ACOUSTICAL STANDARDS NEWS

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American National Standards (ANSI Standards) developed by Accredited Standards Committees S1, S2, S3, and S12 in the areas of acoustics, mechanical vibration and shock, bioacoustics, and noise, respectively, are published by the Acoustical Society of America (ASA) through the American Institute of Physics (AIP). In addition to these standards, ASA publishes Catalogs of Acoustical Standards, both National and International. To receive copies of the latest Standards Catalogs, please contact Avril Brenig.

Comments are welcomed on all material in Acoustical Standards News.

This Acoustical Standards News section in JASA, as well as the National and International Catalogs of Acoustical Standards, flyers on the draft international documents available, and other information on the Standards Program of the Acoustical Society of America, are available via the ASA home page: http://www.asa.aip.org.

Standards Meetings Calendar—National

The next meetings of the Accredited Standards Committees for national standards development, the review of International Standards, and planning of future meetings are scheduled to be held during the 141st ASA Meeting at the Palmer House Hotel, Chicago, IL, 4–8 June 2001. Meetings of the Accredited Standards Committees are open to the public for participation. Organizations and individuals with expertise that may enhance the acoustical standards effort are encouraged to participate.

• Monday, 4 June 2001
  ASACOS Steering Committee

• Tuesday, 5 June 2001
  ASA Committee on Standards (ASACOS). Meeting of the Committee that directs the Standards Program of the Acoustical Society

• Wednesday, 6 June 2001

• Thursday, 7 June 2001
  Standards Committee Plenary Group Meeting (PL)
  To discuss national and international items relevant to Accredited Standards Committees S1, S2, S3, and S12, plus a general review of the international standardization (U.S. Technical Advisory Group—TAG) activities (ISO/TC 43 Acoustics, ISO/TC 108 Mechanical Vibration and Shock, and respective Subcommittees, and IEC/TC 29 Electroacoustics)

• Thursday, 7 June 2001
  Accredited Standards Committee S12 on Noise (also Technical Advisory Group for ISO/TC 43/SC 1—Noise)

• Thursday, 7 June 2001
  Accredited Standards Committee S1 on Acoustics (also Technical Advisory Group for ISO/TC 43—Acoustics and IEC/TC 29—Electroacoustics)

• Thursday, 7 June 2001

American National Standards Institute (ANSI) Calendar

8 January 2001
• ANSI Company Member Council Executive Committee (Day 1 of 2)

9 January 2001
• ANSI Company Member Council Executive Committee (Day 2 of 2)
• ANSI Organizational Member Council Meeting

10 January 2001
• ANSI International Forum (AIF)

11 January 2001
• ANSI International Committee Meeting (Day 1)

12 January 2001
• ANSI International Committee Meeting (Day 2)

22 January 2001
• ISO/TMB Business Planning Team

23 January 2001
• ISO/TMB (Day 1)

24 January 2001
• ISO/TMB (Day 2)
• Consumer Interest Council Meeting

15 February 2001
• Finance Committee Meeting of the Board of Directors

16 February 2001
• Executive Committee Meeting of the Board of Directors

27 February 2001
• BCCA

28 February 2001
• ANSI National Issues Committee

7 March 2001
• ICAC

8 March 2001
• ANSI Regional Standing Committee for the Americas

22 March 2001
• Board of Directors meeting
SOUNDINGS

S1 Working Groups

S1/Advisory—Advisory Planning Committee to S1 (T. Kuemmel);
S1/WG1—Standard Microphones and their Calibration (V. Nedzelivtisky);
S1/WG5—Band Filter Set (J. Pope);
S1/WG15—Noise Cancelling Microphones (R. L. McKinley);
S1/WG16—FFT Acoustical Analyzers (R. J. Peppin, Chair, L. Wu, Vice Chair);
S1/WG17—Sound-Level Meters and Integrating Sound-Level Meters (T. J. Kuemmel);
S1/WG19—Insertion Loss of Windscreens (R. J. Peppin);
S1/WG20—Ground Impedance (Co-Chairs: K. Attenborough and J. Sabetier);
S1/WG21—Electromagnetic Susceptibility (EMS) of Acoustical Instruments (J. Seiler);
S1/WG22—Cavitation Detection and Monitoring (W. L. Nyborg);
S1/WG23—Underwater Acoustics (F. Fisher);
S1/WG24—Design Response of Weighting Networks for Acoustical Measurements (G. S. K. Wong);
S1/WG25—Specification for Acoustical Calibrators (M. P. Valoski).

