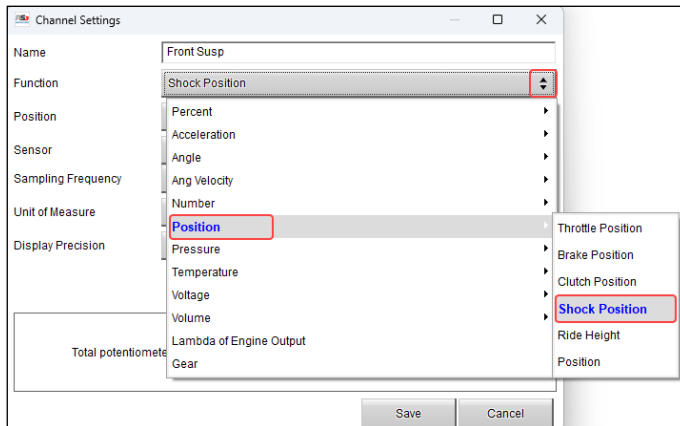




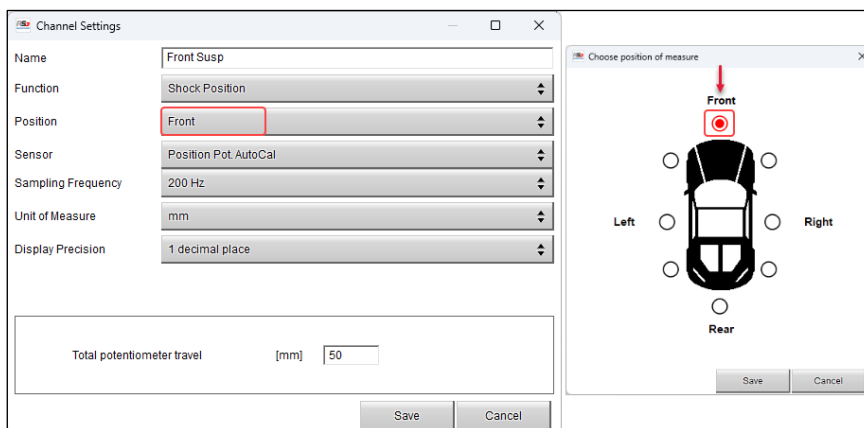
Setting Up and Calibrating a Suspension Position Sensor for Bikes in Race Studio 3

Select the Analog Channel you have the suspension sensor attached to and name the channel **Front Susp**, **Susp** etc.

Then click on the Function pulldown box. Select **Position** and then **Shock Position**.



Then click on the Position pulldown box. On the vehicle graphic, Select the **Position** (Front in this example)





Next click on the Sensor pulldown box. If you have the new and innovative AiM Eclipse potentiometer, select AiM Eclipse, if you have any other standard linear potentiometer, Select **Position Pot. AutoCal**

The 'Channel Settings' dialog box is shown with the following settings:

Field	Value
Name	Front Susp
Function	Shock Position
Position	Front
Sensor	Position Pot. AutoCal
Sampling Frequency	AiM Eclipse
Unit of Measure	Position Pot. Calib
Display Precision	1 decimal place

At the bottom, the 'Total potentiometer travel' is set to 50 mm. The 'Save' and 'Cancel' buttons are at the bottom right.

Set the Sampling Frequency. Many suggest **200 Hz** as a minimum for suspension position.

Choose your Unit of Measure, the choices are inches or millimeters, and I selected **mm**.

Set the Display Precision, selected is **1 decimal place**.

Finally, set the Total Potentiometer Travel to the actual full length of travel of your installed potentiometer, this sensor was **50mm**. Then click on the **Save** button.

Transmit the configuration to the logger by clicking on the **Transmit** button.

The 'Channel Settings' dialog box is shown with the following settings:

Field	Value
Name	Front Susp
Function	Shock Position
Position	Front
Sensor	Position Pot. AutoCal
Sampling Frequency	200 Hz
Unit of Measure	mm
Display Precision	1 decimal place

At the bottom, the 'Total potentiometer travel' is set to 50 mm. The 'Save' and 'Cancel' buttons are at the bottom right.



After getting the Channel settings correct and transmitted to the logger for all the Suspension position sensors and having the bike sitting level and at ride height, go to **Live Measures** and click on the  **Auto Calibrate** button and then **Autocalibrate All** and then **Exit**.

The **Autocalibrate All** function automatically calibrates all sensors in your system that do not require a further calibration process. Here we have 2 Suspension sensors, they are autocalibrated and show values of zero at ride height. When the suspension is compressed you will have positive values and when the suspension is in droop you will have negative values.

AiM MXm (USB)

Live Measures

Data Download

WiFi and Properties

Settings

Tracks

Predictive Reference Lap

Counters

Logo

Firmware

Autocalibrate All

Exit

Name	Function	Current Val...	New Value
Front Susp	Front Shock Position	0.0 mm	Default
Rear Susp	Rear Shock Position	0.0 mm	Default
LongitudinalAcc	Inline Acceleration	0.00 g	Default
LateralAcc	Lateral Acceleration	0.00 g	Default
VerticalAcc	Vertical Acceleration	-1.00 g	Default
RollRate	Roll Rate	0.0 deg/s	Default
PitchRate	Pitch Rate	0.0 deg/s	Default
YawRate	Yaw Rate	0.0 deg/s	Default

Then as a final check, while in the Live Measures function, push down on your bike and watch the Suspension value on the RS3 screen and check to make sure that the values match the amount you are compressing the Suspension. Here the Rear Suspension is compressed and displays **12.6 mm**.

Here I have clicked on the **Rear Susp** value in Live Measures, and it is highlighted and displayed along the right edge of the screen, making it easier to view specific channels in the Live Measures function.

AiM MXm (USB)

Live Measures

Data Download

WiFi and Properties

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123

mV

Search ANY of

Master	
LongitudinalAcc	-0.00 g
VerticalAcc	-1.00 g
PitchRate	0.5 deg/s
Front Susp	-0.0 mm
RPM	0 rpm
External Voltage	12.2 V
Calculated channels	
GPS InlineAcc	0.00 g
GPS Yaw Rate	0.0 deg/s
Low Volts	OFF
StartRec	0 #

Front Susp	
-0.0 mm	
Rear Susp	
12.6 mm	