

# Bike Tracker

## Portable



Designed as a motorcycle tracker and security system using the existing GSM/GPRS network and GPS satellites, this product can locate and monitor any remote target by text.

### Functions:

- User Authorisation - fit your own SIM card and authorise your own number(s).
- No subscriptions, text message gives location for direct use of Google Maps.
- Single locating, controlled tracking, automatic tracking of direction changes.
- Absolute street address by SMS, Location based service (LBS).
- Forward to third parties' texts.
- Alarm Functions; movement alarm, over speed alarm, shock sensor alarm, low battery alarm.
- GPS blind spot alert.
- Geo-fence, multi-area management.
- Alarm without GSM network service.
- Check the Vehicle State.
- Voice Monitor - Data logging (Data logging functions with SD card fitted)
- Sleep Mode, Sleep by time, Sleep by sensor
- Set up Terminal (local) Time



Small Size: **64 x 46 x 17 mm, 50g**

Network: **GSM, GPRS - Quad Band 850/900/1800/1900MHz**

Battery Backup: **Chargeable 1000mAH Li-ion Battery**

**Simple to install and setup, Low Cost, No Subscription, Portable**

## 1.0 Hardware Description and Setup



### GSM/GPS/Power LED Indicator

The Autocom Portable Tracker has a single LED light informing you of it's operation.

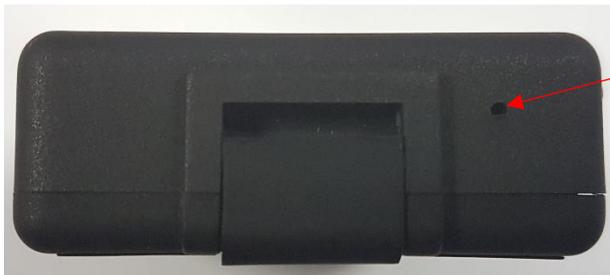
A solid light indicates the Tracker is on but no SIM is identified. A single Green flash shows the Tracker has connected to phone signal; two flashes inform that the Tracker has acquired both phone and GPS.



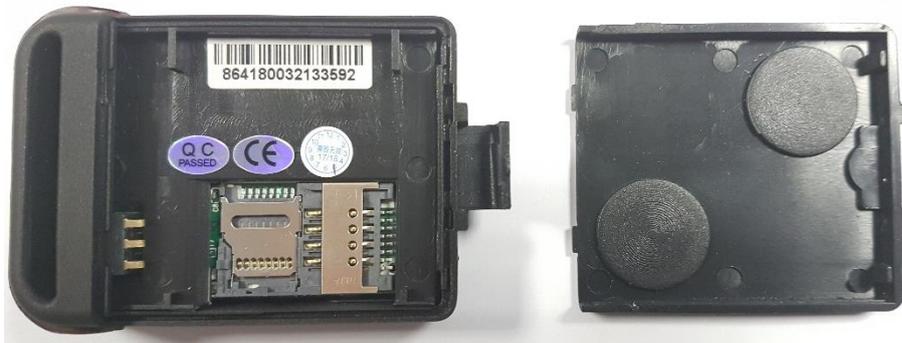
USB port for charging.

LED indicator

SOS and On/Off buttons



Microphone



Removing the back cover gives access to the battery compartment, SIM card holder, and SD card slot for data logging.

### SIM Card Installation

Open the Tracker using the bottom catch, remove the battery if present (turn the Tracker off before removing the battery)

Note: The standard size SIM card is for GSM network. Any standard "pay as you go" or contract SIM is suitable. (Except '3' Network' To check credit balance, it should have an online account setup and switch off voice mail.

If data logging function required, please insert micro SD.

## 1.1 SIM card and Set Up

If possible put the SIM card in a mobile phone to aid activation and setup. Once the SIM is activated turn off the voicemail service either via dialling the voice mail service or ring customer services. This will prevent voicemail answering the call before your Tracker does. As the Tracker or user will hang up, no charges will be incurred for the call.

Ensure that Caller ID is turned on. It is useful to activate an online account to check the balance on the SIM if using PayAsYouGo.

