

# GPS-Base GPS Base Station

## Features

- 45cm DGPS Corrections
- 20cm L1 Corrections
- 2cm L2 Corrections
- RTCA, RTCA2 and RTCM V3 Corrections
- Various Radio Options
- Error Correcting Transmission
- Save/Restore Antenna Position
- Multi-path Rejecting GPS Antenna

## Compatibility

- RT2002/ RT2004
- RT3000
- RT4000

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# GPS-Base Portable GPS Base Station



The GPS-Base is a portable GPS Base Station capable of providing Differential Corrections for Differential GPS Receivers.

The GPS-Base can be used with the RT2002, RT2004, RT3000 and RT4000 products to give up to 2cm positioning accuracy.

One GPS-Base unit can be used to correct multiple DGPS systems. Additional Remote Radio Modems can be pur-

chased for each mobile DGPS system.

## Fast To Install

The GPS-Base has been designed with installation speed in mind. Simply connect the GPS Antenna and the Radio Modem Aerial; then turn on. Simple software on the PC is used to configure the GPS-Base. The current location can be saved and restored or a new location can be set by averaging the GPS measurements.

Training for operators is also minimal. The software contains hints to guide inexperienced users and a quick guide is provided to make the operation easy.

## Flexible Power

The power can be supplied by a battery, a car cigarette lighter or a mains power supply. The GPS base accepts 6 to 18V d.c. and is suitable for car power.

## Multipath Rejection

The GPS-Base uses Pulse-Aperture Correlator Technology to minimise the effects of multipath.

The GPS-700 Pin-Wheel Technology Antenna includes a ground-plane to minimise ground surface multi-path and reflections.

Qty	GPS-Base components with SATEL radio
1	GPS-Base Unit
1	GPS-C006 15m GPS Antenna Cable
1	GPS-702-GG GPS Antenna
2	SATEL Sateline-3ASd Radio Modem
2	Radio Modem Aerial/Antenna with 3m cable
1	Lightweight Tripod
1	Power/Radio modem cable
1	PC-USB cable
1	GPS-Base User Manual
1	GPS-Base Quick Guide

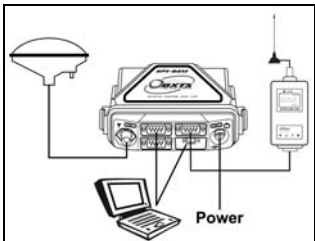
Parameter	GPS-Base Specification
Power	6-18V DC, 2W
Operating Temperature	-40°C to 75°C
Environment	Dry environments
Relative Humidity	95%, non-condensing
Corrections	RTCA (Differential, L1, L2), RTCA2, RTCM V3
Frequency	1 Hz
Format	RS232



The GPS-Base includes a Remote Radio Modem and Antenna for use on the vehicle. The Radio Modem in the GPS-Base will be factory configured for use in a particular country or territory.



GPS-Base components, here shown with SATEL radio modems.



The drawing shows the GPS-Base connections.

### Radio Modem

Three different radio options are available. This allows a suitable radio to be chosen for license free operation.

Advanced Error Correcting Codes are used in the Radio Modem's communication to enhance reliability and minimise the number of corrupt packets.

The Radio Modem provides reliable transmission over a 2km range in an open environment. Since some packets can be dropped or have errors, the Radio Modem can be used up to a range of 5km in open environments.

For further information please contact Oxford Technical Solutions or your nearest local agent.

Radio	Different Radios available
SATEL	380 - 480 MHz band, up to 1 W, typically 5 km. License free bands available for many European countries. Radio will typically cover 8 bands with 25 kHz channel spacing.
SATEL	869 MHz band, up to 500 mW, typically 2 km. License free across most of European Union.
Freewave	900 MHz band, up to 1 W, typically >10 km. License free in USA, Brazil, Canada.

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