

GPS Tracking System

Tracker-007



User's Manual

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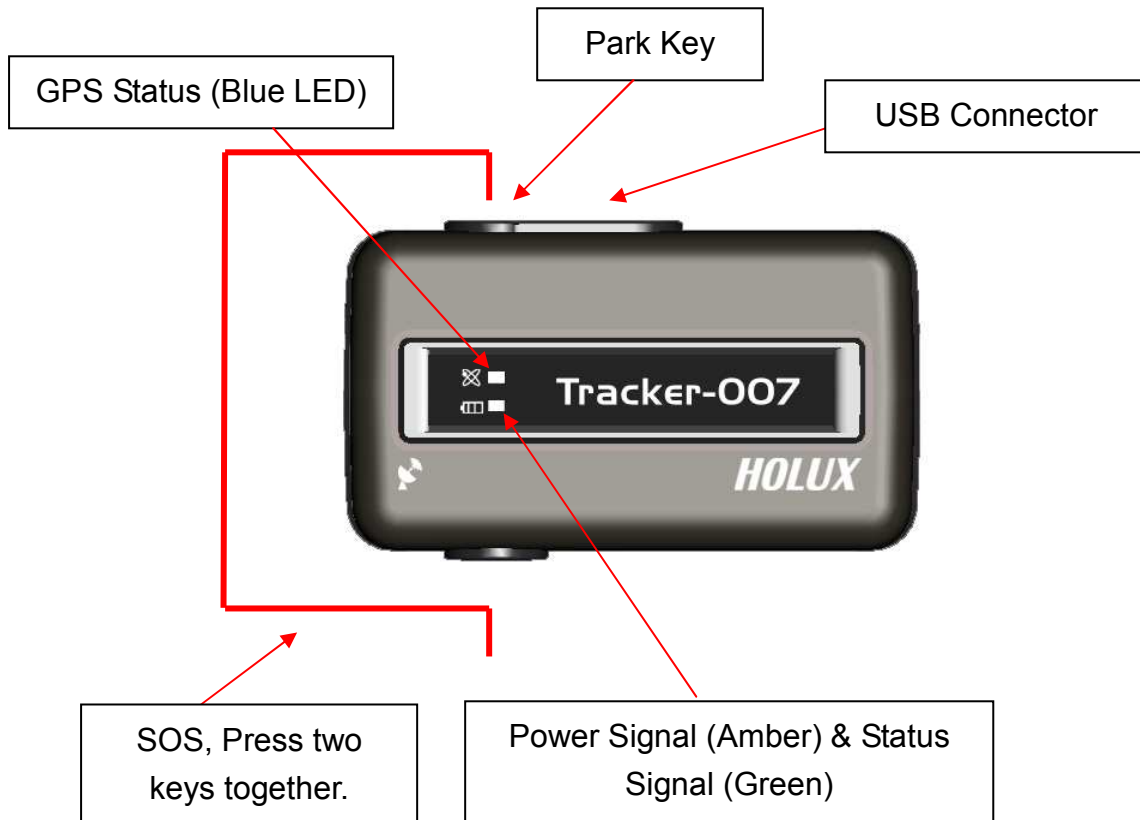
Introduction

Tracker-007 is a multi-functional tracker. Combining with GPRS and high performance GPS, the device can be used to track and report device's position and status to mobile phone through SMS or Main Data Server (MDS) through HTTP. The operation modes include continuous tracking and position lock (park). SOS buttons can be used to send emergency call. All configurations can be set through SMS or USB interface. The wireless communication includes UDP, TCP/IP, HTTP and SMS. With MTK EPO, it can get shorter TTFF at distressed environment.















Application



Parts names and Functions



LED Indication

Item	LED	LED icon /color	Status	Indication
1	Power	 Amber	Blinks every 4 seconds	Battery is low
2		 Amber	Glows steadily	Battery is recharging
3		 Green	Glows steadily	Battery is full
4		 Green	Blinks every 4 seconds	Device is functioning normally
5		 Green	Blink every 0.5 second	Device is powering off when battery is normal
6		 Amber	Blink every 0.5 second	Device is powering off when battery is low
7		 Green	Blink 2 times every 2 seconds	GPRS connection fails or SIM card is invalid when power is normal.
8		 Amber	Blink 2 times every 2 seconds	GPRS connection fails or SIM card is invalid when power is low.
9	GPS	 Blue	Blinks every 2 seconds	Acquisition in process
10		 Blue	Blinks every 4 seconds	Acquisition fails
11		 Blue	Turns off	Acquisition succeed and position is fixed
12	Status	 Amber	Blinks 6 times in 3 seconds. All LED turn off.	SOS mode is activated
13		 Green	Blinks every 2 seconds	Park mode is activated
14		 Amber	Blinks every 2 seconds	Park mode and battery is low

Package Contents

Thank you for purchasing the **Tracker-007** wireless GPS logger. Before you start, make sure that the following items are included in your package. If any of these items are missing, please contact your original local *HOLUX* dealer or distributor.

Tracker-007 Device	1 set
Power adapter	1 set
Car Charger	1 set
USB Cable	1 set
Tool CD	1 pcs
Quick Guide	1 pcs
Warranty Card	1 pcs
Battery	1 pcs
Screw and cap	4 pcs

Before You Getting Started

Possible Additional Fee

- Position request and position response sent by SMS will be charged.
- Each zoom operation will be charged also according to data quantity transferred.

About GPS

- GPS signals are incapable of penetrating solid objects that are non-transparent. The signals will be also be affected by surface cover such as tall buildings, tunnels, elevated expressways, forests etc., or weather conditions such as overcast and rain. If the vehicle is poorly insulated against heat and contains metal parts, GPS signals will not be able to penetrate.
- All wireless communication devices such as cell phones, or traffic police speed detectors can interfere with the reception of GPS signals and results in unstable signals.
- To get position fix successfully, please hold the GPS logo or function key up for better signal orientation.
- There is no guaranty that SOS message will be successfully sent at distressed environment where GPS or GSM signals are weak.

About Power

- Though this device is USB compliant and can be bus powered, it is NOT recommended to charge the device though your computer via USB connection. The manufacturer disclaims any liabilities for damage to the handset or personal PC caused by any improper use.
- It takes 5 ~ 120 seconds for the device to be completely powered off. If the device is in the process of acquiring position fix or position report, the power-offing will not be performed until the previous process is complete.
- Tracker-007 cannot be powered on if battery voltage is below 3.5 volts.

For XP SP3 Users

- Due to the incompatibility problem between Windows XP SP3 and the virtual Comm port of Windows driver, **usbser.sys** for XP SP2 is required for XP SP3 users to install the utility. For more information, please refer to FAQ at <http://www.holux.com>

About SIM PIN Code & GPRS

Notice: SIM PIN should be unlocked before being inserted into the device. SIM PIN can be disabled through ordinary mobile phone.