Charge the battery fully for 8 hours before first use. Ensure use of the supplied battery and charger. After first charge, the battery is usually charged within 4 hours.

The Li-ion battery contains harmful chemicals, avoid damaging the battery to prevent it bursting.

The battery should be charged regularly to retain capacity.

Turn the Tracker on, it is recommended to do this outside and that the Tracker has a good line of sight to the sky as to allow it to obtain its first GPS satellite fix. Once the Tracker has found both a GSM (mobile) signal and a GPS (satellite) signal, the LED will flash steadily every few seconds (unless in a sleep mode).

## 1.2 Fitting to the Motorcycle

The Tracker needs a good line of sight to the sky to ensure GPS accuracy. Plastic coverings are no problem to this view of the sky.

Fit and hide the Tracker. I.e. behind the clocks, behind a fairing panel, in the tail end seat cowling, locked top box lids.

## 2.0 Initialisation and Change Password

**(Tracker default password is: 123456).**

Ensure that you have a signal from the mobile phone and GPS networks when setting up.

Send text "begin+password" to the Tracker, it will reply "begin ok" and initialise all the settings.

Example: send text - **begin123456** to the Tracker.

If OK, it will reply "begin ok".

***Note: The '+' sign is used only in these instructions to signify different words in texts DO NOT USE WHEN TEXTING THE TRACKER. No spaces are required***

*in texts between words, unless specified in the instructions with this symbol*  
**SPC**

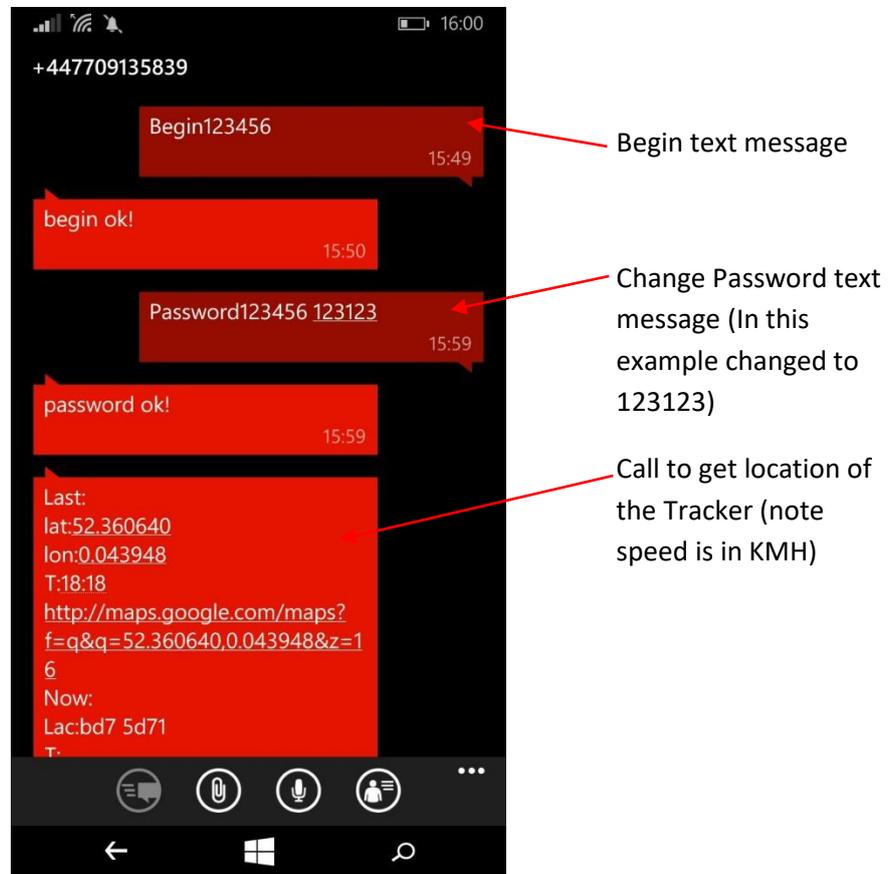


Figure 1 - Example text messages to the Tracker Portable

Send text "password+oldpassword**SPC**newpassword" to the Tracker to change the password.

