AS/NZS 4583:2010
(Incorporating Amendment No. 1)

AS/NZS 4583:2010

Australian/New Zealand Standard™

Amplitude modulated equipment for use in the aeronautical radio service in the frequency range 118 MHz to 137 MHz

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee RC-006, Radiocommunications Equipment—General. It was approved on behalf of the Council of Standards Australia on 28 September 2009 and on behalf of the Council of Standards New Zealand on 26 March 2010.
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The following are represented on Committee RC-006:

AirServices Australia
Australian Communications and Media Authority
Australian Industry Group
Australian Radio Communications Industry Association
Civil Aviation Safety Authority
Department of Defence, Australia
Electromagnetic Technical Evaluation Committee
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This Standard was issued in draft form for comment as DR 09016.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee RC-006, Radiocommunications Equipment—General to supersede AS/NZS 4583:1999. The Standard was originally developed from Airservices Australia specification YSCE 3087, Issue 1. It replaces older Australian Government specifications, Equipment Compliance Requirements 203A and 272A. It is one of a series of Standards dealing with radiocommunications equipment, under the terms of a Memorandum of Understanding between Standards Australia and the Australian Communications and Media Authority.

This Standard incorporates Amendment No. 1 (July 2012). The changes required by the Amendment 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 users, manufacturers and suppliers of radiocommunications equipment intended to operate in the aeronautical mobile band at frequencies in the range 118 MHz to 137 MHz, with the minimum technical performance characteristics required for use in the Australian and New Zealand radio spectrum, including methods of test and measurement.

The purposes of this revision are to:

(a) Correct a number of errors that have been reported in the Standard.

(b) Introduce parallel ETSI approval arrangements for portable equipment in Australia and New Zealand to help reduce associated development and testing costs involved in marketing these models. Similar arrangements have been implemented in the land mobile radio service Standards AS/NZS 4295 and AS/NZS 4768.1. The acceptance of the ETSI standards testing in this case is proposed with the addition of the Australian ‘time out timer’ requirement, and testing of transmitter spurious emission at extremes.

The term ‘normative’ has been used in this Standard to define the application of the Appendix. A ‘normative’ appendix is an integral part of a Standard.

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S E C T I O N 1 S C O P E A N D G E N E R A L

1.1 SCOPE

This Standard specifies the technical performance characteristics, test methods and minimum requirements for radiocommunications equipment operating in the aeronautical radio service in the frequency range 118 MHz to 137 MHz using amplitude modulation and 25 kHz channel spacing.

This Standard specifies the requirements for land-based base stations, mobiles, and personal mobile equipment and equipment used in conjunction with activities such as aviation sport and as otherwise specified by the appropriate aviation regulatory authority. The Standard does not apply to fixed equipment installations in aircraft.

1.2 DEFINITIONS

For the purposes of this Standard, the definitions below apply.

1.2.1 Artificial load

A non-reactive, non-radiating load whose impedance as presented to the transmitter corresponds to the terminal impedance of the antenna normally connected to the transmitter.

NOTE: This is normally 50 Ω.

1.2.2 Audio frequency test load

An impedance network that replaces the load to which the receiver is connected under normal operating conditions. It simulates the impedance of the normal load and any cables with which it is normally used.

NOTE: The audio frequency test load usually consists of a single pure resistance.

1.2.3 Base station

A radiocommunications transmitter, receiver or transceiver fitted with an antenna connector, for use with an external antenna and suitable for use at a fixed location.

1.2.4 Battery end of life voltage

The manufacturer’s declared voltage below which the battery is incapable of operating the equipment in accordance with the manufacturer’s stated specifications.

1.2.5 Carrier power (transmitter)

The mean power delivered to the artificial load during a single radiofrequency cycle, in the absence of modulation.

1.2.6 Combining network

An impedance matching network intended to facilitate the connection of two or more test signal sources to the receiver input.