

We've made quite a few changes with the PC Pros. The latest information can be found at this thread:

<http://www.fastforwardsuperchargers.com/forum/showthread.php?t=1733>

PC Pro Main Card:

The PC Pro Main Card now does not use any O2 nor TPS voltage clamps. If your harness has these wires connected ("A" or "B") this is not a problem because the latest programming simply disables the PC Pro from making any modifications to these wires. In other words, the signal for the wires will "pass through" the PC Pro as if it wasn't there. For existing customers that already have the PC Pro Main card wired up this way, I am leaving the wires intact, just in case there are any changes in the future that would reactivate these voltage clamps.

The PC Pro Main Card also has had its fuel functionality changed. Basically, the user now has more control of tailoring the fuel curve to their needs. The fuel trims, i.e. the solid green, yellow and red lights have been disabled because we found that some tuners overused these and now with our revised fuel curve functionality they are redundant and not needed. Additionally, we have eliminated the adjustability of the Accelerator Pump function. It is still functioning but it is not adjustable anymore. The reason for this is that we found we ended up with the same setting for all model year Miatas. The other reason is that we have only three available functions that can be adjusted. We figured it would be better served for the user to have these three functions for tailoring the boost fuel curve precisely to their needs.

The PC Pro Main Card has 3 different adjustments:

Green: disabled

Yellow: disabled

Red: disabled

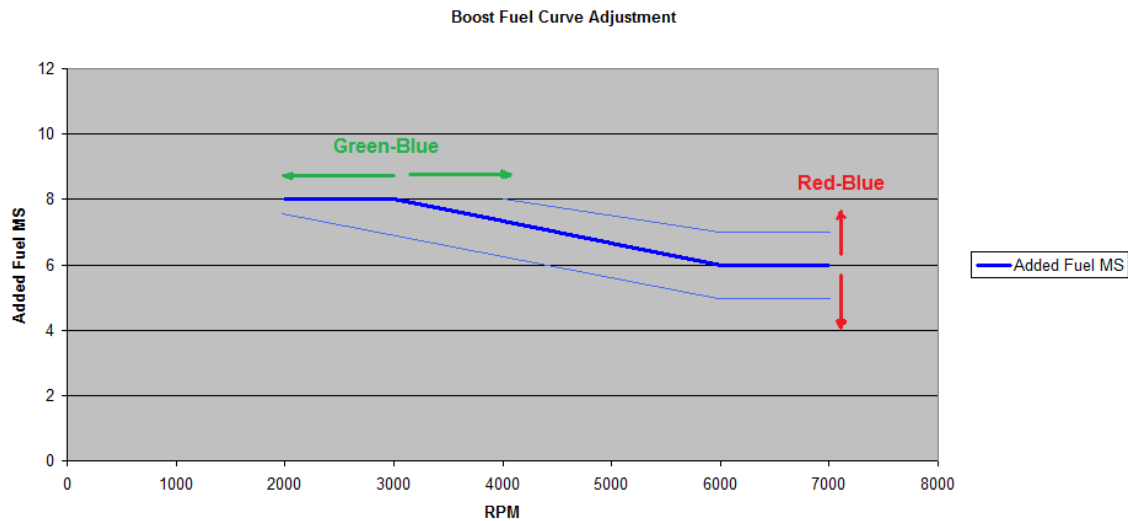
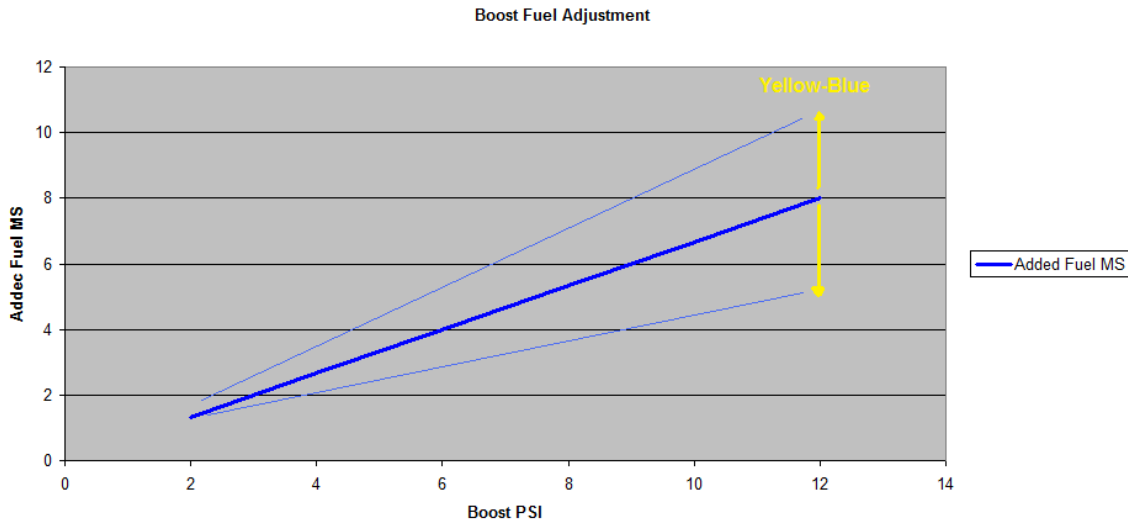
Green-Blue: Fuel Transition Rpm

