

Summary of comments received

Regarding the guideline: *Audio Analog-to-Digital Converter Performance Specification and Test Method: Guideline (High Level Performance)*

Summary compiled June 21, 2012

Comment received February 24, 2012, responding to the version of February 24, 2012

Editor's note: This comment was received from a member of the Technical Committee of the International Association of Sound and Audiovisual Archives, authors of the benchmark Guidelines on the Production and Preservation of Digital Audio Objects (TC-04, Second Edition, 2009). The pass-fail points in that important work provided the starting place for the FADGI guideline development.

I do not think we were entirely comfortable with the performance specs in the TC-04 as they were, but the main reason for that was the lack of ability and engineering knowledge in the general sound archive establishment to actually use the specs in any sort of testing, and as long as the manufacturers behave like this study rightly describe, the specs did not do much good in the first place. . . . Hopefully this [FADGI] report will carry enough weight to make the manufacturers report to the specs and testing methods of your study, so our community actually may compare the different brands, at least that the once complying to the specs will state so, and then we will know what to do with the rest.

I see no problem updating the TC-04 recommendations to your suggested standard for ADs as I do think it is a very good and thorough study.

Comment received March 7, 2012, responding to the version of February 24, 2012

Thank you for the Analog-to-Digital Converter Performance Specification and Testing Study and Recommended Guideline. The proposal was interesting to read. I absolutely applaud the goals of the initiative, though I have reservations about its pragmatic application and effects.

Like the Working Group has found with others (as mentioned in the Introduction section), my concerns are on the pragmatic, implementation side. I'm worried about who would conduct such tests, and where, given the cost of test equipment. Nearly all of these concerns could be satisfied with additional information disclosed by the Working Group before or with a formal recommendation/mandate/whatever.

The focus of the document is on those digitizing existing analog recordings, organizations and parties generally not known for being well funded. One of the experts consulted is the co-founder of Audio Precision; while I have the utmost respect for the company, their products are very expensive, often being more expensive than the devices to be tested. The introduction makes it clear that the Working Group and AES SC-02-01 are adamant on regular testing, and that's the point I'm most concerned with. Regular testing could be, in the big picture, a small or

big cost depending on many factors. Further information from the Working Group would help end-users better understand the guidelines' costs.

My concerns as questions:

Are there documented cases of parties that already carry out AES-17 on their ADC(s) on a regular basis?

How often is an ADC to be checked? Is there research into how long it takes an ADC to drift out of proper alignment after initial verification at purchase? Is this within the lifespan of an ADC--time between purchase and either upgrading or completion of a digitization project?

Is each party engaged in digitization efforts expected to analyze their own ADC(s) with their own test gear? If not, would the Working Group recommend places/labs where parties could have their ADC(s) tested?

Thank you for your time and consideration.

Comment received June 20, 2012, responding to the version of June 19, 2012

Both documents look great. I have a small but possibly important clarification in the *Is This Journey Necessary?* argument at the bottom of page 6 and top of page 7 of the intro pdf. In order to contrast the argument for routine testing with other beliefs, you might say it more bluntly (if it was indeed the case) that some members of the Working Group questioned the need for ongoing, routine testing--reasoning that modes of failure of a device would obviate testing.

The point was not clear to me until I re-read the first part of the section, after reading in the last paragraph of that section, "All of the experts consulted favored routine testing, arguing that ADCs are no different than any other type of equipment and stating that these devices can fail in nuanced and subtle ways, on both analog input and digital output."

Apologies if I have mis-read your intent.