



HI-602X



Easy Manual

INTRODUCTIONS:

HAICOM HI-602X is a very small size (43x69x18mm) GPS/GSM tracker. Inside the tracker, there are mainly contain: GPS module, GSM module, GPS antenna, GSM antenna, re-chargeable battery and it is an independent device similar to a regular mobile phone and completely self-contained. HI-602X uses the most user-friendly program on the air technology via GPRS data transfer to send back the real time GPS location data directly to another phone and user can track any moving object live on the map free of charge from our GPRS web tracking platform. With simply SMS command from any phone, user can easily get the tracker real time data back anywhere.

With HI-602X multi function tracker, one can track, remote control, tapping any object globally in real time on the map. User can check the real time location from the GPRS tracking web site or using the Haicom Tracking software installed on the PC and check the real time position on the map via the regular dial tone transmission.

HI-602X tracking Device is the best tracking solution for use in the widest range of applications, from motor homes to mobile home, from cars to caravans, from agricultural machinery to construction equipment, from containers to golf carts – all the assets that you feel could be at risk, especially if they do not have their own source of power.

Just place the tracker where there is no metal material on above, user can see his valuable anytime, anywhere from any computer. The waterproof case allows the tracker still functioning even though under tough and harsh environment. The build in big battery provide the independent power supply even if there is no external power supply. The moving sensor will let the tracker totally switch off (only the microchip standby: 2 mAh) and the tracker can operate very long, if there is not much movements. With the moving sensor, the tracker will not drain the car battery when the tracker connected to external battery power.

It is very good personal security and most importantly, parent no need to pay monthly fee after purchasing the unit. After purchasing, user can put any local GPRS enabled SIM card (or pre-paid SIM card, etc.) By adjusting the GPRS sending interval, user only need to pay the phone call charge when someday he wants to do the tracking. Also, by set up the 6 prioritize call back telephone numbers inside HI-602X, user can press the SOS button and the tracker will immediately send the SMS with GPS location to the preset telephone numbers about the conditions. User can also press the Geo fencing button so that the tracker will send the SMS warning when the tracker out of the preset circle area. The Geo fencing is also very useful for security purpose to restrict your vehicle, moving property movement. For instance, the tracker will automatically inform you with SMS when your car is out of the preset area circle.



User can also connect HI-602X to all kinds of optional car kits accessories so that the user can globally control the vehicle petro supply or electricity by pressing few phone buttons from any phone. For example,

By connecting the optional vibration sensor, the tracker will also actively warning user when there is any movement on the vehicle.

By connecting the microphone to the car kit box, user can remotely tap the conversation from any phone.

GETTING STARTED:

1. Open Battery Cap



2. Insert GSM SIM Card

*Make Sure SIM Card no need pin code



3. Put Battery in



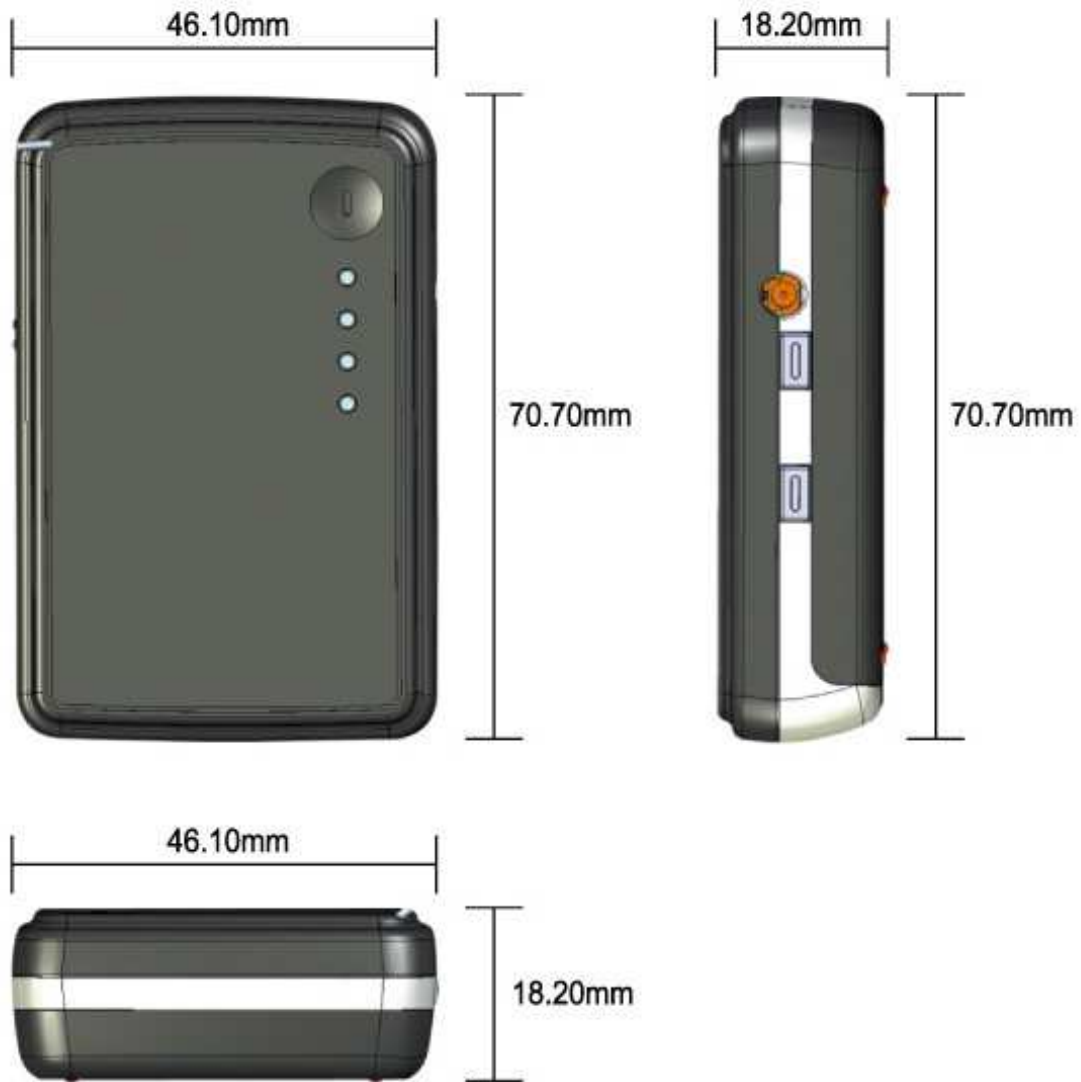
4. Close Battery Cap



HI-602X main unit overview



Dimension



LED Indicator



LED Color	LED	Status
Amber	On	Charging
	Off	Charge Completed
Green	flashing	GPS in 3D fixed
	Stay on	GPS not 3D fixed yet
	Off	GPS in sleeping mode
Red	On	Battery low
White	Off 3 sec./On 75 micro sec.	GSM stand-by
	Off and On 600 micro sec.	Searching GSM network or no SIM
	Stay on	GSM network connected

APPLICATIONS:

- **Real time vehicle tracking**
- **Moving assets security**
- **Personal tracking employee, teens, spouse, fleet, etc.**
- **Child, aged people protection**
- **Pet tracking**
- **Sporting, traveling, recreation tracing**
- **Remotely control vehicle from any where**
- **Tapping the talk around the tracker**
- **Rental car or commercial vehicle management**

Features

Haicom Asset Tracking Solution offers you a lot of advantages

Quad band 850/900/1800/1900 MHz GSM system

External SiRF Star III high performance GPS receiver

Internal GSM active antennas

Advanced communication via SMS/TCP/UDP/HTTP

Program, control and the tracker from the OTA (Over the Air) web tracking platform and also USB configurations

Build in motion sensor for power saving

Support emergency/ over speed/ motion/ power lost alarm

Real time location report on preferred interval and vehicle status monitoring

Premium functions: Fast GPS Fixed/ A-GPS/ Geo-Fencing/ Handsfree Kit/ Anti-Theft/ Data

Logger function with 8MB memory size with 100,000 records or more

Low battery alarm and battery voltage status

- **Our GPRS tracking software Platform and server is free; if you have your own server we can program our tracker with your server protocol**
- **Worldwide coverage with NO additional programs to buy or install - no additional or hidden costs!**
- **Built-in moving sensor with deep sleeping mode (2mA)**
- **Built in 1,100 mAh battery for independent power**
- **Very high sensitivity GPS fixed**
- **Multi-ways tracking software plate form available**
- **Customizations for different tracking applications**
- **Comes with strong Magnetic mounting for easy attachment**
- **Stand alone (Internal Antenna - Self Contained Unit)**
- **Worldwide coverage using GSM/GPRS/SMS**
- **allow you to monitor both on demand or at regular intervals**
- **Ultra low power GPS.**
- **All-in-one design.**
- **Provides you 24/7 access to the location of all your assets.**
- **LIVE real-time tracking, configurable from every 20 second to 72hour GPRS updates!**
- **Give complete supervision into your operations by seeing how long assets are sitting around in one place, when they start moving / stop moving etc.**
- **Establish how long the assets are being used (actual operations time).**
- **Warns when unauthorised/unwanted movement happens.**
- **Provides security and accountability.**
- **Enables the recovery of any stolen assets.**
- **View asset's history online from any computer**

CONNECT TO CAR KIT (OPTIONAL):

By connecting to the optional car kit box and the accessories, user can remotely cut off the vehicle power or petro from any phone with few phone digits pressed. With connecting the optional vibration or microwave sensor, the tracker will initiatively send warning SMS to the preset telephone numbers.



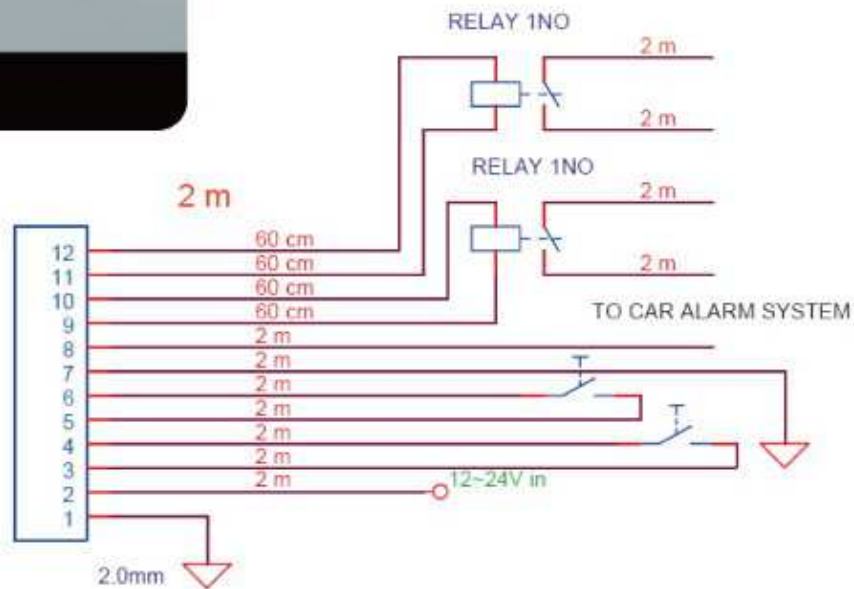
1	GND
2	Vin12V~24V
3	GND
4	ViolationReset
5	GND
6	HelpSw
7	GND
8	GeoFencing
9	RemoteRelay2
10	RemoteRelay2
11	RemoteRelay1
12	RemoteRelay1

HI-602X car kit set up example



Permanent power on installation example

HI-602X connected to car battery via car kit control box



HI-602X Characteristics

Items	Specifications
Power Supply	DC 5V
Backup Battery	1100mAh
Normal power consumption	
Dimension	46.10mm x 70.7mm x 18.2mm
Operating temperature	-20°C to 55°C
Humidity	5% to 95% Non-condensing
Frequency	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	1.023MHz 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
Default datum	WGS-84
Reacquisition	0.1 sec. , average
Hot start	1 sec. , average
Warm start	38sec. , average
Cold start	42 sec. , average
Altitude Limit	18,000 meters (60,000 feet) max.
Velocity Limit	515 meters / second (1000 knots) max
Interface	One input and one output

Standard Packing

1. HI-602X main unit
2. 1,100mAh battery
3. 18 pin to USB set up cable
4. AC power adaptor
5. DC cigarette lighter
6. mini CD with user manual

1



4



2



5



3



6



The in-build self contained battery

As mentioned, we can not tell you how long the HI-602X battery can last because it is really depend on how frequent the tracker used and the sleeping mode time.

Anyway, here are the figures:

POWER ON (GPS ON, GSM OFF) mA

GSM connected (GPS on) 90 mA

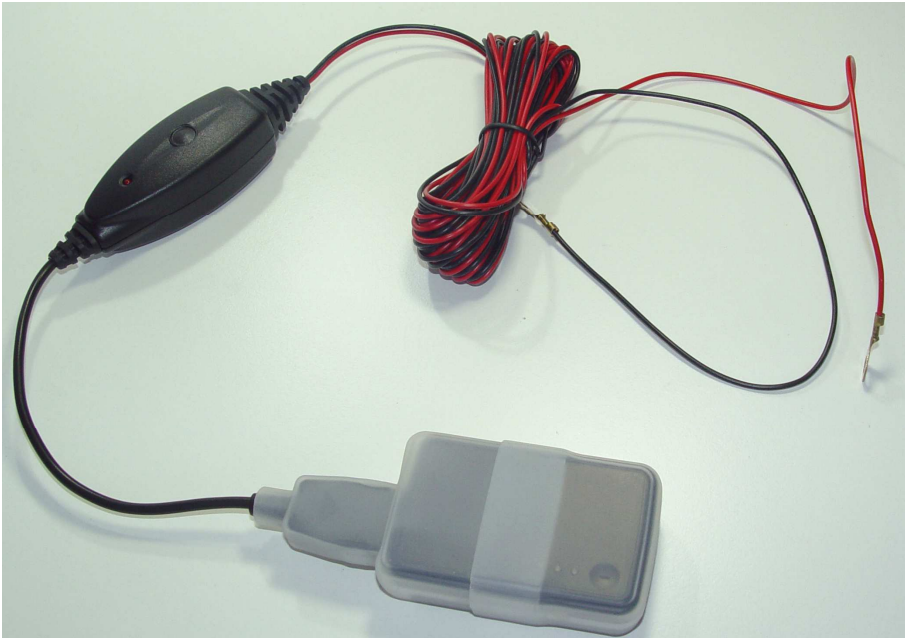
GPS OFF, GSM ON 25 mA

GPS OFF, GSM OFF 2 mA

Connect HI-602X to vehicle battery

With the optional car battery cable, user can also connect HI-604 to the vehicle battery for permanent power supply.

Car battery cable with waterproof jelly bag:



The car battery cable can be connected directly to the vehicle battery (12V or 24V) and transfer into 5V for the HI-602X. Very important: don't connect HI-602X USB set up cable directly to the vehicle battery because the HI-602X 18 pins connector takes only 5V.

GPRS Tracking:

Set up the APN, IP and Port:

1. Connect HI-602X to computer USB port with the set up cable

Setting up

For the initial set up from the retail box, you will need to use the set up program from the inclusive small CD and perform the set up from your computer. **Please make sure to switch off the power on HI-602X while programming. (User can only program the HI-602X while the HI-602X on power off status)**

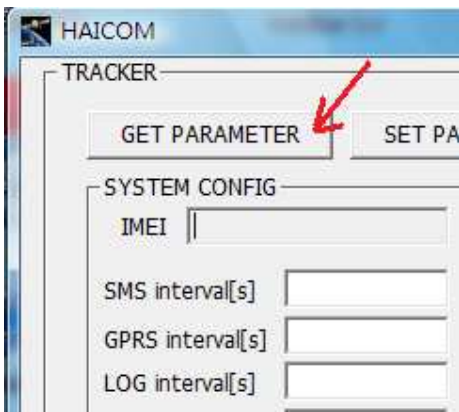
1. Connect the 18 pins to USB set up cable from the tracker to your computer USB port:



2. Open the tracker set up program:

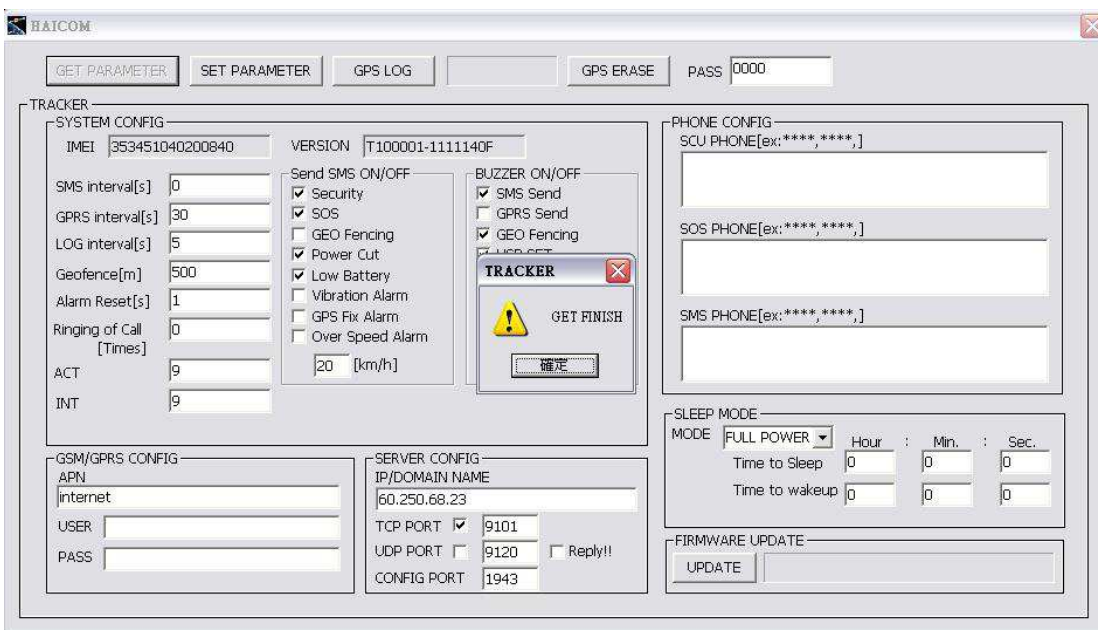


3. Click the “ Get Parameter “



4. Message will shown: “ GET FINISH “ and all the tracker current set up will appeared:

Please double check with your local telecomm service provider to make sure the SIM card APN (Access Point Name) and fill in and program to the tracker.



Initial computer set up reminder:

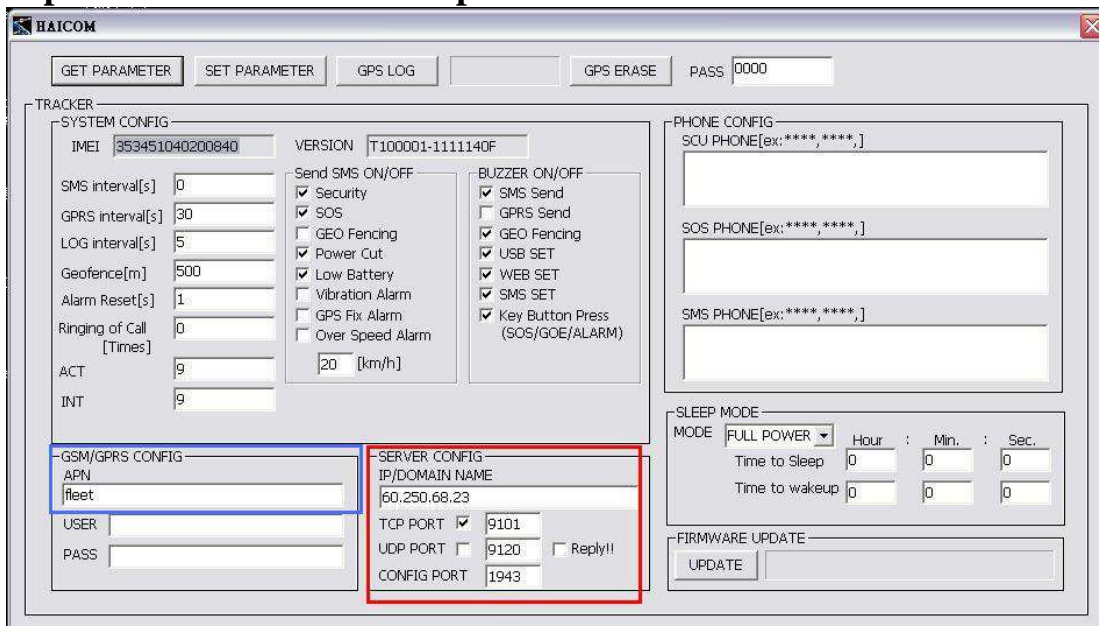
On factory defaults, the basic set up was done.

As soon as you plug in the computer and get parameter, the computer will automatically get and show the tracker imei # on the program.

You will double check with your SIM card telecomm service provider for the correspondent APN (Access Point Name) and key in to the APN section (like the below blue block). The APN could be for instances, “ internet “, “ web. Vodafone “ or any name.

Also, please double check if the IP and port settings (the below red block) was correctly set up. (for use with Haicom GPRS web tracking: <http://www.tracking.haicom.com.tw:8090/Default.aspx>)

The above settings are the must to make the tracker to start sending data back to our server and show on the platform. The rest of selections will be set up depend on individual user’s preferences.

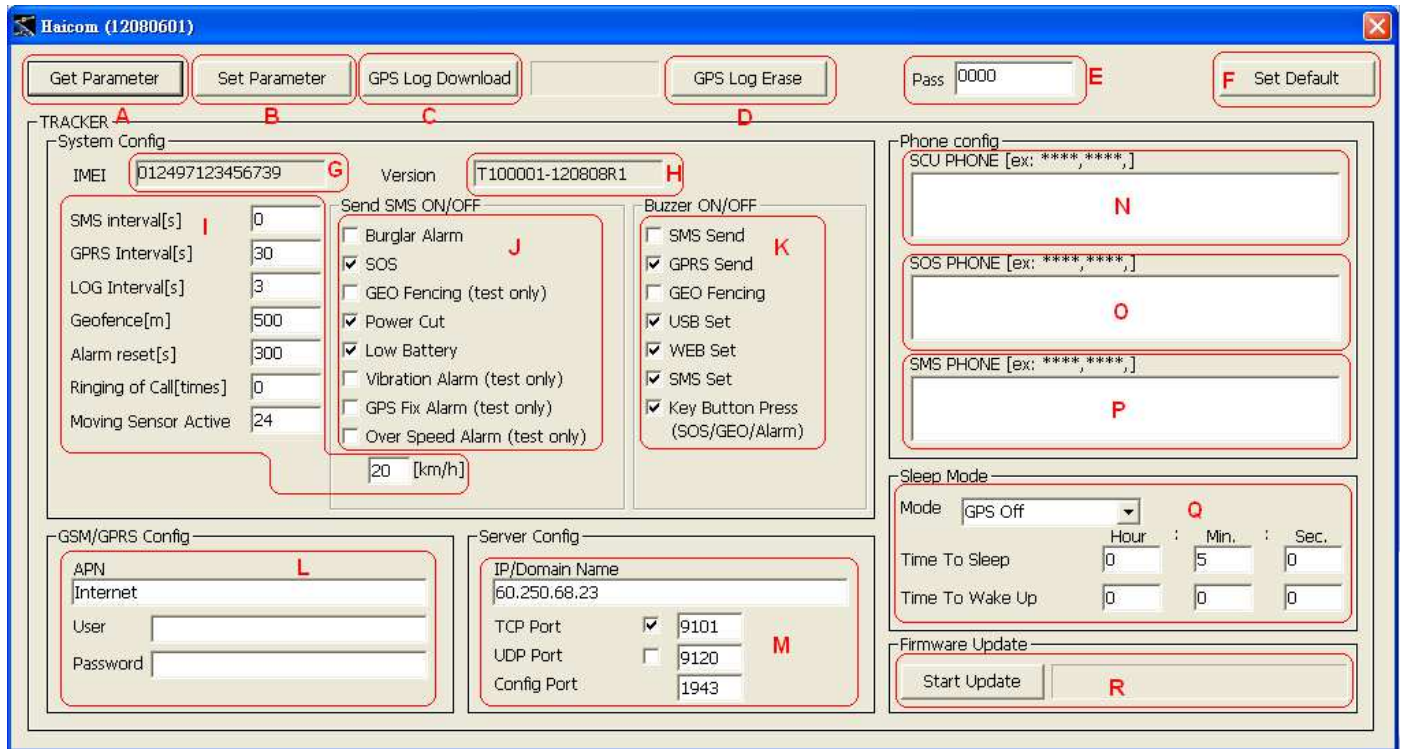


The screenshot shows the HAICOM software interface with the following configuration sections:

