DataPro Designer Quick Start Guide

Introduction

The DataPro Designer application provides the user with the ability to configure the ULTRA-LITE PRO range of Auto Meter® data acquisition products. Using Designer you can assign sensor inputs, set recording rates, configure alarms and calibrate sensors.

Please see the Software Installation and Set-up Guide for information on how to install and set-up the software!

Getting Started

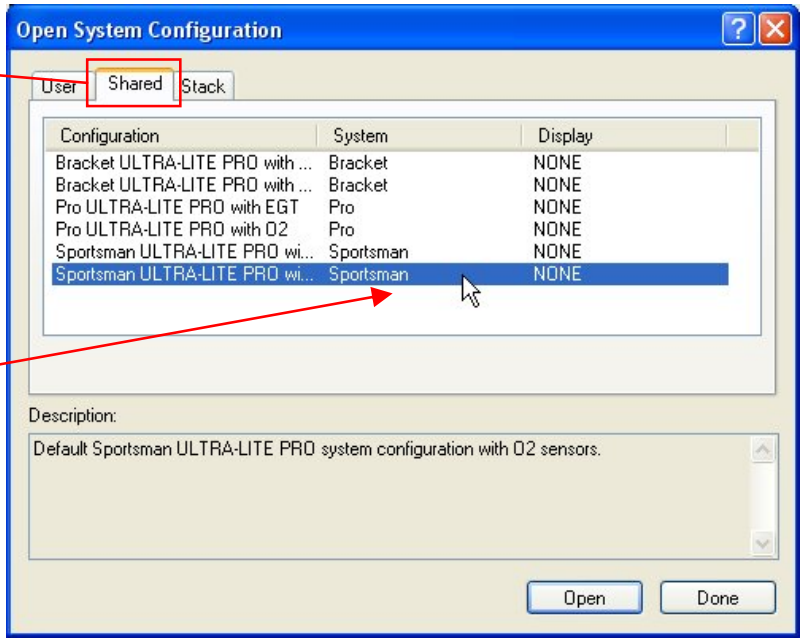
Double-click the Designer icon on the Desktop to launch the Designer application.

Opening a System Configuration

If you are new to Designer, the easiest way to get started is to open a default configuration. To do this, click on the **Open System Configuration** icon on the toolbar. The **Open System Configuration** dialog lists all available configurations on your computer.

1. Click on the **Shared** tab to see a list of the default configurations.

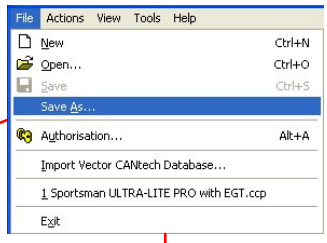
2. Double-click the configuration that best describes the product you have purchased. This will open the selected configuration and display the **Properties** screen.

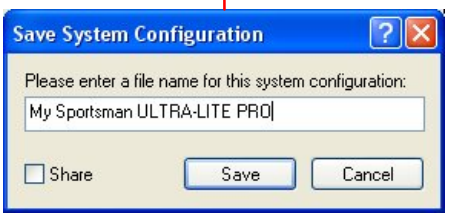


Setting System Properties

The **System Configuration Properties** screen describes the system hardware for which the configuration is intended.

