

# **CAR OPS 4F -UAEX**

# UNMANNED AIRCRAFT SYSTEM (UA) EXPERIMENTATION OPERATIONS

#### **FOREWORD**

- 1. The Civil Aviation Authority Bahamas, known in these regulations as the "Authority" has implemented CAR OPS 4 (Civil Aviation Regulations Unmanned Aircraft) as the technical requirements and administrative procedures applicable to use of Unmanned Aircraft (Drones). The regulations are made under the Civil Aviation Authority Act 2021.
- 2. This suite of regulations relative to CAR OPS 4 Includes the following:
  - a) CAR OPS 4A-UAR Recreational Flight
  - b) CAR OPS 4B-UAC Commercial and Government
  - c) CAR OPS 4C-UAD Demonstration
  - d) CAR OPS 4D-UAM Urban Air Mobility Operations
  - e) CAR OPS 4E-UAS Systems and Operations
  - f) CAR OPS 4F-UAEX Experimental Operations
  - g) CAR OPS 4G-UAEV Event Operations
- 3. CAR OPS 4 includes Standards and Recommended Practices contained in ICAO Annex 6, Part IV International Operations Remotely Piloted Aircraft Systems, First Edition, July 2024.
- 4. Unless otherwise stated, applicable CAR DEF definitions and abbreviations are used throughout this document.
- 5. The editing practices used in this document are as follows:
  - (a) 'Shall' or 'Will' or 'Must' is used to indicate a mandatory requirement.
  - (b) 'Should' is used to indicate a recommendation.
  - (c) 'May' is used to indicate discretion by the Authority, the industry or the applicant, as appropriate.
- 6. The phrase "acceptable to the Authority" has been used throughout these regulations and acceptability shall be determined by the operator procedures specified in the operations manual.
- 7. Paragraphs and sub-paragraphs with new, amended and corrected text will be enclosed within square brackets until a subsequent amendment is issued.
- 8. Section 1 regulations are presented in "Times Roman" font and Section 2 guidance material is presented in "Arial" font.

The Director General, in exercise of the powers conferred by Section 17(1) of the Civil Aviation Authority Bahamas Act, 2021 (No. 2 of 2021) hereby issues the following amended regulation.

Issued the day of 2025

DIRECTOR GENERAL CIVIL AVIATION AUTHORITY BAHAMAS



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# **CAR OPS 4E - UAS**

# UNMANNED AIRCRAFT SYSTEM (UAS) AND OPERATIONS

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#### UNMANNED AIRCRAFT EXPERIMENTATION FLIGHTS

#### **UAEX.001** Abbreviations and definitions

For the purposes of this CAR, the following abbreviations and definitions apply:

#### (a) Abbreviations

- (1) AMC: Acceptable Means of Compliance
- (2) CAA-B: General Civil Aviation Authority
- (3) LAA: Local Appropriate Authority
- (4) LoC: Letter of Conformity<sup>1</sup>
- (5) MOTIA: Ministry of Tourism, Investment and Aviation
- (6) UA: Unmanned Aircraft
- (7) UOA: UA Operator Authorisation
- (8) VLOS: Visual Line of Sight

#### (b) Definitions

(1) **Acceptable Means of Compliance**: Are standards adopted by the CAA-B to illustrate means to establish compliance with the CAR's. An entity/or a person wishing not to comply with the AMC must comply using other means accepted by the Authority.

*Note*: Alternative means of compliance are those that propose an alternative to an existing AMC or those that propose new means to establish compliance with the CAR's for which no associated AMC have been adopted by the CAA-B.

- (2) **Airspace Approval**: An Authorisation issued by the CAA-B or LAA, as the case, to conduct an UA flight operation at specific time and on a specific location and route.
- (3) **Experimental Operation:** Operation of UA for the purpose of UA research and development, UA flights to develop new technology, installing a new equipment, experimenting new use of UA and scientific and academic research.
- (4) **Local Appropriate Authority**<sup>2</sup>: The local authority responsible with regards to the civil aviation affairs in the Commonwealth of the Bahamas.

<sup>&</sup>lt;sup>1</sup>A Letter of Conformity (LOC) for drones is a document that verifies that your drone complies with specific regulations and safety requirements.

<sup>&</sup>lt;sup>2</sup>The CAA-B and the LAA (if applicable) is the authority responsible for authorization, approval and oversight of the UA operations performed within the Commonwealth of the Bahamas. If there is no LAA in a specific Island or the LAA is not performing these tasks, the CAA-B will be the sole responsible for approval and oversight of the UA operations performed within the Commonwealth of the Bahamas.

