ViM (Vehicle Interface Module) Setup

The ViM ( Vehicle Interface Module ) is a CANbus analog / digital input module designed to work with Aim products.

* 1. **Import ViM CAN Protocol.**

Open Race studio 3 and select CAN Protocols Fig 1.

The downloaded file ( AiM\_TECH VIM ) can now be imported.

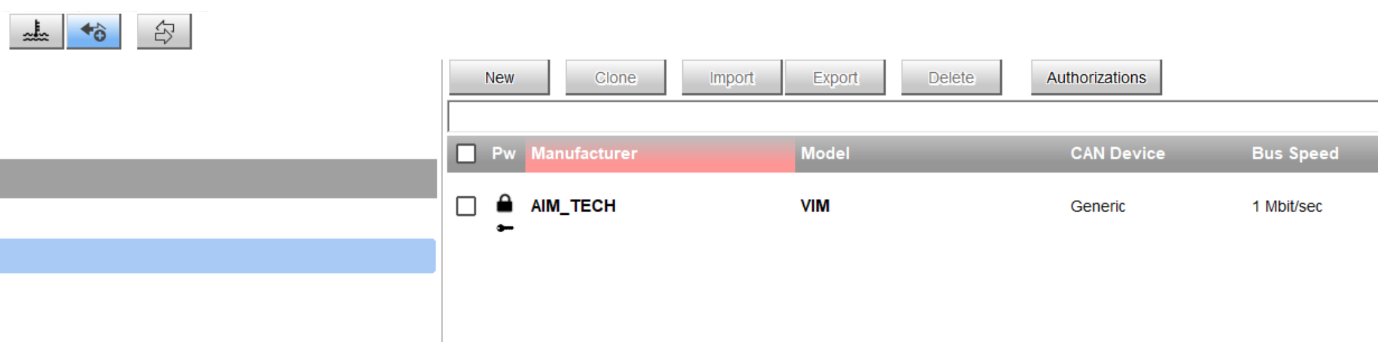


Fig 1

* 1. **CAN2 Stream**

In your configuration select (CAN2 Stream) Change Protocol, AIM TECH, VIM.

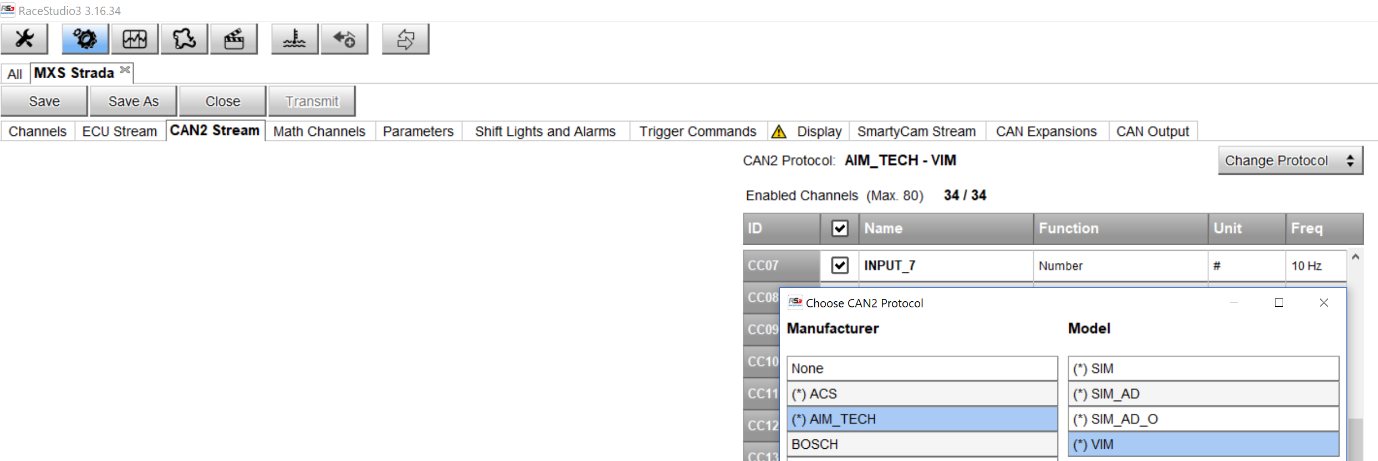
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Fig 2

* 1. **Input signals**

Once the CAN protocol has been imported the ViM inputs can be renamed and scaled.

Scaling can be done in a RS3 ( Race Studio 3 ) Math Channel

Fig 3 shows the imported ViM\_CAN protocol.

The 14 ViM inputs are universal inputs and listed below.

INPUT\_1 to 4 : Ground Signal ( 2= Open 3= Closed to GND ) Note Only connect to GND ref circuits.

ANALOG\_1 to 4 : Ground ref resistive Inputs ( Open or High resistance = 5000mV Grounded = 0mV millivolts) Note Only connect to GND ref circuits.

ANA\_1\_FILTER TO ANA\_4\_FILTER are the same as ANALOG\_1 to 4 but filtered.

