

## BOXsolo – our waterproof tracking device with long-life battery

In today's challenging economic climate, it is critically important for businesses of all types to reduce operational costs, improve efficiency and to protect their valuable assets.

**BOXsolo** is our waterproof and durable tracking device which is designed specifically for tracking assets and equipment that may be left unattended for long periods of time and may be exposed to harsh conditions. It is a highly configurable device that is **designed and manufactured in the UK**. **BOXsolo** offers a unique combination of long battery life, functionality, reliability and quality – at a very competitive price.

**BOXsolo** is perfect for tracking and monitoring:

- Trailers
- Plant Equipment
- Agricultural Equipment
- Boats
- Caravans

### General Overview

The tough, waterproof casing makes this vibration tested product perfect for use in harsh conditions.

**BOXsolo** has a long life internal battery, so it can be used to monitor non-powered assets, as well as equipment that is left without power for long periods of time. The battery is rechargeable, so when external power is available **BOXsolo** will recharge automatically.

The unit processes data from GPS satellites to calculate its position. It then uses the GPRS mobile phone network to transmit these GPS positional logs to the tracking application server at regular intervals. This data is then accessible via a secure application / web interface.

**BOXsolo** gives you:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>▪ powerful GPS performance (works underneath trailers)</li> <li>▪ minute-by-minute GPS positions for accurate journey breakdown</li> <li>▪ regular location reports to reassure you that your asset is exactly where you left it</li> <li>▪ highly configurable reporting</li> <li>▪ impact detection</li> </ul> | <ul style="list-style-type: none"> <li>▪ internal battery monitoring</li> <li>▪ low internal battery alerts</li> <li>▪ low vehicle battery alerts</li> <li>▪ tow-away detection</li> <li>▪ internal antennas</li> <li>▪ quad band (can be used worldwide)</li> </ul> |
|---|--|



## Features

## Benefits

| Long Life Battery  |   |
|--|---|
| Allows <b>BOXsolo</b> to make approx 600 position reports. With one report per day the battery will last for over 18 months. | Ideal for assets that are on site or on hire for long periods of time – you can be sure that your valuable equipment is exactly where you left it.  |
| With live tracking <b>BOXsolo</b> will track an average vehicle for up to 1 month.   | Minute-by-minute tracking without the need for external power. Ideal for equipment out on short-term hire.  |
| <b>BOXsolo</b> can be connected to external power. Whenever power is connected the internal battery will recharge.           | Gives you the convenience of recharging the battery without having to replace it.   |
| Accelerometer / Motion Sensor  |   |
| <b>BOXsolo</b> is fitted with a highly sensitive, 3-axis accelerometer which allows it to detect movement.                   | Allows <b>BOXsolo</b> to alert you to any unauthorised movements of your vehicles / equipment.  |
| If movement / vibration is detected, <b>BOXsolo</b> will wake up and give you minute-by-minute tracking.                     | If your vehicle / equipment is moved – even with the engine off – <b>BOXsolo</b> will alert you and track the journey.  |
| The accelerometer can be switched off if required, and the sensitivity can be adjusted to suit your needs.                   | Helps to prevent false alerts on equipment that vibrates heavily but <b>BOXsolo</b> can also be made sensitive enough to pick up very small vibrations (e.g.: it will detect someone getting into a car). |
| Durable IP67 Casing  |   |
| Fully IP67 rated, waterproof and dustproof casing.   | Makes the unit ideal for use on assets exposed to the elements.   |
| Vibration Tested.  | Perfect on plant and agricultural equipment which vibrate heavily.  |
| Integral fixing lugs / brackets moulded into the casing.   | Enabling quick and secure covert installation.  |
| Highly Sensitive GPS   |   |
| Highly sensitive internal GPS antenna.   | No wires mean that covert installation on the exterior of equipment is possible.  |
| Powerful GPS performance.  | Works perfectly underneath a trailer (will even work in the trunk of a car!).   |

