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Subject: Klipsch RS-7 clone

Posted by [Kim Schultz](#) on Tue, 25 Sep 2007 07:16:44 GMT

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Hi. I want to make some high efficiency dipole surround speakers for my HT. The front and rear speakers for multi channel music are all Pi7 cornerhorns, and the center speaker is a Pi4 with added midhorn. But I would like to try a 7.1 setup with dipole speakers for movies. To keep up with the dynamic and high efficiency of the Pi's, I think I need some horn tweeters, and that's why I thought of a Klipsch RS-7 clone. I will use an Eminence Beta 8A for the bass/mid and need a horn with about 90x60 coverage for the highs. The RCF H100 horn looks nice and fits the bill, but what driver should I use, or should I rather go with a complete horn tweeter like the Beyma CP09 ? I would like to cross over at 2-2,5kHz and have looked at the new Eminence ASD1001 driver, does anybody know how that sounds ? If anybody has any other suggestions please speak up.

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Subject: Re: Klipsch RS-7 clone

Posted by [Wayne Parham](#) on Tue, 25 Sep 2007 13:53:53 GMT

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If what you're talking about is a sealed or vented cabinet for the midwoofer with a pair of flanking tweeters, then you could probably use the Beta 8 just fine. A pair of ASD1001 tweeters mounted similarly to the Klipsch RS-7 could be setup to work nicely. I wouldn't configure the tweeters as a dipole though, because to do that, they would need to be wired out of phase. The idea is to reduce side radiation by cancellation. A dipole radiation pattern forms two lobes, in front and in back. If the horns in an RS-7 were configured as dipoles, you would have no treble out in front of the speaker, only out to the sides in narrow lobes directly on-axis in front of each tweeter. I'd wire the tweeters in phase, and attenuate them to match the midwoofer.

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Subject: Re: Klipsch RS-7 clone

Posted by [Kim Schultz](#) on Thu, 27 Sep 2007 06:40:31 GMT

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Hi Wayne, thx for the reply. I think I will change the design a bit though. After looking at the Klipsch RS-62, I think it makes more sense to have a complete set of drivers on each side. I will use two Monacor SP-6/150PA mounted in a 14-16 liter bass reflex triangle shaped cabinet, that should give me a F3 of about 75hz. For the compression drivers I think I'll go with the new BMS 4524, it can be used down to 1900hz and is still very cheap. The horns are not yet completely decided, but something nearly square with a 90x60 pattern is fine. After thinking it over again, the dipole arrangement makes NO sense at all when using horn. I'll just wire them as you suggested in a bipole arrangement.

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Subject: Re: Klipsch RS-7 clone  
Posted by [Wayne Parham](#) on Thu, 27 Sep 2007 14:36:06 GMT  
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Sounds interesting. Keep us posted as you progress!

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