The Boeing Company and NSBE

* 2017 Boeing Flight Competition Guidelines *

Flight Competition Details

The Boeing Company will sponsor "The Boeing Flight Competition" at the National Society of Black Engineers 43rd Annual National Convention, in Kansas City, MO. The competition judging will be Friday March 31 & Saturday, April 2, 2017. All participating teams must do the following:

- Register online. **Deadline is March 22, 2017.** You will receive registration confirmation, and the time and location of your presentation via email.

Additionally, to be eligible for the Overall Award you must:

- Participate in the Team Presentation Friday, March 31, 2017.
- Participate in the Distance Competition on Saturday, April 1, 2017 at the Convention Center. Check in by 11:30 am. Pre-flight activities begin promptly at noon.

Please Note: No walk-up teams will be allowed to participate. You must be registered by the deadline in order to compete in this competition. The longest distance of record of, 189'10", was achieved by team Firefly of the University of Wisconsin in 2008. Can you beat that record this year?

Glider Construction

You must build a glider adhering to the requirements on this page.

You must then demonstrate the air worthiness of it in a series of flight tests. To assure uniformity of results and fairness, each glider shall be launched by means of a simple rubber band catapult, which you are to select and provide. (You can also use a chain of rubber bands linked together.)
Bring your own calibrated rubber band and spares.

The requirements for **launching** are as follows: The glider will be launched horizontally from the top of a typical table, approximately 30 inches above the floor to allow it to glide as it departs the edge of the launch platform.
You will not be allowed to stand on the launch table. Launch platforms or devices that stand 3 inches above the table top cannot be used. It is strongly recommended that no launching device be used. None of our previous distance winners have used anything more than rubber bands.

The rubber band can be attached as follows but not limited to

(1) a notch can be cut into the balsa wood for the rubber band to grip, or
(2) a launch pin (such as a thumb tack or small nail) can be pushed into the balsa wood for the rubber band to grip.

What materials can be used:

- Glue
- One sheet of Balsa wood (3 inches by 36 inches)
- Rubber band(s)
- Two U. S. quarters
- Paint or decals for decoration
- Tape
- Launch pin

What requirements must be met:

It must be a team effort (greater than one person, but no more than four members per team will be allowed). A person cannot be a member of more than one team.

All team members must participate in at least one of the following activities: design, manufacturing, testing, documentation or launching of the glider.

The glider must be constructed from a single sheet of Balsa wood. The single sheet can be no larger than 3 inches by 36 inches. There is no minimum or maximum thickness required. (The thickness of previous competition participants ranged between 1/8 to 1/4 inches.)