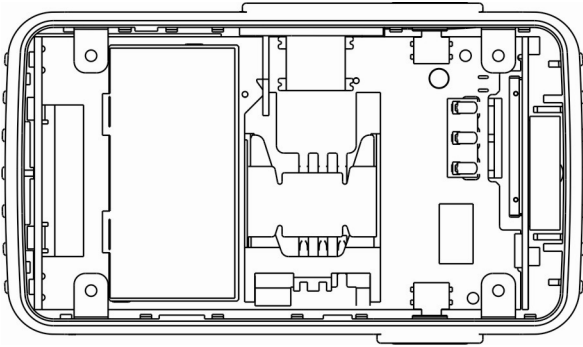
- SIM card GPRS function enabled is required for normal operation.
- The default PIN code in device is 0000. If SIM lock is enabled and password is incorrect, power on/off device three times will make the SIM card locked permanently. Only PUK code can unlock the SIM in such case. If SIM PIN is enabled, make sure the PIN code is set to device by TrackerConfig. The PIN code set will be saved in non-volatile memory.
- If the SIM card is not inserted or SIM card is invalid, position fix function will be disabled.
- Google map installed in your cell phone will be downloaded by GPRS automatically when ezSpot is well installed.

Download documents, Driver and Utility

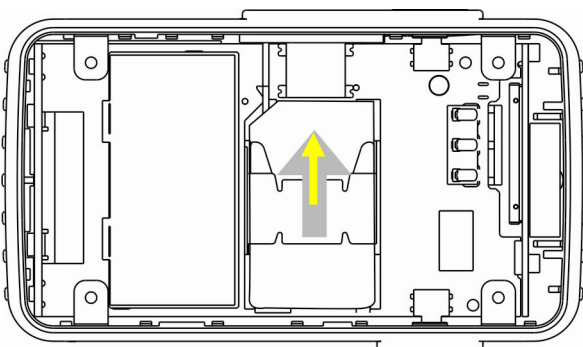
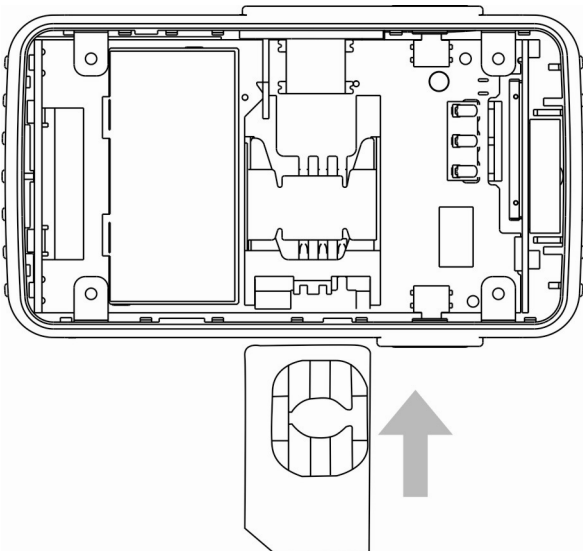
All related documents, driver and utility programs can be downloaded from the ezSpot server at <http://ezspot.holux.com/Holux>.

Installing SIM Card and Battery

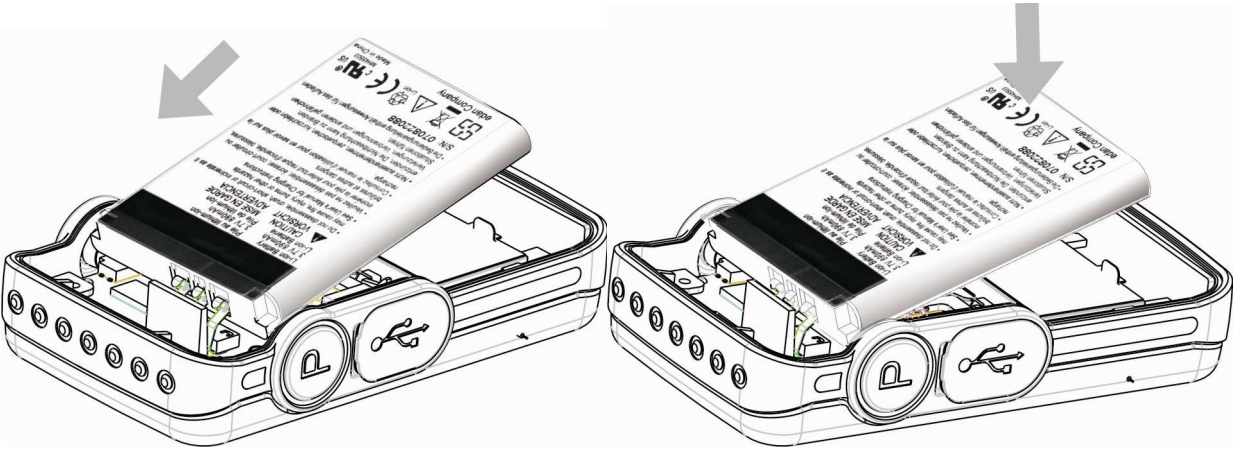
Tracker-007 without SIM card, battery and bottom cover



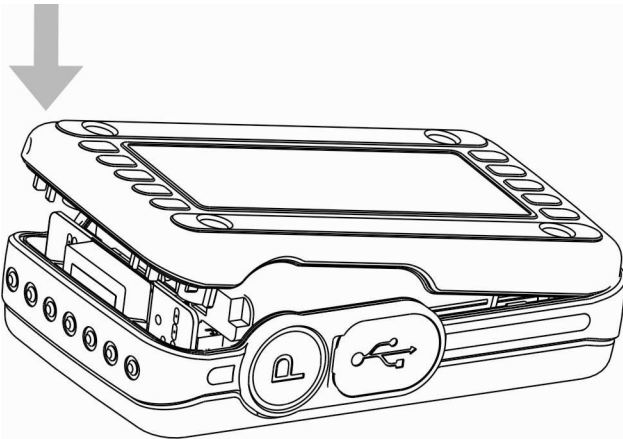
- Slide the SIM card into SIM socket and lock the SIM socket.



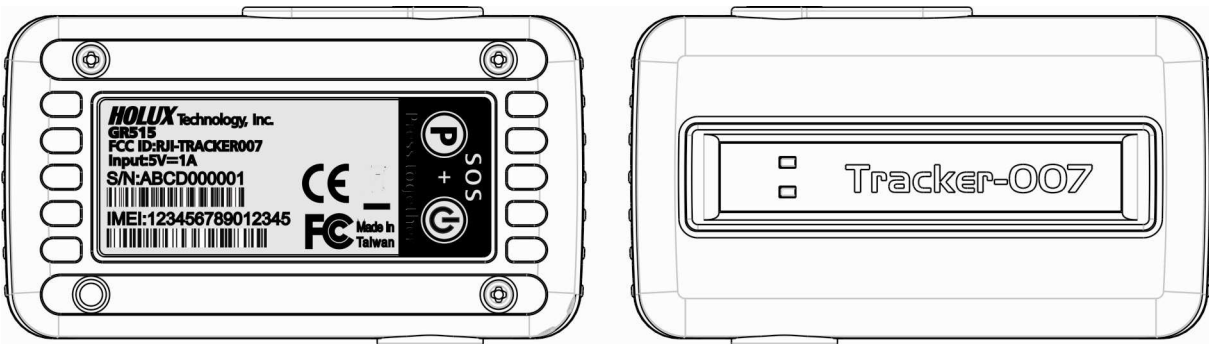
- Install the included battery into **Tracker-007** as the arrow sign shown; see below.



