

# ANTARI™ ASSEMBLY INSTRUCTIONS



Prod. No. 1003

Skill Level One



## Things You'll Need To Assemble this Kit:

Hobby Knife and Pencil



Sandpaper (220 or 320 Grit)



### 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

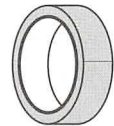
Use TESTORS TUBE Plastic Cement, PACTRA LIQUID CEMENT or other comparable brands.



DO NOT use cyanoacrylate glue.

### Tape

Scotch Magic Tape or Paper Masking Tape

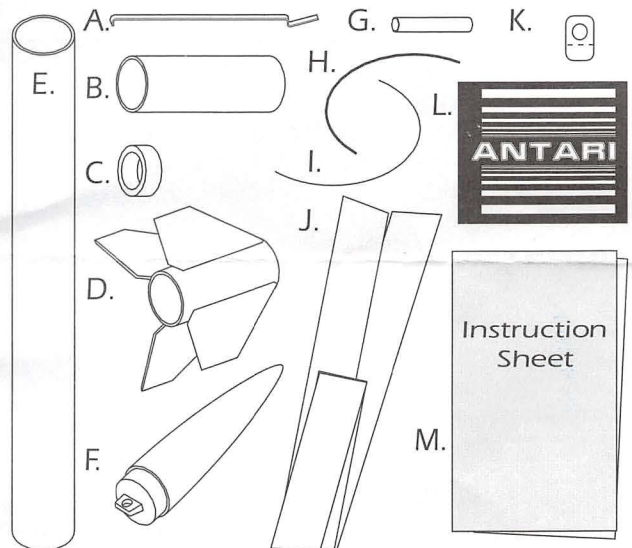


**BEFORE STARTING ASSEMBLY READ THROUGH THESE INSTRUCTIONS. IT IS BEST TO TEST FIT ALL PARTS BEFORE APPLYING ANY GLUE. READ AND FOLLOW THE NAR MODEL ROCKET SAFETY CODE.**

## PARTS LIST

- A. 49000 Motor Clip
- B. 10303 Yellow Motor Mount Tube
- C. 14000 Blue Thrust Ring
- D. 21550 Plastic Fin Unit
- E. 11202 10 inch White Body Tube
- F. 20075 Plastic Nose Cone
- G. 10000 Launch Lug
- H. 50014 21 inch White Elastic Shock Cord
- I. 50051 18 inch Kevlar\* Shock Cord
- J. 28150 24 inch Plastic Streamer
- K. 28004 Single Gripper Tab
- L. 91025 Decal
- M. 90050 Instructions

