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contributions

In order to continue the work of coordinating the development of national and international standards in acoustics, which is conducted by the Acoustical Society as a public service, contributions to the Standards Program are welcomed.** Inquiries on contributions should be addressed to the Standards Manager.

FOR ADDITIONAL INFORMATION,
 PLEASE WRITE TO:
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**US Government agencies are referred to Office of Management and Budget (OMB) Circular A-119 dated January 1980, entitled Federal Participation in the Development and Use of Voluntary Standards.

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information concerning

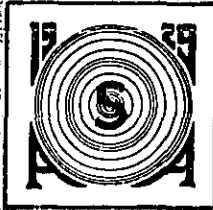
THE STANDARDS

PROGRAM OF

THE ACOUSTICAL

SOCIETY

OF AMERICA



Introduction

The Standards Program of the Acoustical Society of America, developed as a public service, has been delegated by the Executive Council to the Society's Committee on Standards (ASACOS). The decisions of this committee are carried out through a Standards Secretariat, headed by a Standards Manager.

In order to define terminology and develop specifications and standard practices in acoustics, the standards program was established nearly fifty years ago. In 1932, the Acoustical Society of America asked the American Standards Association to initiate a standardization project on acoustical measurement and terminology. That was done, and the Acoustical Society was designated as the sponsor of the new committee, designated Z24.

National Standards

In May 1932, Subcommittees were established to deal with Acoustical Terminology, Noise Measurement, Fundamental Acoustical Measurements, and Sound Absorption and Sound Insulation Measurement. Other subcommittees were added later, and in 1942 the scope of Z24 was extended to include vibration. By 1957, the work had grown to such an extent that Z24 was disbanded and three new committees were appointed to replace it:

S1 Acoustics

S2 Mechanical Shock and Vibration

S3 Bioacoustics

The membership of each committee consists of organizations, and individual members, willing to participate and having substantial concern and competence in the scope of the committee. More than fifty American National Standards, prepared by these committees, have been issued.

As Secretariat for S1, S2, and S3, the Acoustical Society of America is responsible for the organization, guidance, and administration of the committees. For many years, the Acoustical Society contracted with the American Standards Association for the secretariat function. In 1969, when the USA Standards Institute (formerly the American Standards Association) became the American National Standards Institute (ANSI), the Acoustical Society

established its own Standards Secretariat, headed by a Standards Manager, to undertake the secretariat function at its headquarters within the American Institute of Physics.

Membership and operating procedures of the committees follow ANSI-established procedures. The committees establish working groups composed of national experts to prepare draft standards on specific technical problems. The draft standards are voted on by the full committee and upon approval transmitted to ANSI prior to publication. Currently the three S committees have 67 working groups.

International Standards

At the international level, the corresponding work of standardization is performed by three technical committees of the International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO). They are:

IEC TC 29 Electroacoustics

ISO TC 43 Acoustics

ISO TC 108 Mechanical Vibration and Shock

The Nederlands Elektrotechnisch Comité in the Netherlands serves as Secretariat for IEC TC 29, the Dansk Standardiseringsraad in Denmark for ISO TC 43, and the American National Standards Institute (ANSI) for ISO TC 108. In 1975, the Acoustical Society of America was designated as Administrative Secretariat of ISO TC 108 on behalf of ANSI.

American participation in the international work is the responsibility of the US National Committee of the IEC and of ANSI as the USA Member Body of ISO. They base their actions on recommendations of Technical Advisory Groups (TAGs). In the areas of TC 29, TC 43, and TC 108, the advisory groups comprise one or more of the S1, S2, and S3 committees, according to the nature of the technology involved. Standards Committees S1 and S3 (on acoustics and bioacoustics, respectively) serve as the U.S. Technical Advisory Group (TAG) for IEC/TC 29 Electroacoustics, and for both ISO/TC 43 Acoustics and ISO/TC 43/SC1 on Noise. Standards Committee S2 serves as the U.S. TAG for ISO/TC 108 on Mechanical Vibration and Shock, which also includes the four Subcommittees of ISO/TC 108: SC1 on Balancing, Including Balancing Machines; SC2 on Measurement and Evaluation of Mechanical Vibration and Shock as Applied to Machines, Vehicles and Structures; SC3 on Use and Calibration of Vi-

bration and Shock Measuring Instruments; and SC4 on Human Exposure to Mechanical Vibration and Shock.

