

# CHIPnTRAC – guide to setting up and using this GPS Tracker

## Preliminaries

This GPS Tracker uses three technical features:

- **GPS function:** through information provided to the tracker by GPS satellites this function monitors where the tracker is located, provided it has a clear line of sight to the sky and satellites which it needs to get its position and speed data.
- **GSM function:** this provides access to the cellular telephone system so when a SIM card is installed the tracker is able to **receive admin text messages** (sent to it in a set format described in detail below), **send text message responses** to those admin text messages it has received, **receive telephone calls** sent to the mobile number on the SIM card (which the tracker notes but is not able to pick up and instead after two rings an ansafone service provided by the mobile service provider responds) and in response to each call received by the tracker it **sends a text message with position, speed and battery condition data** to the designated mobile phone number(s).
- **Internal systems controlling several essential operational functions** – these include the various admin and reporting tasks set out below.

**Before attempting to set up or install the tracker in a vehicle the following essential requirements are worth noting**

- **SIM card:** you will need to get a SIM card (large size) from a cellular services provider (like O2 or Vodafone) either attached to your existing mobile phone contract or as a self-standing SIM as a PAYG deal or a contract. But please note you will need to ensure the SIM card package you get provides **both mobile data** (at least 1GB per month) **and calls**. Whilst the data part of the package will cover the text messages to and from the tracker, it is essential the tracker is able to **receive calls** from a designated mobile phone number as that initiates a response from the tracker when it will provide the position and speed data in text messages to the designated mobile phone number.
- **Installation:** the two key factors to consider for the installation are first the **tracker must be positioned in the vehicle so it has a clear view of the sky** and the satellites so it is not shielded by ferrous metal – for example steel bodywork. Typical locations might be on the dashboard or the rear parcel shelf under a sloping glass screen – various methods of concealing them from prying eyes are of course possible. The tracker can be placed under glass, wood, alloy or fibreglass panels such as an alloy or fibreglass bonnet or hardtop or under a soft top of a convertible like an MGB Roadster or RV8. Make sure the tracker can be removed from its location when installed so you can access the back-up battery and SIM card when necessary. The second consideration is the **tracker needs a permanent electrical feed from the vehicle's battery** and it must be a continuous supply and not cut when the ignition key is turned off and removed. Without a permanent power feed the rechargeable battery will expire so the tracker will not be able to work!

## Setting up the tracker

- All commands must be sent in lower case - even the first letter.
- Check the SIM settings – see the section headed Testing below.
- Where the word **SPACE** is shown below simply leave a space when typing the message otherwise do not leave any spaces.
- Make sure the internal battery in the tracker is fully charged before inserting it in the back of the tracker.

### Stage 1

1. Make a note of your mobile phone number and the number on the SIM card. Set the SIM card's number as a Contact in your mobile phone. It's a good idea to use the name "**A Tracker**" for the number on the tracker's SIM card and then it will appear at the top of your contacts list in your mobile phone.
2. Take the tracker outside **before** you switch it on for the first time to ensure it has a good GPS contact with satellites.
3. Remove the back cover of the tracker by very carefully lifting the clip on the underside of tracker where you will see a very slight semi-circular recess. Do not attempt to release the clip by lifting the clip at the end of the tracker as that will damage the seating of the clip!



4. Insert the full size **SIM card**. Some trackers have slide and flip metal covers for the SIM card which must be clicked shut others are just slide in.
5. Put in a **fully charged battery** and close the back cover and refix the end clip. The small green indicator LED light on the side of the tracker (between the USB socket and SOS button) will be on – **single flashes**.
6. After a short while the small LED light will change to a **double flash every 3 seconds**. This indicates the tracker is receiving both GPS and GSM signals.

### Stage 2

You can now set up the tracker.

1. Use your mobile phone to send the text message **begin123456**
2. The tracker will reply with the message **begin ok!**
3. Set your mobile phone as the authorised number by sending the text message **admin123456SPACEyourphonenumber**

For **yourphonenumber** enter your number, for example 07770 888888. The first number you send will become the master controlling phone number or designated phone number.

