SETUP GUIDE

gaugeART Analog to CAN Converter to CD Dash

Supported Devices

gaugeART Analog to CAN Converter

CAN Bus Wiring

AEM CD has 2 separate CAN ports. For 3rd party devices, AEM recommends you use AEM CAN Bus 2, whose connections are contained in a 2 pin Deutsch DTM connector. On older harnesses it may be in an unterminated, twisted/shielded flying lead in the dash harness.

gaugeART terminal block position labeled **CANH** → AEM CD "CAN 2" Pin 1 (CAN 2+), Gray wire in twisted/shielded pair
gaugeART terminal block position labeled **CANL** → AEM CD "CAN 2" Pin 2 (CAN 2-), Black wire in twisted/shielded pair

The CD Dash has a software selectable CAN termination resistor. Each CAN network needs 2 terminating resistors with one located at each end. The gaugeART Analog to CAN Converter has an internal terminating resistor that is jumper selectable. If these are the only devices on the CAN bus enable both terminating resistors. If there are other CAN devices make sure you have 2 terminating resistors with one at each end of the network.

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Supported Channels

The AEM CD Dash supports 9 unique channels transmitted from each gaugeART Analog to CAN Converter; up to 4 on the same CAN bus.

CH	CD Dash CHANNEL NAME		CH	CD Dash CHANNEL NAME
Module 1			**Module 3**	
1	AnalogVoltsExt1_4		19	AnalogVoltsExt3_4
2	AnalogVoltsExt1_3		20	AnalogVoltsExt3_3
3	AnalogVoltsExt1_2		21	AnalogVoltsExt3_2
4	AnalogVoltsExt1_1		22	AnalogVoltsExt3_1
5	FlexFuelTemp_1		23	FlexFuelTemp_3
6	FlexFuelContent_1		24	FlexFuelContent_3
7	ThermVoltsExt1_2		25	ThermVoltsExt3_2
8	ThermVoltsExt1_1		26	ThermVoltsExt3_1
9	AnalogVoltsExt1_5		27	AnalogVoltsExt3_5
Module 2			**Module 4**	
10	AnalogVoltsExt2_4		28	AnalogVoltsExt4_4
11	AnalogVoltsExt2_3		29	AnalogVoltsExt4_3
12	AnalogVoltsExt2_2		30	AnalogVoltsExt4_2
13	AnalogVoltsExt2_1		31	AnalogVoltsExt4_1
14	FlexFuelTemp_2		32	FlexFuelTemp_4
15	FlexFuelContent_2		33	FlexFuelContent_4
16	ThermVoltsExt2_2		34	ThermVoltsExt4_2
17	ThermVoltsExt2_1		35	ThermVoltsExt4_1
18	AnalogVoltsExt2_5		36	AnalogVoltsExt4_5

AEM Setup in DashDesign

AEM provides pre-configured layouts that can be easily adapted to accept, display and log (if using a logging CD Dash) the CAN bus channel data from a MoTeC PLM. The following steps will show you how to quickly setup your PLM to work with an existing AEM DashDesign layout.

