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Subject: Re: sensitivity: conversion of units  
Posted by [GM](#) on Wed, 08 Jun 2005 18:31:18 GMT  
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Greetings!! I've seen various values used for half space pressure, from 112 -112.2 dB/m, though 112 seems to be the most common. FWIW, I calc'd it at 112.018, so rounding it off to 112 and 1 % eff.....  $\text{dBv} = \sim 112 + 10 \cdot (\log_{10}(0.01)) = \sim 92 \text{ dB} / \sim 2.828 \text{ V/m}$  Since  $1 \text{ W} = E^2/R = \sim 2.828^2/8 = 1$ , then  $\text{dBa} = \sim 92 \text{ dB/W/m}$  for 8 ohm nominal loads. To convert other nominal resistances (R) to dBa, add  $10 \cdot \log_{10}(R/8)$  to the dBv, so if the above is a nominal 4 or 16 ohms, then dBa = ~89 or 95 dB/W/m. GM

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