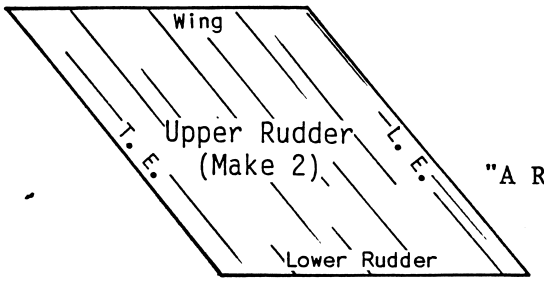
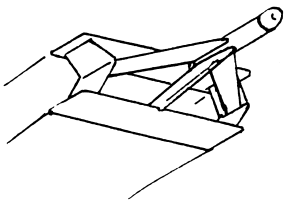


The FLYING JENNY

"A Rocket Boosted Bi-Plane Glider!"



Designed by John Belkewitch

Instructions based on Estes Industries Rocket Plan #21 (1964)

Instructions Modified by R. A. Stott - NAR #36510

Mark "Bunny" Bundick and Bob "Parky" Parks had an interesting idea. A "Boost Glide Classic" contest set for the First Annual National Sport Launch. Whether this contest went off or not, I do not know, but the model needed for this contest is unique enough to publish here. Their rules stated that the model needed for this event was the 1964 Estes FLYING JENNY. The Jenny was an old style bi-plane rocket glider (old style meaning she ejected her engine, unlike today's RGs which must retain their engines, or BGs which must deploy a safe recovery system for the engine casing). Since the plans that came with the rules for this rocket were in pretty rough shape, I've cleaned them up a bit. Start Buildin'!

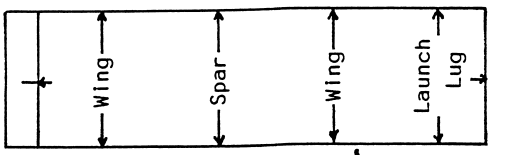
PARTS LIST

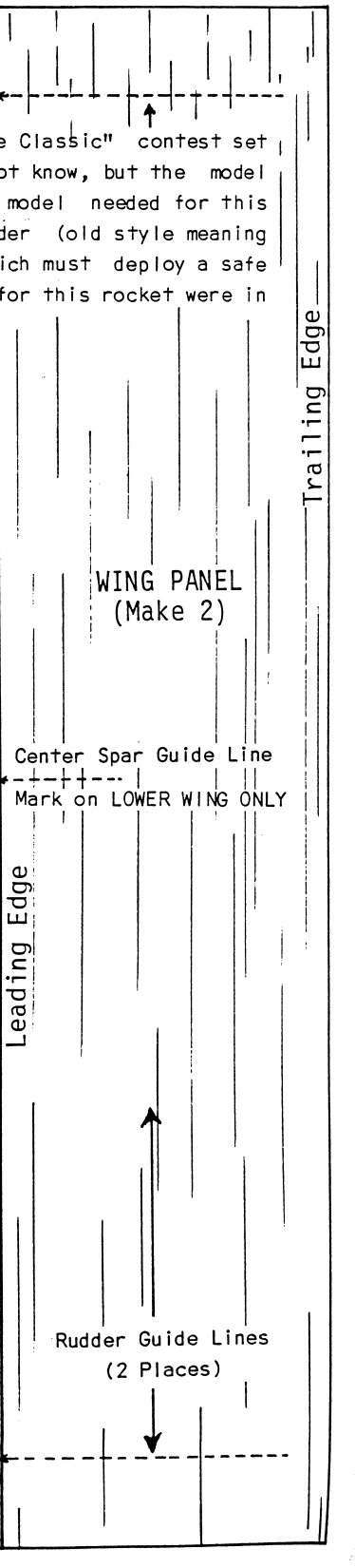
A. BNC-20B Nose Cone
B. BT-20J (2-3/4") Body Tube
C. BFS-30 (3/32") Balsa Fin Stock
D. LL-2A (1-1/4") Launch Lug
E. Solder Tape (Radio Shack #64-010)

