OPTRAKING

Pet Tracker User Guide

Product Overview

Thank you for purchasing GPS pet tracking system TP-200. Now you have a new way to connect with your pets. Using advanced GPS and wireless technology, you can easily keep track of your dog's whereabouts. This device is a waterproof IPX6, innovative miniature size pet remote positioning device with built-in U-blox GPS and GSM/GPRS technology.
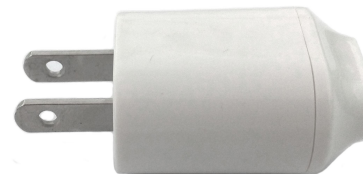
PACKAGE CONTENTS

1 GPS Device
1 USB Charging Cable
1 A/C Adapter with USB Outlet
1 User Guide

        Device   **USB Cable**   **A/C Adapter**

Getting to know your device

SIM card Installation

The SIM card is not included in the package. A **Micro SIM card** is available from the user's local operator.

- Unscrew the back cover and remove the cover.
- Insert SIM card and make sure it's activated with credits
- Put the cover back and tighten the screws.

Note: Before installing the SIM card, check if the SIM card has PIN code or not, if yes, please use a cell-phone to unlock the card's PIN code.

Usages

- For the first time use, please fully charge the battery for around 2~3 hours, using the USB charger.

- When charging, the Blue LED will be on (solid). After fully charging, the Blue LED will go to Signal Mode.

Switching the device on and off

- **To turn on the device:**   Plug the device to a Micro USB cable for charging, device will switch on automatically.

   ※ To get an initial location, use outdoors or near a window so the device may fix onto the satellites.

- **To turn off the device:**   Send SMS to turn off device or turn off by using program software.

- **To turn on/off the device manually:** Open the case and turn on/off by inside switch.

What do the lights mean?

GSM LED--GREEN

Light shows a single flash rapidly every 3 seconds	The device is connected to GSM network
Light shows a double flash rapidly every 3 seconds	The device is registered to GPRS network
Light shows a slow flash every 3 seconds	The device is connecting to GSM network
Light Solid (not flashing)	No SIM Card detected

GPS LED--BLUE

Light shows a single flash rapidly every 3 seconds	The device has GPS positioning fix
Light shows a slow flash every 3 seconds (every 1 second on and 3 seconds off)	The device has no GPS fix
No flashing	GPS chip is sleeping

Low battery alarm

When the unit's battery is less than 15%, it will send an SMS alarm "BAT: LOW!" to all authorized numbers. If battery is less than 15%, the blue light will flash rapidly to warn the user to charge the device as soon as possible.

Command: Low1

To turn off this function, please send **Low0** the device.

Configuration and Operation by SMS

1. To Set the Authorized Number

※ It is not mandatory for all three of the authorized numbers to be set, however a minimum of one must always be set.

① **Command**: **A1 or A1,phone number**

    Note: With no spaces in the text, case-insensitive.
    Example: A1   or   a1,123456789

※ Using your mobile phone, send A1 to the phone number of the device, it will reply: **·Set mobile number 1 OK!**

※ To delete this number, you can send **A0** to the tracker.

②**Command**: **B1 or B1,phone number**
   Example: B1   or   b1,123456789

   The device will reply: **·Set mobile number 2 OK!**

※ To delete this number, you can send **B0**

③**Command**: **C1 or C1,phone number**
   Example: C1   or   c1,123456789
The device will reply: **·Set mobile number 3 OK!**

※ To delete this number, you can send **C0**

2. Modify the Time zone

Command: **TZ+ +00/-00**
Note: the time must amounts be in 2 digits and at maximum 23 hours in value. "+" in the "time zone" portion of the text indicates east. The symbol "-" in the "time zone" indicates west.
Example: tz+02, the system will add 2 hours based on the UTC time.
          tz-02, the system will minus 2 hours based on the UTC time.
※ UTC time has been set as default time.

3. User defined name in SMS content
Command: name1, user name
Example: name1,Emma, the tracker will reply "**Add name ok!**"

※ To delete name, you can send **name0**

4. Location request

4.1 Reply with coordinates and web link

Command: loc

The device will reply "GPS Info! Time: xxxxx; Lat: xxxx; Lon: xxxx; Spd: xxxxx, Altitude:xxxx Bt: xxx

maps.google.com/maps?q=loc:22.647379,114.030998

※Put coordinates to Google earth or Google maps. Click on search button, then you will find the position fixed.

