

Hondata KPro 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.

Technical notes:

Hondata KPro protocol works with PRB ECU and - if PRB calibration is loaded- also with PNF, PND, PRC and PRD ECUs.

Moreover, to work properly, KPro ECU needs AIM “Hondata board” (Part number X05EFIHKPRO).

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 “Hondata” Model “KPro”.

Refer to Race Studio Configuration user manual for further information concerning the loggers configuration.

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

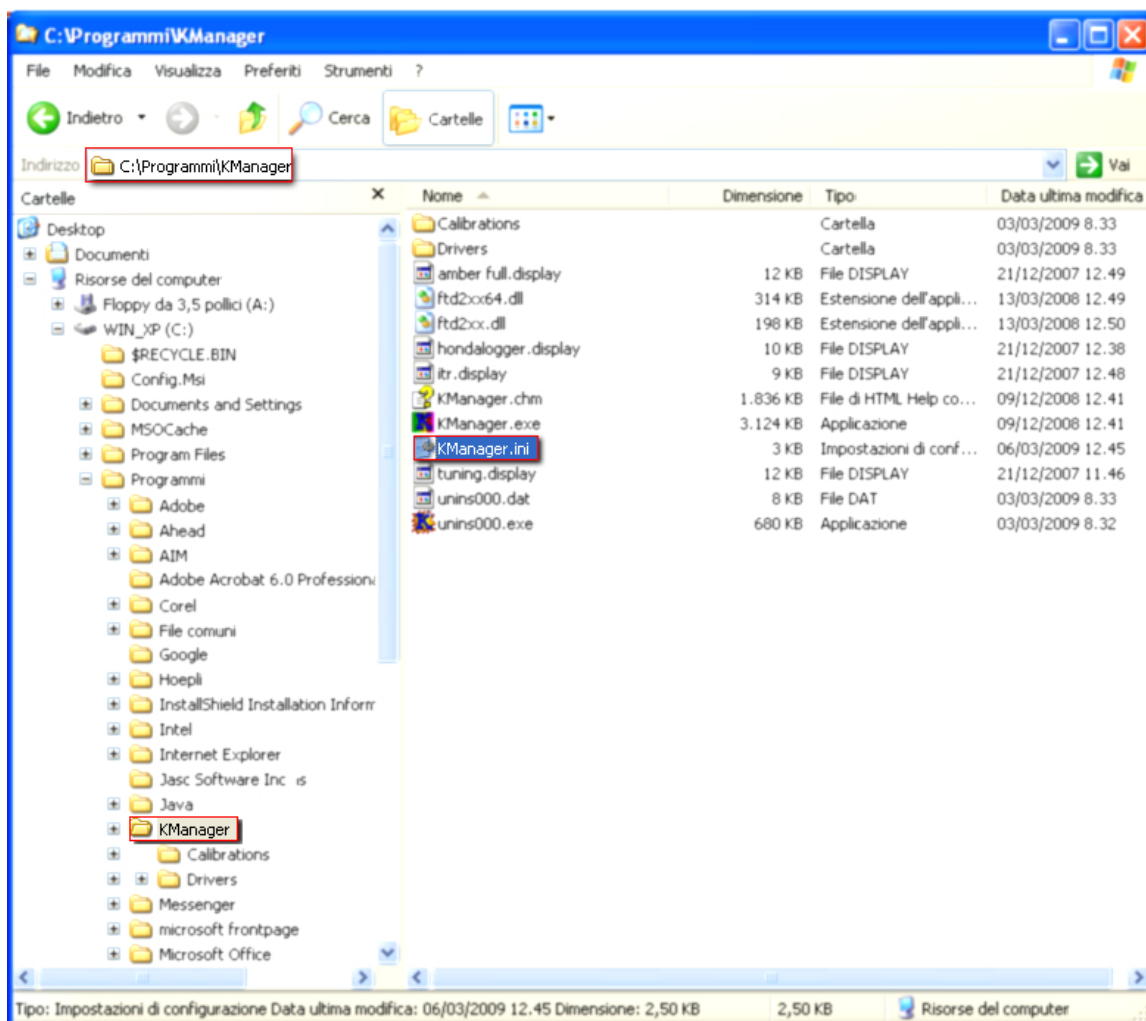
1 – Technical communication notes

Hondata “K-Pro” ECU is equipped with a serial communication setup used to export data to an external logger. Communication between the ECU and AIM loggers needs a previous software setup to be made using “KManager”, Hondata software.

