

QUESTTM
Shaping the future of model rocketry



1 MODEL KIT - Paint and glue not included.
1 MOUËLE RËDUIT - Peinture et colle non comprises.

Flying Model Rocket
Skill Level 1 Kit
For Experienced Modelers

- Flies up to 700 ft. (213 m)
- 14" dia. parachute recovery
- Laser-cut balsa fins

SCREAMIN' DEMON



This kit requires assembly.
White glue, plastic cement, finishing supplies, launch system and rocket motors for launching are not included.

Item No. 1019

Length: 20.5" (52.2 cm)
Dia.: T25/.98" (25mm)
Weight: 1.76oz. (50 g)
Motors: A6-4 (first flight),
B6-4, C6-3, C6-5
Made in China



FLYING MODEL ROCKET ASSEMBLY INSTRUCTIONS



Prod. No. 1019
Screamin' Demon™
 Skill Level One



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

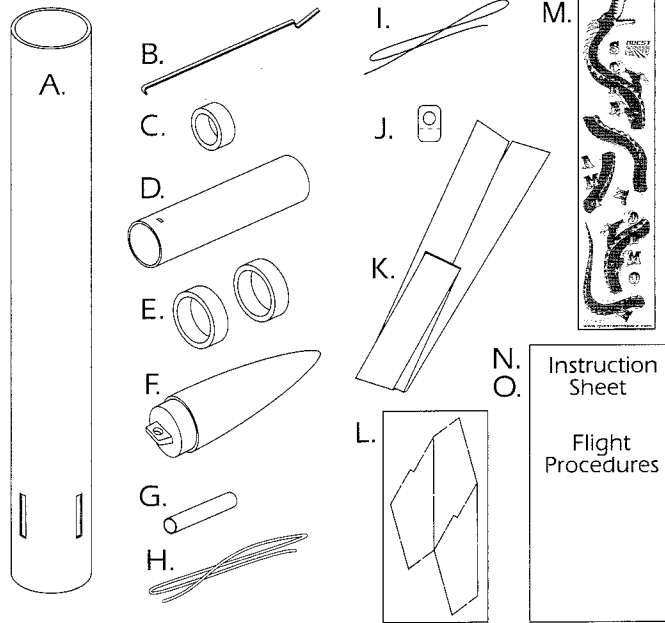
Scotch Magic Tape or Paper Masking Tape, Spray Primer and Spray Paint.

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. 11306S White Body Tube With Fin Slots
- B. 49000 Motor Clip
- C. 14000 Blue Thrust Ring
- D. 10303S Yellow Motor Mount Tube
- E. 14050 Red Centering Ring (2)
- F. 20071 Plastic Nose Cone
- G. 10001 Launch Lug
- H. 50012 24 inch White Elastic Shock Cord
- I. 50053 24 inch Yellow Kevlar* Shock Cord
- J. 3-28000-3000 Gripper Tab
- K. 28155 36 inch Streamer
- L. 33056 Laser-Cut Balsa Fin Set
- M. 01019-1030 Water-Slide Decal
- N. 01019-1010 Instruction Sheet
- O. 01019-1015 Launch Procedures Sheet

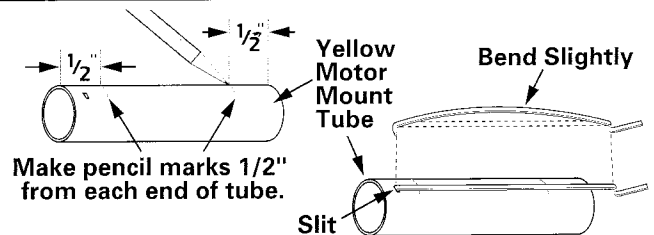
* Kevlar is a registered trademark of Dupont



STEP 1

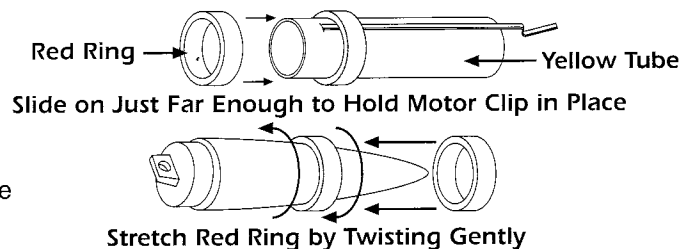
A. Place the Yellow Motor Mount Tube up against the ruler provided above. Make two pencil marks on the tube 1/2 inch from each end as shown.

