Subject: FredT -MLTL Bipole speaker impressions
Posted by Shane on Tue, 27 Jun 2006 00:53:32 GMT
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Fred, now that you've had Jim's bipole speakers for a while what is your impression?

Subject: Re: FredT -MLTL Bipole speaker impressions
Posted by FredT on Tue, 27 Jun 2006 12:27:32 GMT
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Of the five speaker pairs I have upstairs Jim's bipoles are the easiest to listen to. All the others are very good speakers, and each does at least one thing better than the bipoles: The one Pi's and the 3 Pi's can be driven by a 3 watt amp and will play much louder with a more powerful amp, and the Eros MKIII's and the Zaph Audio L-18's offer a bit more sparkle and air and will play louder with a high power solid state amp.The bipoles offer something that's hard to describe but is very compelling. As far as I can tell it's a combination of deep, tuneful and well-controlled bass combined with the octave-to-octave consistency that only a single driver can provide. And unlike most other single driver speakers I have heard there's absolutely no upper midrange shout or treble harshness. Another characteristic that's more difficult to describe (you have to hear it to understand) the bipole ambience. This reminds me of the dipole Magnepans I've owned in the past.Early on the treble was lacking, but a combination of different internal wiring and speaker cables, toe-in, and breakin time has virtually eliminated this problem. The bipoles do have a limitation in their absolute ability to play loudly - about as much as the 5" woofer high end mini monitors I've heard. I measured this playing a Keb Mo CD, and to my ears the music started to sound congested when the volume at the listening position (10' from the fronts of the speakers) was peaking at about 94dB (94dB is pretty damn loud!). To put it in perspective, the volume limitation isn't an issue with most music, but with some highly dynamic material, like my "Heroic Music for Organ, Brass, and Percussion" disk, I prefer the Pi speakers.I suppose the bottom line is this: As I rotate through the other speakers I always find myself returning to the bipoles after a few CD's. I would recommend these without reservation for anybody to use in a second system, and if the loudness limitation isn't an issue I would also recommend them as somebody's main (or only) speakers.
Bipolar MLTL Full Range Speakers

Subject: Re: FredT -MLTL Bipole speaker impressions
Posted by ttan98 on Tue, 27 Jun 2006 13:10:45 GMT
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I saw you build many systems over the past few years(I assume), from the Smugmug website I notice you also build the Audio Nirvana system, can you descibe this system. Thanks..

Subject: Audio Nirvana Drivers
Posted by FredT on Tue, 27 Jun 2006 13:36:36 GMT
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I built a pair using the 8" drivers in their recommended enclosure, and I didn't like them. This driver sounds very much like a Fostex to me, but with too much energy above 1khz. I added Bob Brines' correction filter, which alleviated the problem some but not enough for my taste. Based on my experience I recommend spending a bit more for Fostex Fe series drivers. Bob Brines might have something to add.

Subject: Re: Audio Nirvana Drivers
Posted by ttan98 on Tue, 27 Jun 2006 13:59:48 GMT
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Many thanks, what is your Pi 1 and Pi 3 speakers based on(ie what design and drivers), and the array speakers you built, how do they sound. The array speakers with so many drivers I strongly suspect the sound coherency is inferior to the full range driver. With that in moind why some people are attracted to array speakers? I have not heard one before, you can enlighten me on this issue...

Subject: Re: FredT -MLTL Bipole speaker impressions
Posted by Shane on Tue, 27 Jun 2006 15:26:38 GMT
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Thanks much, Fred.

