Subject: because this forum is good,il post here
Posted by toxicport.e on Sat, 16 Aug 2003 23:09:32 GMT
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amps and clippinghelp! facts are hard to find!!here is a post from some one in a forum,who i disagree with,il reply with what i think in bold.its just my opinon,im lookin this up on the net,but its hard to find real stuff!! tell me what u think!_____From a Tom Nousaine post at the link below (not that easy to follow the very long UseNet discussion on the danger of clipping -- I read the entire thread andI can't say there is agreement ... but Tom does test speakers for a living, so I'll assume his opinion is an expert opinion:"The speaker never comes to a stop. how does he know? when you see a 50hz sinewave being clipped,the actual clipped part will be very short,say 0.02seconds long im guessing,this is not long enough to see,but is plenty enough to be called Dc.This idea is a fundamental misunderstanding that comes from that "DC" argument. i disagreeI think it stems from the misunderstanding that the analog picture of a sine wave or square wave as it appears on the face of an oscilliscope is actually the 'signal' and the flat top is some kind of DC component.an oscilloscople displays v/time division,this is represenative of the amp output,speaker input,is it not? That picture is just an analog idea or representation of the sound or signal. if oscilloscopes are so wrong,what is right,and whyAs Mark began by saying (in his paper) there is no DC component ... he's right .... and therefore the cone never stops. hes right because you say so?Another part of the analysis that tends to get forgotten is that the tweeter's impedance will be rising as well and the only important harmonics will occur around the resonance area of the speaker. im not sure about what hes meaning here.'important harmonics' ?All this is not a criticsm of the work (paper). The idea is well taken and right on the money. You won't protect your speakers by using a larger amplifier. a large amp wont clipIt will just burn them out as fast by supplying more power no matter what the conditionof the signal." it will burn them out ,if ur silly TOM quote from:http://groups.google.com/groups?selm=20020228221328.28778.00001881@mb-fo.aol.com&output=gplain

Subject: Clipping
Posted by Wayne Parham on Sat, 16 Aug 2003 23:52:41 GMT
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Visualize the waveform resulting from an amp in clipping, just like what you see in an oscilloscope trace. The tops of every signal peak hit the same voltage level, sine waves look more and more like square waves, regardless of frequency. This can be expressed in different ways. One can describe this reductionistically, as a series of harmonics. Or one can express it holistically, with the squared off tops. Both are true ways to express the symptoms of an amplifier in clipping. There are probably other ways to descibe the same thing, but it's a pretty simple issue, don't you agree?

Subject: Re: Clipping
Posted by toxicport.e on Sun, 17 Aug 2003 06:38:45 GMT
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yes,but some people still misunderstand it :-Sand then i get confused cos seemingly intelligent people say things that arent logicalthanksas usual:^)btw ive been loooking at the DEATHBOX at decware forums,it seems a load of BS,no real facts how it works,just a big funny ported thing,and ppl who build them tend to say its boomy at 60hz :-Pam i allowed to say things like that?? :) or is that an attack on them/..._mike

Subject: Re: Clipping
Posted by Anonymous on Sun, 17 Aug 2003 22:19:44 GMT
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/heheThat forum is probably the last place to get facts.You can outperform a deathbox (dual 10" bandpass) witha single 'monster' 12" or 15" in a 2 cf. box. /hehe/marketingIf you want to do car audio, go here.http://www.caraudioforum.comYou'll get straight answers.

