

# SETUP GUIDE



## *ECUMaster EMU Black ECUs to CD Dash*

### Supported Devices

#### ECUMaster EMU Black ECU

### CAN Bus Wiring

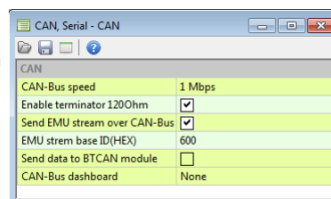
AEM CD has 2 separate CAN ports. For 3rd party devices, AEM recommends you use AEM CAN Bus 2, whose connections are contained in a 2 pin Deutsch DTM connector. On older harnesses it may be in an unterminated, twisted/shielded flying lead in the dash harness.

EMU Black ECU CAN Hi (Black Conn, Pin 12) → AEM CD "CAN 2" Pin 1 (CAN 2+), Gray wire in twisted/shielded pair

EMU Black ECU CAN Lo (Black Conn, Pin 25) → AEM CD "CAN 2" Pin 2 (CAN 2-), Black wire in twisted/shielded pair

### ECU Software Setup

To activate the CAN output, select the "CAN, Serial" option on the left menu bar then select the "CAN" option when the tree expands and set the values to those shown on the right.



## Supported Channels

The EMU Black Protocol consists of 73 channels:

Ch	Channel Name
1	EngineSpeed
2	ThrottlePos
3	IntakeManifoldAirTemp
4	IntakeManifoldAirPress
5	FuelInjPulsewidth
6	ECUAnalogInput1Voltage
7	ECUAnalogInput2Voltage
8	ECUAnalogInput3Voltage
9	ECUAnalogInput4Voltage
10	VehicleSpeed
11	BaroPress
12	OilTemp
13	OilPress
14	FuelPress
15	CoolantTemp
16	IgnitionTiming
17	IgnitionDwellTime
18	AFR1
19	AFR1ControlTrim
20	ExhaustTemp1
21	ExhaustTemp2
22	GearPosCalculated
23	ECUTemp
24	ECUBatteryVoltage
25	CoolantTempErrorState
26	IntakeManifoldAirTempErrorState
27	IntakeManifoldAirPressErrorState
28	AFRErrorState
29	ExhaustTemp1ErrorState
30	ExhaustTemp2ErrorState
31	ExhaustTempWarningState
32	KnockWarnState
33	FuelEthanolContentErrorState

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Ch	Channel Name
34	ThrottleDBWControlErrorState
35	GearShiftCutState
36	AntilagActiveState
37	LaunchControlArmedState
38	IdleControlStatus
39	FuelEthanolContent
40	ThrottleDBWPos
41	ThrottleDBWTarget
42	TracControl_dRPM_raw
43	TracControl_dRPM_corr
44	TracControlTorqueReduce
45	PitLaneSpeedLimitTorqueReduce
46	ECUAnalogInput5Vvoltage
47	ECUAnalogInput6Vvoltage
48	ECUState_PO1
49	ECUState_PO2
50	ECUState_PO3
51	ECUState_PO4
52	ECUState_PO5
53	ECUState_VPO1
54	ECUState_VPO2
55	ECUState_VPO3
56	CANSwitch1State
57	CANSwitch2State
58	CANSwitch3State
59	CANSwitch4State
60	CANSwitch5State
61	CANSwitch6State
62	CANSwitch7State
63	CANSwitch8State
64	ECUSwitch1State
65	ECUSwitch2State
66	ECUSwitch3State
67	MUXSwitch1State
68	MUXSwitch2State
69	MUXSwitch3State
70	FuelPumpState
71	CoolantFanState
72	AirConClutchState

This product is legal in California for racing vehicles only and should never be used on public highways. AEM Performance Electronics, 2205 W. 126th Street Unit A, Hawthorne, CA 90250, Phone: (310) 484-2322 Fax: (310) 484-0152

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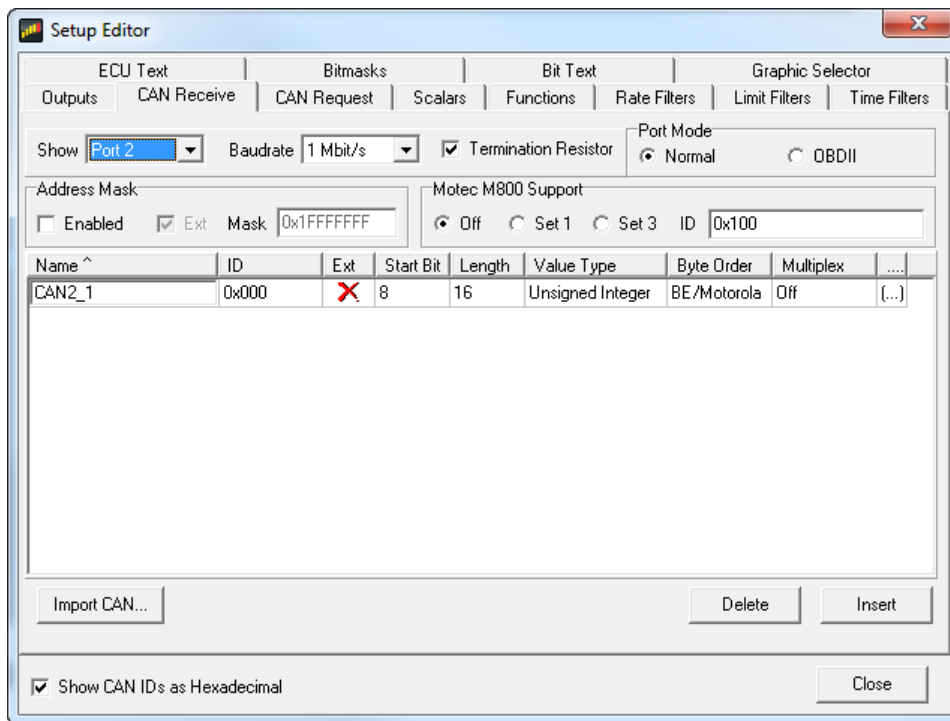


Ch	Channel Name
73	AirConFanState

## Layout Overview & CAN Setup

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.

To import the CAN setup you select SETUP then DISPLAY from the main DashDisplay menu. Once the dialog box opens you select the “CAN Receive” tab.



Change the settings to the following:

**Show:** “Port 2”

**Baudrate:** 1 Mbit/s

**Termination Resistor:** “ON”

**Address Mask:** “OFF”

**M800 Support:** “OFF”

Then click on “Import CAN” on the lower left and select the can setup file. The new items will 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.