Subject: Re: Audio Nirvana Drivers
Posted by Bob Brines on Tue, 27 Jun 2006 15:49:21 GMT
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I spend some time with a pair of AN6's courtesy of Fred. I put them in a pair of 25 liter BR's and compared them to Fostex FE167E's in the same box. In head-to-head comparison, the AN6's were nowhere near as clear and open as the FE167E's, and the An6's were harsh to boot. Even the build quality of the AN6's is inferior to the Fostex. Finally, I think that the cream colored cone of the Fostex just looks better in my cabinets then the ordinary black cone of the AN6.I won't be using any AN drivers in my stuff.Bob

Subject: Line Array Speakers
Posted by FredT on Tue, 27 Jun 2006 19:18:32 GMT
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This probably should be in the array forum, but since you asked I'll respond here. You can hear and actively listen to other good speakers, but you "experince" a well designed line array. The Selah XT-8 is simply in a different league than all the other speakers I have heard. At high volumes you actually feel the bass, much as you do in a live music club environment, but without the distortion. Nothing else can touch its dynamics and clarity, and it's a chamelion when it comes to soundstage. On small scale recordings the soundstage is convincingly intimate, yet on big orchestral pieces it's big. Other speakers rotate through my upstairs system, but only the line arrays stay in the downstairs system. The same is not true of the budget arrays I've built - twelve $4 woofers sounds like one $4 woofer times twelve.

Subject: Re: FredT -MLTL Bipole speaker impressions
Posted by Jim Griffin on Wed, 28 Jun 2006 02:05:42 GMT
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Fred,Thanks again for your obervations and acute listening. I'm glad that you like these speakers. They produce an exceptionally nice sound when used within their limits.Your comments on the power levels of 94 dB peaks at the listening position are close to my calculated output levels under these conditions. At a 10' listening distance you are down about 10 dB sound level from the usual 1 meter SPL rated specification. Remember that the sound is falling at a 6 dB per doubling of distance rate from a point source. If you run the Martin King MLTL spread sheets for 60 watts input to the speaker (30 watts per speaker), you'll find that you are at the Xmax limit of 6 mm for this driver under such conditions. Thus under these conditions, the SPL level produced by the speaker at 1 meter is 106 dB. Hence, at your the listening position you'll measure about 96 dB SPL. This is close to your 94 dB SPL figure. As you imply, most people usually listen at SPL levels in the 80 to 90 dB value even for loud sound. So anything above that level is at the 'turn that damn thing down' level. Bottom line is that these speakers will satisfy most listeners in a small to medium sized room but if you are a hard rocker who wishes for high SPLs in a large room, then these speakers may not be for you. Jim

Subject: Re: Line Array Speakers
Posted by Manualblock on Wed, 28 Jun 2006 18:07:05 GMT
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Say Fred; those Selah 8's go for about 4K$ in the kit form; is that right?That looks like about 6.5/7K$ built. That seems to put you in some pretty rarefied territory; at least in my neighborhood. What are your thoughts regarding this type of committment to the Arrays on that spending level compared to what is out there in the same league?Off hand 4K$ would say get you a pair of well

designed two-ways using TAD drivers. I use that as some kind of example.If you chose to buy used; I can think of some pretty good speaks out there. Is this something that would supercede what is commonly available at that price? Or is this the result of what you can do with whats on the markett as kits regarding sound quality? I don't know if thats clear; maybe I should explain better?Thanks.

Subject: Re: Line Array Speakers
Posted by FredT on Thu, 29 Jun 2006 01:00:22 GMT
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I'm not sure I understand the question. Could you take it to the Array forum, where I'm sure some of the array gurus can help me answer it.

Subject: Re: Line Array Speakers
Posted by Manualblock on Thu, 29 Jun 2006 01:27:39 GMT
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I tried Fred but it doesn't translate well. In simple terms the Selah that you like and use as your reference are 4K$ in kit form.To a guy looking to spend 4K$; there are vast possibilities of some great speakers. The comparisons you made were with much less expensive offerings. Out of curiousity I just wondered whether you had any thoughts about comparing examples of kits in that same price range and how they stacked up in terms of sound quality.I like the array presentation; but in the 4K$ range it would be a difficult descision for me. I wondered how you felt about that.I only asked because you seemed open to sharing your thoughts on that.

