

# VBOX LapTimer

(RLVBLAP01-V2)



VBOX LapTimer is a 10 Hz GPS data logger and predictive lap timer display in one. It provides instant driver feedback, helping you to find valuable improvements in lap times.

VBOX LapTimer comes with an external GPS/GLONASS antenna for enhanced positional accuracy.

In addition to the Delta Time display, VBOX LapTimer uses high brightness colour LEDs to give an indication of your speed relative to your fastest lap.

VBOX LapTimer has an internal accelerometer so that it can be used in normal and upside-down modes.

Information such as speed, split times, and predicted lap times are stored on an SD card for the user to examine later.



## Display options

The OLED Display has the option to show font as a high contrast outline and inverse screen colours for use in different light conditions. Some of the display options are shown below.



Inverted



Normal



Outline

## Features

- Predictive Lap timing: compares your current lap to your best in real time to help improve lap times
- 10 Hz data logging to SD card
- View parameters such as live speed, max speed, lap times and predicted lap times
- Internal accelerometer: flips display according to the way it is mounted
- Supplied with external GPS/GLONASS antenna
- Easy operation: three buttons to scroll display screens, set start/finish points, reset data, start/stop logging, and enter menus
- Motorsport Standard Lemo connectors
- Low power consumption: 1.5 W
- Multiple Mounting methods including standard 1/4-20 UNC threaded hole

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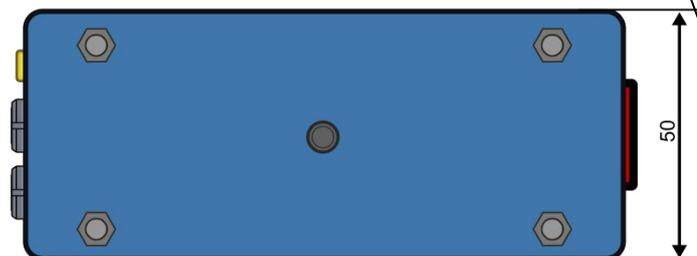
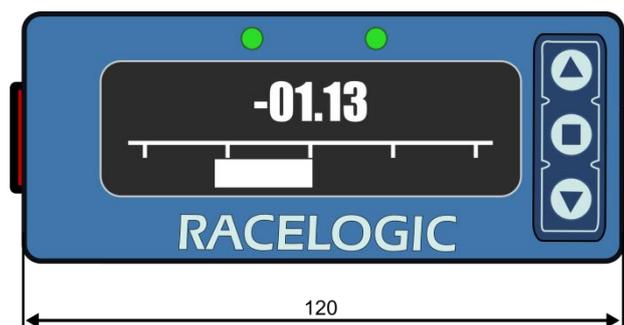


## Display Modes

VBOX LapTimer has different display modes, which can be accessed using the Up and Down buttons. The data on each screen is always calculated, even if it is not displayed.



## Connectors



Power Connector			
Pin	I/O	Function	
1	I	Power +	
2	I	Ground	
Chassis	I	Ground	

RS232/CAN Connector			
Pin	I/O	Function	
1	O	RS232Tx	
2	I	RS232Rx	
3	I/O	CAN Hi	
4	I/O	CAN Lo	
5	I	Power	

GPS Antenna Connector			
Pin	I/O	Function	
1	I	Signal	
Chassis	I	Ground	

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## General Specification

Environmental and Physical	
Unit Connection	1x Lemo 5W socket, 1 x Lemo 2W socket
IP Rating	IP31
Operating Temp	-20 to +70°C
Power	1.5 W
Input Voltage	7 – 30 V DC
Dimensions	120 x 50 x 24.5 mm (exc. connectors)
Weight	178 g (exc. cable)

## GPS Specification

Velocity		Position	
Accuracy	0.1 km/h	2D Position	3 m 95 % CEP*
Units	Km/h or mph	Height	±5 m
Update rate	10 Hz		
Maximum velocity	1800 km/h		
Minimum velocity	0.1 km/h		
Resolution	0.01 km/h		

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

Acceleration		Heading	
Accuracy	0.5 %	Resolution	0.01°
Maximum	4 G	Accuracy	± 0.1°
Resolution	0.01 G		

Support	
Hardware	One Year hardware warranty
Software	Lifetime Support Contract: Valid for a minimum of 5 years from the date of purchase and limited to the original purchaser. Contract includes telephone/ email technical support provided by local VBOX Distributor and firmware/ software upgrades (where applicable).

## Software

Windows software
Circuit Tools: Data analysis software

## Package Contents

	Product Code
VBOX LapTimer unit	VBLAP01-V2
External GPS/GLONASS low profile antenna, 2 m, RG-174 & MCX Male Connector	RLACS284
Lightweight camera/display suction mount with thumb nut	RLACS287
2W Lemo to Cigar Lighter power cable, 2 m, screened	RLCAB010LE
8 GB SD Ultima Pro UHS-1 Memory Card	RLACS313