## Operating Modes

**BOXsolo** has 3 distinct operating modes: Ignition Detect, Motion Detect and Timed.

| Ignition Detect Mode  |
|---|
| <p>In Ignition Detect Mode, <b>BOXsolo</b> is wired to positive, negative (ground) and ignition and works as follows:</p> <ul style="list-style-type: none"> <li>When the ignition is on, <b>BOXsolo</b> will register an “ignition on” and give you minute-by-minute tracking.</li> <li>When the ignition is switched off, <b>BOXsolo</b> will send an “ignition off” message and go to sleep.</li> </ul> <p>In Ignition Detect Mode, if the vehicle / equipment is moved with the ignition off:</p> <ul style="list-style-type: none"> <li>The accelerometer will detect any movement and raise a “Tow-away” alert and give you minute-by-minute tracking.</li> <li>If motion stops for 5 minutes, then a “Tow-away Ended” alert is sent and the unit goes to sleep.</li> </ul> <p>In addition, when there is no movement <b>BOXsolo</b> will wake up every 24 hours (this is configurable) to report its position.</p> |
| Motion Detect Mode  |
| <p>In this mode, only the accelerometer is used to detect when a journey starts. When working from the internal battery only, or when external power is rarely available, this is the best mode to use.</p> <ul style="list-style-type: none"> <li>When motion is detected an “ignition on” alert will be generated and minute-by-minute tracking will start.</li> <li>If there is no movement / motion for 5 minutes, an “ignition off” event will be registered and <b>BOXsolo</b> will go to sleep.</li> </ul> <p>In addition, when there is no movement, <b>BOXsolo</b> will wake up every 24 hours (configurable) to report its position</p>   |
| Timed Mode  |
| <p>In Timed Mode, <b>BOXsolo</b> will be woken periodically by the internal clock to send a positional report before going back to sleep.</p> <p>The wake up frequency is configurable and in this mode, <b>BOXsolo</b> will give a regular, periodic report with the precise location of your asset.</p>   |

## Technical Specification

| <b>Certification:</b>                   | "e" mark approved.<br>RoHS compliant.<br>IP67.  |      |       |   |      |                          |      |  |      |
|---|---|------|-------|---|------|--------------------------|------|--|------|
| <b>Communication:</b>                   | GPRS / TCP and SMS (for configuration only).  |      |       |   |      |                          |      |  |      |
| <b>Antenna:</b>                         | Internal GPS and GSM antennas.  |      |       |   |      |                          |      |  |      |
| <b>Power:</b>                           | Input Voltage: 9-28V DC.  |      |       |   |      |                          |      |  |      |
| <b>Back-up battery:</b>                 | Internal 4200 mA/h rechargeable Li-ion.<br>Over 18 month battery life with 1 update per day.  |      |       |   |      |                          |      |  |      |
| <b>Interfaces:</b>                      | RS-232 (for configuration).   |      |       |   |      |                          |      |  |      |
| <b>OTA Functionality:</b>               | Configuration over-the-air via GPRS and SMS.<br>Free firmware updates for life, available over-the-air.<br>BOX-Online – use our servers for firmware / configuration.   |      |       |   |      |                          |      |  |      |
| <b>Accelerometer:</b>                   | Internal 3-axis motion sensor.  |      |       |   |      |                          |      |  |      |
| <b>Physical Specification:</b>          | Dimensions: 160 x 120 x 35 mm.<br>Weight: 400g.   |      |       |   |      |                          |      |  |      |
| <b>Environmental:</b>                   | Operating Temperature: -15°C – +65°C.<br>Storage Temperature: -30°C – +70°C.  |      |       |   |      |                          |      |  |      |
| <b>Options:</b>                         | <table border="1"> <thead> <tr> <th>Item</th> <th>Part#</th> </tr> </thead> <tbody> <tr> <td>BOXsolo Wired Kit (with 3-wire harness)</td> <td>BS07</td> </tr> <tr> <td>BOXsolo Battery only Kit</td> <td>BS06</td> </tr> <tr> <td>Mains / Cigarette Lighter Charging Kit</td> <td>BS03</td> </tr> </tbody> </table> | Item | Part# | BOXsolo Wired Kit (with 3-wire harness) | BS07 | BOXsolo Battery only Kit | BS06 | Mains / Cigarette Lighter Charging Kit | BS03 |
| Item                                    | Part#   |      |       |   |      |                          |      |  |      |
| BOXsolo Wired Kit (with 3-wire harness) | BS07  |      |       |   |      |                          |      |  |      |
| BOXsolo Battery only Kit                | BS06  |      |       |   |      |                          |      |  |      |
| Mains / Cigarette Lighter Charging Kit  | BS03  |      |       |   |      |                          |      |  |      |

To find out more about BOXsolo and our other products, contact us on +44 (0) 1675 434 200 or send an email to [sales@boxtelematics.com](mailto:sales@boxtelematics.com).

