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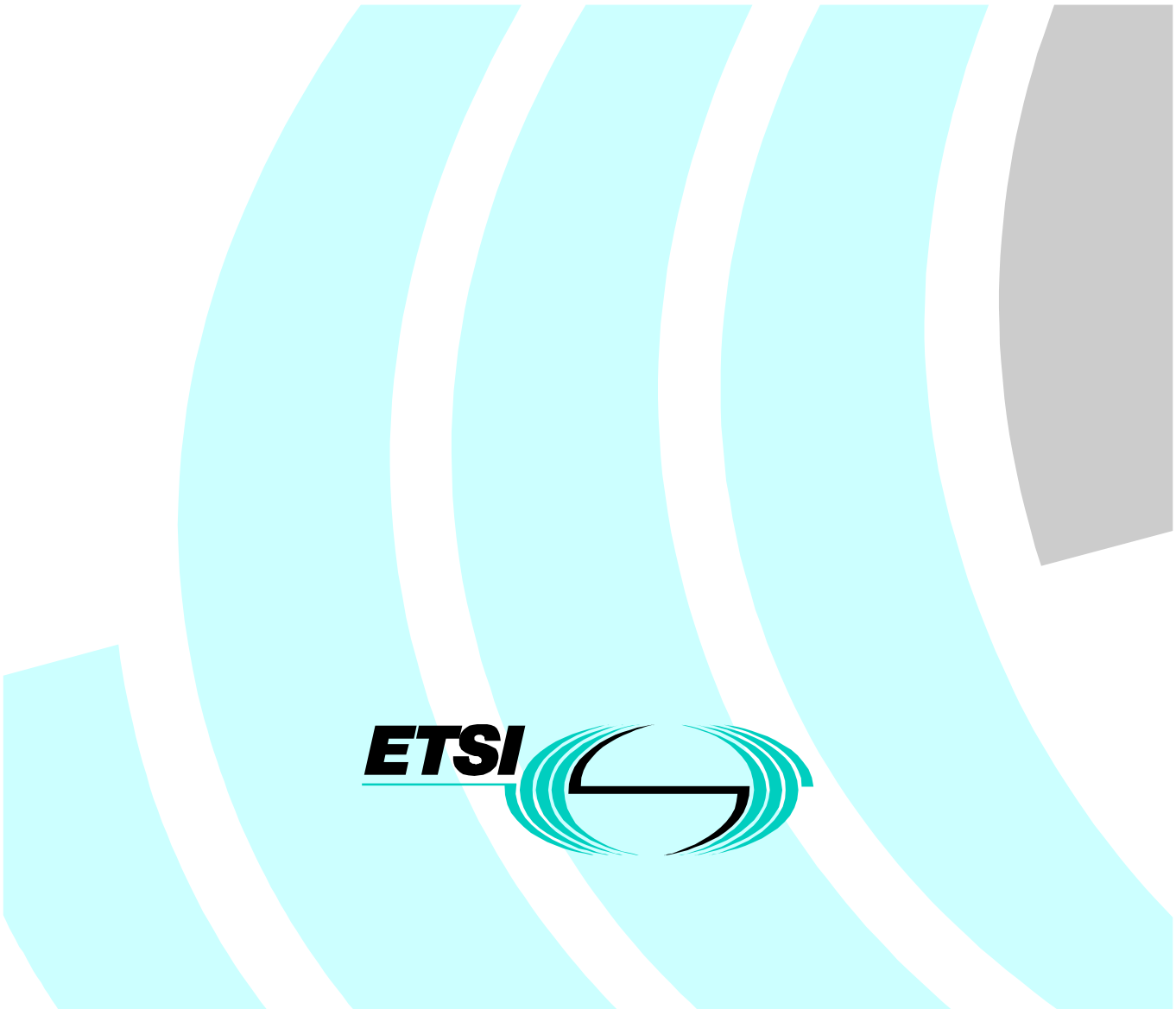
European Standard (Telecommunications series)

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



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Contents

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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
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Date of withdrawal of any conflicting National Standard (dow):	30 November 2000

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.

