HAiCOM™
GPS

HI-604X

Easy Manual

HI-604X GPS Tracking Device with 3-years Standby Battery/IP56 waterproof

INTRODUCTIONS:

This is a multi-function state-of-the-art GPS tracking solution offering you all in one solution GPS/GSM/GPRS/SMS all in real time - the most flexible tracking device in the world - a great marriage of the latest technology and affordability.

With HI-604X 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-604X 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, could be years, 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.

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 update firmware 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/ Hands free 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 5,500 mAh battery for independent power**
- **Stand-by deep sleeping time up to 180Days (depending on tracking frequency)**
- **Very high sensitivity GPS fixed**
- **Multi-ways tracking software plate form available**
- **Waterproof case for harsh condition environment**
- **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 unauthorized/unwanted movement happens.**
- **Provides security and accountability.**
- **Enable the recovery of any stolen assets.**
- **View asset's history online from any computer**

Applications

- **Police Force and law enforcement Sector**
- **Private Investigations Sector**
- **GPS Asset Tracking**
- **GPS Cargo Tracking**
- **Surveillance Work**
- **Anti theft – both domestic and commercial**
- **Asset recovery**

HI-604X Characteristics

Items	Specifications
Power Supply	DC 5V
Backup Battery	5500mAh
Normal power consumption	
Dimension	90.8mm x 52.3mm x 38.9mm
Operating temperature	-20℃ to 55℃
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

How The HI-604X GPS Tracker Works:

Once fully charged, the HI-604 battery can last up to 180 Days, depending on usage frequency, it has a built-in movement sensor that can be configured directly to alert you on your mobile phone and our server automatically when the object is moved or touched. The owner can locate the asset at any time using our free of charge GPRS web tracking platform or from your smart phone or real time SMS address hyperlink solutions. The HI-604X can also be programmed to automatically report its position at regular pre-set time intervals, which could be from every 30 seconds to every 72 hours. Also, set up to weak up and send location back during the long sleep mode.

Getting Started:

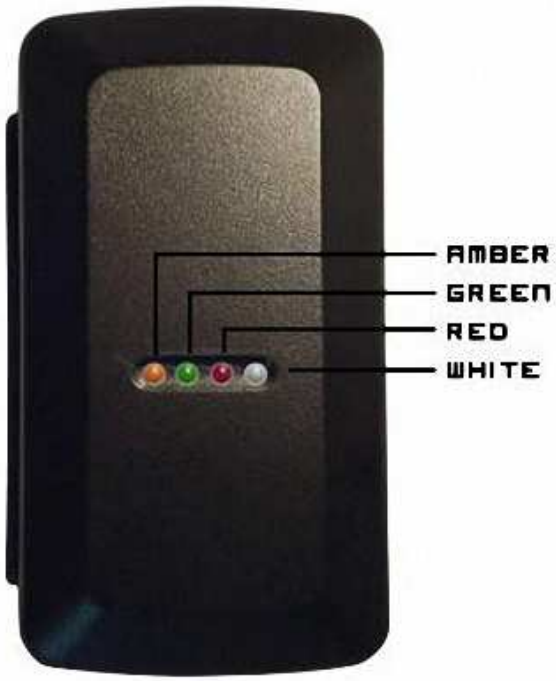
1. **Take out the waterproof side rubber seal and connect the 18 pin cable to HI-604 and plug another end to the USB port from computer or to the AC power outlet with the AC adaptor for power charging.**

2. **Place the SIM card on the SIM card tray and slid in the SIM card tray in. When the SIM card tray inserted in place, the HI-604X power will switch on.**

3. **To switch off HI-604 power, simply push in the yellow dot with any pen.**

Dimensions:

LED Indicator:



LED Color	LED	Status
Amber	On Off	Charging Charge Completed
Green	flashing Stay on Off	GPS in 3D fixed GPS not 3D fixed yet GPS in sleeping mode
Red	On	Battery low
White	64 ms ON/3S OFF 64 ms ON/0.8S OFF	GSM stand-by Searching GSM network or no SIM

Standard Packing:

1. **HI-604X main unit**
2. **SIM card tray**
3. **18 pin to USB set up cable**
4. **AC power adaptor**
5. **DC cigarette lighter**
6. **mini CD with user manual**

The in-build self contained battery:

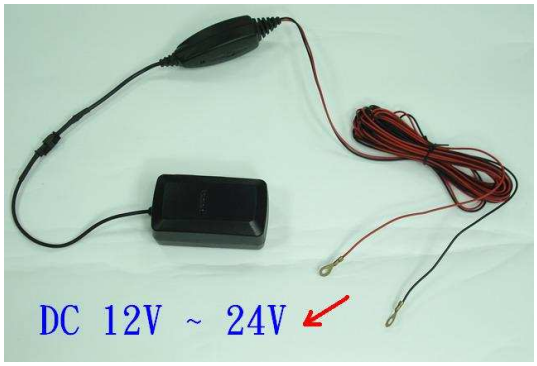
As mentioned, we can not tell you how long the HI-604 battery can last because it is really depend on how frequent the tracker used and the sleeping mode time.
Anyway, here are the figures:

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-604 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:



The car battery cable can be connected directly to the vehicle battery (12V or 24V) and transfer into 5V for the HI-604X. Very important: don't connect HI-604 pintail cable directly to the vehicle battery because the pintail cable takes only 5V.

GPRS Tracking:

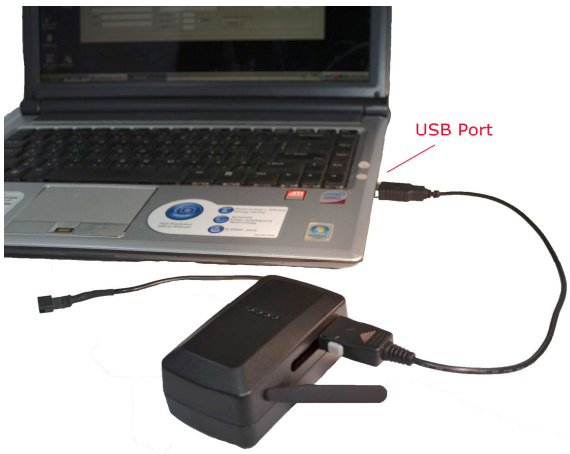
Set up the APN, IP and Port:

1. **Connect HI-604X to computer USB port with the set up cable**

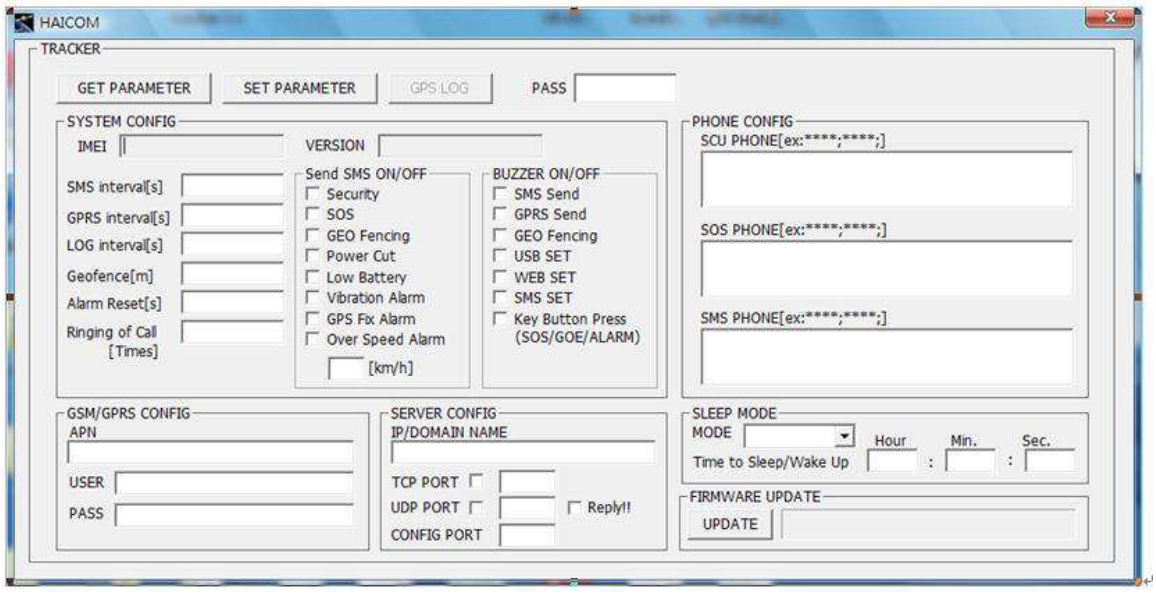
Setting up

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 the SIM card tray is pull off from the holder (User can only program the HI-604X while the HI-604X on power off status)

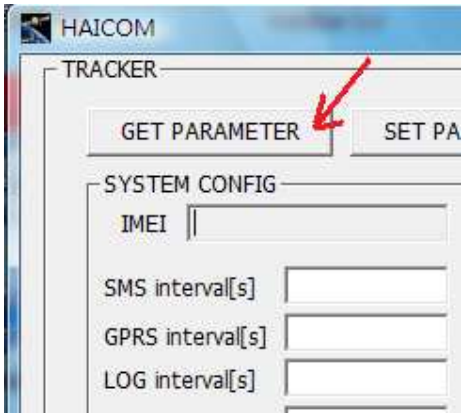
1. **Connect the 18 pins to USB set up cable from the tracker to your computer USB port:**



2. **Open the tracker set up program:**

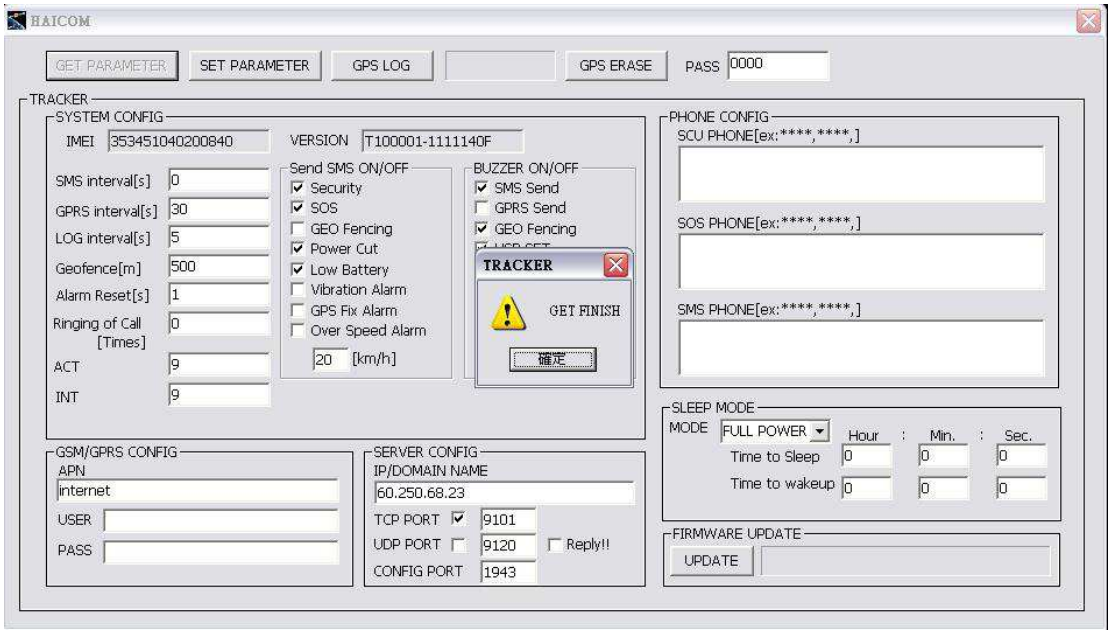


3. Click the “ Get Parameter “



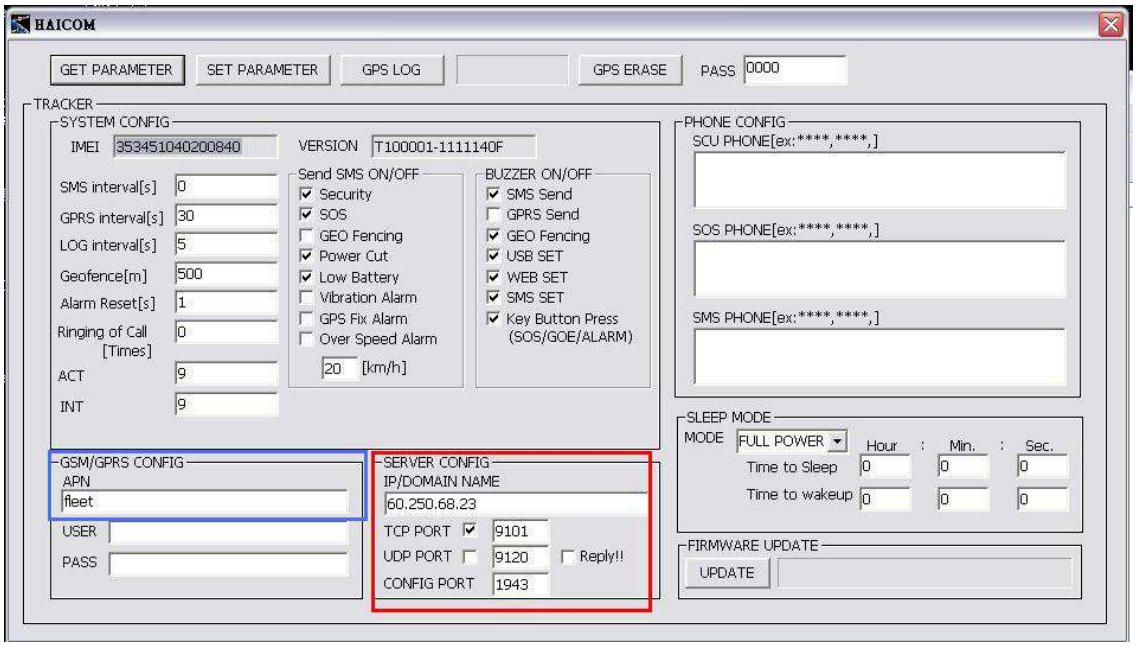
4. Message will shown: “ GET FINISH “ and all the tracker current set up will appeared:

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:

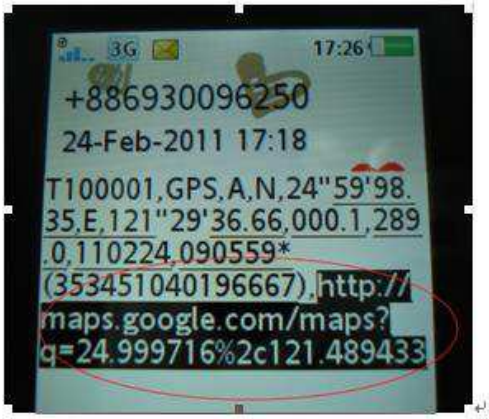
On factory defaults, the basic set up was done.
As soon as you plug in the computer and get parameter, the computer will automatically get and show the tracker imei# on the program.
You will double check with your SIM card telecomm service provider for the correspondent APN (Access Point Name) and key 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.



