

# COMPETITOR

## FLYING MODEL ROCKET

*Easy to  
Assemble*

*13" Long*

An advanced design for competition. Features elliptical fins and unique rear parachute ejection.

Flights over 1000'

Specifications:

Length—13"

Body Dia.—0.903"

Takeoff weight without engine: 1.2 oz. (32 g)\*

Recommended F.S.I. Engines:

\*\*A6-5, B6-5, C6-7

### Skill Level 2

This kit requires assembly. Launch systems, engines, glue, and finishing supplies are not included.

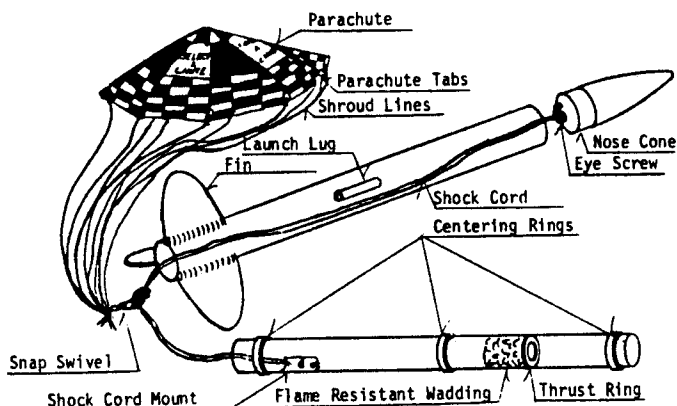
Adult supervision recommended

**1026**



# COMPETITOR

The Competitor is an extremely high performance model designed for competition. It features an elliptical fin design for reduced drag at sub-sonic speeds. A unique rear parachute ejection system is used. This model can be used in parachute duration, streamer duration, or spot landing contests.



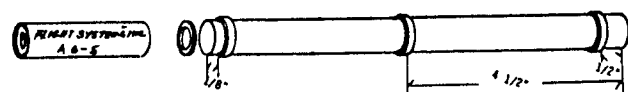
## PARTS LIST:

1 Nose Cone	1 Eyescrew
1 Body Tube 10" X .903"	1 Snap Swivel
1 Fin Material Sheet	1 Parachute Canopy
1 Engine Mount Tube	8 Parachute Shroud Lines
1 Thrust Ring (TR-3)	8 Parachute Glue Tabs
3 Centering Rings (CR-68)	1 Launch Lug
1 Shock Cord	1 Flameproof Wadding
1 Shock Cord Mount	1 Decal Sheet

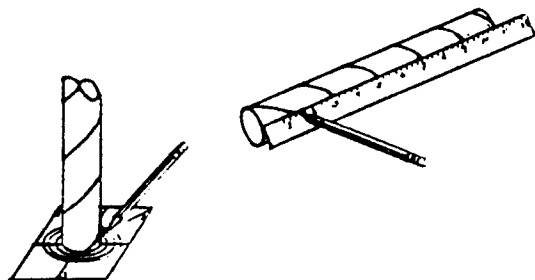
## ASSEMBLY INSTRUCTIONS:

### Important:

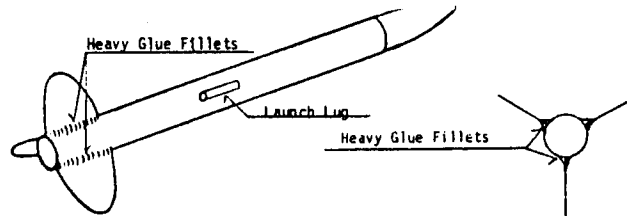
Read through the entire set of instructions before starting assembly. Check to be sure all parts are present. Familiarize yourself with the parts. Test fit the parts together before applying any glue. If a part doesn't fit properly sand or build up for a precision fit. Please read each step before starting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



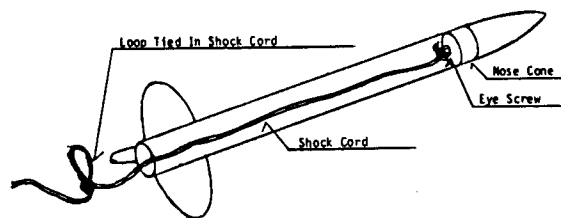
1. Place a ring of glue inside the small 9" X .718 engine mount tube. Using a F.S.I. 18mm engine push the thrust ring into the tube as shown. Engine should protrude 3/8". Remove the engine. Place centering rings on tube as shown. Put a glue fillet on each side of each ring. Avoid getting glue on tops of rings. Set aside and allow to dry.



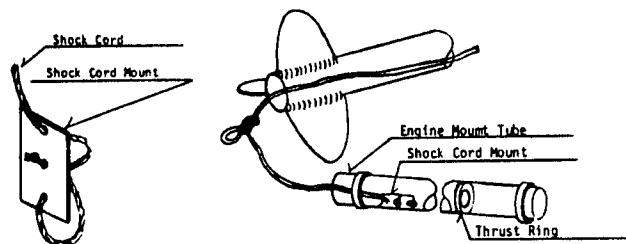
2. Mark the body tube for fin placement as shown. Using a straight edge extend vertical lines 2" up the body tube.



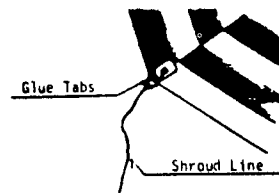
3. Attach fins to rocket. Be sure they are carefully aligned with marks from step 2 and that they stick straight out from body tube. After dry run 2 or 3 heavy glue fillets on each side of each fin. Glue launch lug centered between 2 fins, and parallel to body tube.



