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# Acoustics — Description, measurement and assessment of environmental noise —

## Part 1: Basic quantities and assessment procedures

*Acoustique — Description, mesurage et évaluation du bruit de  
l'environnement —*

*Partie 1: Grandeurs fondamentales et méthodes d'évaluation*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 1996-1 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

This second edition of ISO 1996-1, together with the second edition of ISO 1996-2, cancels and replaces the first edition (ISO 1996-1:1982), and ISO 1996-2:1987, ISO 1996-2:1987/Amd.1:1998 and ISO 1996-3:1987.

ISO 1996 consists of the following parts, under the general title *Acoustics — Description, measurement and assessment of environmental noise*:

- *Part 1: Basic quantities and assessment procedures*
- *Part 2: Determination of sound pressure levels*

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## Introduction

To be of practical use, any method of description, measurement and assessment of environmental noise must be related in some way to what is known about human response to noise. Many adverse consequences of environmental noise increase with increasing noise, but the precise dose-response relationships involved continue to be the subject of scientific debate. In addition, it is important that all methods used should be practicable within the social, economic and political climate in which they are used. For these reasons, there is a very large range of different methods currently in use around the world for different types of noise, and this creates considerable difficulties for international comparison and understanding.

The broad aim of the ISO 1996 series is to contribute to the international harmonization of methods of description, measurement and assessment of environmental noise from all sources.

The methods and procedures described in this part of ISO 1996 are intended to be applicable to noise from various sources, individually or in combination, which contribute to the total exposure at a site. At the present stage of technology, the evaluation of long-term noise annoyance seems to be best met by adopting the adjusted A-weighted equivalent continuous sound pressure level which is termed a "rating level".

The aim of the ISO 1996 series is to provide authorities with material for the description and assessment of noise in community environments. Based on the principles described in this part of ISO 1996, national standards, regulations and corresponding acceptable limits for noise can be developed.