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**

Send SMS ON/OFF:

1. **Security:**
2. **SOS: Send SMS when user press the SOS button**
3. **GEO Fencing: Send SMS when the tracker out of the GeoFencing range**
4. **Power Cut: Send SMS when the external power cut off**
5. **Low Battery: Send SMS when the tracker internal battery low**
6. **Vibration Alarm: Send SMS when vibration sensor triggered**
7. **GPS fix Alarm: Send SMS when GPS in 3D fixed**
8. **Over Speed Alarm: Send SMS when over the speed limit**

GSM/GPRS CONFIG

APN, USER, PASS: Please fill in the SIM card APN, User name and Pass word (check your telecomm. Service provider), Example: internet

SERVER CONFIG

IP/DOMAIN NAME: Please fill in the server IP or Domain name. For example: IP: 60.250.68.23 or Domain name: http://www.tracking.haicom.com.tw:8090
TCP Port: Please fill in the TCP port
UDP Port: Please fill in the UDP port
CONFIG PORT: Please fill in the port for the tracker configuration software from the web tracking plate form to program from the air.
Reply!!: Server response " !! " back when receive the tracker data

PHONE CONFIG

SCU PHONE [ex.*** ;***** ;]**
Please fill in the telephone numbers for the tracker to call back when the motion sensor, relay, etc. functions are triggered. Please put a " ; " mark after each phone number. Maximum 10 phone numbers to be keyed in.

SOS PHONE [ex.*** ;***** ;]**

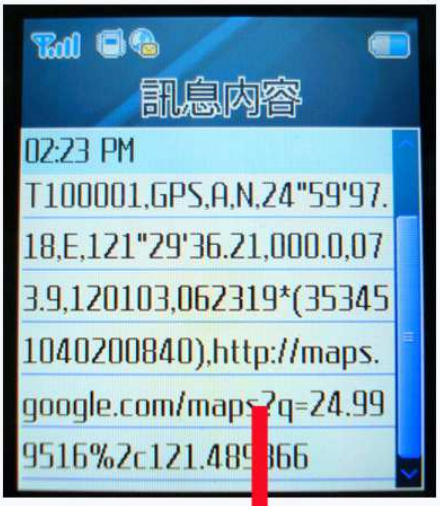
Please fill in the telephone numbers for the tracker to call back when the SOS button is triggered. Please put a “ ; “ mark after each phone number. Maximum 10 phone numbers to be keyed in.

SMS PHONE [ex.*** ;***** ;]**

Please fill in the telephone numbers for the tracker to call back when the request by the SMS command. Maximum 10 phone numbers to be keyed in.

The example to send SMS command to the tracker:
Send: #0000,10

You will receive this message:

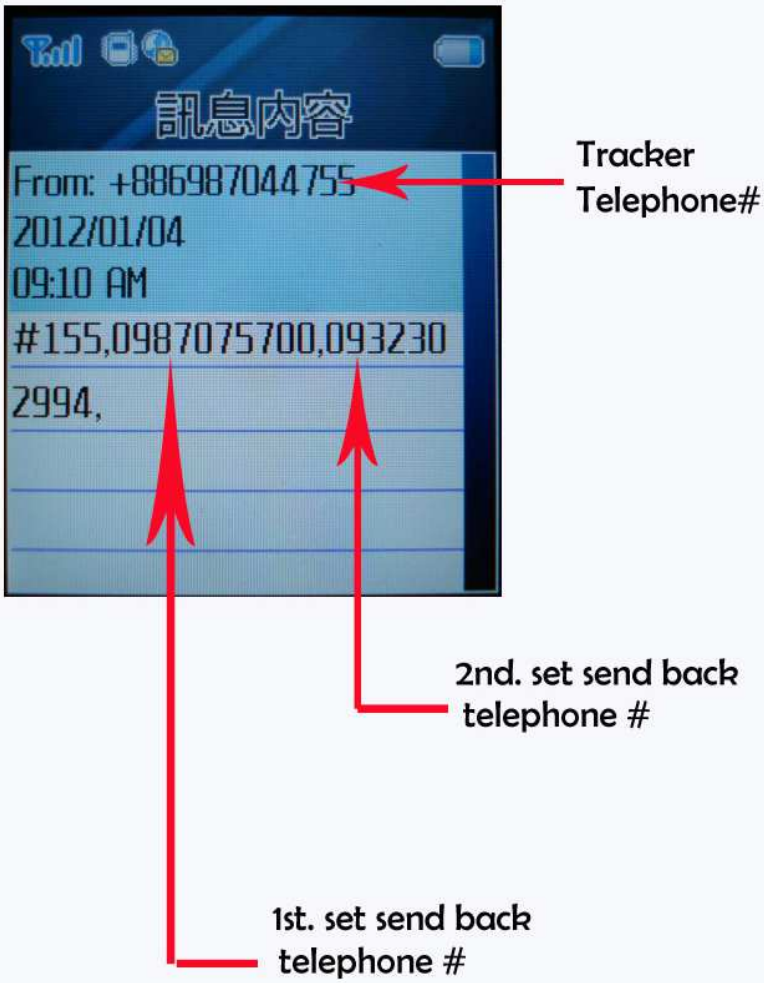


Click the hyperlink to get the real time position

Longtitude
Latitude

The example to send SMS command to the tracker:
Send: #0000,155

You will receive this message:



SMS Command for X seris

SMS command	Interpretation
#0000,100	Get All setting value back
#0000,151,1000000000,2000000000,3000000000	Security Phone Set (10 Max.)
#0000,152,1000000000,2000000000,3000000000	SOS Phone Set (10 Max.)
#0000,153,1000000000,2000000000,3000000000	SMS Phone Set (10 Max.)
#0000,154	Get Security Phone setting
#0000,155	Get SOS Phone setting
#0000,156	Get SMS Phone setting
#0000,200,APN,USER,PASS	Set GSM/SPRS config
#0000,201	Get APN setting
#0000,210,IP or Domain,TCP port,UDP,port,Web port,port select #0000,201,60.250.68.23,9101,9120,1943,1,0,0	Set Server config
#0000,211	Get IP and Port value
#0000,250,SMS,GPRS,LOG,Geo,Alarm,Ring,Speed,Sensor #0000,250,0,30,0,500,60,0,20,6	Set System config
#0000,251	Get Interval setting
#0000,300,Buglar,SOS,GEO,PWCUT,LBAT,Vir,GPS,OPA #0000,300,1,1,0,1,1,0,0,0	Set Send SMS ON/OFF
#0000,301	Get Event setting
#0000,350,SMS_Send,GPRS,GEO,USB,WEB,SMS_Set,KEY #0000,350,1,1,1,1,1,1,1	Set Buzzer ON/OFF
#0000,351	Get Buzzer setting
#000,400,Mode,Hour,Minute,Second,Hour,Minute,Second #0000,400,1,0,5,0,0,5,0	Set Power Saving Mode
#0000,401	Get Power Saving Mode
#0000,460,1	Set Sensor Alarm
#0000,470,5	Bugging Ringing Setting (time)
#0000,00,code,code #0000,00,1234,1234	Set Pin Code
#0000,01,pass,pass #0000,01,0000,0000	Chang Password
#0000,10	GPS Data
#0000,11	Talking Permitted
#0000,12,1 or 0 (1 is cutting)	Relay #1 On/Off
#0000,13,1 or 0 (1 is cuttind)	Relay #2 On/Off
#0000,14	System Reset
#0000,15	Inform Tracker call back to server
#0000,16,1 (1 is activated, 0 is deactivated)	Set GEO Fencing activate
#0000,17,1 (1 is activated, 0 is deactivated)	Set GPS FIX alarm activate

