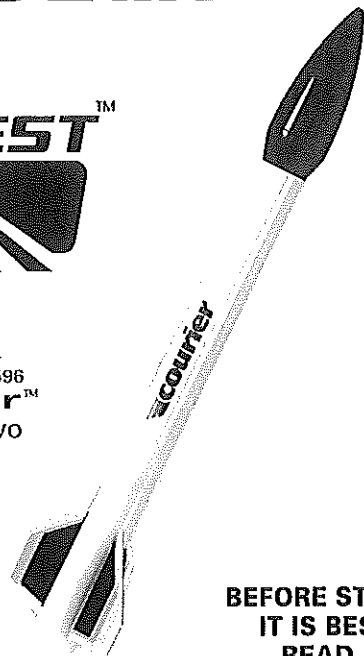


FLYING MODEL ROCKET ASSEMBLY INSTRUCTIONS



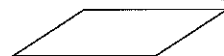
Prod. No. 2011/5596
Courier™
 Skill Level Two



Things You'll Need To Assemble this Kit:
 Hobby Knife, Pencil and Paint Brush



Sandpaper (220 or 320 Grit) & Sanding Sealer



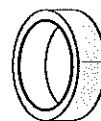
White Glue

Aliphatic Resin glues work best such as TITEBOND or ELMER'S CARPENTER'S WOOD GLUE - ELMER'S WHITE SCHOOL GLUE also works but dries slower.



Tape, Paint & Primer

Scotch Magic Tape or Paper Masking Tape, Spray Primer and Spray Paint.

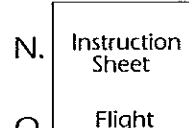
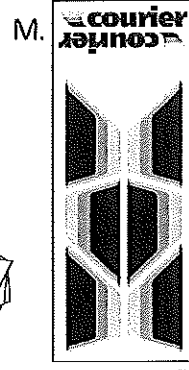
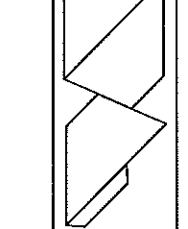
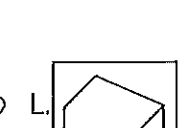
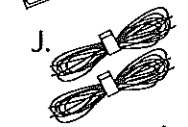
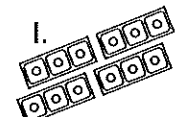
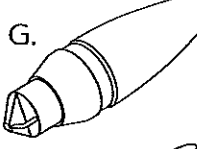
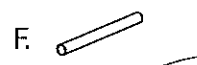
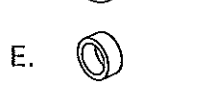
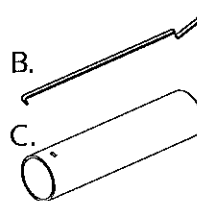


BEFORE STARTING ASSEMBLY READ THROUGH THESE INSTRUCTIONS. IT IS BEST TO TEST FIT ALL PARTS BEFORE APPLYING ANY GLUE. READ AND FOLLOW THE NAR MODEL ROCKET SAFETY CODE.

PARTS LIST

- A. 11501 White Body Tube
- B. 49000 Motor Clip
- C. 10303S Yellow Motor Mount Tube
- D. 16002 Die-Cut Centering Ring (2)
- E. 14000 Blue Thrust Ring
- F. 10001 Launch Lug
- G. Q-PNC-35Egg Plastic Nose Cone
- H. 50053 24" Yellow Kevlar* Shock Cord
- I. 50101 Tyvek Labels (12)
- J. 50100 6 - 26" Shroud Lines
- K. 28107 14 inch Parachute (2)
- L. 33002 Laser-Cut Balsa Fin Set
- M. 91031 Self-Adhesive Decal Sheet
- N. 96005 Instruction Sheet
- O. 96105 Launch Procedures Sheet

* Kevlar is a registered trademark of Dupont

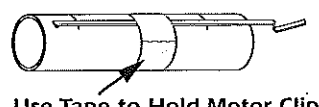
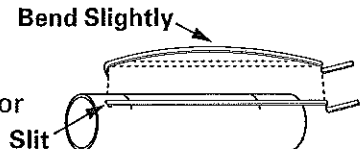
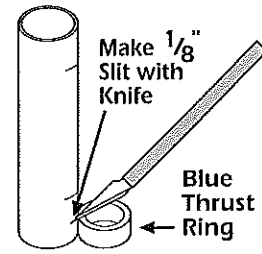
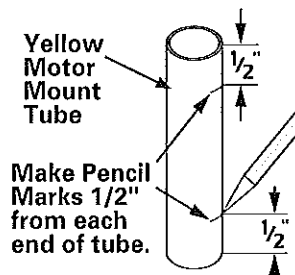


STEP 1

A. Place the Yellow Motor Mount Tube up against the ruler provided above. Make two pencil marks on the tube 1/2 inch from each end as shown.

B. Place the Blue Thrust Ring up against the side of the Yellow Motor Mount Tube and use it as a guide to make a small 1/8 inch long slit in the side of the Yellow Motor Mount Tube as shown.

C. Make a slight bend in the Motor Clip as shown. Insert the Motor Clip into the slit in the Yellow Motor Mount Tube. Use a piece of tape to hold in place.



STEP 2

A. Use two overhand knots to tie the Yellow Kevlar shock cord around the Yellow Motor Mount Tube as shown.

B. Tie a figure "8" in the loose end of the Yellow Kevlar with a 1 inch loop as shown.

Over Hand Knot

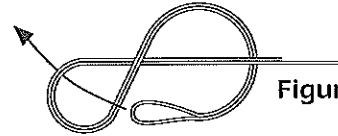
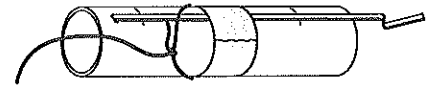


Figure 8 Knot



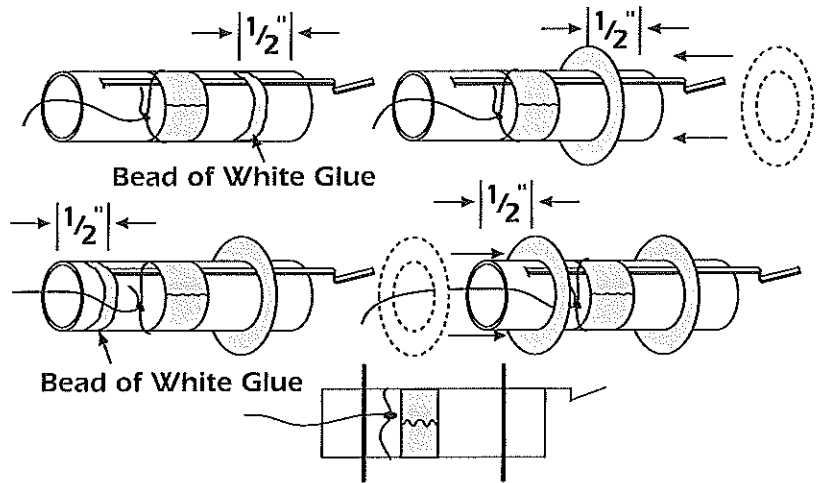
STEP 3

A. Apply a bead of white glue around the Yellow Motor Mount Tube on the pencil mark (made in step 1A.) 1/2 inch from rear end as shown.

B. Slide one of the paper centering rings onto the Yellow Motor Mount Tube and into the bead of glue. Check to be sure ring is aligned straight on Yellow tube as shown.

C. Apply a bead of white glue around the Yellow Motor Mount Tube on the other pencil mark (made in step 1A.) 1/2 inch from the forward end as shown.

D. Pass the Yellow Kevlar shock cord through the remaining paper centering ring. Slide the ring onto the Yellow Motor Mount Tube and into the bead of glue. Check to be sure ring is aligned straight on Yellow tube as shown.

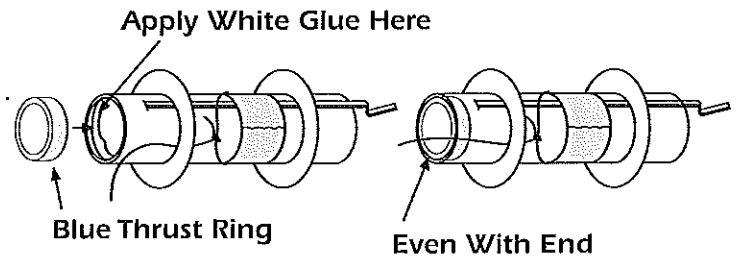


STEP 4

A. Apply white glue around inside edge of Yellow Motor Mount Tube as shown.

B. Insert the Blue thrust ring into the Yellow Motor Mount Tube so it is even with the end of the Yellow Motor Mount Tube.

C. After the glue has set completely, apply a small bead of white glue to both sides of each centering ring. Smooth out the glue with your finger. Wipe excess glue off your finger onto a tissue or paper towel.



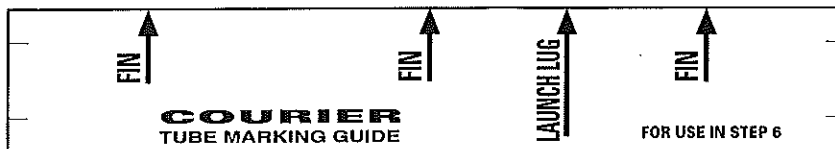
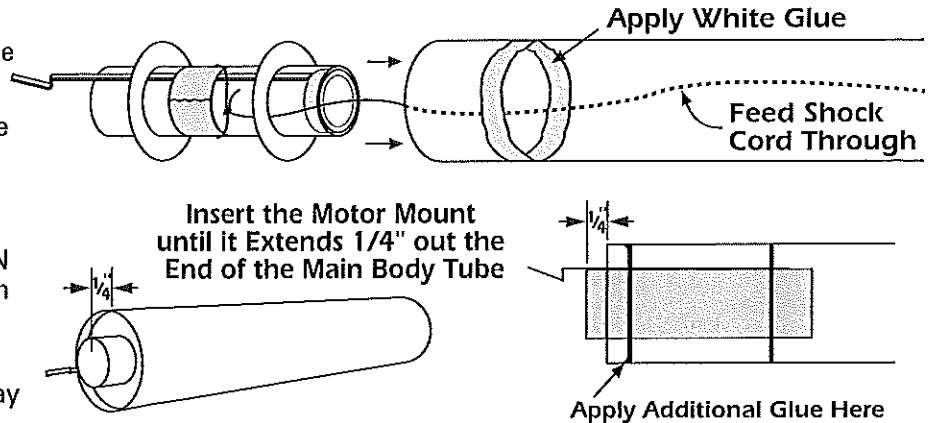
STEP 5

A. "Feed" the shock cord attached to the motor mount assembly into the White body tube until the cord comes out the other end of the white tube.

B. Apply white glue around the inside of the White body tube as shown.

C. Immediately insert the motor mount assembly into the White body tube and PUSH INTO THE BODY TUBE WITH ONE FAST & SMOOTH MOTION until the Yellow motor mount tube extends 1/4 inch out the end of the white body tube as shown.

D. Apply additional white glue to the exposed centering ring/body tube joint as shown. Wipe away excess glue with your finger.



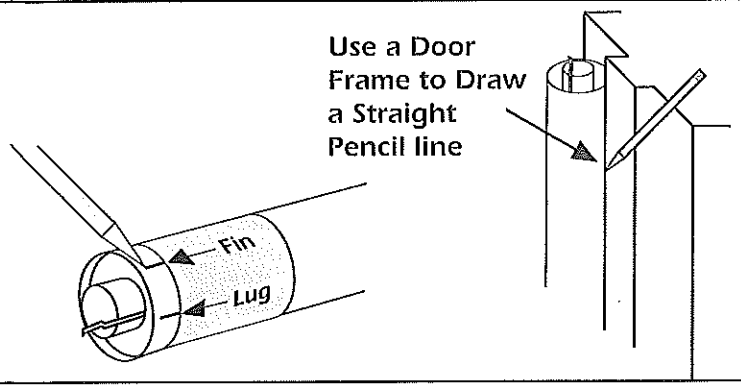
OVERLAP AREA

STEP 6

A. Cut out the tube marking guide from the bottom of the previous page.

B. Wrap the tube marking guide around the body tube. Align the arrow that is marked "Launch Lug" with the motor clip. Mark the body tubes at each of the arrows with a pencil.

C. Use a door frame as a guide and extend each of the pencil marks 6 inches up from the rear of the body tube.

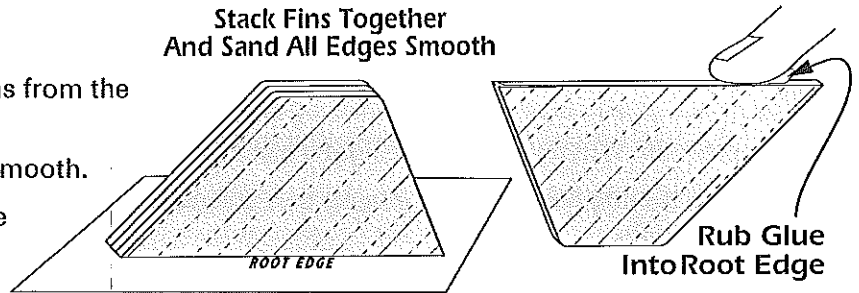


STEP 7

A. Carefully remove each of the Laser-cut balsa fins from the sheet with a sharp hobby knife.

B. Stack the like fins together and sand all edges smooth.

C. Rub a small line of white glue into the root edge of each fin and set aside to dry.

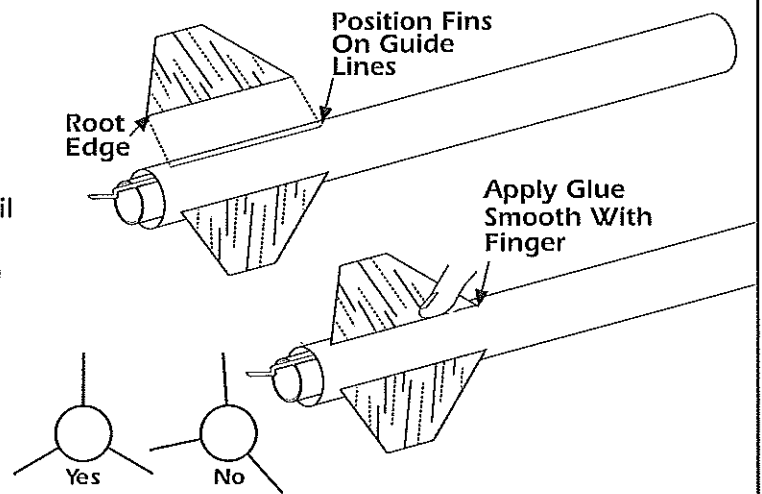


STEP 8

A. Make a pencil mark 1/2 inch from the end of each body tube on all pencil lines except the one for the launch lug.

B. Apply a small line of white glue along the root edge of a fin and apply it to the appropriate pencil line on the body tube by placing the trailing edge of the fin against the pencil mark made in Step A. Adjust the fin so that it projects straight away from the body tube as shown. Allow the glue to set for a few minutes before attempting to glue on the remaining fins. Repeat this step for the remaining fins.

