

**Guest Editorial:
'The Impossible Void'
Walt Jung**

In this issue *TAA* begins what is hoped to be an on going series on distortion and/or imperfections in audio amplifiers. Fundamental to this series (as opposed to so many previous ones of the ho-hum variety) is the goal of *concrete* electrical-audible correlation. I feel (and I'm sure many of you agree) that it is time someone really sat down and gave this serious consideration, and *TAA* is the most logical frame of reference for such a potential new insight.

As an audio magazine, *TAA* is neither the glossy "never-bad review" consumer slick, nor is it the cultist "be damned how it measures" subjective only publication. Both of these two extremes are unrealistic, in different senses of the word.

On the surface, the mass circulation hi-fi publications would seem to be much better equipped technically to investigate such matters as electrical/audible correlations, yet the absence of any such work is obvious. Everyone seems to be content to continue saying, "Oh yes, there is still much that is unknown in that area."

On the other hand, the far out, so-called "high end" crowd tend to belittle measurements as virtually meaningless. Typical are such comments as, "Specifications are nearly worthless, as they do not yet relate to musical quality." *Why* do the equipments which sound musical sound that way? *That* is the burning issue.

Are specifications useful, or aren't they? It has always been my firm opinion that specs are worthwhile, as are subjective listening tests. But a yawning void divides the two, and it is here that the work is needed. Not much changes if members of each camp continue merely to throw stones at each other.

The subjective reviewers need to make more measurements, the measurement types need to do more listening. In other words, *let's get together on the common problem.*

This series will attempt the "impossible": bridging this gap. And it is really not impossible, it just takes the right attitude, insight, equipment, and a fair amount of sweat. I think the article which begins in this issue will demonstrate that the two areas can be brought together, at least on one common point.

The subject of this first installment is *slewing induced distortion* which I call SID. If that sounds remote, please note that SID includes transient inter-modulation (TIM) and many other distortion buzzwords so much in vogue these days. I believe SID is a broader and more penetrating view of the distortion phenomenon than has been presented to date, and I hope this article begins to vindicate the IC op amp in the minds of those who have heretofore been convinced of its alleged "inferiority."

However, this article has other ramifications which go far beyond the use of IC op amps. The concept of SID can, in general, be extended to include all audio amplifiers which use feedback. That takes in a lot of territory: tubes, transistors, and whatever! The material will, I think, provide ample food for thought for many if not all TAA readers.

Many things will doubtless evolve from this article, but one I feel should be stressed here is the importance of more complete electrical testing of audio amplifiers in these areas. The articles will demonstrate that audible defects in audio amplifiers can be tied to slew rate- -but how many amplifiers are specified for this parameter? And how many equipment reviews routinely test for it? The answers are simply too few, to say the least.

All of the above is not to say that SID is the only source of bad sound in amplifiers today. But it is a major one, and one which is far from being universally appreciated. The subject is not altogether a simple one, either, as to understand it you must be able mentally to separate behavior of a feedback amplifier under transient or HF signal conditions, for both small and large signal excursions.

However, although it may be less than crystal clear at first, we trust this first article will give you a beginning grasp of the phenomenon. SID is not at all mystical or nebulous and can be measured quite directly and repeatably. Neither does it occur exclusively during transient conditions, by any means. I hope you enjoy this and succeeding articles and derive useful information from them- -information you can relate to your own experiences.

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