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Sound system equipment –
Part 4: Microphones

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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 sixth edition cancels and replaces the fifth edition published in 2014. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Subclause 19.4 on "pop" measurement replaces Annex C;
b) new Annex D for noise measurements in the digital domain.

The text of this International Standard is based on the following documents:

CDV	Report on voting
100/2992/CDV	100/3109/RVC

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

This document 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 document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

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- withdrawn,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

A bilingual version of this publication 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.

The major characteristics of a microphone are considered in Clauses 6 to 21. Additional characteristics are considered in Annex A and Annex C.

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

CISPR 35:2016, *Electromagnetic compatibility of multimedia equipment – Immunity requirements*

IEC 60268-1:1985, *Sound system equipment – Part 1: General*
IEC 60268-1:1985/AMD1:1988
IEC 60268-1:1985/AMD2:1988

IEC 60268-2:1987, *Sound system equipment – Part 2: Explanation of general terms and calculation methods*
IEC 60268-2:1987/AMD1:1991

IEC 60268-3:2013, *Sound system equipment – Part 3: Amplifiers*

IEC 60268-5:2003, *Sound system equipment – Part 5: Loudspeakers*
IEC 60268-5:2003/AMD1:2007

IEC 60268-11:1987, *Sound system equipment – Part 11: Application of connectors for the interconnection of sound system components*
IEC 60268-11:1987/AMD1:1989
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IEC 60268-12:1987, *Sound system equipment – Part 12: Application of connectors for broadcast and similar use*
IEC 60268-12:1987/AMD1:1991
IEC 60268-12:1987/AMD2:1994

IEC 61000-4-2:2008, *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*
IEC 61000-4-3:2006/AMD1:2007
IEC 61000-4-3:2006/AMD2:2010

IEC 61000-4-4:2012, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-6:2013, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-8:2009, *Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test*

IEC 61000-4-16:2015, *Electromagnetic compatibility (EMC) – Part 4-16: Testing and measurement techniques – Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz*

IEC 61000-4-17:1999, *Electromagnetic compatibility (EMC) – Part 4-17: Testing and measurement techniques – Ripple on d.c. input power port immunity test*
61000-4-17:1999/AMD1:2001
61000-4-17:1999/AMD2:2008

IEC 61260-1:2014, *Electroacoustics – Octave-band and fractional-octave-band filters – Part 1: Specifications*

IEC 61938:2013, *Multimedia systems – Guide to the recommended characteristics of analogue interfaces to achieve interoperability*

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

EN 55103-2:2009, *Electromagnetic compatibility – Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use – Part 2: Immunity*

EN 300 422-2 V1.3.1:2011, *Electromagnetic compatibility and radio spectrum matters (ERM) – Wireless microphones in the 25 MHz to 3 GHz frequency range – Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive*