

ANSI S12.15-1992
(ASA 106-1992)

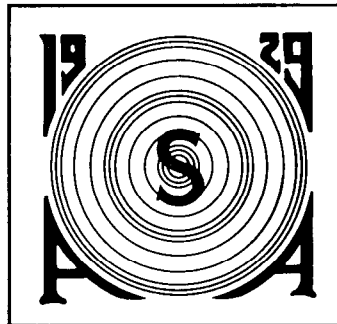
AMERICAN NATIONAL STANDARD
**FOR ACOUSTICS—PORTABLE
ELECTRIC POWER TOOLS,
STATIONARY AND FIXED
ELECTRIC POWER TOOLS, AND
GARDENING APPLIANCES—
MEASUREMENT OF SOUND
EMITTED**

Accredited Standards Committee S12, Noise

Standards Secretariat
c/o Acoustical Society of America
335 East 45th Street
New York, New York 10017-3483

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**ANSI S12.15-1992
(ASA 106-1992)**

**AMERICAN NATIONAL STANDARD
For Acoustics—Portable Electric Power Tools,
Stationary and Fixed Electric Power Tools, and
Gardening Appliances—Measurement of
Sound Emitted**

**ACCREDITED STANDARDS COMMITTEE S12,
NOISE**

ABSTRACT

This American National Standard describes relatively simple test procedures for the measurement of airborne sound from portable electric power tools, stationary and fixed electric power tools, and gardening appliances. Methods are given for the measurement of sound pressure levels and for the calculation of sound power levels. These methods may be used by manufacturers to specify, in part, the sound produced by their products.

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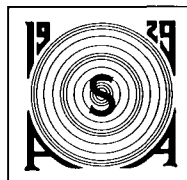
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FOREWORD

[This Foreword is not a part of American National Standard For Acoustics—Portable Electric Power Tools, Stationary and Fixed Electric Power Tools, and Gardening Appliances—Measurement of Sound Emitted, ANSI S12.15-1992 (ASA Catalog No 106-1992) (revision and redesignation of ANSI/PTI S10.1-1983)]

This American National Standard provides a methodology for the measurement of airborne sound emitted from portable electric power tools, stationary and fixed electric power tools, and gardening appliances. This standard also provides for the measurement of sound pressure levels and the calculation of sound power levels.

This standard, originally developed by the Power Tool Institute as ANSI/PTI S10.1-1983, now comes under the jurisdiction of Accredited Standards Committee S12, Noise. It has therefore been redesignated as ANSI S12.15-1992, the year of its approval by ANSI, with its editorially revised text.

This standard, ANSI S12.15-1992, covers the revision to remove ambiguities and clarify technical requirements to American National Standard for Acoustics—Portable Electric Power Tools, Stationary and Fixed Electric Power Tools, and Gardening Appliances—Measurement of Sound Emitted (ANSI/PTI S10.1-1983).

Accredited Standards Committee S12, Noise, under whose jurisdiction this standard was developed, has the following scope:

Standards, specifications, and terminology in the field of acoustical noise pertaining to methods of measurement, evaluation, and control, including biological safety, tolerance, and comfort, and physical acoustics as related to environmental and occupational noise

At the time this standard was submitted to Accredited Standards Committee S12, Noise, for approval, the membership was as follows:

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FOREWORD

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Individual experts of Accredited Standards Committee S12, Noise, were:

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Working Group S12/WG30 on the revision of the Power Tool Institute (PTI) standard ANSI/PTI S10.1-1983, which assisted Standards Committee S12, Noise, in the development of this standard, had the following membership:

R. J. Callahan, *Chair*

D. Keller	W. Saffell
J. Myers	D. Peot
	R. Stavenhagen

Suggestions for improvement of this standard will be welcomed. They should be sent to **Accredited Standards Committee S12, Noise, in care of the ASA Standards Secretariat, 335 East 45th Street, New York, NY 10017-3483. Telephone (212) 661-9404.**

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American National Standard For Acoustics—Portable Electric Power Tools, Stationary and Fixed Electric Power Tools, and Gardening Appliances— Measurement of Sound Emitted

1 PURPOSE AND SCOPE

1.1 Purpose

The purpose of this standard is to provide test procedures for the measurement of airborne sound from portable electric power tools, stationary and fixed electric power tools, and gardening appliances.

This standard provides for the measurement of sound pressure levels and for the calculation of sound power levels.

1.2 Scope

1.2.1. This standard applies to portable electric power tools rated at or below 250 volts (V) for use in accordance with American National Standard National Electric Code, ANSI/NFPA 70-1990.

1.2.2. This standard also applies to stationary and fixed electric power tools rated at or below 600 V for use in accordance with ANSI/NFPA 70-1990.

1.2.3. This standard also applies to gardening appliances, such as cultivators, edger-trimmers, grass shears, etc., either battery-operated or cord-connected, and rated at or below 250 V for use in accordance with ANSI/NFPA 70-1990.

1.2.4. This standard does not cover machine tools, as defined in ANSI/NFPA 70-1990, nor does it cover tools, other than hand tools, intended primarily for production line use. This standard does not cover garage equipment, soldering irons or guns, painting equipment, floor-finishing machines, or vacuum cleaners. Lawnmowers, snow throwers, and chain saws are also excluded since they are covered in American National Standard Safety Specifications for Power Lawn Mowers, Lawn and Garden Tractors, and Lawn Tractors, ANSI B71.1-1980, American National Standard Safety Specifications for Snow Throwers, ANSI B71.3-1984, and the American National Standard Safety Standard for Portable Electric Tools, ANSI/UL 45-1990, respectively.

1.2.5. This standard does not apply to pneumatic and gasoline-powered tools.

1.2.6. This standard also provides a single-sheet certification form (see Appendix A).

2 RELATED STANDARDS

2.1 Related American National Standards

This standard is intended to be used in conjunction with the following American National Standards:

(1) American National Standard National Electric Code, ANSI/NFPA 70-1990.

(2) American National Standard Specification for Sound Level Meters, ANSI S1.4-1983 and ANSI S1.4A-1985.

(3) American National Standard Preferred Frequencies and Band Numbers for Acoustical Measurements, ANSI S1.6-1984 (R 1990).

(4) American National Standard Preferred Reference Quantities for Acoustical Levels, ANSI S1.8-1989.

(5) American National Standard Specification for Octave, Half-Octave, and Third-Octave Band Filter Sets, ANSI S1.11-1986.

(6) American National Standard Methods for the Measurement of Sound Pressure Levels, ANSI S1.13-1971 (R 1986).

(7) American National Standard Safety Standard for Portable Electric Tools, ANSI/UL 45-1990.

(8) American National Standard Safety Standard for Motor-Operated Appliances, ANSI/UL 73-1985.

(9) American National Standard Safety Standard for Stationary and Fixed Electric Tools, ANSI/UL 987-1990.

(10) American National Standard Safety Standard for Snow Throwers Safety Specifications, ANSI B71.3-1984.

2.2 Other Related Standards

This standard is also intended to be used in conjunction with the following standards:

(1) Octave, Half-Octave, and Third-Octave Band Filters Intended for the Analysis of Sounds and Vibrations, IEC 225 (1966).