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.

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).

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

4 Telecommunications facilities for deaf and hard of hearing people

4.1 General or unspecified facilities

4.1.1 Description

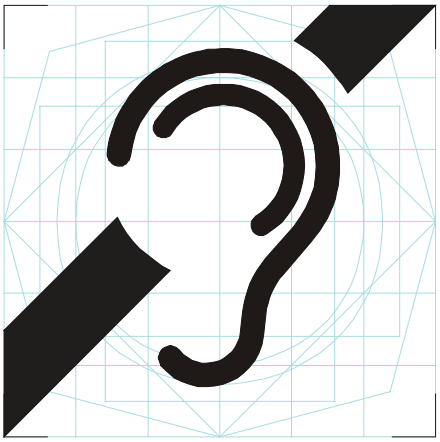
Where facilities for deaf or hard of hearing people are provided it is necessary to be able to indicate this. In many instances it may be useful to indicate the specific facilities that are provided and many of the symbols in this document indicate such specific facilities. Where no symbol exists for 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

ETSI	Symbole Graphique No. 17: Facilites en général pour sourds et/ou malentendants Graphical Symbol No. 1: General facilities for deaf and/or hard of hearing people	EN 301 462

SYMBOLE ORIGINAL
ORIGINAL SYMBOL
(a = 50 mm)



Dimensions réelles
hauteur = 1,30 a
largeur = 1,41 a

Real dimensions
height = 1,30 a
width = 1,41 a

Application: In telephony, for indicating a facility for deaf or hard of hearing people.

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.

4.2.2 Symbol

The symbol may be used to indicate:

- that the facility is provided on a telecommunication terminal;
- the specific control is used to vary the level of amplification.

ETSI	Symbole Graphique No. 9: Amplification (Téléphone) Graphical Symbol No. 9: Telephone Amplification	EN 301 462

SYMBOLE ORIGINAL
ORIGINAL SYMBOL
(a = 50 mm)

Dimensions réelles
hauteur = 1,30 a
largeur = 1,41 a

Real dimensions
height = 1,30 a
width = 1,41 a

Application: In telecommunication, for indicating the facility to amplify the received speech path.

4.3 Coupling

ITU-T defines coupling as the linkage between two systems whereby energy is transferred from one system to another (ITU-T Definition 02.53 [2]). For the purposes of this document the two systems involved may be:

- a telephone and a hearing aid;
- a public telecommunication terminal and a hearing aid;
- a telecommunication terminal and a portable text telephone or personal digital assistant (PDA) acting as a text telephone.

Consequently, for the purposes of this document the energy shall be in a form capable of conveying information.

4.3.1 Inductive Coupling

4.3.1.1 Description

The most common form of coupling available in telephony terminals intended to benefit hard of hearing people using hearing aids. Typically, by using the alternating magnetic field created in an earphone presenting the received speech, and the close proximity of a coupling coil within a hearing aid. ETS 300 381 [5] defines the characteristics required within a telecommunication terminal offering inductive coupling.

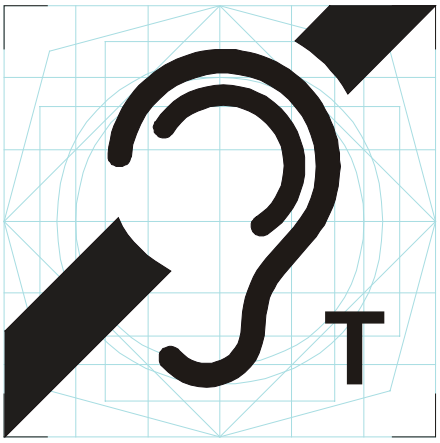
Hearing aids provided with the means to switch between a coupling coil and the usual microphone pick up often use the letter "T" to indicate when the hearing aid is set to inductive coupling. See IEC 118-11 [9].

