Subject: Who are you calling a Nut :-)
Posted by Scott F. on Sat, 21 Feb 2004 05:44:07 GMT
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Hi Guys,Martin, I guess you are right (to a certain extent) when you say I "missed the boat" on your design. The thing you have to keep in mind is that I was driving them with a 2a3 and a 45. I guess I could have stepped up the wattage and gone solid state but I chose to stick to my SET's. I've drifted (pretty much) away from solid state gear. I just don't care for the sound as much as I do tubes, especially SET's. I guess it's that whole simpler is better theory. Plus I simply enjoy the sound of tubes more. By no means think that I am poo-pooing SS and the MLTLs because I'm not. I just chose not to do it out of personal preference.I could have messed with the filter a bit more but when I stuck the PM2A's into the Medallions, I was done for, honestly. If you've ever experienced these things, you'd know where I'm coming from. Your design is very good, as I stated in the article, well worthy of consideration for those not having the acreage or budget required for what I've done. When it comes to being labeled and "enthusiast", I'll happily accept that one :-) This is a really cool hobby. When I find something that turns me on as much as the PM2A's have, it makes writing SO much easier. You guys have NO idea how difficult it is (sometimes) to write. Jeez, sometimes I even bore myself with my writing.And yep, these are definately 3 way speakers. Big thing is I'm playing on the strong points of the Lowthers. Get them much below 100Hz in the Medallions and they need some help. Same with above 15k (or so). So what I did makes sense to me and my ears. I'm a bass fan and the Goodmans filled the ticket. The tweeters could be taken out without much degredation at all. They just fill in little bits and give you a tad more "air".You know suprisingly, the Goodmans and the pair of ASL amps did't add much to cost of the total system. The ASL's were cheap when they were new (like $120ea or so) and cost even less used. The Goodmans I bought in an entire system from a flea market. I picked up an HH Scott 299 integrated, the HH Scott 330 tuner, a Dual 1210 and the Goodmans all for $175. You can occasionally find the Goodmans on eBay for about $75 per driver. As I mentioned, look at the lessor priced, large drivers (say 15") like a University or something. They are dirt cheap and should do the job very well.When it comes to the AR EC3, thats a different story. Used, those things are going for $800. You can always go for one of the lessor priced XO's though. The vintage Pioneer SF series would be my next choice. They are a SS unit, have pleanty of funtionality and can be had in the $300 range. Now, this is a personal thing but I don't care for the sound of an opamp based XO but thats just me.Akhilesh, you are right about the imaging but it didn't stop there. As dynamic as Martins MLTLs are, the back horns can't hardly be beat. Trouble was, the horns bass wasn't good enough for me so like many people I rolled in the 15's (actively) and everything snapped into focus. I'm one happy camper now.Oh, and yes I have a VERY tolerant wife. That and I have my listening room in the basement. Seeya,Scott Faller

Subject: Re: Who are you calling a Nut :-)
Posted by akhilesh on Sat, 21 Feb 2004 14:12:01 GMT
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Hi Scott,Of course, the term "nut" was used in a complimentary way, since in the single driver forum, we are by definition all "nuts" (i.e., enthusiasts). How big were the boxes for the

goodmans? I have a pair of electrovoice EV Force 15s that need about 20 cubic feet BR boxes to go down to about 30 HZ, with 100 DB eff. I can;t make them, since my music room would then be jam packed. I was thinking of trying a music subwoofer. I would also like to say that I have taken Martin's friendly challenge, and am playing with my fullranges (vintage stephens 80FR) and a BSC. Last night I spent a couple hours doing some critical listening. Preliminary qualitative results (complete report to follow later): The speakers do sound better with the BSC, it does flatten the curve and make the recording more bodied. It will probably make blending with a 24db low pass subwoofer easier. I then blended the setup with a supertweeter, crossed a bit low in my opinion (but all the shops were closed and I was stuck with the 2.2 uf caps) and the speakers really sounded a LOT better than I have ever heard them sound. BUT I can't get out of my head that the BSC is in essence choking (attenuating) my full range's midrange, and goes against my overall (irrational) philosophy of not letting any electronics in the way of as large a portion of the spectrum as possible. I mean, a 3 way WILL sound better than my full range, and If I played the right games with the full range it WILL perform better. I have to seriously look deep within myself to see what do I really want from my full ranges: a) the best possible sound, or b) the best possible sound GIVEN certain constraints (like no electronics in the middle of as large a frequency range as possible). Since I am a "nut", you can guess which way I am leaning right now!-akhilesh

