

MXL P&P GSX-R K5 User Manual Release 1.07

Kit Plug&Play – Suzuki GSX-R K5 GSX-R 600 2006/2007 GSX-R 750 2006/2007 GSX-R 1000 2005/2006 User Manual





# SUMMARY

Introduction	3
1 – Plug&Play kit content	4
1.1 – Part Numbers (see also appendix "A")	.6
2 - Plug&Play kit installation for MXL Strada wiring code 04.554.55 and MXL Pis	ta
wiring code 04.554.54	7
2.1 – Removing the lateral mirrors and fairings and the front fairing.	
2.2 – Removing the stock dash, unplugging the stock connectors	
2.3 – Milling the chassis that supports the stock dash	
2.4 – Assembling the kit	
2.5 – Connecting the cables	
2.6 – Installing the wiring	11
2.7 – Installing the TPS cable (included in the kit for MXL Pista)	12
3 – Plug&Play kit installation for MXL Strada wiring code 04.554.14 and MXL Pis	ta
wiring code 04.554.13 1	
3.1 – Removing the lateral mirrors and fairings and the front fairing	
3.2 – Remove the bike seat and the fuel tank	14
3.3 – Removing the stock dash, unplugging the connectors	
3.4 – Milling the chassis that supports the stock dash	
3.5 – Assembling the kit	
3.6 – Connecting the cables 3.7 – Installing TPS cable (included in the kit for MXL Pista)	
4 – MXL inputs	
5 – MXL Suzuki GSX-R firmware	
6 – Suzuki GSX-R kits configuration: MXL Strada wiring code 04.554.55 and MX	
Pista wiring code 04.554.54.	
7 – Suzuki GSX-R kits configuration: MXL Strada wiring code 04.554.14 and MX	٢L
Pista wiring code 04.554.13	27
7.1 – Gear Calibration	
7.1.1 – Saving the configuration with calibrated gears	35
8 – Equivalent circumference compute	36
9 – TPS Sensor configuration	37
10 – Channels	
11 – Data download and analysis	
12 – MXL expansions	
Appendix "A" – Suzuki GSX-R K5 wiring for MXL Strada with code 04.554.55 ar	
MXL Pista with code 04.554.54	
Appendix "B" - Suzuki GSX-R K5 wiring for MXL Strada with code 04.554.14 ar	
MXL Pista with code 04.554.13	19
Appendix "C" –TPS cable for all MXL kits code 04.550.69	55



# PRESENTATION

AIM: a world leader in data acquisition for racing applications.

Established in 1976, nowadays AIM is a world leader in producing high performing loggers for racing application: dashboards, data loggers, digital displays, lap timers.

AIM established new standards in a lot of motor sports: from karts to car, bikes, dragsters, Formula 1 Boat, offshore and even snowboards!

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

Each AIM system is completely designed, realised and tested by its technicians. The Research and Development board is made of Electronic and mechanic engineers, physics and other specialists that develop software, firmware and the related documentation. Our reputation is build on quality products, innovative technologies and on the steady engagement in customer support.



# Introduction

**MXL** Plug&Play kit for Suzuki GSX-R K5 is the dashboard, with data acquisition in Pista version, designed for an easy and quick installation: with the minimum effort it will be possible to connect directly to the bike ECU and show - without additional sensors and depending on the model:

#### MXL Strada

- RPM
- Speed
- Water temperature
- Oil pressure Alarm
- Fuel level alarm
- Turning Lights
- High Beam ON/OFF
- Engaged gear
- 4 free channels

# MXL Pista

- RPM
- Speed
- Water temperature
- Oil pressure alarm
- Engaged gear
- Lateral acceleration
- 6 free channels

The logger, like the stock dashboard, is powered by the bike master switch.

**MXL Strada/MXL Pista** kits for Suzuki GSX-R K5 have been developed for the following bike models:

Displacement	Year 2005	Year 2006	Year 2007
600	See K3 Manual	$\checkmark$	$\checkmark$
750	See K3 Manual	$\checkmark$	$\checkmark$
1000	$\checkmark$	$\checkmark$	See K7 manual

 $\checkmark$  = supported.

Note: thanks to the infrared transmitter/receiver (included in **MXL Pista** kit, optional to **MXL Strada** kit), it is possible to sample/record lap times.

For anything not expressly explained in this user manual, please refer to **MXL** or to **Race Studio Configuration** user manual.

WARNING: the information concerning installation and configuration of MXL Strada/MXL Pista Plug&Play kits for Suzuki GSX-R K5 included in this user manual distinguish the kits depending on their wiring codes. Kit identified by 04.554.54 and 04.554.55 wiring codes are currently produced and sold while kits identified by 04.554.13 and 04.554.14 wiring codes are not produced and sold anymore: these instructions have an only explicative function. This means that any kit bought after the publishing of this user manual, release 1.07 or later, includes a wiring whose identification code can only be 04.554.54 or a 04.554.55.



# 1 – Plug&Play kit content



The composition of Plug&Play kits for Suzuki GSX-R K5 varies depending on the chosen MXL version and on the bike production year. Each kit includes only some of the items showed in the figure here above, numbered to be more clear.

#### MXL Strada kit

- N.1 MXL Strada (1)
- N.1 Wiring for MXL Strada Plug&Play GSX-R K5/K7 (2)
- N.1 USB cable for MXL (5)
- N.1 Accessories/optional leaflet (8)
- N.1 Race Studio 2 Software CD (9)
- N.1 Bracket kit (10), including:
  - 1 MXL bracket
  - 2 Spacing collars for Suxuki GSX-R
  - 4 M4\*8 Phillips recess cup head screws
  - 2 M5\*20 Phillips recess cup head screws
  - 1 Black EPDM washer
  - 2 M5 washer





#### MXL Pista kit

- N.1 MXL Pista (1)
- N.1 Wiring for MXL Pista Plug&Play GSX-R K5/K7 (2)
- N.1 Infrared transmitter (3)
- N.1 Infrared receiver (4)
- N.1 Transmitter Power cable (6)
- N.1 TPS throttle position sensor cable (7)
- N.1 USB cable for MXL (5)
- N.1 Accessories/optional leaflet (8)
- N.1 Race Studio 2 Software CD (9)
- N.1 Bracket kit (10), including:
  - 1 MXL bracket
  - 2 Spacing collars for Suxuki GSX-R
  - 4 M4\*8 Phillips recess cup head screws
  - 2 M5\*20 Phillips recess cup head screws
  - 1 Black EPDM washer
  - 2 M5 washer



#### Universal kit (for customers that already own an MXL Strada/Pista):

- N.1 Wiring for MXL Strada/MXL Pista Plug&Play GSX-R K5/K7 (2)
- N.1 Bracket kit (10), including:
  - 1 MXL bracket
  - 2 Spacing collars for Suzuki GSX-R
  - 4 M4\*8 Phillips recess cup head screws
  - 2 M5\*20 Phillips recess cup head screws
  - 1 Black EPDM washer
  - 2 M5 washer

#### **Optional to MXL Strada kit:**

N.1 – Infrared transmitter (3)

- N.1 Infrared receiver (4)
- N.1 Transmitter power cable (6)
- N.1 TPS throttle position sensor cable (7)

**Note**: before installing the kit it is suggested to check that the kits contains all specified items.

### **1.1 – Part Numbers (see also appendix "A")**

Plug&Play kit **MXL Strada for Suzuki GSX-R600/750 K5**: code: **X16MXLSGS0567** (CAN connection and analog channels; technical drawing nr. 04.554.55 – f1/f2).

Plug&Play kit **MXL Strada for Suzuki GSX-R1000 K5**: code: **X16MXLSGS5610** (CAN connection and analog channels; technical drawing nr. 04.554.55 – f1/f2).

Universal kit MXL Strada Suzuki GSX-R600/750/1000 K5 (wiring+bracket) codes: V02554550K5+DNKTSTMXLK5 (to transform an MXL Strada in a Suzuki GSX-R K5 application; technical drawing 04.554.55 f1/f2).

Plug&Play kit **MXL Pista for Suzuki GSX-R600/750 K5**: code: **X16MXLCGS0567** (CAN connection and analog channels; technical drawing nr. 04.554.54 – f1/f2).

Plug&Play kit **MXL Pista for Suzuki GSX-R1000 K5**: code: **X16MXLCGS5610** (CAN connection and analog channels; technical drawing nr. 04.554.54 – f1/f2).

**Universal kit MXL Pista Suzuki GSX-R600/750/1000 K5** (wiring+bracket) codes: **V02554540K5+DNKTSTMXLK5** (to transform an MXL Strada in a Suzuki GSX-R K5 application; technical drawing 04.554.54 f1/f2).

**Optional to MXL Strada Suzuki GSX-R600/750/1000 K5 Plug&Play kit**: Infrared transmitter with 90 cm cable: code: **X41RX12090** Infrared transmitter: code: **X02TXKMA01** Transmitter power cable: code: **V02POWTX0** TPS – Throttle Position Sensor – cable: code: **V02550690**.



# 2 – Plug&Play kit installation for MXL Strada wiring code 04.554.55 and MXL Pista wiring code 04.554.54

The instructions included in this user manual are intended for an MXL Strada/MXL Pista with **firmware version 14.86.33 or later** and **Race Studio 2** release **2.30.04 or later**.

Suzuki GSX-R K5 Plug&Play wiring has been expressly designed and developed to be absolutely easy to install.

Warning: this kit has been tested to be absolutely compatible with a bike identical to the stock one sold by the manufacturer.

Thanks to the back fixing points of MXL it is possible to replace the stock dash in an easy and quick way.

The logger has to be connected to the chassis of the stock front screen using the bracket included in the kit. The bracket is in black anodized aluminium light weight and mechanically resistant.

#### **GENERAL NOTES – Read these notes before installing the system.**

- Do not cut any cable: the cable supplied with the kit is Plug&Play.
- Pay attention not to damage the stock connectors while plugging/unplugging them. In the following pages it's described how to correctly manage them.
- Do not install the system when the engine is hot. The stock connectors are near to the engine and there is burning risk.
- The space under the fuel tank is quite small: pay attention while demounting/ mounting it.
- Pay attention not to loose screws and washers.
- Pay attention not to damage the fairing while demounting/mounting them.



# 2.1 – Removing the lateral mirrors and fairings and the front fairing.

To disconnect the stock dash and install **MXL** on Suzuki GSX-R K5 bike it is necessary to remove:

- front screen
- lateral mirrors
- lateral fairings
- fuel tank

Note: refer to the bike user manual for further information concerning this step.

### 2.2 – Removing the stock dash, unplugging the stock connectors

The second installation step is removing the stock dash and disconnecting the stock connectors.

The stock dash is fixed through 3 fixing points red circled in Figures 1a and 1b.



Figure 1a: stock dash fixing points rear view.

Once the stock dash has been removed, unplug the 16 pins AMP bike stock connector from the dash back.

Remove the cover as shown in **Figure 2** and pull down the tongue (highlighted in red): unthread the dash connector.

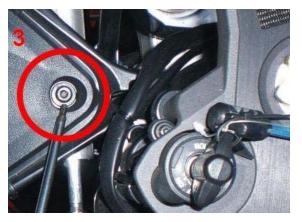


Figure 1b: particular of fixing point labelled "3" front view.



Figure 2: unplugging the 16 pins AMP connector from the stock dash.



### 2.3 – Milling the chassis that supports the stock dash

The lap connector is under the chassis that supports the stock dash. This is why the third installation step is milling a part of this chassis to connect "Lap" cable to the stock connector. In **figure 3** the part of the chassis to be milled is highlighted (2). Pay attention not to damage the anti-vibration mounting (1) while milling the chassis.



Figure 3: chassis to be milled (2) and anti-vibration mounting (1).

### 2.4 – Assembling the kit

The fourth installation step is assembling the kit. It has four anti-vibration mounting already mounted on the back of **MXL**. Install **MXL** on its bracket and fix this last one in correspondence of the four antivibration mountings using the Phillips recess cup head screws and the washers included in the kit.

Figure 5 shows MXL correctly assembled

with bracket and washers (rear view).

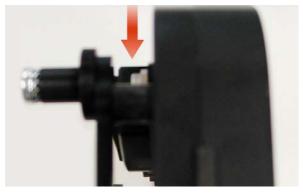


Figure 4: anti-vibration mounting particular.



Figure 5: MXL and bracket - rear view.

#### 2.5 – Connecting the cables

The fifth installation step is installing the wiring supplied with the kit.

The wiring is wrapped in a plaited protective covering. Bent it and let it pass on the bike right side.



