Subject: Ground Plane Measurement
Posted by skywave-rider on Sun, 03 Feb 2013 18:23:52 GMT
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I got rusty about ground plane measurements, opened up the D'Appolito book, and became clueless.

Are gp measurements comparable to anechoic or free field measurements, let's say if they are done out doors? I realize there are some effects, namely a virtual mirrored source which increases the gain. Assuming that is a 6 dB boost, if it is known it's not an issue. So will the frequency response be close to an anechoic measurement? Isn't that why we are doing a gp measurement to begin with?

I was looking at Wayne's 3PI sub FR graph, which is a gp measurement. I was thinking the 6 dB drop in FR in the octave
40-20Hz would be filled in, typically, by room gain (not considering other room effects.)

So is a gp measurement in this frequency range treated as if it were anechoic, apart from SPL?

Subject: Re: Ground Plane Measurement
Posted by Wayne Parham on Sun, 03 Feb 2013 18:43:19 GMT
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Ground plane measurements are essentially the same as halfspace, except they show baffle effects whereas halfspace measurements don't. As the baffle begins to have an effect on directivity, this will show up in the ground plane measurement as rising response, sometimes with slight ripple at the onset. Halfspace can't show this because it is essentially an infinite baffle measurement.

Subject: Re: Ground Plane Measurement
Posted by skywave-rider on Mon, 04 Feb 2013 03:05:28 GMT
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Thanks, Wayne, it's much clearer to me as to the benefits of this type of measurement.