

Advisory Circular AC 91-57C Summary

Chapter 1

AC 91-57C Provides guidance to

1. Persons Operating UA under the exception rule for limited recreational operations of UA in Section 349 of FAA Reauth. Act of 1018.
2. Persons using UA for educational or research.
3. Applications for CBO Status.
4. Application for FAA authorized Fixed Sites and FRIA Sites
5. CBO-sanctioned UA flying events.

Fixed Sites are locations with standing airspace FAA authorization for recreational flying.

FRIA Sites are locations where UA may operate without remote-ID.

Chapter 2

RECREATIONAL FLYER STATUTORY LIMITATIONS

2.1 **Recreational Flyer** - A person who operates a UA strictly for recreation.

2.2 **Statutory Limitations** – Flyers must operating UA must adhere to statutory limitations in 49 U.S.C. § 44809. UA over 55 pounds must operate under FAA-approved safety guidelines of a CBO only at a fixed site.

2.2.1.2.1 UA operated by institution of higher education for educational or research.

2.2.1.2.3 UA flown as part of an educational program that is chartered by a recognized CBO. Elementary and Secondary educ. institutions, have to receive FAA recognition as a CBO or be chartered by a recognized CBO, otherwise under Part 107.

2.2.2 The aircraft is operated in accordance with or within the programming of a CBO's set of safety guidelines and the operator doesn't need to be a member of a CBO to fly under its safety guidelines. AMA not happy with this!

2.2.3 The aircraft is flown within VLOS of the person operating the aircraft or a visual observer.

2.2.4 The aircraft is operated so as not to interfere with and gives way to any crewed aircraft.

2.2.5 In Controlled airspace the operator obtains prior authorization from the FAA or designee.

2.2.5.1 Recreational flyers don't need authorization to operate in Class G below 400 ft. AGL.

2.2.5.2 Recreational flyers may use the FAA's LAANC or <https://uasidekick.com> to check airspace restrictions and obtain authorization to fly in controlled airspace.

2.2.5.3 If a recreational flyer wants to fly near an airport in Class B, C, or D not serviced by LAANC, the flyer should use the FAADroneZone website (<https://faadronezone.faa.gov/>) to request authorization.

2.2.5.5 The B4UFLY app may be used prior to operating UA to provide critical airspace info including locations of airports, national parks, stadiums, special use airspace, TFRs, and other special flight rules at https://www.faa.gov/uas/recreational_fliers/where_can_i_fly/b4ufly/.

2.2.7 Recreational flyers must pass the TRUST aeronautical safety test and maintain proof of test passage to be made available to FAA or law enforcement upon request.

2.2.8.1 Recreational flyers must register UA weighing more than 0.55 pounds (250 grams) at takeoff including those used in limited recreational operations at

<https://faadronezone.faa.gov/>

2.2.8.3 Recreational flyers must mark all their UA with the registration number affixed to UAs.

CHAPTER 3. FAA-RECOGNIZED COMMUNITY-BASED ORGANIZATIONS

3.1.1 A CBO is defined as a membership-based association entity that:

- (1) has 501(c)(3) IRS standing;
- (2) is exempt from tax under section 501(a) of the IRS;
- (3) whose mission is demonstrably the furtherance of model aviation;
- (4) provides a comprehensive set of safety guidelines for all aspects of UA addressing assembly and UA safe operation in the NAS and the safety of individuals and property on the ground, and **may** provide a comprehensive set of safety rules for the operation of UA that are capable of controlled navigation beyond VLOS of the operator;
- (5) provides programming and support for local charter organizations, affiliates, or clubs; and
- (6) provides assistance and support in development and operation of UA flying sites.

3.2 To Apply for CBO Recognition the organization must provide all information necessary for compliance with the statutory requirements of 49 U.S.C. § 44809(h). The applicant should provide a point of contact in the application whom the FAA may contact to request additional information. It may take up to 90 days to process. All documents and info should be submitted via the FAADroneZone website at <https://faadronezone.faa.gov/>.

3.2.1 The FAA will recognize an applicant that submits info demonstrating compliance with 49 U.S.C. § 44809 as a CBO and will issue a letter of recognizing the organization's CBO status. The FAA will maintain a list of CBOs at https://www.faa.gov/uas/recreational_fliers/.

CBOs safety guidelines are to be developed and/or changed in coordination with FAA and if any changes its safety guidelines it must do so in without coordination with the FAA or no longer meets the requirements of 49 U.S.C. § 44809(h), the FAA will notify the CBO of the deficiency. If the CBO is unable to meet the 10/20/22 AC 91-57C 3-2 requirements the FAA will issue a letter of rescission and remove the CBO's status and name from the website.

