Subject: Re: 4pi build with stands finally realized
Posted by Wayne Parham on Fri, 01 Oct 2021 13:38:31 GMT
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It's hard to say from your response chart, because it looks like a mix of on-axis and off-axis, e.g. power response. Were you measuring indoors, perhaps?

If so, measure outdoors or setup your equipment for a pseudo-anechoic measurement. Place the microphone directly on-axis around two or three feet away from the cone. Do this on a baffle or in a cabinet so reflections from the rear of the cone don't interfere with the sound emanating from the front of the cone.

To be honest, I'm worried about that notch at 1.3kHz because I see a lot of substandard cones get weird in that area. The aftermarket cones don't do well above 1kHz. But before we get worried about that, let's make sure you have good measurements because a lot of other things can cause that dip too. Could be self-interference from reflections or from the back-wave or both.

If you measure outdoors, or if you use gating to create a pseudo anechoic chart, what you should expect to see on-axis is rising response between 800Hz and 1.6kHz, and rolloff above that. On-axis, there's with a sharp dip around 2.6kHz. When you go far off-axis, at 45°, response starts to fall above 500Hz. It's down 3dB around 800-1000Hz and 6dB around 1.2kHz. Above that, it falls off rapidly, punctuated by a sharp dip around 1.3kHz.

The JBL spec sheet shows what you can expect to see from the raw driver:
JBL 2226H Spec Sheet