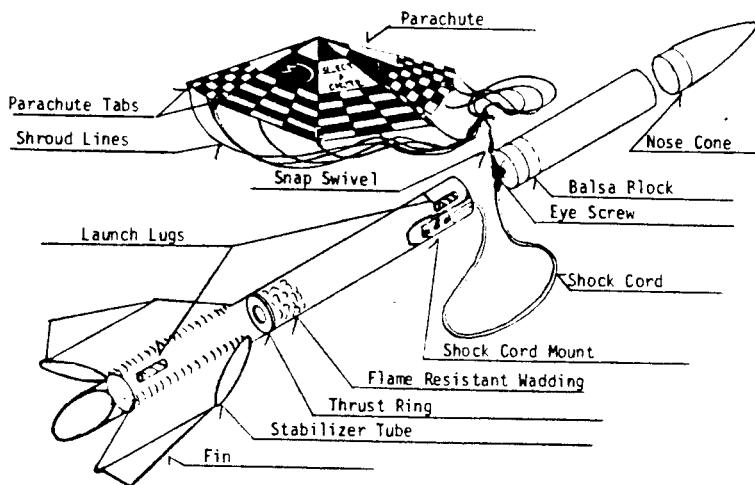


## VIKING II

The Viking II features a unique stablizer design for extreme stability. It makes a beautiful display model in addition to being an excellent flying rocket.



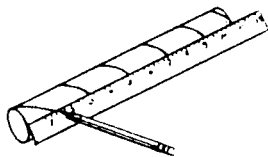
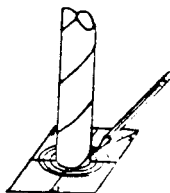
### PARTS LIST:

1 9" X .903 Body Tube (RT-809)	1 20" Shock Cord
1 4" X .903 Body Tube (RT-804)	1 Shock Cord Anchor
1 Nose Cone (NC-81)	1 Screw Eye
3 Fins	1 Snap Swivel
3 Stabilizer Tubes	1 Balsa Bulkhead (BB-8)
1 Balsa Bulkhead (BB-8)	8 Glue Tabs
1 Spacer Tube	8 Shroud Line
1 Thrust Ring (TR-1)	1 Parachute Canopy
1 Thrust Ring (TR-3)	2 1/8" Launch Lugs
2 Centering Ring (CR-68)	2 1/4" Launch Lugs
1 3" X .718" Engine Mount Tube	1 Wadding
	1 Decal Sheet

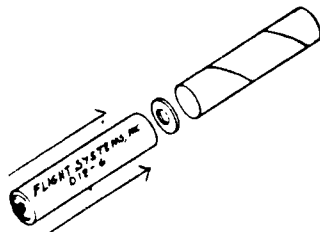
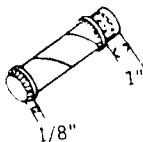
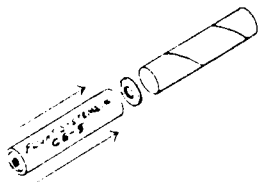
### ASSEMBLY INSTRUCTIONS:

#### Important:

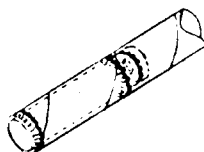
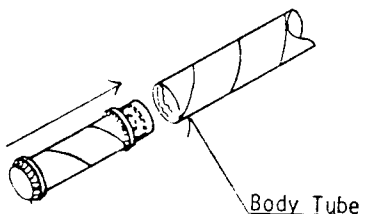
Read through entire instructions before starting assembly. Check to be sure all parts are present. Familiarize yourself with the parts. Test fit the parts together before applying any glue. If a part doesn't fit properly, sand or build up for a precision fit. Please read each step before starting that step. Check off each completed step.



