



**Australian Government**

# **Assessment Requirements for ICTRFN201 Install a satellite antenna**

**Release: 1**

# Assessment Requirements for ICTRFN201 Install a satellite antenna

## Modification History

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

## Performance Evidence

Evidence of the ability to:

- prepare the site and obtain resources in preparation for installation
- determine satellite type and orientation
- assemble, install, align and test a satellite antenna according to plans and specifications, and site specific safety requirements
- conduct performance tests according to manufacturer's specifications and enterprise guidelines.

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

## Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline the following features of a satellite antenna:
  - directivity
  - operation of parabolic reflector and feedhorn
  - optimum placement
  - pattern
  - polarisation
- discuss bit error ratio (BER)
- summarise coaxial cable types and properties
- discuss electromagnetic waves with reference to:
  - absorption by trees and buildings
  - effect of weather on absorption
  - awareness of exposure to electromagnetic radiation (EMR)
- outline legislation, codes of practice and other formal agreements that directly impact on antenna installation

- explain modulation:
  - bandwidth
  - individual spectrum shape of digital satellite television signals
- discuss modulation error ratio (MER)
- outline radio frequency (RF) spectrum terminology related to bands used for satellite broadcasting (C, S, L, Ku, Ka bands)
- outline satellite antenna product knowledge
- summarise signal level expressed in dBuV units
- explain specific work health and safety (WHS) requirements that impact on the installation of satellite antenna equipment.

## Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances should be typical of those experienced in the telecommunications – radio frequency networks field of work and include access to:

- a suitable site for satellite antenna installation
- a range of antennas and cables currently used in industry
- a range of general tools and test equipment required for satellite antenna installation and testing.

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

## Links

Companion Volume implementation guides are found in VETNet -

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