
Subject: Another Happy H290C Fan...

Posted by [sscholl](#) on Tue, 04 Dec 2012 23:45:03 GMT

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Wayne sent me a pair last week. I mated them with the DE250 and using a variation of Wayne's crossover, same filter, more typical resistor L-pad and sometimes a 4Khz 3DB notch using 4ohm resistor, .15mh choke and 10uf cap.

Sound stage and image are very nice (unobtainable with a dome). The tighter pattern works very well in my so-so room. Smooth and very listenable even with clean rock-n-roll guitar where some horns get "in your face". Sibalence and SSSing are very well controled even on Diana Krall vocals (where the 4K notch helps).

I've been using 15" two ways since the mid 90s and this one's the best. AE TD15S woofer for 93db to 24hz. I cooked up my own 3rd order lowpass to meet the horn.

Jazz and contemporary fans might not want the notch but for me and rock-n-roll it's what I prefer.
YMMV

Great Job Wayne!!

Thank you!

Scott

Subject: Re: Another Happy H290C Fan...

Posted by [Wayne Parham](#) on Thu, 06 Dec 2012 17:11:21 GMT

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Glad they're sounding good to you!

Subject: Re: Another Happy H290C Fan...

Posted by [sscholl](#) on Sun, 09 Dec 2012 18:33:09 GMT

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Took some time to terminate the mouth to a baffle. As we all know that does all kinds of good things over just sitting the horn on top of the woofer box. A nice improvement in every way, I don't use the 4K notch and lowered it's level 1.5db to about down 15.5DB from the woofer.

A couple of points for DIY horn folks...After your done with a couple of rounds of tweaking and are getting close to a good match, take the time to mount the horn to some kind of baffle even if it's just two pieces of wood. Remove any L-Pad controls replacing them with decent wire wound

resistors. It's hard to use an L-Pad control in the -10 to 16DB range we need to match up horns to woofers and they degrade sound. Resistors are much better and can be chosen for any attenuation. Also, tighten up the crossover circuit, get rid of any clip leads. Use wire nuts or solder to make good solid connections. Each of these three things will give you a nice step in sound quality.

My rig is really sounding good to me. The only thing I could ask for is a 1.5" version that'll go down one more octave for that 800hz crossover for a near perfect off axis response.

Thanks again Wayne!!

Subject: Re: Another Happy H290C Fan...

Posted by [Wayne Parham](#) on Sun, 09 Dec 2012 19:01:58 GMT

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That's very good advice, Scott. The H290C waveguides were designed to be used on a baffle. They should not be cradle mounted like our H390C wood horn/waveguide is usually used.

The reason is the H390C horn/waveguide is large enough to support the wavefront expansion in free-space, whereas the H290C is not. It doesn't need to be, since the baffle serves this purpose. We get closer center-to-center spacing as a result of this baffle dependency.

One way the H290C can be used "freestanding" is to mount it on a small baffle or in a little box. It doesn't have to be large, although it helps to be at least 4" wider on each side and 6" taller.

The bottom lip of the H290C should still be fairly close to the next adjacent subsystem (midhorn or midwoofer) but these can also serve as part of the baffle. In other words, if the H290C is sitting directly on top of a midhorn or midwoofer box, the baffling below the waveguide can be formed by the midrange driver or cabinet, itself. In this case, just increase the frontal area above and to the sides of the H290C by a couple inches.
