

SETUP GUIDE



Life Racing ECUs to CD Dash

Supported Devices

F42, F88, F90 & GDI Series ECU's

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.

Life CAN High → AEM CD "CAN 2" Pin 1 (CAN 2+), Gray wire in twisted/shielded pair

Life CAN Low → AEM CD "CAN 2" Pin 2 (CAN 2-), Black wire in twisted/shielded pair

ECU Software Setup

The CD Dash supports the default Life Racing CAN output. However, some cal files may not have the CAN output activated or may not support all the channels contained in the default setup. You must confirm the setup before proceeding. To do this, start by opening the "Datastreams" group in the calibration and confirm the following settings:

"Datastream Select" is set to "Custom CAN"

"CAN 1 BUS Speed" is set to 1MHZ

The "Frame Identifier" table contains these values for frames 1-18;

600h,601h,602h,603h,604h,605h,606h,607h,608h,609h,60ah,60bh,60ch,60dh,60eh,60fh,610h,611h

The "Frame Frequency" table contains these values for frames 1-18;

50Hz,50Hz,50Hz,10Hz,10Hz,5Hz,5Hz,10Hz,10Hz,5Hz,5Hz,5Hz,5Hz,5Hz,50Hz50Hz,50Hz,50Hz

The "Frame Content" table contains these values for frames 1-18

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	1	2	3	4
1	rpm	ppsA	vbat	longG
2	map1	prp1	turboSpeed1DeSpiked	bpf
3	map2	prp2	turboSpeed2DeSpiked	SPARE
4	relFp1	lam1	fuelMitCl1	SPARE
5	relFp2	lam2	fuelMitCl2	SPARE
6	act1	ect1	egt1	SPARE
7	act2	ect2	egt2	SPARE
8	ccp1	ccp2	ccp3	ccp4
9	eop1	eop2_U05	eop3_U06	eop4_U07
10	eot	ft1	ecp	bap
11	engineEnable	calSelect	tcSelect	pitSwitch
12	clutchSwitch	manAutoSwitch	wow	autoStartState
13	fuelConsVolLR	sensorSwitch	alsState	wgcStrategyActive
14	gearCutDogKickCount	gearCutFailCount	dbwStatus	knockStatus
15	gearV	gear	paddleSwitch	gsp
16	flSpeed	frSpeed	rlSpeed	rrSpeed
17	swa	latG	vehicleSpeed	drivenSpeed
18	wheelSpin	tcSpinTarg	tcSpinErr	tcTrq
19	NOT_SET	NOT_SET	NOT_SET	NOT_SET

IMPORTANT!, Your calibration may not have all of these first 18 frames fully populated, especially if your ECU does not have the associated function. In cases where ANY slot in the first 18 frames contains "NOT_SET" you MUST change that value to "SPARE" or the ECU will generate an error and will not transmit the CAN data.

Supported Channels

AEM supports the following 81 channels transmitting by the the Life Racing ECUs:

CH	Channel Name
1	EngineSpeed
2	VehicleLongitudinalG
3	TurboSpeed1
4	TurboSpeed2
5	AFR1ControlTrim
6	AFR2ControlTrim
7	ExhaustTemp1
8	ExhaustTemp2
9	EngineCrankcasePress3

CH	Channel Name
28	ThrottlePedalPosA
29	IntakeManifoldAirPress1
30	IntakeManifoldAirPress2
31	FuelPressInjDelta1
32	FuelPressInjDelta2
33	IntakeManifoldAirTemp1
34	IntakeManifoldAirTemp2
35	EngineCrankcasePress1
36	EngineCrankcasePress4

CH	Channel Name
55	ECUBatteryVoltage
56	IntakeRestrictorPostPress1
57	IntakeRestrictorPostPress2
58	AFR1
59	AFR2
60	CoolantTemp1
61	CoolantTemp2
62	EngineCrankcasePress2
63	OilPress1