Subject: 2226h set up, its not the best..
Posted by toxicport.e on Mon, 18 Aug 2003 06:23:35 GMT
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what if the current is not in phase with the voltage.??HELPbtw jbl2226h in room-im getting high excursion wayne!!!! whats going on!?! :-Smy excursion is about the same as my 8inch on a conical pipe with the SAME amp.to get similar midbass loudness i have to turn the amp up about 1/4 way around but ofcourse i get huge 33hz which wasnt there!.also,if i have NO active filter,the highs of the sub, are SO LOUD like 20db or something crazy,that i turn my amp back to where i have it with my 8inch,sounds equal volume ,but little or non detectable bass.is this the effect of the EBS? i didnt expect it to be that much!only 5db lower at worst ,92db efficiency,which is supposedly the efficiency of my 8inch conical pipe!will get 240watt jaycar amp sometime.im afraid how much excursion il get.i wish i could measure it somehow.and no im not playing 10hz sine :PRegards,_Mike

Subject: Persistence, my friend
Posted by Wayne Parham on Mon, 18 Aug 2003 07:54:28 GMT

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You have a good start with good components, so I think it will sound nice when everything is setup properly. JBL 2226's aren't designed to be subwoofers, but they are truly excellent from about 40Hz up. You can tune lower, like with an EBS alignment, but naturally with reduced output on the VLF shelf. What size cabinet are you using and what size port? What's the Helmholtz frequency?

Subject: Re: 2226h set up, its not the best..
Posted by ToFo on Mon, 18 Aug 2003 17:05:45 GMT
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Hi Mike,I should first qualify that I have not yet been willing to afford a pair of 2226's, so I speak only from my experience listening to the speakers of others and running simulations.I think the woofer wants a smaller box. Especially in home sized rooms, or near walls/corners. Maybe 124 liters tuned to 33. Would you be willing to try this driver in a smaller box? I think you will like it a lot. I noticed that all the ones I have heard were about 4 to 5 cubic feet.Thomas F.

Subject: phew
Posted by toxicport.e on Tue, 19 Aug 2003 00:33:58 GMT
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thanks!1st thingi filter low pass LR 12db/octave at 70hz, i just did no filter, to compare it in loudness to my 8inch conical pipe sub,there is a large difference in sound output.. i think im not used to EBS, the rising response is no trouble with the filter..2nd thingi think my tiny transformer cant supply my 30watt IC amp with enuf current.. which is a major prob, the va is probably less than equal to AMP rms rating which is VERY bad..jaycar 240watt shud b goodmy alignment-it isnt ideal, but it should be okay with power. i rechecked its output with what power i have,its what i expect.. less than i remember.. perhaps i looked at it with 100watt and then replaced that with '20watt' in my head :-D its certainly the most output ive heard, so clean compared to any sub! my mates 2x kappa pro 10s dont match it for soudn quality and his subs are flying 2cm excursion with 1.3kw, such a waste :)i have been listening to it more, it is surrepticiously louder than i thought, -its because im going lower freq, which is less detectable apart from rumble :-Pand im used to thumping45hz 8inch sub which ive found doesnt actualy sound that nice, and uses that thump to get abit louder :-Dim happy in the fact that i couldnt have bought from a better companythe only sub i cudve gotn was, SHIVA12 or JAYCAR 12 so i made good choicenext up, basshorn plans for it, to see if its viable :-)thanks :-)OH and also, im putting sound dampening material in it next time the speakers off, and siliconing around the frame to make sure its airtight cos it doesnt mate perfectly with the wood,_mike

Subject: Re: phew
Posted by Wayne Parham on Tue, 19 Aug 2003 03:43:27 GMT
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Sounds like you're off to a good start, and you know what to look for to optimize your system. To be honest, I don't think it's apples-and-oranges to compare a 2226 with an 8" carsound woofer in a pipe or a pair of Kappa 10's. You can probably get the sensitivity to match, but you'll never get the quality to match. Once you get your 2226 dialed in, it will be a much better speaker, whether horn loaded or as a direct radiator.

