
Subject: How does one emulate the typical theater sound?

Posted by [j0nnyfive](#) on Fri, 03 Aug 2012 08:14:19 GMT

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Howdy!

I'm trying to emulate my local movie theater in terms of sound quality. I THINK... the big difference between them and me is in the highs. I think my 2 Pi speakers are playing higher frequencies than the theater. Not sure, but that's what it sounds like to me. It could be their EQ, speaker capabilities, or the fact that their screen is in front of their speakers. Or absorptive material in the room maybe. All of the above?

My ear discomfort (tinnitus?) has been helped quite a bit by moving the speaker away from the wall about a foot. Now I can play the speaker at a level where I can comfortably hear the dialogue without too much discomfort later. I really think my small room with nearby walls may be enhancing the high frequencies somehow. Boosting/reflecting them. I'd like to dampen them more to sound more like the local theater.

Wayne, or anybody else with experience, do you have some ideas that might help me out? Also, does Audyssey undo any tweaks I would make? Do you recommend leaving Audyssey off and just playing direct? The tweaks I'm considering now are turning the speakers off axis about 30 degrees or so, and I'm also considering adding more fiberglass to the inside, but that may not do what I think it will.

Sorry for rambling guys. Could ya help a hick out? The theater sound I'm thinking of is one where it SOUNDS loud and powerful, but I don't have tinnitus afterwards. I don't know how they are able to pull this off, but they do somehow. Thanks!

Subject: Re: How does one emulate the typical theater sound?

Posted by [Wayne Parham](#) on Fri, 03 Aug 2012 15:15:57 GMT

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My home theater sounds much better than any theater I've even been to. Most of the better theaters are running JBL Pro gear, which sounds pretty good, but for whatever reason it is still not nearly as refined as my system. Sounds grainy and artificial by comparison. And that's the best ones, the average ones sound like Best Buy crap.

Now then, I've never been to a Dinner Theater with a well-designed custom sound system. I are documented here on the forum.

are toed-in 45°, axes crossed in front of the listening chairs.

reflect off the side walls, so there is actually very little direct sound from the surrounds, it's all

reflected. That setup was an experiment that I feel worked wonders. Sound from the surrounds really does just that - it surrounds you.

I don't run any sound processors at all. I have a Denon 3800BDCI BluRay player that supplies all the channels, and I just run them into an amplifier and out to the speakers. I'm running Audio Note amplification for the mains and ProFet amps for the subs. I don't use a preamp, I run directly from source into a potentiometer (RDAC, actually) and into the main amp. It's pretty much a minimalist system.

Subject: Re: How does one emulate the typical theater sound?

Posted by [j0nnyfive](#) on Fri, 03 Aug 2012 15:18:08 GMT

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Thanks for your reply! Wayne, I have no doubt whatsoever that your home theater sounds awesome, and that's what's frustrating me. ARGHGH!! lol Minimalist system huh? Cool! I like the idea of it... that's the idea I was trying for but I don't have your experience. I have a Denon AVR 1712. No amp.

Here's what's killing me (in a nutshell): They sound great. They feel painful. IF I'm running them too loud, then this is a problem because I ONLY run them loud enough to understand the dialogue, and no louder. The idea that they must be turned up loud enough to hurt me just to understand dialogue... eh... something's not right.

I think you understand what I'm saying but I just want to get across that I LOVE the speakers. And I don't think it's the speakers necessarily. The other problem is that they may NOT have been made exactly like you would have done it. And I know they weren't tested. So... when I get time (ugh...), I'm gonna have to do some testing. Time is something I don't have much of right now, so I was just fishing the pond for some quick and dirty answers. lol Also, I know it might be the room, but that's what I have the least control over at this point.

Thanks for your patience though! I'm trying not to be "that guy" you know? I still really really want to hear your setup sometime. Man I bet it's awesome. I'm addicted to big speakers now. No going back. Thanks a lot.

Subject: Re: How does one emulate the typical theater sound?

