

# **PCV USER'S GUIDE.**

*There is more information and instructions available on our website ([www.powercommander.com](http://www.powercommander.com)) and on our YouTube video channel (DynojetResearch).*

Now that you have installed your Power Commander here is a brief overview on how to use the unit.

The Power Commander is shipped with a map for a completely stock bike unless it is special ordered with a different map. **If it is necessary to load a map for a different configuration you will need to perform the following steps:**

- In order for the Power Commander to communicate with the computer the Power Commander Control Center Software must first be installed. The software must be downloaded and installed from our website ([www.powercommander.com](http://www.powercommander.com)). See the supplied addendum titled "PC5 Software/Map File Downloading Instructions" for more info.
- From our website you will also need to transfer the map database for your particular bike(s). See the supplied addendum titled "PC5 Software/Map File Downloading Instructions" for more info.

## **The latest software and maps can be found at [www.powercommander.com](http://www.powercommander.com)**

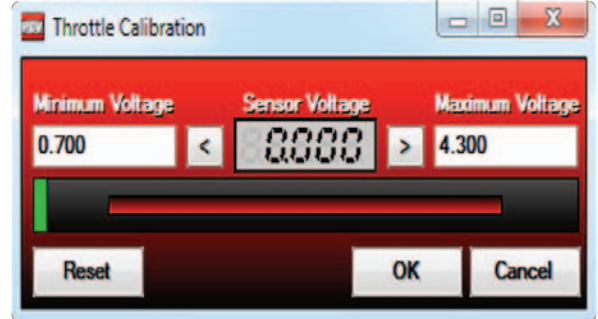
- The PCV maps are not the same as the PCIII maps. Load a map that has a .pvm file extension only.
- In order to send a map to the Power Commander you must first connect the USB cable to the computer and to the Power Commander unit. Make sure that the cable is fully seated into the Power Commander. There is a detent on the cable that could require light pressure to fully engage the cable. Open the Power Commander software by double clicking the PCV icon on your desktop. Click on OPEN MAP FILE and select the map you want to use from the database. Once the map is shown in the tree view area and the software says "Map File Opened Successfully" in the status bar at the bottom of the software window, click SEND MAP to load the opened map file into the connected PCV device.
- The values in the map represent a percentage of fuel change over stock. If you see a value of 10 in the map then at the throttle position and RPM range the bike will be 10% richer than stock. If the value was a -10 then it would be 10% leaner than stock. You have the ability to fine tune your fuel curve by altering these values. We recommend leaving this to one of our Tuning Centers as they have the ability to accurately read the air/fuel curve which allows them to optimize the fuel curve for every cell. Without having the ability to read the air/fuel ratio of the bike it is impossible to accurately make fine adjustments to your fuel curve.
- If you disconnect the battery or disconnect the Power Commander from the bike it will not lose the map. The only way to lose the map is to download another map to the unit.

## THE POWER COMMANDER WILL COME CONFIGURED FOR THROTTLE POSITION, SPEED AND GEAR POSITION.

If you should need to recalibrate any of these parameters go to POWER COMMANDER TOOLS -> CALIBRATE... The speed and gear position were setup with stock gearing and stock tires. Changing either of these variables can affect the accuracy of these readings. If you should need to recalibrate speed or gear it is necessary to get the bike either on a rear wheel stand or on a dynamometer. Speed/Gear inputs are optional inputs that may need to be custom wired to the PCV wire terminal strip. (See the model specific install guide for more info.)

### TPS CALIBRATION

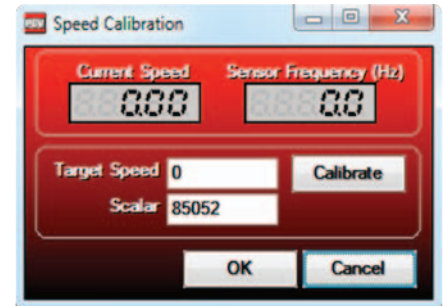
It is important that the PCV software TPS read 0% when the bike is fully warmed up and at idle. If it needs to be reset make sure the bike is fully warmed up before resetting. With the engine running, click on Reset, quickly open throttle to the wide-open throttle stop and quickly close, then click OK. If your bike has fly-by-wire throttle only reset the throttle position on a dynamometer while in gear and under load.



### SPEED CALIBRATION

Type in your set target speed (recommended to be at least 30mph). Get the rear wheel spinning at the set target speed and once the speed is steady, click on Calibrate. Then click OK.

For the most accurate readings use a dynamometer to calibrate speed.

