



## FUEL MOTO MICRO EFI TUNER INSTALLATION INSTRUCTIONS

2012

HARLEY-DAVIDSON  
SOFTAIL/DYNA MODELS



### PARTS LIST

|   |                    |   |                    |
|---|--------------------|---|--------------------|
| 1 | Micro Tuner Module | 1 | Alcohol swab       |
| 1 | USB Cable          | 1 | Posi-Tap           |
| 1 | CD-ROM             | 1 | Front O2 Optimizer |
| 1 | Installation Guide | 1 | Rear O2 Optimizer  |
| 2 | Velcro             |   |                    |

### PLEASE READ ALL DIRECTIONS BEFORE STARTING INSTALLATION

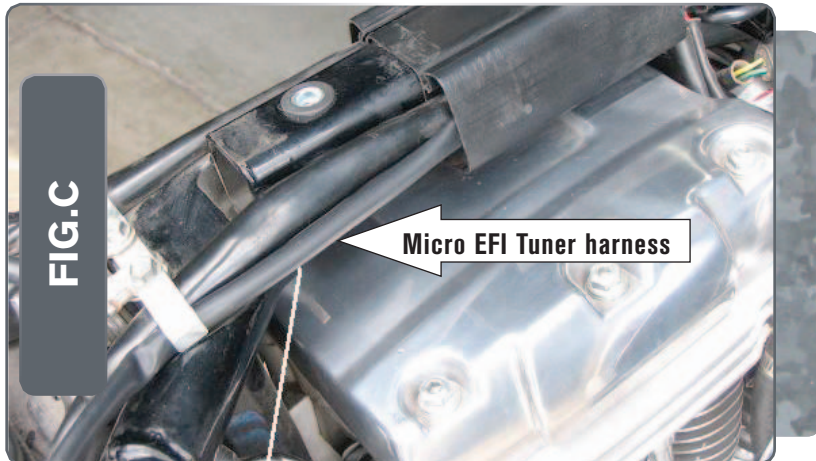
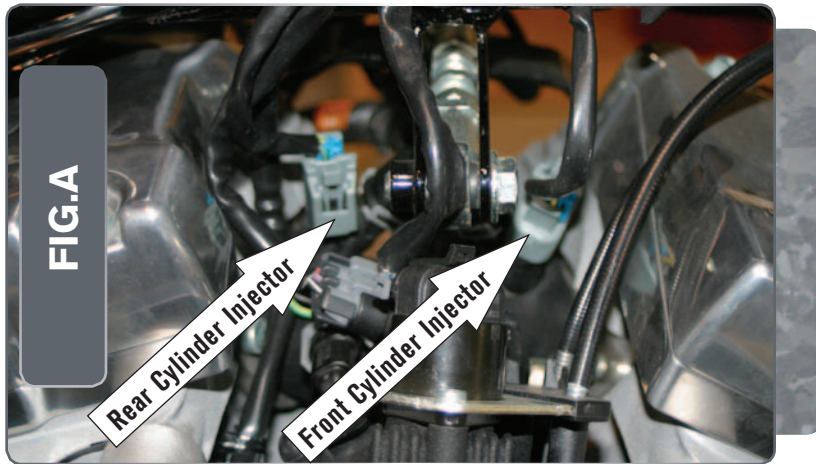
Note: Fuel Moto USA and Fuel Moto Micro EFI Tuner fuel management systems are not legal for use or installation on motor vehicles operated on public highways in the State of California or other States where similar emission and decibel regulation laws may apply. The user shall determine suitability of the product for his or her use. The user shall assume all risk and liability in violation of regulations and any incurred financial obligations due to vehicle inspections or emissions tests.

**Fuel Moto USA**

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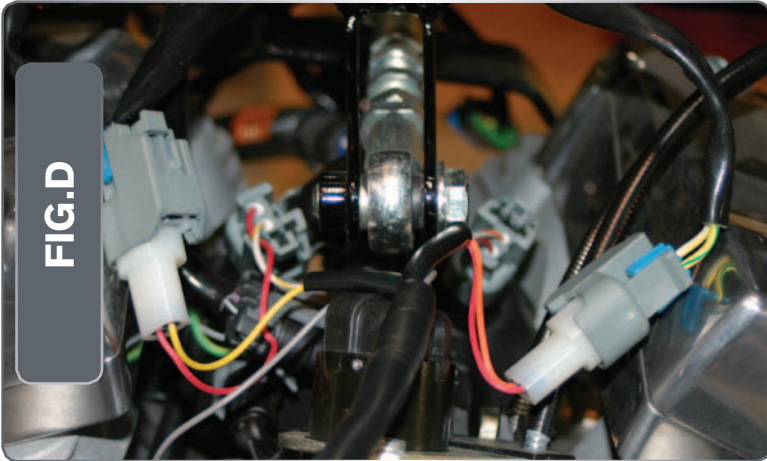
[www.fuelmotousa.com](http://www.fuelmotousa.com)



**Follow these steps if you are installing to a 2012 Softail Model**

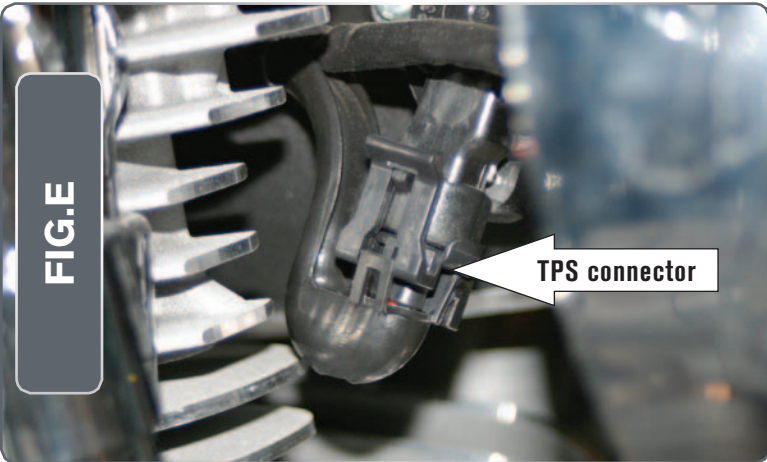
1. Remove the seat.
2. Remove or raise the fuel tank. The tank needs to be raised enough to give access to the fuel injectors and TPS wires.
3. Place the Micro EFI Tuner where you plan on mounting it permanently. In most cases, this will be under the seat.
4. Connect the ground lug (BLACK wire) of the Micro EFI Tuner to a grounding point on the bike. The negative side of the battery is a good location. Use the Velcro tape to mount the Micro EFI Tuner in position. Use alcohol swab to clean mounting surface prior to attaching Velcro.
5. Run the wiring harness for the Micro EFI Tuner from the seat to the engine. Make sure that it will not get damaged when you reinstall the tank.
6. Use one zip tie to secure the harness to the frame, away from the cylinder head, if needed.

FIG.D



7. Unplug the fuel injectors. On the Micro EFITuner, there are 2 pairs of injector connectors.
8. Plug the ORANGE colored wires from the Micro EFITuner in-line of the FRONT injector and stock wiring harness.
9. Repeat step 8, using the other connector pair with YELLOW colored wires for the REAR cylinder injector.

FIG.E



10. Locate the throttle position sensor. This is located towards the rear of the throttle body.

FIG.F



11. Unplug the connector from the TPS.
12. Using the supplied Posi-Tap attach the GREY wire of the Micro EFITuner to the GREEN/PURPLE wire of the stock harness. This wire should be in position "C" on the connector.
13. Plug the TPS connector back onto the throttle body.

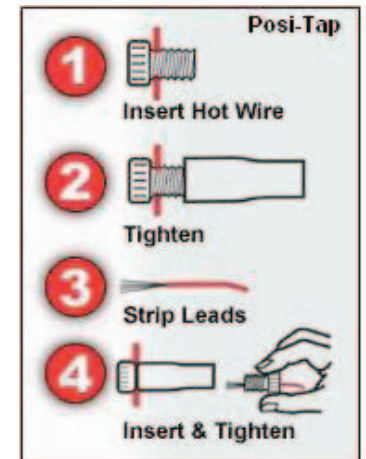
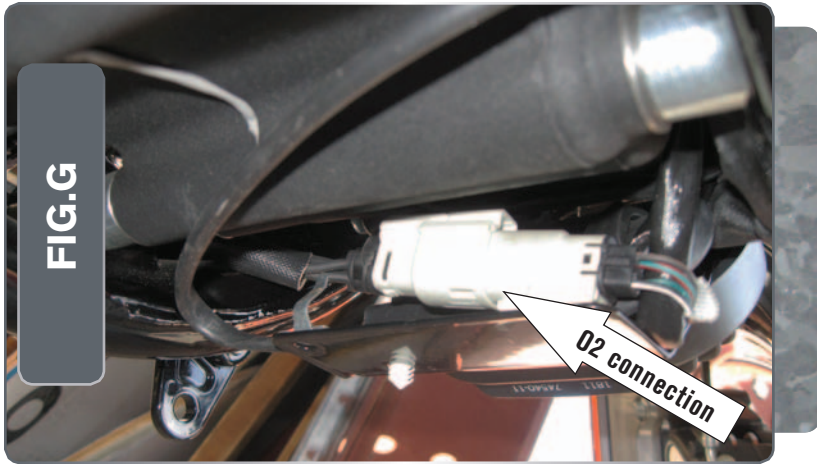


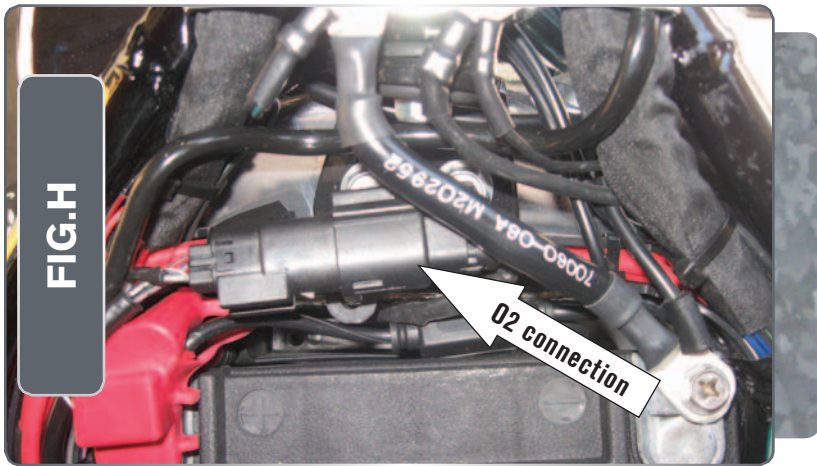
FIG.G



- 14 Unplug the front O2 sensor from the main wiring harness (Fig. G).  
*This connector is located under the front of the engine behind the regulator/rectifier.*  
*There is a BLACK O2 Optimizer and a WHITE O2 Optimizer supplied in the kit. They are indexed so that they can NOT be connected incorrectly.*

- 15 Connect the Micro EFITuner Front O2 optimizer to the stock wiring harness.  
**Note:** *The O2 sensor can be removed from the exhaust, if desired.*

FIG.H



- 16 Disconnect the rear cylinder O2 sensor from the main wiring harness (Fig. H).  
*This connector is located under the seat and in front of the bike's battery.*
- 17 Connect the Micro EFITuner Rear O2 optimizer to the stock wiring harness.  
**Note:** *The O2 sensor can be removed from the exhaust, if desired.*
- 18 Reinstall the battery, seat and fuel tank.

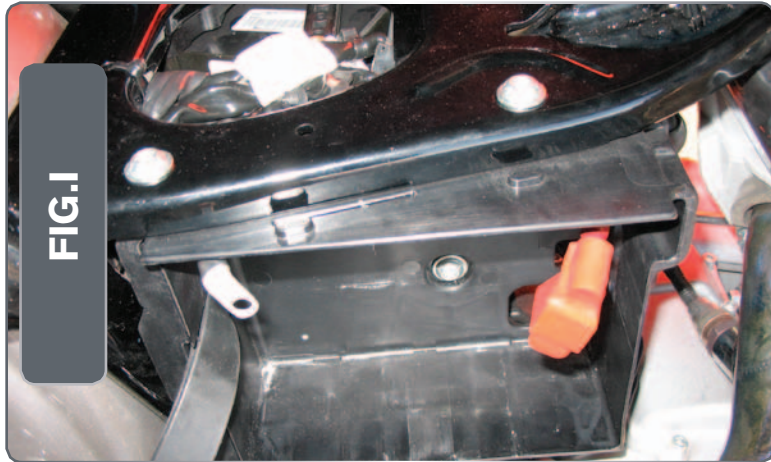


FIG. I

**Follow these steps if you are installing to a 2012 Dyna Model**

- 1 Remove the sidecovers, seat, battery box (Fig. I), and the airbox.
- 2 Remove or raise the fuel tank. The fuel tank needs to be raised high enough to give access to the fuel injectors and TPS wires.

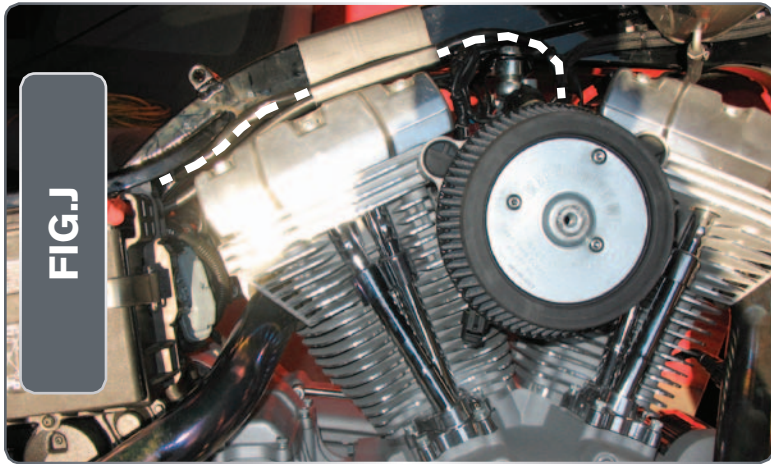


FIG. J

- 3 Route the wiring harness underneath the frame and up towards the throttle body (Fig. J).

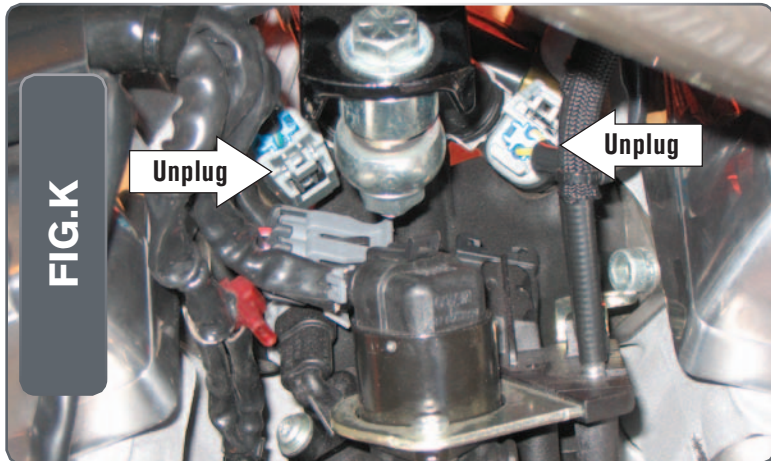
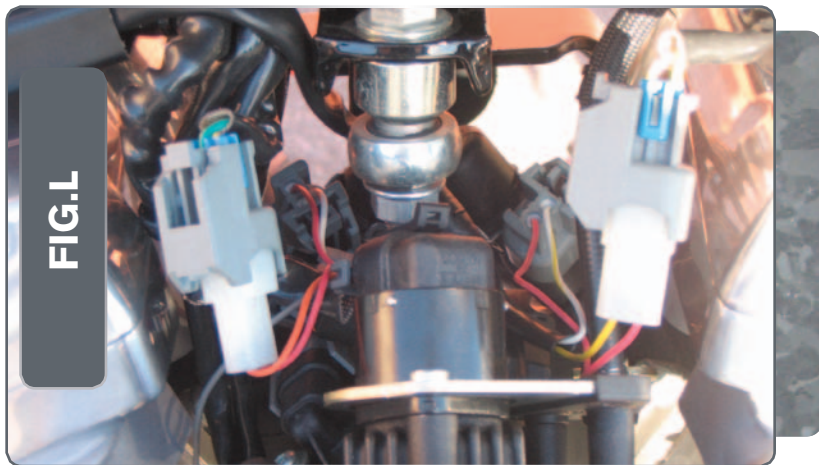


FIG. K

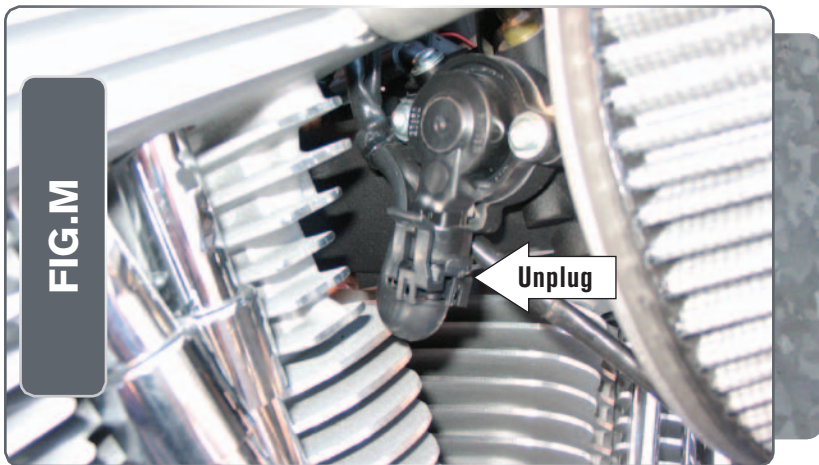
- 4 Unplug the stock wiring harness from both fuel injectors (Fig. K).



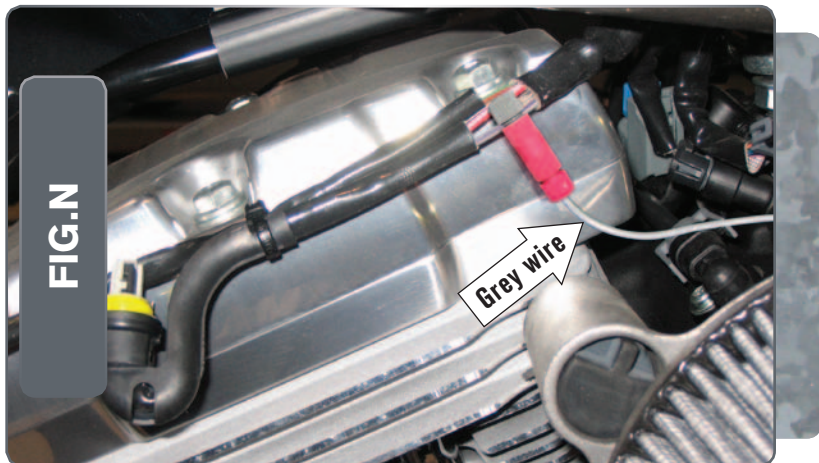
- 5 On the Micro EFI Tuner there are 2 pairs of fuel injector connectors. Plug both sets in-line with the bike's fuel injectors and stock wiring harness for the fuel injectors (Fig. L).

*Plug the connectors with ORANGE colored wires in-line of the FRONT cylinder fuel injector and stock wiring harness.*

*Plug the connectors with YELLOW colored wires in-line of the REAR cylinder fuel injector and stock wiring harness.*

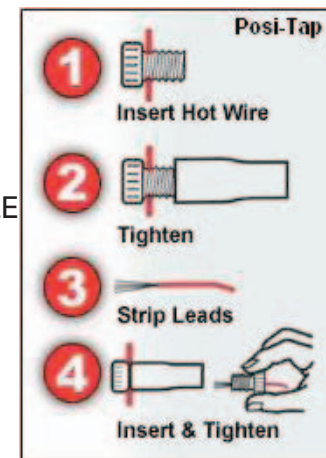


- 6 Locate the Throttle Position Sensor connector behind the throttle body. Unplug the stock wiring harness from the bike's TPS (Fig. M).



- 7 Using the supplied Posi-tap, attach the GREY wire of the Micro EFI Tuner to the GREY/PURPLE wire of the stock harness (Fig. N).

- 8 Plug the TPS connector back onto the TPS.

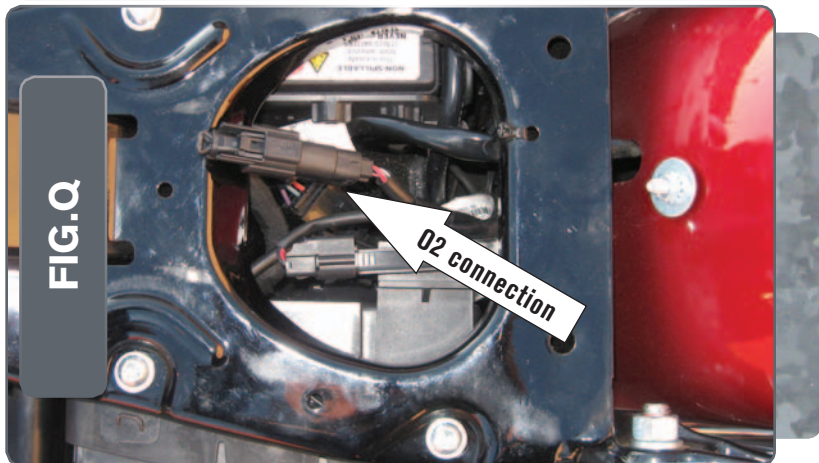




- 9 Place the Micro EFI Tuner module where you plan to mount it permanently. In most cases, this will be next to the ECU (Fig. O).
- 10 Reinstall the battery box and battery.



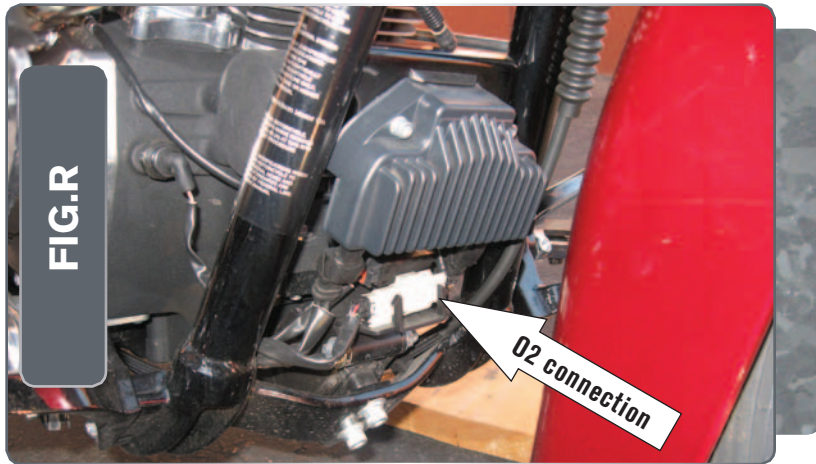
- 11 Secure the ground wire (BLACK wire w/ eyelet) from the Micro EFI Tuner to the negative side of the bike's battery (Fig. P).



