



**E1.8-2018**  
**Entertainment Technology—Loudspeaker Enclosures Intended  
for Overhead Suspension—Classification, Manufacture and  
Structural Testing**

Approved by the ANSI Board of Standards Review on 29 November 2018

Rig/1997-2021r17

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**Interest category codes:**

CP = custom-market producer

DR = dealer rental company

MP = mass-market producer

DE = designer

G = general interest

U = user

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## **Foreword**

The ANSI E1.8 project was initially conceived, developed and subsequently approved as an American National Standard to improve safety with respects to loudspeaker enclosures intended for overhead suspension.

This standard presents a coordinated set of rules that may serve as a guide to regulatory bodies, municipalities and others having jurisdiction responsibilities for inspection of the equipment covered by its scope. The suggestions leading to accident prevention are given both as mandatory and advisory provisions; compliance with both types may be required by employers of their employees.

Safety codes and standards are intended to enhance public safety. This revision of the original standard considers evolving changes in industry technology and acceptable practice occurring since the original standard's publication. Revisions do not imply that previous editions were inadequate. Compliance with this Standard does not itself confer immunity from legal obligations.

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## 1 Scope

### 1.1 General

This standard covers the requirements for enclosures specifically intended for overhead suspension, but addresses only the structural characteristics of the enclosure pertaining to its suspension, such as enclosure construction, component part security, enclosure suspension hardware, manufacturing control systems, structural testing, and product representation.

### 1.2 Annex note references

This document uses annex notes to provide additional reference information about certain specific section requirements, concepts, or intent. Subject matter with a corresponding annex note reference is identified by the asterisk (\*) symbol, and the associated reference text is found in the Annex section, identified with the referring text section number – e.g. an Annex Note to section 3.2 will be identified in the annex section as 3.2.

## 2 Definitions

**2.1 competent person.** A person who is capable of identifying existing and predictable hazards in the workplace and who is authorized to take prompt corrective measures to eliminate them.

**2.2 component.** Parts of a whole.

**2.3 design factor.** A ratio between working load limit and the material strength, expressed as either yield point or failure point depending upon the context of use. Example: a design factor of 10 relative to ultimate failure means that the enclosure component or assembly has a design capacity of 10 times the working load limit.

**2.4 enclosure.** All parts of the loudspeaker system housing or assembly exclusive of the enclosure suspension hardware, electrical wiring, electrical components, acoustical radiating elements and any cover material intended to be user-removable.

**2.5 enclosure suspension hardware.** Suspension components permanently affixed to the enclosure by the manufacturer.

**2.6 manufacturer.** Person or company that fabricates enclosures.

**2.7 permanent.** Not temporary. Affixed and formed in a fashion intended to be functional for the lifetime of use.

**2.8 qualified person.** a person who, by possession of a recognized degree or certificate of professional standing, or who, by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter and work.

**2.9 shall.** Denotes a mandatory requirement.

**2.10 should.** Denotes an advisory suggestion or recommendation; not mandatory.

**2.11 ultimate failure.** Stress causing fracture, rupture or other similar catastrophic failure of a component or material, generally designated as  $F_u$  in material properties information.

**2.12 ultimate strength.** The capacity to resist the maximum force that can be applied without ultimate failure occurring.

**2.13 user.** Person or company who assembles or uses enclosures.

**2.14 working load limit (WLL).** Maximum allowable static or equivalent load intended to be applied to an enclosure or a component of an enclosure; rated load.