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Subject: Just built an attic subwoofer...

Posted by [hurdy\\_gurdyman](#) on Wed, 30 Aug 2006 12:58:58 GMT

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Just finished my attic infinite baffle subwoofer. Two 15 inch drivers in a manifold powered by my harmon-kardon citation 16 amp. The drivers are Eminence built especially for IB use for Hawthorne Audio. After some time spent listening to different room locations with a box sub at the listening seat, I determined the best bass was coming from a spot almost above the left speaker next to an inner wall. XO is around 40 Hz with a passive line level crossover I built, using the preamp of an old TOA mono amp I had. The response is very good down to 25 Hz, down about 8 dB at 20 Hz. I'm very happy with the bass quality. Very natural. I have some pics in this gallery><http://www.hawthorneaudio.com/photos/index.php?cat=10004>Dave  
attic subwoofer

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Subject: Re: Just built an attic subwoofer...

Posted by [Wayne Parham](#) on Wed, 30 Aug 2006 15:00:37 GMT

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Wow! Looks great!May I make a suggestion? It looks like you are using two identical woofers. If that's the case, reverse-mount and reverse-connect one of them. That forms a push-pull configuration which reduces distortion. It works by having one driver push while the other pulls. That way asymmetrical motion and the distortion it causes will be cancelled in summing.  
Info on push-pull drive

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Subject: Re: Just built an attic subwoofer...

Posted by [hurdy\\_gurdyman](#) on Wed, 30 Aug 2006 15:42:09 GMT

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Hey Wayne,Thanks for the tip. I actually did think of that, but was afraid that in this small manifold that having a driver inside would take up to much space. perhaps, when I get bored, I'll try reversing one of the drivers mounting. I used locking nuts an a bit to long bolts, so it's not an easy undertaking.So far, the sound is awesome.Dave

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Subject: Re: Just built an attic subwoofer...

Posted by [Wayne Parham](#) on Wed, 30 Aug 2006 16:21:26 GMT

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I'll bet it sounds great!

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Subject: Driver specs

Posted by [hurdy\\_gurdyman](#) on Wed, 30 Aug 2006 16:32:12 GMT

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Here's the driver specs>Silver Iris 18" IB B.A.D.18" Cast frameKevlar/paper coneDifinimax cloth edgeSilver /copper tensel lead.RoHS certified compliant8 OHMFS 19.8 HzQT 0.51Xmax 14.29 mmVas 640.9 litersPmax 225 WattsCoil Diameter 2.50 InchesMagnet Weight 90 ouncesEfficiency 0.90 %SPL 91.6 dB Dave

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Subject: Correction

Posted by [hurdy\\_gurdyman](#) on Wed, 30 Aug 2006 20:45:42 GMT

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I completely forgot to add the compensation for my old Rat Shack meter! When that is added in, the response can be dialed in quite flat to 20 Hz.Dave

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Subject: Oops

Posted by [hurdy\\_gurdyman](#) on Thu, 31 Aug 2006 13:46:37 GMT

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I gave the specs for the 18 inch drivers. Here's the specs for the 15 inch driver I have>Re 6.56 Ohms fs 22.2 HzLe 6.31 mHQM 9.08QE 0.53QT 0.50Xmax 14.29 mmPmax 225 WattsCoil Diameter 2.50 InchesMagnet Weight 90 ouncesEfficiency 0.59 %SPL 89.7 dB 1W-1mDave

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Subject: Re: Just built an attic subwoofer...

Posted by [hurdy\\_gurdyman](#) on Fri, 01 Sep 2006 14:30:56 GMT

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I've been listening to a handful of recordings that benefit from the new subs. Listening to Victor Wooton's bass on the Flecktones "Three Flew Over The Cookoo's Nest" is a whole new experience. Some of these notes go low and are still very articulate. I've had this recording for about ten years and have always admired the talented and impressive bass playing that Victor

does. However, I don't think I've actually heard it before! The bass has much more weight and heft now, more feeling. The whole recording takes on a more exciting presence. You can hear the sub coming in around 40-50 Hz and smoothly handle everything below that. All the articulation is still there, but no sense of bass being smaller than life. Adding the sub is all pluses, no minuses. Incredibly natural!! I'm listening to the Peatbog Faeries "mellowosity", which has highland pipes for the lead with a strong and powerful bass for the foundation. Bass has come to life like never before Clean but powerful foundation. It's strange how much difference the sub makes. You can't hear any effect from the sub at 80 Hz. Turning it on and off makes no difference. Just barely noticable on 60 Hz test tones. 50 Hz is noticable, but not big time. 40 Hz is clearly where the sub starts to dominate, and this is at the lowest end of a standard four string electric bass and bass violin. Yet the difference in total weight and power is substantial! Listening without the sub just shows that there was obviously something missing with just the SI OB 15 Coaxial (which has more bass than any other OB without a sub I know of). Five string bass and six string bass can go deeper, so this may be part of why I'm hearing such a substantial improvement. Whatever it is, I'm hooked! Any way you look at it, this bass is incredible! I've never, and I mean never, heard reproduced bass sound this real (well, maybe the Decware Imperials, which take up a lot of real estate)! Now, I can hardly wait to watch (and listen) to some good movies with strong deep bass info. Dave

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Subject: New 15" Bass Drivers?  
Posted by [FredT](#) on Fri, 08 Sep 2006 18:57:14 GMT  
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These don't have the same TS parameters as the 15" Augie. Are they a new model that Hawthorne will be offering in the future?

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Subject: Re: New 15" Bass Drivers?  
Posted by [hurdy\\_gurdyman](#) on Wed, 13 Sep 2006 22:39:19 GMT  
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>These don't have the same TS parameters as the 15" Augie. Are they a new model that Hawthorne will be offering in the future?

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