- 12 Unplug the rear O2 sensor from the stock wiring harness (Fig. Q).  
*This connector is located in the frame opening under the seat.*
- 13 Plug the supplied Rear O2 Optimizer into the stock wiring harness in place of the stock o2 sensor.

*There is a BLACK O2 Optimizer and a WHITE O2 Optimizer supplied in the kit. They are indexed so that they can NOT be connected incorrectly.*

*The stock O2 sensors will no longer be connected to anything and can be removed from the exhaust, if desired.*



- 14 Unplug the Front O2 sensor from the stock wiring harness (Fig. R).
- 15 Plug the supplied Front O2 optimizer into the stock wiring harness in place of the stock 2 sensor.  
*The stock O2 sensors will no longer be connected to anything and can be removed from the exhaust, if desired.*
- 16 Reinstall the sidecovers, fuel tank, airbox, and seat.





- USB Port
- HIGH RPM Dial
- MID RPM Dial
- LOW RPM Dial
- MAP Select
- STATUS Light

### Selecting the Map Position

The Fuel Moto Micro EFI Tuner comes loaded with up to ten maps. Using a #1 Phillips screwdriver, turn the map select dial to toggle between the loaded maps. Refer to the map position table below for the maps included in your Micro EFI Tuner Module.

### Using the RPM Range Dials

The Low, Mid, and High RPM Dials refer to the RPM range, in thirds, of your vehicle. Each dial allows +/- 10% fuel adjustment on top of what fuel changes are done in the map. With the dial facing straight up, there is no additional fuel change

For example, if your vehicle revs to 6000 RPM:

- The low RPM dial will adjust 0-2000 RPM
- The mid RPM dial will adjust 2001-4000 RPM
- The high RPM dial will adjust 4001-6000 RPM

### Using Fuel Moto Micro EFI Tuner Control Center

Take your tuning to the next level with the Fuel Moto Micro EFI Tuner Control Center software.

- 1 Insert the CD provided into your computer's cd-rom drive. The launch program will run automatically. If auto-run is disabled, double-click the My Computer icon then double-click the CD drive icon. Double-click Fuel Moto Micro EFI Tuner setup.exe to manually start the CD.
- 2 Click Install Software and follow the on-screen instructions to install the Micro Tuner software. The Micro EFI Tuner software and maps will be stored in C:\Program Files\Fuel Moto Micro EFI Tuner Control Center.
- 3 Click Map Database. All maps will automatically be installed to the C:\Program Files\Fuel Moto Micro EFI Tuner Control Center\maps folder.

### Loading Additional Maps

- 1 Connect the USB cable from the computer to the Fuel Moto Micro EFI Tuner Module. Verify the cable is fully seated in the Fuel Moto Micro EFI Tuner Module.
- 2 Run the Fuel Moto Micro EFI Tuner Control Center software by double-clicking the program icon installed on your desktop or on your start menu.
- 3 Click Open Map File and select a map file.
- 4 Click Send Map. You can send the map to any of the ten map positions .

### Altering Maps Using Software

The values in the map represent a percentage of fuel change over stock. A value of 10 in the map indicates at that throttle position and RPM range the vehicle will be 10% richer than stock. If the value is -10, then it would be 10% leaner than stock. You have the ability to fine tune your fuel curve by altering these values . The Control Center software allows a value of +250 to -100 in each cell.