



## SYBELE CHALLENGER4



## INTRODUCTION

AIM has developed special applications for many of the most common ECUs: by special applications we mean user-friendly systems which allow to easily connect your ECU to our hi-tech data loggers: user need 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) 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.**

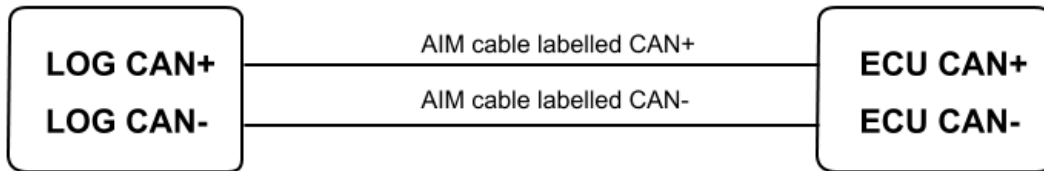
**Select Manufacturer “Sybele” Model “Challenger4”.**

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

**Warning: it is strongly recommended to always verify whether the ECU needs specific software settings to export data.**

## 1 – CAN Communication Setup

Sybele Challenger4 (ECU) is equipped with a CAN communication protocol used to communicate parameters to a data logger. The image here below shows the standard CAN communication setup.



## 2 – Connection to AIM loggers

To connect Sybele Challenger4 to AIM loggers connect:

- AIM cable labelled CAN+ to pin 10 of the ECU connector;
- AIM cable labelled CAN- to pin 9 of the ECU connector.

## 3 – Communication protocol

Channels received by AIM loggers connected to Sybele Challenger4 are:

ID	CHANNEL NAME	FUNCTION
ECU_1	SYBELE_RPM	Rpm value
ECU_2	SYBELE_TPS	Throttle position sensor
ECU_3	SYBELE_MAP	Manifold air pressure
ECU_4	SYBELE_VBATT	Battery Voltage
ECU_5	SYBELE_AFR	Air Flow Ratio
ECU_6	SYBELE_ENGINETEMP	Engine temperature
ECU_7	SYBELE_AIRT	Air temperature
ECU_8	SYBELE_ATMPRESS	Atmospheric pressure
ECU_9	SYBELE_GEAR	Gear number
ECU_10	SYBELE_INJTIME	Injection time
ECU_11	SYBELE_ADVANTAGE	Advantage
ECU_12	SYBELE_COEXCORLAMBDA	Lambda Correction Coefficient
ECU_13	SYBELE_TURBO_PRESS	Turbo pressure
ECU_14	SYBELE_POS_ELECT_TURBO	Electric Turbo Position
ECU_15	SYBELE_TPS_ELECT	Electric Throttle Position Sensor
ECU_16	SYBELE_RICH	Carburetion Setting
ECU_17	SYBELE_DEBIM	Manifold Air Flow