

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO

Praxis Aerospace Concepts International, Inc.
Responsible Person: Jonathan Daniels
Waiver Number: 107W-2018-12266A

ADDRESS

980 American Pacific Dr Ste 102
Henderson, NV 89014

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 standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

Small-unmanned Aircraft Systems (sUAS) operations for beyond the visual line of sight of the Remote Pilot in Command (PIC) or Visual Observer (VO).

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

14 CFR § 107.31 Visual line of sight aircraft operation
14 CFR § 107.33(b) Visual observer

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 22, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from July 10, 2018 to July 10, 2022 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
Praxis Aerospace Concepts International, Inc.**

General.

This Certificate of Waiver is an amendment, which supersedes and replaces Waiver 107W-2018-12266 issued to Praxis Aerospace Concepts International, Inc. for operations under 14 CFR 107. Waiver 107W-2018-12266 is no longer valid.

The FAA's Flight Standards Service has reviewed your application to ensure compliance with the requirements of 14 CFR § 107.200. The Administrator finds that the proposed sUAS 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 the sUAS in the manner you described. Adherence to the provisions of this Waiver establishes a level of safety that ensures safe operations within the national airspace system.

This Waiver may be canceled at any time by the Administrator, the person authorized to grant the Waiver, or the representative designated to monitor a specific operation. 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 may serve as justification for cancellation.

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

14 CFR § 107.31, Visual line of sight aircraft operation, is waived to allow operation of the small unmanned aircraft (sUA) beyond the direct visual line of sight of the remote PIC or VO.

14 CFR § 107.33 Visual observer, is waived to the extent necessary to allow operation of the small unmanned aircraft (sUA) when each VO may not be able see the unmanned aircraft in the manner specified in §107.31.

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 VO 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—
 - a. The Responsible Person must ensure the remote PIC and all personnel involved in the operation are informed of the terms and provisions of this Waiver and the strict observance of the terms and provisions herein;
 - b. The Responsible Person must ensure the remote PIC and all personnel involved in the operation are informed about and familiar with part 107 regulations not waived; and
 - c. The Responsible Person must keep a log of the communications to establish compliance with subparagraphs (a) and (b) of this paragraph. This log must be presented for inspection upon request by the administrator or an authorized representative;
2. This Waiver must not be combined with any other waiver(s), authorization(s), or exemption(s) without specific authorization from the FAA;
3. Operations under this Waiver are to be conducted in Class G Airspace only;
4. 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, is in jeopardy or there is a violation of the terms of this Waiver;
5. A copy of this Waiver must be available during sUAS operations that are the subject of this Waiver;

6. The Responsible Person listed on this Waiver must maintain a current list of pilots by name and remote pilot certificate number used in the Waiver holder's operations. This list must be presented for inspection upon request from the Administrator or an authorized representative;
7. The Responsible Person listed on this Waiver must maintain a current list of 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;
8. All operations under this Waiver must use one or more VO;

§ 107.31 Visual line of sight aircraft operation and § 107.33 Visual observer Special Provisions.

sUAS operations may be conducted outside the visual line of sight of the remote PIC or VO provided—

9. All planned launches and recoveries of the sUA must be within visual line of sight of the remote PIC;
10. The Responsible Person listed on this Waiver must ensure each remote PIC is trained and proficient in a manner consistent with how the sUAS will be operated under this Waiver. All training and demonstration for any remote PIC and VO 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 and contingency procedures,
 - e. Evasive and Emergency procedures,
 - f. Crew Resource Management,
 - g. sUA flight training, and
 - h. A demonstration of sUA ground and flight proficiency;
11. All sUA operated under this Waiver must be capable of semi-autonomous operations as described in the waiver application. Prior to conducting operations that are the subject of this Waiver, the remote PIC must verify, and during operations, the sUA must follow the pre-programmed flightpath;
12. Prior to operations that are the subject of this Waiver, the remote PIC must determine the control link with the sUA has performance capabilities that exceed the planned ranges for the proposed operation;
13. As described in the waiver application, the sUAS ground control station must display in real-time, sUA altitude, sUA position, sUA direction of flight information, and sUA flight mode. This information must be available at all times to the remote PIC;

14. Communication between the remote PIC and VO, must allow for the remote PIC to maneuver the sUA with sufficient time to—
 - a. Give way to all other aircraft,
 - 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 for any reason, and
 - c. To maintain compliance with this Waiver and un-waived provisions of part 107;
15. When communication between the VO and the remote PIC is by use of an electronic device—
 - a. The remote PIC's device must be hands-free,
 - b. There must be a reliable, backup communication method;
16. sUA operations conducted subject to this waiver must cease if, at any time—
 - a. Safety of human beings or property on the ground or in the air is in jeopardy,
 - b. There is a failure to comply with the provisions of this Waiver,
 - c. Full-duplex communications cannot be maintained between the remote PIC and the VO or VO's,
 - d. There is a loss of the sUA control link,
 - e. A non-participating vehicle enters into the area, or
 - f. The sUA GPS location information is degraded;
17. All sUA operations conducted in accordance with this Waiver must comply with the manufacturer User Manual, including recommendations and limitations;
18. For operations subject to this waiver, at all times, the remote PIC or at least one VO must maintain unaided (other than corrective lenses) visual line of sight with the sUA, and must be able to (1) know the unmanned aircraft's location, (2) determine the unmanned aircraft's attitude, altitude, and direction of flight, (3) observe the airspace for other air traffic or hazards, and (4) determine the unmanned aircraft does not endanger the life or property of another;
19. The sUA must be equipped with high visibility markings or lighting visible during the daytime from a distance of no less than 3 statute miles, as described in the waiver application;
20. Not less than 24 hours prior to conducting operations that are the subject of this Waiver, a Notice to Airmen (NOTAM) must be filed with a Flight Service Station. The NOTAM must include location, altitude, and/or operating area, time and nature of the activity;
21. Flight operations recordkeeping requirements. Records shall be retained for a period of 90 days after the expiration date of the Waiver. The Responsible Person shall keep at its principal business office or at other places approved by the Administrator, and provide the Administrator on a monthly basis by email to 9-AFS-820-Part107Reports@faa.gov, the following—
 - a. For each sUA flight conducted under the terms of this waiver—
 - i. Registration number of the sUA,
 - ii. Make and model of the sUA,
 - iii. Name and certificate number of the remote PIC,
 - iv. Name of the VO or VO's,
 - v. Location of the remote PIC during the sUA flight,
 - vi. Location of the sUA, and
 - vii. Duration of the sUA operation;

- b. sUA equipment malfunctions. sUA equipment malfunctions include, but are not limited to, the following—
 - i. Onboard flight control system,
 - ii. Any portion of the navigation system to include GPS functionality,
 - iii. Power plant malfunction or failure,
 - iv. Battery malfunction or failure,
 - v. Electrical power system malfunction or
 - vi. Control station malfunction or failure;
22. Operations subject to this Waiver are limited to the two areas described in the waiver application, when the remote PIC is physically located within the operational area, described in the waiver application as—
- a. Nipton BVLOS Bowl (3.25 nm radius from 35°25'22.78"N, 114°58'44.19"W)
 - b. Piute BVLOS Bowl (2.1nm radius from 35°21'6.83"N, 114°50'41.21"W)