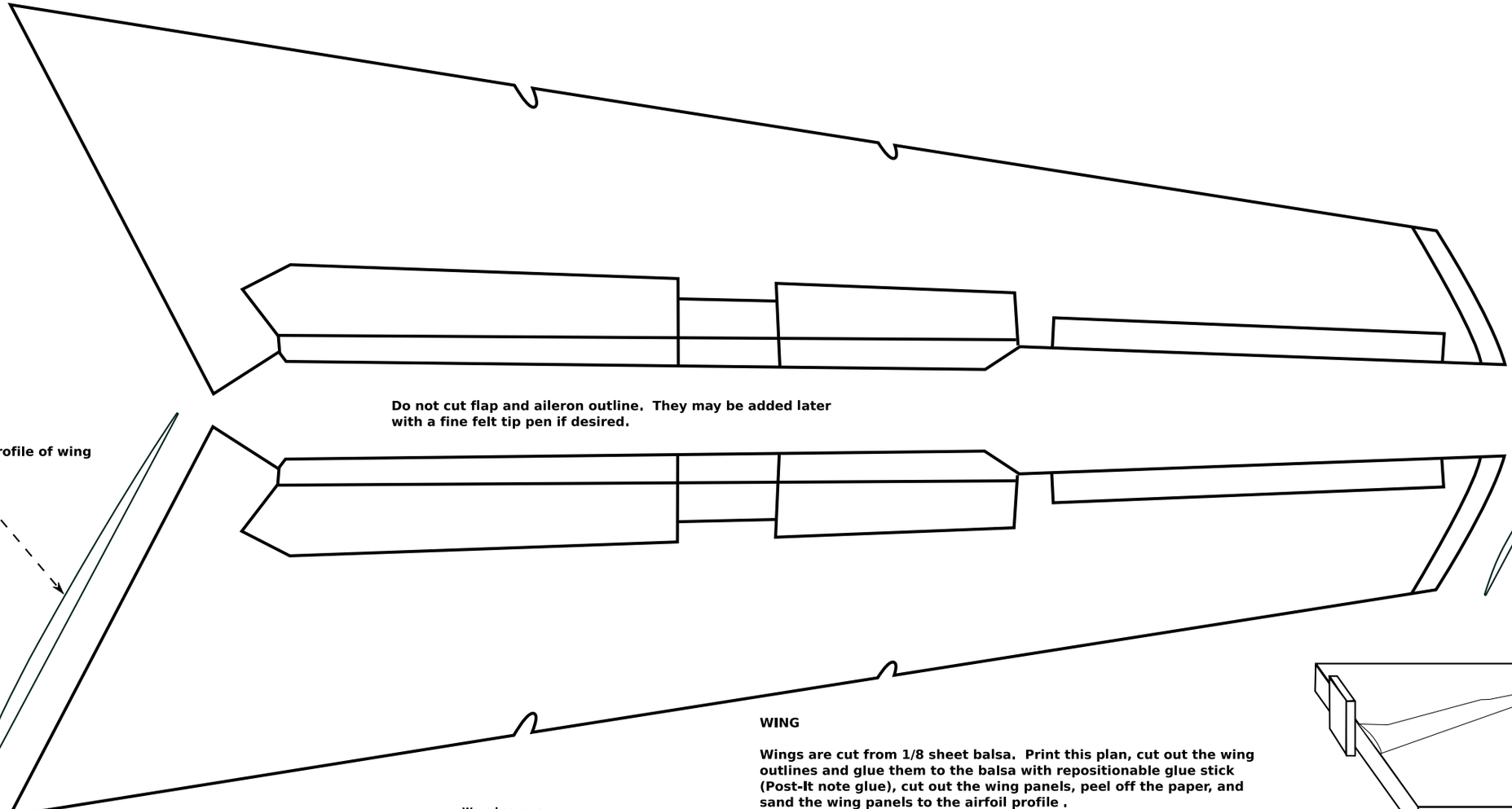
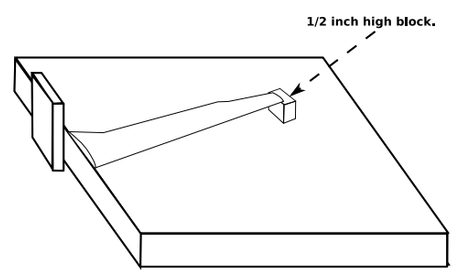
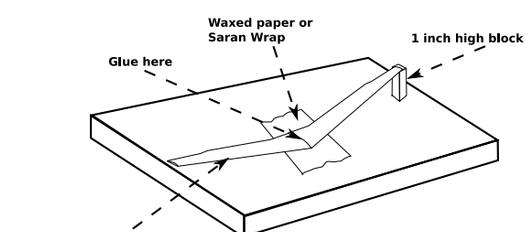




Sanding the dihedral angle at the edge of a board with a sanding block.



Gluing wing panels together

WING

Wings are cut from 1/8 sheet balsa. Print this plan, cut out the wing outlines and glue them to the balsa with repositionable glue stick (Post-It note glue), cut out the wing panels, peel off the paper, and sand the wing panels to the airfoil profile .

