AiM Infotech

Bimota ECU

Release 1.01

ECU

This tutorial explains how to connect Bimota bikes to AiM devices.

1
Supported models and years

Supported Bimota bikes are:

- Bimota   all models with Walbro ECU except for DB7   from 2003 onward
- Bimota   DB7   from 2007 onward

2
Wiring connection

Bimota bikes are equipped with Walbro ECUs. These feature a serial communication bus. To reach it you find a 4 pins Superseal female connector installed on the bike harness. The images here below shoes the ECU installed on the left and the connector on the right.
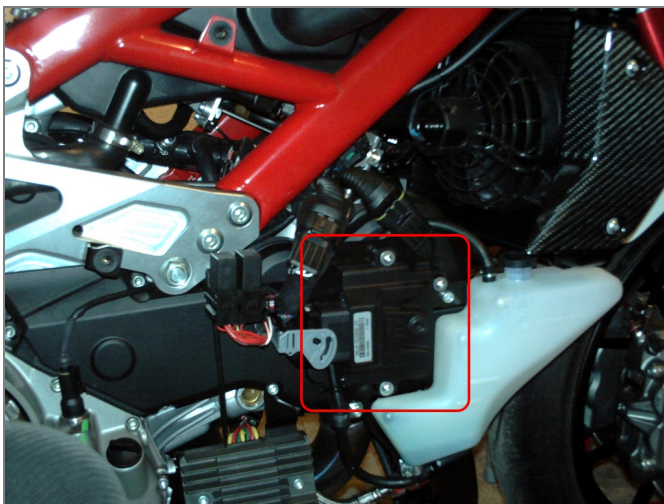
The following drawing shows Superseal connector pinout and below is the connection table
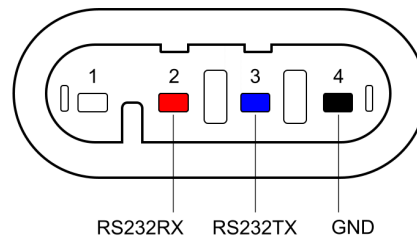
Superseal connector pin	Pin function	AiM cable
2	RS232RX	RS232TX
3	RS232TX	RS232RX
4	GND	GND

3
AiM Logger configuration

Before connecting the device to the ECU set it up as follows:

- Run Race Studio 2 software and follow this path:
- Device Configuration –> Select the device you are using;
- select the configuration or press "New" to create a new one;
- select ECU manufacturer "Walbro" and, according to the ECU installed on your bike, ECU Model
  - o "Bimota" for all Bimota bikes from 2003 onward, except for Bimota DB7
  - o "Bimota_DB7" for all Bimota DB7 bikes from 2007 onward
- transmit the configuration to the device pressing "Transmit".

4
Available channels

Channels received by AiM devices changes according to the selected protocol.

4.1
"Walbro" "Bimota" protocol

Channels received by AiM devices connected to "Walbro" "Bimota" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	RPM	RPM
ECU_2	BAP	Barometric Air pressure
ECU_3	MAP	Manifold air pressure
ECU_4	KLAMBDA	Fuel correction from lambda value
ECU_5	INJ1	Injection time 1
ECU_6	INJ2	Injection time 2
ECU_7	SPARK1	Spark advance 1
ECU_8	SPARK2	Spark advance 2
ECU_9	PHASE	ECU phase
ECU_10	TPS	Throttle position sensor
ECU_11	DELTATPS	Throttle position delta
ECU_12	TAIR	Intake air temperature
ECU_13	TENGINE	Engine temperature
ECU_14	VBATT	Battery supply
ECU_15	LAMBDA	Lambda value
ECU_16	LAMBDAREF	Lambda reference
ECU_17	IDLEPOS	Idle position
ECU_18	GEAR_AD_VAL	Gear advanced value
ECU_19	START_SWITCH	Start switch

ECU_20	SIDE_STAND	Side stand
ECU_21	NEUTRAL	Neutral sensor
ECU_22	ACTIVEBLOCK	Immobilizer

Technical note: not all data channels outlined in the ECU template are validated for each manufacturer model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.

2
"Walbro" "Bimota_DB7" protocol

Channels received by AiM devices connected to "Walbro" "Bimota_DB7" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	WALBRO_RPM	RPM
ECU_2	WALBRO_SPEED	Speed
ECU_3	WALBRO_TPS	Throttle position sensor
ECU_4	WALBRO_DTPS_POS	Throttle position positive delta
ECU_5	WALBRO_DTPS_NEG	Throttle position negative delta
ECU_6	WALBRO_MAP	Manifold air pressure
ECU_7	WALBRO_BAP	Barometric air pressure
ECU_8	WALBRO_AIRT	Intake air temperature
ECU_9	WALBRO_ENGT	Engine temperature
ECU_10	WALBRO_LBDA1	Lambda value 1
ECU_11	WALBRO_LBDA2	Lambda value 2
ECU_12	WALBRO_LBDA_T	Lambda target value
ECU_13	WALBRO_KLBDA1	Fuel correction from Lambda 1 value
ECU_14	WALBRO_KLBDA2	Fuel correction from Lambda 2 value
ECU_15	WALBRO_INJT1	Injection time 1
ECU_16	WALBRO_INJT2	Injection time 2
ECU_17	WALBRO_SPARK1	Spark advance 1

ECU_18	WALBRO_SPARK2	Spark advance 2
ECU_19	WALBRO_PHASE1	Injection phase 1
ECU_20	WALBRO_PHASE2	Injection phase 2
ECU_21	WALBRO_IDLE_VALVE	Idle valve position
ECU_22	WALBRO_ACTIVEBLOCK	Immobilizer
ECU_23	WALBRO_NEUTRAL	Neutral sensor
ECU_24	WALBRO_BATT_V	Battery supply
ECU_25	WALBRO_ERCOUNTER	Error counter

Technical note: not all data channels outlined in the ECU template are validated for each manufacturer model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.