KMS MD35 ECU

INTRODUCTION

AIM has developed special applications for many of the most popular ECUs: by special applications we mean user-friendly systems which allow to easily connect your ECU to our high tech data loggers: user needs only to install harness between the **logger** and the ECU.

Once connected, the logger displays (and/or records, depending on the logger and on the ECU data stream and configuration) values like RPM, engine load, throttle position (TPS), air and water temperatures, battery voltage, speed, gear, lambda value (air/fuel ratio) analog channels…

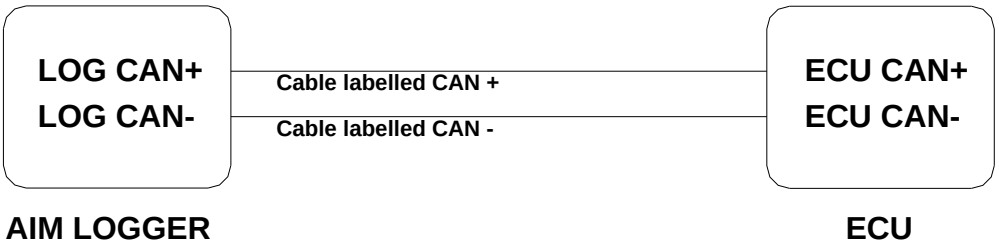
All AIM loggers include – free of charge – **Race Studio 2** software, a powerful tool to configure the system and analyze recorded data on your PC.

Warning: once the ECU is connected to the logger, it is necessary to set it in the logger configuration in Race Studio 2 software.
Select Manufacturer "KMS" Model "MD35".
Refer to Race Studio Configuration user manual for further information concerning the loggers configuration.

Warning: for any further information concerning ECU firmware/software settings and/or upgrading it is always recommended to address to the ECU dealer.

Chaper 1 – CAN Communication Setup

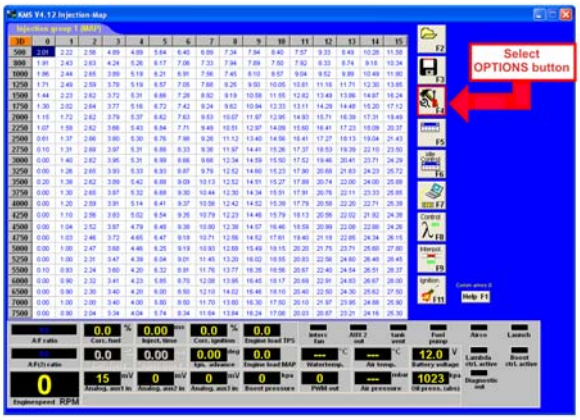
KMS MD35 ECU is equipped with a CAN communication setup used to communicate parameters to an external logger.
The image here below shows the standard CAN communication setup.



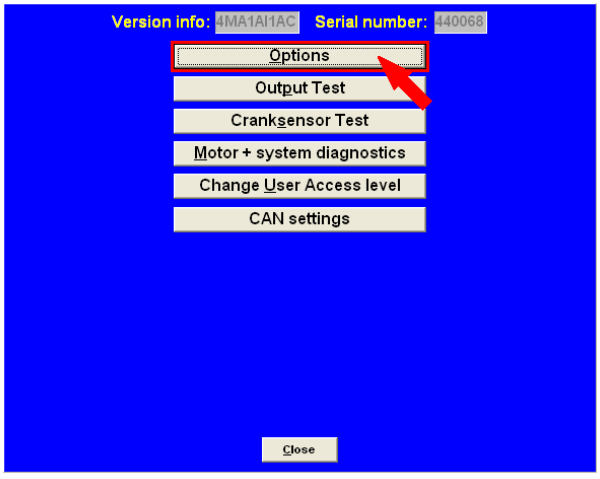
Chapter 2 – Software settings

To ensure a correct communication with AIM loggers KMS MD35 ECU software setting is needed; use KMS more recent software and follow the procedure here below described:

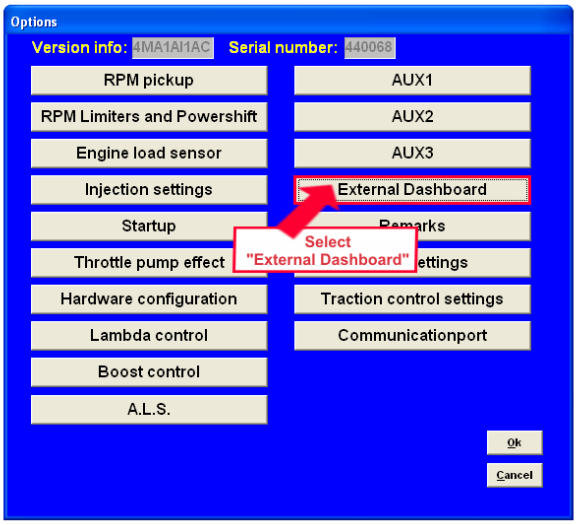
- run the software;
- select “Options” icon;



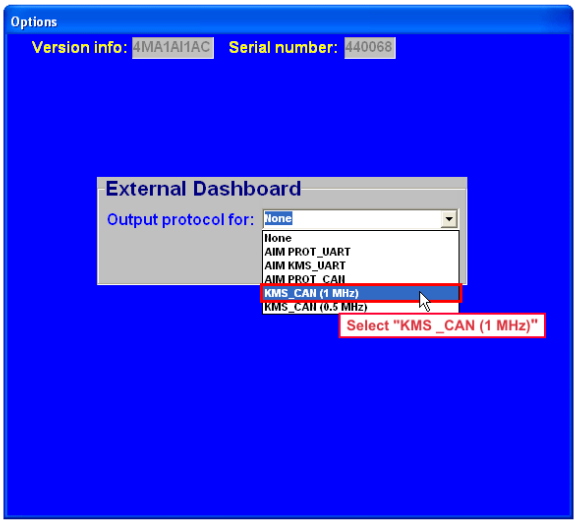
- select “options”;



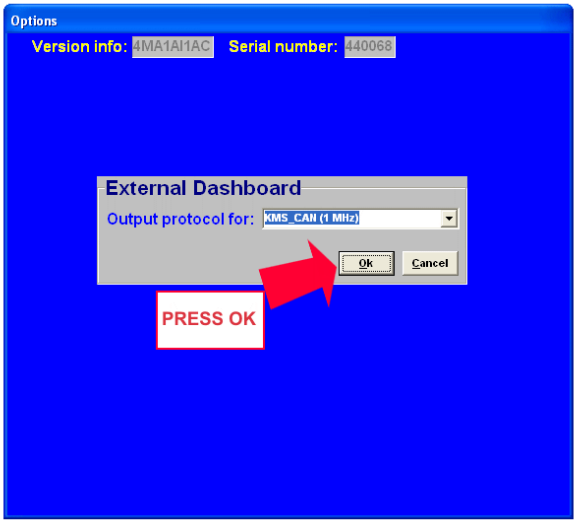
- select “External Dashboard”;



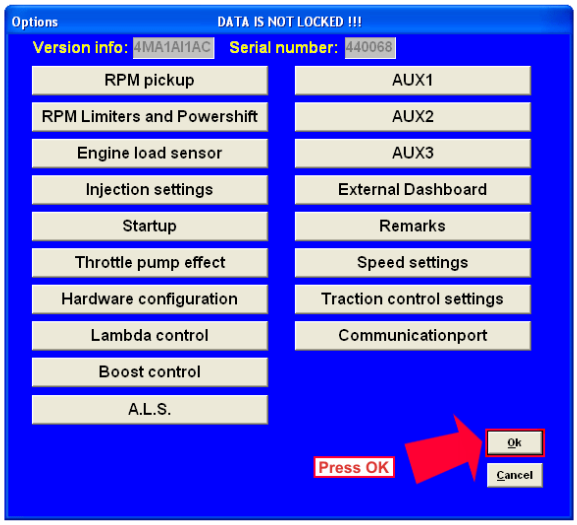
- select “AIM KMS CAN (1MHz)”;



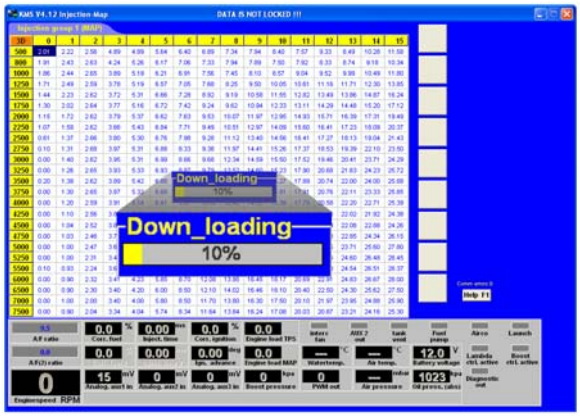
- press “OK”;