Put the root of the wing panels at the edge of a straight board. Prop up the wing tip 1/2 inch and sand the dihedral angle into the wing root with a sanding block.

Pin one wing panel to the work surface over a non-stick layer (Waxed paper or Saran Wrap) and glue the other wing panel to it, at the root, propping up the second wing panel one inch at the tip.

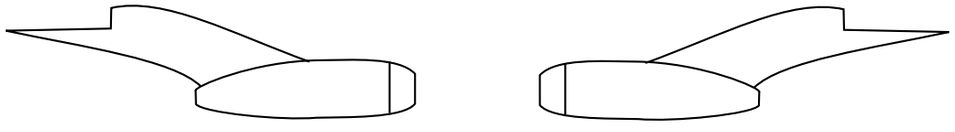
"B-52" A PROFILE CATAPULT GLIDER Sheet 1 of 3

HJL MODEL DESIGN

 kittyfritters@yahoo.com

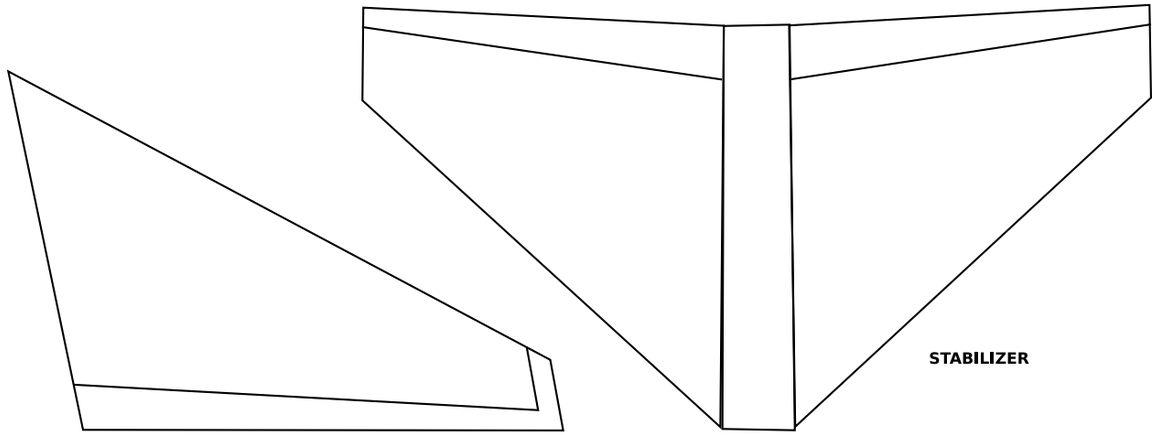
Note: While it will fly with the stabilizer as shown, adding 3/8" wide extensions to the leading edge and tips after the stabilizer is installed, to increase the stabilizer area, will improve the performance.

ENGINE NACELLES



Cut on outer edges only. Outlines of nacelle on pylon and front cowl joint may be added with fine tip felt

NOSE DOUBLERS

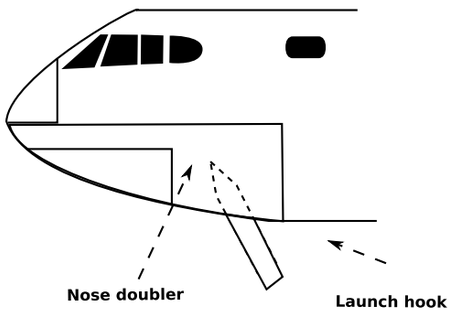


TAIL

STABILIZER

Cut on outer outlines only. Outlines of elevator and rudder may be added later with a fine felt pen.

MAKE ALL PARTS ON THIS SHEET FROM 1/16 INCH SHEET BALSA



NOSE ASSEMBLY

Glue the nose doublers to either side of the nose as shown. When the nose doublers are dry cut a 3/4 inch length from the tip end of a 1/8 inch diameter bamboo barbque skewer. Pushe it into the fuselage, as shown, leaving about half of it sticking out, and glue firmly in place to serve as a launch hook.

ASSEMBLY

Sand all parts smooth and add any drawn on markings before assembly. Carefully fit the assembled wing to the fuselage. This may requre a little sanding and trimming of the wing slot to get a good fit. Make sure that the wing is centered and the dihedral angle is the same on both sides of the fuselage before gluing the wing in. Insert the elevator into the slot in the fuselage and center it and glue it. Glue on the tail making sure that it is striaght fore and aft and vertical to the fuselag. Glue the engine nacelles. into the slots in the leading edge of the wing. Be sure that they are parallel to the fuselage.

The assembled model should look like the one in the photo.

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TRIMMING FOR FLIGHT

The balance point will be at the trailing edge of the wing about half way between the inboard nacelles and the fuselage. Because of the bamboo launch hook the assembled model will most likely be nose heavy. You can use clay to balance the model, but the prototypes required so little weight that they were balanced by pushing straight pins into the tail end of the fuselage. Two to four should be enough to start. When the model has been roughly balanced, test glide it to find if it stalls or dives. If it dives add more weight to the tail, if it stalls remove weight. You should get a fast glide that is just short of being "floaty".