\* Kevlar is a registered trademark of Dupont

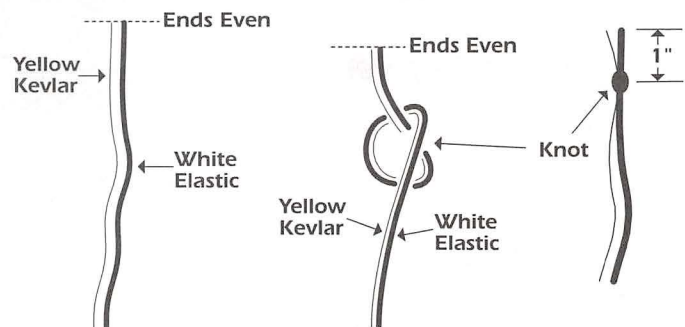


## STEP 1

**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.

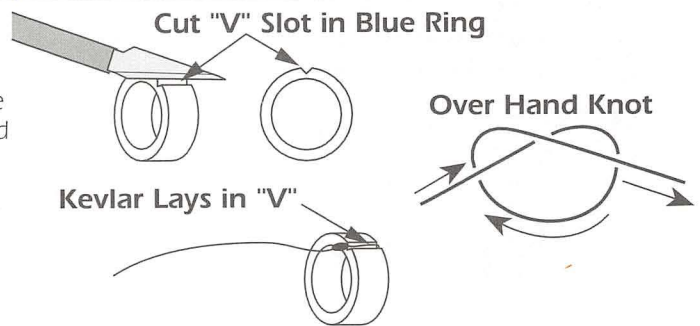


**NOTE: THIS IS A VERY IMPORTANT STEP. IF YOU TIE A DIFFERENT TYPE OF KNOT THE SHOCK CORDS MAY SEPARATE DURING FLIGHT.**

## 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.

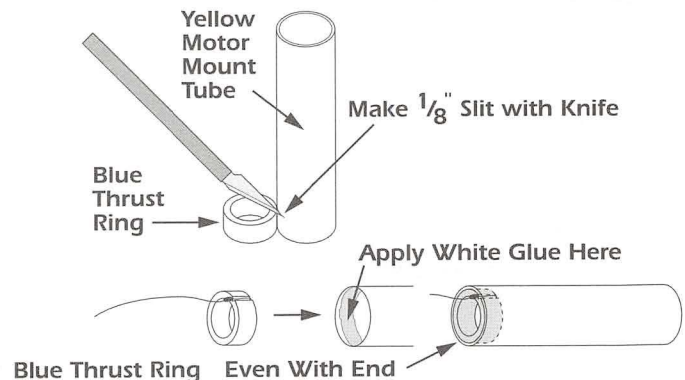


## STEP 3

**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.

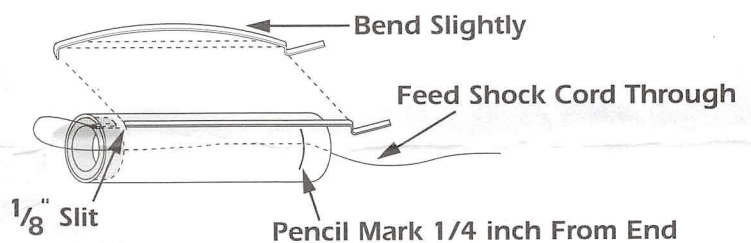


## STEP 4

**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.

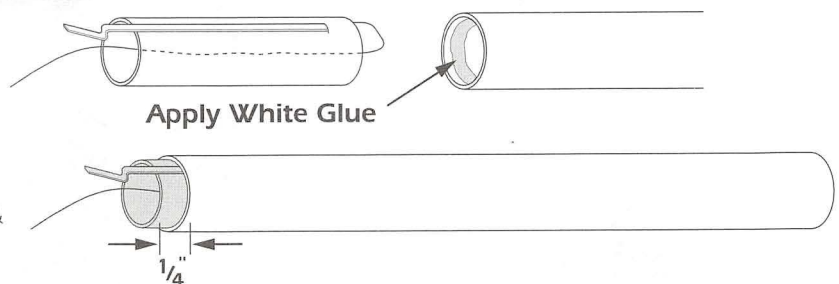
**C.** Make a slight bend in the motor clip as shown. Insert the clip into the slot you made in the Yellow Motor Mount Tube.



## 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.

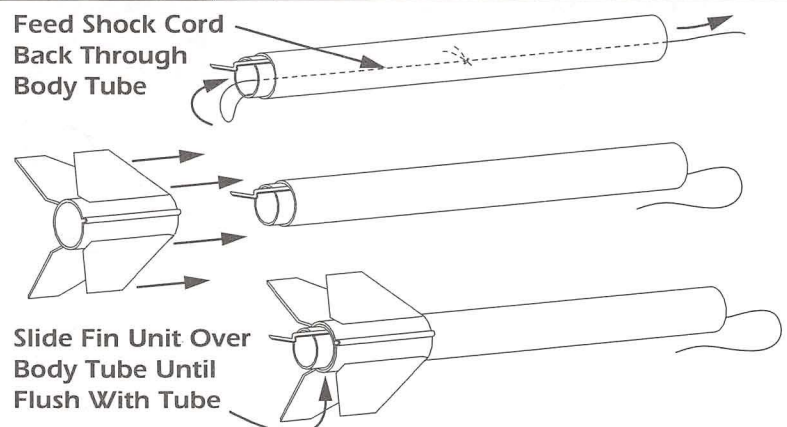


## STEP 6

**A.** Feed the Shock Cord back through the body tube as shown.

**B.** Slide the One-Piece Molded Plastic Fin Unit onto the body tube as shown.

**C.** Slide the Fin Unit onto the body tube until it is flush with the end of the White Body Tube.



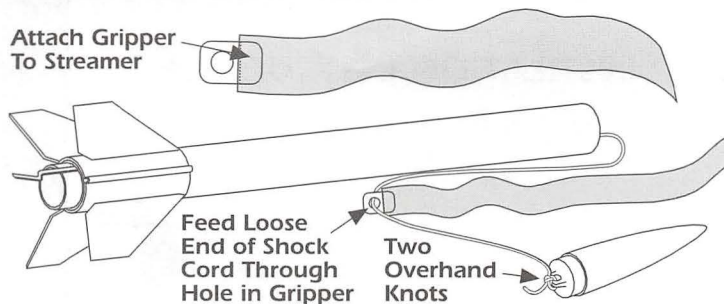


## STEP 7

**A.** Peel the backing off the gripper tab and attach it to one end of the plastic streamer. Firmly squeeze the gripper tab and streamer between your fingers.

