AiM Infotech

Car/bike linear potentiometer Race Studio 3 configuration – suspensions

Release 1.00

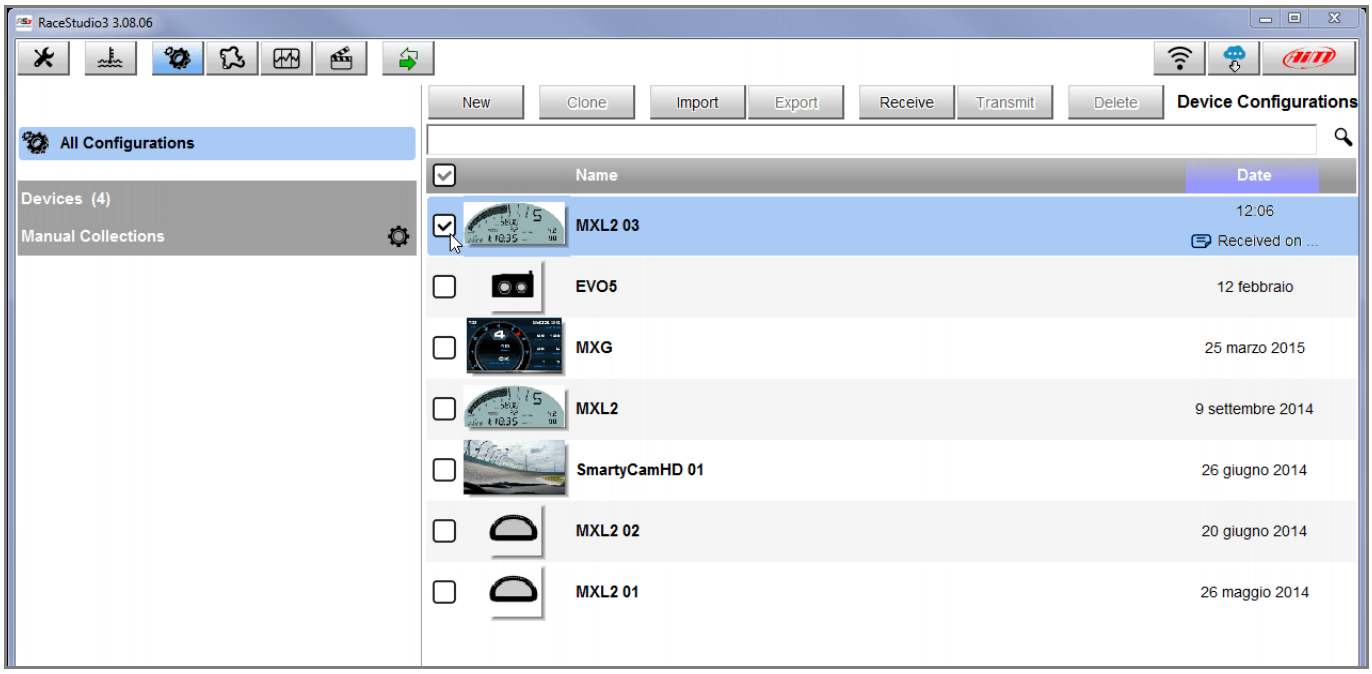
1 Introduction

The car/bike linear potentiometer is supported by both AiM configuration software and can measure the dampers compression or extension as well as the steering rotation measured through the rack displacement. In this datasheet you will:

- load it in the logger configuration using **Race Studio 3**
- use it to measure **dampers** compression or extension

