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NEW YORK NAVAL MILITIA INSTRUCTION 3501.5

Subj: REMOTE PILOT IN COMMAND (RPIC) QUALIFICATION

Ref: (a) NYNMINST 5401.4

(b) FAA Part 107

Encl: (1) Personal Qualification Standard (PQS) for Remote Pilot In Command

- 1. <u>Purpose.</u> This instruction promulgates the qualifications to become designated as a Remote Pilot in Command and includes the Personnel Qualification Standard (PQS) for members to attain this designation.
- 2. <u>Discussion</u>. A qualified Remote Pilot in Command is an individual who has demonstrated the minimum standards and ability to operate unmanned aerial systems (UAS) safely and efficiently. In accordance with references (a) and (b), this program will:
- a. Ensure that each operator is competent to operate a UAS safely, as demonstrated by the successful completion of the training and evaluation specified below.
- b. Ensure that supervisors verify that each operator has successfully completed this or sufficient equivalent training to have been otherwise certified by the Officer in Charge of the UAS Unit as a Remote Pilot in Command (RPIC) prior to permitting a service member to operate UAS.
- c. Trainees may operate UAS only:
- (1). Under the direct supervision of persons who have successfully fully completed this training or otherwise been certified to possess the knowledge, training, and experience to train operators and evaluate their competence; and
- (2). Where such operation does not endanger the trainee or other service members and does not risk damage to military or civilian property.
- d. Training shall consist of a combination of formal FAA Part 107 certification, practical training, and evaluation of the operator's performance in the workplace.
 - e. Training program content.
 - (1). Successful completion of the FAA Part 107 examination.

- (2). Successful completion of the PQS found in enclosure (1).
- 3. <u>Action.</u> Service members seeking to become designated as a Remote Pilot in Command under this instruction must complete the requirements found in enclosure (1), including passing a final qualification examination.
- a. Personal Qualifications Standards (PQS). Enclosure (1) includes those items that must be completed prior to qualification. Qualification Signatories are those personnel whose experience and qualification make them eligible to approve the performance of a candidate.
- b. Check flight. The requirement for the demonstration check flight ensures that the individual member is fully capable of safely operating the specific UAS platform that they have been trained on. A qualifier, designated by the UAS Unit Officer in Charge must observe the oral board and check flight performance of the member to become certified.
- c. Upon satisfactory completion of training and PQS, a certificate of designation as a RPIC is issued to the member. The member is authorized to wear the distinctive RPIC uniform device.

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Personal Qualification Standard (PQS) For REMOTE PILOT IN COMMAND

1. Qualification Approvers

- a. Personnel signing as approving the performance of the candidate must be qualified to do so. Either the person is already a Remote Pilot in Command or otherwise approved by Officer in Charge, UAS Unit to sign as a qualification approver.
- b. Persons signing off on performance standards are to record their rank, name, and start date for qualification of the particular candidate. This is a means of clarifying the individual line-item signatures.

Approvers only sign this section once.

Name/Rank	Signature	Initial	Start Date

2. Pre-flight / Oral Testing

a. To determine that the trainee exhibits satisfactory knowledge, risk management, and skills associated with operating a UAS within the FAA and NYNM requirements including operating as a remote pilot-in-command (RPIC).

Qualification Area	Certifier	Date
A. Pilot Qualifications		
The trainee demonstrates understanding of:		
Certification requirements, currency, and record keeping (SOP).		
Documents required to exercise RPIC privileges.		
Risk Management.		
To set personal minimums and to ensure fitness for flight.		
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B. Airworthiness Requirements		
The trainee demonstrates the ability to:		
Locate and describe airworthiness and registration information.		
Determine the aircraft is airworthy in a scenario given by the evaluator.		
Apply the procedures for operating with inoperative equipment in a scenario given by the evaluator.		
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C. Weather Information		
The trainee demonstrates understanding of:		
Acceptable sources of weather data for flight planning purposes.		
Weather products required for preflight planning, current and		
forecast weather for all phases of flight.		
The trainee demonstrates the ability to identify, assess and	1	
mitigate risks, encompassing:		
Factors involved in making the go/no go and continue decisions.		
Personal weather minimums.		
Aviation weather reports and forecasts.		
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The trainee demonstrates the ability to:		
Use available aviation weather resources to obtain an adequate		
weather briefing.		
Discuss the implications of at least three conditions using actual		
weather or weather conditions in a scenario provided by the		
evaluator.		
Correlate weather information to make a go/no-go decision.		
D. National Airspace System		
The trainee demonstrates understanding of:		
Types of airspace/airspace classes and associated requirements		
and limitations.		
Charting symbology.		

