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Subject: What In-wall AWG to use?

Posted by [dutchswan0311](#) on Thu, 23 Feb 2012 20:35:18 GMT

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Given the size of my room 45(l) x 40(w) x 18 (h) ... What gauge of speaker wire should I use?

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Subject: Re: What In-wall AWG to use?

Posted by [Wayne Parham](#) on Thu, 23 Feb 2012 21:26:27 GMT

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Depends on how long the wire run will be. A good rule is to keep speaker wire resistance under 1/10th the load impedance. You can use a resistance chart to calculate it, given length and gauge. But don't forget that the line is a conductor pair, so double the length when calculating resistance.

Wire Calculator There's no disadvantage using a wire that's too large, but there is if it's too small. Best to get the biggest stranded copper wire you can get, although there does come a point of diminishing returns. I tend to find the minimum wire size needed, then go up a size or two. So, for example, an 18 gauge wire will support about 50 feet runs, but I'd probably go with 14 gauge or 16 gauge anyway. If I had to buy a ton of it though, and the budget started dictating choices, then 18 gauge would suffice.

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Subject: Re: What In-wall AWG to use?

Posted by [dutchswan0311](#) on Thu, 23 Feb 2012 22:43:42 GMT

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Mostly I was just trying to figure out if I should go with 14AWG or if it was necessary to go with 12AWG given the length of the room and the height of the walls. I will give the calculator a go and see what it says.

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Subject: Re: What In-wall AWG to use?

Posted by [dutchswan0311](#) on Fri, 24 Feb 2012 01:42:06 GMT

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Using the link to the calculator Wayne provided above, it appears like the 16AWG is sufficient for all of the 8ohm loads, which is all of the speakers except for the F20 subs which are a 4ohm load. 14AWG would be needed for those subs, so I will just error on the side of caution and get 14AWG for everything. The 12AWG would definitely have been overkill and seems to be that point of diminishing returns.

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