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Subject: Pro line arrays

Posted by [Crystal](#) on Mon, 12 Nov 2007 15:55:55 GMT

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What is the difference between a pro line array and a home line array, other than the power levels? Are there basic design differences? I was wondering if I could use make one of the arrays here and use it for doing live sound. Thanks in advance, Crystal

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Subject: Re: Pro line arrays

Posted by [FredT](#) on Mon, 12 Nov 2007 22:32:32 GMT

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Pro line arrays are generally much larger than home audio arrays and are intended to fill large spaces, with the listeners located in the farfield. I'm aware of one pro array that would work for nearfield listening in a home audio setting. It's the SLS Audio LS8695v2. The low frequency extension is down to 70hz, so a subwoofer is required. These arrays are about five feet tall and can be stacked.

SLS Audio

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Subject: Re: Pro line arrays

Posted by [Crystal](#) on Tue, 13 Nov 2007 17:30:01 GMT

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That looks very nice. I was wondering if I could use an array kit like ART or Selah or something like that for live sound, if I didn't exceed power ability. I think I would need a subwoofer but I am wondering if it will sound right if used within its limits or if there are fundamental differences between nearfield line arrays for home listening and live sound line arrays. Thanks, Crystal

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Subject: Re: Pro line arrays

Posted by [Anonymous](#) on Tue, 13 Nov 2007 17:58:56 GMT

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You can use any good line array design for live sound as long as you don't abuse the speaker and blow up drivers. heh One guy I talked to in private made a cheap stackable line array using 49 cent buyout 4" midranges and he thinks it's great for his band when they do small gigs. The pro audio designs are modular; <http://home.earthlink.net/~ralaudio/i/vant/d.jpg> Stack as many as you need, easy install/tear-down. You can implement this type of stackable design in your house if you

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wanted to. Dali Megaline is a stackable home line array but their modules are larger in size. For high output concert sound where there is potential for driver abuse, the common tweeters you see used in the home linearray designs {commercial or DIY} may not be robust enough or offer the lowest distortion compared to the better planartweeters found in certain proaudio arrays.

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Subject: Re: Pro line arrays

Posted by [Rick Craig](#) on Tue, 13 Nov 2007 20:27:39 GMT

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With live sound the focus is on directionality / coverage, SPL, and reliability. You could adapt some home array designs to live sound applications depending on the coverage and output capability that you need. I have a friend designing a high SPL system for a church that will use some of the same drivers found in home audio arrays. I suggested the Fountek ribbons and he's also going to use the Dayton RS drivers.

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Subject: Re: Pro line arrays

Posted by [FredT](#) on Tue, 13 Nov 2007 23:38:04 GMT

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I wouldn't consider the ART array for this application. The single dome tweeter with a first order crossover couldn't handle the sustained high power levels.

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Subject: Re: Pro line arrays

Posted by [Crystal](#) on Wed, 14 Nov 2007 14:33:00 GMT

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Thank you for that advice. The ART arrays are off the table for live sound. That would probably be the same for Straight 8 then too, with its 8 driver array and its single dome tweeter. Or is it different because they changed out the dome tweeter for a slot loaded compression tweeter? They are using the Straight 8 as a live sound speaker. What do you think? Crystal  
Bottlehead Straight 8

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Subject: Re: Pro line arrays

Posted by [Crystal](#) on Wed, 14 Nov 2007 14:42:54 GMT

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So the basic design features are the same, right? If I am not mistaken, both home hifi arrays and live sound arrays focus on directionality and coverage. The other thing is having so many drivers means each one won't work so hard, which increases SPL without increasing distortion. Both put the sound where you want it, both increase SPL and both reduce distortion. I think probably, now seeing your response and Fred's reply too, the live sound arrays and home hifi arrays are probably basically the same idea. If a compromise has to be made in a home hifi speaker, it will be done at the expense of power/SPL in favor of sound quality. In a live sound speaker, you have to have high power and loudness, so that can't be compromised. Does this sound about right? Have I missed anything? What would you add? Crystal