B. Make a slight bend in the Motor Clip as shown. Insert the Motor Clip into the slit in the Yellow Motor Mount Tube.



STEP 2

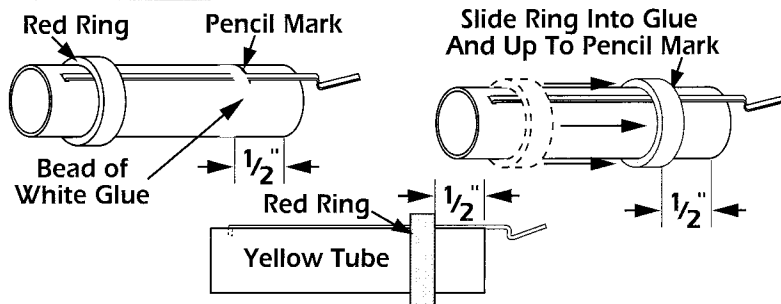
A. Test fit one of the Red Centering Rings onto the Yellow Motor Mount Tube. If it does not slide on easily, stretch the Red Ring by sliding it over the Nose Cone and gently twisting it back and forth a few times. Slide the Red Ring onto the Yellow Tube just far enough to hold the Motor Clip in place.



STEP 3

A. Apply a bead of white glue around the Yellow Motor Mount Tube on the inside of the pencil mark made in Step 1, one half inch from the end as shown.

B. Slide the Red Ring into the bead of glue and up to the pencil mark. The edge of the Red Ring must be 1/2" from end of the Yellow Motor Mount Tube. Wipe away any excess glue.

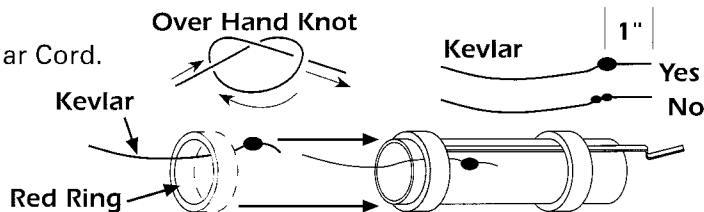


STEP 4

A. Tie two overhand knots 1 inch in from the end of the Kevlar Cord.

B. Pass the end of the Kevlar with the knot through the remaining Red Centering Ring.

C. Slide the Red Centering Ring with the Kevlar under it onto the Yellow Motor Mount Tube. excess glue.

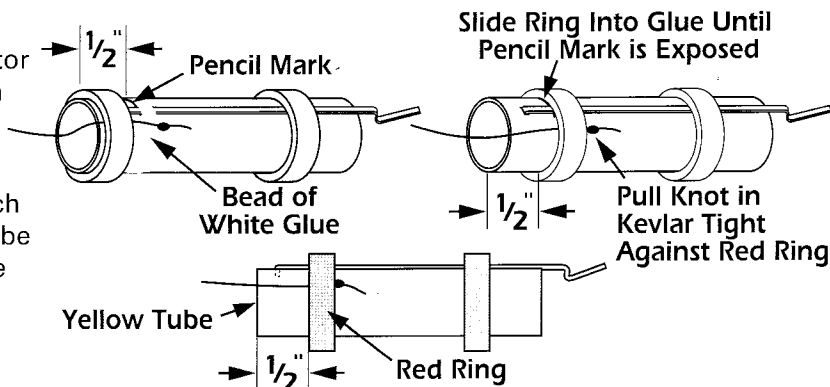


STEP 5

A. Apply a bead of white glue around the Yellow Motor Mount Tube on the inside of the pencil mark made in Step 1, one half inch from the end as shown.

