

# [POWER COMMANDER V]

**2009-2014 Yamaha XV950**

**Installation Instructions**



## **PARTS LIST**

- 1 Power Commander
- 1 USB Cable
- 1 Installation Guide
- 2 Power Commander Decals
- 2 Dynojet Decals
- 3 Velcro strips
- 1 Alcohol swab
- 1 O2 Optimizer

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

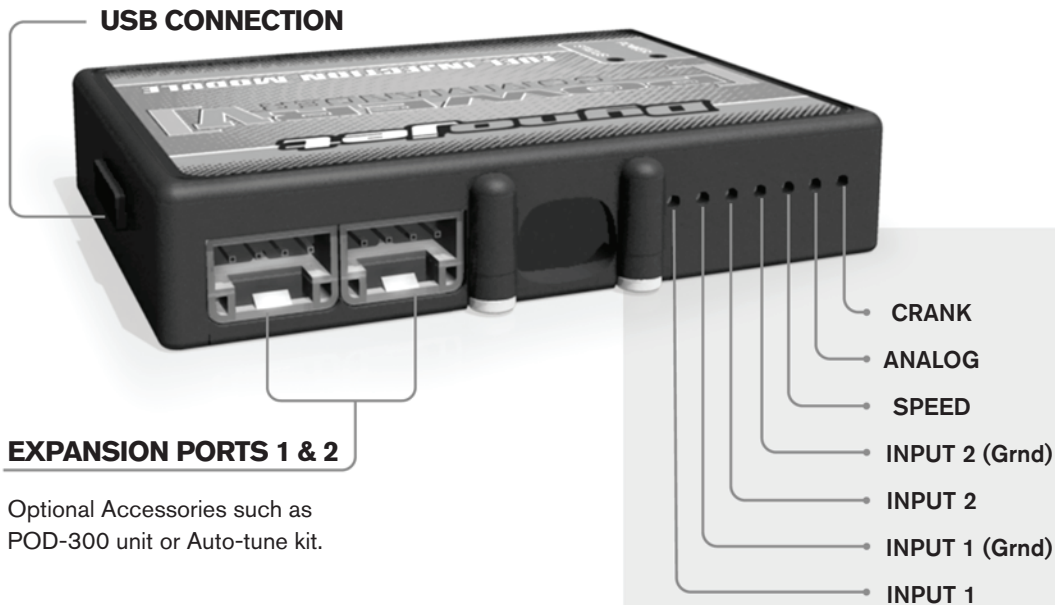
THE LATEST POWER COMMANDER SOFTWARE AND MAP FILES CAN BE DOWNLOADED FROM OUR WEB SITE AT:  
[www.powercommander.com](http://www.powercommander.com)

**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) These inputs are for use with the Dynojet quickshifter. Insert the wires from the Dynojet quickshifter into the SHIFTER inputs. The polarity of the wires is not important. (Set to Switch Input #2 by default.)

