

**MICROTEC®**

Correction by acceleration

DATE	DRAWER	REVISION	NOTE
18-07-2012	Mattia Stranges	1.00	First release of Correction by acceleration strategy

MICROTEC S.r.l.

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Capitale Sociale € 10.200 i.v Reg. Imprese di Varese n. 02356120127 REA n. 251455


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General description:

Inj and Adv correction by acceleration– injection and advance correction for each RPM/TPS/GEAR breakpoint in function of 6 different acceleration threshold.

Acceleration = rpm derivative as a function of time (rpm per second)

Maps (edit)

Multiple Matrix Editing Enabled

2D Graph 3D Graph

Advance Correction by Acceleration

1

RPM

[deg]	1000	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	11000
2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.2	-0.3	-0.4	-0.4	-0.5	-0.6	-0.7	-0.7
20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.3	-0.4	-0.6	-0.7	-0.9	-1.0	-1.2	-1.3	-1.3
25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.4	-0.7	-0.9	-1.1	-1.3	-1.5	-1.8	-2.0	-2.0
30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-0.6	-0.9	-1.2	-1.5	-1.8	-2.0	-2.3	-2.6	-2.6
37.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-0.7	-1.1	-1.5	-1.8	-2.2	-2.6	-2.9	-3.3	-3.3
45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-0.9	-1.3	-1.8	-2.2	-2.6	-3.1	-3.5	-3.9	-3.9
50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	-1.0	-1.5	-2.0	-2.6	-3.1	-3.6	-4.1	-4.6	-4.6
60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	-1.2	-1.8	-2.3	-2.9	-3.5	-4.1	-4.6	-5.2	-5.2
70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	-1.3	-2.0	-2.6	-3.3	-3.9	-4.6	-5.2	-5.8	-5.8
80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Acceleration

1) 3000

2) 3500

3) 4000

4) 4500

5) 7000

6) 9000

Notes

Reset Select

General operation:

- 6 different acceleration thresholds for each gear → 36 listed plan.
- Injection correction are multiplying factor. (0.900 means 90% of base map)
- Advance correction are additive factor. (9° means +9° to base map)
- Between 2 acceleration values, corrections are interpolated.
- Between 2 rpm or tps breakpoint, corrections are interpolated.
- All values (rpm,tps,acceleration) can be defined from the user

