

This corrective mod has been successfully applied by many rs-warrior.com members however as with all mods you proceed at your own risk so read carefully. 1

**Updated 8-04-06**

***This install covers ALL years of Warriors to date.***

**If your Warrior cuts out, has dead spots, a wacky throttle response off idle or a dyno tuner that goes nuts trying to get you a good custom map follow these instructions. It will fix 99% of these issues unless you have a broken CPS.**

Many people have experienced that the PCIII setup as described in its manual is not perfect. The TPS read out in particular is a problem. Instead of a steady TPS signal the PCIII (regular and USB) jumps around pretty wild. This causes not only shops to do custom maps to take a lot longer to get it right but can also lead to less than perfect throttle response of your Warrior.

The solution is very simple and is highly recommended for EVERY Warrior PCIII owner.

**IMPORTANT: When looking for the right wires please make sure that the first color is the base color and the second on is the strip on it. So black/blue for example is a black wire with a blue strip.**

Start with the gray PCIII TPS hookup wire: Pull it back through the insulation to have it come out pretty close of the PCIII. Depending on where you install the PCIII you only need a few inches of gray wire. Check first before you cut it too short.

Now locate the solid yellow wire that runs into the ECU. Be aware that there are several wires that have a least part yellow marking on them. There is only one solid yellow wire (it might have some gold markers on it as all the wires).

Cut that wire, take the insulation off both ends, twist the gray wire around one of those ends, push a piece of shrink tubing over the other yellow end and solder the connection back together. Last but not least push the shrink tubing back over the solder joint and heat shrink it.

The second connection that is even more important is the PCIII digital ground. The Warrior uses a digital ground wire for all its sensors to reduce noise. The PCIII comes with a digital ground wire but unfortunately as it is sold it is connected to regular ground. When you pull back the insulation of the PCIII ground wire you will find two wires ending at the ground connector: One is black (regular ground) and the other one is black/white (digital ground). Cut the black/white wire and pull it back to the same exit you used to run the gray wire. The black/white wire will need to be approximately the same length as the gray wire. Now find the black/blue wire that runs into the ECU. There is only one.

Do the same thing as before but now splice the black/white (PCIII) wire into the black/blue (ECU) wire and heat shrink the solder joint.

Install the PCIII in its final location and you are done.

Now when you hookup a laptop or dyno computer to the PCIII the TPS signal on a running Warrior should be rock steady and the bike should run cleaner and very crisp. If not you might adjust the map you are currently running.

Hope this helps!

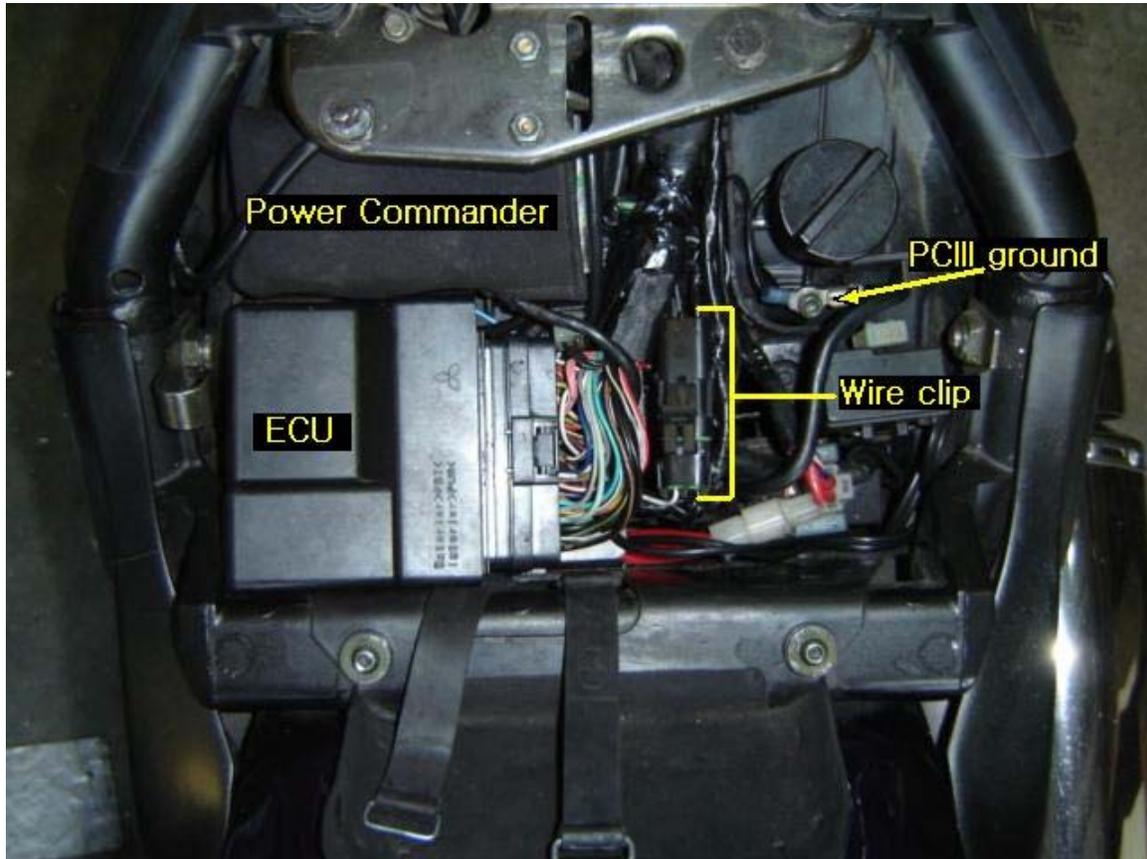
Oliver

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Courtesy of Redhorse:

[http://www.freewebs.com/roadstarwarrior/power\\_commander\\_install.htm](http://www.freewebs.com/roadstarwarrior/power_commander_install.htm)

I cut the wire and twist soldered one end of the bike's wire and the PCIII wire. I then pushed a heat shrink tube over the two connected wires but behind the actual connection and soldered the remaining wire (towards the TPS) inline as if it would be a T- connection. That way you can push the shrink tube over the solder connection and shrink it to become resistant to water - although water does not present a real problem once soldered.

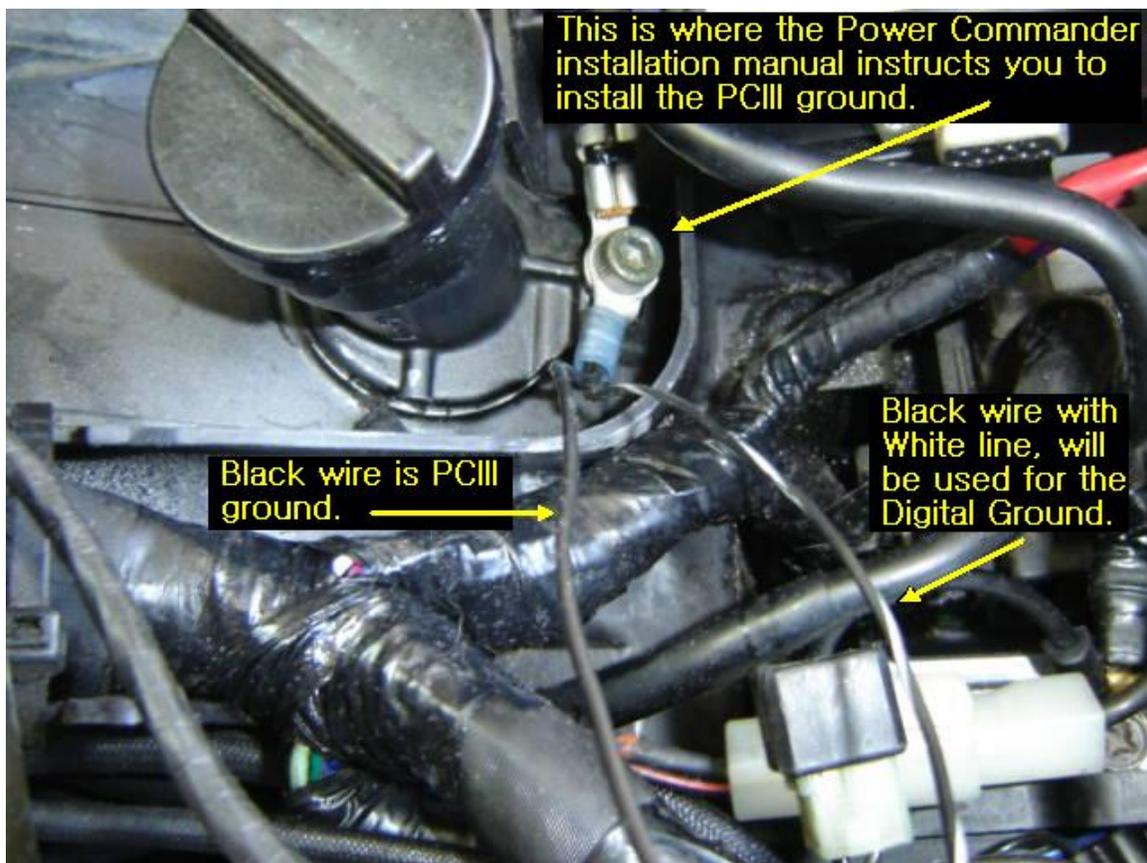


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I have had my PCIII installed on the Warrior for a few years already. I had to work around it, while it was still on the bike. I didn't have to uninstall it from the bike to do the "Perfect" install.

After doing this mod, it's recommended that you recalibrate the throttle position in the Power Commander software.

First step was to cut one of the PCIII ground wires to hook up to the bikes ECU digital ground from the frame electrical ground. The PCIII ground has two wires going to the ring tongue connector that is grounded near the oil filler cap.

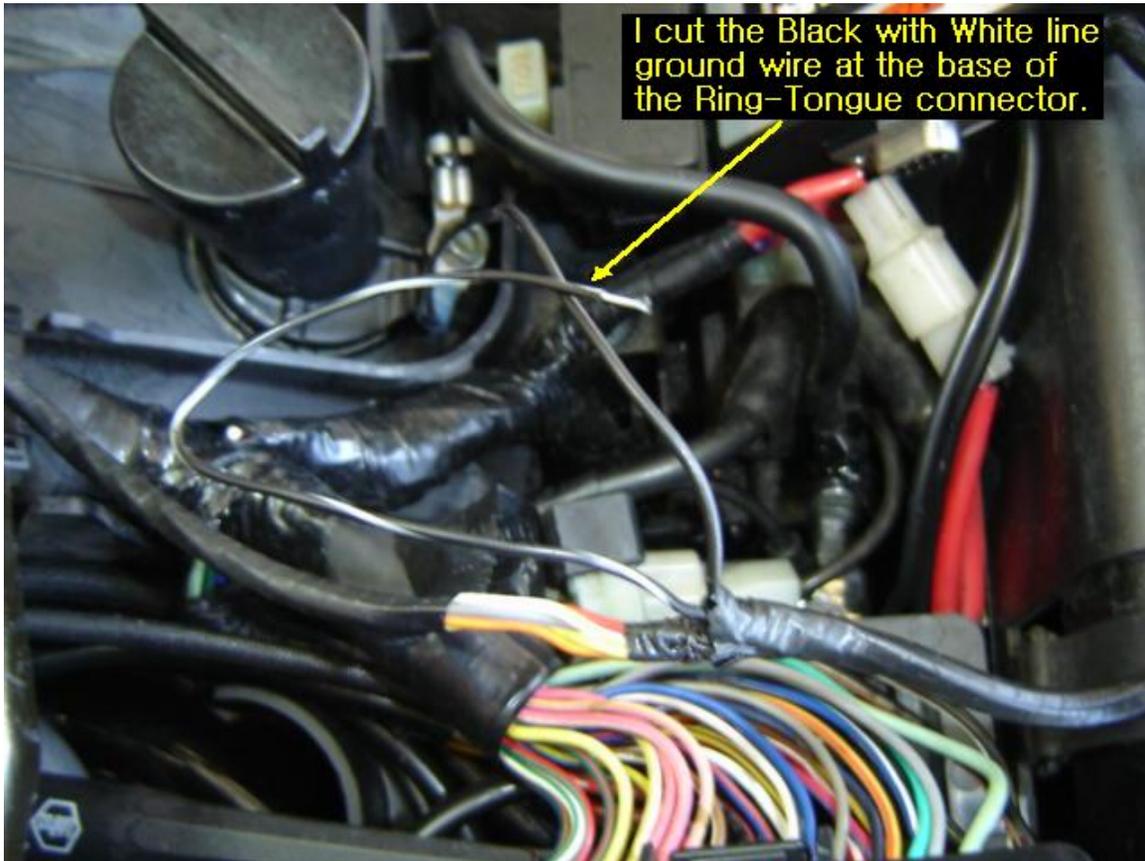


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I

cut the black-with-white-line PCIII ground wire at the base of the ring tongue connector.

