

# Magellan RoadMate 300 GPS dashboard installation

## Disclaimer

Sad but true. You are doing this at your own risk. I have made every attempt to provide you with precise instructions on how to accomplish this task, but common sense, ingenuity and basic coordination skills are required. By deciding to undertake this project, you are absolving the author of this document of all responsibility.

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## Skills

You will be working with plastic which is bad for your lungs, and itchy on your skin – protect both! During this project there will be times (possibly many) when you'll ask yourself: “is this worth it?” and “how did I talk myself into doing this?”. The answer to the first one is YES! - the second one is more complicated, and it likely has something do to with our biological makeup.

## Tools and materials

If you still think that you want to do this, consider costs (all prices are ballpark):

- Magellan RoadMate 300 \$600 – excellent performance, and has beveled edges around the screen and buttons that make it fit nicely into our faceplate cutout - depending on how well they fit together in the end (keep that in mind).
- An SD memory card. The unit holds 80Mb of data, which should be enough for a couple of states. If you need more memory, you will need to buy an SD memory card. 512Mb should be a nice size and will set you back around \$60.
- Dremel-like power tool \$80 – I got the one with flex-cord extension, so that I could keep the main unit away from the glass dust. It turns out that I could use the extension in the kitchen sink with some watter in it – so there was no dust (the stupidity factor is very high with this approach, but apparently I hate glass dust more then I value my pride, ..and possibly life).
- 4” fiberglass cloth tape + resin \$20 – get the cloth that's not too heavy. Multiple layers of thinner cloth are better then one thick one. As far as resin goes polyester and epoxy resins are both two component. Polyester resin generally dries faster - depending on temperature and the amount of accelerant you mix it with. Epoxy resin is usually mixed 50/50. If you live in a warm climate you're all set. For us with temperatures < 60, think heat.
- You'll need a bunch of minor things like a caliper, sanding paper (assorted grit), soldering iron, screws, see illustration 1 for some of these.



Illustration 1

You asked for it..

1. Pull the part out of the center console – there are no screws.
2. You will have to remove the plastic door – there is a spring loading mechanism on the right hand side (looking at it from the front). You can be careful, or just yank it out if you're not concerned about putting it back – I wasn't.
3. If you have a flatbed scanner, you may want to scan the gps – it will make a flat copy of it, which you can then print and make a cutout template. If you don't have a flatbed scanner, use your imagination getting a paper cutout outline of the gps.

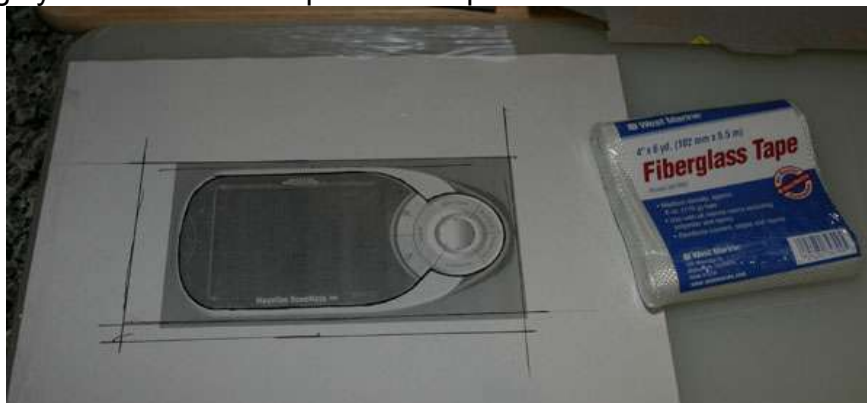


Illustration 2 Scanned actual and printed copy of the gps - they match!

4. The cutout part for the gps will be the area around the beveled edges



5. Place the printed template on a flat surface (nice cutting board) and cover it with plastic wrap (for easy cleanup). You may also wish to outline the template using a marker. The marked outline will dissolve and roughly transfer onto our plastic faceplate.



6. Layer 8-10 sheets of 4" fiberglass tape cloth onto the template. The outline in the above picture

shows the dimensions of the actual faceplate. Make sure there is enough material surrounding this area, so that you can cut it off later. It's much easier then patching things at a later time. Also, if you're going to add more layers, the previous layer will have to be fully dry and sanded – it's just more work, so try not to go there if you don't have to. The final faceplate will be about 2-3mm thick.