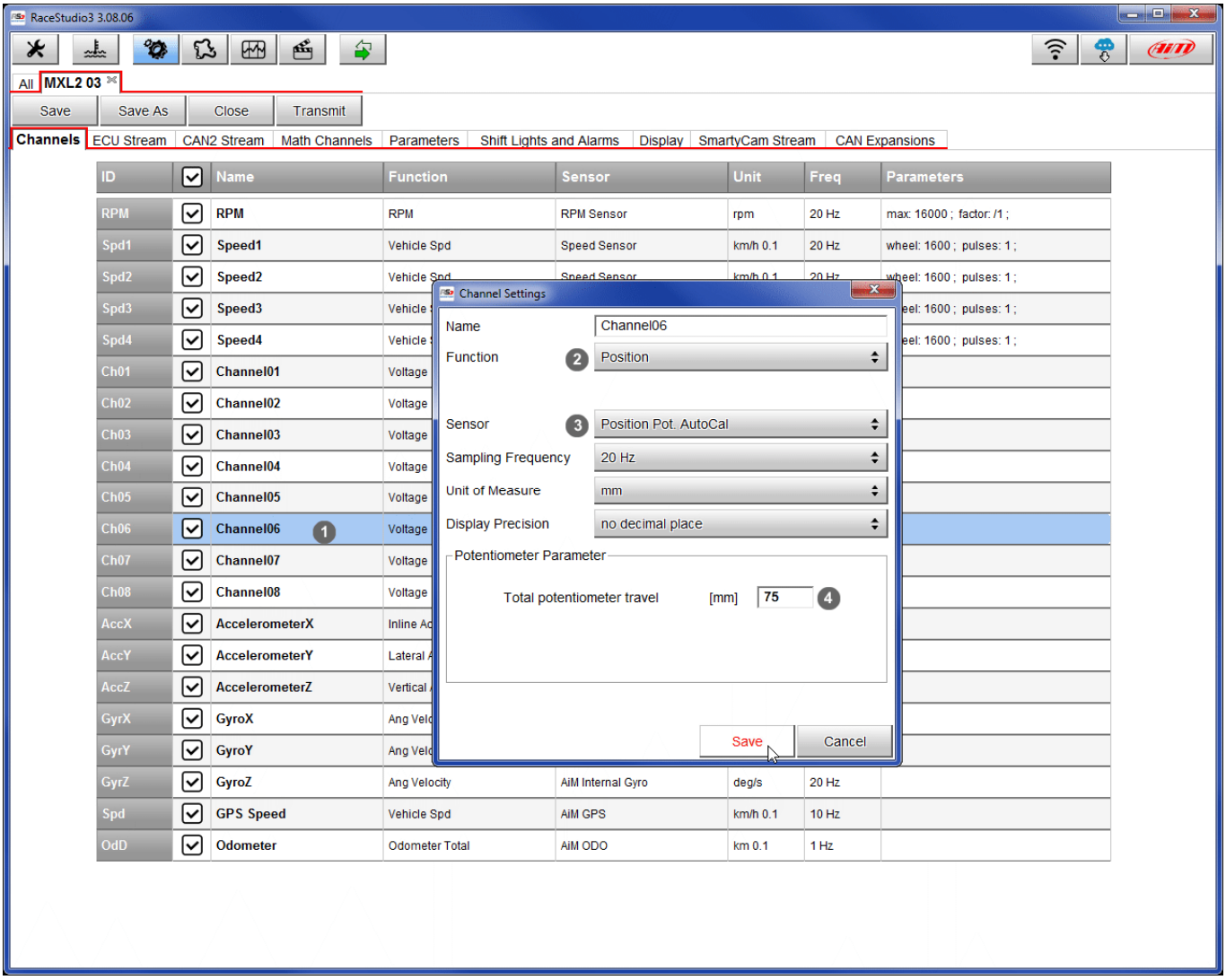
2 Setup with Race Studio 3

To load the potentiometer in the logger configuration, with the logger switched on and connected to the PC, run the software and select the configuration you are going to load it on.