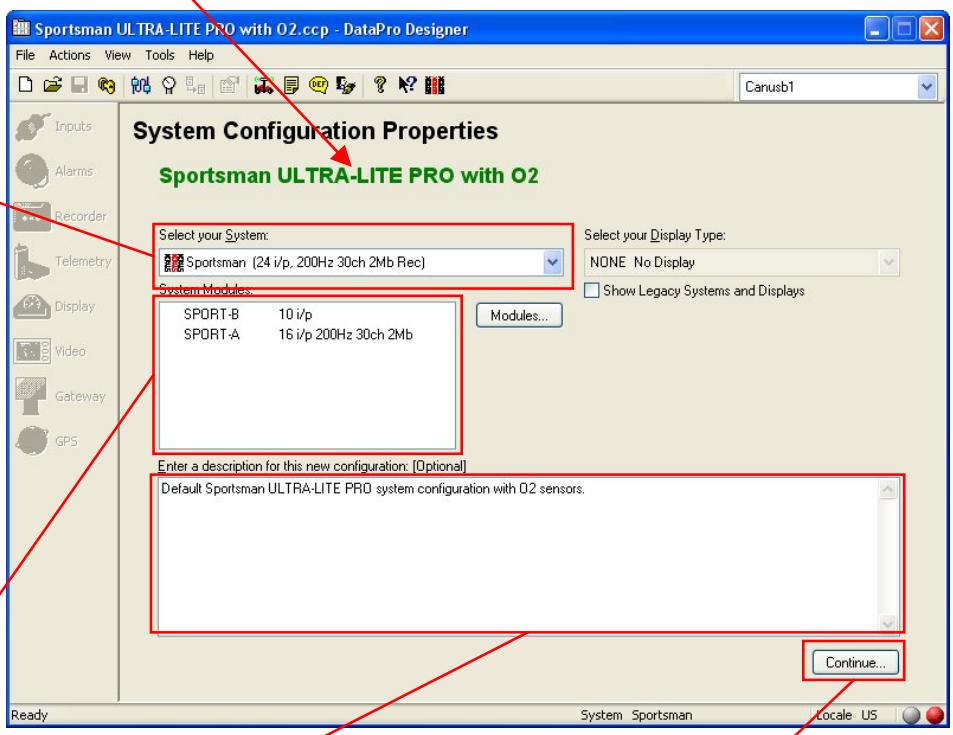
1. The green text displays the name of the loaded configuration. Change this now by selecting the **Save As** option from the **File** menu and entering your own name for the configuration. Uncheck the **Share** option if you want to make this a private configuration, then click the **Save** button.





The **System** dropdown list is used to select the type of hardware system for which this configuration is intended.

The **System Modules** lists details the component parts of the system.



2. Enter a textual description of your configuration in the box provided. This text is also displayed in the **Open System Configuration** dialog enabling you to easily locate your configurations.

3. Click the **Continue** button on the **Properties** screen to display the **Inputs** screen.

Configuring Sensor Inputs

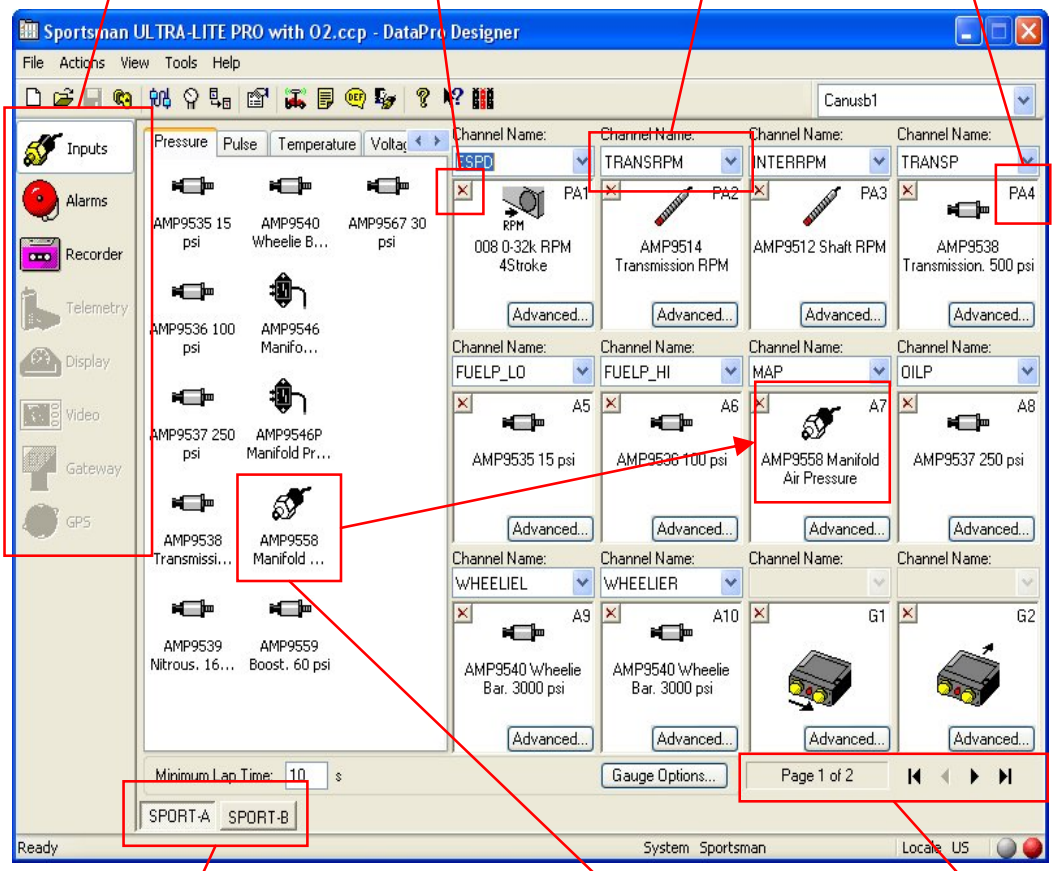
The **Inputs** screen allows you to assign data channel names and sensors to module inputs.

The vertical toolbar buttons on the left of Designer are used to select the different configuration screens.

Assign a channel name by selecting from the input's dropdown list. Alternatively, you may enter your own channel name into the box. Channel names must be no more than 8 characters in length and consist only of alphabetic, numeric and underscore characters.

Remove unwanted assignments by clicking the input's **delete** button. This clears the channel name and sensor icon from the input.

Note, inputs are referenced by their harness identifier e.g. PA4.



The horizontal toolbar buttons along the bottom of Designer are used to select the individual modules in your system.

Assign a sensor by using drag-and-drop. First, select the tab that lists your chosen sensor. In this example, the **Pressure** tab has been selected. Then left-click and hold the sensor icon while dragging it to the desired input box. This example shows the **AMP9558 Manifold Air Pressure** sensor being assigned to input **A7**.

If the selected module has more than 12 inputs, you use the **Page** controls to move back and forth through the different pages of inputs.

Advanced Input Options

Click the **Advanced** button on an input box to access any further options the input may have. For example, if you click the **Advanced** button on an input with a channel name of **ESPD**, then the **Number of Cylinders** option becomes available to be set.

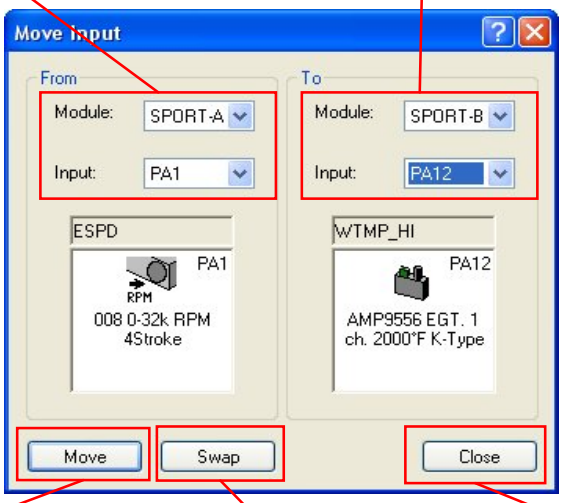
Moving an Input

Input assignments may easily be moved or swapped from one input to another by use of the **Move Input** function.

Click the **Move Input** icon on the toolbar to launch the **Move Input** dialog.

1. Select the '**From'** module and then the input on that module.

2. Select the '**To'** module and then the input on that module.



3. Clicking the **Move** button will move the '**From'** input into the '**To'** input. In this example, the **PA1** input of the **Sport-A** module would become unassigned and the **PA12** input of the **Sport-B** module would be assigned as the **ESPD** channel using the **Direct 008** sensor.

4. Clicking the **Swap** button will swap the '**From**' input with the '**To**' input. In this example, the **PA1** input of the **Sport-A** module would be assigned as the **WTMP_HI** channel using the **AMP9556** sensor and the **PA12** input of the **Sport-B** module would be assigned as the **ESPD** channel using the **Direct 008** sensor.

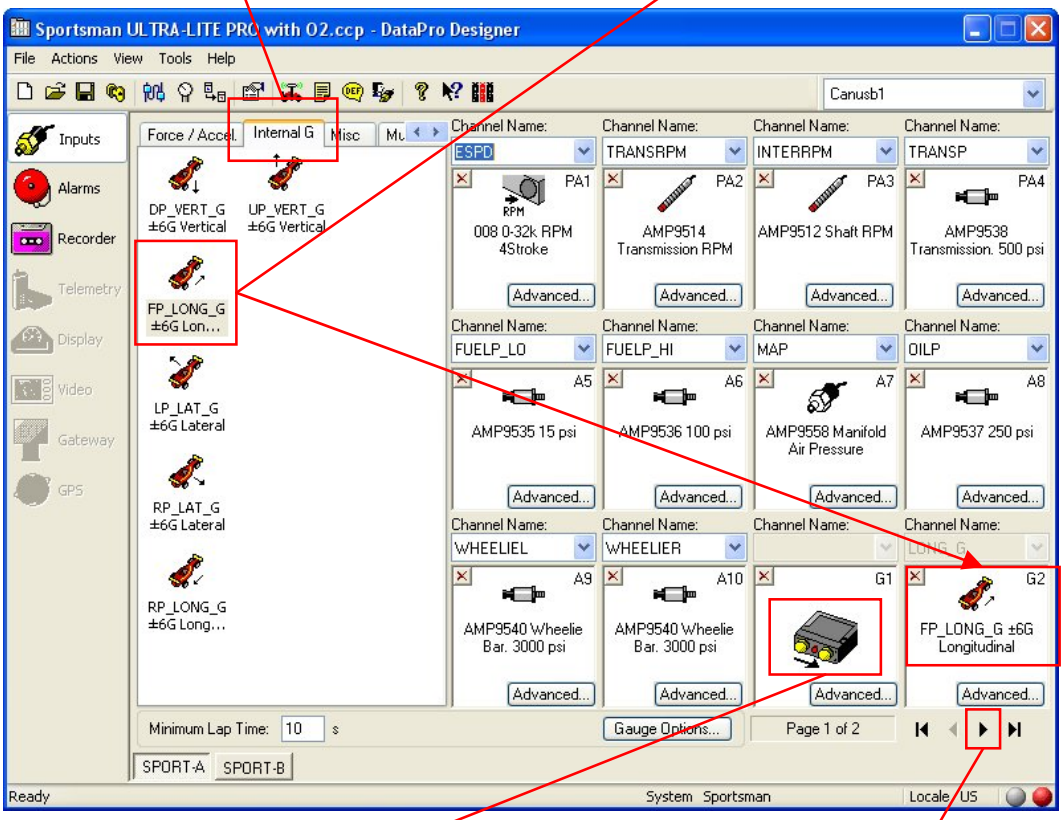
5. Once you have done re-arranging the inputs, click the **Close** button.

Internal G-Meter Assignment

If you wish to use the internal G-Meters, you must configure them according to the orientation of the module fitted to the vehicle.

2. Select the **Internal G** tab.

3. Configure positive or negative acceleration by dragging the appropriate racing car icon to the inputs **G1**, **G2** and **G3**. In this example, forward positive longitudinal G has been assigned to the **G2** input.



1. The icons for inputs **G1**, **G2** and **G3** use an arrow to show the acceleration plane in relation to the module orientation. Look at how the module has been mounted within the vehicle and decide which inputs relate to latitudinal, longitudinal and vertical acceleration.

4. Please note, the **G3** input can be found on **Page 2** of the inputs by clicking the **Next Page** arrow.

Configuring Ultra-Lite Pro Gauges

Enabling a Gauge

Gauges are enabled by selecting specific channel names for inputs (the only exception to this is battery voltage BATT which is enabled by default).

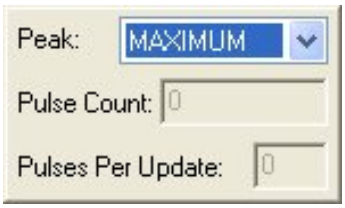
For example, to enable an oil pressure gauge, select **OILP** as the channel name for the oil pressure sensor input.

A list of these gauge-enabling channel names can be found opposite.

Gauge	CHANNEL NAME
Brake Pressure	BRAKEFT
Manifold Vacuum	VACUUM
Engine Speed RPM	ESPD
Nitrous Oxide Pressure	NOS
Exhaust Gas Temperature	EGT
Oil Pressure	OILP
Transmission Temperature	TRANSTMP
Fuel Pressure (0-15psi)	FUEL_LO
Fuel Pressure (0-100psi)	FUEL_HI
Battery Voltage	BATT
Air Fuel Ratio	O2
Manifold Air Pressure	MAP
Cylinder Head Temperature	CHT
Oil Temperature	OILT
Water Temperature (60-210°F)	WTMP_LO
Water Temperature (140-280°F)	WTMP_HI
Differential Temperature	DIFFT
Boost Pressure	BOOST

Setting Gauge Peak Display

Click the **Advanced** button on the input box that has the channel name of the gauge you want to set. For example, to set the **Oil Pressure** gauge, click the **Advanced** button on the **OILP** input.



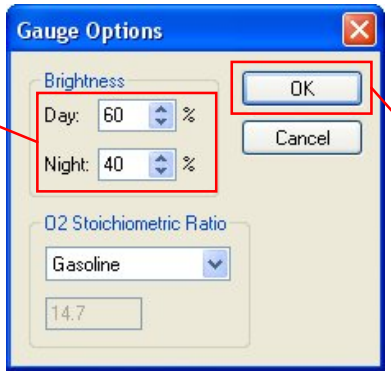
Select **MAXIMUM** from the **Peak** dropdown box to display the peak maximum value or select **MINIMUM** from the **Peak** dropdown box to display the peak minimum value when the driver switch is pressed.

Setting Gauge Brightness

Click the **Gauge Options** button at the bottom of the **Inputs** screen to launch the **Gauge Options** dialog.

1. Set the day and night brightness by clicking the up down arrows. The setting is a percentage of the overall brightness, so 100% is maximum brightness and 0% is no illumination.

Note, this setting applies to all gauges on the CAN

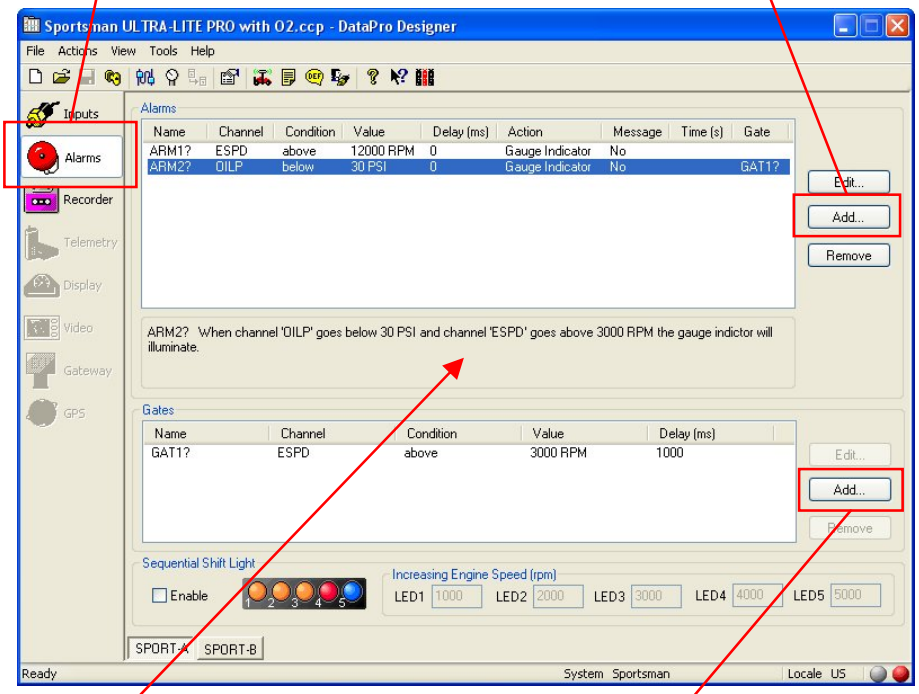


2. When you are done setting the brightness, click the **OK** button.

Configuring Gauge Warning Lamp

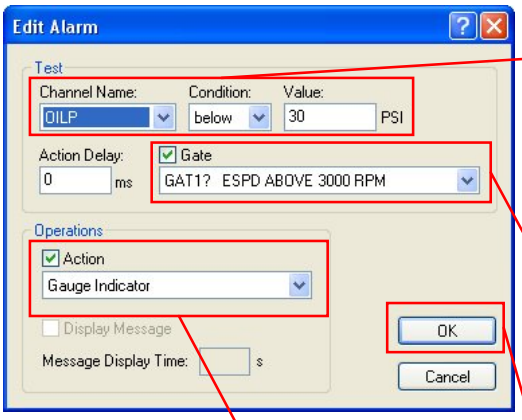
1. Click on the **Alarms** button of the module function toolbar.

3. Click on the **Add** button for the **Alarms** section to launch the **Alarm Editor.**



This text describes what the highlighted alarm will do.

2. If you want your alarm to be gated with another test then click the **Add** button for **Gates** section and complete the gate details in the **Gate Editor** dialog.



4. Select the **Channel Name** of the gauge, the alarm **Condition** and a **Value**. This example sets an alarm for OILP below 30psi.

