

Flyin' Miata

Hush-O-Matic MRS Control Package 06-4919X



Congratulations on your purchase! The Hush-O-Matic MRS Control package allows you to choose a few different modes including always quiet and always loud. Controlling the Hush-O-Matic is done with the windshield wiper intermittent switch. Please call or email us if you have installation questions. Our number and email are below.

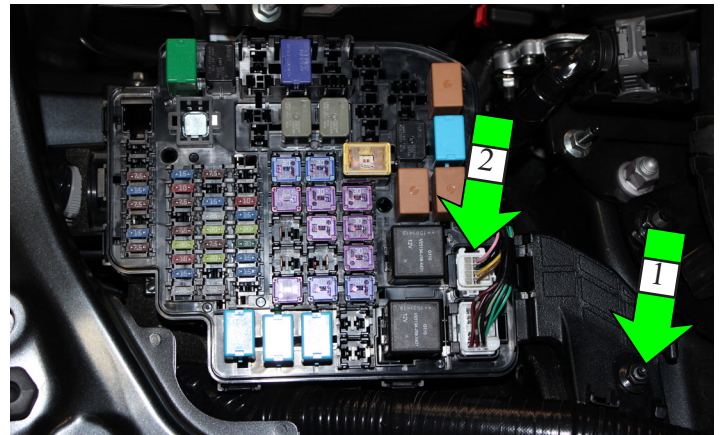
WARNING: Not everyone can perform every installation. It is critical that you be honest with yourself, in regards to your ability. We're more than happy to help, but there are only so many things we can do from the other end of a phone / computer. If in doubt, discuss the install with us before you dive in.

Required tools:

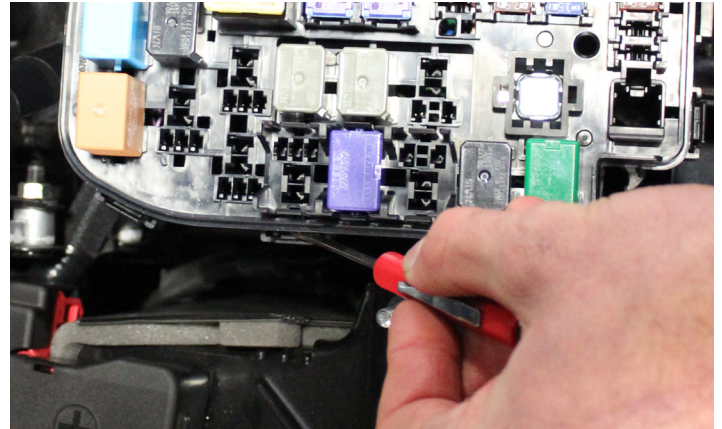
- 10 mm Socket
- Ratchet Socket Wrench
- Wire/Side Cutter
- Pliers

- Wire Stripper
- Wire Crimping tool
- Heat Gun
- Small Flat Blade Screwdriver

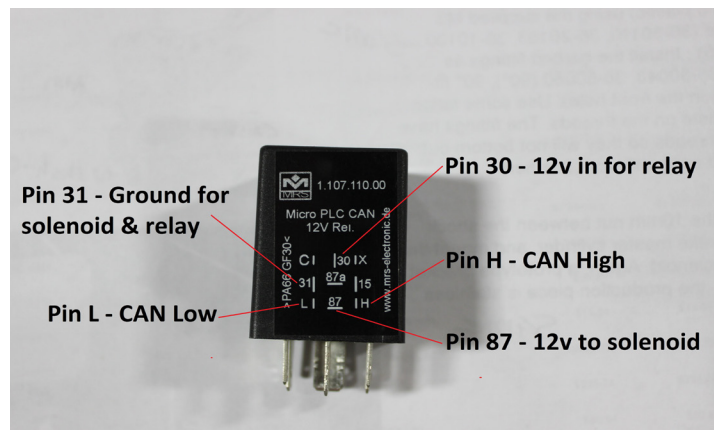
1. Begin by disconnecting the negative terminal on the battery. Next, locate the fuse panel under the hood, then remove its cover. There are seven tabs (next step) and one 10mm nut holding it in place. Remove the nut (1) and disconnect the two electrical connectors located at the back of the fuse panel (2).



