



Mitsubishi Evolution X Omni 4-Bar Tuning Guide

Version BETA 1.01

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Tuning Guide and Table Definitions

The tuning guide outlines the steps necessary to make the Mitsubishi Evolution X compatible with the Omni 4-Bar map sensor. It will be necessary to rescale a number of table axis and some table data before using the Omni 4-Bar Map sensor.

Tuning Guide:

Step 1- Open access tuner and modify calibration

Open the most current map for the vehicle. Under the Base Tables folder, there will be a “Omni 4-Bar Map Sensor” sub folder that includes all the tables needed to make a map compatible with the Omni 4-Bar.

Fuel Compensation MAT vs MAP:

This table replaces “Fuel Compensation MAT vs MAP”. It is necessary to replace the X-axis with these following values:

-11.36	-9.42	-7.49	-5.55	-3.62	-1.68	0.25	4.12	7.99	11.86
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These values come from the X-axis of the respective table under the “Fuel” subfolder in a stock Evo X map. You can also copy these values from the “Fuel” subfolder into the “Omni 4-Bar Map Sensor” subfolder.

MAP Based Load Calc (Comp. Blend), MAP Based Load Calc (Lower Bound), MAP Based Load Calc (Upper Bound):

These tables replace “MAP Based Load Calc (Comp. Blend)”, “Map Based Load Calc (Lower Bound)”, and “Map Based Load Calc (Upper Bound)” in the “Load Calculation Tables” subfolder. These tables share axis, therefore changing the axis in one table will change the axis for all. It is necessary to replace the X-axis in one of the “MAP Based Load Calc (---)” tables with these following values:

2008-2010 Vehicles:

-11.36	-9.42	-7.49	-5.55	-3.62	-1.68	0.25	2.19	4.12	6.06	7.99	9.93	11.86	13.79	15.73	17.66	19.60	21.53	29.27
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2011 + Vehicles:

-12.57	-11.36	-9.42	-7.49	-5.55	-3.62	-1.68	0.25	2.19	4.12	6.06	7.99	9.93	11.86	13.79	15.73	17.66	19.60	21.53	29.27
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These values come from the X-axis of respective table under the “Load Calculation Tables” subfolder in a stock Evo X map. You can also copy these axis values from the “Load Calculation Tables” subfolder into the “Omni 4-Bar Map Sensor” subfolder.

Boost Compensation for Torque Reporting (SST ONLY):

This table replaces “Boost Compensation for Torque Reporting” in the SST sub folder. It is necessary to replace the data with the following values:

2008-2010 Vehicles:

-9.28	-6.76	-5.41	-3.86	-2.89	-2.07	-1.34	-0.76	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
-10.44	-7.44	-4.44	-2.36	-1.10	-0.38	0.20	0.40	0.78	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
-11.45	-9.52	-7.15	-4.73	-2.50	-1.20	0.20	1.17	1.94	2.53	2.91	3.69	4.07	4.07	4.27	4.65	4.65	4.65	4.65	4.65
-11.45	-10.39	-8.89	-6.62	-4.20	-1.97	-0.28	1.90	3.69	4.85	5.81	6.98	7.94	8.52	8.52	8.72	8.72	8.72	8.72	8.72
-11.45	-10.49	-9.08	-7.00	-4.73	-1.97	0.49	3.40	5.81	7.31	8.52	9.88	10.84	11.23	12.20	13.94	15.87	15.87	15.87	15.87
-11.45	-10.49	-9.28	-7.20	-4.83	-1.44	1.90	4.94	6.78	8.14	9.10	11.52	12.78	13.55	15.10	17.76	21.39	21.39	21.39	21.39
-11.45	-10.53	-9.47	-7.97	-5.70	-2.26	0.83	3.98	6.01	7.51	8.91	11.91	13.36	14.13	15.49	18.78	22.02	22.02	22.02	22.02
-11.45	-10.78	-10.05	-8.55	-6.66	-3.62	-0.23	2.62	5.48	7.12	8.81	12.30	13.75	15.05	17.04	21.10	23.61	23.61	23.61	23.61
-11.45	-10.68	-9.86	-8.74	-6.95	-4.25	-1.39	1.36	4.22	5.77	7.80	11.13	12.78	14.33	15.68	18.34	20.57	20.57	20.57	20.57
-11.45	-10.63	-9.81	-8.74	-7.15	-4.54	-1.63	1.07	3.49	5.19	6.68	10.26	11.76	13.17	14.52	17.23	18.58	18.58	18.58	18.58
-11.45	-10.63	-9.76	-8.94	-7.34	-5.21	-2.36	0.25	2.67	4.41	6.10	9.20	11.04	12.54	13.94	17.13	18.68	18.68	18.68	18.68
-11.45	-10.63	-9.86	-9.03	-7.83	-5.75	-3.33	-0.52	1.75	3.25	5.23	8.33	9.83	11.76	13.36	16.41	16.94	16.94	16.94	16.94
-11.45	-10.82	-10.15	-9.52	-8.84	-7.00	-4.83	-2.46	-0.04	1.70	3.20	6.39	8.47	9.83	11.04	14.28	15.20	15.20	15.20	15.20
-11.45	-10.82	-10.24	-9.61	-8.99	-7.68	-5.79	-3.52	-1.15	0.35	2.04	5.14	6.98	8.91	10.46	12.92	14.23	14.23	14.23	14.23
-11.45	-10.87	-10.29	-9.71	-9.18	-8.36	-6.76	-4.63	-2.31	-1.01	0.88	3.88	5.48	7.94	9.88	11.57	13.31	13.31	13.31	13.31
-11.45	-10.92	-10.34	-9.81	-9.37	-9.08	-7.73	-5.70	-3.47	-2.36	-0.33	2.67	3.98	6.98	9.30	10.22	12.39	12.39	12.39	12.39