Figure 6: wiring installation.



MXL P&P GSX–R K5 User Manual Release 1.07

Connect the 16 pins connector (previously unplugged from the stock dash) to the male connector placed in the black aluminum box of **MXL** wiring as shown in **figure 7**: press until you hear a click.

Use the stock dash plastic cover to make the connection waterproof.

Let the wiring run between the high beam and the front fairing (figure 8).

**Note**: the 2 AMP connectors, the wiring labelled "Lap" and the stock wiring (ending with a channel interface wiring) are too big to pass between the high beam and the front fairing. It is suggested to insert the wiring from above.



Figure 7: wiring connection.



Figure 8: kit installation.



battery.

## **2.6 – Installing the wiring**

To install the wiring follow this procedure. It shows a black ground cable labelled "GND" that needs to be directly connected to the negative pole of the bike battery, as shown in the images below.

The cable highlighted by the arrow in **figure 14** is external to the wiring.



Figure 9: the ground black cable.



Figure 10: the ground cable runs along the chassis.

Figure 11: the connection of ground cable to the battery negative pole.



Figure 12: ground cable correctly connected.

Let it run along the bike chassis, as indicated in **figure 10**, until the bike

Once reached the battery connect it to the negative pole (**figure 11**).

In **figure 12** the external ground cable correctly connected to the battery negative pole is shown.



# 2.7 – Installing the TPS cable (included in the kit for MXL Pista)

Warning: before installing this cable it is necessary to demount the bike fuel tank. Refer to the bike user manual for further information on the subject.

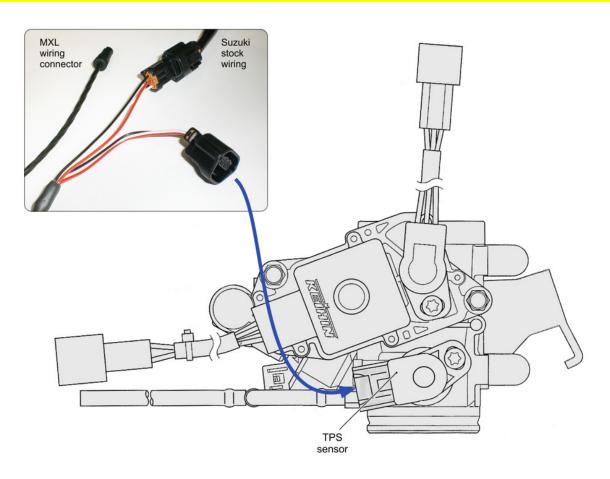


Figure 13: TPS cable installation.

Unplug the original Suzuki wiring from TPS sensor and connect it to the male connector of MXL wiring for TPS sensor (as indicated in the box of figure 13).

Connect the female connector of MXL wiring for TPS sensor to the same sensor (as highlighted by the blue arrow).

Connect the 4 pins male plastic Binder connector to one of the free channels depending on the model of MXL (see "Channels" chapter).

For further information concerning the configuration of the channel the TPS sensor is installed on, refer to the related chapter of this user manual.



# 3 – Plug&Play kit installation for MXL Strada wiring code 04.554.14 and MXL Pista wiring code 04.554.13

WARNING: kit whose wiring is identified by codes 04.554.13 and 04.554.14 is no more in production and this chapter - like the one concerning the logger configuration - has just an explicative function for customers owning this kit.

Suzuki GSX-R K5 Plug&Play wiring has been expressly designed and developed to be absolutely easy to install.

# Warning: this kit has been tested to be absolutely compatible with a bike identical to the stock one sold by the manufacturer.

Thanks to the back fixing points of MXL it is possible to replace the stock dash in an easy and quick way: each component is Plug&Play.

The logger has to be connected to the chassis of the stock front screen using the bracket included in the kit. The bracket is in black anodized aluminum light weight and mechanically resistant.

**GENERAL NOTES – Read these notes before installing the system.** 

- Do not cut any cable: the cable supplied with the kit is Plug&Play.
- Pay attention not to damage the stock connectors while plugging/unplugging them. In the following pages it's described how to correctly manage them.
- Do not install the system when the engine is hot. The stock connectors are near to the engine and there is burning risk.
- The space under the fuel tank is quite small: pay attention while demounting / mounting it.
- Pay attention not to loose screws and washers.
- Pay attention not to damage the fairing while demounting/mounting them.



# 3.1 – Removing the lateral mirrors and fairings and the front fairing.

To disconnect the stock dash and install **MXL** on Suzuki GSX-R K5 bike it is necessary to remove:

- front screen
- lateral mirrors
- lateral fairings
- fuel tank

Note: refer to the bike user manual for further information concerning this step.

### 3.2 – Remove the bike seat and the fuel tank

To reach stock connectors (water, gear and TPS) it is necessary to remove the bike seat and the fuel tank.

Note: refer to the bike user manual for further information concerning this subject.

### 3.3 – Removing the stock dash, unplugging the connectors

The third installation step is removing the stock dash and unplugging its connectors.

The stock dash is fixed to the bike through three fixing points.

In **figure 14** the back and the front anchor points of the stock dash are red circled.



Figure 14: the stock dash has been removed

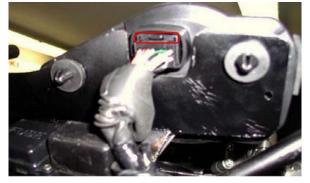


Figure 15: unplug the stock dash.

When the stock dash has been removed it is needed to unplug the 16 pins AMP connector from the same dash back side.

Remove the protective cover as shown in **figure 15** and pull down the tongue (highlighted in red): unthread the connector from the dash.

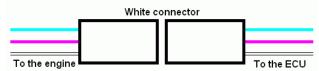


MXL P&P GSX–R K5 User Manual Release 1.07

**Figure 16** shows the position of gear and water temperature stock connectors. For further information concerning the stock connectors refer to **figures** from **17** to **19**.

The stock gear connector is a 3 pins white one placed on the bike left side (**figure 16**). Here below male and female gear connectors are drawn.

**Note**: cable colours correspond to the real ones.



#### How to unplug a 3 pins connector.

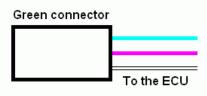
3 pins male and female connectors are strictly fixed. To disconnect the male from the female use a flat screwdriver: pull down the tongue and unplug the connectors.

**Warning**: to unplug the connectors unplug the plastic cases and not the cables, that could disconnect seriously damaging the wiring.

Stock water temperature connector, shown in **figure 19**, is green, has 2 pins and is placed on the left part of the engine cylinder block of the bike. (**figure 16**).

Here below the stock water temperature connector is drawn.

**Note**: cable colours correspond to the real ones.



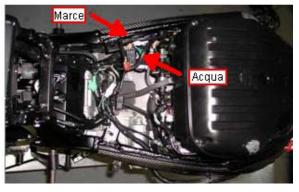


Figure 16: stock connectors position.



Figure 17: gear connector – particular.



Figure 18: how to unplug a connector.



Figure 19: water temperature connector – particular.



### 3.4 – Milling the chassis that supports the stock dash

The lap connector is under the chassis that supports the stock dash. This is why the fourth installation step is milling a part of this chassis to connect "Lap" cable to the stock connector. In **figure 20** the part of the chassis to be milled (2) is highlighted. Pay attention not to damage the anti-vibration mounting (1) while milling the chassis.



Figure 20 - chassis to be milled (2) and antivibration mounting (1).

### 3.5 – Assembling the kit

The fifth installation step is assembling the kit for Suzuki GSX-R. It has four antivibration mounting already installed on the back of **MXL**.

Install the logger on its aluminium bracket in correspondence of the four anti-vibration mounting, using screws and washers included in the kit.

Figure 22 shows MXL correctly assembled

with bracket and washers (rear view).

Figure 21 – anti-vibration mounting particular.



Figure 22 – MXL and bracket – rear view.

## 3.6 – Connecting the cables

The sixth installation step is installing the wiring included in the kit.

The wiring is all wrapped in a plaited protective covering. Bent it and let it run along the bike right side.



Figure 23 – Wiring installation.



MXL P&P GSX–R K5 User Manual Release 1.07

Connect the 16 pins black AMP connector (previously unplugged from the stock dash) to the male one placed in the black aluminum box of **MXL** wiring shown in **figure 24**: press until you hear a click.

Use the plastic cover of the stock dash to make the connection waterproof.

Connect male and female water and gear connectors (these green and white previously disconnected) to the related connectors of **MXL** wiring.

Let cables labelled "Gear", "Water Temp" etc... run along the bike chassis as shown in **figure 25**. Use plastic wrappers to fix them to the bike stock wiring.

"Gear" and "water temperature" stock connectors are under the fuel tank: let them enter the engine compartment as shown in **figure 25**.

Let all cables (except for "Lap" one") run between the high beam and the front fairing (**figure 26**).

**Note**: the 2 AMP connectors, cable labelled "Lap" and stock wiring (the one ending with a black channels interface box) are too big to pass between the high beam and the chassis. It is suggested to insert the wiring from above.



Figure 24 – wiring installation – particular of AMP connector.

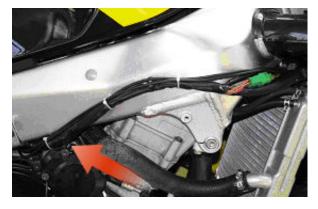


Figure 25 – wirings running along the bike chassis.



Figure 26 – kit installation.



# 3.7 – Installing TPS cable (included in the kit for MXL Pista)

Warning: before installing this cable it is necessary to demount the bike fuel tank. Refer to the bike user manual for further information on the subject.

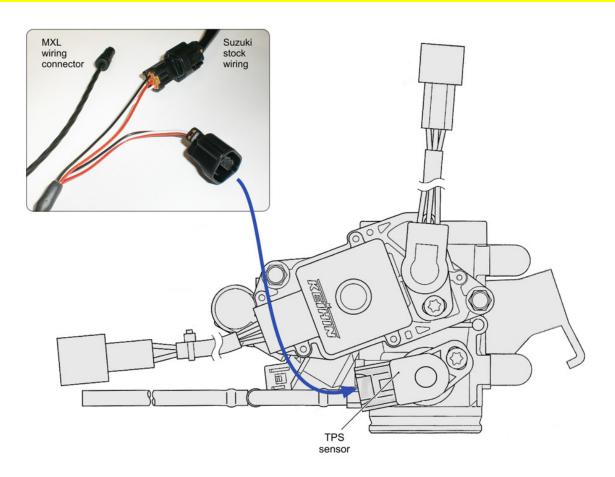


Figure 27: TPS cable installation.

Unplug the original Suzuki wiring from TPS sensor and connect it to the male connector of MXL wiring for TPS sensor (as indicated in the box of figure 27).

Connect the female connector of MXL wiring for TPS sensor to the same sensor (as highlighted by the blue arrow).

Connect the 4 pins male plastic Binder connector to one of the free channels - depending on the model of MXL (see "Channels" chapter).

For further information concerning the configuration of the channel the TPS sensor is installed on, refer to the related chapter of this user manual.



# 4 – MXL inputs

Thanks to interface cables included in Suzuki GSX-R K5 Plug&Play kit, data acquisition is really easy and quick. The image below shows all inputs that allow data visualization on **MXL**.



Figure 28: MXL Strada/MXL Pista: rear view.

- Lap connector (1): allows lap time detection;
- External expansion Modules connector (2): allows the connection with all expansion modules that communicate through the CAN bus (GPS, lambda probe);
- AMP 12 pins female connector (3) AIM wiring supplied with the kit;
- AMP 16 pins female connector (4) AIM wiring supplied with the kit.



# 5 – MXL Suzuki GSX-R firmware

**MXL Strada/MXL Pista** for Suzuki GSX-R K5 is equipped with a special firmware version that supplies the logger with a second virtual dashboard.

Note: MXL firmware version has to be 14.86.33 or later.

On the street the display is set on "street mode" and shows the following parameters:

- Bar graph with configurable scaling: **black**;
- RPM digital value/ battery voltage/ total and partial odometer/ date and time: **fuchsia** (use VIEW/QUIT button to switch between the options).
- Speed: red
- Engaged gear: green.
- Analog channels always on top, depending on **MXL** model: **bleu**.
- Up to 4 fields shown on demand and selectable by the drop down menu of System Configuration window of **Race Studio 2**. Use ">>" button to switch between the fields.





**On track**, passing by a switched on transmitter, the display switches automatically on "track mode" and shows lap time in spite of odometer.



Figure 30 – Display on track mode.

