

retesting, using what seems like a hundred drivers. In truth, I think I tried probably twenty candidates or so. I've tried a few drivers since the introduction of the midhorn, and have some in mind to try right now. So finding the right drivers is an ongoing thing.

In the 1980's, some of my best loudspeaker models used a JBL 2105 midrange which has a 5" diameter cone. They sounded great, but required a little higher crossover than what I wanted of

well below 100Hz and that was one of my goals, to be able to cover the entire midrange band, all the way down. I wanted to blend the woofer and midrange smoothly, overlapping fairly wide in the upper modal region to counter floor bounce and smooth room modes. The midhorn also needed to go high enough to blend well with the 1" compression drivers I've used in all my designs.

Much to my surprise, none of the 8" midwoofers I tried worked well at low frequencies. Some could be made to work well, but only in horns much larger than I was prepared to use. Some had too little output but most had too much ripple down low. So I looked at larger drivers with 10" and even 12" cones. Naturally, the larger woofers did well down low, but most lacked the ability to reach up high enough.

The problem now was what I described earlier, that response at the top end of the passband was completely different than what is shown in the models. All cones are beginning to flex by 1000Hz, so piston models don't accurately predict response. So to find drivers that would work meant checking them in Hornresp to find candidates that had the required low end response and then building a physical model to measure high end response.

By now, I had pretty much gravitated to a basic horn shape and size. The horn that is now used in my cornerhorn models had pretty much taken shape, with the last unresolved items being throat size and driver choices. Again, I would manipulate the throat size in Hornresp to make sure it didn't cause too much ripple down low, and then build it and measure it with the driver mounted to see actual response, finding drivers that had the necessary top end.

Eventually, I settled on the midhorn as it exists today. I was able to use the JBL 2012 and Delta 10 drivers and get good response through the intended range. I had also hoped to use the Eminence Deltalite 10" driver but couldn't coax it high enough. Eminence has changed the driver since then, and I've been meaning to retry it on the horn. I also want to try drivers from AE.