C. After the glue is completely dry apply a small bead of white glue to both sides of all fin-body tube joints. Smooth out the glue with your finger. Wipe excess glue off your finger onto a tissue or paper towel.

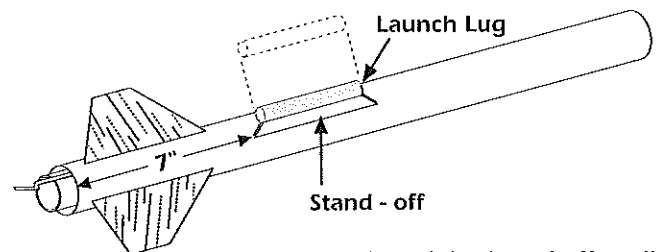


STEP 9

A. Make a pencil mark on the launch lug line 7 inches from the rear of the rocket as shown.

B. Apply white glue to the root edge of the launch lug stand-off and place it along the pencil line with one end even with the mark 7 inches from the rear of the rocket as shown.

C. Apply white glue to the launch lug and place it along the outer edge of the stand-off as shown.



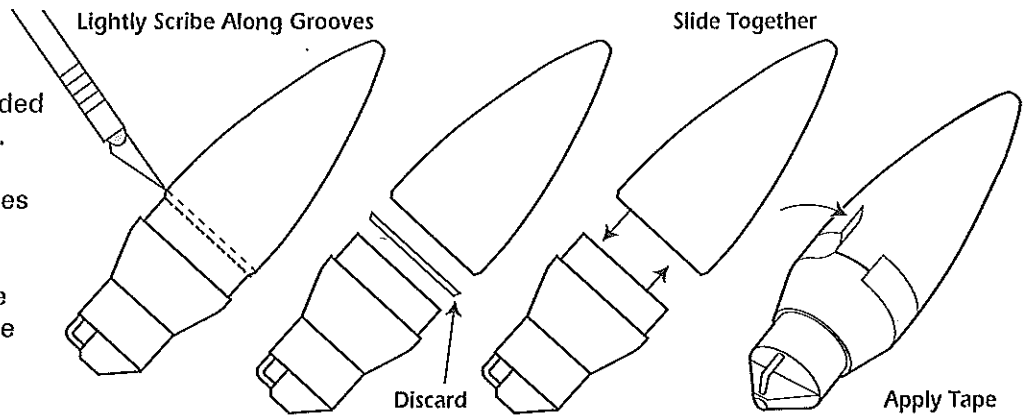
NOTE: Be sure launch lug/stand-off are lined up straight along the white body tube.

STEP 10

A. Use a sharp hobby knife to make several light scribes/cuts along the molded grooves to separate the cone as shown.

B. Use sandpaper to remove rough edges on both parts.

C. Slide the two halves of the nose cone together. Hold in place by wrapping tape all the way around the cone. Black vinyl electrical tape works best.



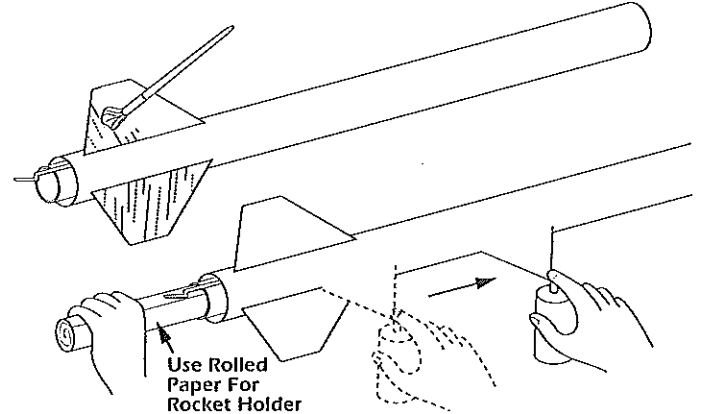
STEP 11

A. After all the glue is completely dry apply a coat of sanding sealer to each fin. When sealer is dry, lightly sand each fin.

