AUTRONIC SMC V191

AiM

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_V190/1/SMC_V191".
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.
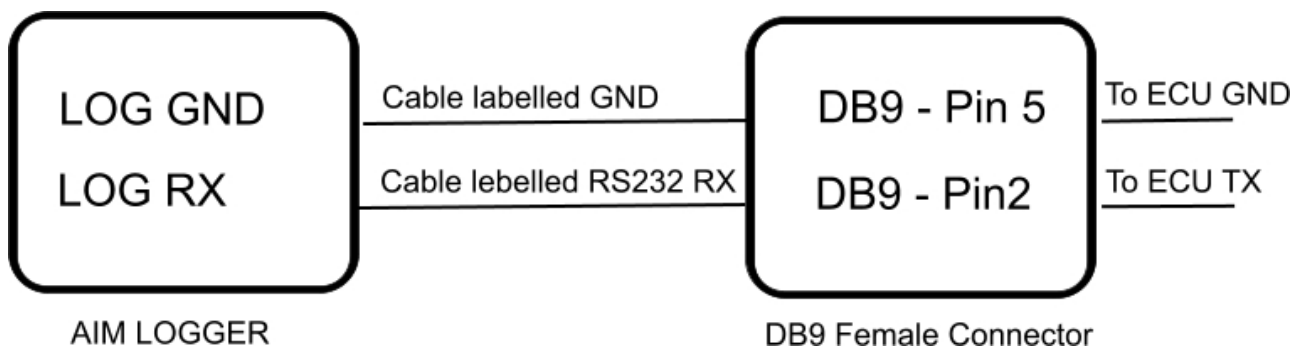
INDEX

Chapter 2 – Serial communication Setup

Autronic SMC V 191 has a serial communication protocol (RS 232) and is equipped with a 36 pins connector used to communicate parameters to a data logger, or to configure the ECU itself
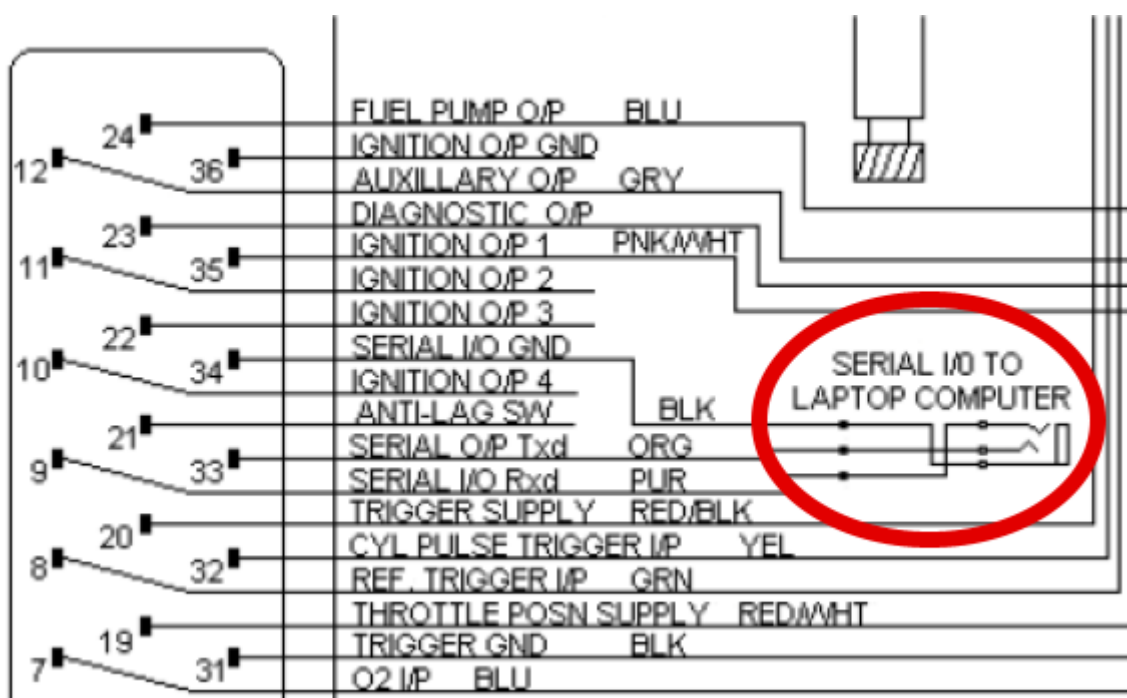
The image here below shows the standard serial communication setup.
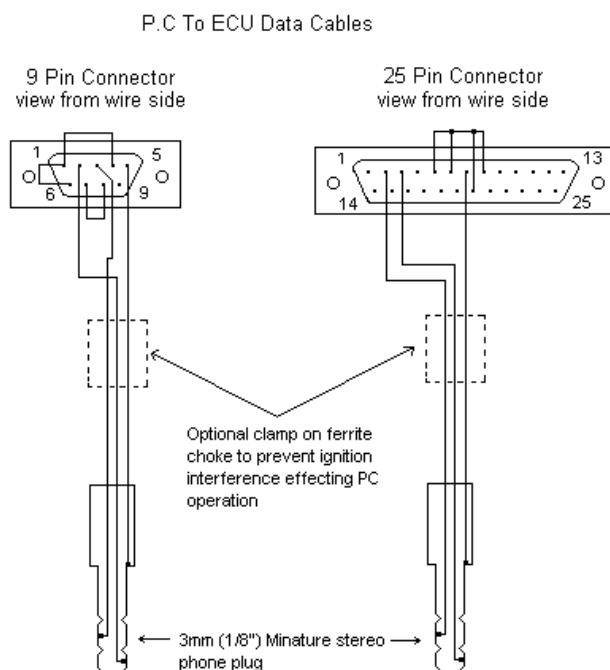
Chapter 3 – Connection with AIM loggers

