



**SLOVENSKI STANDARD**  
**SIST EN 301 462 V1.1.1:2003**  
**01-december-2003**

Human Factors (HF); Symbols to identify telecommunications facilities for the deaf and hard of hearing people

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# ETSI EN 301 462 V1.1.1 (2000-03)

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*European Standard (Telecommunications series)*

## **Human Factors (HF); Symbols to identify telecommunications facilities for deaf and hard of hearing people**

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## Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Human Factors (HF).

Technical Report TR 101 767 [4] describes the work that was undertaken in choosing and testing the symbols presented in the present document. TR 101 767 [4] shows that the principles laid out in EG 201 379 [1].

National transposition dates	
Date of adoption of this EN:	11 February 2000
Date of latest announcement of this EN (doa):	31 May 2000
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 November 2000
Date of withdrawal of any conflicting National Standard (dow):	30 November 2000

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## Introduction

The symbols contained in the present document have been designed and tested in order to maximize their acceptability to deaf and hard of hearing people. The use of these symbols on, near, or otherwise associated with equipment that provides the appropriate facilities for deaf and hard of hearing people is encouraged. Such usage would be likely to increase the usage of the facilities provided and thus maximize the benefit to deaf and hard of hearing people.

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# 1 Scope

The present document defines symbols to identify telecommunication facilities for deaf and hard of hearing people.

The telecommunication facilities addressed are:

- amplification;
- coupling for hearing aids, these include:
  - induction coupling;
  - electrical coupling.
- text telephony;
- videotelephony, these include:
  - general videotelephone;
  - high quality videotelephone, suitable for lip reading and fluent signing.
- general non-specific facilities which may or may not be telecommunication related.

The symbols in the present document are presented in accordance with the drafting rules described in IEC 416 [3].

This document is applicable to:

- telecommunication equipment and services provided by manufacturers, network operators and service providers, that offer the defined facilities or technologies intended to assist deaf and hard of hearing people;
- public information signs that may be used to identify telecommunication facilities intended to assist deaf and hard of hearing people;
- telecommunication directories that identify telecommunication facilities intended to assist deaf and hard of hearing people connected to specific numbers;
- packaging and/or associated product documentation that supports telecommunication equipment, facilities or services intended to assist deaf and hard of hearing people.

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# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

- [1] EG 201 379: "Human Factors (HF); Framework for the development, evaluation and selection of graphical symbols".
- [2] ITU-T Definition 02.53 (1961): "List of definitions of essential telecommunication terms".
- [3] IEC 60416: "Guide for general principles for the creation of graphical symbols for use on equipment".

- [4] TR 101 767: "Human Factors (HF); Symbols to identify telecommunications facilities for the deaf and hard of hearing people; Development and evaluation".
- [5] ETS 300 381: "Telephony for hearing impaired people; Inductive coupling of telephone earphones to hearing aids".
- [6] ETS 300 488: "Terminal Equipment (TE); Telephony for hearing impaired people; Characteristics of telephone sets that provide additional receiving amplification for the benefit of the hearing impaired".
- [7] ETS 300 679: "Terminal Equipment (TE); Telephony for the hearing impaired; Electrical coupling of telephone sets to hearing aids".
- [8] ETR 333: "Human Factors (HF); Text Telephony; Basic user requirements and recommendations".
- [9] IEC 60118-11 (1983): "Symbols and other markings on hearing aids and related equipment" (Implements CENELEC HD 450.11 S).

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## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

**additional receiving amplification:** facility provided in a terminal whereby the gain in the receiving direction from telephone line to ear may be increased (or decreased) relative to that required by the **relevant terminal standard**, for the purpose of enabling the user to select, within certain limits, his/her preferred receiving loudness. (as defined in ETS 300 488 [6])

**coupling:** linkage between two systems whereby energy is transferred from one system to another (ITU-T Definition 02.53 [2]). The energy may be in a form capable of conveying information.

