Fantastic Fan Pulse Width Modulator (PWM) Modification

Let me start by thanking those of you that assisted with and developed this mod for use. I have the original Fantastic Fan mounted in my 2015 HAWK it is mounted in vent position over the stove. Until now only we used as a necessity for the very few times we have cooked inside. As all have said the noise was a deterrent otherwise. Mine is the 3 speed model with a reverse switch.

1. Remove the plastic facia giving access to the screws holding controller portion of Fan. Remove the 4 screws and then remove the screw and handle for opening the top cover.

2. When controller lowers you can see the two wires from FWC power to the fan. Mine were butt spliced from camper to controller.

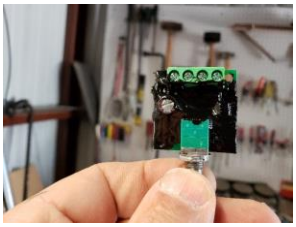
3. I cut both wires above butt splices and added insulated crimp blade connectors. I put male connector on one wire and female on the other so as to not be able to cross polarity in the future if removed. You will need to use a multimeter or such and determine polarity. On my setup the BLACK wire is NEGATIVE (-) and the YELLOW is POSITIVE (+)

4. Before proceeding I unpackaged the PWM I had purchased on AMAZON.

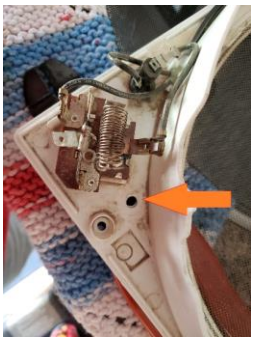
Here is a link https://www.amazon.com/RioRand-RR-PWM-15V-Voltage-Motor-Controller/dp/B00N30UK2M/ref=sr_1_3_sspa?keywords=riorand+rr-pwm-15v+low+voltage&qid=1579273507&sr=8-3-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUExQ0hSMTkyMDVRUk9YJmVuY3J5cHRlZ

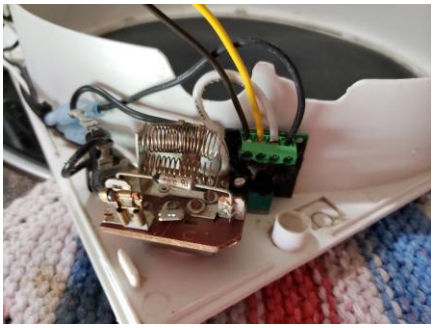
ElkPUEwODU1MTg1M1I1WE5WS01ETzZXSSZlbmNyeXB0ZWRBZElkPUEwMDk0ODY4MUVRV01IS0VJRTlVTyZ3aWRnZXROYW1lPXNwX210ZiZhY3Rpb249Y2xpY2tSZWRpcmVjdCZkb05vdExvZ0NsaWNrPXRydWU=

I was informed by Russell Deeny, fellow FWC owner, that the PWM is not waterproof and if heavy rain than it can get damaged. He recommended I use a Silicone Conformal coating. I did not have that specifically but I did have Liquid Tape for sealing electrical connections and waterproofing them so I covered both sides of my PWM with it and let it dry.

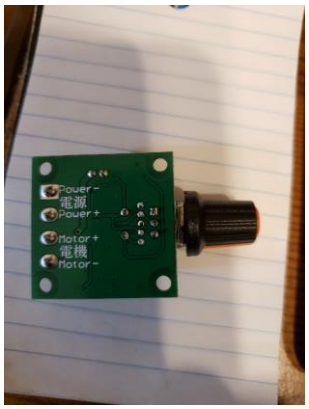


5. I then proceeded to locate and drill a hole in controller to mount the PWM. I copied others and mounted near the speed switch.

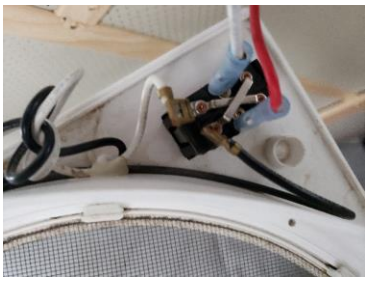




6. Back to wiring… I made two pigtails one Yellow and one Black with appropriate Male and Female spade connectors on each so they could plug into the FWC power wires I previously added connectors to and determined polarity. The opposite end of each pigtail was stripped ¼ " to be inserted into the PWM. The Black is inserted into the POWER negative (-) and the Yellow into the POWER positive (+)



7. There are two wires connected to the REVERSE switch one is Black negative (-) and the other White positive (+). Those wires come from the 3-speed controller switch. I once more cut the wires and added blade connectors so polarity can not be mixed. I made two more pigtails one white and one black. Crimped on appropriate blade end male and female then stripped the opposite ends ¼ “. These ends are inserted into the PWM on the MOTOR connection BLACK to negative (-) and White to positive (+)



8. This is all the wiring that will need changing. I just closed everything up and tested. The PWM will regulate speed in any of the 3 positions. Now I can run it slow…. AND QUIET!!!

I realize I may just be confusing some of you more but I hope this may help a little. Feel free to call 254-498-7967 or message me if you have particulars and think I may assist.