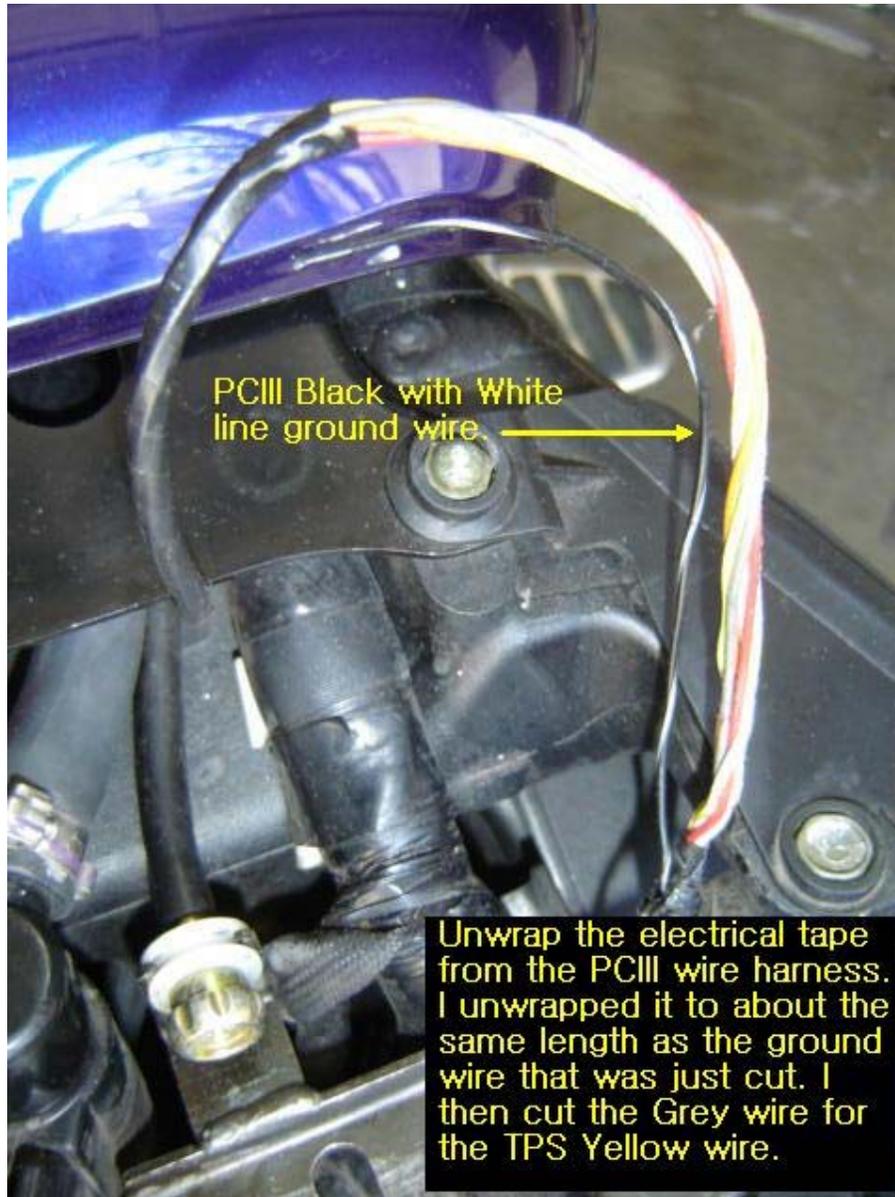
I left the solid black PCIII ground wire still attached to the ring tongue connector that is still bolted down near the oil filler cap.



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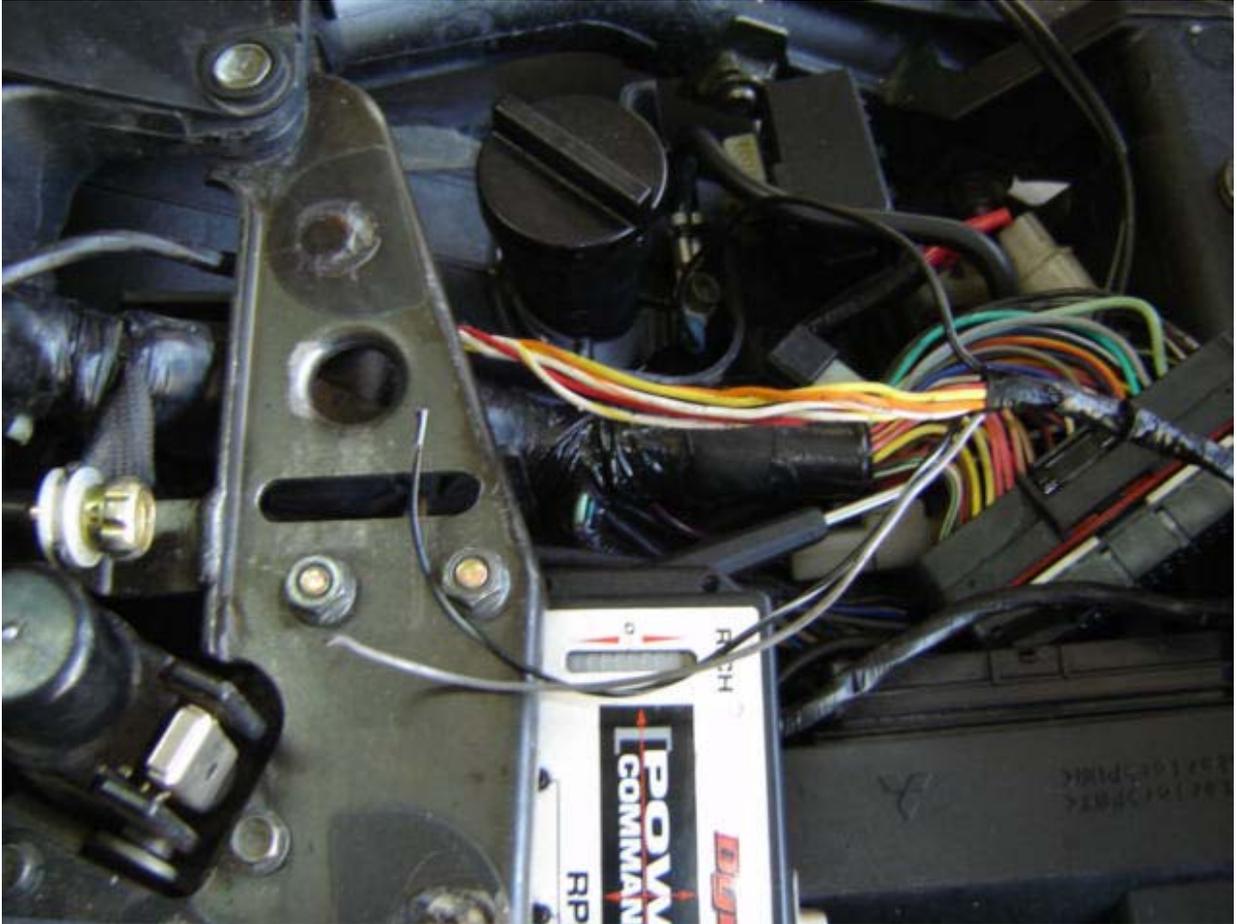
Next step was to unwrap the electrical tape from the PCIII wires going to the TPS connector between the cylinders. I unwrapped about 7 inches of the electrical tape. About the same length of wire as the digital ground wire that I had just cut. I then located the Grey wire and cut it about the same length as the Black/White-line ground wire.

I re-wrapped the PCIII wire harness with electrical tape.



