Subject: Lab12 destructive test
Posted by Bubblersound on Wed, 11 Oct 2006 16:06:39 GMT
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At the end of your Lab12 thermal tests, you wrote:"Compare these values with the driver run without a heat exchanger. With 40VRMS input, it reached 195º F after an hour and a half, and the voice coil had failed. All other conditions were the same."The Lab12 is rated 400 watts RMS (about 40VRMS by your calculations) why did it fail when this is the safely rated RMS power handling by Eminence? Is this because it's a 50% duty cycle, 40hz sine wave?

Subject: Re: Lab12 destructive test
Posted by Wayne Parham on Thu, 12 Oct 2006 16:48:01 GMT
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I'm not sure about Eminence's ratings, but I do know that the LAB12 driver fails with 375 watts continuous power input after an hour. The failure mode is thermal; The voice coil glue fails and the wire unwinds. This is pretty close to 400WRMS and few people run drivers this hard, so their power rating seems pretty close to me. The driver's thermal capacity more than doubles with the radiant cooling provided by the cooling plug.Cooling Plug Information