AS 4599.1—2011

Australian Standard®

Digital television—Terrestrial broadcasting

Part 1: Characteristics of digital terrestrial television transmissions

STANDARDS Australia

This Australian Standard® was prepared by Committee CT-002, Broadcasting and Related Services. It was approved on behalf of the Council of Standards Australia on 12 July 2011. This Standard was published on 10 August 2011.

The following are represented on Committee CT-002:

- Australian Broadcasting Corporation
- Australian Chamber of Commerce and Industry
- ACMA
- Australian Industry Group
- Australian Information Industry Association
- Australian Subscription Television and Radio Association
- CHOICE
- Commercial Radio Australia
- Community Broadcasting Association of Australia
- Consumer Electronics Suppliers Association
- Electronic Services Industry Association
- Engineers Australia
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- Media Access Australia
- Special Broadcasting Service

Additional Interests:

- Australian Digital Testing
- Austar Communications
- AV Link Australia
- Broadcast Australia
- BTC Australia
- Modern Antenna Systems
- Network Ten
- Nine Network Australia
- Panasonic Australia
- Rohde & Schwarz (Australia)
- Seven Network (Operations)
- Tx Australia

This Standard was issued in draft form for comment as DR AS 4599.1.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at **mail@standards.org.au**, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

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Digital television—Terrestrial broadcasting

Part 1: Characteristics of digital terrestrial television transmissions

Originally as AS 4599—1999.
Previous edition AS 4599.1—2007.
Third edition 2011.

Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 0 7337 9897 9

PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee CT-002, Broadcasting and Related Services to supersede AS 4599.1—2007. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

This Standard was prepared in conjunction with the ACMA and the television broadcasting industry to ensure consistency of implementation of terrestrial broadcasting transmissions and to enable the design of digital transmission equipment and television receivers. The ACMA has published a set of digital terrestrial television planning parameters in *Technical Planning Guidelines* and *The Digital Terrestrial Television Broadcasting Planning Handbook* which reference this Standard.

The objective of this Standard is to provide television transmission equipment and receiver manufacturers and broadcasters with the technical specification for the Australian digital terrestrial television transmission system in order to achieve interoperability and optimization of transmission choices for digital terrestrial television broadcasting (DTTB) and reception.

Standards Australia provides a family of terrestrial television Standards including AS 4933.1, *Digital television—Requirements for receivers*, Part 1: *VHF/UHF DVB-T television broadcasts,* AS/NZS 1367, *Coaxial cable and optical fibre systems for the RF distribution of analog and digital television and sound signals in single and multiple dwelling installations* and AS 1417(Int), *Receiving antennas for radio and television in the VHF and UHF broadcast bands*, which are related to this Standard.

The objective of this revision is to update the reference documents and bring the Standard into line with current practice.

The Australian implementation of the DVB-T system uses the technical content of relevant ETSI Standards.

Copies of these Standards may be obtained from the relevant Standards authorities.

The development of standards within the EBU DVB project is a dynamic process. Reviews of existing and development of new ETSI standards are underway at DVB. End users of this Standard are encouraged to keep up to date with DVB reviews by contacting the DVB Project Office directly at

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or by visiting the DVB website:

http://www.dvb.org

In previous versions of this Standard to maintain consistency with the referenced documents, a comma was frequently used in this Standard when referring to a decimal marker, particularly in tables. This is no longer the case in this version and a decimal marker is now used.

Any international Standard references should be replaced by an equivalent Australian Standard when one is available. The availability of equivalent Australian Standards can be determined from the SAI Global website www.saiglobal.com.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for digital terrestrial television transmissions in Australia, including the video, audio and data coding, the characteristics of the transport stream, the channel coding and the modulation system to be used.

This update includes consideration of standards related to terrestrial fixed and mobile broadcasting, encoded video and audio. In this update of AS 4599.1, references are included for copy protection, copy management and application programming interfaces.

1.2 APPLICATION

This Standard shall be read in conjunction with the referenced international standards detailed in Clause 1.4*.

Digital terrestrial television broadcasting in Australia is based on the DVB specifications published in the ETSI Standards referenced in this Standard.

This Standard is set out in Sections, which deal with specific topics in ETSI Standards. These are summarized below:

Addressed Standards		
Section	**Title**	**ETSI Standard**
2	Coding	ETSI TS 101 154 V 1.8.1 (2007)* Digital Video Broadcasting (DVB); Implementation Guidelines for the use of Video and Audio Coding in Broadcasting Applications based on the MPEG-2 Transport Stream
		ETSI TS 102 005 Digital Video Broadcasting (DVB); Specification for the use of Video and Audio Coding in DVB services delivered directly over IP protocols
		ETSI TR 102 033 Digital Video Broadcasting (DVB); Architectural framework for the delivery of DVB-services over IP-based networks
		ETSI TS 102 034* Digital Video Broadcasting (DVB); Transport of MPEG-2 Based DVB Services over IP Based Networks
		AS/NZS 13818-6* Information Technology—Generic coding of moving pictures and associated audio information, Part 6: Extensions for DSM-CC.

* This Standard is referenced by ACMA in the Broadcasting Services (Technical Planning) Guidelines 2007.