
Subject: Eight months in the making and still not done, but:

Posted by [BillEpstein](#) on Sun, 07 Dec 2003 14:04:13 GMT

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Here are the Art Deco inspired, Pi-aligned, Twin Towers: The oil finish needs to be waxed and buffed, the ports are dusty and that pink spot on the horn cabinet is a flaw in the veneer that needs to be repaired. But it took so long to get here and I'm so wrapped up in listening to them, it might be additional months before I get to these annoyances. Here you can see the brass casters and brass trim in the reveal between top and bottom. Tough to get a shot that really shows those 811B horns. Need a strobe and a mylar umbrella. The veneer is Fiddleback Anegre with Mahogany border. I've had wires hanging off the 3677's for so long I decided to do something extra for the crossovers. They're mounted on (supposedly) vibration absorbing nylon standoffs, bi-wireable and with CAT5E triple twisted pairs (21 ga.) throughout. As usual, our Lord's Department of Practical Jokes and Unintended Consequences became involved and the cheap "backer veneer" I used for the rear panels, 'weeping cedar', turned out to be absolutely gorgeous and flawless. Now that the 811's aren't perched on paperback books I can attest that the 'cutting the welds' tweak is without merit (like so many others) and simply screwing the flanges down tightly to a piece of wood makes a major difference in sound. There are a few more pix on my website and in the future I will compare Bill's Woodhorns and so forth. I will say that the horns are now more revealing of changes in amplifiers and even tube bias; the baffle has eliminated some of the ringing that makes the 811 sound lively but at the same time obscures some detail. I'm so grateful to Wayne Parham and Bill Martinelli and Ron (Speakerman57) Semega. Wouldn't have started without Wayne and couldn't be anywhere near ALMOST finished without Bill. And Ron showed me how to turn Wayne's schematic into an actual crossover: "this is a pencil, this squiggly line is a resistor....."! I guess I'll call these the Waynetinelliega's! Merry Pranks Website Creating is more like performing than listening

Subject: Stunning!

Posted by [Wayne Parham](#) on Sun, 07 Dec 2003 15:53:42 GMT

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Wow! Bill, those are absolutely stunning. Great work!!!

Subject: Re: Eight months in the making and still not done, but:

Posted by [Manualblock](#) on Sun, 07 Dec 2003 19:22:36 GMT

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Perfect Testament to a man's personal artistic vision. An inspiration to anyone who has ever persued this hobby. Could not agree more with your statement concerning 811 ringing. Put them

in a box surrounded by r13 acoustic insulation and tighten them down. I think many are hearing their source components, not the horn. One question; I believe I saw in previous posts that you have Altec woofers, so I am wondering if you chose the JBL for its sound over the Altec or whether you had heard this combination and particularly liked it? Thanks For Your time.

Subject: Re: Eight months in the making and still not done, but:
Posted by [Adrian Mack](#) on Sun, 07 Dec 2003 20:31:39 GMT
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Those look really, really great Bill. Excellent work on the finishing too! I hope when I do the finishing on my 3-way horn tower that I can have it look just as perfect as yours (though I'll probably stuff it up! haha). Anyway, nice work!

Subject: well done!
Posted by [replay](#) on Sun, 07 Dec 2003 22:26:30 GMT
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imagine the stuff you can hide behind the horn.what's up with the green stuffed toy?cheers,caesar

Subject: Re: All questions answered.....
Posted by [BillEpstein](#) on Sun, 07 Dec 2003 23:19:40 GMT
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"Many Banthans died to bring us these plans"Looks like a case should fit, hmmm?"And I have never heard the Altec woofer, the 416? But I understand from Ron that it lacks the bottom and some of the detail of the JBL. I've heard the 416 described as "sonorous" and also that it doesn't like going as high as 800 Hz. Speakerman could fill info here.Creating is more like performing than listening

Subject: Re: All questions answered.....

Posted by [Manualblock](#) on Mon, 08 Dec 2003 13:03:41 GMT

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Thanks for the reply. What more fitting tribute than the "King of Beers"!

