



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **AVIE4001B Maintain aircraft radio communications**

**Revision Number: 1**

## **AVIE4001B Maintain aircraft radio communications**

### **Modification History**

Not applicable.

### **Unit Descriptor**

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This unit involves the skills and knowledge required to maintain radio communications using English language and to operate and manage radiotelephone, transponder and intercom equipment under normal and emergency flight conditions. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

### **Application of the Unit**

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Work must be carried out in compliance with the relevant licence and aircraft rating requirements of the Civil Aviation Safety Authority (CASA) and/or ADF; airspace control requirements and aircraft operations; and aircraft control principles, regulations, safety codes, protocols and procedures relevant to maintaining aircraft radio communications.

Operations are conducted as part of commercial and military aircraft activities across a variety of operational contexts within the Australian aviation industry.

Use for ADF Aviation is to be in accordance with relevant Defence Orders and Instructions and applicable CASA compliance.

Work is performed under limited supervision.

This unit is nominally packaged at Certificate IV.

### **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

**Employability Skills**                      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. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
<b>1 Conduct radio communications</b>	<p>1.1 Transmission and receipt of radio telephone messages is carried out using English language in accordance with workplace procedures and regulatory requirements</p> <p>1.2 Emergency and urgency transmissions and procedures are made in accordance with the En Route Supplement Australia (ERSA) (current edition) and the Aeronautical Information Publication (AIP)</p> <p>1.3 All messages are reacted to appropriately in accordance with workplace procedures and regulatory requirements</p> <p>1.4 A listening watch is maintained throughout a flight in accordance with workplace procedures</p>
<b>2 Manage radio equipment malfunctions</b>	<p>2.1 Radiotelephone equipment failure procedures are performed in the event of a loss of radio transmission or reception in accordance with Flight Manual/Pilot's Operating Handbook (POH)</p> <p>2.2 Fault finding procedures and corrective actions not involving special tools or instruments are employed</p>
<b>3 Operate transponder</b>	<p>3.1 Aircraft transponder is operated and monitored in accordance with the AIP during normal operations</p> <p>3.2 Aircraft transponder is operated and monitored in accordance with the AIP during non-normal and emergency operations</p>

## Required Skills and Knowledge

### REQUIRED KNOWLEDGE AND SKILLS

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

#### Required knowledge:

- Sections of Civil Aviation Orders and regulations pertaining to aircraft radio communications
- In ADF context, relevant Defence Orders and Instructions
- Relevant OH&S and environmental procedures and regulations
- Principles of effective radio communications
- Functions of radiotelephone equipment as used on aircraft
- Operating procedures for aircraft radiotelephone equipment
- Standard radiotelephony phraseology as per Aeronautical Information Publication (AIP)
- International distress frequencies for R/T
- Recall distress, radio failure and unlawful interference transponder code
- Problems that may occur during radio communications and action that can be taken to overcome them
- Faults that may occur in radiotelephone equipment and appropriate fault detection and remedial action that can be taken
- Fault finding procedures and corrective actions for radiotelephone equipment not involving special tools or instruments

#### Required skills:

- Use oral and written English language communication skills sufficient to support situation awareness within flight radio operations
- Operate aircraft radiotelephone equipment in accordance with manufacturers instructions, workplace procedures and regulatory requirements
- Communicate effectively under operating conditions using standard phraseology and communication protocols
- Use English language to a standard which enables requests and instructions to be understood by Air Traffic Service and other stations and ensures compliance with received instructions
- Conduct basic faultfinding of defective radiotelephone equipment
- Comply with regulatory requirements pertaining to aircraft radiotelephone communications
- Manipulate any switch or device requiring the release of flight controls without changes to height, heading, speed, attitude, exceeding RPM or power limits
- Interpret and react appropriately to light signals from air traffic control
- Interpret instructions, regulations, procedures and other information relevant to maintaining aircraft radio communications
- Interpret and follow operational instructions and prioritise work

## REQUIRED KNOWLEDGE AND SKILLS

- Complete documentation related to maintaining aircraft radio communications
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when maintaining aircraft radio communications
- Adapt to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may occur when maintaining aircraft radio communications in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when maintaining aircraft radio communications
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during aircraft radio communications
- Monitor and anticipate operational problems and hazards and take appropriate action
- Monitor work activities in terms of planned schedule
- Modify activities dependent on differing workplace contingencies, situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Adapt to differences in equipment and operating environment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Implement OH&S procedures and relevant regulations
- Identify and correctly use equipment required to maintain aircraft radio communication

# Evidence Guide

## EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, 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

### **Context of and specific resources for assessment**

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
  - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
  - access to an appropriate range of relevant operational situations in the workplace
  - In both real and simulated environments, access is required to:
    - relevant and appropriate materials and equipment, and
    - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

### **Method of assessment**

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
  - through activities in an appropriately simulated environment at the registered training organisation, and/or
  - in an appropriate range of situations in the workplace

## Range Statement

### 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.

- Tasks may be undertaken in:
- variable weather conditions in accordance with Day Visual Flight Rules
  - VMC with simulated IMC
  - IMC
- Performance may be demonstrated in:
- an aircraft with appropriate radiotelephone equipment
  - single engine aircraft
  - multi engine aircraft
  - variable air traffic conditions
  - variable flight situations
  - abnormal situations
  - classes of airspace as designated by the Civil Aviation Safety Authority
- Aircraft may include:
- fixed wing
  - helicopters
  - commercial balloons
  - other commercial or military aircraft which incorporate radio communications equipment
- Crew may include:
- single pilot
  - multi crew
- Classes of airspace may be:
- as designated by the regulator
  - restricted and danger areas
  - military control zones
  - Air Defence Identification Zones
- Radiotelephony equipment may include:
- HF radio
  - VHF radio
  - UHF radio
  - transponder
  - intercom system
- Dependent on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
  - enterprise procedures
  - organisational procedures
  - established procedures
  - standard operating procedures
- Information/documents may include:
- relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders, including Day Visual Flight Rules (Day VFR)



## RANGE STATEMENT

- in ADF context, relevant Defence Orders and Instructions
  - Manual of Standards - Pilot Licensing (MOS-PL)
  - Flight Manual/Pilot's Operating Handbook (POH)
  - Aeronautical Information Publication (AIP)
  - En Route Supplement Australia (ERSA)
  - charts
  - Fight Radiotelephone Operator Licence (FROL) Syllabus
  - operations manuals
  - approved checklists
  - workplace procedures and instructions and job specification
  - induction and training materials
  - conditions of service, legislation and industrial agreements including workplace agreements and awards
- Applicable regulations and legislation may include:
- relevant Civil Aviation Regulations, Civil Aviation Safety Regulations and Civil Aviation Orders pertaining to radio communications
  - in ADF context, relevant Defence Orders and Instructions
  - relevant state/territory OH&S legislation
  - relevant state/territory environmental protection legislation
  - relevant Australian Standards
- Performance includes tolerances specified in either of:
- relevant licence and aircraft rating requirements of the Civil Aviation Safety Authority (CASA) such as:
    - Day VFR Syllabus
    - Manual of Standards
  - relevant Defence documentation such as:
    - Defence Orders and Instructions
    - approved curricula and training documentation

## Unit Sector(s)

Not applicable.

## Competency field

### Competency Field

E - Communication and Calculation