ANA\_1\_FIL\_INV TO ANA\_4\_FIL\_INV give a filtered and inverted signal compared to ANALOG\_1 to 4,

This input option is used for fuel level sender units which read 0 Ω when the tank full.

ANALOG\_5 to 13 are 0 to 11.4 Volt analog inputs, ANALOG\_14 is a 0 to 33.6 Volt input.

INPUT\_5 to 14: change from 0 to 1 at 4 Volts and are rated up to 33.6 Volts.

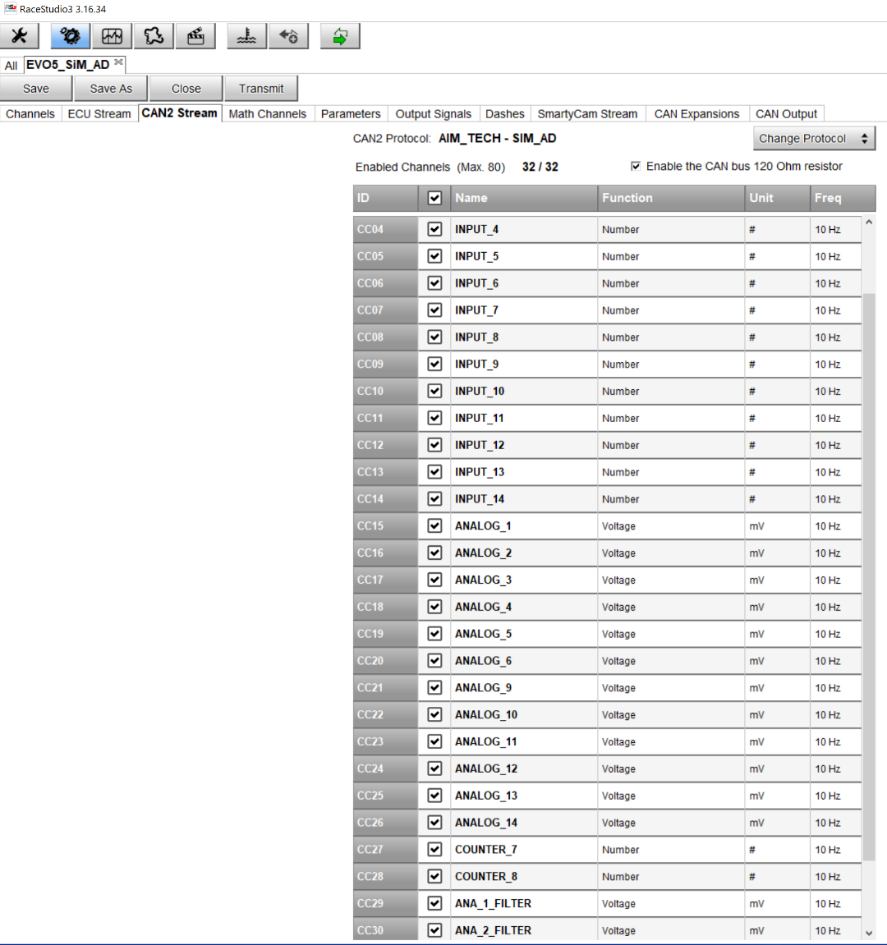


Fig 3

* 1. **Fuel Level Setup**

Connect the fuel level sender to the ViM ( Input 1 ) Channel.

If your fuel level sender decreases its resistance when full and increases when empty the ANA\_1\_FIL\_INV value must be observed in RS3 Live Measures.

Fig 4 illustrates the tank full mV value of 5000 mV.

Fig 5 illustrates the tank empty value of 4391 mV.

Both your empty and full ANA\_1\_FIL\_INV values can now be entered into the excel Multiplier /Offset Calculator.

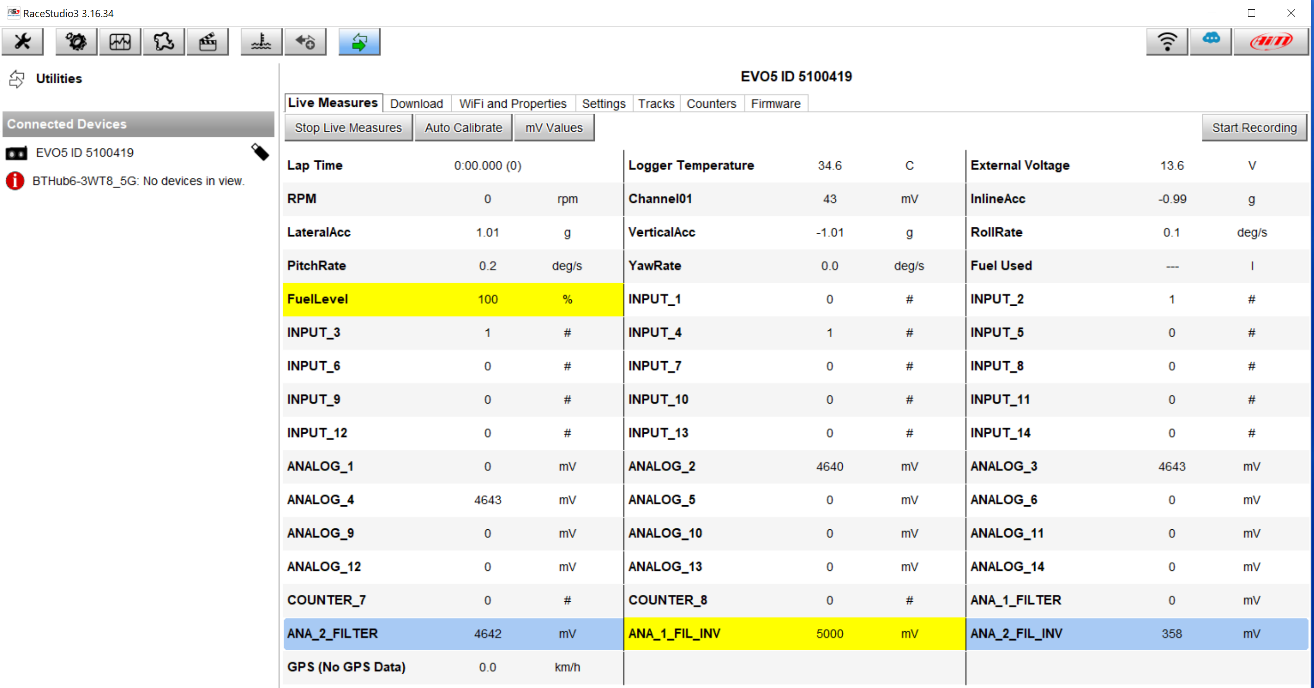
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Fig 4

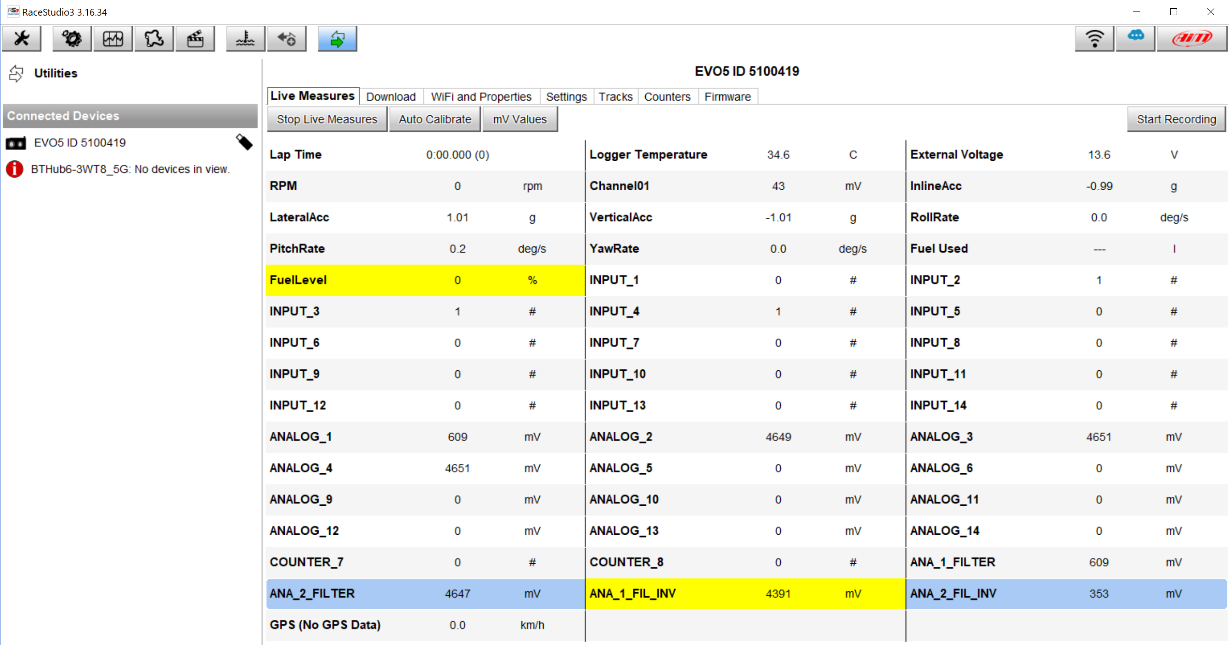


Fig 5

* 1. **Math Channel Fuel Level Sender Cal**

Fig 6 illustrates the Math setup procedure to create a new Fuel\_Level channel reading 0% when empty and 100% when full.

Note: Only enter the above values into the yellow cells.

Create a new Math Channel called Fuel\_Level.

Select ANA\_1\_FIL\_INV for the ( Linear Correction Parameter )

The Multiplier and Offset values calculated in the spreadsheet can now be entered.