## CHIPnTRAC – guide to setting up and using this GPS Tracker

4. The tracker will reply with the message **admin ok!**
5. You can authorise 4 other mobile phone numbers.
6. To remove an authorised (designated) phone number send the message  
**noadmin123456SPACEphonenum**

For **phonenum** enter the number, for example 07770 888888.

Test the tracker – see below.

### After setting up the tracker and powering up

Reconfirm the authorised numbers using the admin command.

**admin123456SPACEyourphonenum**

Enter **yourphonenum** as explained above.

Send the Tracker to sleep by texting

**sleep123456SPACEtime**

Simply enter the word **time** and **not** the minutes before the tracker goes to sleep.

OR set an alert (for guidance see below).

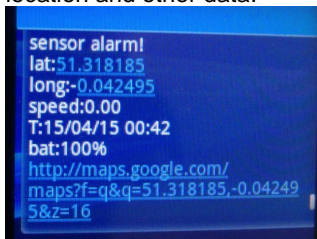
### ON/OFF switch

This will temporarily turn the tracker off. To turn the tracker off fully, remove the internal battery.

### Testing

Check that the tracker's green light is flashing every 3 seconds. It may not be flashing because after about 5 minutes the light will turn off and the tracker goes to sleep to save the battery. To carry out the tests or when setting alternative designated numbers:

- **Make sure the tracker wakes up** fully by sending the text message:  
**nosuppress123456**
- **Phone the tracker** as a phone call and not as a text message.
- You will **hear it ring twice and then hang up** (possibly an ansafone may come in after two rings).
- A minute or two later you will **receive a text message** from the tracker with its location and other data.



If you do not: receive a reply with the tracker's location, check the following:

1. Check the SIM card has credit if it is a PAYG card.
2. Check the SIM for settings Caller Display ON, Call Transfer OFF, Voice Mail OFF, PIN Code OFF and SMS messages TEXT FORMAT.
3. Check the SIM card is properly in place and the retaining clip is shut.
4. Check your text message commands and ensure you only used lower case, even for the first letter, and that there are spaces only where indicated.

5. Check you entered your own mobile phone number correctly on the admin command so the tracker recognises your number as a designated number.

- To send the tracker back to sleep, text **sleep123456SPACEtime**  
Simply enter the word **time** and **not** the minutes before the tracker goes to sleep.

### Setting up additional authorised or designated mobile phone numbers and removing them if necessary

You can have up to 5 designated mobile phone numbers so each will have control over the tracker – that's the primary number plus an additional 4.

1. Send the text message: **admin123456SPACEotherphonenum**  
For **otherphonenum** enter the number, for example 07770 777777.
2. Tracker will reply: **admin ok!**

### Removing a designated mobile phone number

Send the text message: **noadmin123456SPACEphonenum**

### Setting the time in the tracker

The tracker comes with the time set to China time zone (8). To get the correct local time you wish to have displayed in text messages you receive from the tracker you must set the time zone for the country you are in. You can check Google for the time zone you are in The UK is Time Zone 1. Note the system in the tracker cannot take account of clocks moving forward or back. To change the timezone:

Send a text message: **timeSPACEzone123456SPACEtimezone**  
For **timezone** simply enter the timezone number – for example for the UK enter 1.

### Locating the vehicle when the tracker is in sleep mode

The procedure is:

1. To wake up the tracker send the text message: **nosuppress123456**
2. Tracker will reply with the text message: **nosuppress ok!**
3. Phone the tracker as a phone call and not as a text message.
4. You will hear it ring twice and then hang up (possibly an ansafone may come in after two rings).
5. A minute or two later you will receive a text message with the tracker's location and other data. The screen will show the following data:
  - Report the latitude and longitude co-ordinates as part of the display on the screen together with the vehicle's speed.
  - Report the state of the tracker's internal battery will be shown which should be over 95% if connected to the vehicle's battery using the voltage converter.
  - Report the location of the vehicle as a link and if you if you have a web-enabled phone then you will be able to click the link at the bottom of the screen message and that will provide a web connection to Google Maps.