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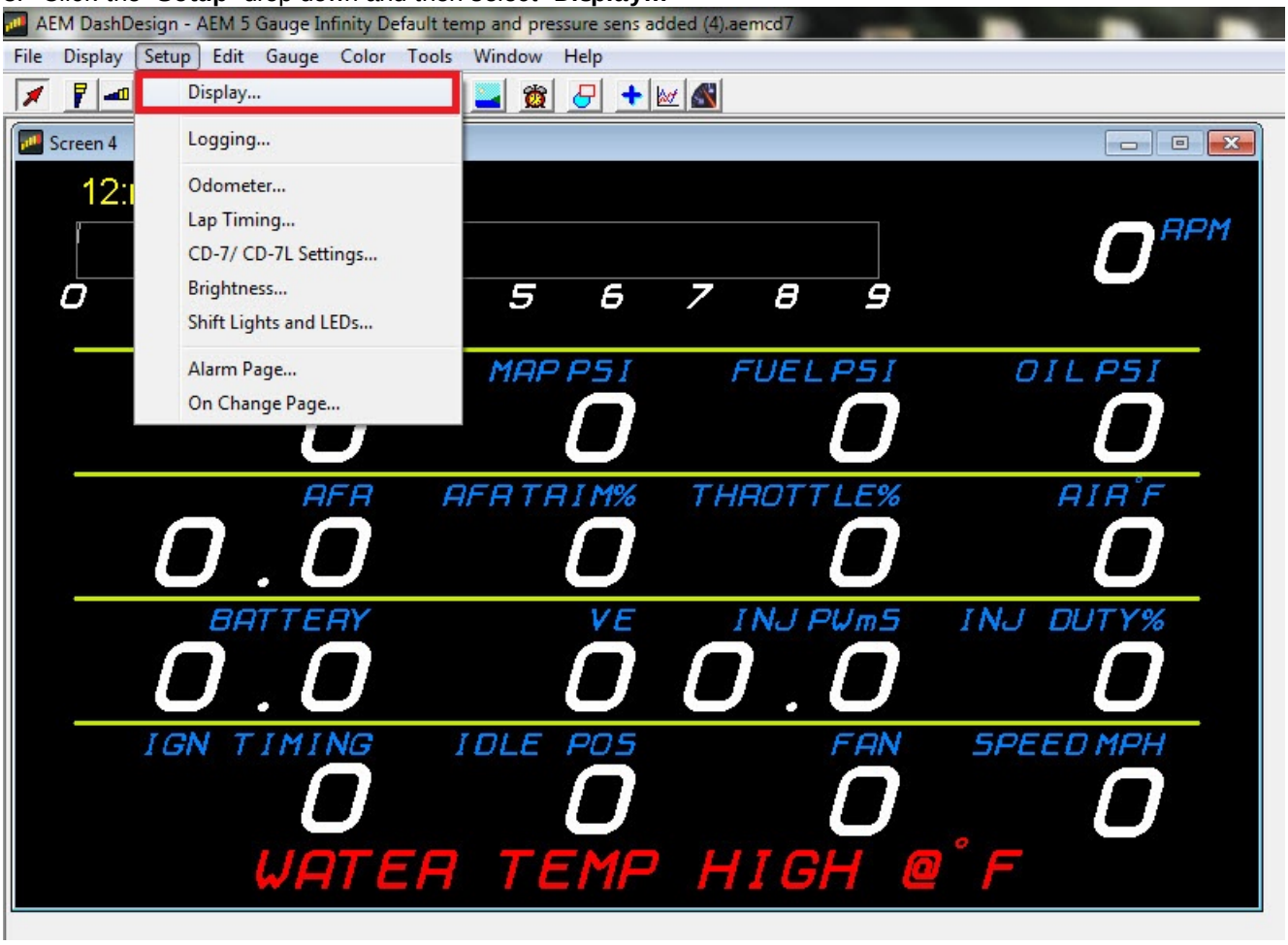
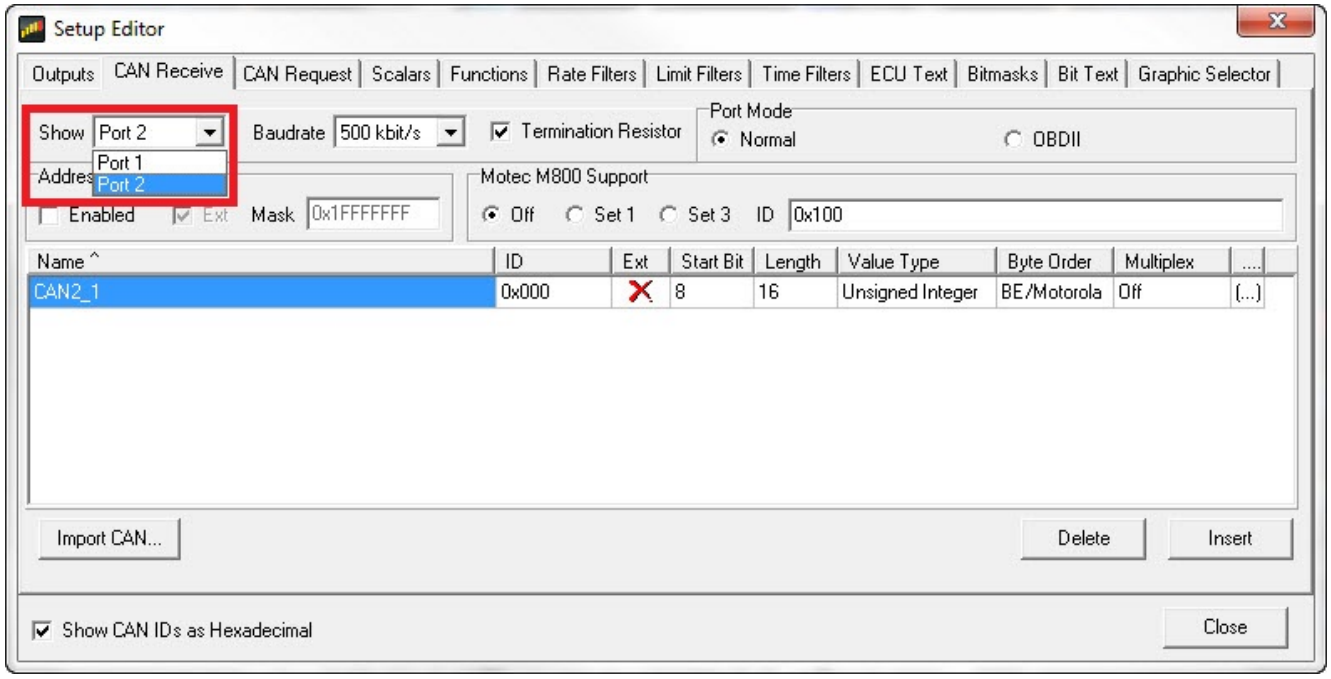
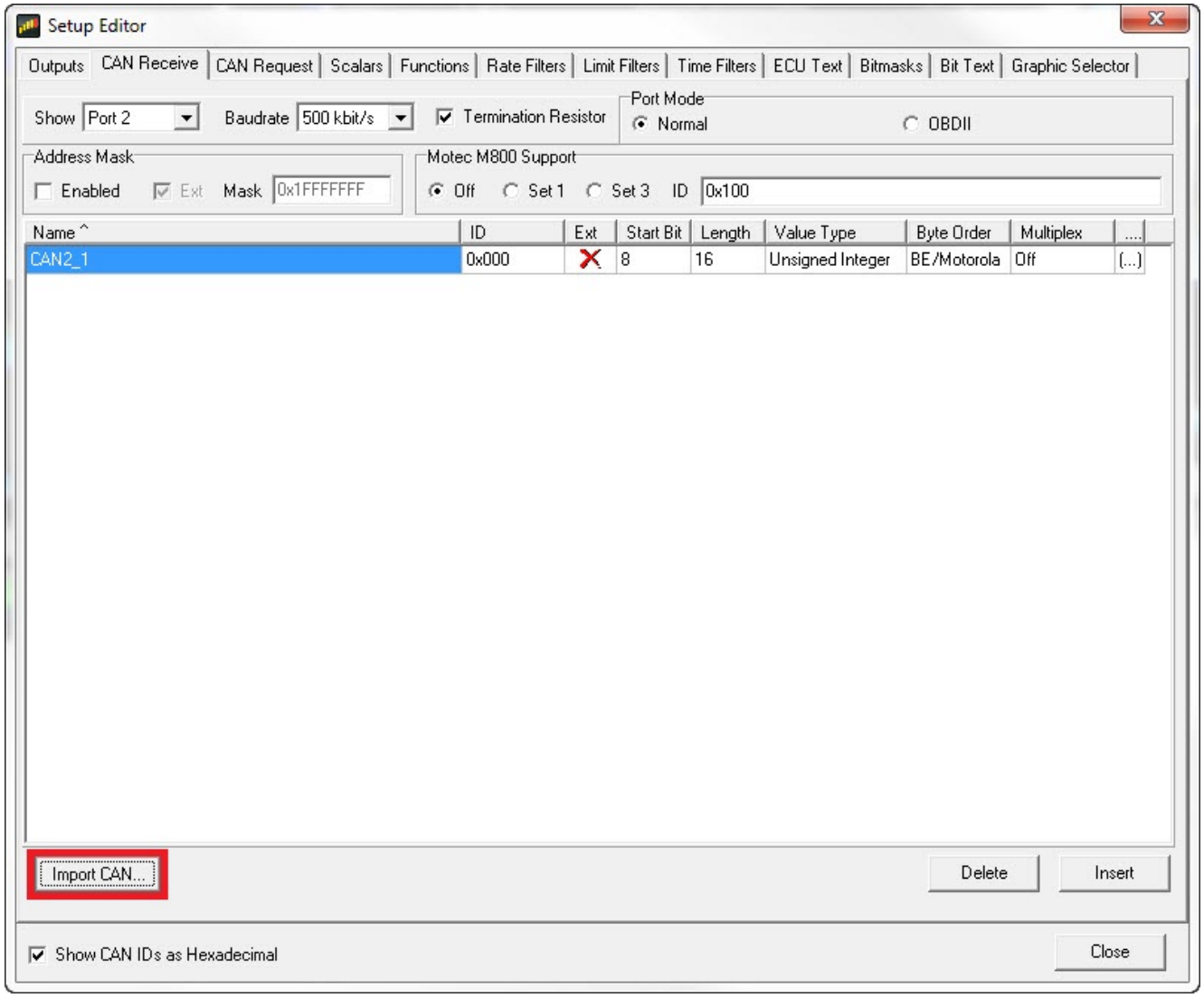
1. Visit www.aemelectronics.com/forum and scroll down to the CD Dash forum. This is a great place to find answers to all AEM Dash related questions you may have.
2. Open your layout in AEM DashDesign.
3. Click the "**Setup**" drop down and then select "**Display…**"