#0000,18,1	(1 is activated, 0 is deactivated)	Set Sensor (Moving) Alarm
#0000,19,1	(1 is activated, 0 is deactivated)	Set Over speed alarm activate
#0000,20,1	(1 is activated, 0 is deactivated)	Set GPS On/Off

Remarks:

1. ON : 1 , OFF : 0

2. * consult the web set up platform (Device Setting)

* Update new firmware

1. Decompress the files.

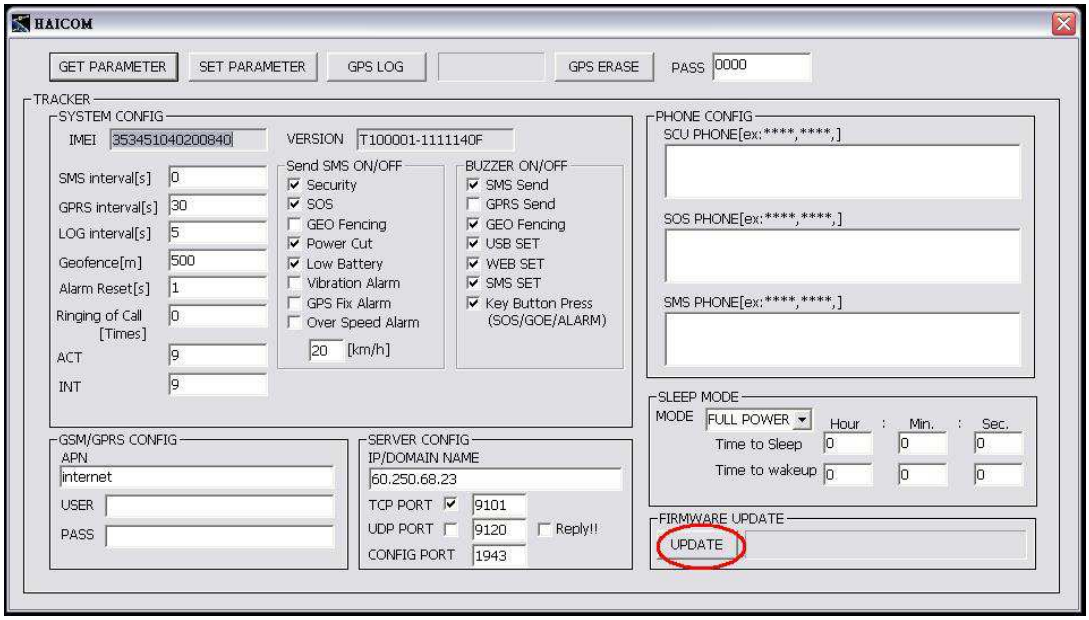
2. Run the TRACKER program

3. Plug the tracker to the computer USB port

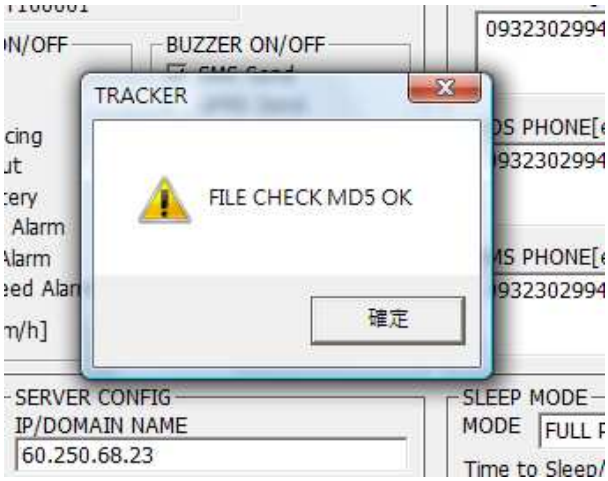
4. Press the GET PARAMETER and see the current settings

5. Press the UPDATE

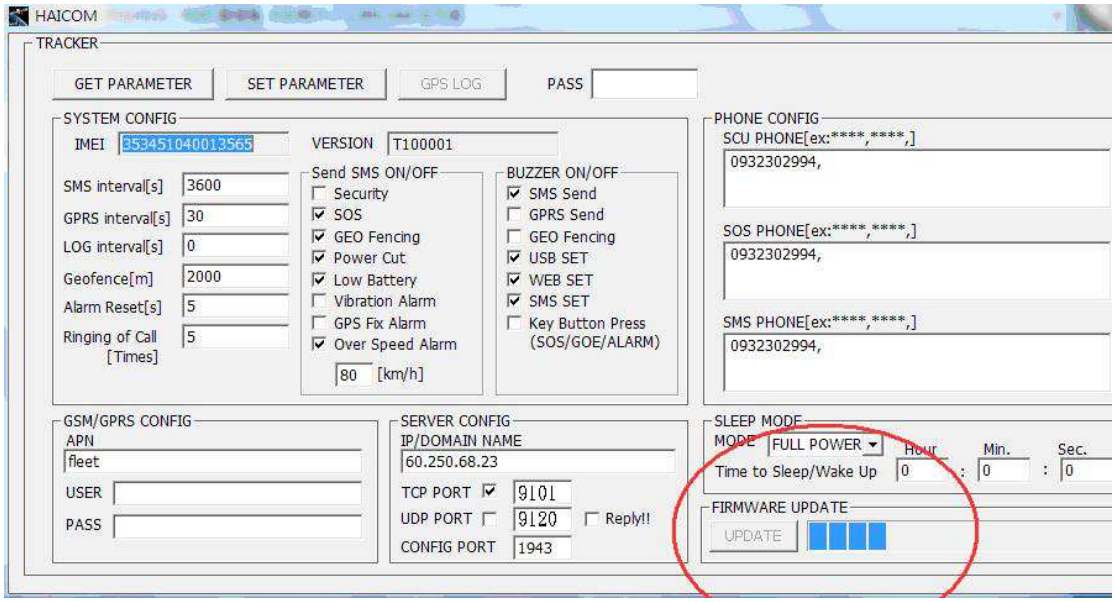
6. Open the firmware (2 files)



