AS 3658—1989

Australian Standard®

Vibration and shock — Mechanical vibration and shock affecting humans — Vocabulary

This Australian Standard was prepared by Committee AV/1, Acoustics/Vibration — Terms, Units and Symbols. It was approved on behalf of the Council of Standards Australia on 11 November 1988 and published on 26 June 1989.

The following interests are represented on Committee AV/1:

Audiological Society of Australia
Australian Acoustical Society
Australian Environment Council
Australian Institute of Physics
Confederation of Australian Industry
CSIRO, Division of Applied Physics
Department of Industrial Relations and Employment, N.S.W.
Monash University
Royal Australian Institute of Architects
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PREFACE

This Standard was prepared by Standards Australia's Committee on Acoustics/ Vibration — Terms, Units and Symbols. It is substantially in agreement with ISO 5805, *Mechanical vibration and shock affecting humans — Vocabulary*. It defines terms relating to human exposure to mechanical vibration and shock. Terms which have already received a standard definition in AS 2606, *Vibration and shock — Vocabulary*, which this vocabulary is intended to supplement, are not included, nor are many unspecialized terms which, although they may be relevant to the scope of this terminology, are readily to be found in general, technical, medical, or scientific lexicons.

A few synonyms have been included among terms defining directions of vibration and shock affecting humans, where widespread use of the synonyms is still current. The use of the primary standard term entered first, following the numerical identifier, is however recommended, and the use of ambiguous synonyms is deprecated.

References to 'shock' are to be understood in the mechanical rather than the medical sense; mechanical shock is defined in AS 2606.

More information regarding biodynamic and basicentric co-ordinate systems will be found in AS 2670, *Vibration and shock — Guide to the evaluation of human exposure to whole body vibration*, and AS 2763, *Vibration and shock — Hand-transmitted vibration — Measurements and medical screening.*

CONTENTS

STANDARDS AUSTRALIA

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SECTION 1. GENERAL

No	Term	Definition
1.001	**building vibration (or shock)**	Mechanical vibration (or shock) affecting humans, or sensed or detectable by humans, in or on a building, bridge, or other fixed structure. NOTE: Building vibration disturbing humans is not infrequently associated with noise, and many people have difficulty distinguishing vibratory from acoustical disturbances in buildings.
1.002	**footfall**	Mechanical vibration, shock motion, or noise generated by people moving about in buildings.
1.003	**indirect vibration**	Mechanical vibration which disturbs humans without entering the body (e.g. vibration of the visual field).
1.004	**limb vibrator** segmental vibrator	Vibration machine (usually small) for applying mechanical vibration topically to a human limb or other part of the body for experimental or therapeutic purposes.
1.005	**ride**	Measurable motion environment (including mechanical vibration, shock, rotational motions, sustained accelerations, etc) in a vehicle as experienced by the passengers and crew.
1.006	**self-applied vibration**	Mechanical vibration applied to one's own body for therapeutic, recreational, or pleasurable purposes.
1.007	**self-induced vibration** (in biodynamics)	Endogenous mechanical vibration, i.e. oscillatory motion of or within the body induced by muscular activity (such as walking or dancing) or the action of organs (such as the beating of the heart). (See also AS 2606, *Vibration and shock — Vocabulary*.)
1.008	**traffic vibration**	Perceptible or measurable mechanical vibration of the ground or of a structure caused by the passage of vehicular traffic.
1.009	**vibration (or shock) limit**	Quantitative expression, which is properly based on adequate statistical data, of the maximum intensity or severity of mechanical vibration (or shock) recommended for human exposure according to a specified criterion (e.g. a limit of safe exposure when the criterion is the prevention of injury or disease). NOTE: Australian Standards within the scope of evaluating human response to mechanical shock and vibration usually define assessment methods for evaluating human response and particular dose-response relationships. It is, in general, not the function of such Standards to set absolute exposure limits. The term 'vibration (or shock) limit' is sometimes used by appropriate legislative or regulatory authorities, and it is recommended that they use the methods and data presented in Australian Standards as bases for their decisions.
1.010	**vibration (or shock) criterion**	Expression of the purpose (e.g. to preserve health, efficiency, or comfort) to establish a vibration (or shock) limit. (*See also* vibration (or shock) limit). NOTE: Fully expressed, a criterion should also define the scope of the limit and the fraction or percentile of the population to be protected by the limit.
1.011	**vibration rating** (in biodynamics)	Subjective estimation of vibration intensity or severity using a rating scale or set of numbers obtained by means of psychological testing. NOTE: Vibration rating is commonly analogous to the scaling of the loudness or perceived noisiness of audible sound.
1.012	**vibratory communication**	Communication with a person by means of the vibration sense using vibratory signals applied to the body mechanically or induced electrically.