ANSI \$1.6-1984 [a revision of \$1.6-1967(R1976)] (ASA 53-1984)

Standards Secretariat Acoustical Society of America 335 East 45th Street New York, New York 10017

AMERICAN NATIONAL STANDARD
Preferred Frequencies, Frequency Levels, and Band
Numbers for Acoustical Measurements

ABSTRACT

This standard defines the preferred frequencies, or nominal band-center frequencies to be used for acoustical measurements. Frequency levels or band numbers are associated with these sets of frequencies and the preferred frequencies are rounded values obtained from those for which the corresponding frequency levels or band numbers are integers.

AMERICAN NATIONAL STANDARDS ON ACOUSTICS

The Acoustical Society of America is the Secretariat for Accredited Standards Committees S1 on Acoustics, S2 on Mechanical Shock and Vibration, S3 on Bioacoustics, and S12 on Noise. Standards developed by these committees, which have wide representation for the technical community (manufacturers, consumers, and general-interest representatives), are published by the Acoustical Society of America as American National Standards after approval by their respective standards committees.

These standards are developed as a public service to provide standards useful to the public, industry, and consumers, and to Federal, State, and local governments.

This standard was approved by the American National Standards Institute as ANSI S1.6-1984 [a revision of S1.6-1967(R1976)] on 21 May 1984.

An American National Standard implies a consensus of those substantially concerned with its scope and provisions. An American National Standard is intended as a guide to aid the manufacturer, the consumer, and the general public. The existence of an American National Standard does not in any respect preclude anyone, whether he has approved the standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standard. American National Standards are subject to periodic review and users are cautioned to obtain the latest editions.

Caution Notice: An American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of publication.



FOREWORD

[This Foreword is not part of American National Standard Preferred Frequencies, Frequency Levels, and Band Numbers for Acoustical Measurements S1.6-1984), a revision of S1.6-1967(R1976) (ASA Catalog No. 53-1984).]

This standard comprises a part of a group of definitions, standards, and specifications for use in acoustical work. This standard was developed under the jurisdiction of Accredited Standards Committee S1 using the American National Standards Institute (ANSI) Standards Committee Procedure. The Acoustical Society of America holds the Secretariat for Accredited Standards Committee S1. This standard was approved for publication by ANSI.

Accredited Standards Committee S1, under whose jurisdiction this standard was developed, has the following scope:

Standards, specifications, methods of measurement and test, and terminology, in the fields of physical acoustics, including architectural acoustics, electroacoustics, sonics and ultrasonics, and underwater sound, but excluding those aspects which pertain to biological safety, tolerance, and comfort.

This revision differs from \$1.6-1967 (R1976), Preferred Frequencies and Band Numbers for Acoustical Measurements, in that the rarely used 1/2-octave bands have been deleted and the table of band numbers has been expanded in response to the wider range of band-center frequencies in modern instrumentation. The preferred frequencies recommended by this standard agree with those recommended in ISO 266-1975.

At the time this standard was submitted to Accredited Standards Committee S1 for final approval, the membership was as follows:

T. F. W. Embleton, Chairman

D. Johnson, Vice-Chairman

A. Brenig, Secretary

Acoustical Society of America ● T. Embleton, D. Johnson (Alt)
Air-Conditioning and Refrigeration Institute ● A. L. Potter, H.
C. Skarbek (Alt)

American Bell . S. R. Whitesell, H. R. Silbiger (Alt)

American Iron & Steel Institute • E. H. Toothman, P. A. Hernandez (Alt)

American Society of Heating, Refrigerating & Air-Conditioning Engineers (ASHRAE) • M. Blanck, G. F. Hohn (A/t)

Audio Engineering Society • L. W. Sepmeyer, M. R. Chial (Alt)
Computer & Business Equipment Manufacturers Association • L. F. Luttrell

National Bureau of Standards . S. L. Yaniv

National Council of Acoustical Consultants • G. W. Kamperman, A. P. Nash (Alt)

Owens-Corning Fiberglas . R. Moulder, K. Roy (Alt)

U.S. Army Aeromedical Research • B. Mozo, J. H. Patterson Jr. (Alt)

U.S. Army Communication Electronics Command • M. S. Mayer

U.S. Army Human Engineering Laboratory • G. Garinther, D. Hodge (Alt)

U.S. Department of the Air Force . H. E. von Gierke

Individual members of the S1 Committee were

L. Batchelder R. Guernsey
K. M. Eldred R. K. Hillquist
D. R. Flynn R. Huntley
R. S. Gales D. Johnson
W. J. Galloway W. W. Lang
E. E. Gross, Jr. G. C. Maling, Jr.

A. H. Marsh A. P. G. Peterson L. W. Sepmeyer J. Tichy H. E. von Gierke R. W. Young

The informal working group that assisted the S1 Committee in drafting this standard consisted of the following persons:

Tony F. W. Embleton, Chairman

L. Batchelder W. Lang L. W. Sepmeyer
D. Flynn A. Marsh R. W. Young
S. Ehrlich

Suggestions for improvements of this standard will be welcomed. They should be sent to the Standards Secretariat, Acoustical Society of America, 335 East 45th Street, New York, NY 10017.