

Mini-ROTAROC

By George Gassaway

Oct 27, 2007

Balsa BT-5
nose cone

Plans page 1 (Design & assembly)

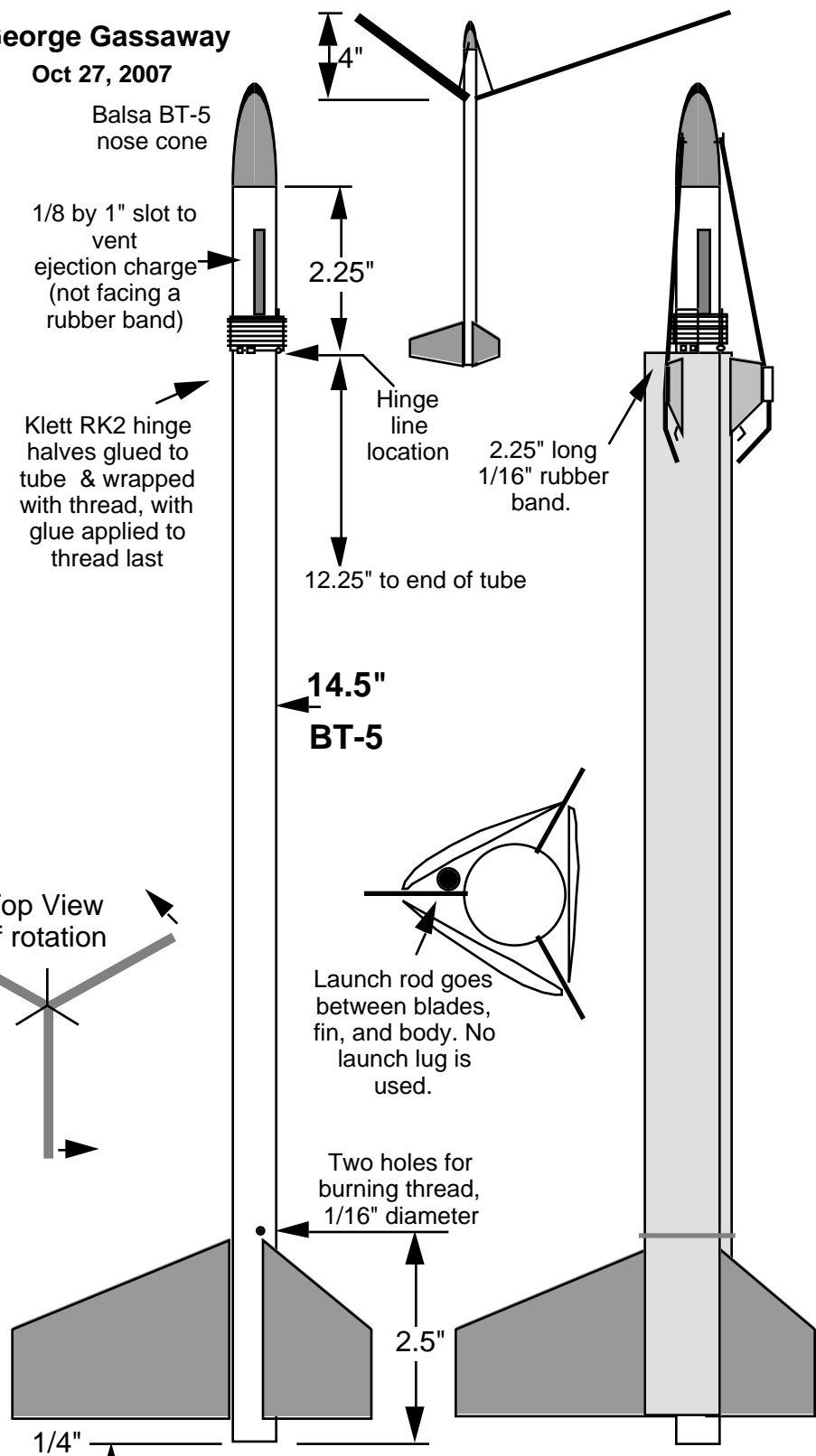