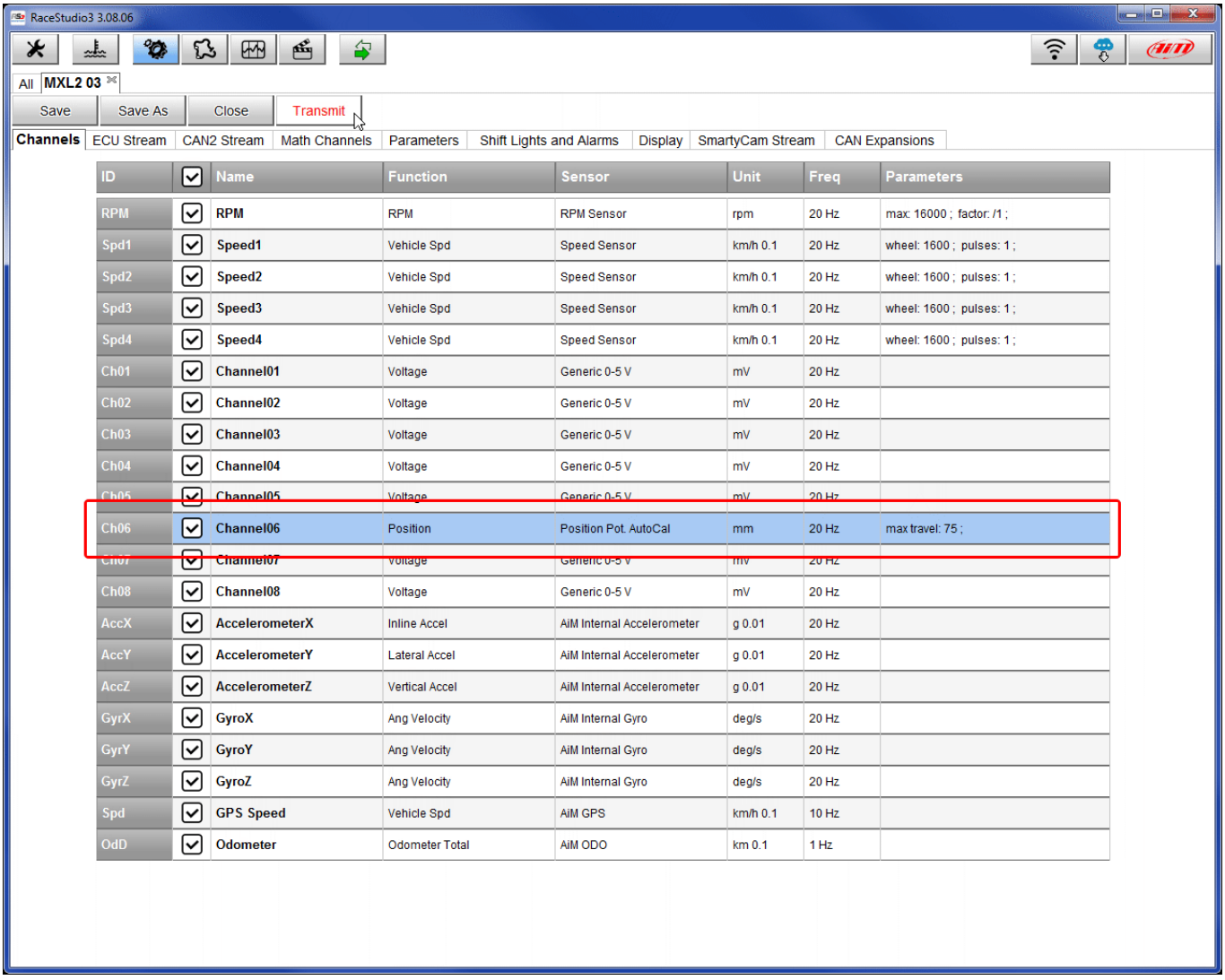
Enter the configuration (in the example MXL2 03) and the related "Channels" layer.

- Select the channel where to set the potentiometer on – in the example channel 6 (**1**) and fill in the panel that shows up; tip: you can name the channel (in the example named "Channel06").
- Function: "Position" (**2**)
- Sensor: "Position Pot. AutoCal" (**3** – this implies that the potentiometer will be auto-calibrated as shown in the following pages)
- Fill in the other fields
- Fill "Total Potentiometer travel" box with the potentiometer travel in mm – in the example we used a 75 mm travel potentiometer (**4**)
- Click "Save"



When the software comes back to "Channels" layer the potentiometer has been set on the desired channel as shown here below.

