Subject: My imagination swept me away
Posted by Listener345 on Sat, 02 May 2026 01:02:05 GMT
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Hi, I'm Brian and I'm new here.
I am very interested in building a 3-way system incorporating JBL components including the 2226h (which I already own), 2123h (yet to purchase) and possibly the 2445 (yet to purchase) or the Emilar EA-175 drivers and EH-800 horns that I already have. After searching relentlessly I finally came across the Audio Round Table website. I thought I would stop by to ask for guidance relating to my imagined plan. I stumbled across post #45568 in where almost the same build occurred but because I am a new member, I didn't know how to inquire about this thread.
Now I am in the position to where I am messaging you directly in the hopes I can get the info I'm looking for.
Can you help me?

Subject: Re: My imagination swept me away
Posted by Wayne Parham on Sun, 03 May 2026 00:26:41 GMT
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That sounds like a great system!

Do you understand much about crossovers? Do you have any measurement equipment?

The crossover is the brain and heart of a loudspeaker, and measurement equipment is needed to dial it in. You can do a lot with modeling tools, but these days, measurement equipment is available enough you will really want to use measurements in the design and verification process.

Subject: Re: My imagination swept me away
Posted by Listener345 on Wed, 06 May 2026 01:42:38 GMT
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Thank you for the reply, I know the function of a crossover but that's the extent of my knowledge. I have no gear whatsoever, I don't even own a PC (I have a Mac) but I do have an idea:)
I was thinking to use a pro electronic crossover and tri-amp the system. This may not be the best way to accomplish the crossover but it's something I'm somewhat comfortable with trying.

Other than duplicating someone's proven passive crossover, this idea is all I have.

Subject: Re: My imagination swept me away
Posted by Wayne Parham on Wed, 06 May 2026 14:44:06 GMT

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The thing is, even an active crossover needs to be adjusted and calibrated to provide the right transfer function to each driver so that they all sum properly. This requires several measurements on-axis and off-axis.

You may be able to find an active crossover that includes a microphone and can automatically "dial itself in." Such a device might have a "configuration" mode that asks you to place the microphone in several places - one at a time - to allow it to learn. A simpler mode might make adjustments only with the microphone at the listening position. Not as good, but easier to use.

This kind of self-adjusting active crossover might be your best option. But while I can see this technology emerging, I am not sure it is available yet.

Subject: Re: My imagination swept me away
Posted by gofar99 on Sat, 09 May 2026 19:11:28 GMT
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Hi Active crossovers can be the way to go. I have a two way system with Marantz ELS that can go down to about 30 HZ (they say) and 205 Liter subs using Altec Lansing 30 cm drivers. They can reach 20 on the bottom end and supposed to go well up to 1000 or so. I use a Behringer CX 3400 electronic crossover to 4 identical amps of my own design. I crossover at 60HZ. The 3400 can do either 2 or 3 way crossover. It could be what you need as you can select both the upper and lower frequencies and relative gain for each. It is quiet (I am fanatical about hum and noise) and as best I can tell and measure accurate and doesn't introduce any distortion or other artifacts. It was not expensive and used ones should be pretty easy to find (new ones also likely).

Subject: Re: My imagination swept me away
Posted by Listener345 on Mon, 11 May 2026 04:54:31 GMT
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Thanks for the reply Bruce.
I'm also doing a diy approach to the amplifiers. I have a few LM3886 chips with accompanying PCBs. I'll build up 3 pairs of amps as I wait to find all the speaker components I need. I'll think about the crossover situation in the meantime. Many years ago I heard about 'Room Equalization Wizard', a free software that I'm confident is still available although I don't know if it's still free. I guess I'll have to look into that although I don't own a pc, mic or any other measurement tools.
It's going to be a long hard road with no guarantee of success.
It's funny nobody else has put these drivers together in a system in the past. I think these would make a great 3-way, or am I mistake?
I have one more possible (unconventional) trick up my sleeve but I'll think about that one for a while before I include it in my posts…

Subject: Re: My imagination swept me away
Posted by gofar99 on Mon, 11 May 2026 16:20:57 GMT
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Hi, I built a pair of 3886 amps. They were quite good. Powerful. low distortion and wide frequency response. They just didn't have the sound I liked. I won't go into the solid state vs tube amp fray, but I greatly prefer the sound of my tube based system. The 3886 amps go back a long way. At least 20 years. There used to be a site that sold circuit boards and all the parts needed except the power transformer for really reasonable prices. The transformers are readily available from many sources.