

# VBOX Pit Lane Timer

(RLVBPIT-R)



VBOX Pit Lane Timer provides instant feedback, to help optimise the time spent in the pit lane and avoid pit stop penalties.

Once the pit lane entry point is crossed, VBOX Pit Lane Timer will display the velocity until the car comes to a stop and then counts down to zero to indicate when it is time to leave the pit box.

In addition to displaying your stint time and pit lane timing information, VBOX Pit Lane Timer uses an array of 6 LEDs to prompt you when to speed up, slow down and leave the pit box.

Information such as speed, time, and position is logged at 25 times per second and is stored on an SD card, to examine later using the free Circuit Tools analysis software.

RLVBPIT-R is designed for more permanent installations, where the connectors are optimally positioned on the rear of the display.



## Display Modes

VBOX Pit Lane Timer has different display modes depending where you are on the track.

**32'07.7**

### Stint Time

When you are out on the track, the Pit Lane Timer will show your time from pit stop to pit stop.

**23.5** km/h

### Live Speed

When you enter the pit lane, the Pit Lane Timer will show your live speed value.

**0'03.5**

### Pit Lane Timing

Once you become stationary in your pit box, a countdown time will be shown. When it is time to leave, a delta from the pit to exit will be shown to help minimise your time in the pit lane.

## Features

- 25 Hz data logging to SD card
- Helps to avoid pit stop penalties.
- Minimises the time spent in the pits.
- Prompts when to leave the pit box and warns if you are likely to cross the line too early.
- Intuitive
- Motorsport Standard Lemo connectors
- Low power consumption: <2W
- Rear mount bracket attachment via 4x M3 screws
- Free lifetime customer support

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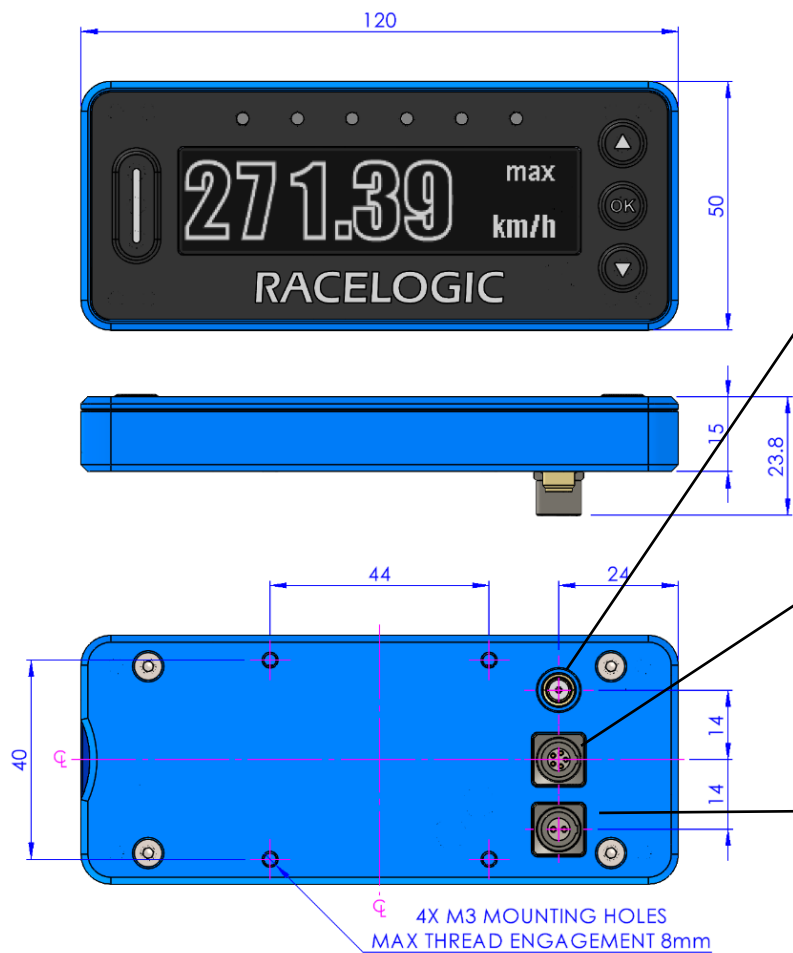
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## LED Modes

An array of 6 LEDs provides the driver with live feedback immediately after the pit entry has been crossed. This includes monitoring speed in the pit lane, time to leave the pit box, and the delta time from pit box to pit exit.

## Connectors



GNSS Antenna Connector			
Pin	I/O	Function	
1	I	Signal	
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	

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

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## General Specification

Environmental and Physical	
Unit Connection	1x Lemo 5w socket and 1 x Lemo 2w socket
Operating Temp	0 to +60°C
Power	<2 W
Input Voltage	7 – 30 V DC
Dimensions	120 x 50 x 15 mm (exc. connectors)
Weight	156 g (exc. cable)

## GPS Specifications

Velocity		Distance	
Accuracy	0.1 km/h	Accuracy	0.05% (<50 cm per km)
Units	km/h, mph or knots	Units	Metres / Feet
Update rate	25 Hz	Update rate	25 Hz
Resolution	0.01 km/h	Resolution	1 cm

Absolute Positioning		Time	
Accuracy	±2 m 95% CEP*	Accuracy	0.01 s
Resolution	1 cm	Resolution	0.01 s
Update rate	25 Hz		

Acceleration		Heading	
Accuracy	1%	Accuracy	0.3°
Resolution	0.01 g	Resolution	0.01°
Maximum	4 g		
Update rate	25 Hz		

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

## Software

Windows software
Circuit Tools: Data analysis software

## Package Contents

	Product Code
VBOX Pit Lane Timer unit	VBPIT02-R-V1
External GNSS low profile antenna, 2 m, RG-174 & MCX Male Connector	RLACS262
2 W Lemo to Unterminated power cable, 2 m, screened	RLCAB014LE
8 GB SD Ultima Pro UHS-1 Memory Card	RLACS313
Rear connector bracket assembly	RLACS359