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Plug&Play kit

Yamaha R1 2004/2005/2006 – R6 2004/2005

Release 1.01



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Presentation

AIM: world leader in data acquisition for racing applications.

Established in 1976, AIM is today a world leader producer of high performances instruments for racing applications: dashes, loggers, digital displays, lap timers.

AIM established new standards in a lot of motorsports: from kart to bikes, Dragster, and even snowmobiles!

AIM products merges the functionalities of traditional tachometers: RPM indicators, temperature, pressure and lap timers, with compact, high performing and friendly using units. Different products for different applications with a shared characteristics: the great innovation.

Each AIM system is designed, developed and tested by its technicians. The Research and development team is made of electronics and mechanicals engineers, physics and other specialists that develop firmware, software, hardware and the related documentation. Our reputation is build on quality products, innovative technologies and on the steady engagement of customer support.

Introduction

MXL Plug&Play kit for **Yamaha R1/R6** is the dash (with data acquisition in Pista version) designed and developed for an easy and quick installation: with the minimum effort it will be possible to connect directly to the bike ECU and visualize (with no need of additional sensors):

- RPM
- Speed
- Water temperature
- Air temperature

Through the bike stock sensor it will be possible to sample:

- Oil level
- Fuel level
- Turning lights signal
- High beam signal
- Neutral signal)
- Battery charge level

MXL, like the stock dash is powered by the bike master switch.

MXL Strada, **Pista** kits for Yamaha here described have been developed for the following bike models:

Model	Year 2004	Year 2005	Year 2006
R1	✓	✓	✓
R6	✓	✓	●

✓ = supported

● = non supported

Note: thanks to the infrared transmitter/receiver (included in kit **MXL Pista** kit, optional to **MXL Strada** kit), lap times will be shown/recorded. **MXL Pista**, moreover, allows to manage and record data coming from 5 external configurable channels (potentiometers suspensions, throttle sensor, brake pressure sensor, etc...).

MXL Plug&Play for **Yamaha R1 2004/2005/2006** and **Yamaha R6 2004/2005** has three different operating mode:

- **Running mode:** is the standard mode that shows and, if connected to an **MXL Pista** records, data out coming from the engine and diagnosis codes;
- **Setting mode:** this mode allows to set some engine parameters. Setting mode allows to modify the ECU mapping.
- **Diagnostic mode:** this mode allows to manage ECU problems and errors.

For what not expressly explained in this tutorial refer to **MXL** and/or **Race Studio Configuration** user manuals.

Chapter 1 – Plug&Play kit composition



Plug&Play kits for Yamaha bikes changes according to the chosen MXL model and to the bike year of production. In the above image kit components are numbered for more clarity.

MXL Strada Plug&Play kit for Yamaha R1 2004/2005/2006 and Yamaha R6 2004/2005:

- N.1 – **MXL Strada (1)**;
- N.1 – 12 pins AMP cable for MXL Strada **(2)**;
- N.1 – Yamaha bracket kit **(3)** made up of:
 - n°1 – bracket;
 - n°3 – washers;
 - n°4 – M4*8 Phillips recess screws;
 - n°3 –M5*18 Phillips recess screws;
- N.1 – USB Cable **(4)**
- N.1 – Race Studio 2 Software CD **(5)**
- This manual + MXL user manual MXL **(6)**.

Note: before installing the kit please verify that it contains all specified items.



MXL Pista Plug&Play kit for Yamaha R1 2004/2005/2006 and Yamaha R6 2004/2005:

- N.1 – **MXL Pista (1)**;
- N.1 – 12 pins AMP cable for MXL Pista (2)
- N.1 – Infrared receiver with 90 cm cable (3)
- N.1 – Infrared transmitter (4)
- N.1 – Transmitter power cable (5)
- N.1 – Yamaha bracket kit (6) made up of:
 - n°1 – bracket;
 - n°3 – washers;
 - n°4 – M4*8 Phillips recess screws;
 - n°3 – M5*18 Phillips recess screws;
- N.1 – USB Cable (7)
- N.1 – Race Studio 2 Software CD (8)
- This manual + MXL user manual (9).

Note: before installing the kit please verify that it contains all specified items.

1.1 – Part Numbers

MXL Strada Plug&Play kit for **Yamaha R1 04/05/06**: part number **X16MXLSYR1407**;

MXL Strada Plug&Play kit for **Yamaha R6 04/05**: part number **X16MXLSYR6450**;

MXL Pista Plug&Play kit for **Yamaha R1 04/05/06**: part number **X16MXLCYR1407**;

MXL Pista Plug&Play kit for **Yamaha R6 04/05**: part number **X16MXLCYR6450**.

