

# [POWER COMMANDER V]

## FUEL AND IGNITION

### 2012-2014 Harley Davidson V-Rod

#### Installation Instructions



#### PARTS LIST

- 1 Power Commander
- 1 USB Cable
- 1 Installation Guide
- 2 Power Commander Decals
- 2 Dynojet Decals
- 2 Velcro strips
- 1 Alcohol swab
- 1 O2 Optimizer (front)
- 1 O2 Optimizer (rear)
- 1 Zip tie

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

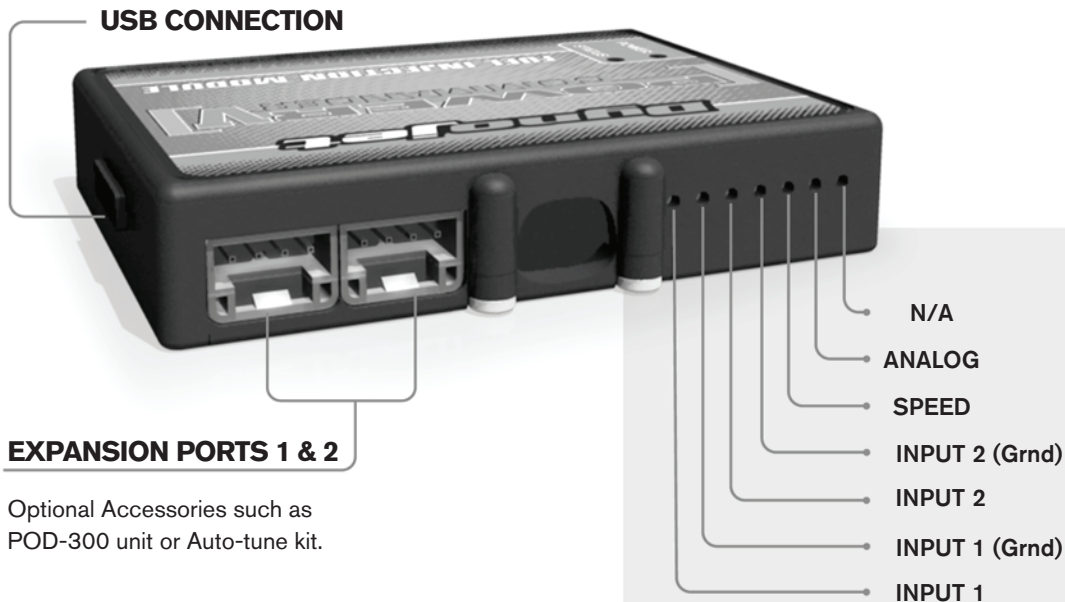
THE LATEST POWER COMMANDER SOFTWARE AND MAP FILES CAN BE DOWNLOADED FROM OUR WEB SITE AT:  
[www.powercommander.com](http://www.powercommander.com)

**PLEASE READ ALL DIRECTIONS BEFORE STARTING INSTALLATION**

**Dynojet**

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# POWER COMMANDER V INPUT ACCESSORY GUIDE



## 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-

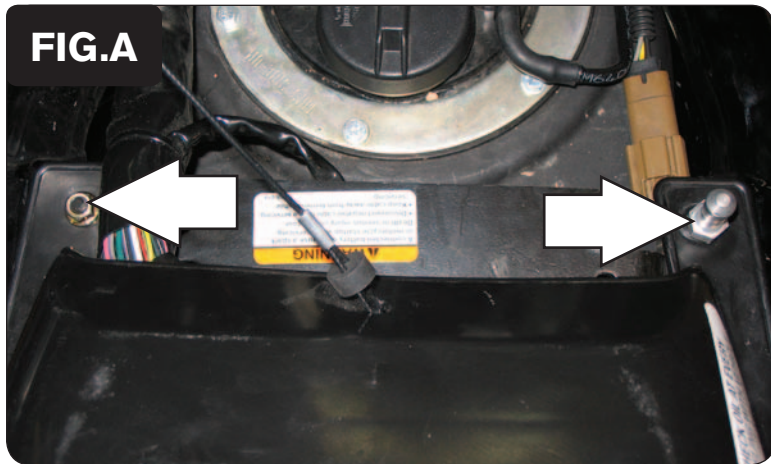
Not needed on Harley applications as the speed signal wire is built into the main wiring harness of the PCV.

### Analog-

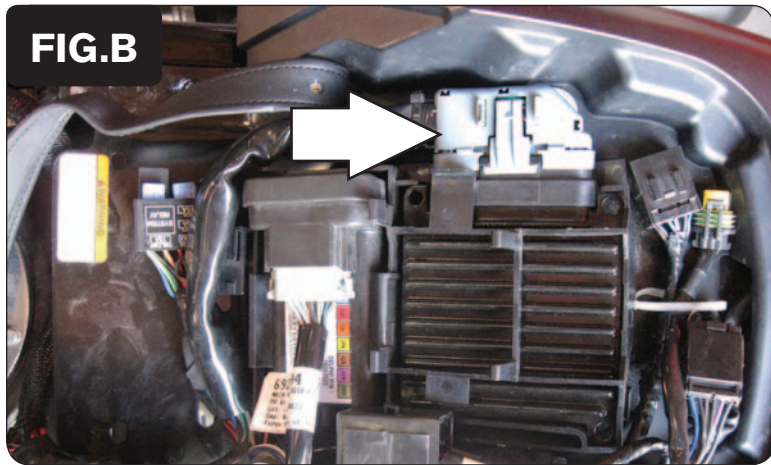
This input is for a 0-5v signal such as engine temp, boost, etc. Once this input is established you can alter your fuel curve based on this input in the control center software.

### Launch-

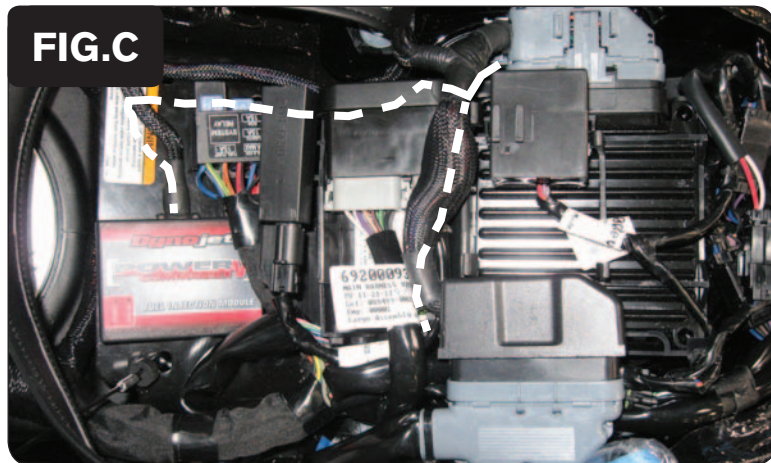
You can connect a wire to either input 1 or 2 and then the other end to a switch. This switch when engaged (continuity) will only allow the RPM to be raised to a certain limit (Set in the software). When released you will have full RPM.