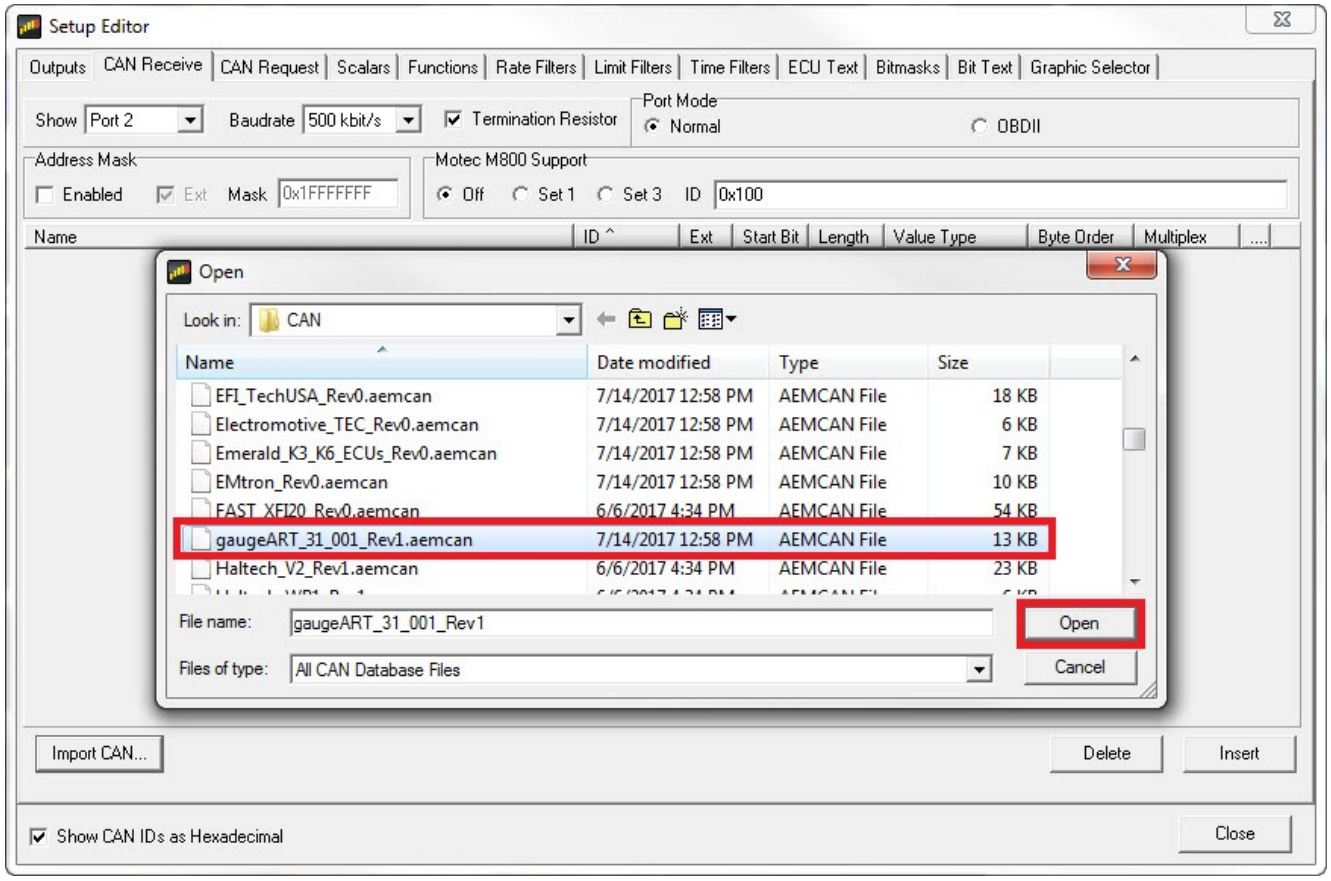
4. Under the "**CAN Receive**" tab, click the drop down next to "**Show**" and select "**Port 2**"