Subject: Clipping with Phil Lesh and Bonn Scott.
Posted by Scholl on Tue, 19 Aug 2003 12:29:04 GMT
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What folks often forget is that all music is peak power not RMS. The audio that most often causes the amplifier to clip are peaks generated by percussive instruments and\or momentary aggressive or dynamic playing by other performers on the recording. These are most often envelopes that occur for short periods at mid bass frequencies or with drums at no particular frequency because

types and performances where low frequency notes are sustained for several seconds but that music is generally not pleasant to listen to. So even thinking about clipping at a single frequency can be generally considered a waist of time unless someone is measuring the power output of an amp.Another thing folks often forget when discussing music power is that it is riddled with amplitude and frequency modulations. There is the signal generated by high frequency instruments surfing on the signal generated by low frequency instruments. When an envelope generated by the performance of a bass or mid bass musician goes near or over the power limits of an amplifier the higher frequency waves modulated onto that envelope get cut off or lost since the amplified signal is driven above DC power rail. Yes, the amplifier is outputting DC at the rail

or something blows up.The best way to see the true affects of clipping is to connect a silly scope to the amplifiers output that is connected to a loudspeaker and play some dynamic music while

works well. Phil Lesh can hit some dynamics that puts the whole signal in the dumber. The volume can be adjusted to watch just the high frequencies getting cut off. AC\DC is good too the steady simple beat can be used to sync the scope almost perfectly. And watching the signal

the amps DC rail voltage for that duration.

Subject: First : clean source then il comment more :)
Posted by toxicport.e on Tue, 19 Aug 2003 22:13:01 GMT
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sorry i meant my mates kappa pro 10s are infact INFINITY car audio ones with 88db/2.83v speakers in tiny sealed boxes,obviously he wants high output,but hes really stretching them too far,350watt rms each and he killed his car battery the other day-with the motor running- :-Peven songs that i couldnt notice in FFT that had 30hz,i notice 'more' sound,im getting simply more complex waves,more sinewves that werent there ,which is always good :-D even if they are only 30-40hz the sound is so nice,the bass actualy has a different character to my 8inch thumper,i like it :)if i wanted to strengthen the box,could i put another 18mm sheet over the back face of the box,because thats an easy panel to add thickness to-id use HEAPS of glue and liquid nails perhaps,,because i knew when i designed it the box would be a little to thin even with bracing inside.could the small amp with its clipping,be making high excursion,pushing the speaker out of linear zone,make it go even further out of strong mag field ,so it goes alot further than if the signal was clean and nice..thanks wayne

Subject: Re: Clipping with Phil Lesh and Bonn Scott.
Posted by toxicport.e on Tue, 19 Aug 2003 22:41:22 GMT
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yeah i agree MOST music is dynamic and peaky...actualy alot of my music ,that is of the 30-40hz bass type is continous style long sine..but then i notice that when a 4/4 drum kick starts up aswell,thats what causes it to clip,the peaks like you say.hyperballad-bjorka strange song with strange bass :-)i think some of my music is more sinusiodal but the peak scheme stil works yepbut all amps that are rated for the same RMS have the same peak power dont they/ or is that due to limitations in the amp itself.. slew rate?

Subject: Re: Clipping with Phil Lesh and Bonn Scott.
Posted by Scholl on Wed, 20 Aug 2003 08:12:48 GMT
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Amp ratings are goofy and confusing. The power supply rail or rails determine the max signal

amplitude which is peak to peak. The manufacturer can then recalculate this as RMS or they can choose a lower level and claim more peak power. I have some old Kenwood integrateds rated at 60 watts with 45V rails for 126 watts peak. If I were playing sine waves I'd get 90 watts RMS with music and I'd be able to get 126 watt peaks with the rest of the signal playing much lower. Also, we're only talking voltage here.. If current dynamics where taked into acount power could be more or less.

Subject: Re: 2226h set up, its not the best..
Posted by toxicport.e on Fri, 22 Aug 2003 23:51:08 GMT
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my 2226 is 2nd hand and it was either that,or a shiva ;)nope the box models fine with 175 tuned to 33hzremember its below resonance so the box requirement is gona be large.besides the vas and fs ,and qts say 50hz tuning and 100L i think for flat :)
