



HB 252 – 2007

Communications Cabling Manual

Module 3:

Residential communications cabling handbook



handbook

HB



Australian Government
Australian Communications
and Media Authority

Handbook

Communications Cabling Manual

Module 3: Residential communications cabling handbook

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PREFACE

This Handbook, HB 252, *Residential communications cabling handbook*, is Module 3 of a series of Handbooks and Standards known collectively as the Communications Cabling Manual (CCM). The CCM has been compiled by Standards Australia Committee CT-001, Communications Cabling, representing carriers, the Communications Alliance, the Australian Communications and Media Authority (ACMA), cable manufacturers, cablers and end-users. The basis for HB 252 was laid down by a subcommittee of CT-001 and its completion overseen by the Chair and Project Manager of CT-001.

The CCM is designed to provide essential information to the communications cabling industry and is available in five modules.

- Module 1: Australian regulatory arrangements (HB 243)
- Module 2: Communications cabling handbook (HB 29)
- Module 3: Residential communications cabling handbook (HB 252)
- Module 4: Regulatory Standards
(AS/ACIF S008:2006 and AS/ACIF S009:2006 or their replacements)
- Module 5: Voluntary Standards
(e.g. AS/NZS 3080 and AS/NZS ISO/IEC 24702)

The objective of this Handbook is to supplement the information in the two Regulatory Standards, which are derived from the Cabling Provider Rules (the Act) and the voluntary Standards AS/NZS ISO/IEC 15018, *Information technology—Generic cabling for homes* and soon-to-be-published AS/NZS IEC 61935.3, *Testing of balanced telecommunications cabling in accordance with ISO/IEC 11801, Part 3: Verification and qualification testing of communication cabling in accordance with ISO/IEC 15018*, with explanatory material, practical details and generally useful information in order to assist installers and others in the field.

While the information contained in this Handbook is the latest available at the time of printing, users must ensure that they consult the latest edition of any referenced Standard, amendments to the Telecommunications Act and its regulations, and use the references herein as a guide only.

This Handbook will be updated regularly and feedback from users is welcomed to assist in improving successive editions.

To receive email notification of any new or updated documentation concerning communications cabling, the reader may register with Standards Watch at <http://www.saiglobal.com/shop/script/search.asp>

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INTRODUCTION

In the past, residential communications and security cabling generally comprised up to three discrete cabling systems:

- Telephone sockets star wired from a common point or wired in a 'bus', 'looped' or 'daisy-chain' manner from one socket to another.
- Free to air (FTA TV) outlets wired via passive splitters/taps, splitter-amplifiers from an antenna or in the case of multiple dwelling units, a Master Antenna TV (MATV) system.
- Security sensors wired to a central alarm panel.

Since the mid-1990s there has been a growing demand for additional cabling in homes for entertainment, control and home office applications, for purposes such as:

- Networking of computers and entertainment devices to each other for resource sharing.
- Connection of computers and devices to the internet.
- Distribution of cable and digital broadcast television services.
- Automation of a range of functions including light switching and illumination levels, heating and cooling, garden watering, blinds, curtains and shutters.
- Home theatre.

During this period, telecommunications regulations and carrier services have also changed in relation to standard cabling, connectors, products and even practices used at the network boundary.

The cabling for these applications is covered by a variety of Australian Standards, the majority of which have been heavily revised since 2000. A new standard for generic cabling for homes (AS/NZS ISO/IEC 15018), which specifies an integrated star-wired approach, was released in 2005. It includes methods to integrate legacy cabling, complying with older regulations or standards, with specific cabling for new services associated with emerging control system standards.

This Handbook has been developed to provide field installation personnel with a guide to applying these and other relevant standards. It is easy to read and understand. It should be utilized as a field reference/planning guide, and whilst it incorporates information from a number of Australian/New Zealand and related Standards, it should not be regarded as a Standard nor a replacement for those Standards.

It is important to note that there are mandatory requirements (in the interest of safety and network integrity) detailed in Australian Communications and Media Authority (ACMA) and Communications Alliance (ACIF) Standards. It should also be noted that voluntary Standards, such as AS/NZS ISO/IEC 15018 or AS/NZS 1367, could be made mandatory by their inclusion in legislation, service agreements and/or contracts.

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