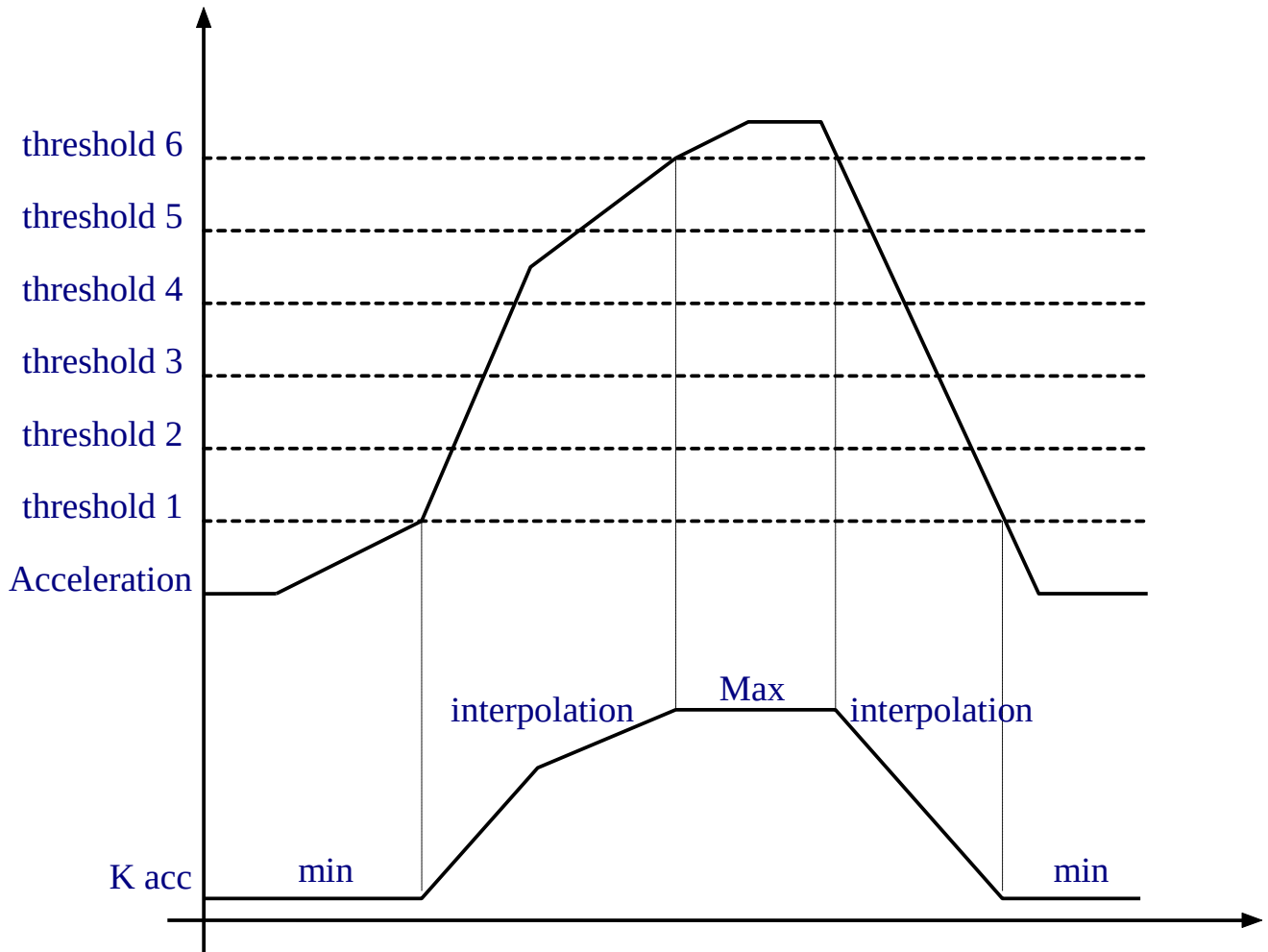
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Detailed operation:


- If acceleration value is below than threshold 1, K acc = correction value from 1) threshold
- If acceleration value is up than threshold 6, K acc = correction value from 6) threshold
- Between 2 acceleration values, corrections are interpolated.
- Acceleration can assume positive and negative values
- Acceleration thresholds must be increasing (thresholds $1 < 2 < 3 \dots < 6$)

