



Australian Government

DEFIN018 Collect radio frequency emissions

Release 1

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Modification History

Release	TP Version	Comments
2	DEF12V2	New unit.
1	DEF12V1	Primary release.

Unit Descriptor

This unit covers the competency required to collect radio frequency emissions. This unit incorporates the actions to search for, intercept (clandestinely or overtly), and report targeted radio frequency emissions.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication. In a Defence context, this means that there is no civilian need to hold this unit in order to meet licensing, legislative, regulatory or certification requirements.

Application of the Unit

This unit was designed for Defence personnel working within the electronic warfare and signals intelligence fields but may be applicable to any individual employed within a similar role.

Typically individuals perform this activity independently with indirect supervision. The application of this unit in the workplace involves the preparation and operation of collection equipment to search the electromagnetic spectrum and collect target emissions.

All activities are carried out in accordance with relevant standard 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. Prepare for collection activities	1.1 A collection plan is developed, detailing key tasks and timelines. 1.2 Collection equipment is prepared considering the task requirements and duration. 1.3 Tasks and orders are received and clarified where required. 1.4 Liaison is conducted with higher, subordinate, and supporting stakeholders.
2. Search for emission	2.1 Collection equipment is operated according to manufacturer specifications and standard procedures. 2.2 Search methodologies are applied in accordance with standard procedures. 2.3 Spectrum is searched for target activity. 2.4 Legal requirements for collection activities are identified and applied during the collection process.
3. Intercept target emission	3.1 Target emission is intercepted in accordance with the collection plan. 3.2 Assessment on the target identity is made by examination of emission characteristics in accordance with standard procedures. 3.3 Target emission is recorded in accordance with standard procedures. 3.4 The recording is reviewed in accordance with standard procedures.
4. Report intercept	4.1 Intercept is reported to relevant personnel in accordance with standard procedures. 4.2 Assessments are reported in accordance with standard procedures.

Required Skills and Knowledge

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

Required Skills

- listen effectively
- communicate effectively within the workplace
- follow instructions and directives

- report information appropriate to the situation
- assess the situational value of information
- use organisation systems and equipment to conduct collection activities
- search, identify, monitor and record target emissions

Required Knowledge

- antenna theory
- communication network systems and architecture
- electromagnetic spectrum
- radio frequency propagation
- international time zones and date lines
- collection systems and equipment
- collection principles
- collection procedures
- compliance principles
- telecommunications legislation
- privacy legislation

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

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement
- communicate effectively with stakeholders

Consistency in performance

Competency should be demonstrated during a range of collection activities conducted over time utilising current specialist sensor equipment and procedures to ensure the candidate is assessed across a variety of relevant workplace situations, collection systems, and target communications environments.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in the workplace or in a simulated workplace environment.

Specific resources for assessment

Access is required to:

- workplace collection systems
- organisational guidelines and procedures

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>Collection plan</i> may include:	• activity duration • activity parameters • organisational priorities • required equipment • situational considerations • software requirements
<i>Equipment</i> may include:	• ancillaries • antennae • receivers
<i>Stakeholders</i> may include:	• colleagues • customers • operators • supervisors or line managers • users
<i>Standard procedures</i> may include:	• Australian Standards • Defence Instructions • doctrinal pamphlets • job guides, other publications • manufacturers' handbooks, industry specifications and technical instructions • workplace health and safety regulations • organisational policies and procedures • procedure manuals • relevant local government by laws • relevant state/territory or federal legislation • Routine Orders • Standing Operating Procedures • Standing Orders • written and verbal orders
<i>Methodologies</i> may include:	• spectrum surveys • search by selector including: • channel • target • frequency band • signal strength
<i>Search</i> may include:	• electronic analysis of the spectrum to identify

	electromagnetic activity of interest
Legal requirements may include:	• international law • privacy legislation • telecommunications legislation
Target emission may include:	• navigational beacon • search and rescue beacon • radar transmission • radio transmission • weapon system
Assessment may include:	• confirmation of single source reporting • intelligence assessment • survey result • threat warning
Emission characteristics may include:	• location of emitter • mode of transmission • modulation type • target type/ID • transmission text (data/voice) • transmitting frequency • transmitting frequency band
Record may include:	• audio recording • computer generated data • digital imaging • hand written notes • logged transcript • video recording
Report may include:	• briefing • email • formal message (transmitted by data or voice) • formatted report • verbal (in person, radio, phone)

Unit Sector(s)

Not applicable.