# IGNITION MODULE

FOR USE WITH

2002-2003 Yamaha R1

Installation Instructions

### **PARTS LIST**

- 1 Ignition Module
- 1 Installation Guide
- 2 Velcro strips
- 1 Alcohol swab
- 1 CAN cable
- 1 USB cable





DURING THIS INSTALLATION!

BEFORE THIS MODULE CAN BE USED THE

POWER COMMANDER 5 MAY NEED TO BE UPDATED.

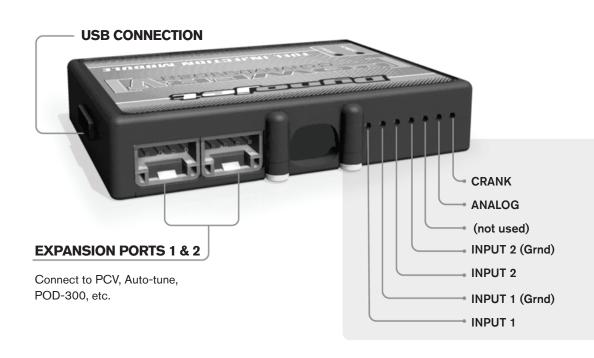
(SEE INCLUDED INSTRUCTIONS.)

PLEASE READ ALL DIRECTIONS BEFORE STARTING INSTALLATION



2191 Mendenhall Drive North Las Vegas, NV 89081 (800) 992-4993 www.powercommander.com

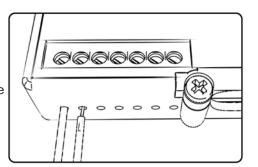
# IGNITION MODULE V INPUT ACCESSORY GUIDE



#### 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 is 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**

Speed - The Speed Limiter feature uses Switch Input #1 or #2. This feature gives the ability to activate a limiter based on vehicle speed. This is intended to be used as a pit lane speed limiter. You can use any OPEN / CLOSED type switch to activate this feature. The feature is configured to Switch Input #1 by default.

Launch - The Launch Control feature also uses Switch Input #1 or #2. This feature is intended to be used as a two stage rev-limiter. You can set a target RPM to limit the bike to when the clutch lever is activated. Once the clutch lever is released full RPM can be achieved. This requires a wire be connected to the grounding side of the clutch switch and the other end into this input. The feature is configured to Switch Input #2 by default.

**Ground -** These are constant digital grounds.

Analog - Not currently used - updates to follow

**Crank -** Not used in this application







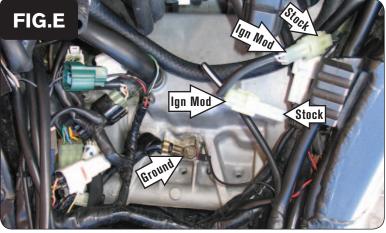
- 1 Remove the main seat.
- 2 Lift and prop the front of the fuel tank up.
- 3 Remove the airbox.
- 4 Remove the black plastic cover over the engine to access the coil sticks.
- Place the Ignition Module next to the PCV and route the harness towards the front of the bike. Route the harness underneath the frame crossover (Fig. A).

6 Disconnect the stock main wiring harness from the coil stick harness (Fig. B).

This is a GREY 6-pin connector pair.

Plug the connectors from the Ignition Module wiring harness in-line of the stock wiring harness (Fig. C).





8 Unplug the stock Crank Position Sensor connectors (Fig. D).

This is a CLEAR 2-pin connector pair located under the fuel tank on the right side of the bike just inside of the frame.

- 9 Plug the pair of 2-pin connectors from the Ignition Module in-line of the stock CPS connectors.
- 10 Attach the ground wire from the Ignition Module wiring harness with the ring terminal to the stock ground location on top of the engine case (Fig. E).
- 11 Secure the Ignition Module in the tail section using the supplied Velcro.
  - Clean both surfaces with the alcohol swab before attaching the Velcro.
- 12 Link one of the expansion ports of the Ignition Module to one of the expansion ports of the PCV using the supplied CAN link cable.

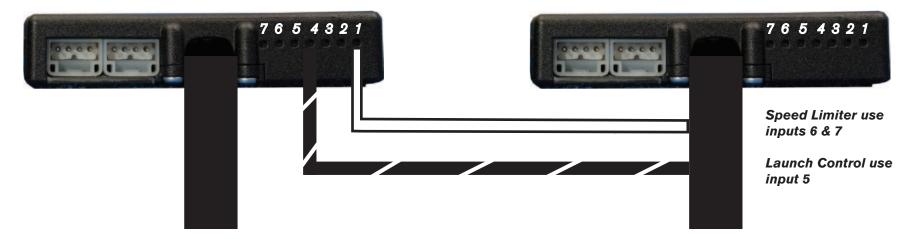
It doesn't matter which ports you use.

Older Ignition Modules with a serial number beginning with 14 or less might also require a CAN termination plug to be installed in an empty port. Newer Ignition Modules with a serial number starting with 15 or higher do NOT require CAN termination plugs.

13 Reinstall the airbox.

Make sure all hoses and electrical connectors are reattached to the airbox.

- 14 Lower and bolt down the front of the fuel tank.
- 15 Reinstall the seat.



#### Connecting the Ignition Module to the PCV:

- The WHITE and the BLACK/WHITE wires from the Ignition Module are used ONLY if you want to use the Rev Xtend feature of the PCV. If you do NOT plan on using this feature, than just tape the wires out of the way.
- If you DO plan on using the Rev Xtend feature, than connect the WHITE wire from the Ignition Module to the #1 input position of the PCV. Connect the BLACK/WHITE wire to the #4 input position of the PCV, if necessary. If both inputs on the PCV are already occupied, you can splice the BLACK/WHITE wire to either wire currently occupying the #6 or #4 PCV inputs.

#### Adding the Ignition Module to the PCV network:

- First download and install the latest version of the PCV Control Center Software (which is version 1.0.6.4.) from the PCV Downloads page of www.powercommander.com.
- To use the Ignition Module you may need to update your firmware in the PCV (and SFM if being used). Make sure the PCV, SFM, and Ignition Module are all updated to PCV firmware version 0.1.10.6 or newer. Go to View -> Device Information in the software to see the current versions. If you need to update the firmware, go to Power Commander Tools -> Update Firmware. The latest version of the PCV firmware and software can be found on the PCV Downloads page of www.powercommander.com.
- Connect a USB cable to the PCV and another USB cable to the Ignition Module. The software will ask you to add the Ignition Module to the network. Click OK. Go to Power Commander Tools -> Manage Network and click on Sync Devices Utility. Follow the on screen instructions.