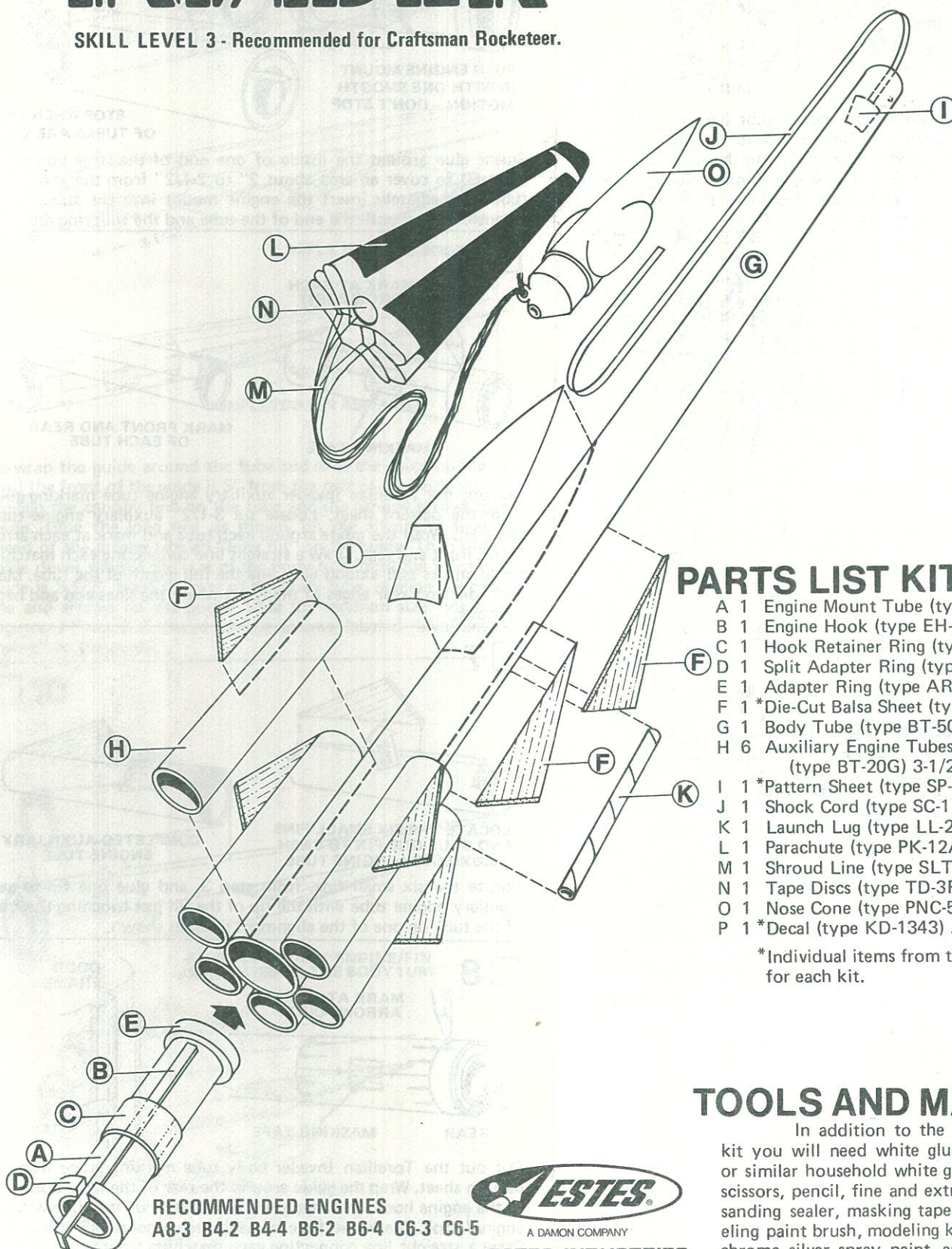


TORRELLIAN INVAIDER

SKILL LEVEL 3 - Recommended for Craftsman Rocketeer.

BEFORE YOU START

Read all instructions before beginning work on your model. Make sure you have all parts and materials. When you are thoroughly familiar with the assembly procedure, begin construction. Check off each step as you complete it. In each step, test-fit the parts together before applying any glue. If some part doesn't fit properly, sand lightly or build-up as needed for precision assembly.