Optional to all MXL Strada for Yamaha kits:

Infrared receiver: part number **X41RX12090**;

Infrared transmitter: part number **X02TXKMA01**;

Transmitter power cable: part number: **V02POWTX0**;

Spare parts:

Yamaha R1 2004/2005/06 and Yamaha R6 2004/2005 **bracket kit**: **DNKTSTMXLY**

12 pin **AMP cable** for **MXL Strada**: **V02.554.350**

12 pin **AMP cable** for **MXL Pista**: **V02.554.340**

Chapter 2 – Plug&Play kit installation

MXL Plug&Play kit for Yamaha R1/R6 has been expressly designed to guarantee maximum installation easiness.

Please note: this kit has been expressly tested to guarantee total compatibility with a stock bike completely corresponding to the one sold by the manufacturer. The only compatible variation is the original YEK (Yamaha Engineering Corporation) kit.

Through the four fixing points on the product rear it is possible to substitute the original dash in an easy and quick way with no need of bending, cutting or drilling anything: each component is “Plug&Play”.

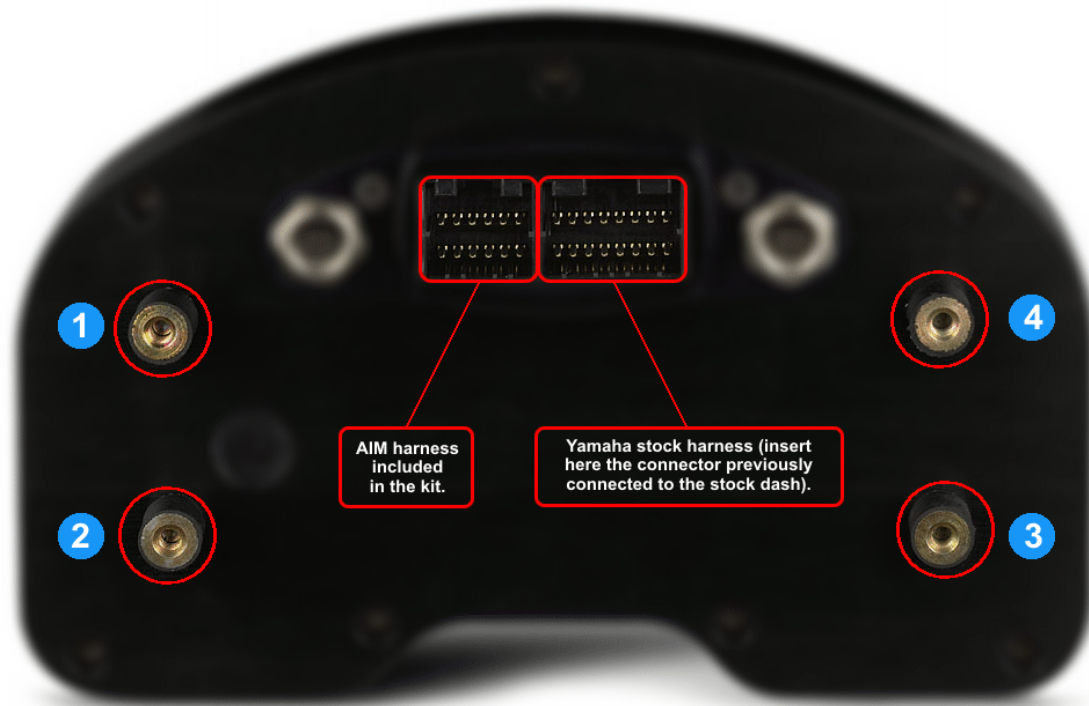
The system is to be connected to the high beam chassis using the bracket included in the kit. This last is in black anodised aluminium, light weight and mechanically resistant.

GENERAL NOTES – Read these notes before installing the kit.

- Do not cut any cable: the wirings included in the kit are Plug&Play;
- be careful not to damage the stock connectors while plugging/unplugging them;
- do not install the system when the engine is hot;
- be careful not to lose screws and washers.

After having removed the stock dash:

- fix MXL to the bracket using the 4 supports highlighted in the below image;
- connect the wiring to the two connectors as explained in the below image.

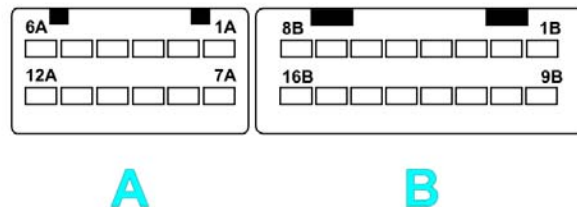


Chapter 3 – MXL and Yamaha connectors pinout

Yamaha R1 and R6 bikes are equipped with a 16 pins AMP female connector.

