AiM Infotech

Emerald K3 ECU

Release 1.01

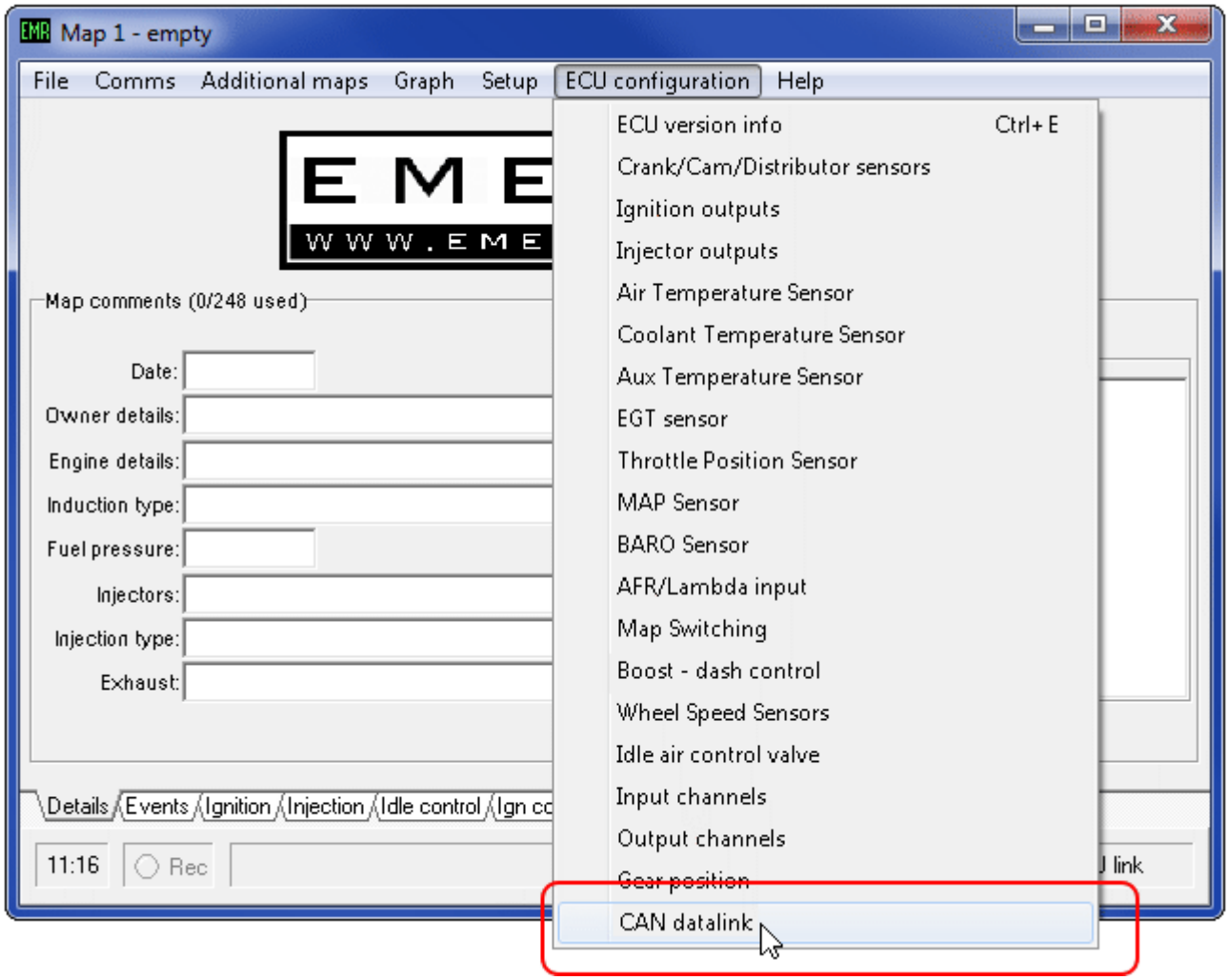
ECU

This tutorial explains how to connect Emerald K3 ECU to AiM devices.