PARTS LIST KIT NO. 1343

A	1	Engine Mount Tube (type BT-20J) . . .	30326
B	1	Engine Hook (type EH-2)	35025
C	1	Hook Retainer Ring (type HR-20) . . .	30168
D	1	Split Adapter Ring (type AR-2050S) .	80425
E	1	Adapter Ring (type AR-2050)	30164
F	1	*Die-Cut Balsa Sheet (type BF-1343A).	32347
G	1	Body Tube (type BT-50KE) 15"	30364
H	6	Auxiliary Engine Tubes (type BT-20G) 3-1/2"	30324
I	1	*Pattern Sheet (type SP-1343)	83317
J	1	Shock Cord (type SC-1)	85730
K	1	Launch Lug (type LL-2B) 2-3/8" . . .	38178
L	1	Parachute (type PK-12A)	85564
M	1	Shroud Line (type SLT-72)	38237
N	1	Tape Discs (type TD-3F)	38406
O	1	Nose Cone (type PNC-50CA)	71005
P	1	*Decal (type KD-1343)	37149

*Individual items from this part are needed for each kit.

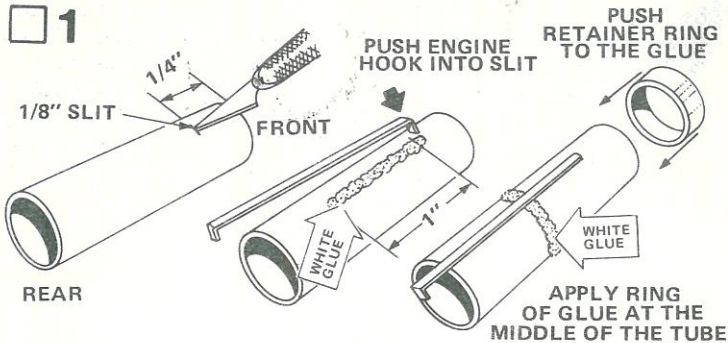
TOOLS AND MATERIALS

In addition to the parts included in this kit you will need white glue (Titebond, Elmer's, or similar household white glue is recommended.), scissors, pencil, fine and extra-fine grit sandpaper, sanding sealer, masking tape, a medium size modeling paint brush, modeling knife with sharp blade, chrome silver spray paint, and chromate green or artillery olive spray paint.