1.1 – Software setup

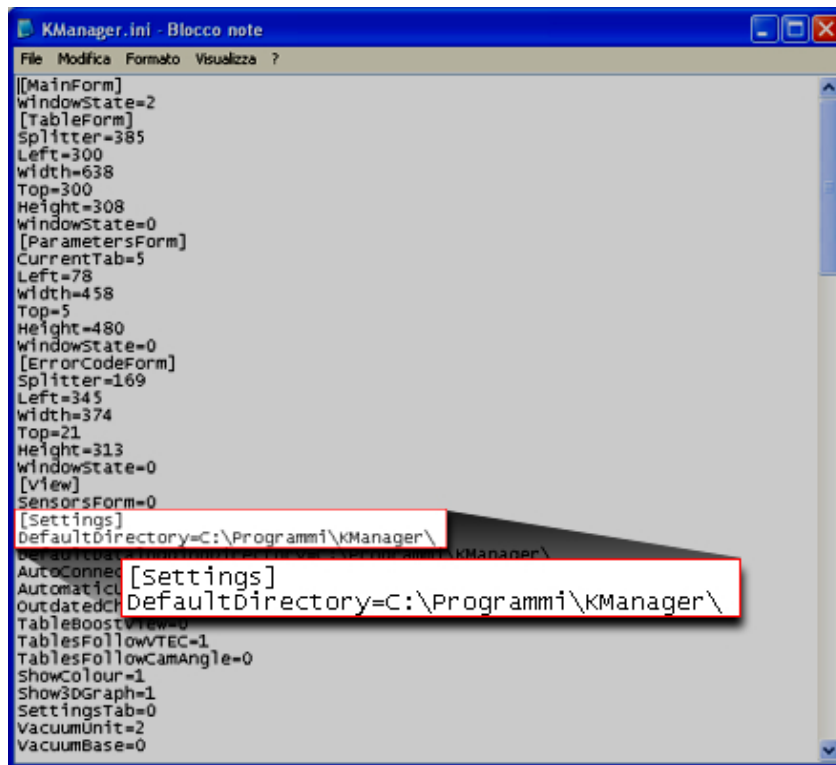
For Hondata “k-Pro” ECU to correctly communicate with AIM loggers it is necessary perform some operations following carefully the instructions that follow.

- install KManager software
- right click on “KManager.ini” file situated in KManager installation folder.



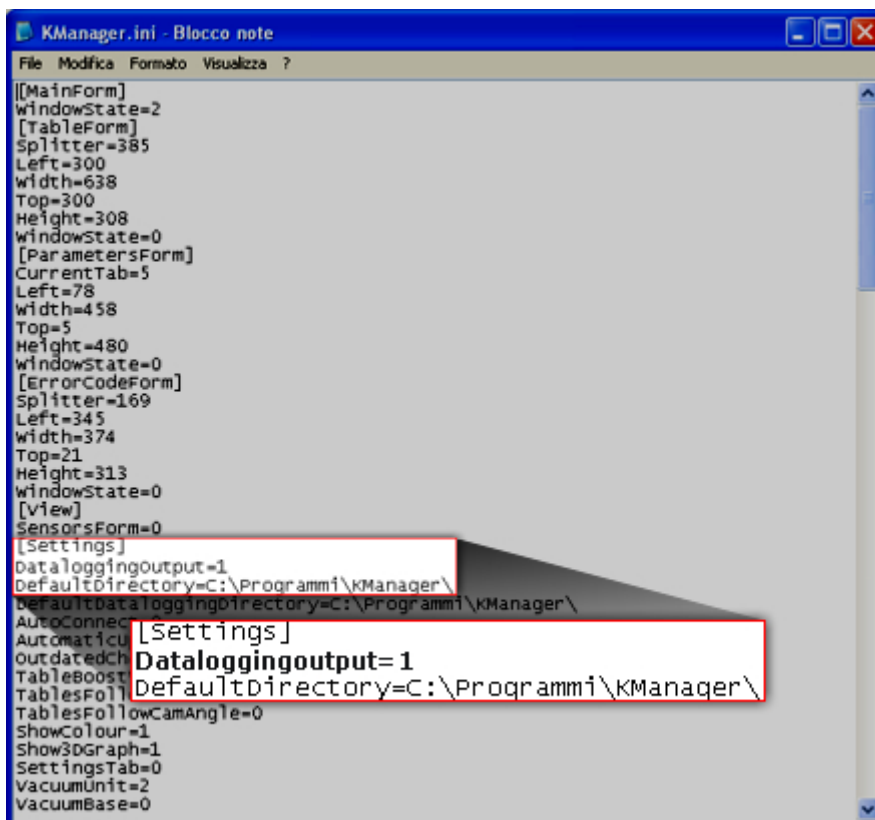
- Open it with the Notepad.

This window appears:



```
[[MainForm]
WindowState=2
[TableForm]
Splitter=385
Left=300
width=638
Top=300
Height=308
WindowState=0
[ParametersForm]
CurrentTab=5
Left=78
width=458
Top=5
Height=480
WindowState=0
[ErrorCodeForm]
Splitter=169
Left=345
width=374
Top=21
Height=313
WindowState=0
[view]
SensorsForm=0
[Settings]
DefaultDirectory=C:\Programmi\KManager\
AutoConnect=1
AutomaticUpdate=1
OutdatedCheck=1
TableBoostView=0
TablesFollowVTEC=1
TablesFollowCamAngle=0
ShowColour=1
Show3DGraph=1
SettingsTab=0
VacuumUnit=2
VacuumBase=0
```

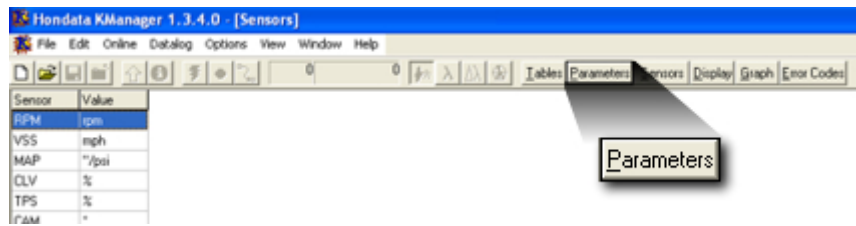
- Add a row stating “Dataloggingoutput=1” after [Settings] one as shown here below



```
[[MainForm]
WindowState=2
[TableForm]
Splitter=385
Left=300
width=638
Top=300
Height=308
WindowState=0
[ParametersForm]
CurrentTab=5
Left=78
width=458
Top=5
Height=480
WindowState=0
[ErrorCodeForm]
Splitter=169
Left=345
width=374
Top=21
Height=313
WindowState=0
[view]
SensorsForm=0
[Settings]
Dataloggingoutput=1
DefaultDirectory=C:\Programmi\KManager\
DefaultDataloggingDirectory=C:\Programmi\KManager\
AutoConnect=1
AutomaticUpdate=1
OutdatedCheck=1
TableBoostView=0
TablesFollowVTEC=1
TablesFollowCamAngle=0
ShowColour=1
Show3DGraph=1
SettingsTab=0
VacuumUnit=2
VacuumBase=0
```

- Save and close the file.

