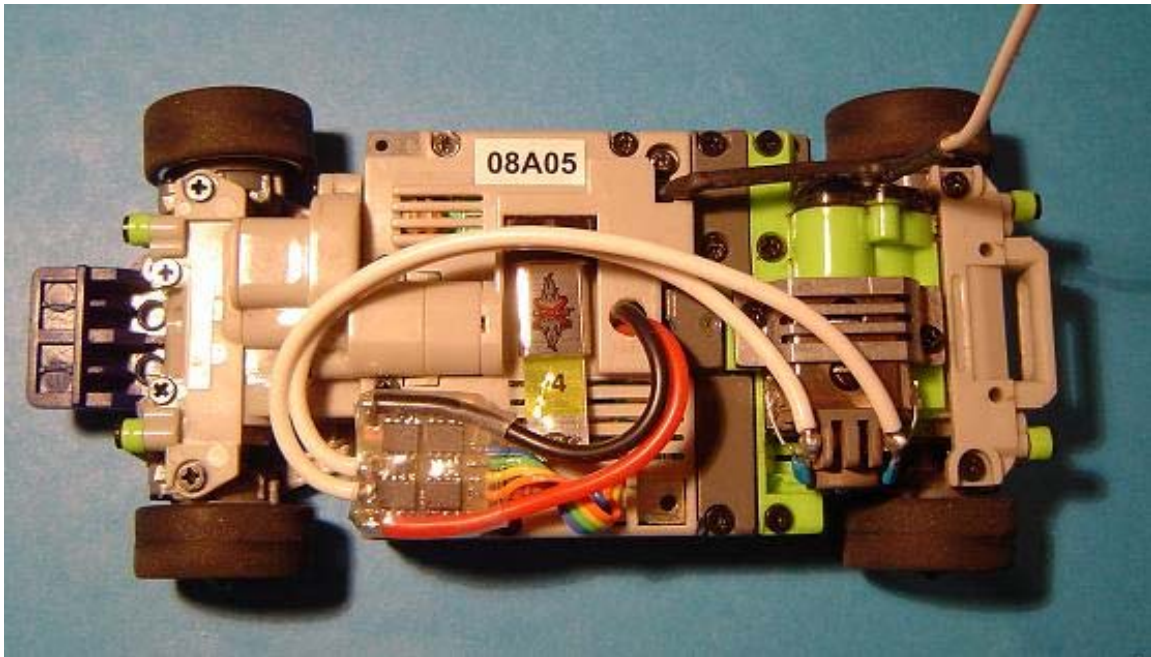




*presents.....*

## **Nelly EVO Turbo Installation Guide**



Revised: 29/12/2005

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**AIM:**

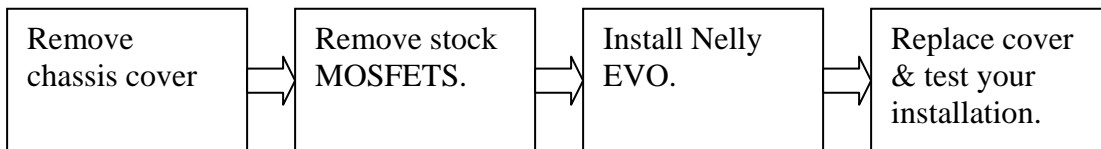
To inform the reader on how to install the Nelly EVO turbo on to the EVO racer or truck chassis. The document will detail the step by step the process required to do this. Also it will include steps on how to test the Nelly turbo and ensure correct operation.

