

## Overview

This standard is concerned with installing and configuring radio communication equipment. This includes installation and testing of radio communication devices. This includes radio antenna installation and testing on a range of fixed or mobile structures.

## Install and configure radio communication equipment

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### Performance criteria

*You must be able to:*

1. Review the radio communication equipment requirements and radio equipment specifications to assess installation tasks
2. Plan the installation of radio equipment to meet installation requirements
3. Assess the risks posed by any site or vehicle specific hazards in line with organisational procedures
4. Assemble, install and configure radio equipment to meet installation requirements
5. Carry out work operations following organisational safety procedures, manufacturer's instructions and any site/vehicle specific requirements
6. Carry out tests to check that radio equipment operates as specified
7. Analyse test results to identify, and where possible rectify, any failures to meet functional specification
8. Follow organisational procedures to report any unrectified failure in connectivity
9. Update documentation for work undertaken and test results according to organisational standards

## Knowledge and understanding

*You need to know and understand:*

1. The general principles of radio communication and radio propagation
2. The characteristics of industry standard radio communication equipment
3. The operation and characteristics of radio equipment components including: amplifiers, demodulators, mixers, modulators, and oscillators
4. The principles of modulation and the different modulation schemes
5. The issues surrounding the radio spectrum for radio operation
6. Radio channels, their use and the impact of Shannon's Law
7. The need and use of the decibel and related decibel quantities
8. The impacts on radio signal propagation
9. The organisations policies, procedures and standards for Installing and configuring radio communication equipment

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