Subject: Lowther T/S Data
Posted by Martin on Thu, 27 May 2004 00:30:24 GMT
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Wayne,Here is the Lowther test data I promised in a post below. This is the average of two drivers.DX2 (120 hrs break in)fs = 55.6 HzRe = 7.1 ohmsQes = 0.33 Qms = 4.02Qts = 0.30Vas = 45.1 litersBL = 9.08SPL (1w 1m) = 95.5 dBDX3 (120 hrs break in)fs = 60.5 HzRe = 7.1 ohmsQes = 0.26 Qms = 3.83Qts = 0.24Vas = 41.1 litersBL = 10.04SPL (1w 1m) = 97.3 dBDX4 (120 hrs break in)fs = 59.7 HzRe = 7.1 ohmsQes = 0.22 Qms = 3.64Qts = 0.21Vas = 46.2 litersBL = 10.43SPL (1w 1m) = 98.3 dBPM6A (brand new)fs = 52.3 HzRe = 7.1 ohmsQes = 0.36 Qms = 2.99Qts = 0.32Vas = 58.0 litersBL = 7.84SPL (1w 1m) = 95.4 dBPM2A (brand new)fs = 56.3 HzRe = 6.9 ohmsQes = 0.22 Qms = 2.42Qts = 0.21Vas = 50.5 litersBL = 10.18SPL (1w 1m) = 97.8 dBPM6C (brand new)fs = 57.1 HzRe = 6.8 ohmsQes = 0.37 Qms = 2.89Qts = 0.33Vas = 50.3 litersBL = 7.76SPL (1w 1m) = 95.8 dBPM2C (brand new)fs = 65.4 HzRe = 6.9 ohmsQes = 0.31 Qms = 2.96Qts = 0.28Vas = 38.1 litersBL = 9.13SPL (1w 1m) = 97.2 dBComments :I have listened to all of these drivers except the PM6A which arrived yesterday. I hope to install the PM6A drivers over the weekend, if I survive my daughter's dance recital. Right now I have been litening to the PM2C's for the past few weeks. A few interesting observations can be made.1) All these Lowthers appear to have the same frame and foam suspension parts.2) The PM2A/6A and DX2/3/4 drivers all share the same cone material and geometry and suspension structure. However the T/S parameters vary. The only difference should be the magnets. The variability in the T/S parameters appears to be primarily due to the foam suspension. The moving mass was fairly consistent (about 10 gm which is very light, the cone is almost transparent) but the foam surround and spider varied quite a bit as seen in the Vas values. This in turn impacted the fs. The surround and the spider are both a foam extrusion. 3) The PM6C/2C drivers have a different cone material so they should be a little different from the others but consistent between the two of them. Same story with the foam surround and spider and the T/S parameters.4) As the magnet strength increases so does the clarity and detail. The top of the line drivers in each series seem to have more top end extension. With a correction circuit and my SS amp the ML TL bass is good enough using any of these drivers for the acoustic jazz that I enjoy.5) The "softest" of the drivers are the C series which do not have the detail of the others. But the C series drivers are still very good.6) The best of the bunch, in my opinion, are the DX4 and the PM2A. I guess you get what you pay for in Lowthers.7) I have Fostex 164 and 208 Sigma drivers and even the bottom of the line Lowther driver is a clear cut above either Fostex. I have not heard the newer Fostex drivers, like the FE-206E or FE-207E, so I cannot compare them.Hope that is of interest,Martin

Subject: Re: Lowther T/S Data
Posted by roncla on Thu, 27 May 2004 13:37:59 GMT
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Thanks mucho for the info Martin! Ya ever want to get rid of some of the Lowthers contact me OK?, i would be interested in doing a direct comparasion to the 206e.The 206e (with a Qts of .18,96 db 1 watt/meter) may turn out better than we all think as i have been running them in my horns and am very satisfied.Gotta hand it to huge magnets(not near the PM Lowther series

though) and light cones, just cant beat the definition and speed.ron

Subject: Re: Lowther T/S Data
Posted by Martin on Thu, 27 May 2004 13:58:12 GMT
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Ron,I would be very interested in working with the Fostex FE-206E and FE-207E (also the FX200) to compare them directly with Lowthers. But unless I get them magically for free, I don't think it is going to happen anytime soon. If I buy any more drivers my wife will probably change the locks and not give me a key, I have not told her about the amp/preamp upgrade I am considering yet.My audio buddies are circling my house like vultures waiting for my extra Lowthers to come loose! Not going to happen in the near future, I have too many interesting projects planned.Martin