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Subject: Re: Pro line arrays  
Posted by [Crystal](#) on Wed, 14 Nov 2007 14:50:38 GMT  
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I see what you mean. After reading what you, Fred and Rick have said, I think the basic design features (home/live) are the same. The modular approach using adjustable brackets looks like a good idea to me. I wonder why home hifi speakers aren't made that way? It would make them more flexible as to where you put them and the area they covered. I realize most homes have 8 foot ceilings, so the "J" shape might not be needed, but with this modular approach, you could still make a straight array. You would also have the option of choosing array size when going modular. If you had room, you could use 8 or 10, if not, maybe just 6. Or if in a room with a cathedral ceiling, you could use more, perhaps using the "J" shape to cover the room immediately below the array if necessary. Your thoughts? Crystal

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Subject: Re: Pro line arrays  
Posted by [Anonymous](#) on Wed, 14 Nov 2007 15:47:40 GMT  
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My next future array project will be modular, the main reason is the cabinet weight. One big tower will be too heavy to move around and if your home is a temporary location, the modular design allows easy transport and re-setup at the new homestead. hehehehe Changing topics. I went to three concerts this year and all of them were big shows and to my surprise, the SPL of these shows were not what I expected. I think the city ordinances prohibit the higher SPL levels that I used to experience at concerts. All the shows had the J line arrays. I counted the stacks and determined that if I cut the array in 1/2, the concert arrays would fit in my home -> lol ....and while it seems crazy, it doesn't to me. It's nice to have high headroom and low distortion and the volume knob is always adjustable. Then I was looking at the costs of those higher end line array modules. LS9900 is sweet, but the MSRP is \$6K per module, lol... <http://www.slsoundspeakers.com/content/view/41/107/http://audiopyle.com/slssales.html> 8 per channel -> expensive. This particular unit used a very nice pro magnetic planar, PRD1000, look

up the specs, amazing. I have something similar and it's worth the high dollar. They have some lower cost modules with the cheaper PRD500 planar. There is another \*new\* solution that I think might be better from a different prosound vendor. I guess if money was no object, I'd probably just buy these and hide them behind the curtains, hehehe..

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Subject: Re: Pro line arrays

Posted by [Anonymous](#) on Wed, 14 Nov 2007 15:54:11 GMT

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After reading your recent posts, you need to define in more detail on what is your 'live sound' goals are.... 10 people venue? 1000 people? etc. For instance, if you are doing this; [http://www.2-tickets.com/venues/VerizonWirelessAmphitheater\\_SA.jpg](http://www.2-tickets.com/venues/VerizonWirelessAmphitheater_SA.jpg) Then you better score some pro audio arrays If you are doing this; [http://www.lakeofthewoodsmuseum.ca/portal/uploadedImages/Sub\\_Portals/Museum/Events/Concert\\_Outside\\_Large.jpg](http://www.lakeofthewoodsmuseum.ca/portal/uploadedImages/Sub_Portals/Museum/Events/Concert_Outside_Large.jpg) Then a DIY project will work nicely and it doesn't have to be super fancy.

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Subject: Re: Pro line arrays

Posted by [Bill Wassilak](#) on Wed, 14 Nov 2007 17:38:37 GMT

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Right now I'm working on a cheap line array for pro sound using Dayton 165's, 6.5" woofers 8 of them, and for the tweeter line it's just going to be piezos.

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Subject: Re: Pro line arrays

Posted by [Rick Craig](#) on Wed, 14 Nov 2007 22:02:25 GMT

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The design fundamentals are the same for home or live sound but the demands are quite different. Covering a deeper and wider space means longer lines and high output capability. Directionality is also more important because of acoustics (potential for feedback and speech intelligibility). Some pro audio companies curve the arrays to control the vertical directivity plus they often use DSP "steering" to manipulate the output and delay on the drivers within the line. As long as you have a design that can provide the right coverage, sensitivity, and output capability then you should be fine. Determine your needs in those areas then look for a design that is a good fit.

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Subject: Re: Pro line arrays

Posted by [FredT](#) on Thu, 15 Nov 2007 22:18:44 GMT

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The woofer arrays of the Straight 8 and the Art Array have good power handling capacity. The slot loaded compression tweeter with a higher order crossover would be more suitable for pro use than the Art Array's Vifa dome with its first order crossover.

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Subject: Re: Pro line arrays

Posted by [Marlboro](#) on Fri, 16 Nov 2007 02:38:10 GMT

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Why would you use piezos when you can get Dayton ND20's for only \$3.50 each in groups?

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Subject: Re: Pro line arrays

Posted by [Bill Wassilak](#) on Fri, 16 Nov 2007 17:16:56 GMT

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Thanks for the tip, I'll check those out.

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