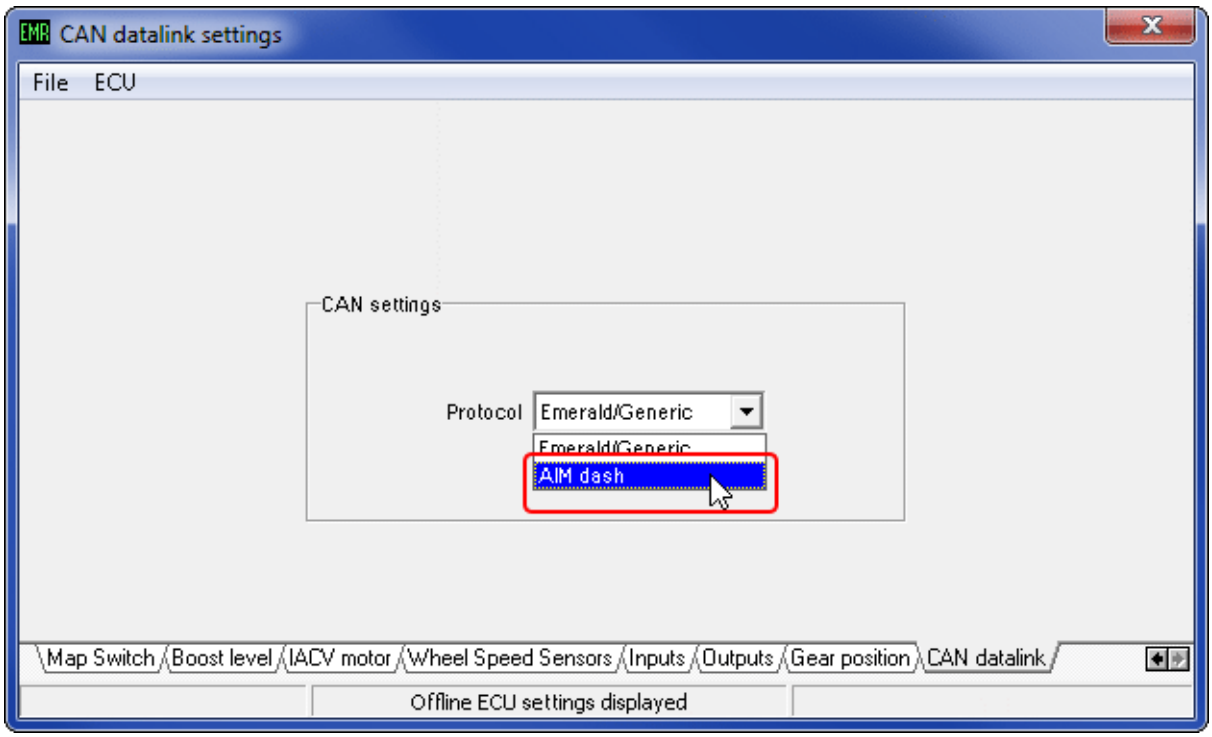
1 Software setup

To connect Emerald K3 ECU to AiM devices a software setup is needed. Run Emerald K3 software and follow this path:

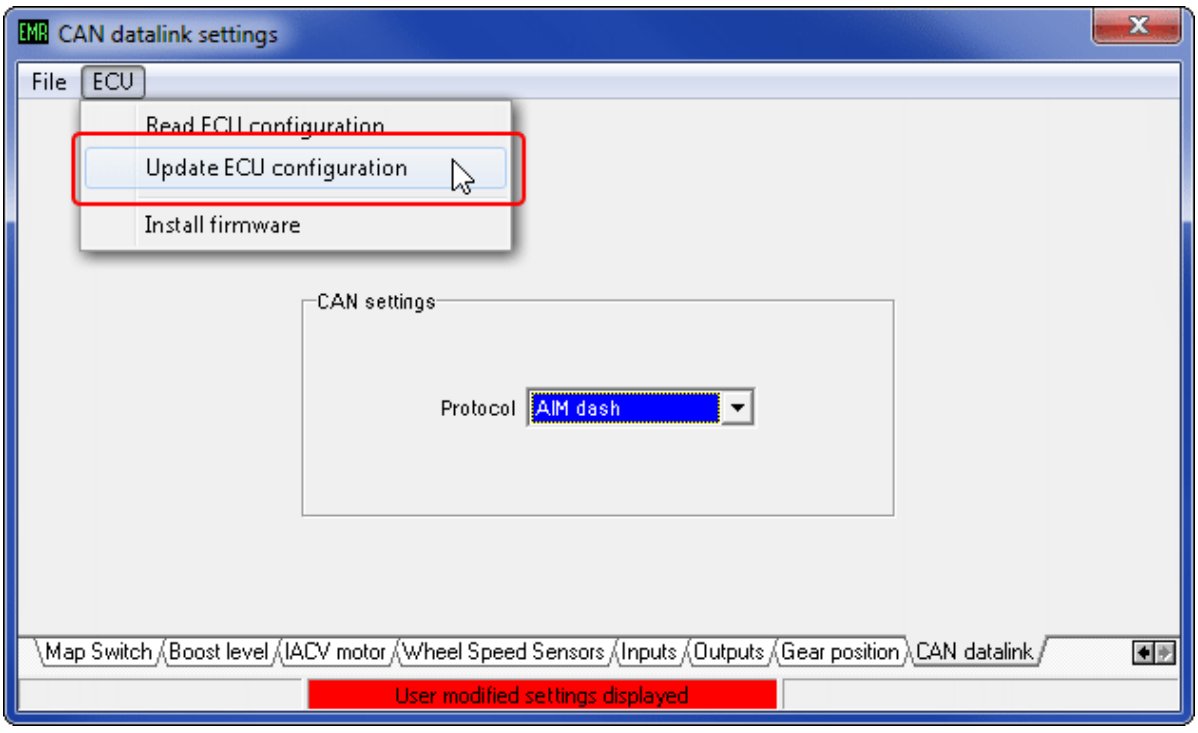
- ECU Configuration –> CAN datalink



- "CAN datalink settings" panel appears: set it to "AiM dash".

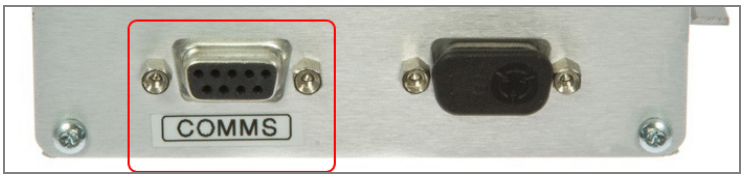


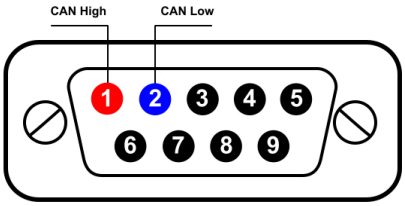
- follow the path "ECU –> Update ECU configuration"



2
Connection to AiM devices

Emerald K3 ECU features a bus communication protocol based on CAN. Rear on the ECU are two DB9 connectors: AiM devices use the one on the left labelled "COMMS". Here below you see DB9 connector on the left, its pinout on the right and the connection table below.





DB9 connector pin	Pin function	AiM cable
1	CAN High	CAN+
2	CAN Low	CAN-

Please note: Emerald K3 ECU comes with a programming cable. The images here below show the cable plugged in on the left and an example of cable on the right.

3 AiM Logger configuration

Before connecting the device to the ECU set it up as follows:

- Run Race Studio 2 software and follow this path:
- Device Configuration –> Select the device you are using;
- select the configuration or press “New” to create a new one;
- select ECU manufacturer “Emerald” and ECU Model "K3"
- transmit the configuration to the device pressing “Transmit”.

4 Available channels

Channels received by AiM devices connected to "Emerald" "K3" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	K3_RPM	RPM
ECU_2	K3_SPEED	Speed
ECU_3	K3_OILPRESS	Oil pressure
ECU_4	K3_OILTEMP	Oil temperature
ECU_5	K3_ECT	Engine coolant temperature
ECU_6	K3_FUELPRESS	Fuel pressure
ECU_7	K3_BATTVOLT	Battery supply
ECU_8	K3_TPS	Throttle position sensor
ECU_9	K3_MAP	Manifold air pressure
ECU_10	K3_AIRCHARGETEMP	Air charge temperature
ECU_11	K3_EXHTEMP	Exhausted gas temperature
ECU_12	K3_LAMBDA	Lambda value
ECU_13	K3_FUELTEMP	Fuel temperature
ECU_14	K3_GEAR	Engaged gear
ECU_15	K3_ERRORFLAG	Error flag