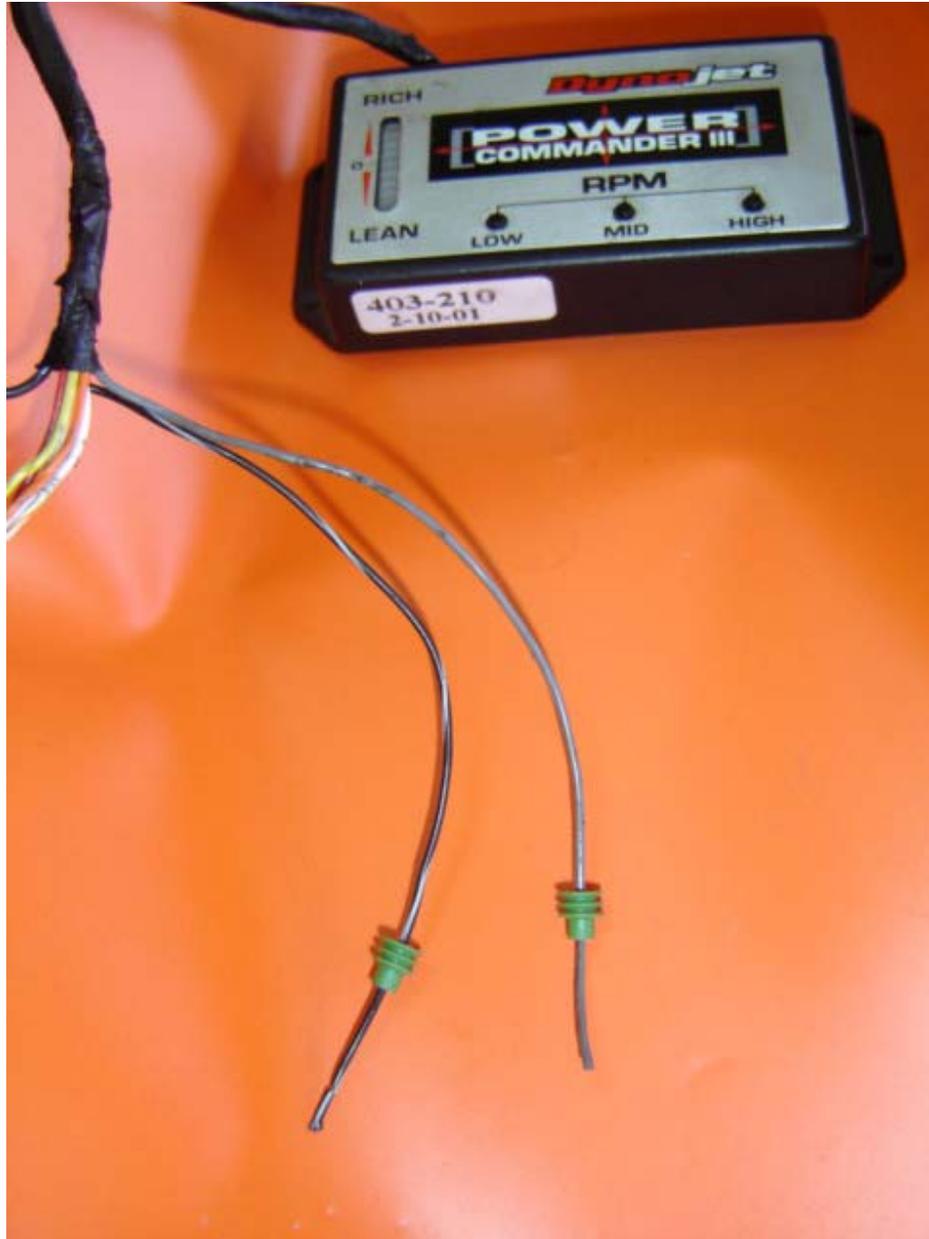
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I then took the Grey & Black/White-line wires and stripped enough of the end off  
to crimp some terminals.



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The green grommet is supposed to make the connector water resistant. After crimping the terminals I soldered the terminals to the wires.



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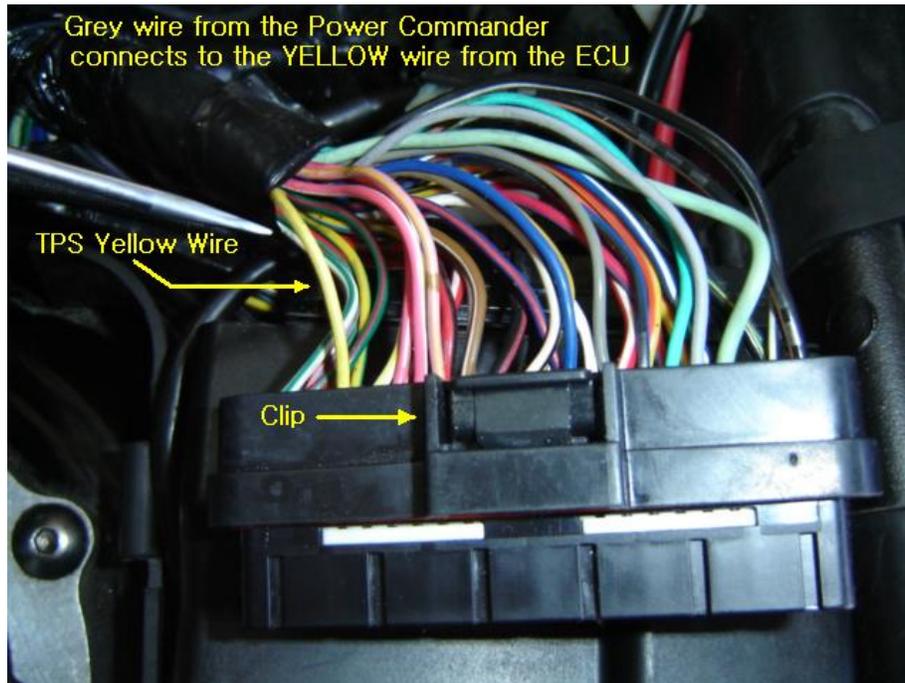
I then inserted the terminals into the connector body. Pushed the green grommets in and snapped the back end of the connector over the wires



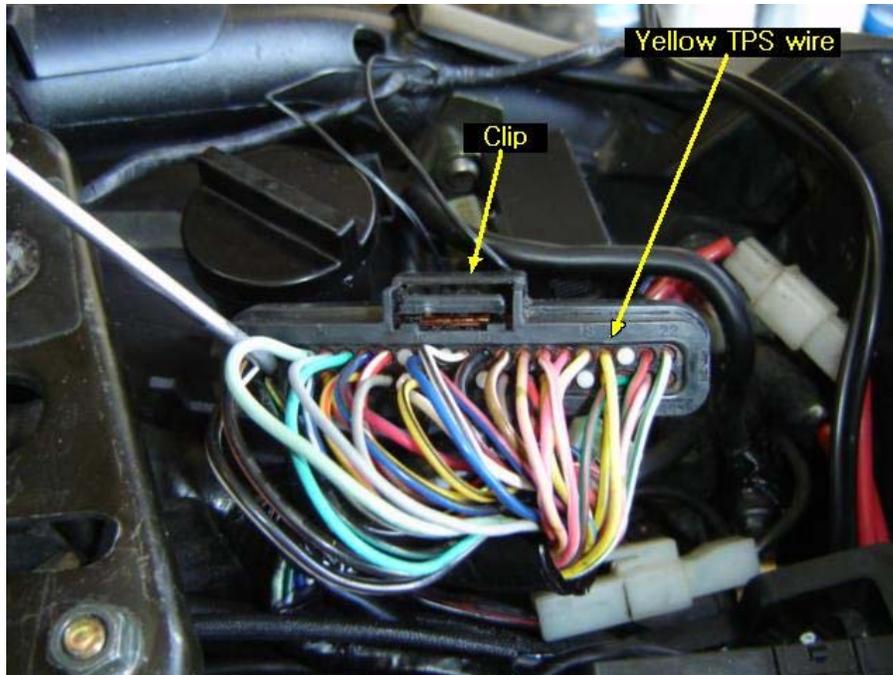
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**I disconnected the ECU from the main wire harness. To prevent damaging the ECU, while cutting and soldering a few wires.**