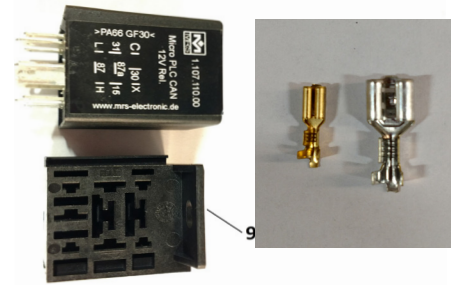
2. Use a small flat blade screwdriver to carefully pry the seven tabs while gently pulling up on the fuse panel to gain access to the wires underneath.



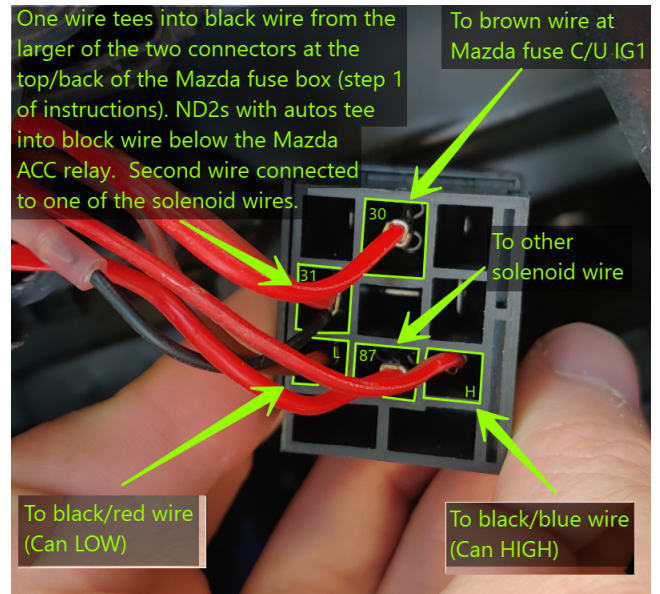
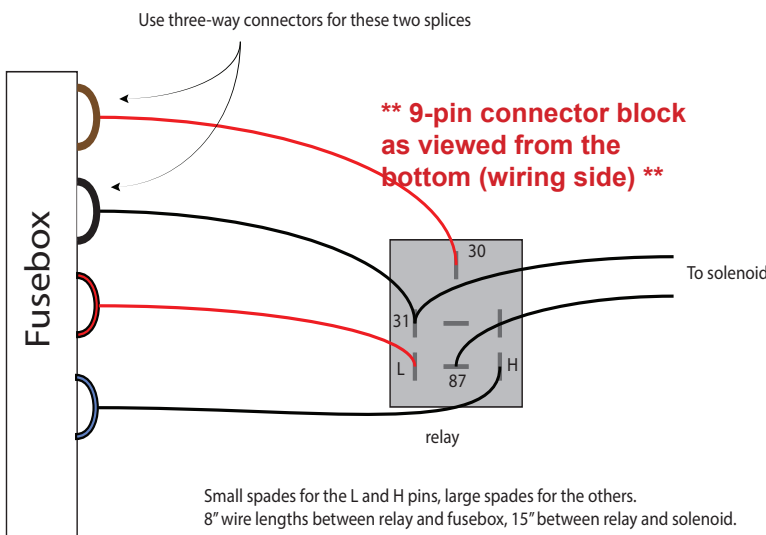
3. Here is the MRS PLC CAN relay (07-44110). The pins are labeled according to function. L and H refer to CAN Low and High.



4. Here are the female spade connectors and MRS 9 pin connector block (07-44190). Pins 30, 31 & 87 will use the large spade. Pins L and H will use the small spade. Use the supplied wire, spades and block to build a connector for the relay. Pin 31 for ground will have two wires attached, one for relay ground, one for the solenoid ground.

