Subject: Re: Max Power Input into drivers
Posted by Adrian Mack on Tue, 06 Jul 2004 13:41:13 GMT
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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 xmax. A vented box shouldnt be used below Fb, the maximum point of excursion inside of the passband is at Fh. If you're presenting full program material at Fh 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 Fh, although I'm assuming there wont be for what you want to do). Below Fb, 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 Fh, if the distribution is weighted less to that region then total power you send to the driver without exceeding xmax 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 xmax rating and also a damage-limited xmax 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 xmax 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 xmax may not be acceptable however, so try to keep it within linear limits. Adrian