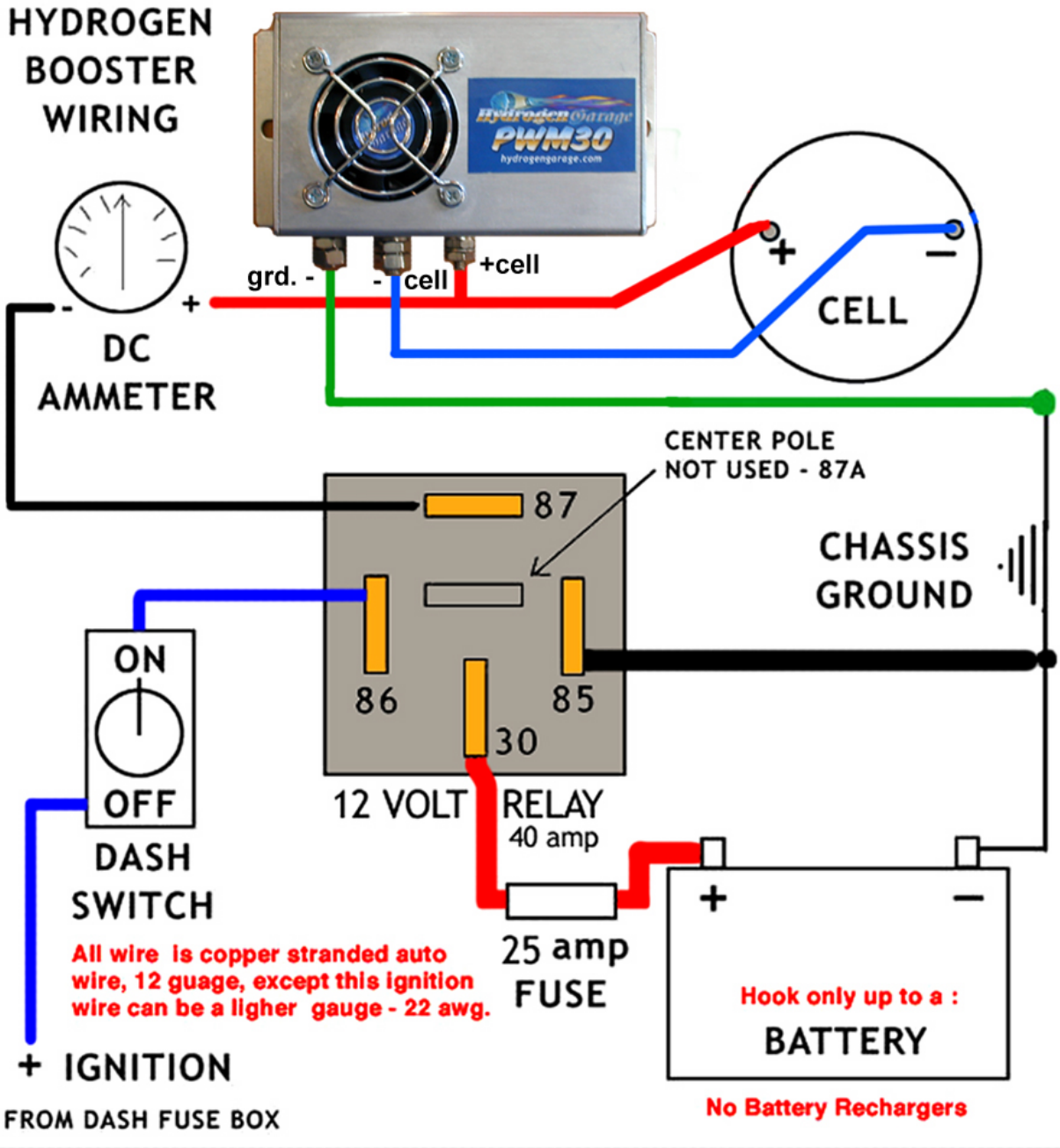
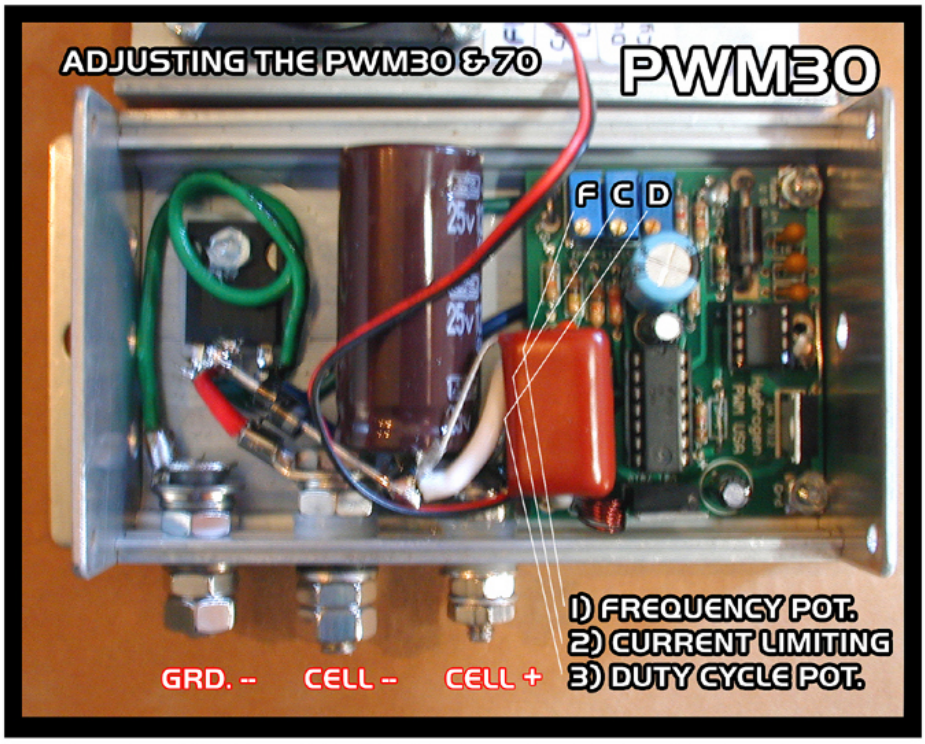
PWM30 & PWM70 Hydrogen Cell Hook Up