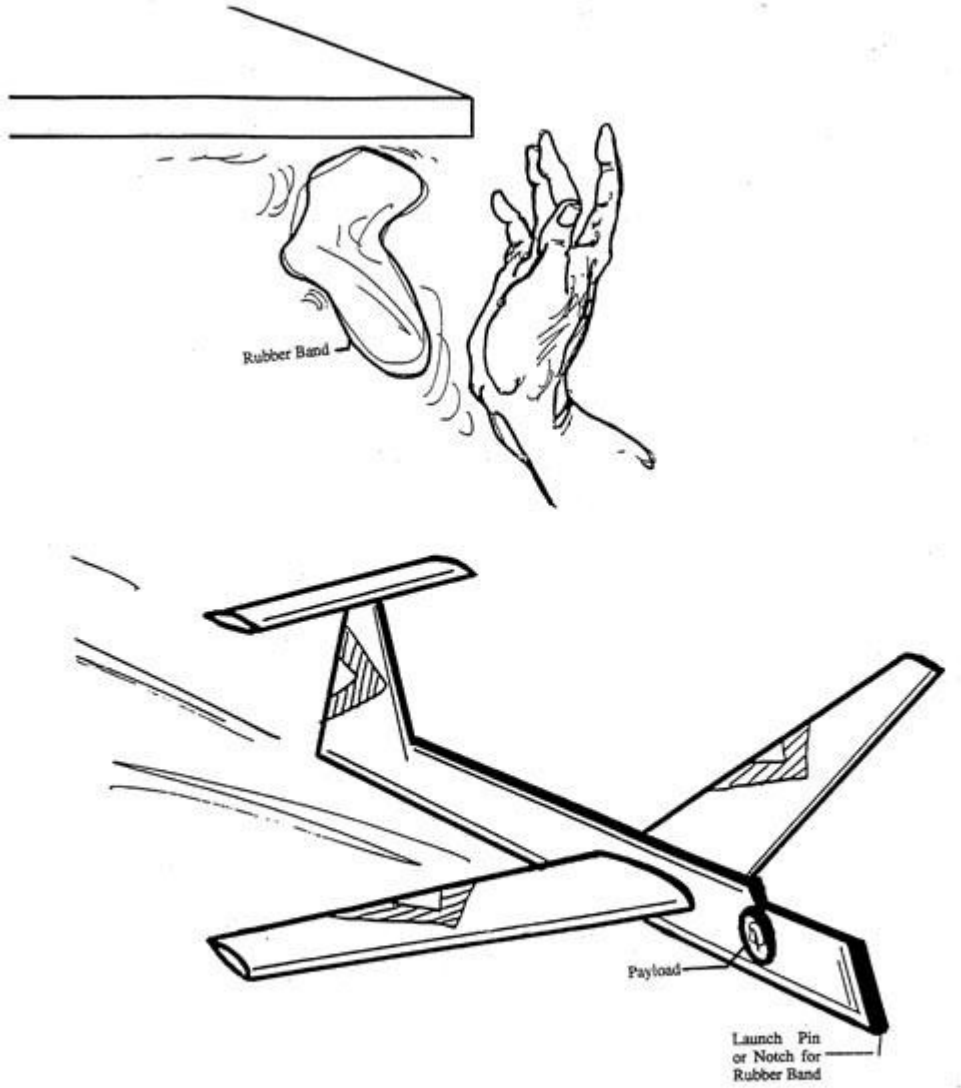
Balsa wood can be purchased at art supply stores, hobby shops and some book store locations.

The glider must carry a payload of two (2) U.S. metal quarters (25 cent pieces).

No part(s) of the glider may be removed or added once the competition has begun, however minor repairs can be done. **No backup gliders will be allowed**.

Team Presentations are limited to 10 minutes. A computer will be available, but we **cannot** guarantee internet access, so please bring any materials that you want to present on a thumb drive.

Examples of a Typical Launch
These two diagrams provide information on a typical launch.

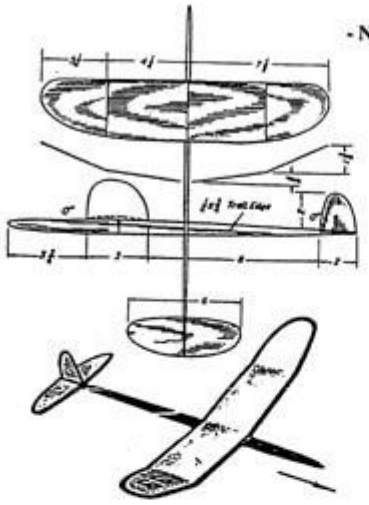


Example of Glider Configuration

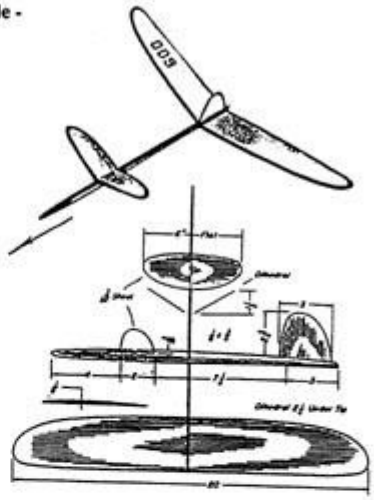
This diagram provides an example of a glider configuration.

