



Australian Government

AVIY3075A Control remote pilot aircraft (RPA) in normal flight

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 AVIY3069A Control remote pilot aircraft (RPA) in normal flight.

Unit Descriptor

This unit involves the skills and knowledge required to control a remote pilot aircraft (RPA) in normal flight, including maintaining straight and level flight, climbing, descending, turning, performing circuits and approaches through its speed range.

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 Meteorological Conditions (VMC); regulations, safety codes, protocols and procedures relevant to controlling an RPA in normal flight.

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.

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

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|---|--|
| 1 Climb RPA | <p>1.1 Clarity of flight path is observed and risks mitigated in accordance with workplace procedures</p> <p>1.2 RPA climb checks are completed according to workplace policies and procedures</p> <p>1.3 Adjustments are made to attitude and power to achieve an increase of altitude at shallow, normal and steep rates and cruise conditions of flight during straight and turning manoeuvres as applicable</p> <p>1.4 RPA is maintained in 'trim' condition as applicable</p> <p>1.5 RPA is leveled off at or below 400' AGL</p> <p>1.6 Situational awareness, lookout and air traffic separation is maintained according to workplace procedures and regulatory requirements</p> |
| 2 Maintain straight and level flight | <p>2.1 Power, altitude and configuration are set to achieve straight and level flight as applicable</p> <p>2.2 RPA is maintained in 'trim' condition as applicable</p> <p>2.3 Visible signs or electronic indications of height change are identified and responded to appropriately</p> <p>2.4 Visible signs or electronic indications of heading change are identified and responded to appropriately</p> <p>2.5 Clarity of flight path is observed and risks mitigated in accordance with workplace procedures</p> <p>2.6 Situational awareness, lookout and air traffic separation is maintained according to workplace procedures and regulatory requirements</p> |
| 3 Turn RPA in flight | <p>3.1 RPA operating limits are maintained during turns according to workplace procedures and manufacturer instructions</p> <p>3.2 Situational awareness, lookout and air traffic separation is maintained during turns</p> |

- 3.3 Potential hazards are identified and controlled during turns
- 4 Control RPA speed in flight**
- 4.1 Height awareness is maintained during slow speed flight
- 4.2 Recovery to cruise speed is achieved whilst maintaining height during flight
- 5 Descend RPA**
- 5.1 Adjustments are made to altitude and power to achieve a decrease of altitude at shallow, normal and steep rates as applicable
- 5.2 RPA is maintained in 'trim' condition as applicable
- 5.3 RPA is leveled from a descent position at a nominated altitude according to workplace policies and procedures and manufacturer instructions
- 5.4 Clarity of flight path is observed during RPA descent and risks mitigated in accordance with workplace procedures
- 5.5 RPA operating limits are controlled during descent according to workplace procedures and manufacturer instructions
- 5.6 Descent checks are completed according to workplace procedures and regulatory requirements
- 5.7 Situational awareness, lookout and air traffic separation is maintained according to regulatory requirements and workplace procedures
- 6 Perform RPA landing approaches**
- 6.1 Approaches are conducted in accordance with Operators Manual procedures appropriate to the RPA type with allowance for wind velocity
- 6.2 All mandated checklists are completed and communications procedures are followed
- 6.3 Traffic conflict or adverse flight conditions are recognised and a go-around/position - hold is performed from any position in the approach and landing pattern
- 6.4 Radio listening watch is maintained in accordance with established procedures and regulatory requirements
- 6.5 RPA is configured for landing according to workplace procedures and manufacturer instructions
- 7 Comply with airspace requirements**
- 7.1 Compliance is maintained with air traffic requirements and controlled or restricted airspace conditions or limitations at all times
- 7.2 Safe progress of the flight is ensured at all times

- 7.3 Awareness of RPA position is maintained at all times
- 7.4 Radio listening watch is maintained in accordance with established procedures and regulatory requirements
- 7.5 Weather conditions are monitored and responded to appropriately according to regulatory requirements and workplace policies and procedures

