AS/ACIF S040:2001

AUSTRALIAN COMMUNICATIONS INDUSTRY FORUM

Australian Standard

Requirements for Customer Equipment for use with the Standard Telephone Service — Features for special needs of persons with disabilities
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FOREWORD

General

This Standard was prepared by the ACIF Working Committee CECRP/WC4 on Disability Standards. It is one of a series of Telecommunication Standards developed under the Memorandum of Understanding between the Australian Communications Authority and the Australian Communications Industry Forum.

This Standard is the result of a consensus among representatives on the ACIF Working Committee to produce it as an Australian Standard.

The requirements in this Standard are consistent with the aims of s380 of the Telecommunications Act 1997. Specifically these aims include specifying the requirements for features of the equipment that are designed to cater for any or all of the special needs of persons with a disability.

One of the objects of the Telecommunications (Consumer Protection and Service Standards) Act 1999 is to ensure that the standard telephone service, payphones and other carriage services of social importance are reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business. This Standard provides requirements and where appropriate recommends design features which remove barriers to access for people with disabilities. Regard must be had to this Standard in determining compliance with the Disability Discrimination Act 1992.

It should be noted that some Customer Equipment (CE) may require demonstration of compliance with requirements in other Standards.

Applicable electrical safety Standards and EMC Standards may apply under Commonwealth or State laws, or both.

Intellectual property rights

Equipment which is manufactured to comply with this Standard may require the use of technology which is protected by patent rights in Australia. Questions about the availability of such technology, under license or otherwise, should be directed to the patent holder or Australian licensee (if known) or through enquiry at IP Australia which incorporates the Patent, Designs and Trade Marks Offices. Further information can be found at www.ipaustralia.gov.au.

Standards revision

Australian Standards developed by the Australian Communications Industry Forum (AS/ACIF Standards) are updated, according to the needs of the industry, by amendments or revision. Users of AS/ACIF Standards should make sure that they possess the latest amendments or editions. Representations concerning the need for a change to this AS/ACIF Standard should be addressed to:

The Project Manager
Customer Equipment and Cable Reference Panel
The Australian Communications Industry Forum
PO Box 444
Milsons Point NSW 1565

Regulatory notice

This document has been made by the Australian Communications Authority as Telecommunications Disability Standard AS/ACIF S040 2002 under s380 of the Telecommunications Act 1997.
The ACA is a Commonwealth Authority with statutory powers to impose requirements concerning telecommunications Customer Equipment and Customer Cabling.

Section 380 disability standards are not included in the compliance arrangements for section 376 technical standards provided by the Telecommunications Labelling (Customer Equipment and Customer Cabling) Notice 2001. Nonetheless, section 380 disability standards are mandatory and the ACA requires Australian manufacturers and importers of specified items of Customer Equipment and Customer Cabling to ensure compliance with these standards.

Compliance with section 380 disability standards is relevant in determining whether a person has complied with section 24 of the Disability Discrimination Act 1992 in the supply of customer equipment.

Further information can be obtained from the ACA website at http://www.aca.gov.au or by contacting the ACA below at:

Australian Communications Authority
PO Box 13112
Law Courts PO
Melbourne VIC 8010
Australia

Telephone: +61 3 9963 6800
Facsimile: +61 3 9963 6899
TTY: +61 3 9963 6948

HREOC notice

In general terms, the Disability Discrimination Act 1992 (DDA) makes it unlawful to discriminate against a person on the ground of disability in the areas of employment, education, insurance and superannuation, access to premises, accommodation, sport, government programs and, importantly, the provision of goods, services and facilities.

To discriminate means to treat a person less favourably than a person without a disability (direct discrimination) or to impose a requirement or condition which, on its face, appears to apply to all people but with which a person cannot comply because of their disability (indirect discrimination). Furthermore, discrimination also means to treat a person less favourably because of the person’s use of an aid such as a hearing aid.

It is unlawful for a person who, whether for payment or not, provides goods or services, or makes facilities available, to discriminate against another person on the ground of the other person’s disability or a disability of any of that other person’s associates:

(a) by refusing to provide those goods or services or to make those facilities available to the person affected by disability; or
(b) in the terms or conditions on which those goods, services or facilities are made available to the person affected by disability; or
(c) in the manner in which the goods, services or facilities are made available to the person affected by disability.

In determining whether a person has infringed this rule in relation to the supply or provision of telecommunications Customer Equipment, regard must be had to whether the Customer Equipment complies with the ACA’s disability standard.

The DDA makes it unlawful to discriminate on the grounds of disability in a range of areas including the provision of goods, services and facilities. Telecommunications is covered by these provisions of the DDA.
Complaints of disability discrimination can be made to the Human Rights and Equal Opportunity Commission (HREOC).

For more information visit the Commission's Internet site at www.hreoc.gov.au

or write to:

The Disability Discrimination Commissioner
GPO Box 5218
Sydney NSW 1042
Australia

or ring an Enquiry Officer on 1800 021 199. For deaf people and people with speech difficulties call TTY 1800 620 241.
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PARTICIPANTS

The ACIF Working Committee that developed this Standard consisted of the following organisations and their representatives:

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1 INTERPRETATION

1.1 Categories of requirements
This Standard contains mandatory requirements as well as provisions that are recommendatory only. Mandatory requirements are designated by the words ‘shall’ or ‘shall not’. All other provisions are voluntary.

1.2 Compliance statements
Compliance statements, in italics, specify methodologies for demonstrating CE’s compliance with the mandatory requirements.

1.3 Definitions, expressions and terms
If there is any conflict between the definitions used in this Standard and the definitions used in the Telecommunications Act 1997, the definitions in the Act take precedence.

1.4 Notes
Text denoted as ‘Note’ is for guidance in interpretation and is shown in smaller size type.

1.5 References
1.5.1 Applicable editions (or versions) of other documents referred to in this Standard are referenced documents and are specified in Section 3: REFERENCES.
1.5.2 If a document refers to another document, the other document is a sub-referenced document.
1.5.3 Where the edition (or version) of the sub-referenced document is uniquely identified in the reference document, then that edition (or version) applies.
1.5.4 Where the edition (or version) of the sub-referenced document is not uniquely identified in the reference document, then the applicable edition (or version) of a legislated document is that which is current at the date the reference document is legislated under the applicable regulatory framework or otherwise comes into effect, or for a non-legislated document, the date upon which the document is published by the relevant standards organisation.
1.5.5 A number in square brackets ‘[ ]’ refers to documents listed in Section 3: REFERENCES.
1.5.6 In the event of a discrepancy between this Standard and a referenced or sub-referenced document, this Standard shall take precedence.

1.6 Units and symbols
In this Standard the International System (SI) of units and symbols is used in accordance with Australian Standard AS ISO 1000 [1].
2 SCOPE

2.1 This Disability Standard applies to certain Customer Equipment (CE) that uses a telephone handset or a keypad, that is manufactured in, or imported into Australia for use with the Standard Telephone Service. This Standard defines the technical requirements relating to the features of the equipment that is designed to cater for some of the special needs of persons with disabilities.

Note: This includes fax machines with a handset and system integral equipment.

2.2 CE is not excluded from the scope of this Disability Standard by reason only that it is capable of performing functions additional to those listed herein.
# 3 REFERENCES

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<td><strong>Australian Standards</strong></td>
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4 ABBREVIATIONS AND TECHNICAL DEFINITIONS

For the purposes of this Standard, the following abbreviations and definitions apply.

4.1 Abbreviations

ACA  Australian Communications Authority
ACIF  Australian Communications Industry Forum
AS  Australian Standard
CE  Customer Equipment
CSS  Customer Switching System
DDA  Disability Discrimination Act
DECT  Digital Enhanced Cordless Telecommunications
HREOC  Human Rights and Equal Opportunity Commission
ITU–T  International Telecommunication Union–Telecommunication Standardization Sector
PHS  Personal Handy Phone System
SPL  Sound Pressure Level
VF  Voice Frequency

4.2 Definitions

4.2.1 Boundary of the Telecommunications Network
Boundary of the Telecommunications Network has the same meaning as in section 22 of the Telecommunications Act 1997.

4.2.2 Customer Equipment (CE)
Customer Equipment has the same meaning as in section 21 of the Telecommunications Act 1997.

4.2.3 Customer Switching System
A switching system for use on the customer side of the boundary of a Telecommunications Network that can switch voice, digital data, images, video, or any other information.

Note 1: A CSS connection is established under user control using some form of access signalling.

Note 2: Examples include but are not limited to a PABX or Key system.

4.2.4 Handset
The part of CE that is designed to be held in the hand in contact with the ear and that contains an acoustic transmitter and receiver transducer.

4.2.5 Handset receiver
The transducer mounted in the handset that converts the electrical telephone signals into acoustic energy for coupling to the user’s ear.

4.2.6 Standard Telephone Service
Standard Telephone Service has the same meaning as in section 6 of the Telecommunications (Consumer Protection and Service Standards) Act 1999.

Note: ACIF G534 [2] provides guidance on the application of the standard telephone service definition.
4.2.7 **System Integral Equipment**

Analogue or digital equipment which is intended to operate in association with a CSS and functions as part of the CSS.

4.2.8 **Telecommunications Network**

Telecommunications Network has the same meaning as section 374(1) of the *Telecommunications Act 1997.*
5 REQUIREMENTS

5.1 Hearing aid coupling

5.1.1 General

The requirements of Clauses 5.1.2 and 5.1.3 shall apply to Customer Equipment handset receivers other than the following:

(a) Cellular mobile telephones.

