AUTRONIC SM2 V193/195

Racing Data Power

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 "Autronic" Model "SM2_V193/195".
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.

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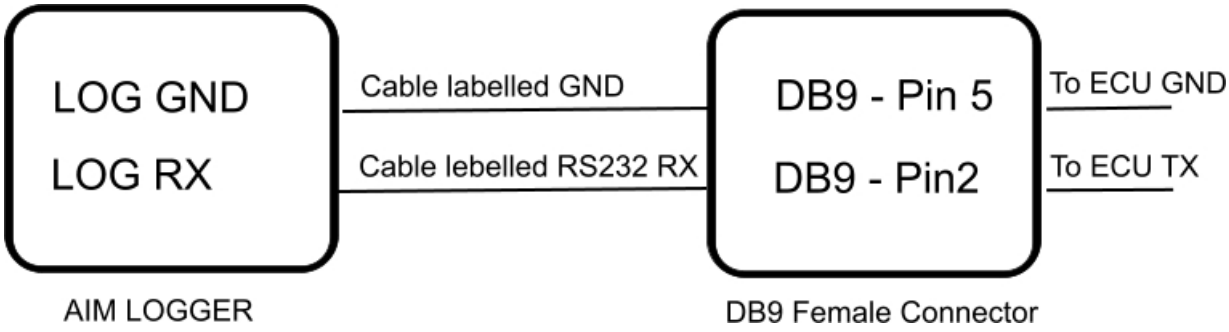
Chapter 2 – Serial communication Setup

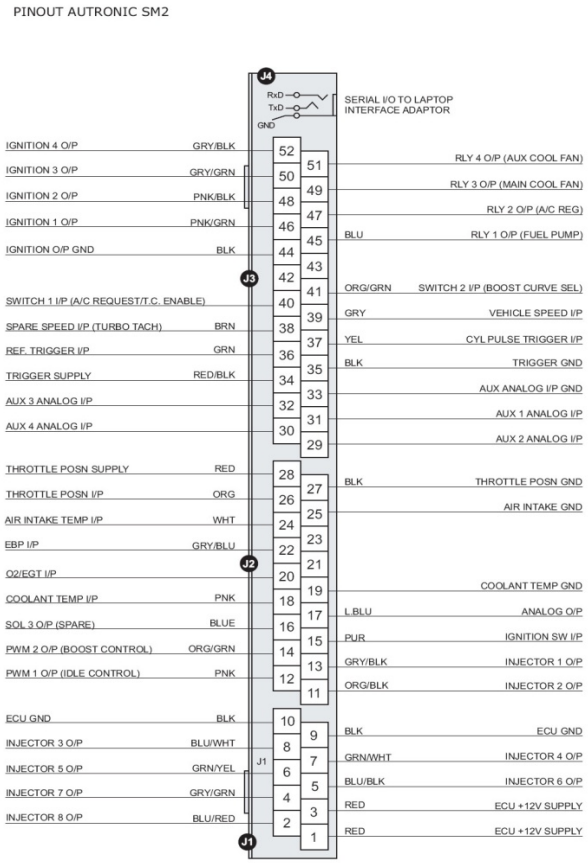
Autronic SM2 V_193/195 has a serial communication protocol (RS 232) and is equipped with 4 connectors (J1,J2,J3,J4) - whose pinout is reported here below.

J4 is the serial I/O interface adaptor: used to communicate parameters to a data logger, or to configure the ECU itself

The image here below shows the standard serial communication setup.



Following image shows Autronic SM2_V193/195 ECU pinout:



Chapter 3 – Connection with AIM loggers

To connect AIM logger to the ECU, please connect AIM cable labelled as "**RS232RX**" with **pin 2** of the **DB9 female** connector (**that goes to ECU TX**) and AIM cable labelled "**GND**" with **pin 5** of the **DB9 female** connector (**that goes to ECU GND**) as reported below.

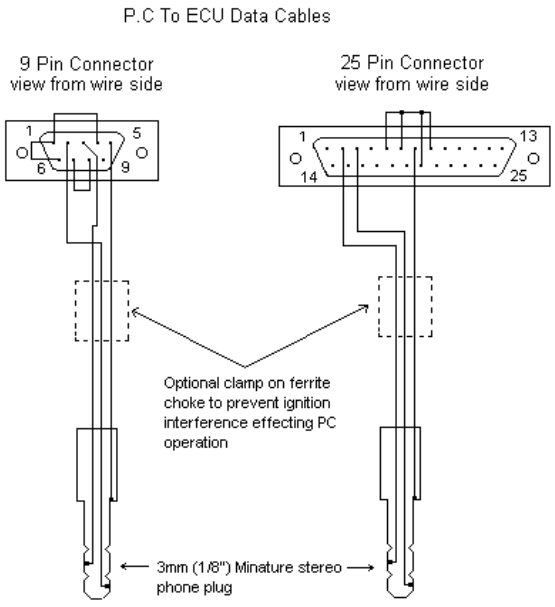
Connection between DB9 Autronic cable and AIM loggers is provided by the following pins:

Pin	Function	Comments
5	GND	
2	RS232TX	

In case of 25 pin connector, connection will be:

Pin	Function	Comments
7	GND	
3	RS232TX	

Here below you see the Autronic PC Serial data link spiral cable – to connect DB9 male connector to the Serial I/O and related pinout.



Chapter 4 – Autronic SCM V193/195 ECU communication protocol

Channels shown on AIM data loggers via serial protocol with Autronic SMC V_193/195 are:

ID	CHANNEL NAME	FUNCTION
ECU_1	AUTR2_RPM	Autronic RPM
ECU_2	AUTR2_SPEED	Autronic Speed
ECU_3	AUTR2_DRVWHEEL_SPD	Autronic wheel speed
ECU_4	AUTR2_WATER_TEMP	Autronic water temperature
ECU_5	AUTR2_CHARGE_TEMP	Autronic Air/Fuel mix temperature
ECU_6	AUTR2_INTAKEAIR_TEMP	Autronic intake air temperature
ECU_7	AUTR2_EXHAUST_PRESS	Autronic exhaust pressure
ECU_8	AUTR2_MANIF_PRESS	Autronic manifold pressure
ECU_9	AUTR2_THROTPOS	Autronic throttle position
ECU_10	AUTR2_INJECT_TIME	Autronic injection time
ECU_11	AUTR2_IGNIT_ANG	Autronic ignition angle
ECU_12	AUTR2_AF_RATIO	Autronic air fuel ratio
ECU_13	AUTR2_BATT_VOLT	Autronic battery voltage
ECU_14	AUTR2_TEMP_NTC1	Custom Temperature #1
ECU_15	AUTR2_TEMP_NTC2	Custom Temperature #2
ECU_16	AUTR2_TEMP_NTC3	Custom Temperature #3
ECU_17	AUTR2_TEMP_NTC4	Custom Temperature #4