3.1 – MXL and Yamaha R1 2004/05/2006 AMP connectors pinout

The below image shows MXL AMP connectors and the related pinout.



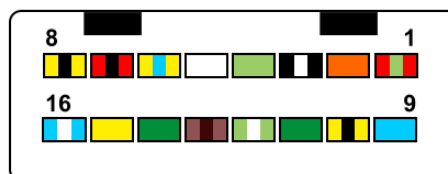
MXL AMP 12 pins male connector pinout ("A")

1A	Analog channel 10 (free)
2A	+Vb
3A	GND
4A	Lap (optical)
5A	+Vref
6A	GND
7A	Analog channel 6 (free)
8A	Analog channel 5 (free)
9A	Analog channel 7 (free)
10A	Analog channel 9 (free)
11A	+Vref
12A	GND

MXL AMP 16 pins male connector pinout ("B")

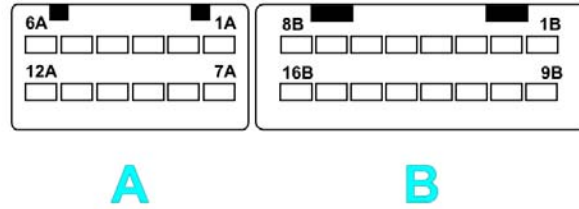
1B	+Vb
2B	+Vb EXT
3B	GND
4B	not used
5B	not used
6B	Linea K
7B	oil level
8B	RPM
9B	+Vb
10B	Hi-beam
11B	Turning lights
12B	Fuel
13B	Turning lights
14B	P1
15B	P2
16B	Neutral

Here below is shown 16 pin AMP female connector installed on Yamaha bike with cable colours.



3.2 – MXL and Yamaha R6 2004/2005 AMP connectors pinout

The image here below shows MXL AMP connectors and the related pinout.



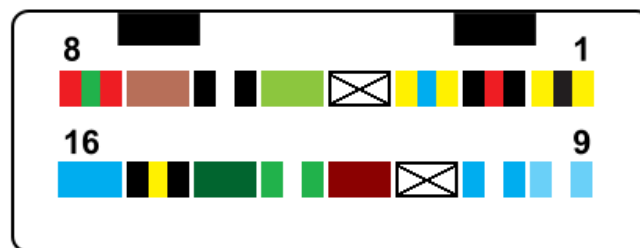
MXL AMP 12 pins male connector pinout ("A")

1A	Analog channel 10 (free)
2A	+Vb
3A	GND
4A	Lap (optical)
5A	+Vref
6A	GND
7A	Analog channel 6 (free)
8A	Analog channel 5 (free)
9A	Analog channel 7 (free)
10A	Analog channel 9 (free)
11A	+Vref
12A	GND

MXL AMP 16 pins male connector pinout ("B")

1B	RPM
2B	Oil level
3B	not used
4B	not used
5B	K line
6B	not used
7B	GND
8B	+Vb
9B	+Vb
10B	Turning lights
11B	Turning lights
12B	Hi-beam
13B	Neutral
14B	not used
15B	Fuel
16B	+Vb ext

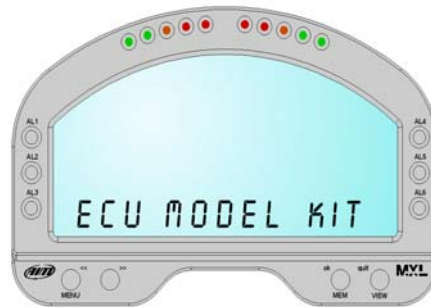
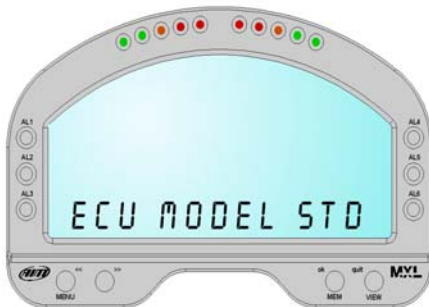
Here below is shown 16 pin AMP female connector installed on Yamaha bike with cable colours.



Chapter 4 – First start up and working mode

MXL Plug&Play kit for Yamaha R1/R6 can be installed on stock bikes and on bikes equipped with original YEC (Yamaha Engineering Corporation) kit. Once the bike powered on, MXL automatically recognizes and shows on the display the kind of ECU installed. Supported ECUs are:

- Standard ECU (stock): the display shows “ECU MODEL STD” (image below on the left);
- YEC kit (YEC ECU): the display shows “ECU MODEL KIT” (image below on the right).



4.1 – Running mode

After ECU recognition, MXL starts working in “**Running mode**” and shows and manages, as default settings, different information according on MXL model.

