Subject: Loth x BS 1's
Posted by Manualblock on Fri, 21 Jul 2006 13:16:25 GMT
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Just thought I would bring up this puzzling experience. The little Loth's are a SD back horn Loaded speaker with a tweeter that comes in very high and no xover. It has a nice musical sound but what is odd is using it with several tube amps that work phenomenally well with the Altecs and the Pi's it never really sang. In order to cut down on the heat for the hot months I replaced the tubes with my trusty old Carver TFM 35 amp. The BS 1's came alive; much more coherent and firm with better frequency extremes. Just more alive. The Carver sounds terrible on the big two-ways; so go figure? I was on the verge of selling the BS 1's too. Now I am intriqued.

Subject: Re: Loth x BS 1's
Posted by GarMan on Fri, 21 Jul 2006 13:37:26 GMT
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MB, not sure how old or what version of the BS-1 you have, but when I auditioned it 4 years ago, I hated it, twice. For some reason, I really wanted to like it, but couldn't bring myself to, even the second time around. The best way to describe my experiences was it sounded "honky". It had all the stereotypical bad atributes of paper woofers, and it was very evident when you compare the BS-1 directly with the larger Loth-X towers.If I remember correctly, the woofer runs without XO, but the tweeter has a cap in series. The 1-PI is a similar speaker with difference being the woofer is rolled off lower with a single coil at about 4KHz opposed to running free up to 10kHz. In my opinion, the 1-PI is a much better sounding speaker. I bet if you did sell your BS-1, you'll get enough money back to build at least two pairs of One-PI's.Gar.

Subject: Re: Loth x BS 1's
Posted by Manualblock on Fri, 21 Jul 2006 14:44:34 GMT
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Absolutely agree on that. But I have had a little different experience with them. Your assesment is right on initially and I felt the same way.But in a peculiar way they had a certain tone that I found attractive. What I heard up front was a very cardboardy bass; syrupy mids and flat highs. No personality. I actually put them away for a year because of that. I am doingf some renovations so I needed to disassemble the stereo and in it's place I figuered to throw the BS 1's in and give them another listen. I ran the tuner for a bout two weeks 24/7. The speaks began to open up and the cardboard is gone. The highs are more evident now and the sound is much more spacious and they actually image.Now I am using the Pi Theater 4's downstairs so I have a continuos reference to guide me in listening.The tube amps as I say have not been kind to the Loth's; but after slipping the Carver in they really sound fine. I am listening as we speak and I must say it is very strange to

see such a wide difference from what I thought. Now I have to experiment so I am going with the chip amp next.So; I agreed with you on the sound for a long time but I am a little curious about this sea change in tone. I would like to try a class A SS amp next.What do you think?

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Subject: Re: Loth x BS 1's
Posted by GarMan on Fri, 21 Jul 2006 16:30:39 GMT
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When in doubt, blame it on the weather.

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Subject: Re: Loth x BS 1's
Posted by akhilesh on Sat, 22 Jul 2006 02:27:45 GMT
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HI JOhn,When you say no crossover I assume you mean "natural rolloff of woofer, with a high pass filter for the tweeter"?I am intrigued as well, and can only think of the output impedance of the carver amp playing a role. Unless the tube amps you used had odd frequency spectra (which many do)-akhilesh

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Subject: Re: Loth x BS 1's
Posted by akhilesh on Sat, 22 Jul 2006 02:29:36 GMT
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Try altering the Xover to a 4 Khz 12 db/octave, or some such. Parts express may sell one cheap. See if that makes it sound dramatically better. -akhilesh

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Subject: Re: Loth x BS 1's
Posted by Manualblock on Sat, 22 Jul 2006 11:56:45 GMT
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You might be onto something; Bob Carver had a lot of odd ideas regarding circuitry so maybe the output impedance is an issue. This amp is very tweaky; it sounds very good on some speakers and really bad on others. There doesnt seem to be any middle ground. The tube amps I use sound pretty similar on every speaker except the Loths, they have a uniform presentation.

