

ANSI/ASA S1.4-2014/Part 3 / IEC 61672-3:2013
Reaffirmed by ANSI August 13, 2019

AMERICAN NATIONAL STANDARD

**Electroacoustics – Sound Level Meters –
Part 3: Periodic Tests
(a nationally adopted international standard)**

ANSI/ASA S1.4-2014/Part 3 /
IEC 61672-3:2013

Accredited Standards Committee S1, Acoustics

Standards Secretariat
Acoustical Society of America
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(a nationally adopted international standard)

Secretariat:

Acoustical Society of America

Approved on July 21, 2014 by:

American National Standards Institute, Inc.

Abstract

ANSI/ASA S1.4-2014/Part 3 / IEC 61672-3:2013 describes procedures for periodic testing of time-weighting, integrating-averaging, and integrating sound level meters that were designed to conform to the class 1 or class 2 specifications of ANSI/ASA S1.4-2014/Part 1 / IEC 61672-1. The aim of the standard is to ensure that periodic testing is performed in a consistent manner by all laboratories. The purpose of periodic testing is to assure the user that the performance of a sound level meter conforms to the applicable specifications of ANSI/ASA S1.4-2014/Part 1 / IEC 61672-1 for a limited set of key tests and for the environmental conditions under which the tests were performed. Periodic tests described in this edition of ANSI/ASA S1.4-2014/Part 3 / IEC 61672-3 apply to sound level meters for which the manufacturer claims conformance to the specifications of the second edition of ANSI/ASA S1.4-2014/Part 1 / IEC 61672-1. Periodic tests described in ANSI/ASA S1.4-2014/Part 3 / IEC 61672-3 apply to sound level meters for which the model has been, or has not been, pattern approved by an independent testing organization responsible for pattern approvals in accordance with the test procedures of ANSI/ASA S1.4-2014/Part 2 / IEC 61672-2. Procedures for the periodic testing of sound level meters designed to conform to the specifications of IEC 61672-1:2002 were given in IEC 61672-3:2006.

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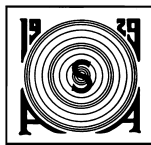
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Foreword

[This Foreword is for information only, and is not a part of the American National Standard ANSI/ASA S1.4-2014/Part 3 / IEC 61672-3:2013 American National Standard Electroacoustics – Sound Level Meters – Part 3: Periodic Tests. 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 acoustics. It was developed and approved by Accredited Standards Committee S1 Acoustics, under its approved operating procedures. Those procedures have been accredited by the American National Standards Institute (ANSI). The Scope of Accredited Standards Committee S1 is as follows:

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

This nationally adopted international standard is a new standard and does not revise or replace any pre-existing American National Standard.

This standard is identical to IEC 61672-3:2013, which was prepared by IEC Technical Committee 29, in cooperation with the International Organization of Legal Metrology (OIML). However, in conformance with ANSI and IEC rules, the words "this part of ANSI/ASA S1.4-2014 / IEC 61672" replace the words "this part of IEC 61672" 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.

This standard includes five Annexes. Annexes B, D and E are normative and are considered to be a part of this standard. Annexes A and C are informative and are not considered part of this standard.

The ANSI/ASA equivalents for the IEC standards in the IEC 61672 series are given below:

- ANSI/ASA S1.4-2014/Part 1 / IEC 61672-1:2013 is an identical national adoption of IEC 61672-1:2013.
- ANSI/ASA S1.4-2014/Part 2 / IEC 61672-2:2013 is an identical national adoption of IEC 61672-2:2013.
- ANSI/ASA S1.4-2014/Part 3 / IEC 61672-3:2013 is an identical national adoption of IEC 61672-3:2013.

This nationally adopted international standard is one of three standards that, taken together, revise and replace ANSI S1.4-1983 (R 2006), ANSI S1.4A-1985 (R 2006) and ANSI S1.43-1997 (R 2007). The subject matter in this document (Part 3) was not part of the superseded American National Standards.

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

R.J. Peppin, *Chair*
A. Scharine, *Vice-Chair*

S.B. Blaeser, *Secretary*

3M Personal Safety Division, Detection Solutions	P.J. Battenberg
.....	M. Wurm (Alt.)
Acoustical Society of America	R.J. Peppin
Air-Conditioning, Heating and Refrigeration Institute	S.J. Lind
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Individual Experts of Accredited Standards Committee S1, Acoustics, were:

V. Buzduga
P. Hanes

W.W. Lang
V. Nedzelnitsky
P.D. Schomer

C. Walber
L. Wu

Working Group S1/WG 17, Sound Level Meters and Integrating Sound Level Meters, which assisted Accredited Standards Committee S1, Acoustics, in the development of this standard, had the following membership.

G.R. Stephany, Chair

M. Alexander
R.J. Anderson
P.J. Battenberg

B.M. Brooks
K. Cox
J.J. Earshen

P. Hanes
R.J. Peppin
J.P. Seiler

Suggestions for improvements to this standard will be welcomed. They should be sent to Accredited Standards Committee S1, Acoustics, in care of the Standards Secretariat of the Acoustical Society of America, 1305 Walt Whitman Road, Suite 300, Melville, New York 11747. Telephone: 631-390-0215; FAX: 631-923-2875; E-mail: asastds@acousticalsociety.org.

Electroacoustics – Sound Level Meters – Part 3: Periodic Tests

1 Scope

This 2014 edition of ANSI/ASA S1.4-2014/Part 3 / IEC 61672-3 describes procedures for periodic testing of time-weighting, integrating-averaging, and integrating sound level meters that were designed to conform to the class 1 or class 2 specifications of the second edition of IEC 61672-1. The aim of the standard is to ensure that periodic testing is performed in a consistent manner by all laboratories.

NOTE 1 In this document, references to IEC 61672-1, IEC 61672-2, and IEC 61672-3 refer to the second editions unless stated otherwise.

U.S. INFORMATIVE NOTE In this document, references to IEC 61672-1, IEC 61672-2, and IEC 61672-3 refer to the three parts of ANSI/ASA S1.4-2014 / IEC 61672:2013. See the list provided in the Foreword.

NOTE 2 Procedures for the periodic testing of sound level meters designed to conform to the specifications of IEC 61672-1:2002 were given in IEC 61672-3:2006.

The purpose of periodic testing is to assure the user that the performance of a sound level meter conforms to the applicable specifications of IEC 61672-1 for a limited set of key tests and for the environmental conditions under which the tests were performed.

The extent of the tests in this part of ANSI/ASA S1.4 / IEC 61672 is deliberately restricted to the minimum considered necessary for periodic tests.

Periodic tests described in this edition of ANSI/ASA S1.4/Part 3 / IEC 61672-3 apply to sound level meters for which the manufacturer claims conformance to the specifications of the second edition of IEC 61672-1. Periodic tests described in this part of ANSI/ASA S1.4 / IEC 61672 apply to sound level meters for which the model has been, or has not been, pattern approved by an independent testing organization responsible for pattern approvals in accordance with the test procedures of the second edition of IEC 61672-2.

Because of the limited extent of the periodic tests, if evidence of pattern approval is not publicly available, no general conclusion about conformance to the specifications of IEC 61672-1 can be made, even if the results of the periodic tests conform to all applicable requirements of this edition of ANSI/ASA S1.4/Part 3 / IEC 61672-3.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60942, *Electroacoustics – Sound calibrators*

IEC 61094-5, *Measurement microphones – Part 5: Methods for pressure calibration of working standard microphones by comparison*