



Australian Government

Department of Education, Employment and Workplace Relations

AVIE3004B Maintain radio communications as part of airport operations

Revision Number: 1

AVIE3004B Maintain radio communications as part of airport operations

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to maintain radio communications using English language as part of airport operations, including the operation, management and maintenance of radio equipment under normal and emergency conditions. It also covers the skills and knowledge needed when taking appropriate action in the event of radio failure, including maintenance of communications with aircraft using light signals. Required performance includes compliance with all relevant regulatory requirements (i.e. CAR Part 5 Div 3 and CAR 82-85 inclusive). Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the relevant licence and aircraft rating requirements of the Civil Aviation Safety Authority.

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.

Work involves the application of aircraft radio communication principles, regulations, standard phraseology, safety codes, protocols and procedures to maintain radio communications with aircraft as part of commercial airport activities across a variety of operational contexts within the Australian aviation industry.

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

ELEMENT	PERFORMANCE CRITERIA
1 Carry out radio communications	1.1 Transmission and receipt of radio telephone messages is carried out using 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 Appropriate responses are made to all received messages in accordance with workplace procedures and regulatory requirements 1.4 A listening watch is maintained in accordance with workplace procedures
2 Maintain radio equipment	2.1 System checks are performed prior to radio use to confirm that it is operational in accordance with manufacturers specifications and operational procedures 2.2 The aircraft radio system is maintained in accordance with manufacturers specifications and operational requirements. 2.3 Faults in the radio performance are identified and reported in accordance with company procedures 2.4 For minor faults not requiring special tools or instruments, appropriate fault-finding procedures and corrective actions are employed in accordance with workplace procedures
3 Take appropriate action in event of radio failure	3.1 In the event of a loss of radio transmission or reception, radio equipment failure procedures are followed in accordance with workplace procedures and the Flight Manual/Pilot's Operating Handbook (POH) 3.2 In the advent of radio failure, light signals from Air Traffic Control where applicable are correctly interpreted and appropriate responses made in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

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

Required knowledge:

- Relevant sections of Civil Aviation Regulations, Civil Aviation Safety Regulations and Civil Aviation Orders pertaining to aircraft radio communications including CAR Part 5 Div 3 and CAR 82-85 inclusive
- Relevant OH&S and environmental procedures and regulations
- Principles of effective radio communications
- Functions of radiotelephone equipment as used to communicate with aircraft
- Operating and maintenance procedures for aircraft radiotelephone equipment
- Standard radiotelephony phraseology as detailed in the Aeronautical Information Publication (AIP)
- Critical messages including a Distress Message (Mayday call) and an Urgency Message (Pan call)
- International distress frequencies for radiotelephone (R/T)
- Problems that may occur during radio communications and action that can be taken to overcome them
- Faults that may occur in radio equipment and appropriate fault reporting, fault detection and remedial action that can be taken
- Fault-finding procedures and corrective actions for radio not involving special tools or instruments

Required skills:

- Communicate effectively with others when maintaining radio communications as part of airport communication procedures and using standard aviation terminology
- Read and interpret instructions, regulations, procedures and other information relevant to radio communications as part of airport operations
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to maintaining radio communications as part of airport operations
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when maintaining radio communications as part of airport operations
- Adapt appropriately 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 radio communications as part of airport operations in accordance with regulatory requirements and

REQUIRED KNOWLEDGE AND SKILLS

workplace procedures

- Implement contingency plans for unexpected events that may arise when maintaining radio communications as part of airport operations
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during radio communications as part of airport operations
- 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 conduct radio communications as part of airport operations

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.

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| Operations are conducted: | <ul style="list-style-type: none">• daily• in variable weather conditions |
| Aerodromes may include: | <ul style="list-style-type: none">• licensed aerodromes• unlicensed aerodromes• Aircraft Landing Areas (ALAs) |
| Radio equipment may include: | <ul style="list-style-type: none">• HF radio• VHF radio |
| An aircraft radio system may include: | <ul style="list-style-type: none">• battery switch• radio master switch• indicating meters• fuses and circuit breakers• microphone and voice activated• transmitter• receiver• headphones and speaker• antenna systems appropriate to the radio |
| Radio operations may include: | <ul style="list-style-type: none">• maintaining the aircraft radio system• transmitting and receiving on VHF and HF• using squelch controls• establishing a listening watch• conducting a communication check• use of Automatic Terminal Information Services (ATIS)• use of an Emergency Locator Transmitter (ELT) |
| Relevant frequencies (as per ERSA) are: | <ul style="list-style-type: none">• Mandatory Broadcast Zones (MBZ)• Common Traffic Advisory Frequency (CTAF)• other air traffic agencies (e.g. air traffic control)• Automatic Terminal Information Services (ATIS) |
| Phraseology and phonetic considerations include but are not limited to: | <ul style="list-style-type: none">• standard procedural words and phrases• pronunciation of phonetic alphabet and numbers• correct use of aircraft call signs• transmission of numbers• transmission of time• radio test procedure/reliability scale• listening to the radio (avoiding over transmissions)• establishing and maintaining communications• clipped transmission and consequences |

RANGE STATEMENT

- Emergency radio procedures are:
- a Distress Message (Mayday call)
 - an Urgency Message (Pan call)
- Appropriate responses to emergency transmission include:
- establishing priority of calls
 - imposing radio silence
- At aerodromes with air traffic control:
- alternative communication methods, in the advent of radio failure, will include the use of light signals
- 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 pertaining to radio communications (including CAR Part 5 Div 3 and CAR 82-85 inclusive)
 - Manual of Standards - Aerodromes (previously Rules and Practices for Aerodromes [RPA])
 - workplace procedures and instructions and job specification
 - Flight Manual/Pilot's Operating Handbook (POH)
 - Manual of Standards - Pilot Licensing (MOS-PL)
 - Aeronautical Information Publication (AIP)
 - En Route Supplement Australia (ERSA)
 - Civil Aviation Advisory Publication (CAAP) No. AIRWAYS - 3(0)
 - manufacturers specifications for the operation and maintenance of radio equipment
 - relevant operations manuals
 - approved checklists for radio operation and minor maintenance
 - 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 (including CAR Part 5 Div 3 and CAR 82-85 inclusive)
 - relevant state/territory OH&S legislation
 - relevant state/territory environmental protection legislation
 - relevant Australian Standards

Unit Sector(s)

Not applicable.

Competency field

Competency Field

E - Communication and Calculation