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Subject: Re: Loth x BS 1's
Posted by Manualblock on Sat, 22 Jul 2006 11:58:39 GMT
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Before I would do something like that I would need to know why. Also as of now they sound very good with this amp so I would hesitate to change anything until I try a couple new amps.In fact with Jazz they really sing, I am now enjoying them. Can they have broken in?

Subject: Re: Loth x BS 1's
Posted by akhilesh on Sat, 22 Jul 2006 19:28:17 GMT
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HI John,The 4khz 12db/octave 2 way Xover will limit beaming by the woofer and also better split the frequency (more controlled than a physical rolloff). IT should significantly alter the sound of the speaker, whether for better or worse is for you to decide. As you may know, most speaker designers would NOT do the physical rolloff, but would rather do the 2 - way Xover.Breakin may be an issue though in my experience it makes little difference. -akhilesh

Subject: Re: Loth x BS 1's
Posted by Manualblock on Sat, 22 Jul 2006 21:41:06 GMT
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Thanks Bud for the info. I knew all about the 4k xover point but here's the rub. This speaker was designed by a guy who meant for this custom woofer he sourced to roll off naturally in order for the bulk of the response to be handled by that driver. The Tweeter has a cap only to prevent damage; it too is sourced to run full range. I guess the idea is to get the purity of tone you would expect from an SD while covering the higher frequencies with the tweeter. I can tell you that using the Carver amp it works and works well.This brings me to a little digression that I feel is a personal theory but one that seems to hold true for the last 30 yrs of audio.Loudspeaker design is a science but it is also an art. The art comes in when a designer uses his skills to provide a vision of how music should sound. It doesn't matter that the artist had a specific sound in mind because it is changed in the mix anyway. No speaker designer worth his salt should touch a loudspeaker unless he truely knows and loves music.Without that drive he will design with standard tools and methods that will produce a predictable result. That to me is where the engineer stops and the designer begins.As an example I would offer Spencer Hughes of Spendor fame. He is not only a technical wizard but he is also a muscician and music lover who  was the head of recording at the BBC for some yrs. The Spendor speakers; SP 1/, SP 9/1, SP 1/2 etc are still the best loudspeakers available if you love music. Why? Who knows, he is able to produce loudspeakers that play classical music better than anyone else period.I personally like the big horns and use them for muyself because I love jazz and they do jazz better than anything else. But they can't touch the Spendors on classical music.My point is it is easy to build and alter speakers by the

cookbook approach; but it is very very rare to build them intuitively to play music that good. So for me too assume I can improve the speaker by creating a cookbook xover seems impossible unless we are talking about a cheap speaker that can be improved with better parts. In this case the parts are very good and I would not see the value in buying really expensive parts to cut and try a new xover; especially since the speakers only cost 225$.Before I did that I would try assembling the new Dyna A 25's for 250$

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Subject: Re: Loth x BS 1's
Posted by akhilesh on Sun, 23 Jul 2006 13:30:20 GMT
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Sounds good. I was merely offering ideas for you to think about. BTW, I always start with measuring a speaker. Measurements tell you a lot more than many would think. In the room where you are listening to it. Speaker designers don't really know what kind of room each listener has. I think some fine tuning is possible in speaker design (as an art) but the vast majority of it is a science, IMHO. -akhilesh

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Subject: Re: Loth x BS 1's
Posted by Manualblock on Sun, 23 Jul 2006 16:07:07 GMT
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Have you looked at the site Clarisonus? It is a web magazine that has as it's members Earl Geddes/John Atwood and many other prominent designers and consultants. They have a current discussion ongoing about loudspeaker design with all those I mentioned and more. It is very interesting.One of the reasons I mention Spencer Hughes is because the BBC had and has the most current and thorough laboratories for measuring sound available. One of the reasons they consistently are quoted in regards to audio. They are also one of the only serious design groups with access to the BBC Orchestra. They design around pink noise to start; then step outside the booth and listen to it played back by a live orchestra. I think that is why they do classical music better than anyone else in loudspeakers. They were also the first organisation to employ laser interferometers to study driver behaviour.

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