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Subject: Two Inexpensive Near field Line Array Systems  
Posted by [Marlboro](#) on Wed, 21 Feb 2007 14:18:54 GMT

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Two inexpensive Array designs: How cheap can you go when you design an array? If you read the literature it would seem that you can't go cheaper than about 3000 to 5000 dollars. But this is not really true. Lets first look at the electronics. You need a pre-amp, three power amps, a 3 way electronic crossover, a sound level meter, and possibly a constant Q minimum stereo 2/3 octave equalizer. On eBay you can find a Kenwood c-1 pre-amp for about \$30, three Kenwood KM-106 150 watt/ch amps for \$60 each, a Rane crossover for about \$130, and sound level meter for about \$40. If you want to throw in the equalizer, about \$130. So.....the hardware will cost you about \$360 without the equalizer, and about \$500 with it. Now....the speakers. We're not going to include the cost of the cabinets. That's up to you and could cost from less than \$300 to way way more. But speaker wise there are two basic directions to go: 1. 24 6.5 inch Dayton 160b's at \$13 each for \$312 total (or choose another speaker in the same price range) 2. 12 Dayton Planars at \$27.75 each for \$333. 3. two sub woofers: MADISOUND NHT10 10" 12 ohm Subwoofer= \$55 each X 2 = \$110 The total cost minus the cabinets on this system would be: about \$1200 + cabinets. Or 1. 64 Dayton ND20FA-6's at about \$3.50 each = \$224 2. 34 - ALL Electronic CORP SK-480's at 5.50 EACH= \$187 3. two sub woofers: MADISON NHT10 10" 12 ohm Subwoofer= \$55 each X 2 = \$110 This total cost would be \$881 + cabinets. Of course labor could be extensive. When you are talking about cutting 34 holes in the baffle for the midrange, and lots more for the tweeters, you are really talking about building. Marlboro

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Subject: Re: Two Inexpensive Near field Line Array Systems  
Posted by [Wayne Parham](#) on Wed, 21 Feb 2007 15:58:18 GMT

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I really dig Fred Thompson's ART Array too. Sounds great, low cost.  
ART Array plans in the ART Projects folder

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Subject: Re: Two Inexpensive Near field Line Array Systems  
Posted by [Marlboro](#) on Wed, 21 Feb 2007 17:26:41 GMT

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Yes, Wayne, one can really cut back on the cost if one DOES NOT use a line of tweeters. If one uses a line then one is pretty much limited to the 3/4 inch Dayton Neo's, and one has to cut the flanges so that vertical comb filter distortion doesn't kick in any earlier than about 14000hz or so. This means that you need a line of about 34 of them to make the meter or so required to cover the whole normal listening area from seated to standing. When you order 68 of them from PE you can get the price down to about \$3.50 each, but that is still \$238 additional almost 10x the cost of

a single Vifa tweeter. And if you use Dayton Neo's then you can't set the crossover below 2600hz, which means that you can't use midranges any bigger than about 4.5 inches to avoid horizontal comb filter distortion, which means that you will need maybe 30 of the mid ranges. It all links together. Its not for nothing that most people use planars or ribbons for the tweeter line. In doing so they can use larger midranges, and cross lower. Marlboro

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