

Fuel Supplement Guide

For Monit TC200

Revision 1.0

The logo consists of a solid black square. Inside the square, the word "monit" is written in a white, lowercase, sans-serif font. Below "monit", there is a thin white horizontal line, and underneath that line, the words "RALLY COMPUTERS" are written in a smaller, white, uppercase, sans-serif font.

monit
RALLY COMPUTERS

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Introduction

Welcome and congratulations on purchasing the monit TC200, the rally computer with the most advanced fuel monitoring system available – we know you'll enjoy using it because we rally too and have taken the utmost care in ensuring the monit TC200 meets the needs of the modern professional rally team.

Like all monit products, the fuel monitoring system in your TC200 is intuitive and remarkably easy to use, but despite this, care still needs to be taken during the setup stage to ensure that you get delivered with the most accurate readings possible, that's why we've provided this guide – it outlines some key points that you need to take care with when calibrating the TC200.

Read and enjoy!

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Basics of the Fuel System

The monit connects to the fuel sender unit of your vehicle and calibrates to give you a digital readout of the amount of fuel in your tank – no more guess work and struggling to read the factory gauge – the absolute accuracy of this readout will depend on the design of your in-tank fuel sender, and the care taken during calibration.

Unless the design and location of your in-tank fuel sender is very good you can expect the reading to be very inaccurate when the vehicle is moving, particularly during acceleration, cornering and driving on inclined surfaces. While we cannot improve your tank or sender design, we have included advanced features in the monit that minimize the fuel sender issues.

- The Monit unit averages the fuel signal heavily when the vehicle is moving to smooth out fluctuations, this averaging turns off ten seconds after the vehicle stops moving, this is when accurate fuel measurements can be taken.
- The unit calculates the ratio of battery and fuel sender voltages, meaning the reading should not change depending on whether the engine is running or not.
- The unit can take up to 10 calibration points, meaning greater matching to your fuel tank characteristics

Electrical Connections

A basic level of electrical ability is required to install the fuel element of the monit. The key aspect is locating fuel level sender wire on your vehicle, this may be via the vehicle wiring diagrams or tracing the correct wire from either your factory fuel gauge or the in-tank sender. Once the vehicle wire is located it should be spliced into the Green wire on the monit loom.

Colour	Description
Green	Fuel Signal Input

The unit will work with most common types of vehicle fuel senders including both increasing and decreasing voltage types. For best results use a sender that has a voltage swing of at least 6volts.

If the vehicles factory fuel guage has been removed an equivalent resistor may need to be installed in its place, the monit should not affect the operation of currently installed gauges.

When connecting the unit up, ensure that any unused wires on the loom cannot short against each other or the vehicle's chassis.

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Before You Start

Several key points need to be taken into account during the calibration process to make sure you get the most out of your system.

Important Points to Consider

The vehicle must be level and stationary during filling, take care not to move or bump the vehicle as this can effect the calibration.

Fuel should be calibrated with the vehicle weight distribution as it will be used during competition.

Turn the vehicle ignition on to ensure that the fuel gauge is powered up

After each filling stage the fuel must be given time to settle before setting of the calibration point

Important Points to Consider

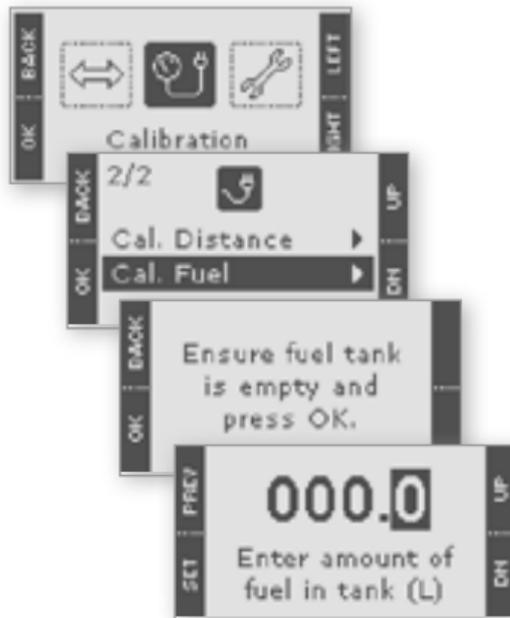
If the tank is completely empty it may take several litres before the sender begins to register.

Fuel sender may 'top out' before the tank is full due to the storage capacity in the filling hose. Ideally only fill the tank until the fuel sender reaches its maximum, if this is not practical then remember the gauge will not be able to register fuel added past this point.

Fuel Calibration

Please make sure you have taken into account the points outlined in previous sections before beginning the calibration, once you are ready to calibrate ensure you have a method of accurately measuring the fuel you add to the tank.

