

DriftBox

RLDB

Racelogic's **DriftBox** is the first ever vehicle performance meter with the ability to measure drift angle. It also measures G-forces, speed, lap & split times, predictive lap time (live comparison to last lap), 0-60, 0-100, braking distance and more.

All these parameters are logged to an SD memory card ten times per second for later review and comparison.

DriftBox contains a high-performance 10Hz GPS engine coupled with a high accuracy temperature compensated inertial sensor, providing a wealth of information with very easy installation and a compact size.

The DriftBox gets all its information from GPS satellites, and needs only power from a vehicle.

The operation is split up into seven modes:



DRIFT ANGLE		
53	34°	43°
KMH		PEAK

THE DRIFT MODE

gives the driver real-time view of drift parameters and calculation of key drift data:

- Speed:** Current, Peak & Average
- Drift Angle:** Current, Peak & Average
- G-force:** Peak & Average
- Score:** Current & Total



LAPTIMING	
19'59.9"	LAST 19'59.5"
	BEST 19'59.5"
	SPL1 19'59.5"
	@ 98.2 mph

THE LAPTIMING MODE

shows current lap, last lap, and best lap.

Split Times:

Option to show split time or speed at a split point.

Virtual Start/Finish/Split Lines:

Using GPS, there is no need for an external beacon or transmitter. Split lines can be easily saved and transferred.



ACCEL	0-60	6.1s
100.1	0-100	10.2s
kmh	0-100-0	6.1s
	Vmax	100.2

THE PERFORMANCE MODE

is used to monitor and record a range of vehicle performance characteristics.

Acceleration: 0-60, 0-100, 0-100-0, 30-50*, 50-70* (Time, Current and Best), Vmax, Shows time and G-force *User adjustable

Braking: 60-0, 100-0, Shows time, distance, G-force

Distance: 60', 1/8mi or 100m, 1/4mi or 200m, 1/2mi or 400m, 1mi or 1km Shows time, trap speed

Live G-Meter: Accel, Decel, and cornering G-forces, with max G



+0.66

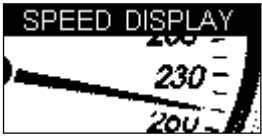
THE PREDICTIVE MODE

enables you to graphically view your predicted lap time. Predictive lap timing works by saving your position around a circuit, every second.

If the current lap is the fastest so far, then this positional data is saved as a reference.

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THE SPEED DISPLAY

DriftBox also works as a highly accurate digital speedometer with compass, a handy feature for street driving.

POI files containing various Points of Interest can be loaded, and DriftBox will display an icon when you are approaching a point of interest.

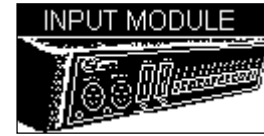
This is great for locating spots such as speed cameras.



THE POWER MODE

Wheel HP Calculation: Enter your vehicle's weight and run an acceleration to estimate wheel horsepower.

Flywheel HP Calculation: Perform a coast-down test to measure drag, and the DriftBox will calculate HP at the flywheel.



THE INPUT MODULE DISPLAY

An additional Input Module screen allows you to configure the incoming signals from an optional Micro Input Module.

A Micro Input Module enables logging and display of four analogue and one digital (RPM) input.

Data Logging

Data logged to the SD flash card can be analysed in detail using the PC software provided. For convenience, the DriftBox can be connected to the USB port of a PC compatible computer to download information stored on the memory card.

The data can also be read using a standard SD/MMC card reader. Lap time, acceleration and HP results can be written to the SD card as text files, for easy saving and transferring.

GPS Specifications

Velocity		Distance	
Accuracy	0.1 Km/h	Accuracy	0.05% (<50 cm per Km)
Units	Km/h or Mph	Units	Metres / Feet
Update rate	10 Hz	Resolution	1 cm
Maximum velocity	1600 Km/h		
Minimum velocity	0.1 Km/h		
Resolution	0.01 Km/h		

Absolute Positioning		Lap Timing	
Accuracy	3m 95% CEP*	Accuracy	0.01 s
Update rate	10 Hz	Resolution	0.01 s
Resolution	1.cm		
Height accuracy	10 Metres 95% CEP*		

* CEP = Circle of Error Probable. 95% CEP means 95% of the time the position readings will fall within a circle of the stated radius.

VBOX
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Acceleration		Environmental and physical	
Accuracy	1%	Weight	226 grams
Maximum	4 G	Size	113 mm x 63 mm x 93 mm
Resolution	0.01 G	Operating temperature	-20°C to +50°C
Update rate	10 Hz	Storage temperature	-30°C to +80°C

Memory		Power	
Type	SD Card	Input Voltage Range	6 – 28 V DC
Recording time	Dependent on card capacity**	Power	Typically 100 mA

Heading		Drift Angle	
Resolution	0.01°	Resolution	0.01°
Accuracy	0.1°	Accuracy	1°

** Approximately 1.1Mb per hour used

Supplied software

Each DriftBox is supplied with a CD containing the DriftBox Tools and Circuit Tools software. This software allows users to display and analyse the information recorded by the DriftBox.

Features include graphical display of logged parameters, full circuit plot, up to 6 overlaid comparison laps and detailed performance analysis.

Package content

DriftBox is available in two versions.

DB01 contains:

- DriftBox 10Hz GPS data logger with inbuilt yaw sensor
- Windscreen suction mount
- In-car power supply
- Mains power supply (UK/US/JP/EU/AU)
- USB cable for connection to PC
- SD card
- Software and manual on CD

DB02 contains:

- All package content of DB01
- External magnetic GPS antenna
- Professional plastic carry case