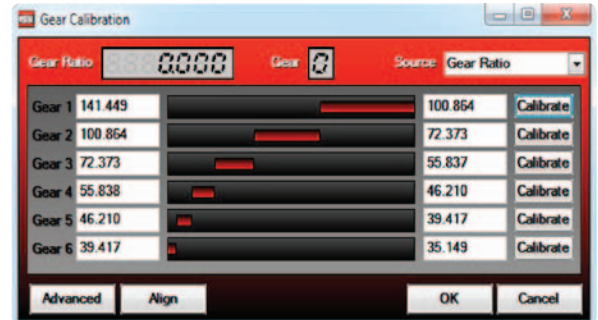


### GEAR CALIBRATION

Once speed is calibrated you can then setup up gear position if needed based on Gear Ratio as the source. Get the bike on a stand or dynamometer and put the bike in first gear. Hold the throttle steady and click on calibrate for gear 1. Repeat this step for all gears.

If your bike is a 5 speed input values for 6th gear that are less than that of 5th gear. Click OK.

If using an analog gear input from a gear position sensor, select Voltage as the Source.



### CONFIGURE

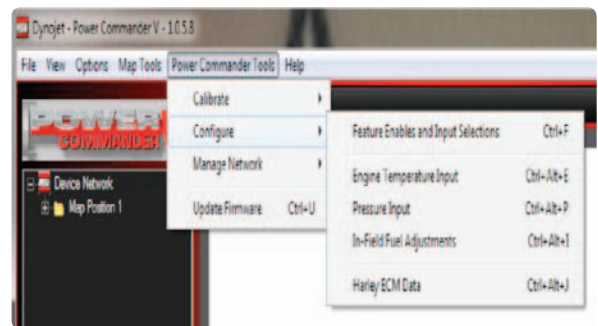
**Features Enables and Input Selections** - Gives access to the additional features (i.e. Map Switch, Quick Shifter, Accel Pump, Startup Fuel, Rev X-tend, and Auto Tune).

**Engine temp** - Displays engine temp either via the J1850 port or thru the 0-5v input

**Pressure input** - Offset base fuel map on 0-5v input

**In-Field Fuel Adjustments** - Make broad range adjustment without the need of a computer (only available with LCD-200 or POD-300 accessories).

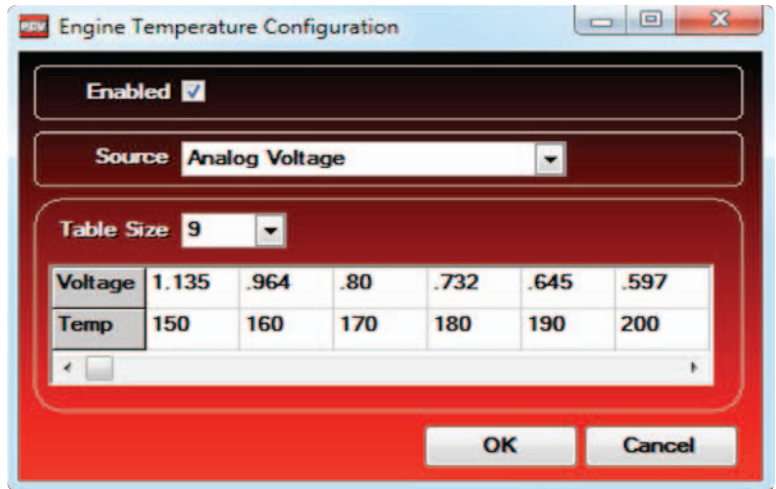
**Harley ECM data** - select J1850 data. Right click any gauge on the main screen to display Harley data.



## ENGINE TEMPERATURE

On Harley models the engine temperature will be displayed via the J1850 data. Click enabled and the source of J1850.

For all other models the engine temperature can be configured thru the optional analog input. The larger the Table Size the more accurate your reading will be. Input the corresponding voltage reading at the upper cell in relation to each specific engine temperature value in the lower cell.



## PRESSURE

You can offset your fuel curve based on this 0-5v analog input. This is intended to be used for boosted applications, but can be based on any 0-5v signal.

Input the voltage readings of the sensor you are tapped into in relation to the reading you want displayed in the software.

On all models other than Harley, if you are using the analog input to configure engine temperature, do NOT enable the pressure.



## QUICK SHIFTER

If using a Quickshifter, make sure the enabling box is checked.

If the Gear input has been wired and configured, the PCV has the ability to adjust the kill times per gear. Make the Mode Gear Dependent in the drop down menu. Otherwise, if the Gear input is not setup, you can only use a Single Kill Time for all shifts.

