



Revision	Date
Initial Release	Oct 3, 2017

Autosport Labs AnalogX to CD-5 & CD-7 Displays

Supported Modules

Up to 4 AnalogX units

Supported Channels

Each AnalogX unit sends out 4 channels of data and up to 4 separate AnalogX units can be used together. The CD-5 & CD-7 supports the following 16 data channels that could be transmitted by the modules:

Channel Name	Units	Update Rate
AnalogX_Ch1	Volts	50Hz
AnalogX_Ch2	Volts	50Hz
AnalogX_Ch3	Volts	50Hz
AnalogX_Ch4	Volts	50Hz
AnalogX2_Ch1	Volts	50Hz
AnalogX2_Ch2	Volts	50Hz
AnalogX2_Ch3	Volts	50Hz
AnalogX2_Ch4	Volts	50Hz
AnalogX3_Ch1	Volts	50Hz
AnalogX3_Ch2	Volts	50Hz
AnalogX3_Ch3	Volts	50Hz
AnalogX3_Ch4	Volts	50Hz
AnalogX4_Ch1	Volts	50Hz
AnalogX4_Ch2	Volts	50Hz
AnalogX4_Ch3	Volts	50Hz
AnalogX4_Ch4	Volts	50Hz

CAN Bus Wiring

The AEM displays feature 2 separate CAN ports. For 3rd party devices, AEM recommends you use AEM CAN BUS 2, whose connections are accessed via a 2 pin deutsch DTM connector in the dash harness. If you have a very early dash, this may be a flying lead with no connector.

On the AnalogX unit you should make the following connections on the “Power and CAN” 4 wire harness;

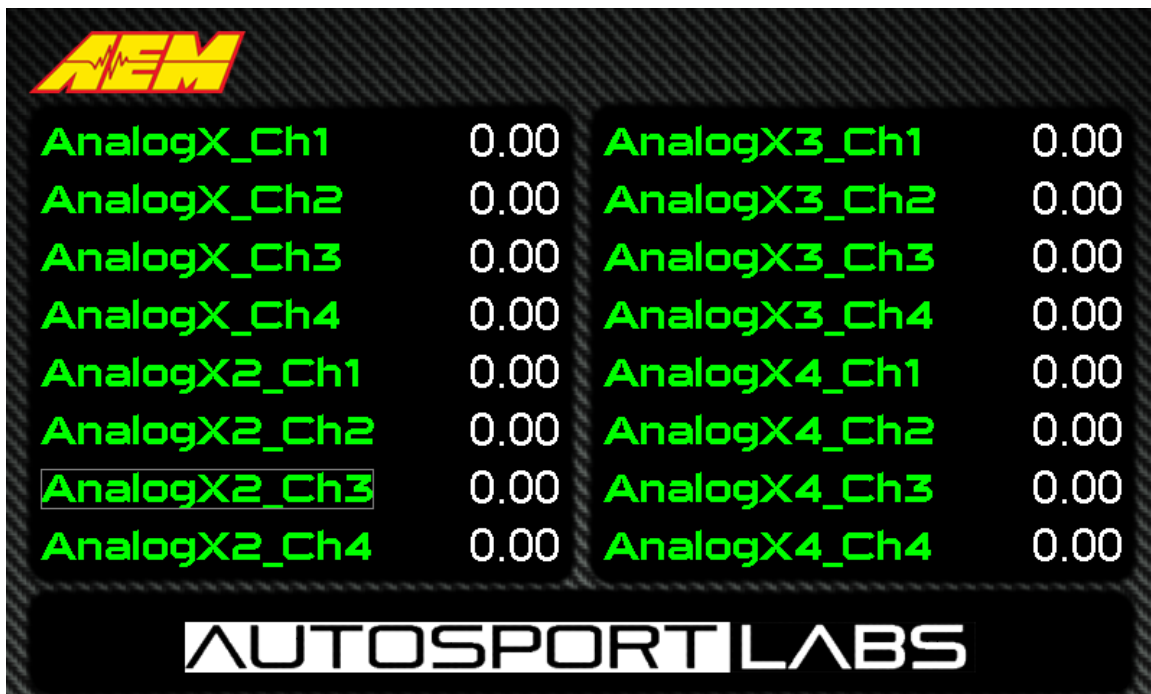
CAN+ BLACK WIRE → AEM CD-7 Pin 5 (CAN 2+), Gray wire in twisted/shielded pair, DTM
CAN- ORANGE WIRE → AEM CD-7 Pin 6 (CAN 2-), Black wire in twisted/shielded pair, DTM

Be mindful of the wire colors from the AnalogX unit and the fact that they do not match when connecting to the AEM Dash displays.

