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Subject: Re: Looking for new speakers

Posted by [AudioFred](#) on Fri, 30 Dec 2011 14:10:21 GMT

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In-ceiling speakers are typically two-way coaxial speakers, with the tweeter mounted centrally on the woofer's pole piece. The most popular size is a 6" woofer with a 3/4" or 1" tweeter. These come in a range of quality levels. I'm including a link to a speaker pair at each level in the sections below. Hope this helps:

The least expensive, often called "contractor speakers" because they are the least expensive speakers a contractor can buy for installation in a new home. These will have cheap drivers, with the crossover consisting of only a single 50 cent capacitor in the tweeter signal path to block low frequencies. These often sound harsh, mostly because the woofer plays full range and you hear it's nasty cone breakup at about 5khz, the tweeter is crossed over too high, and the cheap drivers don't have much power handling capacity. I suppose they're ok for soft restaurant-type light jazz, but not for any other music.

<http://www.parts-express.com/pe/showdetl.cfm?Partnumber=300-402>

Mid priced ceiling speakers will have better drivers and a more sophisticated crossover, with second-order woofer and/or tweeter crossovers, and using better quality drivers and crossover parts. These will sound more open and natural, and will be able to play louder without distortion. This example has a better design crossover, but it still uses cheap electrolytic capacitors and an iron core inductor. <http://www.parts-express.com/pe/showdetl.cfm?Partnumber=300-362>

The next level will use high quality drivers with second order crossovers for both drivers, with air core inductors and polypropylene caps in the tweeter circuit.

<http://www.parts-express.com/pe/showdetl.cfm?Partnumber=300-470>

The quality levels of the above examples vary quite a bit, and the difference between the sound of each successive level will be clearly audible. A friend recently moved into a new luxury condo which was pre-wired for ceiling speakers, and I ordered the US620C model for him. Still haven't installed them, so I can't comment on the quality, but I'll be surprised if they don't sound good. I would also recommend the ES level speakers if you don't want to spend quite so much money, but not the CS level. Remember, if they're at your workplace you will probably be listening to them 8 hours a day, five days a week, or more!

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