5. If you want this test to be gated then select the **Gate** checkbox and choose the gate test from the dropdown list. In this example, the alarm is only set if OILP goes below 30PSI <u>and</u> ESPD goes above 3000RPM for at least 1 second.

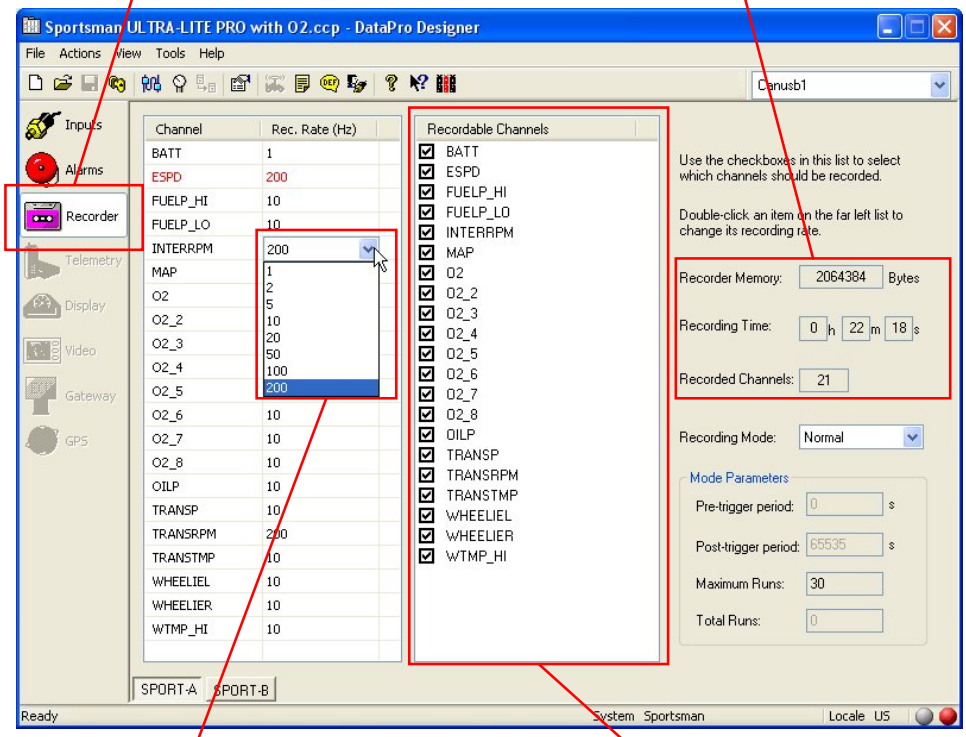
6. Select the **Action** checkbox and choose **Gauge Indicator** from the dropdown list.

7. Click the **OK** button on the Alarm Editor dialog.

Setting Recording Rates

1. Click on the **Recorder** button of the module function toolbar.

As you check and uncheck the recordable channels list, you will notice the recorder statistics on the right of the screen change to reflect the new recording time.

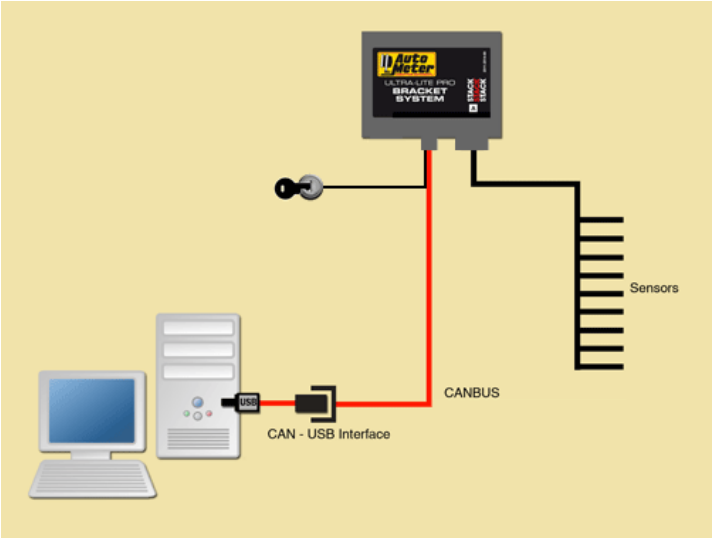


3. Double-click the recording rate on any channel you want to change. This displays dropdown list of available rates for that channel. The rates are shown in samples per second.