B. Repeat the sealing and sanding process until the surface of each fin is smooth.

C. Paint the entire rocket body and fins with spray primer. Follow instructions on the spray can for best results. Allow to dry completely then lightly sand all surfaces. Repeat the spraying and sanding process until the entire rocket is smooth.

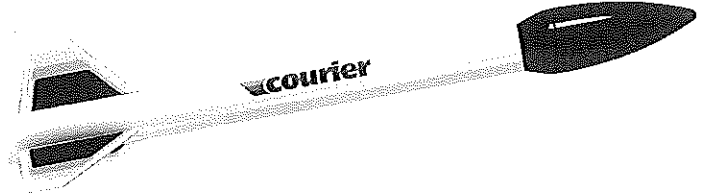
D. Paint the entire rocket body and fins with gloss white spray enamel. Follow instructions on the spray can for best results. Allow to dry completely.



STEP 12

A. When all paint is dry, apply the self-adhesive decals as shown here.

NOTE: Use caution when removing the decals from the backing to prevent decal from curling over onto itself.

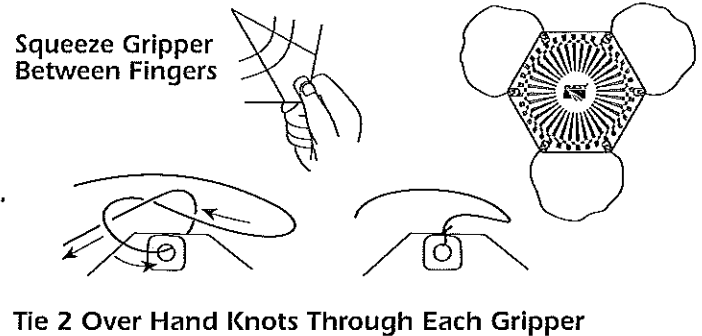


STEP 13

A. Apply gripper tabs to the parachutes so holes in gripper tabs line up with holes in parachute. Firmly squeeze each gripper tab and parachute between your fingers.

B. Assemble both parachutes by passing the end of a shroud line through a hole in a gripper tab and tying 2 overhand knots. Each parachute uses 3 shroud lines. Tie each of the ends of shroud line to the parachute through the gripper tab holes.

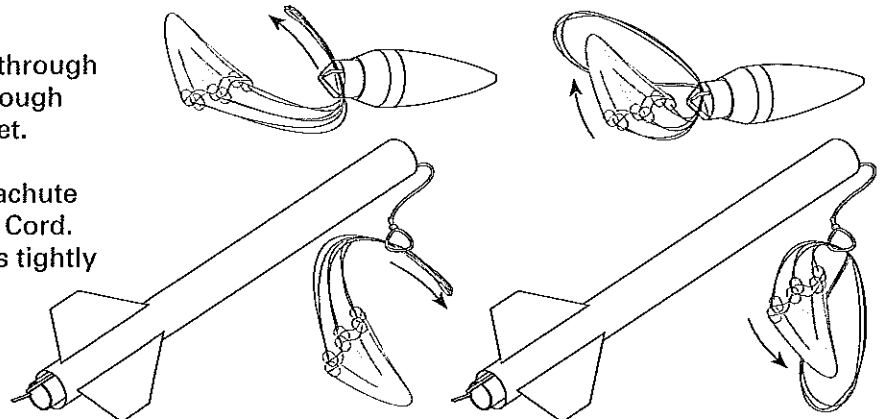
C. Assembled parachute should appear as shown.



STEP 14

A. Pass the shroud line loops of one parachute through the eyelet on the nose cone. Pass parachute through loop ends and pull lines tightly against the eyelet.

B. Pass the shroud line loops of the second parachute through the loop you made in the Kevlar Shock Cord. Pass parachute through loop ends and pull lines tightly against the Kevlar loop.



