

THOY

Tiffany Hobbies of Ypsilanti

P.O. Box 467, Ypsilanti, MI 48197



RUFF

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RECOMMENDED MOTORS:

24mm MOTORS:

D15-7T, E11-5J, E15-4W, E30-4T, F24-4W, F39-9T

29mm MOTORS:

E16-4W, F14-6J, F22-7J, F40-7W, F50-9T, F52-8T,
G33-7J, G64-10W, G80-10T

Approximate Weight	10 oz.
Length	44 in.
Diameter	1.63 in.

High performance is what the Ruff is all about. Features 18" parachute, 29mm motor mount, and a 24 mm motor adapter. The Ruff is one of our strongest, high flying rockets.

Thank you for purchasing the Ruff model rocket kit. We hope that you will have many enjoyable hours flying your new Tiffany Hobbies rocket kit.

Please read these instructions before assembling, so that you will become familiar with how the kit is to be assembled.

Before assembling, check the kit for completeness. This kit should contain the following parts:

- | | |
|-----------------------------------|------------------------------|
| (2) BT-1.52-17 Body tube | (1) MT-1.14 Motor mount tube |
| (1) LL-.25 Launch lug | (1) PNC-1.52 Nose cone |
| (3) CR1-1.52-1.14 Centering rings | (3) Plywood fins |
| (1) P-18 Parachute | (1) Shock cord |
| (1) Shock cord mount | (1) Motor adapter |
| (1) Tube Coupler | |

NOTE: If any parts are missing or damaged, please contact us before assembling the kit.

To complete the kit you will need the following items:

- 5 minute Epoxy
- Sanding sealer
- Ruler
- Sandpaper (80, 220, and 400)

- Cyanoacrylate Adhesive
- Sharp modeling knife
- Sanding block

ASSEMBLY

1) Round the leading and trailing edges of each fin with 80 grit sandpaper on a sanding block. Fine sand the entire fin smooth with 220 grit sandpaper.

2) Cover the fin mount tab with masking tape so that the sanding sealer won't seep onto the area to be glued. Seal the fins with sanding sealer, lightly sanding between coats. This will fill the grain of the plywood to obtain a smooth finish.

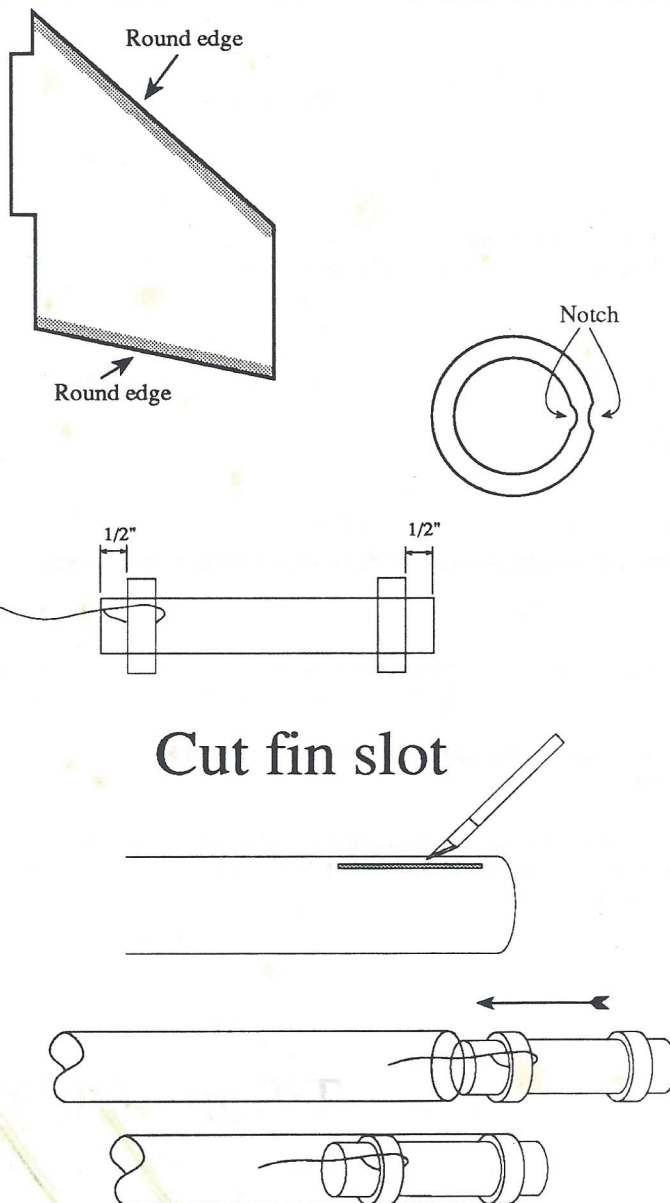
3) Cut two grooves in the forward centering ring for the shock cord mount as shown.

4) Epoxy both centering rings 1/2" in from each end of the tube.