3.2.2 Any organization, including institutions of higher education, elementary and secondary school, and JROTC programs, may request CBO recognition if they meet all the CBO requirements. Educational programs in the elementary and secondary schools are not considered a recreational purpose unless associated with a CBO, though such programs are considered recreational when conducted by institutes of higher education.

3.3 Safety Guidelines

3.3.1 An organization seeking recognition as a CBO is required to provide a set of current safety guidelines, procedures, and policies for all aspects of model aviation including assembly and safe operation of model aircraft within the NAS and the protection and safety of persons and property on the ground. The guidelines should be readily available to FAA upon request.

3.3.2 The limitations and requirements identified in 44809(a) should serve as the baseline for developing safety guidelines and be consistent with the requirements and may go beyond. **Guidelines need not include operations irrelevant to the CBO.** For example, if a CBO is not engaged in a particular type of operation (e.g., FPV or turbine-powered flight), there would be no need for guidelines for that type of operation and only operations covered in guidelines could be done by the CBO members.

3.3.2.1 General Safety Measures and Practices.

3.3.2.1.1 Recommended Safety Guidelines. The FAA recommends the following:

1. Adequate protections and **risk mitigations to prevent UA from causing harm to people.**

CBOs are encouraged to **include** the following **safe practices: restrict operations over people, establish buffer areas between a UA planned flightpath and any people and limit ground access** to areas for certain activities such as racing.

2. Prohibit modifying UA and carrying any hazardous materials or weapons.

Consider restricting any modifying of UA that may create a hazard to the public or the NAS.

3. Prohibition on engaging in careless or reckless behavior. The FAA recommends including the five hazardous attitudes in aeronautical decision making (refer to the Pilot's Handbook of Aeronautical Knowledge, Figure 2-4) and "Dirty Dozen" human behaviors in aircraft maintenance (<https://www.faasafety.gov/files/gslac/library/documents/2012/Nov/71574/DirtyDozenWeb3.pdf>).

4. Airspace restrictions and prohibitions. The FAA recommends that safety guidelines provide info on how to be aware of all restricted/prohibited **airspace** in which the operation will occur.

5. Preflight safety. FAA encourages CBOs to include in their guidelines, as appropriate, info on preflight assessments, flight planning, hazard identification techniques, and scanning techniques for aircraft and other people entering an area of operation.

Consider including AC 107-2, Appendix E, Sample Preflight Assessment and Inspection Checklist. CBOs may also choose to develop a through-flight or turnaround checklist for preflight inspections between successive flights.

6. In-flight safety. FAA recommends flyers assess performance of the UA continually; monitor command and control links; changing weather; and unexpected people or aircraft in the area. Instruct flyers to be familiar with the features a UA may have like a return-to-home that could initiate a straight-line path toward people or obstacles.

7. Post-flight safety. Guidelines for post-flight inspection may include review the flight and consider whether anything presented a risk. Include recommendations for safely securing UA between flights by removing batteries and protecting fragile parts per the manufacturer's recommendations.

3.3.2.2 Regulatory and Statutory Compliance.

3.3.2.2.1 FAA Recommends a safety statement be included in guidelines to remind operators that they must comply with applicable FAA regulations and other Federal laws, in addition to the CBO's safety guidelines.

3.3.2.3 First Person View (FPV).

3.3.2.3.1 If FPV is supported by CBO include safety guidelines for operating UA under FPV.

FAA suggested FPV guidelines:

- 1. FPV flyers should be proficient** in operating their UA without FPV equipment prior to starting FPV flights.
- 2. Perform preflight inspections** of the FPV device's video, control, power source, and mechanical systems before each flight.
- 3. During FPV operations watch the UA, and the surrounding** airspace at all times to ensure safe operations. Instruct Visual Observers how to maintain VLOS with UA at all times, scan the surrounding airspace for hazards, and be able to see the aircraft with unaided vision, except eyeglasses/contact lenses.
- 4. Guidelines about co-location of VOs** with the FPV flyer, require VOs to be in direct communication with the FPV flyer without technological assistance.
- 5. Guidelines for FPV flyer to see** the aircraft throughout the entire flight.
- 6. Guidelines for communications**, such as require FPV flyer and VOs have preplanned communications and procedures to ensure the UA remains in control and within VLOS during when safe operation maybe in question.
- 7. The CBO may address FPV operations** for UA more than 55 pounds in its safety guidelines.

