
Subject: Re: Max Power Input into drivers
Posted by [Adrian Mack](#) on Tue, 06 Jul 2004 13:41:13 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi GarmanThe driver has a maximum thermal power rating, but theres also the excursion-limited power handling as you have found out in Boxplot. You can damage a driver from exceeding maximum thermal rating, but also from physically tearing the driver apart if you exceed x_{max} . A vented box shouldnt be used below F_b , the maximum point of excursion inside of the passband is at F_h . If you're presenting full program material at F_h then whatever power required at this frequency to drive it to maximum excursion is your maximum power input you can send to the driver (unless you have a highpass crossover somewhere above F_h , although I'm assuming there wont be for what you want to do). Below F_b , excursion becomes incredibly large but you don't/arnt supposed to use the driver here anyway. Remember that the distribution of content in music may more or less have content around F_h , if the distribution is weighted less to that region then total power you send to the driver without exceeding x_{max} will differ from what the modelling program suggests (being based on pure sine wave, I think). As a sidenote, the driver will have a linear x_{max} rating and also a damage-limited x_{max} rating as you can 'overdrive' the driver to a fair degree depending on its build quality. The damage limited rating typically being twice that of linear x_{max} but can be significantly more in well-rugged pro drivers (important for pro where uninformed DJ's try to blare every last bit of SPL out of it!). Distortion at damage limited x_{max} may not be acceptable however, so try to keep it within linear limits. Adrian