Adjusting the PWM30 and PWM70. You have 3 potentiometers to adjust. Your PWM30 comes **PRE-ADJUSTED** and set for 15 amps. Your PWM 70 comes **PRE-ADJUSTED** and set for 30 amps. Right now your PWM has a nice safe 300 hz. square tall wave and approx. 85% duty cycle for cold starts. The current limiting pot. we have set for 15 amps. Amp draw will vary slightly different for each cell design. You should just adjust the "current limiting" pot. to change the amp setting, leave the freq. and duty alone.

TO ADJUST THE PWM. (if you insist) Unscrew the 4 screws in the top corners only.

Hook up the PWM to your cell and turn it on. All these tiny pots. are 10 -15 turn potentiometers. So you may have to spin and spin before you see any movement on your amp meter.

1) "Frequency" potentiometer (300hz to 5K hz.) turn clockwise to increase the frequency. Beware higher freq.s attract more voltage spikes and can ruin PWM early. Our P75 & P150 come set at approx. 300hz, so you can not adjust the dangerous freq. We offer this feature for those wishing to tune their cell. We can not guarantee the life of the PWM, if you adjust it higher than 500hz. PLEASE BE WARNED! Tuning a cell to the greatest gas output will attract phantom voltage spikes from no where. Please leave it lower at 300hz, it will make a good% of "ortho" hydrogen & "ortho" oxygen at 300 hz, guaranteed.

2) "Current Limiting" potentiometer Turn clockwise to increase current set. Start off with your cell cold to amps you want to run all the time. You should add enough KOH or NaOH (electrolytes) Our 2 volt cell systems (2 volts between each plate) work with a 20% NaOH or KOH by weight to 100% water weight. Approx. 1 cup of KOH to 1 quart of water. (This assures high amps at cold start, as your cell warms up the current limit feature allows your duty cycle to drop down to allow cell warm up and constant amp setting.

3) "Duty Cycle" potentiometer This is the PWM's throttle. either 0% all the way floored to 100% duty cycle. Turn the tiny pot. clockwise to increase amperage towards 100% duty cycle. If you have an oscilloscope use it on the cell connection, You want the best tallest square wave and leave it there. At 95% to 100% duty cycle and the pulsing goes away. **Not good.** 90 to 100% duty cycle, or full blast throttle (floored) flattens out your wave length. If you do not have a oscilloscope you can still adjust the duty cycle by amp draw. Turn the pot. many times clockwise till your amp reading is max.ed, then back off (counter-clockwise) till you start seeing your amps drop an amp or 2, at this point is where the wave length & tall spike pulsing comes to play. Leave it there. As you cell warms up during operation the duty cycle will automatically drop down, but your current set, will stay the same. More info : http://hydrogengarage.com/assembly.html Enjoy.