



TIA-1083: A NEW STANDARD TO IMPROVE CORDLESS PHONE USE FOR HEARING AID WEARERS

The History: In 2004, telephone manufacturers began to receive customer complaints from hearing aid wearers regarding interference problems experienced when using digital cordless telephones. In August of that same year, a Telecommunications Industry Association (TIA) engineering standards sub-committee discussed a Gallaudet University presentation on the subject. Since cordless telephones have relatively low-power radio frequency (RF) signals, the interference was suspected of being due to something other than direct RF signals and most likely due to undesired magnetic fields when the hearing aid is used in the telecoil (T-coil) mode.

What TIA Did: TIA organized and supported research in this area and developed a testing method to characterize the magnetic interference. This effort culminated with tests on cordless telephones by three different laboratories that were later correlated with results from a study conducted by Gallaudet University during the 2005 Convention of Self Help for Hard of Hearing People (SHHH).

A working group was organized to develop the TIA-1083 standard documenting the test methods and providing performance requirements to limit the amount of magnetic noise produced. Signal-to-noise ratio performance requirements were later added.

To help quantify the signal-to-noise ratios needed by hearing aid users employing T-coil coupling with cordless and cellular phones, a collaborative study was conducted by Gallaudet University, Etymotic Research and Motorola during the 2006 Convention of the Hearing Loss Association of America (HLAA, formerly SHHH). Data obtained from this study were also used to provide input to the standard regarding the magnetic field orientation needs of hearing aids.

The Result: TIA's new standard TIA-1083, Telephone Terminal Equipment Handset Magnetic Measurement Procedures and Performance Requirements, published in 2007, defines measurement procedures and performance requirements for the handset-generated audio band magnetic noise of wireline telephones. A telephone complies with TIA-1083 if it meets the requirements in the standard when manufactured and can be expected to continue to meet these requirements when properly used and maintained. TIA-1083 is expected to play a significant role in efforts to reduce interference problems experienced by people using hearing aids with digital cordless telephones. Manufacturers are developing products that meet the performance requirements of the standard, and a package label is also being created to help hearing aid wearers identify products with reduced interference potential. TIA is grateful to HLAA for its willingness to participate in the research studies used to inform TIA's standards group in the development of TIA-1083. To obtain copies of the TIA-1083 standard, contact Information Handling Services at (800) 854-7179 or visit global.ih.com. To learn more about TIA standards go to www.tiaonline.org.

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About TIA: The Telecommunications Industry Association (TIA) is the leading trade association in Washington, D.C., for the information, communications and entertainment technology industry. For more information, go to <http://www.tiaonline.org>.