- Restore the bottom cover.



- The final assembly of **Tracker-007**. Secure the case by fastening the screws and inserting cap for water proof.



- Make sure that battery is fully charged before using this device.

ezSpot Service

- **ezSpot Service** is a multi-functional Holux tracker system which includes ezSpot in mobile phone and ezSpot server at internet. ezSpot can work with Tracker-005 and Tracker-007 from Holux. The compatibility will be guaranteed for Holux products in the future. There are three position report operation modes in tracker: ezSpot, ezSpot server or both. In ezSpot mode, user can change settings in and request real-time position from Tracker through mobile phone. For ezSpot server mode, tracker will report position to server through HTTP. For third operation mode, tracker will report position to both ezSpot and ezSpot server. The operation mode can be set by PC utility program TrackerConfig through USB connection.
- **ezSpot server** provides log history for user to view through web browser. Please access more service from <http://ezspot.holux.com/Holux/>. Updated driver and utility programs can be downloaded from ezSpot server also. Please register with email and IMEI to get access of the server and its services.
- For more information please refer to “Holux_ezSpot_User_Manual”

User Utility (TrackerConfig)

Note: Power on Tracker-007 before plugging in USB cable and connecting with TrackerConfig. Configurations can be set or read correctly only after system initialization being complete.

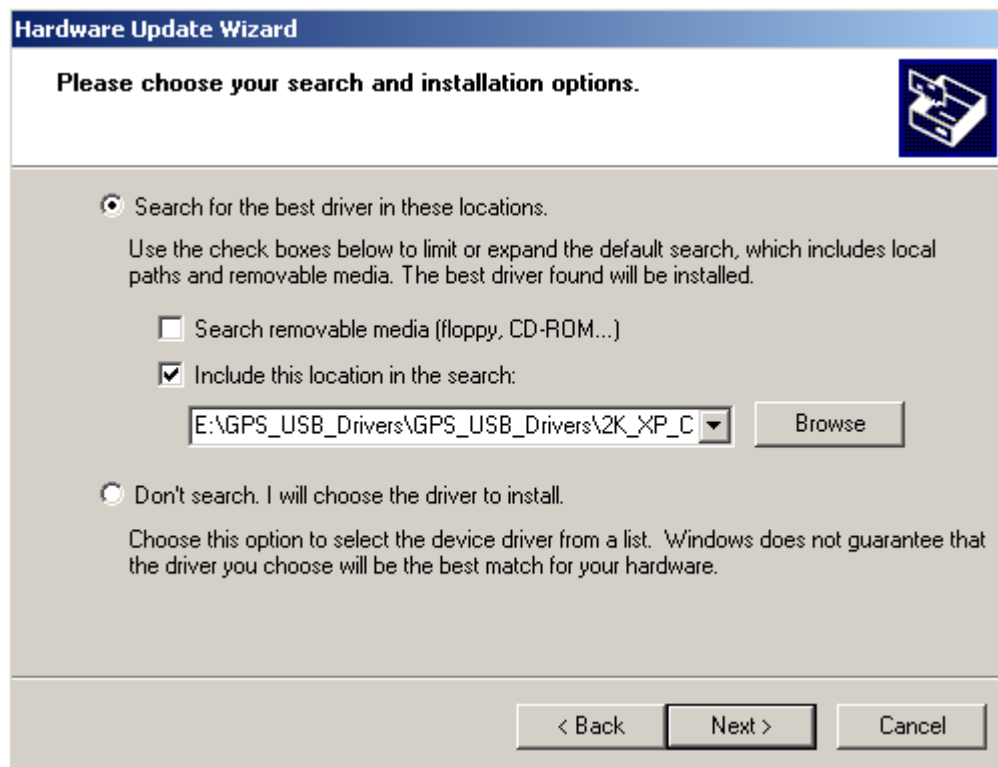
The Tracker-007 enable users the communication with mobile phone through SMS as default. Through this utility program, Tracker-007 can be configured to communicate with ezSpot server through HTTP. Continuous tracking mode can be enabled to make device getting position fix and report to server at preset interval. The APN and server domain name can be set for internet connection. The SIM PIN can be enabled or disabled. SIM PIN code can be changed by the utility also. The program can run only for Windows OS. No support for Linux or Mac OS.

Installing Device Driver for Virtual Comm Port

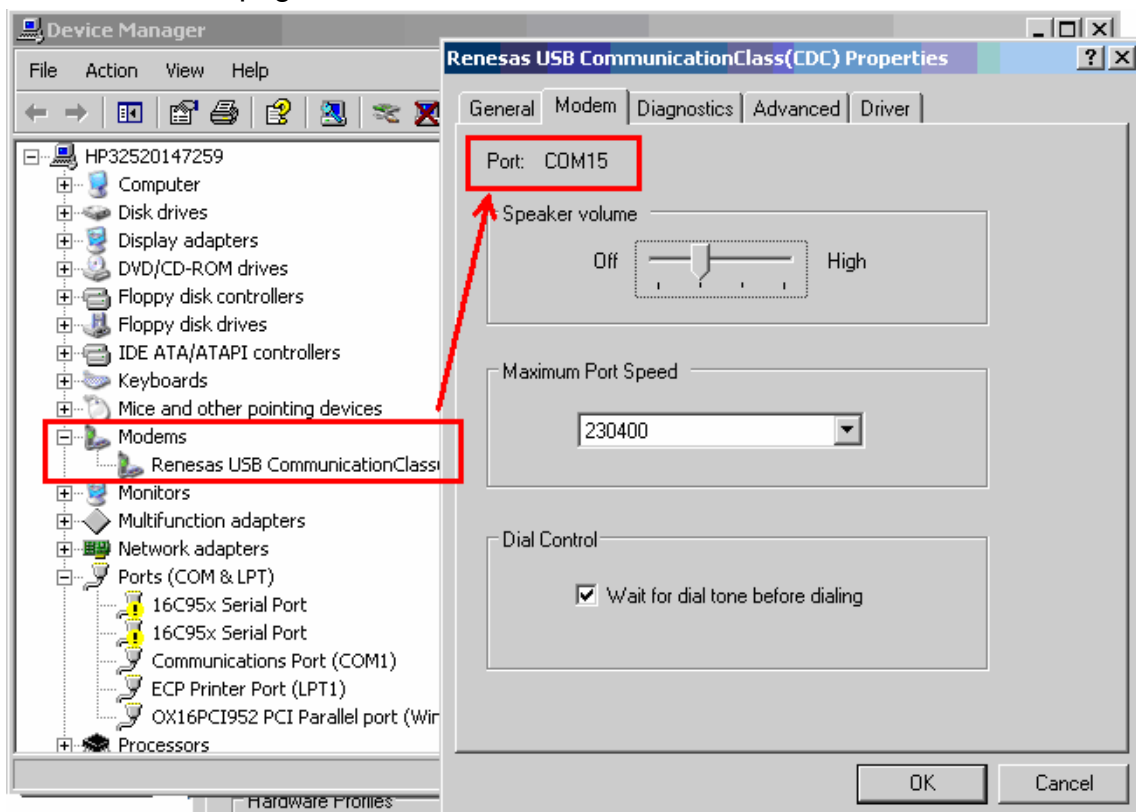
Plug in 5-pin mini-USB cable. When connecting the device first time, OS will request to install the virtual COMM port driver.



