

## Seat ECU for Leon Long Race



## 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 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) 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 “Bosch” and Model “Seat\_Leon\_LR”.**

**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.**

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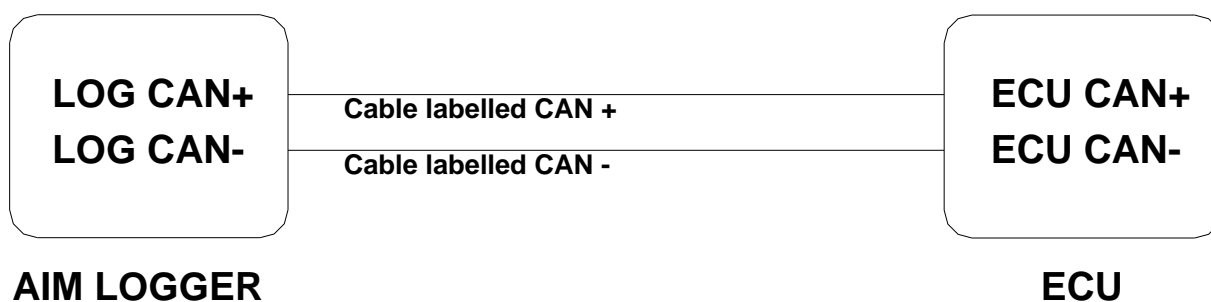
## Chapter 1 – Car Models

Bosch MED 9.1 ECU can be installed on Seat Leon Long Race.

## Chapter 2 – CAN communication Setup

Bosch MED 9.1 ECU is equipped with a CAN communication protocol used to communicate parameters to a data logger and has a 94 pins connector named “A11” used to communicate with an external logger.

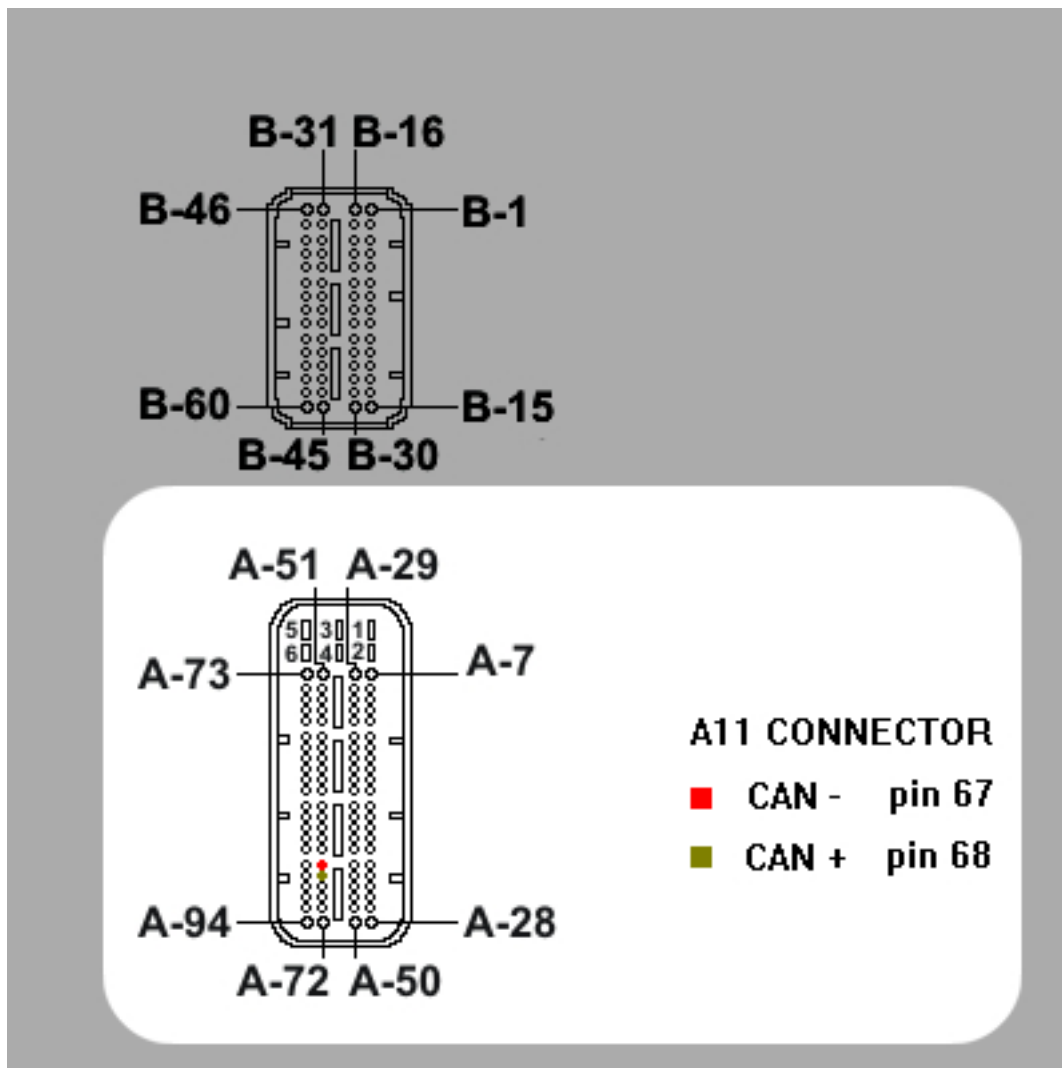
The image here below shows the standard CAN communication setup.



## Chapter 3 – Connection with AIM loggers

To connect Bosch MED 9.1 ECU to AIM loggers use the “A11” male connector highlighted here below and:

- connect pin 68 of “A11” connector to AIM cable labelled CAN+
- connect pin 67 of “A11” connector to AIM cable labelled CAN-



## Chapter 4 – Seat Leon Long Race communication protocol

Channels received by AIM loggers connected to Bosch MED 9.1 ECU for Seat Leon Long Race are:

| ID     | CHANNEL NAME   | FUNCTION                   |
|--------|----------------|----------------------------|
| ECU_1  | RPM            | RPM                        |
| ECU_2  | FOOT_THROTTLE  | Throttle request           |
| ECU_3  | THROTTLE       | Throttle position sensor   |
| ECU_4  | SPEED_FL       | Front left steering wheel  |
| ECU_5  | SPEED_FR       | Front right steering wheel |
| ECU_6  | SPEED_RL       | Rear left wheel speed      |
| ECU_7  | SPEED_RR       | Rear right wheel speed     |
| ECU_8  | WATER_TEMP     | Engine cooling temperature |
| ECU_9  | AIR_TEMP       | Intake air temperature     |
| ECU_10 | TURBO_PRESS    | Turbo pressure             |
| ECU_11 | TURBO_PRESS_HF | Turbo pressure             |
| ECU_12 | TURBO_PRESS_LF | Turbo pressure             |
| ECU_13 | BOOST_PRESS    | Turbo pressure             |
| ECU_14 | FUEL_PRESS_L   | Low fuel pressure          |
| ECU_15 | FUEL_PRESS_H   | High fuel pressure         |
| ECU_16 | LAMBDA         | Lambda Value               |
| ECU_17 | AIRFLOW        | Air Flow                   |
| ECU_18 | STATUS         | Not Available              |
| ECU_19 | GEAR           | Gear Value                 |
| ECU_20 | GEAR_BOX_TEMP  | Gear Box Temperature       |
| ECU_21 | AUX_VALUE      | Auxiliary Value            |
| ECU_22 | POTI_GEARBOX   | Gearbox Volt Value         |
| ECU_23 | TEMP_GEARBOX   | Gearbox temperature        |