

# OSO

## FLYING MODEL ROCKET

*Easy to  
Assemble*

*29" Long*

Durable Aircraft Plywood Fins

Altitudes in excess of 3,500'  
with larger F.S.I. Engines.

Specifications:

Length—29"

Body Dia.—1.130"

Takeoff weight without  
engine: 3.5 oz. (99 g)\*

Recommended F.S.I. Engines:

D18-4, D18-6, D20-5, D20-7,  
F7-6, F100-8

Order Engine Mount C-10  
for using D engines.

### Skill Level 2

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

ADULT SUPERVISION RECOMMENDED

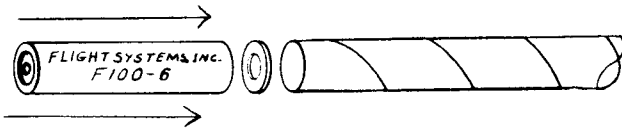
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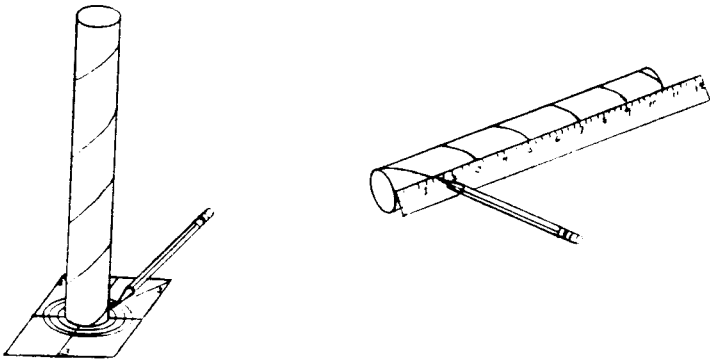
## ASSEMBLY INSTRUCTIONS:

### Important:

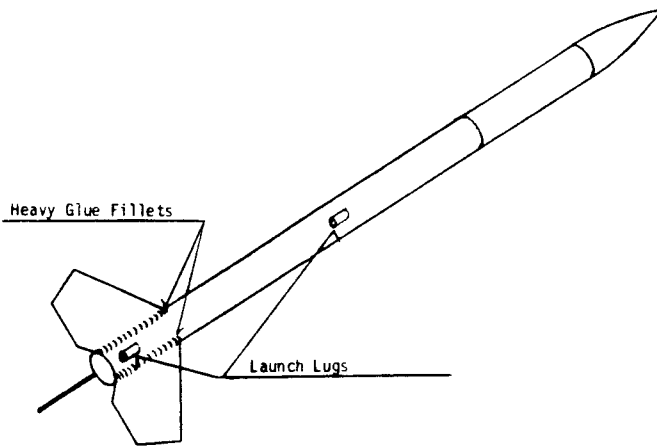
Read through entire instructions before starting assembly. Check to be sure all parts are present. Familiarize yourself with the parts. Test fit the parts together before applying any glue. If a part does not fit properly, sand or build up for a precision fit. Please read each step before starting that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



1. For using large 27mm F.S.I. engines such as the F100 or E60 series install the thrust ring as follows: Put a ring of glue inside the body tube. Take a F.S.I. 27mm engine and push the thrust ring into the body tube until the engine projects out of the body tube 1/2". Use one smooth motion and do not stop until the thrust ring is in the desired location or it will stick in the position in which you stopped.



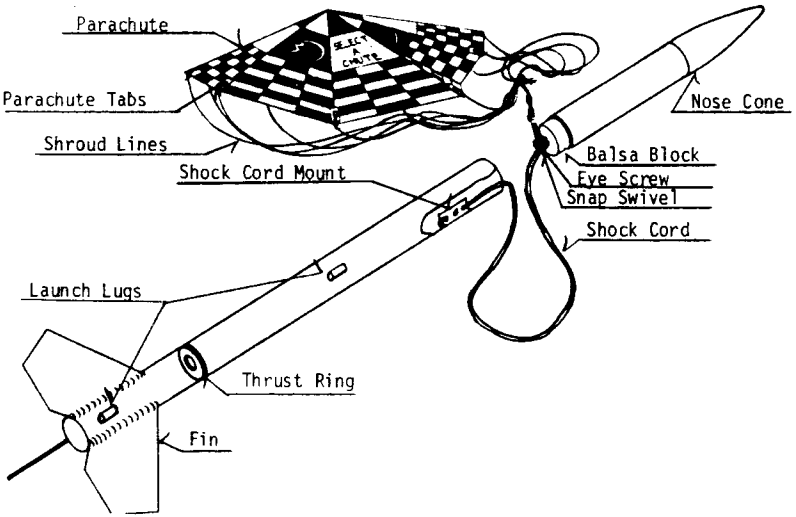
2. Using fin alignment guide mark lines for fin alignment as shown. Use (3) marks for 3 fin models.



3. Lightly sand and round the edges of all fins. DO NOT sand root (red colored edge) of fins. Attach red edge of the fins to the body tube. Be sure the fins stick straight out from the body tube and are carefully aligned with the lines marked on the body tube. Apply a line of glue to launch lug and place it centered between two fins as shown. Stand the assembly on its forward end and allow to dry. When dry, run 2 or 3 heavy glue fillets on both sides of the fins for added strength. Glue second launch lug 9" up tube from lower lug and parallel with lower lug.

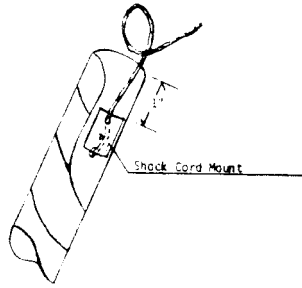
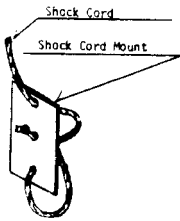
# OSO

The Oso was designed as a research vehicle. Payloads can be carried to altitudes of many thousands of feet using the powerful F.S.I. engines. To use F.S.I. 21mm D series engines order C-10 engine mount.