Note: The Offset value has been entered as a minus number ( -721 )

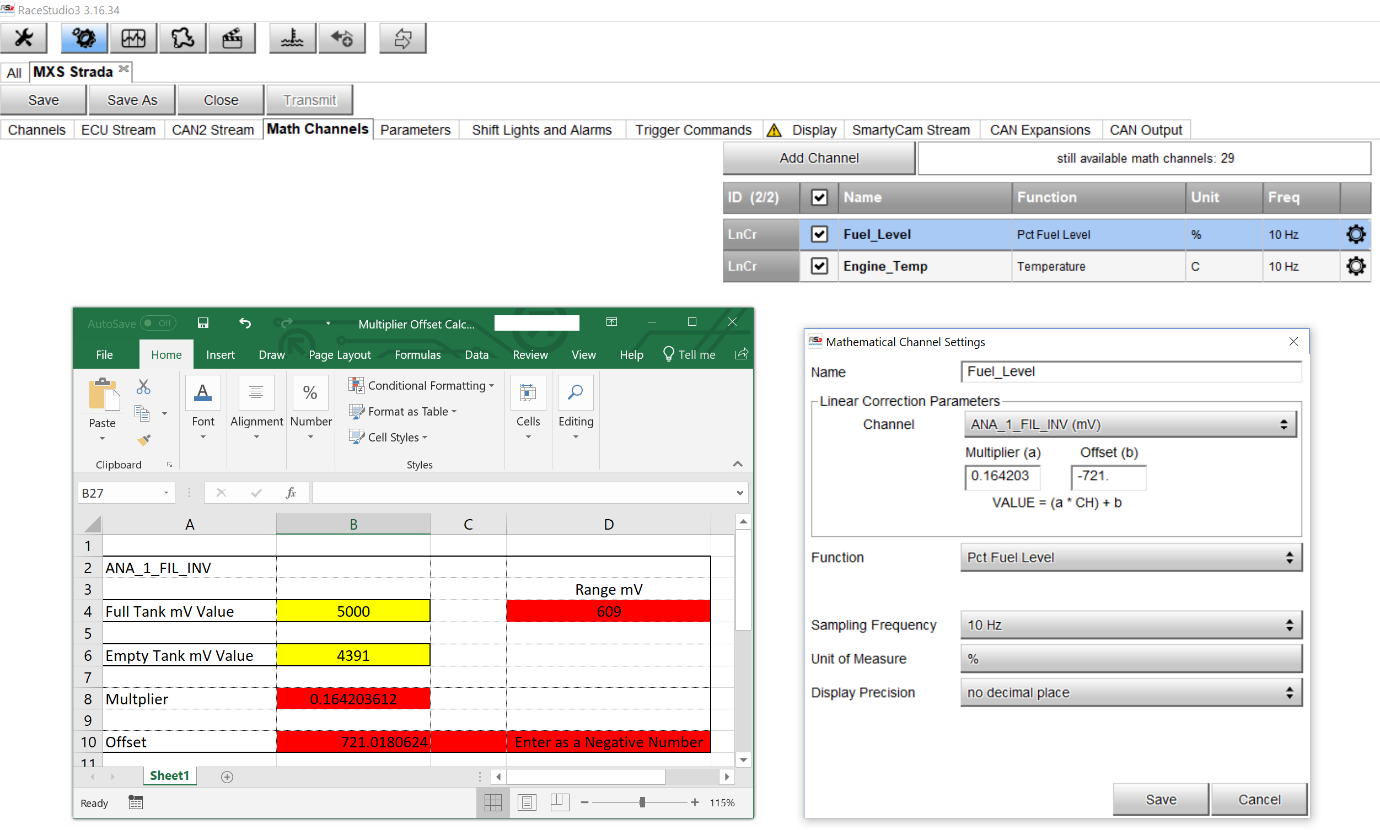
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Fig 6

* 1. **Math Channel Engine Temperature Sensor Cal**

Fig 7 illustrates the Math setup procedure to create a new Engine Temperature sensor channel reading from0°C to 100°C

Note: Only enter the above values into the yellow cells.

Create a new Math Channel called Engine\_Temp

Select ANA\_2\_FIL\_INV for the ( Linear Correction Parameter )

The Multiplier and Offset values calculated in the spreadsheet can now be entered.

Note: The Offset value has been entered as a minus number ( -37.2 )

