

Mazda Mx5
Denso PCM ECU



Racing Data Power

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 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 “Mazda” Model “MX5”.

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

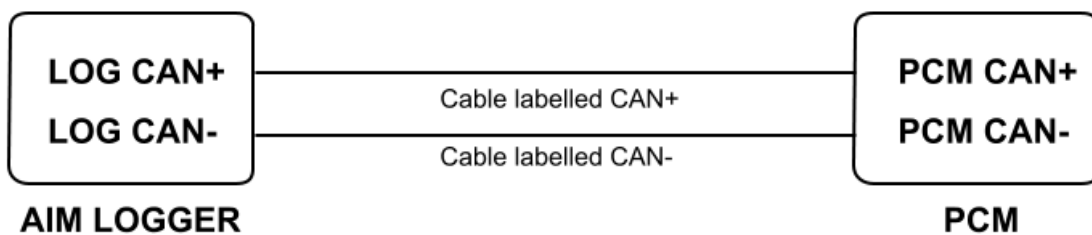
1 – Car Models

Denso ECU is installed as stock on the following car models:

- Mazda MX5 roadster
- Mazda MX5 roadster coupè

2 – CAN Communication Setup

Denso PCM (ECU) is equipped with a CAN communication protocol used to communicate parameters to a data logger.

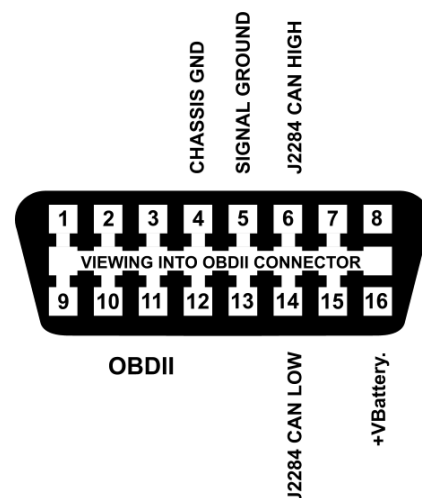


3 – Connection to AIM loggers via OBDII plug

First of all it is necessary to find the OBDII connector position. OBDII connector is below the dashboard in correspondence of the steering column as shown here below on the left. Connect **AIM cable labelled CAN+** to pin 6 and **cable labelled CAN-** to pin 14 of the OBDII connector.

OBDII supplies external power to the logger VBatt (+12V) on pin 16 and GND on pin 5 too.

OBD is not powered by the vehicle master switch, so if AIM logger is connected to OBD for a long time the battery runs down.



4 – Mazda MX5 communication protocol

Channels received by AIM loggers connected to Mazda MX5 Roadster/Roadster coupè are:

ID	CHANNEL NAME	FUNCTION
ECU_1	MX5_RPM	RPM
ECU_5	MX5_SPD_FL	Front left wheel speed
ECU_6	MX5_SPD_FR	Front right wheel speed
ECU_7	MX5_SPD_RL	Rear left wheel speed
ECU_8	MX5_SPD_RR	Rear right wheel speed
ECU_9	MX5_BRAKE_PRESS	Brake pressure
ECU_10	MX5_BRAKE_SWITCH	Brake
ECU_11	MX5_ABS_ALARM	ABS alarm
ECU_16	MX5_PPS	Pedal position sensor
ECU_17	MX5_CLUTCH_SWITCH	Clutch switch
ECU_21	MX5_WATER_TEMP	Water temperature
ECU_27	MX5_INTAKE_AIR_TEMP	Intake Air temperature
ECU_28	MX5_STEERING_ANGLE	Steering angle
ECU_29	MX5_ENGINE_LOAD	Engine load
ECU_30	MX5_LAMBDA	Lambda value
ECU_31	MX5_ADVANCE	Advance
ECU_32	MX5_TEMP_CAT	Catalyst Temperature
ECU_33	MX5_FUEL_LEVEL	Fuel level