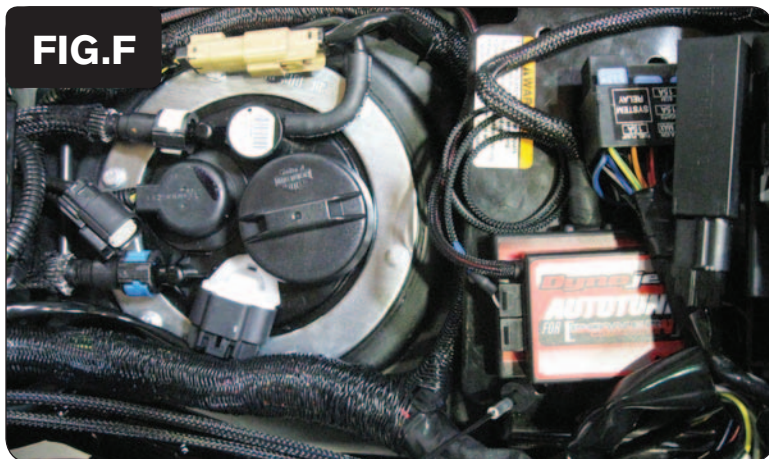
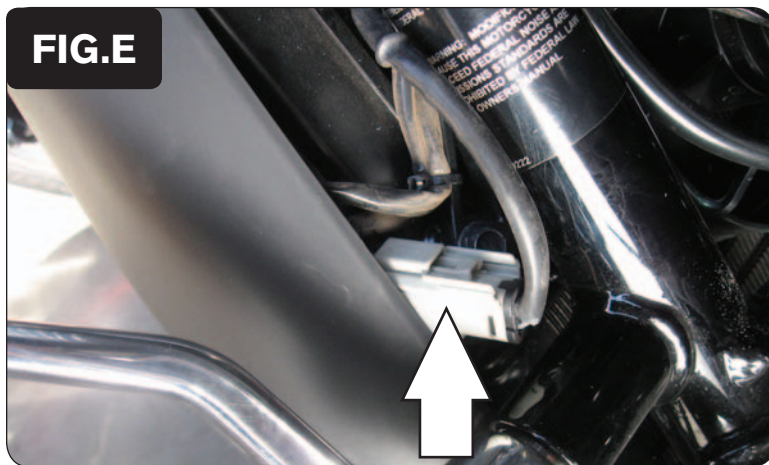
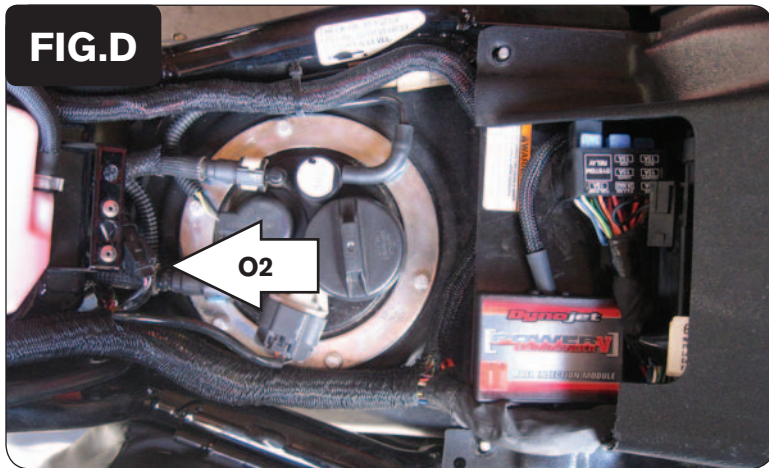
- 1 Remove the seat.
- 2 Remove the two bolts that hold on the rear fender cover (Fig. A).



- 3 Unplug the stock wiring harness from the ECM (Fig. B).



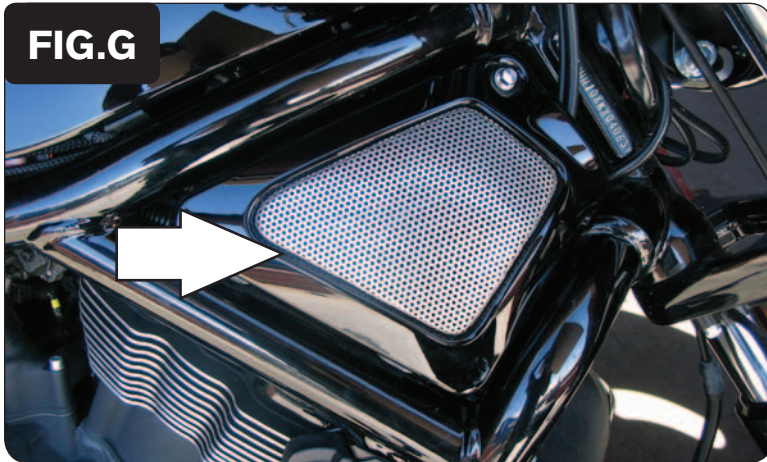
- 4 Plug the PCV in-line of the stock wiring harness and ECM (Fig. C).
- 5 Route the harness as shown in Figure C.
- 6 Use the supplied zip tie to secure the connectors in place.



