

This article describes how to build a “poor man’s” M2W controller. I built one for my 2011 Grand Sport with the NPP dual mode exhaust option. The heart of the controller is a remote RF receiver, bought on eBay for about \$15 (including shipping). The eBay item number is **200450071315**. The item description is: 1Ch RF (water resistant type) Remote & Receiver 24VDC. Even though the description says 24VDC, it also works and is wired to work on 12VDC. The other stuff was less than a buck, so the whole kit was \$16.

I’ll start with the end product and then show you a few details of how I built it. It took all of 2 hours to complete.

First, here is the receiver unit, installed.



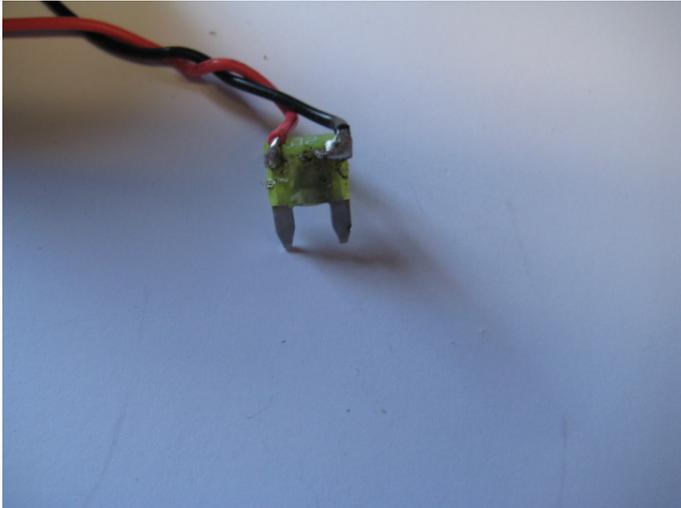
It is the light green box just below the fuse panel in the passenger foot well is the receiver unit. It measures 1inchx1.5inch/.5inch. It has an RF receiver, a relay and relay logic that allows you to either open or complete the exhaust circuit. If you follow the red wire, you will see it is plugged into the fuse receptacle for the NPP exhaust. This fuse is labeled **EXH MDL** for exhaust module. The receiver circuit board is exposed, so I wrapped it in paper and electrician’s tape. The green wire and terminal lug is part of the install and the ground connection is one of the computer mounting screws.

Below is the transmitter. It is about the size of a key fob and fits perfectly in the ashtray:



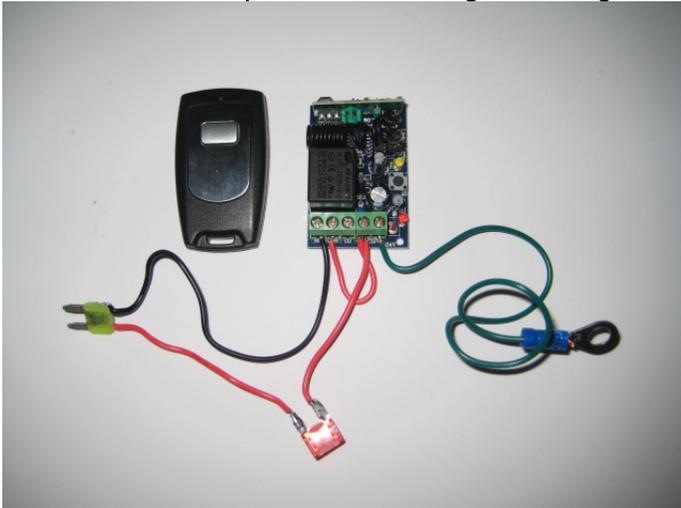
All you do is push the button to open the exhaust, push it again to put it in normal mode. The transmitter has its own battery, just like a typical remote fob.

The first step is to make a fuse-wire connector from a blown fuse. I shorted one to a battery charger. Then I took a Dremel tool and cut away insulation to expose the fuse terminals. I soldered a red wire to one side and a black to the other, as seen below:



You will need to use two colors because the fuse-wire connector provides 12VDC to the receiver, and you will need to know which is which. For now I will assume you use Red and Black. The red wire will have to go into the **RIGHT SIDE** connector of the **EXH MDL** fuse location. The black wire is a switched location. When it sees 12VDC, the NPP exhaust operates in the “normal” way, that is, the butterflies do not open until around 4000 rpm.

That was the hard part, now finishing the wiring, the unit looks like this:



The green terminal board has 5 connections, +12VDC, -12VDC, NO, Com, NC. I put a terminal lug on a 6 inch piece of green insulated wire. It goes to the -12VDC connection on the receiver. The red wire from the fuse-wire I made, and a jumper wire connect to the +12VDC terminal. Notice I soldered in a 10amp fuse, just in case those pesky electrons decide to rush in. The other end of the jumper goes to the COM, which is the common terminal of the relay. This is the +12VDC waiting for the receiver to send it to the other terminal in the fuse block. Next, the black wire from the fuse wire goes on the NC, or “Normally Closed” contact of the receiver relay.

Finally, insulate everything to taste. My taste was heavy paper and electrician’s tape. I don’t know how much current the receiver draws when the car is parked, but it can’t be too much. There is a small LED that stays lit all the time, and the relay may be energized, depending on how the receiver is set (latch or toggle mode). I put the EXH MDL fuse in a spare location, for use in case the receiver fails.