AS/NZS 4280.2:2003
(Incorporating Amendment Nos 1, 2, 3 and 4)

Australian/New Zealand Standard™

406 MHz satellite distress beacons

Part 2: Personal locator beacons (PLBs)

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee RC-004, Radiocommunications Equipment—Maritime. It was approved on behalf of the Council of Standards Australia on 25 September 2003 and on behalf of the Council of Standards New Zealand on 9 September 2003.
This Standard was published on 7 November 2003.

The following are represented on Committee RC-004:

Australian Communications Authority
Australian Electrical and Electronic Manufacturers Association
Australian Federal Police
Australian Maritime Safety Authority
Australian Yachting Federation
Department of Defence, Australia
Electromagnetic Technical Evaluation Committee
Maritime Safety Authority, New Zealand
Ministry of Economic Development, New Zealand
New Zealand Marine Safety Interests
State Maritime Service Departments
State Police/Emergency Services
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Volunteer Marine Rescue Australia

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This Standard was issued in draft form for comment as DR 03267.

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Originated as part of AS/NZS 4280:1995.
Previous edition AS/NZS 4280.2:2002.
Second edition 2003.
Reissued incorporating Amendment No. 1 (April 2005).
Reissued incorporating Amendment No. 2 (September 2006).
Reissued incorporating Amendment No. 3 (April 2010).
Reissued incorporating Amendment No. 4 (September 2013).

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Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

ISBN 0 7337 5519 4

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee RC-004, Radiocommunications Equipment—Maritime to supersede AS/NZS 4280.2:2002.

This Standard incorporates Amendment No. 1 (April 2005), Amendment No. 2 (September 2006), Amendment No. 3 (April 2010) and Amendment No. 4 (September 2013). The changes required by the Amendments are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide equipment designers, manufacturers, suppliers and testing facilities of 406 MHz satellite distress beacons, when employed as Personal Locator Beacons, with both the minimum radiofrequency and environmental requirements and associated test methods, to enable design and confirmation of compliance with Australia and New Zealand radiofrequency spectrum and maritime regulatory requirements.

This Standard is Part 2 of AS/NZS 4280, *406 MHz satellite distress beacons*, which is published in parts as follows:

Part 1: Marine emergency position-indicating beacons (EPIRBs)
Part 2: Personal locator beacons (PLBs) (this Standard)

Part 1 is reproduced from IEC 61097-2:2002, *Global maritime distress and safety system (GMDSS)*, Part 2: COSPAS-SARSAT EPIRB — *Satellite emergency position indicating radio beacon operating on 406 MHz—Operational and performance requirements, methods of testing and required test results.* Some variations have been made for Australian and New Zealand conditions.

This Part 2 pertains to personal locator beacons (PLBs). The subject matter is a revision of AS/NZS 4280.2:2002, *406 MHz satellite distress beacons*—Part 2: *Personal locator beacons (PLBs).*

A4 The NOAA checksum calculation method for 15-character hexadecimal ID (UIN) codes has been reproduced as a new Appendix F.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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FOREWORD

To provide the essential requirements for 406 MHz satellite personal locator beacons (PLBs), this Standard includes both environmental and operational requirements and radiofrequency requirements for land beacons. The requirements are made up of specifications, and methods of test for verification of those specifications, which are based on COSPAS-SARSAT requirements.

These specifications are required by the appropriate national spectrum management authorities and safety authorities in Australia and New Zealand. The authorities may adopt them in part or whole under applicable legislation to support regulation.

The requirements of the national spectrum management authorities are contained in Section 3 and Appendix E. The national safety authorities requirements are in Section 2 and Appendices B, C, and D. The appendices in both cases contain test or registration requirements.

Appendix A provides information about the procurement of COSPAS-SARSAT documentation.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
406 MHz satellite distress beacons

Part 2: Personal locator beacons (PLBs)

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard provides the minimum requirements for Personal Locator Beacons (PLBs) operating with a nominal frequency in the band 406.000 MHz To 406.100 MHz.

These requirements encompass the physical characteristics of the devices pertaining to multi-environment use, and the performance characteristics for reception through the COSPAS-SARSAT satellite system.

Characteristics are also included for the homing transmitters incorporated in these devices.

This Standard does not apply to the fitted Emergency Locating Transmitters (ELTs) used in aeronautical applications.

1.2 APPLICATION

This Standard is intended for use by equipment designers, manufacturers and suppliers to ensure correct operation of the PLBs and their compatibility with COSPAS-SARSAT.

1.3 REFERENCED AND RELATED DOCUMENTS

1.3.1 Referenced documents

The following Standards are referred to:

AS/NZS

CISPR 24 Information technology equipment—Immunity characteristics—Limits and methods of measurement

IEC

60945 Maritime navigation and radiocommunications equipment — General requirements — Methods of testing and required test results

Other documents

COSPAS-SARSAT

Specification for 406 MHz Distress Beacons C/S T.001, current issue
406 MHz Distress Beacons Type Approval Standard C/S T.007, current issue

IMO Resolution A.694(17)

General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids

NOAA Calculations of checksums for 15-character hexadecimal ID (UIN) codes

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