AiM Infotech

Yamaha YZF-R1/R1M from 2015 and YZF-R6 from 2017

Release 1.02

ECU

1
Supported models and years

This user guide explains how to connect Yamaha R1 MY15 to AiM devices. Supported models and years are:

- Yamaha   YZF-R1 (YEC included)   from 2015
- Yamaha   YZF-R1M (YEC included)   from 2015
- Yamaha   YZF-R6 (YEC included)   from 2017

Warning: for this model/year AiM recommends not to remove the stock dash. Doing so will disable some of the bikes functions or safety controls. AiM Tech srl will not be held responsible for any consequence that may result from the replacement of the original instrumentation cluster.

2
CAN bus connection

Yamaha bikes are equipped with a bus communication protocol based on CAN on the CCU (Communication Control Unit) connector placed under the bike seat and shown here below.
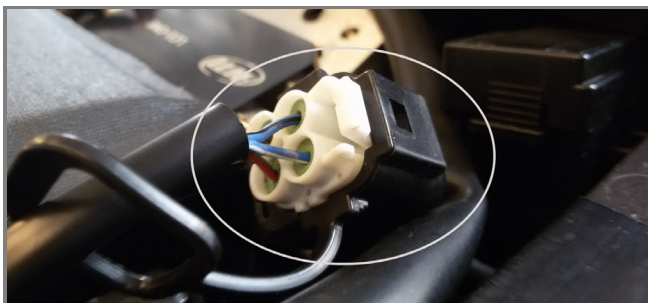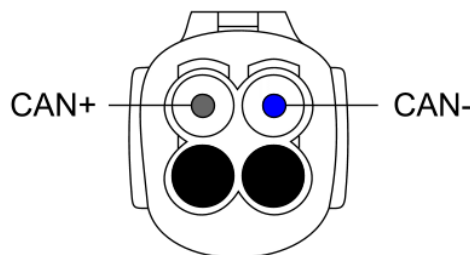
The table below shows colours of the cables of CCU connector and their function.

Cable colour	Cable function
Blue/White	CAN High
Blue/Black	CAN Low
Red	+Vb (unswitched)
Black	GND

Here below is CCU connector pinout

4 pins Sumitomo
male connector pinout
contact insertion view

CAN+ ——————— CAN-

3
Configuration with Race Studio 2

Before connecting the bike ECU to AiM device set this up using AiM Race Studio 2 software. The parameters to select in the logger configuration are:

- ECU Manufacturer: "Yamaha"
- ECU Model: "CAN_2015"

4
Available channels

Channels received by AiM Devices connected to "Yamaha" "CAN_2015" protocol are.

ID	CHANNEL NAME	FUNCTION
ECU_1	ECU_RPM	RPM
ECU_2	ECU_GEAR	Gear
ECU_3	ECU_W_SPD_F	Wheel Speed Front
ECU_4	ECU_W_SPD_R	Wheel Speed Rear
ECU_5	ECU_THROTTLE	Throttle position sensor
ECU_6	ECU_TPS_HAND	Throttle Handgrip
ECU_7	ECU_ECT	Engine Coolant Temperature
ECU_8	ECU_AAT	Ambient Air Temperature
ECU_9	ECU_ACCX	Acceleration X
ECU_10	ECU_ACCY	Acceleration Y
ECU_11	ECU_GYRO	Gyroscope
ECU_12	ECU_TCS_MODE	Traction Control Mode
ECU_13	ECU_LIFT_SET	Lift Control Set
ECU_14	ECU_LAUNCH_SET	Launch Control Set
ECU_15	ECU_SCS_SET	Suspension Control Set
ECU_16	ECU_QSS_SET	Quick Shift Set
ECU_17	ECU_BRK_F_REQ	Brake Pressure Front Request
ECU_18	ECU_BRK_R_REQ	Brake Pressure Rear Request
ECU_19	ECU_BRKP_F	Brake Pressure Front Actuated
ECU_20	ECU_BRKP_R	Brake Pressure Rear Actuated
ECU_21	ECU_GEAR_RAW	Gear raw value
ECU_22	ECU_POW_MODE	Power mode
ECU_23	ECU_MAP_SEL	Map selection
ECU_24	ECU_FR_COMP	Front dumper compression

ECU_25	ECU_FR_REB	Front dumper rebound
ECU_26	ECU_RR_COMP	Rear dumper compression
ECU_27	ECU_RR_REB	Rear dumper rebound
ECU_28	ECU_R_ABS_IN	Rear ABS intervention
ECU_29	ECU_F_ABS_IN	Front ABS intervention
ECU_30	ECU_LAUNCH_IN	Launch control intervention
ECU_31	ECU_LIFT_IN	Lift control intervention
ECU_32	ECU_SCS_IN	Slide control system intervention
ECU_33	ECU_TCS_IN	Traction control system intervention

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.