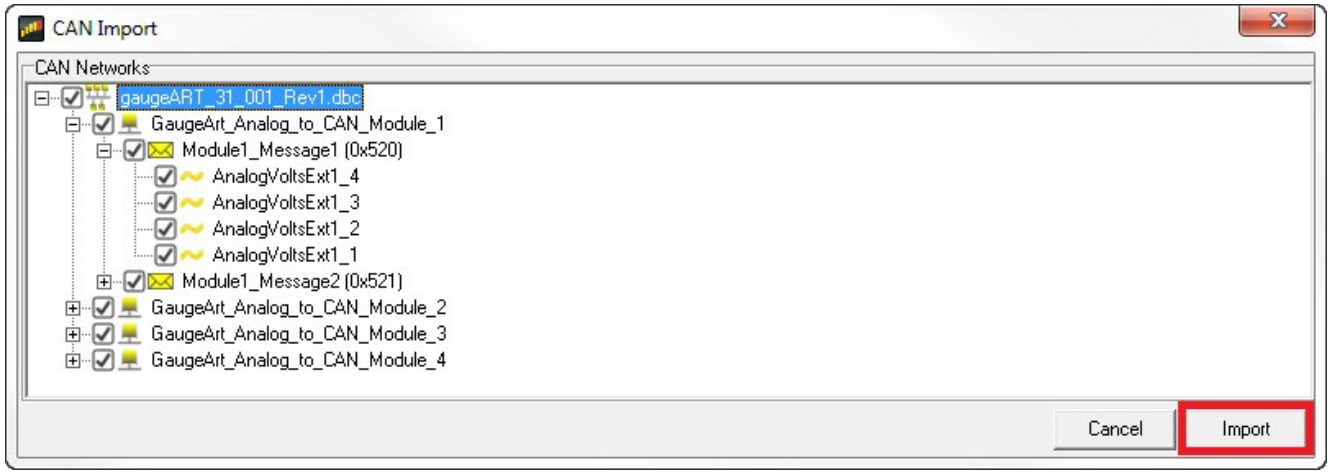
5. Under the "**CAN Receive**" tab, select "**Import CAN…**"