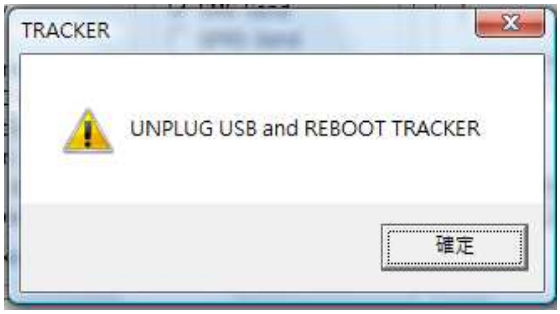
7. Show the below message and click OK



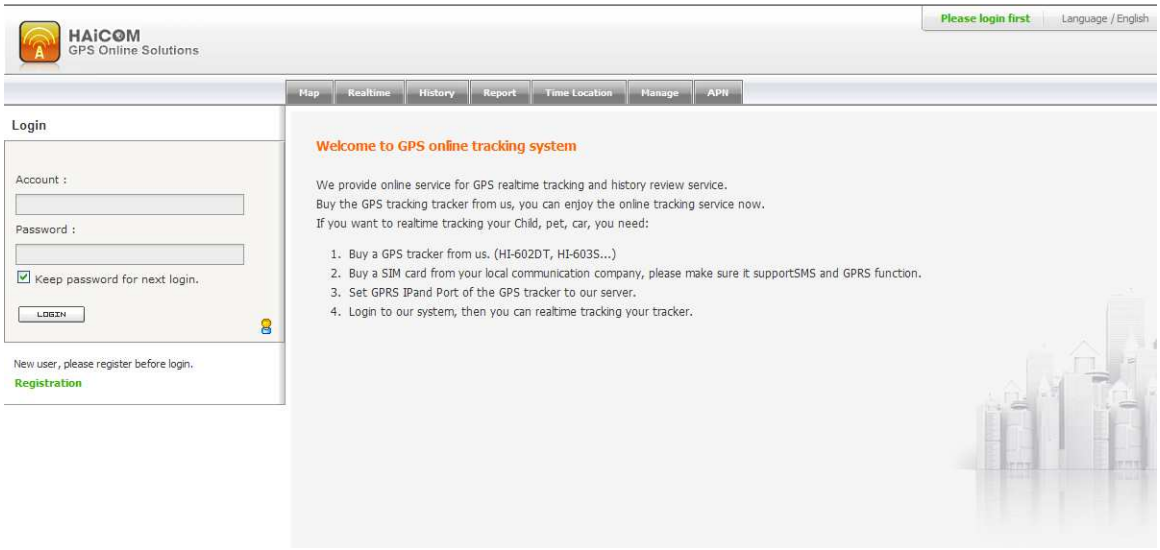
8. The firmware start loading



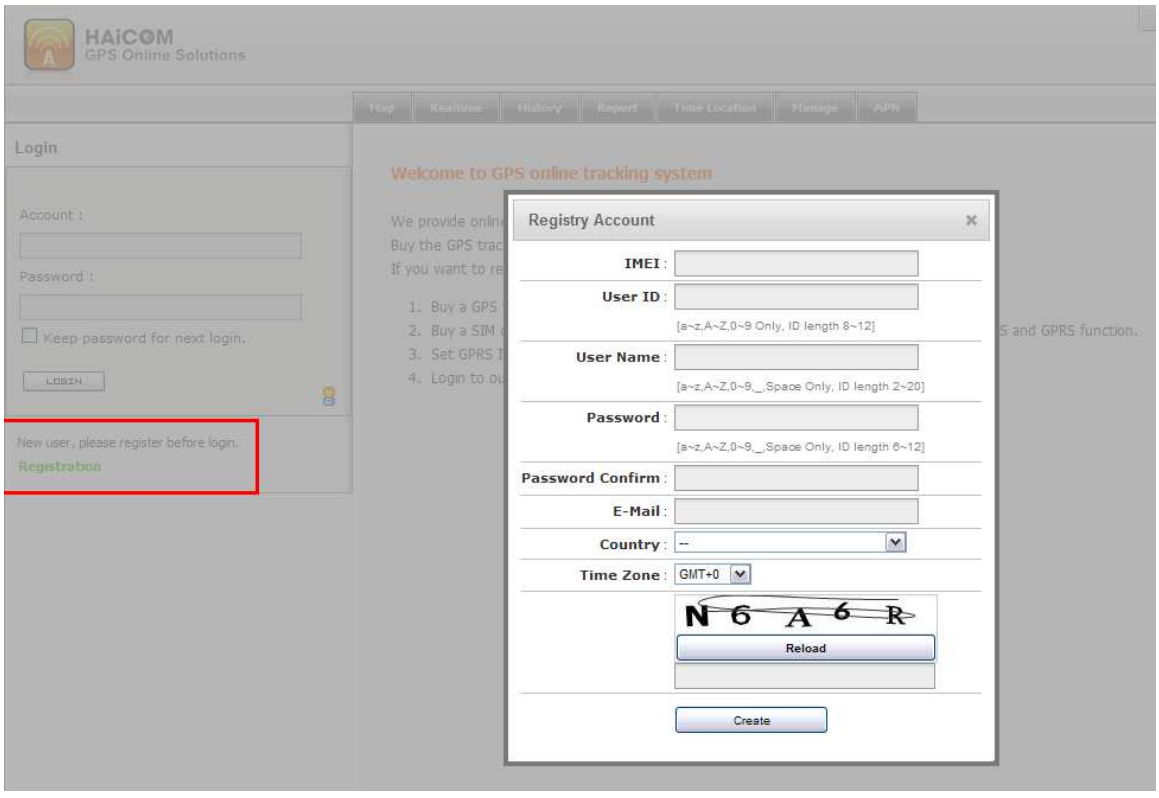
9. The below message shown and press OK



1. **Initial registration from the GPRS web tracking platform:**
   http://www.tracking.haicom.com.tw:8090/