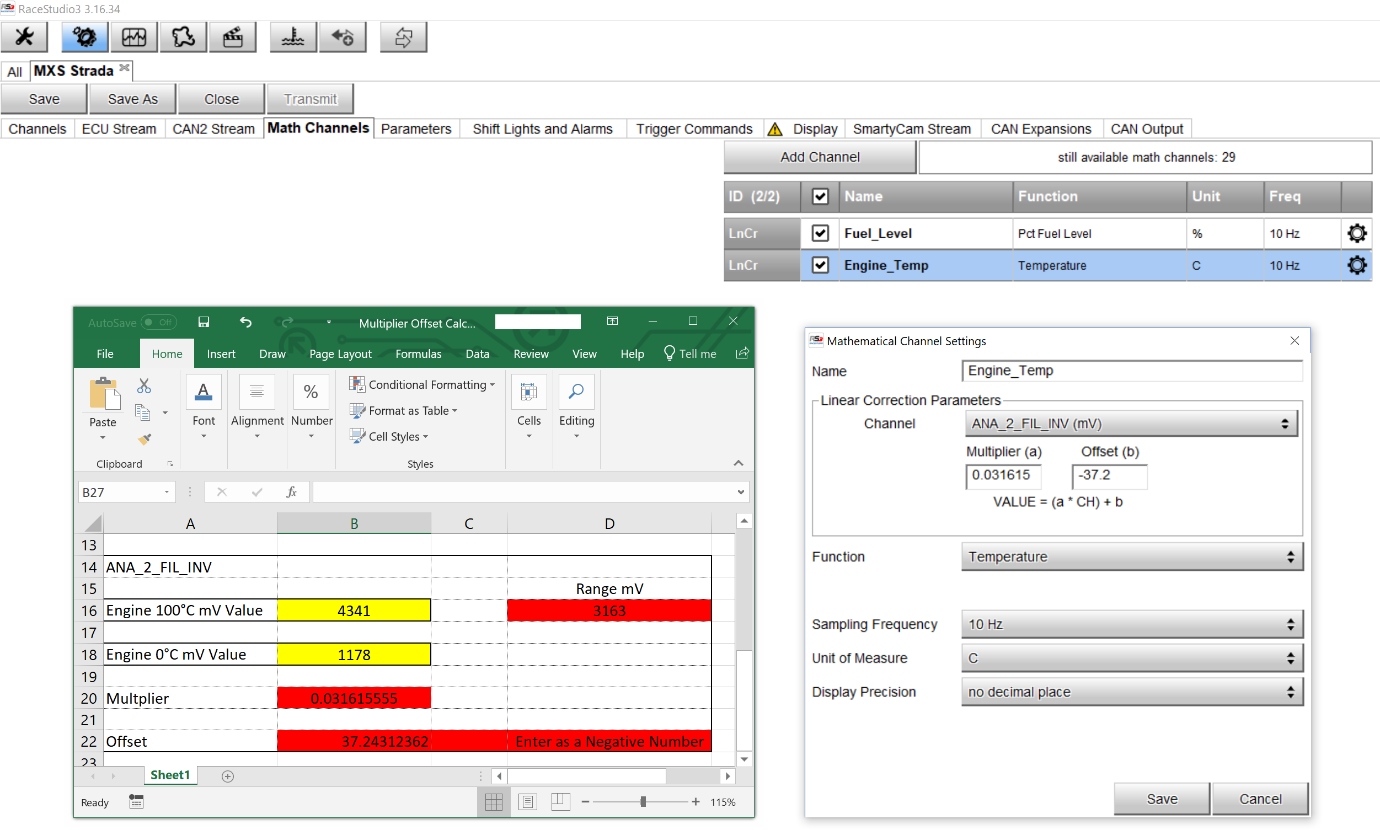


Fig 7

* 1. **Shift Lights & Alarms**

Fig 8 illustrates the procedure to assign a Low Fuel dash LED

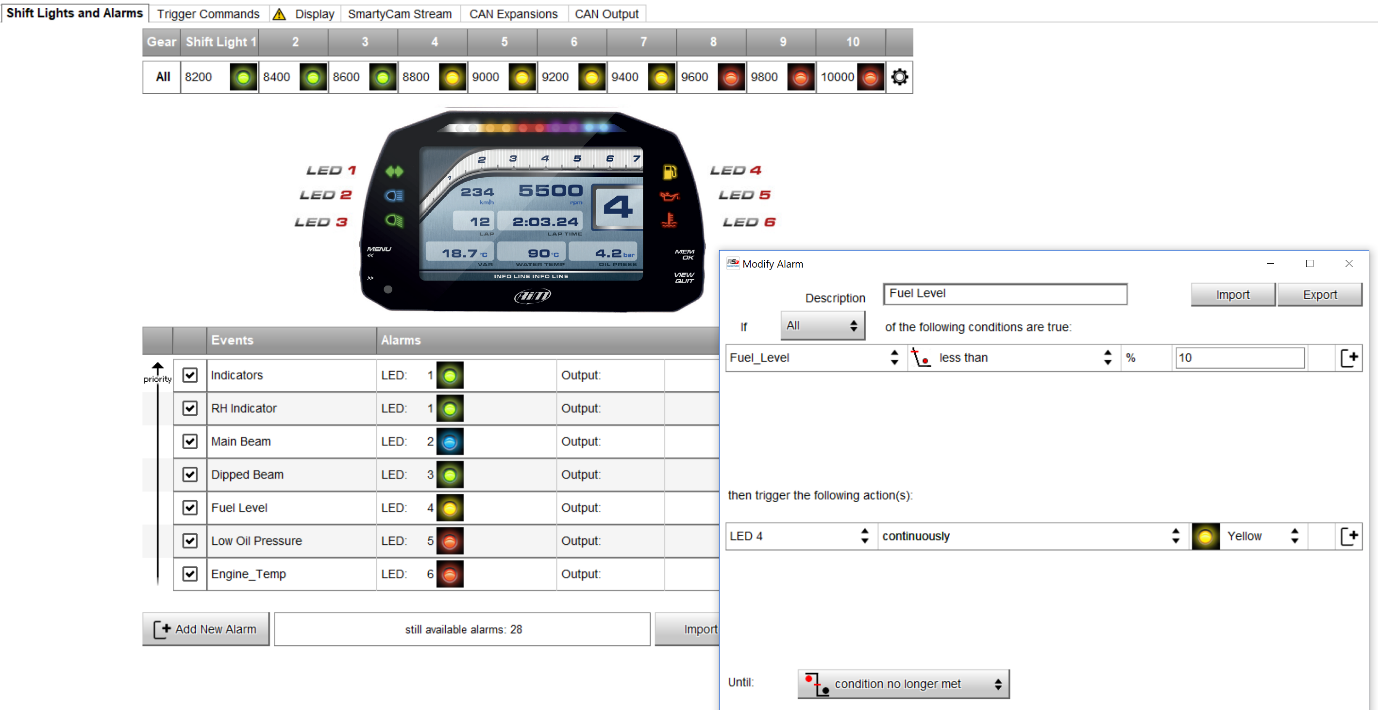


Fig 8