## CHIPnTRAC – guide to setting up and using this GPS Tracker

Alternatively you can use a PC and Google Maps and simply enter the latitude and longitude coordinates but ensure you always enter any “-” signs (for example 51.838517 -001.477033) The green arrow indicates the position. If the GPS signal is weak the tracker will, if it is available, use the GSM phone signal to establish an approximate position. The message will show the letters LAC and a code. Follow the instructions in the Action Log to provide the police with the details to de-code and track the SIM card using the mobile phone system (GSM) as well as GPS.

6. Send the tracker back to sleep, text: **sleep123456SPACEtime**  
This will turn off the green LED light on the side of the tracker and thereby reduce battery use, especially if the tracker is being run on the internal battery alone.

### Setting warning parameters

#### Move alert

If you are leaving the vehicle for some days (for example when going on holiday or putting the car into storage) you will need to use the Move command. If the vehicle is under cover and unable to receive a GPS signal, or the signal is intermittent (for example when the vehicle is parked next to a wall), use the Speed command below.

Having parked the vehicle wait about 10 minutes and then:

1. Send the text message to wake up the tracker: **nosuppress123456**
2. Receive a response: **nosuppress ok!**
3. Send a command which will put a “virtual stockade” around the vehicle. If the vehicle is moved outside a circle of the size (diameter) specified it will send a warning text message to the designated mobile phone number. The stockade diameter range is from 200 metres to 9,999 metres. The example below creates a **200 metre diameter stockade**.  
To create the stockade, send the text message: **move123456SPACE0200**

If the vehicle is moved outside the stockade then a warning is sent from the tracker in the form, for example:

**Move! Lat:51.394051 long:000.353075 speed:072.0 T:04/01/11**

This provides the GPS coordinates of the vehicle, its speed in kph and the date and time. The position will be updated every 3 minutes.

4. To turn off the Move reporting send a text message with the command: **nomove123456**
5. Tracker will confirm receipt of that command: **nomoveok!**

#### Speed alert

You can ask the tracker to warn you if the vehicle exceeds a set speed:

1. Send the tracker the text message: **speed12345SPACE060**  
This will send a warning message if the speed exceeds **60kph**. The lowest speed you can set is 50kph (approximately 30mph). This is also useful as an

alternative to the Move command if the vehicle is parked where it cannot receive GPS signals or they are intermittent which would cause false alarms.

2. To turn off the Speed command send the message: **nospeed123456**
3. Tracker will then confirm with the text message: **nospeedok!**

#### Low battery

If the tracker is relying on the internal back-up battery, it will:

- Send a warning text message when the battery is low: low battery 10% and its position with GPS co-ordinates.
- Turn off the warning use: **lowbattery123456SPACEoff**

#### SOS button

Next to the On/Off button is a button marked **SOS**. Pressing this button will send a message to all authorised/designated phones: **help me!**

The information sent in the text message will include the tracker's GPS coordinates. This message will be sent every 3 minutes until one of the authorised or designated mobile phone numbers turns it off by sending the message: **helpSPACEme!**

#### Auto-Tracking

You can ask the tracker to send regularly updated positions to your mobile phone.

- Send a text message with the command to wake up the tracker: **nosuppress123456**
- Tracker sends a text message confirmation: **nosuppress ok!**
- Send a text message to the tracker **fix030s005n123456**  
This command will send you the position **every 30 seconds for 5 times**. You can use s = seconds, m=minutes or h=hours and the maximum number of times is 255 and always enter leading zeros. Do make sure you have sufficient credit on the tracker's SIM card for a large number of text reports from the tracker's SIM card credit.

