

# [POWER COMMANDER V]

**2009-2012 Harley Davidson XR1200**

**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
- 2 O2 Optimizers

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

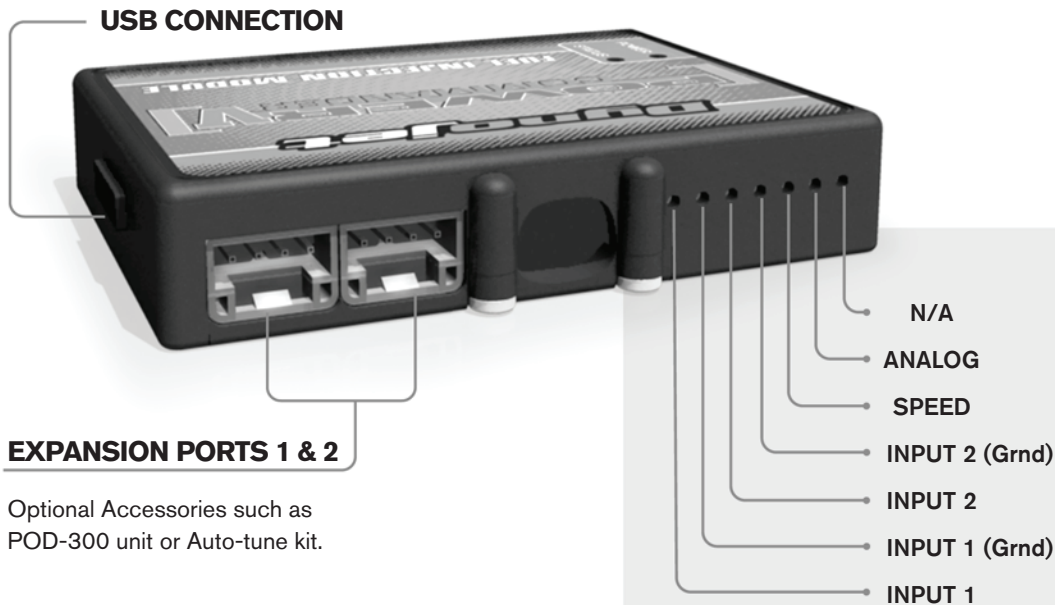
THE LATEST POWER COMMANDER  
SOFTWARE AND MAP FILES CAN BE  
DOWNLOADED FROM OUR WEB SITE AT:  
[www.powercommander.com](http://www.powercommander.com)

**PLEASE READ ALL DIRECTIONS BEFORE STARTING INSTALLATION**

**Dynojet**

2191 Mendenhall Drive North Las Vegas, NV 89081 (800) 992-4993 [www.powercommander.com](http://www.powercommander.com)

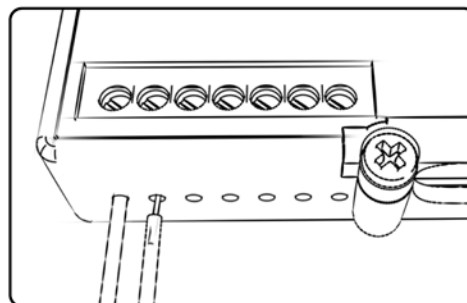
# POWER COMMANDER V INPUT ACCESSORY GUIDE



## 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-

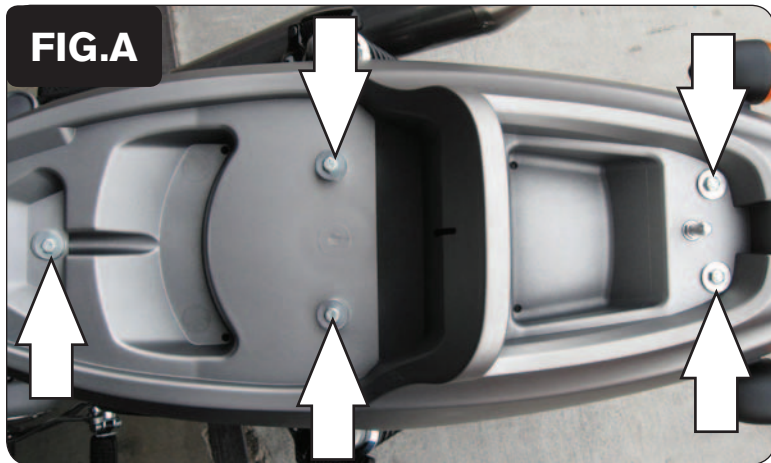
Not needed on Harley applications as the speed signal wire is built into the main wiring harness of the PCV.

