

COMMUNICATIONS ALLIANCE LTD



AUSTRALIAN STANDARD

AS/ACIF S043.3:2008

Requirements for Customer Equipment for
connection to a metallic local loop interface of a
Telecommunications Network—
Part 3: DC, low frequency AC and voiceband

**Adopted for
regulatory purposes**



Australian Standard – Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network— Part 3: DC, low frequency AC and voiceband

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FOREWORD

General

This Standard was prepared by Communications Alliance and most recently revised by the WC07 : VDSL2 Working Committee. It is one of a series of Telecommunication Standards developed under the Memorandum of Understanding between the Australian Communications Authority (ACA) and the Australian Communications Industry Forum.

Note: On 1 July 2005 the ACA became the Australian Communications and Media Authority (ACMA) and the Memorandum of Understanding continues in effect as if the reference to the ACA were a reference to ACMA.

This Standard is a revision of AS/ACIF S043.3:2001 **Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network— Part 3: DC, low frequency AC and voiceband** Standard.

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

The requirements in this Standard are consistent with the aims of s376 of the *Telecommunications Act 1997*. Specifically these aims are—

- (a) protecting the integrity of a telecommunications network or facility;
- (b) protecting the health and safety of persons;
- (c) ensuring access to emergency services; and
- (d) ensuring interoperability with a standard telephone service.

It should be noted that some Customer Equipment (CE) may also need to comply with requirements in other Standards or other Parts of this Standard.

AS/ACIF S043 consists of the following parts under the general title **Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network**:

- Part 1: **General**
- Part 2: **Broadband**
- Part 3: **DC, low frequency AC and voiceband**

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

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Standards revision

Australian Standards (AS/ACIF Standards) developed by the Australian Communications Industry Forum, a division of Communications Alliance, 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:

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Customer Equipment and Cable Reference Panel
Communications Alliance
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Milsons Point NSW 1565

Regulatory notice

This document has been made by ACMA as Telecommunications Technical Standard AS/ACIF S043.3–2008 under s376 of the *Telecommunications Act 1997*.

ACMA is a Commonwealth authority with statutory powers to impose requirements concerning telecommunications Customer Equipment and Customer Cabling.

ACMA requires Australian manufacturers and importers of specified items of Customer Equipment and Customer Cabling to establish compliance with Standards such as this. Items are required to be labelled to the applicable labelling notices.

Details on current compliance arrangements can be obtained from the ACMA website at <http://www.acma.gov.au> or by contacting ACMA below at:

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Melbourne VIC 8010
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Introduction

This introduction for the AS/ACIF S043.3 **Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network—Part 3: DC, low frequency AC and voiceband** Standard is not an authoritative section of this Standard and is only provided as guidance for the user of the Standard to outline its objectives, and the factors that have been taken into account in its development and to list the principle differences between the new and the previous edition.

The reader is directed to the clauses of this Standard for the specific requirements and to the Australian Communications and Media Authority (ACMA) for the applicable telecommunications labelling and compliance arrangements.

Note: Further information on the telecommunications labelling and compliance arrangements can be found in *The Telecommunications Labelling (Customer Equipment and Customer Cabling) Notice* (the TLN). The TLN can be obtained from the Australian Communications and Media Authority (ACMA) website at www.acma.gov.au.

The objective of this Standard is to provide the requirements and test methods for customer equipment designed or intended for connection to a Telecommunications Network via a metallic local loop interface and is designed or intended to include one or more of the following:

- (i) DC power feeding or signalling.
- (ii) Operation in the low frequency AC band, below 300 Hz.
- (iii) Operation in the voice frequency band.
- (iv) Operation above the voice frequency band up to 20 kHz.

in order to meet the regulatory arrangements for such equipment in Australia.

The objective of this revision is to align existing power spectral density requirements with international recommendations on VDSL2 technology and to move into this Standard the existing requirements in AS/ACIF S043.2 for Equipment Classes operating in the voiceband.

The principal differences between this edition of AS/ACIF S043.3 and the previous edition are—

- (i) an update of Clauses 5.4.1 and 5.4.2, Table 1 and Figure 1 to extend the upper limit of the PSD mask from 12 MHz to 30 MHz; and
- (ii) the addition of Appendices A and B.

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1 INTERPRETATIVE GUIDELINES

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, suggest methodologies for demonstrating CE's compliance with the 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

- (a) Applicable editions (or versions) of other documents referred to in this Standard are specified in Section 3: REFERENCES.
- (b) If a document refers to another document, the other document is a sub-referenced document.
- (c) Where the edition (or version) of the sub-referenced document is uniquely identified in the reference document, then that edition (or version) applies.
- (d) Where the edition (or version) of the sub-referenced document is not uniquely identified in the reference document, then the applicable edition (or version) is that which is current at the date the reference document is legislated under the applicable regulatory framework, or for a non-legislated document, the date upon which the document is published by the relevant standards organisation.
- (e) A number in square brackets '[]' refers to a document listed in Section 3: REFERENCES.

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 Standard applies to Customer Equipment (CE) that is designed or intended for connection to:
- (a) is designed or intended for connection to a Telecommunications Network via a metallic local loop interface; and
 - (b) is designed or intended to include one or more of the following capabilities:
 - i. DC power feeding or signalling.
 - ii. Operation in the low frequency AC band, below 300 Hz.
 - iii. Operation in the voice frequency band.
 - iv. Operation above the voice frequency band up to 20 kHz.
- 2.2 CE is not excluded from the scope of this Standard by reason only that it is capable of performing functions additional to those described in this Standard.

Note: Requirements for CE designed or intended to interwork with the PSTN for DC loop seizure and clearing, low frequency AC ring signalling, and decadic or DTMF address signalling etc. are defined in AS/ACIF S002 [3].

3 REFERENCES

	Publication	Title
	Australian Standards	
[1]	AS ISO 1000-1998	The international System of Unit (SI) and its application.
[2]	AS/NZS 60950.1:2003	Information Technology Equipment - Safety
	AS/ACIF Standards	
[3]	AS/ACIF S002:2005	Analogue interworking and non-interference requirements for Customer Equipment for connection to the Public Switched Telephone Network
	AS/ACIF S043	Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network
[4]	AS/ACIF S043.1:2003	Part 1: General
[5]	AS/ACIF S043.2:2008	Part 2: Broadband
	ITU-T Recommendations	
[6]	O.41 (10/94)	Psophometer for use on telephone-type circuits
[7]	O.71 (11/88)	Impulsive noise measuring equipment for telephone-type circuits
[8]	Q.45 bis (11/88)	Transmission characteristics of an analogue international exchange
	ANSI Standards	
[9]	T1.601-1999(R2004)	Integrated Services Digital Network (ISDN) – Basic Access Interface for Use on Metallic Loops for Application at the Network Side of the NT, Layer 1 Specification