Subject: Re: maximum power handling of my 4 pi's
Posted by Wayne Parham on Mon, 26 Nov 2001 21:42:32 GMT
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The way the circuit is configured, resistors R1 and R2 each get about 75% of the voltage applied to the speaker terminals at frequencies above the crossover point. Their resistances are about twice the impedance as the load, so current through them is reduced. This all results in a limit that's about 1/3rd that of the rated input power. In other words, if there's 100 watts input, the most you'd see at R1 and R2 would be about 30 watts, and that's if the input was a pure sine above 2kHz.The limits are about 4-6 times this high with music, speech and other program material, because of its crest factor. I can easily run 300-400 watts without overheating the resistors. Capacitors rated 250V are fine at those levels. Use caution when running high-power tests with pure sines or swept sines though, because a sine above 2kHz will overheat the resistors within a few minutes at signal levels much beyond 28.3v, which is 100 watts for an 8 ohm load.