

# TARTAR

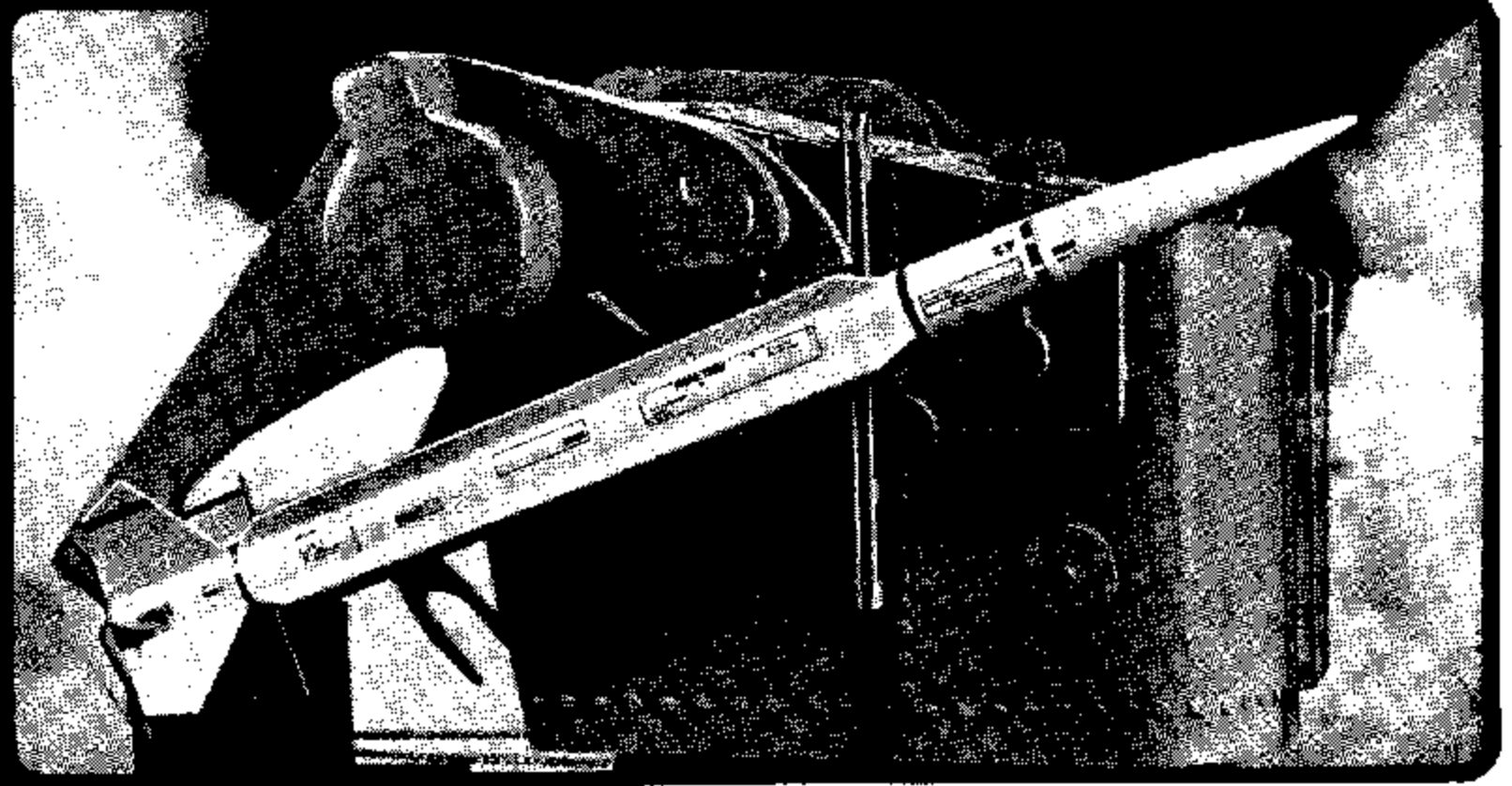
U.S. Navy Surface-to-Air Missile

SKILL LEVEL 2 SEMI-SCALE

HONORABLE MENTION  
DESIGN OF THE MONTH

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Lakeside, California

ESTES INDUSTRIES ROCKET PLAN NO. 83



★ BUILD THE TARTAR WITH ESTES HIGH PERFORMANCE PARTS AND ACCESSORIES.