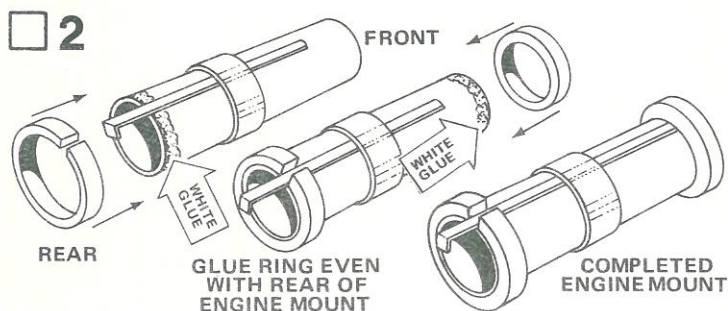


RECOMMENDED ENGINES
A8-3 B4-2 B4-4 B6-2 B6-4 C6-3 C6-5

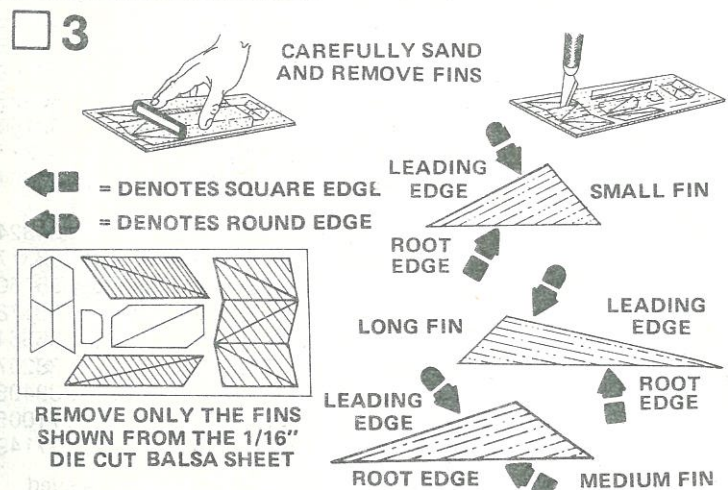
ASSEMBLY INSTRUCTIONS



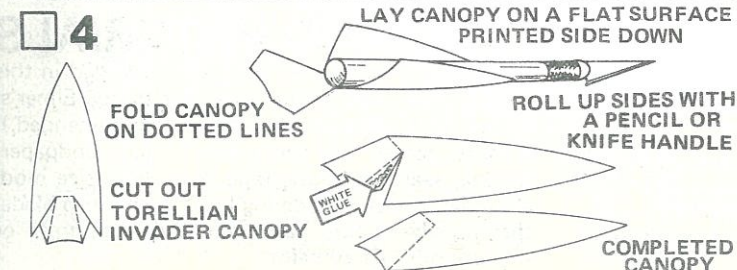
Cut a 1/8" long slit in the engine mount tube (part A), 1/4" from one end as shown. Apply a 1" line of glue to the tube as shown. Push one end of the engine hook (part B) into the slit and press the main part of the hook into the glue. Apply a line of glue around the middle of the tube and slide the hook retainer ring (part C) over the tube and hook and onto the glue.



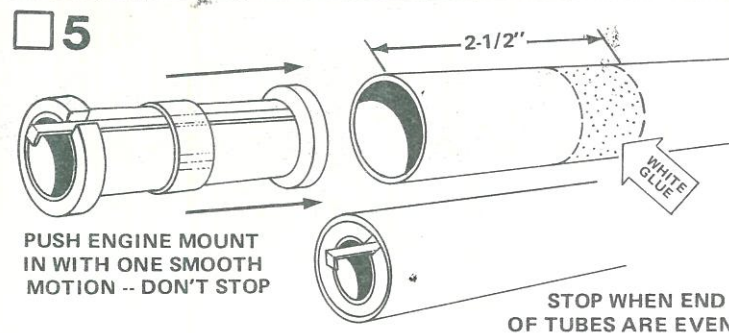
Glue the split adapter ring (part D) to the engine mount tube even with the rear end (the end with the over-hanging hook) so the slot is over the hook. Avoid getting glue in the slot. Glue the other ring (part E) to the front of the engine mount against the end of the hook as shown.



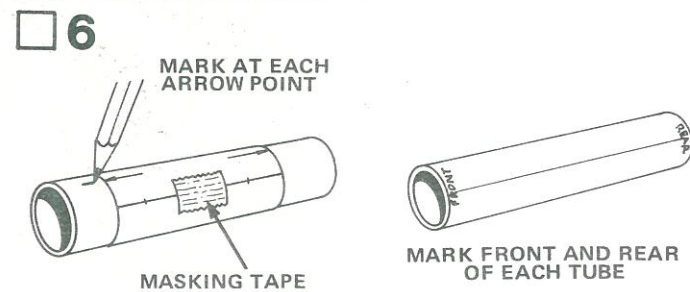
Sand both sides of the 1/16" balsa sheet (part F) until smooth using extra-fine sandpaper wrapped on a sanding block. Carefully remove only the parts needed from the sheet, as shown, using a sharp knife to separate any uncut spots. Round the leading edges only on the fins shown.



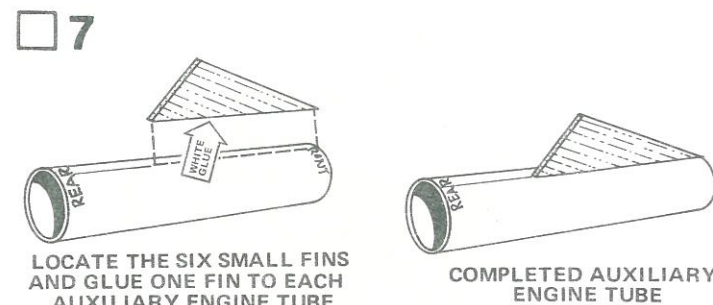
Cut out the canopy from the Torellian Invader side of the pattern sheet (part I) on the heavy outlines. Fold rear of canopy on dotted lines. Roll the sides up around a pencil or knife handle. Glue the rear of the canopy to the sides as shown.