- (5) **Operator:** An operator engaged in the operation of a UA for experimentation purposes only.
- (6) **Special operation approval**: special approval issued by the CAA-B or LAA, as the case, to conduct a Unmanned Aircraft flight operation exceeding operation limitations.
- (7) **UA Operator Authorisation:** is a document issued by CAA-B that authorize the operator to conduct UA operation for the registered purpose. This document include list of authorized UAS.
- (8) **UA Pilot:** means a natural person responsible for safely conducting the flight of a UA by operating its flight controls, either manually or, when the UA flies automatically, by monitoring its course and remaining able to intervene and change its course at any time.

Unmanned Aircraft (UA): An aircraft operated with no pilot on board. An UA may be remotely piloted or autonomously flown.

**Note:** UA includes a broad spectrum of aircraft, from drones, and model radio-controlled aircraft, to highly complex remotely piloted aircraft (RPA) and highly automated or autonomous UA.

(9) **VLOS operation:** means a type of UAS operation in which, the remote pilot is able to maintain continuous unaided visual contact with the unmanned aircraft, allowing the remote pilot to control the flight path of the unmanned aircraft in relation to other aircraft, people and obstacles for the purpose of avoiding collisions.

# GM to UAEX.001 (b) (4) Abbreviations and definitions:

The CAA-B is the authority responsible for authorization, approval and oversight of the UA operations performed within the Commonwealth of The Bahamas. If there is no LAA in a specific Island or the LAA of the specific island is not performing these tasks, the CAA-B will be solely responsible for the approval and oversight of UA operations performed within The Bahamas.

NOTE: If the operator is based in The Bahamas; it must communicate and obtain required authorisation and permission from the LAA of the relevant Island. Otherwise, the operator shall communicate and obtain required authorisation and permission from CAA-B.

#### **UAEX.005** Applicability

- (a) This CAR prescribes the requirements to be met by operators operating UA for experimentation purposes only.
- (b) This CAR does not apply to:

NOTE: If the operator is based outside of New Providence; it must communicate and obtain required authorisation and permission from the LAA, otherwise the operator shall communicate and obtain required authorisation and permission from the CAA-B.



- (1) UA operated by military or law enforcement agencies (state UA);
- (2) UA intended for carriage of passengers; and
- (3) UA operation for Goods delivery.

Note: for Recreational, Commercial & Governmental, Demonstration, Event Organizer, or Carriage of passengers, refer to:

- CAR UAR UNMANNED AIRCRAFT RECREATIONAL FIGHT
- CAR UAC- UNMANNED AIRCRAFT (UA) COMMERCIAL & GOVERNMENTAL OPERATIONS
- CAR UAD UNMANNED AIRCRAFT (UA) DEMONSTRATION OPERATIONS
- CAR UAEV UNMANNED AIRCRAFT (UA) EVENT OPERATIONS
- CAR-UAM URBAN AIR MOBILITY OPERATIONS

# **UAEX.010** Application for **UOA**

- (a) No operator shall perform experimental UA operations without a valid UA Operator Authorisation (UOA) issued by CAA-B or LAA, as the case.
- (b) The application for UOA shall be made in a form and manner established by the CAA-B or LAA, as the case.
- (c) In order to obtain UOA the operator shall apply through CAA-B or LAA registration platform.
- (d) Prior to applying for UOA the applicant shall obtain Letter of Conformity (LoC) for each UA from the CAA-B.

#### **UAEX.015 UA Operator's Responsibilities**

The operator shall appoint an accountable person who has corporate authority and fund access for ensuring compliance with this CAR and relevant legislation and regulation:

- (a) The operator shall ensure that every UA operation is conducted in accordance with this CAR, and applicable laws including the Civil Aviation Act 2021, and any relevant publication issued by the CAA-B or LAA.
- (b) The operator shall ensure that all UA are registered and appropriately insured before commencement of any operation.
- (c) The operator shall notify the CAA-B or LAA, as the case, in sufficient time of any changes concerning the accountable person, operator name, address or contact details, type of UA, fleet size or any change to the type of operations prior to implementing the change.
- (d) The operator shall ensure that all UA instruments and equipment required for safe operation, are available, serviceable and maintained in accordance with the manufacturer and operator's maintenance instructions.