Subject: Re: Line Array Speakers
Posted by FredT on Fri, 30 Jun 2006 18:38:09 GMT
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I responded in the Line Array forum. Hope this information helps.
My Response

Subject: having a bipolar moment
Posted by Duke on Sun, 02 Jul 2006 19:26:18 GMT
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Hi Jim,Congrats on your simple & elegant new design!I like the bipolar format a lot, though it's seldom used in a high end commercial system. I also really like your driver choice. Very intelligent, going with drivers that have a long x-max. Instead of going all-out for efficiency in your driver selection, you traded off some efficiency for bandwidth. Once again, I think that's the right choice - adequate bandwidth comes first in my book. The challenge a bipole has competing in the marketplace is mostly one of customer perception. People don't like the idea that half of the money going into drivers is "wasted" on drivers that face the "wrong direction". And on a more objective basis, can the bipole compete with an equal dollar amount of forward facing drivers? Having built a few experimental bipoles myself, I think the format can be sonically competitive with its dollar equivalent in forward-facing drivers. It's a somewhat different presentation than what you get from forward-facing-only drivers - in some ways better and in some ways worse. But in my opinion it's a very valid way of taking several big steps in the right direction.Duke

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Subject: Re: having a bipolar moment
Posted by Jim Griffin on Sun, 02 Jul 2006 22:15:07 GMT
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Duke,Thanks for the post. Yes, a bipolar does have some applicablity in the world of monopolar boxes and open baffle (dipole) designs. For example, Genesis uses a stereo polar line array woofer stack with a open back dipolar mid/tweeter line array arrangement in a high dollar four box model (they demo'ed this design at the RMAF last fall). A few other commercial speakers use the bipolar concept but they are rare. Too often the bean counters kill multiple driver designs as designers have to compromise what may be a better acoustic solution to satisfy a targeted selling price.As you suspect, the bipolar solution in my case was an attempt to squeeze as much sensitivity from this driver as I could as it is biased toward low end extension and wide bandwidth. I used the narrow width box and MLTL design to enhance the bass within a small floor space enclosure--more WAF was my goal. The bipolar was intended to handle the baffle step compensation while maintaining the sensitivity as high as I could. I'll try to hear your new bipolar creation in the near future.Thanks.Jim

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Subject: Audio Nirvana Driver Review
Posted by FredT on Mon, 03 Jul 2006 23:35:00 GMT
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I noticed TNT Audio did a review of the AN speakers in the recommended ported enclosure. Intersting frequency response graphs: 60hz to 12khz, +6/-12dB. Now I understand why Bob's FT-1600 MLTL's with Fostex drivers sound better.
AN 8" Speakers

Subject: Re: Audio Nirvana Driver Review
Posted by Bob Brines on Tue, 04 Jul 2006 01:56:02 GMT
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I've read this review before. I'm sorry, I found it laughable. Goeff Husband seems to have no clue about the physics of audio, and just from appearances, his FR plots seem to have been generated with an SPL meter and a test CD. Well, read the article. I am also amused at the choice of boxes, David Dicks' 2.8 cabinet. But look at the 2.8 on Dicks' site. It uses TWO 8" Lowther drivers. Husband's version uses ONE AN8. Could this explain some of the FR problems?I was amused that Husband wondered if Dicks' box was acting more like a MLTL than a BR. This is one of the few things he actually got right. Of course it's a MLTL. A badly designed MLTL, but a MLTL nevertheless. This helps to explain the hideous FR plot that Husband got. Not to brag, but I get deeper bass out of my FT-1600's with 6" Fostex than Dicks/Husband get with his 8" AN.OK, OK. I'll stop now.Bob

Subject: Re: having a bipolar moment
Posted by FredT on Wed, 05 Jul 2006 00:44:14 GMT
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I wanted to learn more about this so I Googled "bipolar". This is serious stuff. For an even more interesting read, Google the word "failure" and click on "I'm feeling lucky".