As shipped, all AnalogX units have a 120 ohm CAN terminating resistor installed. You need to be very careful here as a CAN bus must have 2 resistors on the bus in total. Normally the AEM Dash has it's resistor activated and an ECU also has one so you may need to deactivate this resistor to allow the CAN bus to work. If you run multiple AnalogX units on the same bus then you will definitely need to deactivate them. Follow the instructions provided by Autosport Labs to deactivate the resistor and if multiple units are installed, to change the base address for the 2nd through 4th units.

AEM Setup in DashDesign

The fastest way to get something working is to use the AEM created setup for the AnalogX named, “AutosportLabs_AnalogX.aemcd7” (use the newest revision available) which can be found in the same location as this document was. This is a simple layout you can load in your dash that has 4 AnalogX units configured so you can verify proper operation.

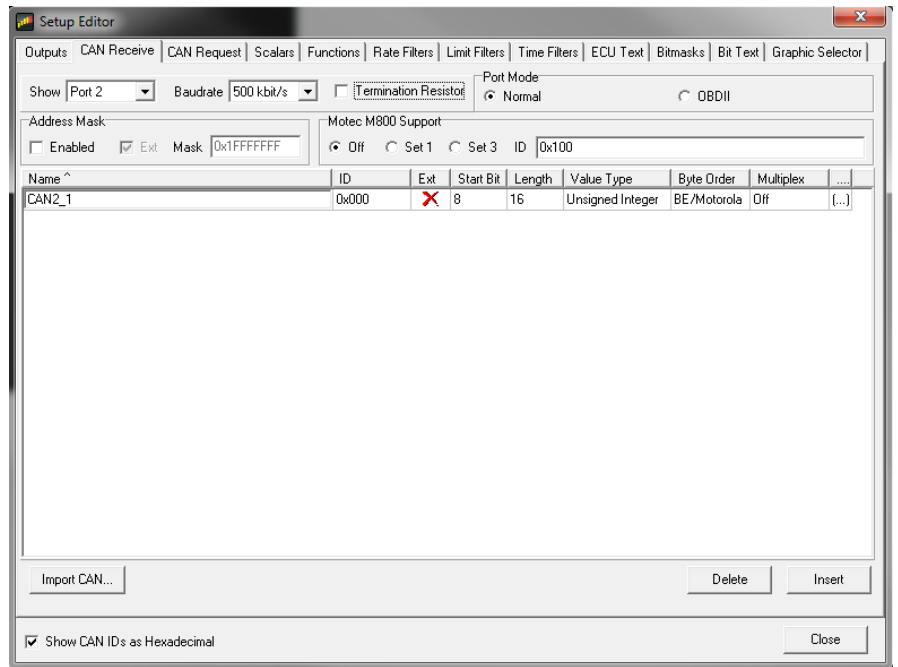


If you want to create something from scratch you can either start with a new dash layout by selecting “File” then “New” in DashDesign or you can select from a pre-designed layout that has screens already designed and inserted but has the CAN inputs left blank. These are chosen by selecting “File” then “Open” and selecting one of the setups titled xzyblank.aemcd7 with the xyz representing a description of the layouts contained in the file (you can always refer back to the supplied AnalogX setup file if you have any issues).

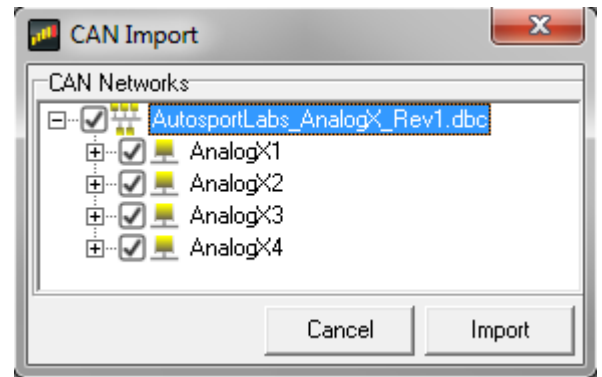
To import the CAN configuration into your setup you select “Setup” then “Display” from the main DashDesign menu. Once the dialog box opens you select the “CAN Receive” tab.

Change the settings to the following:

- Show:** “Port 2”
- Baudrate:** 500 kbit/s
- Termination Resistor:** Unchecked
- Address Mask Enabled:** Unchecked
- M800 Support:** “OFF”



Click on the “Import CAN” button (lower left) and select the “AutosportLabs_AnalogX_Rev1.dbc” (or the latest version) CAN configuration file. Once the file is opened you will see a display containing the contents of the CAN configuration. In this case there are configurations for up to 4 AnalogX units. If you want to set up all 4 units simply click the “Import” button. If you only have 1 unit then uncheck the box next to the units you don’t want.



Once properly configured it should look something like this →

The new items will also appear in the Outputs tab. They can now be viewed on the display or logged. You can rename, filter, or manipulate any of these channels to make them more useful.

