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Subject: Re:harshness & sibilance

Posted by [James W. Johnson](#) on Wed, 22 Sep 2004 20:53:37 GMT

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repost, Wayne has already replied to me via email but I want some more opinions.>>>>>>>>>>Wayne & all, recently I have detected a certain amount of sibilance when the Stage 4 Pis are used for dialogue in a movie...really I am surprised I just now noticed it. The sibilance sort of makes the voices sound harsh as well. What can be done? thanks

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Subject: Re:harshness & sibilance

Posted by [Wayne Parham](#) on Wed, 22 Sep 2004 23:39:35 GMT

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Like I said in the E-mail, you will want to try to isolate the problem. Find out what frequency seems to be over-represented using whatever tools are at your disposal. A process of elimination might help find the cause too. Then, you'll be in a better position to know what to do to solve it. You may find that a touch of midrange EQ in the overtone region might be all you need. Or it may even be a simple matter of changing settings on the DVD player. If you think your speakers are at fault, you might check your tweeter compensation network. It looked alright to me from the photos, but it wouldn't hurt to double-check. It affects the vocal overtone region of the response curve, so if it's not right, vocals will sound raspy and harsh. The vocal fundamentals come from the midwoofer. I think the Omega 15 does a fine job in this regard, but you can also try some JBL 2226's. Another option you might consider is adding a midhorn with one of the 10" drivers.

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Subject: All movies?

Posted by [GarMan](#) on Thu, 23 Sep 2004 01:46:26 GMT

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Hi James, Out of curiosity, is this problem consistent with all movies or just some? Do you hear the same thing when you play a music CD with dialogue?

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Subject: Re:harshness & sibilance

Posted by [James W. Johnson](#) on Thu, 23 Sep 2004 01:59:31 GMT

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I am pretty sure the crossover is right, would you look again please.  
<http://www.massivemaximumtheater.com/xover.JPG>

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Subject: Re:harshness & sibilance  
Posted by [Wayne Parham](#) on Thu, 23 Sep 2004 02:53:48 GMT  
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Looks right to me. You've done a good job of capturing the circuit with a photo, but it's still hard to tell. You measured it with a DVM though, didn't you?

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Subject: Re:harshness & sibilance  
Posted by [Manualblock](#) on Thu, 23 Sep 2004 10:22:25 GMT  
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Are you playing the speakers through your AV receiver?

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Subject: Re:harshness & sibilance  
Posted by [James W. Johnson](#) on Thu, 23 Sep 2004 11:52:30 GMT  
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I am not sure where you are going with this but yes.

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Subject: Re: All movies?  
Posted by [James W. Johnson](#) on Thu, 23 Sep 2004 11:55:25 GMT  
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Probably some would be the better description but now that I noticed it the number will probably increase. I'd say not with CDs but again now that I noticed it I probably will hear it. I've tried different DVD players I've tried different amps I've tried going straight analog thru from the DVD analog out I've tried using what little EQ is available on my pre-amp Equipment: Aragon Soundstage Pre-amp Parasound 1500A amp Parasound 2003 amp All Audioquest Interconnects Monster wire (forget the model... it's not basic 12awg though) Chapter 9 of Star Wars IV A New Hope is an excellent example, both Luke and C3PO's voices exhibit this sort of buzzing noise around their voices.

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Subject: Re:harshness & sibilance  
Posted by [James W. Johnson](#) on Thu, 23 Sep 2004 11:57:43 GMT

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Yes I measured the actually tweeter and woofer circuits with a DMM. The pic here shows how they are laid out.

<http://www.massivemaximumtheater.com/resistors.gif>

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Subject: Re:harshness & sibilance

Posted by [James W. Johnson](#) on Thu, 23 Sep 2004 12:01:34 GMT

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link to system specs..

<http://www.massivemaximumtheater.com/>

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Subject: Re:harshness & sibilance

Posted by [Wayne Parham](#) on Thu, 23 Sep 2004 13:27:25 GMT

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I thought you had measured them a while back, and everything was right. So I think we can remove that from consideration. Do you think you may have blown anything? Or do you think it is a characteristic that you're just starting to notice? Have you tried isolating it any further, like by removing frequency bands with EQ or by disconnecting and removing or replacing things?