MXL STRADA

RPM ¹	from ECU	Shown
Rear speed wheel	from ECU	Shown
Water temperature	from ECU	Shown + alarm LED
Air temperature	from ECU	Shown + alarm LED
Oil pressure	from sensors	alarm LED
Fuel level alarm	from sensors	alarm LED
Turning lights	from sensors	alarm LED
High beam	from sensors	alarm LED
Engaged gear (neutral included)	automatically calculated	Shown
Yamaha error code	from ECU	Available ²

¹ RPM data can be sampled both by the bike ECU and by a stock sensor. To use the data coming from the ECU set “RPM” box in **MXL** system configuration layer on “ECU”; to use the data coming from the stock sensor set “RPM” box in **MXL** system configuration layer on “AIM sensor”. Refer to **Race Studio Configuration** user manual for further information concerning MXL configuration. In case a deep analysis of RPM channel is wished use data coming from the stock sensor (set “AIM sensor”) whose sampling frequency is higher.

² Yamaha_ERR channel is not shown by the default configuration. To see it on **MXL** display configure the logger using **Race Studio Configuration** software. Refer to **Race Studio Configuration** user manual for further information concerning **MXL** channels configuration.

MXL PISTA

RPM ³	from ECU	Shown and recorded
Rear wheel speed	from ECU	Shown and recorded
Water temperature	from ECU	Shown and recorded+alarm LED
Air temperature	from ECU	Shown and recorded+alarm LED
Oil pressure	from sensors	alarm LED
Fuel level alarm	from sensors	alarm LED
Turning lights	from sensors	alarm LED
High beam	from sensors	alarm LED
Engaged gear (neutral included)	internally calculated	Shown and recorded
Yamaha error codes	from ECU	Available ⁴

³ RPM data can be sampled both by the bike ECU and by a stock sensor. To use the data coming from the ECU set “RPM” box in **MXL** system configuration layer on “ECU”; to use the data coming from the stock sensor set “RPM” box in **MXL** system configuration layer on “AIM sensor”. Refer to **Race Studio Configuration** user manual for further information concerning MXL configuration. In case a deep analysis of RPM channel is wished use data coming from the stock sensor (set “AIM sensor”) whose sampling frequency is higher.

⁴ Yamaha_ERR channel is not shown by the default configuration. To see it on **MXL** display configure the logger using **Race Studio Configuration** software. Refer to **Race Studio Configuration** user manual for further information concerning **MXL** channels configuration.

4.1.1 – Error codes in “Running mode”

Yamaha bikes have a diagnostic feature that shows error codes.

Here below are shown “**Running Mode**” error codes and the related meaning.

11	Camshaft pick up sensor problem
12	Crankshaft pick up sensor problem
13,14	Air pressure sensor problem
15,16	TPS sensor problem
17,18	Engine valve EXUP sensor problem
19	Stock bike sensor problem
20	Air pressure sensor problem
21	Water temperature sensor problem
22	Air temperature sensor problem
23	Air pressure sensor problem
30,41	Over turn sensor problem
33	Cylinder#1 ignition problem
34	Cylinder#2 ignition problem
35	Cylinder #3 ignition problem
36	Cylinder #4 ignition problem
42	Speed sensor or neutral (N) sensor problem
43,46	Injection system problem
47	EXUP valve position sensor problem
48	EXUP valve servo sensor problem
50	ECU internal problem

Warning: always refer to Yamaha and YEC official documentation for a complete description of the errors.

In case diagnostic function detects more errors YAMAHA_ERR channel shows error codes in sequence.

4.2 – Setting mode

“**Setting mode**” allows to modify some ECU map settings. They changes depending on if it’s a stock ECU or an YEK kit.

Powering on **MXL** it starts in “**Running Mode**”: press “**MENU/←**” and “**VIEW/QUIT**” at a time to enter setting mode. The display shows “**DIAG SETUP**” message as here below.



Confirm pressing “**OK/MEM**”.

The display shows settable parameters in different pages. Use “**>>**”/“**<<**” buttons to scroll the pages. Once reached the page to be set press “**MEM/OK**” to enter that page setting, use “**>>**”/“**<<**” buttons to modify the settings and press again “**MEM/OK**” to save the new settings and exit. In case no modification has been made but the page has been entered it is anyway necessary to press again “**MEM/OK**” to exit the page.

4.2.1 – Setting mode with stock ECU

In case the bike has a stock ECU **it is only possible to change** each cylinder injection times (and consequently CO value). This setting can be made with the engine on or off.

The below table shows settable parameters.