- (e) The operator shall ensure UA Pilot is competent to perform the intended operation and possess the skills and the knowledge about law, regulations and procedures.
- (f) The operator shall ensure that UA(s) are securely stored, and handed-over to pilots in a controlled and documented manner.
- (g) The operator shall establish and implement procedures to control the UA operation records. Records shall be stored in a manner that ensures protection from damage, alteration and theft. Records shall be retained for at least 24 months.
- (h) In addition to the flying condition stipulated in "My Drone Hub" mobile application and the UOA certificate, the operator shall establish and implement procedures for the safe operation including the following:
  - (1) The UA Pilot shall give way to other UA and maintain safe distance from each other and from any manned aircraft at all times and land the UA safely whenever a manned aircraft in close proximity to the UA operation.
  - (2) The UA Pilot shall ensure that operations do not compromise the privacy of a legal or natural person and does not cause injury or damage to a natural person and properties.
  - (3) The UA Pilot shall ensure Minimum Safe Distance from any person, fixed or mobile objects and shall not fly above crowds.
  - (4) The UA pilot shall ensure that the UA is in a safe operating condition for the intended flight.
  - (5) The UA pilot shall ensure that procedures are established and implemented to deal with emergency and abnormal situations.

#### AMC to UAEX.015 (f) Operator's Responsibilities

Records should include, but not limited to the following:

- (a) Flight mission logs containing:
  - (i.) Date of the flight.
  - (ii.) Route information/ GPS coordinates.
  - (iii.) Time of start and End of Flight.
  - (iv.) Name of Pilot.
  - (v.) Observations / incidents/ equipment failure.
- (b) CAA-B or LAA Airspace Approval, if applicable.
- (c) UA details: UA model, UA serial number, registration, insurance, UA weight, UA main color.
- (d) UA Pilots training certificate and licence.



The procedures should be easily accessible to staff and should state clear roles and responsibilities of the operator and the UA Pilot.

#### **UAEX.020 UA Pilot License**

No one shall fly UA in The Bahamas airspace unless obtain pilot license issued by CAA-B. The following provisions shall be met:

- (a) The applicant shall be of 18 years minimum unless otherwise accepted by the CAA-B or LAA, as the case.
- (b) The applicant shall complete UA training provided by UA training organisation approved by CAA-B or LAA, as the case.

# **UAEX.025** Airspace Approval for UA Operations

- (a) The UA operator shall obtain an UA Airspace Approval prior to any UA operation, unless the flight is intended to be conducted within:
  - (1) *Interior Building space:* Airspace inside a building, or within the interior area of a closed stadium or a facility.
  - (2) **Exterior Building Airspace:** Airspace within 10 meters off the facade or 5 meters above the roof of a building, provided the building is located outside airports boundaries/fences and further boundaries defined by Air Navigation Service Provider. If the building is associated with heliport then a prior approval from the heliport operator shall be obtained.
  - (3) **Drone Fly Zone:** Up to date UA fly zone as indicated in the map guidance in "My Drone Hub" mobile application..
- (b) The following airspace approval limitations shall apply to any UA operation, unless a special operation approval is issued by the CAA-B or LAA, as the case:
  - (1) Operations shall be limited to day time;
  - (2) Operations shall be limited to VLOS operations;
  - (3) Operations shall be limited to 400 ft. height AGL;
  - (4) Operations shall be limited to UA with a maximum take-off mass of 25kg; and
  - (5) No Dangerous Goods shall be transported.

#### **GM to UAEX.025 Airspace Approval for UA Operations**

- (a) Any UA Airspace Approval Application should be submitted through the CAA-B or LAA E-Services, as the case.
- (b) Application should be provided 2 weeks minimum before the intended operation/flight.
- (c) All UOA holders have to comply with CAA-B and LAA rules and conditions, as the case.

(d) The operator may apply for long term operational approval for designated area "for example University premises" where the operator wishes to conduct the experimental flights.

# AMC to UAEX.025 (b) Airspace Approval for UA Operations

In order to obtain special operation approval, the operator should submit a specific operations risk assessment (SORA) to CAA-B or LAA, as the case, to evaluate and authorize the operations. Through SORA the operator should demonstrate that the operation can be conducted with an acceptable level of safety.

#### **UAEX.030 Security Rules**

- (a) The operators shall ensure compliance with any security requirement mandated by the CAA-B, LAA, or any other security agencies.
- (b) The use of aerial photographic apparatus installed on the UA shall not be permitted without a prior authorization from the Security Sector within the CAA-B or LAA, as the case.

#### **UAEX.035 Occurrence Reporting**

- (a) The operator shall report to the CAA-B, any accident and/or serious incident, through the following hotline: 1 (242) 397-4700 and website at <a href="www.caabahamas.com">www.caabahamas.com</a> Accidents shall be also reported to the Aircraft Accident Investigation Authority (AAIA) at <a href="www.baaid.org">www.baaid.org</a>
- (b) The report shall contain all pertinent information, known to the operator, about the accident or serious incident. Reports shall be made within 48 hours from the accident/serious incident occurrence.
- (c) Where relevant, the operator shall produce a follow-up report to provide details of actions it intends to take to prevent similar occurrences in the future.