Subject: Re: Eight months in the making and still not done, but:

Posted by [Garland](#) on Mon, 08 Dec 2003 14:40:40 GMT

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Great looking speakers! How do they compare to your other speaks, esp the Theater 4's? I note your use of Cat5E. Have you tried RS magnet wire for low powered tube/ speaker cable? I find the cat5 to veil the sound in comparison. Of course, your results may vary. Can't wait to see what's next from the Tillster!Garland

Subject: Altec 416 vs JBL 2226

Posted by [spkrman57](#) on Mon, 08 Dec 2003 16:06:56 GMT

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Bill, Sweet looking cabinets!!! Thanks for the compliment, I really did very little compared to the others. My personal preference is for the JBL 2226 as while they don't go as deep as the 416, they also don't have that "bungee" bass sound. The 2226 also drops off at 20db/2Khz and therefore are very crossover friendly if 1.6Khz crossover is used. Read that as needing only single coil in series with the woofer. The thing I don't like with the 416's is the midrange keeps going all the way to around 4Khz, even with 2nd order crossover and zoebel(yes, I have a pair and tried, don't like, but nobody wants them either, so I am stuck with them). Even the Altec Model 19 crossover schematic is 500Hz 2nd order/1.5Khz high pass with different type of compensation(instead of "L" type - it is "T" type compared to Wayne's). I have a new amp I am burning in: ASL MG SI 15 DT(KT88 single ended pentode for 15 watts/chnl pure class "A") Cheaper than SET amp, but good enough for me since all tubes are common and construction is brand new. Only 20 hours on her so far, need around 120 hours for new amp/tubes to be sounding right!!! Bill, are you running in Triode mode on Ella???? Call me at home before the Browns play tonight on Monday night football. I have questions/comments for you!!! Marvin looks quite contented, don't let his bottle run dry, he might get cranky!!!Regards, Ron

Subject: Re:For Garland and all Pi'sters

Posted by [BillEpstein](#) on Mon, 08 Dec 2003 20:06:38 GMT

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I think all the narrow gauge wire has a similar sound: alive with detail, slightly tilted up and a sense of spaciousness beyond normal ambience or the character of the venue. Almost a subtle 'reverb'. If you go back in the archives you'll find that I had the Mapleshade double helix which was 21 ga, I think, then I duplicated it's geometry with 26ga RS magnet and finally I used 22 ga CCC Vampire magnet in a lightly twisted pair as designed by our friend Kevin Haskins via John Risch. I like'm all. The CAT is hotter in the treble than the others, the authentic Mapleshade has the best bass and the Risch-Haskins is warmer and better balanced. All these impressions were taken while I concurrently enjoyed the Theatre 4's and the JBL Tent SAle 3677's with 2226J woofs. Which led me to the inevitable ccomparisons. I found that I liked the crisper bass and transients of the 2226J and the sweeter treble of the PSD-2002. Oddly, I never pulled the Delta's and substituted the JBL. Cabinet tuning was wrong, anyway. Then I visited Speakerman and he had these Altec things perched on his 3677's. (Keep in mind that I was brand new to speaker building and pro sound type components) I heard mid-range I immediately lusted for. They had the warmer sound of the PSD while at the same time revealing more of the music. And they look so great! We cut a deal for my Theatre 4 cabinets and I went home with the Altecs. Isn't it great that everyone has dissimilar tastes? So this past year I played with the Altec/JBL combination, toyed with the idea of building a tower version of the Theatre 4 and finally wound up selling the Theatre 4 motors to finance the construction of these speakers you see here. They are as much Pi speakers as anything on the site, Pro 4 cabinets and woofers with Altec instead of JBL Horns. Damn Bill Martinelli for introducing me to his Woodhorns after I was well along in the construction!:) The 811B's are definitely over-matched against the Woodhorns. But now that they don't ring like cowbells anymore.....We'll have to wait and see. Is that a rumor I heard about wooden sectorals? Hmmmm? So Garland, when are you gonna quit foolin' around with capacitors and build some more speakers? Creating is more like performing than listening

Subject: When I really hit it with the office scratch ticket Christmas bonus

Posted by [Garland](#) on Mon, 08 Dec 2003 21:24:31 GMT

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Annual bonuses were cancelled this year but I should be grateful that I still have a job unlike two other modelmakers we had in our office. So the audio budget has been squeezed to next to nothing but hey, I do have a pair of Vandersteen 2Ci's that ought to be worth something!? and an Adcom 565 preamp and a McCormack pre and... Hmmmm!G

Subject: Re: All questions answered.....

