Subject: Re: Theater vs. Stage vs. Premium vs. Audiophile vs. Pro
Posted by Wayne Parham on Thu, 03 Mar 2005 07:33:01 GMT
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What amp will you be using? In general, the best sound comes from the best parts. But there are some cases that tilt the scales one way or the other. Those cases are usually set by the amp.I've used Eminence and JBL Pro drivers for over 25 years. In all this time, their basic characteristics haven't changed much in my opinion. Both sound good, but I can always tell the difference. I can usually tell the difference within a matter of seconds.Eminence has improved their cast frame drivers and recently come out with low distortion woofers with shorting rings. That's narrowing the gap. But I'd have to say that JBL still sets the standard. They're willing to go the extra mile in R&D, and it shows.Having said that, I'm very pleased with Eminence's Magnum drivers, as are used in the Audiophile Series. Eminence's introduction of shorting rings is a big step in the right direction, in my opinion. I hope they'll contine to focus on R&D and improve them further. I hope they'll bring out new models too. But they'll only do that if people buy them. Otherwise, they'll leave the premium driver market to JBL and other high priced competitors.Eminence also removed the dust cap and replaced it with a mesh on some speakers. The mesh doesn't contribute much to sound, and the end result is a big reduction of breakup modes. If you run high frequencies to Eminence drivers having the phasor and mesh dust cap, you'll find the upper

mentioning anyway.When using a solid state amp with a lot of power, the JBL 22xx woofers definitely sound cleaner to me. This is almost always the case with good tube amps too. The JBLs have very effective shorting rings, so that makes sense. They have reduced distortion. The Eminence Omegas sound very powerful to me, as do the Kilomax woofers. But they aren't quite as clean. The Magnums are squarely in the middle, if you asked me.But in some cases, if you're using a tube amp, your conditions may prove different. For example, I used a nice little SET amp on a pair of low distortion woofers for a while, and it sounded very nice. But I noticed that the bass was a little tubby, almost as if I was using a standard woofer that didn't have a shorting ring. The reason for this is probably that the reduction of even harmonics from the speaker was counteracted by the high amount of even harmonics made by the amp. Or maybe it was the matter of output impedance sending the alignment towards underdamping. I don't think that was it, because the speaker was very overdamped to begin with, and it would have taken more output impedance to shift the alignment than the amp had. In any case, whatever it was, on this particular amp, premium woofers didn't make any difference.Here's a condition that is even more striking. Think about the fact that push-pull tube amps reduce even harmonics, but odd harmonics aren't reduced. This is also the case for drivers with shorting rings. So if you have a push-pull tube amp that makes a fair amount of third harmonics, it may sound really off with a high-quality driver that uses an alnico magnet or a ferrite structure with a shorting ring. Such an amp might sound more balanced with lower cost speakers with standard ferrite magnets. They will tend to balance second and third harmonics.I used to generalize amps into catagories, and I still do sometimes. But the truth is that tube amps are much more varied than most solid state amps. Variables include tubes used, amp toplogy and output transformer among other things. Some generalizations are in order, like small output transformers will probably make weak and/or flabby bass. They aren't going to be helped much with a premium driver. But some amps will surprise you.If you're running a good solid state amp, I'd say that you can expect the good/better/best hierarchy pretty much follows the line. This is pretty much true for the high end tube amps too. But you might find that a $500 flux stabilized woofer sounds artificial on some

I've swapped every part in. I've measured them all to quantify what I've heard. I could write a couple of books on what I've found with different drivers, different conditions, different crossover components, slopes and filters and different amps. There are bits and pieces of that here in the archives. But I think I can risk making some general statements of opinion and have them prove true in most cases. They have been recurring truths for me anyway.I like the low distortion woofers best no matter what. With exception of loading problems, efficiency, impedance peaks, etc, if an amplifier doesn't sound good with a woofer, it isn't helped by using a lesser woofer. In this case, the lower distortion you can get, the better. Even harmonics, odd harmonics, either one. Get rid of them, the less the better. So when I'm spending my money, that's what I'm focusing on.Midrange is where everyone says to place the emphasis. How true it is. But here is where I find people might be able to sneak in some second harmonics and get away with it. I love the sound of a midrange with a shorting ring, it is so crystal clear and pure. But sometimes a midrange with a regular ferrite magnet sounds richer, probably because it is. Richer in harmonics. In some cases, the driver is balancing other anomalies. So there, I'd try the premium driver first, but I might try the lesser driver in some cases. With solid state, I've never seen a case where a lesser driver sounded better than a premium driver with an effective shorting ring. But with tube amps, I have.Tweeters are easy to predict. Without considering directivity issues, differences in tweeters are pretty much shown in the response graph, and tweeters with smoother response sound better to me. Harmonics tend to be out of bounds, so we're not really talking about harmonic distortion when it comes to tweeters. The things that make a tweeter good or bad generally show up in the response curve.So that's my nickel's worth. Basically, I think you get what you pay for, and the more expensive drivers sound better. There are a few exceptions that prove the rule. But in general it's just like fast cars - If you want the best performance, buy the best parts you can afford.