

HeliosCM Speaker Project Part 10 - Watco Tung Oil Finish

With all driver cut outs and flush mounts finished, it's time to do some final sanding by hand and get the enclosures ready for the finish. When working with Veneer you have to really be careful not stand through it.

Most Veneers come with a 150 grit sanded finish so not much is usually required, but during the construction process pencil marks and glue residue and things like that need to be removed. At this point in the project I like to do the final sanding by hand, in this case 150 grit and 220 final pass, the goal here is to remove any imperfections or glue residue and make sure any pencil marks are gone etc. This is the last chance to create the smoothness level you want on the speaker.

I also glued in the binding post terminal plate at this time as well, using masking tape to position them perfectly.

For this project I'm choosing Tung oil from Watco, this is not a pure Tung oil finish and has some thinners and likely varnish in it as well, it's very easy to apply and can create a matte or gloss of a look depending on how many layers you apply it in.

All you do is flood the surface with oil using a rag, let it soak in for about 15 minutes and then gently wipe it off with a clean rag. There are many different ways to apply this type of finish, however I applied three layers with about 2 to 3 hours of dry/soak time between each coat. This produces a semi gloss rich finish that still feels like wood and not a layer of plastic over the wood. Tung oil is a soak in finish so the finish is in the wood, not necessity on top of it (though the more coats you do the more build you'll get).

I did run over the surface with a white Scotch-Brite pad which very gently sand and polished between layers. Steel wool or even 400g sandpaper could be used here too, the idea is to avoid building on imperfections to create a smooth surface.

Overall a very simple and beautiful finish to use, I may do one last sand and coat after crossover work is done.





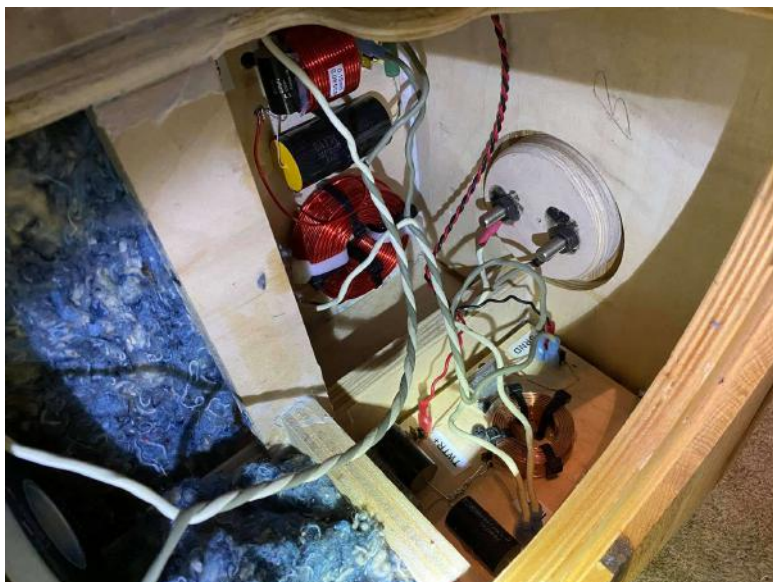
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HeliosCM Speaker Part 11 - Enclosure Final Assembly, Wiring, Driver Installation

The steps get jumbled up here as Jeff and I will post about the crossover later, this post just outlines some of the steps to put all the parts into the finished enclosure to make sound.

I did this on one speaker, did measurements and crossover work with Jeff, once the crossover was finalized then tore down the first speaker and assembled both speakers into their final state.

Lots of little steps in this post like centering drivers and installing screws, adding some damping insulation, installing crossovers, etc, browse the attached pics for details.





Comments”

Andrew Jones “This is a very good example of why the correct way to design speakers is to use large waveguides. In fact one of the reasons co centric drivers work so well is not just that they are concentric, but that they have by definition a large waveguide around the tweeter.