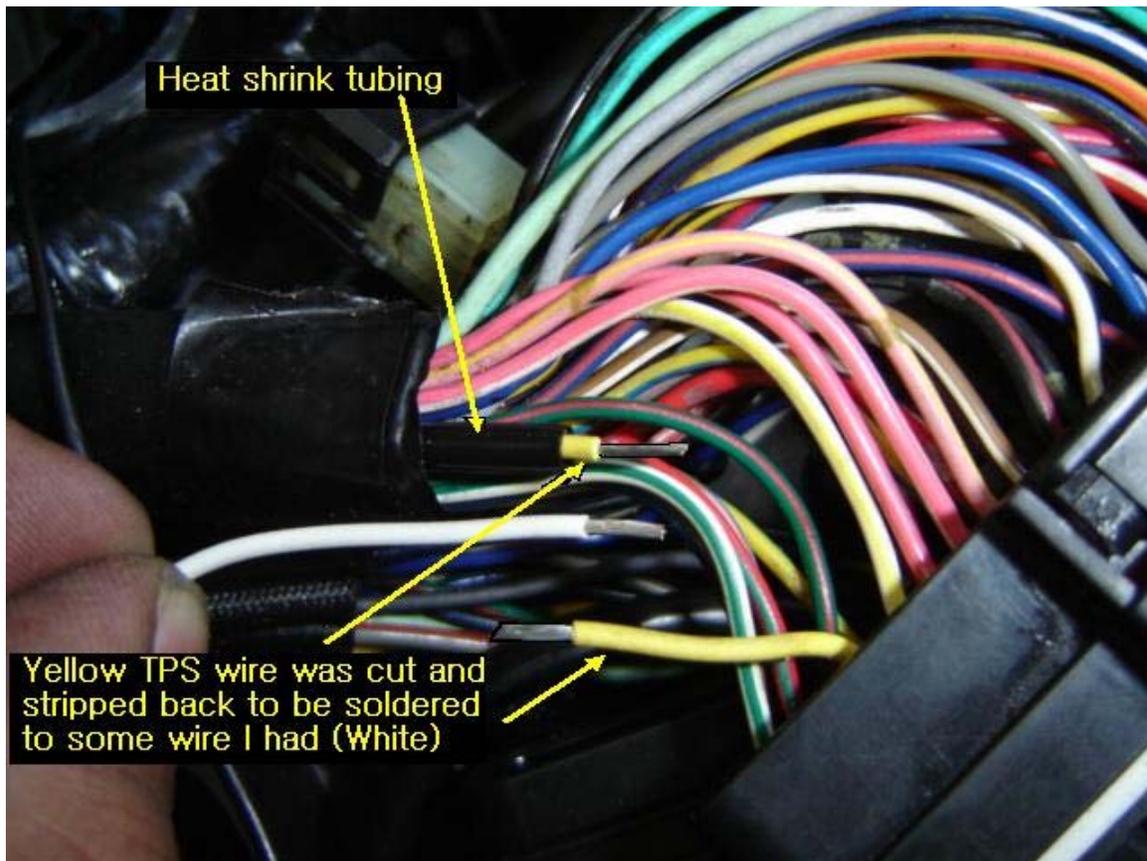
I located the Yellow TPS wire that needed hooked up to the Grey PCIII wire.



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I cut the Yellow wire a few inches from the connector, and stripped the ends



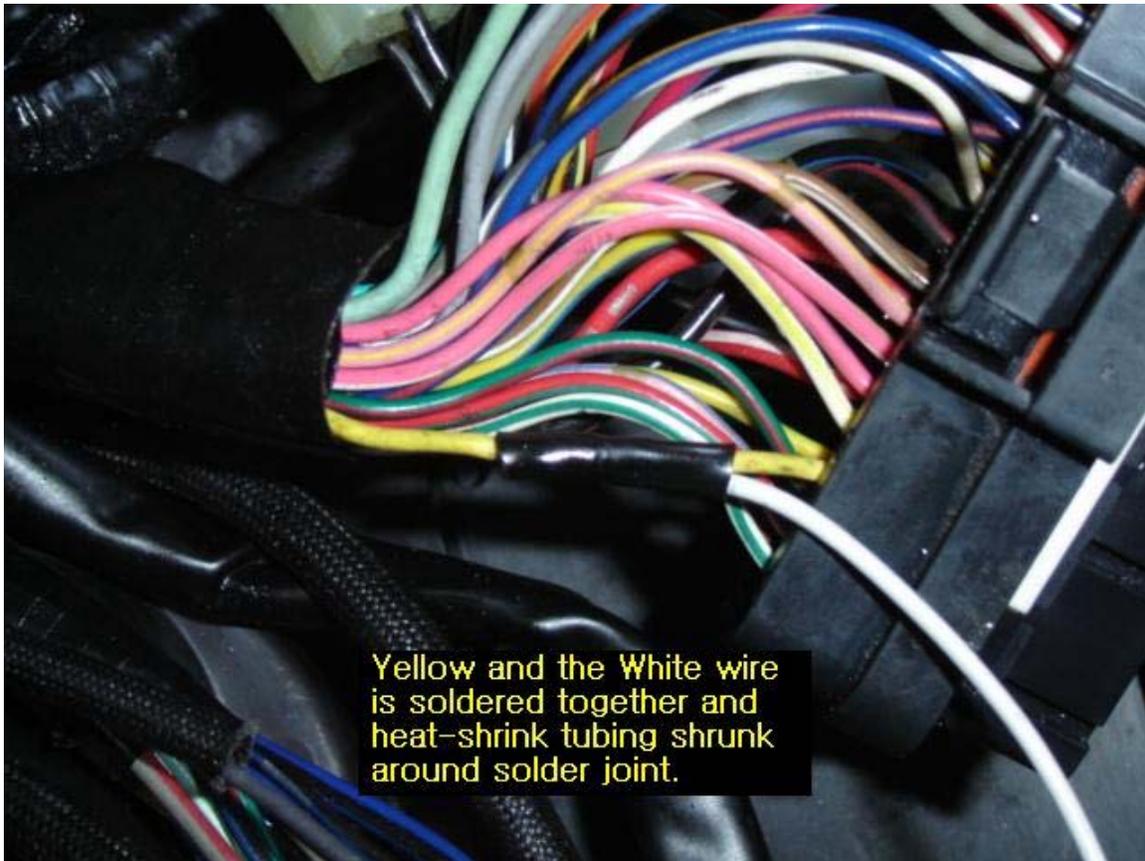
Heat shrink tubing

Yellow TPS wire was cut and stripped back to be soldered to some wire I had (White)

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I then cut a piece (5 inches) of 18 gauge White wire from a spool (I didn't have Yellow wire). I slipped a few inches of heat shrink tubing over one of the Yellow wires and then proceeded to solder the two halves of the Yellow Wire with the White wire I had cut.

(is it possible to strip insulation from yellow wire without cutting the conductor, then solder connecting wire and heat-shrink?)