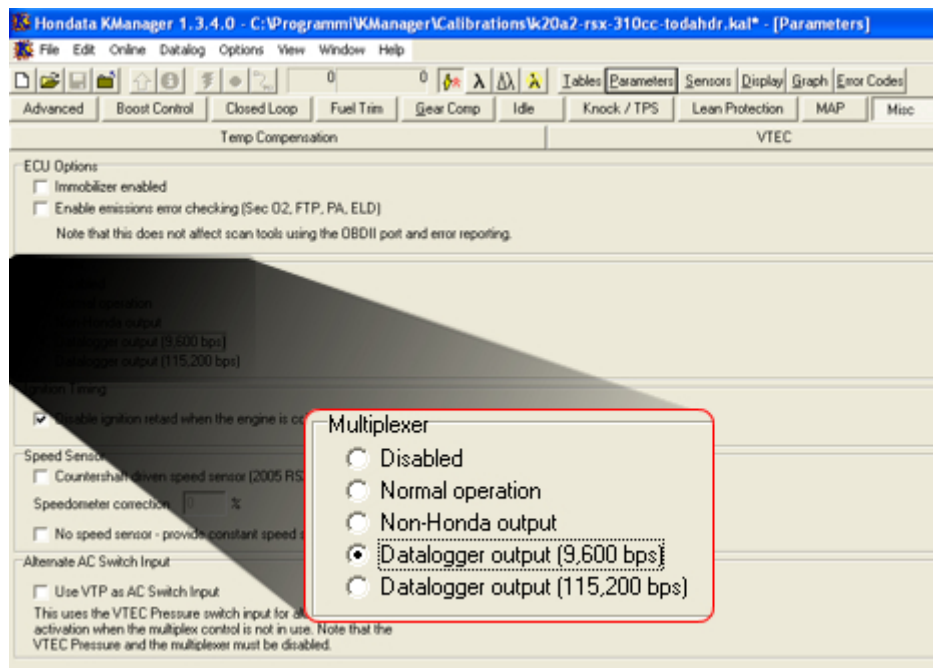
- Run “Kmanager” software;
- Press “Parameters”;



- Press “Misc”;



- Set “Datalogger Output (9.600 bps)” as shown below.

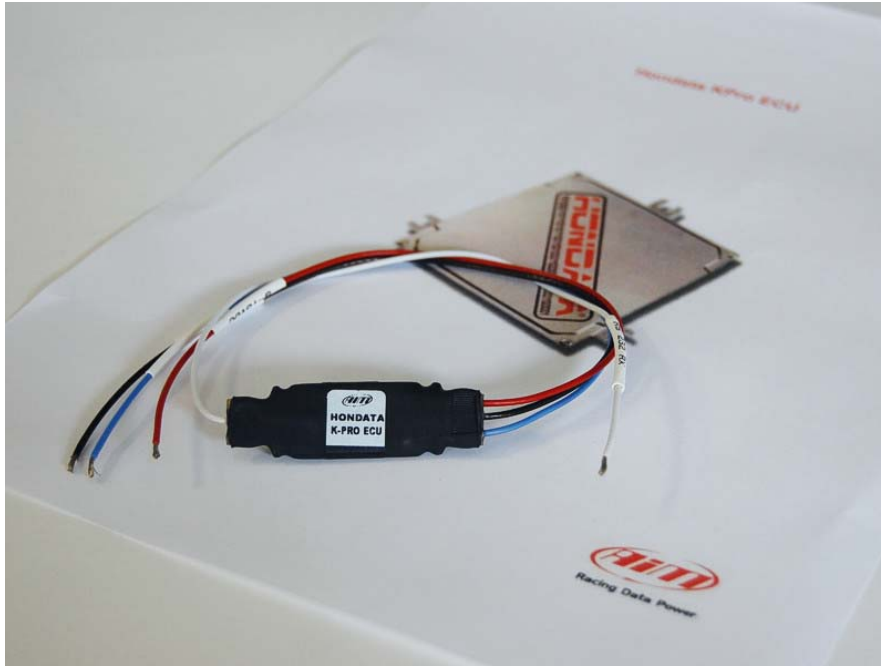


- power the ECU;
- upload the calibration to the ECU;
- connect the data logger to pin E24 (a serial stream on E24 should appear whenever the ECU is powered up).

2 – Hondata serial communication Setup

To connect Hondata “KPro” ECU with AIM logger use the board expressly developed by AIM for this connection. “Hondata board” part number is: **X05EFIHKPRO**.

The image here below shows “Hondata board” kit.

