KMS MA25 MP25 ECUs

Racing Data Power

INTRODUCTION

AIM has developed special applications for many of the most popular ECU: 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 temperature, 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 logger is connected to the ECU it is necessary to set it in the logger configuration in Race Studio 2 software – refer to "How to connect AIM logger" chapter for more details about the connection.
It is also suggested to check 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.

Chapter 1 – Connecting KMS ECU to AIM loggers

KMS MA25 and MP25 ECUs communicate with external loggers through a Serial communication protocol and are equipped with a DB9 connector used to configure ECU parameters via PC.

1.1 – KMS ECUs RS232 communication protocol

To connect AIM logger to ECU, plug DB9 connector as follows:

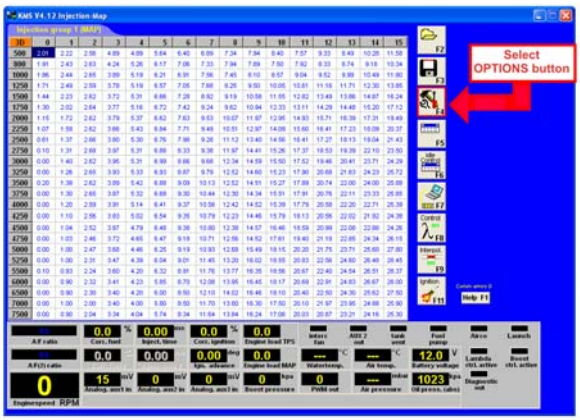
- Connect cable labelled RS232RX of AIM logger to pin 2 of DB9 connector.
- Connect cable labelled RS232TX of AIM logger to pin 3 of DB9 connector.

Note: after connection, set and transmit to the logger the correct Race Studio 2 software configuration.
Then select Manufacturer "KMS" and "RS232".

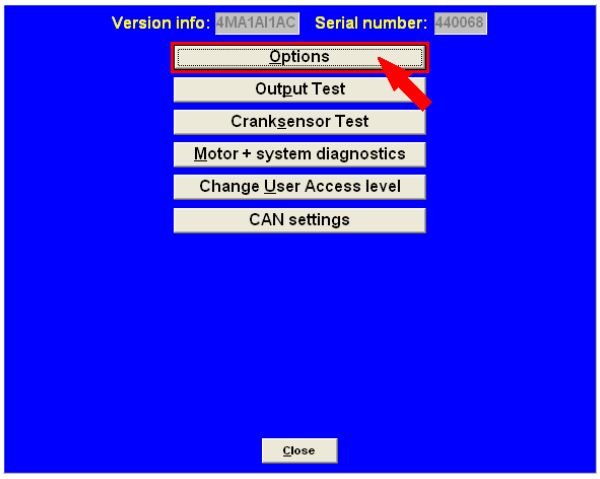
Chapter 2 – Software settings

To ensure a correct communication with AIM loggers KMS MA25/MP25 ECU software setting is needed; use KMS more recent software and follow the procedure here below described:

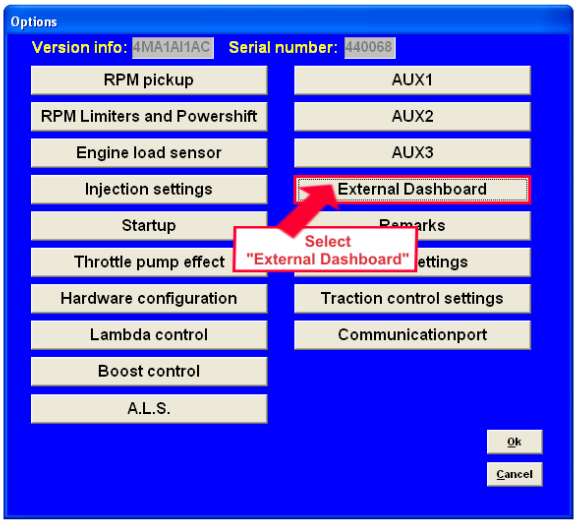
- run the software;
- select "Options" icon;