Required Skills and Knowledge

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

Required knowledge:

- Risk identification, analysis and control
- 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
- Relevant sections of Civil Aviation Regulations and Orders
- In Defence context, relevant Defence Orders and Instructions
- Relevant work health and safety (WHS)/occupational health and safety (OHS) and environmental procedures and regulations
- Principles of aerodynamics
- Functions and effects of all RPA controls
- Procedures for setting power in engines as applicable
- Use of instruments to monitor RPA performance
- Use of trim controls as applicable
- Use of autopilot/flight director functions where applicable
- Use of Navigation sensors and Equipment as applicable
- The effect of angle of bank and load factor on stall speeds as applicable
- Circuit patterns and procedures
- Go-around/position hold procedures
- Pre- recovery checks
- Post launch checks
- The effect of wind on flight path and on RPA

Required skills:

- Apply the techniques of straight and level, climbing and descending flight if applicable
- Perform various functions simultaneously as required
- Maintain separation between air traffic
- Remain within a designated area whilst complying with airspace and air traffic requirements
- Use instruments to monitor RPA performance, if applicable
- Maintain compliance with regulatory requirements

- Communicate effectively with others when controlling a RPA in normal flight, including use of radio, if applicable
- Read and interpret instructions, regulations, procedures and other information relevant to controlling a RPA in normal flight
- Interpret and follow operational instructions and prioritise work
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when controlling a RPA in normal flight
- 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 controlling a RPA in normal flight in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when controlling a RPA in normal flight
- Apply precautions and required action to minimise, control or eliminate hazards that may exist when controlling a RPA in normal flight
- 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 when controlling a RPA in normal flight

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.

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| Tasks must be undertaken in: | <ul style="list-style-type: none"> • visual line of sight, • visual meteorological conditions |
| Performance may be demonstrated in: | <ul style="list-style-type: none"> • single engine RPA • multi engine RPA |
| Performance may be demonstrated on a RPA with: | <ul style="list-style-type: none"> • fully functioning controls • with the use of a suitable simulator |
| RPA may include: | <ul style="list-style-type: none"> • remotely piloted aircraft (rpa)/unmanned aircraft |
| Crew may include: | <ul style="list-style-type: none"> • remote pilot • observer |
| Instruments may be: | <ul style="list-style-type: none"> • instrumentation associated with the particular system |
| Limitations may be imposed by: | <ul style="list-style-type: none"> • prevailing visibility |
| Class of airspace is: | <ul style="list-style-type: none"> • Class G airspace, as designated by the Civil Aviation Safety Authority • restricted and danger areas • military control zones |
| Turns may include: | <ul style="list-style-type: none"> • level • climbing • descending |
| Checklists may include: | <ul style="list-style-type: none"> • climb • cruise • approach • descent • pre-landing • final |
| Dependent on the type of organisation concerned and the local terminology used, workplace procedures may include: | <ul style="list-style-type: none"> • company procedures • enterprise procedures • organisational procedures • established procedures • standard operating procedures |
| Procedures maintaining compliance with airspace requirements are: | <ul style="list-style-type: none"> • geographical limits of the flight area is demonstrated on a chart or electronic display • prominent geographical features are identified using a chart • the position of controlled airspace is |

Information/documents may include:

- determined using a chart and geographical features
- restricted areas are identified using a chart and geographical features
- 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
- Flight Manual/Pilot's Operating Handbook (POH)
- Manual of Standards
- Aeronautical Information Publication (AIP)
- En Route Supplement Australia (ERSA)
- charts
- 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 Safety Regulations and Civil Aviation Orders
- 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 requirements of the Civil Aviation Safety Authority (CASA) such as:
 - RPA Level 1 Syllabus
 - Manual of Standards
 - relevant Defence documentation such as:
 - Defence Orders and Instructions

Unit Sector(s)

Not applicable.

Competency Field

Y - Aircraft Operation and Traffic Management