Example: send SMS – **password123456 123123** to the tracker via a mobile phone

If OK it will reply "password ok". Above is an example password which will be used during these instructions.

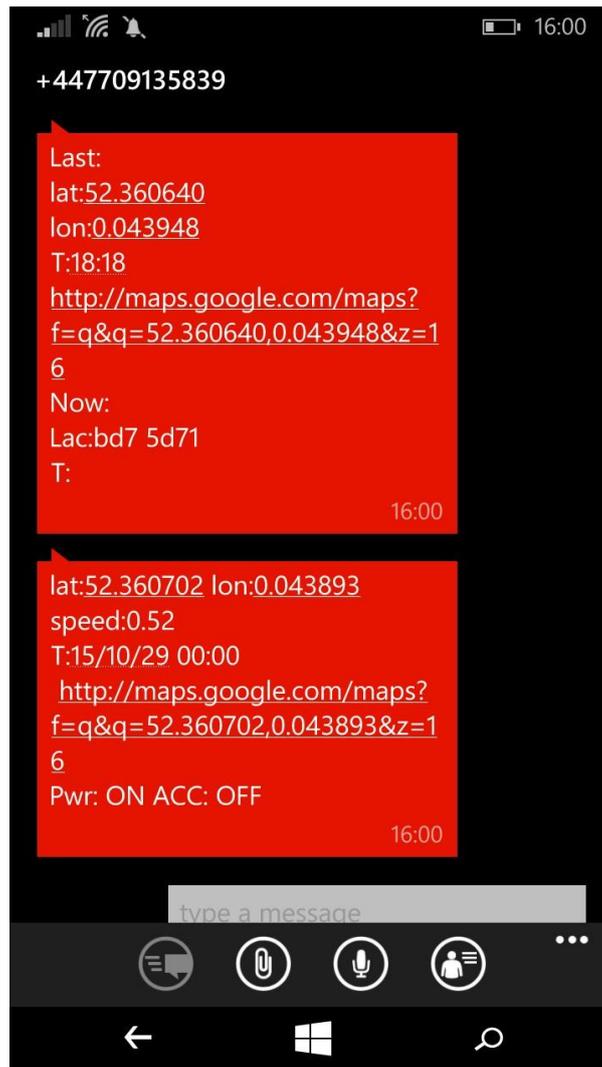


Figure 2 - Example text, location text message returned from to the Tracker after calling.

Now call the Tracker and hang up, it will send a text detailing the location of the Tracker. See Figure 2, this can be opened via the link on your screen (If your mobile device has Google Maps and access to data via wi-fi or 3G/4G type data).

## 2.1 Set Up Time (local)

Every country has a specific GPS time zone code (some countries share the same code.) To set up Tracker local time, research the country GPS time zone code for accurate Tracker information. Send text "time **SPC**zone+password**SPC**timezone" to the Tracker. If successful, it will reply "time OK".

Example UK GMT time zone: send text – **time zone123123 0** to the Tracker.

USA Pacific	USA Eastern	UK/France/Spain	Italy/Germany/Sweden	Central Australia
-8	-5	0	1	9

Table shows example of some GPS time zone codes

Ensure to use the minus in the text if indicated in the country GPS time zone code. Example USA Pacific time zone: send text – **time zone123123 -8**

### 3.0 Single Location of Bike Tracker

When dialling the Tracker from the authorised number(s) (as described in 4.0), it will hang up to your call and respond with real-time latitude and longitude, it will include the information as detailed in Figure 2. If no numbers have been identified as the authorised, then any mobile can be used to text and receive information from the Tracker.

### 4.0 Authorisation

Up to five mobile phone numbers can be authorised. It is best to set the authorised phone number(s) before use.

To set authorisation via text: "admin+password**SPC**mobile phone number"  
Note that other authorised numbers should be set by the first authorised number. If the number is successfully authorised, the unit will reply "admin ok!"

To set authorisation via call: Call the Tracker 10 times continuously to receive the current position. This will then authorise this number automatically.

To delete authorisation, send text: "noadmin+password**SPC**authorised number"

For roaming purpose, you should add your country code ahead of the mobile phone number.

