. Max.16 digits.

If you need to set different numbers for receiving SMS and phone call, you can use W\*\*\*\*\*,003,F,P,T1,T2, In this case T1 is the phone number for receiving SMS and T2 for receiving phone calls.

**Example:**

W000000,003,3,1,88888888

W000000,003,3,1,88888888,99999999

## 9. Call Function

With GT60's inbuilt loudspeaker and microphone, you can use GT60 to make or receive phone calls.

### 9.1 Receiving Phone Call

Use your phone or mobile phone to call the tracker. When the tracker is receiving a call, the green LED light will be on. Press SOS button to receive the incoming call or press Call B button to reject the call.

## 9.2 Making Phone Call

After you have authorized phone numbers for SOS/Call B/Call C button, you can press any of these buttons to make a call to the preset phone number.

Press Call B button to cancel a calling or to end a conversation.

## 9.3 Volume Adjustment

During a conversation, press SOS button to increase the volume or press Call C button to decrease the volume.

# 10. Speeding Alarm

**Command:** W\*\*\*\*\*,005,XX

**Description:** Turn on speeding alarm. When the tracker speeds higher than the preset value, it will send an SMS to the authorized phone number for SOS.

**Note:** XX is the preset value of speed and in 2 digits.

=00 , to turn off this function;

=[01, 20] (unit: 10Km/h).

**Example:** W000000,005,08

When the tracker's speed is over 80km/h, an SMS alarm will be sent out.

# 11. Movement/Geo-fence

## 11.1 Movement Alarm

**Command:** W\*\*\*\*\*,006,X

**Description:** When the tracker moves out of a preset circle scope, it will send an SMS alarm to the authorized phone number for SOS.

**Note:**

1. X is the preset radii to the tracker's original place

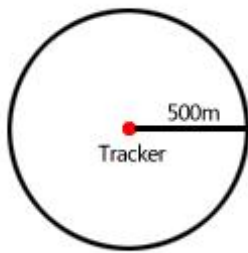
=0, to turn off this function;

=1, 30m	=2, 50m	=3, 100m	=4, 200m
=5, 300m	=6, 500m	=7, 1000m	=8, 2000m

2. Radii: [1, 4294967295] meter(s), suggest to be set above 100 meters;

3. GPRS command is 0x12

**Example:** W000000,006,1



When tracker moves out of this circle scope, it will send out an SMS alarm.

## 11.2 Geo-fence Alarm

**Command:** W\*\*\*\*\*,302,X

**Description:** Turns on Geo-fencing alarm. When the tracker moves in/out the preset scope, it will send an SMS alarm to the authorized phone number for SOS.

**Note:**

1. X is the parameters which includes: latitude, longitude, radii, in, out.
2. Latitude and longitudes should be in ASCII format as follows:  
Latitude is ddd.dddddd, '0' is needed to be stuffed if no value available. '-' should be added for south.  
Longitude is dd.dddddd, '0' is needed to be stuffed if no value available. '-' should be added for west.
3. Radii: [1, 4294967295] meter(s), suggested to be set above 100 meters, if set above 8, it is corresponding radii.
4. If In and Out are 0, corresponding function is invalid. If In and Out are 1, valid.
5. Reply as Geo-Fence Alarm.
6. GPRS exiting command is 0x12, entering command is 0x13.
7. Send W\*\*\*\*\*, 302 to turn off Geo-fence function.

**Example:**

W000000,302,22.000000,-114.123456,3000,1,1

**Remarks:**

1. Only one alarm can be set in either In or Out;
2. Only one alarm can be set in either Movement Alarm or Geo-fence Alarm.

## 12. Track by Distance

**Command:** W\*\*\*\*\*,303,X

**Description:** Send this command to set distance interval

**Note:**

1. X= [1, 4294967295], suggested to be set above 300 meters;
2. X=0, turn off

**Example:** W000000,303,1000

## 13. Set Sensitivity of Tremble Sensor

**Command:** W\*\*\*\*\*,035,XX

**Description:** Send this command to set sensitivity of tremble sensor

**Note:**

1. XX=[1,255], it will be more sensitive if XX is smaller;
2. Default value is 30

**Example:** W000000,035,30

## 14. Listen-in (Voice Monitoring)

**Command:** W\*\*\*\*\*,030,T

**Description:** Authorize a phone number to make a silent call to the tracker. The tracker answers the call automatically and allows the caller to listen to what is happening around the tracker. With this feature, there is no voice indication that the call is in progress.

