
Subject: JBL 2020, 2206 and 2242

Posted by [Adrian Mack](#) on Mon, 23 Feb 2004 11:05:00 GMT

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The 2020H is actually ~97db on average. If you look at the 2.83v/1m response for the 2020, its 95db 1w/1m at 150Hz, rising rising to ~99db from 400Hz to 800Hz, then rises to 105db 1w/1m above 1KHz as it enters breakup mode region, so this is only straight on axis that its 105db 1w/1m at >1KHz. The 2206 on the other hand is 96db 1w/1m and is dead flat from 100Hz to 2KHz. The other components in the system all need to be attenuated to the level of the lowest sensitivity component in the system, so there isn't an issue here regarding matching efficiency between subsystems. A simple driver attenuation circuit or an L-Pad can do this. Regarding SET amp's, the 2206 is actually more suited to them. The impedance at resonance is a lot lower on the 2206 than the 2020, so a SET amp is going to have a lot easier time driving this load instead. High sensitivity is not the only thing to look for when finding suitable drivers for tube amp's, the complex impedance of driver's is the major issue. About the 2242, your 100% correct. That's why I said you need to use active EQ to boost the low end on the 2242. I suggested use of the Behringer PEQ2200, and I think I even told you what Q, center frequency and boost level to set the EQ to using the box size and tuning I suggested. Check up my old post though to see exact values. The Behringer parametric EQ costs US\$99 though, which is actually not a bad price. However if you really do not want to spend \$99 on an EQ unit, there is another way to extend the F3 of the 2242. This is by mass loading the cone. Adding mass to the cone has the effect of lowering driver Fs and raising Qts, and lowering reference efficiency. That means deeper F3. For this particular setup though, it doesn't lower efficiency in the subbass range, as the driver is already -6db to -9db in this region. Adding an extra 110g of mass to the cone results in the following parameters for the 2242:Fs=26.86HzQts=0.357Qes=0.378Qms=6.514Eff= 1.38% or 93.4db 1w/1m (only change is eff above 100Hz, bass region without extra mass is already this level anyway because of the low Qts and high Fs). Those are the two options available. Either use parametric EQ, or if you don't wish to pay for an EQ, add extra mass to the cone. Both methods will extend your F3 to below 30Hz, they are just different ways to get there. Adrian