To connect Your 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.

WARNING! Autronic SMC ECU serial port ends with a female jack connector – like shown below:

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.
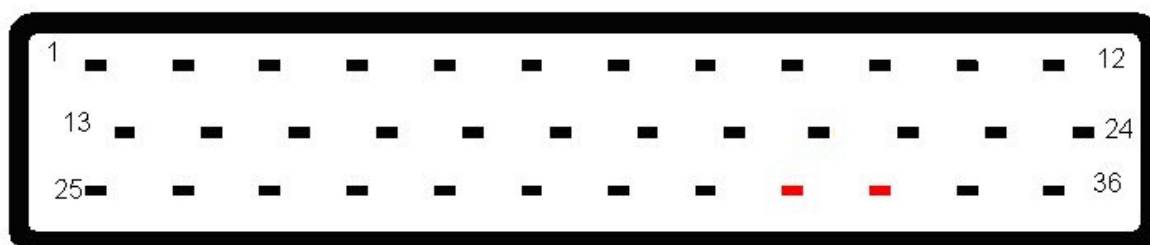

DB9 Female Connector

Jack connector

P.C To ECU Data Cables

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 the 36 pins connector and its pinout is shown.

33	**Serial O/P Txd**
34	**Serial I/O GND**

Chapter 4 – Autronic SMC V191 ECU communication protocol

Channels shown on AIM data loggers via serial protocol with Autronic SMC V191 are:

ID	CHANNEL NAME	FUNCTION
ECU_1	AUTR_RPM	Autronic RPM
ECU_2	AUTR_SPEED	Autronic Speed
ECU_3	AUTR_DRVWHEEL_SPD	Autronic wheel speed
ECU_4	AUTR_WATER_TEMP	Autronic water temperature
ECU_5	AUTR_CHARGE_TEMP	Autronic Air/Fuel mix temperature
ECU_6	AUTR_INTAKEAIR_TEMP	Autronic intake air temperature
ECU_7	AUTR_EXHAUST_PRESS	Autronic exhaust pressure
ECU_8	AUTR_MANIF_PRESS	Autronic manifold pressure
ECU_9	AUTR_THROTPOS	Autronic throttle position
ECU_10	AUTR_INJECT_TIME	Autronic injection time
ECU_11	AUTR_IGNIT_ANG	Autronic ignition angle
ECU_12	AUTR_AF_RATIO	Autronic air fuel ratio
ECU_13	AUTR_BATT_VOLT	Autronic battery voltage