Example: send SMS – **admin123123 +44..authorisedNo..** to the Tracker via a mobile phone (+44 is the UK country code for roaming purposes)

The first authorised number is now +44..authorisedNo.. this number should then be used to set up other numbers that require authorisation.

### 5.0 Absolute street address by Text

You must set up the APN (Access Point Name) of your GSM network for the SIM card in the Tracker first before using this function. The APN is unique to the network operator of your SIM and the tariff type you have chosen. Examples are shown in table below - refer to your operator/vendor for your code.

Operator / Tariff	APN
o2 UK (Contract SIM)	mobile.o2.co.uk
o2 UK (Pay As You Go SIM from a prepaid PHONE)	payandgo.o2.co.uk
Orange UK (Any SIM)	Orangeinternet
T-mobile UK (Any SIM)	general.t-mobile.uk
Vodafone UK (PayAsYouGo SIM from any prepay phone)	pp.vodafone.co.uk

## 6.0 Setting up APN (Access Point Name)

Using the APN as a method of locating your Tracker is the simplest way for you to acquire the location of your Tracker after setup.

The APN should be setup as a part of the activation process of your SIM. Send text "address+password" to test this first before manually setting up the APN.

Send text "APN+password **SPC** your local APN" If the setup is successful, the Tracker will return the message "APN OK".

Example: send text – **apn123123 payandgo.o2.co.uk** to the Tracker.

After configuring the APN, send "address+password" to Tracker and it will reply with a text that includes street name and address

Example: send text – **address123123** to the Tracker.

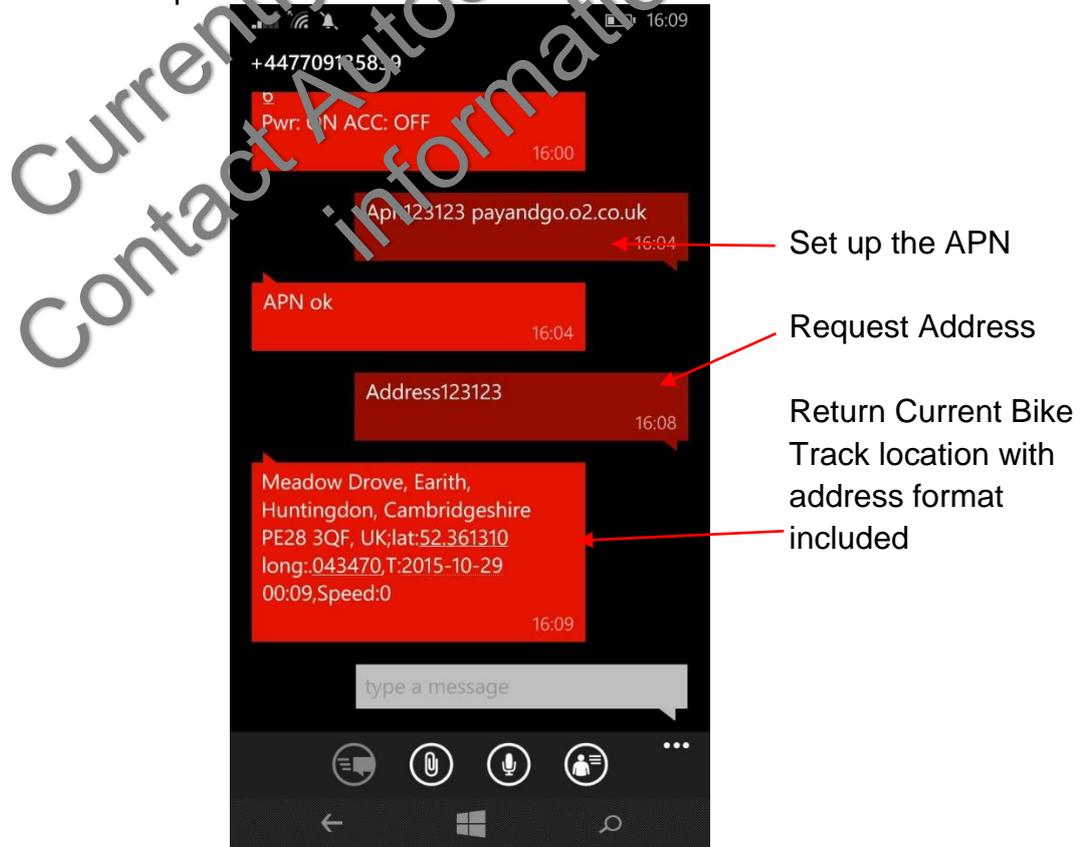


Figure 3 - Example text messages to set APN and obtain the street address.