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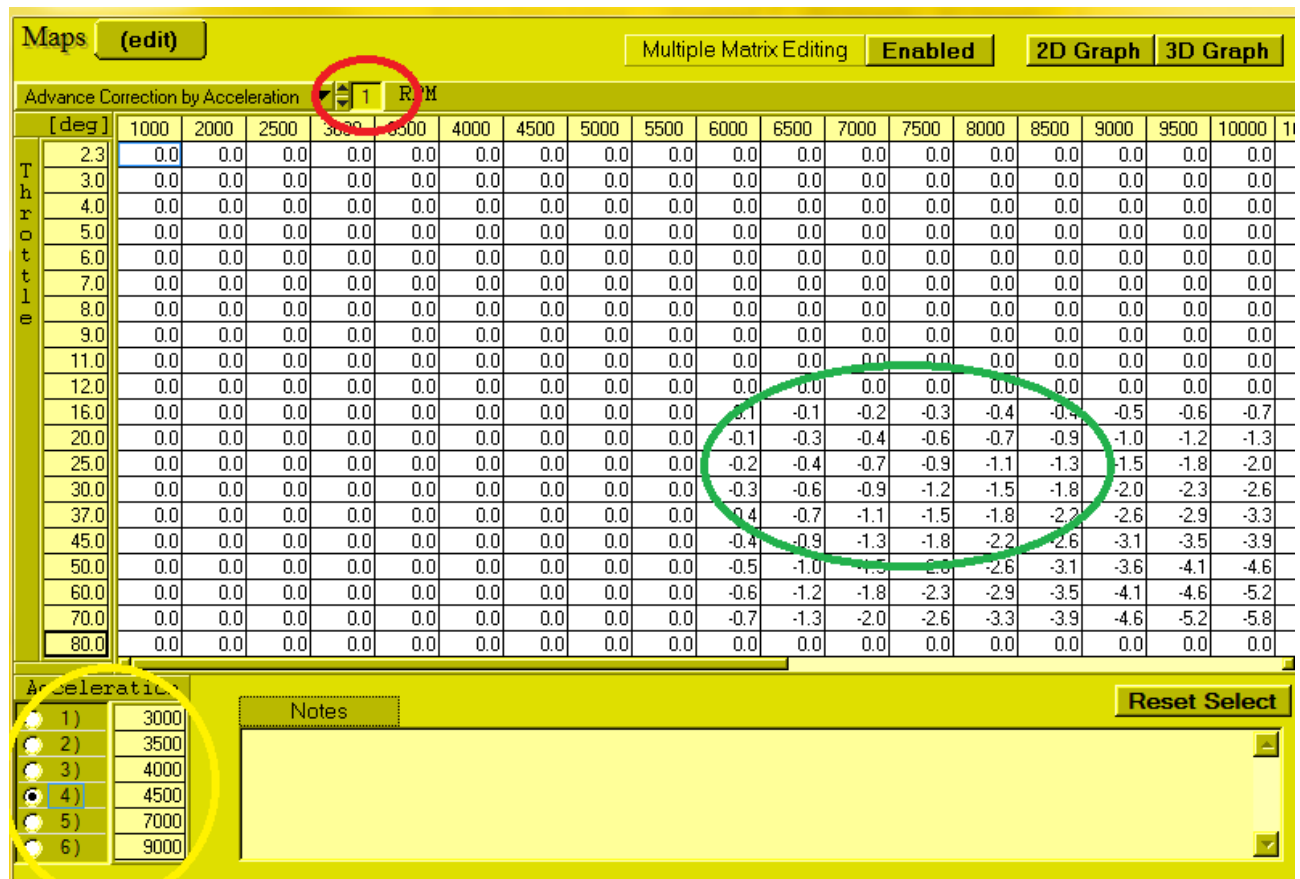
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Software description:



Red circle – gear selection

Yellow circle – acceleration threshold

Green circle – map correction

All values (rpm,tps,acceleration) can be defined from the user

Injection correction percentage as a function of TPS/RPM/ACCELERATION - **KJAcc**

Advance correction additive as a function of TPS/RPM/ACCELERATION - **KAAcc**

Use the mouse to drag an area covering multiple cells as shown here, then press the right mouse button to open the Edit window.

Injection Correction by Acceleration					1	RPM
K		1000	1500	2000	2500	3000
Throttle	0.0	1.000	1.000	1.000	1.000	1.000
	3.0	1.000	1.000	1.000	1.000	1.000
	5.0	1.000	1.000	1.000	1.000	1.000
	10.0	1.000	1.000	1.000	1.000	1.000
	15.0	1.000	1.000	1.000	1.000	1.000
	20.0	1.000	1.000	1.000	1.000	1.000

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All Gears & Accelerations – Tick here if you want your changes to be applied to all gears and all accelerations, not just the one you are working on

Set – Applies a fixed value to all of the chosen cells

Add – Adds a fixed amount to all of the chosen cells

%Add – Adds a percentage to all of the chosen cells

Interpolate – Tick here to interpolate 9 or more cells

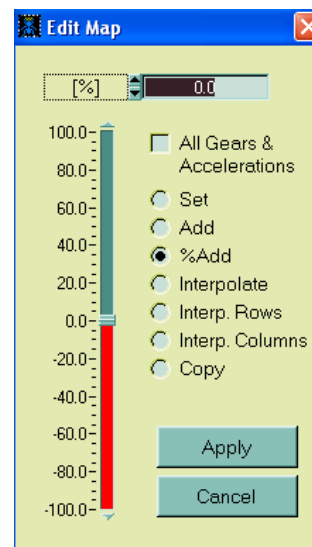
Interp. Rows – Tick here to interpolate 3 or more cells in the same row

Interp. Columns – Tick here to interpolate 3 or more cells in the same columns

Copy - Copies the selected cell values to all other cylinders in this group.

Acceleration	
☒ 1)	500
☐ 2)	800
☐ 3)	1500
☐ 4)	2000
☐ 5)	2500
☐ 6)	3000

In this box you can choose 6 different values of engine acceleration. For each value you have different maps for each gear, so in this window you have 36 plans listed.



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