



## 2017 Rubber Powered Airplane Endurance Competitions

Revision History:

Feb 18, 2017 - Initial Release

General:

### Rules of Competition:

This is a hand launched rubber powered airplane endurance competition. The winner will be the builder whose airplane spent the most time aloft in its competition flight. The event is a build and fly event with participants expected to build the airplane during the event using materials from the kit provided. There will be a 90 minute time period at the beginning of the competition for construction and flight test, followed by a 30 minute qualification period and finally a sudden death round of the top three airplanes for the championship.

Two classes will be conducted simultaneously to accommodate various participant skill levels. Master Class competition will center on the [Peck Polymers ROG](#) kit airplanes, and Delta Class competition will center on the [Midwest Super Delta Dart](#) kit airplanes.

### Event Schedule:

The event is two hours and thirty minutes long. The build portion (the first 90 minutes) will be for building and flight testing the airplanes. The next half hour will be the qualification portion of the event. During qualifying a participant must find an official timer who will time their flight. The timer will record the participant's qualification time. The final flight session involves the top three airplanes in each class. These airplanes will each fly once, the longest flying airplane being the overall winner.

**Dart Class:**



### **Construction:**

The competition centers on a Midwest Super Delta Dart kit airplane. All competing airplanes will be constructed of the materials included in one kit, and will be powered by the propeller and rubber band provided in that same kit. Anything included in the kit bag is acceptable construction materials including the bag itself. A second rubber band motor will be provided and can be installed for competition (the first being used for pre competition flight test). The propeller can be modified, however wet or dry lubrication of the propeller shaft or rubber band is not permitted. Airplanes will be built using CA, Elmer's type glue and/or glue sticks; this is the only material permitted to fly on the airplane that is not included in the Midwest kit. It is the official timers' interpretation of these rules that determines whether the airplane qualifies for competition.

### **Qualifying:**

The official timers are the only accepted witnesses to competition flights. If more than one participant is ready and waiting to be timed each participant gets one flight attempt before the next person in line can attempt a flight. Flights can be repeated to better one's time until the qualification period is complete, however airplanes without a qualifying time will be given priority over those making additional qualification attempts. There is no limit to number of winds on the propeller for this or any phase of the competition. Deliberate sabotage of a competitor's qualification attempt shall not be permitted. It is the official timers' interpretation of these rules that determines how the qualification period will run and whether a qualification flight is legal.

### **Finals:**

The qualifiers with the three longest flight times will compete in a sudden-death style fly-off to determine the champion. In the event of a tie any airplane with a top three time flies in the finals. In the event that one of the three airplanes is not able to fly the fourth longest time will be allowed to fly and so on.

Unlike qualifying this event is a sudden death style competition with one flight per qualifier. Deliberate sabotage of a competitor's flight shall not be permitted. Modification of the airplanes between qualifying and finals is permitted.

The airplanes will fly in their qualifying order, shortest to longest (in the event of a tie a coin toss will determine who flies first). In the event of a tie for the championship a second flight will be permitted as dictated by the official timer. It is the official timers' interpretation of these rules that determines who flies in the finals and who is the event champion.

### Timing:

Time starts the instant the model leaves the participant's hand. Time ends when the model touches the floor, when the model jettisons any parts, or when the participant touches any part of the model. If an obstruction is met which stops the flight, the stopwatch shall be permitted to run for 10 seconds. If, within that time, the model frees itself, timing is to continue. If the model does not free itself within the 10 seconds allotted, the watch shall be stopped, 10 seconds deducted from the time indicated, and the result recorded.

All timing will be conducted by the official timers. It is the official timers' interpretation of these rules that determines final time awarded to each participant.



### Construction:

The competition centers on a Peck Polymers ROG kit airplane. All competing airplanes will be constructed of the materials included in one kit, and will be powered by the propeller and rubber band provided in that same kit. Anything included in the kit bag is acceptable construction materials including the bag itself. A second rubber band motor will be provided and can be installed for competition (the first being used for pre competition flight test). The propeller can be modified, however wet or dry lubrication of the propeller shaft or rubber band is not permitted. Airplanes will be built using CA, Elmers type glue, and/or glue sticks; this is the only material permitted to fly on the

airplane that is not included in the Peck kit. It is the official timers' interpretation of these rules that determines whether the airplane qualifies for competition.

Installing the landing gear included in the kit on the airplane is optional. Builders who chose to perform Rise-Off-Ground flights utilizing the landing gear provided in the kit will have a 10 second bonus added to their flight score.

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Unlike qualifying this event is a sudden death style competition with one flight per qualifier. Deliberate sabotage of a competitor's flight shall not be permitted. Modification of the airplanes between qualifying and finals is permitted.

The airplanes will fly in their qualifying order, shortest to longest (in the event of a tie a coin toss will determine who flies first). In the event of a tie for the championship a second flight will be permitted as dictated by the official timer. It is the official timers' interpretation of these rules that determines who flies in the finals and who is the event champion.

### **Timing:**

As an incentive encouraging participants to accept challenges associated with landing gear and R.O.G takeoff, all successful Rise-Off-Ground flights will have a 10 second bonus added to the time of flight.

#### Hand-Launched flights:

Time starts the instant the model leaves the participant's hand. Time ends when the model touches the floor, when the model jettisons any parts, or when the participant touches any part of the model. All timing will be conducted by the official timers. It is the official timers' interpretation of these rules that determines final time awarded to each participant.

#### Rise-Off-Ground Flights:

Time Starts the instant the model is released, and includes the take-off roll. If the model bounces during takeoff, timing will continue provided the model becomes successfully airborne within 10 seconds. If the model does not become successfully airborne within 10 seconds, then the flight will be declared a delayed flight. Time of flight ends when any part of the model touches the floor after the 10 second takeoff period, when the model jettisons any parts, or when the participant touches any part of the model. In a normal landing, this is when the wheel(s) or landing gear first touches the floor. The landing roll is not included in the flight time.

#### All Flights:

If an obstruction is met which stops the flight, the stopwatch shall be permitted to run for 10 seconds. If, within that time, the model frees itself, timing is to continue. If the model does not free itself within the 10 seconds allotted, the watch shall be stopped, 10 seconds deducted from the time indicated, and the result recorded.

All timing will be conducted by the official timers. It is the official timers' interpretation of these rules that determines final time awarded to each participant.