**SCOPE:**

This installation guide is for the XMOD Evolution chassis only, including:

- Lancer Evo 8
- Purple 67 Firebird
- Infiniti G35
- 06 Mustang
- F150
- Hummer H2

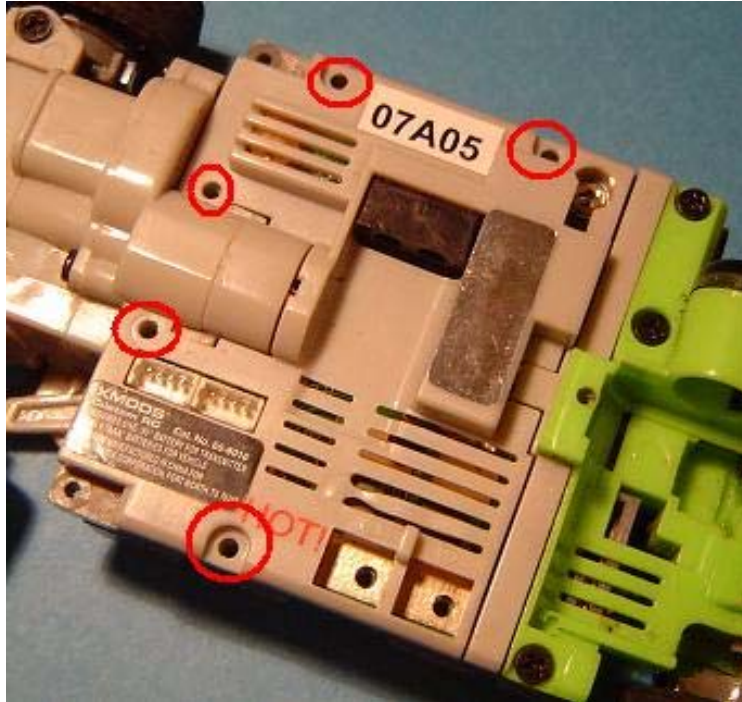
*Whilst the pictures in this tutorial are from the XMOD EVO Racer chassis, the steps are the same for the Truck chassis.*

**PROCESS:****DISCLAIMER:**

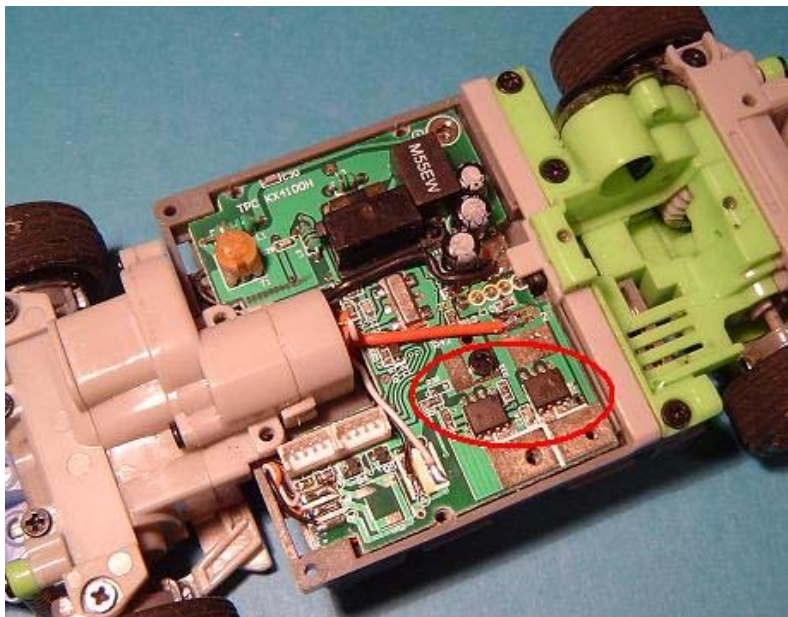
You do all this under your own risk. I am not responsible for any problems you may face or have caused whilst attempting this installation.

## METHOD:

First thing to do is to remove the chassis cover from the EVO Xmod. Before removing the screws you must take out the ***RX crystal and the antenna*** then you can remove the screws as shown below. The locations are outlined in red.



Once this is done you will have easy access to the XMOD PCB. Shown below, circled in red are the stock MOSFETS you are going to remove.