2. Uncheck any channels that you don't want to record right now and check those that you do.

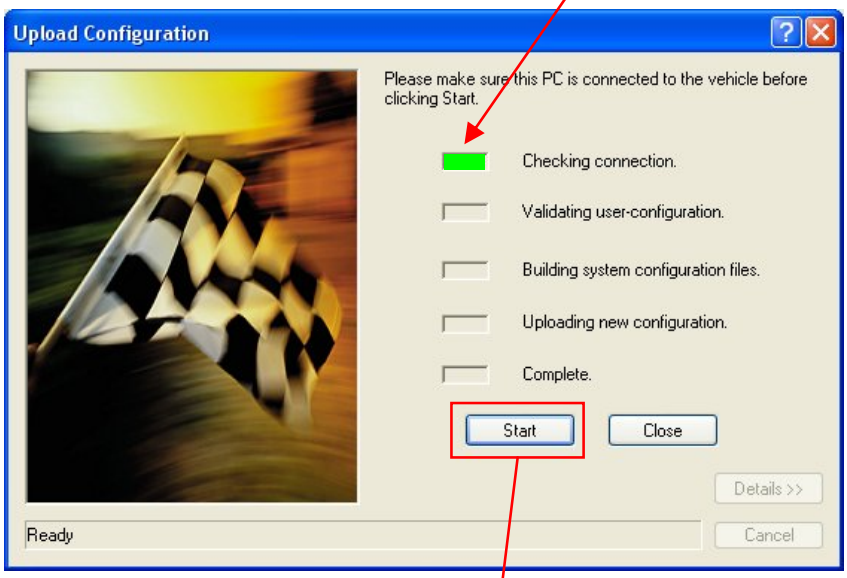
Programming the Module

Please make sure that the computer is connected to the system via the CAN-USB network interface module and that the system is powered.



Click the **Upload** icon on the main toolbar to launch the **Upload** dialog.

2. Green bars appear next to the upload tasks when they have completed successfully.



1. Click the **Start** button when you are ready to program the module.

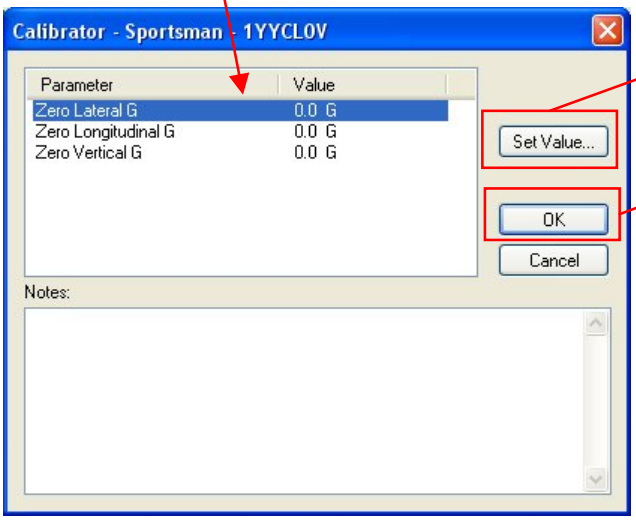
Sensor Calibration

Important! Sensor calibration can only be performed after the module has been uploaded with a configuration.

Click the **Calibrate** icon on the main toolbar to launch the **Calibrator** dialog.

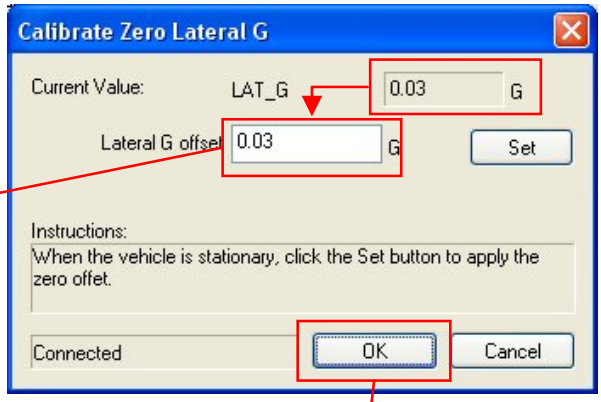
1. Select the parameter you would like to calibrate. This example shows a system with 3 G-Meters.

2. Click the **Set** Value button to edit the select parameter. In this example, we apply a zero offset to the lateral G-Meter.