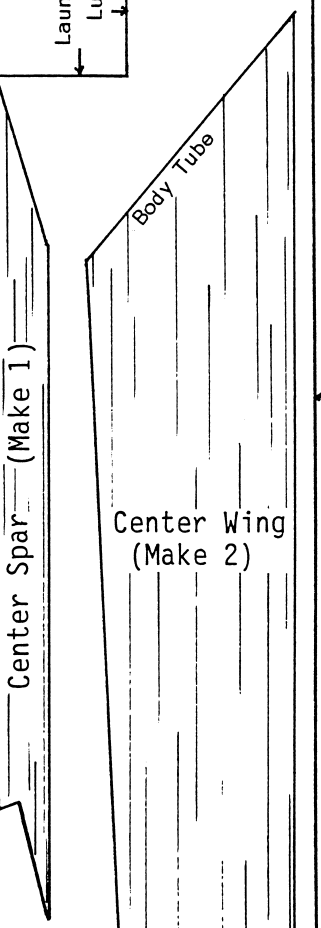
Before starting construction, photocopy this page. Use the photocopy as your template pattern sheet.

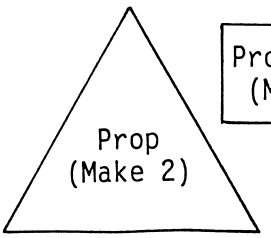
Listed above are the materials you will need to complete this unusual boost-glider. Careful construction and attention to trimming will reward you with many beautiful flights.

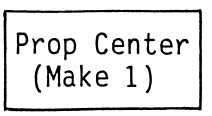
[ED. NOTE: Those of you with an original copy of these plans will notice three slight changes in the instruction. First, modification of the wing tip rudder templates (the original called for the rudders to be cut from one piece of sheet with the grain running in a no-so-very-strong direction. Making it two pieces makes for a stronger pair of rudders). Second, replacement of the Estes NCW-1 Nose Weight (The nose weight is hard to find anymore, so replacing it with this solder should do fine). Third, replacement of the BNC-20A with a BNC-20B (Estes no longer makes the 20A. If you wish the 20B to look like the 20A, simply sand the point off the 20B until you have @ 1/2" of nose left).]

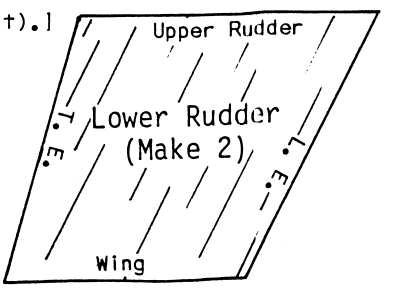












BUILDING THE JENNY

1. [_] Cut out the fin marking guide. Wrap it around the body tube. Mark the tube at the arrows. Extend the marks the length of the tube.

2. [_] Trace and cut out all the balsa pieces. Round the leading and trailing edges of the rudders and wings. Make sure all building guides are transferred from the templates to the balsa pieces.

3. [_] Glue the nose cone into the body tube. (Note: You might wish to seal the bottom of the nose cone with glue to keep the engine from burning it badly during ejection.)

4. [_] Glue the launch lug along its line on the body tube, with one end even with the back edge of the body tube.

5. [_] Glue the center wings along their lines on the body tube, making sure that their trailing edges are even with the end of the body tube. Support them horizontally while drying.

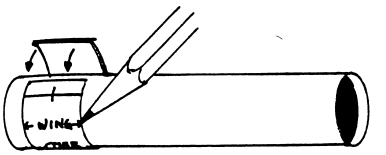
6. [_] Glue the center spar along its mark on the body tube, making sure that its trailing edge is even with the end of the body tube. This spar prevents vibration of the wings during flight.

