

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
CERTIFICATE OF WAIVER

ISSUED TO

FLIR-TELEDYNE UIS
Responsible Person: Peter Blake
Waiver Number: 107W-2021-01271

ADDRESS –

2800 Crystal Dr Ste 330
Arlington, VA 22202

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the provisions contained in this certificate.

OPERATIONS AUTHORIZED

Small unmanned aircraft system (sUAS) operations from a moving land or water-borne vehicle. Night sUAS operations. sUAS operations beyond the remote pilot's visual line of sight. sUAS operations in reduced visibility and reduced cloud clearance.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

14 CFR §§ 107.25—Operation from a moving vehicle or aircraft,
107.29(a)(2) and (b)—Daylight operation,
107.31—Visual line of sight aircraft operation,
107.51(c)—Operating limitations for small unmanned aircraft - Visibility,
107.51(d)—Operating limitations for small unmanned aircraft - Cloud Clearance

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE—This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 33, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from June 7, 2021, to June 30, 2025, and is subject to cancellation at any time upon notice by the Administrator or an authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

General Aviation and Commercial Division, AFS-800

**SPECIAL PROVISIONS ISSUED TO
FLIR-TELEDYNE UIS**

General.

The FAA's Flight Standards Service has reviewed your application to ensure compliance with the requirements of 14 CFR § 107.200 and § 107.205. Pursuant to these authorities, the Administrator finds that the proposed small unmanned aircraft (sUA) operation can be conducted safely under the provisions of this Certificate of Waiver (Waiver) as listed below because you have established adequate mitigations for risks involved with operating your sUA in the manner you described. Adherence to the provisions of this Waiver establishes the required level of safety within the national airspace system.

The Administrator may cancel this Waiver at any time. As a general rule, this Waiver may be canceled when it is no longer required, there is an abuse of its provisions, or when unforeseen safety factors develop. Failure to comply with any provision listed below is a violation of the terms of this Waiver and will serve as justification for cancellation.

List of Regulations Waived by Section and Title. The following regulations are waived:

- 14 CFR § 107.25(b)** Operation from a moving vehicle is waived to allow sUAS operations from a moving land or water-borne vehicle over other than sparsely populated areas not carrying property for compensation or hire;
- 14 CFR § 107.29(a)(2) and (b)** Daylight operation is waived to allow operations at night;
- 14 CFR § 107.31** Visual line of sight aircraft operation is waived to allow operations beyond the remote pilot's visual line of sight;
- 14 CFR § 107.51(c)** Operating limitations for small unmanned aircraft is waived to allow operations as observed from the location of the control station to occur when minimum flight visibility is less than 3 statute miles;
- 14 CFR § 107.51(d)** when the small unmanned aircraft is less than 500 feet below or 2,000 feet horizontally from clouds.

No part of this waiver will function as an airspace authorization under 14 CFR § 107.41. The FAA's Air Traffic Organization responds directly to requests for such authorizations.

Common Special Provisions. The Responsible Person is directly responsible for safety of operations conducted under this Waiver and will ensure the remote PIC, manipulator of the controls, and Visual Observer (VO)¹ comply with all provisions of this Waiver.

1. The Responsible Person listed on the Waiver is responsible to the FAA for the safe conduct of the operations. Prior to conducting operations that are the subject of this Waiver, the responsible person:
 - a. Must ensure the remote PIC, manipulators of the controls, and VOs are informed of the terms and provisions of this Waiver and strictly observe the terms and provisions herein;
 - b. Must ensure the remote PIC, manipulators of the controls, and VOs are informed and familiar with part 107 regulations; and
 - c. Evidence of the above (a and b) must be documented and must be presented for inspection upon request from the Administrator or an authorized representative;
2. This Waiver may not be combined with any other waiver(s), authorizations(s), or exemption(s) without specific authorization from the FAA;

3. The FAA has the authority to cancel or delay any or all flight operations if the safety of persons or property on the ground or in the air are in jeopardy or there is a violation of the terms of this Waiver;
4. A copy of this Waiver must be accessible and available to the Remote Pilot in Command (remote PIC) at the ground control station during sUAS operations that are the subject of this Waiver;
5. The Responsible Person listed on this Waiver must maintain a current list of pilots by name and remote pilot certificate numbers used in the Waiver holder's operations. This list must be presented for inspection upon request from the Administrator or an authorized representative;
6. The Responsible Person listed on this Waiver must maintain a current list of small unmanned aircraft (sUA) by registration number(s) used in the Waiver holder's operations. This list must be presented for inspection upon request from the Administrator or an authorized representative;
7. For the purposes of this Waiver, Direct Participants are the remote pilots in command (PICs), persons manipulating the controls, visual observers (VOs), and any persons whose involvement is necessary for safety of the sUAS operation;

Operational Provisions

8. Operations under this Waiver may only be conducted in Class G airspace unless a separate airspace Certificate of Waiver or Authorization is received from the FAA, in accordance with § 107.41;
9. As described in the waiver application, the altitude of the sUA cannot be higher than 150 feet above ground level unless the sUA is flown within a 150-foot radius of a structure and does not fly higher than 150 feet above the structure's immediate uppermost limit; any altitude restriction specified in an airspace authorization granted in conjunction with this Waiver takes precedence;
10. All operations under this waiver must use one or more VO;
11. Operations under this waiver are only authorized for the make and model sUA aircraft described in the waiver application;
12. The listed regulations are waived, to the extent specified by this document, for operations within the states and territories of the United States of America;
13. Prior to conducting operations under this waiver, the remote PIC and the driver must have general knowledge of the topography and environment for the planned flight route and have briefed the intended flight to address matters such as vehicle route, speeds, and obstacles;
14. Vehicle operation must not interfere with the duties and responsibilities of the remote PIC;
15. As described in the waiver application, the manipulator of the sUAS controls must be the holder of a remote pilot certificate with a sUAS rating;

16. The remote PIC must ensure sufficient VO(s) are used to identify any non-participating aircraft prior to their entry into the planned operational area. For the purpose of this Waiver, sufficient VO(s) is defined as the minimum number of VO(s) required to continuously observe at least a 2 statute mile radius of airspace surrounding the sUA in flight. The remote PIC must confirm VO(s) are physically located such that the remote PIC receives sufficient notice to ensure the UA remains well clear of all other aircraft;
17. The Responsible Person must ensure all operations conducted under this Waiver follow the procedures outlined in the current operations manual. If a discrepancy exists between the provisions in this Waiver and the procedures outlined in the operations manual, the provisions of this Waiver take precedence and must be followed;
18. The Responsible Person may update or revise its operations manual. The Responsible Person must track such revisions and present revised documents to the Administrator or an authorized representative upon request. The Responsible Person must also present revised documents when applying for extension of or amendment to this Waiver. If any revision to the manual would be contrary to the information provided in the waiver application or obviate a condition or limitation of this waiver, then the Responsible Person must apply for an amendment to this Waiver;
19. The Responsible Person must ensure a copy of the current operations manual is available to the remote PIC and all other direct participants prior to and during sUAS operations that are the subject of this Waiver;
20. As described in the waiver application, prior to conducting operations under this Waiver, the remote PIC must be trained to recognize and overcome visual illusions caused by darkness and understand physiological conditions which may degrade night vision. This training must be documented and must be presented for inspection upon request from the Administrator or an authorized representative;
21. The Responsible Person listed on this Waiver must ensure each remote PIC who will conduct operations under this Waiver is trained in a manner that addresses the items listed in § 107.49(a)-(e) and in a manner that is consistent with how the sUAS will be operated under this Waiver. All training and demonstration for all remote PICs and VOs must be documented and made available upon request by the Administrator or an authorized representative. Training operations may only be conducted under the standard requirements of part 107 (without waiver). The training must include:
 - a. sUA limitations,
 - b. sUA programming,
 - c. sUA operational procedures,
 - d. Abnormal procedures,
 - e. Air traffic avoidance procedures,
 - f. Crew Resource Management,
 - g. sUA flight training, and
 - h. Demonstration of sUA ground and flight skills;

22. Prior to operations under this Waiver, all direct participants must attend a safety briefing that addresses at minimum, the following items:
 - a. Designated positions, physical locations, responsibilities, and Crew Resource Management,
 - b. Planned flight operating area,
 - c. Designated launch and recovery areas,
 - d. Verification of geo-fence boundaries,
 - e. Verification of return home and land flight profile, and course,
 - f. Verification of emergency landing site(s), land profile, and course,
 - g. Procedures for avoidance of other aircraft,
 - h. Procedures for operating under this Waiver;
23. Communication between the remote PIC and VO must occur to facilitate, when necessary, the remote PIC taking action to maneuver the sUA with sufficient time to:
 - a. Give way to all other aircraft in accordance with § 107.37,
 - b. React to any unforeseen operational or mechanical failure without creating a hazard to other people, other aircraft, or property in the event of a loss of control of the sUA,
 - c. Maintain compliance with this Waiver and the requirements of part 107;

Technical Provisions

24. The loss of data link procedures and contingency plans must account for the dynamic area of operation. As described in the waiver application, these plans and procedures must include a safe flight termination method or a safe lost link flight path around all obstacles, non-participating aircraft, persons, or vehicles on the ground, which are encountered during the operation;
25. ADS-B out (1090/978 MHz) may not be transmitted from the sUAS when operating pursuant to this Waiver;
26. As described in the waiver application, sUAS ground control station must display in real time the following information: sUA altitude, sUA position, sUA direction of flight, and sUAS flight mode. This information must be available at all times to the remote PIC;
27. The sUAS must audibly and visually alert the remote PIC of degraded system performance, sUAS malfunction, or loss of Command and Control (C2) link between the ground control station and the sUA;
28. All emitters used in sUAS must be in compliance with all applicable FCC regulations and all provisions of the FCC authorization granted for the emitter. A FCC experimental authorization may not be used for sUAS operations under this Waiver;
29. Any electronic communication conducted by the driver during operations under this Waiver must be by use of a hands-free device;
30. As described in the waiver application, the remote PIC must be able to determine that the Command and Control system and communications equipment have performance capabilities that meet the planned ranges for the proposed operation;

31. As described in the waiver application, the equipment (cameras) on the small UAS must function as described in the application and the remote PIC must be able to use the cameras for visual navigation, maintain situational awareness to avoid collisions with obstructions and non-participating human beings, or to yield right-of-way in accordance with § 107.37;

Environmental Provisions

32. The minimum flight visibility, as observed from the location of the control station, must be no less than 300 feet; and
33. All operations conducted under this Waiver must remain clear of clouds.