Subject: Help with testing frequency response
Posted by jw67 on Tue, 16 Jul 2019 20:25:20 GMT
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Hi,
I need some help. I have built pi4 speakers with flanking subs-I lam very happy with them, a great sound but I feel I may have over damped them. I would like to test them to see if that's the case. I have bought a Behringer ECM8000 condenser measurement microphone but I'm a little unsure of the best way to go about measuring frequency response. A lot of the information on the net assumes a certain level of knowledge which I don't possess.

Can someone please point me in the right direction, equipment required, best software, etc. I was under the impression that I needed a microphone and a laptop and some software -I was also told this by a not very knowledgeable web sales person on the phone. But I keep coming across phantom power and audio interface?? I'm not sure whether this is required if you have a laptop. Do you have to connect the laptop to the stereo?

Any help welcomed.

Thanks.

Subject: Re: Help with testing frequency response
Posted by Wayne Parham on Tue, 16 Jul 2019 22:28:52 GMT
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You'll need a sound card that supports that microphone and some measurement software. I doubt your laptop can connect that microphone, so you'll probably want to buy a USB device that acts like a sound card having analog-to-digital and digital-to-analog converters and amplifiers built-in. Several have microphone inputs like you need that provide the right connector and 48v "phantom power" for that microphone. Your microphone manufacturer makes such a device, for example, the UMC404HD. They actually make a lot more than just that device, but it's a simple stereo unit that I've worked with.

As for software, there is a lot of shareware and freeware out there that you can get started with. I personally run WTPro and LMS, and neither is free. So I can't personally recommend any of the freeware/shareware products from personal experience. But i can say that there are a lot of passionate individuals and small teams that have written software for acoustic measurement, so there's a lot out there to choose from.

Start by buying a USB sound card. Then do some searches for acoustic measurement software that you can download and try. Once you get started, report back and we'll help keep you moving forward.

Subject: Re: Help with testing frequency response
Posted by jw67 on Wed, 17 Jul 2019 15:16:10 GMT
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Thanks Wayne, you're a star. I have ordered the sound card and do as instructed and will report back in due course.

Thanks again.

Subject: Re: Help with testing frequency response
Posted by positron on Tue, 02 Jun 2020 04:04:36 GMT
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JW, I often use really well recorded selections to check response, naturalness, dynamics, damping etc. Here are just a few selections I have found that might help you and others.

The first is a percussion recording. I found it extremely natural, amazingly good.

https://www.youtube.com/watch?v=B7Iab-AC3Dw

Higest C piano note.

https://www.youtube.com/watch?v=WmQer6N10aM

Lowest A piano note.

https://www.youtube.com/watch?v=HEjn2qZuPU0

Hope this helps.

pos