STANDARDS ON ACOUSTICS

ANSI S1AA-1985 (R 1997) Amendment to ANSI S1.4-1983.

ACOUSTICAL STANDARDS NEWS

G. S. K. Wong, Chair; T. Kuemmel, Vice Chair

Scope: Standards, specifications, methods of measurement and test, and terminology in the field of mechanical vibration and shock, and condition monitoring and diagnostic of machines, but excluding those aspects which pertain to biological safety, tolerance, and comfort.
S2 Working Groups

S2/WG 1—S2 Advisory Planning Committee (D. J. Evans);
S2/WG2—Terminology and Nomenclature in the Field of Mechanical Vibration and Shock and Condition Monitoring and Diagnostics of Machines (D. J. Evans);
S2/WG3—Signal Processing Methods (Parallel to ISO/TC 108/WG26 and ISO/TC 108/WG27) (D. J. Evans);
S2/WG4—Characterization of the Dynamic Mechanical Properties of Viscoelastic Polymers (W. M. Madigosky);
S2/WG5—Use and Calibration of Vibration and Shock Measuring Instruments (D. J. Evans, Chair; B. E. Douglas, Vice Chair);
S2/WG6—Vibration and Shock Actuators (Parallel to ISO/TC 108/SC6) (G. Booth);
S2/WG7—Acquisition of Mechanical Vibration and Shock Measurement Data (B. E. Douglas);
S2/WG8—Analysis Methods of Structural Dynamics (B. E. Douglas);
S2/WG9—Training and Accreditation (R. Eshleman);
S2/WG10—Measurement and Evaluation of Machinery for Acceptance and Condition (R. Eshleman, Chair; H. Pusey, Vice Chair);
S2/WG11—Measurement and Evaluation of Mechanical Vibration of Vehicles (A. F. Kilcullen);
S3/WG39(S2)—Human Exposure to Mechanical Vibration and Shock (D. D. Reynolds, Chair; H. E. von Gierke, Vice Chair).

Inactive Working Group:

S2/WG54—Atmospheric Blast Effects (J. W. Reed).

S2 STANDARDS ON MECHANICAL VIBRATION AND SHOCK

ANSI S2.5-1962 (R 1997) American National Standard Recommendations for Specifying the Performance of Vibration Machines.

ANSI S2.60-1987 Balancing Machines—Enclosures and Other Safety Measures.

Accredited Standards Committee on Bioacoustics, S3

(R. F. Burkard, Chair; J. Franks, Vice Chair)