B. Slide the Red Ring into the bead of glue until the pencil mark is exposed. If the Red Ring is tight, stretch it as in step 2 above. The edge of the Red Ring must be 1/2" from end of the Yellow Motor Mount Tube. Wipe away any excess glue.

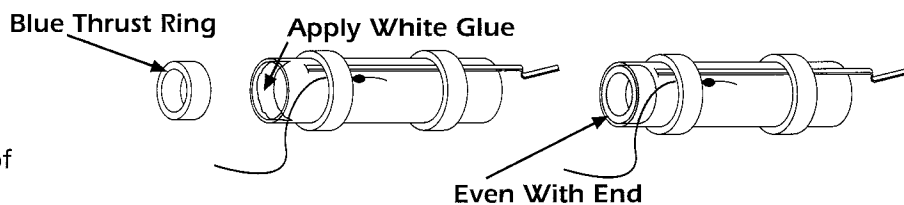
C. Pull the Yellow Kevlar Shock Cord up tight against the Red Centering Ring.



STEP 6

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.



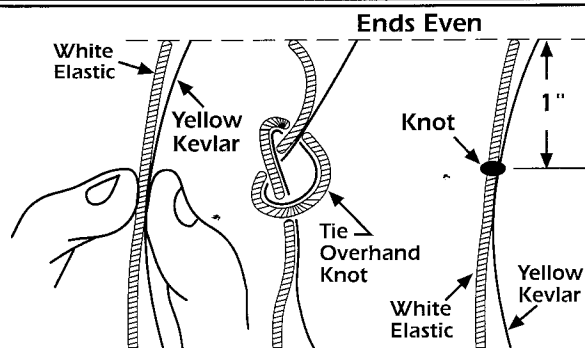
STEP 7

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.

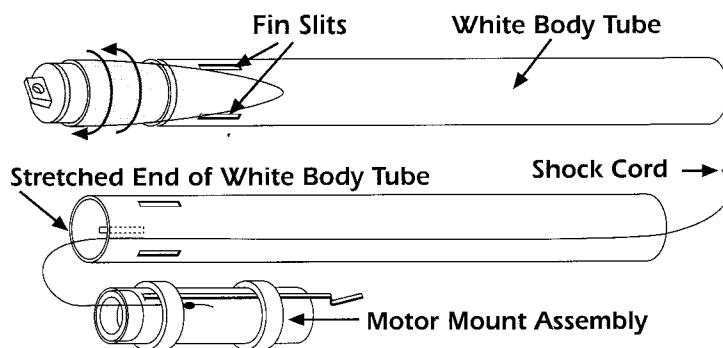


STEP 8

A. Stretch the end of the Body Tube that has the Fin Slits in it slightly by inserting the nose cone into the tube and gently twisting it back and forth a few times.

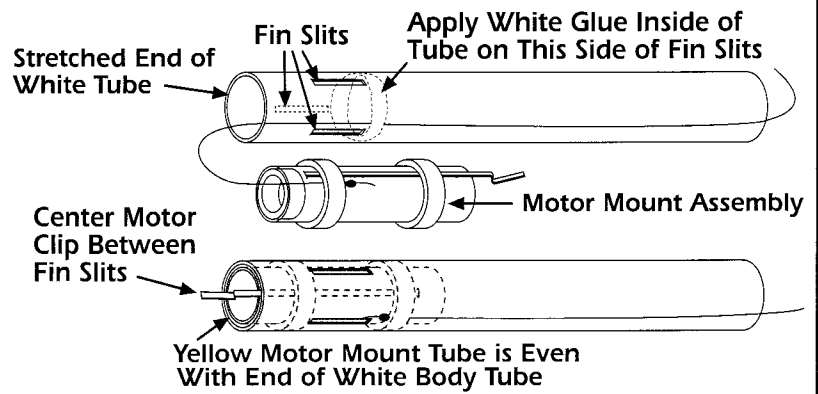
B. Hold the Body Tube with the stretched end facing up and "feed" the shock cord into the tube until the cord comes out the other end.

