Subject: Driver decoupling
Posted by mellotron on Sat, 18 Dec 2021 17:03:31 GMT
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Hey there,

Been stalled for awhile on my build but have started picking it up again.

I was looking into driver decoupling. It seems to be regarded as beneficial for mid and tweeter response. I was considering to try this on the horn with some sorbothane behind the flange and rubber grommets to isolate mounting hardware.

It's a bit less clear whether or not to decouple the mid bass driver as it occupies bass and mid frequencies. Decoupling is not recommended for bass.

I'm planning to flush mount so depth will be fixed once I make a decision one way or the other.

Just wondering if anyone has thought about this and perhaps tried it out. Thanks for any assistance.

Subject: Re: Driver decoupling
Posted by compaddict on Sat, 18 Dec 2021 19:09:50 GMT
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I always think about stuff like that! I did run plumbers putty rope around the plastic tweeeter horn.. That added some happy thoughts...
You should do it!

Subject: Re: Driver decoupling
Posted by mellotron on Sat, 18 Dec 2021 19:47:41 GMT
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Thanks. Glad to hear that it added happy thoughts; can always use more of those.

Did you wrap the horn in rope caulk? I've read of people doing that. That's damping the horn, not decoupling. I may try that at a later stage, but from what I gather some of the response problems between the horn and cabinet can be addressed with decoupling. I'm guessing this may be the reason that people move the horn outside the box which is really only there for the mid bass driver.

Did you run the rope between the horn flange and the baffle? I read about people doing this to seal the flange to the cabinet, which sounds like a good idea but I'm not sure how effective it would be at decoupling. The mounting bolts would need to be decoupled as well.

I think springy is the right philosophy to decouple, so rubbery compounds would I think be most

effective. I was wondering if anyone has walked this road already. All the 'decoupling' threads here seem to be related to footers and turntables, nothing about speakers.

Subject: Re: Driver decoupling
Posted by compaddict on Sat, 18 Dec 2021 20:02:19 GMT
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I did the flange as well. I say decouple it all! Can't hurt right?

Subject: Re: Driver decoupling
Posted by mellotron on Sat, 18 Dec 2021 20:55:43 GMT
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well yes and no.

For the higher frequencies it sounds like a good idea to me or just remove it from the box altogether. But I'm old school, I like my speakers all in one box or two for stereo. No thanks 5.1.

It could be detrimental to the mid bass driver. The bass response needs the driver to be firmly fixed, yet the mid response should benefit from decoupling. So like all speaker design, another compromise. Unless someone has experience with it otherwise, I'm leaning towards coupling for the mid bass.
