



Australian Government

AVIY3069A Control remote pilot aircraft systems (RPAS) in normal flight

Release: 1

AVIY3069A Control remote pilot aircraft systems (RPAS) in normal flight

Modification History

Not applicable.

Unit Descriptor

This unit involves the skills and knowledge required to control a remote pilot aircraft (RPA) in normal flight, including climbing a remote pilot aircraft, maintaining straight and level flight, descending a remote pilot aircraft, turning a remote pilot aircraft, controlling a remote pilot aircraft at slow speed, and performing circuits and approaches. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Work must be carried out in compliance with the Remote Pilot Licence - Basic and remotely piloted aircraft rating requirements of the Civil Aviation Safety Authority (CASA) and/or ADF; airspace control requirements and Day Visual Flight Rules (Day VFR); and aircraft control principles, regulations, safety codes, protocols and procedures relevant when controlling a RPA in normal flight.

Operations are conducted as part of commercial or 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, in accordance with the requirements for operations at Level 1.

Licensing/Regulatory Information

Remote Pilot Licence (RPL) Basic – Level 1

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

Elements and Performance Criteria

- | | |
|--------------------------------------|--|
| 1 Climb RPA | <ul style="list-style-type: none">1.1 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 manoeuvres1.2 RPA is maintained in 'trim' condition1.3 RPA is leveled off not above 400' AGL using standard RPA climb procedures1.4 Flight path clear of obstacles is ensured1.5 Climb checks are completed |
| 2 Maintain straight and level flight | <ul style="list-style-type: none">2.1 Power, attitude and configuration are set to achieve straight and level flight2.2 RPA is maintained in 'trim' condition2.3 No visible signs or electronic indications of height change2.4 No visible signs or electronic indications of heading change2.5 Flight path clear of obstacles is ensured |
| 3 Descend RPA | <ul style="list-style-type: none">3.1 Adjustments are made to attitude and power to achieve an decrease of altitude at shallow, normal and steep rates3.2 RPA is maintained in 'trim' condition3.3 RPA is leveled from a descent at a nominated altitude3.4 Flight path clear of obstacles is ensured3.5 RPA does not exceed operating limits during descent3.6 Descent checks are completed |

- 4 Turn RPA
 - 4.1 'Airspace cleared' procedure is carried out
 - 4.2 Heading is altered during level, climbing, descending and gliding manoeuvres and turns are performed to achieve specified tracks
 - 4.3 Turn on to nominated heading or geographical feature is achieved
 - 4.4 RPA does not exceed operating limits during turns
- 5 Control RPA at slow speed
 - 5.1 Height awareness is maintained during slow speed flight
 - 5.2 Recovery to cruise speed is achieved whilst maintaining height
- 6 Perform approaches
 - 6.1 Approach patterns are conducted in accordance with Operators Manual procedures appropriate to the RPA type with allowance for wind velocity
 - 6.2 All checklists are completed and communications procedures followed
 - 6.3 Traffic conflict or adverse flight conditions are recognised when they arise and a go-around is performed from any position in the approach and landing pattern
 - 6.4 Radio listening watch is maintained in accordance with established procedures, if required
 - 6.5 RPA is configured for landing
- 7 Comply with airspace requirements
 - 7.1 While RPA is maintained within a specified area, compliance is maintained with air traffic requirements and controlled or restricted airspace conditions or limitations
 - 7.2 Appropriate reactions are made to factors which may affect the safe progress of the flight
 - 7.3 Awareness of RPA position is maintained
 - 7.4 Radio listening watch is maintained in accordance with established procedures, if required
 - 7.5 Weather conditions are monitored and an appropriate action is taken

Required Skills and Knowledge

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

Required knowledge:

- Relevant sections of Civil Aviation Regulations and Orders
- In Defence context, relevant Defence Orders and Instructions
- Relevant OH&S 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
- Use of autopilot/flight director functions where applicable
- 'Airspace cleared' procedure to be carried out before all turns
- The effect of angle of bank and load factor on stall speeds
- Circuit patterns and procedures
- Go-around procedures from base leg and final approach
- Pre-landing checks
- After launch checks
- The effect of wind on flight path
- Day VFR criteria

Required skills:

- Apply the techniques of straight and level, climbing and descending flight to achieve a consistent approach to landing
- Perform various functions simultaneously as required
- Maintain separation between aircraft
- 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 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

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 must be undertaken in:	• in accordance with Day Visual Flight Rules
Performance may be demonstrated in:	• single engine RPA • multi engine RPA
Performance may be demonstrated on a RPA with:	• fully functioning dual controls • with the use of a suitable simulator
RPA may include:	• Remotely Piloted Aircraft (RPA)/Unmanned aircraft
Crew may include:	• Remote Pilot • Observer
Instruments may be:	• instrumentation associated with the particular system
Limitations may be imposed by:	• prevailing visibility
Class of airspace is:	• Class G airspace, as designated by the Civil Aviation Safety Authority
Turns may include:	• level • climbing • descending
Checklists may include:	• climb • cruise • approach • descent • pre-landing • final
Circuit height may include:	• standard • low-level
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
Procedures maintaining compliance with airspace requirements are:	• 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 determined using a chart and geographical features

Information/documents may include:

- 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)
- RPA Level 1 Syllabus
- 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