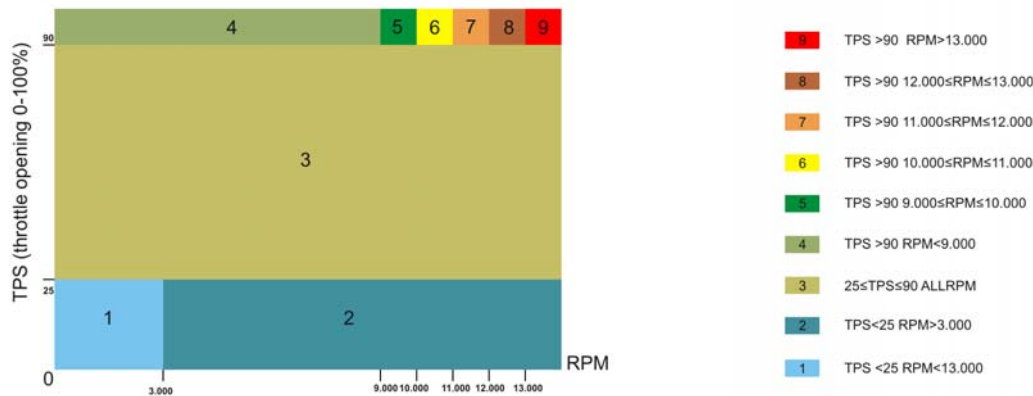
PAGE	DESCRIPTION	VALUE
CO CYLINDER 1	Modifies first cylinder CO value (the higher is the value the richer is the mixture).	Allowed values are between -128 and +127. Default value is 0.
CO CYLINDER 2	Modifies second cylinder CO value (the higher is the value the richer is the mixture).	
CO CYLINDER 3	Modifies third cylinder CO value (the higher is the value the richer is the mixture).	
CO CYLINDER 4	Modifies fourth cylinder CO value (the higher is the value the richer is the mixture).	

Refer to Yamaha technical manual for further information.

To exit setup mode recycle power on the bike.

4.2.2 – Setting mode with YEC ECU kit

In case of a bike equipped with ECU YEC kit it is possible to modify both injection and ignition parameters. It is also always possible to come back to the default configuration. As shown on the **injection map**, it is possible to have richer or leaner air/fuel mixtures in nine different points of the map.



In the below table characteristics of each point of the map are explained.

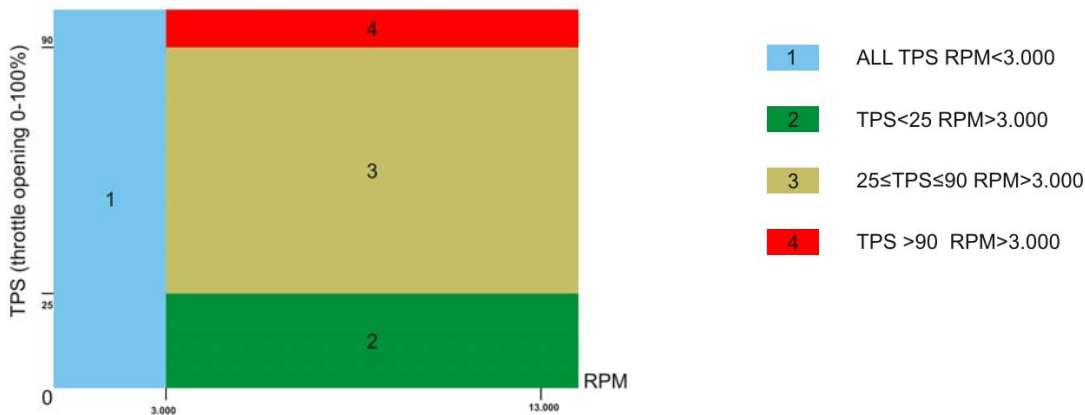
Map point	Characteristics	Description	Value
1	TPS < 25 RPM < 3.000	Modifies the quantity of fuel injected in point "1" of the map.	Correction ±25% of the value in the map
2	TPS < 25 RPM > 3.000	Modifies the quantity of fuel injected in point "2" of the map.	Correction ±25% of the value in the map
3	25 ≤ TPS ≤ 90 ALLRPM	Modifies the quantity of fuel injected in point "3" of the map.	Correction ±25% of the value in the map
4	TPS > 90 RPM < 9.000	Modifies the quantity of fuel injected in point "4" of the map.	Correction ±25% of the value in the map
5	TPS > 90 9.000 ≤ RPM ≤ 10.000	Modifies the quantity of fuel injected in point "5" of the map.	Correction ±25% of the value in the map
6	TPS > 90 10.000 ≤ RPM ≤ 11.000	Modifies the quantity of fuel injected in point "6" of the map.	Correction ±25% of the value in the map
7	TPS > 90 11.000 ≤ RPM ≤ 12.000	Modifies the quantity of fuel injected in point "7" of the map.	Correction ±25% of the value in the map
8	TPS > 90 12.000 ≤ RPM ≤ 13.000	Modifies the quantity of fuel injected in point "8" of the map.	Correction ±25% of the value in the map
9	TPS > 90 RPM > 13.000	Modifies the quantity of fuel injected in point "9" of the map.	Correction ±25% of the value in the map

Growing the value the mixture will be richer.