Visualization mode (street/track) is set via software and stored by the logger. Default setting is show odometer (street mode). If user sets show lap time (track mode) via software, this setting is restored at each switch on, no matter if the bike is on track or not.

**Note**: for further information concerning display management and its configuration refer to **MXL** and/or **Race Studio Configuration** user manual.



# 6 – Suzuki GSX-R kits configuration: MXL Strada wiring code 04.554.55 and MXL Pista wiring code 04.554.54.

When **MXL** has been installed it is ready to work thanks to the default configuration. In case a custom configuration is needed, follow these instructions.

- Run Race Studio 2 software (release 2.30.04 or later).
- Press "AIM system manager" button on the left vertical toolbar.
- Select **MXL** icon from the panel that appears on the right of the vertical keyboard.

🖀 Race Studio 2 🕞 version: 2.22.	
File System manager Download Analys	is Loggeridentification Online Calibrate
AIT	
Racing Data Power	MyChron3 Kart Plus/Gold/Ext
AIM Sportline The World Leader in Data Acquisition	
	MyChron3 Auto/Moto Plus/Gold/Ext
Go to Analysis	M3Log/Visor XGLog
Download data	MXL
AIM system manager	DaVid
AIM system identification	EV03
<b>Denline</b>	EV03 Pro/Pista
AIM system calibration	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Custom sensor manager	
Select language	✓ Go to Exit

Press "new" and this window appears.

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an	System manager							e e
Raing Line Press		Receive	KAN CAN	Net info	Set acquas	ition system		
AIM Sportline and Leader is Data Acquisition	Current configuration		· · · · ·		-			
and the second second second	Installation name Data logger type Ec	u Vehicle	name Available	ine Tine w	ith GPS Tatel free	avency Master trea	uency Expansions tre	g. Tot Expansions
Go to Analysis								
	Select configuration [Districts] Taxinin con	abtaural						
Download data	A New B	🚣	-Cire -	Import	🔤 者 🔤			
	N Installation name Logger	0	U Manufacturer 0	U Model	Vehide name	064 Spiit Sp	eed Temp Create	d Tot
AIM system manager	New configuration							
Second and a second second	Data logger type	MOL PISTA						
M system identification	ECU Manufachaer	None						
	ECU Model	None				•		
Ouline	New configuration mane	DEFAULT						
Children	Vehicle name	DEFAULT				_		
1	Speed measure unit.	kmh				•		
AIM system calibration	Temperature measure unit	TC						
	Pressure measure unit	be						
ustem sensors manager			-					
			and the					
Select Language		845	3 12 11835					
		-						
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aim-sportline.com								
B 2007 HH 284. HL HORTE HERENYED								
INA CANALCANT, 8								



#### Fill in the window below with:

- **Data logger type**: select **MXL Pista** (or **MXL Strada**) depending on the owned logger and paying attention to select the correct displacement (600, 750 or 1000) and the correct wiring identification code.
- New configuration name: fill in a name for the new configuration.
- Vehicle name: fill in a vehicle name.
- Unit of measure: select the desired units of measure for speeds, temperatures and pressures.

New configuration						
Data logger type	MXL PISTA	SUZUKI GSXR 750	2006-2007	(WIRING	04.554.54)	•
ECU Manufacturer	SUZUKI					•
ECU Model	GSXR_K5_K6					•
New configuration name	DEFAULT					
Vehicle name	DEFAULT					
Speed measure unit	km/h					•
Temperature measure unit	°C					-
Pressure measure unit	bar					•
			ncel			

Click on "OK" to create the new configuration.

Select "Channels" layer to enter the configuration of MXL sampled channels.

📔 System manag	jer -								
Trar	nsmit	Beceive		CAN-Net info	5 🔊	et acquisition sysl time	em		
u Current configuration							-		
Installation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansions
DEFAULT	MXL STRADA	SUZUKI - GSXR	DEFAULT	11.32.54 (h.m.s)	4.26.30 (h.m.s)	100 (Hz)	100 (Hz)	0 (Hz)	0
Select configuration			Expansions configura		) ( Te		٦		
🗘 New	S.	Configuration CAN-	Expansions configura		Import	Export er ECII Model	Vebicle r	name Ohs	Solit Speed
	s s s s s s s s s s s s s s s s s s s	Delete	Clone		ECU Manufactur	er ECU Model	Vehicle r		Split Speed
New Installation	name Logger	Delete	250 2006-2007 (		ECU Manufactur			т 8	



#### In case an MXL Strada is being configured this window appears:

	nager								
Т	ransmit	Receive	<b>1</b>	CAN-Net in	fo 🚺 🔊	et acquisition sys time	tem		
urrent configurat	ion								
nstallation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequen	cy Expansions freq	. Tot. Expansions
DEFAULT	MXL STRADA	SUZUKI - GSXR	DEFAULT	11.32.54 (h.m.s)	4.26.30 (h.m.s)	100 (Hz)	100 (Hz)	0 (Hz)	0
Speed_1 Wheel circumfe Pulses per whe	erence (mm) 747						1		
	Enabled/disabled	Channel name			Sensor type		Measure unit		ligh scale
RPM	🔽 Enabled	Engine		-	Engine revolution spee	t i	rpm	0 1	6000
_	Enabled	Speed_1		-	Speed		km/h .1		20.0
SPD_1 CH_1	Enabled	Oil_Press	1	No_Mem	Generic linear 0-5 V	-	۲.1 💽	0.0 5	20.0 .0
CH_1 CH_2	Enabled	Oil_Press Fuel_Level		No_Mem No_Mem I	Generic linear 0-5 V Fuel level	•	∀.1 <u>-</u> %	0.0 5 0 1	20.0 .0 00
СН_1 СН_2 СН_3	Enabled     Enabled     Enabled     Enabled	Oil_Press Fuel_Level Turning_light		No_Mem 0 No_Mem 1 No_Mem 0	Generic linear 0-5 V Fuel level Generic linear 0-5 V	•	V.1 ▼ % V.1 ▼	0.0 5 0 1 0.0 5	20.0 .0 00 .0
сн_1 сн_2 сн_3 сн_4	✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Enabled	Oil_Press Fuel_Level Turning_light Hi_beam		No_Mem No	Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V	• • •	V.1 % V.1 V.1	0.0 5 0 11 0.0 5 0.0 5	20.0 .0 .0 .0 .0
CH_1 CH_2 CH_3 CH_4 CH_5	✓       Enabled         ✓       Enabled         ✓       Enabled         ✓       Enabled         ✓       Disabled	Oil_Press Fuel_Level Turning_light Hi_beam Channel_5		No_Mem No	Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	× × ×	V .1 % V .1 V .1	0.0 5 0 11 0.0 5 0.0 5 0.0 5	20.0 .0 .0 .0 .0 .0
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6	✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Disabled       ✓     Disabled	Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6		No_Mem I No_Mem I No_Mem I No_Mem I No_Mem I	Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	× × × ×	V .1 % V .1 V .1	0.0 5 0 11 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5	20.0 .0 .0 .0 .0 .0 .0 .0
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7	Image: Constraint of the second se	Coll_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7		No_Mem I No_Mem I No_Mem Vo_Mem VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV	Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	× × × ×	V     .1       %       V     .1       V     .1       V     .1       V     .1       V     .1	0.0 5 0 1 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5	20.0 .0 .0 .0 .0 .0 .0 .0 .0
CH_1 CH_2 CH_3 CH_4 CH_5 CH_5 CH_6 CH_7 CH_8	✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Disabled       ✓     Disabled       ✓     Disabled       ✓     Disabled	Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7 Channel_8		No_Mem No	Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V	× × × ×	V     .1       %       V     .1	0.0 5 0 1 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5	20.0 .0 .0 .0 .0 .0 .0 .0 .0
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7 CH_8 CALC_GEAR	▼     Enabled       ▼     Enabled       ▼     Enabled       ▼     Enabled       □     Disabled       □     Disabled       □     Disabled       □     Disabled       □     Disabled       □     Disabled	Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7 Channel_8 Calculated_Gear		No_Mem         I	Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Calculated Gear	× × × ×	V     .1       %       V     .1	0.0 5 0 1 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 9	20.0 .0 .0 .0 .0 .0 .0 .0 .0
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7 CH_8 CALC_GEAR LOG_TMP	▼     Enabled       ▼     Enabled       ▼     Enabled       ▼     Enabled       □     Disabled	Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7 Channel_8 Calculated_Gear Datalogger_Temp		No_Mem         I	Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Calculated Gear Cold joint	× × × ×	V.1 % V.1	0.0 5 0 1 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 9 0 9 0 5	20.0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7 CH_8 CALC_GEAR LOG_TMP	✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Disabled       ✓     Disabled       ✓     Disabled       ✓     Disabled       ✓     Enabled       ✓     Disabled       ✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Enabled	Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7 Channel_8 Calculated_Gear		No_Mem         I	Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Calculated Gear	× × × ×	V.1     ▼       %     ▼       V.1     ▼       #     •       V.1     ▼	0.0 5 0 1 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 9 0.0 5 5.0 1	20.0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0
CH_1 CH_2 CH_3 CH_4 CH_5 CH_6	▼     Enabled       ▼     Enabled       ▼     Enabled       ▼     Enabled       □     Disabled	Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7 Channel_8 Calculated_Gear Datalogger_Temp		No_Mem         I	Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Calculated Gear Cold joint	× × × ×	V.1 % V.1	0.0 5 0 1 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5 0.0 9 0.0 5 5.0 1	20.0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0

In case an MXL Pista is being configured this window appears:

	Transmit	Receive	2	CAN-Net i	info 🚺 🚳 S	Set acquisition sys time	stem		
urrent configura	ation								
Installation nam	e Data logger type	e Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master freque	ency Expansions f	freq Tot. Expansion
DEFAULT	MXL PISTA	SUZUKI - GSXR	DEFAULT	14.15.26 (h.m.s	i) 4.47.30 (h.m.s)	81 (Hz)	81 (Hz)	0 (Hz)	0
	erence (mm) 743								
Channel iden	. Enabled/disabled	Channel name		Sampling fregu	Sensor type		Measure unit	Low scale	High scale
Charine luen.							riodsaro anic		T light scale
RPM	Finabled	Engine		10 Hz 🔹	Engine revolution spee	d	rpm	0	16000
	Enabled	Engine Speed_1					rpm km/h.1	0.0	
RPM	Enabled			10 Hz 🗾	Engine revolution spee	• •	rpm km/h.1	-	16000
RPM SPD_1	Enabled     Enabled     Enabled     Enabled	Speed_1		10 Hz 💌	Engine revolution spee Speed		rpm   km/h .1   V .1	0.0	16000 320.0
RPM SPD_1 CH_1	Enabled	Speed_1 Oil_Press		10 Hz 🔹	Engine revolution spee Speed Generic linear 0-5 V		rpm   km/h .1   V .1	0.0	16000 320.0 5.0
RPM SPD_1 CH_1 CH_2	Enabled     Enabled     Enabled     Enabled	Speed_1 Oil_Press Fuel_Level		10 Hz   10 Hz  10 Hz  10 Hz  10 Hz	Engine revolution spee Speed Generic linear 0-5 V Fuel level	• • •	rpm   km/h .1   V .1   V .1   V .1	0.0 0.0 0 0 0 0.0	16000 320.0 5.0 100
RPM SPD_1 CH_1 CH_2 CH_3 CH_4	Enabled     Enabled     Enabled     Enabled     Disabled	Speed_1 Oil_Press Fuel_Level Channel_3		10 Hz 10	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	• • • •	rpm   km/h .1   V .1   V .1   V .1	0.0 0.0 0 0 0.0	16000 320.0 5.0 100 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6	Enabled     Enabled     Enabled     Disabled     Disabled     Disabled     Disabled     Disabled	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6		10 Hz 10	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V	× × × ×	rpm km/h .1 V .1 2 V .1 2 V .1 2 V .1 2 V .1 2 V .1 2 V .1 2	0.0 0.0 0 2 0.0 2 0.0 2 0.0 2 0.0 2 0.0	16000 320.0 5.0 100 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6	Image: Constraint of the second se	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5		10 Hz   10 Hz  10	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	× × × ×	rpm km/h .1 V .1 2 V .1 2 V .1 2 V .1 2 V .1 2 V .1 2 V .1 2	0.0 0.0 0 2 0.0 2 0.0 2 0.0 2 0.0	16000 320.0 5.0 100 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_6 CH_7	▼     Enabled       ▼     Enabled       ▼     Enabled       □     Disabled	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6		10 Hz   10 Hz  10	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	• • • • • •	rpm           km/h         .1           V         .1         2           %         .1         2           V         .1         2	0.0 0.0 0 2 0.0 2 0.0 2 0.0 2 0.0 2 0.0	16000 320.0 5.0 100 5.0 5.0 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_6 CH_7 CH_8	✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Disabled       □     Disabled	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6 Channel_7		10 Hz         ▼	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V	• • • • • •	rpm           km/h         .1           V         .1         2           %         .1         2           V         .1         2	0.0 0.0 0 0.0 0.0 0.0 0.0 0.0 0.0	16000           320.0           5.0           100           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_6 CH_7 CH_8 CALC_GEAR	▼     Enabled       ▼     Enabled       ▼     Enabled       □     Disabled	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8		10 Hz         ▼	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	• • • • • •	rpm           km/h         1           V         1         2           %         2         4           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2	0.0 0.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	16000           320.0           5.0           100           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0
RPM SPD_1 CH_1 CH_2 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7 CH_8 CALC_GEAR ACC_1	✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Disabled       □     Disabled	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_7 Channel_8 Calculated_Gear		10 Hz         •	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V	• • • • • •	rpm           km/h         1           V         1         2           %         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           Q         0         1	0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	16000           320.0           5.0           100           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           9
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5	✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Disabled       □     Disabled	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8 Calculated_Gear LatAcc		10 Hz         •	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Calculated Gear Lateral accelerometer Cold joint	• • • • • •	rpm           km/h         1           V         1         2           %         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           V         1         2           Q         0         1	- 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	16000           320.0           5.0           100           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           5.0           3.00
RPM           SPD_1           CH_1           CH_2           CH_3           CH_6           CH_7           CH_8           CALC_GEAR           ACC_1           LOG_TMP	✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Enabled       □     Disabled	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8 Calculated_Gear LatAcc Datalogger_Temp		10 Hz         •           11 Hz         •	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Calculated Gear Lateral accelerometer Cold joint	• • • • • •	rpm           km/h .1           V .1         2           %           V .1         2           V .1         2	- - - - - - - - - - - - - -	16000           320.0           5.0

