AiM Infotech

Emerald K3 and K6 ECU – Generic CAN

Release 1.00

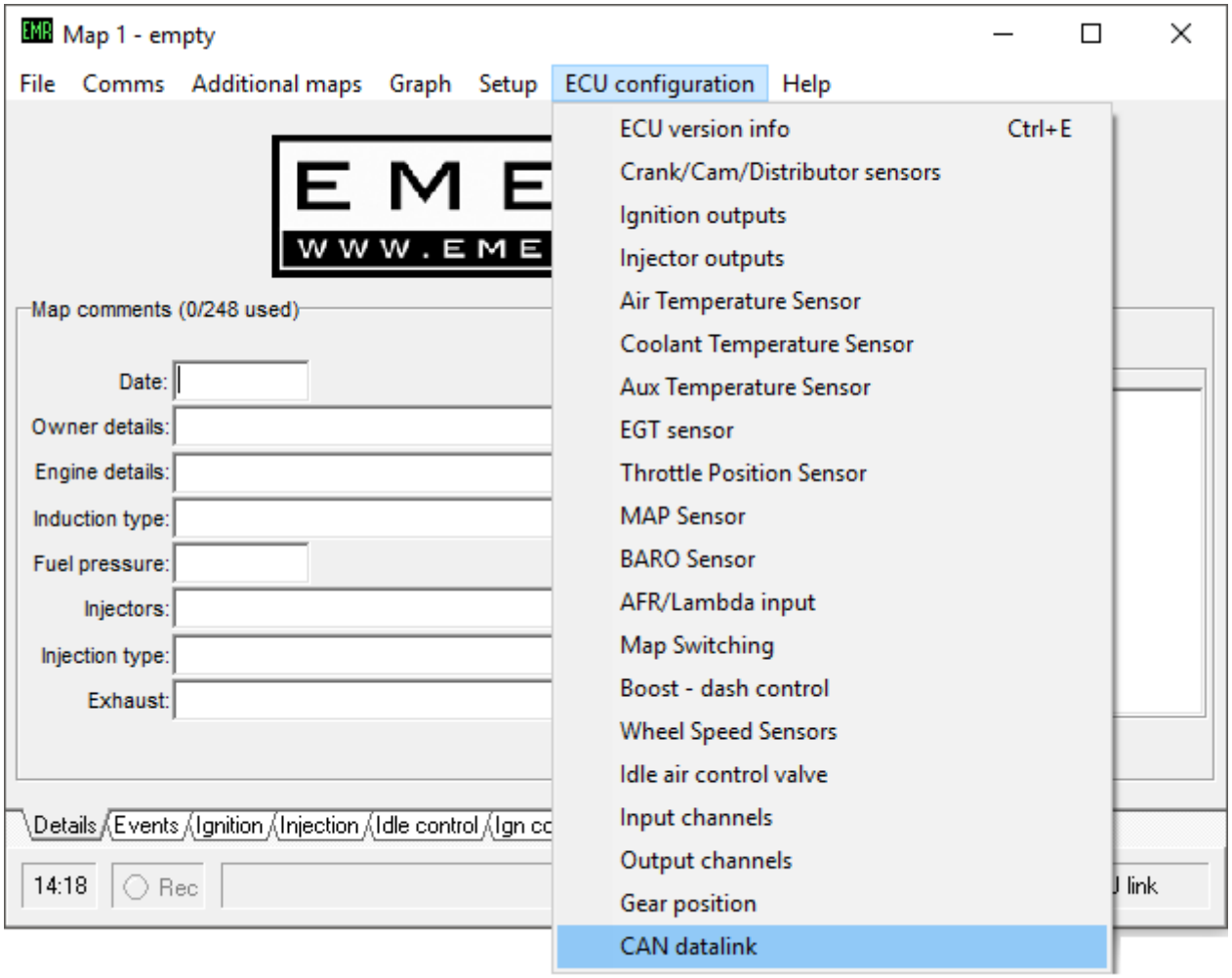
ECU

This tutorial explains how to connect Emerald K3/K6 ECU to AiM devices.