Fig 9 illustrates the procedure to assign a High Engine Temperature dash LED

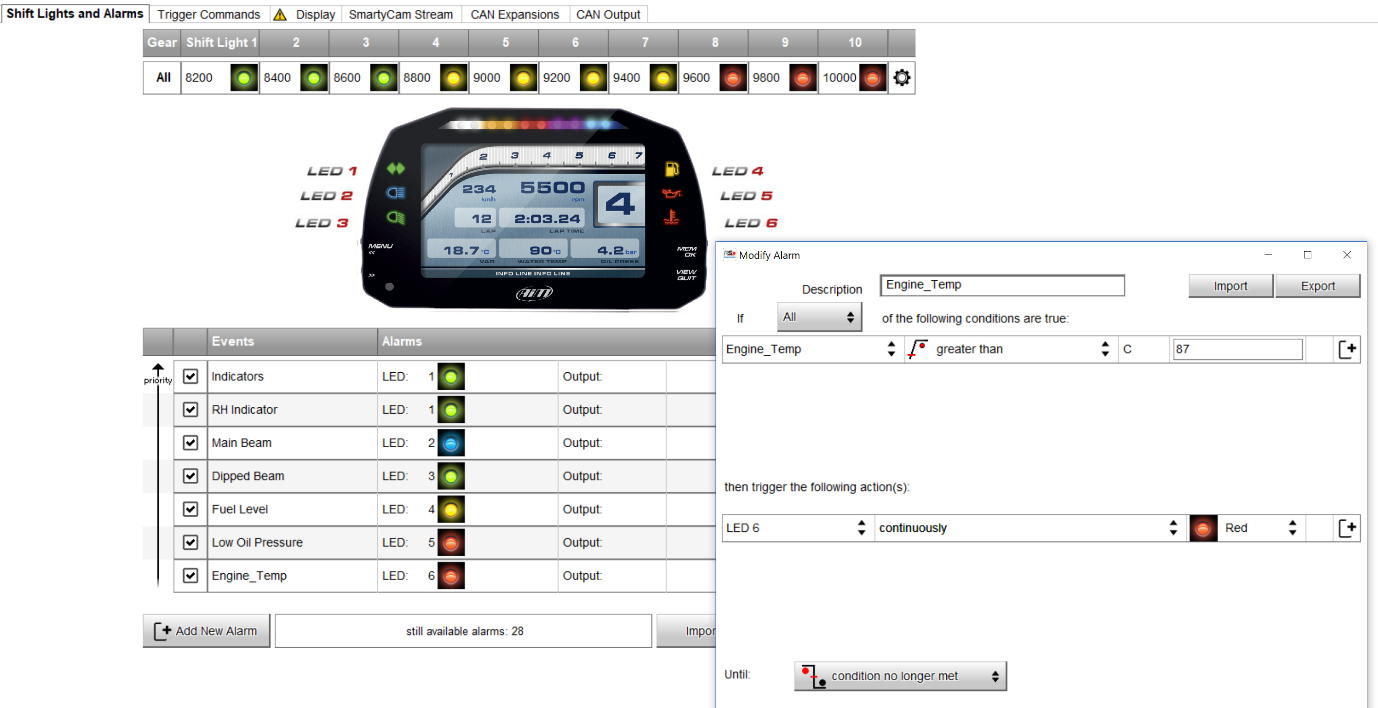


Fig 9

Fig 10 illustrates the procedure to assign a Indicator dash LED

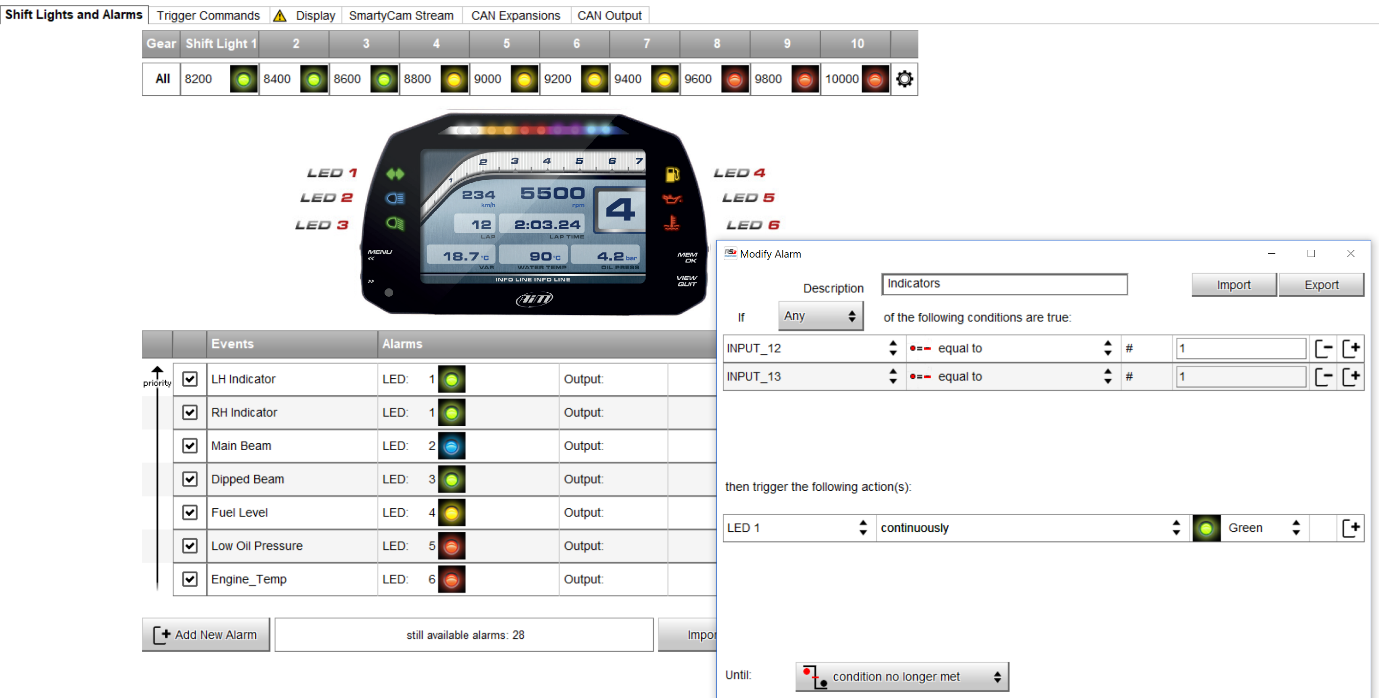


Fig 10

