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Subject: Re: Woofer for Econowave

Posted by [Wayne Parham](#) on Fri, 29 Aug 2008 04:08:07 GMT

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matched-directivity two-way loudspeakers. They are both mature designs, highly optimized and tested for best performance. You'll notice the Econowave uses the same basic crossover circuit, with a bypassed tweeter attenuator providing slightly underdamped tweeter filter via the R1/R2/C1

power response and matches directivity between midwoofer and tweeter. Those are the requirements for a design like this. There are plenty of good woofers suitable for this kind of speaker. I tend to like a slightly overdamped vented alignment, which I feel gives the best overall performance in terms of size/extension/efficiency and it also works out well to conjugate room gain in typical home hifi listening rooms. It's also a great match for distributed subs, providing adequate overlap for blending and smoothing room modes. My favorite woofer for this application

shorting ring for low distortion. The cone is well-damped for smooth midrange, a requirement for the crossover frequency needed for a matched-directivity two-way speaker. It provides good extension in a relatively small package, so subwoofers aren't a requirement. It also blends well with distributed subs, making it a very versatile speaker.