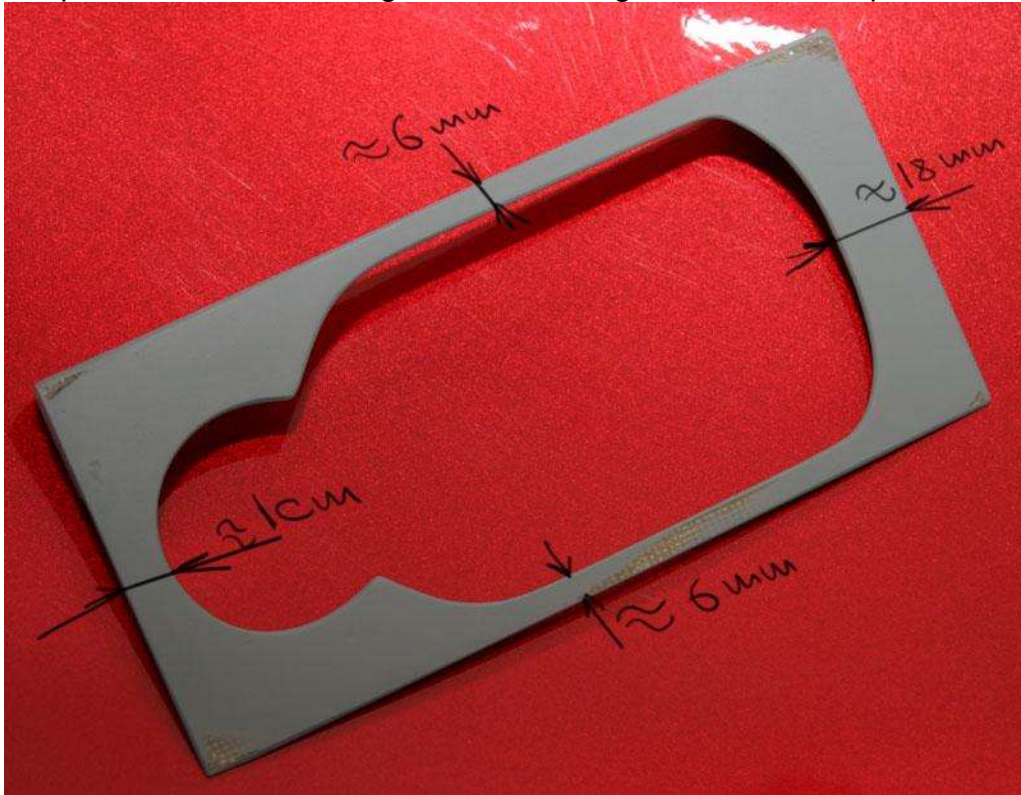
*Illustration 3 New England winters are cold. Warmth is essential for quick drying. If you're doing this in your kitchen, make sure that nobody's around – the fumes will knock you out.*

7. After it's all nice and dry, you will cut the outer outline and fit it in the console.





8. At this point, you're ready to start the most frightening and lengthy task – the inner cutout. I relied on the loose outline from step 5, making sure that I don't get too close to the actual line. The faceplate in the picture has been through lots of sanding and even some primer.



9. In this step, we're adding screw mounts to the bottom of the faceplate. I've constructed resin holders out of polyester foam. **Caution: polyester resin will melt polyester foam, so you need to use epoxy resin for this step, or use wood or polyurethane foam (yellow stuff).** Also make sure that you add fiberglass cloth shavings (cut a bunch of cloth into small pieces with scissors) to the resin, before you pour it in.



