



Race Studio 3

Alarm light signal configuration with RS3

Question:

How do I configure the alarm sensor through RS3?

Answer:

The alarm sensor configuration on your AiM device can be performed this way:

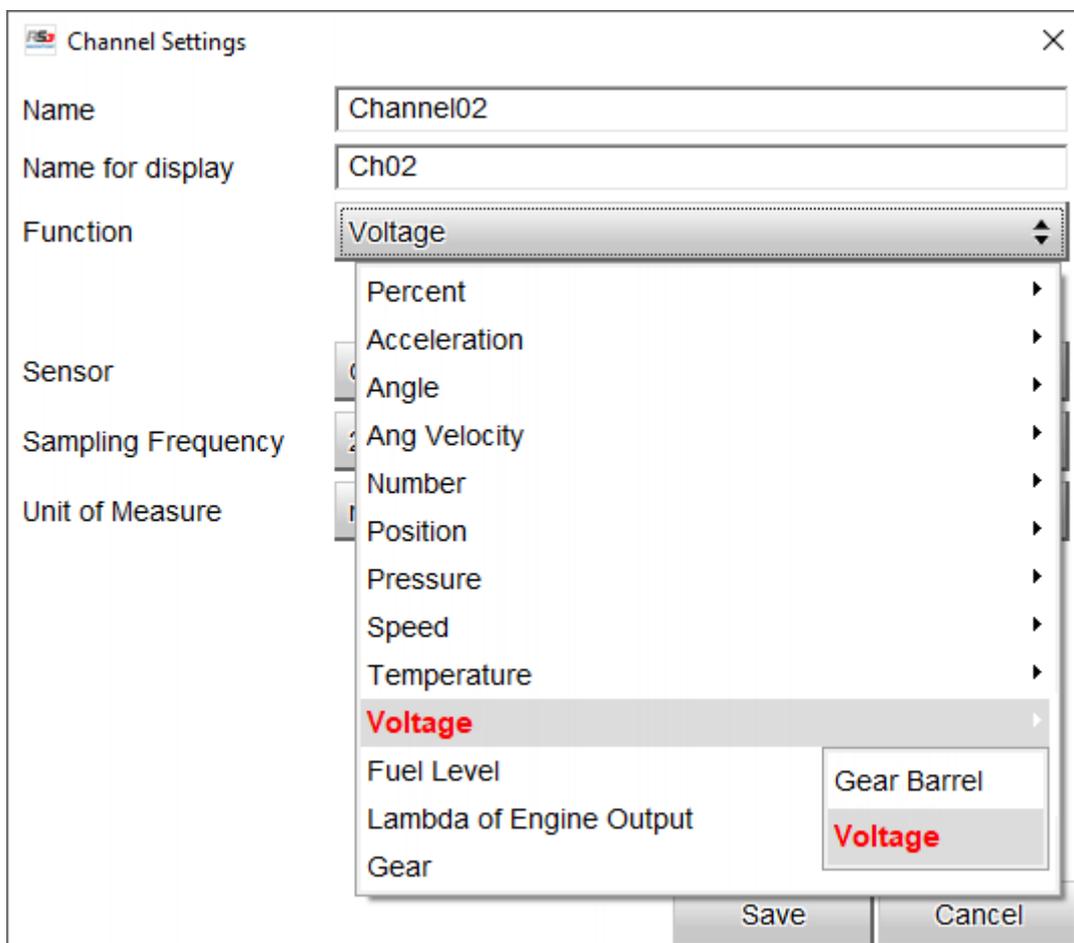
- run RS3.
- enter "Configuration" section and select the configuration to be modified or create a new one if necessary (in the example, an EVO4S configuration have been chosen).
- "Channels" layer appears showing all the available channels with their functions.

The screenshot shows the RaceStudio3 3.16.00 software interface. The 'Channels' tab is active, displaying a table of available channels. The table has columns for ID, Name, Function, Sensor, Unit, Freq, and Parameters. All channels listed have their respective checkboxes checked.

