Subject: Best value for tweeters for La apps? Maybe... horn loading?
Posted by Aaron D on Thu, 05 Jun 2008 07:41:46 GMT
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It looks like I am a little late to the party with this find but I haven't seen it discussed much outside of the original forum that I linked.We all know how hard it is to find a reasonably priced tweeter that will cross low enough to maintain a low enough CTC between the other drivers. This link suggests using the Dayton ND20FB in a simple horn loaded configuration that allows a crossover point of 1.3kHz w/ a horn a little over 3" wide. That calculates to almost 10" CTC spacing for the mids I believe. (start reading about 1/2 way down):http://www.diyaudio.com/forums/showthread/t-101908.htmlI don't know much about horn theory or application but it seems like a good idea unless something obvious is being overlooked. My questions would be along the lines of how the horn loading effects the raw driver specs such as Fs, distortion, and power handling. The raw driver Fs 1,700 Hz.This link is also provided in the info above but it sums everything up nicely:http://www.diyaudio.com/forums/attachment.php?postid=1194160&stamp=1177617133With the current sale price of $4 a piece for the ND20FB-4 the price works out to about $31/foot. The ND20 tweeters already have the reputation of being an excellent performer for the money:Let me know what you think.Thanks,Aaron
ND20FB-4

Subject: Re: Best value for tweeters for La apps? Maybe... horn loading?
Posted by Marlboro on Thu, 05 Jun 2008 14:22:15 GMT
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I've used the ND20FA's in a configuration of 30 per side. Since my system is tri-amped with an analog electronic crossover, I've listened to them as low as 2000hz cross. I didn't like the sound at all. You can't go lower than the FS of 1700, and you don't want to go lower than 2300hz even in groups of 30.Additionally you have to use the "A" model not the "B" model since you won't get the proper c-to-c distance without cutting the flange almost to the start of the fabric dome itself. If you cross at 2500hz, and you cut the flanges then you can put off comb filter distortion to around an inaudible 15,000 hz.But if you use the 3/4 inch domes, then you have to use a three way system, and you can't use a mid range with a c-to-c exceeding about 5.25 inches.Personally, I prefer the dome sound to the alternatives. However, you have to be much more careful in your design if you use them, and you will have to add a large woofer to each side to cover the bass since the small speakers you might use for mid-ranges will not go low enough.See the pictures of my system below. Other people may have other solutions.Marlboro
Marlboro's Calipso Speaker system

Subject: Re: Best value for tweeters for La apps? Maybe... horn loading?
Posted by Anonymous on Mon, 09 Jun 2008 20:18:33 GMT

>>With the current sale price of $4 a piece for the ND20FB-4 the >>price works out to about $31/foot.Dayton PT2C ~ $35 in bulk. I think you can get it closer to $30if you call and place a larger order.http://www.partsexpress.com/pe/pshowdetl.cfm?&DID=7&Partnumber=275-085&ctab=10This is about $60 per foot, double the price of the small domes,but there is less drama.

Subject: Re: Best value for tweeters for La apps? Maybe... horn loading?
Posted by Bill Wassilk on Sat, 05 Jul 2008 07:02:17 GMT

Marlboro,Your right the ND20's are one of the best values around. I've used them in my club line array system that I designed using 32 aside. I'm using the B models so my C-T-C distane starts going to hell at about 14-15K on the high end, but on the low end I'm crossing over using a Behringer DCX digital x-over at 2.3k at 48db/octave LR filters, limiting the power to 275watts with no problems at all even for live PA. I can get plenty of hi end if I need it, using those.