

# PULITZER ELECTRIC AIRCRAFT RACE RULES AND ADMINISTRATIVE PROCEDURES

## GENERAL:

The Pulitzer Electric Aircraft Air Race (“the race”) is a 1000 nm cross-country air race from Omaha, NE to near Kitty Hawk, NC. The race is a multi-day event scheduled for 16 – 19 May 2022. Each contestant must complete the race within a four-day window beginning at the start of civil twilight the morning of 16 May 2022 and ending at the end of civil twilight the evening of 19 May 2022.

The race is open for all aerodynes (a heavier-than-air aircraft which derives its lift in flight mainly from aerodynamic forces) powered by a zero-emission electric means of propulsion. Since some contestants may be using experimental aircraft, and in the interest of safety, the race will be conducted during day, visual flight rules (VFR) conditions.

The race will be generally conducted according to NAA procedures for “Speed Over a Recognized Course” (FAI Sporting Code, Section 2 paragraph 4.6.11), except that only actual flying time will be used to calculate each contestant’s official speed for the race. Time on the ground for recharging, battery exchanges, other maintenance actions or overnight stays, will not be counted as flying time. Each contestant’s speed will be calculated by dividing the distance of the direct course between the Start Point and the Finish Point by the actual cumulative flying time. The contestant with the fastest speed, who is not otherwise disqualified, will be declared the winner.

## PULITZER RACE RULES:

1. Terms:
  - a. Aerodyne - a heavier-than-air aircraft with a means of propulsion which derives its lift in flight mainly from aerodynamic forces.
  - b. The race – The electric aircraft cross-country air race organized by the National Aeronautic Association including pre-race and post-race activities.
  - c. Zero-Emission - refers to an engine, motor, process, or other energy source, that emits no waste products that pollute the environment or disrupt the climate.
2. Eligibility: The race is open to powered aerodynes with a zero-emission electric propulsion system, piloted by an on-board human pilot.
  - a. Eligible aircraft must be an aerodyne with means of propulsion. Aircraft which meet this requirement include aeroplanes, rotorcraft, and others such as eVTOL and urban air mobility vehicles.
  - b. Eligible aircraft must use an electric, zero-emission propulsion system as the sole means of propulsion. Eligible systems include propeller(s) driven by an electric motor powered by an electrical storage, collection or generating device such as batteries, solar collectors, fuel cells or similar system. Onboard aircraft propulsion systems must not use hydrocarbon fuels and must be zero-emission. (Water and other non-polluting substances are permissible.)

- c. Aircraft must be equipped with ADS-B out for flight following. Contestants must not opt out of public flight following by Flight Aware or other commercial flight tracking providers.
  - d. Aircraft must have a valid standard airworthiness certificate or an experimental airworthiness certificate for the purpose of air racing with associated operating limitations compatible with the Pulitzer race.
  - e. Pilots must have a valid pilot license and medical certificate.
  - f. Pilots must have a valid FAI sporting license and NAA membership.
3. Course Description:
- a. Start Point: Eppley Airfield (KOMA), Omaha, Nebraska.
  - b. Finish Point: Dare County Regional Airport (KMQI), Manteo, North Carolina.
  - c. Course: For the purpose of measuring flight distance, the course is a direct course between the Start Point and the Finish Point with a great circle distance of 1000 nm. Contestants do not have to adhere precisely to the direct course but may plan their own course to accommodate selected landing airfields and deviate for weather. However, additional distance flown during the actual flight will not be used in the calculation of the official race speed.
4. Race Window:
- a. The race will be conducted during a four-day window from the beginning of morning civil twilight on 16 May 2022 at the Start Point and ending at the end of evening civil twilight on 19 May 2022 at the Finish Point.
  - b. Times for the beginning of morning civil twilight and the end of evening civil twilight are as published in the Air Almanac converted to local time.
  - c. If a contestant does not complete the course by landing at the Finish Point within the race window, the contestant will be disqualified.
5. Pre-Race Activities:
- a. Registration – contestants must complete the registration process, submit all required forms and pay the race registration fee during the open registration period. Registration forms and instructions can be found on the NAA Pulitzer race webpage. **Registration will be limited to 25 contestants.**
  - b. Contestant Check-in – Contestant check-in will be conducted at Signature Flight Support at the Start Point beginning on 13 May 2022. Contestants must present the following information and documentation for review and verification:
    - i. pilot documents - pilot license, medical certificate, NAA membership, FAI sporting license
    - ii. aircraft documents - FAA aircraft registration, airworthiness certificate (experimental airworthiness certificates must be for the purpose of air racing and include operating limitations compatible with the Pulitzer race).
    - iii. Aircraft performance information – the contestant will provide updated aircraft performance information including, aircraft weight, aircraft stall speed (or normal approach speed for vertical landing aircraft), best range, best endurance and maximum operating speed.
    - iv. Final registration documents, if any changes were made since on-line registration, including signed waivers.
    - v. expected flight plan with stop overs identified.
    - vi. contestant primary and secondary contact information.

