Subject: Dayton Audio B652 and T652
Posted by AudioFred on Fri, 14 Nov 2014 20:25:54 GMT
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In the last couple of years Dayton Audio (Parts Express House Brand) has introduced some new speakers that are priced about as low as a speaker can be priced. Their first was the B652, a 6-1/2" two way stand mount that currently sells for $40/pr. These speakers would never satisfy an audiophile, but audiophiles aren't the intended buyers. The intended buyer is anybody who's now listening to their favorite music through earbuds or bad sounding little plastic computer speakers. In other words, the B652's are for the 99% of the civilized world's population who are not audiophiles. I could list about half a dozen shortcomings, but the bottom line is they don't sound terrible, and with a small subwoofer to supplement their nonexistent bass they sound surprisingly good.
http://www.parts-express.com/dayton-audio-b652-6-1-2-2-way-bookshelf-speaker-pair--300-652

Since the introduction of the B652 Dayton has added two more small speakers, the B652AIR, which uses a higher quality air motion tweeter, and the B452, a smaller version using a 4" woofer instead of the 6-1/2". I haven't heard the B652AIR, but reports I've read are positive, with a significant improvement in the treble range sound quality. The B652AIR is about $20/pr pricier than the dome tweeter model. Still not exactly breaking the bank.

Now Dayton has introduced a floor standing version of the B652, the T652, using the same small dome tweeter, but with two 6-1/2" woofers in a ported enclosure. In other words, a B652 with bass response. The T652 is about $120/pr.
http://www.parts-express.com/dayton-audio-t652-dual-6-1-2-2-way-tower-speaker-pair--300-653

For $120 I couldn't resist, and mine arrived yesterday. My first impression with some baroque classical music was they were a B652 with bass response, they sounded pleasant, and there were not annoying characteristics like sizzzzly tweeter sound. Then I measured them and found an unexpected surprise.

So my question for the speaker experts is what's going on here? Did they intentionally design that 70hz hump into the midbass response? I actually prefer their sound with the ports stuffed with a rag, in which case everything below 150hz is reduced by about 3dB, but I'm thinking somebody who listens to hip hop and pop music might prefer the sound with the ports open.

File Attachments

1) T652.bmp, downloaded 8394 times

Subject: Re: Dayton Audio B652 and T652

Posted by gofar99 on Fri, 14 Nov 2014 23:18:09 GMT
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Hi, Two possibilities. One the way you are measuring it can cause the hump. Room nodes are killers. I have some that were difficult to control. Second it may just be the resonance point of either the speakers, cabinet or perhaps the port. You might try stuffing it with some open cell foam to tame it.

Subject: Re: Dayton Audio B652 and T652
Posted by AudioFred on Sat, 15 Nov 2014 13:26:25 GMT
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Bruce, thanks for the insight. I need to take one to a different room and repeat the measurement. I might also pull a woofer and measure it.

Subject: Re: Dayton Audio B652 and T652
Posted by Wayne Parham on Sat, 15 Nov 2014 18:46:01 GMT
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I agree. If indoors, you can't "see" the speakers below 200Hz or so. You see mostly the room.

It's getting too cold to take speakers outdoors, but that's the only way to get good measurements below 200Hz.

Subject: Re: Dayton Audio B652 and T652
Posted by AudioFred on Sat, 15 Nov 2014 22:59:54 GMT
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I did some more investigating. The woofers are fairly high Q for a ported enclosure. The parameters are: RE = 7.5 ohms, resonant freq = 57hz, QTS = .72, Le = .545mH. The enclosure is about 0.8 cu ft, and with a 2" dia by 4" long port it's apparently tuned to about 43hz. The woofers are wired in parallel with no low pass filter. The tweeter has a 6.8uF cap in series.

Wayne, you're so right about it being too cold. It was in the 50's today in Houston. BRRRRR.

Subject: Re: Dayton Audio B652 and T652
Posted by Wayne Parham on Sun, 16 Nov 2014 15:23:25 GMT
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Oh now you're just being cruel. It's in the 20s here in Bella Vista.