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**Ergonomics — Accessible design —  
Spoken instructions of consumer  
products**

*Ergonomie — Conception accessible — Instructions orales pour les  
produits de consommation courante*



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 4, *Ergonomics of human-system interaction*.

This first edition cancels and replaces ISO 24500:2010.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Consumer products, as defined in ISO 20282-1, include home electrical appliances, information and telecommunication products, gas-heating equipment, toys, sanitary equipment, health-care products, and cameras, some of which use spoken instructions.

These spoken instructions can assist product users regardless of age, including those with visual impairments or moderate cognitive disorders that can cause reading difficulties, in using the product correctly and safely. The spoken instructions are also helpful for some users who are not accustomed to using the product. Therefore, the instructions should be designed so that they are easy to hear and comprehend.

This document adopts the principles of accessible design given in ISO/IEC Guide 71 and amplified in ISO/TR 22411.



# Ergonomics — Accessible design — Spoken instructions of consumer products

## 1 Scope

This document specifies ergonomic requirements and recommendations for consumer product spoken instructions that are provided to guide users in the operation of a product and/or as a means of providing feedback to users about the status/state of a product. Such instructions can be used by persons with or without visual impairments, and are useful for users who have difficulty reading and/or cognitive impairments.

The applicability of the requirements and recommendations described in this document does not depend on the language of the instructions or whether the instructions are provided via recorded human speech or synthesized speech from text.

The requirements and recommendations in this document are applicable to conventional, stand-alone consumer products in general, whose function is limited by characteristics that prevent a user from attaching, installing or using assistive technology in order to use the product. They are not applicable to machines and equipment used for professional work.

This document does not apply to products for which the instructional content and/or the means of presentation are specified in other standards (e.g. medical devices, fire alarms). It also does not provide recommendations or requirements for spoken instructions of Interactive Voice Response (IVR) systems or digital assistants on personal computers or similar devices.

NOTE ISO 9241-154 provides recommendations or requirements for IVR systems.

This document does not specify voice sounds of text-to-speech systems or narrative speech used in place of printed instruction manuals and independently from the product.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

### 3.1

#### consumer product

product that is intended to be acquired and used by an individual for personal rather than professional use

[SOURCE: ISO 20282-1:2006, 3.2]

### 3.2

#### spoken instruction

instruction emitted by a product for the purpose of conveying information to help the user to use the product correctly or to know the state of the product