2011 + Vehicles:

-7.24	-7.24	-5.41	-2.94	-1.59	-1.49	-1.34	-1.34	-1.20	-1.49	-1.49	-1.34	-1.20	-1.20	-1.20	-1.20	-0.96
-9.37	-9.37	-6.91	-4.58	-2.70	-1.73	-1.68	-1.59	-1.49	-1.39	-1.30	-1.15	-0.96	-0.76	-0.43	0.20	0.69
-11.45	-10.68	-9.23	-7.10	-5.07	-3.18	-1.73	-0.67	0.40	1.07	1.61	2.19	2.53	2.86	2.96	3.06	3.15
-12.28	-12.03	-10.15	-9.03	-6.95	-4.92	-2.99	-0.96	0.83	2.62	3.93	6.15	7.22	7.99	8.62	9.35	9.54
-12.47	-12.47	-11.16	-10.10	-8.21	-6.33	-4.25	-1.83	0.78	3.64	6.15	9.25	10.17	10.75	12.10	13.12	13.94
-12.47	-12.47	-12.13	-10.82	-9.03	-7.20	-5.21	-2.70	0.40	3.59	5.72	8.86	11.62	12.63	14.04	17.42	18.83
-12.47	-12.47	-12.37	-11.45	-9.86	-8.31	-6.76	-4.29	-1.20	1.94	4.80	8.67	11.62	13.12	15.29	18.10	20.86
-12.47	-12.47	-12.37	-11.50	-10.29	-9.42	-7.97	-6.18	-3.13	-0.13	2.96	7.94	11.91	13.60	16.21	19.45	21.68
-12.47	-12.47	-12.37	-11.50	-10.44	-9.47	-8.45	-7.05	-4.49	-1.73	1.12	6.25	9.64	12.25	14.38	17.57	19.41
-12.47	-12.47	-12.37	-11.50	-10.44	-9.47	-8.31	-7.34	-4.97	-2.50	0.25	5.04	8.62	10.94	13.55	16.65	17.86
-12.47	-12.47	-12.37	-11.50	-10.44	-9.57	-8.65	-7.78	-5.75	-3.47	-0.86	3.93	7.31	9.88	12.73	15.49	16.99
-12.47	-12.47	-12.37	-11.55	-10.44	-9.86	-8.99	-8.02	-6.62	-4.44	-2.02	2.53	6.10	8.91	11.91	14.86	16.70
-12.47	-12.47	-12.37	-11.55	-10.44	-10.05	-9.42	-8.70	-7.49	-5.55	-3.47	0.88	4.17	6.64	10.12	13.21	15.39
-12.47	-12.47	-12.37	-11.55	-10.49	-10.15	-9.52	-8.89	-7.68	-6.57	-4.49	-0.47	2.86	5.67	9.35	12.54	14.57
-12.47	-12.47	-12.37	-11.55	-10.49	-10.15	-9.71	-9.13	-7.83	-6.66	-4.68	-0.96	2.09	4.94	7.89	11.13	12.39
-12.47	-12.47	-12.37	-11.55	-10.53	-10.15	-9.71	-9.13	-7.92	-6.81	-4.92	-1.20	1.85	4.51	7.46	10.51	11.81

These values come from the Z data of respective table under the “SST” subfolder in a stock Evo X map. You can also copy these data values from the “SST” subfolder into the “Omni 4-Bar Map Sensor” subfolder.

Baro Sensor Offset:

This data replaces “Baro Sensor Offset” in Sensor Calibrations Folder / Baro Sensor sub folder. Replace the data with the following value:

767

MAP Sensor Offset #01,

MAP Sensor Offset #02:

This data replaces “Map Sensor Offset #01” and “Map Sensor Offset #02” in the “Sensor Calibrations” Folder / MAP Sensor subfolder. Replace the data in both tables with the following value:

3068

Step 2- Install map and Omni 4-Bar

Install the newly modified map onto the car and install the Omni 4-Bar sensor. Use the new monitor “Omni Pres.” in ATR/AP to monitor boost pressure, the previous monitor “Boost” will no longer report correctly. Confirm with a boost gauge that the pressure displayed in Access Tuner is similar. Run the vehicle in a 3-Bar compatible boost pressure, the vehicle should act in the same manner as before the installation. If the vehicle does not act as intended review previous steps.

Step 3- Tune

Omni 4-Bar adjustment should now be complete. Scale the previous tables accordingly to the expected maximum boost pressure of the car. For any further questions contact mitsubishi.experts@cobbtuning.com

#NOTE :

The “OMNI Pres.” monitor works in the same way as the monitor “Boost” and assumes a base pressure value of 14.5psi (sea level). Elevation changes will affect this monitor.