**Note:**

1. T is the telephone number for wiretapping with a max. of 16 digits.
2. Calls from unauthorized number are treated as normal incoming calls and indicated by beeps.

**Example:**

W000000,030,88888888

## 15. Heartbeat

**Command:** W\*\*\*\*\*,015,data

**Description:** Set an interval for heartbeat.

**Note:**

data is the interval in unit of minutes

data=0, to turn off this function;

data=1~65535, set interval for heartbeat.

**Example:**

W000000,015,10

In this example, the tracker will send heartbeat every 10 minutes.

## 16. Power Down

**Command:** W\*\*\*\*\*,026,XX

**Description:** This command puts the tracker in power down mode when it is inactive or immobile for a period of time. In Power Down mode, GPS stops working while GSM enters sleep mode and stops sending out messages. The device remains in this mode until it is activated by message, incoming calls, movement, or triggered by three buttons.

**Note:**

XX=00, to turn off this function;

XX=01~99, to turn on Power Down after a specified period of being inactive (or stationary). It is in unit of minutes.

**Example:** W000000,026,10

The tracker will enter power down mode after it is inactive (or stationary) for 10 minutes.

## 17. Get IMEI

**Command:** W\*\*\*\*\*,601

**Description:** Get IMEI of the tracker. IMEI is 15 digits

**Example:** W000000,601

## 18. Initialization

**Command:** W\*\*\*\*\*,990,099###

**Description:** This sets all settings (except for the password) back to factory default.

**Note:** Send SMS "Default?" to the device. Within 120 seconds, send this SMS command to the tracker. ### is the ending character and is required in the text message.

**Example:** W000000,990,099###

## 19. Password Initialization

**Command:** W888888,999,666

**Description:** This resets the password back to factory default and can be used in case you forget your password.

**Note:** Send SMS "Default?" to the device, and then, within 120 seconds, send this SMS command to the tracker to set the password back to factory default (000000).

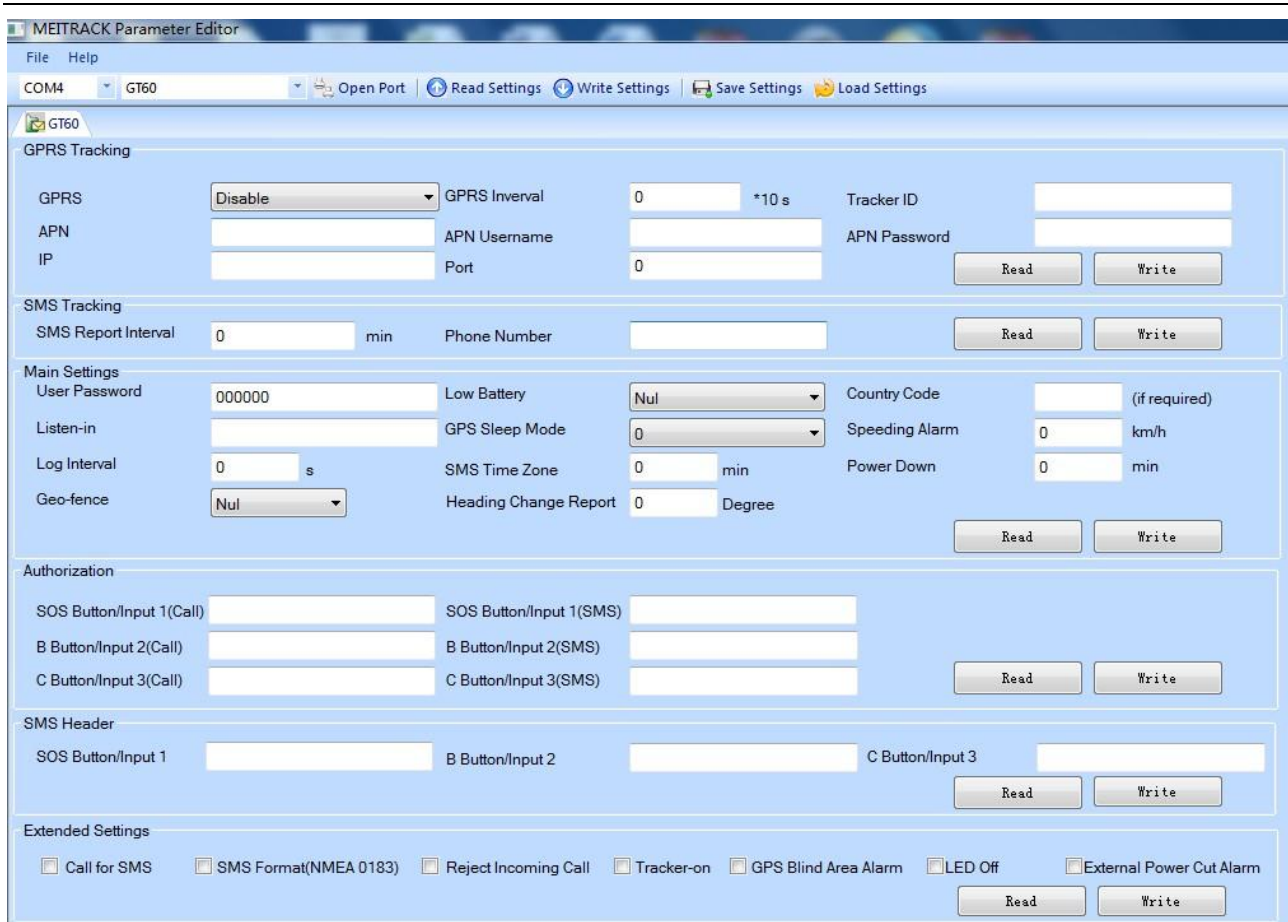
If you have set an authorized telephone number, when the password has been successfully preset the telephone will receive W888888,999,666

**Example:** W888888,999,666

***For more details regarding SMS commands, please go to Annex 1 Command List.***

## 20. Parameter Editor

The tracker can also be configured by computer using the Parameter Editor. This method is much easier and user friendly.



Please refer to Meitrack Parameter Editor for more information.

## 21. Copyright and Disclaimer

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## Annex 1. SMS Command List

Note: \*\*\*\*\* is user's password and the default password is 000000. The tracker will only accept commands from a user with the correct password. Commands with wrong password will be ignored.

Description	SMS Command	Example
Track on Demand	W*****,,000	W000000,,000

Remarks: To get the current location of the tracker, send this command as an SMS or make a telephone call directly to the tracker. After doing so, the device will report its longitude and latitude by SMS with the format as follows:



Latitude = 22 32 36.63N Longitude = 114 04 57.37E, Speed = 2.6854Km/h, 2008-12-24,01:50			
<b>Track on Demand -Google Link</b>			
W*****,100		W000000,100	
Remarks: Send this command to the tracker and you receive an SMS with an http link. Click on the link and the location can be shown directly on your mobile phone using Google Maps. For example: <a href="http://maps.google.com/maps?f=q&amp;hl=en&amp;q=22.540103,114.082329&amp;ie=UTF8&amp;z=16&amp;iwloc=addr&amp;om=1">http://maps.google.com/maps?f=q&amp;hl=en&amp;q=22.540103,114.082329&amp;ie=UTF8&amp;z=16&amp;iwloc=addr&amp;om=1</a> (Note: Only smart phones and PDAs support this function.)			
<b>Change Password</b>			
W*****,001,#####		W000000,001,123456	
Remarks: To change user's password. ##### is the new password. Password should be 6 digits.			
<b>Track by Interval</b>			
W*****,002,XXX		W000000,002,030	
Remarks: To set interval for automatic timed report. XXX is the interval in minutes. If XXX=000, turn off tracking by time. In this example, the tracker will send location data back to your mobile phone every 30 minutes.			
<b>Authorization</b>			
W*****,003,F,P,T1		W000000,003,3,1,88888888	
(W*****,003,F,P,T1,T2)		W000000,003,3,1,88888888,99999999	
Remarks: Authorize phone numbers for buttons/inputs, receiving location reports, SMS alarms or phone calls. F=0, to turn off this function; (default) F=1, only sends SMS to the authorized phone number; F=2, only calls the authorized phone number; F=3, both SMS and calling P=1, set an authorized number for Input 1; P=2, set an authorized number for Input 2. T1: Preset phone number. Max.16 digits. If you need to set different numbers for receiving SMS and phone call, you can then use W*****,003,F,P,T1,T2, In this case T1 is the phone number for receiving SMS and T2 for receiving phone call. Note: VT310 doesn't support two-way conversation. Calling only gives ring and reminder to the authorized phone			
<b>Speeding Alarm</b>			
W*****,005,XX		W000000,005,08	
Remarks: When the tracker speeds higher than the pre-set value, it will send an SMS to the authorized phone number for SOS. XX is the preset value of speed and in 2 digits. =00 , to turn off this function; =[01, 20] (unit: 10Km/h). In this example, when the tracker's speed is over 80km/h, an SMS alarm will be sent out.			
<b>Movement Alarm</b>			
W*****,006,X		W000000,006,6	
Remarks: When the tracker moves out of a preset circle scope, it will send an SMS alarm to the authorized phone number for SOS. X is the preset radii to the tracker's original place =0, to turn off this function			
=1, 30m	=2, 50m	=3, 100m	=4, 200m

=5, 300m	=6, 500m	=7, 1000m	=8, 2000m
<b>Geo-fence Alarm</b>			
W***** ,302,X		W000000,302,22.000000,-114.123456,3000,1,1	
<p>Remarks: Turn on Geo-fencing alarm. When the tracker moves in/out the preset scope, it will send an SMS alarm to the authorized phone number for SOS.</p> <p>Note:</p> <ol style="list-style-type: none"> <li>X is the parameters which includes: latitude, longitude, radii, in, out;</li> <li>Latitude and longitude should be in ASCII format as follows: Latitude is ddd.dddddd, '0' is needed to be stuffed if no value available. '-' should be added for south. Longitude is dd.dddddd, '0' is needed to be stuffed if no value available. '-' should be added for west.</li> <li>Radii: [1, 4294967295] meter(s), suggest to be set above 100 meters, if set above 8, it is corresponding radii;</li> <li>If In and Out are 0, corresponding function is invalid, if are 1, valid;</li> <li>Reply as Geo-Fence Alarm;</li> <li>GPRS exiting command is 0x12, entering command is 0x13;</li> <li>Send W***** , 302 to turn off Geo-fence function.</li> </ol>			
<b>Track by Distance</b>			
W***** ,303,X		W000000,303,1000	
<p>Remarks: Send this command to set distance.</p> <p>Note:</p> <ol style="list-style-type: none"> <li>X= [1, 4294967295], suggest to be set above 300 meters;</li> <li>X=0, turn off.</li> </ol>			
<b>Extended Functions</b>			
W***** ,008,ABCDEFGHIJ## #		W000000,008,1011100011###	
<p>Remarks:</p> <p><b>A=0</b>, turn off the function of sending SMS location report after a phone call is made to the tracker;  <b>A=1</b>, turn on the function of sending SMS location report after a phone call is made to the tracker.  <b>B=0</b>, location data of NMEA 0183 GPRMC will be interpreted into normal text for easy reading;  For example, Latitude = 22 32 36.63N Longitude = 114 04 57.37E, Speed = 2.6854Km/h, 2008-12-24,01:50  <b>B=1</b>, location data complies with NMEA 0183 GPRMC protocol.  For example, \$GPRMC,161509.000,A,2232.5485,N,11404.6887,E,0.3,153.7,290709,,*03  <b>C=0</b>, turn off the function to automatically hang up an incoming call;  <b>C=1</b>, turn on the function to automatically hang up an incoming call after 4 - 5 rings.  <b>D=0</b>, turn off the function of sending an SMS when the tracker is turned on;  <b>D=1</b>, turn on the function of sending an SMS to the authorized phone number for SOS when the tracker is turned on.  <b>E</b>, defaulted as 1 (the tracker shuts down automatically when the power voltage is lower than 3V).  <b>F=0</b>, turn off the SMS alarm when the tracker enters GPS blind area;  <b>F=1</b>, turn on the SMS alarm when the tracker enters GPS blind area. SMS is to be sent to the authorized phone number for SOS.  <b>G=0</b>, all LEDs work normally;  <b>G=1</b>, all LEDs stop flashing when the tracker is working.  <b>H</b>, reserved and defaulted as '0'.</p>			