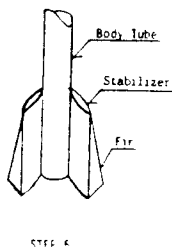
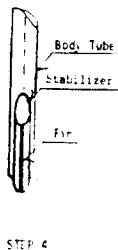
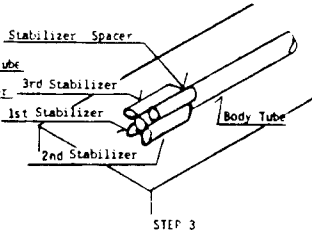
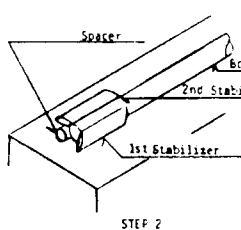
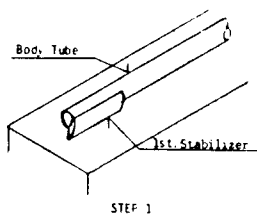
1. Using fin alignment guide mark lines on the body tube for stabilizer alignment as shown.



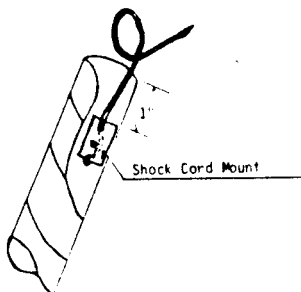
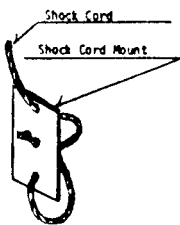
2. Decide whether you wish to use F.S.I. 18mm (A6, B6, C6) or F.S.I. 21mm (D18, D20, E5) engine. For 18mm engine it will be necessary to assemble a motor mount. Run a ring of glue inside the 3" X .718 engine mount tube. Now using a F.S.I. 18mm engine push small TR-3 thrust ring into engine mount tube until engine protrudes 3/8". Remove engine and allow thrust ring to dry. Glue centering rings on engine mount tube in position shown above. Put heavy glue fillets on each side of each centering ring. Set aside to dry. If using 21mm engine run a ring of glue inside end of body tube marked for fin placement. Using F.S.I. 21mm engine push thrust ring into body tube until engine protrudes 3/8". Remove engine. If using 21mm engine skip step 3.



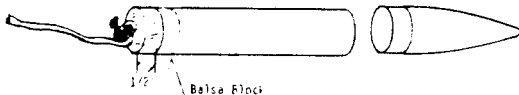
3. After 18mm engine mount from step 2 has completely dried install it in end of body tube marked for fin placement by placing a ring of glue inside body tube and sliding engine mount in until it is flush with back of tube. DO NOT STOP pushing engine mount until it is in place or it will stick.



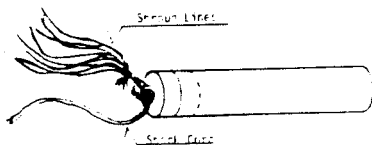
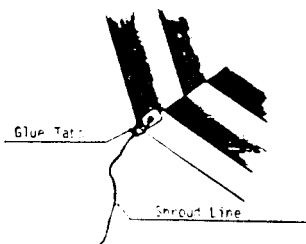
4. Apply a line of glue to first stabilizer and press into place as shown above. Stabilizer should be parallel to body tube. Hold until glue sets up. - Use spacer tube as shown above to attach 2nd and 3rd stabilizers. After stabilizers have dried run 2 or 3 heavy glue fillets on each side of each stabilizer for added strength. Allow to dry. Attach fins. Position as shown above. Fillet both sides of each fin. Allow to dry. Apply a line of glue to launch lug and place centered between any 2 stabilizers. Attach upper lug 7" up tube from lower lug. Be sure it is aligned with lower lug.



5. Install shock cord in shock cord mount as shown. Spread a heavy layer of glue over the side opposite the shock cord knot. Curve shock cord mount and insert into the nose cone end of the body tube and firmly press in place. Drawing shows the proper position in the body tube.



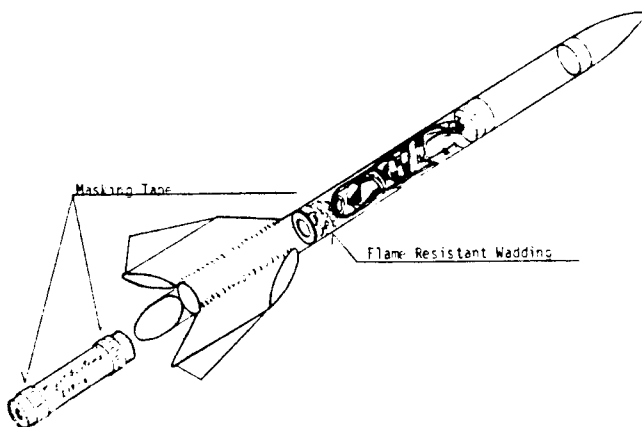
6. Run a ring of glue inside 4" X .903" payload section. Slide balsa bulkhead into payload section until it protrudes 1/2". Allow to dry in place. Twist eyescrew into center of balsa bulkhead and attach shock cord. Slide nose cone into other end of payload section.



7. Cut parachute to 14". Assemble as shown above by attaching one glue tab to each corner of chute, punching a hole through the center of each and tying a shroud line through each. Tie shroud lines to snap swivel and attach to eyescrew in balsa block.
8. The rocket is now ready to paint and add decals. It is recommended that a light coat of paint be sprayed on and let dry. Add a couple more mist coats lightly sanding between them. Then apply a wet coat (gloss just appears) and set aside to dry. After model is completely dry apply decals. Cut one decal at a time from the sheet and submerge in lukewarm water until decal will slide off of the paper (usually about 20 seconds). Gently slide decal onto rocket and carefully smooth out any wrinkles.

## FLIGHT PREPARATION

1. Install flameproof wadding as shown in cutaway view of rocket.
2. Fold and install parachute. It is a good idea to dust parachute with ordinary talcum powder before each flight.
3. Install engine using Friction Fit. Several wraps of masking tape are placed around the engine as shown to hold the engine in place.
4. Insert F.S.I. engine until contact is made with the thrust ring. Be sure to use enough masking tape to assure a snug fit in the body tube. It should require a firm push. If the engine doesn't fit firmly it will be ejected instead of the parachute and the rocket will free fall.
5. Place the rocket on the launcher insert the F.S.I. ignitor and attach the firing clips as shown.
6. Go back to launch control and clear the area. Arm the launch control by inserting the phone jack attached to the firing line.
7. Give count down, 5-4-3-2-1, ignition!!

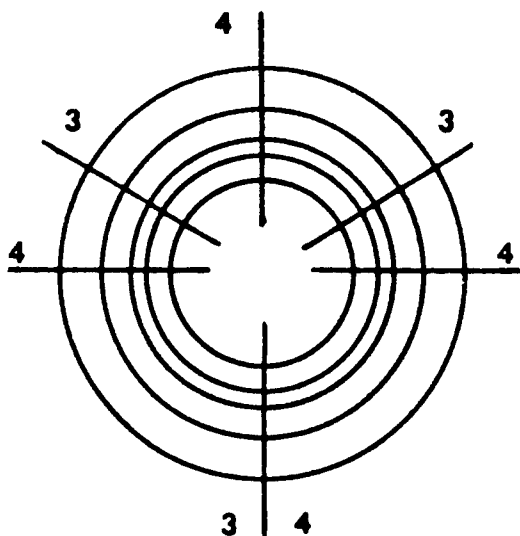


Be sure to follow the \*HIA-NAR Model Rocket Safety Code when carrying out your model rocket activities.