### Analog-

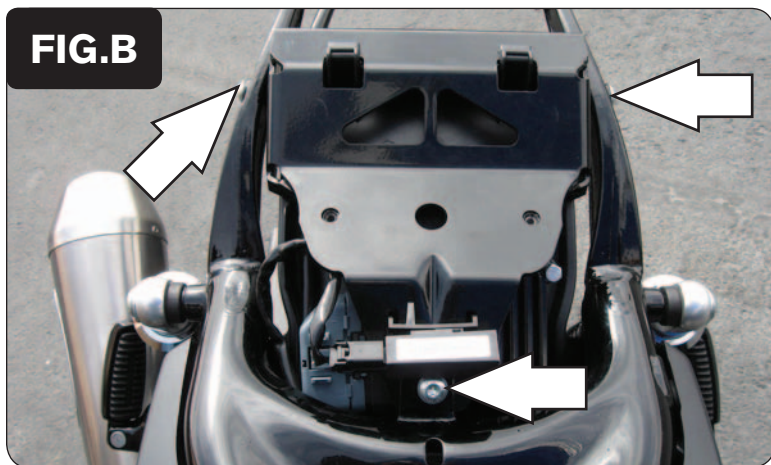
This input is for a 0-5v signal such as engine temp, boost, etc. Once this input is established you can alter your fuel curve based on this input in the control center software.

### 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.

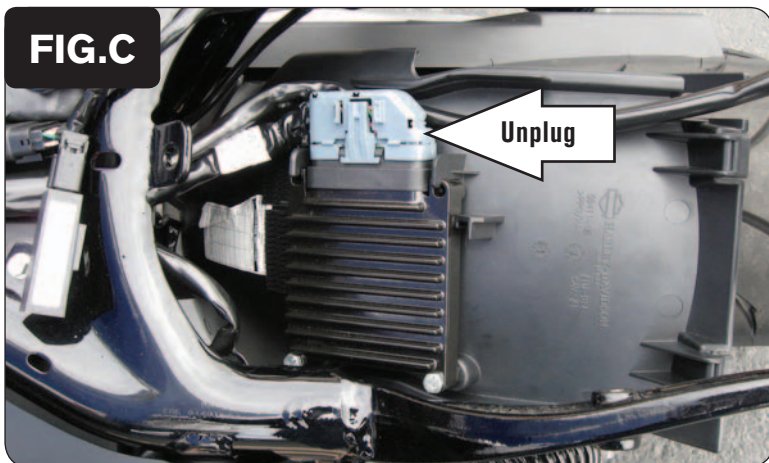


- 1 Remove the seats.
- 2 Remove the tail section by removing the 5 bolts (Fig. A).



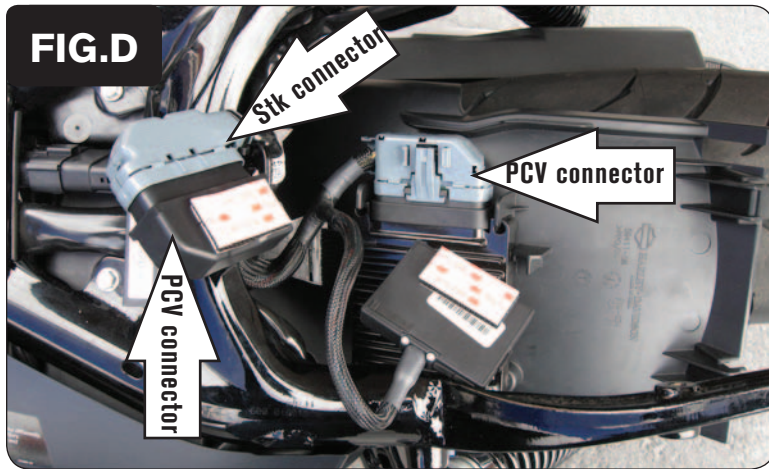
- 3 Remove the bracket that holds the ECM tray to the frame by removing the 3 bolts shown in Fig. B. There is a fourth bolt at the bottom of the plastic tray located in front of the rear tire.