### Speed-

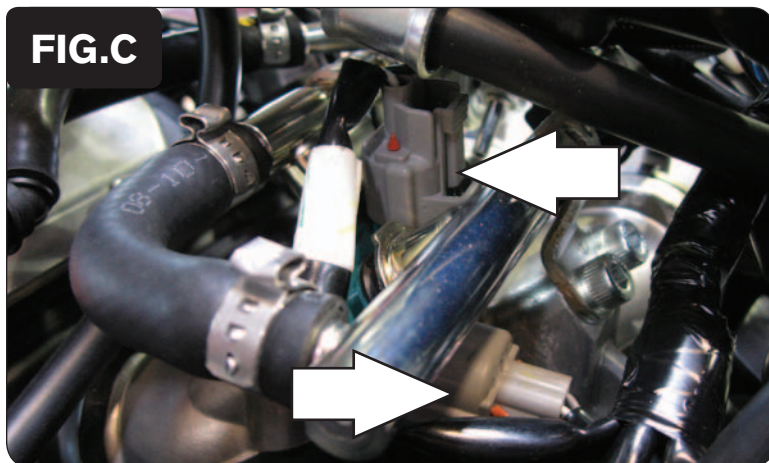
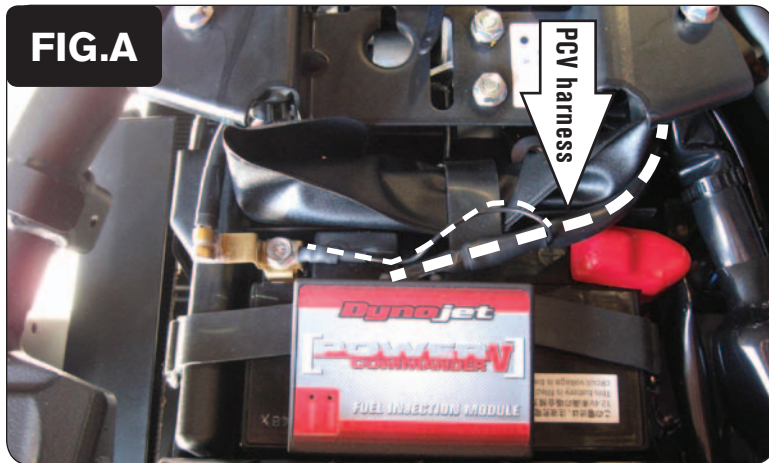
If your application has a speed sensor then you can tap into the signal side of the sensor and run a wire into this input. This will allow you to calculate gear position in the Control Center Software. Once gear position is setup you can alter your map based on gear position and setup gear dependent kill times when using a quickshifter.

### 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.

### Crank-

Do **NOT** connect anything to this port unless instructed to do so by Dynojet. It is used to transfer crank trigger data from one module to another.



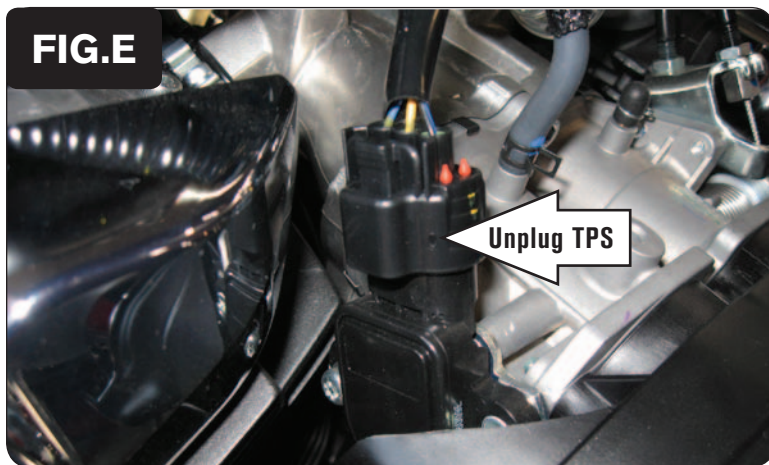
- 1 Remove the seat.
- 2 Remove the fuel tank.
- 3 Lay the PCV near the battery.
- 4 Route the PCV harness under the seat bracket and go towards the front of the bike (Fig. A).
- 5 Attach the ground wire of the PCV to the negative side of the battery.
- 6 Route the PCV harness along the right hand side frame tube (Fig. B).
- 7 Unplug the stock wiring harness from each fuel injector (Fig. C).



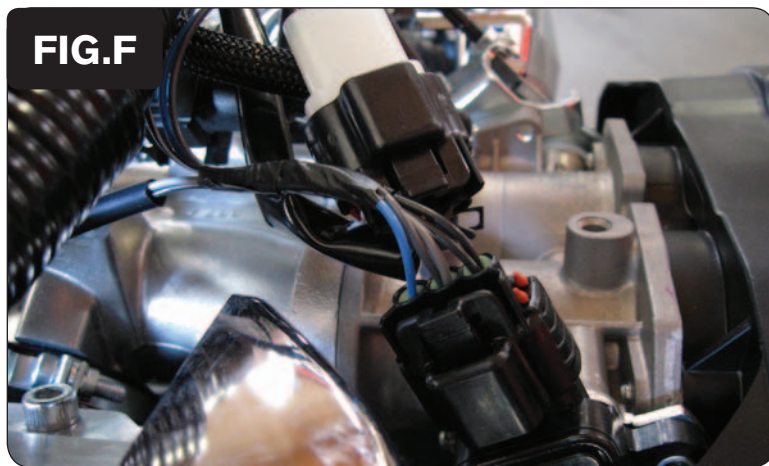
- 8 Plug the PCV harness in-line of the stock wiring harness and each fuel injector (Fig. D).

