AiM User Guide

Microtec M222

Release 1.00







This user guide explains how to connect Microtec M222 ECU to AiM SoloDL. It is an aftermarket product installed on Honda bikes only. Please refer to Microtec website "www.microtec.cc" to know supported bike models.

## 1 Installation notes

To install SoloDL on your bike you can use a bar pad. AiM provides the two optional bar pads shown below:

- bar pad for handle bar with cross brace part number: **DNKTKPMSOL1** image on the left;
- bar pad for handle bar without cross brace part number: **DNKTKPMSOL0** image on the right.







Microtec M222 ECU can be connected to SoloDL using an interface cable shown here below. Its part number is: **V02569260**.



M222 ECU is placed under the bike seat and has a connector used to communicate data to an external device. Make it pass along the side of the bike and plug it to AiM cable.



Please note: Microtec ECU powers SoloDL. It is thereby unnecessary to check SoloDL battery status.



In case Microtec ECU is already connected to an external device it is possible to maintain this connection using AiM cable. As explained in the drawing below, M222 ECU can be connected to AiM cable male connector labelled "To the ECU" and the third device can be connected to the ECU through AiM cable female connector labelled "To other devices".



ECU connector has a cap on it. If the ECU is only connected to SoloDL remove the cap and place it on AiM cable female connector (labelled "to other devices" here above) and connect AiM cable male connector to the ECU female connector.

## 2 ECU Software setup

Before connection to SoloDL, Microtec ECU needs to be setup via MON software. ECU channel frequency is to be set on 50 or 100Hz value. Please refer to MON software user guide to know how to perform this operation. As an example we are showing here below channel frequency setting page of MON172 software.

XX M Cor	ion172 v2. nfiguration	16 A (CAN-acqu	uisition)
Frame	e ID (hex)	Frequency	Channel
1	200	0ff	RPM Revolution
3	208	✓ 50 N	Throttle
4	200	100 Hz V	Advance
5	210	200 Hz 500 Hz	ig High 1/PV Terog Lov



## 3 SoloDL configuration

Before connecting SoloDL to the ECU, set it up using Race Studio 2 software. Run the software and press "Device Configuration" on the software left keyboard: select "SoloDL" in the panel that shows up as here 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 "Microtec" and ECU Model "M222" as here below.