- TRACKER SYSTEM CONFIG:**
 - IMEI: 353451040200840
 - VERSION: T100001-1111140F
 - SMS interval[s]: 0
 - GPRS interval[s]: 30
 - LOG interval[s]: 5
 - Geofence[m]: 500
 - Alarm Reset[s]: 1
 - Ringling of Call [Times]: 0
 - ACT: 9
 - INT: 9
 - Send SMS ON/OFF:
 - Security
 - SOS
 - GEO Fencing
 - Power Cut
 - Low Battery
 - Vibration Alarm
 - GPS Fix Alarm
 - Over Speed Alarm
 - BUZZER ON/OFF:
 - SMS Send
 - GPRS Send
 - GEO Fencing
 - USB SET
 - WEB SET
 - SMS SET
 - Key Button Press (SOS/GOE/ALARM)
- GSM/GPRS CONFIG (Blue box):**
 - APN: fleet
 - USER: []
 - PASS: []
- SERVER CONFIG (Red box):**
 - IP/DOMAIN NAME: 60.250.68.23
 - TCP PORT: 9101
 - UDP PORT: 9120 Reply!!
 - CONFIG PORT: 1943
- PHONE CONFIG:**
 - SCU PHONE[ex:****,****,]: []
 - SOS PHONE[ex:****,****,]: []
 - SMS PHONE[ex:****,****,]: []
- SLEEP MODE:**
 - MODE: FULL POWER
 - Time to Sleep: Hour: 0, Min.: 0, Sec.: 0
 - Time to wakeup: Hour: 0, Min.: 0, Sec.: 0
- FIRMWARE UPDATE:**
 - UPDATE: []

User guides for USB settings and SMS features

1. USB Settings :



A. Press to get the tracker current settings

B. Press to save the settings changed

C. Press to download the GPS data logger records

D. Press to delete and clean out the GPS logger records. To avoid the records capacity too full (the full capacity is about 257,000 points) and slow down the download time, the records deleting is recommended after download the GPS data logger.

E. The Password is for the security purposes and the SMS commands can be used after the password verification.

F. Press to re-flash all settings back to defaults

G. The tracker's imei#

H. The current firmware version. The file name is based on the data of the generating.

I: The parameter settings for different functions:

1. The continue SMS sending time interval to certain preset phones. The setting is

recommended to set more than 10 (s), 10 seconds, and set “ 0 “ means switch off this function.

2. The continue GPRS GPS coordinates sending time interval to the server. The setting is recommended to set more than 15 (s), 15 seconds, and set “ 0 “ means switch off this function.

3. The GPS data logger recording time interval. The setting is recommended to set more than 3 (s), 3 seconds, and set “ 0 “ means switch off this function.

4. The geo-fencing setting range (in diameter) The setting is recommended to set more than 500 (m),
500 meters.

5. To temporary disable all the alert functions. The setting is recommended to set less than 300 (s), 300 seconds. During the time, all the alert features will be disabled.

6. The ringing times after the voice tapping function activated.

7. The motion sensor sensitivity. The setting is recommended to set between 21 to 24, The less the number, the higher the sensibility.

8. The speed limit alert function. The alert will shown after the tracker speed higher than the speed (in kilometer per hour)

J: The on/off settings for the alert functions:

1. Turn on or off for the vehicle anti-thief alarm function

2. Turn on or off for the SOS button alarm function

3. Turn on or off for the geo fencing alarm function. The function here is only for testing and the function will be switched off once the geo fencing function activated (only one time)

4. Turn on or off the alarm when the tracker external power cut off.

5. Turn on or off the alarm when the tracker battery voltage power lower than 3.6V (battery low)

6. Turn on or off for the motion sensor alarm function. The function here is only for testing and the function will be switched off once the motion sensor function activated (only one time)

7. Turn on or off for the GPS in 3D fixed inform function. The function here is only for testing and the function will be switched off once the GPS 3D fixed function reported (only one time)

8. Turn on or off for the over speed alarm function. The function here is only for testing and the function will be switched off once the over speed function activated (only one time)

K: The settings for the tracker buzzer sound or silent:

1. Buzzer sound or silent every time when the SMS coordinates sending

2. Buzzer sound or silent every time when the GPRS coordinates sending

3. Buzzer sound or silent when the geo fencing alarm sent

4. Buzzer sound or silent when the USB set up completed

5. Buzzer sound or silent after receiving the settings from the web tracking site

6. Buzzer sound or silent after receiving the settings from the phone SMS command

7. Buzzer sound or silent when press the buttons (only available for the HI-602X and the optional car kit box)

L: Set up the APN (Access Point Name) from the SIM card telecomm service provider

M: Set up the IP/Domain address of the tracking server for the GPRS data to send to

1. Can set up either the IP or the domain name
2. Set up the server receiving data protocol and port (Set TCP if the server protocol is TCP)
3. Set up the server receiving data protocol and port (Set UDP if the server protocol is UDP)
4. Set up the two-way configuration port between the server and the tracker. User can also set as “ 0 “ to disable the GPRS function (under this mode, the SMS and the data logger functions still keep on working) User can also set as “ 1 “ to switch off both the server alarm control function and the two-way configuration function (under this mode, the GPRS coordinates sending functions still keep on working)

N: Set up the telephone numbers which will receive SMS from all the alarm functions activated and the tapping voice (except for the SOS)

O: Set up the telephone numbers which will receive SMS when the SOS alarm functions activated and the tapping voice

P: Set up the telephone numbers which will receive SMS with the continue coordinates and the tapping voice

Q: Set up the sleeping mode and the times:

1. Full power: Keep on sending coordinates none stop. Highest power consumption and no need to set up the times.
2. GPS Off: The tracker GPS function will be switched off (based on the ‘Time To Sleep’ colume time) after the tracker no moved. Under this mode, the tracker still stand by to take the commands from the phone SMS or from the web tracking set up) As soon as the tracker moved again, the GPS function will start to work again. Under this mode, the tracker power consumption will be less.
3. All Off: The tracker all functions, GPS, GSM, etc. will be switched off (based on the ‘Time To Sleep’ colume time) after the tracker no moved. Under this mode, the tracker will not be able to take any commands from the phone SMS or from the web tracking set up) As soon as the tracker moved again, all the functions will start to work again. Under this mode, the tracker power consumption will be lowest.
4. Weak Up: The tracker all functions, GPS, GSM, etc. will be switched off (based on the ‘Time To Sleep’ colume time) regardless of the tracker motion sensor moved or not. Under this mode, the tracker will not be able to take any commands from the phone SMS or from the web tracking set up) After the finish the sleep time (based on the ‘Time To Weak UP’ colume time) the tracker will switched on again to work normal. The automatic sleep and weak up will be cycled continuesly base on the settings. The mode is suitable for the



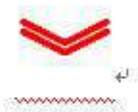
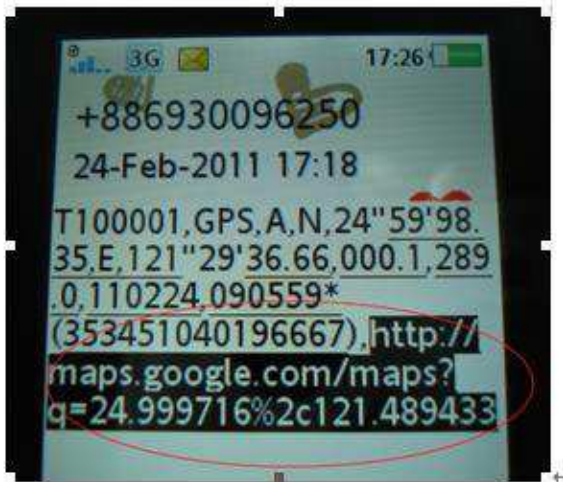
condition that the user only need to know the tracker updated locations in some fix time and let the tracker go sleeping mode (switched off) to save power consumption. The 'Time To Sleep' set up is recommended to set no less than 3 minutes so that the tracker GPS have enough time to let the GPS get 3D fixed. In this way, the tracker can send the updated real time location (GPS 3D fixed location) back to the server.

R: Firmware update: After the firmware updated, delete the GPS log data in the tracker is recommended to make sure the tracker internal memory stay in complete.

Terms Explanations

System Config:

1. **IMEI: Tracker** (International Mobile Equipment Identity number , IMEI#)
2. **Version: Tracker** firmware version
3. **SMS intervals[s]:** Interval of tracker send real time position with Google map hyperlink via SMS



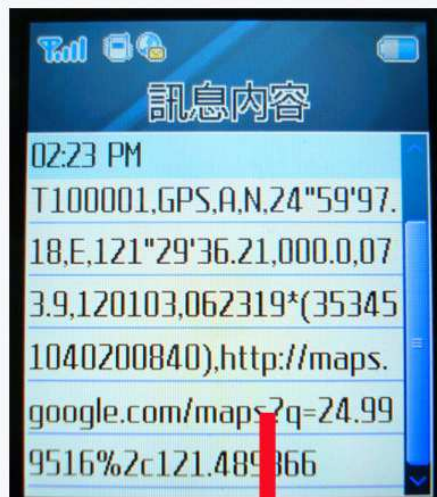
4. **GPRS interval[s]:** Interval of tracker send real time position to the server via GPRS
5. **LOG interval[s]:** Interval of tracker data logging
6. **Geofence[m]:** Send warning when tracker out of the Geofencing range
7. **Alarm Reset[s]:** Time of all the security functions temporary disabled
8. **Ringing of Call[Times]:** Tracker ringing time when user call

The example to send SMS command
to the tracker:

Send: #0000,10



You will receive this message:



Click the hyperlink
to get the real time
position



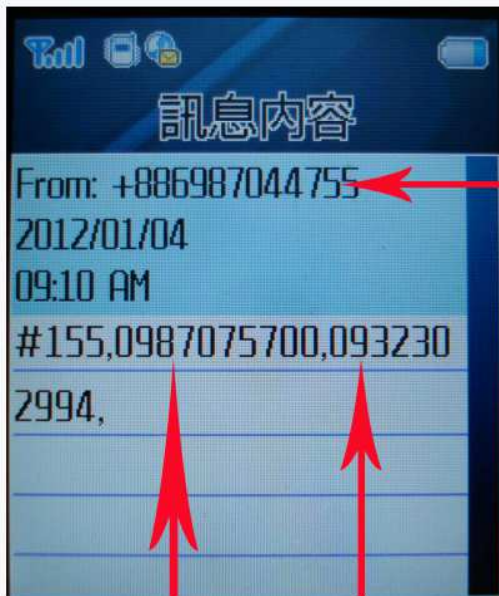
Longitude
Latitude

The example to send SMS command to the tracker:

Send: #0000,155



You will receive this message:



Tracker Telephone#

2nd. set send back telephone #

1st. set send back telephone #

SMS Command for X seris



Code	Format	Function
100	#0000,100	Request all setting values back
151	#0000,151,0000000000,0000000000,0000000000	Set Security Phone Number.(10 Max.)
152	#0000,152,0000000000,0000000000,0000000000	Set SOS Phone Number (10Max.)
153	#0000,153,0000000000,0000000000,0000000000	Set SMS Phone Number (10 Max.)
154	#0000,154	Get Security Phone Setting
155	#0000,155	Get SOS Phone Setting
156	#0000,156	Get SMS Phone Setting
200	#0000,200,APN,USER,PASS	Set APN
201	#0000,201	Get APN Setting
210	#0000,210,IP,TCP port,UDP port,config port,protocol select #0000,210,60.250.68.23,9101,9120,1943,0	Set IP and Port
211	#0000,211	Get IP and Port Value
250	#0000,250,SMS,GPRS,LOG,Geo,Alarm,Ring,Speed,Sensor #0000,250,0,30,0,500,60,0,20,10	Set Interval and Parameter
251	#0000,251	Get Interval Setting
300	#0000,300,Buglar,SOS,PWCUT,LBAT #0000,300,0,1,1,1	Set Event
301	#0000,301	Get Event Setting
350	#0000,350,SMS_Send,GPRS,GEO,USB,WEB,SMS_Set,KEY #0000,350,0,0,0,1,1,1,1	Set Buzzer
351	#0000,351	Get Buzzer Setting
400	#0000,400,Mode,Hour1,Minute1,Second1,Hour2,Minute2,Second2 #0000,400,1,0,5,0,0,0,0	Set Power Saving Mode
401	#0000,401	Get Power Saving Mode Setting
01	#0000,01,Pass,Pass #0000,01,0000,0000	Set Password
10	#0000,10	Get GPS Data
11	#0000,11,Phone Number	Talking Permitted
12	#0000,12,1	Relay #1 On/Off
13	#0000,13,1	Relay #2 On/Off
14	#0000,14	Tracker Reset
15	#0000,15	Inform Tracker send TX000 to Server
16	#0000,16,1	Set GEO Fencing Activate
17	#0000,17,1	Set GPS Fixed Alarm Activate
18	#0000,18,1	Set Moving Alarm Activate
19	#0000,19,1	Set Over Speed Alarm Activate

EXAMPLE : #0000,210,60.250.68.23,9101,9120,1943,0

SMS initial code

0000 password (default is 0000)

210 Initial command code

60.250.68.23,9101,9120,1943,0 Varies parameters

Fill in “ * “ between the comma when the above parameters unchanged.

Fill in nothing between the comma to empty the data (originally there are some parameters in between, such as the APN, USER and the PASS)

Different parameters will divided by comma: “ , “

Explanations to the initial command code:

151 (Set Security Phone Number)

Fill in maximum 10 phone numbers

152 (Set SOS Phone Number)

Fill in maximum 10 phone numbers

153 (Set SMS Phone Number)

Fill in maximum 10 phone numbers

200 (Set APN)

APN : GPRS Access Point Name of the SIM card (check with your telecomm service provider for the exact APN)

USER : APN user name

PASS : APN password

210 (Set IP and Port)

IP : The server IP address which the tracker will send to (Domain name also OK)

TCP port : The destinate server TCP port

UDP port : The destinate server UDP port

Config port : Set up the two-way configuration port between the server and the tracker. User can also set as “ 0 “ to disable the two way configuration function.

Protocol select : Select the communication protocol between the tracker and server

0→ TCP 、 1→UDP

250 (Set Interval and Parameter)

SMS: The continue SMS sending time interval to certain preset phones. The setting is recommended to set more than 10 (s), 10 seconds.

GPRS: The continue GPRS GPS coordinates sending time interval to the server. The setting is recommended to set more than 15 (s), 15 seconds.

LOG: The GPS data logger recording time interval. The setting is recommended to set more than 3 (s), 3 seconds.

Geo: The geo-fencing setting range (in diameter) The setting is recommended to set more than 500 (m), 500 meters.

Alarm: To temporary disable all the alert functions. The setting is recommended to set less than 300 (s), 300 seconds. During the time, all the alert features will be disabled.

Ring: The ringing times after the voice tapping function activated.

Speed: The speed limit alert function. The alert will shown after the tracker speed higher than the speed (in Km/h kilometer per hour)

Sensor: The motion sensor sensitivity. The setting is recommended to set between 21 to 24, the less the number, the higher the sensibility.

300 (Set Event)

Buglar: Enable or disable (1 → enable, 0 → disable) to send SMS when the vehicle anti-thief alarm function activated

SOS: Enable or disable (1 → enable, 0 → disable) to send SMS when the SOS button pressed

PWCUT: Enable or disable (1 → enable, 0 → disable) to send SMS when the tracker external power source was cut.

LBAT: Enable or disable (1 → enable, 0 → disable) to send SMS when the tracker internal battery low (less than 3.6V)

350 (Set Buzzer)

SMS Send: Buzzer sound or silent (1 → enable, 0 → disable) every time when the SMS coordinates sending

GPRS: Buzzer sound or silent (1 → enable, 0 → disable) every time when the GPRS coordinates sending

GEO: Buzzer sound or silent (1 → enable, 0 → disable) when the geo fencing alarm sent

USB: Buzzer sound or silent (1 → enable, 0 → disable) when the USB set up completed

WEB: Buzzer sound or silent (1 → enable, 0 → disable) after receiving the settings from the web tracking site

SMS Set: Buzzer sound or silent (1 → enable, 0 → disable) after receiving the settings from the phone SMS command

KEY: Buzzer sound or silent (1 → enable, 0 → disable) when press the buttons (only available for the HI-602X and HI-603)

400 (Set Power Saving Mode)

Mode : Set up the sleeping mode: 0 → Full power · 1 → GPS off · 2 → all off · 3 → fixed on/off time

Hour1 : Time setting, hours

Minute1 : Time setting, minutes

Second1 : Time setting, second (please consult the above USB setting guides “Time To Sleep” Q)

Hour2 : Time setting, hours

Minute2 : Time setting, minutes

Second2 : Time setting, second (please consult the above USB setting guides “Time To Weak Up” Q)

01 (Set Password)

Pass : Set up the new password (needed to be 4 digits)

Pass : Key in once again the new password (the set up can only success when this 4 digits are identical to the above 4 digits)

10 (Get GPS Data)

Request the current GPS coordinates from the tracker

11 (Talking Permitted)

Allow some specific phone to do the phone tapping and the request will only available one time and user will set another command when once again need such function. For instances, the telephone number, 0937777777, was not fill in the list of the preset telephone numbers (like, the SCU, SOS, SMS from the USB column)

When need to do the tapping, send SMS command #0000,11, 0937777777 to the tracker and the user can use the phone 0937777777 to do the tapping once.

12 (Relay #1 On/Off)

1 → cut off relay · 0 → recover the relay to normal

13 (Relay #2 On/Off)

1 → cut off relay · 0 → recover the relay to normal

14 (System Reset)

Request the tracker re-flesh all settings

15 (Inform Tracker send TX000 to Server)

Request the tracker and the server to perform the two ways synchronize communications (In order to let the tracker and the server to do the two way settings and information exchanges, they must stay in connection status. But, under some circumstances, the tracker is not connected to the server, such as under GPS off mode (sleeping mode) although the GSM is active but the tracker do not stay connect with the server. With this command, the tracker will immediately take the server command and react. If not, the tracker will also proactively connect to the server within 3 minutes)

16 (Set GEO Fencing Activate)

Activate GeoFencing alarm send back , 1 → enable , 0 → disable The function only available for one time and will set up once again when need it.

17 (Set GPS Fix Alarm Activate)

Activate GPS in 3D fixed message send back , 1 → enable , 0 → disable The function only available for one time and will set up once again when need it.

18 (Set Moving Alarm Activate)

Activate motion sensor alarm send back , 1 → enable , 0 → disable The function only available for one time and will set up once again when need it.

19 (Set Over Speed Alarm Activate)

Activate over speed alarm send back , 1 → enable , 0 → disable The function only available for one time and will set up once again when need it.

The tracker will automatically send SMS message notice that the above settings and control executed successfully.

SMS GPS coordinates send back guides:

EXAMPLE:

\$T120808R1,GPS,A,N,24°59'58.26,E,121°29'21.65,000030.0,182.57,120808,074222*(012497123456789),<http://maps.google.com/maps?q=24.999518,121.489352>

Explanations:

\$	SMS initial code
T120808R1	Firmware version
GPS	SMS message type (please consult the below SMS message type list)
A	GPS fixed status (A in 3D fixed ,V not fixed yet)
N,24°59'58.26,E,121°29'21.65	Coordinates (Format: degree" minute' second)
000030.0	Speed (Sea mile)
182.57	Direction angle (degree)
120808	GPS time (UTC)
074222	GPS time (UTC)
012497000242432	Tracker imei#
http://maps.google.com/maps?q=24.999518,121.489352	The hyperlink URL to the map Click the link to see the map

SMS message type:

GPS	Upon request with command 10, the tracker will keep on sending (SMS interval)
the	GPS coordinates back via SMS
BUR	Burglar Alarm activated
BATLOW	Battery power low (less then 3.6V) alarm
POWCUT	Tracker external power cut off alarm
SOS	The SOS button press
GPS_OK	GPS 3Dfixed report
GEO	Geo Fencing activated
VIA	Vibration Alarm activated
OSA	Over Speed Alarm activated

* Update new firmware

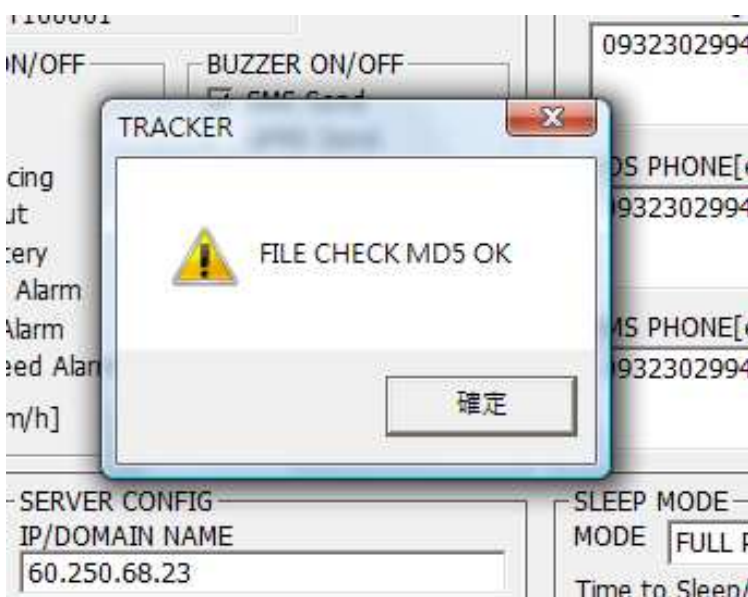
1. Decompress the files.
2. Run the TRACKER program

名稱	大小	類型
Smpl_HID	75 KB	BIN 檔案
Smpl_HID.md5	1 KB	MD5 檔案
TRACKER	1,880 KB	應用程式

3. Plug the tracker to the computer USB port
4. Press the GET PARAMETER and see the current settings
5. Press the UPDATE
6. Open the firmware (2 files)

The screenshot shows the HAICOM TRACKER software interface. At the top, there are buttons for 'GET PARAMETER', 'SET PARAMETER', 'GPS LOG', 'GPS ERASE', and a 'PASS' field with '0000'. The main area is divided into several configuration sections: 'SYSTEM CONFIG' (including IMEI, VERSION, SMS/GPRS/LOG intervals, Geofence, Alarm, and ACT/INT), 'PHONE CONFIG' (SCU, SOS, SMS PHONE), 'GSM/GPRS CONFIG' (APN, USER, PASS), 'SERVER CONFIG' (IP/DOMAIN NAME, TCP/UDP/CONFIG PORTS), and 'SLEEP MODE' (MODE, Time to Sleep, Time to Wakeup). In the bottom right corner, the 'FIRMWARE UPDATE' section has an 'UPDATE' button circled in red.