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

S3 Working Groups

S3/Advisory—Advisory Planning Committee to S3 (J. Franks);
S3/WG35—Audiometers (R. L. Grason);
S3/WG36—Speech Intelligibility (R. Schlauch);
S3/WG37—Coupler Calibration of Earphones (B. Kruger);
S3/WG39(S2)—Human Exposure to Mechanical Vibration and Shock—Parallel to ISO/TC 108/SC4 (D. D. Reynolds, Chair; H. E. von Gierke, Vice Chair);
S3/WG43—Method for Calibration of Bone Conduction Vibrator (J. Durrant);
S3/WG48—Hearing Aids (D. A. Preves);
S3/WG56—Criteria for Background Noise for Audiometric Testing (J. Frank);
S3/WG58—Hearing Conservation Criteria (D. L. Johnson);
S3/WG59—Measurement of Speech Levels (H. Levitt);
S3/WG60—Measurement of Acoustic Impedance and Admittance of the Ear (D. J. Lilly);
S3/WG62—Impulse Noise with Respect to Hearing Hazard (D. L. Johnson);
S3/WG67—Manikins (M. D. Burkhard);
S3/WG72—Measurement of Auditory Evoked Potentials (R. F. Burkhard);
S3/WG76—Computerized Audiometry (A. J. Miltich);
S3/WG78—Thresholds (W. A. Yost);
S3/WG79—Method for Calculation of the Speech Intelligibility Index (C. V. Pavlovic);
S3/WG81—Hearing Assistance Technologies (M. K. Wynne);
S3/WG82—Basic Vestibular Function Test Battery (C. Wall III);
S3/WG83—Sound Field Audiometry (T. R. Letowski);
S3/WG84—Otoacoustic Emission (G. R. Long);
S3/WG85—Hearing Loss and Exposure (R. A. Dobie);
S3/WG86—Audiometric Data Structures (G. J. Frye and B. Kruger, Co-Chairs);
S3/WG87—Human Response to Repetitive Mechanical Shock (N. Alem);
S3/WG88—Standard Audible Emergency Evacuation and Other Signals (I. Mande);
S3/WG89—Spatial Audiometry in Real and Virtual Environments (J. Besing);

S3 Liaison Working Group:
S3/L-1 S3 U.S. TAG Liaison to IEC/TC 87 Ultrasonics (W. L. Nyborg).

S3 STANDARDS ON BIOACoustICS

ANSI S3.5-1997 American National Standard Methods for the Calculation of the Speech Intelligibility Index.


Accredited Standards Committee on Noise, S12

S12 Working Groups

S12/Advisory—Advisory Planning Committee to S12 (R. D. Hellweg);
S12/WG3—Measurement of Noise from Office and Data Processing Equipment (R. Lotz);
S12/WG11—Hearing Protector Attenuation and Performance (E. H. Berger);
S12/WG12—Evaluation of Hearing Conservation Programs (J. D. Royster, Chair; E. H. Berger, Vice Chair);
S12/WG15—Measurement and Evaluation of Outdoor Community Noise (P. D. Schomer);
S12/WG18—Criteria for Room Noise (R. J. Peppin);
S12/WG23—Determination of Sound Power (R. J. Peppin and B. Brooks, Co-Chairs);
S12/WG31—Predicting Sound-Pressure Levels Outdoors (M. J. White);
S12/WG32—Revision of ANSI S12.7-1986 Methods for Measurement of Impulse Noise (A. H. Marsh);
S12/WG33—Revision of ANSI S5.1-1971 Test Code for the Measurement of Sound from Pneumatic Equipment (D. Bookshar);
S12/WG34—Methodology for Hearing Conservation Program (R. Goodwin);
S12/WG35—Method for the Selection of Hearing Protectors that Optimize the Ability to Communicate (D. Byrne and K. L. Michael, Co-Chairs);
S12/WG36—Development of Methods for Using Sound Quality (G. L. Ebbot and P. Davies, Co-Chairs);
S12/WG37—Measuring Sleep Disturbance due to Noise (K. S. Pearson);
S12/WG38—Noise Labelling in Products (R. D. Hellweg and J. Pope, Co-Chairs);
S12/WG39—Measurement of the Noise Attenuation of Active and/or Passive Level Dependent Hearing Protective Devices (D. Gauger);
S12/WG40—Measurement of the Noise Aboard Ships (S. Fisher, Chair; A. F. Kilcullen, Vice Chair);
S12/WG41—Model Community Noise Ordinances (C. Caccavari, Chair; M. Alexander, Vice Chair);
S12/WG42—Classroom Acoustics (D. Lubman and L. Sutherland, Co-Chairs).

