SPECIFICATION - LEVEL 3 RADIO NETWORK TECHNICIAN v1.1 (ST0757)

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Introduction

The Radio Network Technician Level 3 apprenticeship develops the competence required to set up, configure, maintain, and monitor radio networks delivering digital voice and data services. Apprentices will work with radio frequency distribution architecture in a variety of contexts, including telecommunications operators, emergency services, defence organisations, and third-party radio access providers. The role involves ensuring network performance in terms of service, coverage, quality, and availability, while complying with relevant regulations and health and safety requirements. Work may be office-based, on-site, or field-based, including in remote base stations and at height, requiring knowledge of lone working procedures and fall arrest techniques.

Key Information	
Name	Radio network technician ST0757
Level	3
Duration	24 months on-programme, 3 months EPA window
Funding Band	£19,000
Prerequisites and Entry Requirements	Before final assessment of the qualification, the Learner must be employed in a relevant role, meet Gateway requirements before taking the End-Point Assessment. have completed a portfolio of evidence and, if applicable, have passed the required Functional Skills. There are no mandatory qualifications required for this this End-Point Assessment.
Methods of Assessment	There are three assessment methods, observation, presentation: written or verbal brief and a professional discussion underpinned with a portfolio.
Simulated Assessment	The observation will take place in a simulated environment selected by the EPAO. This may include the EPAO's premises, a training provider's premises, an employer's training facility, a test centre, or another suitable simulated environment.
Grading	Learners will be assessed across the three assessment components and awarded a grade of Fail, Pass, or Distinction. The overall result from each assessment method is combined to decide the overall grade of a Fail, Pass, Merit or Distinction. Grading criteria are outlined in the End-Point Assessment Plan and associated guidance documents.
Link to assessment plan	Radio network technician / Skills England

End-Point Assessment Objective

The End-Point Assessment (EPA) confirms that the apprentice has achieved the required competence to work independently as a Radio Network Technician. This includes the ability to design, install, test, implement, fault-find, and optimise radio telecoms networks in line with industry regulations and health and safety requirements. Apprentices must demonstrate they can work effectively with minimal supervision, meet performance objectives, and collaborate with internal teams, external customers, and equipment suppliers to support the delivery of reliable, high-quality radio network services across a range of environments.

Programme Structure

Throughout the programme, apprentices will gain practical skills and underpinning knowledge in a variety of settings. They will be employed in a relevant role for typically 24 months, during which they will compile a portfolio of evidence with support from their assessor. The assessor will monitor progress against the standard to ensure the apprentice is fully prepared for the EPA.

Available Support

Sample assessment materials for the observation, presentation and the professional discussion are available to approved training providers to support learner preparation and ensure consistency in delivery.

KSB Mapping Table

Knowledge	Assessment Method
K1 Principles of radio propagation including path profile analysis and the behaviour of radio waves as they travel from one point to another and different frequency bands.	Presentation
K2 Characteristics of digital communication the architecture, component parts including differences to network behaviour.	Professional discussion
K3 Causes and impact of radio interference and noise in a network.	Presentation
K4 Principles of electrical theory for antenna.	Professional discussion
K5 Types of cabling and connectivity and their relative merits.	Professional discussion
K6 Network architectures, the specification of a network's physical components, functional organisation and configuration. Its operational principles, procedures, protocols and management tools.	Presentation
K7 Principles of radio wave propagation in networks. manual and automated methods of frequency planning for digital voice and data networks.	Presentation
K8 Frequency spectrum in networks and their uses.	Professional discussion
K9 Impact of harmonics in radio frequency and how to reduce this.	Professional discussion
K10 The relationship between capacity demands and types of radio networks used to support requirements.	Presentation
K11 Differences between wide-band and narrow band networks. The use of simplex and duplex techniques in networks, methods of frequency hopping and their benefits in different networks.	Professional discussion
K12 Techniques and systems used in testing to identify the location and cause of faults in complex and or non-standard radio telecommunications networks; including observation, simulation, measurement, identification of function loss comparison, and previous fault data.	Professional discussion

K13 Previous fault data includes frequency of occurrence, manufacturers' documentation including user guides and diagnostic data, maintenance records, trending, built-in diagnostics, comparison with commissioning results.	Observation
K14 Good voice and data network performance.	Observation
K15 Fault-finding processes. Performance measurement against targets, including key user requirements.	Observation
K16 Types of faults. The main factors affecting network performance including typical faults, and approaches to a reduction in network performance.	Observation
K17 Health and safety requirements.	Observation
K18 Security principles, policies and procedures including data protection, software, access, encryption and regulation. How to report security breaches using local procedures and rules.	Professional discussion
K19 Network vulnerabilities and how they are assessed.	Presentation
K20 Security process for accessing field-based sites.	Presentation
K21 Ethical use of data and the implications, with respect to the use of data and automation.	Professional discussion
K22 User requirements and methods to set priorities.	Observation
K23 Roles within a multidisciplinary team and the interfaces with other areas of an organisation.	Presentation
K24 Information available in data sources, methods to access these and then interpret the information within the data source.	Professional discussion
K25 The occupation in relation to the wider landscape including current or future requirements.	Professional discussion
K26 Sustainability and environmental considerations in their area of work.	Professional discussion
K27 Methods of work planning and prioritisation.	Presentation
K28 Methods to keep up to date with emerging and or evolving technologies, their use and impact on the role.	Professional discussion
Skill	Assessment Method
S1 Operate the planning process including selection of equipment.	Presentation
S2 Select a location as part the planning process.	Presentation
S3 Install or support installation of equipment.	Observation

S4 Install, or support the installation, positioning equipment according to manufacturer's specifications, design detail and perform administrative tasks including installation reports and test results.	Presentation
S5 Identify the causes of issues relating to frequency interference and other noise sources.	Professional discussion
S6 Prioritise, plan and organise work activity using a methodical approach.	Presentation
S7 Select the required frequency for a given radio path through the use of software application, manual calculations or system planning tools.	Presentation
S8 Access and use the test systems.	Observation
S9 Report faults and use the required escalation process.	Observation
S10 Collate and input fault data and statements into the fault management system.	Observation
S11 Rectify faults within own area or escalate as necessary.	Observation
S12 Utilise software monitoring tools, user information or data gathered from testing to modify a radio network or link to overcome communication issues.	Observation
S13 Configure and maintain a network supporting the use of a Radio Frequency RF system.	Observation
S14 Gather network performance information and user insight through feedback or user experience.	Observation
S15 Identify procedures to enhance and improve system performance.	Professional discussion
S16 Analyse data, draw conclusions and understand organisation impacts.	Professional discussion
S17 Apply organisational security policies.	Presentation
S18 Access sites according to required procedure.	Professional discussion
S19 Create a written work plan and communicate plan to team members.	Presentation
S20 Use customer feedback to process, prioritise and resolve issues.	Observation
S21 Work in agile, multi-disciplinary delivery teams, taking a flexible, collaborative and pragmatic approach to delivering tasks.	Presentation
S22 Review own development needs. Keep up to date with developments in technologies, trends and innovation using a range of sources.	Professional discussion
Behaviours	Assessment Method
B1 Adheres to required work practices and conducts all work in a manner which is safe.	Observation
B2 Aligns work activities and priorities to organisational objectives.	Presentation

B3 Uses initiative to take ownership and responsibility for their work.	Professional discussion
B4 Demonstrates a pragmatic and logical approach to problem solving.	Observation
B5 Is a positive role model to others in attitude to work and how it is undertaken.	Professional discussion
B6 Work collaboratively with stakeholders.	Presentation