

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 1: Radiofrequency requirements**

### **AS/NZS 4768.1:2003**

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.

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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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### **Part 1: Radiofrequency requirements**

First published as AS/NZS 4768.1:2003.

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee RC-006, Radiocommunications Equipment—General. This Standard has been developed from Australian Standard 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, the ETSI publications EN 300 113-1 V1.3.1 and EN 300 113-1 V1.4.1, and IEC 60489-6 ed 3 1999, *Radio equipment used in mobile services— Methods of measurement*, Part 6: *Data equipment*.

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.

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 1 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 (this Standard)

Part 2: Methods of test

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

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

## CONTENTS

	<i>Page</i>
1 SCOPE .....	4
2 REFERENCED DOCUMENTS .....	4
3 DEFINITIONS .....	5
4 GENERAL REQUIREMENTS .....	9
5 TEST CONDITIONS .....	10
6 TRANSMITTER REQUIREMENTS .....	14
7 RECEIVER REQUIREMENTS .....	17

## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

**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 1: Radiofrequency requirements****1 SCOPE**

This Standard provides radiofrequency requirements for digital radio equipment operating in land mobile and fixed services radiofrequency bands in the frequency range 29.7 MHz to 1 GHz with channel spacings up to 25 kHz.

Categories of equipment within this range include—

- (a) base, mobile, personal mobile and RF control stations operating in designated land mobile bands; and
- (b) fixed point-to-point and point-to-multipoint equipment operating in designated single channel fixed service bands.

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.

Equipment operating in the land mobile services bands from 806 to 825 MHz and 851 to 870 MHz is not covered by the Standard.

NOTE: For operation of land mobile equipment in these bands refer to the relevant authorities in Australia and New Zealand.

**2 REFERENCED DOCUMENTS**

The following documents are referred to in this Standard:

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

AS/NZS

4768 Digital radio equipment operating in land mobile and fixed services bands in the frequency range 29.7 MHz to 1 GHz

4768.2 Part 2: Methods of test

IEC

60489 Radio equipment used in mobile services—Methods of measurement

60489-6 Part 6: Data equipment

ETSI

EN 300 113-1 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

NOTE: This version (V1.3.1) only refers to testing of constant envelope angle modulation equipment.