Subject: H290C at or above 2kHz
Posted by Scholl on Tue, 21 Jan 2014 19:51:24 GMT
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Wayne,

Still lovin the H290C. However, I did a run room and placement testing to find that a 15" two way just wasn't working well in my room. Mainly that the midbass was much smoother with the woofer close to the floor rather high enough to keep the horn at ear level. That forced me into a threeway with the trusty 2118J being put back into service. After three weeks of iterative measurements, changes, listening and calculations I arrived at about a 2000Hz crossover for best balance from the H290C/DE250 to the 2118. I use the same padding as the 3PI but change the other values to 5uf, 0.6mh, 12uf for a higher lowpass. All in all, I like the horn\driver combo better than before.

What values would you recommend for that point?

Thanks,

Scott

Subject: Re: H290C at or above 2kHz
Posted by Wayne Parham on Tue, 21 Jan 2014 21:00:36 GMT
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Honestly, I crossover below that point and haven't tried to optimize a system with crossover that high. My Spice models include a bunch of configurations in that ballpark, so I could use them as a starting point. I've done that a time or two with various models, but never pressed on because I didn't like the position/size of the nulls up there. I always seem to gravitate down towards 1kHz to 1.3kHz.
Crossover optimization for DI-matched two-way speakers (has Spice model with several ballpark starting values)

Subject: Re: H290C at or above 2kHz
Posted by Scholl on Tue, 21 Jan 2014 21:23:07 GMT
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Excellent!

I hate to be a PITA but I think you moved the mic below the point a max null.

Anyway, I agree. But since my system is in a typical room, in a typical home, I have the speakers positioned so that seated listeners are always within the limits of upper and lower nulls. And above\below those points the room bounces are likely to dominate. The limits of perfection are dominated by the environment not the machines.

Thanks!!

Scott

Subject: Re: H290C at or above 2kHz
Posted by Wayne Parham on Tue, 21 Jan 2014 21:42:36 GMT
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Dude, good eye! I did go past the lower null in that video. You can see me go right through it.

The problem for me was I knew where they were, both above and below the speakers, but without any feedback, I slightly overshot it on the lower null. I was basically just going by the angle when doing the demonstration and couldn't see the computer screen. I probably should have set a mirror behind the camera to show me the computer screen, making it easy to watch and stop in the maximum part of the null.

Subject: Re: H290C at or above 2kHz
Posted by Scholl on Tue, 21 Jan 2014 23:51:49 GMT
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How far are the 4Pis from the side walls in that video?

I'd like to see the RTA on those from the listening position. I saw side wall interaction problems with my system unless they where right against the wall or over 3' from the wall. Anything in between saw a boost in the upper bass.

Scott

Subject: Re: H290C at or above 2kHz
Posted by Wayne Parham on Wed, 22 Jan 2014 19:20:14 GMT
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The nearest walls were all about 8 feet away in that video. It's a pretty large room. But even so, I wasn't interested in an anechoic measurement, or even pseudo-anechoic. I measure outdoors for greatest accuracy. That video was merely a demonstration, one that shows the nulls, their angular position and their bandwidth and depth.

As for room interactions and placement with respect to wall, I couldn't agree more:
Speaker placement and wavefront launch