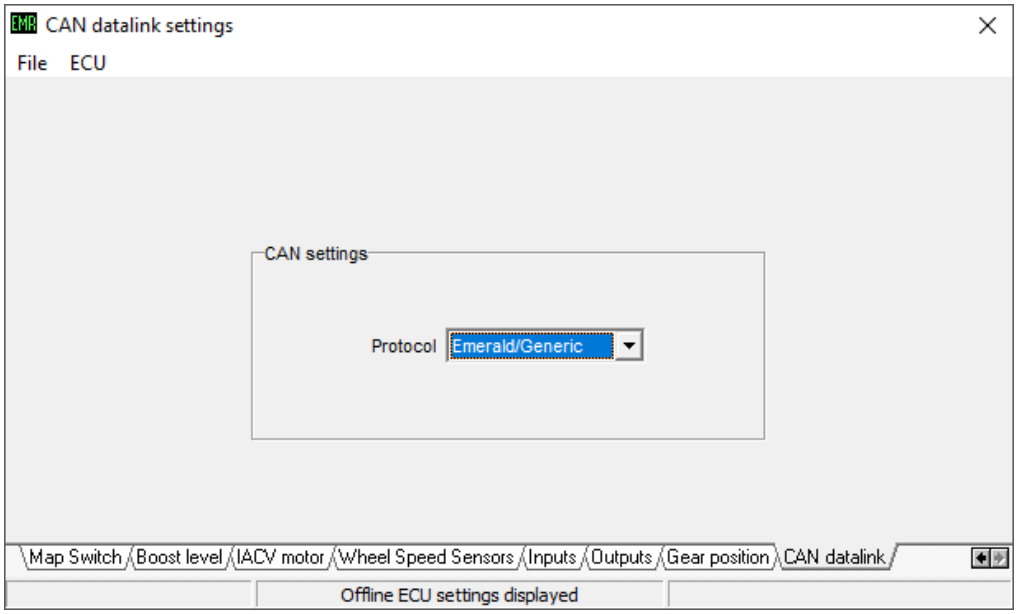
1 Software setup

To connect Emerald K3/K6 ECU to AiM devices a software setup is needed. Run Emerald K3/K6 software and follow this path:

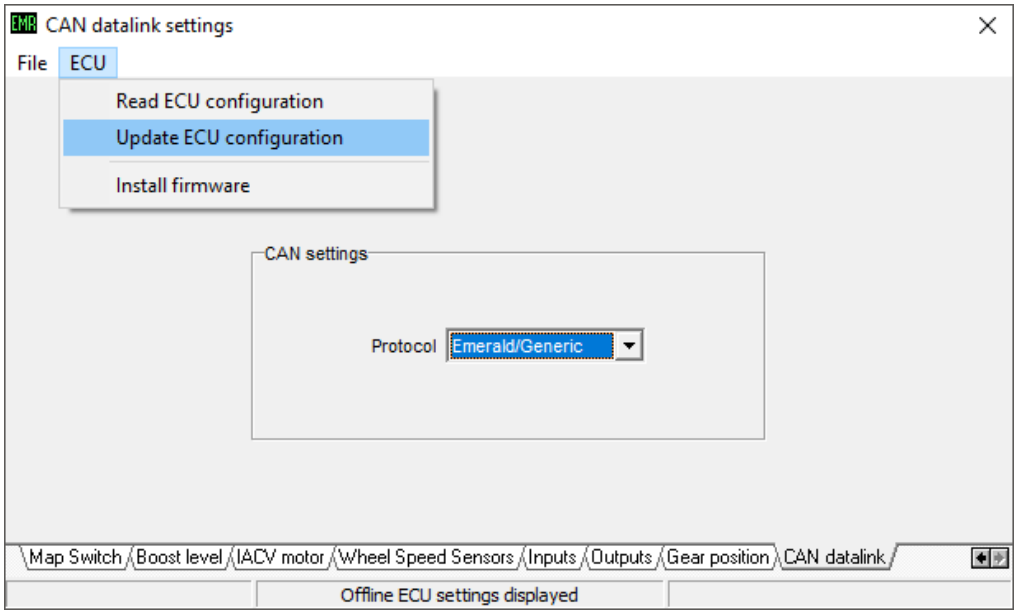
- ECU Configuration –> CAN datalink



- "CAN datalink settings" panel appears, make sure it is set as ”Emerald/Generic".

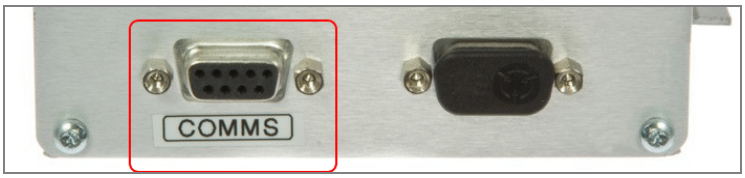


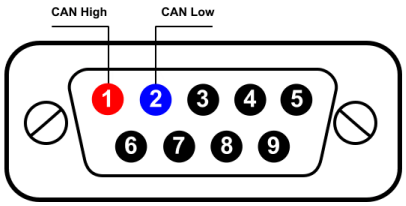
- follow the path "ECU –> Update ECU configuration"



2
Connection to AiM devices

Emerald K3/K6 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/K6 ECUs come with a programming cable, this can be modified to include the CAN connection. The images here below show the cable plugged in on the left and an example of cable on the right.

3
AiM device configuration

Before connecting the ECU to AiM device set this up using AiM Race Studio software. The parameters to select in the device configuration are:

- ECU manufacturer “Emerald”
- ECU Model “Generic CAN”

4
“Emerald” “Generic CAN” protocol

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

CHANNEL NAME	FUNCTION
RPM	RPM
MAP	Manifold air pressure
BARO	Barometric pressure
TPS	Throttle position sensor
CoilOnTime	Coil on time
EGT	Exhaust gas temperature
RoadSpeed	Vehicle speed
AFR1	Air/Fuel ratio 1
AFR2	Air/Fuel ratio 2
StatusFlags	Status message
ErrorFlags	Error message
Pri Inj BankOnTm	Primary injection bank (time)
Sec Inj BankOnTm	Secondary injection bank (time)
AIR TEMP	Air temperature
COOLANT TEMP	Coolant temperature
AUX TEMP	Auxiliary temperature

IGNITION ADV	Ignition advance
INJECTOR DUR	Injector duration
GEAR	Engaged gear
SELECTED MAP	Active engine map
Battery	Battery voltage