C. Grab the end of the shock cord and pull it all the way through the tube until the Motor Mount assembly that is attached to the other end pulls up against the tube.



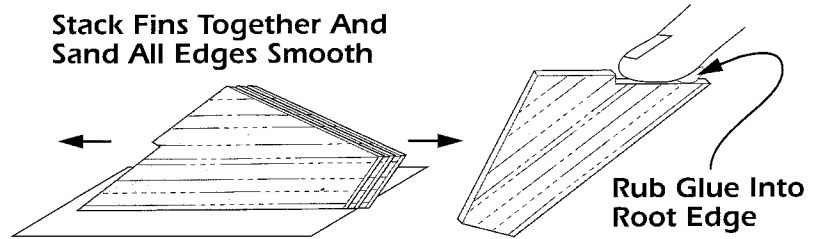
STEP 9

- Hold the Motor Mount Assembly and the Body Tube in one hand.
- Apply White Glue around the inside of the Body Tube just beyond the Fin Slits.
- Align the Motor Mount Assembly so the Motor Clip is centered between two of the Fin Slits.
- Immediately insert the Motor Mount Assembly and PUSH IT INTO THE BODY TUBE WITH ONE FAST & SMOOTH MOTION until the Yellow Motor Mount Tube is even with the end of the Body Tube.



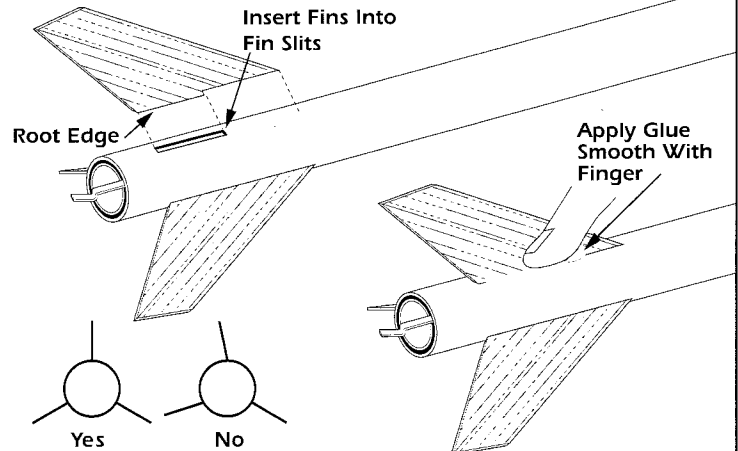
STEP 10

- Carefully remove each of the three Laser-cut balsa fins from the sheet with a sharp hobby knife.
- Stack the fins together and sand all edges smooth.
- Rub a small line of white glue into the root edge of each fin and set aside to dry.



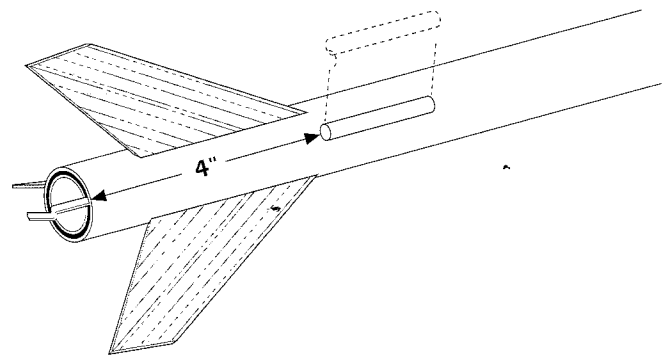
STEP 11

- Apply a small line of white glue along the root edge of a fin and insert it into one of the fin slots on the body tube. 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 two fins.
- After the glue is completely dry apply a small bead of white glue to both sides of a fin-body tube joint. Smooth out the glue with your finger. Wipe excess glue off your finger onto a tissue or paper towel.
- Repeat the above step for the remaining fin-body tube joints. Set aside to dry.