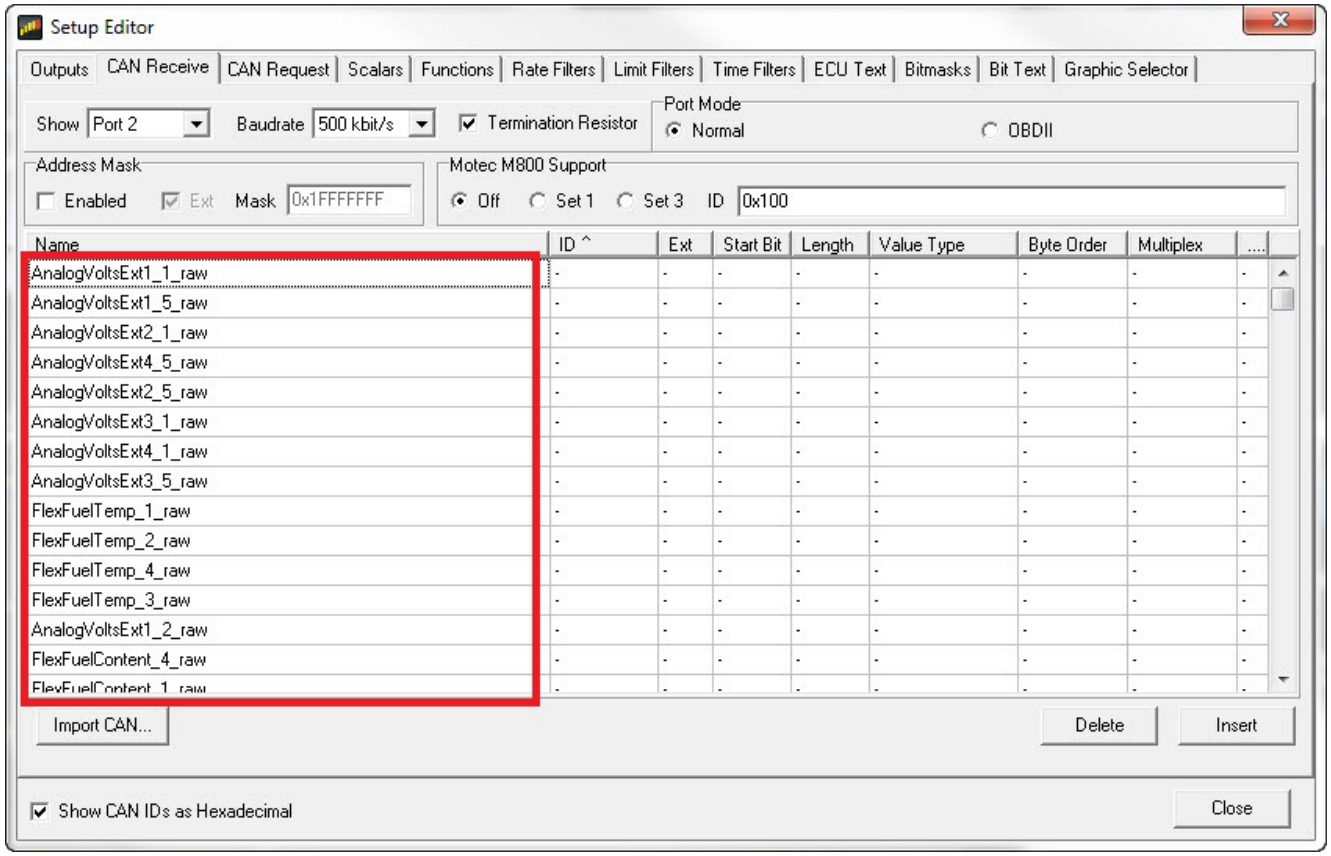
6. Navigate to the .aemcan file for your application. Select the file and click "**Open**".