7. Show the below message and click OK



8. The firmware start loading

TRACKER

GET PARAMETER SET PARAMETER GPS LOG PASS

SYSTEM CONFIG

IMEI: 353451040013565 VERSION: T100001

SMS interval[s]: 3600 GPRS interval[s]: 30 LOG interval[s]: 0 Geofence[m]: 2000 Alarm Reset[s]: 5 Ringing of Call [Times]: 5

Send SMS ON/OFF: Security, SOS, GEO Fencing, Power Cut, Low Battery, Vibration Alarm, GPS Fix Alarm, Over Speed Alarm

BUZZER ON/OFF: SMS Send, GPRS Send, GEO Fencing, USB SET, WEB SET, SMS SET, Key Button Press (SOS/GOE/ALARM)

PHONE CONFIG

SCU PHONE[ex:****,****,]: 0932302994,

SOS PHONE[ex:****,****,]: 0932302994,

SMS PHONE[ex:****,****,]: 0932302994,

GSM/GPRS CONFIG

APN: fleet USER: PASS:

SERVER CONFIG

IP/DOMAIN NAME: 60.250.68.23 TCP PORT 9101 UDP PORT 9120 Reply!! CONFIG PORT: 1943

SLEEP MODE

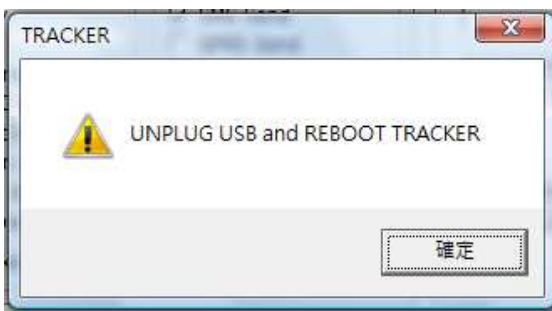
MODE: FULL POWER Hour: 0 Min.: 0 Sec.: 0

Time to Sleep/Wake Up: 0 : 0 : 0

FIRMWARE UPDATE

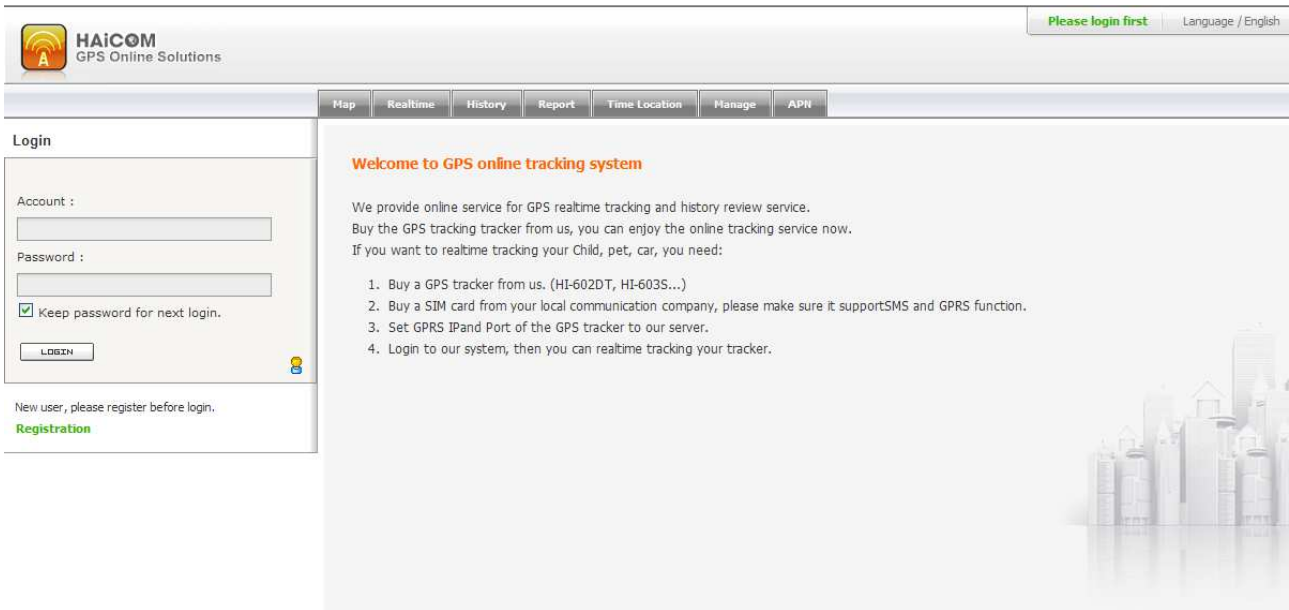
UPDATE [Progress Bar]

9. The below message shown and press OK

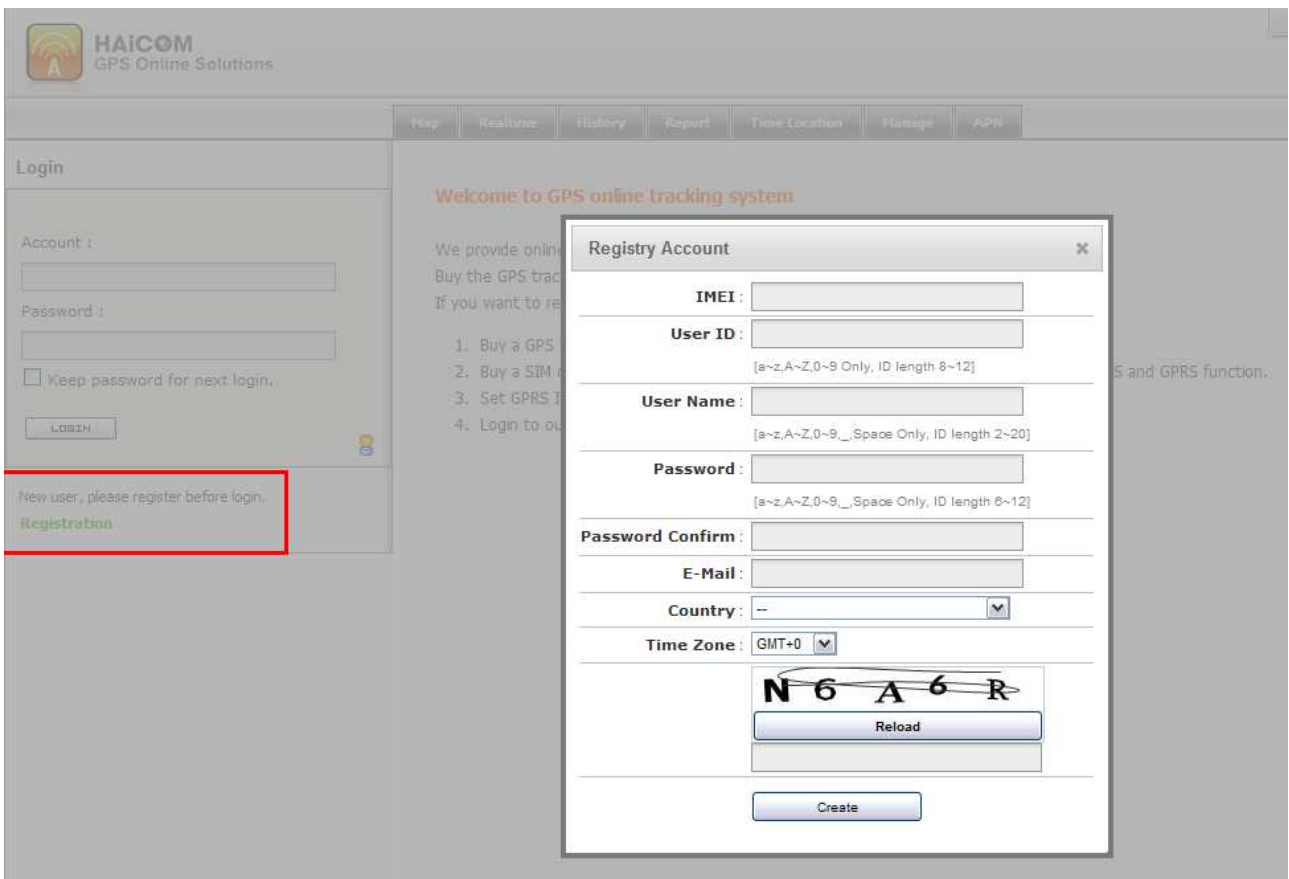


1. Initial registration from the GPRS web tracking platform:

<http://www.tracking.haicom.com.tw:8090/>



2. New user; please register before login.



3. The tracker imei# is shown on the bottom of the sticker:



4. After login, select the “Manage “ for Add New Tracker

HAiCOM GPS Online Solutions

Map Realtime History Report Time Location Manage API

Manage/TrackerConfig

Tracker config

Geo-Fence

Speed Alarm

Modify Password

User Account

Graphic Setting

Device Setting

Command Send

Add New Tracker Total devices permission : 100

User Name	IMEI ID	Tracker Model	
HI-603X Jack	353451040200840	HI-603	Ryan
HI-604 Paul	353451043957552	HI-604	ryan
HI-604 Q	354779032976095	HI-604	Ryan
HI-604 Test			ryan
HI-604X			ryan
Jack-604			Ryan
M.5			Ryan
M.5.1			ryan

Tracker Setting

User ID: ryan

User Name:

Model: HI-602

Tracker ID:

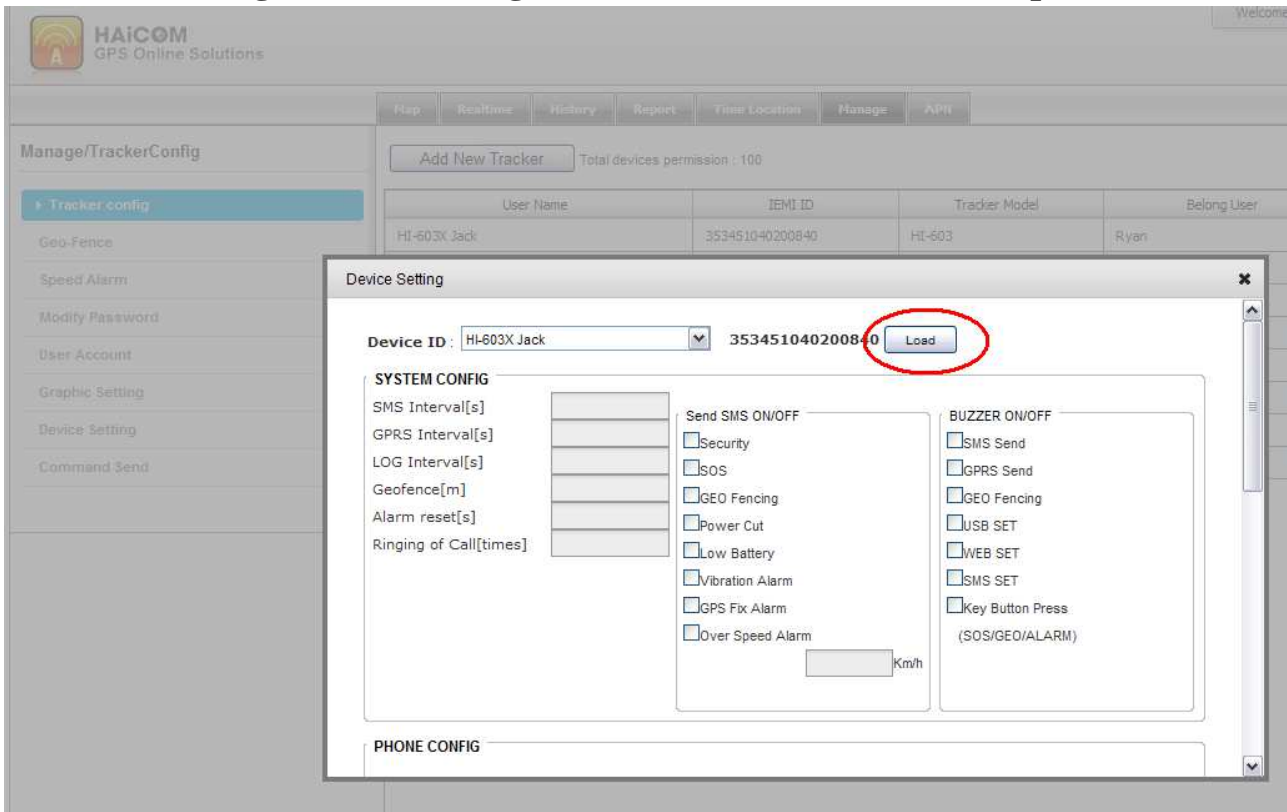
Please input digital number

Add

* Program tracker from Haicom GPRS web tracking web site

1. Make sure the tracker connected to the GSM network and start sending back the data

2. On the Manage/Device Settings section, select the tracker and press Load



The screenshot displays the Haicom GPS Online Solutions web interface. The main navigation menu includes Map, RealTime, History, Report, Time Location, Manage, and API. The 'Manage/TrackerConfig' section is active, showing a table of trackers. A 'Device Setting' window is open, displaying configuration options for the selected device 'HI-603X Jack' (IMEI: 353451040200840). The 'Load' button is circled in red. The 'SYSTEM CONFIG' section includes fields for SMS Interval[s], GPRS Interval[s], LOG Interval[s], Geofence[m], Alarm reset[s], and Ringing of Call[times]. The 'Send SMS ON/OFF' section has checkboxes for Security, SOS, GEO Fencing, Power Cut, Low Battery, Vibration Alarm, GPS Fix Alarm, and Over Speed Alarm. The 'BUZZER ON/OFF' section has checkboxes for SMS Send, GPRS Send, GEO Fencing, USB SET, WEB SET, SMS SET, and Key Button Press. The 'PHONE CONFIG' section is partially visible at the bottom.