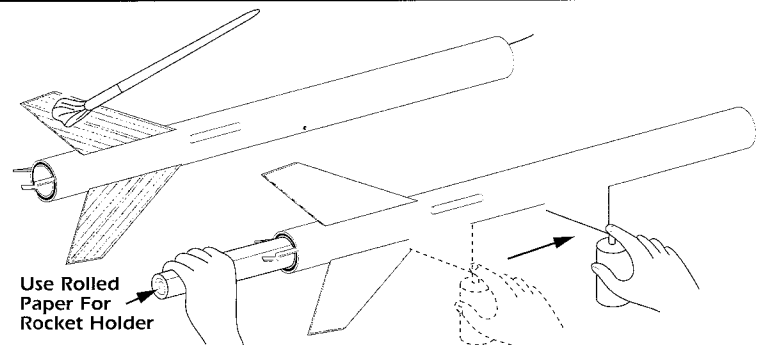
STEP 12

- Make a pencil mark 4 inches from the rear of the rocket aligned with the Motor Clip as shown.
- Apply white glue to the launch lug and place with one end even with the mark 4 inches from the rear of the rocket as shown.



STEP 13

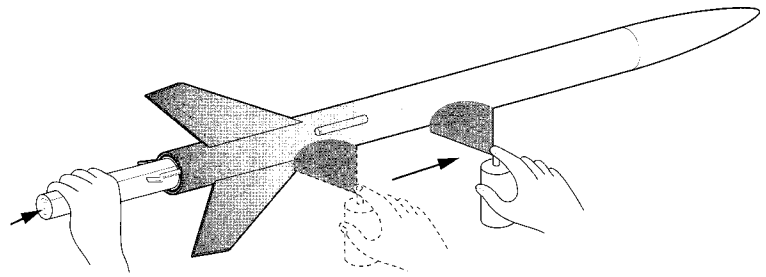
- After all the glue is completely dry apply a coat of sanding sealer to each fin. When sealer is dry, lightly sand each fin.
- Repeat the sealing and sanding process until the surface of each fin is smooth.
- Paint the entire rocket body and fins with spray primer. Follow instructions on the spray can for best results. Allow to dry and sand smooth.



STEP 14

A. Paint the entire rocket body and fins with gloss yellow spray enamel. Allow to dry completely

B. Paint the fins and lower end of the rocket with gloss orange paint. Carefully create a gradation from orange fins to yellow nose cone by spraying very light coats of the orange paint over the yellow. Allow to dry completely.