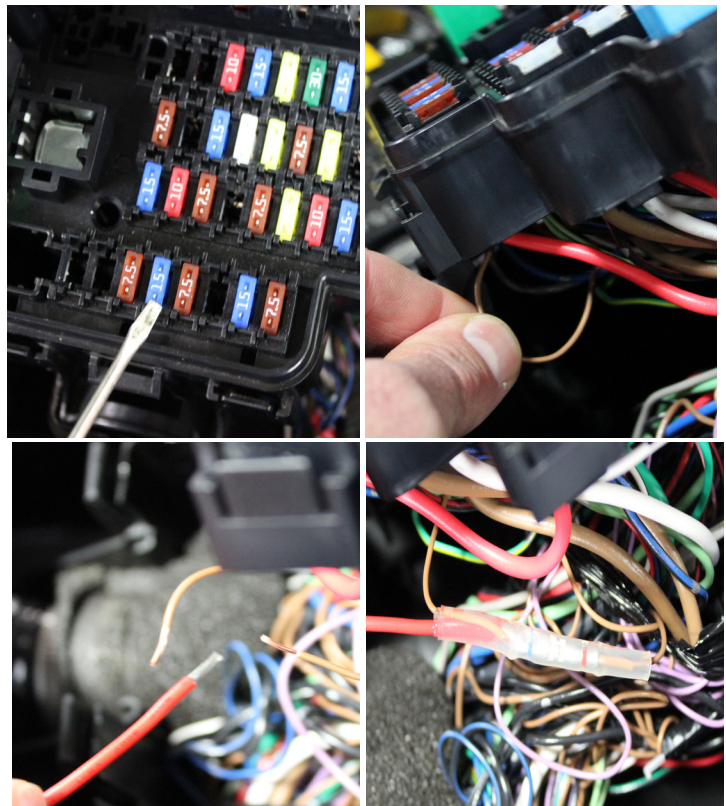


5. To build the relay and harness assembly, start by pulling apart the dual lead wire (36-80210) to create two 36" single wires. Now cut four 8" pieces and two 15" pieces. Strip the ends of two 8" wires and crimp a *small* female spade to each. Install these in the block for pins L and H. Take another 8" wire, crimp on a *large* female spade, install in the block for pin 30. Strip the end of one 15" wire, crimp on a *large* female spade, install in the block for pin 87. Strip two ends of the remaining 8" and 15" pieces. Crimp both into one *large* female spade, install in the block for pin 31.

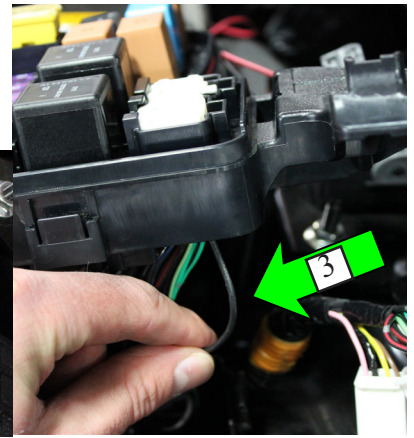
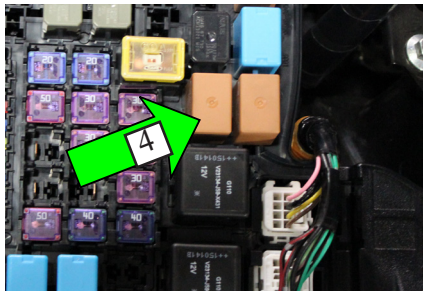


6. On the fuse panel locate the fuse labeled C/U IG1. Then locate the brown wire coming out from under it. Of the two wires connected to fuse C/U IG1 it is the wire nearest the fire-wall, farthest from the front of the car.

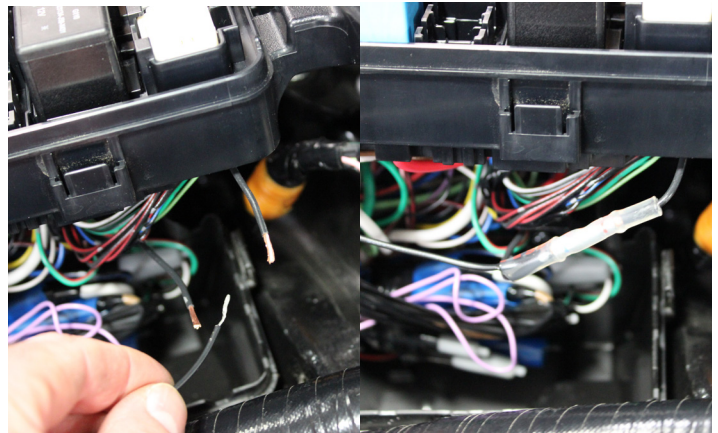
7. Tee the wire from pin 30 on the relay into this wire using a 3-way butt connector (36-80101). The butt connector has a blue stripe and a red stripe. The end with the red stripe is for the single wire. The blue end is for two wires. Insert the wires into the butt connector and crimp them. Give the wires a tug to make sure the crimp is good. Use a heat gun to shrink the butt connector plastic around the wires.



