

Australian Standard<sup>®</sup>

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**RECOMMENDED METHODS OF  
MEASUREMENT ON RECEIVERS  
FOR TELEVISION BROADCAST  
TRANSMISSIONS**

**Part 2—ELECTRICAL AND  
ACOUSTIC  
MEASUREMENTS AT  
AUDIO-FREQUENCIES**

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This Australian standard was prepared by Committee TE/14, Radiocommunications. It was approved on behalf of the Council of the Standards Association of Australia on 3 September 1986 and published on 3 November 1986.

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The following interests are represented on Committee TE/14:

Australian Broadcasting Corporation  
Australian Electrical and Electronic Manufacturers Association  
Confederation of Australian Industry  
Consumer Electronics Suppliers Association  
Department of Aviation  
Department of Communications  
Department of Defence  
Federation of Australian Commercial Television Stations  
Federation of Australian Radio Broadcasters  
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First published . . . . . 1986
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PUBLISHED BY STANDARDS AUSTRALIA  
(STANDARDS ASSOCIATION OF AUSTRALIA)  
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 4390 6

## PREFACE

This standard was prepared by the Association's Committee on Radiocommunications. It is identical with and has been reproduced from IEC 107-2 (1980) (Recommended Methods of Measurement on Receivers for Television Broadcast Transmissions — Part 2: Electrical and Acoustic Measurements at Audio-frequencies) drawn up by IEC/TC 12, Radiocommunications.

The standard applies to broadcast television receivers designed for monochrome and colour vision reception with accompanying sound and standardizes the conditions and methods of measurement of a TV receiver to allow the comparison of results obtained by different authorities. The standard does not specify, however, the limiting values of the various quantities for acceptable performance.

The standard consists of selected measurements recommended for assessing electrical and acoustic properties of receivers such as audio-frequency response and volume control characteristics, audio-frequency non-linear distortion, internally generated interference, sensitivity, etc.

- (a) *Terminology.* The words 'Australian Standard' should replace the words 'IEC Publication' (or those of other standards bodies) wherever they appear.
- (b) *Specific technical differences.* The following specific technical differences apply in Australia:
- (i) Clause 15, Audio-frequency power output, method of measurement. The last sentence of this clause states that output power is expressed in dB(mW), in milliwatts or watts. In Australia the usual practice is to express output power in watts.
  - (ii) Section 16, Amplitude modulated sound reception signal-to-noise ratio due to picture interference. This Section (Clauses 51 to 53) does not apply in Australia.
- (c) *Cross-references.* The references to IEC Publications of those of other standards bodies should be replaced by references to Australian standards, as follows:

<i>Reference to IEC or other document</i>	<i>Appropriate Australian Standard or other Document</i>
IEC 107 Recommended Methods of Measurement on Receivers for Television Broadcast Transmission	AS 1173 Recommended Methods of Measurement on Receivers for Television Broadcast Transmission
IEC 107-1 General Considerations — Electrical Measurements other than those at Audio-frequencies	Part 1: General Considerations — Electrical Measurements other than those at Audio-frequencies
Section Four . . . . .	Clauses 2.6 to 2.10
Section Five . . . . .	Clauses 3.1 and 3.2
Section Seven . . . . .	Clause 5.1
Section Eight . . . . .	Clauses 5.2 to 5.6
Section Nine . . . . .	Clause 5.7
Section Ten . . . . .	Clause 6.1 and 6.2
Chapter 5 . . . . .	Clauses 9.1 to 9.15
Clause 14 . . . . .	Clause 3.1
IEC 107-4 Additional Measurements*	No Australian equivalent
IEC 268 Sound System Equipment	AS 1127 Sound System Equipment
IEC 268-5 Loudspeakers	Part 5: Loudspeakers
IEC 268-14 Circular and Elliptical Loudspeakers; Outer Frame Diameters and Mounting Dimensions	Part 4: Dimensions of Loudspeakers
ISO 266 Acoustics — Preferred Frequencies for Measurements	AS 2533 Acoustics — Preferred Frequencies for Measurements
CCIR Report 624 TV Transmission Standards	Department of Communications: Transmission Standards for the Australian Terrestrial Television Service
CCIR Recommendation 468-1 Frequency Response Networks	No Australian equivalent

- (d) *Page number references.* The text references apply to the IEC page numbers at the bottom left-hand corner of each page.

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\* In course of preparation

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# RECOMMENDED METHODS OF MEASUREMENT ON RECEIVERS FOR TELEVISION BROADCAST TRANSMISSIONS

## Part 2: Electrical and acoustic measurements at audio-frequencies

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### CHAPTER I: GENERAL

#### SECTION ONE—INTRODUCTION

##### 1. Object

The object of this standard is to standardize the conditions and methods for the measurements to be used for the study of a receiver for television broadcasting so as to make possible the comparison of the results of measurements. Specifying limiting values of the various quantities for acceptable performance is not an object of this standard.

The standard constitutes a catalogue of selected measurements recommended for assessing the essential properties of receivers of a given type. It is neither mandatory nor limiting; a choice of measurements can be made in each particular case and, if necessary, additional measurements may be carried out.

The recommended methods are designed to make possible the assessment of the performance of the complete receiver, without going into more than a minimum of detail and without giving its components separate consideration.

It should be realized that the measurements proposed are subject to future improvements as methods are refined and with the development of receiver techniques.

##### 2. Scope

The methods of measuring the electrical, acoustic and optical properties described in this standard apply more particularly to broadcast television receivers designed for monochrome and colour vision reception with accompanying sound of the systems of the C.C.I.R.\* recommendations and reports, due regard being given to national transmission standards.

### CHAPTER II: GENERAL NOTES ON MEASUREMENTS

#### SECTION TWO—GENERAL CONDITIONS

##### 3. Introduction

Ideally, the measurements of the sound section should be carried out using acoustic techniques. Due to the nature of the measurements and to simplify interpretation of the results, purely electrical measurements are recommended where possible, since the interpretation of acoustic measurements

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\* C.C.I.R.: International Radio Consultative Committee.