There are many different ways you can remove the stock MOSFETS. I just use a hobby knife or similar and cut through the pins where they leave the black ceramic package. With all the pins cut the black package just falls off.

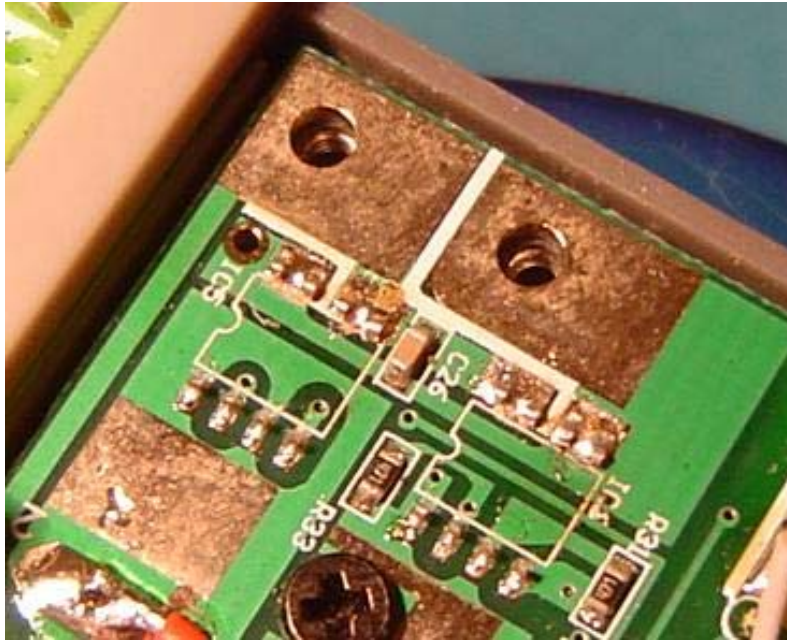


You can also use a soldering iron to melt the solder joints and pry the MOSFETS off but I don't recommend this.

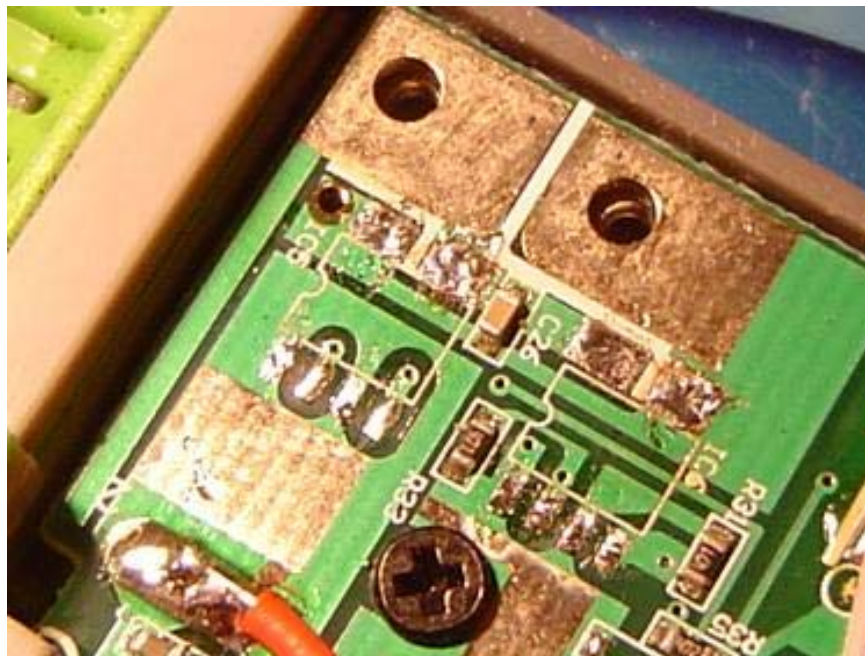
***TOO MUCH HEAT ON THE SOLDER PADS WILL MAKE THEM LIFT OFF THE PCB AND BREAK!!!***

Remember that! I can't stress this strongly enough!