Subject: Re: Lowther T/S Data
Posted by Wayne Parham on Thu, 27 May 2004 17:38:22 GMT
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I think maybe one of the Tulsa group might loan you a pair of their Fostex 206e speakers, particularly if they could be swapped on trade for a pair of Lowthers. I know that's a lopsided tradeout, but it's just for a trade and would be treated gently on 2 watt gear.

Subject: Re: Lowther T/S Data
Posted by Wayne Parham on Thu, 27 May 2004 17:40:01 GMT
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Absolutely excellent. Thanks so much for the data. Nice that now a person can type in the part number of the Lowther into the search feature here and up will pop your post with T/S specs. Excellent!

Subject: Re: Lowther T/S Data
Posted by Martin on Thu, 27 May 2004 18:34:29 GMT
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Hi Wayne,About a year ago, I had to make some hard decisions about what I was going to work

on and what I was going to turn away. Speaker building is a hobby and it competes for time with my wife and three little kids, it always ends up last on the priority list. The flood of e-mails arriving every week inquiring if I had TL designs for specific drivers and even some people wanting all of the design work done for them so they could decide later if they wanted to actually build the design became overwhelming. People wanted simulations run for them right away so they could decide if they even wanted to buy the specific drivers they were considering. It was too much, there were not enough hours in the day to keep everybody happy. So I had to form a set of guidelines to decide what projects I wanted to take on. Here is what evolved :1. I only work on what I am interested in doing, at the present time this is full range drivers and in particular Lowther drivers. Sometimes if somebody has something really interesting, I can be distracted to look at it for a while. But for right now, Lowther drivers and horn design theory has me completely fascinated.2. I will only work with a driver if I own it and can see that the design work leads me to something even more interesting in the future, no more discontinued drivers or loaners. Twice in the past year I have turned down the loan of pairs of AER drivers. Even though these drivers are very interesting to me, I don't want to be responsible for somebody else's expensive drivers (> $1400 a pair) and in the end I was going to be left with nothing when they were returned.3. No deadlines or time schedules, I don't need any stress from my hobby. This also means no collaborations because I always feel an obligation to complete my part quickly and not leave somebody waiting. No more pressure, I want to enjoy my hobby since I already have a job with enough pressures.4. No more free work for people in the business, I have been burned a couple of times in the past couple of years. I am always interested in commercial projects but there has to be someting in it for me and it has to be up front. Any opportunity also has to meet guidelines 1 throught 3.So while I appreciate the offer of a loaner pair of Fostex FE-206E drivers, I really cannot accept. I hope you understand.Martin

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Subject: Re: Lowther T/S Data
Posted by Wayne Parham on Thu, 27 May 2004 19:07:36 GMT
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I understand completely. I never gave it much thought, really, but I'm pretty much the same way. I am skeptical of loaners simply because they are unknown items. It's never an issue of trust with the people involved; It's more a matter of confidence in the samples. I just have a concern about repeatability of tests and the number and consistency of samples taken. So I understand why you would not be able to make use of a loaned pair of FE206e drivers.But will you still send us your Lowthers?

Subject: Re: Lowther T/S Data
Posted by Martin on Thu, 27 May 2004 22:15:49 GMT
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Sorry, but I am not ready to part with a pair yet. If you are in the Albany NY area, you are more

then welcome to stop by for a listen.Martin

Subject: Re: Lowther T/S Data
Posted by Wayne Parham on Thu, 27 May 2004 22:21:09 GMT
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Well, you can't blame a guy for tryin'.

Subject: Re: Lowther T/S Data
Posted by roncla on Thu, 27 May 2004 23:26:56 GMT
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Lowther drivers and horn design theory has me completely fascinated.Me also, but more towards the horn design and theory.ron

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