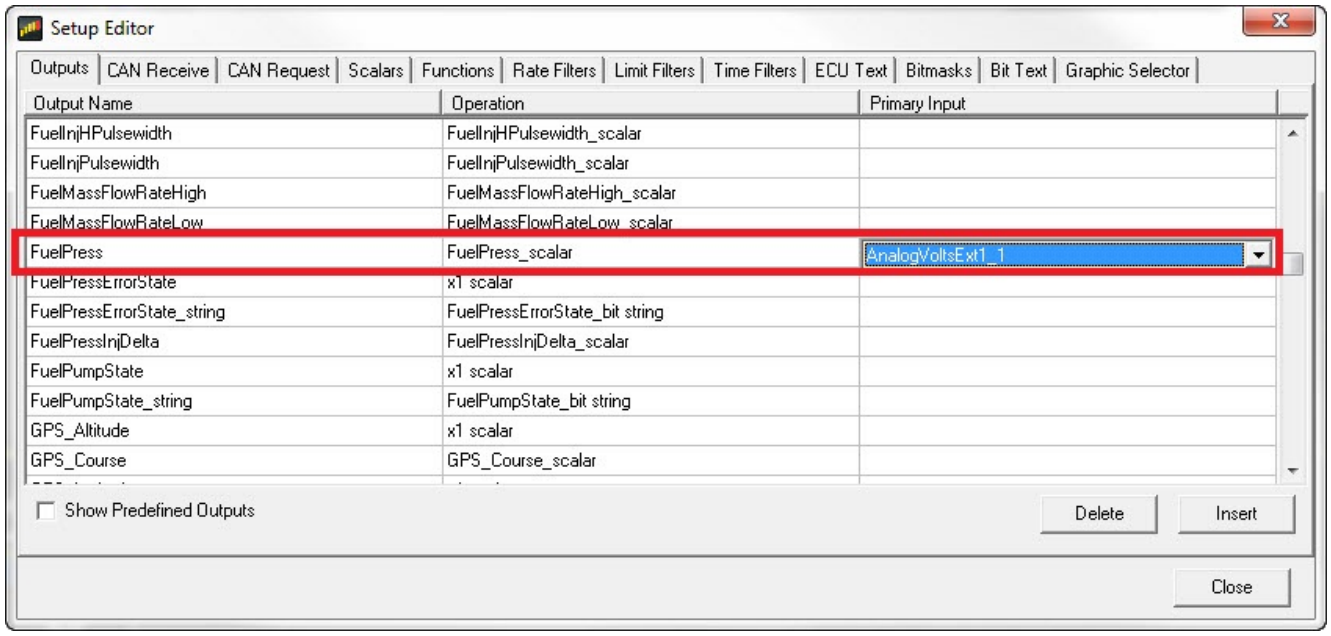
7. In the "**CAN Import**" window you may expand the drop downs and see all of the available CAN channels for your device. You can import all of the channels available or you may select only the channels you need to display. For this example all available channels are selected. Unused channels can easily be deleted after completing the setup of your CD Dash. Once you have selected the channels you wish to import, click "**Import**".