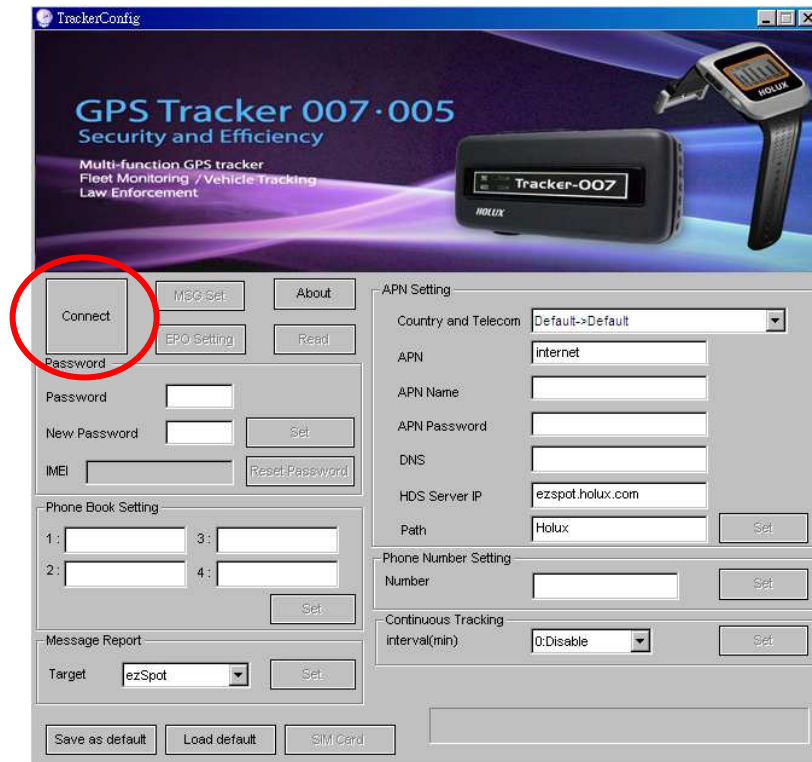
Please choose Win2XMcom.inf for Windows XP (SP2 and earlier version) and Win2XMcom_Vista.inf for Windows Vista.



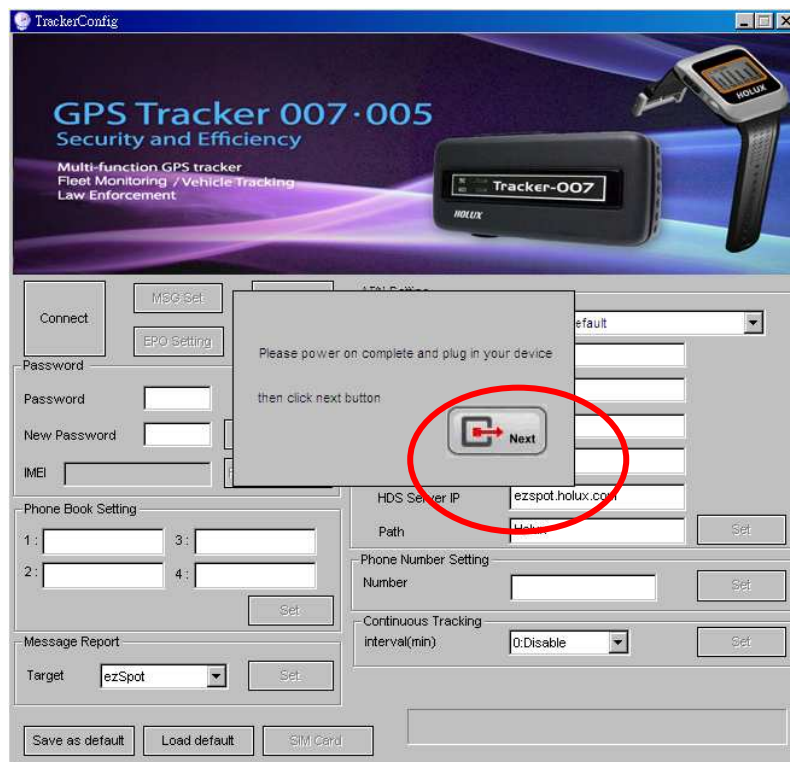
A new MODEM device in device manager will appear after installation. Check Comm port number from Modem page.

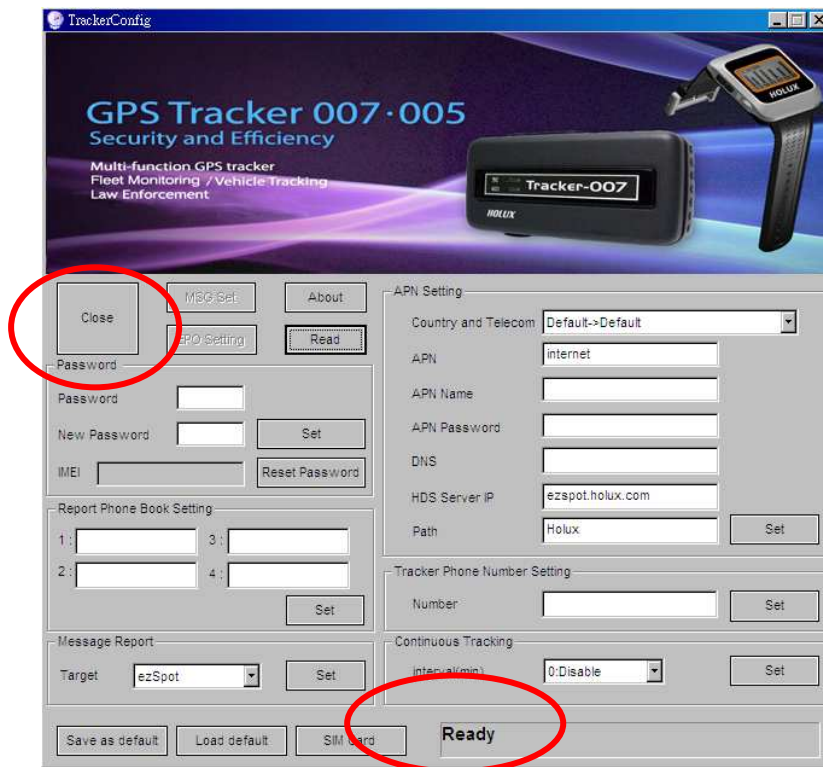


Parameter Setting and Retrieval



Press “Connect” button. After program connecting to the device, it will show a “Next” message in new Diagnostic page and the button name will be changed to “Close”.