Now that the stock MOSFETS have been removed, you need to clean up the solder pads on the PCB to make it easier to install Nelly. In the picture shown below us see where the leftovers of the little metal “legs”: of the MOSFETS are still there.

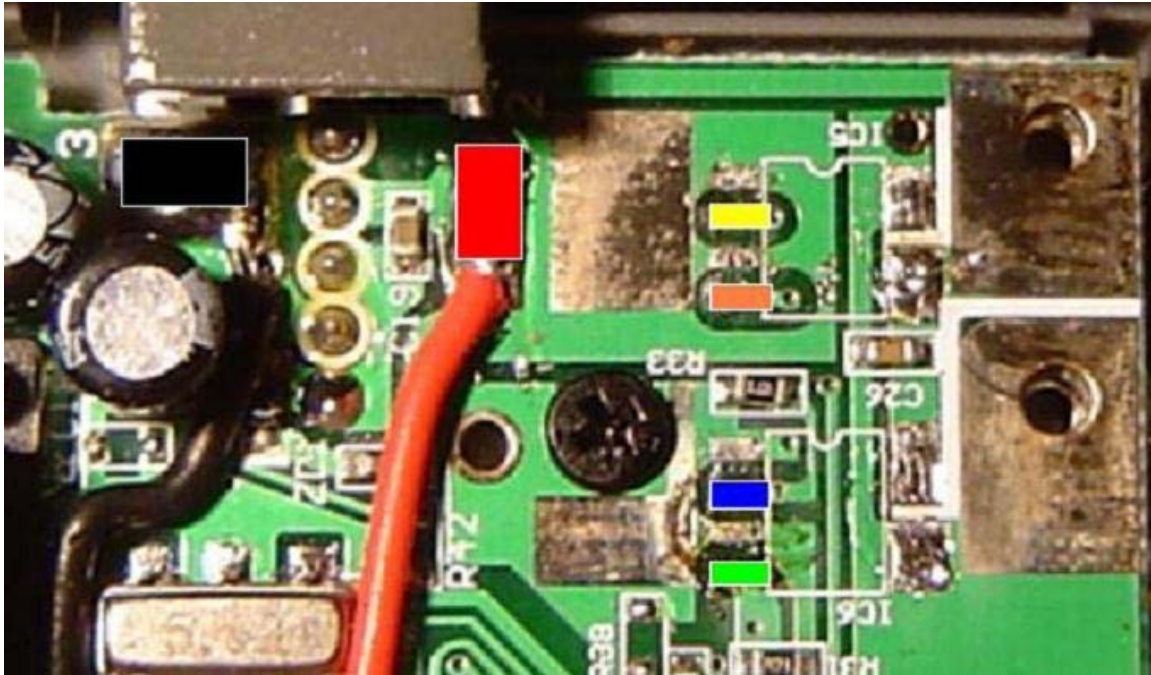


Using a soldering iron, clean up the solder pads and remove the left over MOSFET “legs”. Once done you should have a clean set of pads that are nice and flat as shown below.



Now that the stock MOSFETS have been removed you need to install Nelly into the correct locations on the EVO PCB.

Show below is a picture detailing what wires from Nelly need to go where. There are the four rainbow coloured wires that connect Nelly to the signals from the EVO PCB. There are also two power wires (red and black) that connect Nelly to the power supply.

