AiM Infotech

Car/bike rotatory potentiometer – Race Studio 2 configuration – throttle

Release 1.00







1 Introduction

This datasheet explains how to configure with Race Studio 2 the throttle potentiometer for car/bike installations.

AiM instruments can measure the relative displacement between two different points using a sensor (rotary potentiometer) directly connected to the two measure points. This sensor may be used to measure angular displacements, such as throttle position.

2 Setup with Race Studio 2

To load the potentiometer in AiM logger configuration:

- run the software, select the logger in use and the configuration to set the potentiometer on and enter "Channels" layer
- select the channel where to set the potentiometer on (in the example channel 8) and select "Zero based potentiometer" in "Sensor type" column as shown here below.

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	LOGGER_CONF	MXL PISTA	None - None	Optical	READ	9.3	32	Temperature VDO 60-200 °C		121 (Hz)	0 (Hz)	0			
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	KPIVI	Enabled	Engine		10	HZ		Gyro	rpm		200	00			
	SPD_1	Enabled	speed_1		10	HZ		External vertical accelerometer	Km/n	.1 0.0	250	1.0			
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	CH_2	Enabled	Channel_2		10	Hz 💌	-	Generic linear 0-500 mV	V .1	0.0	5.0				
	CH_3	Enabled	Channel_3		10	Hz 👱		Generic linear 0-50 mV MSI 0-100 psi sensor	V .1	0.0	5.0				
Device Info	CH_4	Enabled	Channel_4		10	Hz 🗵	- i	MSI 0-150 psi sensor	V .1	0.0	5.0				
	CH_5	Enabled	Channel_5		10	Hz 💌	19	SEAT Brake Pressure	V .1	0.0	5.0				
	CH_6	M Enabled	Channel_6		10	Hz 💌		SEAT Water Temperature	V .1	• 0.0	5.0				
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	CH_8	Enabled	Channel_8		10	Hz	4	Zero based potentiometer 🛛 👻	mm .	L <u> </u>	5.0				
	CALC_GEAR	Disabled	Calculated_Gea		10	Hz ·	- (Calculated Gear	#	0	9				
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Transmit the configuration to the logger pressing "Transmission".

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	Speed_1											
Download Data	Wheel circumfere	ence (mm) 1666										
	Pulses per wheel	revolution 1										
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	SPD_1	Enabled	Speed_1		10 Hz	✓ Speed		•	km/h .1	0.0	250.	0
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	CH_2	Enabled	Channel_2		10 Hz	Generic	inear 0-5 V	•	V.1	-l 0.0	5.0	
	CH_3	Enabled	Channel_3		10 Hz	- Generic	inear 0-5 V	•	V.1	L 0.0	5.0	
Device Info	CH_4	Enabled	Channel_4		10 Hz	- Generic	inear 0-5 V	•	V .1	L 0.0	5.0	
	CH_5	Enabled	Channel_5		10 Hz	Generic	inear 0-5 V	•	V .1	-l 0.0	5.0	
	CH_6	Enabled	Channel_6		10 Hz	Generic	inear 0-5 V	•	V .1	-l 0.0	5.0	
Online	CH_7	Enabled	Channel_7		10 Hz	- Generic	inear 0-5 V	•	V .1	L 0.0	5.0	
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To calibrate the potentiometer:

• Press "Device Calibration"

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Serve comiguration	CH 2	Fnabled	Channel 2		1	0 Hz	•	Generic line	ar 0-5 V	-	V.1	-	0.0	5	.0
	CH 3	Enabled	Channel 3		1	0 Hz	•	Generic line	ar 0-5 V	•	V .1	•	0.0	5	.0
Device Info	CH 4	Enabled	Channel 4		1	0 Hz	-	Generic line	ar 0-5 V	•	V .1	-	0.0	5	.0
	CH_5	Enabled	Channel_5		1	0 Hz	-	Generic line	ar 0-5 V	•	V .1	-	0.0	5	.0
	CH_6	Enabled	Channel_6		1	0 Hz	•	Generic line	ar 0-5 V	•	V .1		0.0	5	.0
Online	CH_7	Enabled	Channel_7		1	0 Hz	-	Generic line	ar 0-5 V	•	V.1	•	0.0	5	.0
	CH_8	Enabled	Channel_8		1	.0 Hz	-	Zero based	potentiometer	-	mm .1	-	0.0	5	.0
	CALC_GEAR	Disabled	Calculated_Gea		1	.0 Hz	-	Calculated (Gear		#		0	9	
Device Calibration	ACC_1	Enabled	LatAcc		1	.0 Hz	•	Lateral acce	lerometer		g .01		-3.00	3	.00
	LOG_TMP	M Enabled	Datalogger_Ter	n	1	.0 Hz	-	Cold joint			°C	•	0	5	0
	BATT	🗹 Enabled	Battery		1	Hz	-	Battery			V.1		5.0	1	5.0



Calibration panel shows up:

• Press "Calibrate" button of "Zero based potentiometer"

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	Pul	Configuration name		System type				
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Device Configuration	CH Channel na	me Sensor type	Status	Click here to calibrate		0.0	5.0	
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To learn the calibration points the software shows the related panel:

- with the throttle in its high position press "Get raw value" corresponding to high position, fill in the reference value in the related cells highlighted here below on the left
 - o "0" for zero position
 - o "100" for high position
- with the throttle in its zero position press "Get raw value" corresponding to zero position (image here below on the right)
- press "OK"







When calibration is over potentiometer status will turn to "Calibrated" and become red:

• Transmit the calibration to the logger pressing "Transmit Calibration"

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