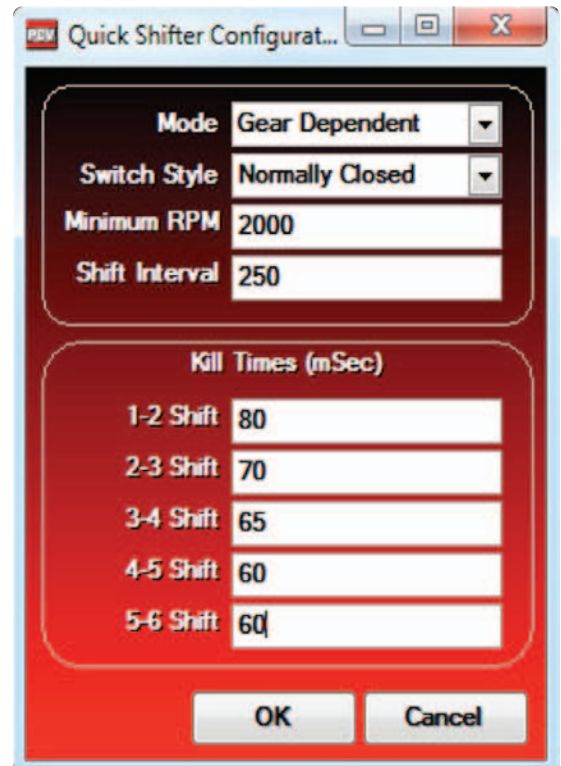
Switch Style - circuit style of the shift sensor being used. All of the older PC3 shift switches are normally open circuit switches. Most of the PC5 shift switches are normally open also. Only some older PC5 shift switches are normally closed. (Older QEMs with BLUE LED status lights will only work with normally closed circuit switches, which can special ordered directly from Dynojet).

Minimum RPM - lowest RPM that the shifter can be activated

Shift Interval - period of time between shifts that the software will activate. This reading is in milliseconds.

Kill Time - how long to kill the engine on an upshift (also in milliseconds)

*All 4-cylinder street bikes that have 8 stock fuel injectors will need an additional QEM, SFM, or the Ignition Module accessory to Quickshift. Any 1 of the 3 will do.*

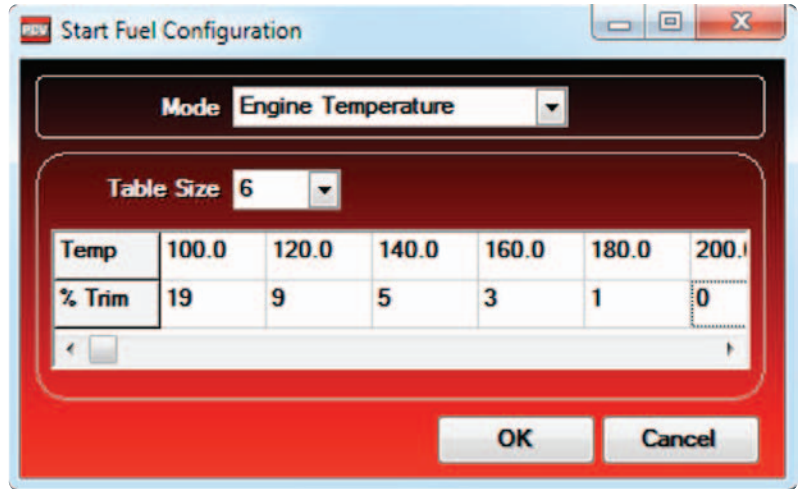


## START UP FUEL

Start up fuel can be based on time or engine temperature. Choose what mode from the drop down menu.

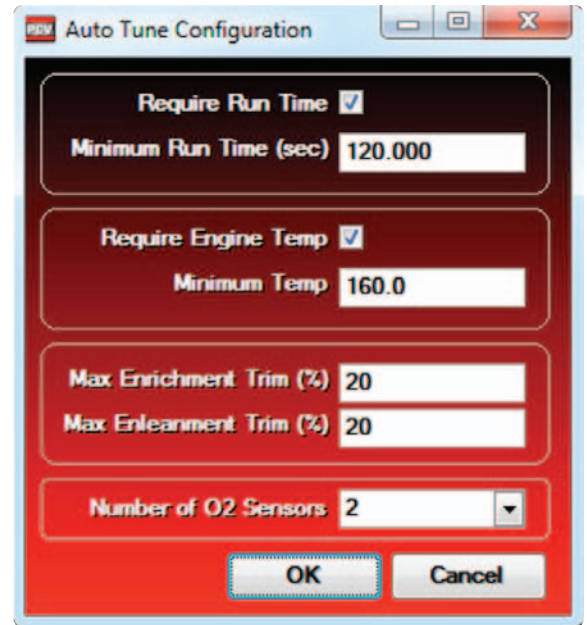
Time - from the first revolution of the crank the software will deliver a set percentage of fuel for a given amount of time in seconds

Engine temp - the software will deliver a percentage of fuel over the fuel map based on engine temperature. This can only be used if engine temperature has been configured.



## AUTO TUNE

Each PCV from Dynojet comes configured for use with the Autotune kit. These configuration settings are explained in more detail with the instructions that come with the Autotune kit.



## HARLEY ECM DATA

The J1850 Harley ECM data is streamed into the PCV on most Harley Davidson models. This allows the software to display each channel listed.

The Speed and Engine Temperature channels are enabled as the unit is shipped from Dynojet. To enable other channels check the box next to the channel. These channels can be displayed on the main software screen by right clicking on any of the digital gauges.