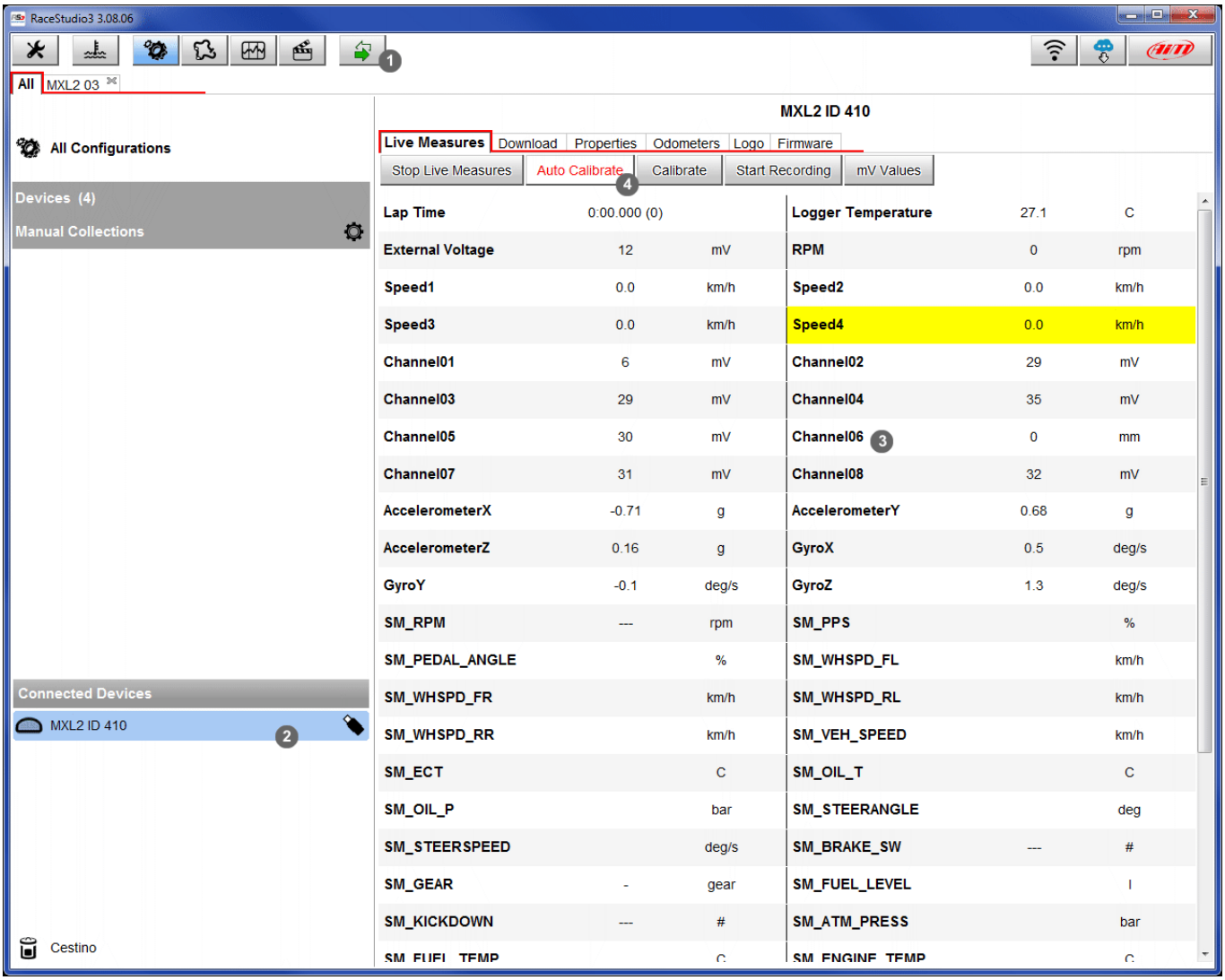
- Transmit the configuration to the logger pressing "Transmit" on the top keyboard.



ID		Name	Function	Sensor	Unit	Freq	Parameters
RPM	☑	RPM	RPM	RPM Sensor	rpm	20 Hz	max: 16000 ; factor: /1 ;
Spd1	☑	Speed1	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz	wheel: 1600 ; pulses: 1 ;
Spd2	☑	Speed2	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz	wheel: 1600 ; pulses: 1 ;
Spd3	☑	Speed3	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz	wheel: 1600 ; pulses: 1 ;
Spd4	☑	Speed4	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz	wheel: 1600 ; pulses: 1 ;
Ch01	☑	Channel01	Voltage	Generic 0-5 V	mV	20 Hz	
Ch02	☑	Channel02	Voltage	Generic 0-5 V	mV	20 Hz	
Ch03	☑	Channel03	Voltage	Generic 0-5 V	mV	20 Hz	
Ch04	☑	Channel04	Voltage	Generic 0-5 V	mV	20 Hz	
Ch05	☑	Channel05	Voltage	Generic 0-5 V	mV	20 Hz	
Ch06	☑	Channel06	Position	Position Pot. AutoCal	mm	20 Hz	max travel: 75 ;
Ch07	☑	Channel07	Voltage	Generic 0-5 V	mV	20 Hz	
Ch08	☑	Channel08	Voltage	Generic 0-5 V	mV	20 Hz	
AccX	☑	AccelerometerX	Inline Accel	AiM Internal Accelerometer	g 0.01	20 Hz	
AccY	☑	AccelerometerY	Lateral Accel	AiM Internal Accelerometer	g 0.01	20 Hz	
AccZ	☑	AccelerometerZ	Vertical Accel	AiM Internal Accelerometer	g 0.01	20 Hz	
GyrX	☑	GyroX	Ang Velocity	AiM Internal Gyro	deg/s	20 Hz	
GyrY	☑	GyroY	Ang Velocity	AiM Internal Gyro	deg/s	20 Hz	
GyrZ	☑	GyroZ	Ang Velocity	AiM Internal Gyro	deg/s	20 Hz	
Spd	☑	GPS Speed	Vehicle Spd	AiM GPS	km/h 0.1	10 Hz	
OdD	☑	Odometer	Odometer Total	AiM ODO	km 0.1	1 Hz	

To auto-calibrate the potentiometer:

- enter "All" layer and press "Device" (**1**)
- select the logger – in the example MXL2 ID 410 (**2**)
- in "Live Measures" layer, keeping the potentiometer in its zero position, select the channel where the potentiometer has been set – in the example channel 6 (**3**)
- press "Auto Calibrate" (**4**)



- Keep the potentiometer in its zero position as shown here below
- Press "Auto calibrate All".