**B.** Feed the loose end of the shock cord through the hole in the gripper tab.

**C.** Use two overhand knots to tie the loose end of the shock cord onto the nose cone.

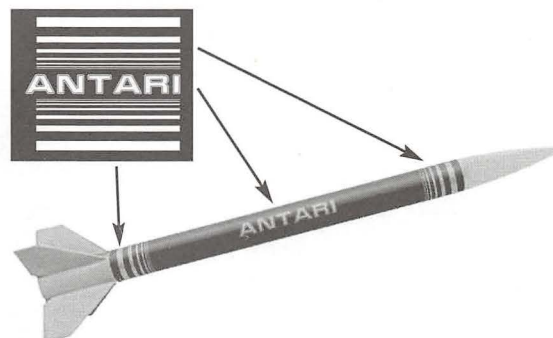


## STEP 8

**A.** Apply the self-adhesive decal to your rocket as shown here.

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

OPTIONAL PAINT SCHEME: If you would like to paint your model to look like the kit panel, paint the body tube gloss black and paint the nose cone and fin unit gloss red. Apply each self-adhesive decal to your rocket body tube using the kit panel as a visual guide for placement.



# FLYING YOUR ANTARI ROCKET

## WHAT ELSE YOU WILL NEED:

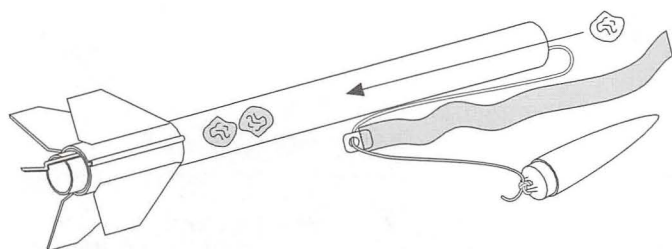
To successfully fly your rocket you will need the following items:

- QUEST Launch Pad (No. 7610)
- QUEST Launch Controller (No. 7510)
- QUEST Parachute Recovery Wadding (No. 7020)
- QUEST Rocket Motors, Type A6-4, B6-4

## PREPPING YOUR ROCKET FOR FLIGHT

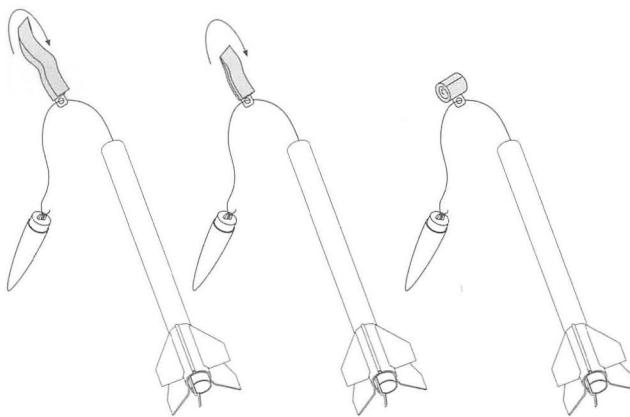
### STEP 1

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 BODY TUBE. If it is a tight fit, remove and re-fold and roll the streamer tighter.

**B.** Push the shock cord into the body 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 LAUNCHING PROCEDURES**

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

# LAUNCH PROCEDURES

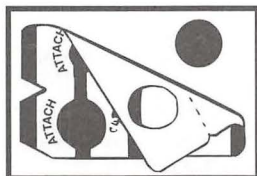
## IGNITER INSTILLATION INSTRUCTIONS

Launch your model rockets by electrical means only. Use a Quest Launch Controller and Tiger Tail II igniters. Install Tiger Tail II Igniter carefully, following these instructions.

### STEP 1

Remove Tiger Tail sticker from backing sheet.

Leave "dots" behind on sheet.

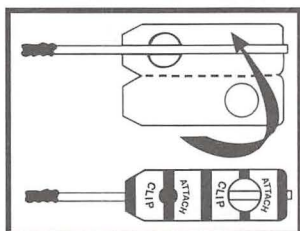


### STEP 2

Center the copper igniter wire over the hole.

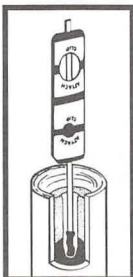
Fold Tiger Tail sticker over the igniter wire.

Be sure igniter wire is centered and visible through both holes.



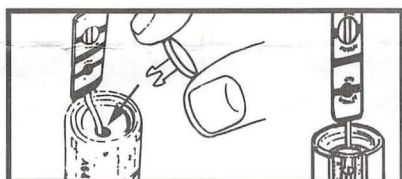
### STEP 3

Place black coated end of the igniter wire into the motor nozzle as far as it will go. Black igniter tip **MUST TOUCH** the bottom of the nozzle or motor will not ignite.



