



Australian Government

AVIE3007A Maintain remote pilot aircraft systems (RPAS) aeronautical radio communications

Release 1

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Modification History

Release 1. This is the first release of this unit.

This unit replaces and is equivalent to AVIE3006A Maintain remote pilot aircraft systems (RPAS) aeronautical radio communications.

Unit Descriptor

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.

Application of the Unit

Work must be carried out in compliance with the relevant licence and RPAS rating requirements of the Civil Aviation Safety Authority (CASA); relevant airspace control requirements; Visual Metrological Conditions (VMC); regulations, safety codes, protocols and procedures relevant to maintaining aeronautical radio communications.

Use for Defence Aviation is to be in accordance with relevant Defence Orders and Instructions

Operations are conducted across a variety of operational contexts within the Australian Aviation Industry.

Work is performed under limited supervision.

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

Work is performed under limited supervision.

Licensing/Regulatory Information

Refer to Application of the Unit.

Pre-Requisites

Nil.

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

Elements and Performance Criteria

Conduct radio communications

- 1.1 Transmission and receipt of radio telephone messages is carried out using the English language in accordance with workplace procedures and regulatory requirements
- 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)
- 1.3 All messages are responded to appropriately in accordance with workplace procedures and regulatory requirements
- 1.4 A listening watch is maintained throughout a flight in accordance with workplace procedures

Manage radio equipment malfunctions

- 2.1 Radio communications 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), the En Route Supplement Australia (ERSA) (current edition) and the Aeronautical Information Publication (AIP)
- 2.2 Fault finding procedures and corrective actions not involving special tools or instruments are employed

Required Skills and Knowledge

This section describes the knowledge and skills required for this unit.

Required knowledge:

- Risk identification, analysis and control
- Sections of Civil Aviation Orders and regulations pertaining to aircraft radio communications
- In Defence context, relevant Defence Orders and Instructions
- Relevant OH&S and environmental procedures and regulations
- Principles of effective radio communications
- Functions of radio communications equipment as used in a remote pilot aircraft systems (RPAS)
- Operating procedures for RPAS radio communications equipment
- Standard radiotelephony phraseology as per Aeronautical Information Publication (AIP)
- Problems that may occur during radio communications and action that can be taken to overcome them
- Faults that may occur in radio communications equipment and appropriate fault detection and remedial action that can be taken
- Fault finding procedures and corrective actions for radio communications equipment not involving special tools or instruments
- Error management, including error types, causes and consequences as relevant to this unit
- Human performance and its limitations, including the senses, memory and situational awareness as relevant to this unit
- The decision making process as relevant to this unit
- Management of fatigue as relevant to this unit
- Stress, workload and time pressure management in relation to this unit
- Effective communication as relevant to this unit.

Required skills:

- Use oral and written English language communication skills sufficient to support situation awareness within flight radio operations
- Operate RPAS radio communications 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 Services and other stations and ensures compliance with received instructions
- Conduct basic faultfinding of defective radio communications equipment
- Comply with regulatory requirements pertaining to aircraft radio communications
- Operate RPAS radio communications equipment while maintaining commanded flight

parameters

- Interpret instructions, regulations, procedures and other information relevant to maintaining aircraft radio communications
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to maintaining RPAS radio communications
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when maintaining aircraft and RPAS 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 and RPAS radio communications in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when maintaining RPAS radio communications
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during RPAS 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 WHS/OHS standards
- Implement WHS/OHS procedures and relevant regulations
- Identify and correctly use equipment required to maintain RPAS radio communications

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 competence in this unit must be relevant to and satisfy all of the requirements of the Elements, Performance Criteria, Required Skills, Required Knowledge and include:

- risk management
- human factors
- safety management systems and:
- required 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 time and in a suitable range of contexts.

Resources for assessment include access to:

- 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

Practical assessment must occur in a:

- real or appropriately simulated environment.

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate to this unit:

- knowledge and performance questions and direct observation.

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
Performance may be demonstrated in:	• RPAS with appropriate radio communications equipment • variable air traffic conditions • variable flight situations • abnormal situations • classes of airspace as designated by the Civil Aviation Safety Authority
Aircraft may include:	• Remotely Piloted Aircraft (RPA)/Unmanned aircraft
Crew may include:	• Remote Pilot • Payload Operator • Observers • Other Ground Crew
Classes of airspace must be:	• in Class G airspace, as designated by the regulator, and may be in: • restricted and danger areas • military control 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) • in Defence context, relevant Defence Orders and Instructions • Manual of Standards • Flight Manual/Pilot's Operating Handbook (POH)

- Aeronautical Information Publication (AIP)
- En Route Supplement Australia (ERSA)
- Maps and aeronautical charts
- Aircraft Radio Certificate of Proficiency (ARCoP) or Flight 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

Emergency terms may include:

- PAN PAN
- MAYDAY

Applicable regulations and legislation may include:

- relevant Civil Aviation Regulations, Civil Aviation Safety Regulations and Civil Aviation Orders pertaining to radio communications
- in Defence 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 RPAS rating requirements of the Civil Aviation Safety Authority (CASA) such as:
- Manual of Standards
- relevant Defence documentation such as:
 - Defence Orders and Instructions
 - approved curricula and training documentation

Unit Sector(s)

Not applicable.

Competency Field

E - Communication and Calculation