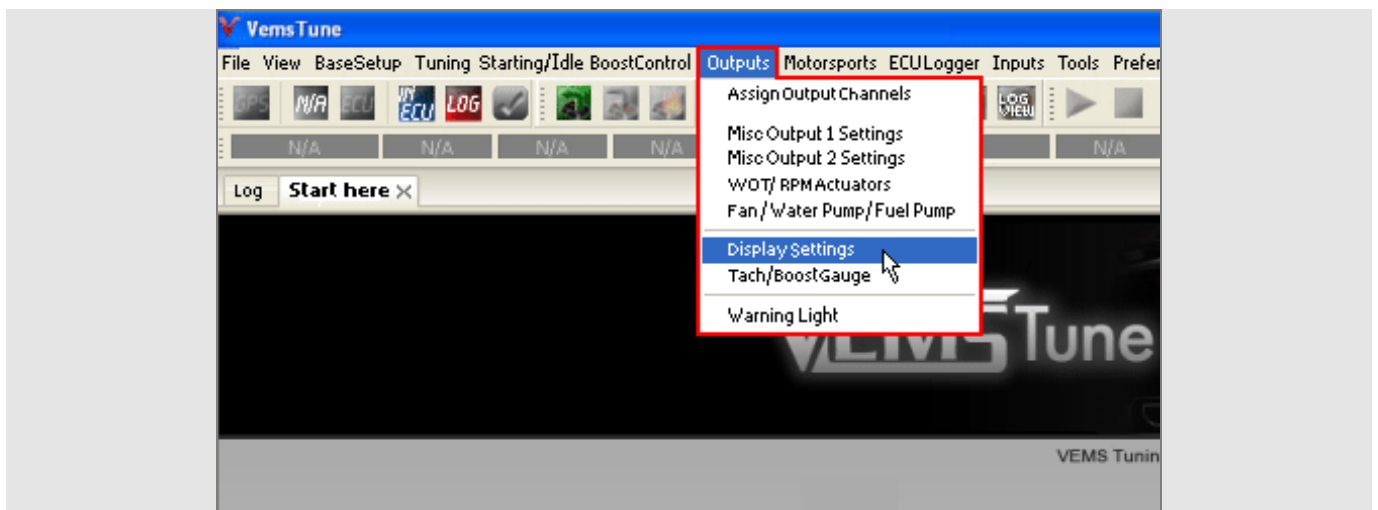AiM Infotech

VEMS V3 ECU

Release 1.00

This tutorial explains how to connect VEMS V3 ECU to AiM devices. VEMS ECU comes with its proper wiring to be used use to connect it to AiM devices.
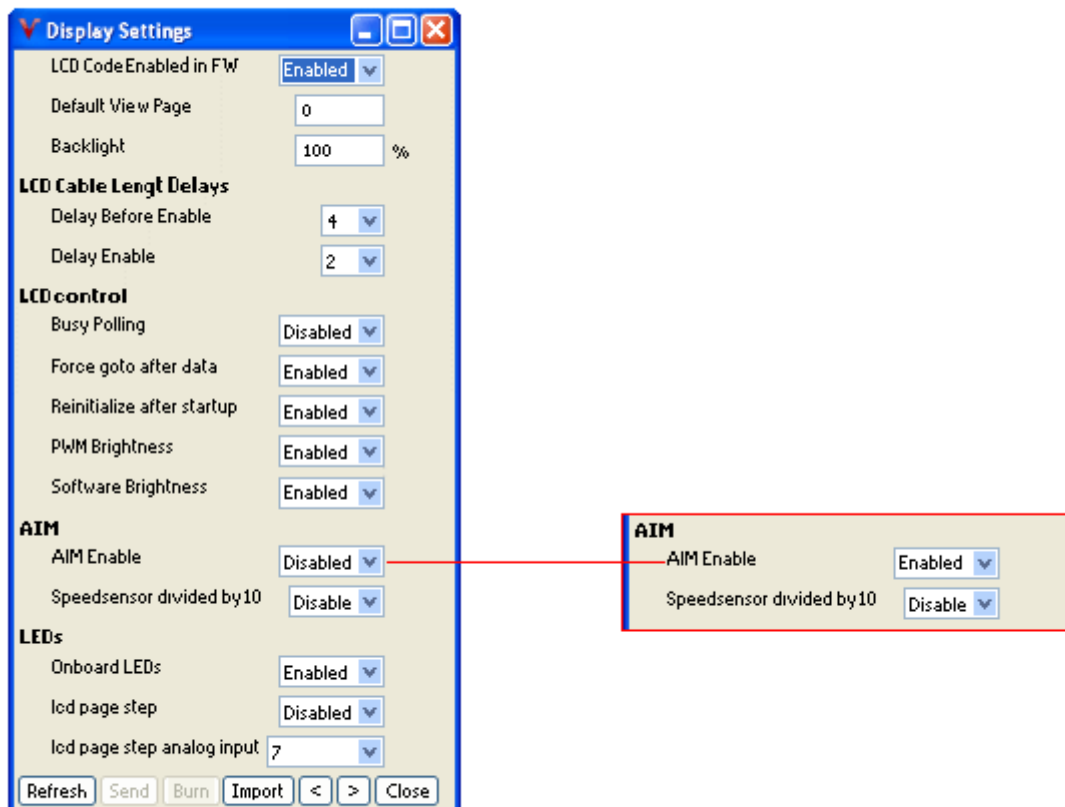
1
Software Setup

VEMS ECU features a serial communication protocol. The ECU comes with VEMS Tune software and a software setup is needed before connecting the ECU to AiM devices. Install VEMS Tune software and follow these steps.