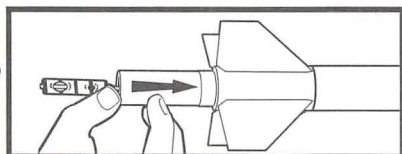
### STEP 4

Push the plastic Tiger Tac into nozzle as far as it will go.



### STEP 5

Insert rocket motor into rocket's motor mount.



## N.A.R MODEL ROCKET SAFETY CODE

Approved February 10, 2001

**1. MATERIALS.** I will use only lightweight, non-metal parts for the nose, body, and fins of my rocket.

**2. MOTORS.** I will use only certified, commercially-made model rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer.

**3. IGNITION SYSTEM.** I will launch my rockets with an electrical launch system and electrical motor igniters. My launch system will have a safety interlock in series with the launch switch, and will use a launch switch that returns to the "off" position when released.

**4. MISFIRES.** If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher's safety interlock or disconnect its battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.

**5. LAUNCH SAFETY.** I will use a countdown before launch, and will ensure that everyone is paying attention and is a safe distance of at least 15 feet away when I launch rockets with D motors or smaller, and 30 feet when I launch larger rockets. If I am uncertain about the safety or stability of an untested rocket, I will check the stability before flight and will fly it only after warning spectators and clearing them away to a safe distance.

**6. LAUNCHER.** I will launch my rocket from a launch rod, tower, or rail that is pointed to within 30 degrees of the vertical to ensure that the rocket flies nearly straight up, and I will use a blast deflector to prevent the motor's exhaust from hitting the ground. To prevent accidental eye injury, I will place launchers so that the end of the launch rod is above eye level or will cap the end of the rod when it is not in use.

**7. SIZE.** My model rocket will not weigh more than 1500 grams (53 ounces) at liftoff and will not contain more than 125 grams (4.4 ounces) of propellant or 320 N-sec (71.9 pound-seconds) of total impulse. If my model rocket weighs more than one pound (453 grams) at liftoff or has more than 4 ounces (113 grams) of propellant, I will check and comply with Federal Aviation Administration regulations before flying.

**8. FLIGHT SAFETY.** I will not launch my rocket at targets, into clouds, or near airplanes, and will not put any flammable or explosive payload in my rocket.

**9. LAUNCH SITE.** I will launch my rocket outdoors, in an open area at least as large as shown in the accompanying table, and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad, and that the launch site does not present risk of grass fires.

### LAUNCH SITE DIMENSIONS

Installed Total Impulse (N-sec)	Equivalent Motor Type	Minimum Site Dimensions (ft)
0.00 - 1.25	1/4A, 1/2A	50
1.26 - 2.50	A	100
2.51 - 5.00	B	200
5.01 - 10.00	C	400
10.01 - 20.00	D	500
20.01 - 40.00	E	1,000
40.01 - 80.00	F	1,000
80.01 - 160.00	G	1,000
160.01 - 320.00	Two G's	1,500

**10. RECOVERY SYSTEM.** I will use a recovery system such as a streamer or parachute in my rocket so that it returns safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.

**11. RECOVERY SAFETY.** I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places.

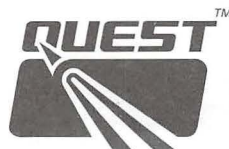
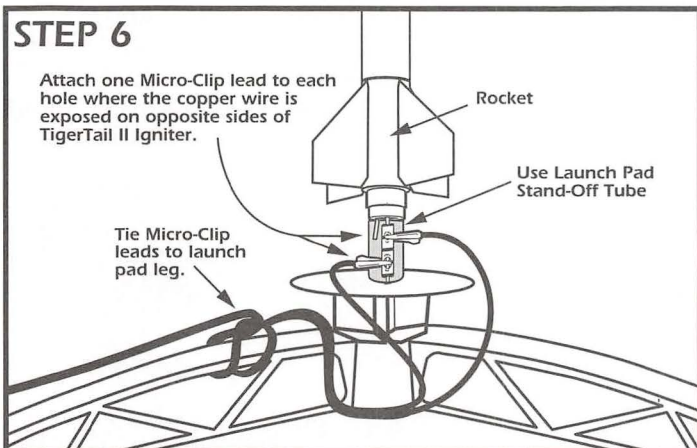
### STEP 6

Attach one Micro-Clip lead to each hole where the copper wire is exposed on opposite sides of TigerTail II Igniter.

Tie Micro-Clip leads to launch pad leg.

Rocket

Use Launch Pad Stand-Off Tube



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



91025



