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BUREAU OF INDIAN STANDARDS
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मसौदा भारतीय मानक
मेगफोन्स – विशिष्टि (पहला पुनरीक्षण)

Draft Indian Standard
Specification for megaphones (First Revision)

LITD 07 Audio, Video and Multimedia Systems and Equipment Sectional Committee	**Last Date for Comments**: 26 **October 2025**

NATIONAL FOREWORD
(Formal clauses will be added later)

This Indian Standard may be adopted by the Bureau of Indian Standards, after the draft finalized by Audio, Video and Multimedia Systems and Equipment Sectional Committee would be approved by the Electronics and Information Technology Divisional Council.

This Standards was published in 1973. First revision has been taken up to incorporate the following changes:

1. The scope has been changed to remove the limitation to transistorized megaphones only.
2. The restriction of power source only to 'dry cells' has been removed.
3. 'Loudspeaker' have been replaced with 'loudspeakers with horn'.
4. The list of referred standards has been updated.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:2022 'Rules for rounding off numerical values *(Second Revision)*'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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Indian Standard

Specification for megaphones

1. SCOPE

1.1 This standard prescribes the general and performance requirements of megaphones.

1.2 Methods of measurements and electro-acoustic requirements and classification of type tests, acceptance tests and routine tests are not covered in this standard.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definition shall apply.

2.1 Megaphone − A device used to intensify or direct the sound. This consists of a microphone, an amplifier, a loudspeaker with horn and power supply, built into a single portable unit.

3. CATEGORY

3.1 The megaphone shall be able to withstand the following climatic severities:

Climatic Text	*Severities*
Dry heat	+70° C
Cold	-10° C
Damp heat (cycling)	2 cycles

NOTE-In case of special requirements where the above category cannot be applied, different combinations of climatic severities may be agreed to between the purchaser and the supplier, provided that the degrees of severity are chosen from those specified in IS 9000 series.

4. MATERIALS COMPONENTS, WORKMANSHIP AND ACCESSORIES

4.1 Materials and Components − The megaphone shall be constructed from suitable materials and components conforming to relevant Indian Standard Specifications, if any.

4.2 Workmanship − All parts of the megaphone shall be manufactured thoroughly workmanlike manner and in accordance with good engineering practice. Battery should be easily replaceable.

4.3 Each megaphone shall be provided with at least the following:

a) Volume control,

b) Strap for hanging from shoulder, and

c) On-off switch (non-locking type).

4.3.1 The following optional facilities may be provided:

a) Input socket with appropriate markings and cable, for use with external power supply. The socket shall be suitably polarized.

b) Input socket and cable with remote on-off switching facility for use with external microphone.

c) Socket for auxiliary input.

d) Microphone dust cover.

5. MARKING

5.1 Each megaphone shall be clearly and indelibly marked with the following information.

a) Name and trade-mark of the manufacturer,
b) Serial number,
c) Rated power output of the amplifier,
d) Supply voltage and battery polarity, and
e) Country of origin.

5.2 Each megaphone may also be marked with the Standard Mark. The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 2016 and the Rules and Regulation made there under. Details of conditions under which a license for the use of Standard Mark may be granted to manufacturers and producers may be obtained from the Bureau of Indian Standards.

6. MECHANICAL REQUIREMENTS

6.1 Dimension − The dimensions shall comply with the manufacturer's specification.

6.2 Weight − Weight of the complete unit without battery and without shoulder strap shall be not more than 2.5 kg.

7. ELECTRO-ACOUSTIC REQUIREMENTS

7.1 Output Sound Pressure Level − For the purpose of this measurement, the level of speech and the setting of the volume control shall be such that there is no appreciable acoustic feed back. The output found pressure level at a specified point (1.5 meters) on the axis shall be not less than 90dB.

7.2 Harmonic Distortion − The overall harmonic distortion shall be less than 10 percent at 1000 Hz at the conditions specified in 7.1.

7.3 Frequency Response − The overall frequency response shall be within ± 3 dB from 300 to 3000 Hz.

7.4 Power Source − It shall be possible to use commonly available cells which can be accommodated within the units.

7.5 Life of Power Source−With a 1000 Hz sinusoidal input signal and the amplifier operated at 10 percent of the rated output power, the on- load voltage per cell shall not fall below 0.75 V/cell in less than 5 hours.

7.6 Rated Power Output of the Amplifier − The rated power output shall be as specified by the manufacturer.

7.7 Temperature Limited Output − Under Consideration.

8. CLIMATIC TESTS

8.1 Climatic Sequence − The climatic sequence shall consist of dry heat, damp heat (cycling) and cold tests carried out in the following order:

a) Dry heat (see **8.1.1**),

b) Damp heat (cycling)-first cycle (see **8.1.2**),

c) Cold (see **8.1.3**), and

d) Damp heat (cycling)-remaining cycles (see **8.1.4**).

8.1.1 *Dry Heat* − The megaphone shall be subjected to dry heat test in accordance with IS/IEC 60068-2-2:2007. The temperature of the test chamber shall be maintained at the appropriate maximum value of the category (see **3.1**).

8.1.2 *Damp Heat (Cycling)* − The megaphone shall be subjected to the first cycle of damp heat (cycling) test in accordance with IS/IEC 60068-2-30:2005.

8.1.3 *Cold* − The megaphone shall be subjected to cold test in accordance with *IS 9000 : Part 11 : Sec 1 to 4*. The temperature of the test chamber shall be maintained at the appropriate minimum value of the category (see **3.1**).

8.1.4 *Damp Heat (Cycling)* − The megaphone shall be subjected to the remaining cycles of damp heat (cycling) test in accordance with IS/IEC 60068-2-30:2005 (see **3.1**). The number of remaining cycles in this case is one cycle.

8.1.5 Final Measurement − At the end of the climatic sequence the megaphone shall be kept at the standard atmospheric conditions specified in IS 9000: Part 11: Sec 1 to 4 for 24 hours for recovery. At the end of the recovery period, there shall be no mechanical damage and the megaphone shall confirm to the requirements specified in 7.

8.2 Water Spray − The megaphone shall pass the water spray test specified in IS/IEC 60068-2-18:2017. The normal operating position of the megaphone shall be horizontal. At the end of the recovery period there shall be no mechanical damage and the megaphone shall conform to the requirements specified in 7.

8.3 Bump − This test shall be carried out in accordance with *IS 9000 (Part 7/Sec 1):2018 IEC 60068-2-27 : 2008.* At the end of the recovery period there shall be no mechanical damage and the megaphone shall conform to the requirements specified in 7.

8.4 Vibration − This test shall be carried out in accordance with IS/IEC 60068-2-6 : 2007. At the end of the recovery period there shall be no mechanical damage and the megaphone shall conform to the requirements specified in 7.