- Select "Outputs – >Display Settings" as shown here below.

- Go to AiM option and set AiM Enable "Enabled" as shown here below.
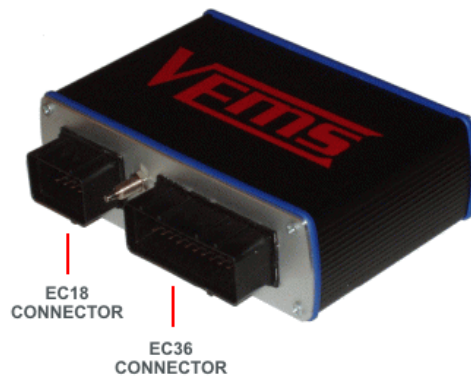

Please note: for further information concerning ECU firmware / software settings and/or upgrading it is always recommended to address to the ECU dealer.
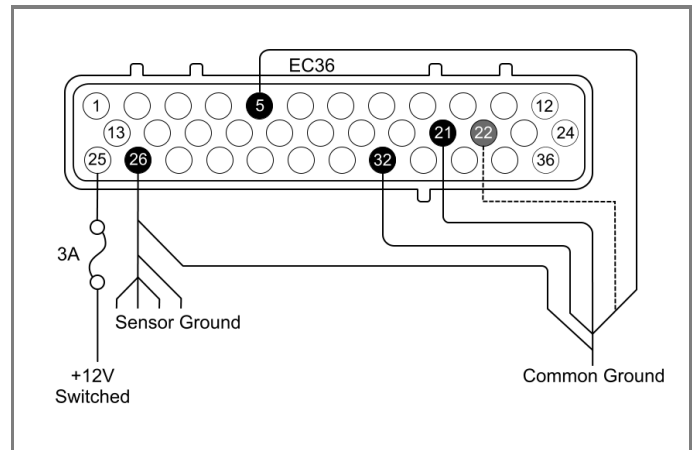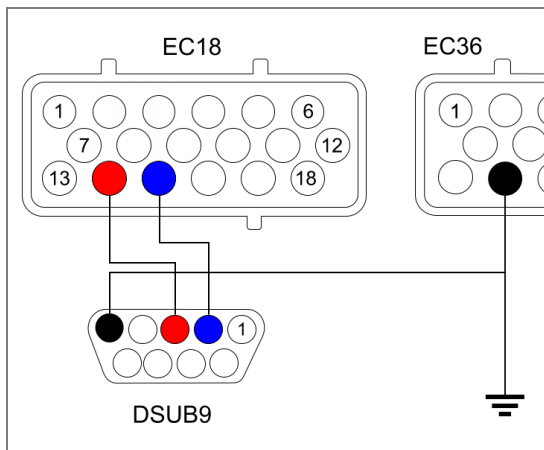
2
Wiring connection

VEMS ECU is equipped with two connectors EC18 on the left and EC36 on the right shown here below.

EC18
CONNECTOR

EC36
CONNECTOR

To connect VEMS ECU with AiM devices through the ECU harness use the DB9 connector you find on the harness. Here below are serial connection drawings as well as connection table.

EC18 Pin	EC36 Pin	Pin function	DB9 Pin	Pin Function	AiM device cable
14		RS232RX	3	RS232RX	RS232TX
15		RS232TX	2	RS232TX	RS232RX
	5, 21, 22, 26, 32	GND	5	GND	GND

3

AiM device configuration

Before connecting the ECU to AiM device set this last using AiM Race Studio software. The parameters to selec tin the device configuration are:

- ECU manufacturer "VEMS"
- ECU Model "ECU_AIM_Datastream";

4

Available channels

Channels received by AiM loggers connected to "VEMS" "ECU_AIM_Datastream" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	ECU_RPM	RPM
ECU_2	ECU_SPEED	Vehicle speed
ECU_3	ECU_OIL_PRESS	Oil pressure
ECU_4	ECU_OIL_TEMP	Oil temperature
ECU_5	ECU_WATER_TEMP	Engine cooling temperature
ECU_6	ECU_FUEL_PRESS	Fuel pressure
ECU_7	ECU_BATT_VOLT	Battery supply
ECU_8	ECU_THRT_ANGLE	Throttle angle
ECU_9	ECU_MAP	Manifold air pressure
ECU_10	ECU_AIR_CHARGE	Intake air temperature
ECU_11	ECU_EXH_TEMP	Exhausted gas temperature
ECU_12	ECU_LAMBDA	Lambda value
ECU_13	ECU_FUEL_TEMP	Fuel temperature
ECU_14	ECU_GEAR	Engaged gear
ECU_15	ECU_ERRORS	ECU error