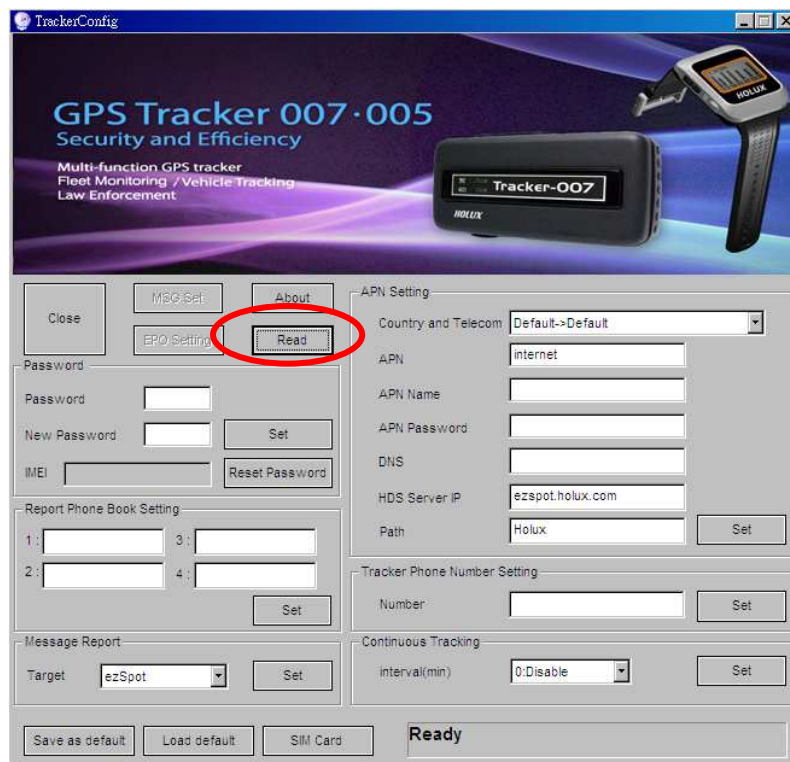




If SIM card is not detected or is locked, “Ready” will not be shown on message frame.

Read Device information

Check “Read” button will get all information in device.

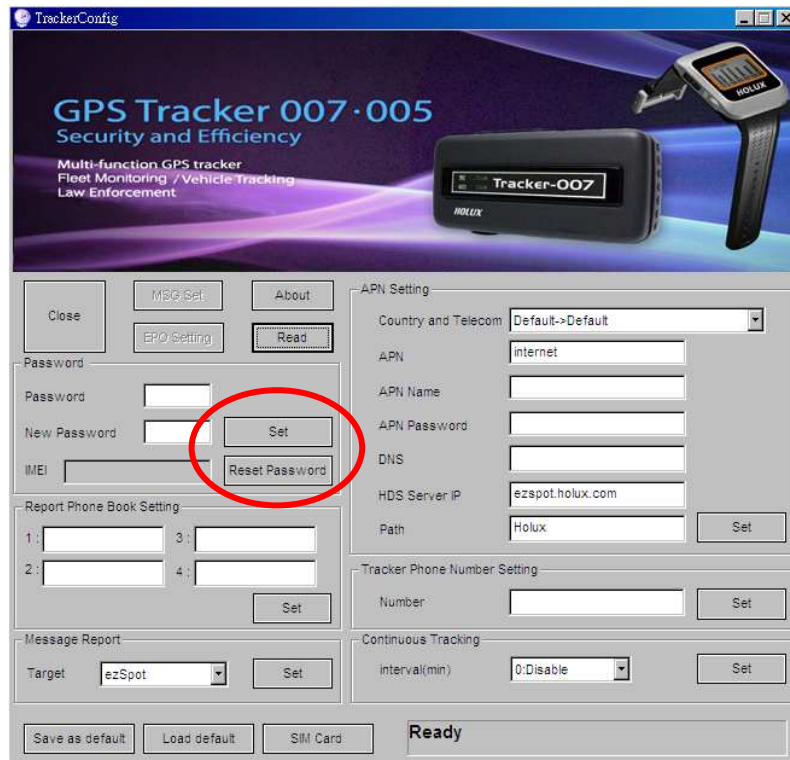


Change Password and Reset Password

Press “Set” button in password group to change password.

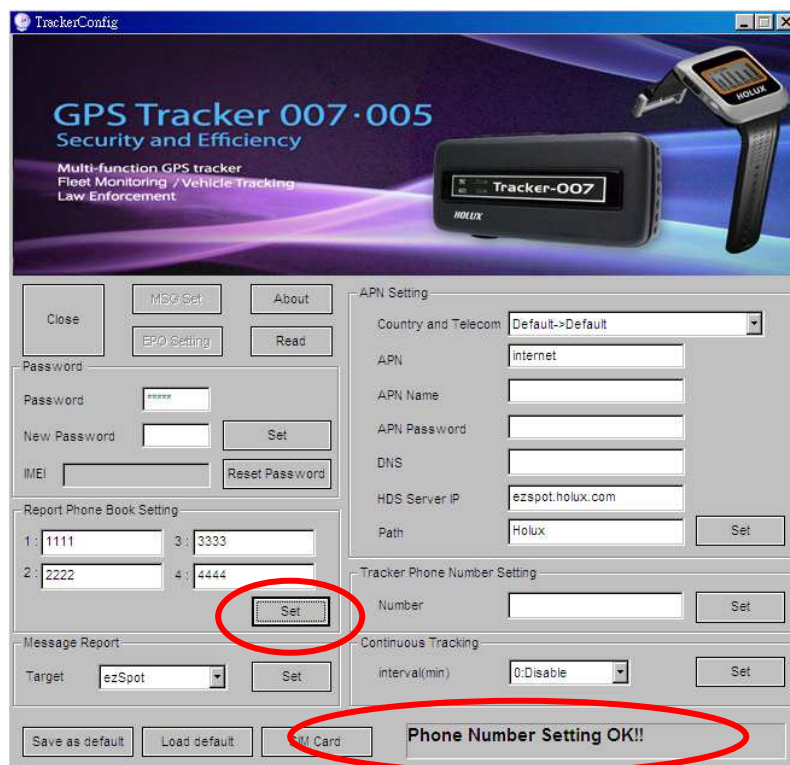
Execute “Reset Password” button will reset password to default “12345”. This function can

be used when password is forgotten.



Report Phone Number Setting

There are 4 phone numbers that can be set. Device will respond position request if caller phone number is in the list.



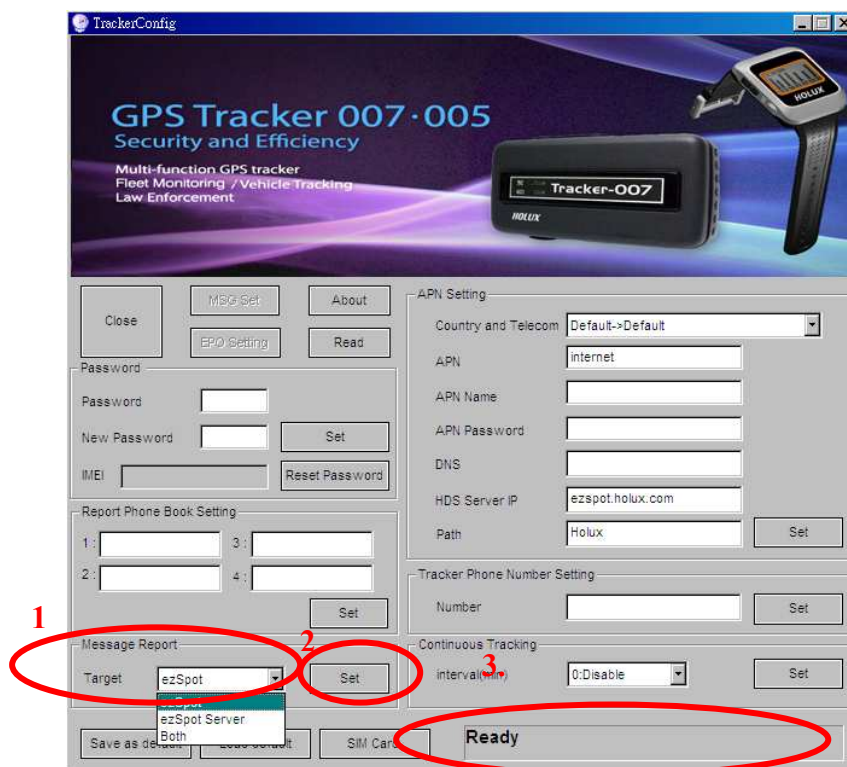
Message Type Setting

The function can be used to set parameter for report target. Tracker-007 can report position to ezSpot in mobile phone or ezSpot server