※Click on the link then the location can be shown directly on Google Map on your mobile phone.

4.2 Reply with Address

Command: add

Notes: This function needs GPRS function support.

The device will reply "Add: Donghuan 1st road, Bao'an, UK;

5. GEO-FENCE Alarm

Command: G+X, Y, Z, xxxM/KM

Example: G1,1,1,100M

Notes: No spaces in between.

X=No. of Geo fence (1~3), user can set 3 Geo fences

Y=0 means to turn off the function

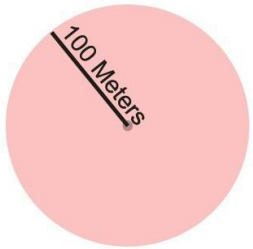**Y**=1 means to turn on the function

Z=1 means to set alarm when the tracker enters the preset area

Z=0 means to set alarm when the tracker breaches the district

xxx is the preset distance to the tracker's original place, must be 3 digitals.   M means meters, KM means kilometers

The device will send the message to the authorized numbers as "Geo fence alarm!+GPS info" when it **enter** the area you set.

(User must set this function when the device has GPS fixed.)

To turn off this function, please send **G1,0 or G2,0 or G3,0**

6. Movement Alert

Command: M1, xxxM/KM

Notes: xxx must be 3 digitals. M means meters, KM means kilometers

The tracker must be stationary when setting this function

Example: m1,100m

When the tracker moves beyond 100 meters, it will send an SMS alarm to the preset numbers.

To turn off this function, please send **M0** to the device.

(The settings must be at least 50 meters)

7. Listen-in (Voice wiretapping)

Command: L1

A1, B1, C1 can make a silence call to the tracker, the track answers the call automatically and allows the caller to hear what is happening around the tracker. There is no voice indication that the call is in progress.

To turn off this function, please send **L0** to the device.

8. Motion alarm

Command: V1, xx S/M/H
Note: No spaces in between, S means seconds, M means minutes, H means hours, xx means the time you set and must be two digitals.
Example: V1,05M

If user turns on this function, the device will detect motion every 5 minutes and will send an SMS warning alarm to all registered phone numbers.
To turn off this function, please send **V0**

9. Shut down LED

Command: LED1
The device will reply "LED off" and later LEDs will stop flashing, but the device is actually on.
To turn off this function, please send **LED0**

10. AGPS

Command: AGPS1, latitude, longitude
Example: AGPS1,22.647606,114.022583
Assisted GPS (abbreviated generally as A-GPS and less commonly as aGPS) is a system that is often able to significantly improve the startup performance or time-to-first-fix (TTFF) and improve the GPS location to be more precise, of a GPS satellite-based positioning system.
To turn off this function, please send **AGPS0**

11. Check settings

Command: status

The device will reply **E.g.** A+8613812345678 B13912345678 C13712345678; Speed: 0,100km/h; GEO:0,0,0; VB:1,10S; MV:1,100; LED:0; TZ:2.0; LI: 1; PS:1; DS:0; FL:1; Bat: 95

To recognize the meaning of "0"& "1"

The number "**0**" implies that the function is turned off; whilst "**1**" indicates that the function is turned on.

12. Turn Off device

Command: OFF

The device will reply "off" and then device shut down.

Device three working modes

1. No Power saving mode

Command: PS0

In this mode, Both GSM and GPS are on all the time, Battery can last 18~24 hours.

2. Smart Power saving mode (default mode)

Command: PS1

In this mode, the gsm chip is working and receives calls, SMS and transmits location. The GPS chip is activated by motion, incoming calls and SMS. The GPS chip is off when there is no movement or no phone usage. Battery life is not wasted when the device isn't moving.

Under normal use, battery can last 3 ~ 7 days.

3. Deep Sleeping mode

Command: DS1
Both GSM and GPS chip will shut down to save power, the device is unable to receive calls or SMS.

It can be only activated by movement. Once movement is detected, it will run for the set time and sleep again if no movement is detected.