Both show the channels sampled by the logger and speed panel labelled "Speed" and highlighted in the images above.

**Note**: all additional channels are disabled by default; for any information concerning their configuration refer to **Race Studio Configuration** user manual.



**Speed panel**: Suzuki GSX-R speed sensor is installed on the jackshaft that connects the gearbox to the pinion. The number of magnets installed on this jackshaft is 4. The wheel circumference used in this panel is an "Equivalent Circumference" computed using this formula:

$$EquivCircumf = \frac{WheelCircumf * Np}{Nc}$$
Np = pinion teeth number  
Nc = Crown teeth number

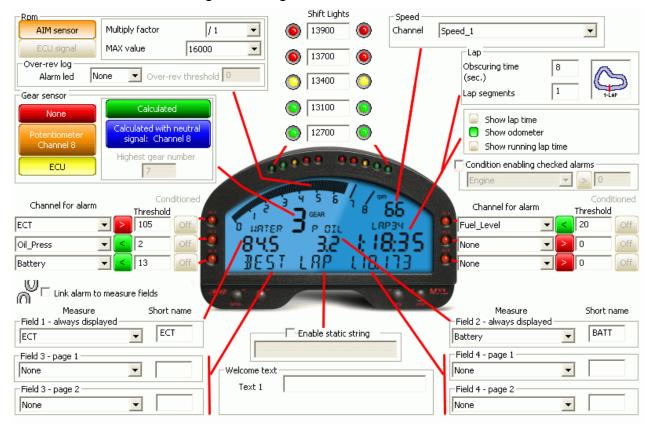
Using default values computed for a Suzuki GSX-R750, the equivalent circumference value is 747 mm (29.4 inches). Changing the pinion or the crown with one that has a different teeth number equivalent circumference needs to be re-computed. For further information on this computation refer to the related chapter of this user manual.



It is now necessary to configure **MXL** display. Select "System Configuration" layer.

System man	ager									
Т	ansmit	Receive		CAN-Net info	S 🔊	et acquisition sys time	tem			
urrent configurati	on									
Installation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansion	าร
DEFAULT	MXL PISTA	SUZUKI - GSXR	DEFAULT	14.15.26 (h.m.s)	4.47.30 (h.m.s)	81 (Hz)	81 (Hz)	0 (Hz)	0	
	inverterri	002010-00301		11.10.20 (11.11.0)		01(12)		0(12)	-	
Select configural	ion   Channel    System		Expansions configura	ator	mport	Export				
Select configurat C Ne Ne Installatic	ion Channel System	n configuration   IAN-	Expansions configura	stor)	mport	Export er ECU Model	Vehicle	name Obs	Split Speed	
Select configural	ion   Channel    System	n configuration   IAN-	Expansions configura	ator	mport	Export	Vehicle	name Obs	Split Speed	- -

The window shown here below appears. Default values differ depending on the model of **MXL** selected when creating the configuration.



Set fields are: RPM, Shift lights, Speed, Lap; some alarms and the gear sensor.



**RPM**: high scale can be set to a value included between 14000 and 16000 RPM depending on the bike displacement.

Lap: obscuring time 8 seconds and 1 lap segment (no split times).

**Shift Lights**: each displacement has different threshold values, computed considering the stock engine limiter threshold value. In case the bike engine limiter has an higher threshold value than the stock one, default values need to be modified so that the last red light switches on just before limiter intervention.

Default visualization is:

- **ECT**: water temperature; threshold value ">" (more than) 105 °C.
- **OIL PRESS**: oil pressure; threshold value "<" (less than) 2 bar.
- **BATTERY**: battery voltage; alarm threshold value "<" (less than) 13 volts.
- **FUEL LEVEL**: fuel level: threshold value "<" (less than) 20. This value is expressed in percentage and corresponds to the bike reserve value (around 4.5 litres 1 gallon).
- **ODOMETER**: run kilometres. This default setting changes automatically once on the track (with infrared transmitter and receiver). The logger switches on "show lap time" if detects a lap signal. Switching OFF/ON the logger it shows again odometer.

**Note**: to modify and customize the shown channels with the related alarms, refer to **Race Studio Configuration** user manual.

The configuration is now ready to be transmitted to the logger. Press "Transmit" button on the software top keyboard.



# 7 – Suzuki GSX-R kits configuration: MXL Strada wiring code 04.554.14 and MXL Pista wiring code 04.554.13

WARNING: this kit version is not produced anymore: these instructions have just an explicative function for customers that already own the kits.

When **MXL** has been installed it is ready to be used thanks to the default configuration. In case a custom one is needed, follows these instructions.

- Run Race Studio 2 software.
- Press "AIM system manager" button on the left vertical keyboard.
- Select **MXL** icon on the panel that appears right of the vertical keyboard.



Press "New" and this window appears:

and	System manager							1944
Barrag Davis Press	Jan Tarad	Rece		CAN-Net into	Set acquisition sy time	utem		
AIM Sportline World Leader in Data Acquisition	Cutert configuration					_		
	Installation name Data logger typ	e Ecu	Vehicle name	Available time Time	with GPS Total frequency	Master trequency	Expansions treq.	Tot. Expansion
Ge to Analysis	Select configuation   Charters   1)	then configuration [						
Download data	🗘 New 🖌	Debite .	2 0**	F Import	tan 🛃 tan			
	N Installation name Logg	er	ECU Manufactu	rer ECU Model	Vehicle name Obs.	. Spit Speed	Temp Created	Tot
AIM system manager	New configuration							
And system manager	Data logger type		MOL PISTA SUZU	0 6549 K3 - K5 (CAB +				
	ECU Manufacturer		None	•				
AlM system identification	ECU Model		None	•				
			DEFAULT					
Outine	New configuration name							
	Vehicle name		DEFAULT					
AIM system calibration	Speed meanure unit		1mh	-				
	Temperature measure unit		[.c.	-				
(management of the second of t	Pressure measure unit		bar					
Custom sensors manager								
			- Trees					
Select Language		845	11835					
			-					
			-					
		/ 014	Cancel					
					-			
The second s								
aim-sportline.com								



#### Fill in the window below with:

- **Data logger type**: select **MXL Pista** (or **MXL Strada**) depending on the owned logger and paying attention to select the correct displacement (600, 750 or 1000) and the correct wiring identification code.
- New configuration name: fill in a name for the new configuration.
- Vehicle name: fill in a vehicle name.
- Unit of measure: select the desired units of measure for speeds, temperatures and pressures.

New configuration	
Data logger type	MXL STRADA SUZUKI GSXR K3 · K5 (WIRING 04.554.14)
ECU Manufacturer	None
ECU Model	None
New configuration name	DEFAULT
Vehicle name	DEFAULT
Speed measure unit	km/h
Temperature measure unit	<b>℃</b>
Pressure measure unit	bar 💌
	Image: Concel

Press "OK" to create the new configuration.

Select "Channels" layer to configure the channels sampled by MXL.

🖀 Race Studio 2 - version: 2.30.04										- B 🛛
File AIM system manager Download data	Analysis AIM system i	dentification Online	AIM system calibrat	ion Custom sensors	manager Select La	nguage ?				
	📓 System manag	;er								
Recing Data Power AIM Sportline The World Leader in Data Acquisition	Transmit Receive CAN-Net info									
The World Ceader in Data Acquisition	Installation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansions
	DEFAULT	MXL PISTA	SUZUKI - GSXR	DEFAULT	14.15.26 (h.m.s)	4.47.30 (h.m.s)	81 (Hz)	81 (Hz)	0 (Hz)	0
Go to Analysis	Select configuration	Channels Bysten	configuration CAN-	Expansions configura		nport	Export			
	N Installation	name Logger				ECU Manufacture	er ECU Model	Vehicle r	name Obs	Split Speed
	1 DEFAULT	MXL PIST	A SUZUKI GSXR 7	<sup>750</sup> 2006-2007 (\	WIRING 04.554.54)		GSXR_K5_K6	DEFAUL	r 8	1 km/h 💽
AIM system manager	2 DEFAULT	MXL STRA	DA SUZUKI GSXR 7	50 2006-2007 (V	VIRING 04.554.55)	JUZUKI	GSXR_K5_K6	DEFAUL	r 8	1 km/h 💌



