

---

Subject: Re: Kinda reproducing a square wave  
Posted by [Wayne Parham](#) on Thu, 18 Mar 2004 18:55:40 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Certainly, there is the issue of slew rate and overring. I would suggest an acceptable limit of minimum slew rate and maximum overring. If we were to quantify the issue, it would remove ambiguity. I agree that no perfect square wave is possible, and that is a mathematical curiosity since a perfect sine wave is realizable. The perfect square wave isn't possible because of the fact harmonics content would have to be infinite. But if we set limits, say slew rate less than  $10\mu\text{S}$  and overring less than 0.1%, then we can discuss a realizable square wave. And I think that is realistic. That at least puts us in the realm of possibility, and I would argue that a square wave having  $10\mu\text{S}$  rise/fall time and less than 0.1% overring would sound absolutely perfect. It's a great goal. That then leaves us with the other issues to discuss. We won't have much trouble finding signal generators and amplifiers capable of square waves with  $10\mu\text{S}$  rise/fall time and less than 0.1% overring, but we'll have a hell of a time finding electro-mechanical devices that can do it and an almost certainty of inability to find electro-mechanico-acoustic devices that can generate this waveform between 20Hz and 20kHz.

---