[ezSpot]: Tracker-007 will send position to ezSpot through SMS.

[ezSpot Server]: Tracker-007 will send position to ezSpot server (or MDS) through HTTP.

[both]: Tracker-007 will send position to ezSpot through SMS and ezSpot server through HTTP.



APN Setting

This item is to get and set MDS server setting.

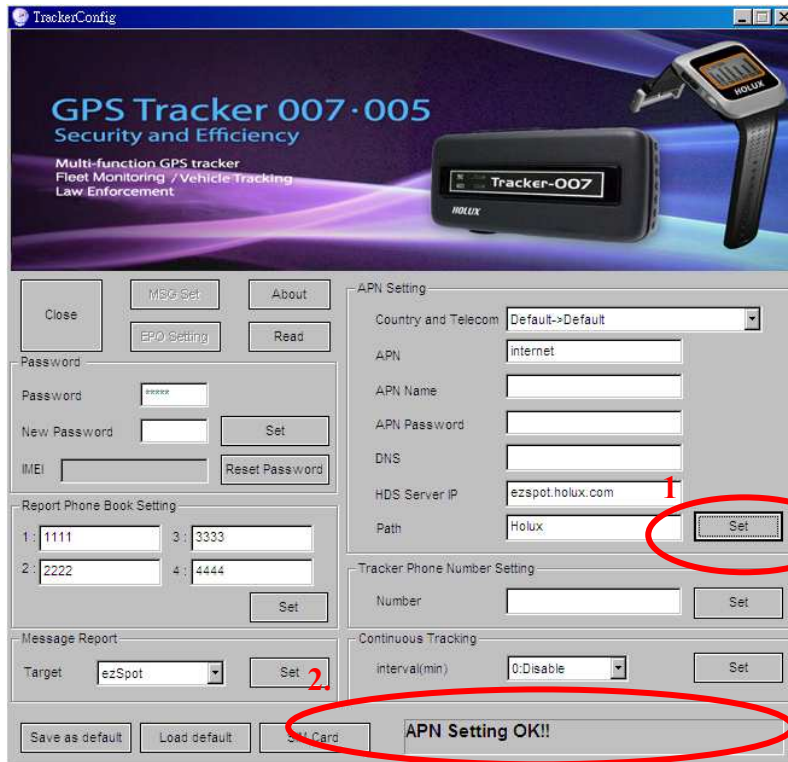
[APN]: This indicates Access Point Name

[APN User Name]: This indicates the user name for APN.

[APN Password]: This indicates the user password for APN.

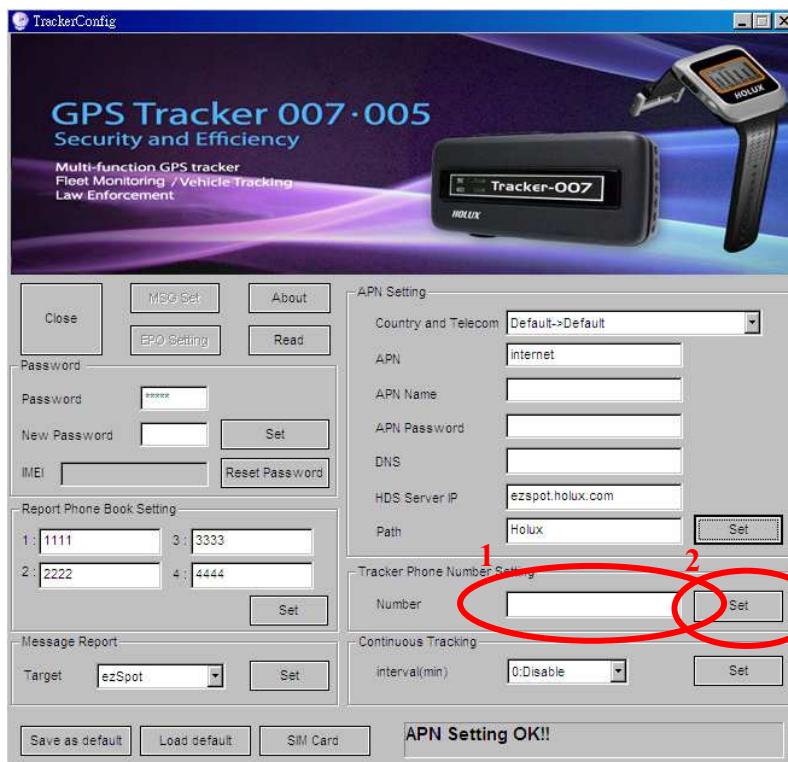
[APN DNS]: This indicates the APN domain name server.

[MDS Server IP]: MDS (or ezSpot server) IP or domain name. Default is "ezspot.holux.com". The parameters will be set automatically by selecting Country and Telecom. Default will be "internet". Manual input changes are allowable if necessary.



Phone Number Setting

[Number]: Number (MSISDN) is the phone number of SIM card in Tracker-007.

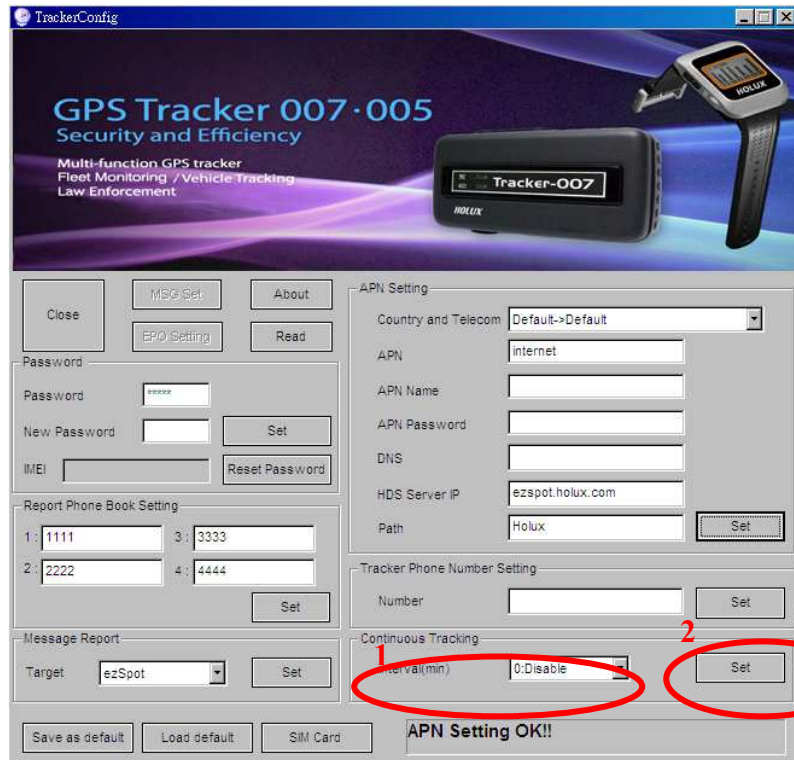


Continuous Tracking

[Continuous tracking setting]