📓 RaceStudio 2.47.05H											
Ele Device Configuration Download Data	mport SmartyCam Data	Agalysis Dev	ce Info Qnline Device Q	alibration Customize Sens	or Language <u>?</u>						
ATT	📓 System manag	jer									
	Current configuration										
Racing Data Power	🚬 🗐 , Trans	smit	Receive								
AIM Sportline											
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	manager	DEFAULT			SOLU DL	SUZUKI	YUSHIMURA	_na		February 19, 2013	402 (H2)
A <u>n</u> alysis	Channels of current of	configuration									
	Chappel identifier	Epabled(	Chappel pame		Sampling fre	squency Sensor type		Measure unit		Carach Cara Eur	
	CH_1		Internal Battery		1 Hz	Voltage sensor		V .01		Shiakycan ru	cours secong
Download Data	CALC_GEAR	Configurat	ion Manager							Gear sensor	]]
	ACC_1	r	1							None	Calculated
	ACC_2	🔶 Ne	w 🖌 Dek	ste 🔏 Cic	one 🚽 li	mport 🖌 Export			- 1	ECU Highest o	ear number 0
Import SmartyCam microSD Data	BATT										
interest butta	ECU_1	N Ins	allation name	New configuration				Created			/
	ECU_2	1 DEF	AULT	Data logger type			× •	February 19, 2013			
Device Configuration	ECU_3			New configuration name	DEFAI	ULT			2		
	ECU_4			ECII Manufacturer	MICE	DIEC					
	ECU_5			ECU Madal	Mich	5120			H		
Device Into	ECU_6 ECU 7			ECU MODEI	M222		<u> </u>				/
	ECU_8			Speed measure unit	km/h		<u> </u>				
	ECU_9			Temperature measure u	nit <u>"C</u>		~				
<u></u> nline	ECU_10			Pressure measure unit	bar		×		티		
	ECU_11								밑		
	ECU_12			SOLON I					2		
Device Calibration	ECU 14			14275					-		
	ECU_15			0.000					5		
	ECU_16					🚽 OK 🖪 Can	ncel				
Customize Sensor ti	ECU_17					•		£			
	ECU_18							🗸 🗸			
	ECU_19	2	YOSHLADV 4		10 Hz	Angle sensor		den .01			
	ECU_21	v.	YOSHI_QINJ_1		10 Hz	Raw value		# .01			
	ECU_22	~	YOSHI_QINJ_2		10 Hz	🗾 Raw value		# .01	•		
	ECU_23		YOSHI_QINJ_3		10 Hz	🗾 Raw value		# .01	<u> </u>		
	ECU_24	<b>V</b>	YOSHI_QINJ_4		10 Hz	Raw value		# .01	-		
	ECU_25		YOSHI_FR_BRAKE		10 Hz	Pressure sensor		bar .1	-		
	ECU 27	V	YOSHI WATER TEMP		10 Hz	Temperature sense	or	PG .1			
aim-sportline.com	FCIL 28	L.	YOSHI AIR TEMP		10 Hz	Temperature sense	or	°C			
B 2007 AIM SAL ALL RIGHTS RESERVED		CILONE CAN									
VIA CAVALCANTI, P	🗘 🎸 Co	nfiguration									
CERTOSCO SOL NADIGLIO, AICAN - ITALY		_									

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

🕌 System manager	System manager				
Current configuration		Receive			
Configuration Manager Channels of current con	nstallation name DEFAULT iguration				
Channel identifier	Enabled/	Channel name			
CH_1	M	Internal Battery			
CALC GEAR	1	Calculated Gear			



## 4 Microtec "M222" protocol

Channels received by SoloDL connected to Microtec M222 protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	MT_RPM	RPM
ECU_2	MT_ENG_ACC	Engine acceleration
ECU_3	MT_TPS	Throttle position
ECU_4	MT_DEV_TPS	Throttle position derivative
ECU_5	MT_ECT	Engine coolant temperature
ECU_6	MT_TAIR	Intake air temperature
ECU_7	MT_BARO	Barometric pressure
ECU_8	MT_MAP	Manifold air pressure
ECU_9	MT_BATT	Battery supply
ECU_10	MT_GEAR	Engaged gear
ECU_11	MT_LAMBDA	Lambda value
ECU_12	MT_MAP_INDEX	Manifold air pressure index
ECU_13	MT_INJ_PHASE	Injection phase
ECU_14	MT_INJ_TIME	Injection time
ECU_15	MT_INJ_BASE	injection base time
ECU_16	MT_ING_ADV	Ignition advance
ECU_17	MT_ING_BASE	ignition base angle
ECU_18	MT_COR_INJ_H2O	Injection correction from water temperature
ECU_19	MT_COR_INJ_AIR	Injection correction from air temperature
ECU_20	MT_COR_INJ_MAP	Injection correction from manifold air pressure
ECU_21	MT_COR_INJ_AUX	Injection auxiliary correction
ECU_22	MT_COR_INJ_ENG	Injection correction from engine temperature
ECU_23	MT_OFF_IGN_H2O	Offset ignition from water temperature
ECU_24	MT_OFF_IGN_AIR	Offset ignition from air temperature
ECU_25	MT_OFF_ING_MAP	Offset ignition from manifold air pressure
ECU_26	MT_OFF_ING_AUX	Auxiliary ignition offset
ECU_27	MT_OFF_IGN_ENG	Offset ignition from engine temperature
ECU_28	MT_DWELL	Dwell time