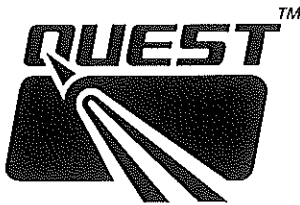
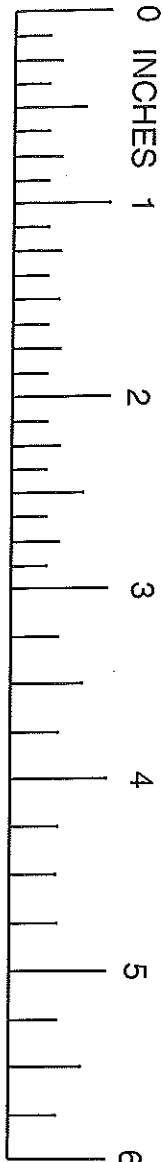
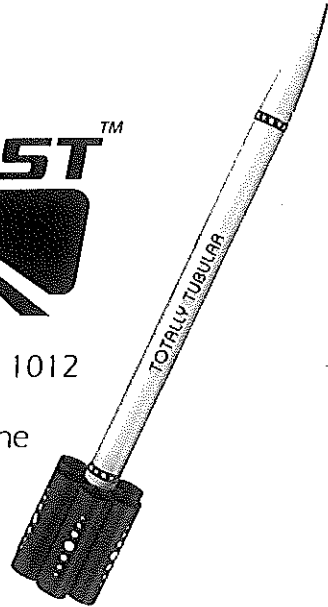


Totally Tubular™ ASSEMBLY INSTRUCTIONS



Product No. 1012

Skill Level One

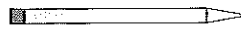


Things You'll Need To Assemble this Kit:

Hobby Knife



Pencil



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.



Plastic Cement

Use TESTORS TUBE Plastic Cement, or other comparable brands.

DO NOT use cyanoacrylate glue.

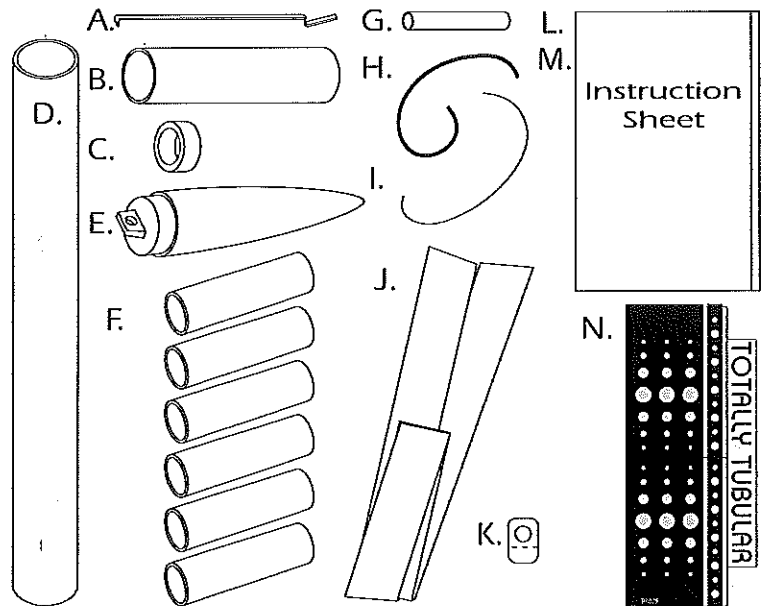


**BEFORE STARTING ASSEMBLY READ THROUGH THESE INSTRUCTIONS.
IT IS BEST TO TEST FIT ALL PARTS BEFORE APPLYING ANY GLUE.
READ AND FOLLOW THE NAR MODEL ROCKET SAFETY CODE.**

PARTS LIST

- A. 49000 Motor Clip
- B. 10303 Yellow Motor Mount Tube
- C. 14000 Blue Thrust Ring
- D. 11210 Body Tube
- E. 20087 Nose Cone
- F. 11211 Blue Fin Tubes (6)
- G. 10000 1 inch Launch Lug
- H. 50012 24 inch Elastic Shock Cord
- I. 50053 24 inch Kevlar* Shock Cord
- J. 28150 24 inch Plastic Streamer
- K. 28004 Single Gripper Tab
- L. 90074 Instruction Sheet
- M. 90960 Launching Procedure Sheet
- N. 91029 Decal

* Kevlar is a registered trademark of Dupont



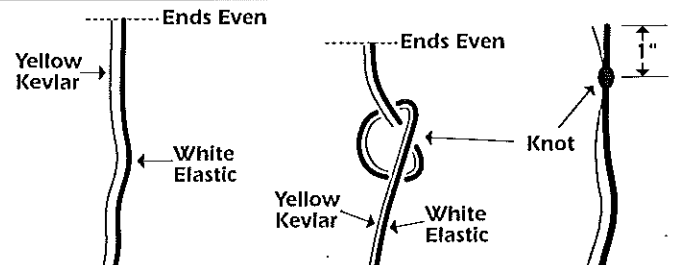
PARTS NOT SHOWN TO SCALE

STEP 1

A. Hold the Yellow Kevlar Shock Cord and the White Elastic Shock Cord side by side. Pull one end of each cord so that they are even with each other. While holding the two cords together, tie a single parallel overhand knot approximately one inch in from the even ends as shown.

B. Gently pull on both cords to set the knot and prevent it from slipping.

C. Apply a small amount of white glue on the ends of both cords to prevent them from fraying.

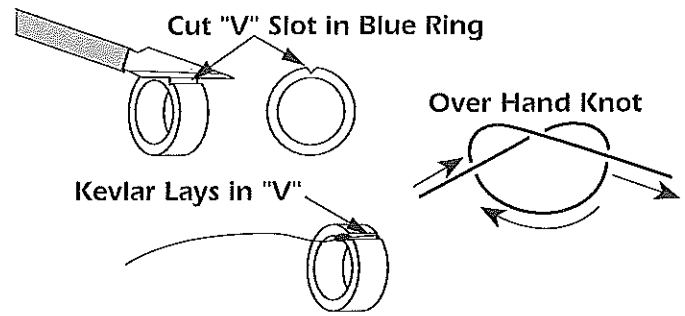


NOTE: THIS IS A VERY IMPORTANT STEP. IF YOU TIE A DIFFERENT TYPE OF KNOT THE SHOCK CORDS MAY SEPARATE DURING FLIGHT.

STEP 2

A. Use a sharp hobby knife to cut a shallow "V" slot in the Blue Thrust Ring as shown. Test fit the Blue Thrust Ring into one end of the Yellow Motor Mount Tube. If the fit is tight, sand the outside of the Blue Thrust Ring until you get a looser fit.

B. Tie the Yellow Kevlar Shock Cord onto the Blue Thrust Ring using two overhand knots as shown. Be sure the shock cord lays in the "V" you made in the Blue Thrust Ring.

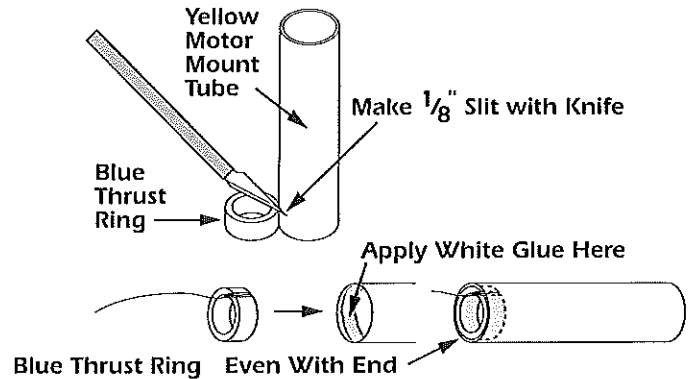


STEP 3

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

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

C. Insert the Blue Thrust Ring into the Yellow Motor Mount Tube with the Yellow Kevlar and knot facing as shown until it is even with the end of the Yellow Motor Mount Tube.

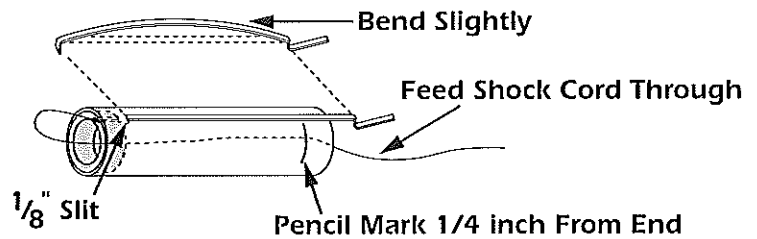


STEP 4

A. Using the ruler on the front of the instruction sheet, make a pencil mark 1/4 inch from the end of the Yellow Motor Mount Tube as shown.

B. "Feed" the shock cord back through the Yellow Motor Mount as shown.

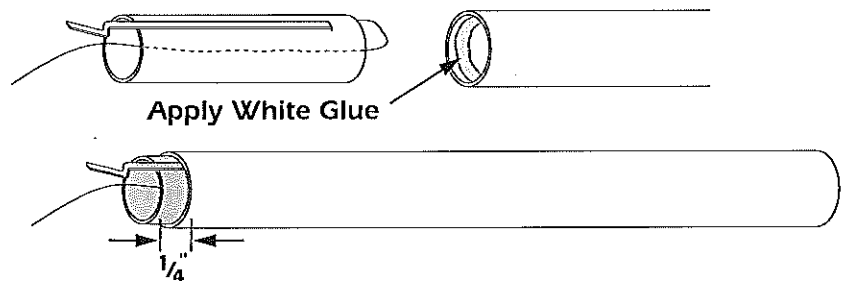
C. Make a slight bend in the motor clip as shown. Insert the clip into the slot you made in the Yellow Motor Mount Tube.