FLYING YOUR COURIER MODEL ROCKET

WHAT ELSE YOU WILL NEED:

To successfully fly your rocket you will need the following items:

- QUEST Launch Pad (No. 7610)
- QUEST Launch Controller (No. 7510)
- QUEST Parachute Recovery Wadding (No. 7021)
- QUEST Rocket Motors, Type A6-4, B6-4 or C6-5
- QUEST Rocket Motors with Egg, Type B6-2 or C6-3 only.
- Use a A6-4 Motor for your first flights.

ESTIMATED ALTITUDES

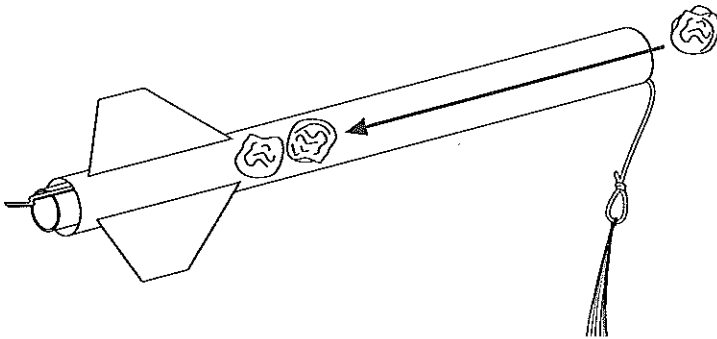
The following is a guide to assist you in determining which motor to use based on the wind conditions and size of flying field available.

MOTOR	ESTIMATED ALTITUDE
A6-4	150 FEET
B6-4	280 FEET
C6-5	600 FEET
B6-2 with EGG	140 FEET
C6-3 with EGG	300 FEET

PREPPING YOUR ROCKET FOR FLIGHT

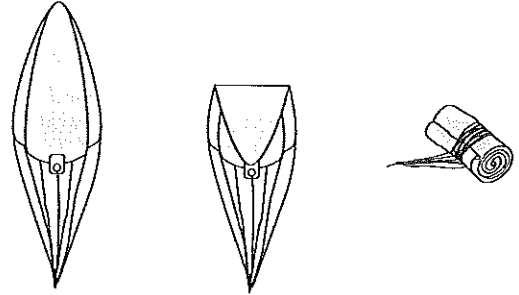
STEP 1

Pull the shock cord all the way out of the body tube. Crumple three sheets of recovery wadding and insert one by one into the body tube making sure that the Knot between the Kevlar and white elastic shock cord is on the nose cone side of the wadding. Wadding should fit loosely



STEP 2

- Grab the parachute at its center and allow the rocket to hang from it. The weight of the rocket will pull the parachute into several triangular shapes.
- Gather the triangles together into one flat triangle.
- Fold the top of the parachute down over itself once.
- Now continue to roll the parachute over itself and roll the shroud lines around it.



STEP 3

- Pack the parachute into the body tube. THE PARACHUTE MUST SLIDE EASILY INTO THE TUBE. If it is a tight fit, remove and re-fold the parachute.
TIP: LIGHTLY DUST YOUR PARACHUTE WITH TALCUM OR BABY POWDER TO KEEP IT FROM DEVELOPING A SET SHAPE. THIS TECHNIQUE IS ESPECIALLY EFFECTIVE IF THE WEATHER IS HOT AND HUMID OR VERY COLD.
- Push the shock cord into the tube and re-fit the nose cone onto the rocket. BE CAREFUL NOT TO CATCH ANY OF THE SHOCK CORD BETWEEN THE SHOULDER OF THE NOSE CONE AND THE BODY TUBE.

READ AND FOLLOW THE ENCLOSED LAUNCHING PROCEDURE SHEET

READ AND FOLLOW THE N.A.R. SAFETY CODE DURING ALL YOUR MODEL ROCKETRY ACTIVITIES.



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