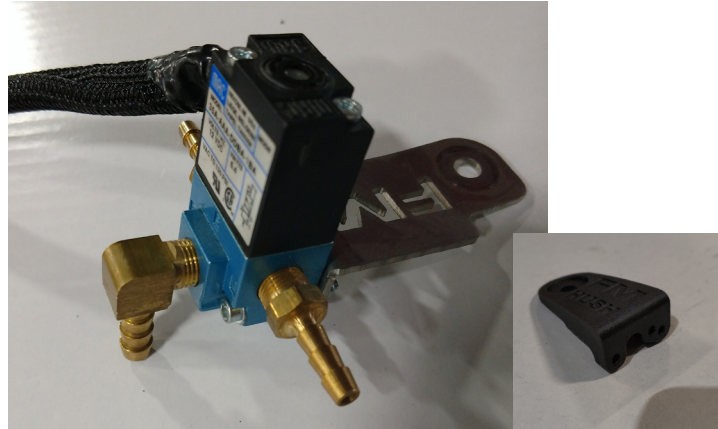
8. Locate the black wire under the fuse panel (3). It goes to the larger of the two connectors from step 1. If you have a ND2 with an automatic, you will not have this black wire and will need to use the black wire found below the ACC relay (4).



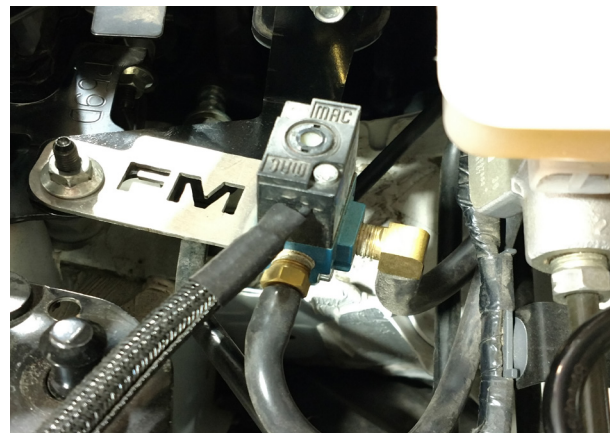
9. Tee the 8" ground wire from pin 31 into the black wire using another 3-way butt connector (36-80101). Use the same crimp/shrink method from step 7.



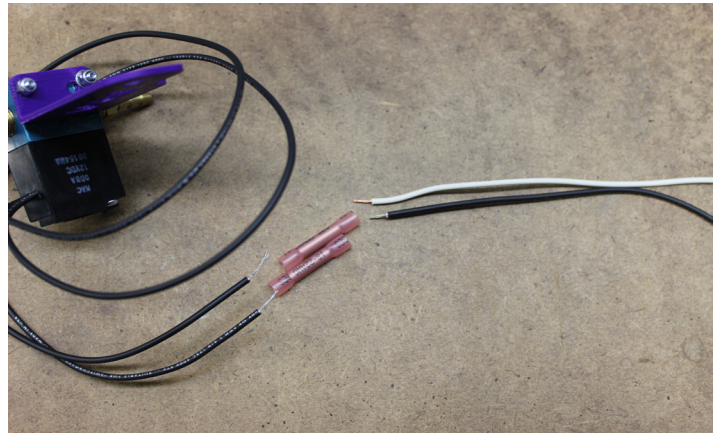
10. Mount the vacuum solenoid to the FM mounting bracket (now 3D printed, shown on the right) using the supplied M3 hardware (36-30110, 36-20163, 36-10100, 07-26905). Install the barbed fittings (36-50043, 36-50060 (90°)) using some Teflon thread paste on the threads. The 90° fitting goes in the front hole labeled 3. The straight fitting goes in the side hole labeled 2. That will leave the other side hole labeled 1 open, unlike what is shown. The fittings have tapered threads so they will not bottom out. Good and snug will work fine here.