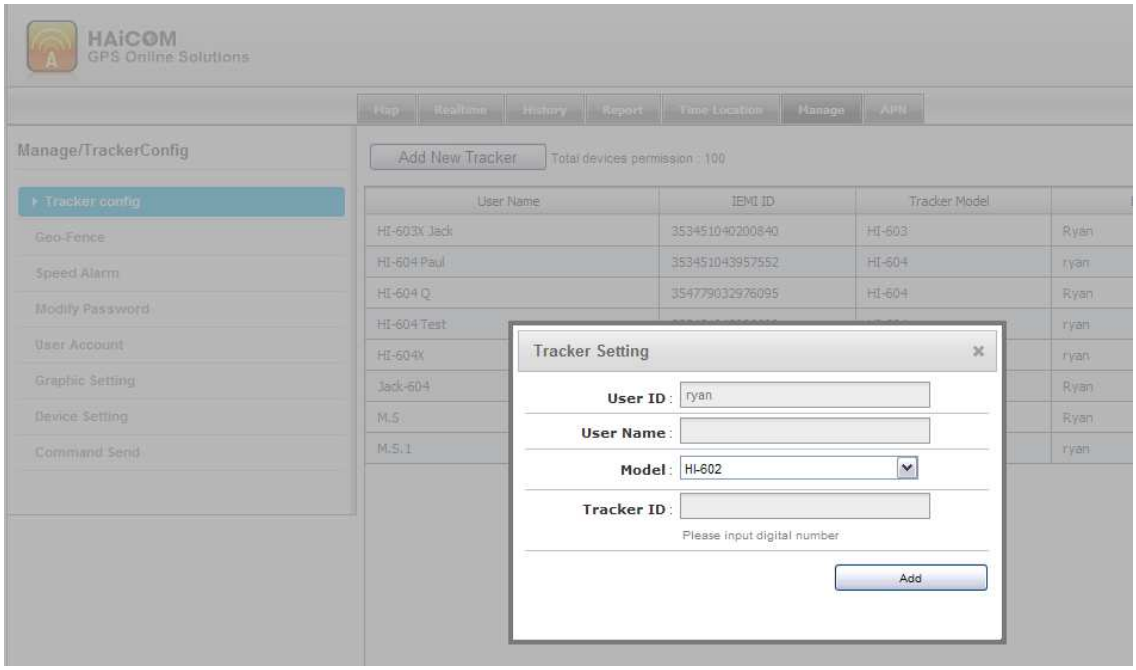


2. **New user; please register before login.**



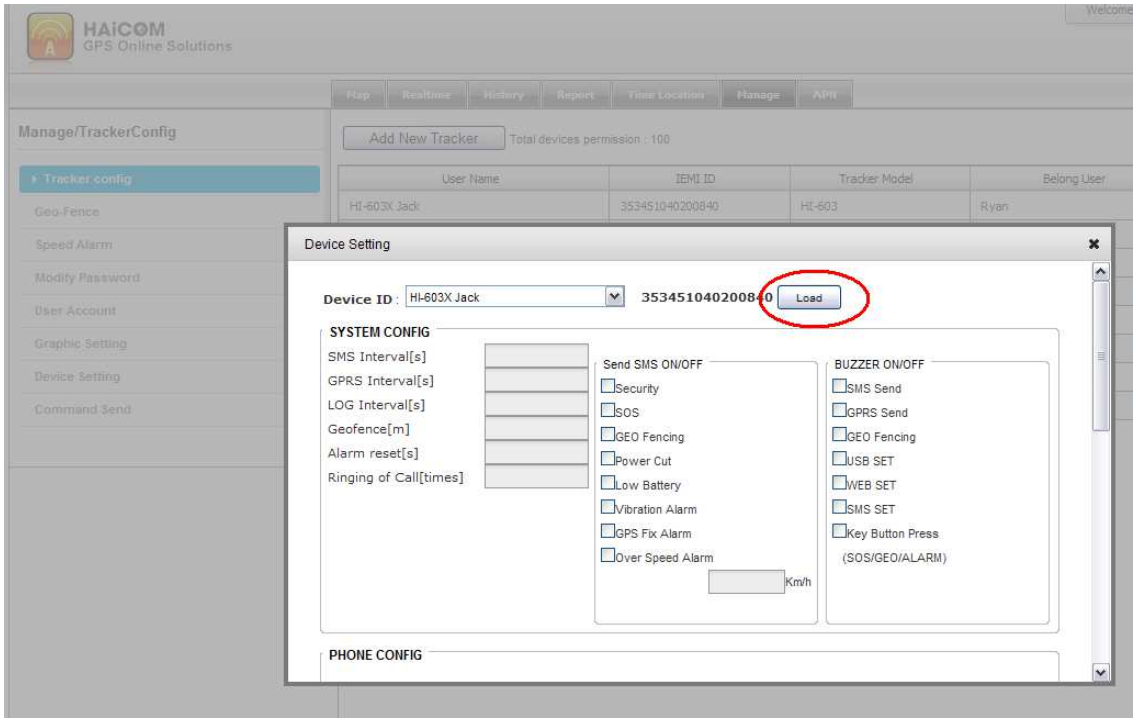
3. The tracker idea # is shown on the bottom of the sticker:

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



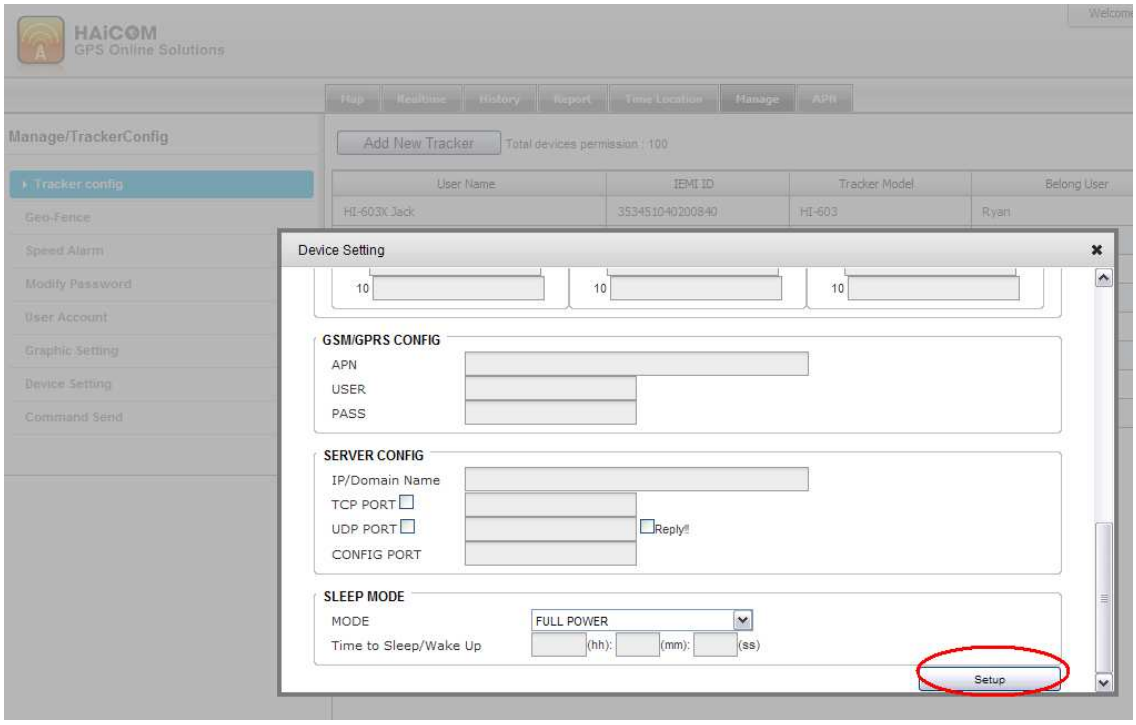
* Program tracker from Haicom GPRS web tracking web site

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**

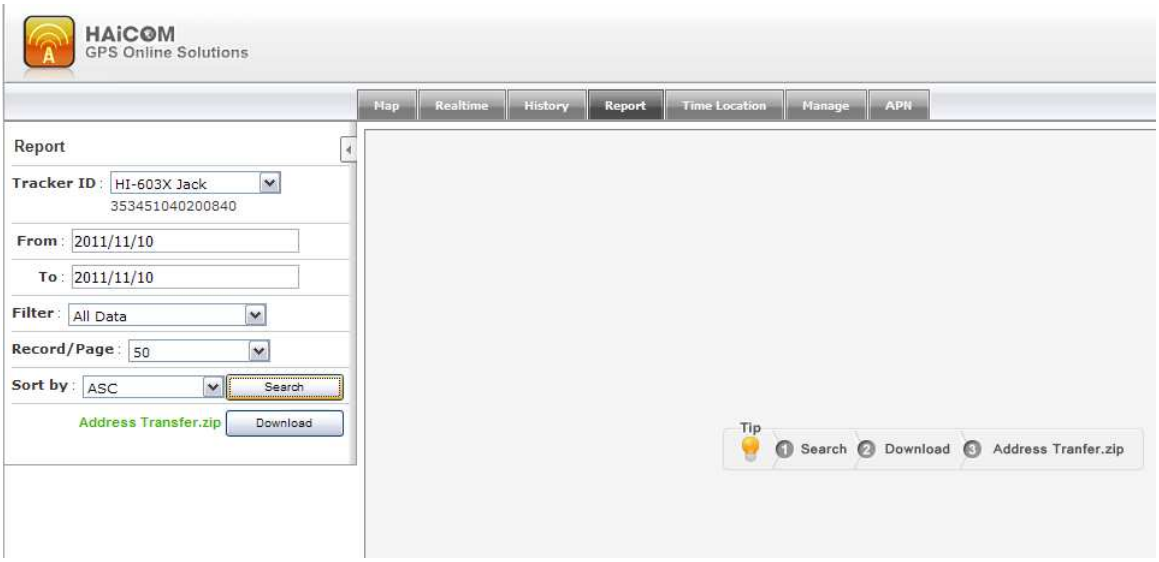


3. **Change the prefer settings**

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



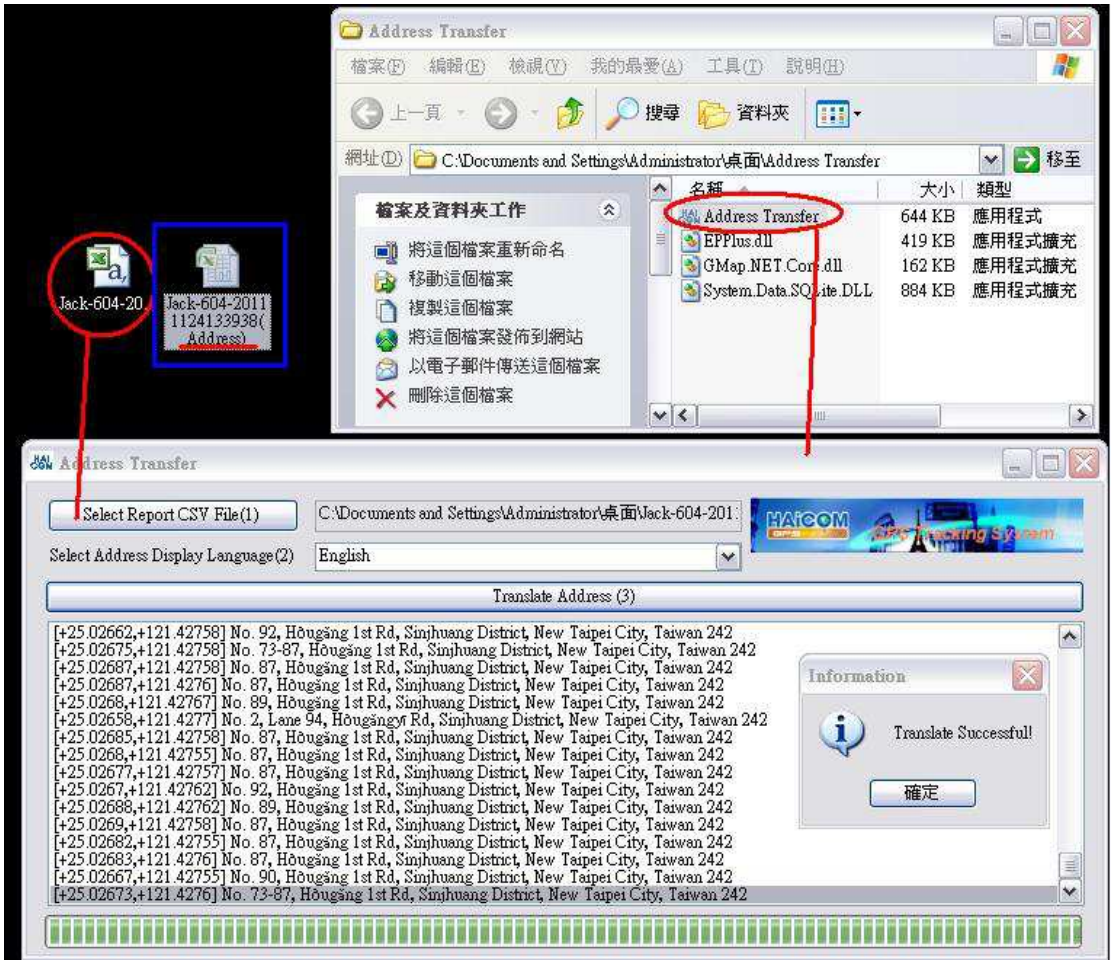
How to generate the detail report print out with address



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.

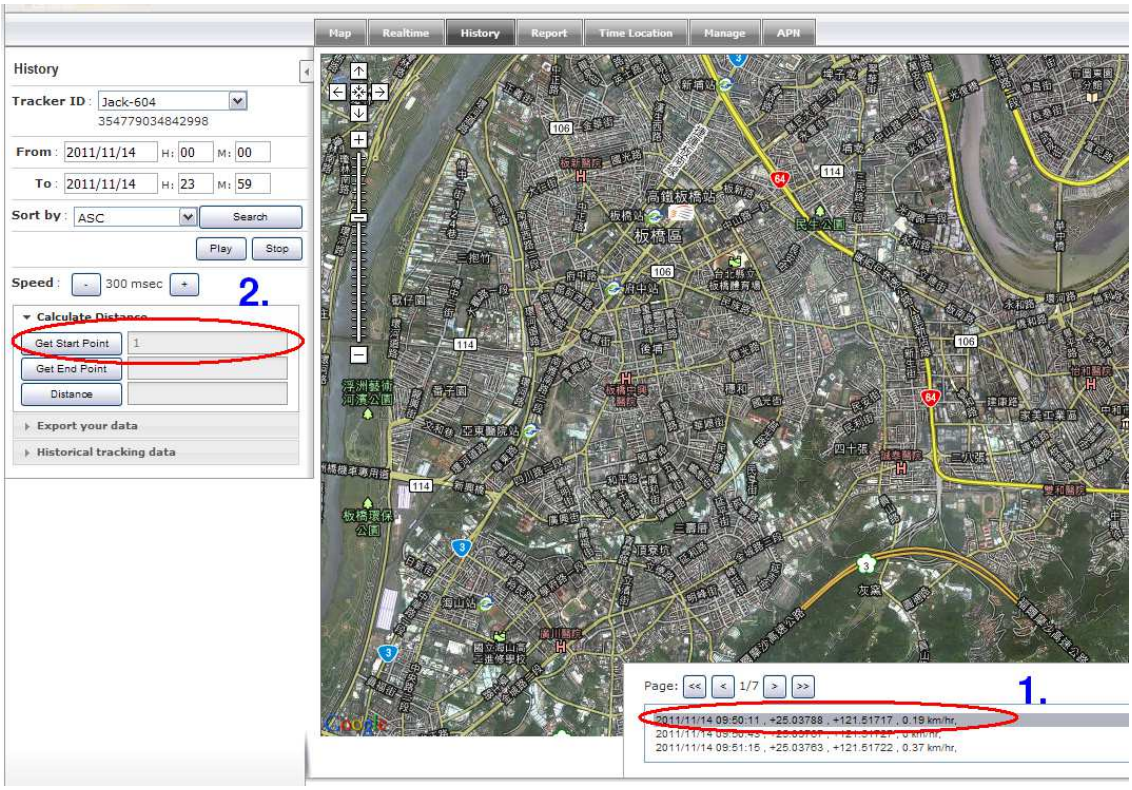
The example of the detail report printout:

	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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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, Jiànbā Rd, Jhonghe 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

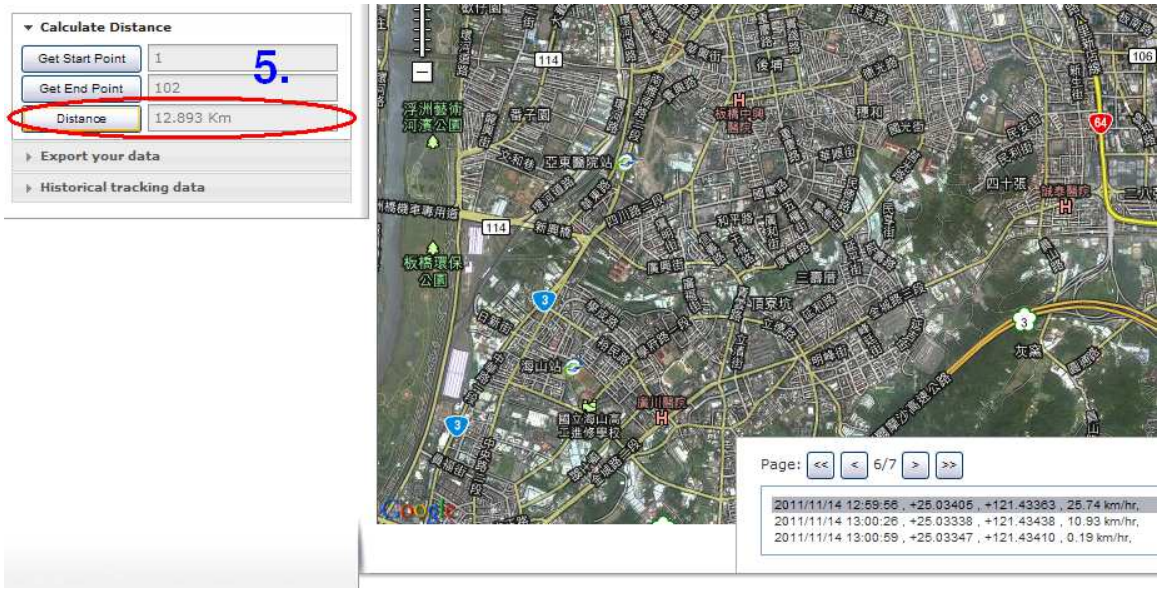
2. Click the start point icon



3. Click the preferred end point

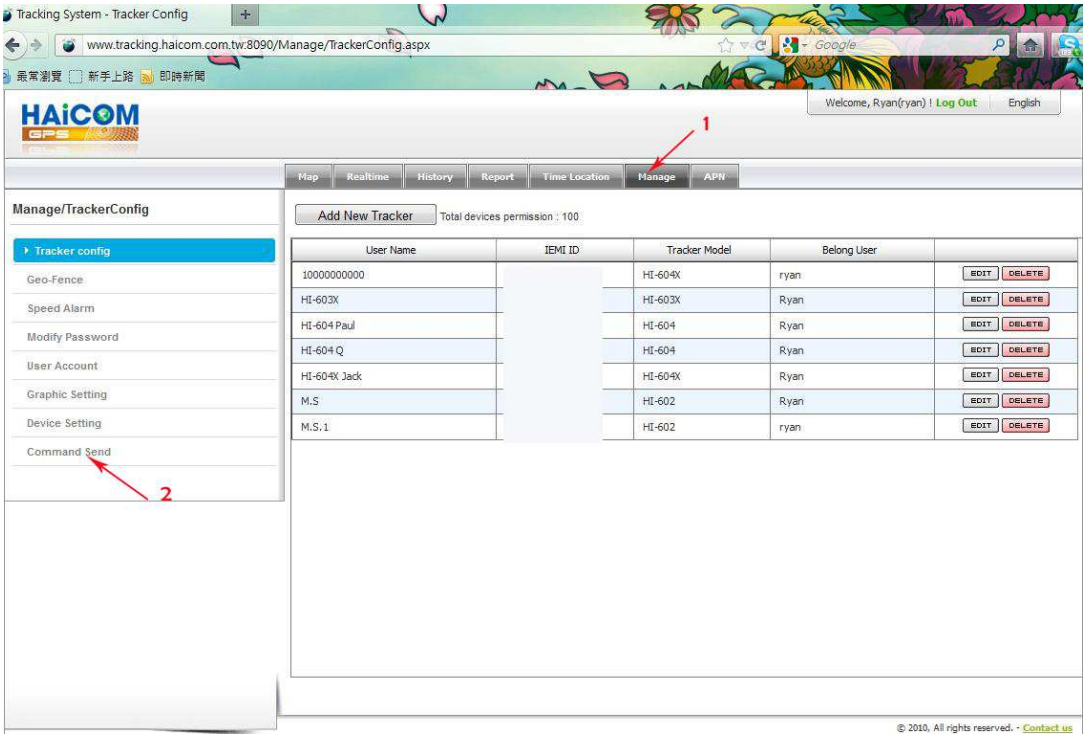
4. Click the end point icon

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



How to send command from the GPRS tracking platform:

1. Click Manage -> Command Send:

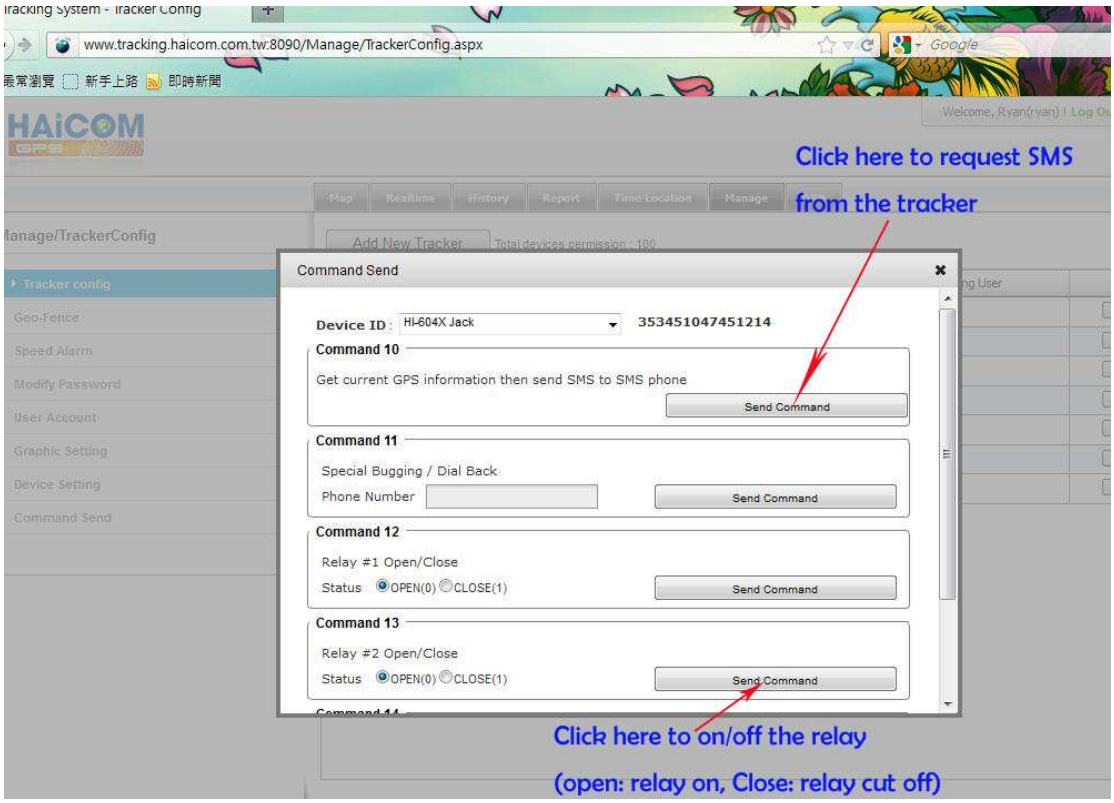


2. Click to send commands from the platform:

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: