

Race Studio 2

Configuring the TPS potentiometer with RS2

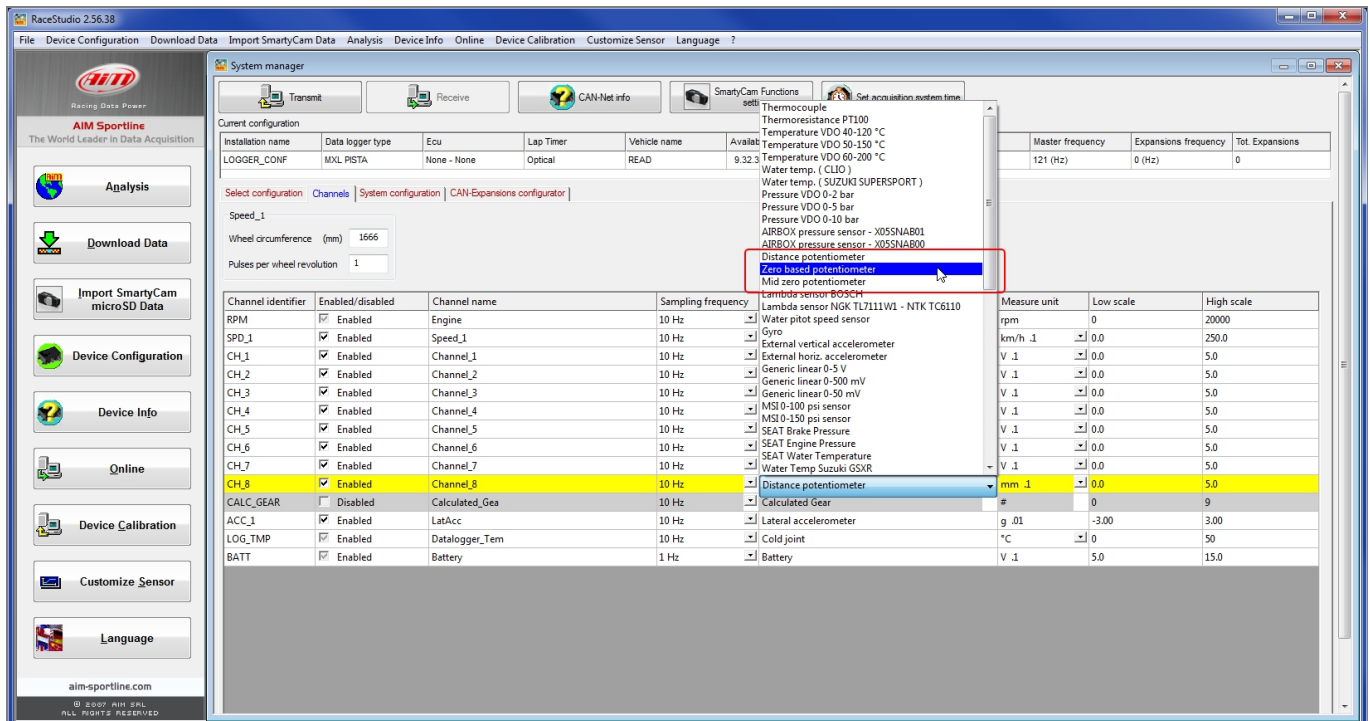
Question:

How do I configure the TPS potentiometer installed on my car/bike using RS2?

Answer:

To configure the TPS potentiometer with RS2:

- run RS2.
- click "Device Configuration" on the software left keyboard and select the logger in use and the configuration to set the potentiometer on.
- 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 below; if you know precisely the total potentiometer travel you can choose the measure unit among millimeters and degrees; if not the suggested choice is percentage "% 1."



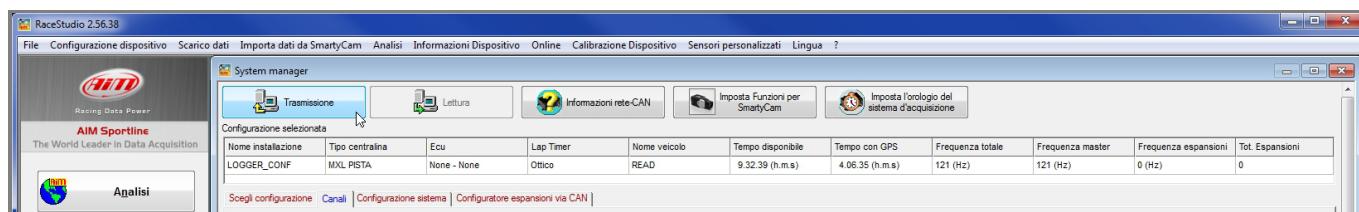
The screenshot shows the RaceStudio 2.56.38 interface. The 'Channels' configuration window is open, displaying a list of channels and their configurations. Channel 8 is highlighted, and the 'Sensor type' dropdown is set to 'Zero based potentiometer'.

Channel identifier	Enabled/disabled	Channel name	Sampling frequency	Sensor type	Measure unit	Low scale	High scale
RPM	Enabled	Engine	10 Hz	Lambda sensor BOSCH	rpm	0	20000
SPD_1	Enabled	Speed_1	10 Hz	Water pitot speed sensor	km/h	0.0	250.0
CH_1	Enabled	Channel_1	10 Hz	Gyro	V.1	0.0	5.0
CH_2	Enabled	Channel_2	10 Hz	External vertical accelerometer	V.1	0.0	5.0
CH_3	Enabled	Channel_3	10 Hz	External horiz. accelerometer	V.1	0.0	5.0
CH_4	Enabled	Channel_4	10 Hz	Generic linear 0-5 V	V.1	0.0	5.0
CH_5	Enabled	Channel_5	10 Hz	Generic linear 0-500 mV	V.1	0.0	5.0
CH_6	Enabled	Channel_6	10 Hz	MSI 0-100 psi sensor	V.1	0.0	5.0
CH_7	Enabled	Channel_7	10 Hz	MSI 0-150 psi sensor	V.1	0.0	5.0
CH_8	Enabled	Channel_8	10 Hz	SEAT Brake Pressure	V.1	0.0	5.0
CALC_GEAR	Disabled	Calculated_Gear	10 Hz	SEAT Engine Pressure	V.1	0.0	5.0
ACC_1	Enabled	LatAcc	10 Hz	Water Temp Suzuki GSXR	V.1	0.0	5.0
LOG_TMP	Enabled	Datalogger_Temp	10 Hz	Distance potentiometer	mm.1	0.0	5.0
BATT	Enabled	Battery	1 Hz	Calculated Gear	#	0	9
				Lateral accelerometer	g .01	-3.00	3.00
				Cold joint	°C	0	50
				Battery	V.1	5.0	15.0

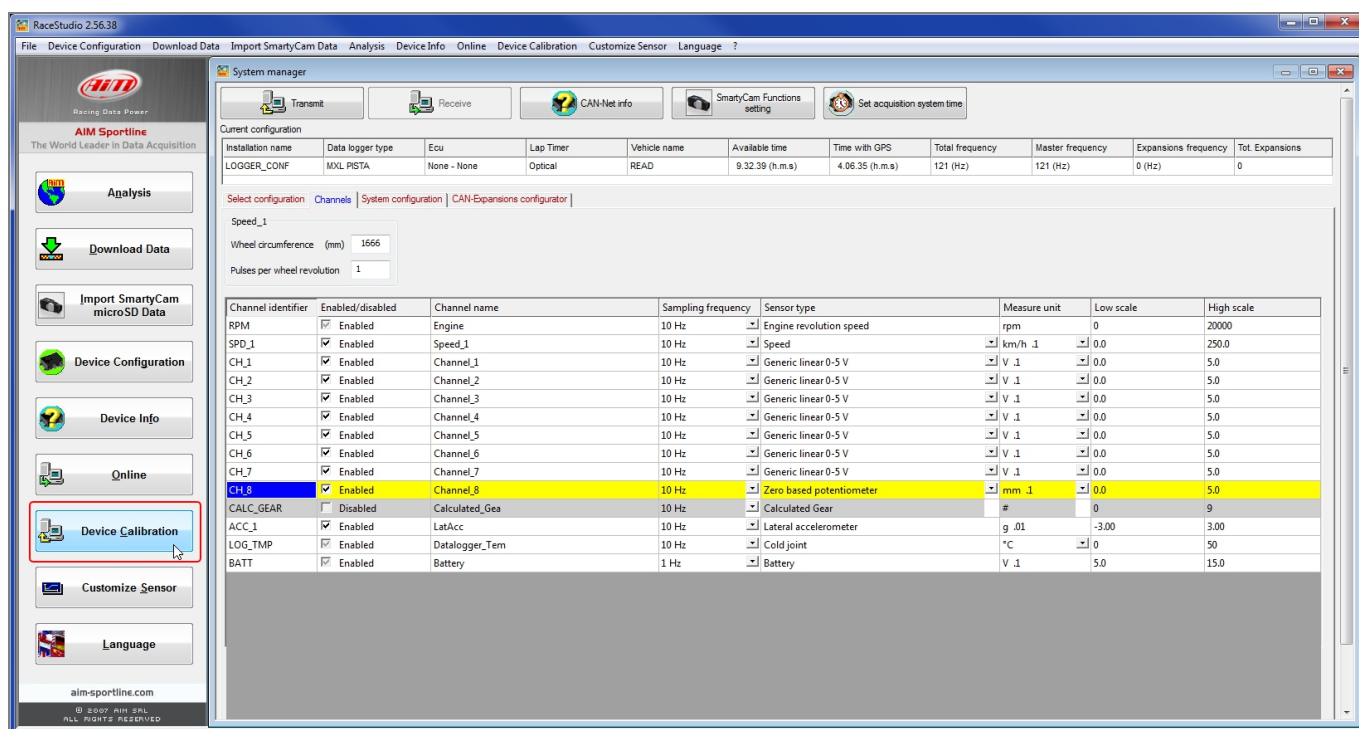


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Transmit the configuration to the logger pressing "Transmit".



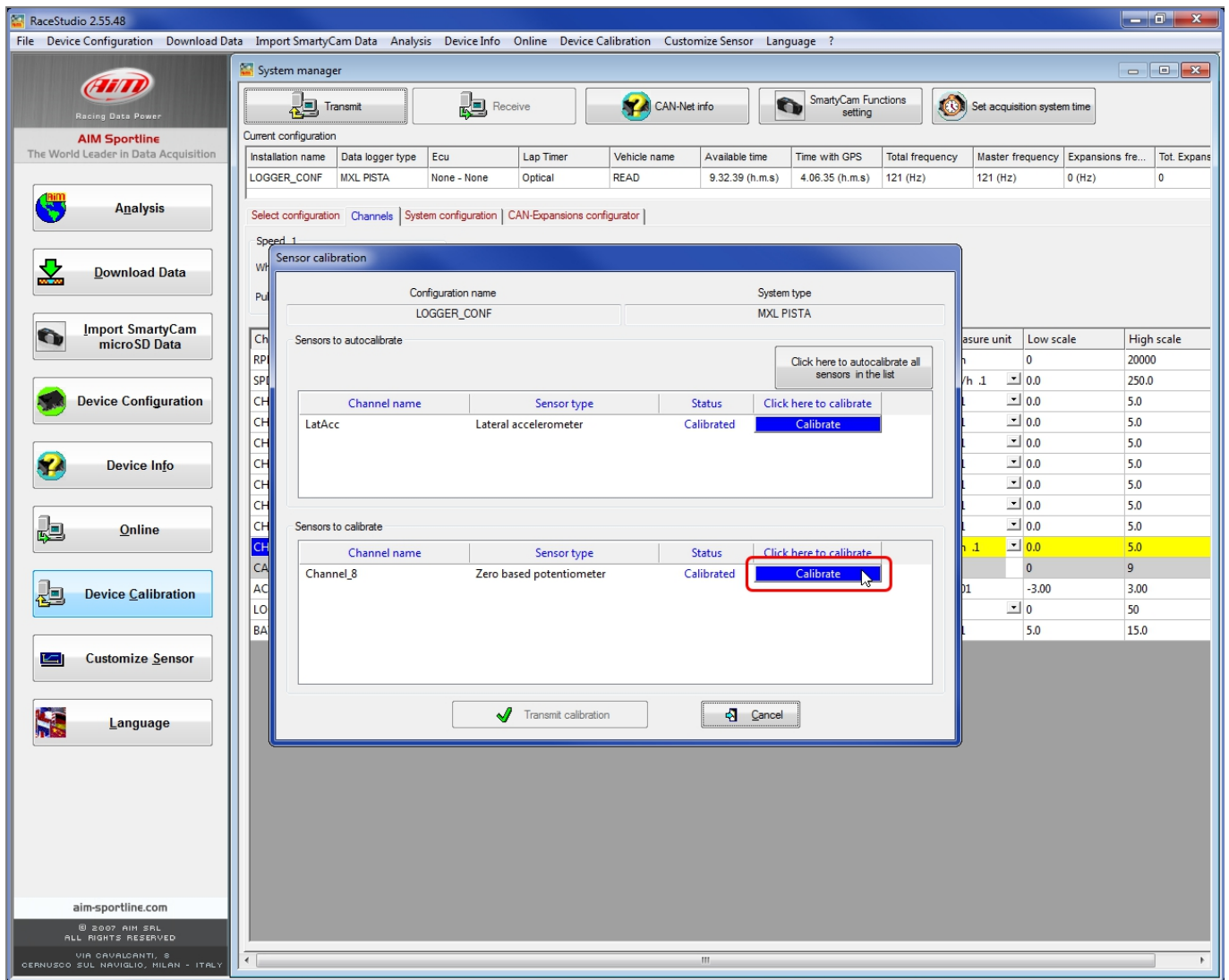
- Press "Device Calibration" to calibrate the potentiometer



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Calibration panel shows up

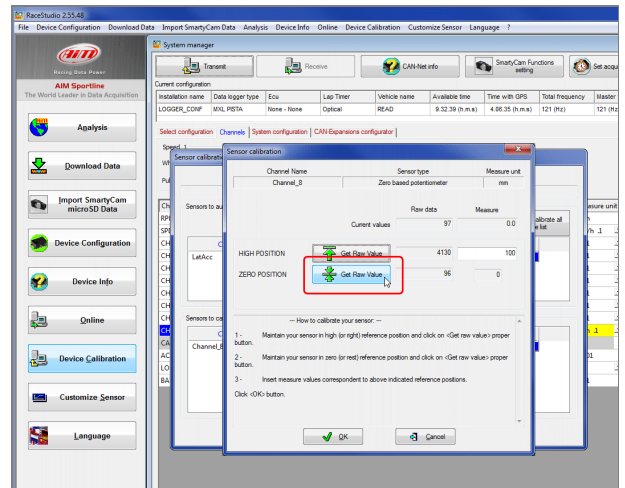
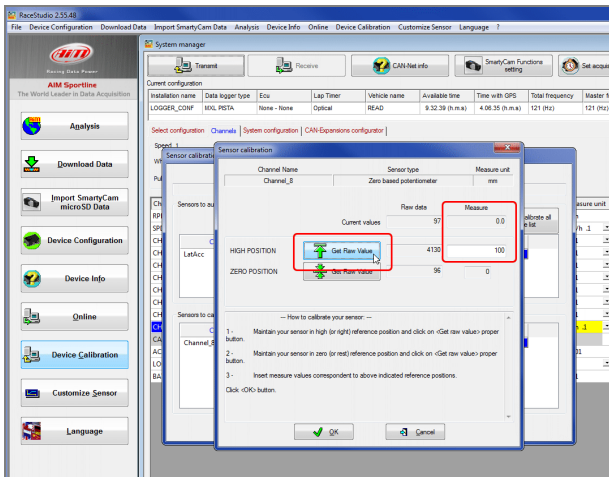
- Press "Calibrate" button of "Zero based potentiometer".



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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.
 - "0" for zero position
 - "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".



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

- Transmit the calibration to the logger pressing "Transmit Calibration".

