Australian/New Zealand Standard™

Digital radio equipment operating in land mobile and fixed services bands in the frequency range 29.7 MHz to 1 GHz
Part 2: Methods of test
(IEC 60489-6:1999, MOD)

Standards Australia

STANDARDS NEW ZEALAND
Paerewa Aotearoa

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 18 April 2003 and on behalf of the Council of Standards New Zealand on 2 April 2003. It was published on 10 October 2003.

The following are represented on Committee RC-006:

Australian Communications Authority
Australian Electrical and Electronic Manufacturers Association
Civil Aviation Safety Authority Australia
Department of Defence, Australia
Electromagnetic Compatibility Society of Australia
Electromagnetic Technical Evaluation Committee
Ministry of Economic Development, New Zealand
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee RC-006, Radiocommunications Equipment—General. The text of IEC 60489-6, *Radio equipment used in the mobile services—Methods of measurement, Part 6: Data equipment* has been reproduced. There are additions and modifications to the text which incorporate information from AS 4295, *Analogue speech (angle modulated) equipment operating in land mobile and fixed services bands in the frequency range 29.7 MHz to 1 GHz*, and the ETSI publication EN 300-113-1 V1.3.1 *Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Land mobile service; Radio equipment intended for the transmission of data (and speech) and having an antenna connector; Part 1: Technical characteristics and methods of measurement*.

It is common in Australia and New Zealand to import equipment from other parts of the world where there may not be harmonized spectrum management and equipment specification regimes. The objective of this Standard is to provide the user, manufacturer or supplier of digital radio equipment operating in the frequency range 29.7 MHz to 1 GHz of the VHF and UHF Land Mobile and Fixed Services Bands with the minimum technical performance characteristics and requirements necessary to contribute to effective management of the radiofrequency spectrum in Australia and New Zealand.

For application in Australia consideration has been given to the regulations of the Australian frequency band planning requirements.

The requirements specified in this Standard take into account that, in Australia and New Zealand, digital radio equipment may operate in spectrum adjacent to analogue radio equipment. This arrangement requires that digital radio equipment operate without causing harmful interference to analogue radio equipment occupying adjacent channels and vice versa.

This Standard is Part 2 of AS/NZS 4768, *Digital radio equipment operating in land mobile and fixed services bands in the frequency range 29.7 MHz to 1 GHz*, which consists of the following parts:

Part 1: Radiofrequency requirements

Part 2: Methods of test (this Standard)

This Part 2 provides the test methods to be used for establishing compliance with the minimum radiofrequency requirements for operation of the equipment in Australia and New Zealand. Part 1 provides these limits to be assessed. Not all of the test methods in Part 2 are relevant to Part 1.

Statements expressed as mandatory terms in notes to tables are deemed to be requirements of this Standard.

Variations to IEC 60489-6:1999 are indicated at the appropriate places throughout this Standard. Strikethrough (~~example~~) identifies IEC tables, figures and passages of text which, for the purposes of this Australian/New Zealand Standard, are deleted. Where Australian/New Zealand tables, figures or passages of text are added, each is set in its proper place and identified by shading (example). Added figures are not themselves shaded, but are identified by a shaded border.

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

In this Standard, the following print types are used:

– requirements proper: in arial type;

– *test specifications: in italic type;*

– explanatory matter: in smaller arial type.

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Any IEC table, figure or passage of text that is struck-through is not part of this Standard. Any Australian/New Zealand table, figure or passage of text that is added (and identified by shading) is part of this Standard.

In Australia and New Zealand it is intended that Part 2 of this Standard be used to prescribe the test methods used to assess equipment against the limits given in Part 1 of this Standard, although not all of the test methods are used.

1 General

1.1 Scope and object

This part of IEC 60489 refers specifically to mobile radio transmitters and receivers for the transmission of data (telegraphy) signals having the emission characteristics given in ~~1.1.~~1.2. Emissions not covered by ITU Radio Regulations (edition 1982), Article 4 and Appendix 6 (AP6, Part A for details and definition of the emission characteristics) are not within the scope of this Standard.

This standard is intended to be used in conjunction with IEC 60489-1. The terms and definitions and the conditions of measurement set forth in this standard are intended for type and acceptance tests. In Australia and New Zealand this Standard is intended to be used in conjunction with AS/NZS 4768.1.

The object of this standard is to standardize the definitions, the conditions and the methods of measurement used to ascertain the radio-frequency performance of data and selective call equipment, thus making possible meaningful comparisons of the results of measurements made by different observers and on different equipment.

This standard will cover the following types of data signals:

– bit streams;

– character strings;

– messages;

– selective calling.

Selective calling differs from messages in their intended functions; it may be considered as data signals, analogous to messages transmitting only the information required to activate an alarm on one receiver or a group of receivers.

The methods of measurements for the radio-frequency parameters are appropriate for the four types of data signals.