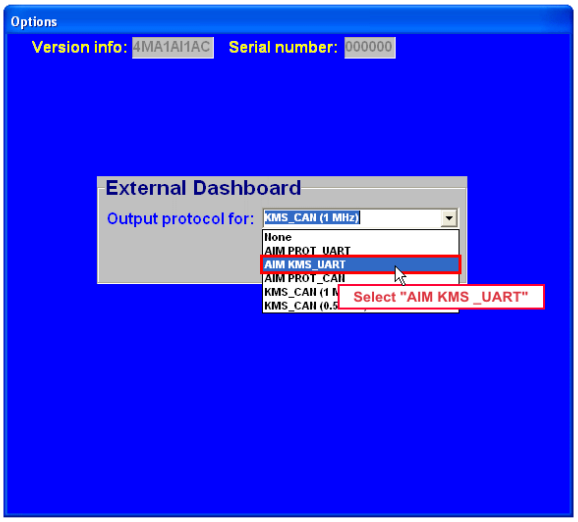
- select "options";



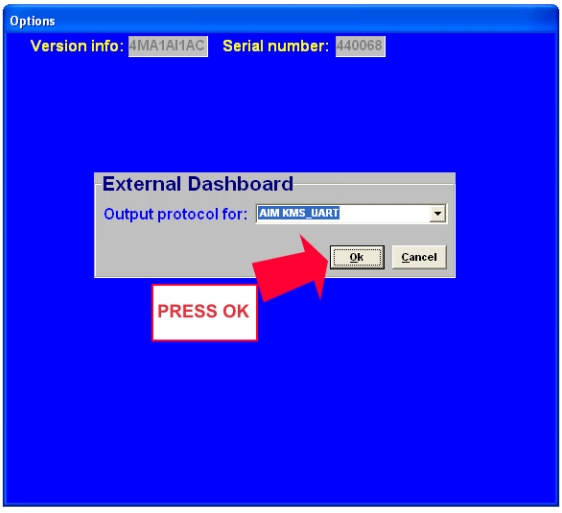
- select “External Dashboard”;



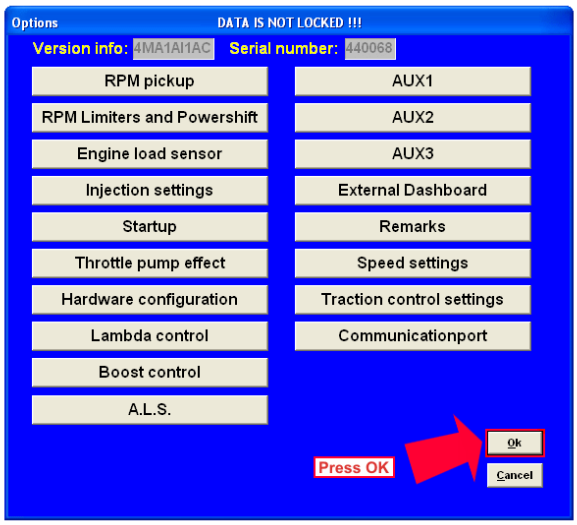
- select “AIM KMS_UART”;



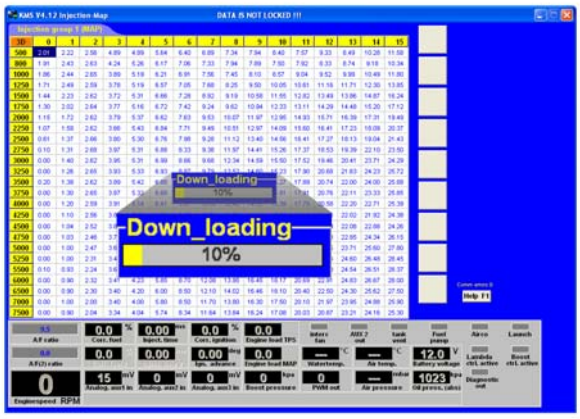
- press “OK”;



- press “OK” again;



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



Chapter 3 – KMS MA25 and MP25 communication protocols

Channels received by AIM loggers connected to ECU are:

Channel Name	Function
KMS_RPM	RPM
KMS_TPS_RAW	Throttle position sensor
KMS_ECT	Engine cooling temperature
KMS_IAT	Intake air temperature
KMS_MAP	Manifold air pressure
KMS_OILP	Oil pressure
KMS_AFR	Air/fuel ratio
KMS_IGN_ADV	Throttle position sensor
KMS_INJ_TIME	Injection time
KMS_GEAR	Gear number
KMS_TPS_LOADST	TPS Load Site
KMS_MAP_LOADST	Map Load Site
KMS_LAUNCH_SW	Launch Switch Active
KMS_LAMBDA_CT	Lambda Control Active
KMS_FUEL_INJ_C	Correction on Fuel Injector
KMS_IGNI_CORR	Correction on Ignition
KMS_ECU_BATT	Battery voltage
KMS_THROTTLE	Throttle position