

# [POWER COMMANDER V]

## FUEL AND IGNITION

### 2001-2006 Harley Davidson Softail

#### Installation Instructions



#### PARTS LIST

- 1 Power Commander
- 1 USB Cable
- 1 Installation Guide
- 2 Power Commander Decals
- 2 Dynojet Decals
- 3 Dual Lock Velcro strips
- 1 Alcohol swab
- 1 Zip tie
- 1 ECM tray

**THE IGNITION MUST BE TURNED  
OFF BEFORE INSTALLATION!**

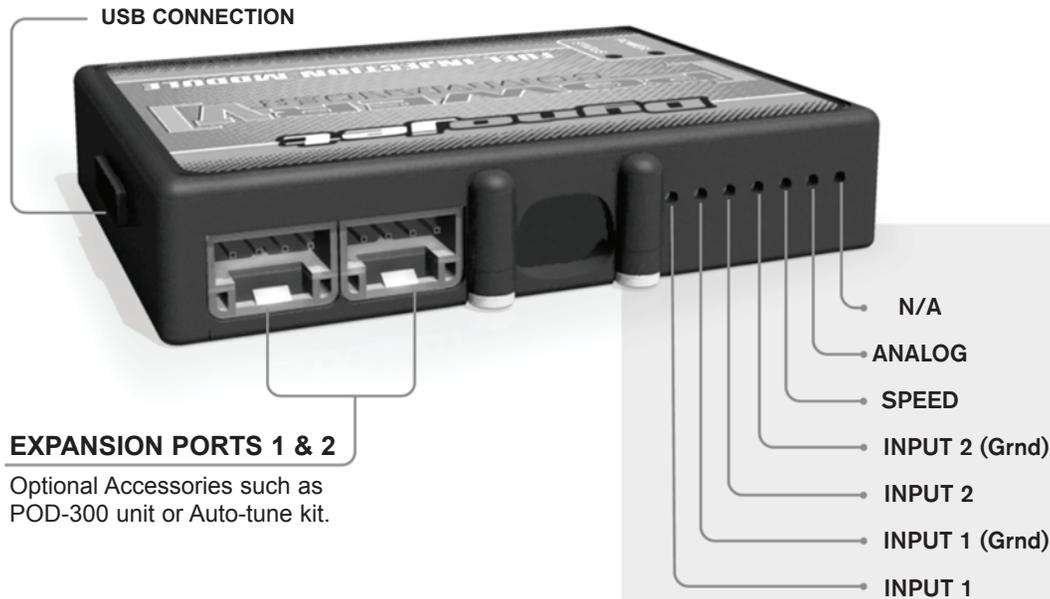
THE LATEST POWER COMMANDER  
SOFTWARE AND MAP FILES CAN BE  
DOWNLOADED FROM OUR WEB SITE AT:  
[www.powercommander.com](http://www.powercommander.com)

**PLEASE READ ALL DIRECTIONS BEFORE STARTING INSTALLATION**

**Dynojet**

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# POWER COMMANDER V INPUT ACCESSORY GUIDE



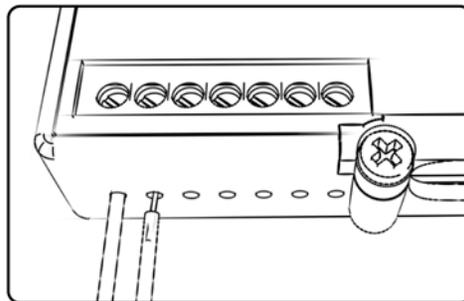
## EXPANSION PORTS 1 & 2

Optional Accessories such as POD-300 unit or Auto-tune kit.

## Wire connections:

To input wires into the PCV first remove the rubber plug on the backside of the unit and loosen the screw for the corresponding input. Using a 22-24 gauge wire strip about 10mm from its end. Push the wire into the hole of the PCV until it stops and then tighten the screw. Make sure to reinstall the rubber plug.

NOTE: If you tin the wires with solder it will make inserting them easier.



# ACCESSORY INPUTS

## Map -

(Input 1 or 2) The PCV has the ability to hold 2 different base maps. You can switch on the fly between these two base maps when you hook up a switch to the MAP inputs. You can use any open/close type switch. The polarity of the wires is not important. When using the Autotune kit one position will hold a base map and the other position will let you activate the learning mode. When the switch is "CLOSED" Autotune will be activated. (Set to Switch Input #1 by default.)

## Shifter-

(Input 1 or 2) Used for clutch-less full throttle upshifts. Insert the wires from the Dynojet quickshifter into either INPUT 1 or INPUT 2. The polarity of the wires is not important. (Set to Switch Input #2 by default.)

## Speed-

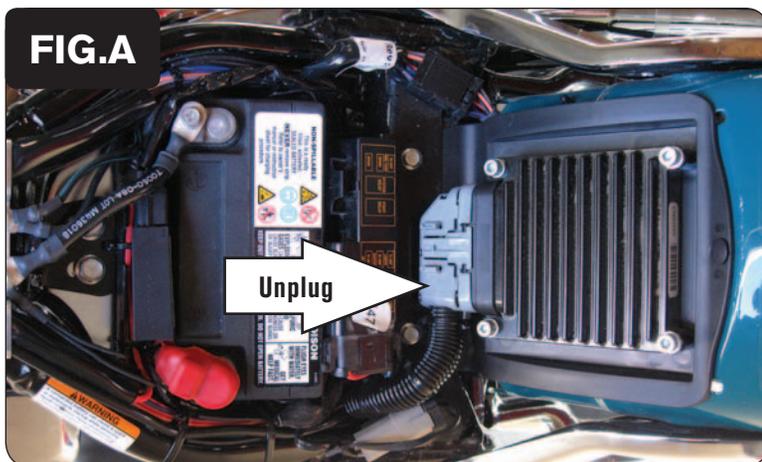
Not needed on Harley applications as the speed signal wire is built into the main wiring harness of the PCV.

## Analog-

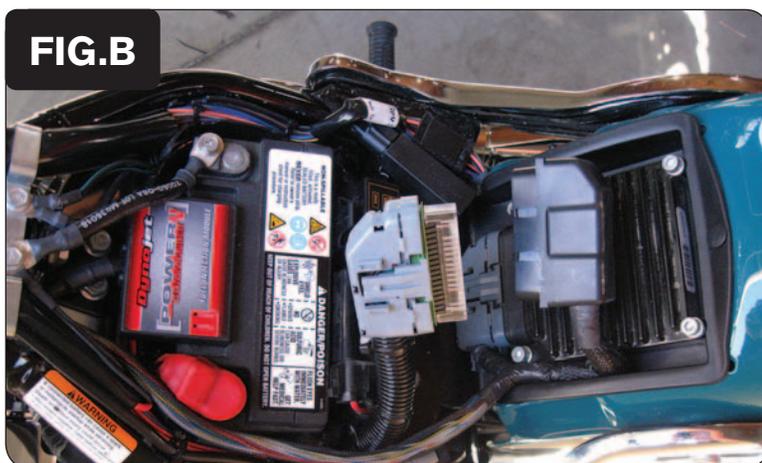
This input is for a 0-5v signal such as engine temp, boost, etc. Once this input is established you can alter your fuel curve based on this input in the control center software.

## Launch-

You can connect a wire to either input 1 or 2 and then the other end to a switch. This switch when engaged (continuity) will only allow the RPM to be raised to a certain limit (Set in the software). When released you will have full RPM.



- 1 Remove the seat.
- 2 Unplug the stock wiring harness from the ECM (Fig. A).
- 3 Remove the 4 bolts that hold the ECM to the tray and remove the ECM.
- 4 Remove the tray from the rear fender.

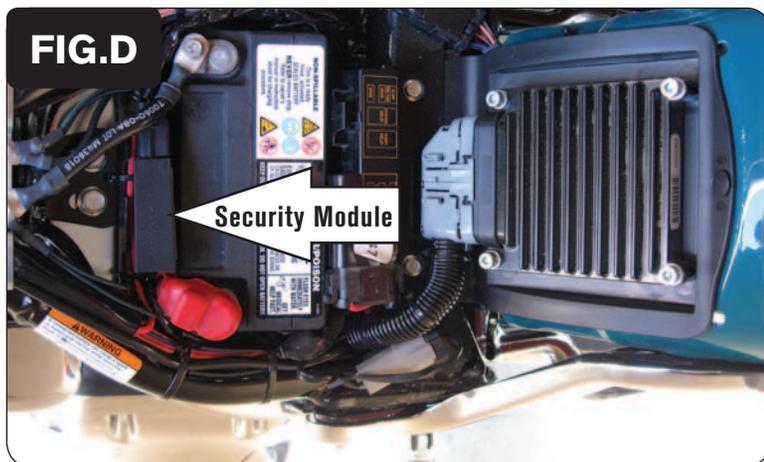


- 5 Install the Dynojet ECM tray to the rear fender.
- 6 Connect the PCV harness in-line of the stock wiring harness and ECM (Fig. B).
- 7 Place the BLACK PCV to GREY stock connector on top of the ECM. Secure these connectors to the ECM using the supplied zip tie.



- 8 Using the supplied Velcro secure the PCV to the top of the battery (Fig. E).

**Note:** Depending on seat clearance, model variations, accessory options, and other considerations you might find other module mounting locations to be more suitable. Alternate locations to be considered are on top of the ECM or on top of the rear fender (2" rear of the solo seat nut).

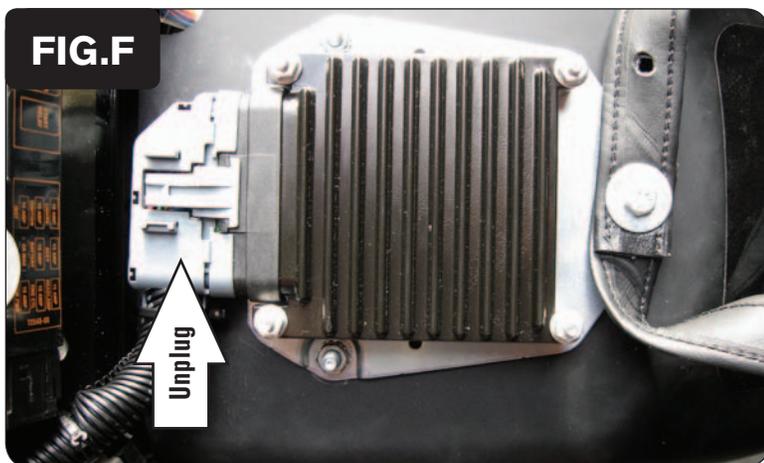


**Note: If your bike is equipped with a Security Module at the front of the battery, you might find it necessary to relocate the Security Module in order to store the PCV module on top of the battery.**

- 1 Remove the security module from the top of the battery (Fig. D).  
*This unit slides to the right of the bike.*



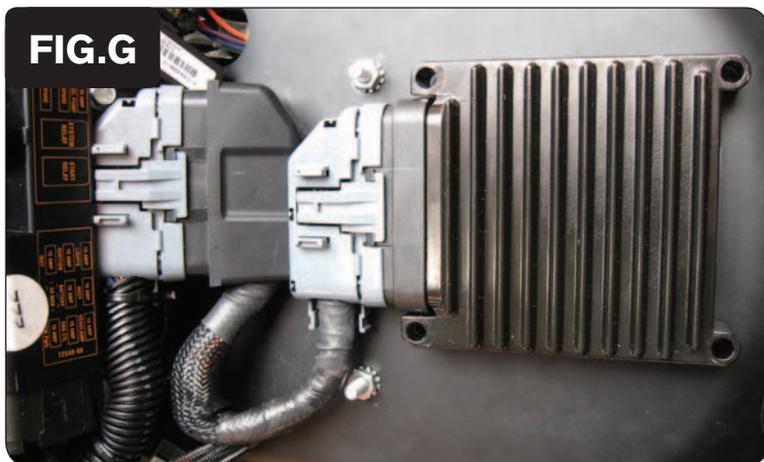
- 2 Move the security module to the right side of the bike. Use a zip tie to secure the module to the tail light connector (Fig. E).



**Note: If installing to a Softail Deuce, Screaming Eagle Deuce, or a 2006 model, use the following instructions.**

- 1 Remove the seat.
- 2 Unplug the stock wiring harness from the ECM (Fig. F).
- 3 Remove the 4 nuts that hold the ECM to the bracket and remove the ECM.
- 4 Remove the bolt that holds the seat strap to the rear fender.  
*Remove one nut at a time or the bracket will fall into the tire.*
- 5 Reinstall the nuts to support the inner fender bracket.

*Due to the limited amount of clearance the seat strap and ECM bracket can NOT re-used.*



6 Connect the PCV wiring harness in-line of the stock wiring harness and ECM (Fig. G).

7 Place the mating BLACK PCV connector and the stock GREY connector as close to the fuse/relay box as possible.

*This connection will NOT lay flat against the frame.*

8 Using the supplied Velcro secure the ECM to the rear fender.

*Place the ECM as far down as possible. The upper part of the ECM will just overlap the bolt hole for the seat strap. Clean both surfaces with the supplied alcohol swab prior to applying the Velcro.*

*If using the Auto-tune kit offset the ECM about 1" from center towards the right hand side of the bike.*

9 Using the supplied Velcro secure the PCV module to the top of the battery (Fig. H).

*Clean both surfaces with the supplied alcohol swab prior to applying the Velcro.*

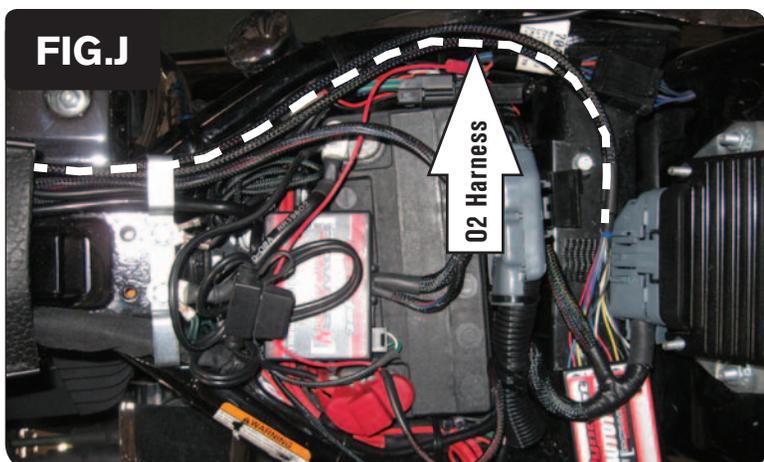
### **Follow these instructions when installing the Autotune kit (part #AT-100B)**

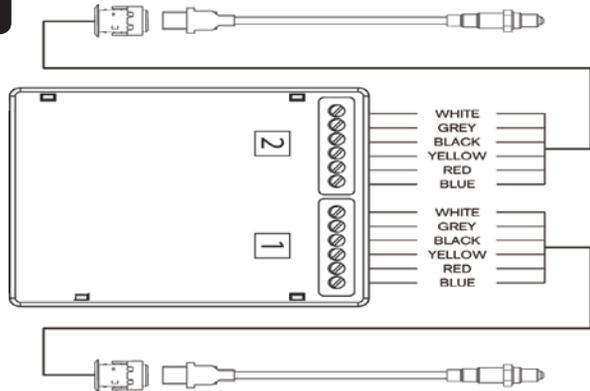
**Note:** Assuming the bike has an exhaust system designed for a 2001-2006 model year Softail, it should not have M18 x 1.5 O2 sensor bungs available in the header pipes for the Auto-tune wideband O2 sensors. In this case you will need to weld bungs into the header pipes to use Auto-tune. The Auto-tune kits with a part number ending in "B" come with weld-in bungs supplied.

1 Remove the seat.

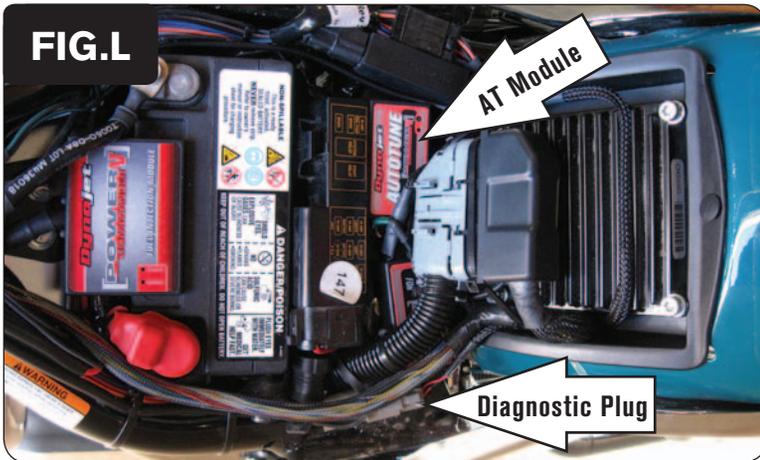
2 Connect the longer O2 sensor harness to the front Dynojet O2 sensor. Route the harness along the frame and go around the right hand side of the battery.

3 Repeat step 2 for the rear O2 sensor using the shorter harness.



**FIG.K**

- 4 Connect the front O2 sensor harness to sensor input #1 on the Autotune module per Figure K. The harness can be cut to length if desired.
- 5 Connect the rear O2 sensor harness to sensor input #2 on the Autotune module per Figure K. The harness can be cut to length if desired.

**FIG.L**

- 6 Remove the rubber plug from the stock diagnostic plug. Connect the power lead from the Autotune module into the diagnostic plug (Fig. L).
- 7 Secure the module to the frame using the supplied Velcro.

**FIG.M**

- 8 Use the CAN bus cable to connect one Autotune module to the PCV. It does not matter what ports are used.
- 9 Install the CAN termination plug into the open port of the Autotune module.
- 10 Secure the harnesses in place as in Figure L. Make sure the O2 sensor harnesses do not contact the exhaust.

Check [www.powercommander.com](http://www.powercommander.com) for maps and software updates.