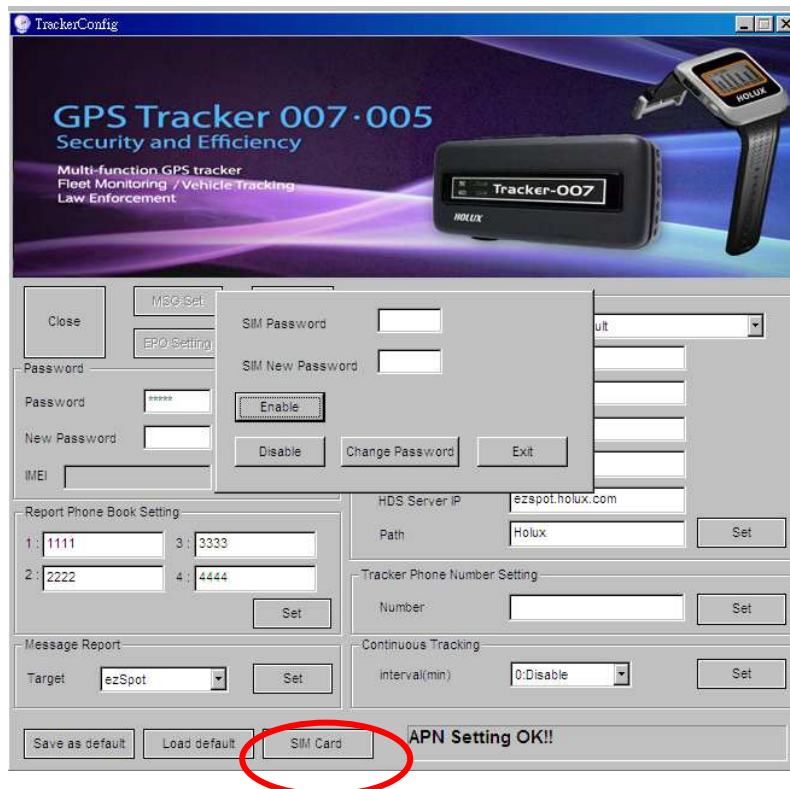
In continuous tracking mode, Tracker-007 will report position to ezSpot server at the preset interval.

[Interval (min)]: This is the duration, in seconds, for which continuous tracking needs to be done. If 0 is passed to the continuous tracking.



SIM PIN

SIM PIN can be locked or unlocked through “SIM Card” function. SIM PIN code can also be changed. It is recommended to set SIM PIN in unlock mode to prevent SIM card from entering locked state.



EPO Setting

EPO data can speed up TTFF at weak GPS environment. User can enable or disable this function. Device will update EPO data every three days.



Basic Operation

Turn on Tracker

Press the power key for more than 2 seconds to turn on the device. Green LED will flash every 4 seconds during the process. The device will try to attach during power on stage. It will take about 60 seconds to complete.

Turn off Tracker

Press the power key for 2 seconds to turn off the device.

Position Request

Press “Find Now” in menu using ezSpot

Enter the correct “Password” and “Tracker Tel. No” for tracker. Press “Find Now”.

Java phone

Mobile phone

- Mobile phone will call Tracker-007.
- Tracker-007 will start to acquire position if caller phone number is one of the 4 phone numbers pre-configured in the setting.
- Once the position is acquired and fixed, Tracker-007 will report the current position.
- Tracker-007 will report the latest position if position fix fails.



Java phone



Mobile phone

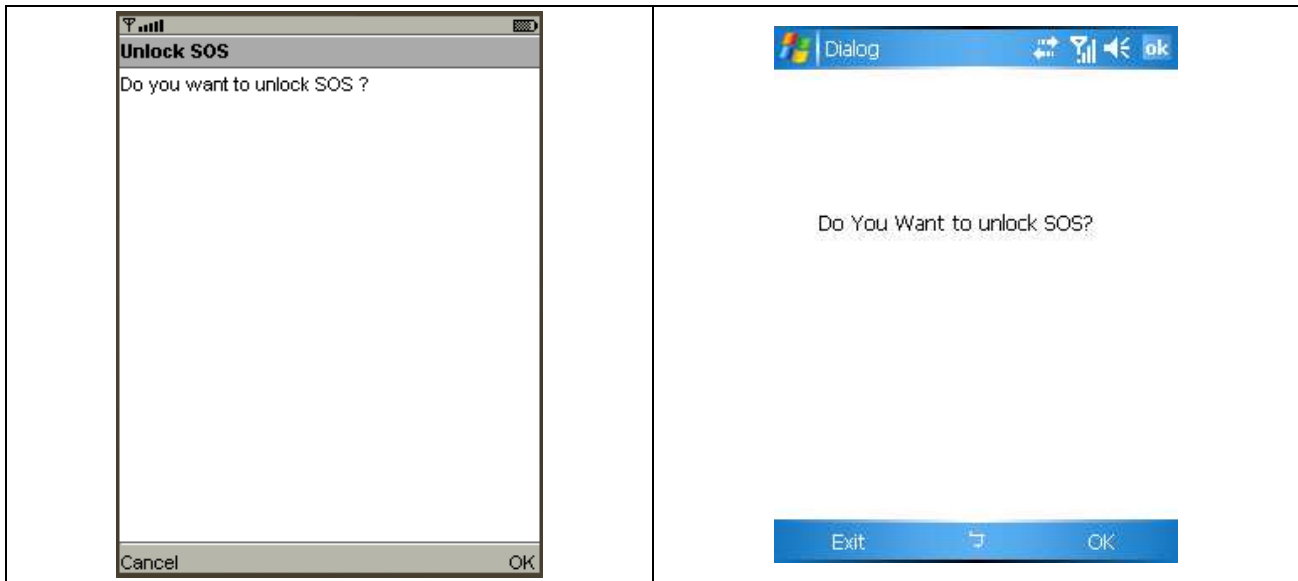
Position Lock (Park)

- Pressing park key for more than 2 seconds will activate the park mode. Green LED will blink every 2 seconds in park mode.
- Blue LED blinks every 2 seconds when device is getting a position fix.
- Tracker will continue to get a position fix every 5 minutes to check if it is within park range. Only when park state is violated will device sent out the message.
- Tracker will use the first successful position fix as park center.
- Depending on the message type setting, Tracker will report position when park is violated to ezSpot with phone number 1, ezSpot server or both.
- Pressing park key again will release the park mode and Tracker will be back to the previous operation mode.
- Pressing two keys simultaneously in park mode will change device into SOS mode. Park mode will be stopped.