10. This is what the end result should look like.



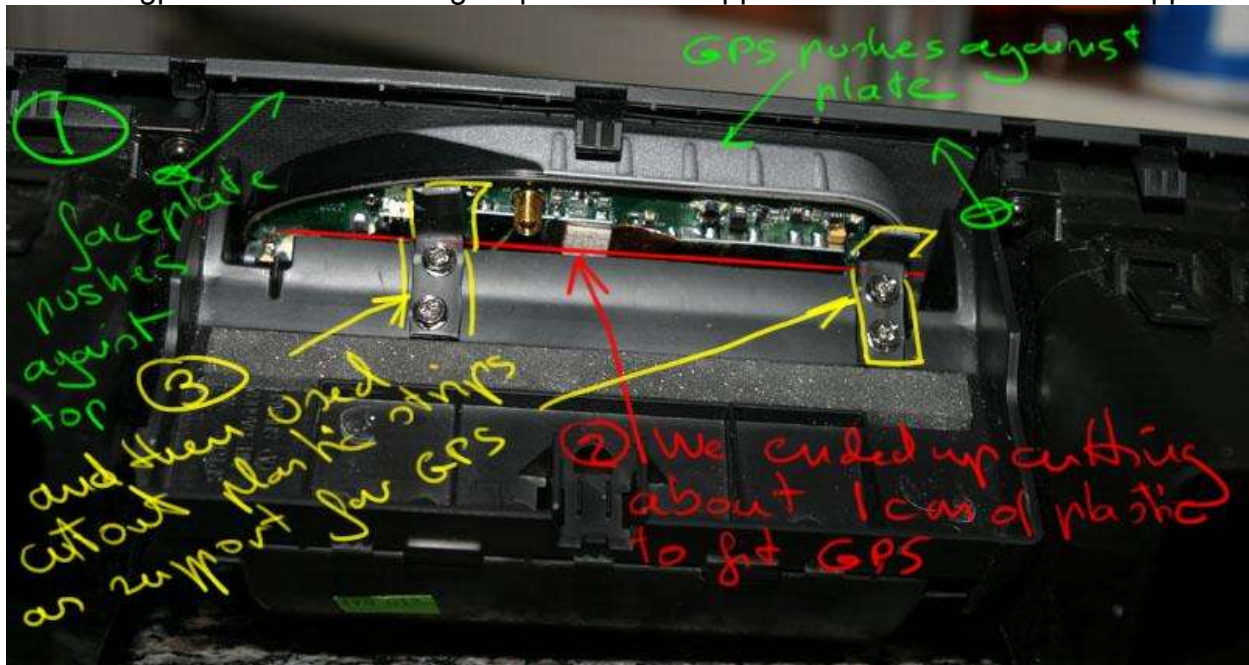
11. After lots of sanding, and about 8-10 layers of paint with more sanding in-between (I used Rust-Oleum Professional – High Performance Enamel – Flat Black 7578), I ended up with a nice looking faceplate.