Warning: value selected in point “4” of the map (TPS>90 RPM<9.000) is applied in points 5,6,7,8 and 9 too. In these last pages the shown value is to be added to the one selected in point “4” of the map.

**Ex.: point “4” shows value 10%: the mixture is 10% richer in this point;
point “5” shows value 3%: the mixture is 10+3=13% richer in this point.**

Ignition map is divided in 4 parts.



Parameters can be modified in three points of the map as explained in the table here below.

Map point	Characteristics	Description	Value
2	Advance ⁵ TPS<25	Changes the ignition timing in point “2” of the map.	Correction between +15° and -15° of the map value.
3	Advance ⁵ 25≤TPS≤90	Changes the ignition timing in point “3” of the map.	Correction between +15° and -15° of the map value.
4	Advance ⁵ TPS>90	Changes the ignition timing in point “4” of the map.	Correction between +15° and -15° of the map value.

⁵ Ignition advance

It is recommended to always refer to Yamaha YEC kit user manual to better take advantage from this functionality.

ECU kit offers two other possibilities to modify parameters.

Page	Description	Value
INJN COR TO SPEED	Modifies the quantity if injected mixture according to the vehicle speed.	20 correction possibilities (+10/-10); +10 multiplies by two the default parameter; -10 avoid any correction; 0 uses the default parameter; Each level is a 10% increment (or so) compared to the correction factor the ECU already uses.
DEFAULT VALUES SET	Shows the number of modified parameters (injection and ignition). Modifications can be cancelled.	Number of modified parameters.



After having shown the number of modified parameters it is possible to come back to default settings pressing “>>”/“<<” and then “MEM/OK”. Led 4 starts blinking and default parameters are restored.

4.3 – Diagnostic mode

It allows to monitor the behaviour of sensors and signals out coming from the ECU. It is possible to switch from Running mode to diagnostic mode when the engine is off.

To enter Diagnostic Mode from Running Mode press first “**MENU/←**” and “**VIEW/QUIT**” at one time and then “**MENU/←**” e “**>>**”. Diagnostic mode will show information concerning different sensors in different pages. Use “**MENU/←**” and “**>>**” to scroll through the pages. The table here below shows the pages.

Page	Description	Shown data
THROTTLE SENSOR	Master throttle angle	Valve open angle (from 0° to 125°).
ATMO PRESSURE	Atmospheric pressure	Atmospheric pressure in Kpa.
INTAKE PRESSURE	Intake air pressure.	AirBox pressure in Kpa.
INTAKE TEMP	Intake air temperature.	Intake air temperature in °C.
WATER TEMP	Water temperature	Water temperature in °C
VEHICLE SPEED	Vehicle speed. Shows incremental number of pulses read by the sensor.	Reads pulses form 0 to 99.
OVERTURN SENSOR	Value read by the anti-overturn sensor.	Voltage value*10 (from 0 to 50)
BATTERY VOLTAGE	Battery voltage	Battery voltage
SWITCH (STOCK BIKE)	Switch (stock)	1 = OFF (stock on) 0 = OFF (stock off)
SWITCH (YEC KIT)	Switch (ECU kit)	1 = ON 0 = OFF
SELECT SWITCH (STOCK BIKE)	Neutral Switch	1 = Neutral 0 = Gear
SELECT SWITCH (YEC KIT)	Map selection switch (kit YEC)	1 = SB 0 = ST
IGNITION COIL 1	When engine-off switch is selected and de-selected the engine off switch turns the coil on 5 times (shown value is not important).	
IGNITION COIL 2		
IGNITION COIL 3		
IGNITION COIL 4		
INJECTOR 1	When engine-off switch is selected and de-selected the engine off switch turns the injector on 5 times (shown value is not important).	
INJECTOR 2		
INJECTOR 3		
INJECTOR 4		
AI SOLENOID (STOCK only)	When engine-off switch is selected and de-selected the engine off switch turns the AI Solenoid on 5 times.	
MAIN RELAY	When engine-off switch is selected and de-selected the engine off switch turns the main relay on 5 times (shown value is not important).	
FAN RELAY (STOCK only)	When engine-off switch is selected and de-selected the engine off switch turns the fan relay on 5 times.	
PROJECTOR RELAY	When engine-off switch is selected and de-selected the engine off switch turns the projector relay on 5 times.	