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Subject: Re: Who are you calling a Nut :-)
Posted by Scott F. on Sat, 21 Feb 2004 17:20:30 GMT
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Hiya,> Of course, the term "nut" was used in a complimentary way, since in the single driver forum, we are by definition all "nuts" (i.e., enthusiasts).I know, I was just poking fun :-)>How big were the boxes for the goodmans? I have a pair of electrovoice EV Force 15s that need about 20 cubic feet BR boxes to go down to about 30 HZ, with 100 DB eff. I can;t make them, since my music room would then be jam packed. I was thinking of trying a music subwoofer. The Goodmans are in about a 3cf BR box. They used to have two slots about 3"x12" cut top and bottom of the front baffle. I sealed those up and cut 1 1/2" holes in there so I could "tune" the box a little easier. I just played with different length tubes until I got the smoothest response. I haven't gotten around to measuring the TS parameters fo the Goodmans yet. I will one of these days. When I do, I'll model them and build a proper enclosure for them. For the meanwhile, they are in their original cabinets.What you are seeing with your EV is why I mention looking at some vintage, HiE speakers. They are cheap and they were designed for smaller boxes. Trouble is, there isn't much of a database for the TS params for these old divers. Purely speculation hear but (and I can see the responses already)....if you were to pick up a pair of these and put them in a quickly made, braced, plywood 3+/- cf BR box. You could tune them by ear. You can play with different lenghth ports by using paper towel cardboard tubes. Just cut them to different lenghts, insert them and listen. When it comes to the "wrong" internal volume, you can always add bricks to take up internal volume if the box gets too boomy. I realize this can be a HUGE pain in the sphincter muscle - but - if you don't have the ability or tools to properly measure the TS params, this is just one way of doing it. It isn't scientific by any stretch but it does get you somewhat close. After you discover the "right" sound for you, then you can build a proper enclosure out of MDF or whatever your fav material is.>I was thinking of trying a music subwoofer. My experience very limited experience with commercial subs, all of the manufacturers want to propide the most Xmax they

can. Familiar with the statement "Everyone knows the only way to get REAL bass is to move tons of air."? Hate to say this but I (personally) think they are wrong. Not just a little wrong but REALLY wrong. I've tried rolling a 12" Shiva under the Lowthers and it didn't blend at all. I lumbered and covered up loads of bass and midbass details. It stuck out like a sore thumb. When I rolled in the Goodmans (HiE, low Xmax) it was like somebody finally focused the picture. They blended perfectly. These things don't call a bit of attention to themselves at all. I really think alot of this is due to trying to match a LowE high distortion driver with a HiE low distortion driver. It doesn't work. Match high distortion sub with high distortion monkey coffins and it works just fine. Heck I do that now with my small system and it sounds pretty good.I have convinced myself (right or wrong) that the Lowther/Goodman matching is pretty simple. These are HiE, low Xmax, low distortion, thin rigid coned drivers. They come closer to matching the Lowthers in construction and design than the loose, flabby, LowE, high distortion subs out there. Problem with the ProSound drivers is their Q (amongst other issues). Thats not to say they can't sound good but the compromise is the box size. If you ever thought a proper horn was BIG, wait until you build a box 10cf or bigger. I've done it. I built 9.75cf boxes for the Shivas. It takes two people to handle one of these darned things. They weighed well over 200# each. Definately not a project for the faint of heart.Personally, I think trying one of the cheap, vintage drivers is well worth experimenting with. They are cheap (did I mention that they are cheap), readily availible, and your unfnished, plywood 3cf test box can be made in a matter of a couple of hours. Just a few hours after that, you'll have them tuned and be finalizing designs for the proper enclosure.Again, this is just one approach to it. Maybe not the best and certainly not the only way to do it but it's worthy of consideration. In my case it just happened to work extremely well. I just wish Lowther, Fostex and others would consider making a LARGE, HiE woofer that had a workable Q. So many of our (collective) problems could solved by that.> I would also like to say that I have taken Martin's friendly challenge, and am playing with my fullranges ...Absolutely, go for it. It's well worthy of playing with. When it comes to the filter circuit "choking" the midrange, thats OK. If you are using a fleapowered amp and can live with the efficiency drop, thats absolutely fine. If you use solid state and like the sound thats cool too. Ultimately, all that really matters is that you are getting some decent tunes from the design and that YOU are happy.Seeya.Scott

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Subject: Re: Who are you calling a Nut :-)
Posted by Martin on Sat, 21 Feb 2004 20:00:38 GMT
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Hi akhilesh,"The speakers do sound better with the BSC, it does flatten the curve and make the recording more bodied."I think you are getting close. Let me run a couple of thoughts and questions by you. What I have found is that without a BSC circuit a speaker can sound very clean and detailed. You can easily hear fingers sliding on strings or saxophone keys reseating. The realism is very exciting. But to my ears the performance sounds light, no body or weight to the instruments. This is particularly true with a grand piano. When you add the circuit some of these details are not quite so easily heard but the performance has body and you get a sense of size for the instruments. The big grand piano has some weight. If you go too far with the circuit, the life is gone. Here are the questions that need to be thought about :1. Are the details you hear without the BSC circuit in the right proportion with the rest of the performance? Is part of the audio spectrum dominant at the expanse of the bass and midbass?2. Are you hearing what was