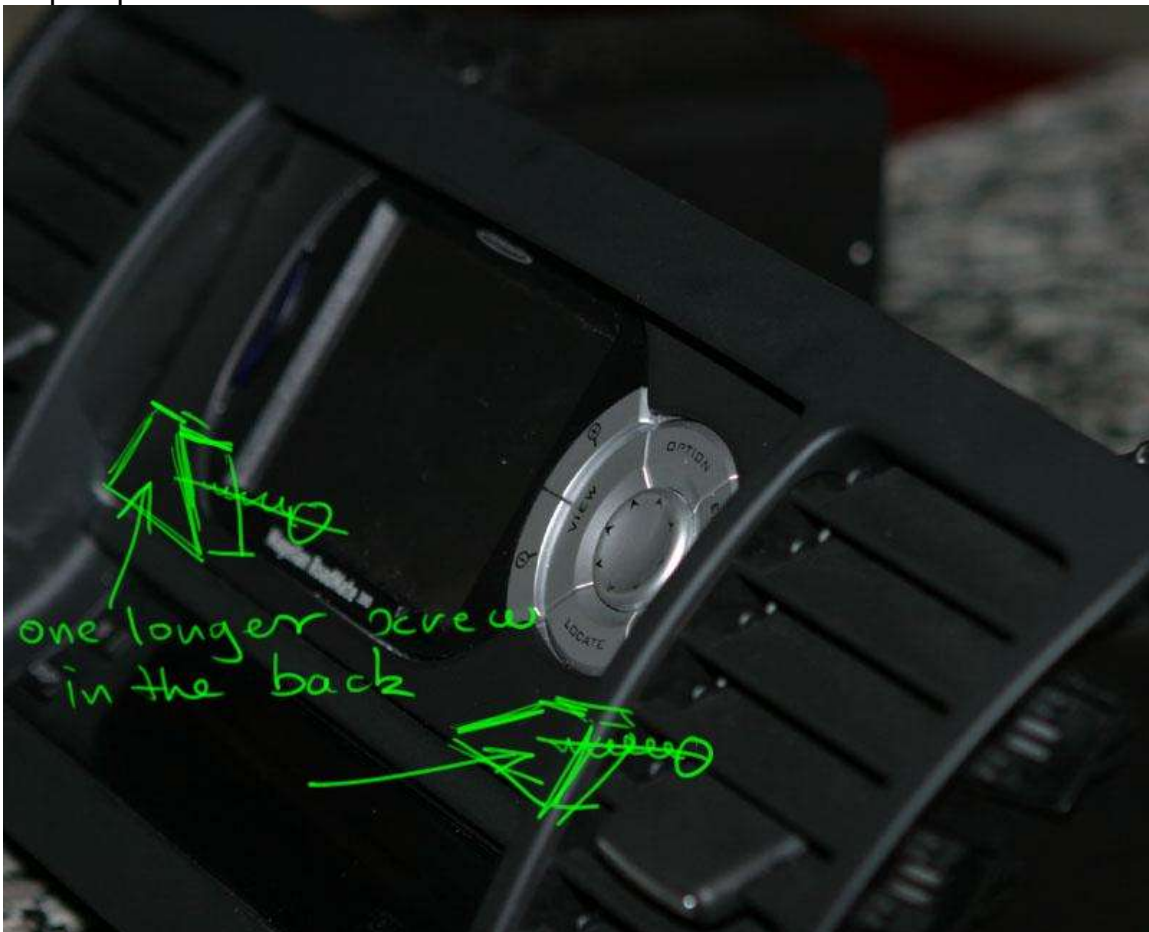
*Illustration 4 Rough fit test, no screws in the back.*



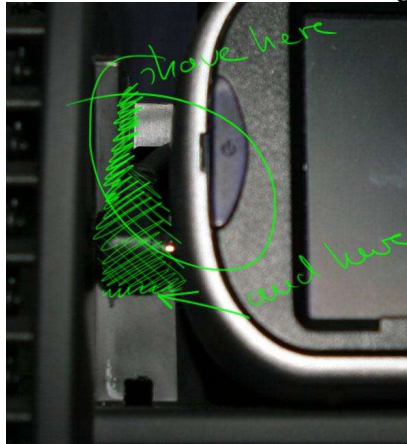
12. This picture shows the fit from the back. The faceplate rests between the console and the gps. The gps pushes against the faceplate and is supported by plastic strips in the back (the ones that are screwed in). I've made these from the plastic strip that I had to cut (about 1cm) in order to be able to fit the gps inside. I cut the big strip in half and applied heat to bend the two support strips.



13. The bottom of the faceplate is held in place by a screw that goes through a hole in the console unit (no need to drill anything. Make sure you pre-drill the holes in the faceplate though – you don't want it to split open).



14.OK, it's time for wires. You will have to take some more plastic off the console part in order to nicely fit the power plug and the unit into the console. Once again, Dremel made this really easy.



15.If you don't mind driving with your lights on, you're almost done. The harness in the back of the unit supplies voltage when the lights are on – and that's all that I needed to know. If you want steady voltage even when lights are off – you're on your own. Here is what I did. The wire is then soldered into the harness, ..and you're done.



16.This image shows the soldered wires. I took the LED light out – what's the point?



17.And here is the final assembly. You can't see any wires!



18. I purchased an external gps antenna for Meridian RoadMate 500, 700 for \$29.95 from [www.gpsgeek.com](http://www.gpsgeek.com). I've velcro-ed it in the middle of the dashboard and ran the wire on the driver's side around and under the steering wheel, then back up through a hole in the dashboard – use your imagination.
19. I've also secured the back plate of the gps unit which houses the speaker to the whole thing. I wasn't sure if the speaker volume will be strong enough – it is, but not if the stereo is loud. I may install a different mylar speaker in the future. It works for now. Sorry – no pictures. Also the heat doesn't appear to be a problem.
20. I took a long trip with this unit, about 300 miles and I loved every minute of it. In the end – for me – it was all worth it! **Good luck!**