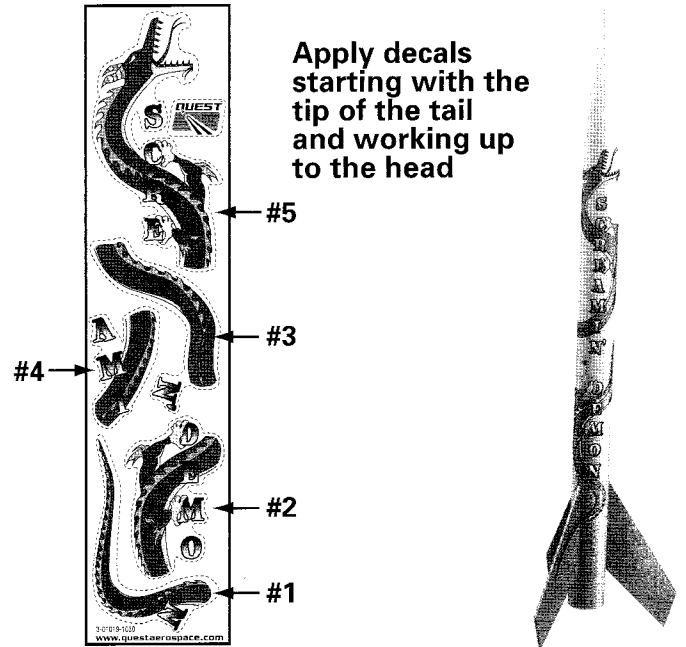
STEP 15

A. After all paint is completely dry, use scissors to cut out decals.

B. Place decals in luke-warm water. DO NOT PLACE MORE THAN ONE DECAL AT A TIME IN WATER! The decals will curl as they get wet. When they start to uncurl (approx. 20-30 seconds) remove from water and slip from backing into position on rocket.

C. Apply the decals in consecutive order starting with the tail and working up to the head of the Demon. Apply the first decal so the tip of the Demon's tail is on one of the fins. Align the decal so the Letter "N" is centered between two fins.

D. Using the photo on the package front as a guide apply each consecutive decal so they slightly overlap. Align each decal so the letters on the decal are centered with each other.

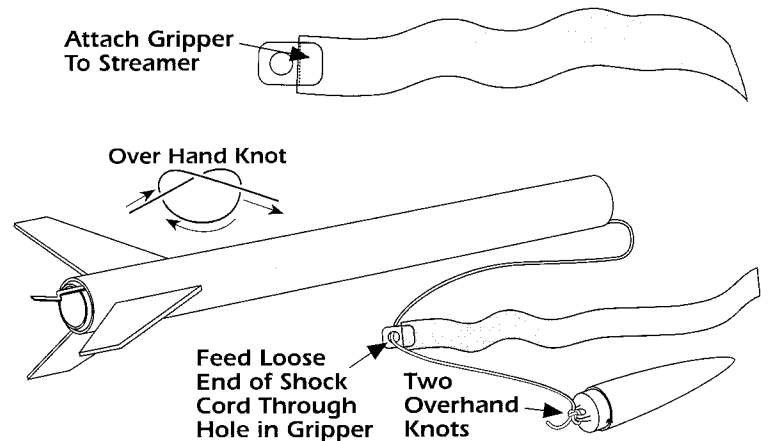


STEP 16

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.



FLYING YOUR SCREAMIN' DEMON 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, C6-3 or C6-5
- Use a A6-4 Motor for your first flights.

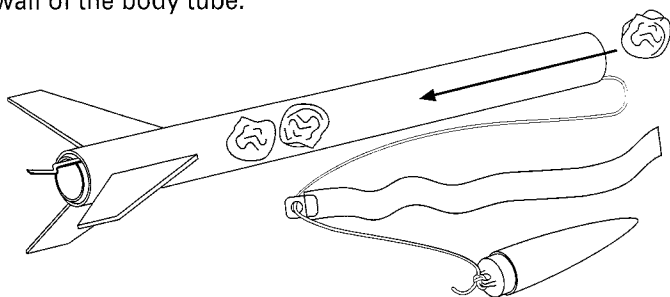
ESTIMATED ALTITUDES

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	300 FEET
B6-4	600 FEET
C6-3	1000 FEET
C6-5	1200 FEET

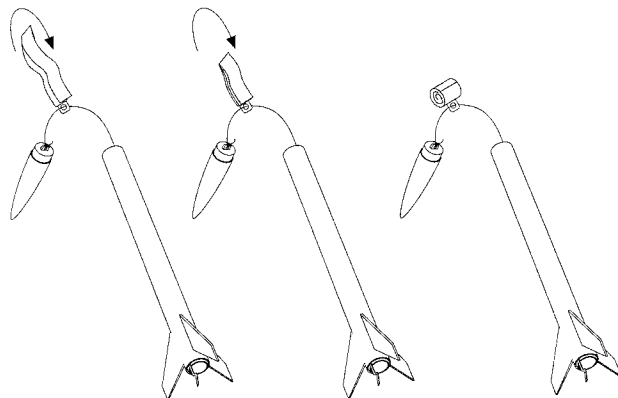
PREPPING YOUR ROCKET FOR FLIGHT STEP 1

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 E. Hidden Valley Dr.
 Cave Creek, AZ 85331-8555
 www.questaerospace.com

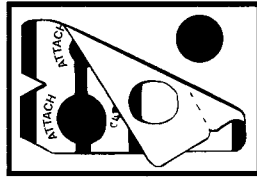
LAUNCH PROCEDURES

IGNITER INSTALLATION 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.

