



Australian Government

ICTCBL303 Install and terminate coaxial cable

Release: 2

ICTCBL303 Install and terminate coaxial cable

Modification History

Release	Comments
Release 2	This version released with ICT Information and Communications Technology Training Package Version 5.0.
Release 1	This unit first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to install and terminate coaxial cable on client premises in communications applications, digital and analog, including master antenna television (MATV), cable television (CATV), closed-circuit television (CCTV), digital video broadcasting – terrestrial (DBVT), digital video broadcasting – satellite (DVB-S), data and video, including digital broadcasting, computer networks such as local area networks (LAN) and wide area networks (WAN), and multimedia.

It applies to technical staff who install and terminate coaxial cable for new installations, upgrades or the maintenance of existing networks in domestic, commercial and industrial installations on a client's premises.

Where this unit of competency is undertaken as a competency related to the ACMA Cabler Registration, this requires prior completion of ICTCBL247 and a WHS/OHS unit of competency.

All cabling work for clients in the telecommunications, fire, security and data industries must be performed by a registered cabler. All cablers are required to register with an Australian Communications and Media Authority (ACMA) accredited registrar.

Unit Sector

Telecommunications – cabling

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to install and	1.1 Prepare for given work according to relevant legislation, codes,

ELEMENT	PERFORMANCE CRITERIA
terminate coaxial cable	regulations and standards 1.2 Arrange access to site according to required procedure 1.3 Inform appropriate personnel of identified hazards on worksite 1.4 Select coaxial cable type, connectors and manufacturer's tool to comply with installation environment and client requirements 1.5 Check proposed route and bend radius to meet manufacturer's specifications and industry standards 1.6 Test cable on drum for continuity and inspect visually for crushing and kinks 1.7 Discuss with client proposed method of installation and cable route, and adjust if necessary
2. Install, terminate and test coaxial cable	2.1 Maintain cable segregation to industry standards 2.2 Protect integrity of coaxial shield cable to ensure no loss of signal during operation and maintain bend ratios to not exceed manufacturer's specifications and industry standard 2.3 Install cable securing hardware to ensure cable is not crushed or kinked while maintaining cable manufacturer's bend radius 2.4 Install cable following work health and safety (WHS) and environmental requirements, and complying with manufacturer's specifications and industry standards 2.5 Terminate cable and perform type of termination specified in plan using safe work practices and according to manufacturer's specifications 2.6 Test termination for transmission loss and signal levels, and re-terminate the coaxial cable if the transmission loss exceeds the manufacturer's specifications 2.7 Record all measurements 2.8 Fit over-voltage protection devices to all cables with metallic component where required
3. Remove termination waste from work area	3.1 Clean work area thoroughly to minimise risk of injury from loose metal strands 3.2 Dispose of waste safely according to relevant environmental requirements 3.3 Restore worksite to client's satisfaction
4. Document installation	4.1 Update plans and records with details of installation and test results 4.2 Show client completed work and ensure work matches agreed

ELEMENT	PERFORMANCE CRITERIA
	method of installation and cable route 4.3 Notify client of work completion and obtain sign off

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	Reads and interprets plans, specifications, and other documentation from a variety of sources and consolidates information
Writing	Accurately records information and prepares documentation using clear language and organisational formats and protocols
Oral Communication	Demonstrates an awareness of the need to vary structure, style, tone and vocabulary to meet the requirements of the audience, context and purpose
Numeracy	- Makes calculations appropriate for measuring and estimating materials - Performs mathematical calculations to check, interpret and confirm results of system tests
Navigate the world of work	Takes personal responsibility for adherence to legal and regulatory responsibilities relevant to own work context, and draws attention to any issues that may affect self or others
Interact with others	Recognises the purpose of various communications directly relevant to own role
Get the work done.	- Implements actions as per plan, making slight adjustments if necessary, and addressing some unexpected issues - Automatically implements standard procedures for routine decisions in response to familiar problems - Understands when to take responsibility and when to notify others

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTCBL303 Install and terminate coaxial cable (Release 2)	ICTCBL303 Install and terminate coaxial cable (Release 1)	Updates to application and knowledge evidence. Updates to template to apply consistent format between units.	Equivalent unit

Links

Companion Volume Implementation Guides are available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTCBL303 Install and terminate coaxial cable

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- install and terminate coaxial cable types including RG6 quad shielded coaxial cable
- install different connector types
- conduct and interpret test results
- verify the installation complies with manufacturer's specifications and warranties
- prepare a report for a client that documents the installation and test results
- comply with all related work health and safety (WHS) requirements and work practices.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislation, regulations, standards and codes of practice associated with the installation of coaxial cables
- features of types of coaxial cable and the manufacturer's specifications that apply
- features and operating requirements of test equipment for coaxial cable
- information required to operate equipment according to a test specification
- manufacturer's requirements for safe operation of coaxial cable tools and equipment
- safety precautions when working with coaxial cable and radio frequency (RF) based systems
- specific WHS requirements relating to the activity and site conditions

- test methods and performance requirements
- types and techniques for connecting and termination of coaxial cable, including:
 - compression termination
 - crimp termination
- function of over-voltage protection devices
- transmission and propagation characteristics of coaxial cable
- typical issues and challenges that occur on site.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- special purpose tools, equipment and materials
- sites where installation and termination of coaxial cabling may be conducted
- equipment and personal protective equipment currently used in industry
- testing equipment currently used in industry
- relevant regulatory and equipment documentation that impacts on installation activities.

Note: All client cabling work in the telecommunications, fire, security and data industries must be performed by a registered cabler. All cablers are required to register with an Australian Communications and Media (ACMA) accredited registrar. Assessment by a Telecommunications Industry Training Advisory Board (TITAB) registered assessor is recommended for this unit.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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