## 7.0 Check the Vehicle State

Send text "check+password" to the Tracker in the vehicle. It will reply with the status of the power, battery, GPS, ACC, GSM signal and GPRS status to the authorised number(s).

Example: send SMS – **check123123** to the Tracker.

It will reply with the following text detailing the state of the Tracker.

Power: ON/OFF

Battery: 100%

GPRS: ON/OFF

GPS: OK/NOGPS

ACC: OFF/NO

GSM Signal: 1-32 (A higher figure indicates stronger GSM signal)

## 8.0 Alarms

The Tracker has a 3-axis acceleration sensor to facilitate its awareness of its environment, allowing detection of movement, tilt, or shock.

### 8.1 Movement Alarm

Set up when the unit has been immobile for 10 minutes with GPS signal reception. Send text "move+password**SPC**0200" to the Tracker. (Distance is measured in metres and requires 4 digits. E.g. 200 metre radius - 0200) It will reply "move OK". If the Tracker detects such a movement (the default distance is 200m), it will reply "Move+ latitude and longitude" to the authorised number(s) at intervals of 3 minutes.

To deactivate, send text "nomove+password"

### 8.2 Shock Sensor Alarm

This sensor is great for use on a vehicle that is kept for a time in a crowded area. It will make the user aware if the Tracker detects a large enough G-Force shock. To activate the alarm, send text "shock+password", the Tracker will reply "Shock is activated". It will send "Sensor alarm+latitude/longitude" to authorized number(s) if a shock is detected.

#### 8.2.1 Shock sensor sensitivity configuration

The sensitivity of the built-in shock sensor has three different levels:

First level: Alarm will be triggered after it detects slight vibration.

Send text "sensitivity+password**SPC**1".

Second level: Alarm will be triggered after detecting 8 vibrations during a two second interval.

Send text "sensitivity+password**SPC**2".

Third level: Alarm will be triggered after detecting 25 vibrations during a five second interval.

Send text "sensitivity+password**SPC**3"

### 8.3 Overspeed Alarm

Send text "speed+passwordSPC080" to the unit (example speed notification of 80kmh), Tracker will reply "speed OK!". When the vehicle exceeds 80kmh, the unit will send text "speed+080!+latitude and longitude" to the authorised number(s) at intervals of 3 minutes.

To deactivate, send text "nospeed+password"

Note: The recommended speed should be not less than 30kmh as below this, it will be affected by the accuracy of GPS signals drift etc.

### 8.4 Low Battery Alarm –

This function is on by default.

Send text "lowbattery+passwordSPCon", the tracker will then text "low battery+latitude and longitude" to authorised number(s) twice in a 15 minute interval only when voltage of the battery is below 3.55V. This function is activated as default.

To deactivate, send text "lowbattery+passwordSPCoff"

### 8.5 GPS Blind Spot Alert

This function is off by default.

To be warned of a GPS blind spot, send text "gpssignal+passwordSPCon", Tracker will send an alert reading "nogps last valid latitude/longitude before lost signal" identifying the last location the Tracker had an active GPS link.

To deactivate, send text "gpssignal+passwordSPCoff"

### 8.6 SOS Signal

To activate, press the 'SOS' button for three seconds, it will send "help me! Latitude/longitude" to all authorized phone numbers every 3 minutes. It will stop sending the messages when an authorised number sends text "help me!" to the Tracker.

### 8.7 Alarm Message Intervals

You can decide how many times you will receive an alarm message from the Tracker. To limit the numbers, "xtime+password+005", the Tracker will then send Alarm messages to authorised number(s) 5 times. (Note: 5 messages is the default number)

### 9.0 Sleep Modes

The Bike Tracker can be sent to sleep in various modes. This is a useful function for when vehicles are garaged or stored, it will save battery power.