Battery can last 40 days if no movement at all.

To turn off this function, send **DS0**

Real time tracking on www.smart-tracking.com

Our web based tracking system incorporates the TCP/IP protocol and allows users to monitor it in real time over the internet or sends an e-mail to the predefined e-mail address.

How to connect device to the platform for real time tracking via GPRS

1. Get IMEI number

Command: version
The device will reply" IMEI: 123456789123456; GSM CSQ:xxxx; Soft:V07.20.10.1345"

2. Go to the website www.smart-tracking.com and login with your account.

3. On the left side, click "Manage→Add Tracker"

Add Tracker

Tracker Name:	[ ]	*
IMEI:	[ ]	*
Hardware version:	EV07 ▼	*
SIM Card:	[ ]	*
User ID:	Select a user... ▼	*
Alarm by mail:	☐ Send mail to user when alarm occurs.	

Note:
- Hardware Version: Select **EV07**

- Type tracker name and IMEI number, make sure IMEI numbers are correct.

4. GPRS Setting

In order to use the GPRS function, the user needs to setup the APN by sending SMS command.
--What is APN? Access point name (APN) is the name used to identify a general packet radio service (GPRS) bearer service in the GSM mobile network. The APN defines the type of service that is provided in the packet data connection.

※ Make sure that the SIM card in the tracker supports the GPRS function.
※ The APN can be acquired from your local GSM operators.

Command: S1, APN, user name, password
Notes: Some access point name without user name and password, so please leave it blank.

Example: S1,internet

"internet" is the APN from the SIM card provider; therefore the user must set their particular APN for their own country which the unit resides.
After sending the command, the device will reply "Set APN OK! GPRS connecting"

After send S1,APN, wait for a while then you will see device is online.

Set GPRS Time interval by SMS (this can be also set from platform)

Command: TIxxS/M/H
The meaning of "xx", The setting must be in 2 digitals and maximum 99 in value, which means 01~99.
xxS is the time interval in second with range(30~99)
xxM is the time interval in minute with range(01~99)
xxH is the time interval in hour with range(01~99)

Example: TI01M
The device will reply "Set updating time interval OK!" and then device will update the time by every 1 minute on the website.

Disable GPRS:

Command: S0
The device will reply "GPRS OFF".

Reconnect GPRS
Reconnect the website via GPRS for real time tracking, please send **S2**

Check APN & IP, Port

Command: G1
The device will reply "APN: internet; Name: xxx; Password: xxxx; Port: 5050; IP:www.smart-tracking.com"

Change IP and Port

Command: IP1,IP/domain name,port
Example: IP1,103.21.211.11,5050   or   IP1,www.smart-tracking.com,5050
Reboot device

Command: reboot
The device will restart itself without changing any settings.

Initialization:

Command: RESET!

Note: This is to make all settings back to the factory default.

Built-in Memory

The device built in 8MB flash memory inside. It will store the GPS information when do not have GSM network coverage (i.e., very low population density areas, some mountainous terrain, underground areas etc). The device will transmit GPS locations to the WEB server automatically once the GSM network is recovered.

Cautions:

Please comply with the instructions to extend the unit life:

1. Keep the unit dry. Any liquid may destroy or damage the inside circuitry.
2. Don't use & store the unit in dusty places.
3. Don't put the unit in overheated or overcooled places.
4. Clear the unit with a piece of dry cloth. Don't clean in chemicals, detergent.
5. Don't disassemble or refit the unit.
6. Using other batteries will cause unwanted situation

Hardware Specification:

Content	Specs.
Mainframe Dimension	65*36*14mm
Weight	35g
GSM Frequencies	900/180/850/1900Mhz
GPS chip	U-blox 7 (Support AGPS)
GPS sensitivity	Cold start: -148dBm Hot start: -162dBm
GPS accuracy	<2.5m
Time to First Fix	Cold start 32s, Warm start 11s, Hot start 1s
Charging Voltage	5V DC
Battery	Chargeable 3.7V 900mAh
Standby Current	≤2mAh
Storage Temperature	-40°C to +85°C
Operation Temperature	-20°C to +80°C
Humidity	5%-95% non-condensing