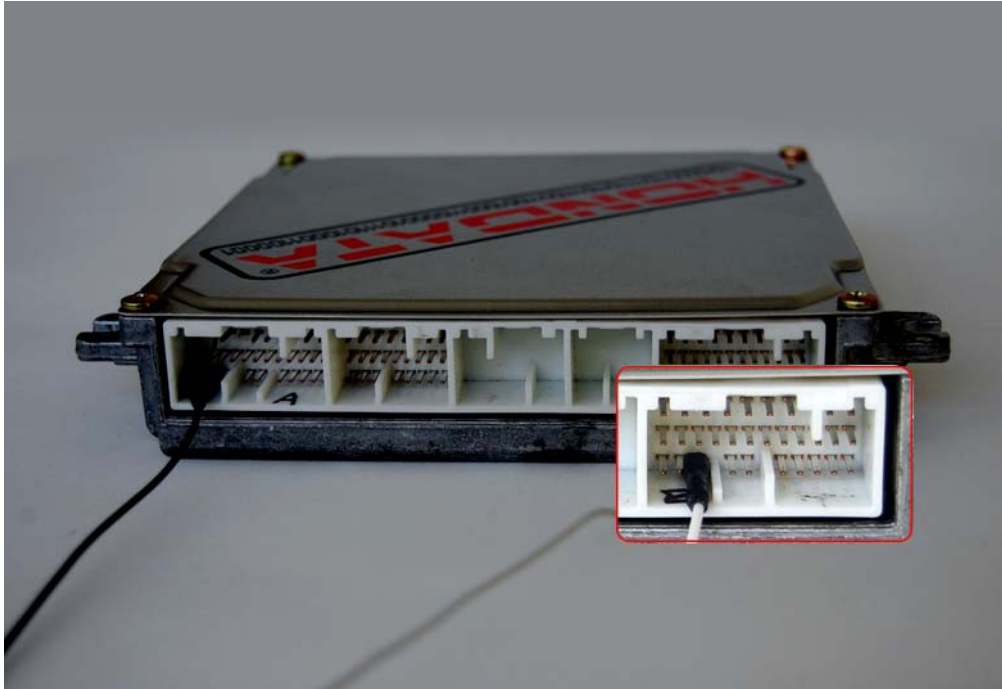


3 – Connection to AIM loggers

To connect Hondata “KPro” ECU with AIM loggers connect:

- cable labelled “9-15 VDC” of AIM logger wiring with cable labelled “9-15 VDC” of AIM “Hondata board”;
- cable labelled “GND” of AIM logger wiring with cable labelled “GND” of AIM “Hondata board”;
- cable labelled “RS232RX” of AIM logger wiring with cable labelled “RS232TX” of AIM “Hondata board”;
- cable labelled “RS232RX” of AIM “Hondata board” with **pin 24** of ECU “E” connector.

The images here below shows: on top Hondata “KPro” ECU, AIM “Hondata board” and AIM logger connection diagram, while on bottom KPro ECU “E” connector.



4 – Communication protocol

Channels received by AIM loggers connected to Hondata KPro ECU are:

ID	CHANNEL NAME	FUNCTION
ECU_1	HONDATA_RPM	RPM
ECU_2	HONDATA_SPEED	Vehicle speed
ECU_3	HONDATA_GEAR	Engaged gear
ECU_4	HONDATA_ECT	Engine cooling temperature
ECU_5	HONDATA_IAT	Intake air temperature
ECU_6	HONDATA_BATTERY	Battery voltage supply
ECU_7	HONDATA_TPS	Throttle position sensor
ECU_8	HONDATA_MAP	Manifold pressure
ECU_9	HONDATA_INJECTOR_TIME	Injection time
ECU_10	HONDATA_IGNITION_PHASE	Ignition phase
ECU_11	HONDATA_REVERSE_LOCKOUT	Reverse lockout
ECU_12	HONDATA_BRAKE_SWITCH	Brake indicator
ECU_13	HONDATA_SCS	SCS
ECU_14	HONDATA_EPS	EPS
ECU_15	HONDATA_FUEL_PUMP	Fuel pump indicator
ECU_16	HONDATA_RADIATOR_FAN	Radiator fan indicator
ECU_17	HONDATA_VTEC_OIL_PRESS	Oil pressure
ECU_18	HONDATA_VTEC_SOLENOID1	Solenoid indicator 1
ECU_19	HONDATA_VTEC_SOLENOID2	Solenoid indicator 2
ECU_20	HONDATA_MIL	Malfunctioning indicator lamp
ECU_21	HONDATA_CAM_ANGLE	Cam angle
ECU_22	HONDATA_LAMBDA	Lambda value
ECU_23	HONDATA_AFR	Air/Fuel ratio
ECU_24	HONDATA_KNOCK_COUNT	Knock since power on