



IEC 60268-4

Edition 4.0 2010-06

# INTERNATIONAL STANDARD

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**Sound system equipment –  
Part 4: Microphones**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

PRICE CODE



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ICS 33.160.50

ISBN 978-2-88910-994-4

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

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## SOUND SYSTEM EQUIPMENT –

### Part 4: Microphones

#### FOREWORD

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International Standard IEC 60268-4 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

This fourth edition cancels and replaces the third edition published in 2004, and constitutes a technical revision.

The main changes with respect to the previous edition are the following:

- correction of noise measurement,
- added annex for digital microphones,
- added requirement for tolerances in data to be specified.

The text of this standard is based on the following documents:

FDIS	Report on voting
100/1678/FDIS	100/1707/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 60268 series, under the general title "*Sound system equipment*", can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual edition of this document may be issued at a later date.

## SOUND SYSTEM EQUIPMENT –

### Part 4: Microphones

#### 1 Scope

This part of IEC 60268 specifies methods of measurement for the electrical impedance, sensitivity, directional response pattern, dynamic range and external influences of sound system microphones, and also details the characteristics to be specified by the manufacturer.

It applies to sound system microphones for all applications for speech and music. It does not apply to measurement microphones, but it does apply to each audio channel of microphones having more than one channel, for example for stereo or similar use. It is also applicable to flush-mounted microphones and to the analogue characteristics of microphones with digital audio output.

For the purposes of this International Standard, a microphone includes all such devices as transformers, pre-amplifiers, or other elements that form an integral part of the microphone, up to the output terminals specified by the manufacturer.

NOTE The characteristics specified in this standard do not completely describe the subjective response of the microphone. Further work is necessary to find new definitions and measurement procedures for a later replacement by objective characteristics of at least some of the subjective descriptions used to describe microphone performance.

#### 2 Normative references

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

IEC 60065:2001, *Audio, video and similar electronic apparatus – Safety requirements*  
Amendment 1 (2005)

IEC 60268-1:1985, *Sound system equipment – Part 1: General*  
Amendment 1 (1988)  
Amendment 2 (1988)

IEC 60268-2:1987, *Sound system equipment – Part 2: Explanation of general terms and calculation methods*  
Amendment 1 (1991)

IEC 60268-3:2000, *Sound system equipment – Part 3: Amplifiers*

IEC 60268-5:2003, *Sound system equipment – Part 5: Loudspeakers*  
Amendment 1 (2007)

IEC 60268-11:1987, *Sound system equipment – Part 11: Application of connectors for the interconnection of sound system components*  
Amendment 1 (1989)  
Amendment 2 (1991)



IEC 60268-12:1987, *Sound system equipment – Part 12: Application of connectors for broadcast and similar use*  
Amendment 1 (1991)  
Amendment 2 (1994)

IEC 61000-4-2:1995, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3:2006, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*  
Amendment 1 (2007)

IEC 61265:1995, *Electroacoustics – Instruments for measurement of aircraft noise – Performance requirements for systems to measure one-third-octave-band sound pressure levels in noise certification of transport-category aeroplanes*

IEC 61938:1996, *Audio, video and audiovisual systems – Interconnections and matching values – Preferred matching values of analogue signals*

ISO 354:2003, *Acoustics – Measurement of sound absorption in a reverberation room*

ITU-T Recommendation P.51:1996, *Artificial mouth*