STEP 5

A. Apply white glue around the inside of one end of the White Body Tube.

B. Orient the Yellow Motor Mount tube as shown and immediately insert it into the White Body Tube and PUSH INTO THE BODY TUBE WITH ONE FAST & SMOOTH MOTION up to the 1/4 inch pencil mark on the Yellow Motor Mount Tube as shown.

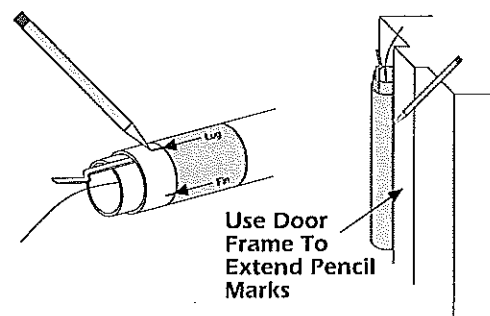


STEP 6

A. Cut out the tube marking guide from the front page of the instruction sheet

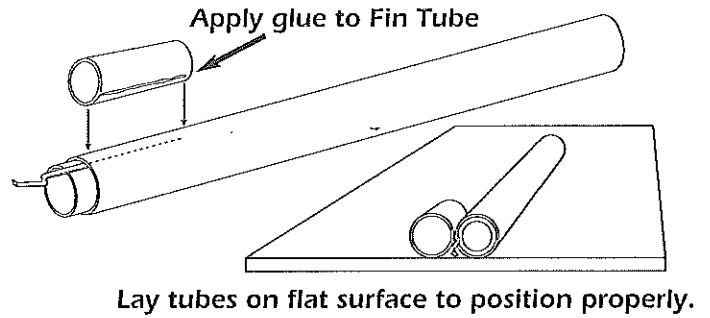
B. Wrap the tube marking guide around the body tube. Align the arrow that is marked "Launch Lug" with the motor clip. Mark the body tube at each of the arrows with a pencil.

C. Use a door frame as a guide and extend each of the pencil marks 3 inches up from the rear of the body tube.



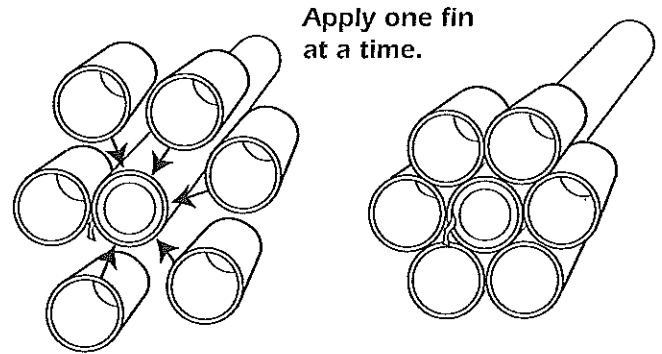
STEP 7

- A. Apply a small line of white glue down the entire length of one Blue Fin Tube.
- B. Using the line you made in Step 7 as your guide, place the Blue Fin Tube along the line on the Yellow Body Tube with one end even with the end of the Yellow Body Tube.
- C. Check alignment of the tubes by placing both tubes on a flat table top. Allow the glue to set in this position before proceeding further.



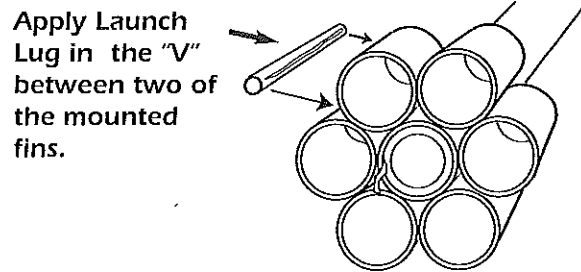
STEP 8

- A. One at a time, apply a small line of white glue to the remaining Blue Fin Tubes and position them side by side all the way around the Yellow Body Tube.



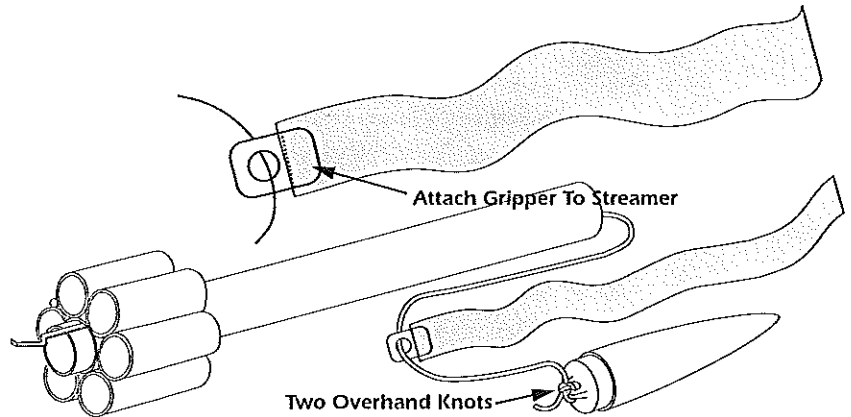
STEP 9

- A. Apply white glue to the launch lug and place it in between two Blue Fin Tubes as shown.



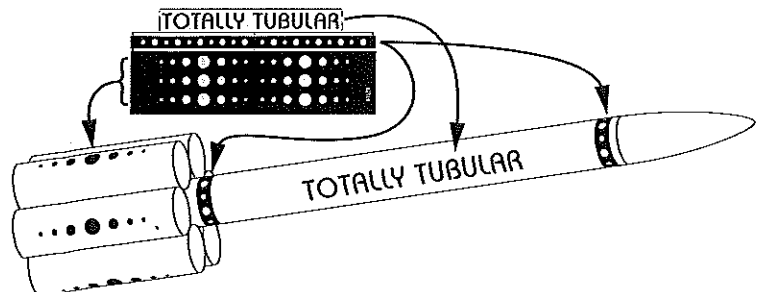
STEP 10

- A. Feed the shock cord back through the body tube until you are able to grab it from the front end and pull it all the way out the front.
- B. Peel the backing off the gripper tab and attach it to one end of the plastic streamer.
- C. Feed the loose end of the shock cord through the hole in the gripper tab.
- D. Use two overhand knots to tie the loose end of the shock cord onto the nose cone.



STEP 11

- A. Apply the self-adhesive decals as shown. NOTE: Use caution when removing the decals from the backing to prevent decal from curling over onto itself.



FLYING YOUR TOTALLY TUBULAR 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. 7020)
- QUEST Rocket Motors, Type A6-4, B6-4 or C-5
- Use a A6-4 Motor for your first flights.

ESTIMATED ALTITUDES

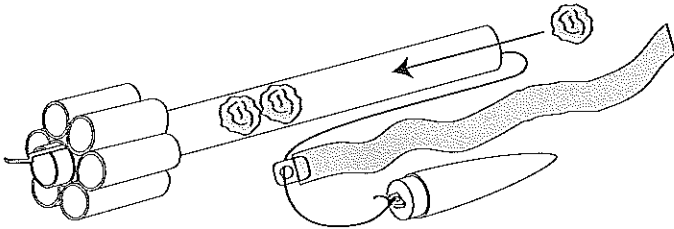
The following is a guide to assist you in determining which motor to use based on the wind conditions and size of flying field available.

MOTOR	ESTIMATED ALTITUDE
A6-4	450 FEET
B6-4	800 FEET
C6-5	1400 FEET

PREPPING YOUR ROCKET FOR FLIGHT

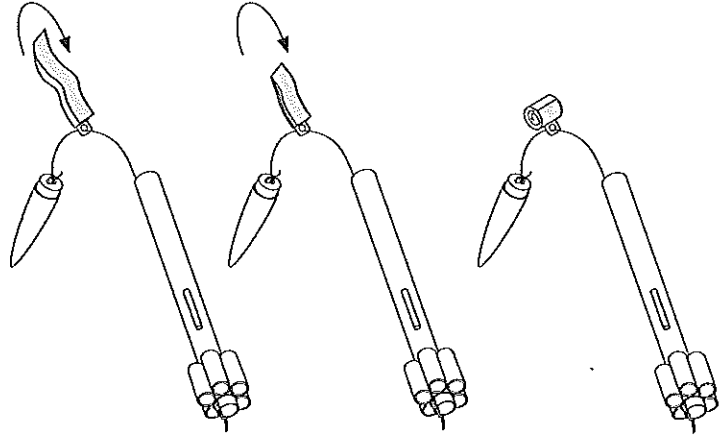
STEP 1

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 in the tube but tight enough to form a good seal against the wall of the body tube.



STEP 2

A. Grab the plastic streamer at its center and fold it in half. Continue to fold the streamer in half until small enough to roll tightly.



STEP 3

- A. Pack the streamer into the body tube. **THE STREAMER MUST SLIDE EASILY INTO THE TUBE.** If it is a tight fit, remove and re-fold the streamer.
- B. 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.**



Manufactured by:
QUEST AEROSPACE, INC.
6012 East Hidden Valley Drive
Cave Creek, AZ 85331-8555