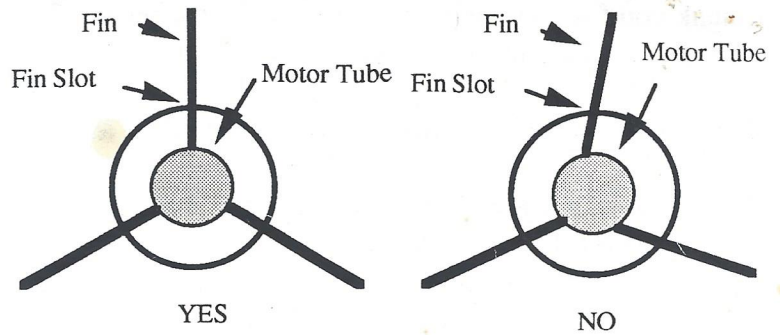
5) With a sharp knife cut out the fin slots. The fin slots are marked out on the body tube.

6) Tie the shock cord onto the shock cord mount. Put a small drop of cyanoacrylate adhesive on the knot.

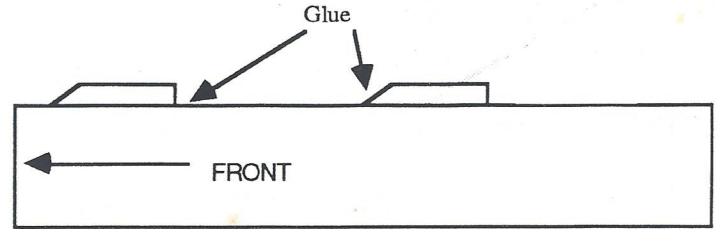
7) You must check the fit of the motor mount before gluing. To do this, insert the motor mount into the back end of the body tube where the fin slots have been cut. If the fit is too tight, sand the centering rings until a smooth fit is obtained. Then epoxy the motor mount into the body tube so that the bottom centering ring is flush with the end of the body tube and the shock cord mount extends to the top of the body tube.



8) Epoxy the fins into the fin slots in the body tube. Make sure they are straight with the body tube. For maximum strength give the fins a good fillet coat of epoxy.

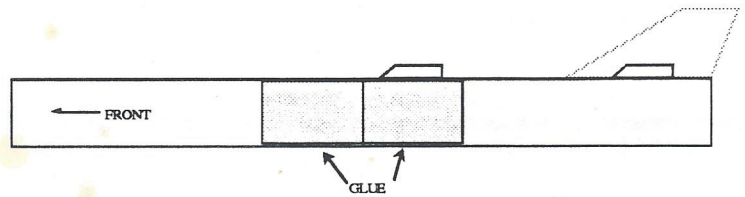


9) Cut the launch lug in half at an angle. Lightly sand the two marked areas on the body tube and the launch lug where they are to be glued together. With epoxy, glue the launch lugs directly over the two marked areas. Make sure that they are in line with each other and the body tube. Apply a good coat of epoxy as a fillet for maximum strength.



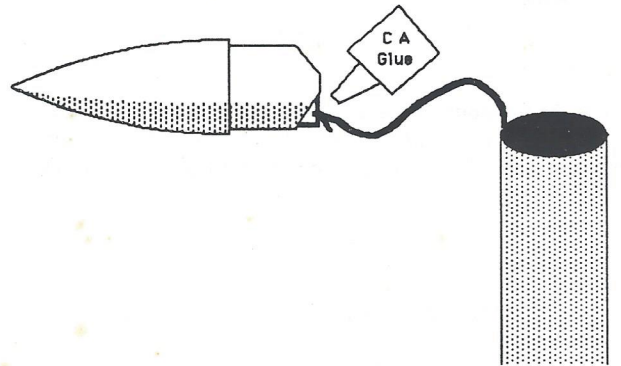
10) Tie the shock cord to the shock cord cable from the motor mount. Apply a drop of cyanoacrylate adhesive on the knot.

11) To assemble the body tube slip the tube coupler half way into the top of the lower tube and glue. Glue and slip the upper tube on to the lower tube.



12) Lightly sand the nose cone to remove the mold line.

13) Tie the shock cord to the mount on the nose cone. Apply a drop of cyanoacrylate adhesive on the knot. Attach the parachute to the nose cone.



14) Check the fit of the nose cone into the body tube. If the cone is too loose, wrap tape around the cone. If the cone is too tight, sand it down to a nice smooth fit.

15) Paint the rocket in your choice of colors.

PREPARING FOR FLIGHT

- 1) Place a generous amount of recovery wadding in the body tube. Slide the wadding down into the body tube (do not pack the wadding).
- 2) Fold the parachute and insert it into the body tube. Slide the nose cone into the body tube.
- 3) Wrap 1/2" masking tape around the nozzle end of the motor so that the diameter is equal to the outside diameter of the motor tube. Friction fit the motor into the motor tube.

FLYING INSTRUCTIONS

- 1) Always follow motor manufacturers instructions when preparing and flying this rocket.
- 2) Always follow all local laws and ordinances when flying.
- 3) F.A.A. approval may be required to fly this rocket.

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