- press “OK” again;



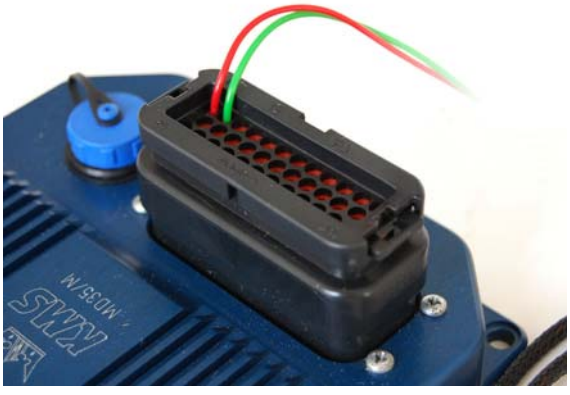
- Data download starts automatically and KMS setting procedure is over.

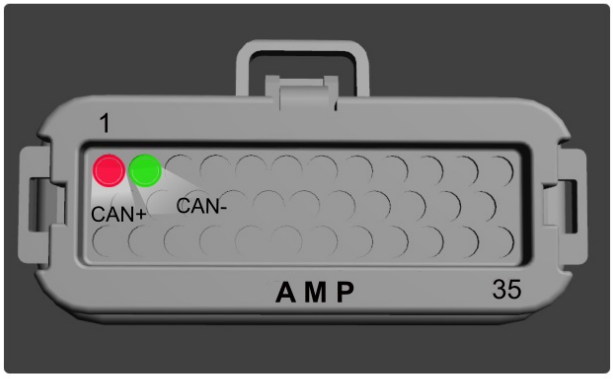


Chapter 3 – Connection to AIM loggers

To connect AIM logger to KMS MD35 ECU

- Connect cable labelled CAN+ of AIM logger to pin 1 (red cable) of the ECU;
- Connect cable labelled CAN- of AIM logger to pin 2 (green cable) of the ECU.





Chapter 4 – Communication protocol

Channels received by AIM loggers connected to KMS MD35 ECU are:

CHANNEL NAME	FUNCTION
K_RPM	RPM
K_ECT	Engine cooling temperature
K_IAT	Intake air temperature
K_MAP	Manifold air pressure
K_OILP	Oil pressure
K_TPS_ENG_LOAD	Throttle Position Sensor Engine Load
K_BOO_ENG_LOAD	Boost Engine Load
K_BATT_VOLT	Battery Voltage
K_EXH_TEMP1	Exhausted Temperature1
K_EXH_TEMP2	Exhausted Temperature2
K_CRANK	Crank sensor signal
K_GEAR	Gear Value
K_ACC_RPM_CH	RPM
K_INJ1_PULSE	Injection 1 Pulse
K_INJ1_CORR	Injection 1 Correspondence
K_LAMBDA1	Lambda signal 1
K_LAMBDA2	Lambda signal 2
K_LAMBDA1_STAT	Lambda1_Status
K_LAMBDA2_STAT	Lambda 2_Status
K_INJ2_PULSE	Injection _Pulse
K_INJ2_CORR	Injection 2 Correspondence
K_IGNIT_CORR	Ignition _Correspondence
K_IGNIT_BTDC	Ignition before top death condition
K_AUX2_ACT	Auxiliary 2_Active
K_AUX3_ACT	Auxiliary 3_Active
K_FUELPUMP_ACT	Fuel pump active
K_AUX1_ACT	Auxiliary 1 Active
K_LAMBDA_ACT	Lambda Active
K_LAMB_ERR_ACT	Lambda Error Active
K_BOOST_ACT	Boost Active
K_SUPP_ERR_ACT	Supply Error Active
K_POWER_SW_ACT	Power Switch Active
K_LAUNCHSW_ACT	Launch switch Active
K_RPM_LIM	RPM limiter
K_BOOST_LIM	Boost limiter
K_FUEL_CUT_LIM	Fuel cut limiter
K_IDLE_VALVE	Idle Valve
K_BOOST_VALVE	Boost Valve
K_ATM_PRESS	Atmospheric Pressure
K_TPS	Throttle Position