EXUP	EXUP open angle	EXUP open angle in degree.
SUBTHROTTLE	When engine-off switch is selected and de-selected secondary throttle position changes from totally open to totally close..	Secondary throttle position in degrees.
ERRCODEEEPROM (STOCK only)	Cylinder number in case of ECU EEPROM error.	Cylinder number (from 1 to 4). Shows 0 in case of no error.
ERRHAPPENED (STOCK only)	Shows the sequence of detected errors.	Shows the sequence of detected errors (range from 11 to 50)
ERRHAPPENEDCLR (Stock only)	Shows the number of detected errors. Can be reset moving the engine switch from OFF to ON.	In case of no error shows 0, otherwise numbers from 1 to 25.

To exit “Diagnostic” mode recycle the power on both MXL and the ECU.

Warning: refer to Yamaha and YEC official documentation for a complete description of the errors.

Chapter 5 – Calibration, gear calculation, configuration, data download and analysis

MXL Strada/ Pista can show on the display the engaged gear.

At first start up **MXL** starts gear calibration and shows “RUNNING GEAR CAL” on the display bottom string.



Warning

- For **MXL** to show engaged gear it is necessary to perform “Gear calibration procedure”. Refer to **Race Studio** configuration user manual to know how to do it.
- In case crown/pinion ratio has been changed a new calibration and a new gear calculation is to be done.
- Refer to **Race Studio Configuration** user manual for further information concerning gear sensor calibration and gear calculation.

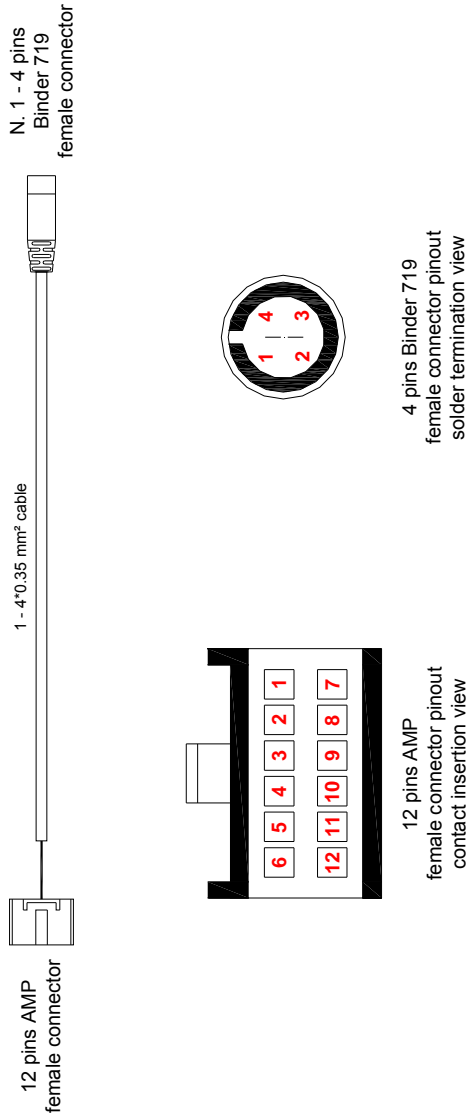

MXL can be configured only using a PC and **Race Studio 2** software (included in the kit). To connect **MXL** to the PC use the proper USB cable included in the kit.


For any further information concerning **Race Studio 2** software installation and functionalities refer to the related user manual.

When a test session is over it is possible to download stored data (**MXL Pista** only) and save them in the database integrated in **Race Studio 2** software.

For further information concerning data download refer to **Race Studio Configuration** user manual.