recorded or an unbalanced presentation that you would not necessarily hear at a live event.An elevated midrange can be very captivating, there are micro-details that would not be heard as clearly on a flatter speaker. Imaging seems to be enhanced. I do not believe that any detail is lost with the inclusion of a BSC circuit, I believe that the details are restored to their original volume level and this can mean that they are sometimes not as easily heard. In my opinion no signal quality is sacrificed. The biggest down side is a loss of efficiency in the mid range. The bass and midbass efficiency is not impacted.With your drivers (Qts ~ 0.5) the influence of the circuit will be harder to get just right. You are probably getting reasonably flat bass already with a 2-4 dB loss due to baffle step. Where the circuit really shines is in low Qts drivers like the FE-206E or the Lowthers that I use. For these drivers the bass is already rolling off at 100 Hz and for the speaker to have any weight it needs to have the midrange attenuated."BUT I can't get out of my head that the BSC is in essence choking (attenuating) my full range's midrange, and goes against my overall (irrational) philosophy of not letting any electronics in the way of as large a portion of the spectrum as possible. I mean, a 3 way WILL sound better than my full range, and If I played the right games with the full range it WILL perform better. I have to seriously look deep within myself to see what do I really want from my full ranges: a) the best possible sound, or b) the best possible sound GIVEN certain constraints (like no electronics in the middle of as large a frequency range as possible)."I would be looking for the most accurate reproduction of a live event. I listen to acoustic jazz so the tone, size, power, and sound of the instruments is the most important factor. It would be harder to apply this philosophy to electronic music like rock or whatever they call the stuff my three kids make me listen to in the car. If your ears like the circuit, but your brain wants the straight connection, trust the ears in the end. No matter what trust your ears.Martin

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Subject: Re: Who are you calling a Nut :-)
Posted by Phil Wilson on Sun, 22 Feb 2004 04:58:55 GMT
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The Lowther's I listened to (a PM6C and one of the DX series, can't remember which) I thought were unrealistically detailed, like Martin is talking about - that was why I chose the Fostex after an A/B listening session. As it was described to me, listening to a Lowther is like getting used to spicy food - at first it can be a little jarring, but eventually you won't be able to listen to the "bland" stuff again. If you want every single piece of information off that source, then an unfiltered Lowther gets as much as I've ever heard. Like Mike says, all that detail doesn't sound like anything I've heard in real life. At the same time, the information is there, and it is amazing to hear. So which is right? I ended up choosing the Fostex because it sounded more realistic to me (so I have already added a "filter" by choosing the less detailed driver). I guess I agree with Akhilesh that cutting out some of the signal to add weight to other parts seems to be a little inconsistent with the point of using a single driver. At the same time, I picked the Fostex for the same reason Martin is using the filter, so I definitely see the point. The cool thing about the filter is that you can take it out or tweak it whenever you want to hear that sweat drop fall off the cellist's nose. Phil.

Subject: Re: Who are you calling a Nut :-)
Posted by Martin on Sun, 22 Feb 2004 13:35:55 GMT
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Hi Phil,"I guess I agree with Akhilesh that cutting out some of the signal to add weight to other parts seems to be a little inconsistent with the point of using a single driver."There is no question that your statement is indeed the generally accepted philosophy for single full range drivers. Personally, I don't like living by strict audio rules just because it is the accepted practice. If you want to advance your system's performance, then you need to think out of the box and try a few things that are "wrong". As for the filter and Lowthers, you can always put back what the filter attenuates (notice I did not say removes). With my Fostex systems, there is nothing you can do to add the extra detail of the Lowthers.Martin

Subject: Vintage drivers
Posted by akhilesh on Sun, 22 Feb 2004 15:38:10 GMT
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Hi Scott,Thanx for the encouraging words. I love the vintage drivers. The EV drivers I have are not too vintage, and their T/S parameters indicate 20 cubic foot boxes. Of course, If i power them separately and have an active crossover, all i need worry about is flatness in teh 30-60 HZ range, and not SPL. Maybe a small sealed box would work with an active crossover and a large enough amp. might try that in the near future. Sounds like a good idea!-akhilesh

Subject: Re: Who are you calling a Nut :-)
Posted by Phil Wilson on Sun, 22 Feb 2004 16:11:29 GMT
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The thing that is nice about Martin's solution is that you can essientially "dial in" the amount of detail you want. Like you say, I can't get more detail than the Fostex's can provide. You can tone down the detail of the Lowther's (or not) depending on what you want. I think I remember a post where you talked about adding the filter to the Fostex drivers - do you also recommend that, and what does that do to the presentation? Phil.

Subject: Re: Who are you calling a Nut :-)
Posted by Martin on Sun, 22 Feb 2004 17:39:16 GMT
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Hi Phil,I use the BSC filter in both of my Fostex speakers. It works just as well with the Fostex as with the Lowther drivers. In my Fostex FE-208 Sigma ML TL, I even added a 2 uF capacitor in parallel with the BSC circuit to "extend" the frequency response a little bit higher. I had been trying to decide if I wanted to add a super tweeter but this little trick did the job and I have not gone that route. Those speakers ended up in my family room and even my wife comments she likes them. The kids give them a good workout every once and a while, I guess I do to on occassion, and they have performed very well.Martin