**PARTS LIST**

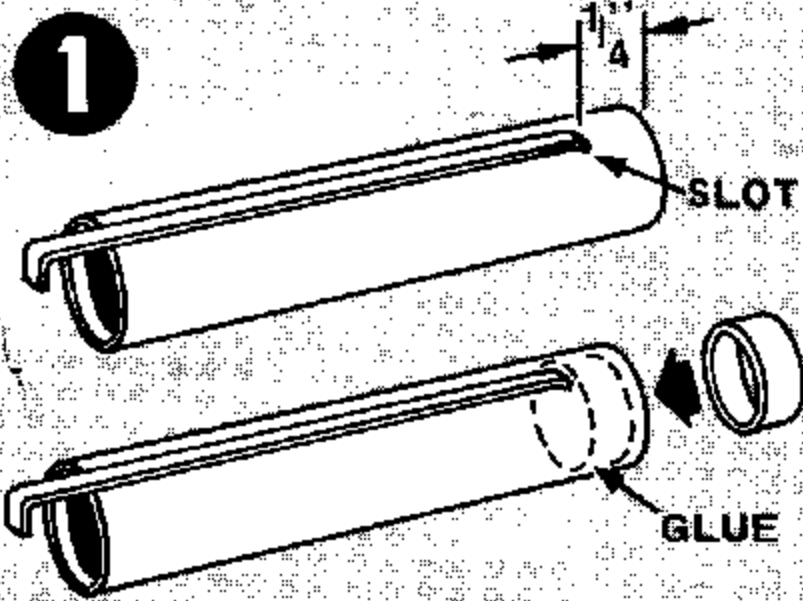
- 1 18" Body Tube . . . . . BT-55
- 1 Nose Cone . . . . . BNC-55AC
- 1 Launch Lug . . . . . LL-2A
- 1 Screw Eye . . . . . SE-2
- 1 Shock Cord . . . . . SC-1
- 1 18" Parachute . . . . . PK-18
- 1 Balsa Fin Stock . . . . . BFS-30
- 1 Balsa Fin Stock . . . . . BFS-30W
- 1 Engine Mount . . . . . EH-2055
- 1 Engine Hook . . . . . EH-2

**ADDITIONAL MATERIALS**

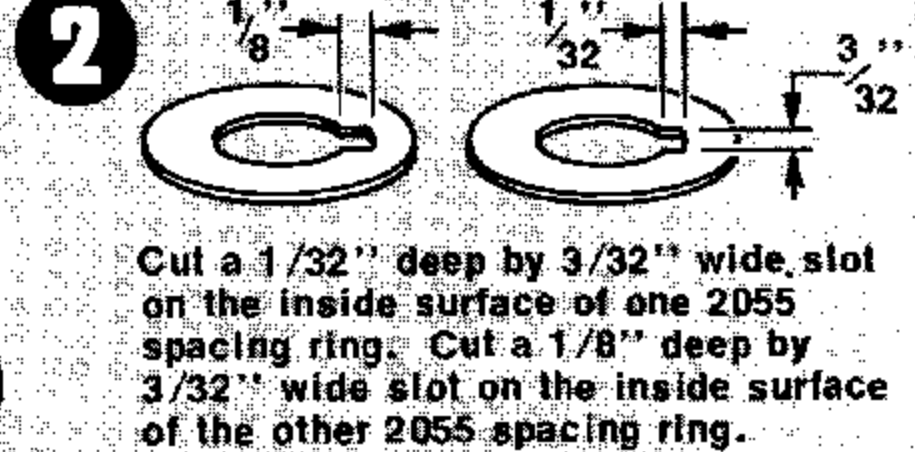
- Hobby Knife
- White Glue
- Ruler
- Sanding Material
- Sanding Sealer
- Enamel Paint (Spray)
- Sharp Pencil