(b) Cordless telephones that use transmission technology that prevents effective coupling to hearing aids due to electromagnetic interference.

Note: Some examples of transmission technologies that maybe used in digital cordless telephones are DECT and PHS.

5.1.2 Frequency Response

The frequency response of the magnetic field radiated by the handset receivers shall comply with the limits shown in Figure 3/P.370 of ITU-T Rec.P.370[4].

5.1.3 Magnetic field strength

To enable coupling to hearing aids, the magnetic field strength radiated from the handset receivers shall be between –17 dB and –34 dB relative to 1 A/m at 1 kHz, until the following new requirements take effect on the dates specified:

(a) From 1 July 2003, magnetic field strength radiated from all handset receivers, that are not part of System Integral Equipment and which were first manufactured in, or first imported into Australia after 1 September 2001, shall be between –17 dB and –30 dB relative to 1A/m at 1 kHz.

(b) From 1 March 2005, magnetic field strength radiated from all handset receivers, that are not part of System Integral Equipment and which were first manufactured in, or first imported into Australia before 1 September 2001, shall be between –17 dB and –30 dB relative to 1A/m at 1 kHz.

Note 1: From 1 March 2007, magnetic field strength radiated from handset receivers, that are part of System Integral Equipment should be between –17 dB and –30 dB relative to 1A/m at 1 kHz to enable coupling to hearing aids.

Note 2: The changes stipulated in items (a) and (b) are to provide for better coupling of handset receivers with hearing aids. Earlier compliance of CE with the new specifications prior to the required dates is recommended.

Compliance with Clause 5.1 shall be checked by using the method described in Clause 6.3.1.

5.2 Tactile indicators on keypads

5.2.1 The requirements of Clause 5.2 shall only apply to CE with a keypad, that has keys that can be differentiated by touch, where the keypad has the primary function of dialling for the purposes of call set-up for the Standard Telephone Service.

5.2.2 CE manufactured in, or imported into, Australia prior to 1 July 2003 are exempt from the requirements of those Clauses.
5.2.3 From 1 July 2003, all CE except cellular mobile telephones and cordless telephones shall have a raised pip as a tactile indication on the key associated with digit ‘5’ on keypads.

5.2.4 From 1 July 2003, all cellular mobile telephones and cordless telephones shall have a raised pip as a tactile indication on or in the vicinity of the key associated with digit ‘5’ on the keypad.

5.2.5 The pip specified in Clause 5.2.3 and Clause 5.2.4 shall be at least 0.4 mm above the face of the key.

Note: This does not prevent other additional indicators to be located in the vicinity of the key associated with the digit ‘5’.

Compliance with Clause 5.2 should be checked by inspection.
6 TESTING

6.1 General
6.1.1 Compliance with all requirements applicable to the CE as specified in the requirements clauses is to be verified.

6.1.2 Methods for demonstrating compliance of CE with requirement clauses specified in this Disability Standard are described in Clauses 6.2 to 6.3.

6.2 Standard test conditions
6.2.1 Testing for compliance with this Standard shall be conducted at the nominal supply voltage of the CE and within the following ranges of atmospheric conditions:
   (a) An ambient temperature in the range of 15°C to 25°C inclusive.
   (b) A relative humidity in the range of 30% to 75% inclusive.
   (c) An air pressure in the range of 86 kPa to 106 kPa inclusive.

6.2.2 Where elements in a test circuit are variable, the test shall be carried out over the indicated range for that element.

6.2.3 The accuracy level of all measurements shall be better than ±2% for voltage and current, ±0.25% for frequency and ±0.5% for time.

6.2.4 All component values in the test configuration shall have a tolerance of—
   (a) ±1% for resistance;
   (b) ±1% for capacitance; and
   (c) –0%, +25% for inductors.

6.2.5 The prevailing conditions shall be recorded for each test.

6.3 Parameters to be tested
6.3.1 Hearing aid coupling test
6.3.1.1 Magnetic field strength shall be measured in accordance with the procedures described in Sections 4.1 and 4.2 of ITU-T Rec. P.370 [4]. The probe coil used shall be as defined in Section 5.1 of ITU-T Rec. P.370 [4] or FCC Rules Part 68.316 [3].

6.3.1.2 Where the CE incorporates a receive volume control, the control may be adjusted in order to meet the requirements of Clause 5.1.

6.3.1.3 Frequency response of the magnetic field shall be measured in accordance with the method described in Section 4.4 of ITU-T Rec. P.370 [4].
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ACIF’s role is to develop and administer technical and operating arrangements to foster a thriving, effective communications industry serving the Australian community through

- the timely delivery of Standards, Codes and other documents to support competition and protect consumers;
- driving widespread compliance; and
- the provision of facilitation, coordination and implementation services to enable the cooperative resolution of strategic and operational industry issues.

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