#### Shock Sensor Alert

To set up alerts for any tampering with the vehicle:

- Send a text message with the command: **shock123456**
- To cancel this command, send: **noshock123456**

After setting the shock you can set three levels of sensitivity:

Level 1 (default) detects slight vibrations **sensitivity123456SPACE1**  
Level 2 detects 8 vibrations in 2 seconds **sensitivity123456SPACE2**  
Level 3 detects 25 vibrations in 5 seconds **sensitivity123456SPACE3**

#### Send to sleep

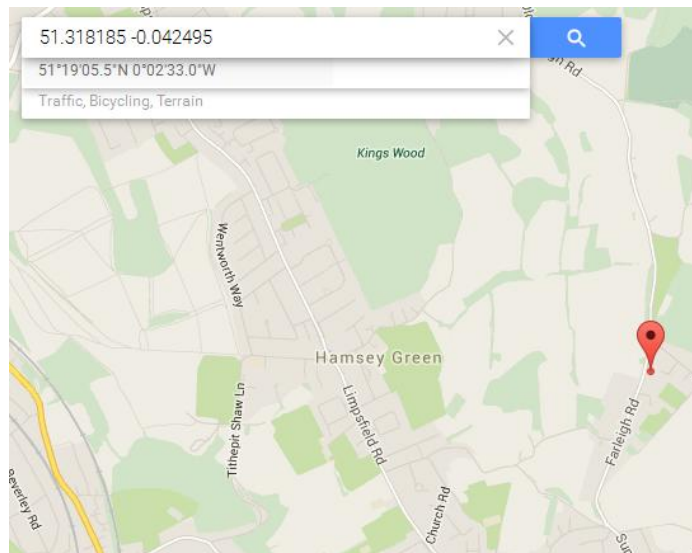
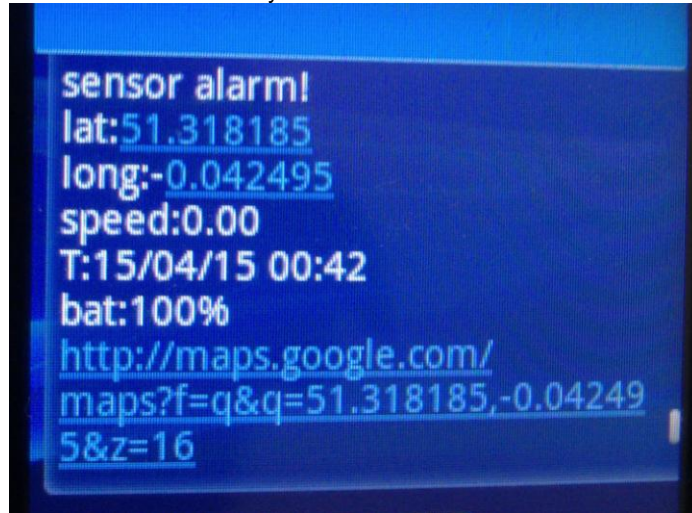
To send the tracker to sleep after turning off any alerts, this will save battery life especially when running on the internal battery alone, send

**sleep123456SPACEtime**

## CHIPnTRAC – guide to setting up and using this GPS Tracker

### Viewing the location on a PC using the latitude and longitude data from the tracker's text message

If you do not have a smart phone (with which you can access Google maps using the link in the text message), you will need to type in the latitude and longitude data into the search box in Google maps but make sure you leave a space between the end of the latitude coordinate and the start of the longitude coordinate and make sure you include a minus sign if that is shown in the text message. If you fail to do so the location you will search for will be east of Greenwich and not west!.



### Network:

GSM Bands 850/900/1800/1900 MHz

	Sleep	Alert
Internal Battery	7 days	7-12 hours
6volt/12volt 30aH	3 months	1 month
6volt/12volt 180aH	14 months	5 months

GPS accuracy:

5 metres

Storage temp: -

40°C to 85°C

Operating:

3.7v

Car Converter:

Input 6volt– 24 volt, output 4 volt



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### Property Marking

#### Deterring theft

Being caught with any item that can be linked to a crime is the biggest risk for the thief and those handling stolen property. At the same time the lack of a link is the biggest hindrance to the police in being able to bring a case to court. Surveys about crime prevention and detection have consistently shown that over 95% of victims of theft cannot provide the police with identification of the stolen items that will stand up in court.

**Three essentials with ID marking** of property as these will deter a thief who will look for alternative, less risky plunder elsewhere:

1. **Clear, visible ID** which is also difficult and very time consuming to remove.
2. **Covert ID** which will be difficult to find and remove.
3. **Having a record of the ID markings** that you can give to the police and your insurer.

#### UV marking pen

You can write individual invisible ID markings on dozens of components, **spares and tools. These marking will become visible under Ultra Violet light.** Other than the UV light, which most police have, these do not require any special equipment or forensic or laboratory test to read. With this information the police will be able to obtain a search warrant because they will have evidence that will stand up in court linking the item(s) to the crime.

#### Clearly visible Anti-Tamper markings

RBSPM includes Anti-Tamper ID tags that are difficult to remove and leave a permanently imprinted message.

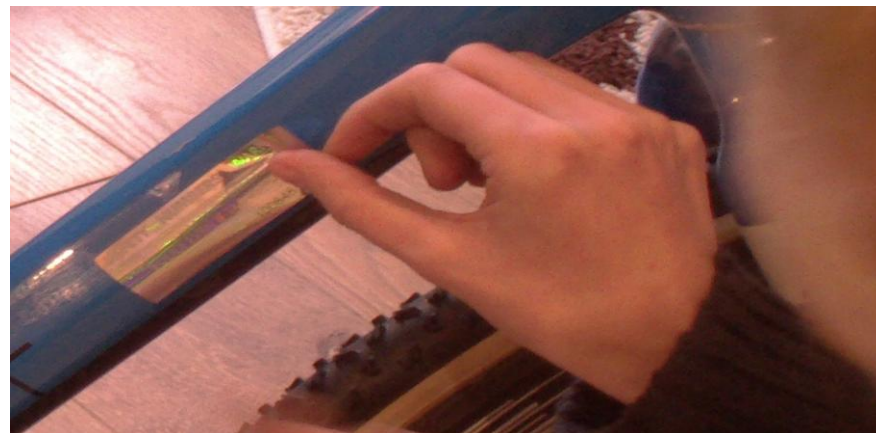
Clean the surface: remove, dust, grease and polish.

Peel the tag from backing and press firmly into place and leave for 15 minutes to set.

Finally enter the details against the anti-tamper ID tag in the certificate page of the log provided with the GPS Tracker kit and pass a copy to your insurers. The details should also be logged on to your electronic log on the SD card supplied.



Clean the surface: remove, dust, grease and polish.



Peel the tag from backing and press firmly into place and leave for 15 minutes to set

#### Covert ID - RFID Microchip

These microchips all conform to the standard ISO 11784/5 FDXB which is the standard Trading Standards must be equipped to read. The chips must not be shielded by ferrous metal otherwise the signal will not be transmitted. They can be super glued into place. You can drill a hole and place them in the hole and then cover it with plastic wood, fibreglass or putty. Drill an 2mm diameter hole 14mm deep. Glue the chip in the hole and cover with plastic, paint, putty, but not ferrous metal.



Clean the surface: remove, dust, grease and polish.

#### Registering the various ID

All the ID marks, including manufacturers' serial numbers, can be registered on the electronic log on the SD card. Requires Microsoft Excel v 2000 onwards (Excel software is not supplied).

## CHIPnTRAC – guide to setting up and using this GPS Tracker

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Kent DA11 7NB

**01474 350883**

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[stan@rbslimited.fsnet.co.uk](mailto:stan@rbslimited.fsnet.co.uk)

### **Club Recovery**

Five point service if your car is stolen:

- Help with operating your self-monitoring tracker.
- Liaison with the police.
- Recovery service to bring your vehicle to a secure location.
- Liaison with your insurance company.
- Help with repairs to any damage.

Terms and conditions apply

Support: **07956 552713**

### **General warning**

Treat batteries carefully, avoid heat or flames and always dispose of batteries through your local council's waste disposal site. RBS Property Marking Ltd and its agents are not responsible for any damage caused by the use or fitting of the GPS tracker, the batteries, RFID microchips or anti-tamper ID tags.