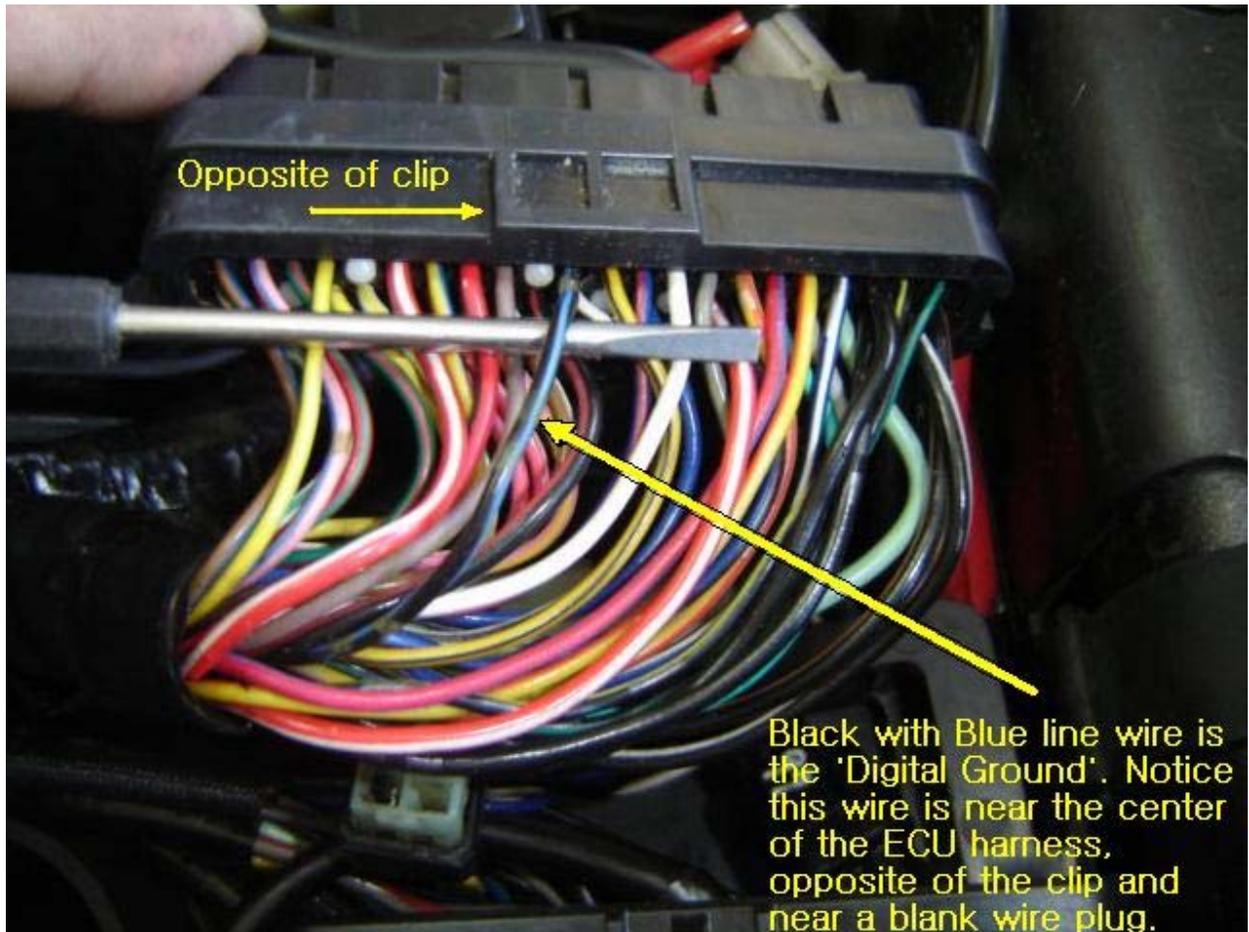


When I was satisfied with the solder joint, I slipped the heat shrink tubing over the joint and shrunk it down with a hair dryer and lighter.

(Is it beneficial to connect conductor so it exits the opposite side away from the harness clip – to make it easier to connect ECU to clip?)

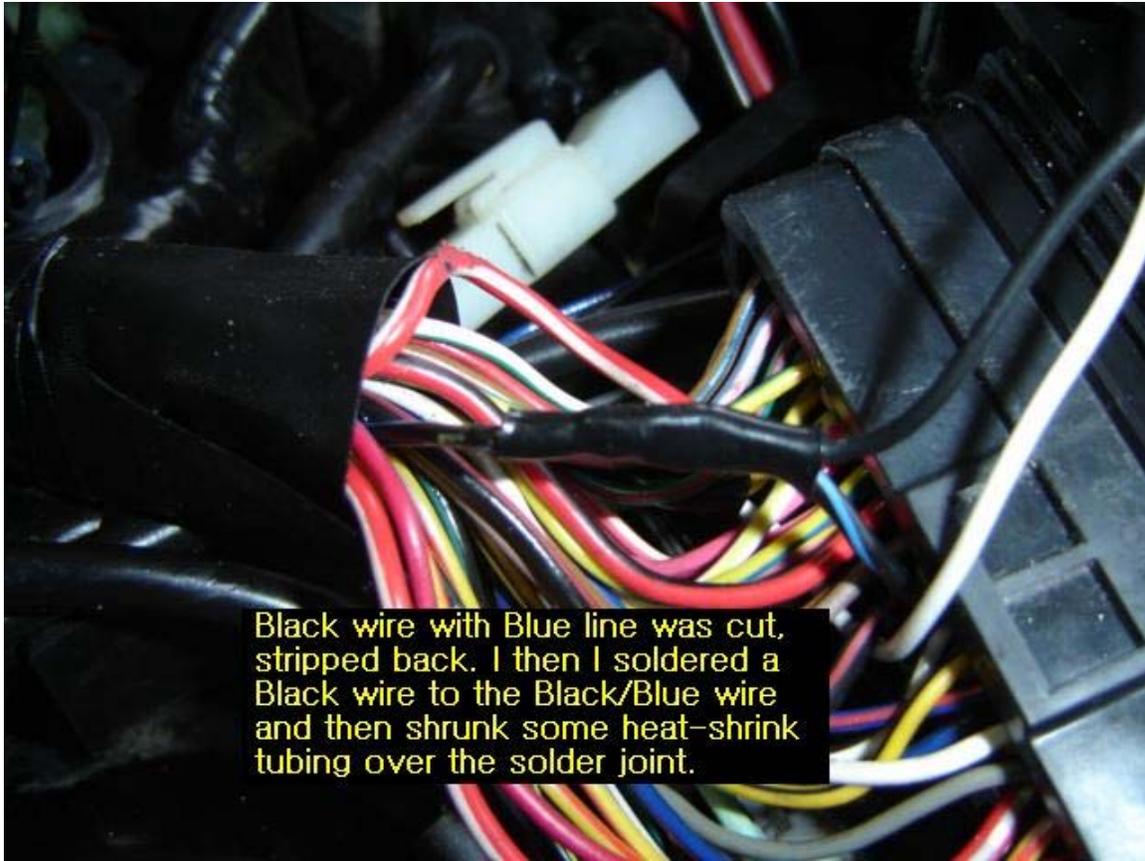
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Locate the ECU's digital ground wire.



Its the Black/Blue-line wire on the other side of the connector from the Yellow TPS wire. It's near the center of the connector, near a wire plug.

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I then cut the Black/Blue-line wire a few inches from the connector.  
I stripped the ends off and cut a 5 inch long Black 18 gauge wire from a spool.  
I slipped a piece of heat shrink tubing over one end of the Black/Blue-line.  
I soldered the two halves of the Black/Blue-line wire with the Black wire.  
I slipped the heat shrink tubing over the solder joint, and shrunk it down with a hair dryer and lighter.

