

AIM Infotech

AEM 2 series V 1.17 Plug&Play version for Honda S2000

Release 1.00



ECU





1

Supported models

This tutorial explains how to connect AEM ECU to AiM devices. Supported models are:

- AEM 2 Series v 1.17 Plug&Play version for Honda S2000 cars AEM part number 30-6052

The ECU can be installed on Honda bikes featuring an AEM Dynoshift – an on-vehicle Dynamometer – that allows user to see additional channels labelled as "DY" in the channel list.

Please note: always refer to AEM for any further information concerning Honda bikes compatibility and software, firmware settings.

2

Prerequisites

AEM 2 series v1.17 Plug&Play version for Honda bikes ECU – with or without Dynoshift – can communicate with AIM devices if:

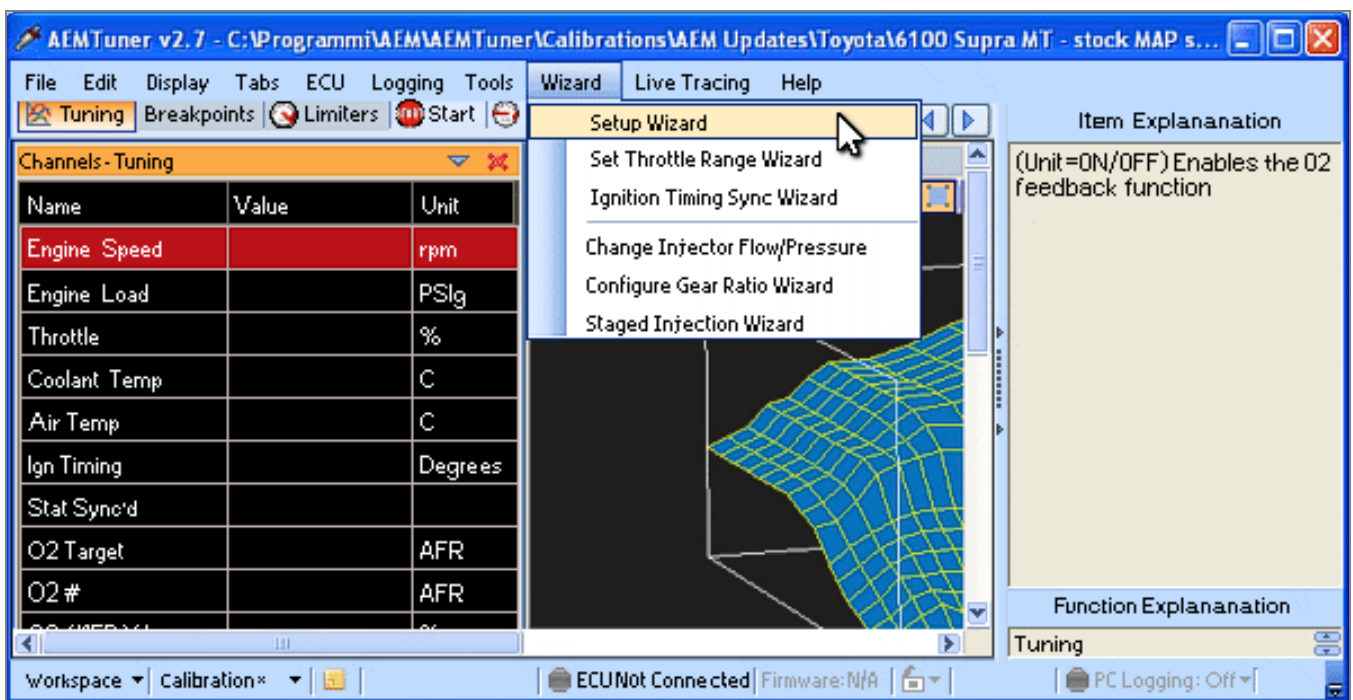
- ECU firmware version is 1.17 or higher
- AEM Tuner software version is 2.7 or higher