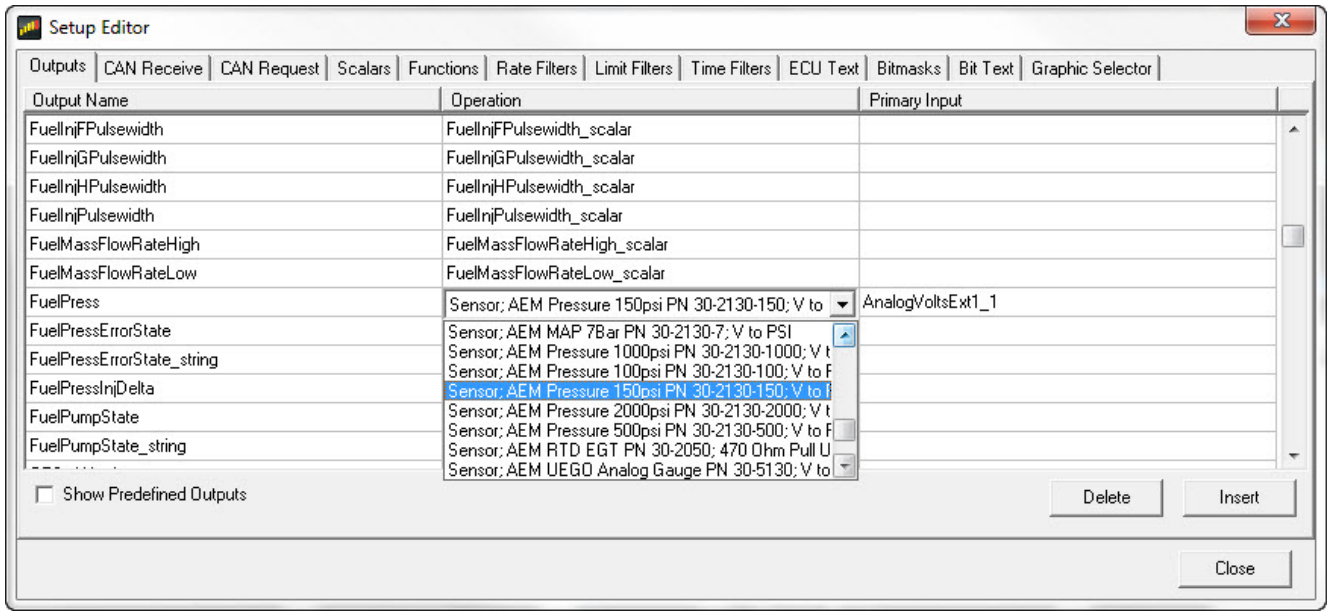
8. In the "**Setup Editor**" under the "**CAN Receive**" tab, check to make sure the channels you selected to import are present. If they are not, go back to step 4 and try again.



