Mini-ROTAROC
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

Sand trailing edges of rotors 1 and 3
Cut away rotor 1, then sand trailing edge of rotor 2

How to tie elastic thread to hold rotors for boost
Pull snug, then tie knot

By George Gassaway
Oct 27, 2007

Balsa BT-5 nose cone

1/8 by 1" slot to vent ejection charge (not facing a rubber band)

Klett RK2 hinge halves glued to tube & wrapped with thread, with glue applied to thread last

Launch rod goes between blades, fin, and body. No launch lug is used.

Two holes for burning thread, 1/16" diameter

14.5" BT-5

How to tie elastic thread to hold rotors for boost
Pull snug, then tie knot

Pull snug, then tie knot
**Mini-ROTAROC**

Plans page 2 (with full size templates & details)

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

---

**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.

---

**Full size rubber band standoff & dihedral angle support**

(3 from 3/32"" balsa, note grain)

- Full size fin (three)
  - 1/16 light balsa
- Optional rotor tip shape
  - (Full size, top view)
  - Trailing Edge
  - Leading Edge

- Root, Glue to rotor
- Pin or model R.R. spike to anchor rubber band
- Split segment of 1/8" launch lug

---

**BOOST FRONT VIEW OF MAJOR PARTS (NOT TO SCALE)**

**ROTOR AIRFOIL**

- Triple size airfoil shape (3" chord)
- Actual size airfoil

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).

---

**Skewed hinge mount**

Trim Root edge of the Rotor to match the angle of the hinge based on the rotor hub hinge.
Grain

Full size fins (three)
1/16 light balsa

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