Yellow-Blue: Boost Fuel

Red-Blue: High Rpm Fuel

Note that the disabled modes will still show up when the "mode" button is pressed on the PC Pro. It is just that they have no effect.

Functions of the three adjustments are best illustrated with the following two graphs:



The Boost Fuel (Yellow-Blue) is the main adjustment. As shown above, it adjusts how much fuel is added per psi of boost. The Fuel Transition Rpm (Green-Blue) and High Rpm Fuel (Red-Blue) determine the shape of the added fuel with engine rpm. The Fuel Transition Rpm is the engine rpm at which the amount of fuel added per psi is reduced as shown above. The High Rpm Fuel determines the amount of fuel added per psi at 6000+ rpm compared to below the Fuel Transition Rpm. For example, at the recommend setting of 6 lights for Red-Blue, this corresponds to the High Rpm Fuel being 75% of the fuel added per psi below the Fuel Transition Rpm.

The Main Card should be adjusted so that the air/fuel ratio is between 12-13:1 below 3500rpm and transitions to 11.5:1 by 4500rpm. An air/fuel ratio of 11.5:1 from 4500rpm to engine redline is highly recommended. The default settings for the Main Card are 4 lights on the Green-Blue and 6 lights for both the Yellow-Blue and Red-Blue.

PC Pro E-Cool Card:

The PC Pro E-Cool Card functionality has remained unchanged. The only adjustment on it is fuel added per psi of boost (Green-Blue).

The PC Pro E-Cool Card has one adjustment:

Green: disabled

Yellow: disabled

Red: disabled

Green-Blue: Boost Fuel (5th injector)

Like on the Main Card, the disabled modes will still show up when the “mode” button is pressed on the PC Pro. It is just that they have no effect.

The default setting for the E-Cool Card is 4 lights for the Green-Blue and it is highly recommended that this not be adjusted. It has been found that this is the optimum setting for E-Cool.

PC Pro Timing Card:

The PC Pro Timing Card now has four functions:

Green: Low Rpm Timing Retard (0-3500rpm)

Yellow: Mid Rpm Timing Retard (3500-5250rpm)

Red: High Rpm Timing Retard (5250rpm-redline)

Green-Blue: Boost Timing Retard

The Low Rpm Timing Retard is the fixed number of degrees of timing that is retarded from stock when in boost at low rpm (0-3500rpm). The number of lights corresponds to the number of degrees retard. The Mid Rpm Timing Retard and High Rpm Timing Retard functions correspond to the same function at the mid and high rpm. The Boost Timing Retard is the number of degrees of timing that is retarded per psi. Eight lights corresponds to 1 degree per pound of boost. The default setting is 4 lights, which is about a ½ deg per pound of boost. It is recommended that the Boost Timing Retard be used for timing retard and that the Rpm Timing Retard (low, mid and high rpm) all be set to 0 lights. This yields the smoothest torque curve with no loss in power if set correctly. The default setting for the Green-Blue is a good starting point. Those running larger pulleys or with '01-'05 models may find they need to increase this to 5 or 6 lights however. A knock gauge is highly recommended for adjustment.