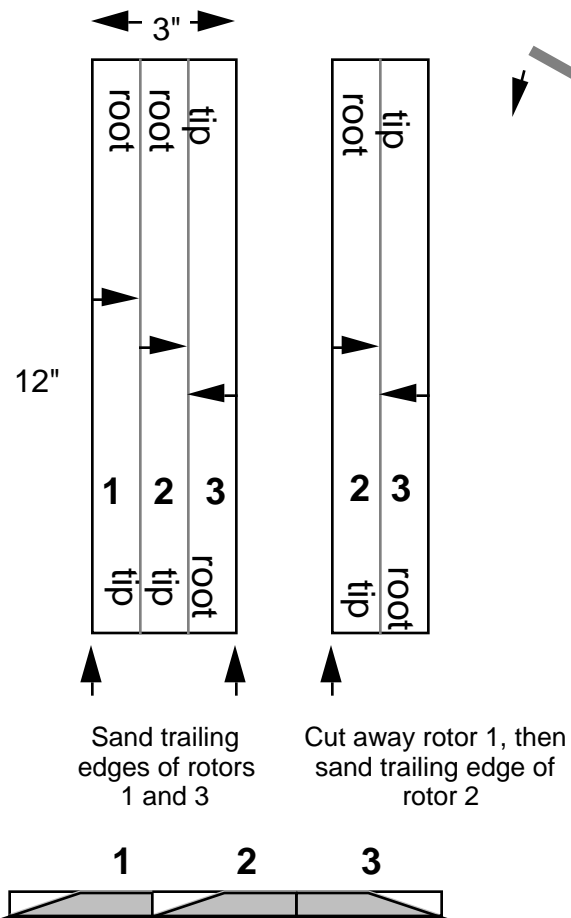
Drawings show model which would rotate counter-clockwise as viewed from above.

