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**Ergonomics — Accessible design —  
Accessibility of information presented  
on visual displays of small consumer  
products**

*Ergonomie — Conception accessible — Accessibilité des informations  
présentées sur les écrans de visualisation des produits de  
consommation de petite taille*



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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)).

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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*.

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

Visual displays are in-built in many consumer products to be used to present information about the status, function or operation of the product to the users. If a product is big enough to adopt large displays, it would be easy to make the various users including older or visually disabled people feel comfortable in recognizing and understanding the presented information on the displays. Some small consumer products, such as digital cameras and remote controllers of air conditioners, are equipped with a small display because of the limited space on the product itself. The adoption of small display can mean that many users experience difficulties in using those products because they cannot easily recognize or understand the information visually presented on it. Among the many things that can be done to make the product more accessible to the widest range of users, one thing is to carefully design the visual information presented on the small display. This document provides design guidance on the accessibility of visually presented information on small displays.



# Ergonomics — Accessible design — Accessibility of information presented on visual displays of small consumer products

## 1 Scope

This document specifies the methods to improve accessibility of the visual display on small consumer products in order to minimize inconveniences that a variety of users including people with disabilities and the elderly can experience while using those products.

In particular, this document focusses on how to present information on small visual displays to make the product more accessible for older people and people with low vision or colour deficiency. The provision of different modalities or alternative ways of displaying information to make the product more accessible is not covered in this document. This document only covers accessibility with regard to visual presentation of information, not audio or tactile-based display methods.

NOTE 1 Accessibility of a product can be enhanced by adopting alternative means to the visual presentation of the information, which is not covered in this document. For information about alternative forms of presentation, ISO/IEC Guide 71, ISO 9241-112 and ISO 9241-171 can be useful.

NOTE 2 A comprehensive catalogue of accessibility needs and strategies for accommodation for all users (not only those with visual impairments) is out of scope for this document. Readers interested in this regard can refer to ISO/IEC 29138-1.

This document applies to various consumer products equipped with digital displays, in which the information about operation of the product is visually presented. The products are usually equipped with built-in display panels. The consumer products include those hand-held products that can be easily carried by the user or those that are not portable but equipped with small displays, though the size of the product or the display is not specified in this document.

NOTE 3 This document focusses on the accessibility of small displays, regardless of the size of the consumer product.

NOTE 4 Examples include, but are not limited to, electronic thermometers, digital cameras, air-conditioning systems, remote controllers.

This document is not applicable to those products with high flexibility or adjustability in presenting information on the display. Some examples are web- or application-based displays of ICT devices such as smart phones, smart TVs, and tablet PCs. It is not applicable to touch-based displays that have both the functions of display and control. Some examples are touch interfaces of smart watches or digital cameras. Finally, accessibility issues relating to indicating lamps/lights used for simple alerts or alarm are covered in ISO 24550 and are not considered in this document.

NOTE 5 There are many accessibility issues in the touch interface related to information presentation as well as control function and they need to be dealt with together.

It is possible that some guidance of this document is not applicable to some products, such as oral or ear thermometers, which have extremely small in-built displays.

## 2 Normative references

There are no normative references in this document.