Slide the plastic tray out of the bracket and remove the bracket



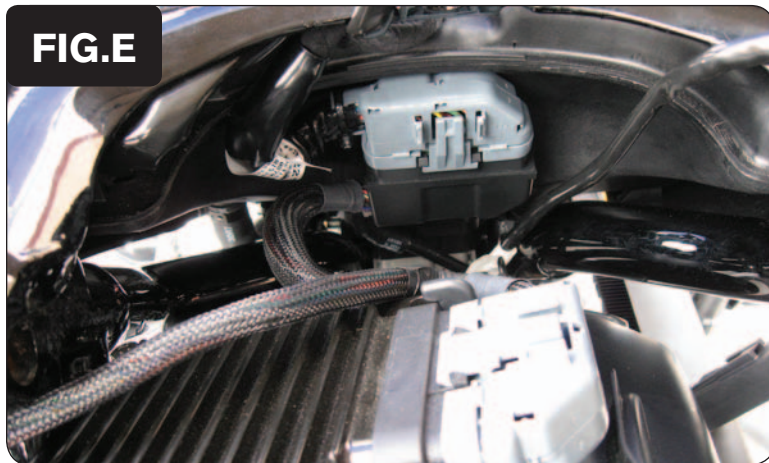
- 4 Unplug the stock wiring harness from the ECM (Fig. C)





- 5 Connect the PCV in-line of the stock wiring harness and ECM (Fig. D).
- 6 Using the supplied Velcro attach a piece to the back side of the PCV/stock harness connection and another piece to the back of the PCV module.

*Make sure to use the alcohol swab to clean all surfaces before attaching the Velcro adhesive.*

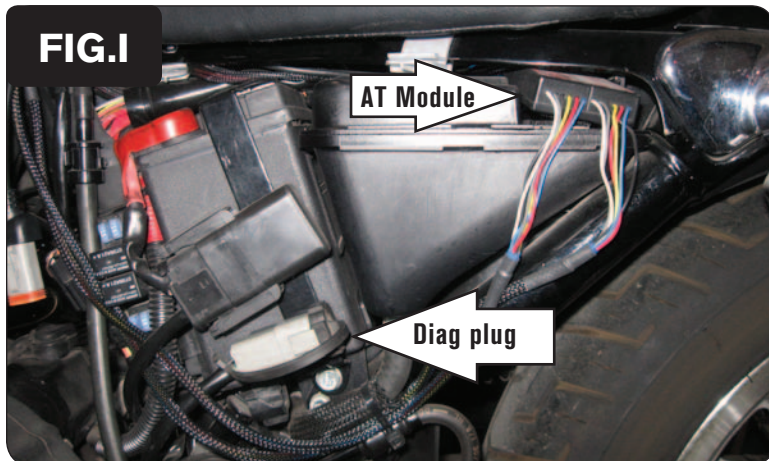


- 7 Secure the PCV/stock harness connection as shown in Fig. E.



- 8 Secure the PCV module to the plastic tray just in front of the ECM (Fig. F).
- 9 Reinstall the plastic tray to the bracket and install the bracket.

*To make future adjustments to the PCV easier plug the USB cable into the PCV module and route the other end of the cable where it can be easily accessed.*



- 10 Locate the front O2 sensor connector and unplug it (Fig. G).

*This connector is located to the left side of the oil filter.*

- 11 Plug one of the Dynojet O2 Optimizers into the stock wiring harness.

*The stock O2 sensor does not need to be connected to anything. The sensor can be removed completely from the motorcycle if desired. If using the Auto-tune kit remove the stock sensor and install the Auto-tune's wideband O2 sensor into the exhaust.*

- 12 Locate the rear O2 sensor connector and unplug it (Fig. G).

