



## Interfacing with MAF Sensors

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### Summary

This application note describes the setup procedures for connecting various MAF sensors to the R-Series analog input for data logging Mass Air Flow. It outlines in detail how to setup the R-Series unit and PLX Logger analog tables to properly interpret the input voltage to useful values in g/Sec.

### Supported MAF Sensors

- 1) Mitsubishi DSM/3000GT/Stealth
- 2) Mitsubishi EVO 8
- 3) Nissan Sentra/G20/NX
- 4) Nissan Silvia/180SX/Pulsar/Bluebird
- 5) Nissan Skyline GT-R
- 6) Nissan Skyline GT-S
- 7) Nissan 300ZX
- 8) Nissan 240SX/Altima
- 9) Subaru WRX/Saab 92X

### Setting up the R-Series

Both the R-300 and R-500 can be setup to read MAF in the data logger monitor inputs menu. For instructions how to toggle to this setup menu please refer to the R-300/R-500 users guide.



The R-300/R-500 needs 4 sets of data points to properly define the relationship between voltage to g/Sec.

Volts1  
Values1  
Volts2  
Values2

By entering these 4 points, the R-Series unit will be able to display the correct values for g/Sec.

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(408)745-7591



## 1) Mitsubishi DSM/3000GT/Stealth

	<b>g/Sec</b>
<b>Volts1</b>	0
<b>Values1</b>	0
<b>Volts2</b>	5
<b>Values2</b>	98.05

## 2) Mitsubishi EVO 8

	<b>g/Sec</b>
<b>Volts1</b>	0
<b>Values1</b>	0
<b>Volts2</b>	5
<b>Values2</b>	98.05

## 3) Nissan Sentra/G20/NX

	<b>g/Sec</b>
<b>Volts1</b>	0
<b>Values1</b>	0
<b>Volts2</b>	5
<b>Values2</b>	99.61

## 4) Nissan Silvia/180SX/Pulsar/Bluebird

	<b>g/Sec</b>
<b>Volts1</b>	0
<b>Values1</b>	0
<b>Volts2</b>	5
<b>Values2</b>	99.61

## 5) Nissan Skyline GT-R

	<b>g/Sec</b>
<b>Volts1</b>	0
<b>Values1</b>	0
<b>Volts2</b>	5
<b>Values2</b>	99.61

## 6) Nissan Skyline GT-S

	<b>g/Sec</b>
<b>Volts1</b>	0
<b>Values1</b>	0
<b>Volts2</b>	5
<b>Values2</b>	99.61

## 7) Nissan 300ZX

	<b>g/Sec</b>
<b>Volts1</b>	0
<b>Values1</b>	0
<b>Volts2</b>	5

<b>Values2</b>	99.61
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8) Nissan 240SX/Altima

	<b>g/Sec</b>
<b>Volts1</b>	0
<b>Values1</b>	0
<b>Volts2</b>	5
<b>Values2</b>	99.61

9) Subaru WRX/Saab 92X

	<b>g/Sec</b>
<b>Volts1</b>	0
<b>Values1</b>	0
<b>Volts2</b>	5
<b>Values2</b>	99.61

## Setting up PLX Logger

User can set up the relationship of the voltage read from the MAF sensor to the corresponding values of pressure (g/Sec). In the PLX Logger, please go to "Config -> Analog Inputs" from the PLX Digital Dash. Select "custom" and enter in the appropriate values from the tables listed below.

**Setup Analog Inputs**

**Analog #1**  
Preset: Custom  
Volts/Unit:  

Volts	Units
0.00	-15.67
0.50	-12.91
1.00	-10.16
1.50	-7.42
2.00	-4.67
2.50	-1.92
3.00	0.83
3.50	3.58
4.00	6.32
4.50	9.07
5.00	11.82

Offset Voltage: 0.00

**Analog #2**  
Preset: Voltage  
Volts/Unit:  

Volts	Units
0.00	0.00
0.50	0.50
1.00	1.00
1.50	1.50
2.00	2.00
2.50	2.50
3.00	3.00
3.50	3.50
4.00	4.00
4.50	4.50
5.00	5.00

Offset Voltage: 0.00

**Analog #3**  
Preset: Voltage  
Volts/Unit:  

Volts	Units
0.00	0.00
0.50	0.50
1.00	1.00
1.50	1.50
2.00	2.00
2.50	2.50
3.00	3.00
3.50	3.50
4.00	4.00
4.50	4.50
5.00	5.00

Offset Voltage: 0.00

**Analog #4**  
Preset: Voltage  
Volts/Unit:  

Volts	Units
0.00	0.00
0.50	0.50
1.00	1.00
1.50	1.50
2.00	2.00
2.50	2.50
3.00	3.00
3.50	3.50
4.00	4.00
4.50	4.50
5.00	5.00

Offset Voltage: 0.00

OK Cancel

## 1) Mitsubishi DSM/3000GT/Stealth

Volts	g/Sec
0.00	0
0.50	9.805
1.00	19.610
1.50	29.415
2.00	39.220
2.50	49.025
3.00	58.830
3.50	68.635
4.00	74.880
4.50	88.245
5.00	98.050

## 2) Mitsubishi EVO 8

Volts	g/Sec
0.00	0
0.50	9.805
1.00	19.610
1.50	29.415
2.00	39.220
2.50	49.025
3.00	58.830
3.50	68.635
4.00	74.880
4.50	88.245
5.00	98.050

## 3) Nissan Sentra/G20/NX

Volts	g/Sec
0.00	0
0.50	9.961
1.00	19.922
1.50	29.883
2.00	39.844
2.50	49.805
3.00	59.766
3.50	69.727
4.00	79.688
4.50	89.649
5.00	99.610

## 4) Nissan Silvia/180SX/Pulsar/Bluebird

Volts	g/Sec
0.00	0
0.50	9.961
1.00	19.922
1.50	29.883
2.00	39.844
2.50	49.805
3.00	59.766
3.50	69.727
4.00	79.688

4.50	89.649
5.00	99.610

## 5) Nissan Skyline GT-R

Volts	g/Sec
0.00	0
0.50	9.961
1.00	19.922
1.50	29.883
2.00	39.844
2.50	49.805
3.00	59.766
3.50	69.727
4.00	79.688
4.50	89.649
5.00	99.610

## 6) Nissan Skyline GT-S

Volts	g/Sec
0.00	0
0.50	9.961
1.00	19.922
1.50	29.883
2.00	39.844
2.50	49.805
3.00	59.766
3.50	69.727
4.00	79.688
4.50	89.649
5.00	99.610

## 7) Nissan 300ZX

Volts	g/Sec
0.00	0
0.50	9.961
1.00	19.922
1.50	29.883
2.00	39.844
2.50	49.805
3.00	59.766
3.50	69.727
4.00	79.688
4.50	89.649
5.00	99.610

## 8) Nissan 240SX/Altima

Volts	g/Sec
0.00	0
0.50	9.961
1.00	19.922
1.50	29.883
2.00	39.844
2.50	49.805

3.00	59.766
3.50	69.727
4.00	79.688
4.50	89.649
5.00	99.610

9) Subaru WRX/Saab 92X

Volts	g/Sec
0.00	0
0.50	9.961
1.00	19.922
1.50	29.883
2.00	39.844
2.50	49.805
3.00	59.766
3.50	69.727
4.00	79.688
4.50	89.649
5.00	99.610

## Revision History

Version 1.0 (11/5/05)	Initial release
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