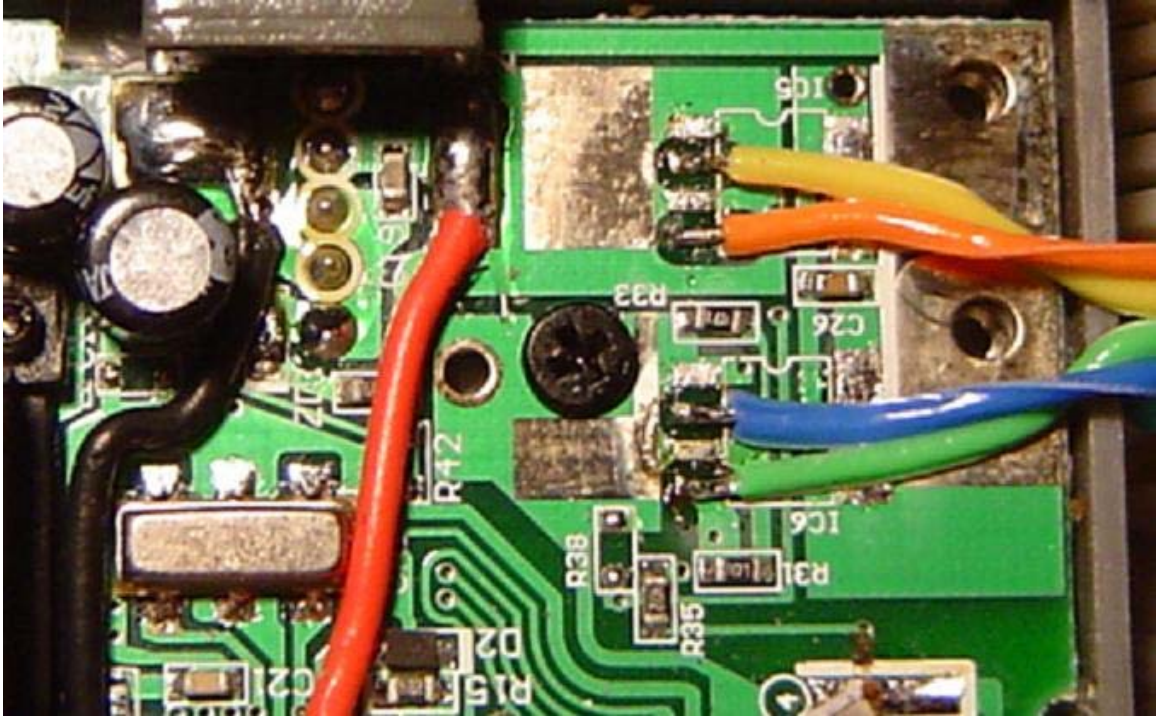


This is the “tricky” part of the install. You need to make sure that the four coloured wires connect ONLY to the pins shown in the picture above.

- **Yellow wire -> Pin 2, IC5**
- **Orange wire -> Pin 4, IC5**
- **Blue wire -> Pin 2, IC6**
- **Green wire -> Pin 4, IC6**

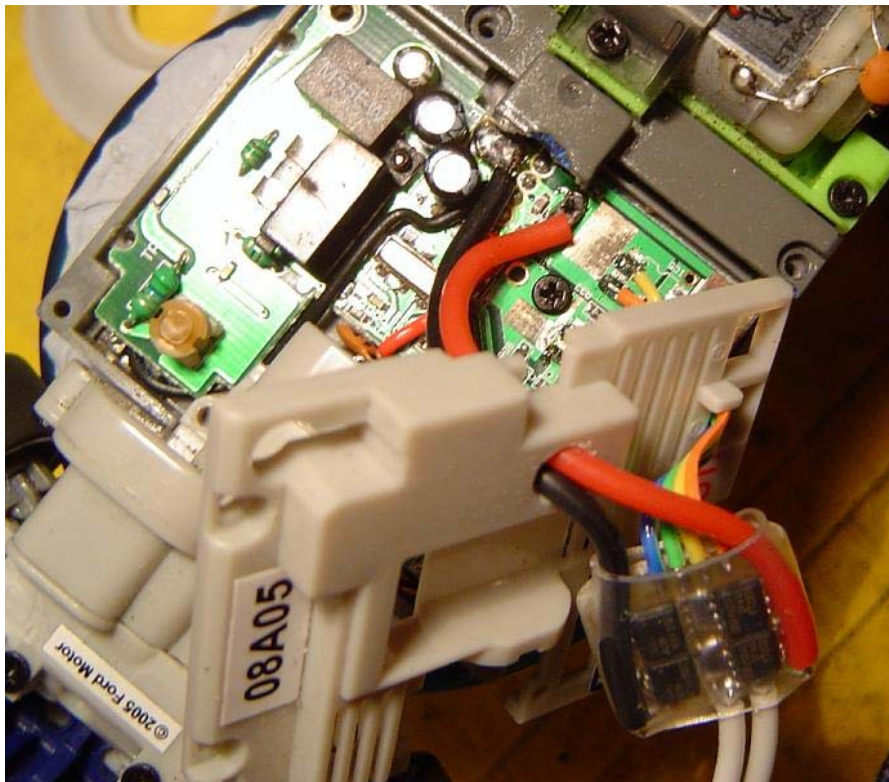
Make sure you don't solder the signal wires to the adjacent MOSFET pads. They must only connect to the pads shown in the picture above. If you accidentally solder these wires to the anything else you may damage Nelly!

