

# Australian Standard<sup>®</sup> 2839.1—1986

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## COLOUR TELEVISION RECEIVERS Part 1—GENERAL REQUIREMENTS



**STANDARDS ASSOCIATION OF AUSTRALIA**  
*Incorporated by Royal Charter*



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Australian Broadcasting Corporation  
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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*This standard was issued in draft form for comment as DR 77006. ✓*

**AUSTRALIAN STANDARD**

**COLOUR TELEVISION RECEIVERS**  
**Part 1**  
**GENERAL REQUIREMENTS**

**AS 2839.1—1986**

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## PREFACE

This standard was prepared by the Association's subcommittee on Radio Reception, as the first in a series of standards on the performance of colour television receivers. Other standards in the series are under consideration.

The purpose of the standard is to specify minimum performance requirements for colour television receivers intended for the reception of transmissions using the 625-line PAL system to the Technical Standards for the Australian Television Service.\* The standard applies to both mains and battery operated receivers.

These minimum requirements are considered necessary for both the information of the consumer and the guidance of the suppliers of TV receivers in order to achieve a higher standard of performance for the benefit of the viewer. The requirements apply to a television receiver where it is operated with a suitable antenna, within the primary service area of the appropriate television station according to the planned service of the Department of Communications.

Information to be supplied by the manufacturer is also specified, both for the guidance and the protection of the consumer. Such information should be available in an instruction manual available with each receiver or in an appropriate written form, at the point of sale.

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## STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard**  
for  
**COLOUR TELEVISION RECEIVERS**

**PART 1—GENERAL REQUIREMENTS**

**1 SCOPE.** This standard specifies the minimum general performance video characteristics of television receivers and defines the characteristics necessary for satisfactory performance under Australian conditions. It also specifies the minimum information describing the equipment to be supplied by the manufacturer.

**2 APPLICATION.** This standard applies to colour television receivers intended for the reception and reproduction of colour transmissions on the 625-line PAL system with negative modulation and with associated frequency modulated sound reception.

The standard applies to both mains and battery-operated equipment.

**3 REFERENCED DOCUMENTS.** The following standards are referred to in this standard:

AS 1053	Radio Interference Limits and Measurements for Television and Radio Receivers
AS 1852	International Electrotechnical Vocabulary 1852(60) Radiocommunications
AS 2202	Code of Practice for the Provision of Warranties/Guarantees for Household Goods
AS 3100	Approval and Test Specification for Definitions and General Requirements for Electrical Materials and Equipment
AS 3159	Approval and Test Specification for Electronic Sound and Vision Equipment
AS 3250	Approval and Test Specification for Mains Operated Electronic and Related Equipment for Household and Similar General Use
IEC 169.2	Radio Frequency Connectors Part 2—Coaxial Unmatched Connectors
CIE No 15 (1971)	Colorimetry, International Commission on Illumination

**4 DEFINITIONS.** For the purpose of this standard, the definitions given in AS 1852(60) apply.

**5 RECEPTION OF THE RADIATED SIGNALS.** The television receiver shall be capable of receiving the radiated signals generated by authorized television transmissions in accordance with the Technical Standards for the Australian Television Service. It shall

satisfactorily reproduce the program material conveyed by those signals and the colour coding commensurate with Clause 11(d).

NOTE: The fact that a receiver complies with this clause does not guarantee reception outside the planned area nor reception without an appropriate antenna.

**6 FREQUENCY CONTROL.**

**6.1 Frequency coverage.** The receiver shall be equipped for the reception of all VHF and UHF channels listed in the Technical Standards of the Australian Television Service at the time of manufacture.

NOTE: The channels currently allocated for television in Australia are listed in Tables 1 and 2.

**6.2 Fine tuning.** The receiver shall be equipped with a form of tuning control, e.g. memory fine tuning or automatic fine tuning, such that after selection of the required channel retuning of the receiver is not required as a regular adjustment.

**6.3 Stability.** After a warm-up period of two min, the local oscillator frequency of the receiver shall not vary by more than  $\pm 300$  kHz for any or all normal operating conditions. The receiver shall meet this tolerance under the following conditions with automatic frequency control (if fitted) operating:

- (a) A variation over the range of  $\pm 10^\circ\text{C}$  about any mean initial ambient temperature in the range  $15^\circ\text{C}$  to  $35^\circ\text{C}$ .
- (b) A variation in mains voltage of  $\pm 10$  percent.
- (c) Normal channel changing operations.

**7 ELECTROMAGNETIC INTERFERENCE.**

**7.1 Intermediate frequency (IF).** In order to minimize interference to the reception of the wanted signal at the receiver, the intermediate frequency shall be  $36.875 \pm 0.25$  MHz (for vision carrier) except where receiver implementation necessitates the use of a non-standard intermediate frequency, then any interference generated by such a receiver, or its susceptibility to interference, shall be no worse than for a receiver using the standard IF of 36.875 MHz.

**7.2 Limits of interference.** The receiver, including any accessories supplied as original equipment, shall comply with the requirements of AS 1053.

**8 SAFETY.** The receiver, including any accessories supplied as original equipment, shall comply with the requirements of either AS 3159 or AS 3250, as appropriate.

**9 A.C. POWER SUPPLY.** Receivers shall be designed to operate on a nominal mains supply voltage of 240 V a.c., 50 Hz, single phase, with a maximum variation of +15, -10 percent.