*The connector pair of the PCV wiring harness with ORANGE colored wires go to the FRONT cylinder injector.*

*The connector pair of the PCV wiring harness with YELLOW colored wires go to the REAR cylinder injector.*

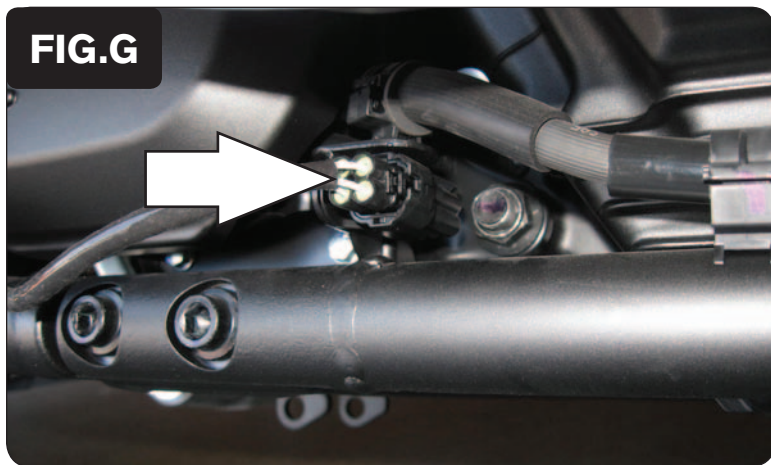


- 9 Locate the Throttle Position Sensor on the right hand side of the bike to the rear of the throttle body.
- 10 Unplug the TPS connector from the throttle body (Fig. E).



- 11 Plug the PCV harness in-line of the TPS and stock wiring harness (Fig. F).
- 12 Secure the PCV module to the top of the battery with the supplied Velcro.

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



	0	2	5	10	15	20	40	60	80	100
500	0	0	0	0	0	0	0	0	0	0
750	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0
1250	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0
1750	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0
2250	0	0	0	0	0	0	0	0	0	0
2500	0	0	0	0	0	0	0	0	0	0
2750	0	0	0	0	0	0	0	0	0	0
3000	0	0	0	0	0	0	0	0	0	0
3250	0	0	0	0	0	0	0	0	0	0
3500	0	0	0	0	0	0	0	0	0	0
3750	0	0	0	0	0	0	0	0	0	0
4000	0	0	0	0	0	0	0	0	0	0
4250	0	0	0	0	0	0	0	0	0	0
4500	0	0	0	0	0	0	0	0	0	0
4750	0	0	0	0	0	0	0	0	0	0
5000	0	0	0	0	0	0	0	0	0	0
5250	0	0	0	0	0	0	0	0	0	0
5500	0	0	0	0	0	0	0	0	0	0
5750	0	0	0	0	0	0	0	0	0	0
6000	0	0	0	0	0	0	0	0	0	0

**FIG.H**

- 13 Locate the stock O2 sensor connection (Fig. G).  
*This is located on the lower right hand side frame rail.*
- 14 Plug the Dynojet O2 Optimizer in-line of the stock O2 sensor and wiring harness.
- 15 Secure the Optimizer under the BLACK cosmetic engine cover.
- 16 Reinstall the fuel tank and bodywork.

**Optional inputs:**

**Speed input location** - PINK wire of sensor over the front drive pulley

**12v for Auto-tune** - RED/WHITE wire of 6 pin connector for tail light

**Tuning notes:**

The O2 Optimizer for this model controls the stock closed loop area. This area is represented by the highlighted cells shown in Figure H. The O2 Optimizer is designed to achieve a target AFR of 13.6:1. To use this O2 Optimizer you must retain your stock O2 sensor (even if using Auto-tune).

Input values of 8 in this range of cells of your PCV map's fuel tables. If using the Auto-tune system do NOT input values in this area of your Target AFR table.

The light on the O2 Optimizer will blink while the sensor is being heated up. The unit is not functioning until the light is lit up solid.