Posted by [j0nnyfive](#) on Fri, 03 Aug 2012 15:59:56 GMT

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Wayne you're a genius you just gave me an idea. I'm going to run NO room correction technology! This will eliminate a variable. Thanks! I'll just run them direct and move them around the room and see what this does to the overall sound. I think Audyssey may be nice, but there could be a flaw in my microphone placement. ? Maybe? Dunno.

Subject: Re: How does one emulate the typical theater sound?

Posted by [chrisR](#) on Fri, 03 Aug 2012 22:31:33 GMT

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Johnny, Do you have this problem only when listening to surround sound DVD's? Is this with the DSP in the receiver on or off? Can you run any sort of pure analog bypass or 'straight' mode? Is that better?

Wayne, no center channel speaker? Is your DVD set for 5.1 or some stereo with surround? Otherwise aren't you losing the content that's over the center channel?

Chris

Subject: Re: How does one emulate the typical theater sound?

Posted by [Wayne Parham](#) on Sat, 04 Aug 2012 00:28:58 GMT

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I run a phantom center. The Denon can be set to run in this mode, as can most systems. I would love to run a center channel, but only if I could make it the same as my right and left mains. I would want it to be the same kind of speaker and be at the same height. But that would block the screen, so I run a phantom center instead. The toe-in helps, with R/L axes crossed ahead of the listening chairs.

Subject: Re: How does one emulate the typical theater sound?

Posted by [j0nnyfive](#) on Sat, 04 Aug 2012 11:04:20 GMT

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I've been running straight mode the past few times I've listened to the speakers. I think this does help! But if I'm going to run these straight, I think I definitely need a sub... I really need a sub anyway.

I'm not sure if it's only on surround sound DVDs or not. I haven't noticed a big difference between disks. The vast majority of the time I'm running blu ray (if that makes a difference).

Wayne, you need a projector w/ AT screen! Also curious, what model of RDAC are you running? I may go this direction if I'm going to get amps.. unless I NEED a preamp. ? Not sure..

I recently read elsewhere where a guy wrote that the louder he listens to movies, the more rolloff he wanted in the high frequencies, and the quieter he listened, the more high frequency detail he wanted. When I read this, it really clicked with me. I had the Ascend Acoustics Sierra Towers (they're at my parent's house now), and I really like the sound. I like to turn them up, but it feels like the high frequencies become stabbing, although the lower frequencies are fine. I'm not an

audio expert.. would you guys say that I'm probably a "warm" speaker type of guy? Or is this just a universal thing where the louder you want, the less high freq you probably need?

Thanks!

Subject: Re: How does one emulate the typical theater sound?

Posted by [Wayne Parham](#) on Sat, 04 Aug 2012 14:02:41 GMT

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You're absolutely right. With a projector and screen, you can put the center speaker behind the screen. That's definitely the best approach. When running a plasma or LCD screen though, I'd have to say I don't think there is a good center channel option. That's why I prefer a phantom center. When the R/L axes are crossed, it works very well, especially when the mains are only a dozen feet apart or so.

As for subs, you definitely need them. They aren't just there for extension, but also for modal smoothing. The idea is to run a sub close to each main: a foot or two below, beside and behind, in between the main speaker being flanked and the nearest boundaries. The main is on stands, the sub on the floor; The main is pulled out from the wall a foot or two, the sub is pushed back against the wall. The sub also sits outboard slightly, in between the main speaker and the nearest sidewall.

The reason flanking subs are needed is midbass and deepest lower midrange are omnidirectional, and the sound goes everywhere with equal SPL. The sound that bounces off nearby boundaries is delayed slightly as it arrives your ears compared to the direct sound, which comes straight at you. But the reflected sound is almost as loud, so at frequencies where it is out-of-phase because of the delay, it almost completely cancels, leaving a big hole in response. The peaks surrounding this self-reflection notch contrast greatly, and depending on the frequency where it occurs (which is determined by the distances to boundaries), it can make the sound thin or nasal. Or it can go the other way and make a sort of hollow, tubby sound, even throaty.

