
Subject: Buffer for my system?

Posted by [mantha3](#) on Mon, 11 Feb 2013 17:10:52 GMT

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Hi all,

I currently run some 4 PI speakers and I run a pair of subwoofers with them as Wayne advises. Real happy. I have a nice subwoofer that I built with a Morel 12" and then I have an older Boston Acoustics 8" subwoofer. So I run to the plate amps of each of these subwoofers the R/L signal running each in Mono since they are running the blended R/L. One is in the front of the room the 2nd is on the side of the of the room side fire. The sound is nice!

I have a signal source and then run the signal split 3 ways... 1 to the pair of tube amps for the 4PI pair, 1 signal R/L of a plate amp on the subwoofer, 1 signal R/L of a plate amp on the 2nd subwoofer.

Having the signal split 3 ways I was thinking a buffer may be a good idea... Run a Buffer that has an Input and then have it with 3 outputs? I think a buffer would be a good thing to introduce to get a bit better drive behind the 3 way split. Not sure about Tube Buffer or a Pass B1

Subject: Re: Buffer for my system?

Posted by [Wayne Parham](#) on Mon, 11 Feb 2013 19:34:39 GMT

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I would simply split the source signal and run one pair of R/L lines to the mains and the other pair through an inline filter and onto the amps for the flanking subs.

Like this:

100Hz low-pass filter

150Hz low-pass filter Of course, this assumes both subs are the same and placed flanking the mains. Distributed subs don't need to be the same, so I'd run the Morel and the Boston Acoustics as distributed subs. You could probably leave them right where they are.

Don't know if that answered your question or not but that's what I would do.

Subject: Re: Buffer for my system?

Posted by [mantha3](#) on Mon, 11 Feb 2013 20:17:57 GMT

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The subs are quite different. The Morel is twice the subwoofer the Boston Acoustics is. If I ran a R channel to the Morel and then a L channel to the Boston then the L channel would be loosing

some bass.

This is why I currently run a R/L output to one sub and a R/L output to another.

Things are sounding pretty good. I was just thinking with a PASS B1 Buffer the super low output impedance push would be a good thing to help push signal to all the amps.

I'm a bit new to this.

Subject: Re: Buffer for my system?

Posted by [Wayne Parham](#) on Mon, 11 Feb 2013 21:01:24 GMT

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What you have are distributed multisubs, which will provide extension and modal smoothing below 100Hz. That's a pretty good setup, even without flanking subs.

What flanking subs do is to provide smoothing in the 100Hz to 200Hz octave. They work a little bit differently than distributed subs. Both are used for extension and smoothing, but their proximity to the mains puts their smoothing region in a different band.

If I had two dissimilar subs, I'd run them the same as you have.

Subject: Re: Buffer for my system?

Posted by [JCDC](#) on Tue, 12 Feb 2013 14:39:02 GMT

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To answer your electronics question: Your preamp is seeing your units in parallel.

So if they are all 10K
 $10k \parallel 10k \parallel 10k = 3.3k$ (or just $/3$)

3.3k would be on the edge of "difficult to drive" for many preamps.

Or all 20k = 6.7k This would probably be ok

Or all 50k = 16.7k fine.

Or if you had 10k, 20k, 50k the combined parallel resistance would be 5.9k

Cheers,
Jeff

Subject: Re: Buffer for my system?

Posted by [Wayne Parham](#) on Tue, 12 Feb 2013 16:45:05 GMT

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Good advice: I think the gist of what you're saying is correct, and would limit fan-out to a reasonable number of connections.

The thing that concerns me more than drive level is noise immunity, and that having a bunch of unbalanced lines connected together might introduce more noise. If the source output impedance

noise is potentially more likely. So I guess my real concern with fan-out isn't the drive level but the vulnerability to noise.

As to buffer amps, I think they're good for the noise problem (if one finds they have it) but I wouldn't put one in just to do it. If there is no noise problem, don't. No need to introduce anything into the signal path that isn't necessary.

Boils down to a situation where you just have to see what you have and decide what to do. If you don't have a noise and/or drive problem, don't add a buffer stage.

Subject: Re: Buffer for my system?

Posted by [Les Winter](#) on Wed, 13 Feb 2013 00:39:52 GMT

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You may not have the problem you think. The tube amp may have an input impedance near 500K which, compared with the others, is negligible. I would suggest that you can call the sub manufactures and ask what impedances the sub amps are. If I remember correctly, my parts express plate amp was around 18k. A pair of 18k's in parallel is a manageable 9k. The tube amp's presence would then be hardly noticable if at all.

That said, I use a b-1 to avoid having a passive master volume control. Nelson Pass writes about the subjective sound this produces in his B-1 article.

My b-1 works great, adds little or nothing I can detect and is not finicky to wire up. It is running constantly for several years w/o issues.

good luck.
Les