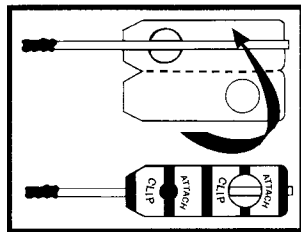


STEP 2

Center the copper igniter wire over the hole.

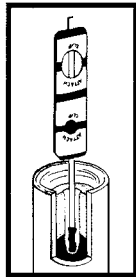
Fold Tiger Tail sticker over the igniter wire.

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



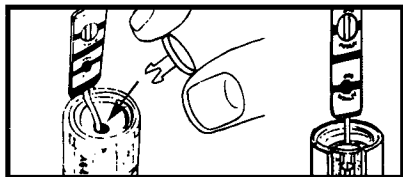
STEP 3

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.



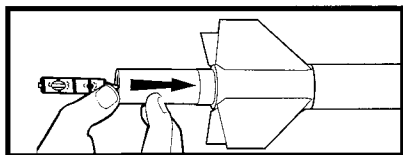
STEP 4

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



STEP 5

Insert rocket motor into rocket's motor mount.



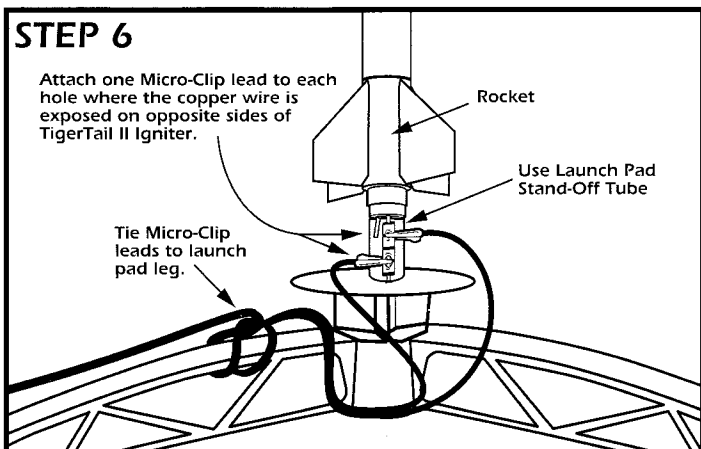
STEP 6

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



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 launcher 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.

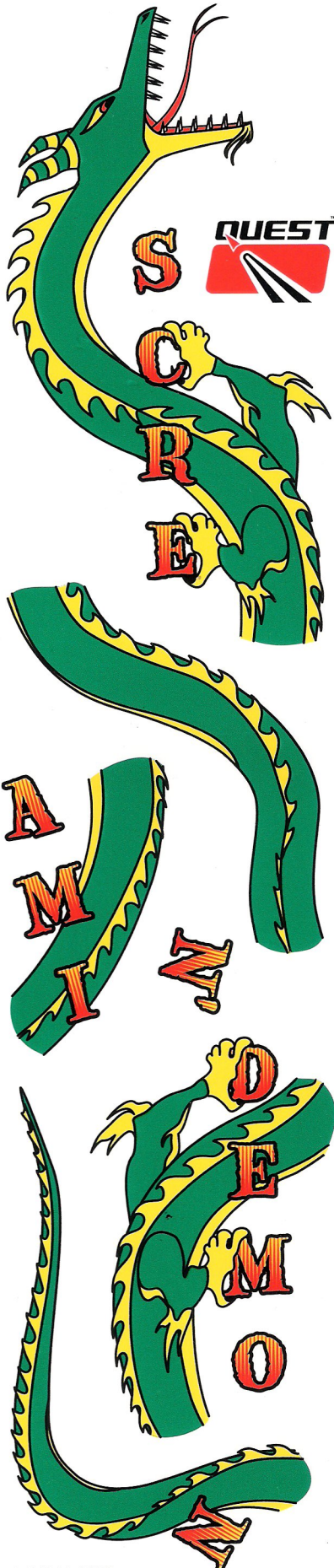
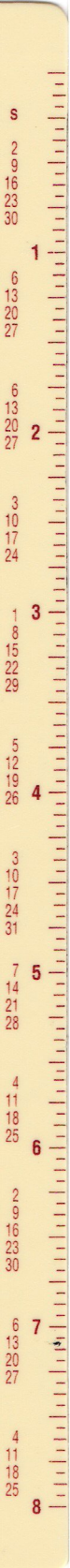
9. LAUNCH SITE. I will launch my rocket outdoors, in an open area at least as large as shown in the accompanying table, and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad, and that the launch site does not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