**RECOMMENDED ENGINES**

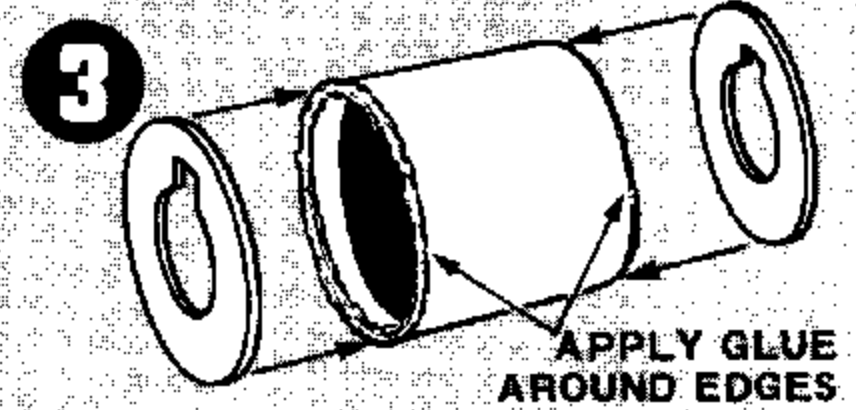
- B4-2
- B6-4
- C6-5



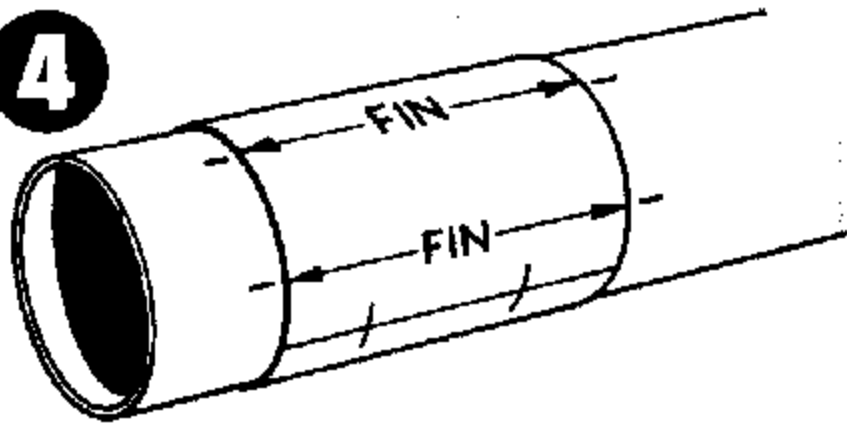
**1** Mark the BT-20 engine tube 1/4" from one end. Punch a 1/8" wide slot on this mark and insert EH-2 engine hook. Spread glue 1/4" inside the end of the engine holder tube nearest the slot and insert the engine block. Push it in place until it touches engine hook and is flush with the end of the engine holder tube.



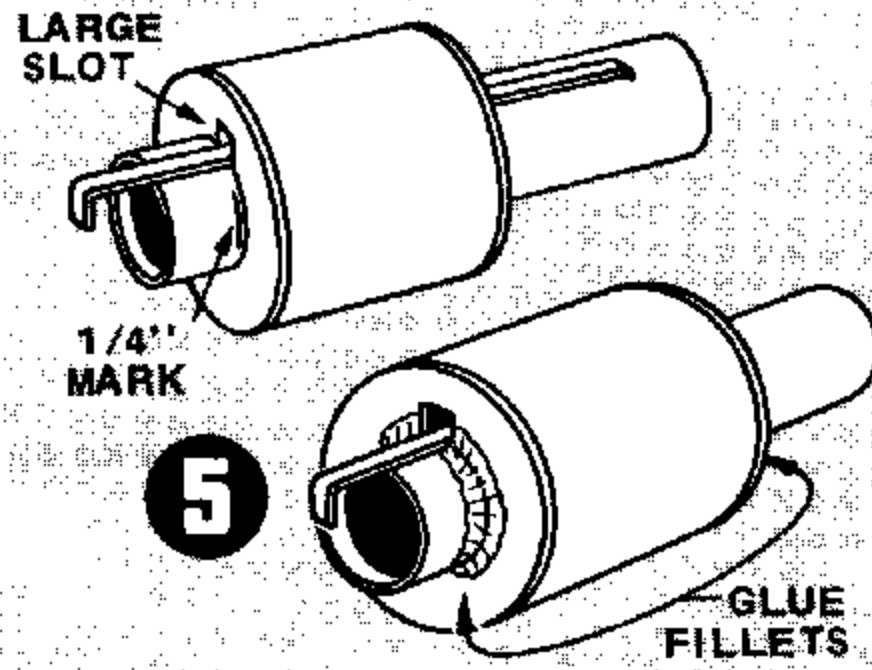
**2** Cut a 1/32" deep by 3/32" wide slot on the inside surface of one 2055 spacing ring. Cut a 1/8" deep by 3/32" wide slot on the inside surface of the other 2055 spacing ring.



