AiM User Guide

# Kit for EVO4, Solo and SoloDL on Suzuki GSX-R

### Release 1.02



KIT





### 1 Models and years

This user guide explains how to install AiM Solo and SoloDL on Suzuki GSX-R bikes and how to connect EVO4 and SoloDL to the Engine Control Unit (ECU) of the bike. Supported models and years are different for Solo, SoloDL and EVO4.

Brackets for Solo and SoloDL installation are available for the following models/years

•	GSX-R1000	2001-2004 and 2009-2014
•	GSX-R750	2001-2014
•	GSX-R600	2001-2014

EVO4 and SoloDL connecting cable are available for the following model/years:

•	GSX-R1000	2005-2014
٠	GSX-R750	2006-2014
•	GSX-R600	2006-2014

**Please note**: not all combinations are available. With reference to the tables above, no bracket is available for SoloDL on GSX-R 1000 from 2005 to 2008 included.

## 2 Kit content and part number

Here follow part numbers of GSX-R installation kit with bracket and ECU interface cable as well as for ECU interface cables only.



### 2.1 SoloDL kit

SoloDL installation kit is shown here below; part number is: **V02569140CS**.



The kit includes:

- 1 bracket (**1**)
- 1 8x45 pan head Allen screw (2)
- 1 toothed washer (3)
- 2 4x10 Allen screws with countersunk head (4)
- 1 rubber loose piece (5)
- 1 AiM interface cable for Suzuki GSX-R (6)

AiM SoloDL bracket kit for Suzuki GSX-R 1000 2009-2014 can also be bought separately as spare part. Its part number is: **X46KSSGSXR**.



### 2.2 AiM cable for SoloDL

Suzuki GSX-R cable for SoloDL is shown below; its part number is: **V02569140**.



Here below cable constructive scheme is showed.



Suitomo connector pinout Contact insertion view



7 pins Binder 712 male connector pinout Solder termination view



### 2.3 AiM cable for EVO4

Suzuki GSX-R cable for EVO4 is shown below; its part number is: **V02563140**.



The cable has a built in resistor for K Line signal management. Here below cable constructive scheme is showed.



5 pins Binder 712 male connector pinout Solder termination view



### 3 Installation and connection

Here you find the instructions to install Solo and SoloDL and to connect EVO4 and SoloDL to your Suzuki GSX-R bike ECU. EVO4 cable is long enough to allow installation of the logger under the bike seat.

### 3.1 Installation of Solo and SoloDL

As shown here below Suzuki GSX-R bike ignition block can be on the left or on the right of the handle bar hinge:





Fix Solo/SoloDL bracket to the adapter bracket for Suzuki GSX-R using the two countersunk screws you find in the kit.





Screw the 8x45 pan head Allen screw in the toothed washer and screw the rubber loose piece under Suzuki adapter bracket.







Insert the assembled kit in the handle bar hinge until the distance piece abuts the hinge.



Tighten the central screw on the hinge so that this last grips.





#### Hook Solo/SoloDL to its bracket



Fix it using the screws already inserted rear on Solo/SoloDL bracket.







The image here below shows SoloDL correctly installed.





## 3.2 Connection of SoloDL and EVO4 to the bike ECU

To connect EVO4 and SoloDL to the ECU of the bike use the connector you find under the bike seat shown below.

Uplift the bike seat. ECU connector has a black rubber cup as shown here on the right.



Remove the black rubber cup as shown here on the right.





Connect AiM wiring to Suzuki wiring as here on the right.

If you have installed an AiM **EVO4** logger take the cable to the logger.

If you have installed an AiM **SoloDL** make the cable pass along the saddle frame as shown here on the right.

Make the cable pass between the fuel tank and the chassis as in the image on the right.

Please avoid positions where the cable would be exposed to direct heat.









Connect the cable to SoloDL as here on the right.





### 4 Configuring with Race Studio 2

Before connecting SoloDL/EVO4 to the ECU set it up as connected to that ECU using Race Studio 2 software.

# 4.1 Configuring SoloDL

Run the software, press "Device Configuration" on the software left keyboard and select "SoloDL" in the panel that shows up as below.





The software shows SoloDL configuration page: press "Configuration Manager" and select the configuration you want to use or press "New" to create a new one. In this second case "New Configuration" panel appears: select ECU Manufacturer "Suzuki" and ECU model "SDS\_Protocol" as shown below.