The way flanking subs work is they counteract the self-reflection notches. Where the distances between main speaker, boundary and listener all conspire to create a hole in response, the different set of distances between sub, boundary and response tend to "fill in the hole". Likewise, where a hole is formed from the self-interference between sub and wall, the main speaker fills it in. This limits the size of the hole to about 6dB versus what it would be without flanking subs: 15dB to 25dB. Flanking subs make a 10dB to 20dB improvement in the smoothness of the 100-200Hz range, similar to the modal smoothing more distant multisubs provide below 100Hz. Room modes, multisubs and flanking subs

Subject: Re: How does one emulate the typical theater sound?

Posted by [mantha3](#) on Sat, 04 Aug 2012 22:33:53 GMT

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The person who started this thread... What do you have in the room? Sound treatment?

Subject: Re: How does one emulate the typical theater sound?

Posted by [j0nnyfive](#) on Sat, 04 Aug 2012 23:22:39 GMT

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Wayne, thanks for that explanation! I really do want subs, but unfortunately..... *sigh*..... they have to wait a while longer. Doh! So painful...

I went back and forth on the issue "Center channel or no center channel" for a long time. Now, I don't have a choice. My love for big speakers prevents one from fitting below my screen. lol

Let me ask you this Wayne... just doing damage control and making the best of what I have... where, theoretically, would be the best place to put my 2 speakers? They are 2 Pi.. so, would you have them out away from a boundary, or would you put them right up against the boundary/wall? Right now, I think the best place seems to be away from the wall. I did a LOT of tinkering today. Messed with a ton of settings on my receiver, and I think I've found some good compromises.

I say compromises (also to the last poster) because I'm really in no position to treat my room right now (financially or practically) because I'm in an apartment, and I'm probably going to be moving out shortly. So, the room will change. But let's say it didn't change... what are some cheap (one-size-fits-all) treatment tricks a person can do to improve their sound? I have carpet, and a thick rug. The side wall that the speakers are nearest has french doors that are covered in blackout fabric. And I'm angling the speakers in such a way as to avoid as much wall reflection as possible. I'm with ya on the room sentiment! I know it's super important. It's also the most confusing aspect for a noob. lol

Thanks!

Subject: Re: How does one emulate the typical theater sound?

Posted by [Wayne Parham](#) on Sun, 05 Aug 2012 04:40:13 GMT

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Without subs, I'd place them against as many boundaries as possible. Back against the wall, low to the ground on small risers, not stands. But I'd much prefer them to be on stands that place them at ear level with flanking subs beside them.

Subject: Re: How does one emulate the typical theater sound?

Posted by [j0nnyfive](#) on Sun, 05 Aug 2012 13:37:39 GMT

Thanks. I will try that. I just got some new concrete blocks to put them on. They're a little less than a foot tall. I'll put them back against the wall again and see how that sounds.

Well actually... just thinking about this... I think Audyssey would cancel out the bass boost taken from the wall... Hmm.. BUT, maybe the speaker would be used more efficiently this way? Because instead of Audyssey trying to ADD bass, it would need to take away bass... perhaps this would give Audyssey a bit more "slack" to work with. I'll try it!

Subject: Re: How does one emulate the typical theater sound?

Posted by [justphil](#) on Sun, 05 Aug 2012 15:44:31 GMT

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I think I understand what the OP is getting at. In my HT I use a Denon receiver with 2pi mains and a 1pi center. My surrounds are some crummy speakers from an old Pioneer set up. My wife's and my main complaint is that you have to have the volume VERY loud to hear whats being said. But at that point, the volume of the music portion of what you are watching is to loud for comfort. Its like the voice volume needs to be turned up separately. I have yet to figure out how to accomplish this but its like my center channel needs to be louder as I believe that is where most voices come from in multichannel material such as DVD's. Perhaps this is a failure with proper mic placement when I run Audesy.

Subject: Re: How does one emulate the typical theater sound?

Posted by [j0nnyfive](#) on Sun, 05 Aug 2012 17:05:58 GMT

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Hey JustPhil!

Sounds kinda like what I'm dealing with. It's the voices. If I turn the "surround mode" to "virtual", the voice gets a lot more clear! But for some reason, this setting sounds way too weird. It's not right to my ears... but the voices are easier to hear. But when I go back to Stereo or Dolby, it's like the voices get a bit more quiet and muddled sounding. And so I'm tempted to hit "volume up"..... up.... up.... oops! down... down.... down... lol

But, I've been tweaking and moving the speakers... and I think I'm getting the hang of it. For one thing, I really do think these speakers need a sub. Let me correct that... for MOVIES, you need a sub PERIOD. I don't have one (kicking myself). I also think that if you don't have all 5 channels running, Dolby does something funny with the sound. I could be wrong on that one. I also think Audyssey does something funny with the sound sometimes if your auto-setup wasn't done just right.

I also think it's just a question of math: If the dynamic range is higher, there is going to be more distance (in decibels) between the loudest sound and the volume of voices. This difference is something you may have to deal with on a per movie basis. Some movies are just mixed poorly, and some movies are just obscenely loud. I think some movies (older ones?) seemed to sound

"brighter" to my ears than others. For me personally, bright + dynamic = ouchy.

Also, my room acoustics are probably terrible (added brightness), and my speakers may not be broken in very well. (I've never let them rip.) Factors factors.

BUT... I think I'm getting the hang of this stuff. Gotta learn your receivers settings and what it all does to the sound. It IS helping me. "Serious" home theater isn't always a simple matter. lol

K. I'm rambling now. I'll chut up.

Subject: Re: How does one emulate the typical theater sound?

Posted by [justphil](#) on Sun, 05 Aug 2012 19:36:41 GMT

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Have you tried messing Dynamic EQ settings? Like Audesy bypassing front speakers, Audesy flat etc? Some of these settings have helped me also.

Subject: Re: How does one emulate the typical theater sound?

Posted by [j0nnyfive](#) on Mon, 06 Aug 2012 14:03:42 GMT

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Yeah, here's what I typically do:

Music:

- Audyssey Flat, Dynamic EQ OFF. (the usual).
- Audyssey Flat, Dynamic Vol Midnight (if my ears bug me).
- Audyssey (NOT Flat),.. (if the music is too bright).
- Pure Direct (if Audyssey bugs me).

Movies:

- Audyssey, Dynamic EQ On. (If I want to show off).
- Audyssey, Dynamic Vol Midnight (if it's just me).
- Audyssey, Dynamic EQ On, Cinema EQ On (if movie is bright)
- Manual EQ (if movie is so bright it cracks my eyeballs)

Right now I've got the speakers up against the front wall facing straight ahead and on concrete blocks about a foot off the floor. The wall is providing a good bass boost, and I think it gave Audyssey more to work with.

Subject: Re: How does one emulate the typical theater sound?

Posted by [chrisR](#) on Mon, 06 Aug 2012 21:44:47 GMT

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Let me add a couple of thoughts. For one of my setups I have an older JVC receiver, and in spite of bringing the audio in on a toslink cable and having the source (TV in this case) sending all 5.1 channels (can't really verify), any of the surround modes just don't work even though I have left, center, right speakers hooked up. It seemed like it worked before but doesn't now, but with any surround mode the sound is way messed up, so the center channel speaker is basically a riser for the TV now.

The other setups have newer Yamaha receivers and those work fine but I generally don't enable the DSP modes, except for 7ch Stereo for some things (radio mostly).

Chris

Subject: Re: How does one emulate the typical theater sound?

Posted by [j0nnyfive](#) on Tue, 07 Aug 2012 17:04:41 GMT

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I think Audyssey MultEQ XT does a good job so far. I've been resting my ears the past couple days. Get that little weird feeling out. I've got dynamic compression turned on max and the volume down at -50. Super quiet. Even with compression turned on, they still sound like "big" speakers to me. I guess it's just the fact that sound is radiating from a larger cone? Either way, I like it. I don't think I could go back to smaller speakers. I tried to a couple times. I liked the smaller speaker for a couple days, but sorely missed the big ones.