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Subject: Re: All movies?

Posted by [GarMan](#) on Thu, 23 Sep 2004 13:56:10 GMT

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James, I asked because most audio content in movies are processed and synthesised more than the meat you find in baloney. In some movies, the audio track is completely stripped from the footage and recreated in computers. And you know what happens when you have poor content and revealing speakers... But from the sounds of it, the problem is consistent across all movies. I'd probably check your connections and soldering inside the speakers. A month ago, I had a poor connection with the horn tweeter. Low frequency pressure from the woofer caused the connection to vibrate which in turn introduced a buzz in the HF. Gar.

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Subject: Re:harshness & sibilance

Posted by [James W. Johnson](#) on Thu, 23 Sep 2004 13:57:36 GMT

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Really I have done all there is to do at this point, if there is nothing wrong with my crossovers then this is just how they sound. Its been there all along and I just now noticed. Its time to build another speaker is all. Over and out.

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Subject: Another thought

Posted by [GarMan](#) on Thu, 23 Sep 2004 13:58:00 GMT

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In HT, almost all dialogue comes from the center channel speaker. I'd rotate your speakers around a bit to see if the problem is with the channel or the speaker.

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Subject: Re:harshness & sibilance

Posted by [LAL](#) on Thu, 23 Sep 2004 17:29:09 GMT

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James, I have Stage 4 Pi's along with other speakers with which to compare them. My Pi's are not sibilant or harsh on voices. As matter of fact they are to me surprisingly good at voice reproduction. One thing I have found out over the years is that when you listen to reproduced music you are hearing the sum total of all that went in to its reproduction, not just the speakers. Sibilance can have its source in the CDs and DVDs you play, it can be affected by your cabling, by the rack you use, by the way you couple your components to the rack, by your room, by speaker placement, and also your speakers themselves. I would not assume your problems are necessarily with your speakers. My 4 Pi's sound much better by placing them away from room corners and a foot or two off the floor. I suggest you try this. If your room is rectangular you might try them on the long wall instead of the short wall. You might also take a serious look at acoustical room treatment. The room itself can be the major factor in how your system ultimately sounds. One way to find out if it is the speakers or the room is take your speakers outside and play them there away from room interference and see how they sound on some good CDs with male and female voices. If they sound OK there then it is not your speakers and it is probably your room or speaker placement in the room. In your pictures it appears to me that you have a narrow room with the speakers on the floor near corners. If this is so it is a near guarantee that they are not going to sound particularly good. Why don't you try bringing your 2 Pi's from the rear using them as left and right speakers and use one of 4 Pi's as a true center channel speaker and see how it handles dialog in a new position (and if possible raise it off the floor a foot or so). I find that using a separate center channel speaker sounds better than using only the left and right with a simulated center channel. My experience is that using a single 4 Pi and a pair smaller left and right speakers produces a much better result than a left and right pair of 4 Pi's without any

separate center speaker. My Stage 4 Pi does a spectacular job as a dedicated center channel speaker. Before I'd set out building another pair of speakers I would take a long look at speaker placement and room treatment.

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Subject: Re:harshness & sibilance

Posted by [Manualblock](#) on Fri, 24 Sep 2004 01:33:33 GMT

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Does the AV receiver have some kind of eq. for ambiance, hall/concert that kind of thing? I have noticed on my Theater 4's certain settings can exacerbate those qualities. That's all I am up to; I realise you probably already have that covered but just a thought.

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Subject: Re:harshness & sibilance

Posted by [Manualblock](#) on Sat, 25 Sep 2004 23:30:32 GMT

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I'd would like to add if you access the Pi site for floor treatment Wayne has a procedure for sistering the floor joists. It is very methodical and specific and I recommend it to anyone with wood floors.

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Subject: Re: All movies?

Posted by [James W. Johnson](#) on Mon, 27 Sep 2004 14:26:19 GMT

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Well I have tested more and it's really only a few movies ...it may well be that these speakers are revealing less than perfect recordings and as much testing as I have done over the last few days I am almost 95% sure this is it. These speakers simply tell the truth and nothing but the truth.

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