- c. Aircraft Inspection – each aircraft participating in the Pulitzer race will be inspected to verify the electric means of propulsion, the aircraft is equipped with functioning ADS-B out equipment, and the installation and operation of the GPS flight data recorder.
6. Air Race Rules:
- a. Flight data recorder – Contestants will be required to carry and operate a GPS flight data recorder during the race.
    - i. a self-contained GPS flight data recorder will be provided for each contestant aircraft.
    - ii. at a minimum, the GPS data recorder must be operated continuously beginning 5 minutes before each takeoff through landing rollout until clear of the runway.
  - b. Starting procedures –
    - i. contestants will make individual starts using normal air traffic control (ATC) procedures to request taxi clearance and takeoff clearance.
    - ii. calls for takeoff clearance may begin once the race window has opened (beginning of morning civil twilight)
  - c. Flight conditions –
    - i. contestants must maintain Day VMC conditions.
    - ii. contestants must fly only between the beginning of morning civil twilight and the end of evening civil twilight at their location. The beginning of morning civil twilight and the end of evening civil twilight are as published in the Air Almanac converted to local time.
    - iii. transitory IMC conditions are permitted if unexpected weather is encountered, but VMC must be reestablished as soon as possible.
    - iv. Extended flight in IMC in order to gain an advantage over other contestants is not permitted and is grounds for disqualification.
  - d. Intermediate stops – contestants may make as many intermediate stops as are necessary.
  - e. Takeoff and landing times at intermediate stops –
    - i. Data from the self-contained GPS flight data recorders will be the primary means to determine takeoff and landing times.

If the GPS flight data recorder malfunctions, does not record or the data is corrupted, takeoff and landing times will be determined as follows:

- ii. At towered airfields, the Pulitzer race officials will contact the tower for landing and takeoff times.
- iii. At non-towered airfields (landing time) – to determine the landing time, the last aircraft position recorded by FlightAware will be determined. Race officials will calculate the landing time based on an assumed approach speed of 1.3 V<sub>stall</sub> for fixed wing aircraft. For aircraft making vertical landings, race officials will calculate the landing time based on 90% of the normal approach speed.
- iv. At non-towered airfields (takeoff time) – to determine the takeoff time, the first aircraft position recorded by FlightAware will be determined. Race officials will calculate the takeoff time based on an assumed climb at best

endurance speed for fixed wing aircraft. For aircraft making vertical takeoffs, race officials will calculate the takeoff time based on 90% of the normal approach speed.

- f. Formation flight – formation flight with support aircraft is permitted for flight following, safety chase, photography etc. Close formation (“fingertip”) is not allowed so as to gain a drag reduction and/or speed advantage. If close formation is performed for safety or photography purposes, the contestant aircraft must be the lead aircraft.
  - g. Contingencies – Pulitzer race officials may exercise control over conduct of the race as necessary to ensure safety and accommodate unforeseen circumstances in the best interest of the race and contestant safety. (For example, race officials may issue weather holds, or extensions to the race window, etc.) Race officials will communicate any contingency actions to the contestants as expeditiously as possible using the contact information provided at the race check-in.
  - h. Record setting during race – Pulitzer race contestants will not be granted a sanction by the NAA to attempt an aviation world record during the Race Window.
7. Post-Race Activities:
- a. Calculation of speed – each contestant’s official speed will be calculated by dividing the course distance by the cumulative flight time recorded by race officials.
  - b. Posting of race results – the contestant with the fastest official speed will be declared the winner. The official speeds will be posted, and the winner announced once the race window has closed, the official speeds have been calculated and verified, and all reviews and appeals have been resolved.
8. Race Administration:
- a. Reviews and Appeals - contestants may request a review of data calculated by race officials or a race official’s application of the Pulitzer race rules. If a contestant is not satisfied with the explanation or decision by the race official, and the matter at dispute affects the outcome of the race, the contestant may appeal to a panel comprised of the NAA Secretary of Contest and Records, the Chairman of the NAA Contest and Records board, and one member of the NAA Contest and Records board not directly involved in the administration of the race.
  - b. The decisions of the NAA Pulitzer race appeals panel are final.