User Name	IMEI ID	Tracker Model	Belong User
HI-603X Jack	353451040200840	HI-603	Ryan

Device ID: HI-603X Jack 353451040200840 **Load**

SYSTEM CONFIG

SMS Interval[s]
GPRS Interval[s]
LOG Interval[s]
Geofence[m]
Alarm reset[s]
Ringing of Call[times]

Send SMS ON/OFF

Security
 SOS
 GEO Fencing
 Power Cut
 Low Battery
 Vibration Alarm
 GPS Fix Alarm
 Over Speed Alarm Km/h

BUZZER ON/OFF

SMS Send
 GPRS Send
 GEO Fencing
 USB SET
 WEB SET
 SMS SET
 Key Button Press
(SOS/GEO/ALARM)

PHONE CONFIG

3. Change the prefer settings

4. Press Setup and will show: Device information update successfully

The screenshot shows the HAiCOM GPS Online Solutions web interface. The main menu includes options like Map, Realtime, History, Report, Time/Location, Manage, and APN. The 'Manage/TrackerConfig' section is active, displaying a table of trackers. A 'Device Setting' dialog box is open, showing configuration options for a specific device. The 'Setup' button at the bottom right of the dialog box is circled in red.

User Name	IMEI ID	Tracker Model	Belong User
HI-603KJack	353451040200840	HI-603	Ryan

Device Setting

10 [] 10 [] 10 []

GSM/GPRS CONFIG

APN []

USER []

PASS []

SERVER CONFIG

IP/Domain Name []

TCP PORT []

UDP PORT [] Reply!

CONFIG PORT []

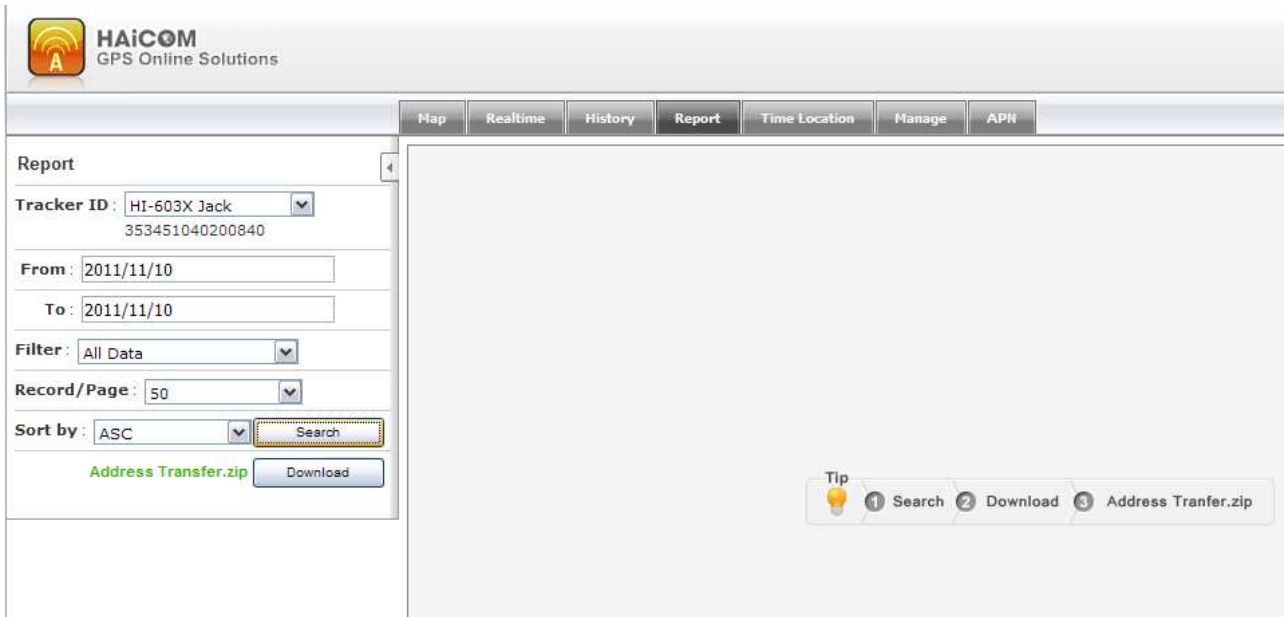
SLEEP MODE

MODE FULL POWER [v]

Time to Sleep/Wake Up [] (hh): [] (mm): [] (ss)

Setup

How to generate the detail report print out with address

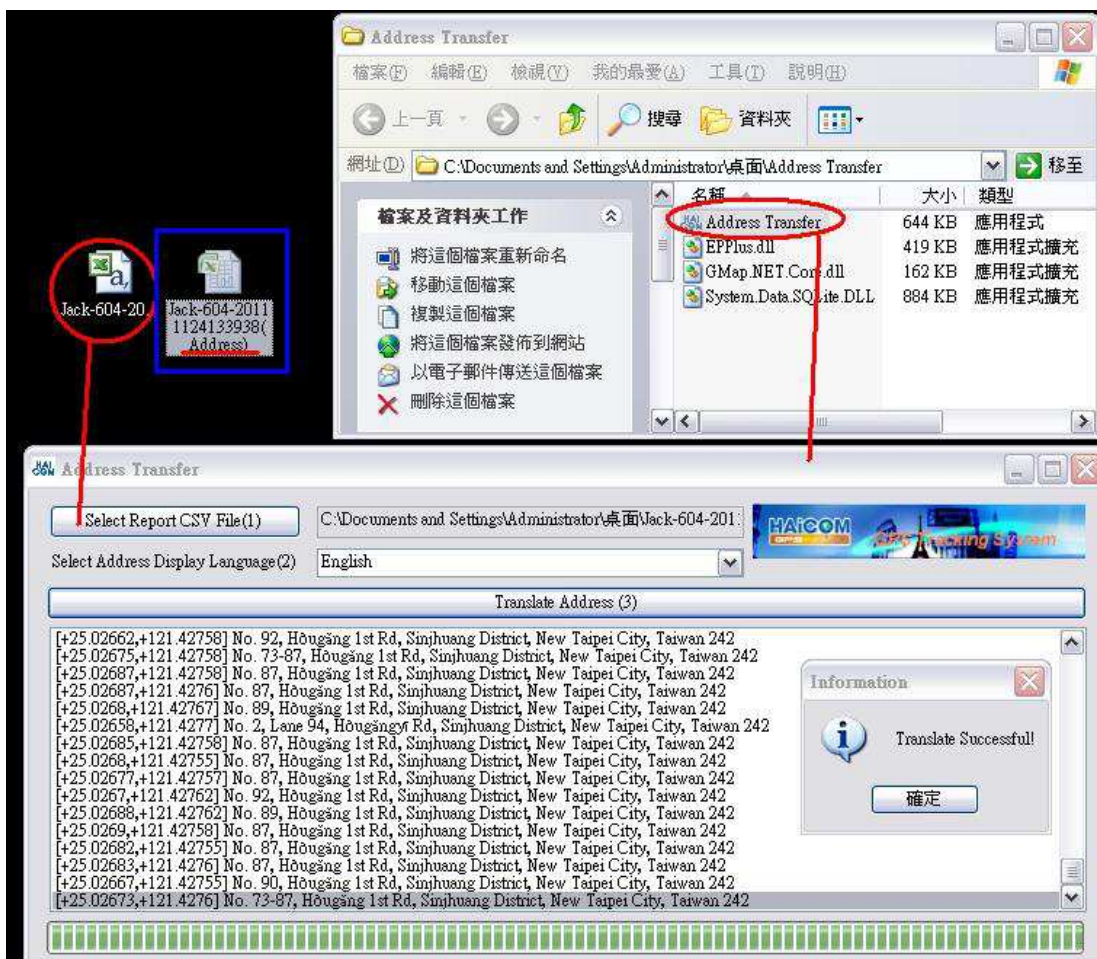


The screenshot shows the HAiCOM GPS Online Solutions web interface. The top navigation bar includes tabs for Map, Realtime, History, Report, Time Location, Manage, and APN. The 'Report' tab is active. On the left, the 'Report' section contains the following fields:

- Tracker ID: HI-603X Jack (dropdown menu) with the ID 353451040200840 below it.
- From: 2011/11/10 (text input)
- To: 2011/11/10 (text input)
- Filter: All Data (dropdown menu)
- Record/Page: 50 (dropdown menu)
- Sort by: ASC (dropdown menu) with a Search button to its right.

Below these fields, there is a green link labeled 'Address Transfer.zip' and a 'Download' button. A 'Tip' box at the bottom right of the report area contains a lightbulb icon and the following steps: 1 Search, 2 Download, 3 Address Tranfer.zip.

1. Select the preferred from and to date and click “ Search “
2. Click “ Download “ and the csv file will be saved as Excel file
3. Click “ Address Transfer.zip “ for the transfer program



1. Click “ Address Transfer program icon to run the program “
2. Select the csv Excel file
3. Click “ Transfer Address (3) “
4. After the translate program running, the “ Translate successful ! “ message will appeared. In the mean time, there will extra Excel file with (Address) saved on your desktop. Open the file, you will see the retail reports, with Date/time/long./lat./detail address data like below example shown.