<p><b>I=0</b>, turn off the function of sending SMS alarm when the extra power of the vehicle tracker is cut;</p> <p><b>I=1</b>, turn on the function of sending an SMS alarm to the authorized phone number for SOS when the extra power of the vehicle tracker is cut.</p> <p><b>J</b>, defaulted as 1.</p> <p><b>###</b> is the ending character. (ABCDEFGHIJ defaulted as 1000100001)</p>		
<p><b>Presetting by SMS for GPRS tracking</b> (Ensure that your SIM card supports GPRS connection prior to setting)</p>		
<b>Set Tracker's GPRS ID</b>	W*****,010,ID	W000000,010,00001
<p>Remarks: to set a digital GPRS ID for the tracker. GPRS ID must not over 14 digits.</p>		
<b>Set APN</b>	W*****,011,APN,Username, Password	W000000,011,CMNET,Meiligao,6688 W000000,011,CMNET
<p>Remarks: If no APN username and password are required, just input APN only. APN defaulted as 'CMNET'. APN + username + password should not over 39 characters.</p>		
<b>Set IP and Port</b>	W*****,012,IP,Port	W000000,012, 220.121.7.89,8500 W000000,012,www.meiligao.net,8500
<p>Remarks: IP is your server's IP or the domain name. Port: [1,65534]</p>		
<b>Set DNS Server IP</b>	W*****,009,DNS Server IP	W000000,009,220.23.4.90
<p>Remarks: If the domain name you set by the last command (W*****,012,IP, Port) doesn't work, your server IP is not properly set. You can first use this command to set DNS Server IP (please check with your DNS server provider for the DNS Server IP) and then redo the command W*****,012,IP,Port.</p>		
<b>Enable GPRS Tracking</b>	W*****,013,X	W000000,013,1
<p>Remarks: X=0, to turn off GPRS tracking (default); X=1, to enable GPRS tracking via TCP; X=2, to enable GPRS tracking via UDP.</p>		
<b>Set GPRS Interval</b>	W*****,014,XXXXX	W000000,014,00060
<p>Remarks: to set time interval for sending GPRS packets. XXXXX should be in five digits and in unit of 10 seconds. XXXXX=00000, to turn off this function; XXXXX=00001~65535, time interval for sending GPRS packet and in unit of 10 seconds. In this example, the tracker will send every 600 seconds (10 minutes).</p>		
<b>Set Heartbeat Interval</b>	W*****,015,data	W000000,015,10
<p>Remarks: to set interval for heartbeat. Data: in unit of minute</p>		

<p>data=0, to turn off this function;  data=1~65535, set interval for heartbeat.  In this example, the tracker will send heartbeat every 10 minutes.</p>						
<b>Set Sensitivity of Tremble Sensor</b>	W*****,035,XX	W000000,035,30				
<p>Remarks: Send this command to set sensitivity of tremble sensor  Note:  1. XX=[1,255], it will be more sensitive if XX is smaller.  2. Default value is 30.  Example: W000000,035,30</p>						
<b>Heading Change Report</b>	W*****,036,degree	W000000,036,90				
<p>Remarks: when the heading direction of the tracker changes over the preset degree, a message with location data will be sent back to the server by GPRS.  degree=0, to turn off this function;  degree=[1,360], to set degree of direction change.</p>						
<b>For more information regarding GPRS tracking please refer to GPRS Communication Protocol</b>						
<b>Sleep Mode</b>	W*****,021,X	W000000,021,2				
<p>Remarks: this setting is for power saving.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">X=0 turn off sleep mode</td> <td style="width: 25%;">X=1 Level I</td> <td style="width: 25%;">X=2 Level II</td> <td style="width: 25%;">X=3 Level III</td> </tr> </table> <p>Here is some explanation for the sleep mode.  GPS module will be closed for 64 seconds * X ( X=1, 2, 3), if it gets continuous GPS fixed for 32 times or Non-GPS fixed for 128 times. After that, GPS module will periodically work and close.</p>			X=0 turn off sleep mode	X=1 Level I	X=2 Level II	X=3 Level III
X=0 turn off sleep mode	X=1 Level I	X=2 Level II	X=3 Level III			
<b>Power Down</b>	W*****,026,XX	W000000,026,10				
<p>Remarks: Put the tracker in power down mode when the tracker is inactive (stationary) or immobile for a period of time.  In Power Down mode, GPS stops working and GSM enters sleep and stop sending out message. The device remains in this mode until it is activated by message, incoming calls, or input changes.  XX=00, to turn off this function;  XX=01~99, to turn on Power Down after a specified period of being inactive. It is in unit of minutes.  In this example, the tracker will enter power down mode after it is inactive for 10 minutes.</p>						
<b>Listen-in (Voice Monitoring)</b>	W*****,030,T	W000000,030,88888888				
<p>Remarks: T is the telephone number for wiretapping and max. 16 digits.</p>						
<b>Time Zone</b>	W*****,032,T	W000000,032,480 W000000,032,-120				
<p>Remarks: Default time of the tracker is GMT, you can use this command to correct it to your local time. This command is for SMS tracking only.  T=0, to turn off this function;  T=[-32768,32767] to set time difference in minute to GMT.</p>						