Emergency Report (SOS)

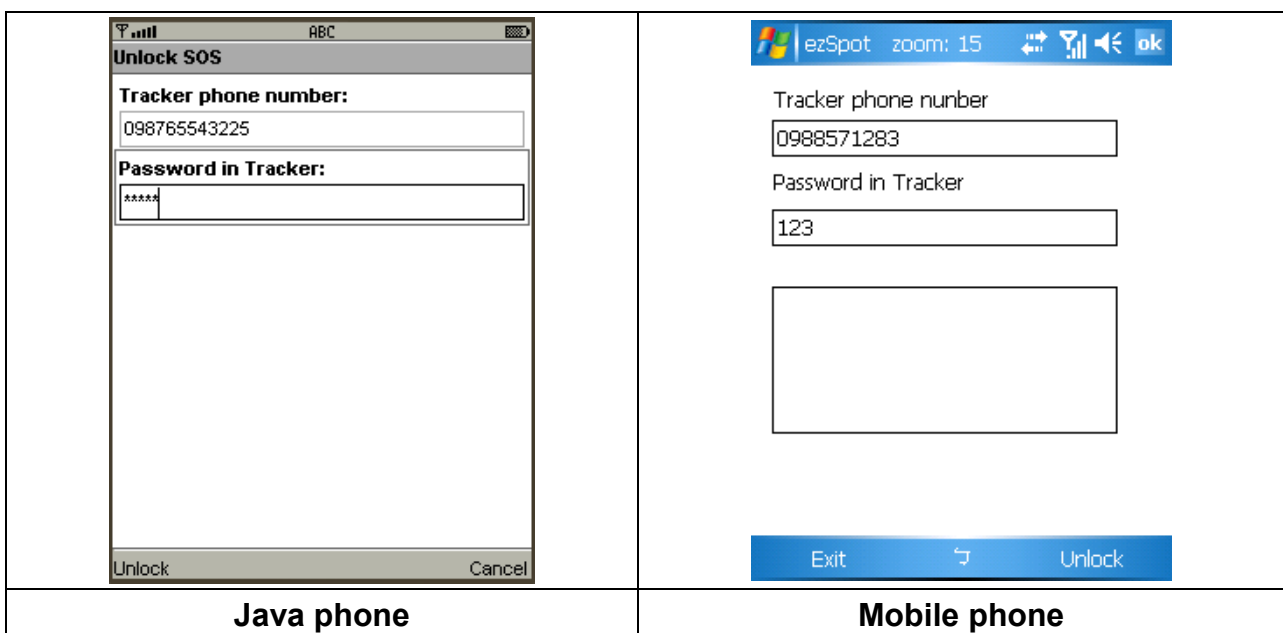
- Pressing two keys simultaneously for more than 2 seconds will activate SOS mode. Tracker will try to get a fix immediately and send SOS signal.
- When SOS is activated, all LED's will flash 6 times within 3 seconds. Then all LED's will be OFF.
- Depending on the message type setting, Tracker will report position to ezSpot with phone number 1, ezSpot server or both.
- SOS mode will keep running until out of battery and can only be unlocked by mobile phone "SOS unlock" message.
- If position fix fails, device will send the latest position.

- Pressing two keys again will restart SOS process and LED's will flash 6 times again.
- SOS mode has the highest priority. Power off function is non-functional during SOS mode.



Java phone

Mobile phone



Java phone

Mobile phone

- When ezSpot in mobile phone receives Tracker-007 SOS message, it will display SOS location of Tracker-007 for 10 sec, then the Unlock SOS screen appears.
- Click Unlock to unlock SOS.
- Click Cancel/Exit if you don't want to unlock, the SMS screen re-appears.

Terminology

EPO	Extended Prediction Orbit, predicted ephemeris data specific for MTK chip solution..
MDS	Main Data Server, device will send position information to server through HTTP message
MTK	Mediatek Inc.
SMS	Short Message Service
TTF	Time to First Fix
ezSpot Service	ezSpot Service is a multi-functional Holux tracker system which includes ezSpot in mobile phone and ezSpot server at internet.
ezSpot	ezSpot is the tracking service program running in Java and Windows Mobiles phones.
ezSpot server	ezSpot server is demo tracking service web site at Holux. Domain name http://ezspot.holux.com/Holux

Appendix A. Specifications

Physical Characteristics

5-pin Mini-USB connector with USB virtual COM port

Dimensions: 76 x 42.5 x 20 mm

Weight: 69 g

Keys: power and park key

Operation temperature: -10 °C ~ 55 °C

Storage temperature: -20 °C ~ 70 °C

Operating humidity 5 ~ 90 %

Waterproof: IPX6

System

Renesas 32-bit RISC CPU

Memory: 8 Mbytes NOR and 4 Mbytes SRAM

Location log: 24,000 records.

GPRS Protocol

GPRS multi-slot class 8 (optional)

GPRS multi-slot class 10 (default)

GPRS mobile station class B

GSM Antenna

PIFA Tri band antenna: GSM850, DCS1800 and PCS1900 MHz

PIFA Tri band antenna: GSM900, DCS1800 and PCS1900 MHz

Certification

FCC

CE

NCC

GSM module

SIMCOM SIM340DZ GSM module

SIM socket: 1.8, 3.0 V

GPS

Chipset: MTK MT3318

15 x 15 x 4 mm patch antenna

Power Consumption

Battery: Li-Ion Battery, 890 mAh

Standby time 110 hours.

Park mode with position fix at 5 minutes interval: 50 hours; Continuous tracking with position fix at 15 minutes interval: 70 hours.

FCC Regulations

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

- This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation. This device is a multi-functional tracker by putting on the moving object. For RF exposure safety, the user is not allowed to put this device in the pocket.



Declaration of Conformity

The following products is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the laws of the Member States relating to R&TTE Directive (1999/5/EC) that include the Electromagnetic Compatibility Directive (89/336/EEC) and Low Voltage Directive (73/23/EEC). The listed standard as below were applied:

The following Equipment:

Product	:	Tracker007
Trade name	:	HOLUX
Model Number	:	GR515

This product is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the laws of the Member States relating to R&TTE Directive (1999/5/EC) that include the Electromagnetic Compatibility Directive (89/336/EEC) and Low Voltage Directive (73/23/EEC), the following standards were applied:

1999/5/EC:

- ETSI EN301511 V9.0.2 :
- ETSI EN300440-2 V1.1.2 :
- ETSI EN301489-1 V1.6.1 /-7 V1.3.1 /-24 V1.3.1 :
- ETSI EN60950-1 (2001) :
- :

The following importer/manufacturer is responsible for this declaration:

Company Name : **HOLUX Technology, Inc**

Company Address : **No.1-1,Innovation Road I, Science-Based Industrial Park, Hsinchu 300, Taiwan, R.O.C**

Telephone : 886-3-6687000

Facsimile : 886-3-6687111

Person is responsible for marking this declaration:

Philip Yu
 Name (Full Name)
September-04-2008
 Date

Vice President
 Position/ Title

 Legal Signature

HOLUX Technology, Inc.

E-Mail: info@holux.com.tw Web: www.holux.com