See the following page for an example of what the signal wire connections should look like.



As you can see in the picture above, this is what the four signal wires should look like when soldered to the MOSFET pads on the EVO PCB.

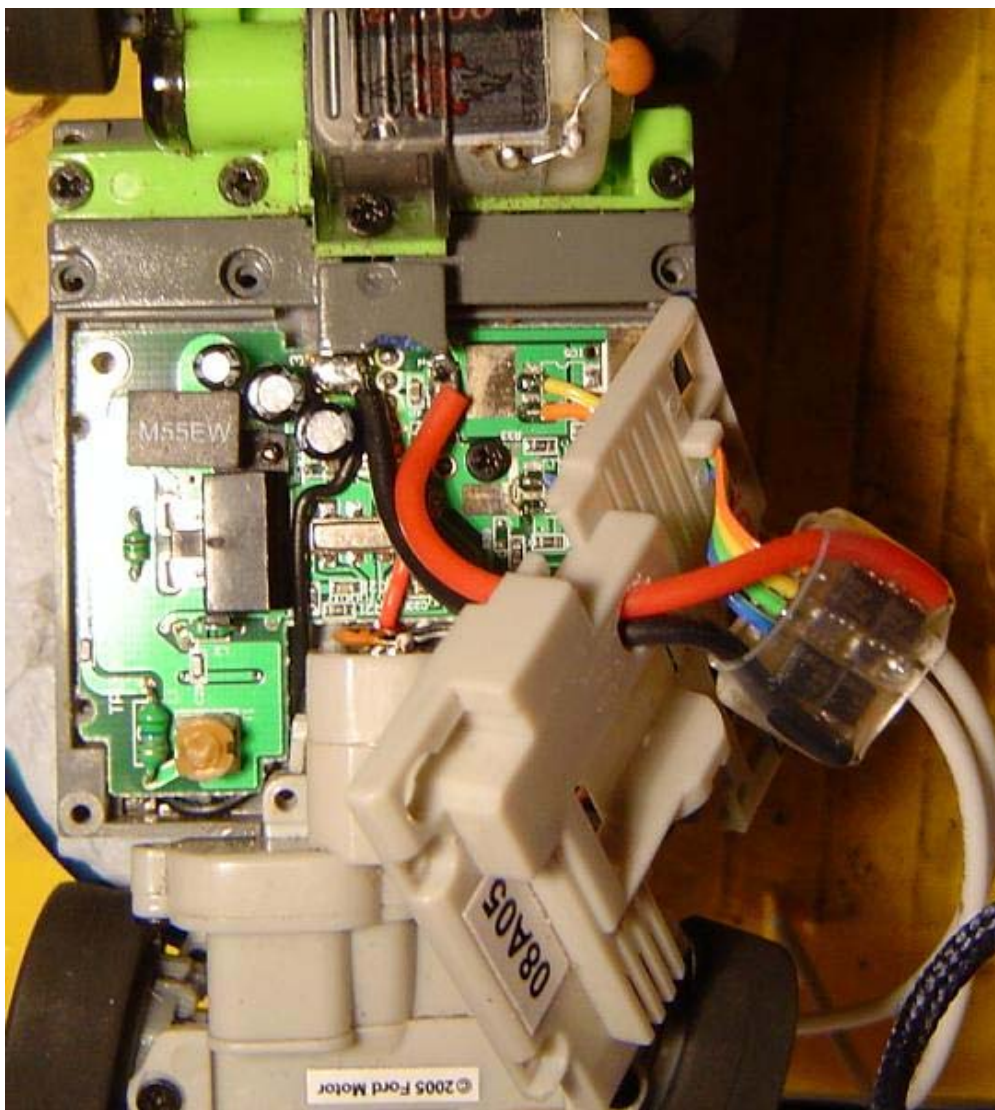
Now the Power wires from Nelly go to the Red and Black locations as shown in the picture on the previous page. This is quite simple. Again, make sure that you don't short out any adjacent connections when you do this.



