



Overview

The Racelogic Differential Base Station is a complete differential correction system designed to provide local correction for improved GPS accuracy. By programming the Base Station with a known GPS position, it is able to accurately monitor the difference between its programmed position and the position that it is receiving via GPS. This difference is transmitted via radio to allow a remote GPS system to correct position.

Two Base Station options are available from Racelogic. Both systems are equipped with RTCM output providing 40cm DGPS accuracy for all VBOX GPS systems except VBOX Mini. However, the Base Stations differ in the high precision modes that they offer. The first offers a 20cm DGPS mode for use with suitably upgraded VBOX IIS units¹. The second is equipped with an RTK DGPS mode which, when combined with a VBOX III RTK, gives an accuracy of 0.02m 95% CEP*.

The exact position of the antenna can be entered manually if known or 'surveyed' by averaging the received GPS position over a period of time. Up to 25 positions can be saved and recalled from memory.

Featuring a high performance GPS engine and integrated radio transmitter, the Base Station can be powered from an external 12v source or from the built-in NiMH battery pack. It is also supplied with separate radio modem to allow a mobile GPS system to receive the RTCM correction data.



Features

- Standard RTCM output
- Integrated radio transmitter
- 25 Position memory
- Self Survey Mode
- Battery or external power
- Supplied with radio receiver
- Rugged IP64 enclosure

Specification

Inputs	Voltage	6 to 18V DC
	Antenna	5v Active antenna
Outputs	Radio	900/868Mhz (Please specify country when ordering)
	Data Format In 40cm mode	RTCM Type 1, 3
Memory	GPS Position	25 locations

Base Station 2 – RLVBBS2

DGPS Modes Available	Works with	Accuracy improvement
40cm	All VBOX GPS units (except VBOX Mini)	40cm 95% CEP*
20cm	VBOX IIS ¹	20cm 95% CEP*

Base Station 3 – RLVBBS3

DGPS Modes Available	Works with	Accuracy improvement
40cm	All VBOX GPS units (except VBOX Mini)	40cm 95% CEP*
RTK	VBOX III with RTK option	2cm 95% CEP*

¹ Chargeable upgrade required to VBOX to use 20cm Mode

* 95% CEP (Circle Error Probable) means 95% of the time the position readings will fall within a circle of the stated diameter

Parts included:

- VBBS Base Station with built-in Radio transmitter
- Survey grade GPS antenna
- Antenna tripod
- Remote radio modem for use with mobile GPS unit
- Battery charger / Mains supply (100 to 240V ac)