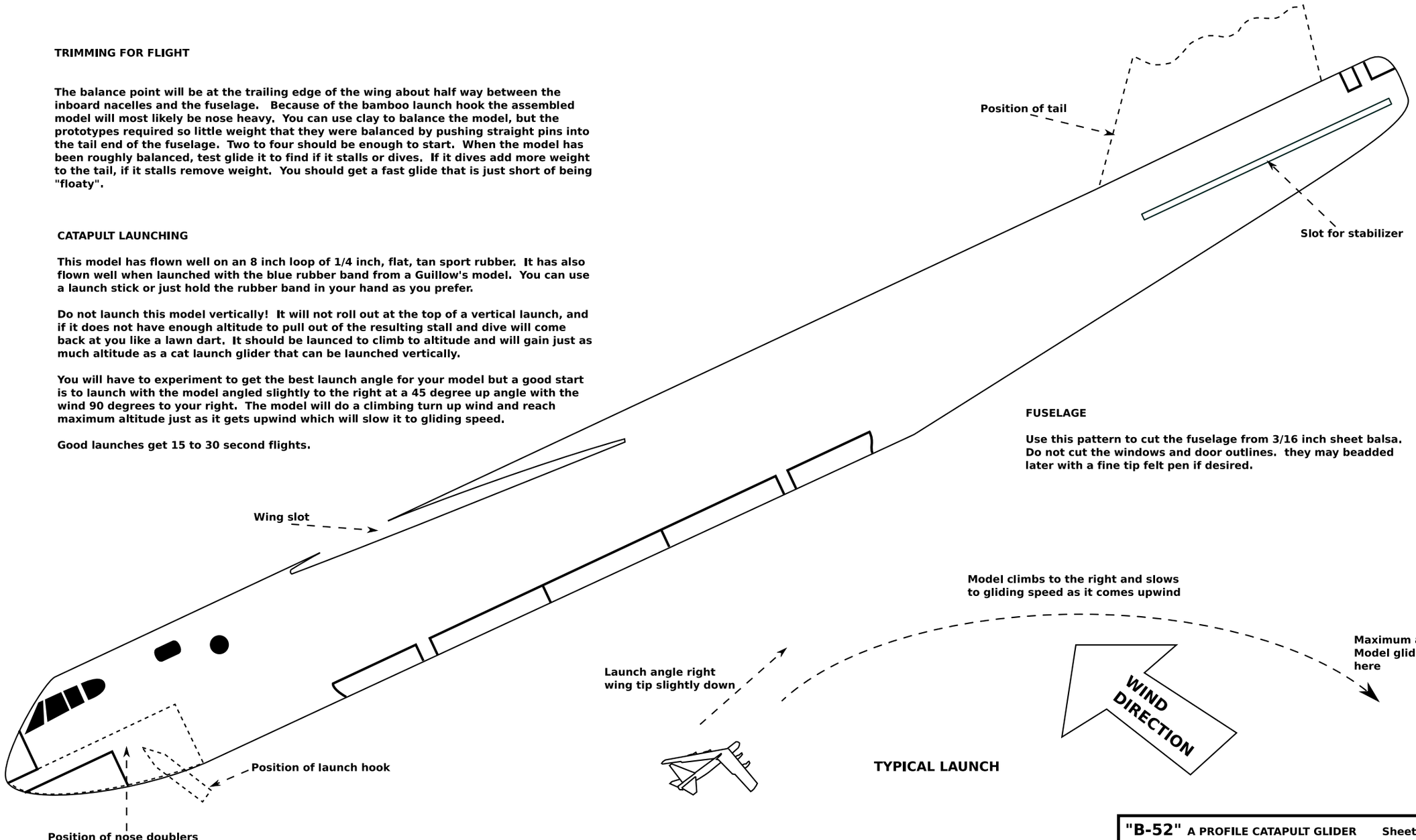
CATAPULT LAUNCHING

This model has flown well on an 8 inch loop of 1/4 inch, flat, tan sport rubber. It has also flown well when launched with the blue rubber band from a Guillow's model. You can use a launch stick or just hold the rubber band in your hand as you prefer.

Do not launch this model vertically! It will not roll out at the top of a vertical launch, and if it does not have enough altitude to pull out of the resulting stall and dive will come back at you like a lawn dart. It should be launced to climb to altitude and will gain just as much altitude as a cat launch glider that can be launched vertically.

You will have to experiment to get the best launch angle for your model but a good start is to launch with the model angled slightly to the right at a 45 degree up angle with the wind 90 degrees to your right. The model will do a climbing turn up wind and reach maximum altitude just as it gets upwind which will slow it to gliding speed.

Good launches get 15 to 30 second flights.



FUSELAGE

Use this pattern to cut the fuselage from 3/16 inch sheet balsa. Do not cut the windows and door outlines. they may beadded later with a fine tip felt pen if desired.

TYPICAL LAUNCH

"B-52" A PROFILE CATAPULT GLIDER Sheet 3 of 3

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 kittyfritters@yahoo.com