#### In case an MXL Strada is being configured, this window appears:

	Transmit	Receive	<b>*</b>	CAN-Net in	nfo 🚳 S	et acquisition sys time	tem		
urrent configura	ation								
Installation nam	e Data logger type	e Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequer	ncy Expansions freq.	Tot. Expansions
DEFAULT	MXL STRADA	SUZUKI - GSXR	DEFAULT	11.32.54 (h.m.s)	4.26.30 (h.m.s)	100 (Hz)	100 (Hz)	0 (Hz)	0
Wheel circumf Pulses per wh	ierence (mm) 74 eel revolution 4	7							
Channel iden	., Enabled/disabled	Channel name	:	Sampling frequ	Sensor type		Measure unit	Low scale	High scale
	Enabled/disabled	Channel name Engine			Sensor type Engine revolution speed	d	Measure unit rpm		High scale 16000
RPM	•		1	No_Mem				0	
RPM SPD_1	Enabled	Engine	r I	No_Mem No_Mem	Engine revolution speed	•	<mark>rpm</mark> km/h .1	0 .0	16000
RPM	Enabled	Engine Speed_1	ן ו ו	No_Mem No_Mem No_Mem	Engine revolution speed Speed	•	rpm km/h .1 ∀ .1 ▼	0 0.0 0.0 0	16000 320.0
RPM SPD_1 CH_1	Enabled Enabled	Engine Speed_1 Oil_Press	1 1 1 1	No_Mem No_Mem No_Mem No_Mem	Engine revolution speed Speed Generic linear 0-5 V	•	rpm km/h .1 ∀ .1 ▼ % ∀ .1 ▼	0 0.0 0.0 0.0 0 0.0	16000 320.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4	Image: Second state     Enabled	Engine Speed_1 Oil_Press Fuel_Level Turning_light Hi_beam	ז ו ו ו ו	No_Mem No_Mem No_Mem No_Mem No_Mem No_Mem	Engine revolution speer Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V	× × × ×	rpm km/h .1 V .1 ▼ % V .1 ▼ V .1 ▼	0 0.0 0.0 0 0 0 0.0 0 0 0.0	16000 320.0 5.0 100 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5	Image: Enabled	Engine Speed_1 Oil_Press Fuel_Level Turning_light Hi_beam Channel_5	ז ו ו ו ו ו ו ו ו ו ו ו ו ו ו ו ו ו ו ו	No_Mem No_Mem No_Mem Vo_Mem Vo_Mem Vo_Mem No_Mem	Engine revolution speer Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	× × × ×	rpm km/h .1 ∀ .1 ▼ % ∀ .1 ▼ ∀ .1 ▼ ∀ .1 ▼	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	16000 320.0 5.0 100 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6	Image: Constraint of the second se	Engine Speed_1 Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6		No_Mem           No_Mem           No_Mem           No_Mem           No_Mem           No_Mem           No_Mem	Engine revolution speer Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	× × × × ×	rpm       km/h .1       V .1	0 0.0 0.0 0 0.0 0.0 0.0 0.0	16000 320.0 5.0 100 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_6 CH_7	Image: Constraint of the second se	Engine Speed_1 Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7		Vo_Mem	Engine revolution speer Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	• • • • •	rpm       km/h .1       V .1       %       V .1	0 0.0 0 0 0 0 0.0 0.0 0.0 0.0 0.0 0.0	16000 320.0 5.0 100 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_3 CH_4 CH_5 CH_6 CH_6 CH_7 CH_8	Image: Constraint of the second se	Engine Engine Speed_1 Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7 Channel_8		No_Mem           No_Mem           Vo_Mem           Vo_Mem           Vo_Mem           Vo_Mem           Vo_Mem           Vo_Mem           Vo_Mem           Vo_Mem	Engine revolution speer Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	• • • • •	rpm       km/h .1       V .1       %       V .1	0 0.0 0.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	16000 320.0 5.0 100 5.0 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_6 CH_7 CH_8 CALC_GEAR	Image: Second	Engine Speed_1 Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7		No_Mem	Engine revolution speer Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Calculated Gear	• • • • •	rpm           km/h .1           V .1         ×           %            V .1         ×           V .1         ×	0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_6 CH_7 CH_8 CALC_GEAR	Image: Constraint of the second se	Engine Engine Speed_1 Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7 Channel_8		No_Mem	Engine revolution speer Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	• • • • •	rpm            km/h .1         ¥           V .1         ¥           %         ¥           V .1         ¥	0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7 CH_8 CALC_GEAR LOG_TMP	Image: Second	Engine Engine Speed_1 Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7 Channel_8 Calculated_Gear		No_Mem           Vo_Mem	Engine revolution speer Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Calculated Gear	• • • • •	rpm           km/h .1           V .1         ×           %            V .1         ×           V .1         ×	0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_7 CH_8 CALC_GEAR	Image: Second	Engine Engine Speed_1 Oil_Press Fuel_Level Turning_light Hi_beam Channel_5 Channel_6 Channel_7 Channel_7 Channel_8 Calculated_Gear Datalogger_Temp		No_Mem         No_Mem           No_Mem         No_Mem	Engine revolution speer Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Calculated Gear Cold joint	• • • • •	rpm            km/h .1         ¥           V .1         ¥	0 0.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5000 320.0 5.0 100 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5

In case an MXL Pista is being configured, this window appears:

	Transmit	Receive	<b>*</b>	CAN-Net in	1fo 🚳	Set acquisition sys time	tem		
urrent configura	ation								
Installation nam	e Data logger type	e Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master freque	ncy Expansions freq.	Tot. Expansion
DEFAULT	MXL PISTA	SUZUKI - GSXR	DEFAULT	14.15.26 (h.m.s)	4.47.30 (h.m.s)	81 (Hz)	81 (Hz)	0 (Hz)	0
	erence (mm) 74	7							
Channeliden	Enabled/disabled	Channel name	c	iampling fregu	Sensor type		Measure unit	Low scale	High scale
Channel Iden.							riousaro anic	Lott Scalo	nign scale
	Enabled	Engine			Engine revolution spee	ed 💦	rpm		nigh scale 16000
RPM	Enabled	Engine Speed_1	1	<mark>0 Hz 🗾</mark>			rpm km/h.1	0 1	
RPM SPD_1	Enabled Enabled Enabled		1	0 Hz 🗾	Engine revolution spee	• •	rpm km/h.1 V.1 _	0 1 0.0 3	16000
RPM	Enabled	Speed_1	1 1 1	0 Hz 🗾 0 Hz 🗾 0 Hz 🖃	Engine revolution spee Speed	• •	<mark>rpm</mark> km/h.1	0.0 3 0.0 5	16000 320.0
RPM SPD_1 CH_1	Enabled Enabled Enabled	Speed_1 Oil_Press	1 1 1 1	0 Hz 0 Hz 0 Hz 0 Hz 0 Hz 0 Hz 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Engine revolution spee Speed Generic linear 0-5 V	u U U	rpm   km/h .1   V .1 _▼   %	0 1 0.0 3 0.0 5 0.0 1	16000 320.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3	Enabled       Enabled       Enabled       Enabled       Enabled       Enabled	Speed_1 Oil_Press Fuel_Level	1 1 1 1 1 1	0 Hz 0 Hz 0 Hz 0 Hz 0 Hz 0 Hz 0 Hz 0 Hz 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Engine revolution spee Speed Generic linear 0-5 V Fuel level	u U U	rpm   km/h .1   V .1 •   %   V .1 •	0 1 0.0 2 0.0 5 0.0 1 0.0 5	16000 320.0 5.0 100
RPM SPD_1 CH_1 CH_2	Enabled       Enabled       Enabled       Enabled       Enabled       Enabled	Speed_1 Oil_Press Fuel_Level Channel_3	1 1 1 1 1 1 1	0 Hz 0 Hz 0 Hz 0 Hz 0 Hz 0 Hz 0 Hz 0 Hz 1 1 1 1 1 1 1 1 1 1	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V		rpm km/h .1 V .1 % V .1 V .1 V .1 V .1 V .1 V .1 V .1	0 0 0 0.0 0 0.0 0 0 0 0.0 5 0.0 5	16000 320.0 5.0 100 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4	Image: Enabled	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4	1 1 1 1 1 1 1 1 1	0 Hz         •	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V	× × × ×	rpm km/h .1 V .1 % V .1 V .1 V .1 V .1 V .1 V .1 V .1	0 0 0.0 5 0.0 5 0.0 5 0.0 5 0.0 5	16000 320.0 5.0 100 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6	F     Enabled       F     Enabled       Enabled     Enabled       Disabled     Disabled       Disabled     Disabled	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5	1 1 1 1 1 1 1 1 1	0 Hz         •	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	× × × ×	rpm           km/h .1           V .1           %           V .1	0 0 0 0.0 0 0 0 0 0.0 0 0.0 5 0.0 5 0.0 5	16000 320.0 5.0 100 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_6 CH_7	Image: Second	Speed_1 Ol_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6	1 1 1 1 1 1 1 1 1 1 1	0 Hz         •	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	• • • • • •	rpm       km/h       V	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	16000 320.0 5.0 100 5.0 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_6 CH_6 CH_7 CH_8	Image: Construction     Image: Construction       Imag	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6 Channel_7	1 1 1 1 1 1 1 1 1 1 1 1	0 Hz         ▼	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	• • • • • •	rpm       km/h       V	0         3           0.0         3           0.0         3           0.0         3           0.0         3           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5	16000 320.0 5.0 100 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5
RPM SPD_1 CH_1 CH_2 CH_3 CH_3 CH_4 CH_5 CH_5 CH_6 CH_7 CH_8 CALC_GEAR	Image: Second	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 Hz         ×	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V	• • • • • •	rpm         rpm           km/h .1         v           V .1         v	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	16000 320.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_5 CH_6 CH_7 CH_8 CALC_GEAR ACC_1	Image: Second	Speed_1 Oil_Press Fuel_Level Channel_3 Channel_5 Channel_6 Channel_7 Channel_8 Calculated_Gear		0 Hz         ×	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Calculated Gear	• • • • • •	rpm         rpm           km/h .1         v           V .1         v           V.1         v           g.01         v	0         3           0.0         5	16000 320.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 9
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5	Image: Second	Speed_1 OI_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8 Calculated_Gear LatAcc		0 Hz         -	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Generic linear 0-5 V Calculated Gear Lateral accelerometer	• • • • • •	rpm         rpm           km/h .1         v           V .1         v           V.1         v           g.01         v	0         3           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0.0         5           0         5           0         5	16000 320.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
RPM SPD_1 CH_1 CH_2 CH_3 CH_4 CH_5 CH_5 CH_6 CH_7 CH_7 CH_8 CALC_GEAR ACC_1 LOG_TMP	✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Enabled       ✓     Enabled       Disabled     Disabled       Disabled     Disabled       Disabled     Disabled       Disabled     Disabled       Disabled     Disabled       Øisabled     Disabled       Øisabled     Disabled       Øisabled     Disabled	Speed_1 OI_Press Fuel_Level Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Channel_8 Calculated_Gear LatAcc Datalogger_Temp		0 Hz         -           Hz         -	Engine revolution spee Speed Generic linear 0-5 V Fuel level Generic linear 0-5 V Generic linear 0-5 V Calculated Gear Lateral accelerometer Cold joint	• • • • • •	rpm           km/h .1           V .1         ×           V .1         ×	0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	16000 320.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 9 3.00 50

Both show the channels sampled by the logger and speed panel – labelled "Speed" and highlighted in the figures above.

**Note**: additional channels are disabled by default. Refer to **Race Studio Configuration** user manual for further information concerning their configuration.



**Speed panel**: Suzuki GSX-R speed sensor is installed on the jackshaft that connects the gearbox to the pinion. The number of magnets installed on this jackshaft is 4. The wheel circumference used in this panel is an "Equivalent Circumference" computed using this formula:

$$EquivCircumf = \frac{WheelCircumf * Np}{Nc}$$
Np = pinion teeth number  
Nc = Crown teeth number

Using default values computed for a Suzuki GSX-R750, the equivalent circumference value is 801.4 mm (31.55 inches). Changing the pinion or the crown with one that has a different teeth number equivalent circumference needs to be re-computed. For further information on this computation refer to the related chapter of this user manual.

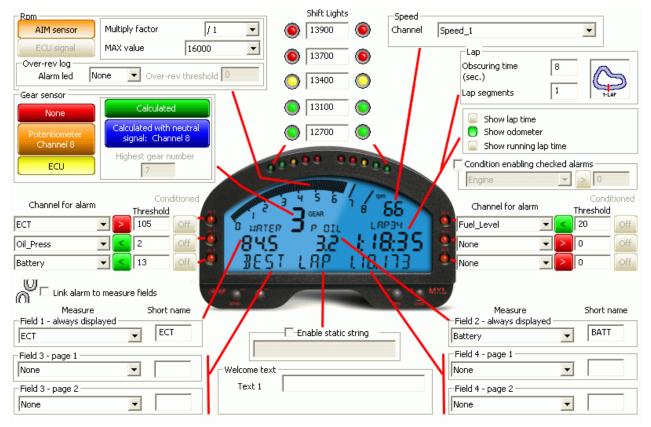


#### It is now necessary to configure MXL display.

#### Select "System configuration" layer:

2	] Trans	nit 🛛	B Receive	<b>*</b>	CAN-Net info	, 🚺 🚳 S	et acquisition sys time	tem		
	nt configuration	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansions
DEFA			SUZUKI - GSXR		14.15.26 (h.m.s)	4.47.30 (h.m.s)	81 (Hz)	81 (Hz)	0 (Hz)	0
Sele	et configuration			1	1					-
	ect configuration	Channel System		Expansions configural	tor	mport	Export			
		Channel System	configuration   IAN-	Expansions configural	tor		Export	Vehicle r		Split Speed
Seler N	New	Channel System	configuration IAN- Delete	Expansions configural	tor	mport	Export	Vehicle	name Obs	

The window below appears. Default values are different depending on the model of MXL selected while creating the configuration.



Set fields are: RPM, Shift lights, speed, lap, some alarms and the gear sensor.



**RPM**: high scale value is set on 14000 RPM.

Lap: obscuring time: 8 seconds and number of segments: 1 (no split times).

**Shift lights**: each displacement has different threshold values, computed considering the stock engine limiter threshold value. In case the bike limiter has a threshold value higher than the stock one, default values need to be modified so that the last red light switches on just before limiter intervention.

Default visualization is:

- ECT: water temperature alarm threshold values: ">" (max) 90°C; "<" (min) 50°C.
- **ODOMETER**: run kilometres. This default setting changes automatically once on the track (with infrared transmitter and receiver). The logger, in fact, switches on "Show lap time" if detects a lap signal. Switching OFF/ON the logger it shows again odometer.

**Note**: refer to **Race Studio Configuration** user manual for further information about the modification and customization of sampled channels.

