



On Distortion (1)

JULIAN MUSGRAVE – HIGH END AUDIO’S COURT JESTER – POSTULATES, PREDICATES AND PREVARICATES ON THE TOPIC OF DISTORTION

Hold on there. Are you sure you want to read an article called *On Distortion (1)*? Sounds a bit heavy going, doesn’t it? Definitely an equipment-free zone too; no slinky, silk-clad interconnects draping themselves seductively over the sofa; no gorgeous new DACs with enormous sample rates. Go on, enjoy yourself. Read the rest of the magazine first. Come back when you feel brave enough: And bring the Panadol plus a stiff G&T.

Back again? Excellent. So let’s talk about distortion. Important stuff distortion. When you think about it this whole High End Audio gig is about distortion and virtually nothing else. No, really. If our objective is to bring the sound of live music into our listening room then the only difference between that and recorded music are the distortions created by the recording method, by various domain changes, by the playback equipment and our listening room (see *Ref1*). Thus sound quality and distortion describe the same thing from exactly opposite points of view; a conclusion that will come back to haunt us later.

The Refined Connoisseurship of the Audiophile

What an audiophile does is grade those distortions into ones he doesn’t mind (even likes, and can therefore live with) and those that make him shudder and therefore can’t be lived with. I know we audiophiles do other stuff and, occasionally at least, other aesthetics are considered, but when push comes to shove, we are, gentlemen, refined connoisseurs of distortion. (There’s nothing unusual about this, as refined connoisseurship has historical form: the Egyptians were refined connoisseurs of the various grades of dead; the ancient Romans were refined connoisseurs of various grades of barbarism; we choose to do distortion.)

Ref. 1: There are huge cultural differences between live and recorded music but we’ll put those to one side for the purposes of this article.

An understanding of distortion therefore seems the most basic skill we can bring to being an audiophile. If we can’t do distortion, is there therefore any point in doing High End Audio? So if I were to suggest that actually we audiophiles are useless at distortion, then you might get a bit gruff about it, wouldn’t you? I won’t suggest it then. (PM says I shouldn’t make readers gruff; it’s bad for business and all that.)

But that does not change the proposition that we audiophiles can rarely, if ever, *use* distortion figures, because they turn to dust when they are leveraged into better audiophile outcomes. That is no reflection on our refined connoisseurship: of knowing lots of names and numbers but that’s not the same thing at all. Neither is there a problem with measurements in High End Audio. Splendid stuff, measurements. If a meter tells us an amplifier is outputting 3A, then that is what it is doing. Smart little chaps, meters, and by and large we don’t argue with them. *Specification* measurements tell us loads of useful stuff; *distortion* measurements do not.

And This is What I Mean

The quandary is quite easily demonstrated. Look at the table below which are the test results from four amplifiers recently reviewed in a venerable printed audiophile magazine.

Amplifier	Distortion	Cost	Sound Rating
A	0.0023% to 0.014%	£9,500	8.0
B	0.0002 to 0.0027%	£2,190	8.4
C	0.0005% to 0.017%	£999	8.0
D	0.10% to 0.66%	£5,150	8.2

Is there any correlation between distortion (presumably total harmonic distortion, or THD), price and sound rating? Amplifier A has five times