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 Dynoshaft – 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

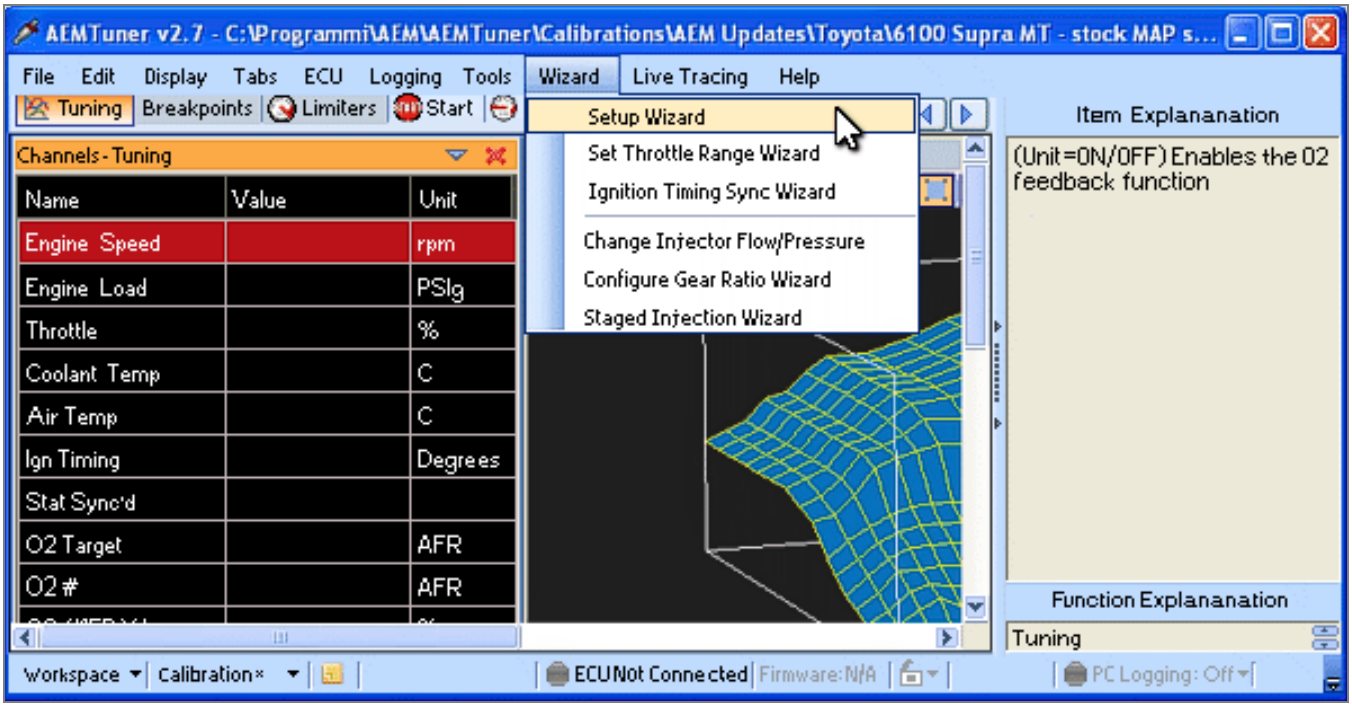
AEM 2 series v1.17 Plug&Play version for Honda bikes ECU – with or without Dynoshaft – can communicate with AIM devices if:

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

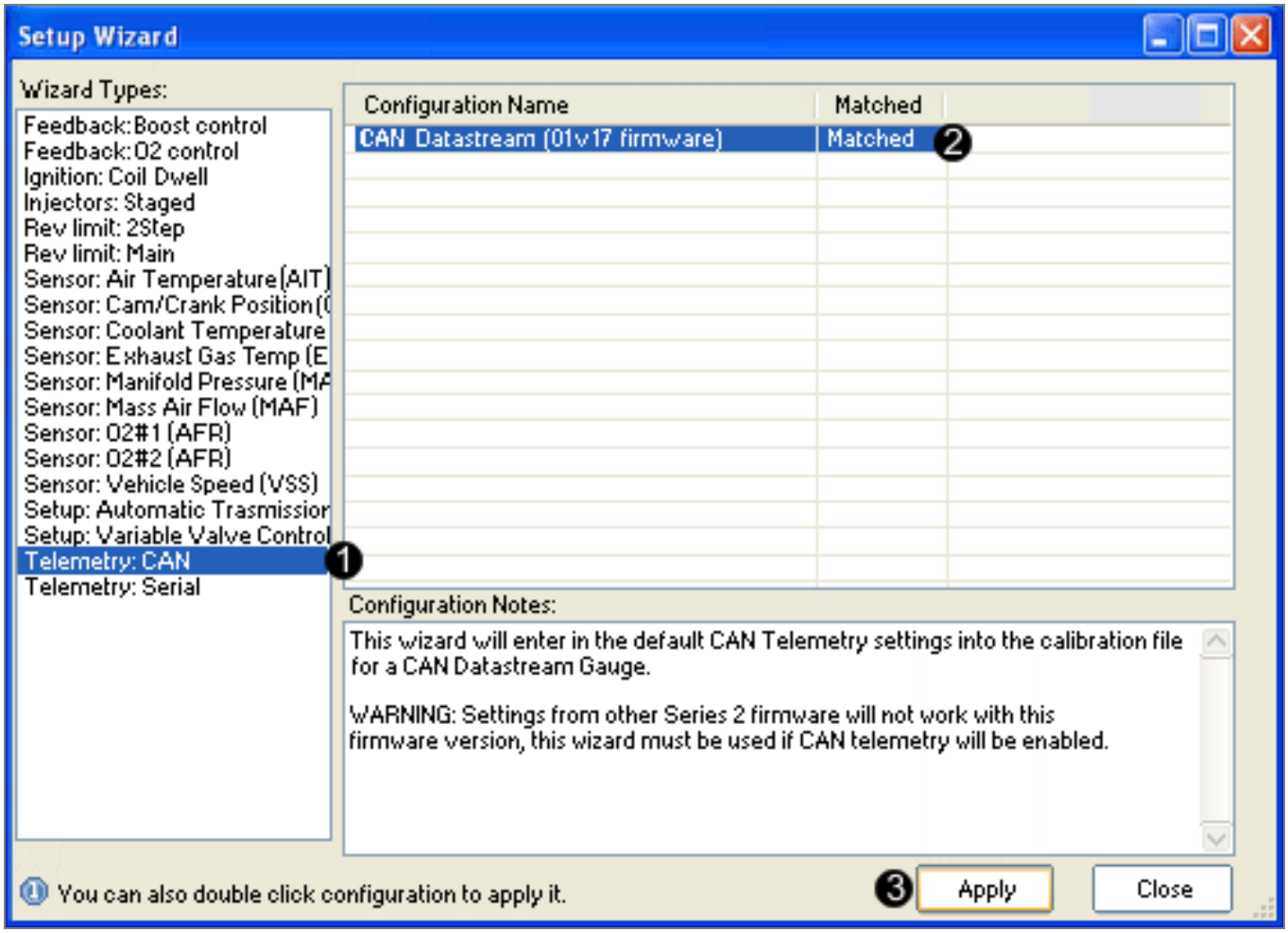
3
Software setting

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

- run the software
- follow this path: Wizard –> Setup Wizard

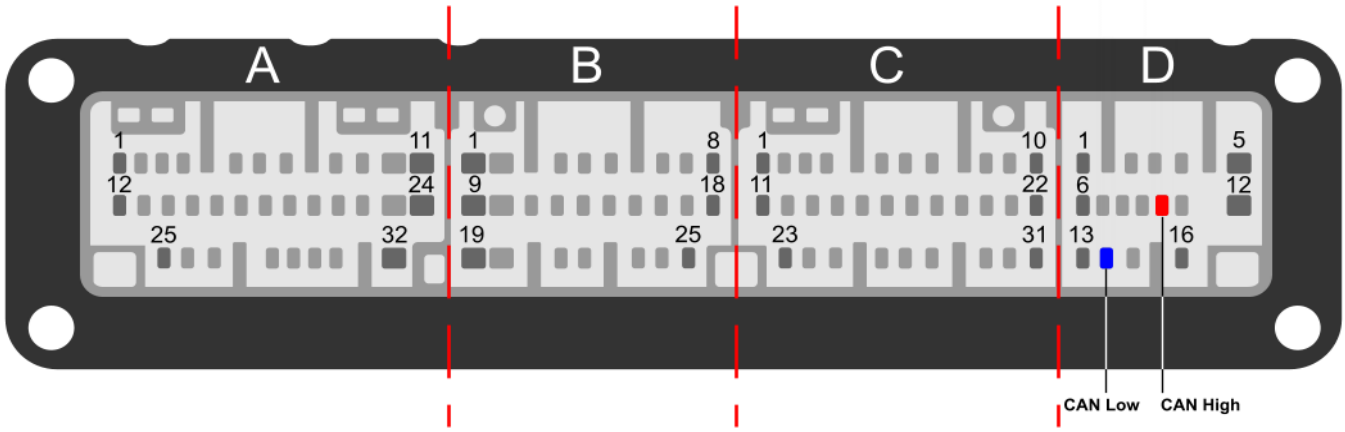


- "Setup Wizard" panel appears: select "Telemetry CAN" (**1**);
- "Configuration name" appears (**2**) notifying the user that firmware version matches system requirements;
- press "Apply" (**3**).



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”;

6
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 Dynoshaft 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