The configuration is now ready to be transmitted to **MXL**: press "Transmit" button on the software top keyboard.



# 7.1 – Gear Calibration

Gear calibration is the last step to finish system configuration; it is to perform only in case the default one does not allow visualization of the correct engaged gear number and can be done only through a PC with Microsoft Windows XP or Microsoft Window Vista 32 bit operating system and **Race Studio 2** software (included in the kit).

The logger needs to be connected to the PC using the proper USB cable included in the kit.

Connect **MXL** to the PC and switch both on (firstly the PC and then **MXL**); run **Race Studio 2** and follow this procedure:

- press "AIM System manager" button on the left vertical keyboard and select "MXL" on the panel that appears right of the vertical keyboard (MXL Strada/MXL Pista Susuki GSX-R).
- press "Calibration" button on the menu bar or on the vertical keyboard (highlighted in the figure below).

	📓 System manager								
Racing Data Power	Transmit	Receiv	/e 📢	CAN-Net info	, 🚳 <sup>s</sup>	et acquisition sys time	tem		
AIM Sportline	Current configuration			Q					
le world ceader in Data Acquisition	Installation name Data la	ogger type Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansion:
	DEFAULT MXL P	ISTA SUZUKI - GSXR_	DEFAULT	14.15.26 (h.m.s)	4.47.30 (h.m.s)	81 (Hz)	81 (Hz)	0 (Hz)	0
Download data	N Installation name	Logger			ECU Manufactur	er ECU Model	Vehicle	name Obs	Split Speed
<b>7</b>	🛟 New	Delete	2 Clone		import	Export			
	To shall shine a second				ECH Man faster	an ECLIMANIA	() a biala		Colle Conned
	1 DEFAULT	MXL PISTA SUZUKI GSX	R 750 2006-2007	(WIRING 04.554.54)		GSXR_K5_K6	DEFAUL		1 km/h
AIM system manager	2 DEFAULT			(WIRING 04.554.55)		GSXR K5 K6	DEFAUL		1 km/h
Aim system manager									
AIM system identification									
🗐 Online									

This window appears: press "calibrate" button corresponding to the sensor to calibrate (in this case gear potentiometer).

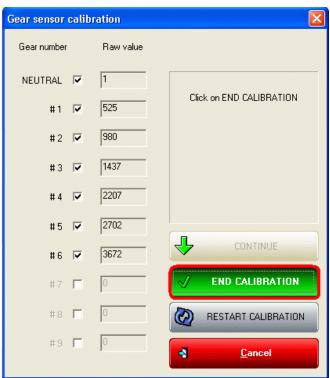
sensor calibration				
	Configuration name LOGGER_CONF		System type MXL PISTA	
Sensors to autocalibrat	te			here to autocalibrate all sensors in the list
Chan	Channel name	Sensor type	Status	Click here to calibrate
Sensors to calibrate	Channel name	Sensor type	Status	Click here to calibrate
CH_8 Gear		Gear potentiometer	Calibrated	Calibrate
	<b>v</b>	Transmit calibration	<b>▲</b> <u>C</u> ancel	



#### Calibration panel appears.

Gear se	ensor	calib	ation	
Gear r	number		Raw value	
NEU	RAL		4096	
	#1	•	1516	Check radio button correspondig with your higher gear number
	#2	•	1920	then click on CONTINUE.
	#3	•	2580	
	#4	•	3056	
	#5	•	3620	
	#6	•	3899	
	#7		0	END CALIBRATION
	#8		0	RESTART CALIBRATION
	#9		0	<b>A</b> <u>C</u> ancel

- Select the higher gear number enabling the corresponding checkbox and press "CONTINUE".
- engage one by one all gears, also with the engine off but with the ignition on and click on "CONTINUE" after each gear, as for the instruction that appears on the panel right to "raw value" column.
- When calibration is over the window below appears. Press "END CALIBRATION".





 The system comes back to the previous window and shows sensor status "calibrated" in red and "Transmit calibration" button enabled. Press it to transmit the calibration to the logger.

Warning: the configuration transmitted to the logger is not automatically stored in the software configurations database. This means that, once transmitted to the logger, the configuration is not inserted in the available configurations database.

#### 7.1.1 – Saving the configuration with calibrated gears

To save the new configuration with calibrated gears in **Race Studio 2** configurations database, activate "Select Configurations" layer and press "Receive" button on the top keyboard.

Tra	nsmit	Receive	<b>\$</b>	CAN-Net info	🚳 S	et acquisition sys time	tem		
urrent configuration							-		
nstallation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansions
EFAULT	MXL PISTA	SUZUKI - GSXR	DEFAULT	14.15.26 (h.m.s)	4.47.30 (h.m.s)	81 (Hz)	81 (Hz)	0 (Hz)	0
-		Delete	Expansions configurat		mport	Export			
New	s and a second s		•		mport	1	Vehicle r	name Obs	Split Speed
🗘 New	s and a second s	Delete	🧘 Clone		ECU Manufactur	1	CONTRACTOR CONTRACTOR		Split Speed

The configuration of the logger connected to the PC, previously transmitted, is received, saved as the last one on bottom of available configurations database and highlighted in yellow.

📓 System mana	ger								
Current configuration	nsmit	] Receive		CAN-Net info	<b>o</b> s	et acquisition sysl time	tem		
Installation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master frequency	Expansions freq	Tot. Expansions
DEFAULT	MXL STRADA	SUZUKI - GSXR		10.29.54 (h.m.s)	4.16.37 (h.m.s)	110 (Hz)	110 (Hz)	0 (Hz)	0
Select configuratio	n Channels System	configuration CAN-	Expansions configural	tor ]					
			~	· · · · · · · · · · · · · · · · · · ·			ſ		
🗘 Nev	· S	Delete	🧾 Clone	T II	mport 😽	Export			
N Installation	name Logger				ECU Manufactur	er ECU Model	Vehicle	name Obs	Split Speed
1 DEEALILT	MXL PISTA	SUZUKI GSXR 3	50 2006-2007 (V	WIRING 04 554 54)		GSXR K5 K6			1 km/b -
2 DEFAULT	MXL STRA	DA SUZUKI GSXR 1	000 2007-2008 (V	VIRING 04.554.55)	🖃 SUZUKI	GSXR_K7_K8	DEFAUL	LT 8	1 km/h 🔳
				<b>t</b>					
				$\mathbf{N}$					

**Note**: for any further information concerning **Race Studio 2** installation and configuration refer to the related user manual.



# 8 – Equivalent circumference compute

The equivalent circumference can be computed using "Bike.exe" software, included in **Race Studio 2** CD, utilities folder. Browse the CD and double click on "Bike.exe" icon.

Fill in "Drive gear teeth number".Fill in "Driven gear teeth number".Select the circumference unit of measure.Fill in the circumference value.Press "Compute".



🏭 GSX-R SUZUKI	
	Drive gear teeth 16 number
	Driven gear teeth number
	Circumference C inch @ mm
	COMPUTE EXIT
	Equivalent Circumference

Speed\_1 Wheel circumference (mm) 778 Pulses per wheel revolution 4

The software computes the equivalent circumference value and shows it in the related cell (red circled here on the right).

Fill in this value in the related case of **Race Studio 2** "Channels" layer.



# 9 – TPS Sensor configuration

After having installed the sensor on the bike (see the related chapter for further information), it is necessary to calibrate it so that it samples correct data.

This procedure can be performed only using a PC with Microsoft Windows Xp or Microsoft Windows Vista 32 bit operating system and **Race Studio 2** software (included in the kit).

The logger needs to be connected to the PC through the USB cable supplied with the kit and switched on.

Run **Race Studio 2** software and press "AIM system manager" button on the left vertical keyboard. Select "MXL" on the panel that appears right of the vertical keyboard.

To set TPS sensor on a channel follow this procedure.

- Activate "Channels" layer.
- Select the channel where the sensor has been physically installed on.
- Enable the checkbox corresponding to it in "Enable/Disable" column.
- Set, if desired, a channel name.
- Select "Zero based potentiometer" in the drop down menu of "Sensor Type" column.
- Set the desired unit of measure in "Unit" column
- Set high scale value (recommended 110%)
- Press "Transmit" button on the top keyboard to transmit the configuration to the logger.

Speed_1	MXL PISTA	SUZUKI - GSXR DEF			Total frequency 91 (Hz)	Master frequer 91 (Hz)	ncy Expansions fre 0 (Hz)	eq Tot. Expansion 0
	ation Channels Sy	tom configuration   CAN-Expa		(initia) 4.00.00 (initia)	01 (12)	01(12)	0 (12)	0
Speed_1			nsions configurator					
Speed_1			nsions configurator					
	erence (mm) 74	_						
Wheel circumfe	erence (mm) 74	_						
Wheel circumfe	erence (mm) /4							
Dulcos por ulta	el revolution 4	- \						
Fuises per Whe								
								1
	Enabled/disabled	Channel name		equ Sensor type		Measure unit	Low scale	High scale
RPM	🔽 Enabled	Engine	10 Hz	Engine revolution speed		rpm	0	16000
SPD_1	Enabled	Speed_1	10 Hz	Speed		km/h .1	0.0	320.0
CH_1	Enabled	Oil_Press	10 Hz	🗾 Generic linear 0-5 V			0.0	5.0
СН_2	Enabled	Fuel_Level	10 Hz	Fuel level	*	%	0	100
CH_3	🔽 Enabled	Sensore_TPS	10 Hz	Zero based potentiomet	.er 🗾	%.1 💌	0.0	110.0
u <u>r</u>	- Disabled	channel_+	10112	senencinear oro v		v .1	0.0	5.0
	Disabled	Channel 5	10 Hz	ric linear 0-5 V	-	V .1	0.0	5.0
CH_5	Disableu							
CH_5 CH_6	Disabled	Channel_6	10 Hz	🗾 Generic linear 0-5 V	<b>•</b>	V .1 💌	0.0	5.0
			10 Hz 10 Hz				0.0	
CH_6 CH_7	Disabled	Channel_6		🖃 Generic linear 0-5 V		V.1 💌		5.0
СН_6 СН_7 СН_8	Disabled	Channel_6 Channel_7 Channel_8	10 Hz	<ul> <li>✓ Generic linear 0-5 V</li> <li>✓ Generic linear 0-5 V</li> <li>✓ Generic mear 0-5 V</li> </ul>	•	V.1 💌	0.0	5.0 5.0
CH_6 CH_7 CH_8 CALC_GEAR	Disabled Disabled Disabled	Channel_6 Channel_7	10 Hz 10 Hz	Generic linear 0-5 V     Calculated Gear		V.1 .1	0.0   0.0	5.0 5.0 5.0
CH_6 CH_7 CH_8 CALC_GEAR ACC_1	Disabled Disabled Disabled Disabled Disabled	Channel_6 Channel_7 Channel_8 Calculated_Gear LatAcc	10 Hz 10 Hz 10 Hz	Generic linear 0-5 V     Generic linear 0-5 V     Generic linear 0-5 V     Generic linear 0-5 V     Calculated Gear     Lateral accelerometer	- -	V .1 • V .1 • # g .01	0.0 0.0 -3.00	5.0 5.0 9
CH_6 CH_7 CH_8 CALC_GEAR ACC_1 LOG_TMP	<ul> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Enabled</li> <li>Enabled</li> <li>Enabled</li> </ul>	Channel_6 Channel_7 Channel_8 Calculated_Gear LatAcc Datalogger_Temp	10 Hz 10 Hz 10 Hz 10 Hz 10 Hz	Generic linear 0-5 V     Gelulated Gear     Lateral accelurometer     Cold joint		V .1 . V .1 . # g .01 °C .	0.0   0.0   0   -3.00   0	5.0 5.0 9 3.00 50
СН_6 СН_7 СН_8	<ul> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Vector Enabled</li> </ul>	Channel_6 Channel_7 Channel_8 Calculated_Gear LatAcc	10 Hz 10 Hz 10 Hz 10 Hz	Generic linear 0-5 V     Generic linear 0-5 V     Generic linear 0-5 V     Generic linear 0-5 V     Calculated Gear     Lateral accelerometer	-	V .1 ▼ V .1 ▼ # g .01 °C ▼ V .1	0.0 0.0 -3.00	5.0 5.0 5.0 9 3.00



When TPS sensor has been set on a channel, it needs to be calibrated. Click on "Calibration" button on the left vertical keyboard or on the menu bar (red circled in the figure below).