In the last picture on the previous page you can see how the Nelly power wires connect to the EVO PCB. You will also notice that I have made a hole in the top of the EVO PCB cover to feed the power wires through.

Also, the Nelly signal wires feed through the motor tab holes in the PCB cover. ***Obviously you should feed the wires through and cut them to the length you want before soldering them to the EVO PCB. This makes final installation much easier.***

Below is another picture giving you an idea of how the power and signal wires from Nelly go through the EVO PCB cover.



Now that you have completed the “tricky” part of the installation you can go ahead and close up the EVO PCB cover and attach it back onto the chassis.

All that is left is to solder the white motor wires onto your motor. This is quite easy to do and should leave you with a installation that looks similar to the picture shown below.



The motor wires are white so you can clearly tell them apart from the main Nelly power wires. Don't worry about which way you should connect them for now. You will test this shortly.

### **TESTING YOUR INSTALLATION:**

Now that everything is wired up, you need to test your Nelly turbo installation.

1. Put the Rx crystal back in and reattach the antenna to the chassis. Making sure the power switch on the Xmod EVO is in the off position, now insert your batteries.
2. Turn on the TX! (always do this first, fundamental law of RC)
3. Now turn on the EVO.
4. Apply throttle on the TX, ensure that the car goes in the right direction. If the car goes backwards when you're pressing forwards on the TX, just swap the motor wires around. This will fix it.
5. All Done!

## **TROUBLESHOOTING:**

- Make sure you insert the RX crystal after re-assembling the EVO Xmod.
- Make sure the wires all fit ok under the PCB cover. Check to make sure no wires are being pressed down upon or “clamped” by the chassis cover.
- Check that your batteries are fully charged.
- Make sure that the Nelly power wires are connected properly and that they are not touching any adjacent electronics
- Double check the Nelly signal wires, make sure there connection is solid. TIP: Once I’m happy with an install I usually put a bit of glue on the four wires to help them stay on the PCB. This gives it a bit more strength.
- If Nelly gets hot as soon as you turn on the power, turn off the chassis immediately and remove the batteries, check the signal wires as detailed above.

## **WHAT YOU SHOULD NOTICE:**

- 1) You will have more “punch” off the mark when accelerating.
- 2) Your car should come out of corners faster with heavily increased acceleration.
- 3) You can run hot motors now without the MOSFETS getting hot. You want the MOSFETS to stay cool, the hotter they get the worse they perform.
- 4) You can run a lithium supply without the need to worry about the MOSFETS, running a higher powered supply like lithium’s push the MOSFETS even further. Stock MOSFETS and hot motors with a lithium supply will run very hot and can blow the stock MOSFETS. This upgrade will ensure against it

Now go enjoy your new EVO!

Cheers,

ph2t.

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email: [ph2t@netspace.net.au](mailto:ph2t@netspace.net.au)  
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