Posted by [Bill Martinelli](#) on Tue, 09 Dec 2003 01:25:34 GMT

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Who won the taste test. It looks like the right finished the JD and fell long before the left toppled the turkey.

Subject: Re: MINT !

Posted by [Bill Martinelli](#) on Tue, 09 Dec 2003 01:27:47 GMT

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Hey Till, Those are stunning. I love the veneer. Breaths new life to the 19 design. I just love your brass balls on the bottom too! the other Bill

Subject: Sweet!

Posted by [JLapaire](#) on Tue, 09 Dec 2003 15:39:14 GMT

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Beautiful work, Bill. You could call them the Heritage Model or something, they certainly look like heirlooms. Seeing those inspires me to do something with my 511Bs and bolt-on PSD2002s. I wonder if the tweets would go low enough with a steep active crossover to blend with Omega-Pro 18s? Congratulations - heck, they're done enough! John

Subject: Re: Altec 416 vs JBL 2226

Posted by [Manualblock](#) on Tue, 09 Dec 2003 16:02:00 GMT

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Hi speakerman; I asked about the jbl/416 opinion and I am thankful you replied. I am in the process of deciding which woofer to use in a pi project that will use the 811/802d combo. I have 416's on hand and thought to use them but have also considered 2226h as well. In JBL literature they claim that the highest recommended crossover point is 1200hz but it seems from your post you cross at 1.6k. The frequency response graph provided by JBL claims significant energy up to 3k although there is a spike around 1.7k that's 17db attenuated. The Altec 19 file from Altec claims they use a 1200hz crossover. Teck note AL 6050-1. The benefit of your experience would be greatly appreciated. BTW I agree with you on the bungee sound although I always called it the kettledrum sound, but I have found it to be somewhat amp dependent. My E.A.R. el 859 doesn't produce such a pronounced effect. Thanks for any help in advance J.R.

Subject: Altec model 19 crossover info

Posted by [spkrman57](#) on Wed, 10 Dec 2003 14:39:20 GMT

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Manualblock, I actually have the schematic for the model 19. The 2nd order low-pass section is set for 500hz if you take the values and compare them to Pi 500hz crossover for the bottom end. The high-pass section is set for around 1.5Khz with a slightly different HF attenuation/compensation network from the Pi crossover. The midrange control is only a coil paralleled with a potentiometer in series with the ENTIRE crossover at the input. If the pot is closed (shorts the coil), the coil is effectively removed from the circuit, if the other extreme, you have a .3mh coil in series with your crossover. Cute, but I question the wisdom of the midrange circuit control in this. In reality, the basic crossover for the model 19 is really just a 2nd order low-pass at 500hz and a 3rd order hi-pass at 1500hz. I am going to use the Pi 500hz low/1.6khz hi and result in the same, I feel no need to run the system through a coil(mid control). I bought the 416's from Great Plains new, but now I regret as I prefer the JBL 2226's for their design: natural rolloff at 2khz/20db, not need for fancy crossover or zoebel, and their bass is lean vs the 416, but seems to have a flatter response(at least to my ears that is!!). Also, Altec finally figured out after many years to use a 9 cubic ft ported box for the 416. Many Valencia/Flamenco versions were ported 5.7 cu' designs, and that was very liberal if you actually measure the internal dimensions. For your project: Use the 2226 w .7 mh air coil(biggest wire guage you can afford) and 1.6khz high pass(parts express), R2=15 ohms, R1=30 ohms and .47 ufd cap. That is for 802 on 811B horn. Also, look what Bill mentioned about metal Altec horn becoming less annoying(ringing) when mounted at the front flange, dampens well enough to tolerate. I myself got sucked into wooden horns and will never go back!!!! hope this helps, if not better experts than me will show you the way!!!! If you need anymore info, send me a private e-mail Regards, Ron