The example of the detail report printout:

	A	B	C	D	E	F	G	H	I	J	K
1	Index	DATE	TIME	ADDRESS	SPEED	DISTANCE	GPS FIX	ORIENT	LATITUD	LONGITUD	COMMENT
2	1	2011/10/27	00:00:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0.2 km/hr	0 km	OK	96.4	N 24.99952	E 121.48935	
3	2	2011/10/27	00:00:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	40.2	N 24.99952	E 121.48935	
4	3	2011/10/27	00:01:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	90.9	N 24.99952	E 121.48935	
5	4	2011/10/27	00:01:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	171	N 24.99952	E 121.48935	
6	5	2011/10/27	00:02:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	44.8	N 24.99952	E 121.48935	
7	6	2011/10/27	00:02:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	60.8	N 24.99952	E 121.48935	
8	7	2011/10/27	00:03:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	177.7	N 24.99952	E 121.48935	
9	8	2011/10/27	00:03:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	31.2	N 24.99952	E 121.48935	
10	9	2011/10/27	00:04:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	339	N 24.99952	E 121.48935	
11	10	2011/10/27	00:04:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	46.3	N 24.99952	E 121.48935	
12	11	2011/10/27	00:05:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	342.5	N 24.99952	E 121.48935	
13	12	2011/10/27	00:05:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0.2 km/hr	0 km	OK	44.8	N 24.99952	E 121.48935	
14	13	2011/10/27	00:06:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	214.5	N 24.99952	E 121.48935	
15	14	2011/10/27	00:06:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	95.9	N 24.99952	E 121.48935	
16	15	2011/10/27	00:07:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	36.3	N 24.99952	E 121.48935	
17	16	2011/10/27	00:07:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	71.1	N 24.99952	E 121.48935	
18	17	2011/10/27	00:08:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0.2 km/hr	0 km	OK	67.4	N 24.99952	E 121.48935	
19	18	2011/10/27	00:08:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0 km	OK	166.3	N 24.99952	E 121.48935	
20	19	2011/10/27	00:09:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0.2 km/hr	0.002 km	OK	83.7	N 24.99952	E 121.48937	
21	20	2011/10/27	00:09:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0.002 km	OK	7.7	N 24.99952	E 121.48937	
22	21	2011/10/27	00:10:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0.002 km	OK	100.6	N 24.99952	E 121.48937	
23	22	2011/10/27	00:10:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0.002 km	OK	59.2	N 24.99952	E 121.48937	
24	23	2011/10/27	00:11:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0.004 km	OK	102.6	N 24.99952	E 121.48935	
25	24	2011/10/27	00:11:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0.006 km	OK	66.5	N 24.99952	E 121.48937	
26	25	2011/10/27	00:12:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0.006 km	OK	127.5	N 24.99952	E 121.48937	
27	26	2011/10/27	00:12:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0.008 km	OK	42.4	N 24.99952	E 121.48935	
28	27	2011/10/27	00:13:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0.008 km	OK	95.9	N 24.99952	E 121.48935	
29	28	2011/10/27	00:13:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0.01 km	OK	49.3	N 24.99952	E 121.48937	
30	29	2011/10/27	00:14:21	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0 km/hr	0.01 km	OK	42.9	N 24.99952	E 121.48937	
31	30	2011/10/27	00:14:51	No. 3, Lane 125, Jiānbā Rd, Zhonghe District	0.2 km/hr	0.01 km	OK	63.6	N 24.99952	E 121.48937	

How to calculate the historical total travel distance:

1. Click the preferred start point
2. Click the start point icon

The screenshot displays the HAiCOM GPS software interface. The 'History' tab is active, showing the following details:

- Tracker ID: Jack-604 (354779034842998)
- From: 2011/11/14 H: 00 M: 00
- To: 2011/11/14 H: 23 M: 59
- Sort by: ASC
- Speed: 300 msec

The 'Calculate Distance' section is highlighted with a red circle and a '2.' label. It contains the following buttons and input fields:

- Get Start Point (input field contains '1')
- Get End Point
- Distance

The map shows a yellow route starting from a point marked with a red circle and a '1.' label. The bottom status bar shows a table of historical tracking data:

Time	Latitude	Longitude	Speed
2011/11/14 09:50:11	+25.03788	+121.51717	0.19 km/hr
2011/11/14 09:50:45	+25.03781	+121.51721	0 km/hr
2011/11/14 09:51:15	+25.03763	+121.51722	0.37 km/hr

3. Click the **preferred** end point
4. Click the end point icon

Speed: - 300 msec +

▼ Calculate Distance

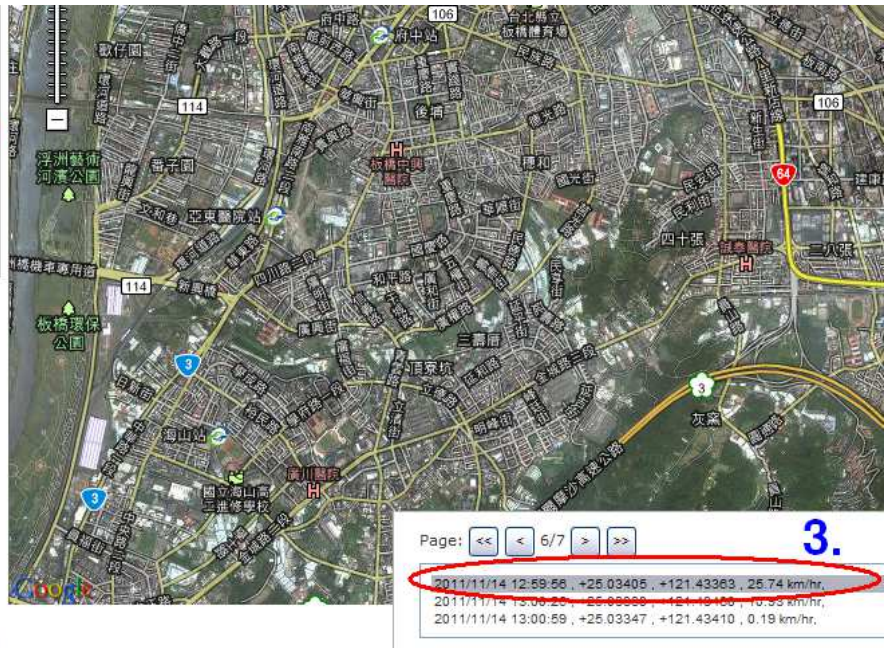
Get Start Point 1 **4.**

Get End Point 102

Distance

► Export your data

► Historical tracking data



5. Click the Distance icon to get the total traveled distance

▼ Calculate Distance

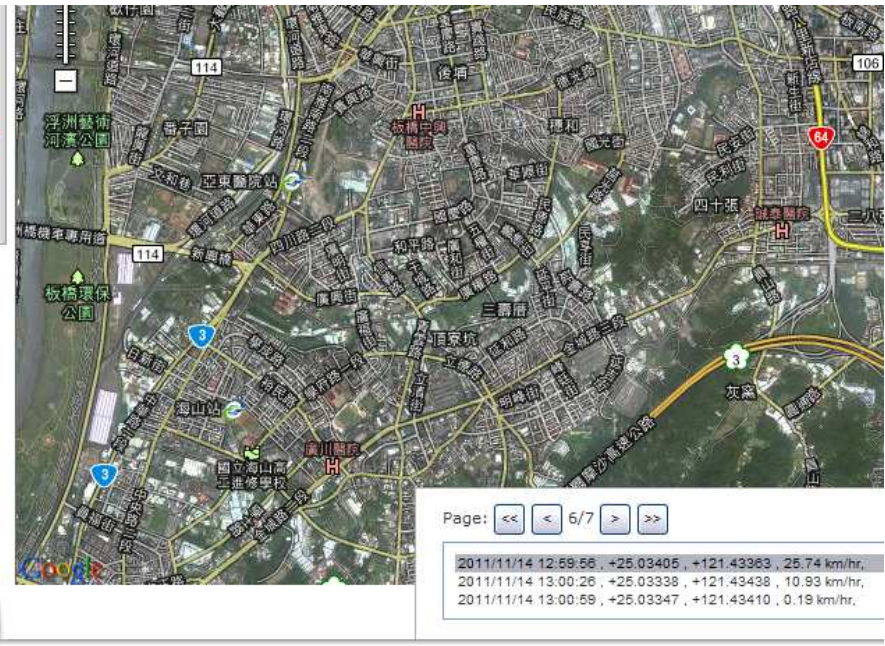
Get Start Point 1

Get End Point 102

Distance 12.893 Km **5.**

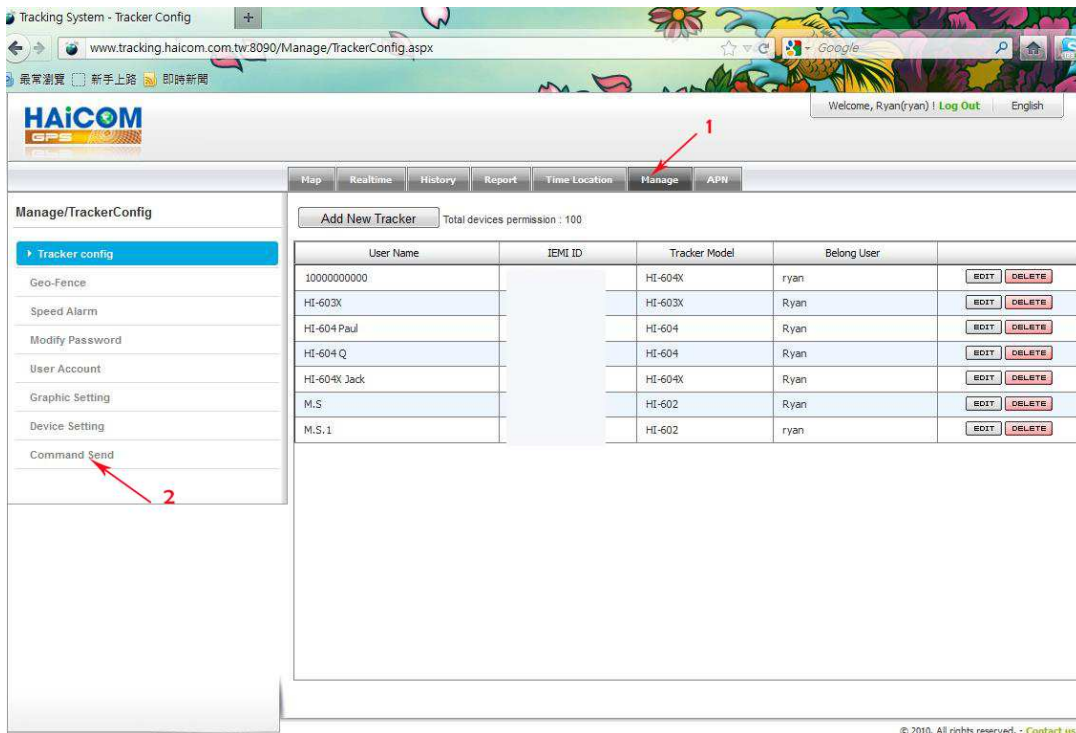
► Export your data

► Historical tracking data



How to send command from the GPRS tracking platform:

1. Click Manage -> Command Send:

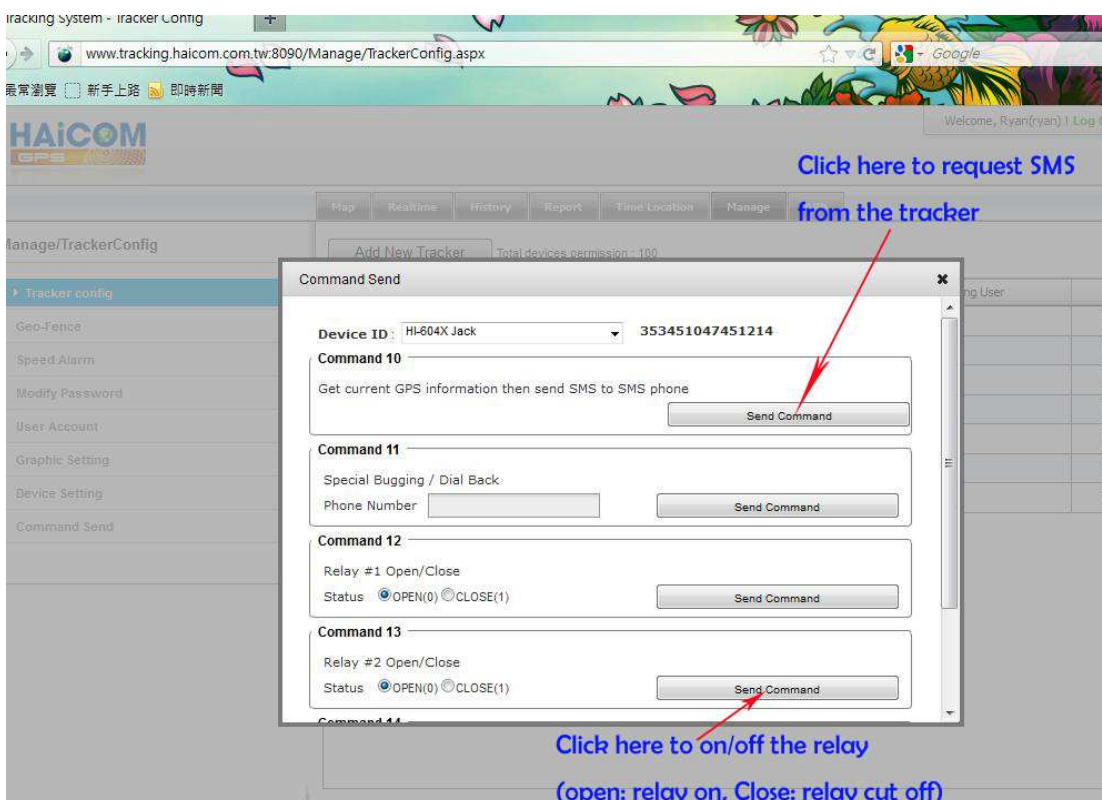


2. Click to send commands from the platform:

Status

Open (0) means the relay is stay connection.