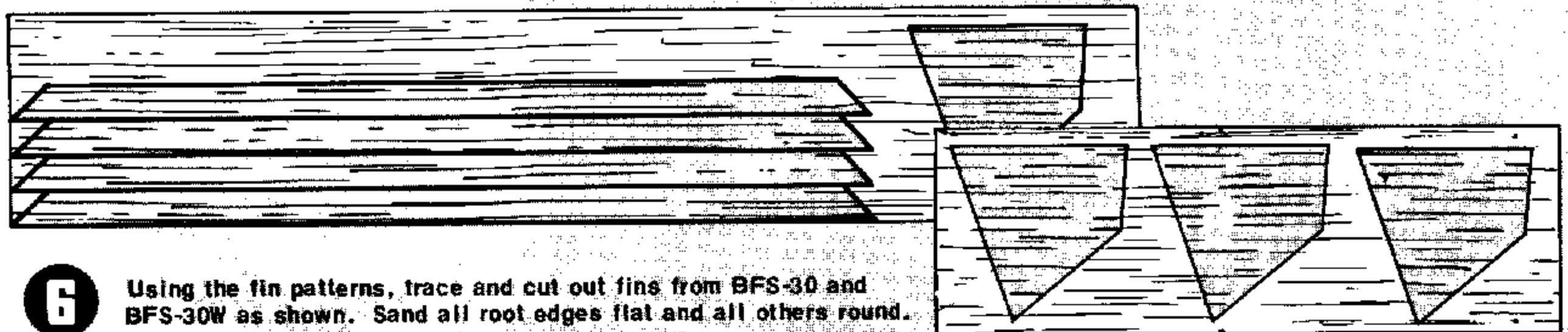
**3** Apply a line of glue around each end of the stage coupler. Place a spacing ring on each end as shown and wipe off excess glue. Be sure that slots are in line with each other. Set this and the engine holder assembly aside to dry completely.



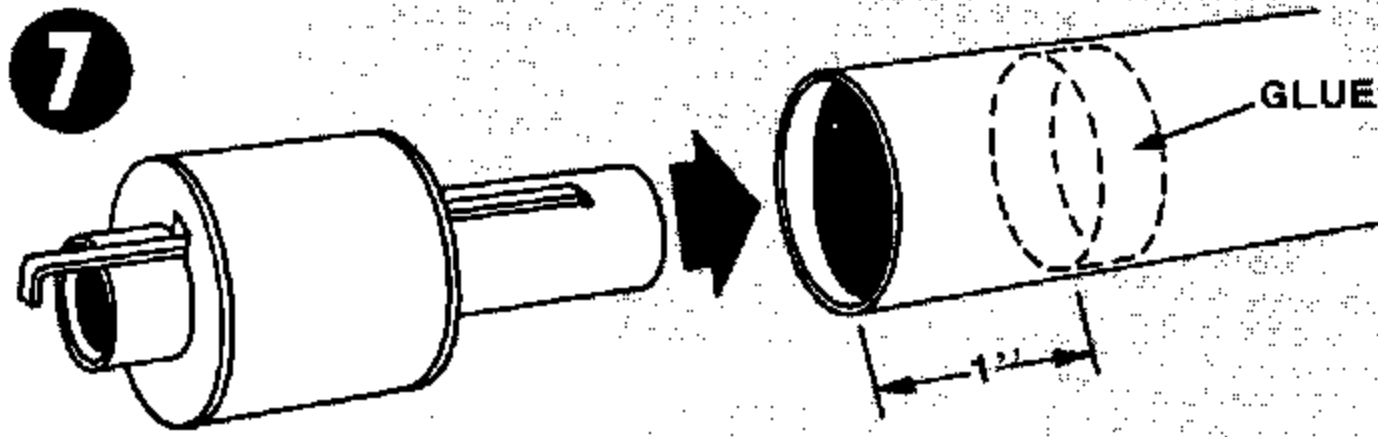
**4** Cut out the body tube marking guide. Wrap it around the rear of the body tube and mark the tube at each arrow point. Remove the guide and draw a straight line the entire length of the tube connecting each matching front and rear mark.



