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## The \$10,000 challenge

**For decades, nobody has been able to tell a tube amp from a transistor amp.**



Most audiophiles are non-technical. I come from electrical engineering. All I care about is low noise. I am astonished to hear what people call superb audio DACs with "presence" and "imaging" and "breadth" and "clarity" when there is a terrible hiss under all the sound.

Thing is, people like the hiss. It is what makes singing in the shower sound good. White noise that fills in the bottom of the noise floor. I find a similar case with mic pre-amps. When people rave about them and pay 800 bucks a channel, they are really buying an equalization device.

This gets to Bob Carver's [now Richard Clark] \$10,000 challenge. They have bet that nobody can tell a tube audio amp from a transistor audio amp in double-blind testing.

Carver says the first thing he does it is to use a spectrum analyzer to precisely match the equalization of the tube amp. That drops out 99% of the people. For the 1% that remain he mixes in a little 60 Hz hum into the transistor amp.

No one has won the challenge. Its been about 3 decades now.

This does not apply to guitar amps where you use the tubes for the crappyness of their transfer characteristic as well as the EQ, many people can hear that difference. I agree that jitter is important, especially for sigma-delta converters. I think the audiophiles take things to the extreme. Last time I did the calculations you need microseconds of jitter to noticeably effect a kHz range data acquisition system. As real as that bus that runs over a hobo.