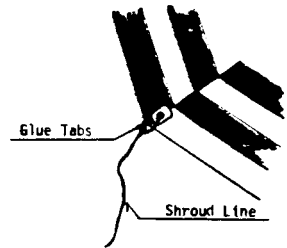
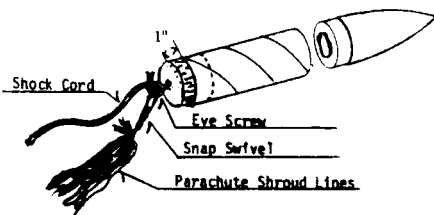


**PARTS LIST:**

- |                                |                           |
|--------------------------------|---------------------------|
| 3 Fins                         | 1 Shroud Line             |
| 1 Body Tube (18" X 1.13")      | 1 Parachute Tab           |
| 1 Payload Section (6" X 1.13") | 1 Shock Cord              |
| 1 Nose Cone                    | 1 Shock Cord Anchor       |
| 1 Balsa Block                  | 2 Launch Lugs             |
| 1 Eyescrew                     | 1 Thrust Ring             |
| 1 Snap Swivel                  | 1 Fin Placement Guide     |
| 1 Parachute                    | 1 Flame Resistant Wadding |
|                                | 1 Decal Sheet             |



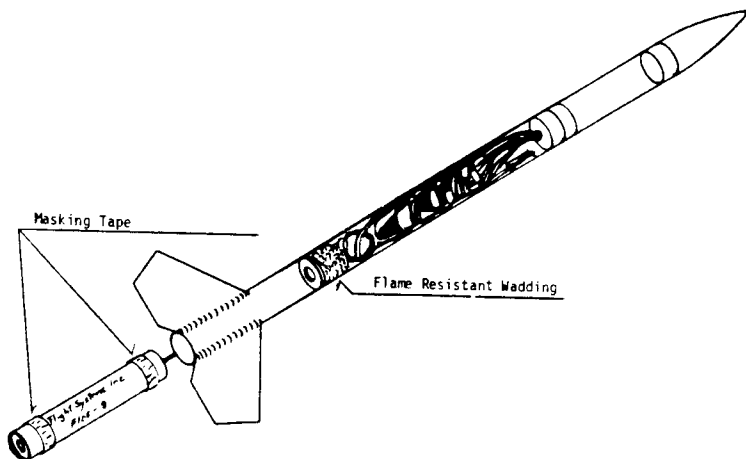
4. Install the shock cord in the top end of the body tube (opposite end of fins). Install the shock cord as follows; Tie shock cord to the shock cord mount as shown. Spread a heavy layer of glue over the side opposite the shock cord knot. Curve the shock cord mount and insert into the nose cone end of the body tube and firmly press in place. The drawing shows the proper position in the body tube. Note, shock cord mount must be 1" down from end of body tube.



5. Put a ring of glue inside of the payload section. Insert balsa block as shown. Twist eyescrew into the center of the balsa block. Put a small amount of glue on eyescrew to keep it from coming loose. Attach the shock cord. The parachute is marked in inches. Cut with scissors to the desired size. For the Oso, cut 16" size. Lay the parachute on a flat surface and attach shroud lines as shown. Punch a hole through the glue tab and tie the shroud lines to the parachute. Attach the snap swivel. Insert nose cone.
6. 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 does not 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!!

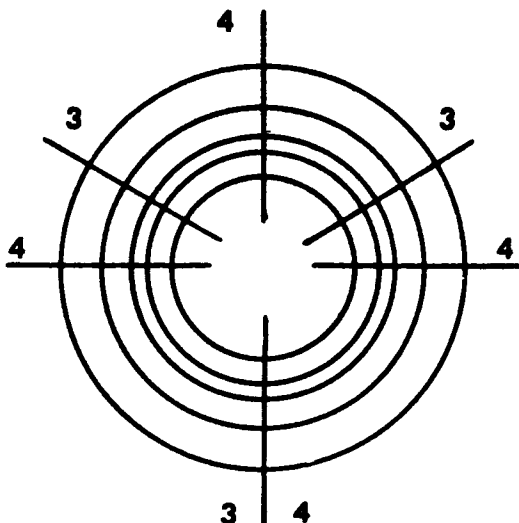


Be sure to follow the \*HIA-NAR Model Rocket Safety Code when carrying out your model rocket activities.

\*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.

15 16  
21 22 23  
28 29 30

**JANUARY**  
3 4 5 6  
10 11 12 13  
17 18 19 20  
24 25 26 27

**MARCH**  
3 4 5 6  
10 11 12 13  
17 18 19 20  
24 25 26 27

**APRIL**  
1 2 3  
7 8 9 10  
14 15 16 17  
21 22 23 24  
28 29 30

**MAY**  
1 2 3  
5 6 7 8  
12 13 14 15  
19 20 21 22  
26 27 28 29

**JUNE**  
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9 10 11 12  
16 17 18 19  
23 24 25 26

**JULY**  
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7 8 9 10  
14 15 16 17  
21 22 23 24  
28 29 30 31

**AUGUST**  
4 5 6 7  
11 12 13 14  
18 19 20 21  
25 26 27 28

**SEPTEMBER**  
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15 16 17 18  
22 23 24 25  
29 30

**OCTOBER**  
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20 21 22 23  
27 28 29 30

**NOVEMBER**  
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**DECEMBER**  
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# OSO

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**FLIGHT SYSTEMS**