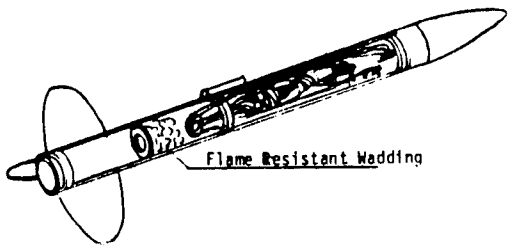
4. Twist eyescrew into the center rear of nose cone, tie shock cord to eyescrew. Thread shock cord through body tube. Glue nose cone in place. DO NOT allow glue to run down inside of body tube. Tie a loop in shock cord 9" from the free end as shown.



5. Sand the centering rings slightly so that the engine mount will slide easily in and out of the body tube. Thread the free end of the shock cord through the shock cord anchor as shown. Glue the shock cord anchor in the end of the engine mount.



6. Cut parachute to 12". Assemble as shown. Attach glue tab to each corner, punch a hole through the center of each glue tab. Tie a shroud line through each hole. Tie the shroud lines to the snap swivel and attach the snap swivel to loop in shock cord.

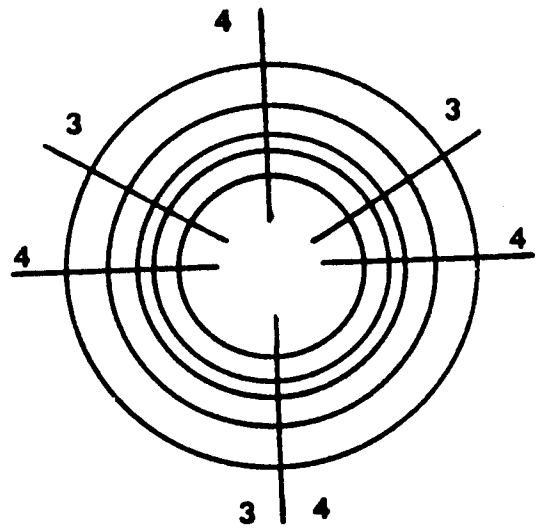


- 7. Push wadding into the top of the engine mount until it comes in contact with the thrust ring. Fold the parachute. Insert shock cord and parachute into top of engine mount tube. Slide the engine mount tube into body tube until the engine mount tube is flush with the back of the body tube.
- 8. The 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.

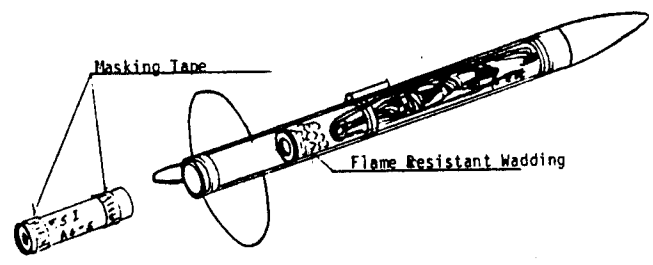
**FLIGHT PREPARATION**

- 1. Install engine using Friction Fit. Several wraps of masking tape are placed around the engine as shown to hold the engine in place.
- 2. 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.
- 3. Place the rocket on the launcher insert the F.S.I. ignitor and attach the firing clips as shown.
- 4. Go back to launch control and clear the area. Arm the launch control by inserting the phone jack attached to the firing line.
- 5. Give countdown, 5-4-3-2-1, ignition!!

**FIN PLACEMENT GUIDE**



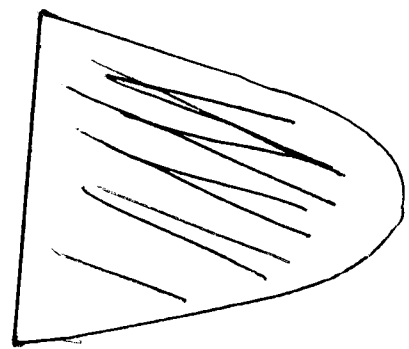
- 1. Center end of tube in the proper circle.
- 2. Mark (4) lines for four fin models and (3) lines for three fin models.



3/16" Balsa

FSI Competitor

1 inch



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0 21 22 23  
7 28 29 30

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**MARCH**  
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**APRIL**  
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1 22 23 24  
8 29 30

**MAY**  
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6 27 28 29

**JUNE**  
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**JULY**  
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**AUGUST**  
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**SEPTEMBER**  
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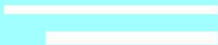
**NOVEMBER**  
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# COMPETITOR

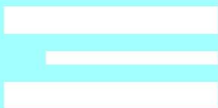
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Nose Cone: 2 7/8" (from shoulder to tip)  
Fit .908 BT available from Totally Tubular.  
(From BalsaMachining.com Shape=9, Q=.908, L=1.85, M=.5, I=.865, A=1.0)

Body Tube: Use .908 BT available from Totally Tubular.

Fin Material: 3/16" Balsa

Engine Mount Tube: Use BT20, 8 7/8" long

Thrust Ring: For BT20

Centering Rings: Use CR20-50 and trim to fit

Shock Cord: At least 24" length

Parachute: 12"

Launch Lug: 1/8" X 1 1/4"