

More Notes

3D ROCKETRY

3-DEMON

Instructions



3-DEMON

Parts List

- 1 - 3" x 11.25" Plastic Cone
- 1 - 17" x 3" Body Tube
- 1 - 7"X 29MM Motor Tube
- 2 - 3/16" Plywood Centering Rings
- 3 - 3/16" Birch Plywood Fins
- 6 - 3/16" Balsa Fin Trim Pieces
- 1 - 1/4" x 3" Launch Lug
- 1 - 1/4" Eyebolt / Nut

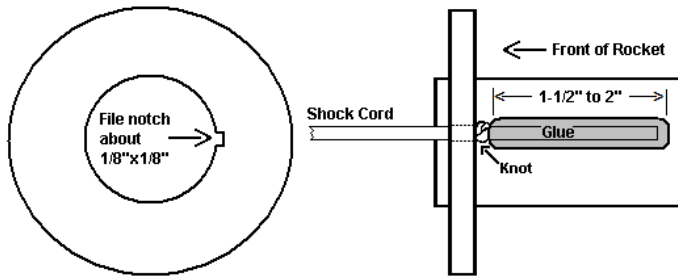
3D Rocketry, Statement of Limitation of Liability

Limitation of Liability: Model rockets are not toys. Model rockets are functional rockets constructed of lightweight materials and launched using pre-manufactured, NAR safety certified model rocket motors in accordance with the NAR Model Rocket Safety Code. Model rockets, if misused, can cause injury, property damage and even death. 3D Rocketry certifies that it has exercised reasonable care in the design and manufacture of its products. Once sold, we cannot assume any liability for product storage, transportation or usage. 3D Rocketry shall not be held responsible for any property damage or personal injury whatsoever arising from the handling, storage, use or misuse of our product. The buyer assumes all risks and liabilities there from and accepts and uses 3D Rocketry products on these conditions.

3D ROCKETRY

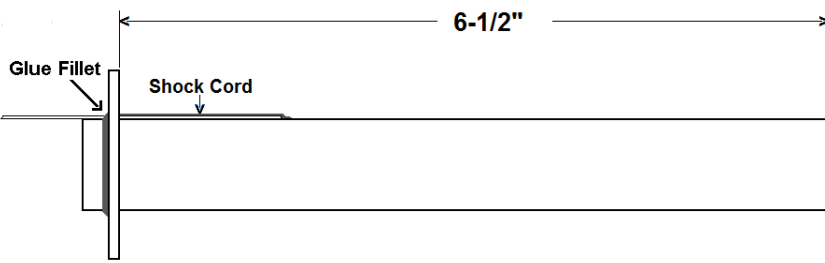
Step 1

File a 1/8 in. X 1/8 in. notch in one of the centering rings as shown. Place the centering ring in position. (See step 2) **Do not glue ring to motor tube yet.** This allows the shock cord to go through notch when gluing ring. Next tie a large knot about 2-1/4 in. from the end of the shock cord. The knot should be larger than the notch to keep cord from pulling through. Glue 1-1/2 in. to 2 in. of the cord end to the motor tube as shown. (**Tip: Epoxy works best.**) Set aside to dry.



Step 2

After shock cord glue is dry, glue forward centering ring to motor tube 6-1/2\" from bottom of tube as shown. Be sure to pull shock cord through forward centering ring notch before gluing. Apply a few layers of fillet glue at the **top of forward ring only!** (**Tip: Yellow carpenter's glue works well.**) Let each layer of fillet glue dry before applying next layer. Set aside to dry. (**Tip: Be sure to sand entire motor tube with coarse sand paper for better ring and fin adhesion.**)



3D ROCKETRY

NOTES:

Recommended Engines

Single use: F27-4, F23-4, F20-4, F50-6, F25-6,
G38-7, G40-7 and G77-7

Predicted Altitudes

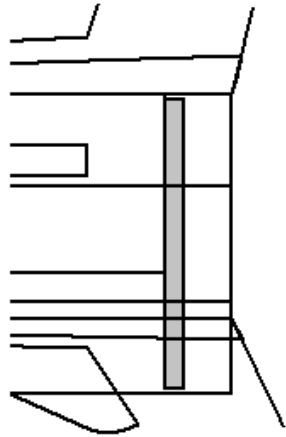
950 Feet to 1,750 Feet

3D ROCKETRY

Step 9

After optional internal fillets have been applied glue rear ring into place. Glue ring to fin ends and motor tube.

(Tip: Keep glue off of motor tube behind the ring as not to interfere with retainer attachment.)

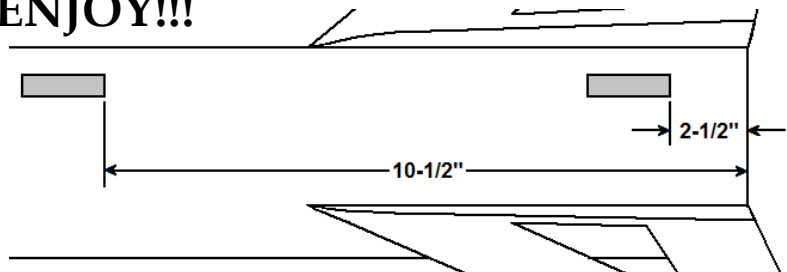


Step 10

Launch lug placement is at 2-1/2" and 10-1/2" from the bottom of the body tube. Lug distances can be adjusted to your personal preference. (Tip 1 : Making launch lug standoffs with scrap wood helps from scratching your body tube when launching.) (Tip 2 : Rail buttons work very well when attached to the centering rings.)

Attach your recovery device and most importantly.....

