



## **TIA-1083-A: 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).

The TIA-1083 Technical Standard Working Group was organized to document the test methods and provide performance requirements to limit the amount of magnetic noise produced. At the 2006 Hearing Loss Association of America (HLAA, formerly SHHH), a collaborative study was conducted by Gallaudet University, Etymotic Research and Motorola where volunteers helped answer the question: "How much noise is too much noise?" Data obtained from this study were used to quantify signal-to-noise ratios and to provide input to the standard regarding the magnetic field orientation needs of hearing aids.

**The Result:** TIA's 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 when manufactured and can be expected to continue to meet these requirements when properly used and maintained. TIA-1083 is already playing a significant role in efforts to reduce interference problems experienced by people using hearing aids. Manufacturers are developing products that meet the standard, and a logo to be used as a package label was created to help hearing aid wearers identify compliant products. 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.ihs.com](http://global.ihs.com). To learn more about TIA standards go to [www.tiaonline.org](http://www.tiaonline.org).

**The Revision:** On June 8, 2009 TIA took a significant step in expanding TIA-1083 by voting in favor of a proposed revision of TIA-1083-A. With the goal of ensuring identical performance requirements for all phones, the revision includes testing methods for phones with digital interfaces, allowing the standard to be applied to telephones utilizing newer technologies, such as Wi-Fi, Voice over Internet Protocol (VoIP), Bluetooth® and USB. TIA anticipates publishing the standard by the end of summer 2009.

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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>.