ID	Name	Function	Sensor	Unit	Freq	Parameters
RPM	<input checked="" type="checkbox"/> RPM	Engine RPM	RPM Sensor	rpm	20 Hz	max: 16000 ; factor: 1 ;
Spd1	<input checked="" type="checkbox"/> Speed1	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz	wheel: 1600 ; pulses: 1 ;
Spd2	<input checked="" type="checkbox"/> Speed2	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz	wheel: 1600 ; pulses: 1 ;
Ch01	<input checked="" type="checkbox"/> Channel01	Voltage	Generic 0-5 V	mV	20 Hz	
Ch02	<input checked="" type="checkbox"/> Channel02	Voltage	Generic 0-5 V	mV	20 Hz	
Ch03	<input checked="" type="checkbox"/> Channel03	Voltage	Generic 0-5 V	mV	20 Hz	
Ch04	<input checked="" type="checkbox"/> Channel04	Voltage	Generic 0-5 V	mV	20 Hz	
Ch05	<input checked="" type="checkbox"/> Channel05	Voltage	Generic 0-5 V	mV	20 Hz	
Acc1	<input checked="" type="checkbox"/> InlineAcc	Inline Accel	AIM Internal Accelerometer	g 0.01	50 Hz	
Acc2	<input checked="" type="checkbox"/> LateralAcc	Lateral Accel	AIM Internal Accelerometer	g 0.01	50 Hz	
Acc3	<input checked="" type="checkbox"/> VerticalAcc	Vertical Accel	AIM Internal Accelerometer	g 0.01	50 Hz	
Gyr1	<input checked="" type="checkbox"/> RollRate	Roll Rate	AIM Internal Gyro	deg/s 0.01	50 Hz	
Gyr2	<input checked="" type="checkbox"/> PitchRate	Pitch Rate	AIM Internal Gyro	deg/s 0.01	50 Hz	
Gyr3	<input checked="" type="checkbox"/> YawRate	Yaw Rate	AIM Internal Gyro	deg/s 0.01	50 Hz	
Accu	<input checked="" type="checkbox"/> GPS Accuracy	GPS Accuracy	AIM GPS	mm	10 Hz	
Spd	<input checked="" type="checkbox"/> GPS Speed	Vehicle Spd	AIM GPS	km/h 0.1	10 Hz	
Alt	<input checked="" type="checkbox"/> Altitude	Altitude	AIM GPS	m	10 Hz	
Odo	<input checked="" type="checkbox"/> Odometer	Odometer Total	AIM ODO	km	1 Hz	