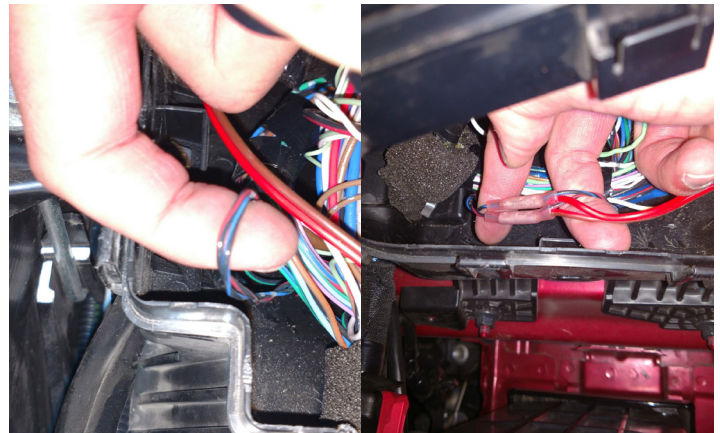
11. Find the 10mm nut between the shock top and brake master cylinder, and mount the vacuum solenoid.



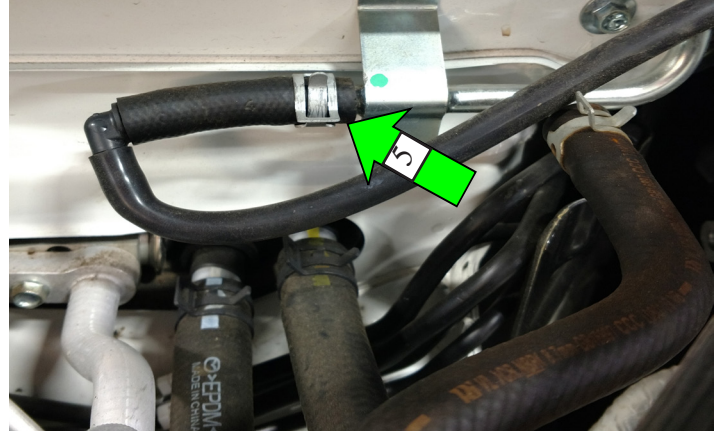
12. Take the two black wires from the vacuum solenoid and connect one wire to the 15" wire on pin 87 and other to the 15" wire on pin 31 on the relay using two red butt connectors (36-80100). It does not matter which is power or ground. Use the same method from step 7 to crimp and shrink the butt connectors.



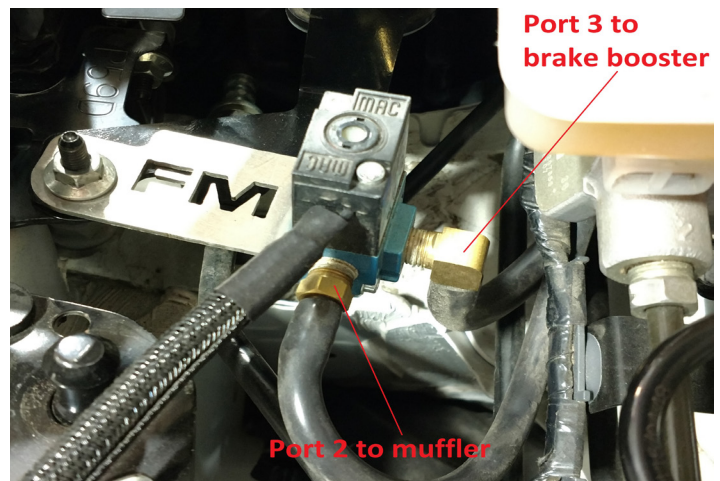
13. Locate the CAN communication wires under the engine bay fuse panel. They will be in the bundle of wires nearest the engine. They will be easy to find since they are the only wires twisted together. The black/blue wire is CAN high, the black/red wire is CAN low. Using two red butt connectors (36-80100) tee the black/blue wire to the 8" wire on pin H. Tee the black/red wire to the remaining 8" wire on pin L. Use the crimp/shrink method from step 7.