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CH	Channel Name
10	OilPress2
11	OilTemp
12	BaroPress
13	TracControlModeSwitchState
14	GearShiftManAutoSwitch
15	FuelUsed
16	WastegateStrategyStatus
17	dbw Status_DBW2
18	dbw Status_TPS1
19	knockStatus_Cyl11
20	knockStatus_Cyl8
21	knockStatus_Cyl5
22	knockStatus_Cyl2
23	GearPosCalculated
24	WheelSpeedFrontLeft
25	WheelSpeedRearRight
26	VehicleSpeed
27	TracControlSlipTarget

CH	Channel Name
37	OilPress3
38	FuelTemp
39	ECU_engineEnable_U
40	PitLaneSpeedLimiterSwitchState
41	WeightOnWheels
42	ECU_sensorSwitch_U
43	gearCutDogKickCount
44	dbw Status_DBW1
45	dbw Status_PPS
46	knockStatus_Cyl10
47	knockStatus_Cyl7
48	knockStatus_Cyl4
49	knockStatus_Cyl1
50	GearShiftPaddleSwitchPos
51	WheelSpeedFrontRight
52	SteeringAngle
53	WheelSpeedAvgDriven
54	TracControlSlipError

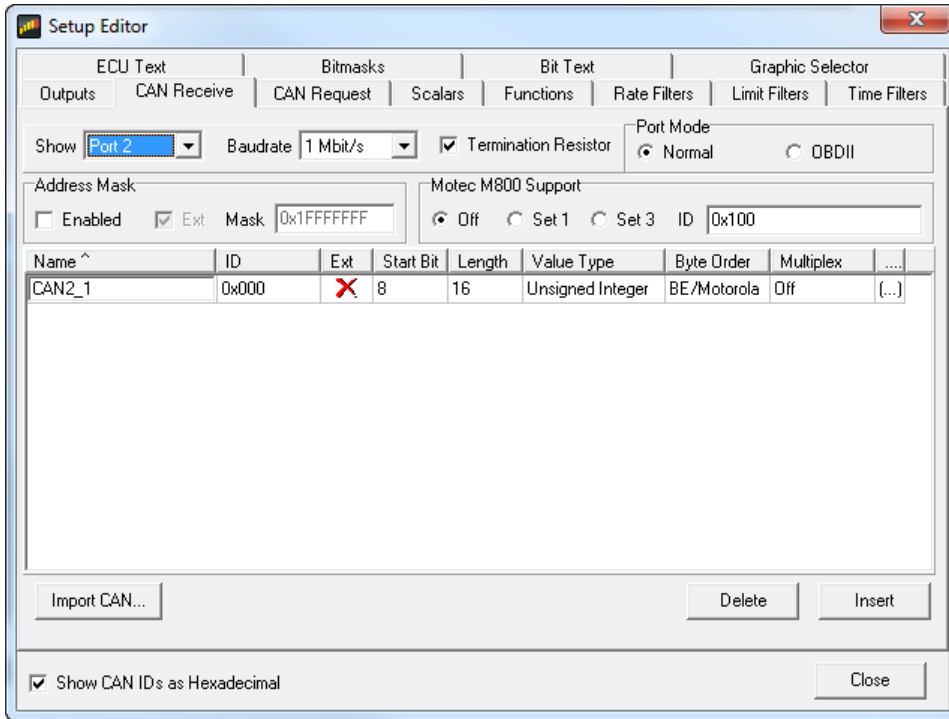
CH	Channel Name
64	OilPress4
65	CoolantPress
66	EngineModeSwitchStatus
67	ClutchSwitchState
68	EngineAutoStartState
69	AntiLagSystemState
70	gearCutFailCount
71	dbw Status_TPS2
72	knockStatus_Cyl12
73	knockStatus_Cyl9
74	knockStatus_Cyl6
75	knockStatus_Cyl3
76	GearboxDrumPosVoltage
77	GearShiftSystemPress
78	WheelSpeedRearLeft
79	VehicleLateralG
80	TracControlSlipMeasured
81	TracControlTorqueReduceRequest

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.

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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.