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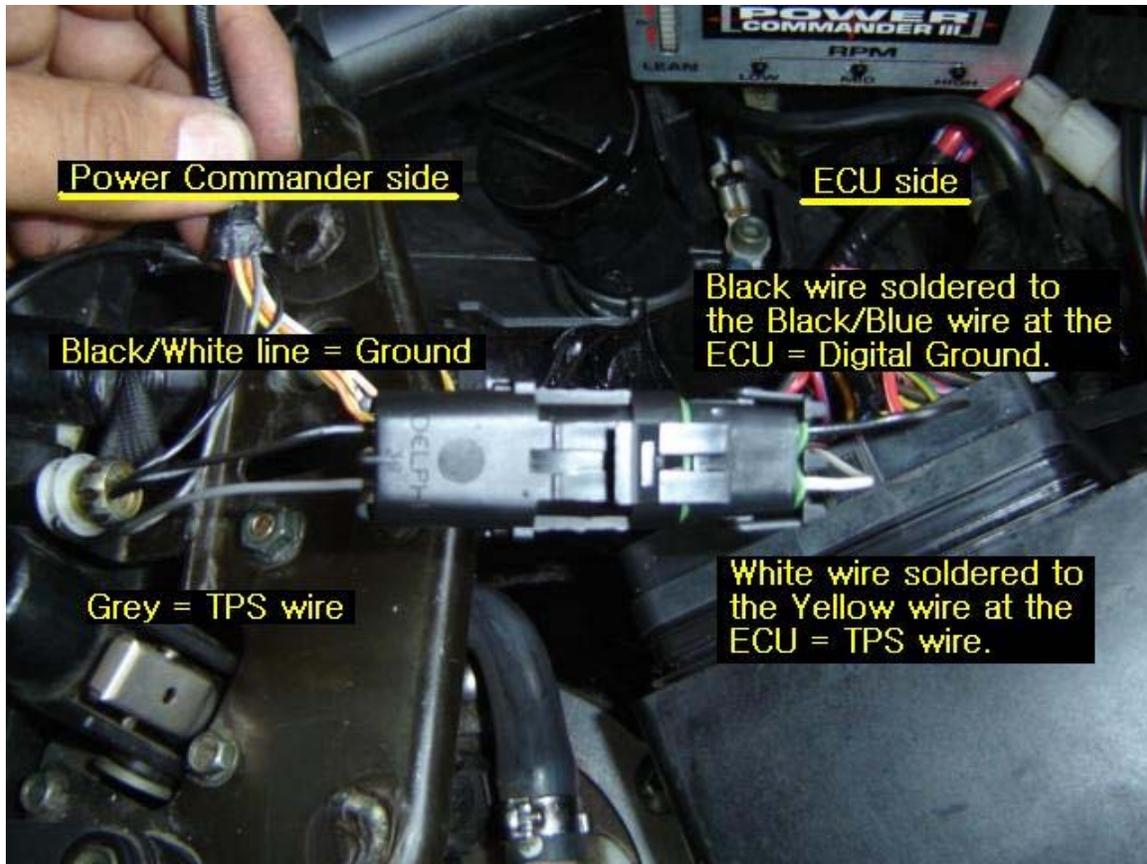
I stripped the ends of the two wires (solid Black and the solid White wire) that I had soldered to the Yellow and Black/Blue-line wires from the ECU connector.

I slipped the green grommets over the wires then crimped the terminals onto them.

I soldered the terminals to the wires. Then inserted the terminals onto the connector body.

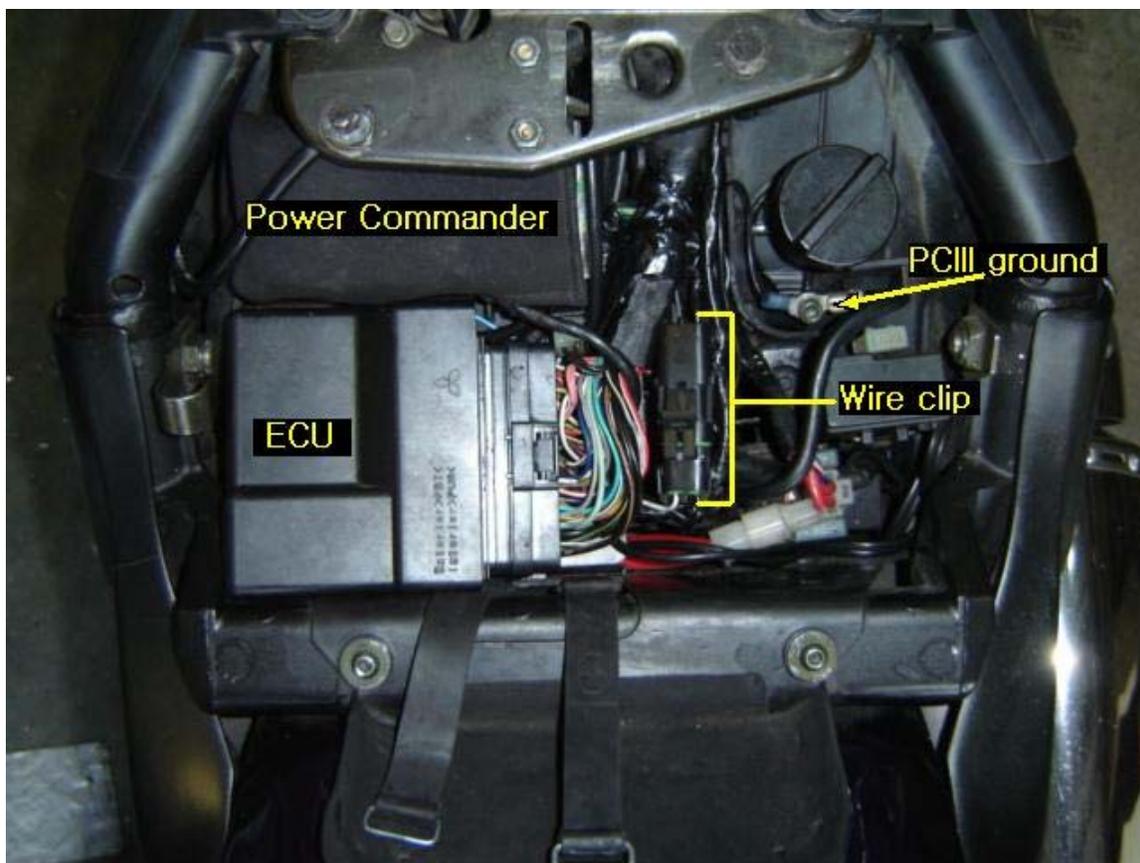
I had to make sure and match the correct colored wires into the connector body, to make sure they match up with the correct wires on the other connector. You don't want to cross the wires.

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The 2nd photo shows the connector snapped together. I made sure that I had the correct ECU wires going to the correct corresponding wires from the PCIII.

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All the components back in place. ECU & PCI III is plugged in. The PCI III in it's neoprene pouch, under the seat bracket. I put the foam cover over the components and strapped the ECU strap over the cover & ECU.

After doing this mod, it's recommended that you recalibrate the throttle position in the Power Commander software.

## PC3USB Set Throttle to Zero

First off, make sure bike is at operating temp before making any adjustments. tps readings will vary from cold to hot due to throttle stops & throttle body tolerances, So warm up engine & CHECK AGAIN

You need to reset the throttle position. To do it warm up the bike and connect your computer to the PCIII. Make sure you have the latest version of the software, if you don't download it and install from [www.powercommander.com](http://www.powercommander.com). Once connected, click on "Power Commander Tools" from the top menu and select "set throttle position". Next to the closed reading on the left there is a little arrow. Click on that and hit ok. Your throttle position reading will zero out and your done. You only have to do the closed position, so don't hit the "reset" button unless you want to reset the open position too.