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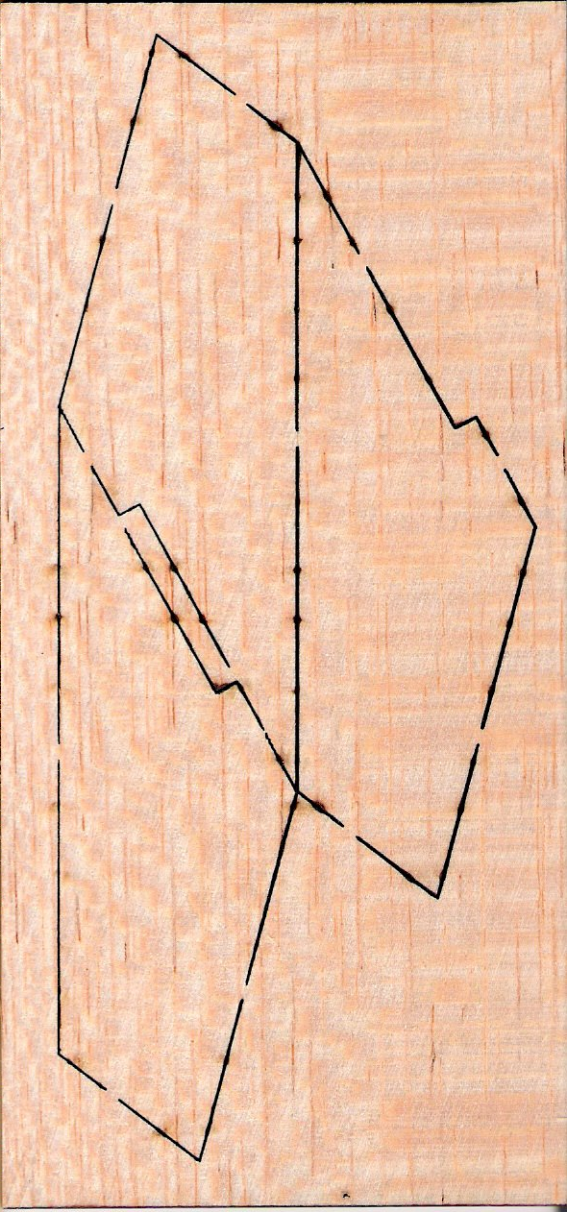
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Quest Screamin' Demon Parts Summary

NOTE: Items listed below are cross referenced to the parts list included in the plans.

- A. BT-50 equivalent, 16 inches long
- B. Standard length
- C. EB-20
- D. BT-20 equivalent, 2.75 inches long
- E. CR20-50
- F. See scan
- G. 1/8" X 2"
- H. 1/16" diameter
- I. 1/32" diameter
- J. 3/4" X 1 1/8"
- K. 3 inches wide
- L. 1/8" balsa
- M. See scan
- N. See scan
- O. See scan