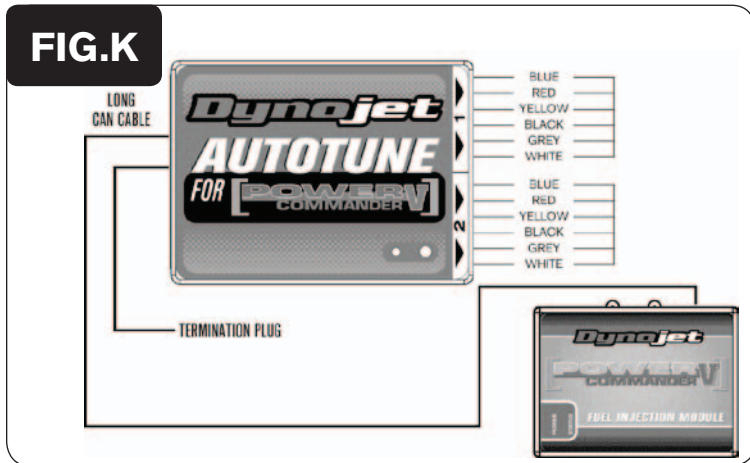
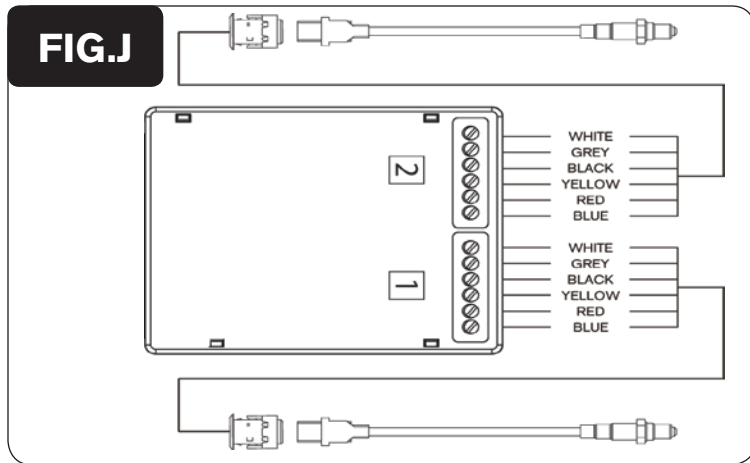
*This connector is located in front of the oil tank.*

- 13 Plug one of the Dynojet O2 Optimizers into the stock wiring harness

*The stock O2 sensor does not need to be connected to anything. The sensor can be removed completely from the motorcycle if desired. If using the Auto-tune kit remove the stock sensor and install the Auto-tune's wideband O2 sensor into the exhaust.*

**Follow these instructions when using the Auto-tune kit - (part # AT-100)**

- 1 Remove the left hand side cover.
- 2 Using the supplied Velcro install the Auto-tune module as shown in Figure I.  
  
Make sure the Velcro does not cover the designation of the sensor inputs on the back of the Auto-tune module. The inputs are coded to the front and rear cylinders.
- 3 Remove the rubber plug for the diagnostic connector. Plug the lead from the Auto-tune kit into the stock diagnostic connector (Fig. I).



- 4 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 #1 sensor input on the Auto-tune module. Wire the harness to the module per Figure J. The harness can be cut to length if desired.
- 5 Repeat step 4 for the rear cylinder. Wire the harness to the #2 sensor input on the Auto-tune module. The harness can be cut to length if desired.
- 6 Use the CAN bus cable to connect the Auto-tune module to the PCV. It does not matter what ports are used.
- 7 Install the CAN termination plug into the open port of the Auto-tune module. ***This is the BLACK hard plastic connector in the Auto-tune kit (PN: 76423025). It is CRITICAL that this be installed and it is often overlooked.***
- 8 Secure the harnesses in place as to not contact the exhaust.
- 9 Reinstall the side cover.

In the PCV software go to Power Commander Tools - Configure - Features, Enables, and Input Selections to enable the Auto-tune feature.

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