5. Click **OK** on the Calibrator dialog to save the calibration.

3. If your computer is connected to the module via the CAN-USB network interface and the module is powered, the **Set** button takes the current sensor value and places it into the offset box. If your module is not connected, you can manually enter an offset value in the box.



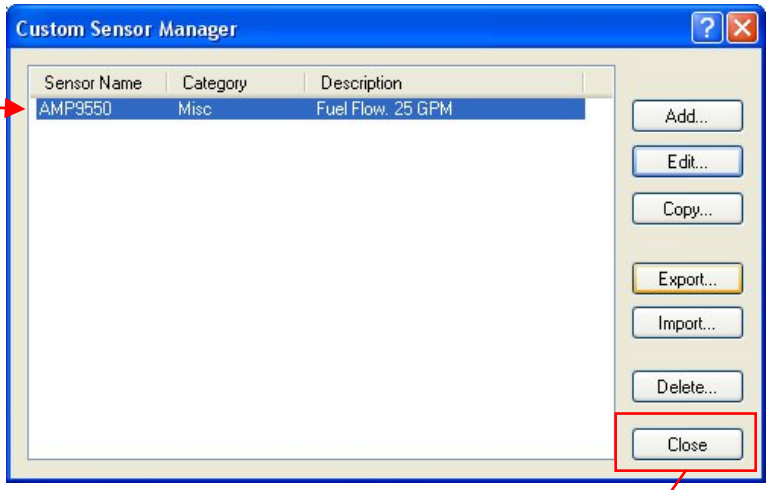
4. Click **OK** to apply the calibration.

Important! To apply the modified calibration, you must now upload the configuration again (as described above in Programming the Module).

Calibrating the **AMP9550 Fuel Flow** sensor is a different process to that described above. Each AMP9550 sensor is shipped with a certificate of calibration which can be manually entered into Designer.

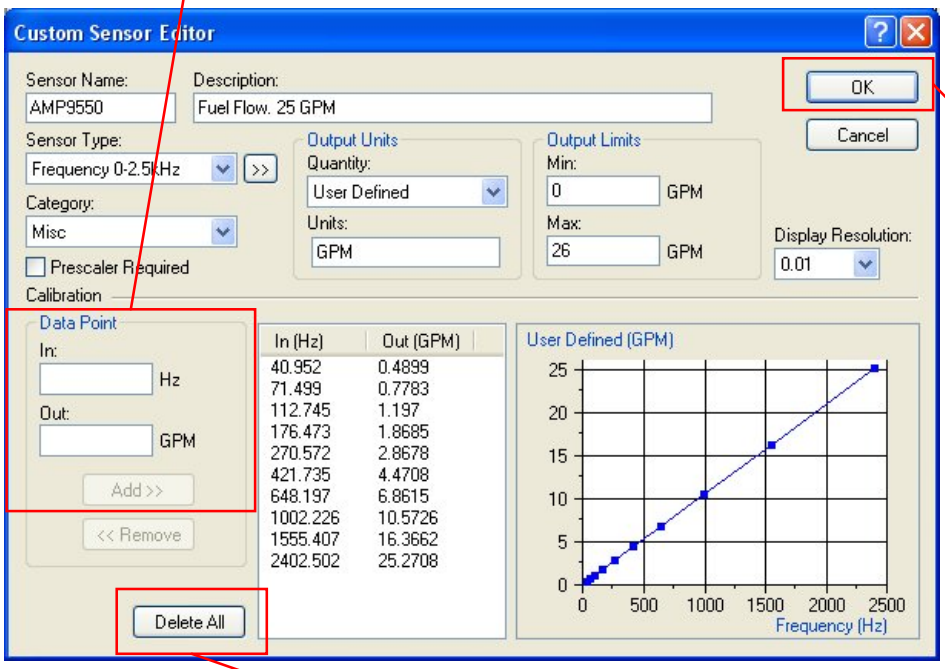
Click the **Custom Sensor Manager** icon on the main toolbar to launch the **Sensor Manager**.

1. Double-click the AMP9550 sensor item to launch the **Custom Sensor Editor**.



5. Click the **Close** button to close the **Custom Sensor Manager**.

3. Enter the values from the calibration certificate using the **Data Point** controls



4. Click the **OK** button when all values have been entered.

2. Click the **Delete All** button to remove the default calibration points.

Important! To apply the modified calibration, you must now upload the configuration again (as described above in Programming the Module).

Notes

Notes

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