PARTS: light 1/16" balsa (fins & rotor supports), Med-light stiff 1/16" balsa (rotors), 14.5" BT-5, BT-5 nose cone, Klett RK2 model plane hinges (3), pins or model railroad spikes, 1/16" by 2.25" rubber bands.

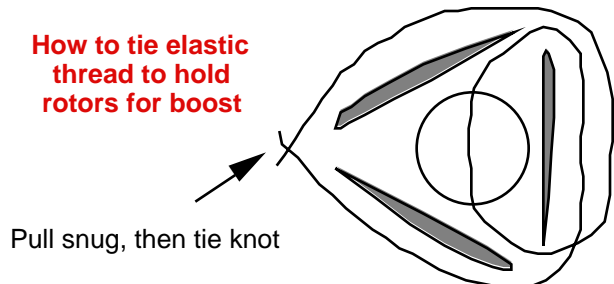
Rotors are 1" wide (chord), 12" long. Made from medium-light 1/16" balsa. Balsa should be somewhat stiff so it will not bow outward much when folded for boost.

Rotors are fragile and easy to damage or break while sanding the trailing edge. Below is how to sand the trailing edge of all rotors before cutting out from balsa sheet.

Middle arrows point in direction of leading edge. Top view for models rotating counter-clockwise



How to tie elastic thread to hold rotors for boost

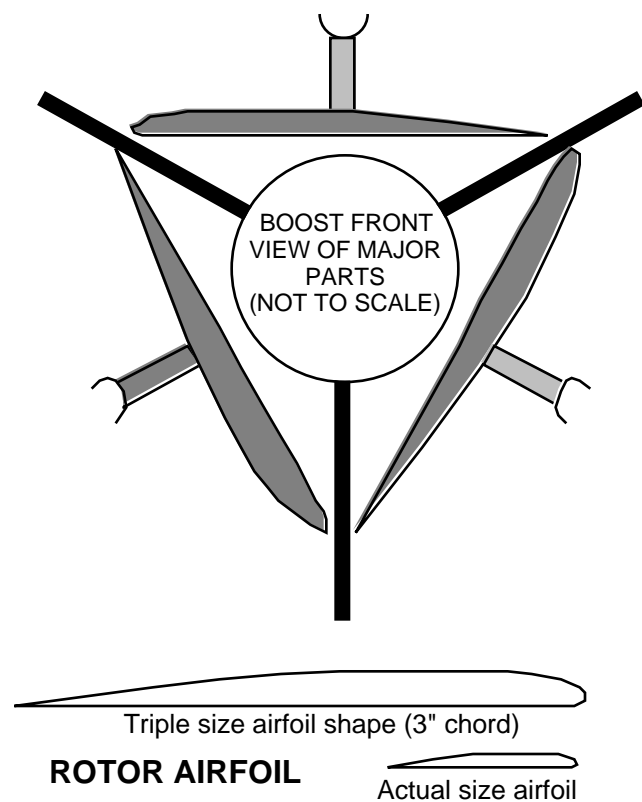
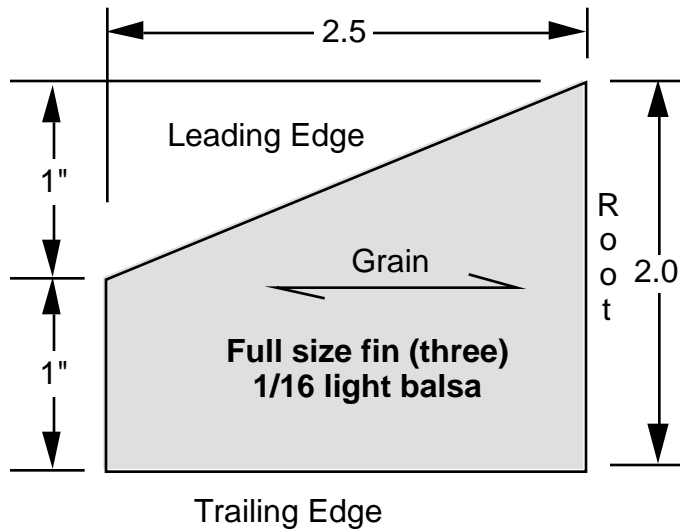


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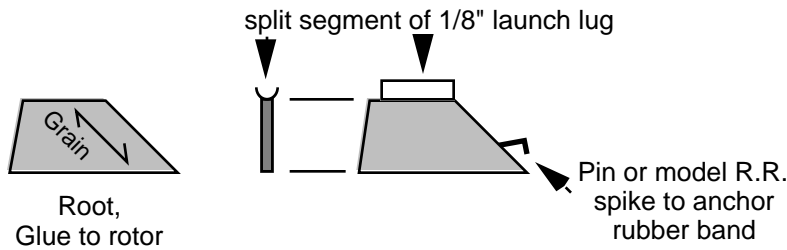
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Plans page 2 (with full size templates & details)

Power: 1/2A3-2T, A3-2T, A3-4T



Full size rubber band standoff & dihedral angle support (3 from 3/32" balsa, note grain)



When you glue the blade to the hinge, make SURE that the airfoil faces the correct way. The Hub hinge assembly is angled so that the rounded leading edge of the airfoil should be to the right (lower than the leading edge), and the tapered trailing edge is on the left (higher than the leading edge)

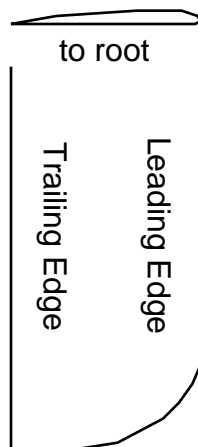
Construction:

For best performance, build model carefully so that parts are not grossly out of alignment and so it will deploy and rotate properly.