#### **AMC to UAEX.035 Occurrence Reporting**

The following list while not exhaustive includes types of occurrences involving UA Operations, which should be reported to the CAA-B (by email to www.caabahamas.com and LAA (if applicable):

- (a) Crashes.
- (b) Interferences with signal or control of UA.
- (c) near miss with a manned aircraft or other UA.
- (d) Collisions with other objects.
- (e) Operation which results in a public nuisance.
- (f) Operations out of the area assigned for UA operation.
- (g) A serious or fatal injury (third parties and own personnel).
- (h) UA lost while in operation.



# **UAEX.040 UA Operator Authorisation Continued Validity**

- (a) The UA Operator Authorisation (UOA) shall be valid for one year and its validity is subject to:
  - (1) The Operator remaining in compliance with the applicable requirements and conditions stipulated in the authorisation and in this CAR or any relevant publication issued by LAA, as the case.;
  - (2) The validity of CAA-B or LAA Security Clearance, as the case.
  - (3) The CAA-B or LAA, as the case, is granted access, at any time, to the operator's facility, equipment, document, records, data, procedures or any other material relevant to its activity; and
  - (4) The UOA has not being surrendered, suspended or revoked.
- (b) The UA Operator Authorisation (UOA) may be renewed upon request by the operator.

# **UAEX.045 Oversight and Findings**

Upon obtaining UOA, the operator will be subject to the CAA-B or LAA, as the case, surveillance program over the scope, requirement and provision promulgated in this CAR. Any Non-compliance with this regulation will result in findings which are divided into three levels.

#### **GM to UAEX.045 Oversight and Findings**

### **Finding Classification & Definitions:**

Level	Description	Timeline for completion of actions by operator	Note
Level 1	A significant non-compliance, which poses a hazard to UA operational safety or lowers safety standards.  Non-compliance with the CAR, certification requirements, operating in violation of terms and conditions of the approval certificate and Evidence of system failure and repeated level 2 findings shall fall under level 1 category.	Within 7 Calendar Days from day of detection to provide the appropriate corrective action plan	Where a particular Level (1) finding requires an action on the spot, such as grounding an UA, the inspector shall notify verbally, followed by email to the operator pending formal notification from the CAA-B.
Level 2	A non-compliance with CAA-B rules, or a nonconformance with the operator's procedures, which could possibly hazard the UA operational safety, or which could lower safety standards.	Within 60 Calendar Days	It is up to the inspector to reduce or extend the timeline based on the urgency of the CA/PAs or corrective action plan provided by the operator. Where practicable the target date should be coordinated and agreed with the auditees
Level 3	Recommendations addressing opportunities for improvements or minor deficiencies, which may lead to potential non-conformances	Within 90 Calendar Days	Not all Level (3) shall necessarily warrant corrective actions. This is dealt with on a case-to-case basis. The fact that the operator did take note of a particular Level (3) may be enough for the auditor to close it.



#### **UAEX.050 Enforcement Action**

During oversight inspection and audit, if the evidence indicates that the individual and/or operators has violated the provision of the relevant civil aviation law or CAA-B regulation or relevant LAA publication, an enforcement action decision and deterrent action shall be applied against the violator.

#### GM to UAEX.050 Enforcement Action

If violation and non-compliance detected, the operator may be subject to one of the following deterrent actions:

- (1) An <u>administrative action</u> may be taken where an authorized operator violates a provision of this regulation. Administrative action can be:
  - Oral Counselling
  - Warning Letter
  - Restriction of privilege
  - Suspension
  - Revocation
  - Detention, confiscate or Grounding of Unmanned Aircraft
- (2) A <u>Judicial action</u> involves the prosecution of an alleged offender. This usually involves contravention of the Civil Aviation Act 2021 and/or regulations.

## **UAEX.055** Appeal process

The appeal process initiated to allow applicants (UA pilots) who feel aggrieved by a decision (Administrative and/or Judicial action) made against them by the CAA-B, the right to apply for an appeal against that decision.

*Note: The scope of this process excludes any appeal related to aviation security (AVSEC)* 

The applicant (UA pilot) may appeal pursuant to the provisions of the Civil Aviation Act 2021 section 34 *Objections to Proposed Decisions* and section 44 *Appeals to the Director General against Enforcement Action*.