#### 9.1 Sleep by Time

Send text "sleep+passwordSPCtime", the Tracker will reply "sleep time ok" if none of the alarms have been set and no operations scheduled the Tracker will sleep in 5 minutes. The GPS module shuts down, LEDs will be off. Calling or texting will wake the Tracker. If these alarms have been set, the Tracker will wake by detecting shock sensor. (This mode only works under text mode)

### **9.2 Sleep by Shock Sensor**

Send text "sleep+passwordSPCshock" to the Tracker, it will reply "sleep shock ok", it will enter sleep mode if no shake is detected or if ACC is off. The GPS module shuts down, LEDs will be off. Shake or any operation can wake the Tracker.

### **9.3 No Sleep Mode**

Send text "sleep+passwordSPCoff" to Tracker, it will reply "sleep off ok". The GSM, GPS, LED modules will all be active and the Tracker will not enter sleep mode. This is the default mode.

### **9.4 Scheduled Wake-up**

Send text "schedule+passwordSPC1h" to wake the Tracker each hour, and location information will automatically be sent after wake up (m: minute, h: hour, d: day). The maximum time interval is 3 digits, and can't exceed 30 days. GSM and GPS modules will shut down and the Tracker runs in lowest power consumption. Calling or texting cannot wake the Tracker. Alarms can be triggered normally, after wakeup and alarm cancelled.

To deactivate send text after wake up "noschedule+password"

## **10.0 Reset Hardware**

Send text "reset+password" to the Tracker, it will reply "reset ok". The GSM module and GPS module in the Tracker will be reset.

## **11.0 Forward the Text Message to Third Parties**

Send text "forward+passwordSPCthird party phone number" from an authorised phone number, the Tracker will reply "forward ok". This system supports only one third party mobile phone number.

This can be used for example where your phone operator sends a top up reminder to the SIM and you wish it forwarded to yourself as a reminder.

To cancel, send text "noforward+password".

## **12.0 Advanced Tracking Functions**

### **12.1 Auto Track Continuously / limited times upon time interval**

Send text "fix030s005n+password" to the Tracker. It will report the latitude and longitude at intervals of 30 seconds for 5 times. (s:second, m:minute, h:hour) This command set must be in 3 figures and the maximum value is 255.

Example: send text – **fix002m010 123123** to the Tracker

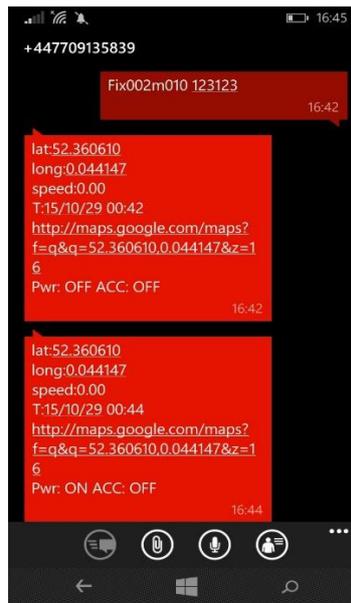


Figure 5 shows Auto Track. Text message sent to track every 2 minutes 10 times using fix

### 12.1.2 Track with Unlimited Times Upon Time Interval - Send text

"fix030s\*\*\*n+password" to the Tracker. It will reply the latitude and longitude continuously at interval of 30 seconds. Note: The interval must not be less than 20 seconds.

To deactivate, send text "nofix+password"

### 12.2 Geo-fence

Set up a geo-fence for the Tracker to restrict its movements within a specified area. The Tracker will send text to the authorised number(s) when it goes out of this specified area.

Set up when the unit has been immobile for 10 minutes, send text "stockade+passwordSPCLatitude,longitude;latitude,longitude" to the Tracker to set the restricted area. In case of breach, it will send text "stockade!+latitude and longitude" to the authorised number(s) at interval of 3 minutes.

Note: The first latitude and longitude is coordinate of the top left corner of the Geo-fence, while the second latitude and longitude is the coordinate of the bottom right corner, it will alarm at intervals of 3 minutes.

To deactivate, send text "nostockade+password"