To cut the relay (cut off the ignition, oil pump, power, etc.), select Close (1)



3. Click the Select to see the command sending status:

Command Send

Status OPEN(0) CLOSE(1)

Command setup successful

Command 13

Relay #2 Open/Close

Status OPEN(0) CLOSE(1)

Command setup successful

Command 14

Tracker Reset

Tracker Reset

Command Queue List ALL Command

User	Date Time	TX ID	TX	Send Flag	Send Time
ryal	2012-01-17 15:39:18	TX200	\$GPRS353451040200840,TX201,#10,*	YES	2012-01-17 15:39:46
ryal	2012-01-17 10:01:38	TX200	\$GPRS353451040200840,TX201,#13,0,*	YES	2012-01-17 10:02:39
ryal	2012-01-17 10:01:37	TX200	\$GPRS353451040200840,TX201,#12,0,*	YES	2012-01-17 10:02:18
	2012-01-17				2012-01-17

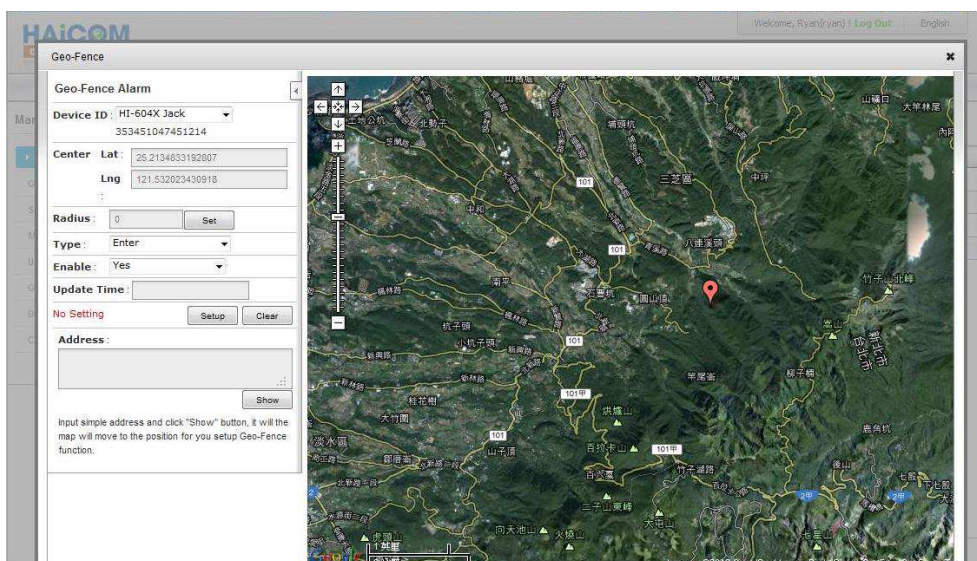
YES: the sending successfully
NO: the sending still pending

Set up GeoFencing function steps:

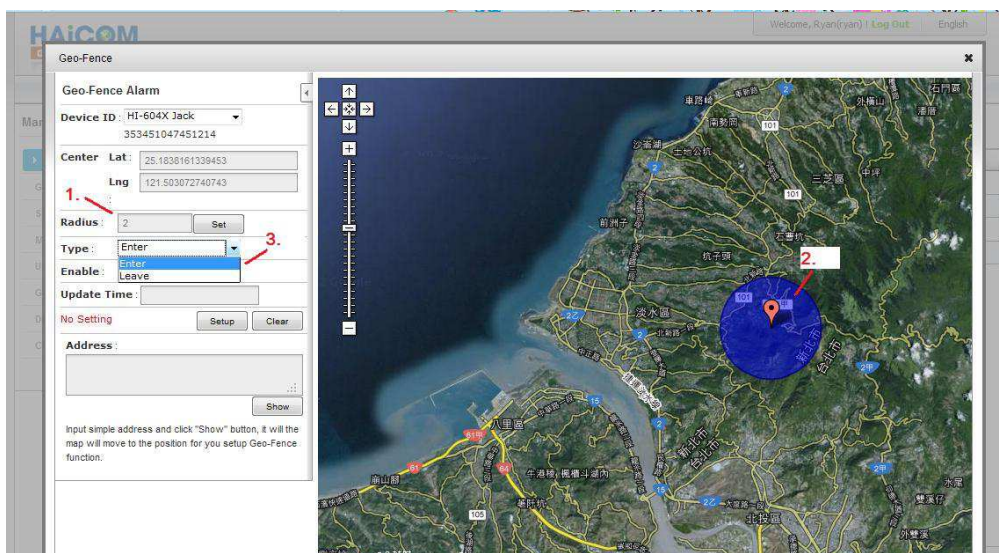
Basically, there are two ways to set up the geo fence function and both ways are independent to each other. For instance, if you set up the geo fence alarm on the map radius, the trigger will only report to the tracking site. If you set up the geo fence function from the Manage -> Device Setting, from the SMS or from the computer set up program, it will only report the alarm to the phone (and not to the tracking site)

1. Set up geo fence radius on the tracking site:

1. Move the mouse cursor to the preferred geo fencing point and double click it.
The red bubble will appeared:

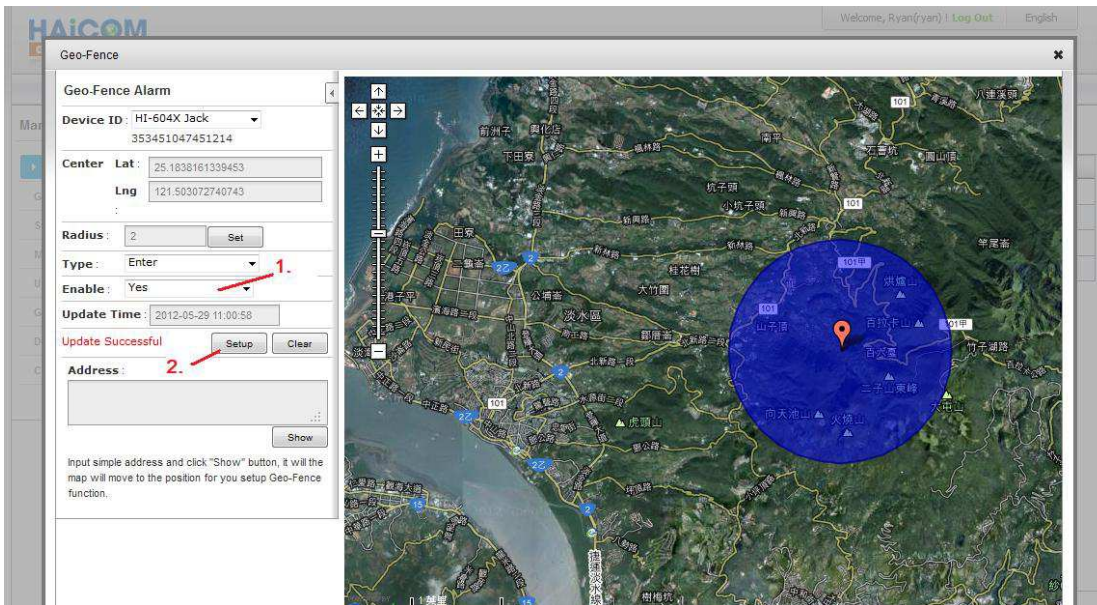


2. Key in the preferred geo fencing radius range (in km) and click Set.
After the clicking, the blue circle will appeared on the map.
User can select to get the geo fencing alarm when the tracker enter or leave the radius range.



3. Make sure click “ Yes “ on the Enable section so that the geo fencing function will work.

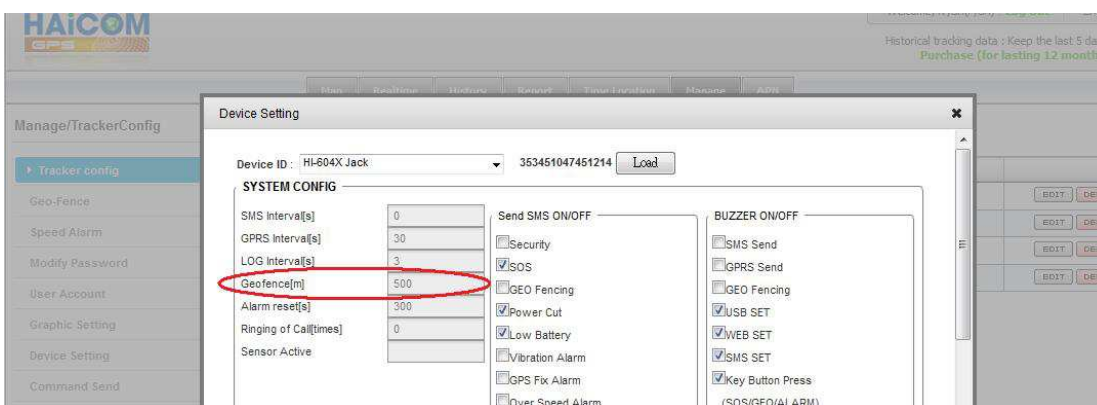
Then, click Setup to complete the procedures. In the mean time, the Update Time will show the time that you set up and show Update Successful on the side:



2. Set up geo fence from the Device Settings:

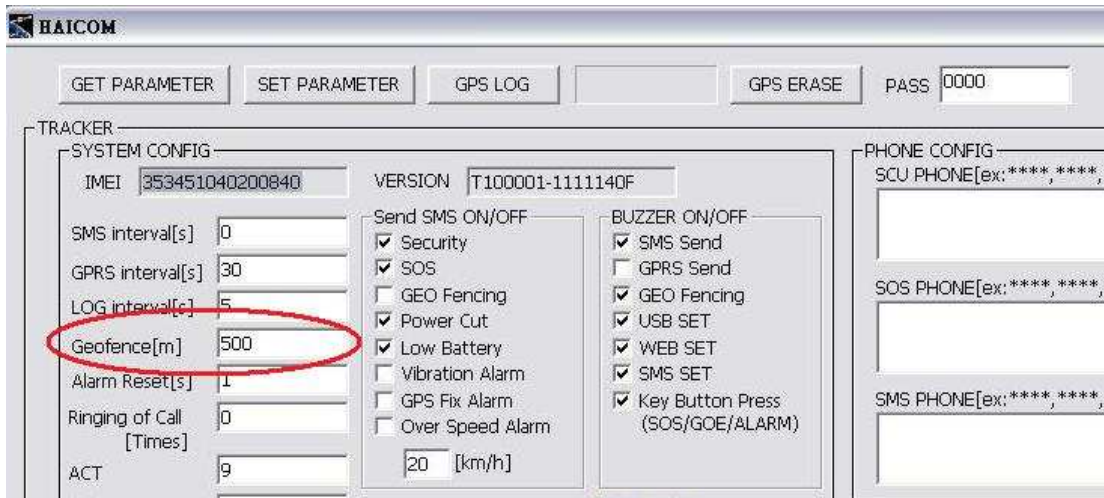
User can use different ways to set up the geo fence functions:

a. On the GPRS tracking site, go Manage and Device Setting and press “load”:



Set up the geo fence range, say 500 meters radius, the tracker will report to the preset phones while the feature triggered.

b. Connect the tracker to your computer and set up geo fence from the set up program:



c. The geo fence will triggered only once and user will set up again from the SMS command to activate the alarm once again:

14	#0000,14		System Reset
15	#0000,15		Inform Tracker call back to server
16	#0000,16,1	(1 is activated, 0 is deactivated)	<u>Set GEO Fencing activate</u>
17	#0000,17,1	(1 is activated, 0 is deactivated)	Set GPS FIX alarm activate
18	#0000,18,1	(1 is activated, 0 is deactivated)	Set Sensor (Moving) Alarm