Although inductive coupling is almost always used to couple to hearing aids, the wording of the "Application" text in subclause 4.3.1.2 has been broadened to allow for the possibility that inductive coupling may also be used to couple to other devices designed to assist hard of hearing people.

4.3.1.2 Symbol

ETSI	Symbole Graphique No. 10: Raccordement par inductive Graphical Symbol No. 10: Inductive Coupling	EN 301 462

SYMBOLE ORIGINAL
ORIGINAL SYMBOL
(a = 50 mm)



Dimensions réelles
hauteur = 1,30 a
largeur = 1,41 a

Real dimensions
height = 1,30 a
width = 1,41 a

Application: In telephony, for indicating the facility to allow a hearing aid or other device for hard of hearing people to be inductively coupled to a telecommunication terminal.

4.3.2 Electrical Coupling

4.3.2.1 Description

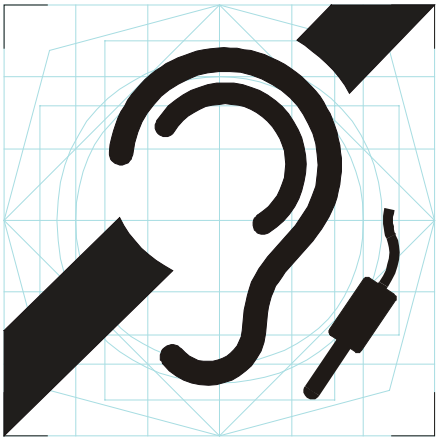
A possible alternative means for coupling the speech path between a telecommunication terminal and a hearing aid, by means of a direct wire connection. Typically restricted to body worn hearing aids. ETS 300 679 [7] defines the characteristics required within a telecommunication terminal offering electrical coupling to a hearing aid.
IEC 118-11 [9] recommends the use of the letter "E" to indicate when the hearing aid is set to electrical coupling.

Electrical coupling may also be used between other devices and a telecommunication terminal, for example to connect a portable text telephone to a voice telephone. No specific standards exist which specify electrical coupling between telecommunication terminals and other assistive communication devices for hearing-impaired people.

4.3.2.2 Symbol

ETSI	Symbole Graphique No. 11: Raccordement électrique Graphical Symbol No. 11: Electrical Coupling	EN 301 462

SYMBOLE ORIGINAL
ORIGINAL SYMBOL
(a = 50 mm)



Dimensions réelles
hauteur = 1,30 a
largeur = 1,41 a

Real dimensions
height = 1,30 a
width = 1,41 a

Application: In telephony, for indicating the facility to allow a hearing aid or other device for hard of hearing people to be electrically coupled to a telecommunication terminal.

4.4 Text Telephony

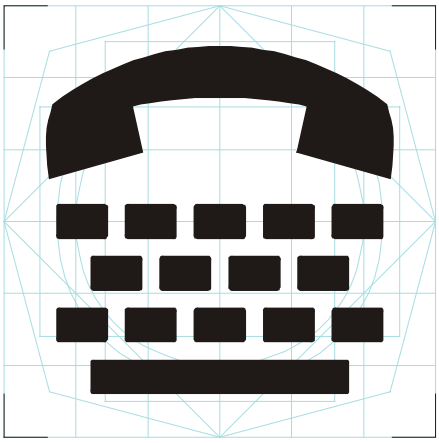
4.4.1 Description

Textphones are used by deaf persons to communicate with other textphone users or to make use of textphone relay services. A means of attaching Textphones is provided as a facility on some public payphones. The symbol in subclause 4.4.2 is designed to indicate the presence of a textphone facility.