The Acoustical Society, through its Standards Secretariat, plays a key role in organizing and administering the TAGs which prepare the national positions for presentation to the international committees and recommend the U.S. vote on proposed ISO or IEC standards. One objective is always to harmonize the national and international standards to the greatest extent possible.

meetings of the ANSI standards committees

The American National Standards Committees S1, S2, and S3 operate under ANSI procedures and meet regularly twice a year. Interested members are always welcome to attend. The meetings are usually held in conjunction with the regular meetings of the Acoustical Society of America, except that S2 occasionally meets at another related meeting. At these meetings, the various working groups report their progress for discussions and guidance. Representatives to these committees discuss their activities, and exchange technical information which will lead to the establishment of the requirements for new national and international standards. New projects are often discussed and new working groups are established. Planning groups, which determine the needs and priorities for certain standards, meet separately from the committees, but report to them. In this way, the interests of the government, particularly its regulatory agencies, industry, and the general public are brought together to produce voluntary standards.

working groups

Each standard is first drafted by a working group appointed specifically for the task. Members are chosen for their expertise, and include representatives of producers, consumers, and general interests. Working groups usually meet in conjunction with the meetings of their parent committees.

administration

For many years, the Standards Program of the Society was administered directly by the Society's Executive Council. In 1970, on the recommendation of a special committee formed to propose ways to upgrade the effectiveness of the Society, the ASA Executive Council formed the ASA Committee on Standards (ASACOS). The Chairman of ASACOS became responsible for the Standards Program. In 1978, the By-laws of the Society were changed, and a new post, Standards Director, was created. The Standards Director, who now acts as Chairman of ASACOS, is an Officer of the Society and is a member (without vote) of the Executive Council.

The Standards Program is administered, through the Standards Secretariat, by the Standards Manager.

publications

Originally, all standards produced by Z24 and, later, S1, S2, and S3 were published and sold by ANSI (formerly the American Standards Association). Since 1975, they have been published by the Acoustical Society. The ASA Standards Publication Program has continued to grow rapidly since its inception, producing needed standards within the scopes of the Standards Committees (S1, S2, S3). The Acoustical Society's *Index of Noise Standards* and latest *Catalog of Acoustical Standards* are available from the Standards Secretariat.

The Standards Publication Program of the Acoustical Society is the responsibility of ASA's Committee on Standards (ASACOS). ASACOS has appointed a Publishing Subcommittee and the Standard Manager (with the advice of the Standards Director and the Publishing Subcommittee of ASACOS) is charged with carrying out the functions of the Standards Publishing Program.

approvals

During the standards development process, proposed American National Standards are balloted by

American National Standards Committees S1, S2, and S3. When a consensus has been reached, the standards are submitted to ANSI and are announced for public comment. After any additional comments have been resolved, the standards are approved as American National Standards by the ANSI Board of Standards Review (BSR). Before publication by the Society, the standards are also approved by ASACOS.

why standards?

Standards have a significant impact on nearly every aspect of acoustics. Consider these examples of important standards produced by Standards Committees S1, S2, and S3:

Committee S1, Acoustics, has defined

- the almost universally-used procedures for performing absolute and comparison calibrations of measurement microphones;
- the performance characteristics of sound level meters used for practically all measurements of sound level in the United States;
- the performance characteristics of octave and one-third octave filters widely used in acoustical measurements;
- the performance characteristics of personal noise dosimeters used to determine the noise exposure of people; and
- a number of procedures for measuring sound pressure levels and sound power levels in various acoustical environments.

Committee S2, Mechanical Shock and Vibration, has developed

- procedures for calibration of transducers used widely in shock and vibration measurements;
- recommendations for specifying the performance of vibrating machines;
- guidelines for describing the characteristics of resilient mountings;
- nomenclature for specifying damping properties of materials.

Committee S3, Bioacoustics, has issued standards on

- the performance of audiometers and the conduct of threshold audiometry so as to enhance reliable determinations of hearing acuity;
- methods for measurement of the performance of hearing aids;
- procedures for calculation of speech intelligibility; and
- techniques for evaluation of the effects of shock and vibration on people.

It is apparent that the production of these needed standards affects numerous aspects of modern life, from the equipment we use at home and at work, to the accuracy of tests which are performed on people. Scientists—as well as government personnel and the public at large have a major interest in the outcome of national standardization.

awards

The work of standards development is accomplished by the technical experts on the working groups as a public service on their own time or the time donated by their employees. Their names and contributions are acknowledged in the foreword to the published Standards. The Acoustical Society awards Certificates for working group members who have contributed to standards approved and published by the Acoustical Society of America.

sale of standards

Standards are sold through the ASA Standards Secretariat and through ANSI. A catalog is available from the Standards Secretariat. There is a 20% discount available to Acoustical Society members (including sustaining Members) on single-copy orders of all standards published by the Acoustical Society (but not the older standards published by ANSI).

A 20% discount is also in effect for purchase of the complete set of acoustical standards (both old and new).