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Subject: best for SET's

Posted by [sailor](#) on Wed, 07 Sep 2005 10:47:07 GMT

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Hi Wayne, I have heard a horn system using an Edgarnhorn for mids and knew immediately I wanted that sound. I have e-mailed Bruce Edgar a number of times but have never received a reply, then I recently discovered your site and forum but am unfamiliar with your products and need some help and advice please. Size of enclosure is not a problem but I am looking for the best possible sound from low powered SET's. Bi-amping is a possibility. I live in South Africa and JBL is unavailable but Eminence drivers are imported, though not the entire range. I can also buy a pair of Altec 421-8LF if you think they would be usefull in one of your or any other designs. It has been suggested that I consider a karlson enclosure for the Altecs. In my case I do not have corners to use but a friend who has asked me to help him with speaers has two corners to use on the short wall of a 17ft X 28ft well carpeted and damped living room. He is also in a financial position to import any drivers you might suggest. I have heard some single-driver systems and although impressive I miss the weight and slam necessary for greater involment in the music but without losing midrange quality. Your ideas and recommendations would be greatly appreciated.Regards

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Subject: Re: best for SET's

Posted by [Wayne Parham](#) on Wed, 07 Sep 2005 11:46:05 GMT

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There are lots of good speaker choices, depending on your amplifier and the price point you're comfortable with. For the room with useable corners, I'd suggest the best system would be the

have no corners, I might suggest that you use an Eminence Magnum driver in a suitable enclosure below the midrange and tweeter shown above. I have plans for those too, if you're interested. One advantage of corner loading is that it forces a radiation angle of 90°. You can see in the photo above that the midrange and tweeter also have this pattern, so this reduces reflections. When the woofer is placed in or near the corners, room modes are equally charged. Also, since all sound sources share the same 90° radiation pattern, the reverberent field has an equal distribution of frequencies and sound is uniform and natural throughout the room. This not only helps make the "sweet spot" larger, but it also makes the sound more balanced within the sweet spot.

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Subject: Re: best for SET's

Posted by [Crazy Dave](#) on Wed, 07 Sep 2005 16:37:23 GMT

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Hi Wayne, In the past you have recommended low Zmax woofers for single ended tube amps. In this case do you feel that the benefits high magnet strength of the Magnum outweigh the problems with high Zmax? TIA Dave

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Subject: Re: best for SET's

Posted by [Wayne Parham](#) on Wed, 07 Sep 2005 21:54:55 GMT

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It depends on the choice of amp. Some of the low-cost entry level kits definitely work best with speakers having low Zmax.

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Subject: My stab at this...

Posted by [roland](#) on Thu, 08 Sep 2005 08:10:14 GMT

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Hi there, I think the ETF presentation by Lynn may shed some light on this. <http://www.nutshellhifi.com/library/ETF.html> Looking at the output loop of a conventional SE amplifier and combining this with hi vs low Zmax you could assume that the 'longer' path to ground with a larger cap between SE xformer and earth will affect performance more than let's say the parafeed arrangement with a small cap to ground handles the AC part of the signal.... maybe why parafeed seem less sensitive to speakers than conventional SE. This of course not heard by me, only based on comment from the board. The ETF presentation great for understanding the different topologies anyway... a must read??? PS Wayne. Planning the build of the Stage4, should happen in 2 weeks time... home alone one weekend:) no distractions.  
ETF

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Subject: Output impedance and reactive loads

Posted by [Wayne Parham](#) on Thu, 08 Sep 2005 09:30:38 GMT

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That's a great link, thanks! What we're dealing with here is essentially a voltage divider with a reactive load that varies with frequency. If the output circuit is a constant voltage source, it isn't as sensitive to reactive loads as a constant current source. Some SET amps have high output impedance, which makes the amp act like a current source. As a result, load impedance fluctuations cause corresponding response fluctuations. Here are some other good links: [Highly Reactive Loads and SET Amplifiers](#) [Effects Of Source Impedance on Loudspeakers](#) [Variable Amplifier Impedance](#) [Feedback and fidelity](#) [What is Negative Feedback?](#)

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Subject: Re: best for SET's  
Posted by [sailor](#) on Thu, 08 Sep 2005 09:58:29 GMT  
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Yes thank you Wayne, I am interested in the plans for the mid and high horns. What are the crossover points you recommend. You also suggest an Eminence Magnum in a suitable enclosure. Would that be the 15" or 18" and what size box and port is required. I would like the width of the box to match the width of the midrange horn, so will adjust height and depth to obtain the required internal volume. I also like the look of your Thermionic 8 Pi and wonder how this would compare to your recommendation of Eminence Magnum with mid and tweeter horns on top. I showed the picture of the Audiophile Series seven Pi to my friend who is quite excited about it and he and I would both like to know what the difference in performance is between the 15" and 18" Regards

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Subject: You've got mail!  
Posted by [Wayne Parham](#) on Thu, 08 Sep 2005 10:27:05 GMT  
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crossover, which has been optimized for the drivers indicated mounted in the positions shown in

The crossover point to the midhorn is very low, so midbass and midrange performance is virtually made. It is designed for a different price point.

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Subject: Re: My stab at this...  
Posted by [Crazy Dave](#) on Thu, 08 Sep 2005 14:17:12 GMT  
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That was quite a good read. Thanks for the link. Amp speaker interaction is quite an interesting subject. Dave

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Subject: Re: Output impedance and reactive loads  
Posted by [Crazy Dave](#) on Thu, 08 Sep 2005 14:18:45 GMT  
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Hi Wayne, Thanks for the links. I'll check them out tonight. Dave

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Subject: Re: You've got mail!

Posted by [sailor](#) on Thu, 08 Sep 2005 15:36:20 GMT

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Thanks very much. I sail on Saturday from Cape Town to Tortola caribbean on a 44ft cat. This is not a holiday its how I earn money to build amps and speakers. If the hurricanes don't get me I'll start building when I return. My regards and appreciation.

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