📓 RaceStudio 2.47.05H										E 2 🛛	
Ele Device Configuration Download Data	mport SmartyCam Data	ı A <u>n</u> alysis Devi	ce In <u>f</u> o <u>O</u> nline Device <u>O</u>	alibration Customize Sens	or Language ?						
AID	System manager										
	Current configuration										
Racing Data Power	Tran	smit	Receive								
AIM Sportline The World Leader in Data Acquisition		<u> </u>				Four contraction of the second	ECU Model				
The world ceases in Data Acquisition	Configuration Manager	Installation nam DEFAULT			Logger SOLO DL	ECU Manufacturer SUZUKI	V YOSHIMURA_09		Created February 19, 2013	Total Frequency 402 (Hz)	
4900	· · · · · · · · · · · · · · · · · · ·	J			0020 02	302014	TOSTIMOTIA_03		Teendary 10, 2010	402 (112)	
A <u>n</u> alysis	Channels of current configuration										
	Channel identifier	Enabled/	Channel name		Sampling fre	quency Sensor type	Mea	isure unit	SmartyCarn Fur	actions setting	
	CH_1		Internal Battery		1 Hz	Voltage sensor	V. V	)1		contro occurig	
Download Data	CALC_GEAR	Configurat	on Manager						Gear sensor	]]	
	ACC_1	[							None	Calculated	
Invest Sweet Com	ACC_2 ACC_3	🔶 Ne	w 🖌 Dek	ete 🔒 🔒 Cic	ine 🚽 🗗 Ir	nport 🖌 Export			ECU Highest o	pear number 0	
Import SmartyCam microSD Data	BATT					,					
	ECU_1		allation name	New configuration			Greated	<b>_</b>		/	
	ECU_2	1 DEF	AULT	Data logger type			Pebruary	19, 2013		/	
Device Configuration	ECU_3			New configuration name	DEFAL	ILT		2			
	ECU_4		(	ECU Manufacturer	SUZU	a		-			
	ECU_5 ECU_6			ECU Model				H			
Device Into	ECU_7		(		GSXR	_K5_K6 ·	<u> </u>			/	
	ECU_8			Speed measure unit	GSXR	K7_K8					
	ECU_9			Temperature measure un	SDS F						
Qnline	ECU_10			Pressure measure unit	SWIFT	_2012 4		<u>.</u>			
	ECU_11							1			
	ECU_12 ECU_13			=010m				빈			
Device Calibration	ECU_13 ECU_14			1.4276				1			
	ECU_15			L. IC. 10				<b>5</b>			
	ECU_16					🖌 🖉 Cancel		5			
Customize Sensor ti	ECU_17										
Customize Sensor a	ECU_18							🗸 ок 🛃			
	ECU_19 ECU 20	7			10 Hz	<ul> <li>Angle sensor</li> </ul>					
Language	ECU_20 ECU_21	V	YOSHI_ADV_4 YOSHI_QINJ_1		10 Hz	Raw value	deg # .				
	ECU_22	v.	YOSHI_QINJ_2		10 Hz	Raw value	- · ·				
	ECU_23	<b>V</b>	YOSHI_QINJ_3		10 Hz	Raw value	# .				
	ECU_24	<b>V</b>	YOSHI_QINJ_4		10 Hz	Raw value	#.1				
	ECU_25	<b>V</b>	YOSHI_FR_BRAKE		10 Hz	Pressure sensor	bar				
	ECU_26	<u>v</u>	YOSHI_BOOST_PRESS		10 Hz	Pressure sensor	kPa				
aim-sportline.com	ECU_27 ECU_28	N N	YOSHI_WATER_TEMP		10 Hz 10 Hz	Temperature sensor     Temperature sensor	°C •C	• •			
8 2007 AM SRL ALL RIGHTS RESERVED						and removed or of SPINIT	14	and here			
VIA CAVALCANTI, 8	🗘 🗘 🖓	CU-ONE CAN									
CERNUSCO SUL NAVIGLIO, HILAN - ITALY		-									

Confirm pressing "OK" in both panels and transmit the configuration to SoloDL pressing "Transmit" as shown below.

🕌 System man	System manager				
	ion ransmit		Receive		
Configuration Manager Channels of curre	DE	allation name FAULT uration			
Channel identifie	er	Enabled/	Channel name		
CH_1 CN_C_GEAR		V V	Internal Battery Calculated Gear		



### 4.2 Configuring EVO4

Run the software, press "Device configuration" on the software left keyboard and select "EVO4" in the panel that shows up on the right as here below.





The software shows EVO4 configuration page: select the configuration you want to use or press "New" to create a new one. In this second case "New configuration" panel shows up: select ECU Manufacturer "Suzuki" and ECU model "SDS\_Protocol" as shown below.



Confirm pressing "OK" and transmit the configuration to EVO4 pressing "Transmit".

System manager					
Transmit		Receive			
Current configuration					
Installation name	Data logg	ger type	Ecu		
DEFAULT	EV04 - 5	i channels	BMVV - BIKE_S1000		



## 5 Suzuki SDS protocol

Channels received by SoloDL and EVO4 connected to Suzuki "SDS\_Protocol" are:

ID	CHANNEL NAME	FUNCTION
ECU_1	SDS_RPM	RPM
ECU_2	SDS_TPS	Primary throttle position
ECU_3	SDS_GEAR	Engaged gear
ECU_4	SDS_BATT_VOLT	Battery Supply
ECU_5	SDS_CLT	Engine coolant temperature
ECU_6	SDS_IAT	Intake air temperature
ECU_7	SDS_MAP	Manifold air pressure
ECU_8	SDS_BAROM	Barometric pressure
ECU_9	SDS_BOOST	Boost pressure
ECU_10	SDS_AFR	Air/Fuel ratio
ECU_11	SDS_NEUT	Neutral signal
ECU_12	SDS_CLUT	Clutch switch
ECU_13	SDS_FUEL1_pw	Fuel injector 1
ECU_14	SDS_FUEL2_pw	Fuel injector 2
ECU_15	SDS_FUEL3_pw	Fuel injector 3
ECU_16	SDS_FUEL4_pw	Fuel injector 4
ECU_17	SDS_MS	Mode selector
ECU_18	SDS_XON_ON	XON switch
ECU_19	SDS_PAIR	Air pressure
ECU_20	SDS_IGN_ANG	Ignition angle
ECU_21	SDS_STP	Secondary throttle position