Mark the engine holder tube 1/4" from the end (end opposite engine block) as shown. Slide the engine holder assembly into the adapter assembly so the spacing ring with the larger 1/8" X 3/32" slot is on the 1/4" mark. Apply a fillet of glue around each ring-body tube joint, being careful not to get glue in the spacing ring slots. Allow unit to dry completely.



**6** Using the fin patterns, trace and cut out fins from BFS-30 and BFS-30W as shown. Sand all root edges flat and all others round.



**7** Spread a layer of glue 1" inside one end of the BT-55 body tube. Slide the engine mount assembly into the body tube until the end of the engine tube is flush with the BT-55. Do not pause during this operation or the glue may stick with the mount in the wrong place.

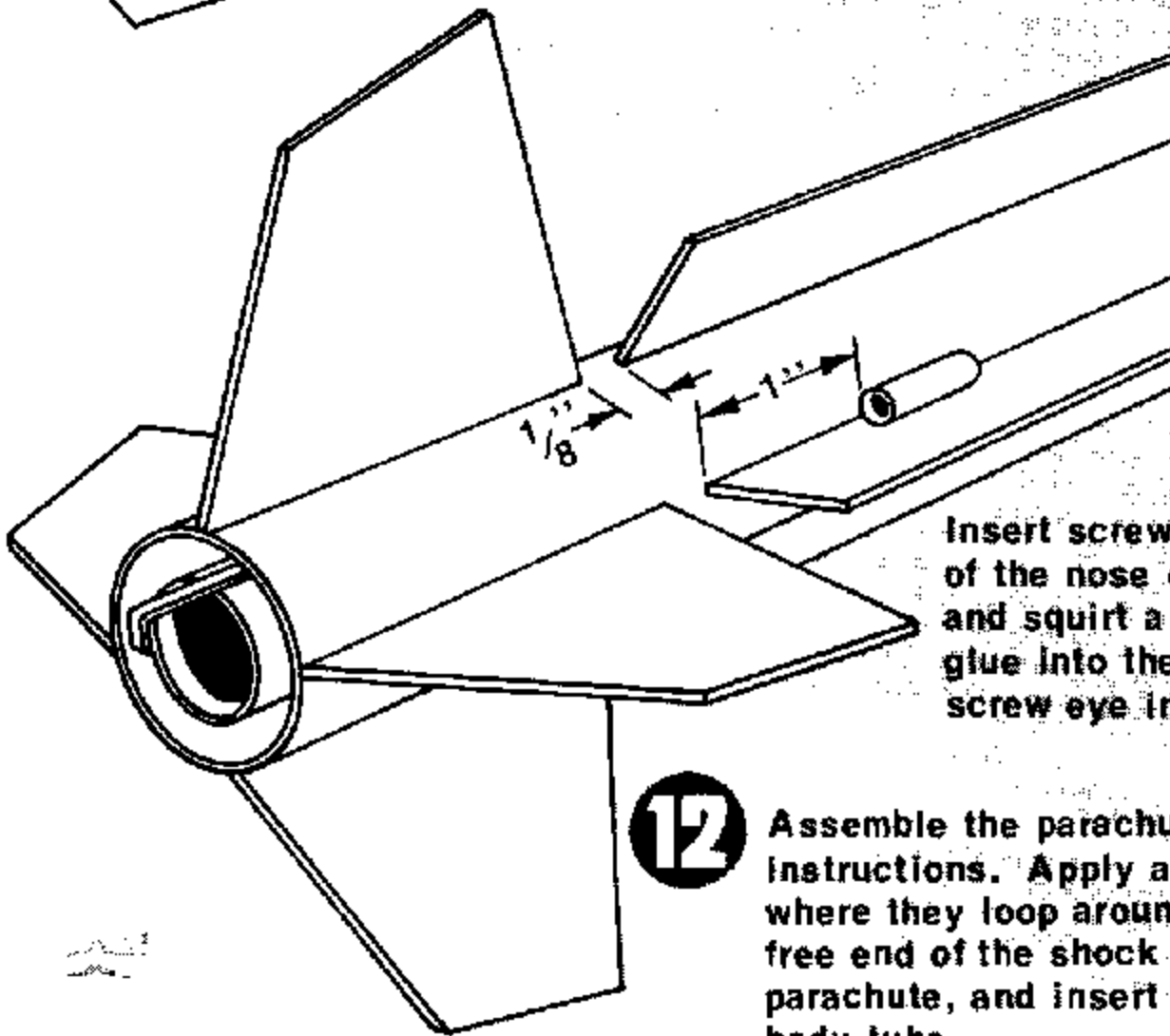


**9** Cut out the shock cord mount. Assemble as shown. When gluing mount into body tube, press it down until glue sets.

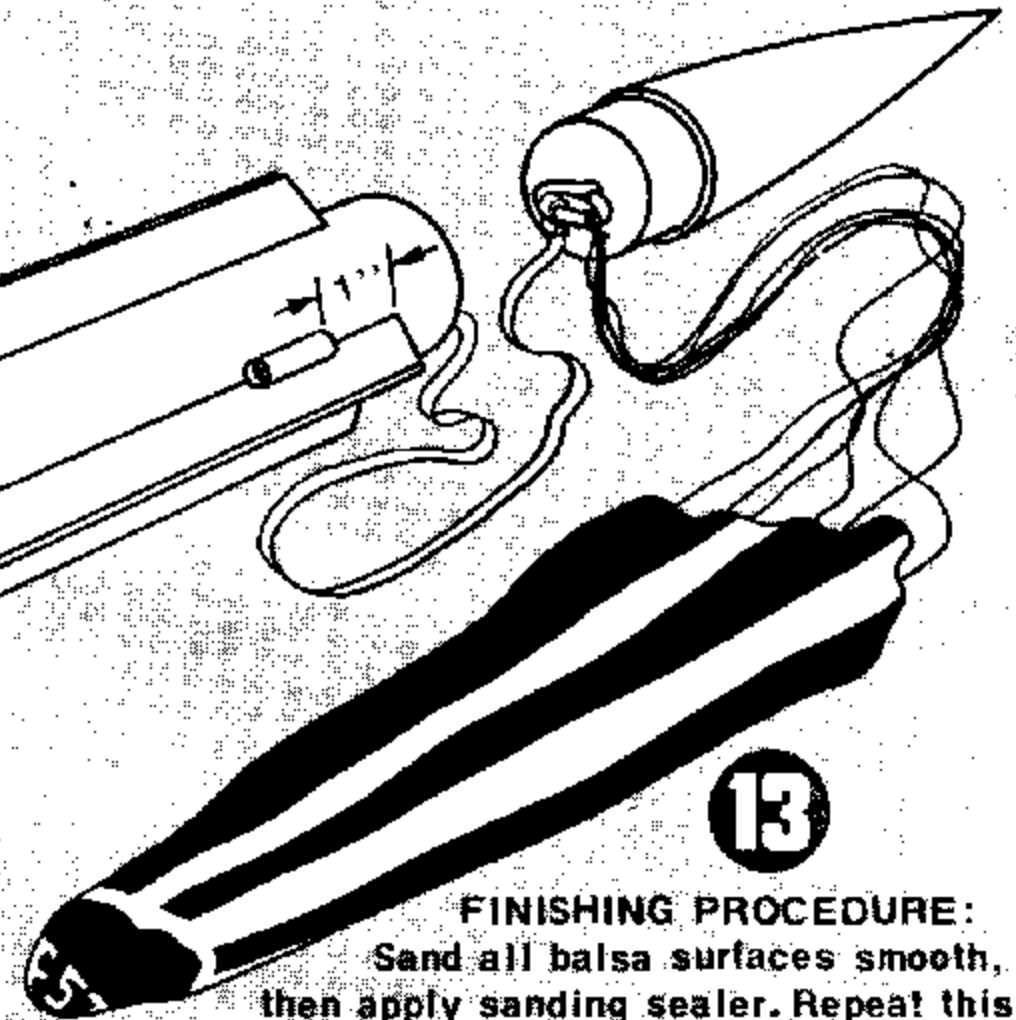


**8** Rub a priming coat of glue into the root edge of each fin and allow to set. Using guide lines, glue the four main fins to the rocket as shown: Glue one runway fin 1/8" above each main fin on guide line as shown.

**10** Cut launch lug (LL-2A) in half. Glue launch lugs between body tube and one runway fin 1" from each end of runway fin as shown.

