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.