Racing Data Power		nager	and the second second second							
	Т	'ransmit	Receive		CAN-Net i	nfo 🚳 S	et acquisition sys time	tem		
AIM Sportline World Leader in Data Acquisition	Current configurat	ion						_		
world ceader in Data Acquisition	Installation name	Data logger type	Ecu	Vehicle name	Available time	Time with GPS	Total frequency	Master freque	ncy Expansions freq	Tot. Expansion
	DEFAULT	MXL STRADA	None - None	DEFAULT	0.00.00 (h.m.s)	7.13.04 (h.m.s)	0 (Hz)	0 (Hz)	0 (Hz)	0
Download data		erence (mm) 801. rel revolution 4								
Aim system manager	Channel iden	Enabled/disabled	Channel name		Sampling frequ	Sensor type		Measure unit	Low scale	High scale
	RPM	🔽 Enabled	Engine		No_Mem	Engine revolution spee	ł	rpm	0	20000
	SPD_1	Enabled	Speed_1		No_Mem	Speed		km/h .1		250.0
AIM system identification	CH_1	Enabled	Water_Temp_ECT		No_Mem	Water Temp Suzuki GS				150
	CH_2	Disabled	Channel_2_free		No_Mem	Generic linear 0-5 V	<u>•</u>			5.0
	CH_3	Enabled	Oil_Press_signal		No_Mem	Oil Press Suzuki GSXR		bar .1		5.0
		Disabled	Channel_4_free		No_Mem	Generic linear 0-5 V	<u>•</u>			5.0
Online	CH_4	E = 11.1						#	0	
Online	CH_S	Enabled	Fuel_level		No_Mem	Status signal				50
Online	CH_5 CH_6	🔽 Enabled	Turning_light		No_Mem	Status signal		#	0	1000
	CH_5 CH_6 CH_7	Enabled	Turning_light Hi_beam		No_Mem No_Mem	Status signal Status signal		#	0 0	1000 50
Online AIM system calibration	CH_5 CH_6 CH_7 CH_8	Enabled     Enabled     Enabled     Enabled	Turning_light Hi_beam Gear_pot		No_Mem No_Mem No_Mem	Status signal Status signal Gear potentiometer		# #	0 0 0	1000 50 50
	CH_5 CH_6 CH_7	Enabled	Turning_light Hi_beam		No_Mem No_Mem	Status signal Status signal		# # #	0 0 0 0	1000 50

#### This window appears.

or calibratior						
	Configuration name	e	System type			
	LOGGER_CONF		MXL PIST	ΓΑ		
ensors to autocalit	prate					
			Cli	ck here to autocalibrate all sensors in the list		
Chan	Channel name	Sensor type	Status	Click here to calibrate		
ensors to calibrate <del>Chan</del> CH_6 TPS	Channel name	Ocrean type Zero based potentiometer	Otalas Default value	Click here to calibrate Calibrate		
Chan CH_6 TPS						
Chan CH_6 TPS		Zero based potentiometer	Default value	Calibrate		

Click on "Calibrate" button corresponding to the sensor to calibrate (in this case "Zero based potentiometer").



This window appears:

Sensor calibration		
Channel Name	Sensor type	Measure unit
TPS	Zero based potentiometer	%
	Raw data M Current values 1	1easure 0.0
	Get Raw Value 3669	100
	Get Raw Value	0
	your sensor: or right) reference position and click on <get raw="" td="" va<=""><td>lue&gt; proper</td></get>	lue> proper
2 - Maintain your sensor in zero ( button.	or rest) reference position and click on <get raw="" td="" val<=""><td>ue&gt; proper</td></get>	ue> proper
3 - Insert measure values corresp	oondent to above indicated reference positions.	
Click <0K> button.		~
,	OKCancel	

Follow the instruction that appears on the PC monitor.

- with the gas completely opened press "Get raw data" button corresponding to High Position.
- with the gas in its zero position press "Get raw data" button corresponding to Zero position.
- Match raw data with custom values to insert in "Measure" box. For example match raw data sampled with gas completely opened with 100 value and raw data sampled with gas closed to "0" value.
- Press "OK"
- The system comes back to the previous window.



The window shows sensor status turned to "calibrated" in red and "Transmit calibration" button enabled. Pressing it the calibration is transmitted to the logger.

nsor calibrati	ion				
	Configuration name	System t MXL PIS	stem type		
Sensors to autoc		]	DIRSE FIG		
			C	lick here to autocalibrate all sensors in the list	
Chan	Channel name	Sensor type	Status	Click here to calibrate	
Sensors to calibr.	ate Channel name	Sensor type	Status	Click here to calibrate	
	Channel name	Sensor type Zero based potentiometer	Status Calibrated	Click here to calibrate	
Chan	Channel name				
Chan	Channel name				

Warning: the configuration with TPS sensor calibrated, once transmitted to the logger, is not saved in Race Studio 2 configurations database. This means that to have it stored it is necessary to receive it as previously explained.



## 10 – Channels

Default channels setting of MXL Strada/MXL Pista for Suzuki GSX-R is:

#### MXL Strada Suzuki GSX-R K5 (wiring code 04.554.55)

Channel identification	Channel name	Function		
Channel identification	Channel name	Function		
RPM	Engine	RPM Value		
SPD_1	Speed1	Speed Value		
Ch_1	Oil_Press	Oil Pressure		
Ch_2	Fuel_level	Fuel level		
Ch_3	Turning_Light	Turning_Lights ON/OFF		
Ch_4	Hi_Beam	High Beam ON/OFF		
Ch_5	Channel_5	Free Channel		
Ch_6	Channel_6	Free Channel		
Ch_7	Channel_7	Free Channel		
Ch_8	Channel_8	Free Channel		
LOG_TMP	Datalogger_Temp	Logger internal temperature		
BATT	Battery	Battery voltage		
ECU1	ECT	Temperature Sensor		
ECU2	Gear	Gear Sensor		

#### MXL Pista Suzuki GSX-R K5 (wiring code 04.554.54)

Channel identification	Channel name	Function
RPM	Engine	RPM Value
SPD_1	Speed1	Speed Value
Ch_1	Oil_Press	Oil Pressure
Ch_2	Fuel_level	Fuel level
Ch_3	Channel_3	Free Channel
Ch_4	Channel_4	Free Channel
Ch_5	Channel_5	Free Channel
Ch_6	Channel_6	Free Channel
Ch_7	Channel_7	Free Channel
Ch_8	Channel_8	Free Channel
Acc1	LatAcc	Lateral Accelerometer
LOG_TMP	Datalogger_Temp	Logger internal temperature
BATT	Battery	Battery voltage
ECU1	ECT	Temperature Sensor
ECU2	Gear	Gear Sensor



#### MXL Strada Suzuki GSX-R K5 (wiring code 04.554.14)

Channel identification	Channel name	Function		
RPM SPD_1 Ch_1 Ch_2 Ch_3 Ch_4 Ch_5 Ch_6 Ch_7 Ch_8 LOG_TMP	Engine Speed1 Water_Temp_ECT Channel_2_free Oil_Press_signal Channel_4_free Fuel_level Turning_Light Hi_beam Gear_Pot Datalogger_Temp	RPM Value Speed Value Suzuki Water temperature Free Channel Oil Pressure Free Channel Fuel level Turning Lights ON/OFF High Beam ON/OFF Calculated Gear Logger internal temperature		
BATT	Battery	Battery voltage		

#### MXL Pista Suzuki GSX-R K5 (wiring code 04.554.13)

Channel identification	Channel name	Function
RPM SPD_1 Ch_1 Ch_2 Ch_3 Ch_4 Ch_5 Ch_6 Ch_7 Ch_8 Acc1 LOG TMP	Engine Speed1 Water_Temp Channel_2 Channel_3 Channel_4 Channel_5 Channel_6 Channel_7 Gear LatAcc Datalogger_Temp	RPM Value Speed Value Suzuki Water Temperature Free Channel Free Channel Free Channel Free Channel Free Channel Free Channel Free Channel Calculated Gear Lateral Accelerometer Logger internal temperature
BATT	Battery	Battery voltage

ī

According to the wiring you got, free channels can be freely configured to connect additional sensors like suspension potentiometers, brake and pressure sensors, etc.

Note: for further information concerning additional sensors installation and configuration refer to **Race Studio Configuration** and to **MXL** user manual.



# **11 – Data download and analysis**

Once a test session is over it is possible to download data stored in the logger memory and save them in a database.

**Note**: data download and analysis is only available on **MXL Pista**. For further information on these subjects refer to the related user manuals.



## 12 – MXL expansions

Thanks to the wide range of AIM products, expressly dedicated to the needs of any biker, **MXL** is a modular and expandable system.

#### **GPS Module**

GPS Module allows to sample a lot of important information: brake analysis, information concerning the chassis, analysis of the behaviour of the biker in any point of the track.

This allows to view trajectories, the related speed and evaluate driving errors. Exporting all the information on Google Earth® it will thereby be possible to over impose real images to the run trajectories.



LCU-ONE CAN controls and allows to optimize the Stoichiometric ratio (Air/Fuel) with extreme precision.

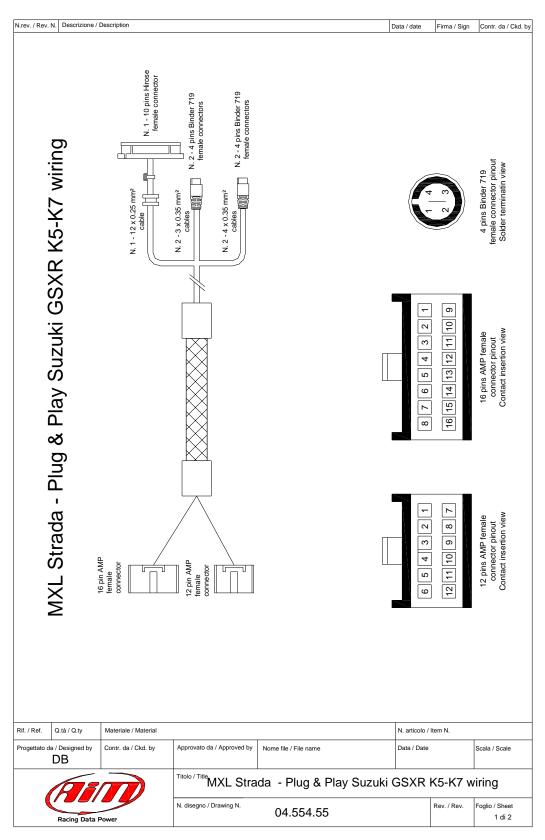
To obtain the maximum engine performance, LCU-ONE uses a wide band Bosch LSU 4.9 probe and can detect punctual Lambda values in a 0.65-1.6 range.







# Appendix "A" – Suzuki GSX-R K5 wiring for MXL Strada with code 04.554.55 and MXL Pista with code 04.554.54





N.rev. / Rev. N. Descrizione / Description

Data / date Firma / Sign Contr. da / Ckd. by

Label	Binder pin	Cable colour	Cable type	AMP 12 pin	AMP 16 pin	Connection	Length
Ch. 5	1 2 2	White Black	3 x 0.35 mm²		16 15	Analog Input 5 Analog GND	300 mm
		3 4 Bleu			14	V Reference	
	1	White			13	Analog input 6	
Ch. 6	2	Black	3 x 0.35 mm²		11	Analog GND	340 mm
	4	Bleu			14	V Reference	
	1	White			12	Analog Input 7	
Ch. 7	2	Black Red	4 x 0.35 mm <sup>2</sup>	9	3	Analog GND +VB	380 mm
	4	Bleu		5	6	V Reference	
	1	White			9	Analog Input 8	
Ch. 8	2	Black	4 x 0.35 mm <sup>2</sup>		7	Analog GND	400 mm
	3	Red Bleu		11	2	+VB V Reference	

#### 10 pins Hirose female connector table

Label	Pin AMP 12 pin	Pin AMP 16 pin	Cable colour	Pin Hirose	Connection	Length
ASG07 o ASG05/A Board	2 12 1 8 4 3	8 5 4 1	Green Red Yellow Brown Black Orange Pink Purple White Bleu	1 2 3 4 5 6 7 8 9 10	Oil P Ch. 1 VB Ext Fuel Ch. 2 Speed GND RPM Tum Ch. 3 High Beam Ch. 4 CAN+ CAN-	440 mm

Rif. / Ref.	Q.tà / Q.ty	Materiale / Material			N. articolo /	Item N.	
Progettato d	a / Designed by	Contr. da / Ckd. by	Approvato da / Approved by	Nome file / File name	Data / Date		Scala / Scale
I	DВ						
			Titolo / Title Cavo M	XL Strada Plug & Play Su	zuki G	SXR K5	-K7
	Racing Data F	Power	N. disegno / Drawing N.	04.554.55		Rev. / Rev.	Foglio / Sheet 2 di 2