Appendix – Wirings and pinout


N. rev. / Rev. N.	Descrizione / Description	Data / Date	Firma / Signature	Contr. da / Ckd. by																								
<p>Plug&Play kit for MXL Strada Yamaha R1 2004/2005/2006 - R6 2004/2005 optical lap cable</p>  <p>N. 1 - 4 pins Binder 719 female connector</p> <p>12 pins AMP female connector</p> <p>1 - 4*0,35 mm² cable</p> <p>12 pins AMP female connector pinout contact insertion view</p> <p>4 pins Binder 719 female connector pinout solder termination view</p> <p style="text-align: center;">Binder 719 connector table</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Channel</th> <th>Binder Pin</th> <th>Cable Colour</th> <th>AMP 12 pins</th> <th>Connection</th> <th>Lenght</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Lap</td> <td>1</td> <td>white</td> <td>4</td> <td>Lap in</td> <td rowspan="4">330 mm</td> </tr> <tr> <td>2</td> <td>black</td> <td>3</td> <td>Analog GND</td> </tr> <tr> <td>3</td> <td>red</td> <td>2</td> <td>+VB</td> </tr> <tr> <td>4</td> <td>bleu</td> <td>4</td> <td>Lap in</td> </tr> </tbody> </table>					Channel	Binder Pin	Cable Colour	AMP 12 pins	Connection	Lenght	Lap	1	white	4	Lap in	330 mm	2	black	3	Analog GND	3	red	2	+VB	4	bleu	4	Lap in
Channel	Binder Pin	Cable Colour	AMP 12 pins	Connection	Lenght																							
Lap	1	white	4	Lap in	330 mm																							
	2	black	3	Analog GND																								
	3	red	2	+VB																								
	4	bleu	4	Lap in																								
Rif. / Ref.	Q.tà/Q.ty	Material / Material	N. articolo / Item N.																									
Progettato da / Designed by L.I.	Contr. da / Ckd. by	Approvato da / Approved by	Nome file / File name	Data / Date Scala / Scale																								
	Titolo / Title Cavo Lap ottico MXL Strada per Plug&Play Yamaha R1 2004/2005/2006 - R6 2004/2005																											
	N. disegno / Drawing N.	02.554.35	Rev. / Rev.	Foglio / Sheet 1 of 1																								

N. rev. / Rev. N.	Descrizione / Description		Data / Date	Firma / Signature	Contr. da / Ckd. by
Binder 719 connectors table					
Channel	Binder pin	Cable colour	AMP 12 pin	Connection	Lenght
Ch. 5	1	white	8	Analogic input 5 Analogic GND	330 mm
	2	black	6		
	3	n.c.		V Reference 1	
	4	blue	5		
Ch. 6	1	white	7	Analogic input 6 Analogic GND	330 mm
	2	black	6		
	3	n.c.		V Reference 1	
	4	blue	5		
Ch. 7	1	white	9	Analogic input 7 analogico GND	380 mm
	2	black	12		
	3	n.c.		V Reference 2	
	4	blue	11		
Ch. 9	1	white	10	Analogic input 9 Analogic GND	380 mm
	2	black	12		
	3	red	2	+Vb V Reference 2	
	4	blue	11		
Ch. 5/Gyro	1	white	1	Analogic input 10 Analogic GND	430 mm
	2	black	3		
	3	red	2	+Vb V Reference 2	
	4	blue	11		
Lap	1	white	4	Lap in Analogic GND	430 mm
	2	black	3		
	3	red	2	+Vb Lap in	
	4	blue	4		
Rif. / Ref.	Q.ta/Q.ty	Material / Material		N. articolo / Item N.	
Progettato da / Designed by	Contr. da / Ckd. by	Approvato da / Approved by	Nome file / File name	Data / Date	Scala / Scale
L.I.				28/06/2005	
		Titolo / Title Cavo MXL Pista per kit Plug&Play Yamaha R1 2004/2005/2006 - R6 2004/2005			
		N. disegno / Drawing N.		Rev. / Rev.	Foglio / Sheet 2 of 2

N. rev. / Rev. N.	Descrizione / Description	Data / Date	Firma / Signature	Contr. da / Ckd. by
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Tabella connettori Binder 719

Canale	Pin Binder	Colore cavo	Pin AMP 12	Connessione	Lunghezza
Ch. 5	1	Bianco	8	Analog input 5	330 mm
	2	nero	6	Analog GND	
	3	n.c.			
	4	blu	5	V reference 1	
Ch. 6	1	Bianco	7	Analog input 6	330 mm
	2	nero	6	Analog GND	
	3	n.c.			
	4	blu	5	V reference 1	
Ch. 7	1	Bianco	9	Analog input 7	380 mm
	2	nero	12	Analog GND	
	3	n.c.			
	4	blu	11	V reference 2	
Ch. 9	1	Bianco	10	Analog input 9	380 mm
	2	nero	12	Analog GND	
	3	rosso	2	+ VB	
	4	blu	11	V reference 2	
Ch. 10 / Gyro	1	Bianco	1	Analog input 10	430 mm
	2	nero	3	Analog GND	
	3	rosso	2	+ VB	
	4	blu	11	V reference 2	
Lap	1	Bianco	4	Lap in	430 mm
	2	nero	3	Analog GND	
	3	rosso	2	+ VB	
	4	blu	4	Lap in	

Rif. / Ref.	Q.tà/Q.ty	Material / Material	N. articolo / Item N.	
Progettato da / Designed by	Contr. da / Ckd. by	Approvato da / Approved by	Nome file / File name	Data / Date
		Titolo / Title Cavo MXL Pista per Plug&Play Yamaha R1 2007/2008 - R6 2006/2007/2008		
		N. disegno / Drawing N. 04.554.34	Rev. / Rev.	Foglio / Sheet 2 di 2