- 7 Install the rear fender cover.
- 8 Use the supplied velcro to secure the PCV in place (Fig. D).  
*Make sure to use the alcohol swab to clean the surface before attaching.*
- 9 Locate the stock rear O2 sensor connection and unplug it (Fig. D).  
*This is a BLACK 4 pin connector.*
- 10 Plug one of the Dynojet O2 Optimizers into the stock wiring harness.  
*The Optimizers are indexed so they can not be installed incorrectly.*
- 11 Locate the stock front O2 sensor connection and unplug it (Fig. E).  
*This is a WHITE 4 pin connector located on the left side of the radiator. It may be necessary to remove the radiator shroud to gain access.*
- 12 Plug one of the Dynojet O2 Optimizers into the stock wiring harness.  
*The stock O2 sensors will no longer be connected to anything and can be removed from the exhaust if desired.*
- 13 Reinstall seat.

**Follow these instructions when installing the Autotune kit (PN: AT-100)**

- 1 Lift the main seat up. Remove the rear fender cover.
- 2 Using the supplied velcro install the Autotune module on top of the PCV module(Fig F.)



3 Remove the right hand side cover by the steering stem (Fig. G).

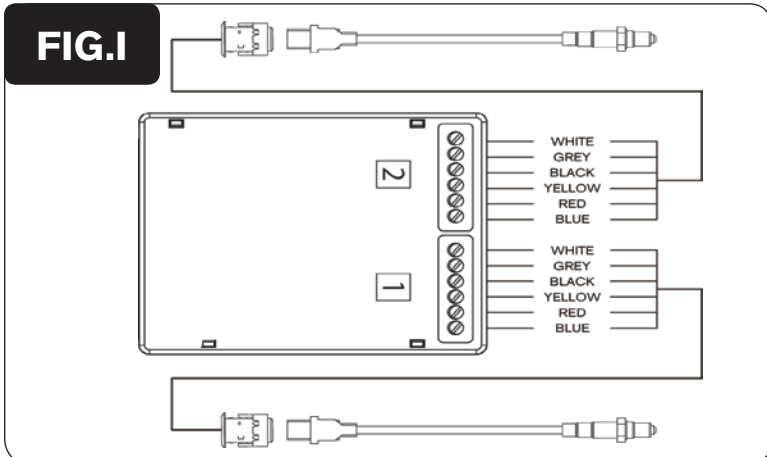


4 Remove the rubber plug for the diagnostic connector. Using the **OPTIONAL (PN: 76950159)** V-rod extension lead plug one end of the lead into the stock diagnostic connector (Fig. H).

5 Route the Autotune harness along the right side of the airbox and plug the other end into the Autotune kit.

### ATTENTION

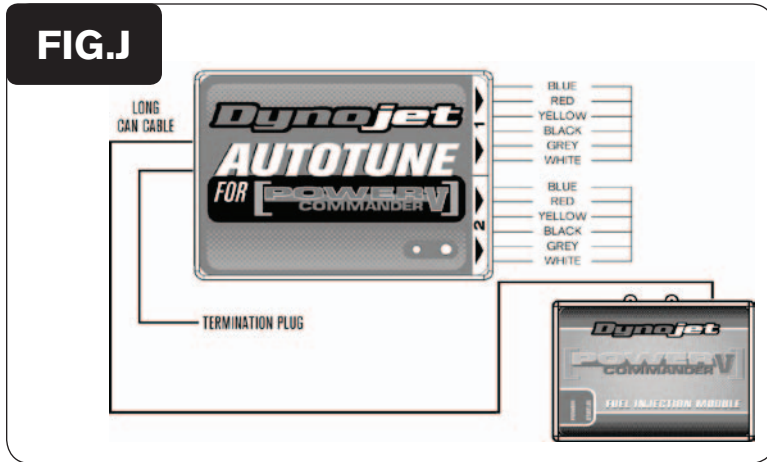
If you do not have the **OPTIONAL (PN: 76950159) Power Extension Lead** cut off the connector from the Autotune module. Connect the **RED** wire to a switched 12v source. Connect the **BLACK** wire to Ground.



6 Connect the longer harness to the front O2 sensor. Route the harness along the front down tube and along the backbone of the frame to the Autotune module. Wire the harness to the #1 input on the module per Figure K. The harness can be cut to length if desired.

7 Repeat step 6 for the rear cylinder. Wire the harness to Autotune Module sensor input #2. The harness can be cut to length if desired.

**FIG.J**



- 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 to not contact the exhaust.
  - 11 Reinstall the seat, rear fender cover, and side cover.
- Go to [www.powercommander.com](http://www.powercommander.com) for maps and software updates.