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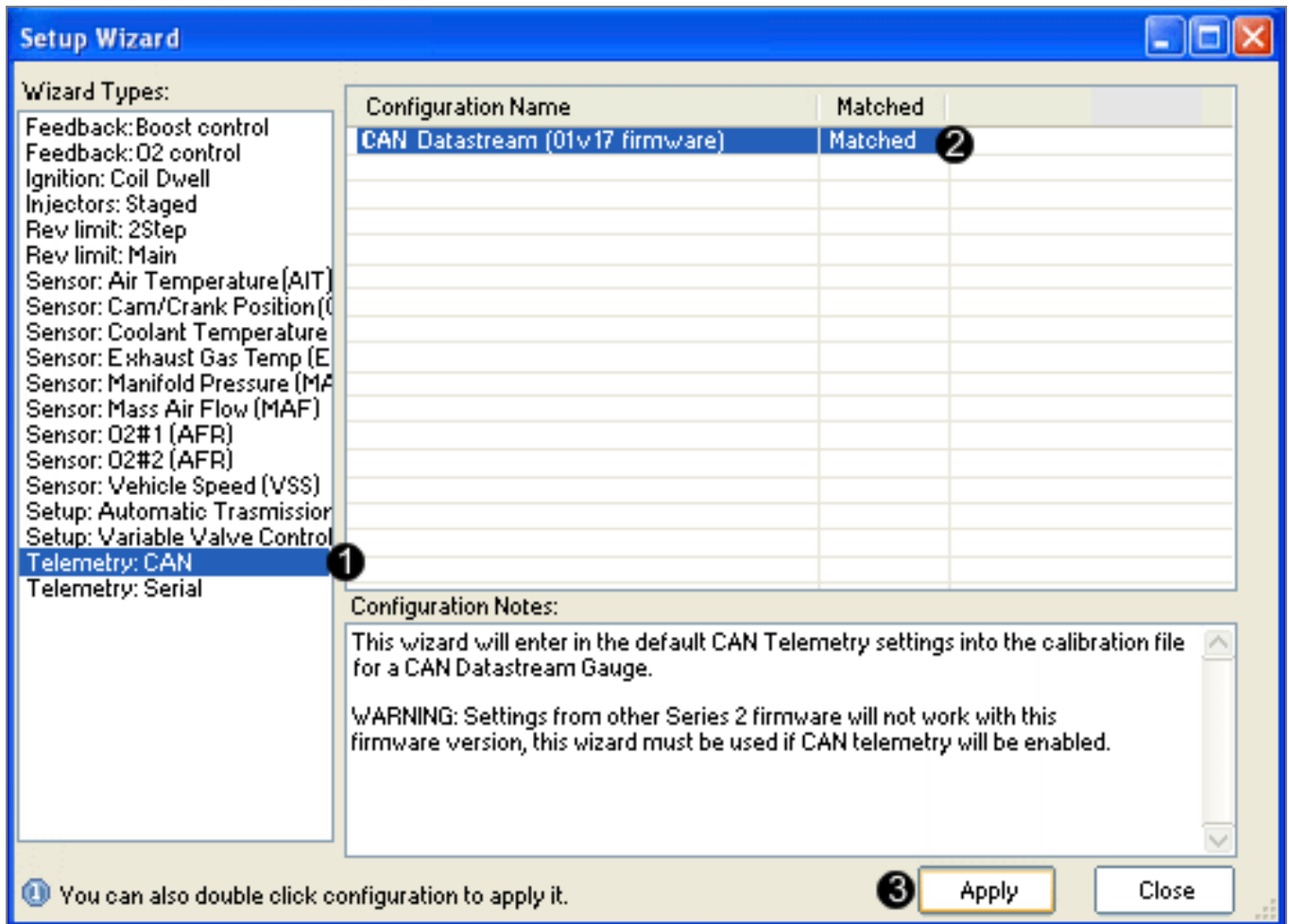
Software setting

Using AEM Tuner software – provided by AEM – follow these steps:

- run the software
- follow this path: Wizard → Setup Wizard



- “Setup Wizard” panel appears: select “Telemetry CAN” (1);
- “Configuration name” appears (2) notifying the user that firmware version matches system requirements;
- press “Apply” (3).



Setup Wizard

Wizard Types:

- Feedback: Boost control
- Feedback: O2 control
- Ignition: Coil Dwell
- Injectors: Staged
- Rev limit: 2Step
- Rev limit: Main
- Sensor: Air Temperature (AIT)
- Sensor: Cam/Crank Position (C)
- Sensor: Coolant Temperature
- Sensor: Exhaust Gas Temp (E)
- Sensor: Manifold Pressure (MA)
- Sensor: Mass Air Flow (MAF)
- Sensor: O2#1 (AFR)
- Sensor: O2#2 (AFR)
- Sensor: Vehicle Speed (VSS)
- Setup: Automatic Transmission
- Setup: Variable Valve Control
- Telemetry: CAN** (1)
- Telemetry: Serial

Configuration Name	Matched
CAN Datastream (01v17 firmware)	Matched (2)

Configuration Notes:

This wizard will enter in the default CAN Telemetry settings into the calibration file for a CAN Datastream Gauge.

