
Subject: Re: switching power supply used in amps
Posted by [Anonymous](#) on Thu, 25 Jul 2002 19:47:04 GMT
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They do this in car audio amplifiers, it's a common practice going back 20 years. Do these car audio amplifiers lack sonically vs. home audio amplifiers? Noway. Why would they want to do this in home/pro audio amplifiers? One reason is space. Since you are dealing with 50/60 Hz transformers you need "big uns" to get some high powered amplifiers plus "big uns" transformers are very inefficient, a lot of power is lost to heat. High frequency switching power supplies done correctly can reduce size because they require a much smaller transformer (toroidal typically), they are more efficient. The reduction in size is because they switch the transformer on/off not at 50/60 Hz but perhaps anywhere from 20 kHz - 100 kHz depending on who designed the circuit. Some people may argue that switching noises may leak into the audio signal path. Sure, if the amplifier is poorly designed. Plus, can your ears hear this noise? I've done car audio for 10 years and didn't experience any leakage noise problems, even with cheaper amplifiers. Still not sure? Go listen to one and be 100% sure. Oh, the reason most home amplifier companies don't do this is because of cost. It's cheaper to just buy a beefy 50 pound transformer, add a bridge rectifier and some storage capacitors and the power supply circuit is done and it's reliable. Ask the same designer to convert to a high frequency switching power supply and he will say "oh no, now I have to do some real engineering work".