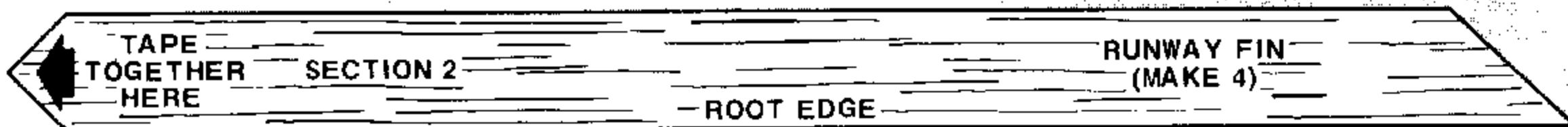
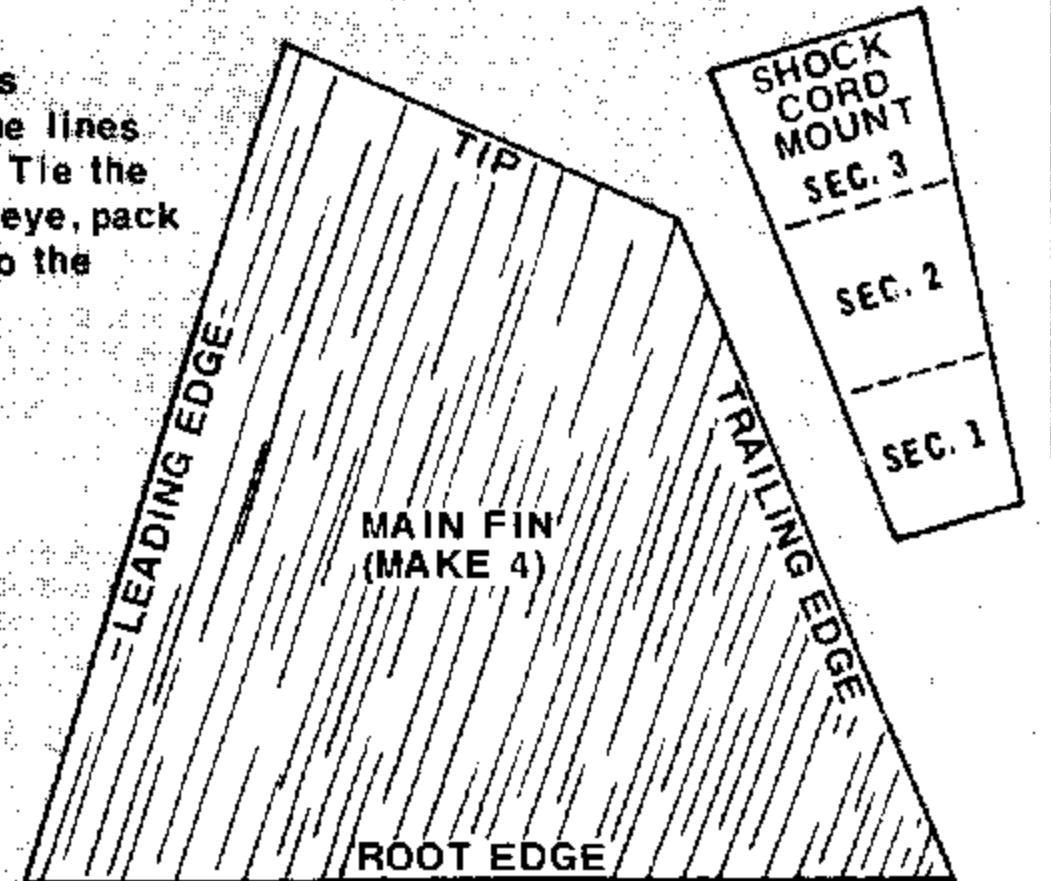
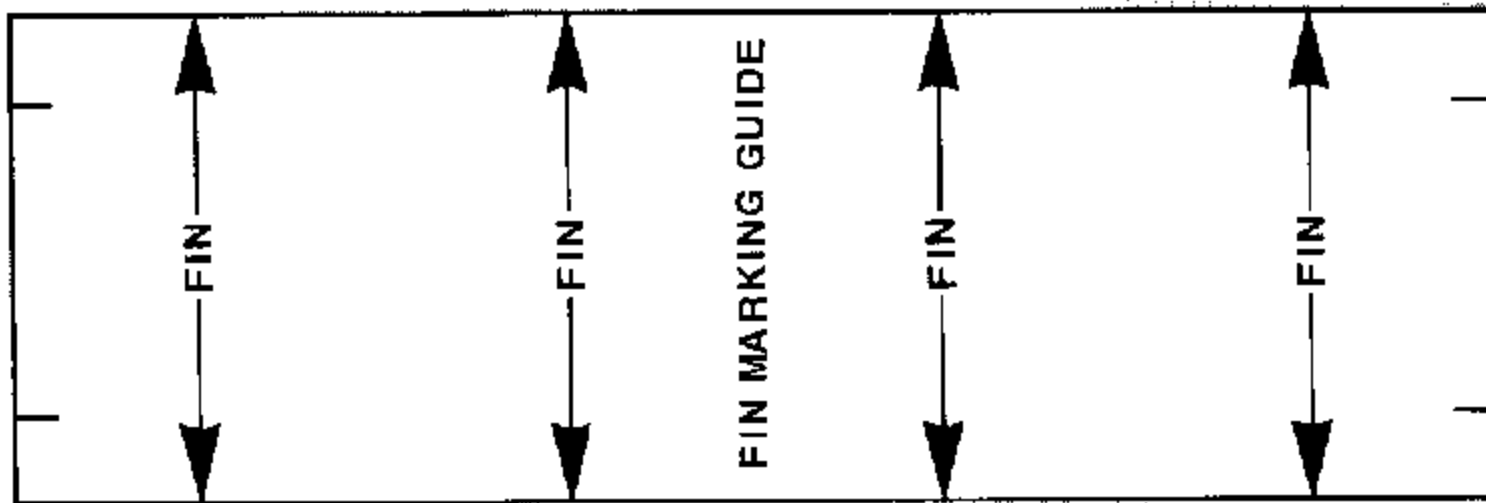


**11** Insert screw eye into the base of the nose cone. Remove it, and squirt a small amount of glue into the hole. Reinsert the screw eye into the nose cone.



**13** FINISHING PROCEDURE: Sand all balsa surfaces smooth, then apply sanding sealer. Repeat this procedure until balsa is smooth. Refer to photo for decor ideas.

**12** Assemble the parachute according to its instructions. Apply a spot of glue to the lines where they loop around the screw eye. Tie the free end of the shock cord to the screw eye, pack parachute, and insert the nose cone into the body tube.



TAPE SECTION 1 AND SECTION 2 TOGETHER TO FORM A ONE PIECE PATTERN