Qualification Area	Certifier	Date
Special use airspace (SUA), special flight rules areas (SFRA),	- Corumon	
temporary flight restrictions (TFR), and other airspace areas.		
The trainee demonstrates the ability to:		
Explain the requirements for basic weather minimums and flying in		
particular classes of airspace.		
E. Performance and Limitations		
Trainee will explain factors affecting performance to include:		
Atmospheric conditions.		
Aircraft condition.		
Airport environment (Restricted / Authorization).		
Loading - Weight and balance.		
Exceeding aircraft limitations.		
Possible differences between actual aircraft performance and		
published aircraft performance data.		
F. Operation of Systems		
Aircraft systems, to include:		
Primary flight controls.		
Landing gear.		
Telemetry and flight.		
Indications of system abnormalities or failures.		
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The trainee demonstrates the ability to identify, assess and		
mitigate risks, encompassing:		
Failure to identify system malfunctions or failures.		
Improper handling of a system failure.		
Failure to monitor and manage automated systems.		
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The trainee demonstrates the ability to:		
Properly use appropriate checklists.		
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G. Human Factors		
The trainee demonstrates understanding of symptoms,		
recognition, causes, effects, and corrective actions associated with:		
Hypoxia.		
Hyperventilation. Stress and fatigue.		
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Qualification Area	Certifier	Date
Dehydration and nutrition.	Octuner	Date
Hypothermia.		
Optical illusions.		
Effects of alcohol, drugs, and over-the-counter medications.		
Aeronautical Decision-Making (ADM).		
Hazardous attitudes.		
Distractions, loss of situational awareness, and/or improper task		
management.		
The trainee demonstrates the ability to:		
Describe symptoms, recognition, causes, effects, and corrective actions for at least three of the conditions listed above.		
Perform self-assessment, including fitness for flight and personal minimums, for actual flight or a scenario given by the evaluator.		
H. Flight Deck Management		
The trainee demonstrates the ability to train Visual Observer.		
If a visual observer is used during the aircraft operation, all of the following requirements must be met:		
RPIC and the visual observer must maintain effective		
communication with each other at all times. RPIC must ensure that the visual observer is able to see the	1	
unmanned aircraft.		
RPIC and the visual observer must coordinate to do the following:		
Scan the airspace for any potential collision hazard.		
Maintain awareness of the aircraft through direct visual		
observation.		
I. Engine Starting		
Area is clear of bystanders.		
Announce "clear prop."		
J. Before Takeoff Check		
Properly position the aircraft.		
Verify ready for takeoff (Bat temp / no warnings).		
360° Scan of Sky.		
3. Flight/Practical Test		
A. Takeoff		
Controls correct.		

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Qualification Area	Certifier	Date
Telemetry correct.		
B. Normal Approach and Landing		
Ensure landing area is clear.		
A stabilized approach, to include energy management concepts.		
Effects of atmospheric conditions, including wind, on approach and landing.		
C. Flight Test Requirements		
The trainee demonstrates the ability to perform the following without assistance.		
UAS vs Manned Aircraft		
During any flight, trainer will act as VO and call out aircraft. Trainee will take appropriate action.		
VO States:		
"I hear an aircraft behind us."		
"I hear an aircraft behind us, and the sound is getting louder."		
"I see an aircraft to our left approx. ½ mile away."		
"I see an aircraft at $\frac{1}{2}$ mile to our left at the same Altitude and closing rapidly.		
Loss of Go App in Flight		
Scan T/O 200' A./ 2000' D.		
Trainer unplugs Trainee IPAD.		
Trainee Manually Attempts to Return to Land – May use Controller RTH –		
Cancel before Landing.		
Unable to Determine Aircraft Orientation		
Fly to – 200' A./ 2000' D Straight Line.		
Observe Map.		
Yaw Aircraft using Camera–Hand fly to HP.		
Fly to – 200' A./ 2000' D Straight Line.		
Rotate Aircraft using Radar –Hand fly to HP.	(b)	
Land Manually.		

Qualification Area	Certifier	Date
Home Lock (Automated Flight) with Low Battery		
Trainee will set Low Battery Warning to 50% and Critical Low Battery to 40%.		
Trainee will Fly aircraft using Home Lock Function.		
Trainee will observe the Home Lock (and all automated flight controls) ceases to function with Critical Low Battery Warning.		
Trainee will demonstrate positive control of aircraft upon Home Lock being disabled.		
Land Aircraft.		
UAS Executes RTH When Not at Home Point		
Trainee will set Low Battery Warning to 25% and Critical Low Battery to 10%.		
Trainee will set RTH 40m and Max Alt. 120m.		
Fly to 250' D. / 50' Alt. (hover over safe emergency landing area).		
Trainee will observe aircraft execute an RTH when the Flight Time Indicator on Battery Management Scale reaches and covers the HP Indicator.		
Trainee will observe aircraft issue warning that it will return to home after a 10 second count down.		
Pilot will observe aircraft rise to 131' and fly to above HP and begin descent.		
RPIC will then take control of aircraft and land manually.		
4. Final Certification Recommendation.		
CANDIDATE:		
a. Candidate has completed and holds FAA Part 107 certification.		
b. Candidate completed a practical demonstration and oral board as a Remote Pilot in Command (RPIC), and is authorized the wearir Naval Militia RPIC uniform device.		
Certified by:		
Date:		