S12 Liaison Working Groups:

S12/L-1 IEEE 85 Committee for TAG Liaison—Noise Emitted by Rotating Electrical Machines (parallel to ISO/TC 43/SC 1/WG 13) (R. G. Barfield);


S12.5-1990 American National Standard Requirements for the Performance and Calibration of Reference Sound Sources.


ASA Committee on Standards (ASACOS)

ASACOS (D. L. Johnson, Chair and ASACOS Standards Director; P. D. Schomer, ASACOS Vice Chair).

U.S. Technical Advisory Groups (TAGS) for International Standards Committees:


ISO/TC 108 Mechanical Vibration and Shock (D. J. Evans, U.S. TAG Chair)

ISO/TC 108/SC1 Balancing, including Balancing Machines (R. H. Mehta, U.S. TAG Chair; K. Won, U.S. TAG Vice Chair)


ISO/TC 108/SC5 Condition Monitoring and Diagnostic Machines (D. J. Vendittis, U.S. TAG Chair; R. F. Taddeo, U.S. TAG Vice Chair)


IEC/TC 29 Electroacoustics (V. Nedzelnitsky, U.S. Technical Advisor)

Standards News from the United States

(Partially derived from ANSI Reporter, and ANSI Standards Action, with appreciation)

Newly published American National Standards

ACOUSTICS

ANSI S1.16-2000, American National Standard, METHOD FOR MEASURING THE PERFORMANCE OF NOISE DISCRIMINATING AND NOISE CANCELLING MICROPHONES

Noise cancelling microphones are used in numerous applications where improved signal-to-noise ratios are important for speech communication and/or other audio applications. Arrays of microphones connected together by hardware and/or other audio applications. Arrays of microphones connected together by hardware and/or software can also improve the signal-to-noise ratio. This Standard addresses the need to have a standard methodology to measure the performance of these types of devices.

ANSI S1.17-2000, American National Standard, MICROPHONE WINDSCREENS—PART 1: MEASUREMENTS AND SPECIFICATION OF INSERTION LOSS IN STILL OR SLIGHTLY MOVING AIR

This Standard is a revision of ANSI S1.17-1997, American National Standard, MECHANICAL VIBRATION—BALANCING QUALITY REQUIREMENTS OF RIGID ROTORS—PART 1: DETERMINATION OF PERMISSIBLE RESIDUAL UNBALANCE, INCLUDING MARINE APPLICATIONS

This standard is the national parallel to ISO 1940-1: 1986, Mechanical vibration—Balance quality requirements of rigid rotors—Part 1: Determination of permissible residual unbalance.

ANSI S3.1-1999, American National Standard, MAXIMUM PERMISSIBLE AMBIENT NOISE LEVELS FOR AUDIOMETRIC TEST ROOMS

This Standard is a revision of ANSI S3.1-1991, American National Standard Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms. The 1991 Standard specified maximum permissible ambient noise levels (MPANLs) from 125 to 8000 Hz in octave and one-third-octave bands allowed in an audiometric test room that would produce negligible masking of pure tones presented at reference equivalent threshold sound pressure levels specified in ANSI S3.6-1989 for two audiometric conditions (ears covered using a supra-aural earphone and ears not covered) and for three test frequency ranges (125–8000 Hz, 250–8000 Hz, and 500–8000 Hz). The MPANLs were derived using reference equivalent threshold sound-pressure levels measured in an NBS 9-A coupler.

This revision also specifies MPANLs from 125 to 8000 Hz in octave and one-third-octave bands allowed in an audiometric test room that would produce negligible masking of pure tones for two audiometric conditions and three test frequency ranges. However, the MPANLs specified in this revision were derived using a different computational method based on sound field thresholds, principles of masking for a given threshold shift, power-law summation of masking, and earphone attenuation values. Since the new computational method does not use NBS 9-A coupler-based measurements as done in 1991, MPANLs have been specified for an insert as well as for a supra-aural earphone. The present Standard allows slightly more low-frequency and slightly less very high-frequency ambient noise in an audiometric test room than specified in 1991.