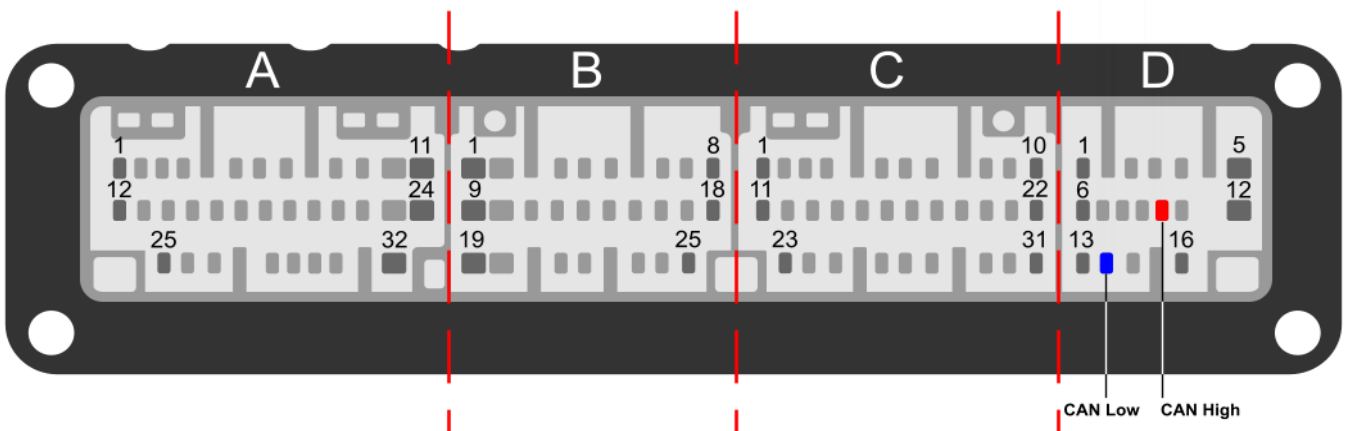
WARNING: Settings from other Series 2 firmware will not work with this firmware version, this wizard must be used if CAN telemetry will be enabled.

1 You can also double click configuration to apply it.

3 **Apply** **Close**

4 Wiring Connection

AEM 2 Series v1.17 Plug&Play version for CAN Honda ECU is equipped with 4 AMP male connectors shown here below with their pinout. Below is connection table.



ECU Pin	Pin Function	AIM Cable
D10	CAN High	CAN+
D14	CAN Low	CAN-

5 AIM device configuration

Before connecting the ECU to AiM device, set this up using AiM Race Studio software. Parameters to select in the device configuration are:

- ECU manufacturer "AEM"
- ECU Model "EMS V1.17 CAN Honda";

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Available channels

Channels received by AIM loggers connected to "AEM" "EMS V1.17 CAN Honda" protocol are listed here below.

Please note: channels from 20 to 26 marked as "DY" are only available if AEM Dynoshift is connected. Otherwise these channels will be shown as in error.

ID	CHANNEL NAME	FUNCTION
ECU_1	EMS_RPM	RPM
ECU_2	EMS_ENG_LOAD	Engine Load
ECU_3	EMS_TPS	Throttle position sensor
ECU_4	EMS_AIR_TEMP	Intake air temperature
ECU_5	EMS_COOL_TEMP	Engine coolant temperature
ECU_6	EMS_ADCR11	User defined channel 11; 0-5 Volts
ECU_7	EMS_ADCR13	User defined channel 13; 0-5 Volts
ECU_8	EMS_ADCR14	User defined channel 14; 0-5 Volts
ECU_9	EMS_ADCR17	User defined channel 17; 0-5 Volts
ECU_10	EMS_ADCR18	User defined channel 18; 0-5 Volts
ECU_11	EMS_ADCR15	User defined channel 15; 0-5 Volts
ECU_12	EMS_ADCR16	User defined channel 16; 0-5 Volts
ECU_13	EMS_ADCR08	User defined channel 08; 0-5 Volts
ECU_14	EMS_O2_#1	Lambda sensor
ECU_15	EMS_O2_#2	Lambda sensor
ECU_16	EMS_VEH_SPEED	Vehicle speed
ECU_17	EMS_GEAR	Engaged gear
ECU_18	EMS_IGN_TIM	Ignition timing
ECU_19	EMS_BATT_VOLT	Battery supply
ECU_20	EMS_MAP	Manifold air pressure
ECU_21	DY_DSH_RPM	Driveshaft RPM



ECU_22	DY_DSH_TQ_FTLB	Driveshaft Torque - ft-lb
ECU_23	DY_DSH_PW_HP	DriveShaft Power - HP
ECU_24	DY_TQ_FR_FTLB	Torque Fraction ft-lb
ECU_25	DY_PW_FR_HP	PowerFraction - HP
ECU_26	DY_DSH_RPM2	DriveShaft RPM
ECU_27	DY_DSH_TQ2FTLB	Driveshaft Torque (low range) - ft-lb
ECU_28	DY_DSH_PW2_HP	Driveshaft Power (low range) - HP
ECU_29	DY_SYS_VOLT	System Voltage
ECU_30	DY_TANK_VOLT	Tank Voltage
ECU_31	DY_SENS_VOLT	Sensor Voltage
ECU_32	DY_POW_LEV	Power level
ECU_33	DY_SENS_TEMP	Sensor Temp
ECU_34	DY_DRV_FREQ	Drive Frequency
ECU_35	DY_SYST_TEMP	System Temp
ECU_36	DY_ERROR	Mixed Errors and status: bit = 0 – Sensor firmware error bit = 1 – Controller firmware error bit = 2 – Sensor comms active bit = 3 – Got good zero offset bit = 4 – Got good calibration bit = 5 – Led aligned bit = 6 – Auto zero active bit = 7 – not used