### Power Commander .MAP files and .DJM files

Similar subject. I tried to load a map on mine and it said it was the wrong version. The map I got from here was in this format xxxxxxxxx.map and it only wants the ones with the DJM file extension. Do I need a software upgrade or is the map to old? Anyone?

The PCIII USB only uses .DJM extension but it's easy to change from the .map extension. You just need to change the extension on the file. On the computer, not in the Power Commander software, find the map file you want to load and left click once on it so it is highlighted. Left click again and the file name will have a cursor next to it. Just change the extension from ".map" to ".djm" and hit enter. You can also right click on the file and choose rename from the dropdown menu. Once you have done that open up the Power Commander software and use the "open map" button to load it into the software. Then just download into PCIII. Make sure your Power Commander is powered up or the bike is on.

## Adjusting RS Warrior ECU for Air/Fuel Ratio Front & Rear Cylinders

### Adjusting the ECU

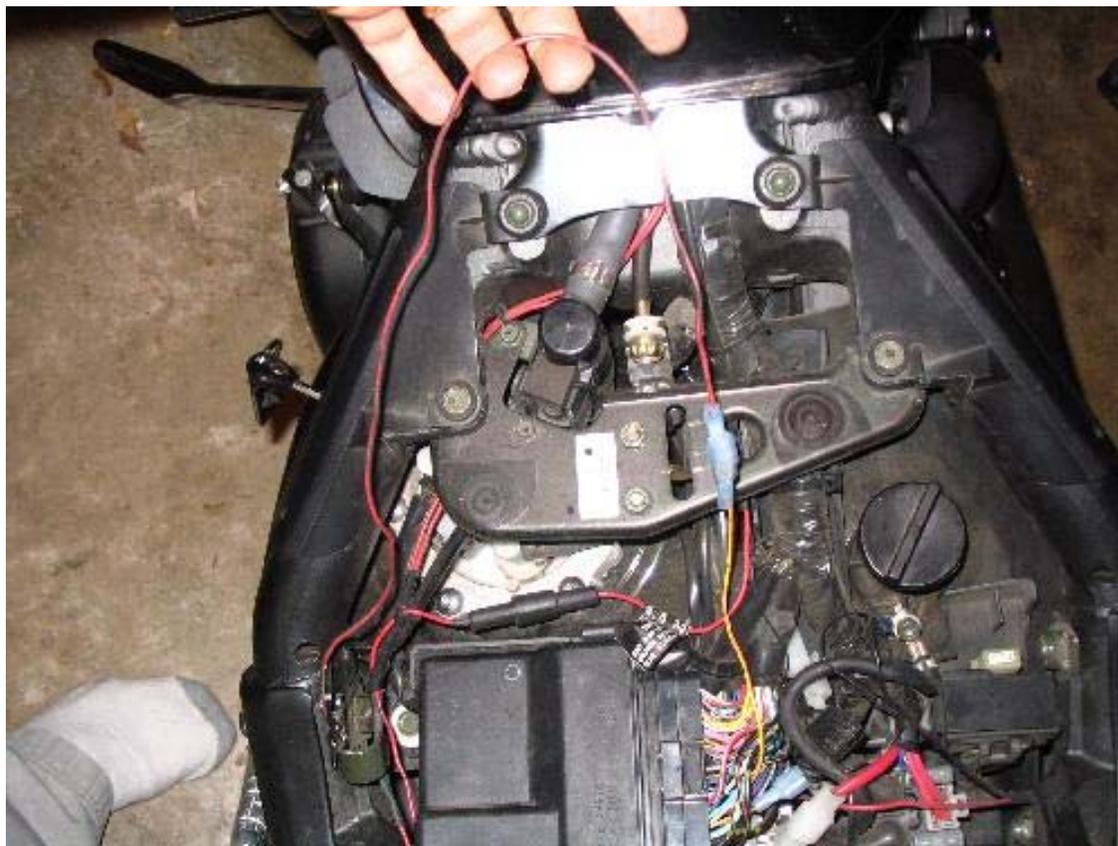
Courtesy of DFW\_Warrior

[http://www.rswarrior.com/forums/topic.asp?TOPIC\\_ID=33867](http://www.rswarrior.com/forums/topic.asp?TOPIC_ID=33867)

For all those that don't have the PCIII (all three of us) here is my little, simple way of adjusting the ECU.

By the way, rswarrior.com, Yamaha Motorcycles, and I take no responsibility for you frying your ECU by following these instructions. Follow them at your own risk. I am not a professional mechanic, and I do NOT use really big words to describe the things I do. So if you have any questions feel free to ask away.

First pull off the seat, and little foam thing from under your seat and that will expose the ECU. Free up the little retaining strap from the ECU and then locate wire #27 and #29 in the harness. These two wires will come free from the bundle if you give them a little pull. **Note: Don't try and pull them out of the harness itself, just the taped up bundle of wires!** You will notice that wire 27 and 29 are actually just a loop wire that tells the ECU which mode to operate in. BTW, the wire will be yellow with a red stripe down it.



## Adjusting RS Warrior ECU for Air/Fuel Ratio Front & Rear Cylinders

Now for the fun stuff... First, don't remove the harness from the ECU. There is no need to and it really just slows things down. Take a pair of wire cutters and cut the wire in half and then install a pair insulated quick disconnects. I got a pack of them from Lowes for less than \$2.

Next, make yourself a little jumper cable out of an alligator clip, piece of wire, and a matching quick disconnect to mate up to pin #29.

Attach the jumper to pin #29 and then attach the alligator clip to some part of the frame. I use the helmet lock thingy. Yes, pin #27 will have nothing plugged into it for this portion of the adjustment.

Now you're ready to adjust the ECU. First hold both buttons on the tach down and then turn the key to "Run". Continue to hold the buttons down until "DIAG" appears where the clock used to be. Now let go of both buttons.

Press Select and "Co" will appear and now hold both buttons again until "Co 01" appears. This is the air/fuel mix of the rear cylinder. Hold both buttons again and a number will appear in the lower LCD panel. Write this number down because this is your baseline that the machine was set at from the factory.

Original Factory Baseline for CO1: \_\_\_\_\_ (rear air/fuel mix)

To adjust this number either press Select or Reset and the number will change.

Select = larger number, which = richer.

Reset = smaller number, which = leaner.

Once you have adjusted this to your liking press both buttons and you will return to the Cylinder select option, saying "Co 01".

Now press the Reset button and "Co 01" will change to "Co 02". Hold both buttons down again and adjust the front cylinder the same way as the rear. Write down the baseline number before you start so you can go back if needed.

Original Factory Baseline for CO2: \_\_\_\_\_ (front air/fuel mix)

Now once you've done both cylinders, turn off the key and remove the jumper from the ECU. Reattach the quick connects, and make sure they aren't touching anything that could cause them to rub or short out and you'll be good to go.

## Adjusting RS Warrior ECU for Air/Fuel Ratio Front & Rear Cylinders

BTW, I carry my jumper with me in my tool kit just because you never know when you might need it.

As far as how much do you adjust the ECU, you're on your own. All bikes are different, and with different mods people have vastly different settings. Try searching this wonderful site and there will be loads of information to pick from.

But here is one little tip on the popular "What number should I adjust to" question. There is no right or wrong answer for any given setup. A good rule of thumb is to just adjust each cylinder the same amount. How much depends on the altitude where you live, all the mods you've done, how clean your filters are, and many more factors. It's just going to have to be a trial and error type thing.

I hope this helps someone out a little. 🙏