3.3.2.4 Small UA Maintenance, Inspections, and Minimum Conditions for Safe Operation.

3.3.2.4.1 FAA Recommends including guidance to flyers on UA care, maintenance, and inspections for safe operations of UA between flights to include:

- 1. UAs and their associated systems/parts** should be maintained in accordance with manufacturer's instructions. For homebuilt UA guidelines should provide general maintenance guidance. Refer to AC 107-2, Paragraphs 7.2.1.1 and 7.3.5, Benefits of Recordkeeping.
- 2. Guidance regarding frequency of checking** for UA system software updates.
- 3. Guidelines for checking flight-critical systems** (e.g., rotors, battery, controls) for damage prior to flight and guidance to repair or replace if damaged.
- 4. Guidance to test control links** prior to flight and to not attempt or continue flight if command and control signal strength appears inadequate.
- 5. Guidelines for moving parts**, such as servos and rotors moving freely or respond to controls as expected.
- 6. Guidance for all systems** to have adequate energy to complete the planned flight.

- 7. Guidelines that guidance systems** and instruments (e.g., Global Positioning System (GPS), compass, altimeter) must be accurate and performing as expected.
- 8. Guidance that automated features** (e.g., return to home, auto-land) are functioning correctly.
- 9. Guidelines for carrying external loads**, attachments to UA, recommended weight limit of external loads, and that such loads do not negatively affect the balance or control of the UA.
- 10. Guidelines for flying site suitability**, such as checking the expected flight path for other people, aircraft, and obstacles.

3.3.2.5 Night Flight. Under 49 U.S.C. § 44809(a)(3)

Recreational flyers or VOs must maintain VLOS throughout the night flight.

FAA strongly recommends CBOs develop safety guidelines for night flying to include **equipping UA with anti-collision lights** that can be **seen** from **3 statute miles** away and to arrange lights on the UA to allow flyers to discern the orientation and flight path of the UA. **Guidelines can also permit night flying without lighting** in areas that are sufficiently illuminated to maintain VLOS of UA and identify any potential hazards.

Night flight presents visual perception challenges to operators. CBOs may reference FAA-H-8083-3C, Airplane Flying Handbook, Chapter 11 Night Operations.

3.3.2.6 Determining a Recreational Flyer's Medical Condition.

3.3.2.6.1 FAA Recommends that safety guidelines should include ascertaining prior to flying whether a flyer is fit for flying their UA, or if a VO is fit to serve.

3.3.2.6.2 Alcohol or Drug Use The FAA highly recommends that safety guidelines address how the use of alcohol or drugs would interfere with the recreational flyer's ability to operate the UA safely.

3.3.2.6.3 IMSAFE The FAA recommends the inclusion of the IMSAFE checklist for flyers in CBO guidelines:

- **Illness**—Is the flyer suffering from any illness or symptoms that might affect safe UA flying?
- **Medication**—Is the flyer taking drugs/prescriptions that might affect safe operation of UA?
- **Stress**—Is the flyer experiencing any psychological or emotional factors which might adversely affect his or her performance?
- **Alcohol**—Has flyer been drinking within the last 8 hours? (metabolizing can take up to 24 hours). One ounce of liquor, one bottle of beer, or four ounces of wine can impair flying skills.
- **Fatigue**—Has the flyer received sufficient sleep and adequate rest in the recent past?
- **Emotion**—Is the recreational flyer emotionally upset?

3.3.2.7 Emergency Procedures.

3.3.2.7.1 Recommended Safety Guidelines. An emergency is the actual or impending loss of control of a UA or violation of an operational limitation. FAA recommends that safety guidelines address potential in-flight emergencies such as:

- 1. Sustained loss, weak or intermittent** radio signals, control signals experiencing interference, or a UA not responding predictably to control inputs.
- 2. Loss of power or propulsion.**
- 3. Loss of navigation (GPS) or loss of sight of the UA.**
- 4. Flight instruments losing performance** or displaying incorrect information.
- 5. Unanticipated people or aircraft** entering the area of operation.
- 6. Parts or attachments on UA** becoming loose or breaking off.
- 7. Electrical arcing, or battery** or component fires.
- 8. Unexpected weather** (e.g., high winds, sudden storms, fog).

3.3.2.7.2 Responsibility for Safety. The FAA recommends that the safety guidelines emphasize that the **recreational flyer is responsible for the safety** of the flight during emergencies. While risk assessment is not necessary for developing acceptable safety guidelines, some CBOs may find it helpful to consult the recommended methods for assessing potential hazards and planning appropriate emergency procedures found in AC 107-2, Appendix A, Risk Assessment Tools.

