Competition ROCKETS

EGGLOFTING by Dan Wolf
B & C Eggloft Duration

"Variation On a 2 Minute Egg" by Dan Wolf
B & C Eggloft Duration

"Variation On A TWO MINUTE EGG"
PARTS LIST:

1. 1.75" OD plastic "Easter" egg
2. Music Wire Launch Lug
3. Cardboard Shroud, made formula from Estes' book or for 8.5"
   R = 6.2", R2 = 14.75", Angle = 25°
5. Engine Block
6. Body tube, 4" length of
   Estes BT-20
7. Fins, make from 3/32" balsa or 1/32" plywood, or 20 mil wilerglass
8. 3/16" launch lug

Items not shown:

9. Shock cord, two parts, make lower section from 100 lb. Kevlar or .012" wire cable, long enough to stop just below top of shroud. Top half is 34° to 36° length of 1/8" elastic shock cord.
10. Parachute, 36" to 34" thin mylar or "dry" balsa, long material.

"Slick Chick" Parts List
1. 1.75" OD plastic "Easter" egg
2. Spacer Ring, 1/2" wide by 43° to 45° inside diameter ring, make from heavy paper or cut down a larger diameter body tube.
3. Shroud, 2" long, make from thin card stock.
4. Engine block, glue to bottom of egg capsule.
5. Body tube, 7" to 9" BT-20.
6. Another engine block.
7. Fins, make from 3/32" balsa or 1/32" plywood, or 20 mil wilerglass

Item not shown:

1. Shock cord, 36" of 100 lb. Kevlar with 4" section of 1/8" classic spliced in near payload end.
2. Parachute, 14" to 18".

John's plan was originally more involved and used a number of Apogee Components parts; I've tried to list options so that they can be built "Apogee"-like due to the uncertainty of getting these parts in the future. For the Kevlar, I'd suggest a "tackie" cello. Look for Kevlar fishing line under the brand name "Braun.

Flying Tips:

Egglofters have a tendency to weathercock severely. Thus the importance of the launch lugs. Also, try using the rod launcher with the wind, so that as it does weathercock, the resulting boost will (hopefully) be closer to vertical. Flying strategy is important here too. At the Finger Lakes Fall Classic last September, Jeff Ziemer flew a powered flight and then he waited out the wind, and put up his second flight late in the day, after the winds had ceased. The result was a near vertical boost and the winning flight.

In duration, egg chutes are no good unless they open. For dry cleaner bag chutes, put the entire chute and some baby powder in a garbage bag and shake it vigorously until the plastic chute material is thoroughly impregnated with the powder. Smoother chutes will deploy easier. Use a 36" for starters and work up to bigger chutes as your experience allows.

One problem with Easter egg/round egglofters is drag reperation. There isn't much to hold the capsule on the top of the rocket so often times the capsule will separate at the end of the boost stage. To prevent this, tape the capsule to the shroud with two small pieces of Scotch tape "lap" fast. This keeps the capsule firmly attached until ejection.

Another problem many have with egglofters is splitting the engine. You could try an engine clip, but notice that both of the plans show the fins mounted about 1/4" above the end of the body tube. Once the engine has been friction fitted, a wrap of mylar tape around the engine/body tube junction will keep the engine in the rocket.

Last but not least, don't forget the rules of egglofting. First, you can't catch the model, it must touch the ground first. Second, don't open the egg capsule until you've got a stack at the return table. And finally, don't forget that all egglofter events are single heat flight so if you "crack up" on the first one, pull that back up immediately and "go for broke" on the second flight.

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SPORT ROCKETS

MARCH/APRIL