
Subject: Realistic Mach One Like Build

Posted by [braxus](#) on Fri, 01 Feb 2013 02:22:09 GMT

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<http://www.simplyspeakers.com/replacement-speaker-woofer-w-15pc-8.html>

I was planning on building a Mach One like speaker. The box will be custom built and slightly bigger than the original- to help out low end bass. I will be using the stock midrange and tweeters, but replacing the woofer with the one in the above link. Do you think that woofer will mesh well with the other two sets of drivers, using a stock-like crossover?

For the crossover, I will be using:

14uf (Woofer)

2.7mh coil (Woofer)

8.2uf (Midrange)

1mh coil or wind down (Midrange)

.15mh (Tweeter)

4uf (Tweeter)

The woofer specs are:

Impedance: 8 ohms, Re: 7.1 ohms

Power: 250 watts RMS, 500 watts max

Response: 25-2100 Hz

Sensitivity: 95 dB, 1 watt, 1 meter

Le: 2.5 mH, Fs: 33 Hz, Vas: 5.40 cu. ft., Qms: 3.59, Qes: .55, Qts: .47, Xmax: 4mm

Box sizing will be- outside box dimensions are 36"t X 17-1/2"w X 14"d using 3/4" MDF board. I'm not sure if the box dimensions shown here are big enough for that woofer chosen. The box will be sealed. I came to a calculation of 4.34 cu feet for the box size, but not sure if the woofer shown works with this or not- in a sealed enclosure.

Any comments?

Subject: Re: Realistic Mach One Like Build

Posted by [Wayne Parham](#) on Fri, 01 Feb 2013 04:10:26 GMT

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There's really no way to say just by looking at a picture. But then again, the Mach One speaker doesn't require a woofer with any particular strengths - it uses a relatively low crossover point so you don't have to worry as much about cone breakup like you would in a DI-matched two-way

speaker.

Beyond that, the devil is in the details. You can knock together a speaker and it will make sound, but to get the best results, you have to do some work. The crossover is what makes the difference between a decent speaker and a great speaker. The more effort you put into designing and testing the crossover, the better you can expect it to sound.

Subject: Re: Realistic Mach One Like Build
Posted by [braxus](#) on Fri, 01 Feb 2013 04:30:56 GMT
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The crossover I mentioned was designed from a speaker engineer using test equipment and computer software. The only difference here is the larger box and the different woofer.
