

ANSI/ASA S3.55-2014/Part 1 / IEC 60318-1:2009

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AMERICAN NATIONAL STANDARD

Electroacoustics – Simulators of Human Head and Ear – Part 1: Ear Simulator for the Measurement of Supra-aural and Circumaural Earphones (a nationally adopted international standard)

ANSI/ASA S3.55-2014/Part 1 /
IEC 60318-1 :2009

Accredited Standards Committee S3, Bioacoustics

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Acoustical Society of America
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Secretariat:

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Approved on January 21, 2014 by:

American National Standards Institute, Inc.

Abstract

ANSI/ASA S3.55-2014 / IEC 60318-1:2009 specifies an ear simulator for the measurement of supra-aural and circumaural earphones (used for example in audiometry and telephonometry) applied to the ear without acoustical leakage, in the frequency range from 20 Hz to 10 kHz. The same device can be used as an acoustic coupler at additional frequencies up to 16 kHz.

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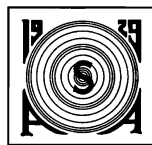
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Foreword

[This Foreword is for information only, and is not a part of the American National Standard *ANSI/ASA S3.55-2014/Part 1 / IEC 60318-1:2009 American National Standard Electroacoustics – Simulators of Human Head and Ear – Part 1: Ear Simulator for the Measurement of Supra-aural and Circumaural Earphones*. As such, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the standard.]

This standard comprises a part of a group of definitions, standards, and specifications for use in bioacoustics. It was developed and approved by Accredited Standards Committee S3, Bioacoustics, under its approved operating procedures. Those procedures have been accredited by the American National Standards Institute (ANSI). The Scope of Accredited Standards Committee S3 is as follows:

Standards, specifications, methods of measurement and test, and terminology in the fields of psychological and physiological acoustics, including aspects of general acoustics which pertain to biological safety, tolerance and comfort.

This standard is a nationally adopted international standard (NAIS). It was undertaken as part of the revision of ANSI/ASA S3.7-1995 (R2008), Method for Coupler Calibration of Earphones, which, in addition to coupler calibration methods, contains detailed information about the audiometric ear, the 6cc coupler, and the 2cc coupler. Several years ago, IEC 60318 was reorganized into several parts, which now include the same information about the aforementioned couplers (IEC 60318, Parts 1, 3, and 5, respectively). Given that the manufacture of these couplers has changed little if at all in more than 25 years, the fact that the IEC and ANSI/ASA specifications for these couplers are essentially identical, and the fact that manufacturers of these couplers do not produce different versions of the devices to meet alternative versions of the standards, harmonization was deemed appropriate. The first step in this process has been the move of the detailed coupler specifications from the previous version of ANSI/ASA S3.7 to NAIS ANSI/ASA S3.55, Parts 1, 3, and 5, which correspond directly to their IEC 60318 counterparts. References in other standards that previously pointed to ANSI/ASA S3.7 for a particular coupler will now point to the appropriate NAIS ANSI/ASA S3.55 part instead, as these documents get revised and updated. The next revision of ANSI/ASA S3.7 will focus solely on the calibration methods for earphones, and will also point to the appropriate NAIS ANSI/ASA S3.55 part, where the detailed coupler information now resides.

This standard is an identical national adoption of IEC 60318-1 Ed. 2.0 b:2009 *Electroacoustics – Simulators of human head and ear – Part 1: Ear simulator for the measurement of supra-aural and circumaural earphones*, which was prepared by IEC/TC 29. However, in conformance with ANSI and IEC rules, the words “this part of ANSI/ASA S3.55 / IEC 60318” replace the words “this part of IEC 60318” where they appear in the IEC document, decimal points were substituted in place of the decimal commas used in IEC documents, and American English spelling is used in place of British English spelling.

At the time this Standard was submitted to Accredited Standards Committee S3, Bioacoustics, for approval, the membership was as follows:

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Vacant, *Vice-Chair*

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Working Group S3/WG 37, Couplers, Ear Simulators, and Earphones, which assisted Accredited Standards Committee S3, Bioacoustics, in the development of this standard, had the following membership.

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Suggestions for improvements of this standard will be welcomed. They should be sent to Accredited Standards Committee S3, Bioacoustics, in care of the Standards Secretariat of the Acoustical Society of America, 35 Pinelawn Road, Suite 114E, Melville, New York 11747-3177. Telephone: 631-390-0215; FAX: 631-390-0217; E-mail: asastds@aip.org.

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