14. Take the cap off the end of the metal brake booster line (5) and use the 3" section of 3/8" hose (36-40220) and install it on the vacuum fitting. Next install the 3/8" to 1/4" reducing elbow (36-52027). Connect about 40" of the supplied 1/4" vacuum hose (36-40125) to the reducer. Connect the other end of this vacuum line to port 3 on the vacuum solenoid. Trim the vacuum line as necessary and secure it on the brake booster line across the firewall. No hose clamps are necessary, aside from the stock one on the brake booster line. Connect the vacuum line from the muffler to port 2 on the solenoid. Leave port 1 open to atmosphere.



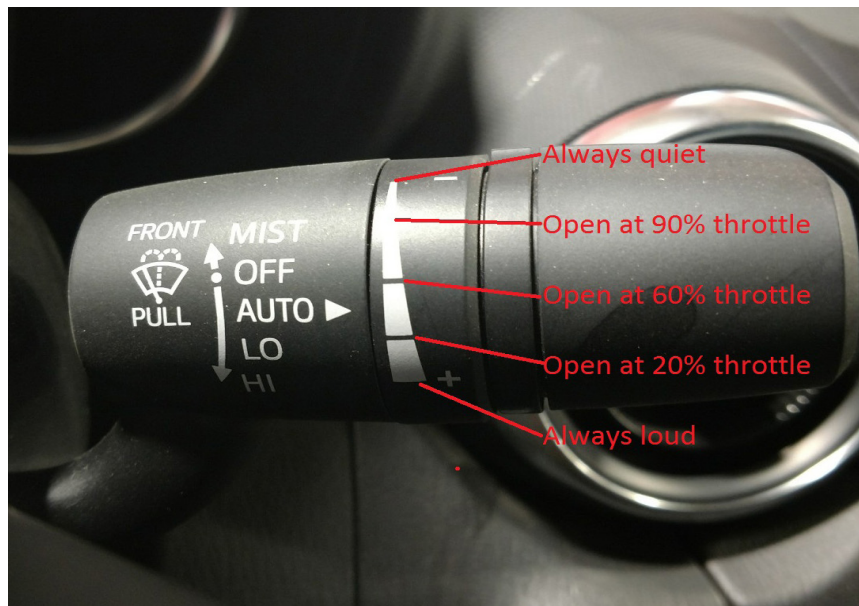
NOTE: If you are upgrading from the original control pack or adding this one to your existing Hush-O-Matic, remove the tee in the brake booster hose at the back of the intake manifold and put that plumbing back to stock. If your vacuum line from the muffler is too short to reach the solenoid you may be required to source a 3/16" (4mm) barb union and some additional vacuum hose to reach.



15. Tuck the MRS CAN relay under the fuse panel on the side nearest the engine. Feed the solenoid wires out the front of the fuse panel, making sure that none will be pinched. Snap the fuse panel back in place. No pinched wires, right? Plug the white connectors back in and replace the 10mm nut from step 1. Replace the panel cover. Route the wires from the solenoid along the existing stock wire harness, use the supplied wire loom to protect the wires and zip tie in place.

Operation

The various settings for Hush-O-Matic electronic operation are controlled with the windshield wiper intermittent switch. The setting can be changed at any time while the switch is in the OFF, LO and HI positions. In the LO and HI positions the wipers will also operate as normal. When the switch is in the AUTO or intermittent position, the Hush-O-Matic setting cannot be changed. In the AUTO position, wiper intermittent operation can be changed as normal. The switch works basically like a volume control. Turning the switch all the way down is the position for always quiet. One hash mark up, the Hush-O-Matic will go loud once the throttle is 90% open or very close to wide open throttle. The next two positions are loud when 60% and 20% throttle are reached. Turning the switch all the way up is the always loud position.



That's it, you are done installing! Time to go for a drive and enjoy!