N.rev. / Rev.	N. Descrizione /	Description			C	ata / date	Firma / Sign	Contr. da / Ckd. by
	<b>3SXR K5-K7 wiring</b>	N. 1 - 12 × 0.25 mm <sup>2</sup> cable N. 1 - 10 pins Hirose female connector	N. 4 - 3 x 0.35 mm <sup>2</sup> cables N. 2 - 4 x 0.35 mm <sup>2</sup> ifemale connectors cables N. 2 - 4 x 0.35 mm <sup>2</sup> female connectors female connectors					4 pins - Binder female connector pinout Solder termination view
	L Pista - Plug & Play Suzuki GSXR K5-K7 wiring					8 7 6 5 4 3 2 1	16 15 14 13 12 11 10 9	16 pins AMP female connector pinout Contact insertion view
	MXL Pista -	16 pins AMP female connector	12 pins AMP female connector			6 5 4 3 2 1	1211110987	12 pins AMP female connector pinout Contact insertion view
Rif. / Ref. Progettato d	Q.tà / Q.ty la / Designed by DB	Materiale / Material Contr. da / Ckd. by	Approvato da / Approved by	Nome file / File name		N. articolo / Data / Date		Scala / Scale
	(FI)			ta - Plug & Play Suz	zuki G	SXR k	1	1
	Racing Data I	Power	N. disegno / Drawing N.	04.554.54			Rev. / Rev.	Foglio / Sheet 1 di 2



N.rev. / Rev. N. Descrizione / Description

Data / date Firma / Sign Contr. da / Ckd. by

Label	Binder pin	Cable colour	Cable type	AMP 12 pin	AMP 16 pin	Connection	Length
Ch. 3	1 2	White Black	3 x 0.35 mm <sup>2</sup>		4 7	Analog Input 3 Analog GND	300 mm
	3 4	Bleu	5 x 0.55 mm-		6	V Reference	300 mm
Ch. 4	1 2	White Black		Analog Input 4 Analog GND	340 mm		
	3 4	Bleu	5 x 0.55 mm		2	V Reference	340 mm
Ch. 5	1 2 3	White Black	3 x 0.35 mm²		16 15	Analog Input 5 Analog GND	380 mm
	4	Bleu			14	V Reference	
Ch. 6	1 2 3	White Black	3 x 0.35 mm²		13 11	Analog Input 6 Analog GND	420 mm
	4	Bleu			14	V Reference	
Ch. 7	1 2 3	White Black Red	4 x 0.35 mm²	0	12 13	Analog Input 7 Analog GND +VB	460 mm
	4	Bleu		9	6	V Reference	
Ch. 8	1 2 3	White Black Red	4 x 0.35 mm²		9 7	Analog Input 8 Analog GND +VB	500 mm
	4	Bleu		11	2	V Reference	

### Binder 719 female connector table

#### 10 pins Hirose female connector table

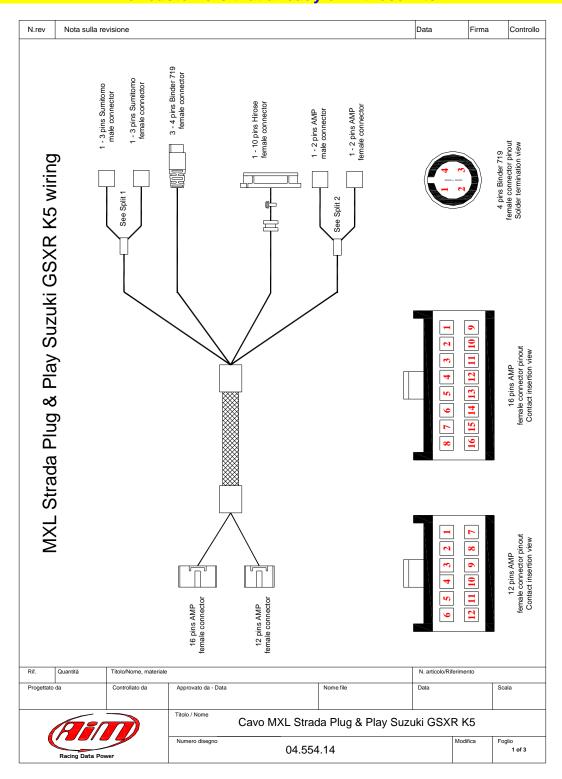
Label	AMP 12 pin pin	AMP 16 pin pin	Cable colour	Hirose pin	Connection	Length
		8	Green	1	Oil P Ch. 1	
	2		Red	2	VB Ext	
		5	Yellow	3	Fuel Ch. 2	
ASC 07 a	12		Brown	4	Speed	
ASG 07 o ASG 05/A	1		Black	5	ĠND	540 mm
Board	8		Orange	6	RPM	540 mm
Duaru				7	n.c.	
				8	n.c.	
	4		White	9	CAN+	
	3		Bleu	10	CAN-	

Rif. / Ref.	Q.tà / Q.ty	Materiale / Material			N. articolo /	Item N.	
Progettato da	a / Designed by	Contr. da / Ckd. by	Approvato da / Approved by	Nome file / File name	Data / Date		Scala / Scale
[	DВ						
	<b>F</b>		Titolo / Title MXL Pis	ta - Plug & Play Suzuki G	SXR K	(5-K7 wi	ring
<b>K</b>	Racing Data F		N. disegno / Drawing N.	04.554.54		Rev. / Rev.	Foglio / Sheet 2 di 2

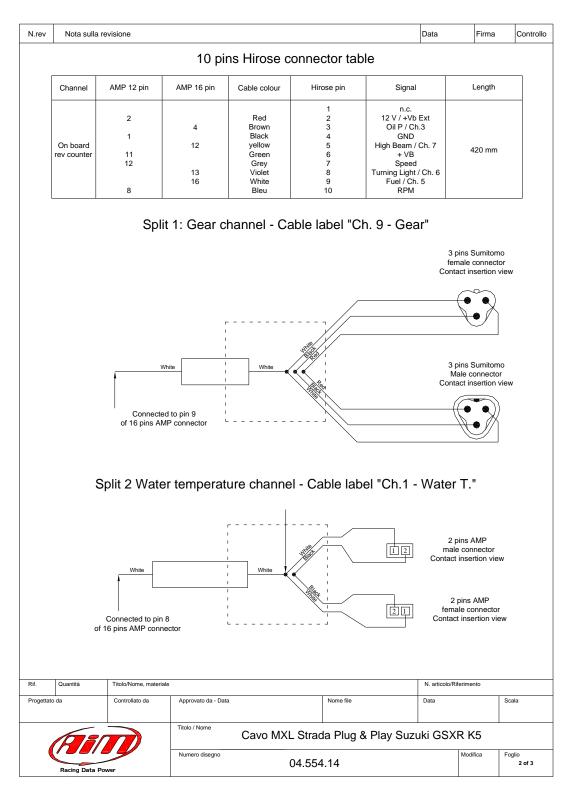


# Appendix "B" – Suzuki GSX-R K5 wiring for MXL Strada with code 04.554.14 and MXL Pista with code 04.554.13

#### WARNING: kits whose wiring identification codes are 04.554.14 (for MXL Strada) and 04.554.13 (for MXL Pista) are not produced anymore: this chapter - like these concerning MXL Installation and configuration - have just an explicative function for customers that already own these kits.







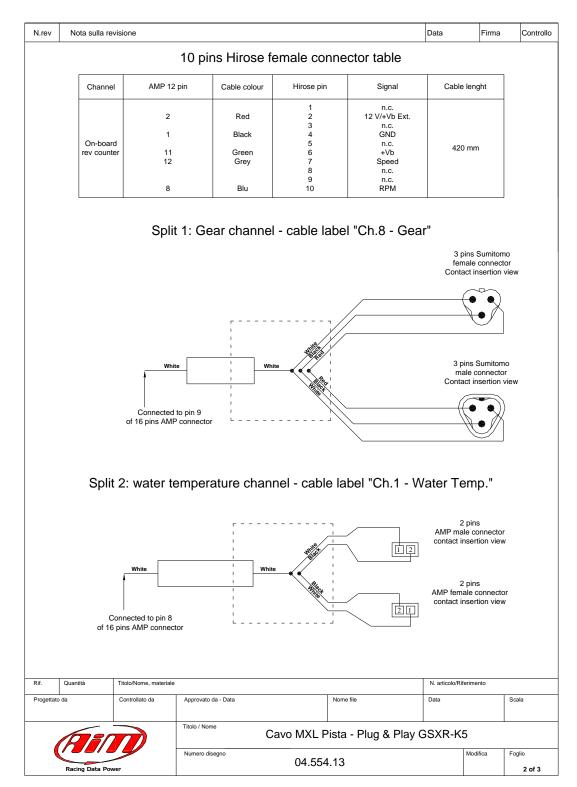


l.rev	Nota su	lla revisione				Data	Firma	Contro
			4 pii	ns Binder 719	connector tabl	e		
[	Channel	Binder pin	Cable colour	AMP 12 pin	AMP 16 pin	Connection	Length	
	Ch. 2	1 2 3 4	White Black Rosso Bleu	9	5 7 6	Analog input 2 Analog GND V reference	330 mm	
	Ch. 4	1 2 3 4	White Black Rosso Bleu	9	1 3 2	Analog input 4 Analog GND + VB V reference	380 mm	
-	USB	1 2 3 4	White Black Rosso Bleu	10 7	10	USB D+ GND USB D-	1080 mm	
if.	Quantità	Titolo/Nome,				N. articoloRife	rimento	
Rif.		Titola/Nome, Controllato d	a Approvato da		Nome file	N. articolo®ite	rimento Scal	ia
				Cavo MX	Nome file	Play Suzuki GSXF	Scal	



N.rev	Nota sulla re	visione					Data	Firma	Controllo
GSX-R K5 wiring	1 - 3 pins Sumitomo	See Split 1 1 - 3 pins Sumitomo female connector	T - 4 pins Binder 719	1 - 10 pins Hirose female connector	1 - 2 pins AMP male connector See Split 2 1 - 2 pins AMP female connector				female connector prior solder termination view
MXL Pista - Plug & Play Suzuki GSX-R K5 wiring							8 7 6 5 4 3 2 1	16 15 14 13 12 11 10 9	16 pins AMP female connector pinout Contact insertion view
MXL P			16 pins AMP female connector	12 pins AMP female connector			6 5 4 3 2 1	12 11 10 9 8 7	12 pins AMP female connector pinout Contact insertion view
Rif.	Quantità	Titolo/Nome, material	•				N. articolo/Rif	erimento	
Progettato	da	Controllato da	Approvato da - Data		Nome file		Data		Scala
	6		Titolo / Nome		XL Pista - Plug & I		SYP	5	
(	(PB)		Numero disegno			ay G		Modifica	Foglio
	Racing Data Pov	VEP		04	.554.13				1 of 3









Nota su	lla revisione				Data	Firma	
		Binde	er 719 female	connector tab	le		
Channel	Binder pin	Cable colour	AMP 12 pin	AMP 16 pin	Connection	Lenght	
	1 2	White Black		5 7	Analog input 2 Analog GND		
Ch. 2	3 4	Red Bleu		6	V Reference	330 mm	
	1 2	White Black		4 3	Analog input 3 Analog GND	+	
Ch. 3	3 4	Red Bleu		6	V Reference	330 mm	
	1	White		1	Analog input 4		
Ch. 4	2 3	Black Red	9	3	Analog GND +VB	380 mm	
	4	Bleu		2	V Reference		
	1 2	White Black		16 15	Analog input 5 Analog GND		
Ch. 5	3 4	Red Bleu	9	2	+VB V Reference	380 mm	
	1	White Black		13 15	Analog input 6		
Ch. 6	2 3 4	Red Bleu	11	2	Analog GND +VB V Reference	430 mm	
	1	White		12	Analog input 7		
Ch. 7	2	Black Red	11	11	Analog GND +VB	430 mm	
	4	Bleu		14	V Reference		
USB	1 2 3	White Black Red	10 7	10	USB D+ GND USB D-	1080 mn	
	4	n.c.					
Quantità ato da	Titolo/Nome,		- Data	Nome file	N. articolo/Rife	erimento	
		Titolo / Nome	Cavo	MXL Pista - Plug	& Play GSXR-K5	5	



# Appendix "C" – TPS cable for all MXL kits code 04.550.69