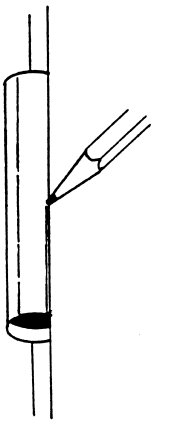
7. [_] On a flat surface, glue the two halves of the rudders together as shown on their templates. LET DRY THOROUGHLY.

8. [_] Assemble the Building Jig. Let dry.

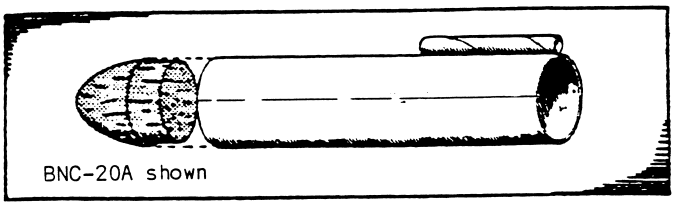
9. [_] Glue the rudders to the outer ends of the center wings. On a flat surface, sit the model on the Building Jig as shown. The bottom edges of the rudders MUST rest squarely on the flat surface. LET DRY THOROUGHLY.

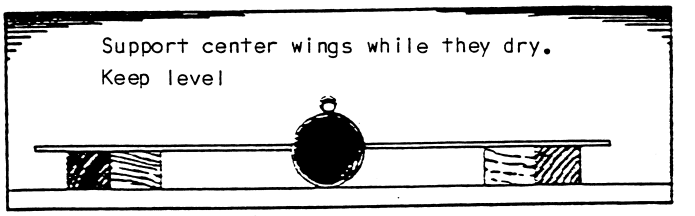
10. [_] Glue the top and bottom wings to the rudders along their building guide lines. Make sure the spar mounts to the lower wing along its building guide line. Let dry.

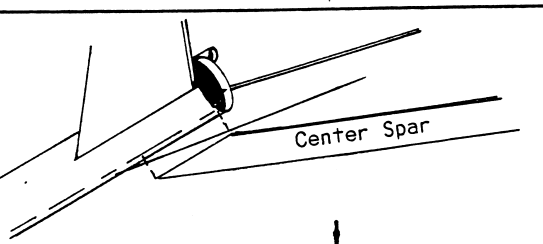


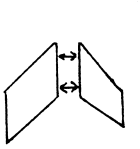


Artwork in boxes from original Estes instructions.









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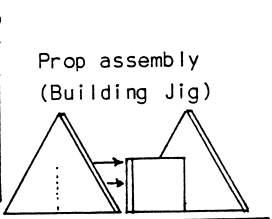
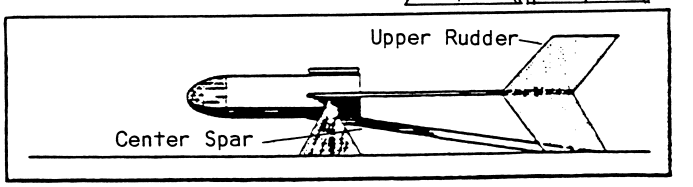
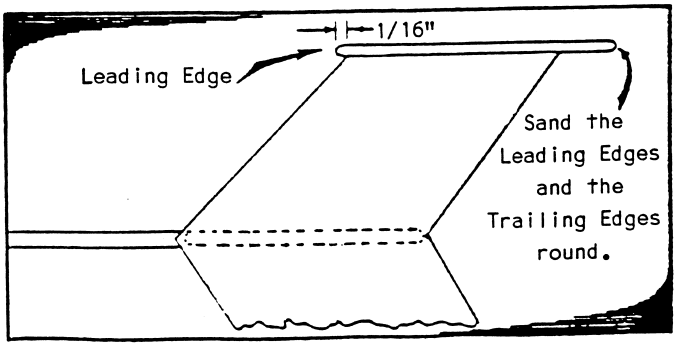
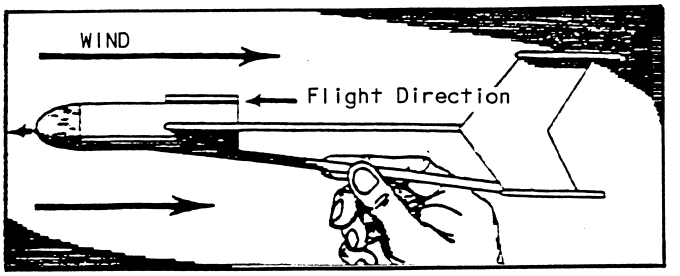




