



Australian Government

DEFSO001C Operate a radar system

Release 2

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Modification History

Release	TP version	Comments
2	DEF12 V2	Layout adjusted.
1	DEF12 V1	First release.

Unit Descriptor

This unit covers the competency required to operate a radar system as part of a team and under supervision.

It includes the requirement to configure the system, build and maintain the continuous collection, collation and analysis of information to track existing contacts or identify new contacts.

This activity could continue for a prolonged period requiring the operator to hand over effectively to another operator.

Application of the Unit

This unit was developed for Combat Systems Operators working within Defence but is applicable to any individual in this field of work.

Radar systems are operated in a wide variety of environments and conditions. Typically operators work independently and as part of a team under direct and/or indirect supervision, use discretion and judgement, and take responsibility for the quality of their outputs. All activities are carried out in accordance with relevant organisational policies and procedures.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Configure radar system	1.1 Instructions are received from supervisor in accordance with <i>standard operating procedures</i> (SOPs) 1.2 Serviceability of <i>radar system</i> is confirmed and any faults are recognised and reported to supervisor 1.3 Radar display is <i>optimised</i> for operator use 1.4 <i>Outside environmental conditions</i> are determined and system is optimised accordingly 1.5 <i>Internal</i> and <i>external communications</i> are established
2. Compile and maintain an electronic picture	2.1 Information is collated and analysed to identify and discriminate radar contacts 2.2 Information is continuously collected, collated and analysed to track contacts or to identify new contacts 2.3 Information is collected using radar identification friend from foe (IFF) and <i>other available sensors/sources</i> in accordance with organisational procedures 2.4 Contact details are reported, displayed and disseminated to stakeholders in accordance with organisational procedures 2.5 Threats are responded to in accordance with organisational doctrine 2.6 <i>Problems or issues</i> beyond own capability are reported immediately to supervisor
3. Finalise operations	3.1 Radar system operation is <i>transferred</i> to new operator as required or is ceased as directed by supervisor 3.2 System is secured and stowed in accordance with SOPs 3.3 Documentation is secured and stowed in accordance with SOPs 3.4 Report is made to supervisor on completion in accordance with SOPs

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- apply organisational doctrine
- conduct daily system operability tests (DSOTS)
- detect contacts via electronic means
- optimise operations room equipment
- use correct voice procedure
- use identification procedures

Required Knowledge

- basic principles and characteristics of radar
- cryptographic materials
- environmental prediction system
- external communications
- internal communications
- relevant registered publications
- tactical data systems

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- maintain effective communication by using clear and concise procedures
- identify, track and report contacts over a minimum of one hour
- complete a minimum eight hours of radar systems operations using a manual or automated system
- work within one's delegated authority

Consistency in performance

Competency should be demonstrated over time that is sufficient to include a range and variety of situations.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in an actual workplace or in a simulated workplace environment.

Specific resources for assessment

Access is required to:

- appropriate documentation and resources normally used in the workplace

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an industry-approved simulated work environment. Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<i>Standard operating procedures</i> may include:	• Australian Standards • Job guides, pamphlets and other publications • Manufacturers' handbooks, industry specifications and technical instructions • Work health and safety regulations • Organisational policies and procedures • Relevant local government by laws • Relevant state/territory or federal legislation or regulations • Written and verbal orders and job instructions
<i>Radar system</i> may include:	• Associated communications equipment: • radio equipment for internal and external communications • radio headsets • Associated IFF equipment • Associated operating manuals and publications • Radar display
<i>Optimising a radar display</i> may include:	• Setting up for best performance • Setting up to operator requirements
<i>Outside environmental conditions</i> may include:	• Absorption • Atmospheric layers • Man-made interference (deliberate and non deliberate) • Scattering • Sea clutter • Weather
<i>Internal communications</i> may include:	• Broadcast circuits • Sound powered activated communications • Telephone
<i>External communications</i> may include:	• Data links • Radio (HF/VHF/UHF) • Satellite • Signals/messages
<i>Other available sensors/sources</i> may include:	• Acoustic • Electronic support • C4I

	• Information systems • Visual
<i>Problems or issues</i> may include:	• Mechanical failure • Outside environmental conditions • Power failure • System failure • Tactical consideration
<i>Transferring radar system operations</i> may include:	• Comprehensive handover of current situation and system configuration

Unit Sector(s)

Not applicable.