The annexes detail the derivation of the MPANLs and provide information for interim low-frequency MPANLs, high-frequency ambient noise levels, techniques for physical measurement of ambient noise, supra-aural earphones encased in passive noise-reducing enclosures, and general considerations in planning for an audiometric test room.

Further experimenting work concerning the influence of masking on hearing thresholds is encouraged, especially masking of low-frequency noise on higher frequency hearing thresholds, very low- and high-frequency earphone attenuation, and the attenuation provided by passive noise-reducing earphone enclosures. As a result of this research, a more precise specification of permissible ambient noise levels may be developed.

ANSI S3.45-1999, American National Standard, PROCEDURES FOR TESTING BASIC VESTIBULAR FUNCTION

This standard is derived from the activities of Working Group 96 on Evaluation of Tests for Vestibular Function of the Committee on Hearing, Bioacoustics, and Biomechanics (CHABA) of the National Research Council (NRC). The CHABA Working Group was formed in 1985. The results of its work were published, with permission, in Aviation Space and Environmental Medicine 63, No. 2, Supplement, A1–A34, 1992.

The primary purpose of the CHABA working group was to develop recommendation for a Standard that would specify a basic battery of tests of human vestibular function. This standard is the outcome of that effort. This Standard does not provide test interpretations, but does offer examples of reports of test interpretations in an informal annex. A bibliography on vestibular function and its testing is provided in a second annex.

Newly published Nationally Adopted International Standards (NAIS)

NOISE

ANSI S12.54-1999 (ISO 3744: 1994) NATIONALLY ADOPTED INTERNATIONAL STANDARDS (NAIS STANDARD) Acoustics—Determination of sound power levels of noise sources using sound pressure—Engineering method in an essentially free field or over a reflecting plane

This Nationally Adopted International Standard (NAIS) comprises a part of a group of definitions, standards, and specifications for use in acoustical work.

ANSI S12.56-1999 (ISO 3746: 1995) NATIONALLY ADOPTED INTERNATIONAL STANDARDS (NAIS STANDARD) Acoustics—Determination of sound power levels of noise sources using sound pressure—Survey method using an enveloping measurement surface over a reflecting plane

Final actions on American National Standards

ANSI’s Board of Standards Review has taken the final action indicated on the standards listed below.

ACOUSTICS


Standards News from Abroad

(Partially derived from ANSI Reporter and ANSI Standards Action, with appreciation)

Newly published ISO and IEC Standards

Listed here are new and revised standards recently approved and promulgated by ISO—the International Organization for Standardization and IEC—the International Electrotechnical Commission. They are all available from ANSI, the U.S. member of ISO and IEC and the sole source in the United States of ISO and IEC publications. Catalogs listing several thousand current ISO and IEC standards are also available from ANSI.
ISO Standards

MECHANICAL VIBRATION AND SHOCK (TC 108)

ISO 14964: 2000, Mechanical vibration and shock—Vibration of stationary structures—Specific requirements for quality management in measurement and evaluation of vibration

MACHINE TOOLS (TC 39)


CEN

European drafts sent for CEN enquiry

The following European drafts have been sent to CEN members for enquiry and comment. If the draft is a proposed adoption of an International Standard, it is so noted. The final date for offering comments is listed after each proposal.

ACOUSTICS


POWER TOOLS


European drafts sent for formal vote (for information)

The following European drafts have been sent to CEN members for formal vote. If the draft is a proposed adoption of an International Standard, it is so noted.

ACOUSTICS

prEN 13477-1, Nondestructive testing—Acoustic emission—Equipment characterization—Part 1: Equipment description

prEN 13477-2, Nondestructive testing—Acoustic emission—Equipment characterization—Part 2: Verification of operating characteristic

International documents submitted to the U.S. for vote and/or comment

Some of the documents processed recently by the ASA Standards Secretariat. Dates in parentheses are deadlines for submission of comments and recommendation for vote, and they are for information only.

U.S. TAG

ISO Documents