\*HIA- Hobby Industry of America

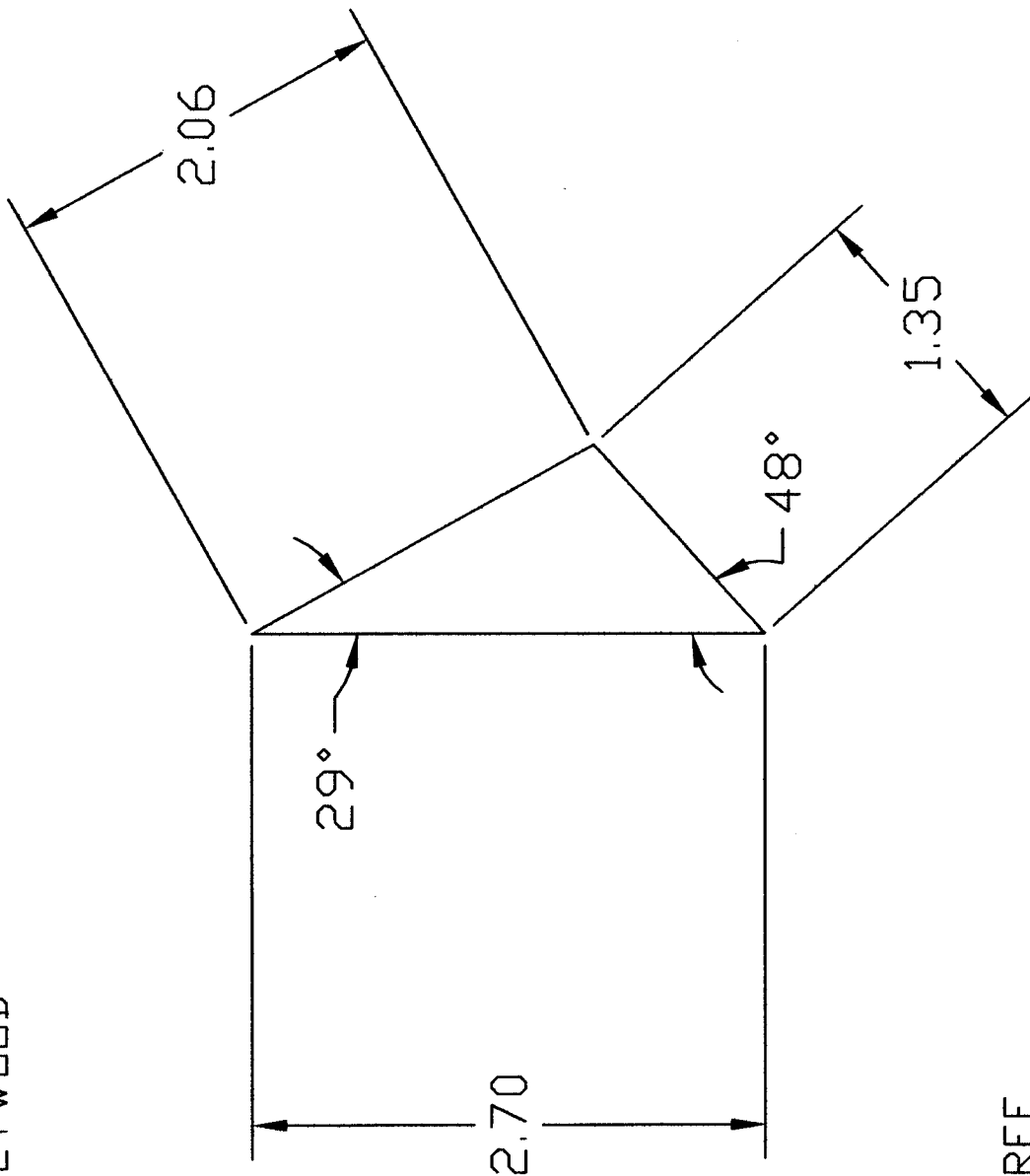
NAR- National Association of Rocketry

## FIN PLACEMENT GUIDE



1. Center end of tube in the proper circle.
2. Mark (4) lines for four fin models and (3) lines for three fin models.

1/16" PLYWOOD

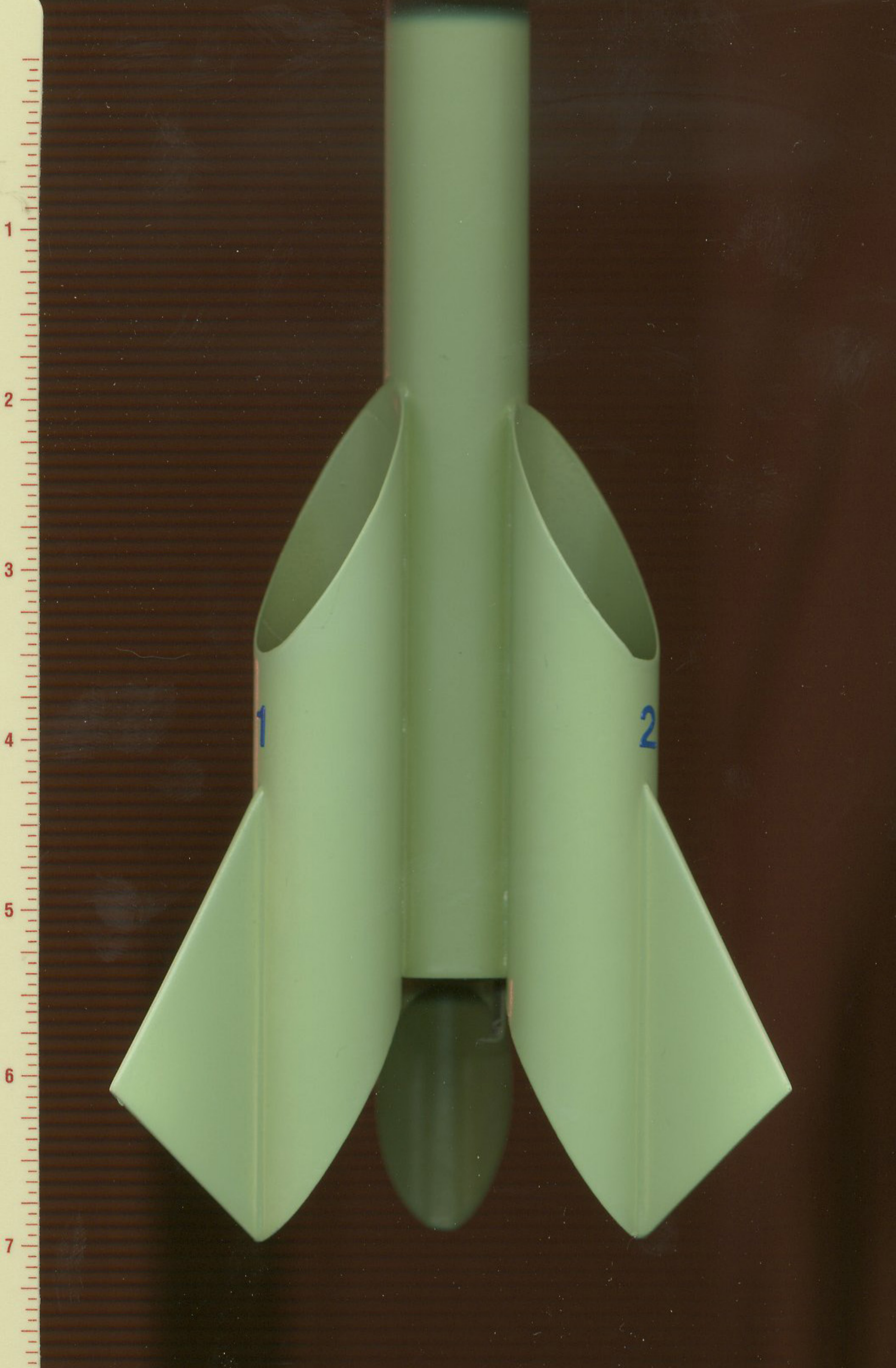


MAKE THREE

FSI

VIKING II

FIN PATTERN



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4

[Redacted]

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5

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## FSI Viking II Parts List

Nose Cone:	2.85" (from shoulder to tip) Fit .908BT from Totally Tubular. (From Balsa Machining.com Shape=9, Size=2, Q=.908, L=2.0, M=.5, I=.865, A=1.0)
Payload Body Tube:	8" length. Use .908 BT from Totally Tubular.
Lower Body Tube:	12" length. Use .908 BT from Totally Tubular.
Fin Material:	1/16" Plywood
Stabilizer Tubes:	5" length. Use .908 BT from Totally Tubular.
Balsa Bulkhead:	1" length. (From Balsa Machinin.com Shape=2, Q=.865, L=1.0)
Engine Mount Tube:	For 18mm, Use BT20, 3" long
Thrust Ring:	For BT20
Centering Rings:	Use CR20-50 and trim to fit
Shock Cord:	At least 24" length
Parachute:	14"
Launch Lug:	1/8" X 1"