GLIDER CONFIGURATION EXAMPLES

- No Scale -

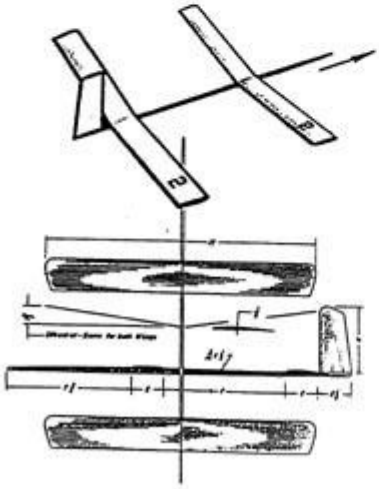


CONVENTIONAL (Tail Aft)

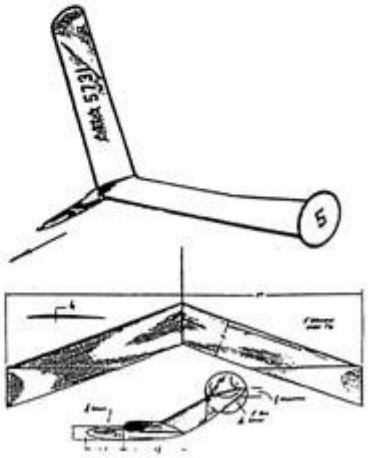


CANARD (Tail Forward)

- No Scale -



TANDEM WING



FLYING WING (Tailless)

- No Scale -

Judging Criteria

The glider should fly as far forward as possible in a straight line.

The glider should be aesthetically appealing; for example, school logo, school colors, clean look, smooth edges, etc. The design should be practical and durable. The glider should be simple to build, simple to fly and easy to repair.

In the event of a tie, a fly-off will be conducted to determine the winner.

All decisions of the judges are final!!

Disqualification

Any glider that incorporates a hanger, fiberglass, wire or additional materials not mentioned above will be disqualified. Additionally, no bullets or projectiles will be allowed to participate.

Prizes and Awards

Overall Award: $1,400.
Awarded to the team that participates in both aspects of the competition: Team Presentation & Design and Flight Competition. If you do not participate in both aspects of evaluation, you will not be considered for the Overall Award. No exceptions will be considered.

Presentation & Design Awards 1st, 2nd, and 3rd: $800, $600, and $400.
Awarded to the team that gives the best 10-minute oral/multimedia presentation illustrating the team's efforts and considerations while designing, building, and testing its glider. The multi-media presentation should include information about the team's activities as they address the various aspects of design and considerations for both, building and constructing. The presentation should also include the data and results from any testing. Presentations will be judged for:

1) Good team verbal skills and
2) Creativity using charts, pictures, photos, videos, web page, etc.

The winners will be determined by a panel of judges.

Distance Awards 1st, 2nd, and 3rd: $800, $600, and $400.
Awarded to the 3 teams with the farthest flying gliders as measured from the launch pad to landing

How to get your team registered for the Flight Competition.

To submit your registration form for the Flight Competition, complete the online web form.

Note: This form must be completed by March 22, 2017.

What you need to do when you arrive at the National Conference.

- Participate in the Team Presentation Friday, March 31, 2017.
  (You must bring your glider & repair materials with you.)

- Participate in the Distance Competition on Saturday, April 1, 2017 at the Convention Center. Check in by 11:30 am. Pre-flight activities begin promptly at noon.

The Boeing Company Flight Competition Contact.

If you have any additional questions, please contact:

Darlene Fox
The Boeing Company
P.O. Box 3707 MC 14-83
Seattle, WA 98124-2207
Phone: 425-237-1379
Cell Phone: 425-891-0909
E-mail: mailto:darlene.m.fox@boeing.com?subject=Boeing-NSBE Flight Competition Registration