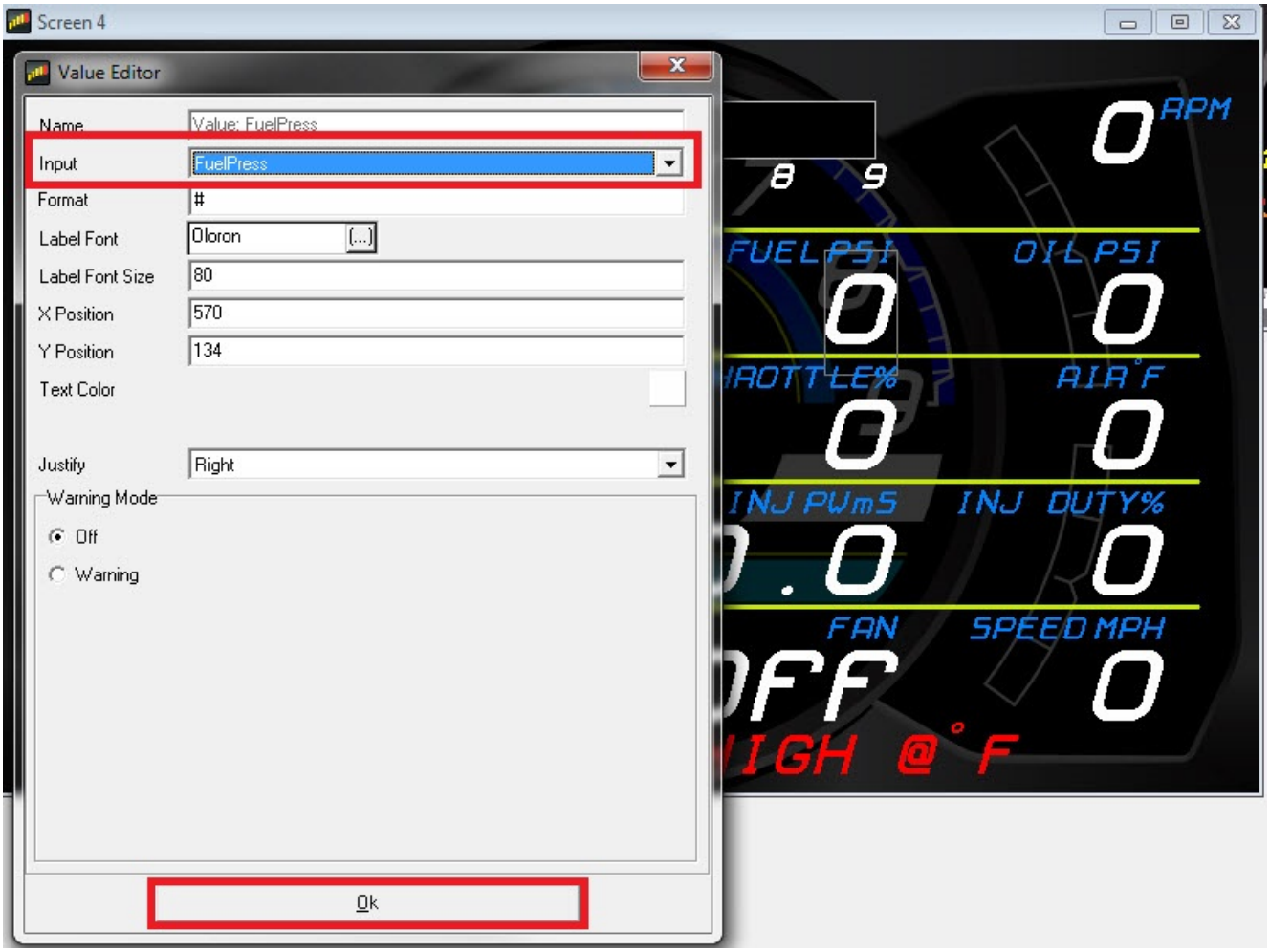
9. For this example we will setup "**AnalogVoltsExt1_1**" as fuel pressure using an AEM 150psi sensor. You will follow the same general steps to setup other pressure and temperature sensors with the gaugeART 8ch Analog to CAN module and AEM CD Dash. Find the output "**FuelPress**" in the "Outputs" tab and the Primary Input to "**AnalogVoltsExt1_1**".



10. Select the correct conversion for your specific sensor. Locate the drop down under the "**Operation**" column for the "**FuelPress**" output and scroll down to "**Sensor; AEM Pressure 150psi PN 30-2130-150; V to PSI**" or the one matches your sensor.



11. Navigate to a page in your layout that displays Fuel Pressure. Double click on the Fuel Pressure value or needle/bar graph you wish to use to display Fuel Pressure. This will open the "**Value Editor**", "**Dynamic Needle Gauge Editor**" or "**Bar Editor**" window. Click on the "**Input**" drop down and select the channel "**FuelPress**". Click "**Ok**".



12. Save the layout. Once the layout has been saved connect the dash to your computer and press "**Ctrl+U**" or "**File>Upload to Display…**" Once the upload is complete unplug the dash from the computer. You should now be able to view the Fuel Pressure from your gaugeART Analog to CAN Converter on your AEM CD Dash.