

## **A Custom ECU Tune for my NC (2006) Miata Part 3, "The Tune Install Process".**

So far in this 3 part article, Part 1 explained about acquiring the Moto-East Data-Logger, and the Delta Force Interface, and then e-mailing the Data File, and my stock ECU Template to Mike at Moto East. Part 2 explained about the "Tune" itself, and the changes Mike did in my Custom Tune. This month I will explain the actual Tune install process.

Also as a note, If you have an earlier Miata (Up to 2005) let me remind you of a previous "Flyin' Miata" employee, Ken Hill Jr., (now in our club) who is proficient at Tuning for the earlier year Miatas. He will be very happy to work with you to increase the performance of your NA and NB Miatas. If you have any questions, Ken can be reached at: [ken@oracletuning.net](mailto:ken@oracletuning.net)

Using my Stock Tune Template, and referencing my Data-log file, Mike did a first pass custom tune and e-mailed the file to me. I downloaded it into my "Delta Force" Interface from my computer, and installed it into my Miata. It is important to be careful during the process of installing the tune into the Miata's ECU. You have to be sure all electrical accessories in the car were turned off, and that you don't open the door. If something electrical disturbs the downloading process, it could mess up the transfer of the tune into the ECU. Five minutes later the new tune was in my car and I was ready for the first test drive.

I hooked up the Data-Logger and went for a drive. I did the same Data-Logging sequence as when I first started the process. I then e-mailed this new Data File to Mike at Moto-East. The first custom tune only had some small changes as Mike needed to see how these changes affected the way the motor responded to them. Mike knows the safest way to create a Custom Tune is with small steps, so this first tune only had small changes. An hour after I e-mailed my new Data-Log to Mike he sent a revised custom tune to me to try. Note, it is possible to need several revisions after the initial Tune file, but all needed revisions are included in the initial cost. So there are no extra charges if it takes a couple revisions to get it just right for "your" Miata.

I installed the revised tune into my Miata that evening, but I didn't have time to do another Data-Log run. But the next day it felt like I was driving a totally different car to work. I enjoyed it so much I took a longer way home from work that day. I did a Data-Log run after Dinner and then e-mailed the new Log File to Mike. Mike is an expert at this, and we found he actually hit it "right-on" with this second Tune. After seeing the last Data-Log I sent to Mike, he said the revised tune was right where it needed to be with the small safety margin built in as I asked for.

I didn't want to take my Custom Tune right to the "Edge", as I drive the car every day, and I want to keep it running for a long time, so I asked Mike to not take my Tune as far as someone might go if they were racing, and needed every last available horsepower. I basically asked for a "Safe Street Tune". I told Mike I wanted as much power as I could get, but still have a safety margin for the times I was really on the throttle (like climbing the mountains on the Zoom Drive). I could have also had him raise the Red-Line "motor cut out" if I wanted, but I didn't want to risk blowing the motor for a couple extra RPM. Starting 2009 Mazda put a Forged Crankshaft in the Miata engine, so those with the newer Miata could take advantage of raising this red line "motor cut out".

OK,... Now the results..... I am really impressed with the results of going thru this tune process. As I had previously owned earlier Miatas, I really like the quicker throttle response feel I have now. When I leave the clutch out and give it gas, I now feel I get a quicker start. The extra pep I feel in lower gears is really noticeable around town. Recently I pulled away from a stop light by giving about 1/3 throttle and shifted out of 1st and 2<sup>nd</sup> gears around 4,000 RPMs. I wanted to get to the next light before it turned red. I easily made the light, and when I looked in my mirror the guy behind me was WAY behind me. I smiled the rest of the way home!

When entering a 4 lane highway before, the car seemed a little dead in the lower gears. Now I have all the power I want to accelerate onto the highway. I actually have to watch myself as it accelerates a lot quicker than before, and I end up entering the highway at a faster speed than I targeted.

One evening I was on the 4 lane in a 65 MPH zone, and got behind a car doing just over 55 mph. I pressed the gas pedal a little while still in high gear to go around him, and before I knew it I was doing 70! Oh, what FUN!

I had the pleasure of being the Tail Guy for Jerry Long on the Polar Bear Drive. I found I was quickly catching up using far less throttle than before. At one point I looked at the Speedometer as I was accelerating and I was doing 80 mph! I didn't believe I was going so fast so quickly!

So yes, I feel the Custom Tune from Mike at Moto-East was worth it. I can enjoy the improvements the Custom Tune did to my Miata every day commuting to and from work. I really like this! Plus when I really want to get my heart pumping, I give it the gas and feel instant power in any gear. It just ZOOMS! I was skeptical at first about the value of a custom tune, but I am glad I did it! Plus the Miata starts, drives, and cruises on the highway just as it did before. Also note, if at any time you want to return the Miata back to it's original OEM Tune (Trade in or Sell), it is a 5 minute job which is as easy as installing the custom tune.

If you like to drive your 2006 or newer Miata in a very sporty manner, or just want to make your everyday driving more enjoyable, then take a look at a Custom Tune from Moto-East. Mike is a great guy to work with. After I figured out how to do it, it seemed easy and I really enjoyed the process.

I also want to point out that Mike has a "Standard Performance Street Tune" just for pure stock Miatas. You do not have to rent the Data Logger for this. You just buy the Interface with the included Standard Street Tune, load it into the Miata and go enjoy. This standard tune is advertised to give 8 to 10 additional Hp. Where if you data log and do the entire Tune process, even more power can be gained, especially with aftermarket exhaust added.

If you want to do some reading about Custom Tuning, here are some links to web pages that go into far more details than I have tried to touch on. Read the "Tuning Principals" first.

\* Link for Tuning Principals: <http://www.megamanual.com/begintuning.htm>

\* Link for Tuning Theory: <http://www.megamanual.com/ms2/tune.htm>

Just as a note, after writing my original Tuning article, Mike Mann at Moto-East offered a 10% discount deal on NC, (2006+ Miatas) ECU Tuning to PACE club members for a listing in our web page and newsletters. With the Club officer's approval, Moto-East is now listed and PACE Members can get 10% off everything Tuning related on his web page. This includes the Data-Logger rental, the Delta Force Interface, the EcuTek Brand – "ProECU" computer software, and his tuning work.

Link to his on-line tuning store: <http://www.moto-east.com/store/2006-miata-nc.html>

PACE Members use the Coupon Code: **10-OFFPACE** when ordering on his web site. Note you must use all Capital Letters, and he may ask you at some point to verify you are a PACE member. You know how to reach me if you have any questions!

Zooming with my Custom Tuning! (And Smiling)  
Bill Latsha