4.4.2 Symbol

	Symbole Graphique No. 14: Téléphone à texte Graphical Symbol No. 14: Text Telephone	EN 301 462

SYMBOLE ORIGINAL
ORIGINAL SYMBOL
(a = 50 mm)



Dimensions réelles
hauteur = 1,30 a
largeur = 1,41 a

Real dimensions
height = 1,30 a
width = 1,41 a

Application: In telephony, for indicating the facility to enable use of a textphone facility

4.5 Videotelephony

4.5.1 General Videotelephone

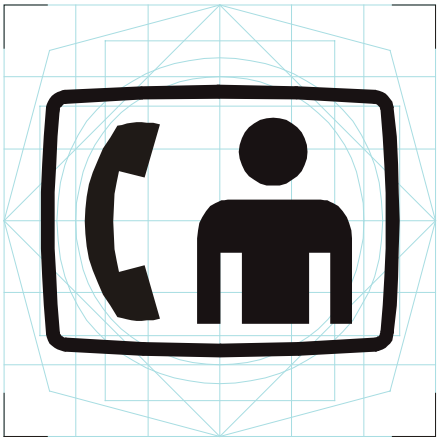
4.5.1.1 Descriptions

Videotelephony can have a broad range of application for all people in society. Some videotelephones with appropriately high performance can be of use in lip-reading and the conveying of sign language. Unless these characteristics can be guaranteed and unless it is wished to indicate that these capabilities exist, it is necessary to be able to indicate that a videotelephone is available with unspecified capabilities. The symbol in subclause 4.5.1.2 is the one to be used when special facilities for lip-reading or sign language cannot be guaranteed.

4.5.1.2 Symbol

ETSI	Symbole Graphique No. 15: Video-téléphone général Graphical Symbol No. 15: General Videotelephone	EN 301 462

SYMBOLE ORIGINAL
ORIGINAL SYMBOL
(a = 50 mm)



Dimensions réelles
hauteur = 1,30 a
largeur = 1,41 a

Real dimensions
height = 1,30 a
width = 1,41 a

Application: In telephony, for indicating a videotelephony facility with unspecified capabilities.

4.5.2 Special Videotelephone for Signing and Lip-reading

4.5.2.1 Description

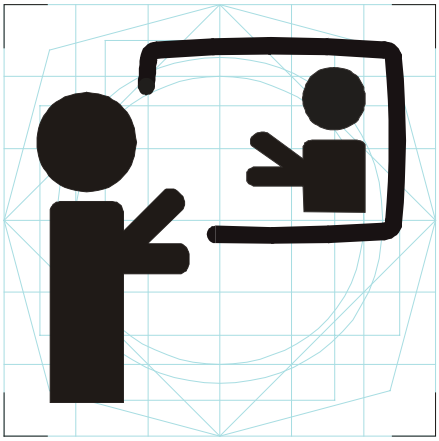
The provision of a video facility on a telephone can provide a communication facility for the profoundly deaf who are unable to benefit from the use of a hearing aid and for whom sign language is their mother tongue. It can also be a powerful aid for hearing impaired users who gain additional clues to speech perception by viewing the face of the speaker for lip reading. The ability to see the talker thus provides the potential both for the use of sign language and lip-reading.

The quality of picture obtained from videotelephones is not always suitable for lip-reading or signing due both to the excessive delay and to the low frame rate. Where these parameters exceed the required minimum values the videotelephone can be said to be suitable for signing and lip-reading. The symbol in subclause 4.5.2.2 is the one to be used when it is guaranteed that these minimum performance values will be exceeded.

4.5.2.2 Symbol

ETSI	Symbole Graphique No. 16: Video-téléphone - Langue des signes et/ou Lecture labiale Graphical Symbol No. 16: Videotelephone for Signing and Lip-reading	EN 301 462

SYMBOLE ORIGINAL
ORIGINAL SYMBOL
(a = 50 mm)



Dimensions réelles
hauteur = 1,30 a
largeur = 1,41 a

Real dimensions
height = 1,30 a
width = 1,41 a

Application: In telephony, for indicating a videotelephony facility suitable for effective communication using sign language or lip-reading

History

Document history				
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V1.1.1	March 2000	Publication		