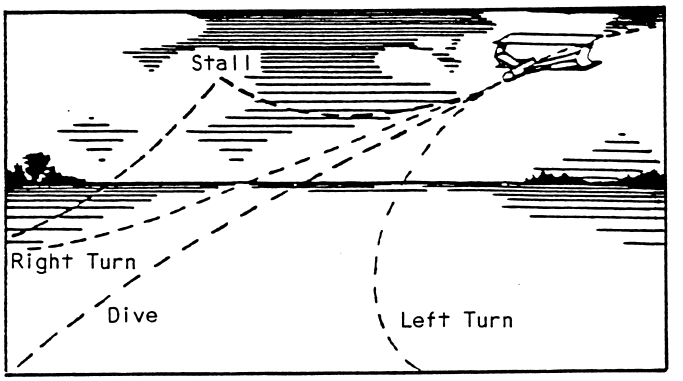


TRIMMING FOR FLIGHT

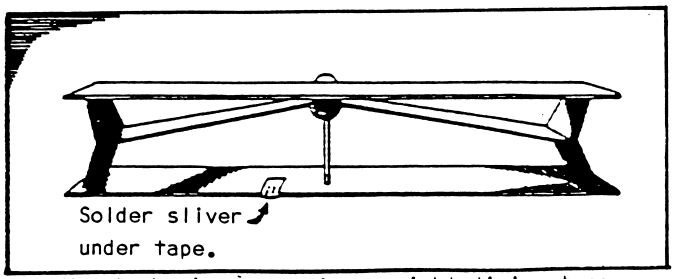
After the model has dried thoroughly, test glide the model by grasping it at the center spar and tossing it into the wind with the nose level.



If the model stalls, tape a piece of solder to the nose cone and toss it again. If it flies straight, remove the tape and solder. Coil the solder into a roll (You may wish to nip a small piece of solder off, since the glue you are about to add will add some weight of its own). Drill a small hole in the front of the nose cone. DO NOT GO THROUGH THE ENTIRE NOSE CONE. Glue and insert the solder into the hole. Fillet the hole with glue until smooth.



If the model dives, observe whether it also turns to the right or to the left as it dives. If it does, you may compensate for the turn at the same time you correct the dive.



How to begin correcting a right diving turn.

For example: Your model drops quickly to the right. Take a piece of solder tape and attach it near the trailing edge of the lower wing (only experience can tell you how much solder. Since you will need to adjust it, tape it on first before gluing it on.) perhaps an inch of left of center. Continue to glide and adjust until a smooth straight glide is obtained.

Note: Some may wish to use clay instead of solder. This is fine, as long as you don't intend on finishing the model with paint. To use clay on a finished model, you must trim it AFTER you have painted it. To use solder, trim first, paint second. Also note that painting the model may cause a need to re-trim the model. Here, clay is much easier to use than solder. One thing to remember, CLAY MELTS at a much lower temperature than solder, and to trim the lower wing, which is BELOW THE ENGINE might cause some wild glides after launch.

POWERING THE JENNY

The FLYING JENNY will fly with any standard sized engine. 1/2A6-2 or A8-3 are recommended for sport and exhibition flying. However, if you have a large flying field and like the hiking, then go ahead....put a B6-4 engine in and watch Jenny head into the wild blue yonder... ...perhaps for keeps!

CAUTION! Tape your lead wires to the launch rod leaving just enough free to attach micro-clips to the igniter. This will keep the wires from tangling in the wings when launching.

ANOTHER WAY TO CORRECT A RIGHT DIVING TURN