3.3.2.8 Safety Incident Reporting Program. To support and promote a safety culture among all CBOs and flyers, the FAA recommends safety guidelines address safety incidents. A “safety incident” is defined as an occurrence associated with the operation of the UA that affects or could affect the safe operations. **CBOs may include a safety incident report program** for flyers. **Gathering data would enable better understanding of the trends and risks of UA operations to identify appropriate mitigations.**

3.3.2.9 Safety Guidelines for Certain UA Operations.

Safety Guidelines should include safety procedures, standards, and limitations for specific types of operations conducted by flyers operating under the CBO’s safety guidelines, such as, but not limited to:

- 1. UA more than 55 pounds** including the weight of anything attached to or carried by the aircraft. **CBO standards and limitations for UA over 55 pounds must be approved by FAA. Large UA may only be operated from a fixed site.**
- 2. Turbine engine operations.**
- 3. Combat simulations.**
- 4. Racing operations.**
- 5. Aerobatics.**
- 6. Training.**
- 7. Research conducted by institutions of higher education.**

3.4 Requests for Fixed Sites.

3.4.1 Applications may be submitted through the FAADroneZone website at <https://faadronezone.faa.gov/>.

3.4.2 Compliance with the requirements of part 89 for remote identification is required at fixed sites. For more details, see paragraph 1.7.4.

3.4.3 As stated in paragraph 3.1.1 above, a CBO “provides assistance and support in the development and operation of locally designated model aircraft flying sites.”

3.4.4 A CBO does not have to request the establishment of a fixed site as part of the CBO recognition process. However, a CBO may submit a request to the FAA for the authorization of a fixed site.

When a fixed site has received FAA authorization, recreational flyers will be able to use the site to **conduct operations using small UA or UA more than 55 pounds, or participate in a CBO-sanctioned event in such controlled airspace** (i.e., Class B, C, or D airspace or within the lateral boundaries of the surface area of Class E airspace designated for an airport), **without additional airspace authorizations**. These operations are **subject to** the parameters of a **mutually agreed upon operating procedure with the ATC facility**.

Request authorization for a fixed flying site by submitting their request **through the FAADroneZone** website at <https://faadronezone.faa.gov/>. Any request submitted to the FAA for the authorization of a fixed site **should include the following information**:

- 1. Latitudes and longitudes that define** the boundaries of the proposed site. Text, picture, and geographic files for depicting the requested area.
- 2. Maximum altitudes requested** for operations at the site.
- 3. Hours of operation at the site.**
- 4. Description of any unique operations**, if applicable, including:
 - Large (more than 55 pounds) UA operations.
 - Turbine engine operations.
 - Combat simulations.
 - Racing operations.
 - Aerobatics.
- 5. Airspace classification.**
- 6. Nearest airport.**
- 7. Photos of site location.**
- 8. Previous Letter of Agreement or Authorization**, as applicable.

3.4.5 A request submitted to the FAA to allow operations at a fixed site should clearly **indicate the kinds of operations** to take place, **such as aerobatics or air races**, and include any information pertinent to the operations, such as additional safety procedures to address the kinds of operations anticipated and how they will be followed at the fixed site. The FAA will review the submitted documents and determine whether it is appropriate to issue an

authorization for the fixed site. If the FAA needs additional information, the FAA will contact the requester.

3.5 CBO-Sponsored Events.

3.5.1 Authorization for CBO-Sanctioned Event(s).

3.5.1.1 If a planned, UA-only event will occur at a fixed site in controlled airspace designated for an airport, the **CBO must request a fixed site authorization for the time and place** of the event. Refer to 49 U.S.C. § 44809(c)(1). Requesters should **submit all** of the site-specific **information in paragraph 3.4.4 above and the dates** and duration of the event via the FAADroneZone website (<https://faadronezone.faa.gov/>) **at least 90 days in advance** of the event for authorization. **CBOs intending to conduct events in Class G airspace that may exceed 400 feet AGL must contact the FAA for further information.**

3.5.1.2 UA-only aviation events conducted under the 49 U.S.C. § 44809 exception, **such as UA races or aerobatic displays, must adhere to CBO safety guidelines** developed in coordination with the FAA or in the case of operations involving UA weighing **more than 55 pounds, approved by the FAA.**

If a CBO wishes to **conduct such sanctioned events periodically**, the FAA recommends that the CBO **develop safety guidelines for CBO-sanctioned events as part of its guidelines submitted** for recognition.

For any public event, the FAA strongly recommends including **procedures to protect nonparticipants** from all UA participating in the event and identify persons responsible (e.g., safety officer, contest director) for ensuring the safety of the operations conducted onsite. Note: As mentioned in paragraph 2.2.1, the FAA will not predetermine that all participants in an event are compliant with 49 U.S.C. § 44809(a). **Each individual pilot maintains responsibility for compliance** with the 49 U.S.C. § 44809(a) requirement for recreational purpose.

3.5.1.3 When a CBO makes an application for a sanctioned event at a fixed site in DroneZone, the CBO should **provide its safety guidelines** for the sponsored events as part of the application. If a CBO has not incorporated sanctioned events into its safety guidelines, then that CBO should include in its application **how it will conduct the event safely** protecting nonparticipants from all UA participating in the event.