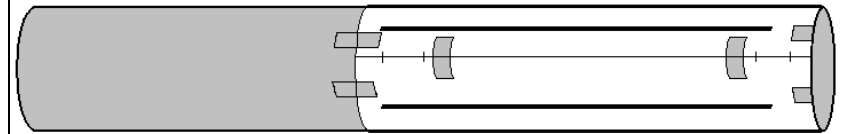
ENJOY!!!



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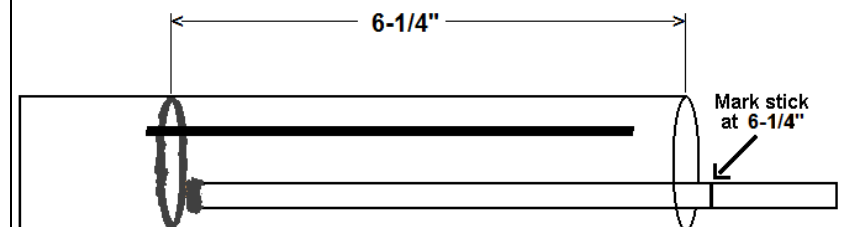
Step 3

Cut out fin slot template guide. Tape slot guide around body tube lining it up with the small guide lines and end of body tube. Next tape down fin guide at the end of body tube and at top of fin guide. **Make sure template can not move while cutting or marking tube.** The slots can be cut out a couple of different ways. 1) Cut out slots and trace slots on to body tube with pencil or poke holes at each corner point, connect pin dots with straight edge and carefully cut out slots with a hobby knife freehand or with a straight edge. 2) Cut slots out using a dremel type tool. After cutting slots sand or trim slots so fins slide through easily but snugly.



Step 4

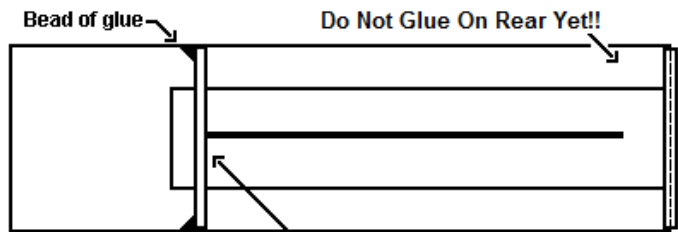
Find a scrap piece of stick that's about 10 in. to 12 in. long and mark the scrap piece at 6-1/4" in. Apply a generous ring of glue inside the main body tube at the 6-1/4" in. mark as shown.



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Step 5

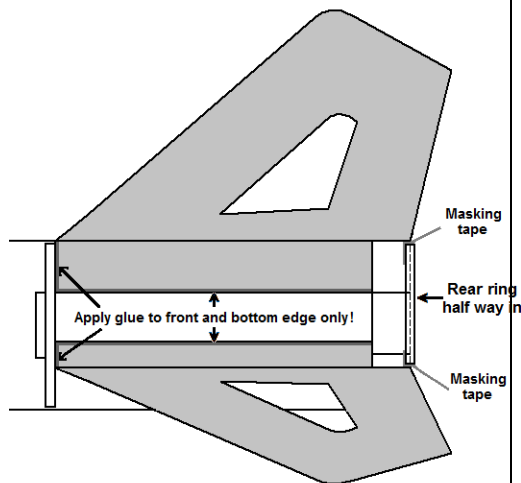
Insert the dry motor tube assembly into the main tube till the bottom of the top centering ring is at the top of the fin slot. Insert the lower ring to line up motor tube. **Do not glue lower ring on yet!** Stand up the completed assembly with the motor tube end down until the glue dries. Look down into upper end of body tube with flash light and check to make sure you have a good bead of glue around the edge of the centering ring. Extra glue can be added to top edge of centering ring if needed.



Slot must line up with the Bottom of centering ring.

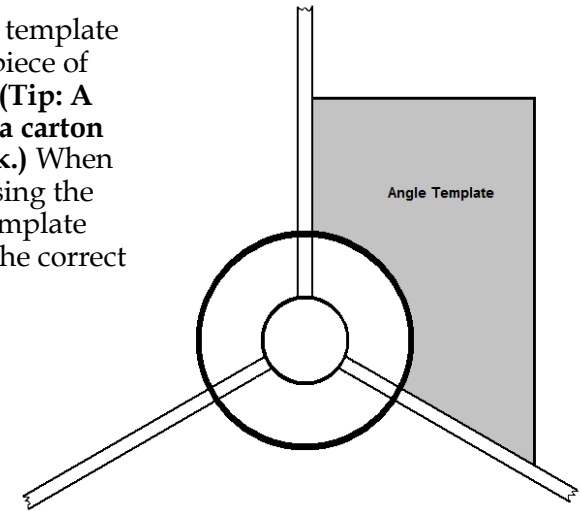
Step 6

Apply masking tape to the rear centering ring so you are able to pull ring out and apply optional internal fillets after gluing fins. **Insert rear ring in half way!** Apply glue to the front and bottom edges of the fin only as shown and carefully slide in slot until fin touches motor tube. **Try to keep glue off of the body tube at the slot edge, this helps with attaching the trim flush.** (Tip: Epoxy has the best holding strength.)



Step 7

Cut out the angle template and trace onto a piece of heavy cardstock. (Tip: A used 24 pack soda carton makes great stock.) When gluing each fin using the supplied angle template keeps the fins at the correct angle.



Step 8

Sanding the balsa trim at a slight angle as shown makes a better fit along the body tube eliminating the gap. Keeping the slot edge as level as possible helps with trim laying flat on body tube. Apply a coat of glue to the trim and apply the trim, lining up the front of the trim with the front of the fin first. Trim off excess at the back of trim flush at the angle of the fin.