1. Navigate to the calibration menu and select 'Cal. Fuel'
2. Follow the on screen instructions regarding calibration. Note: the first step should be with a nearly empty tank, you can then enter the approximate residual fuel level in the tank.
3. Follow the on screen instructions regarding adding fuel, remember to wait for the fuel to settle after it has been added



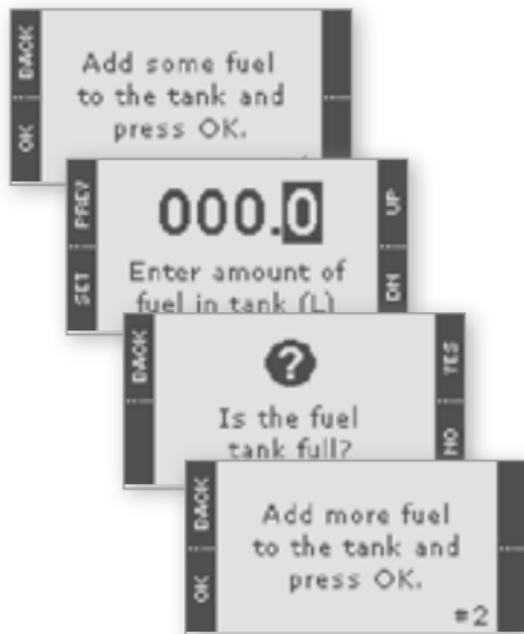
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Fuel Calibration (cont)

3. before pressing OK then entering the amount added.
4. Enter the amount of fuel that was added.
5. Repeat addition and calibration of fuel until the tank is full.

The monit allows up to 10 calibration points, it's best if you use as many points as possible to increase the accuracy of the calibration, take care to ensure that the amount of fuel you add between these points is sufficient to fill the tank with 10 points.

Note: Please take care when running your vehicle near to empty during events, make sure you are confident with your calibration and the accuracy of your in-tank fuel sender



Trouble Shooting / Error Messages



Invalid fuel signal

If you have a fuel sender that increases in voltage as the fuel level rises, this message indicates that the voltage decreased or stayed the same between points.

If you have a fuel sender that decreases in voltage as the fuel level rises, this message indicates that the voltage increased or stayed the same between points.

Causes:

- 1) The amount of fuel added since the last point might not have been enough to move the float (this is particularly important if this is the first point as the float may have bottomed out).
- 2) You didn't wait long enough for the fuel to settle in the tank when you set the last point. This could have caused an incorrect reading to have been taken.
- 3) Some electrical noise caused an incorrect signal. Check the signal quality with a multimeter.

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Fuel Level Must Increase

You must increase the fuel level between set points. You cannot calibrate by removing fuel from the tank.



Maximum Number of Points Reached

The TC200 can store a maximum of 10 points. If you have run out of points, begin again and increase the amount of fuel you add between each point.

Fuel Level Varies/Is Inaccurate

Most issues with inaccuracy are from the in-tank fuel sender or incorrect calibration. Please make sure you read previous sections of this guide carefully and follow all guidelines carefully

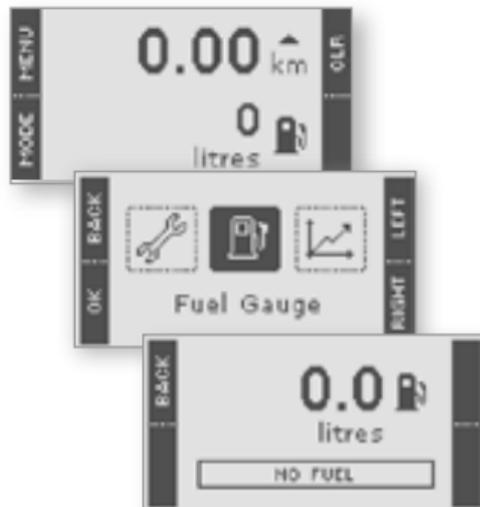
Remember to stop and wait for fuel to settle in the tank before taking accurate fuel readings. If you followed the instructions carefully and still have problems, feel free to drop us a line – we will be glad to help you out.

Viewing Fuel Level

Using the Telemetry menu in the main Settings menu the vehicle fuel level can be turned on as one of the telemetry sources displayed on the lower line of the main screen (see users manual for further information)

A full screen fuel gauge can be displayed by navigating to the Fuel Gauge menu. When selected, the current fuel reading is displayed in large digits in the middle of the screen in the current fuel units. On the bottom of the screen a bar graph showing the fuel level as a percentage of a full tank is shown.

Note: Many vehicles will not give a correct fuel reading unless the ignition is turned on.



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