

AiM Infotech

Seat Ibiza+Seat Leon ECUs

Release 1.01

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This tutorial explains how to connect Seat cars to AiM devices.

## 1

### Car models and years

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Supported car models and years are:

- |              |                        |           |
|--------------|------------------------|-----------|
| • Seat Ibiza | 4 <sup>th</sup> series | from 2008 |
| • Seat Leon  | 2nd series             | 2005-2012 |

## 2

### Available connections

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These cars models can be connected to AiM devices through the OBDII plug or through the CAN connection cables.

#### 2.1

### CAN bus connection

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Seat cars ECU features a data transmission bus based on CAN.

CAN connection cables can be found in different places: behind the instrument cluster, near the steering column, behind the fuse box or the glove box inside the main wiring loom. Regardless of the stock ECU installed on your car, colours of the cables you need to connect to AiM devices are always the same, they are twisted and you can see them here below.

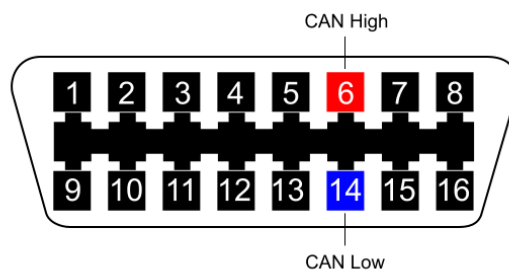
Pin function	Seat ECU cable colour	AiM cable label
CAN High	Orange/Black	CAN+
CAN Low	Orange/Brown	CAN-

## 2.2

### OBDII connection

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These cars ECU can be connected to AiM devices also through the OBDII plug normally placed on the driver side left of him. **Please note:** according to the international rules the OBDII plug is to be in a 60cm distance area from the steering column. Here below is OBDII connector pinout as well as connection table.



OBDII connector pin	Pin function	AiM cable
6	CAN High	CAN+
14	CAN Low	CAN-

## 3

### AiM device configuration

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Before connecting AiM 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 "SEAT\_Sport" and ECU Model "SEAT\_Group" if you are using the CAN connection cables
  - ECU manufacturer "OBDII" and ECU Model "CAN" if you are using the OBDII plug
- transmit the configuration to the device pressing "Transmit".

## 4

### Available channels

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

#### 4.1

#### "Seat\_Sport" "Seat\_Group" protocol

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Channels received by AiM devices connected to "SEAT Sport" "Seat\_Group" protocol are.

ID	CHANNEL NAME	FUNCTION
ECU_1	ECU_RPM	RPM
ECU_2	ECU_SPD1	Speed 1
ECU_3	ECU_WATERTMP	Engine coolant temperature
ECU_4	ECU_ENGMOMENT	Engine moment
ECU_5	ECU_AIRTEMP	Intake air temperature
ECU_6	ECU_GASPERC	Throttle position
ECU_7	ECU_BRKPR	Brake pressure
ECU_8	ECU_SPD2	Speed 2
ECU_9	ECU_SPDAS	Reference speed
ECU_10	ECU_ATMTEMP	Atmospheric temperature
ECU_11	ECU_FRLF_SPD	Front Left wheel speed
ECU_12	ECU_FRRG_SPD	Front rear wheel speed
ECU_13	ECU_RRLF_SPD	Rear left wheel speed
ECU_14	ECU_RRRG_SPD	Rear right wheel speed
ECU_15	ECU_YAWRATE	Yaw rate
ECU_16	ECU_STSPD	Steering speed
ECU_17	ECU_STANG	Steering angle
ECU_18	ECU_BRK	Brake sensor switch
ECU_19	ECU_FUEL	Injected fuel



ECU_20	ECU_GEAR	Engaged gear
ECU_21	ECU_ENGOILT	Engine oil temperature
ECU_22	ECU_TPS	Throttle position percentage
ECU_23	ECU_CLUTCH	Clutch
ECU_24	ECU_BOOST_TDI	Boost TDI (for Diesel cars)
ECU_25	ECU_BOOST_TFSI	Overboost TFSI (for gasoline cars)
ECU_26	ECU_ENG_MOM	Engine moment
ECU_27	ECU_FUEL_P_L	Low fuel pressure
ECU_28	ECU_FUEL_P_H	High fuel pressure
ECU_29	ECU_LAMBDA	Lambda value
ECU_30	ECU_AIR_FLOW	Air flow
ECU_31	ECU_ASR_SW	ASR switch
ECU_32	ECU_MSR_SW	MSR switch
ECU_33	ECU_ABS_SW	ABS switch
ECU_34	ECU_EDS_SW	EDS switch
ECU_35	ECU_ESP_SW	ESP switch
ECU_36	ECU_COOL_ALARM	Engine coolant temperature alarm
ECU_37	ECU_OILP_ALARM	Oil pressure alarm
ECU_38	ECU_ERR_CODE	Error code
ECU_39	ECU_RT_BOOST	Boost retard

**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.

## 4.2

# Channels available with "CAN" protocol

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Channels received by AiM devices connected to "OBDII" "CAN" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	OBDII_RPM	RPM
ECU_2	OBDII_SPEED	Speed
ECU_3	OBDII_ECT	Engine coolant temperature
ECU_4	OBDII_TPS	Throttle position sensor
ECU_5	OBDII_IAT	Intake air temperature
ECU_6	OBDII_MAP	Manifold air pressure
ECU_7	OBDII_MAF	Manifold air flow
ECU_8	OBDII_FUEL_LEV	Fuel level
ECU_9	OBDII_PPS	Pedal position sensor

**Please note:** channels listed above are those polled by AiM devices. They may or may not come across in the data stream depending on models. RPM, TPS, ECT and speed are generally available.