Fig 11 illustrates the procedure to assign a Main beam dash LED

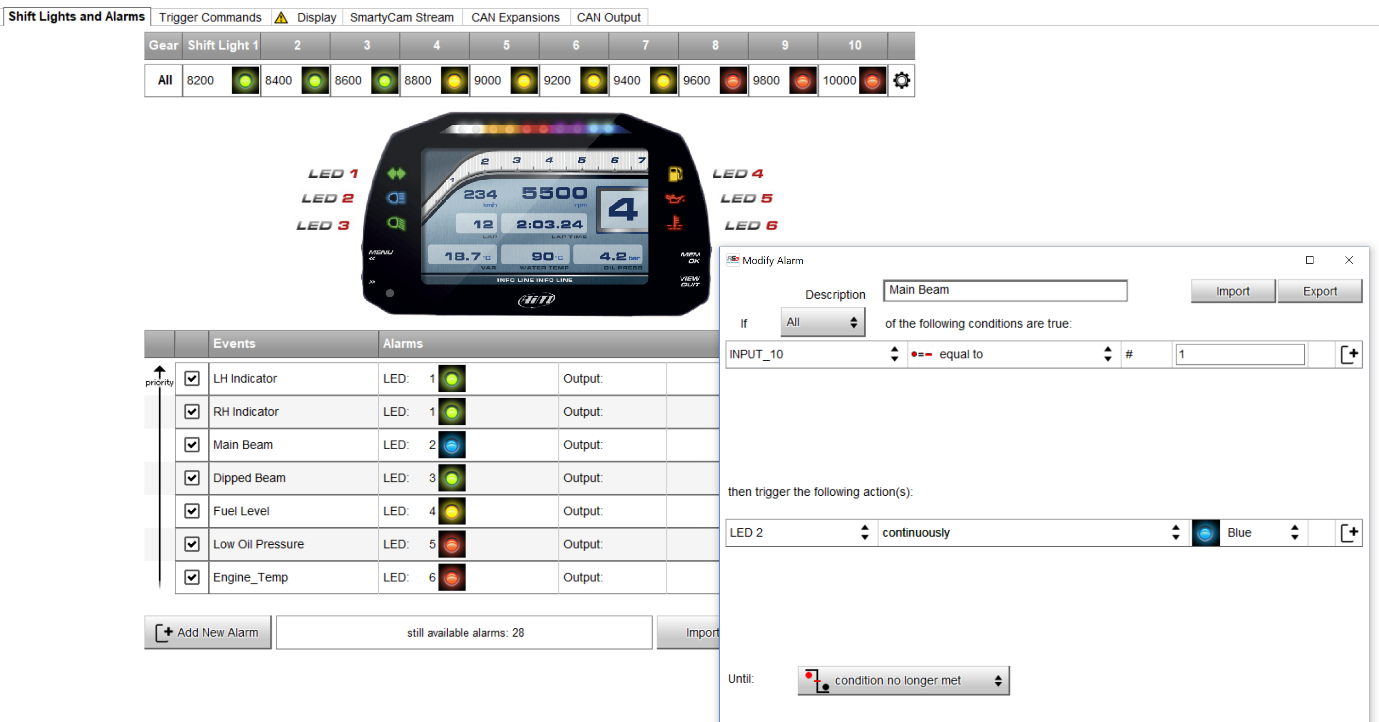


Fig 11

Fig 12 illustrates the procedure to assign a Low Oil Pressure dash LED