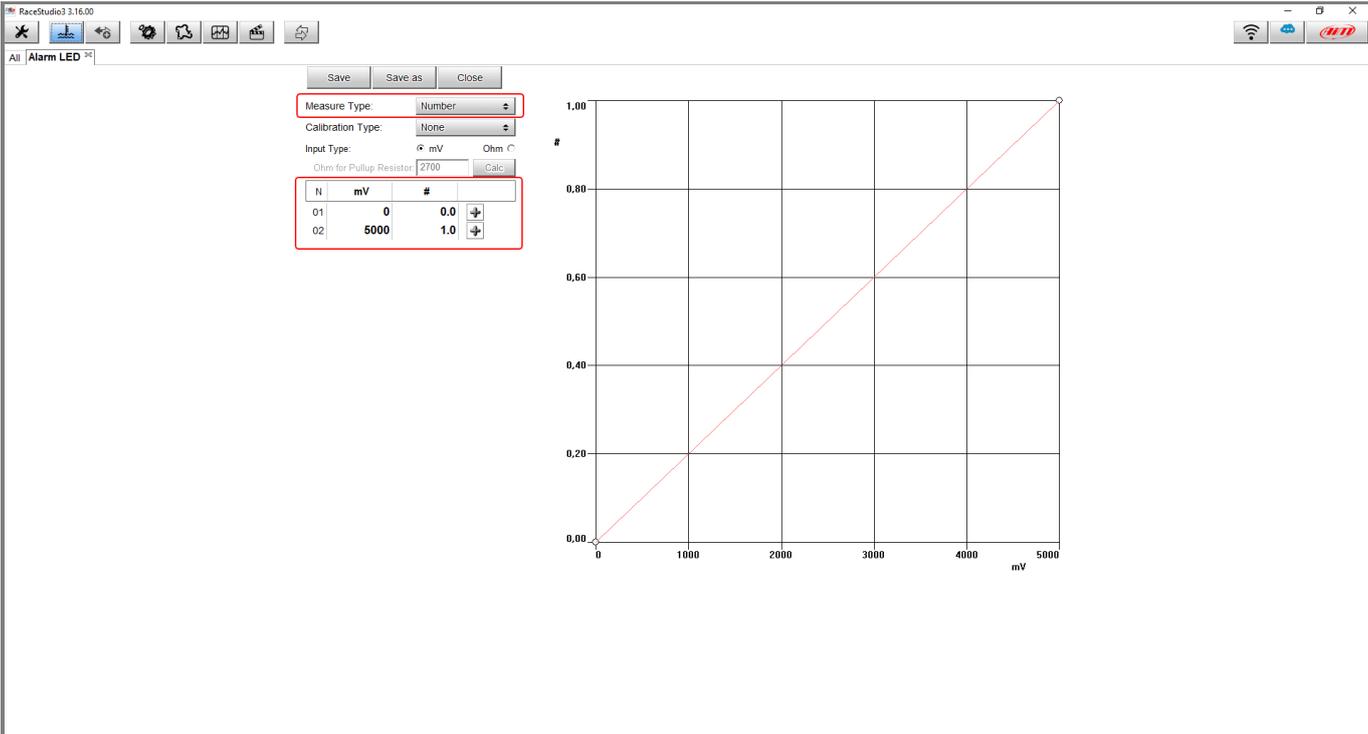
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- Click “Function” in the analog channel menu (be sure it is enabled) and choose “Voltage” or “Number” function, then choose the sensor type among these that appear clicking “Sensor”.
 - **Voltage:** Volts (V) or milliVolts (mV) are the available measurement units, shown as whole number or with maximum three decimal places; user can set the sampling frequency.
 - **Number:** to make this option appear in channel function menu you need to previously create a Custom Sensor.



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To create a custom sensors press the related icon  on the software top left keyboard: select Measure type "Number" and fill the table below with the related sensor values in Mv (with switch on and off). The recorded value is shown as whole number or with one decimal place in a 0-1 range, corresponding respectively to 0 mV and 5000 mV.



The screenshot shows the RaceStudio3 3.16.00 software interface. The window title is "RaceStudio3 3.16.00". The main area is titled "All Alarm LED 24". There are three buttons at the top: "Save", "Save as", and "Close". Below these are configuration options:

- Measure Type: Number
- Calibration Type: None
- Input Type: mV Ohm
- Ohm for Pullup Resistor: 2700

A table is shown with the following data:

N	mV	#
01	0	0.0
02	5000	1.0

To the right of the table is a graph with a grid. The x-axis is labeled "mV" and ranges from 0 to 5000 with major ticks every 1000. The y-axis is labeled "#" and ranges from 0.00 to 1.00 with major ticks every 0.20. A red line is plotted from the origin (0, 0.00) to the point (5000, 1.00).

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To set the alarm LEDs of your AiM device, select the LEDs and display settings layers, to say:

- “Shift Lights and Alarms” layer for MXG 1.2/MXG 1.2 Strada, MXS 1.2/MXS 1.2 Strada, MXP/MXP Strada, MXm and MXL2.
- “Dashes” -> “Shift Lights and Alarms” layer for EVO/4S/5 (it is necessary to specify the dash type).

Choose which one among the available LEDs will show the alarm signal, set the reference channel with its threshold:

- Voltage: threshold 2,5V
- Number: threshold 0,5 (be sure that the channel is configured to be shown with one decimal place).

Once the process is over, click “Transmit” to transmit the configuration to your device. In the following example, an EVO4S configuration is shown.

Create New Alarm

Description

Import Export

If All of the following conditions are true:

Channel02 less than V 0,500

then trigger the following action(s):

Alarm actions in EVO4S

Output Open Circuit

Until: condition no longer met

Alarm actions in GS Dash

LED 1 continuously Red

Until: condition no longer met

Save Cancel