<p>For those ahead of GMT, just input the time difference in minutes directly. For example, GMT+8, W000000,032,480 (8 hours is 480 minutes).</p> <p>^- is required for those behind GMT. For example, W000000,032,-120.</p>								
<b>Set SMS Header</b>	W*****,033,P,Char	W000000,033,1,help						
<p>Remarks: this command is to set initial characters for SOS message when SOS/IN1, Button B/IN2, Button C/IN3 is pressed.</p> <table border="1"> <tr> <td>P=1, SOS button/Input1</td> <td>P=2, B button/Input2</td> <td>P=3, C button/Input3</td> </tr> </table> <p>Char is the character in SOS message and max 32 characters and defaulted as:</p> <table border="1"> <tr> <td>1 SOS Alarm!</td> <td>2 Cry For Help!</td> <td>3 Call The Police!</td> </tr> </table>			P=1, SOS button/Input1	P=2, B button/Input2	P=3, C button/Input3	1 SOS Alarm!	2 Cry For Help!	3 Call The Police!
P=1, SOS button/Input1	P=2, B button/Input2	P=3, C button/Input3						
1 SOS Alarm!	2 Cry For Help!	3 Call The Police!						
<b>Get Version No. and Serial No.</b>	W*****,600	W000000,600						
<p>Remarks: to get the version and serial number of tracker's firmware.</p>								
<b>Get IMEI</b>	W*****,601	W000000,601						
<p>Remarks: to get IMEI of the tracker.</p>								
<b>Reboot GSM</b>	W*****,901###	W000000,901###						
<p>Remarks: to reboot the GSM module of the tracker.</p>								
<b>Reboot GPS</b>	W*****,902###	W000000,902###						
<p>Remarks: to reboot the GPS module of the tracker.</p>								
<b>Initialization</b>	W*****,990,099###	W000000,990,099###						
<p>Remarks: Send SMS "Default?" to the device, within 120 seconds, send this SMS command to the tracker to make all settings (except for the password) back to factory default.</p> <p>### is the ending character.</p>								
<b>Password Initialization</b>	W888888,999,666	W888888,999,666						
<p>Remarks: In case you forget your password, Send SMS "Default?" to the device, within 120 seconds, send this SMS command to the tracker to make the password back to factory default (000000).</p>								

## Annex 2. Troubleshooting

<b>Problem: Unit will not turn on</b>	
<b>Possible Cause:</b>	<b>Resolution:</b>
The power button is not pressed long enough	Press and hold the button for 3-5 seconds
Battery needs charging	Recharge battery for 3 hours
<b>Problem: Unit will not reply with SMS</b>	
<b>Possible Cause:</b>	<b>Resolution:</b>
Green LED is flashing (1 second on and 2 seconds off)	Make sure GT60 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 or in power down mode	Cancel sleeping mode or power down
Wrong password in your SMS or wrong SMS format	Write correct password or SMS format
The SIM in GT60 has run out of credit	Replace or top up the SIM card
<b>Problem: Green LED is Flashing (1 second on and 2 seconds off)</b>	
<b>Possible Cause:</b>	<b>Resolution:</b>
No GSM signal	Check with a mobile phone to see if there is a signal in the area or try to call the unit to see if you hear a ring tone
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 your 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
Battery is low	Recharge the unit and the GSM will start working
<b>Problem: Blue LED is Flashing (1 second on and 2 seconds off) or the SMS received starts with 'Last...'</b>	
<b>Possible Cause:</b>	<b>Resolution:</b>
Unit does not have clear view of the sky	Move the unit to a location where the sky is visible. Tall buildings, trees and heavy rain, can cause problems with the GPS reception
Bad GPS reception	Place the front side of GT60 towards sky
Battery is low	Recharge the unit and the GPS will start working
<b>Problem: Unit Fails to Connect to Server via GPRS</b>	
<b>Possible Cause:</b>	<b>Resolution:</b>
SIM card in GT60 does not support GPRS function	Enable SIM card GPRS function
GPRS function of GT60 is turned off	Turn on GPRS function of GT60
Incorrect IP address or PORT	Get the right IP address and PORT and reset to GT60
GSM signal is weak	Move the unit to a location with good GSM reception