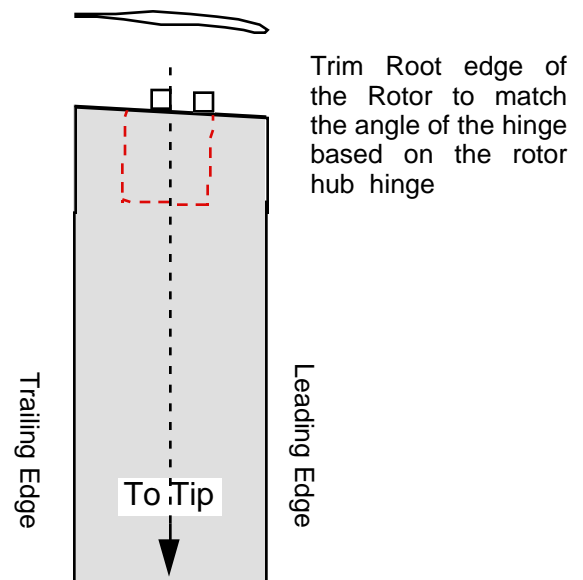
Keep model lightweight in selection of parts, wood, and in construction. Use Cyanoacrylate glue.

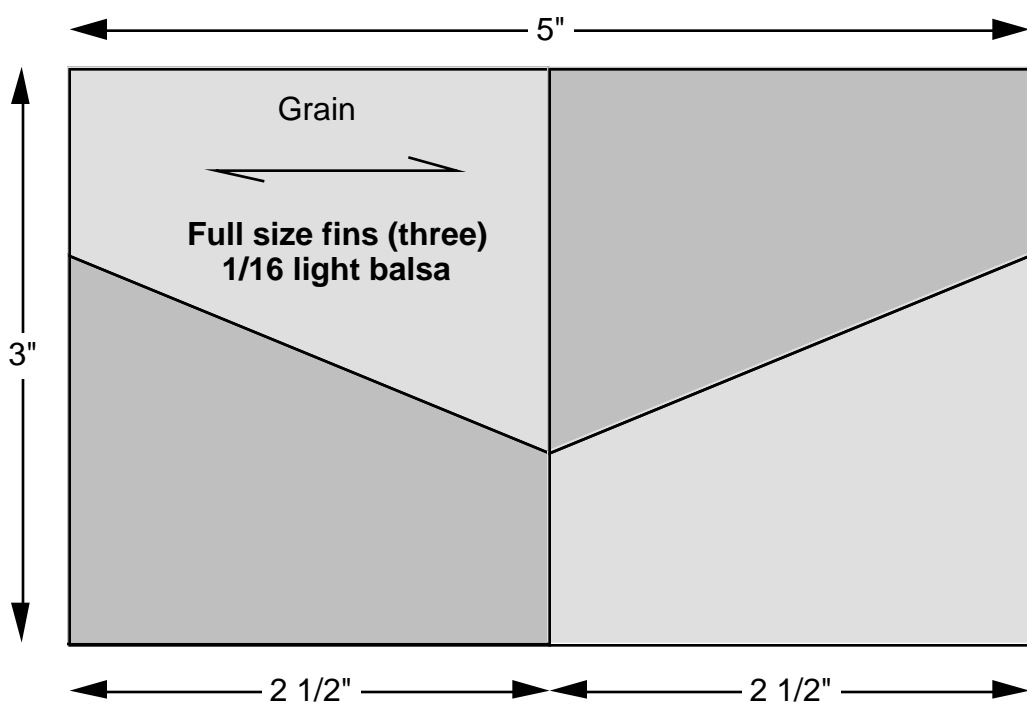
For finish, use only 1 coat of thinned clear dope on fins and nose cone, 1-2 coats of clear thin dope on rotors. Do not use any paint. For coloring, use magic marker.

Optional Rotor tip shape (Full size, top view)



Skewed hinge mount





**3-fin marking guide for BT-5
(13mm) body tube**