This input is connected to an oil pressure switch, When the engine is not running the circuit is to ground.

Note: When this input is grounded the input value = 3.

This can be seen below in Fig 12

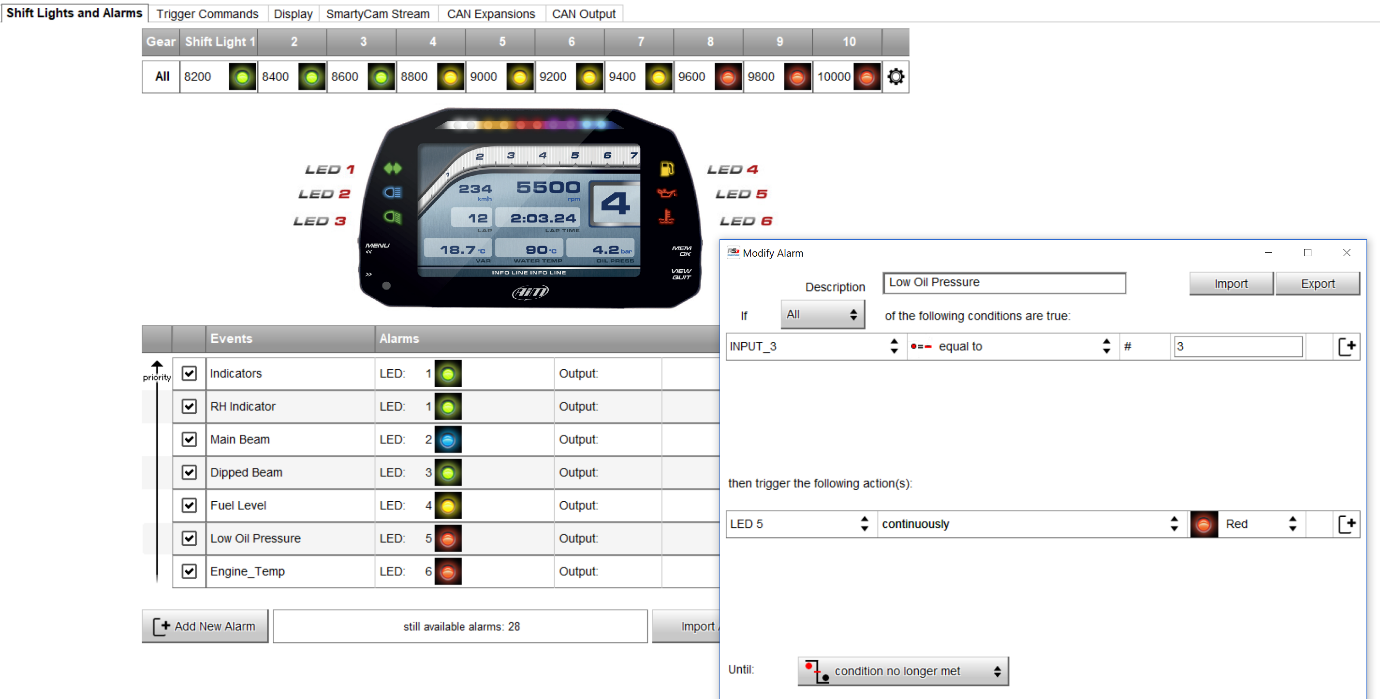


Fig 12