**electrical coupling:** transmission of information from one device to another through a direct electrical connection. The interconnection from a telephone to a hearing aid is taken from the electrical path to the telephone earphone (as required by ETS 300 679 [7])

**infra-red coupling:** transmission of information from one device to another by means of infra red radiation

**radio coupling:** transmission of information from one device to another by means of radio signals

**relevant terminal standard:** standard which would apply if the terminal concerned did not provide additional receiving amplification for the benefit of hearing impaired users. (As defined in ETS 300 488 [6])

**symbol:** symbols, pictograms, and icons are all graphic devices used to convey information, either as complementary to or as replacement for text. The word symbol is sometimes used specifically to refer to abstract representations, the word pictogram to refer specifically to pictorial representations, and the word icons to screen based graphical devices. In practice these distinctions are often unclear and so the term symbol is used here generically

**telephone amplification:** loose term implying the provision of **additional receiving amplification** within a telephone terminal

**text telephone:** terminal offering **text telephony** functions, either as a standalone unit or as an addition to a voice telephone, videotelephone or other telecommunication terminal; or as an application in a multifunction computer based terminal

**text telephony:** telecommunication facility offering real-time text conversation through telecommunication networks (as described in ETR 333 [8]). Text telephony may be combined with voice or video telephony



**videotelephone:** terminal offering **videotelephony** functions, either as a standalone unit, or as an addition to a voice, text or other telecommunication terminal or as an application in a multifunction computer based terminal

**videotelephony:** telecommunication service providing an interactive, bi-directional, real-time audio-visual communication, normally intended for a single user at either end

## 3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

IEC	International Electrotechnical Commission
ISO	International Standards Organisation

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# 4 Telecommunications facilities for deaf and hard of hearing people



## 4.1 General or unspecified facilities

### 4.1.1 Description

Where facilities for deaf or hard of hearing people are provided it is necessary to be able to indicate this. In many instances it may be useful to indicate the specific facilities that are provided and many of the symbols in this document indicate such specific facilities. Where no symbol exists for the specific facility provided for deaf or hard of hearing people it is necessary to provide a symbol that gives a well understood general indication that some facility has been provided. Such a symbol can also be of value to indicate that a range of facilities is provided instead of or in addition to the provision of symbols indicating the individual facilities.

A symbol indicating general facilities for deaf and hard of hearing people can also form the basis for a set of symbols that indicate specific facilities by using additional graphic elements added to the general symbol.

## 4.1.2 Symbol

	<p>Symbole Graphique No. 17: Facilites en général pour sourds et/ou malentendants</p> <p>Graphical Symbol No. 1: General facilities for deaf and/or hard of hearing people</p>	<p>EN 301 462</p>
<p>SYMBOLE ORIGINAL ORIGINAL SYMBOL (a = 50 mm)</p> <div style="text-align: center;">  <p><b>iTeh STANDARD PREVIEW</b> <b>(standards.iteh.ai)</b></p> <p>SIST EN 301 462 V1.1.1:2003 <a href="https://standards.iteh.ai/catalog/standards/sist/e8991118-87ea-4ad5-8f6c-a5745433b939/sist-en-301-462-v1-1-1-2003">https://standards.iteh.ai/catalog/standards/sist/e8991118-87ea-4ad5-8f6c-a5745433b939/sist-en-301-462-v1-1-1-2003</a></p> </div> <p>Dimensions réelles hauteur = 1,30 a largeur = 1,41 a</p> <p>Real dimensions height = 1,30 a width = 1,41 a</p> <p>Application: In telephony, for indicating a facility for deaf or hard of hearing people.</p>		

## 4.2 Telephone Amplification

### 4.2.1 Description

The facility to control and vary the amplification of the incoming speech path within telecommunication terminals and intended to be of particular benefit to hard of hearing people.

ETS 300 488 [6] specifies characteristics of telephone sets that provide additional receive amplification for the benefit of hard of hearing people. This standard applies both to telephones that can be connected to the PSTN and the ISDN and there is no reason why similar requirements could not be applied to mobile or other terminals offering a speech path. The standard requires the telephone to have normal sending characteristics and, when the receiving gain is set to normal, normal receiving characteristics. The receiving frequency response is permitted to vary outside normal limits when the receiving loudness is set to be outside the normal range allowed by the relevant telephone specification. Gains of up to 20 dB are permitted and the possible use of voice switching for the prevention of instability is acknowledged. Unless provisions are made to prevent instability occurring, it is required that the telephone reverts to normal gain at the end of a call so as to prevent problems when the telephone is used by users with normal hearing.

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