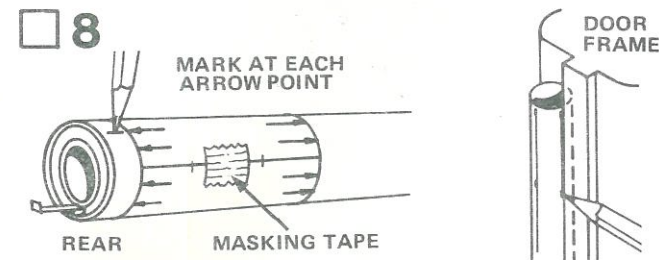
Smear glue around the inside of one end of the large body tube (part G) to cover an area about 2" to 2-1/2" from the end of the tube. Immediately insert the engine mount into the tube in one smooth motion until the end of the tube and the split ring are even.



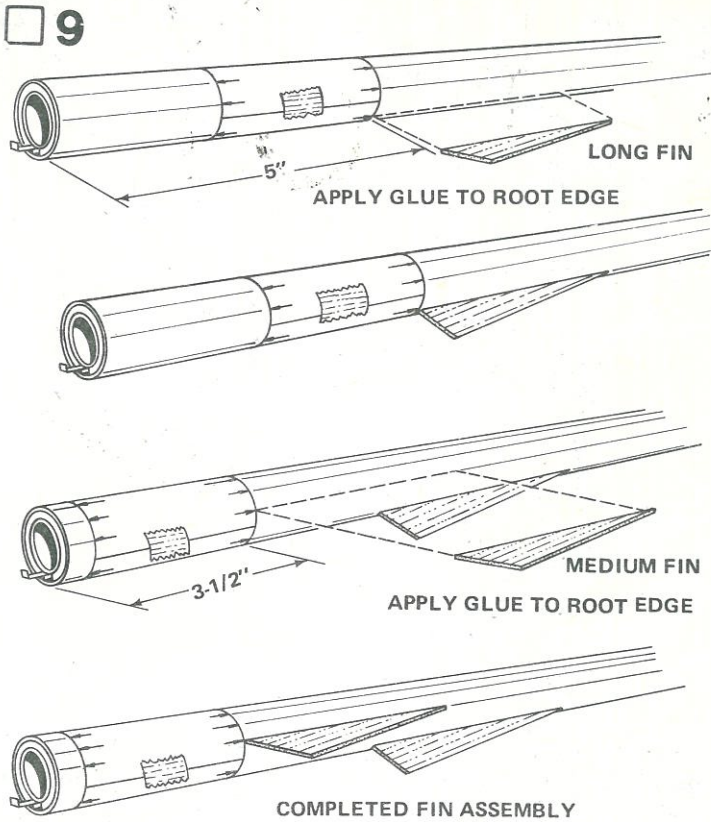
Cut out the Torellian Invader auxiliary engine tube marking guide from the pattern sheet. Locate six 3-1/2" auxiliary engine tubes (part H). Wrap the guide around each tube and mark at each arrow point, front and rear. Draw a straight line connecting each matching set of marks and extend each line the full length of the tube. Mark the front and rear edges of the tubes where the lines end and begin as shown.



Locate the six small fins, from step 3, and glue one fin to each auxiliary engine tube with the tip of the fin just touching the front of the tube on one of the alignment lines, as shown.

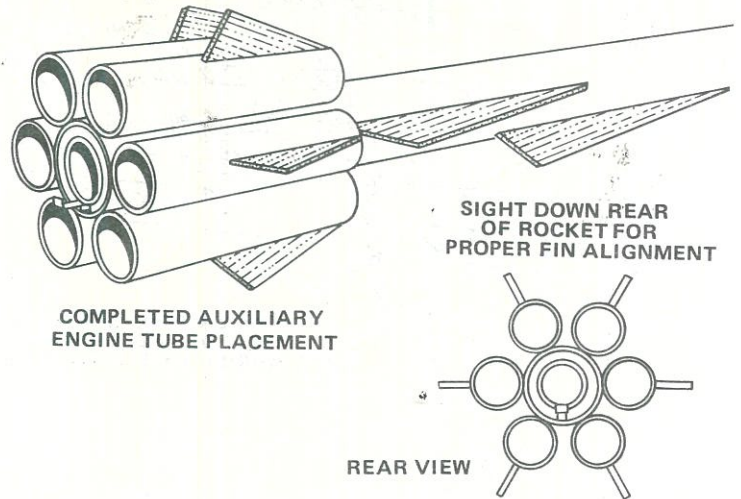
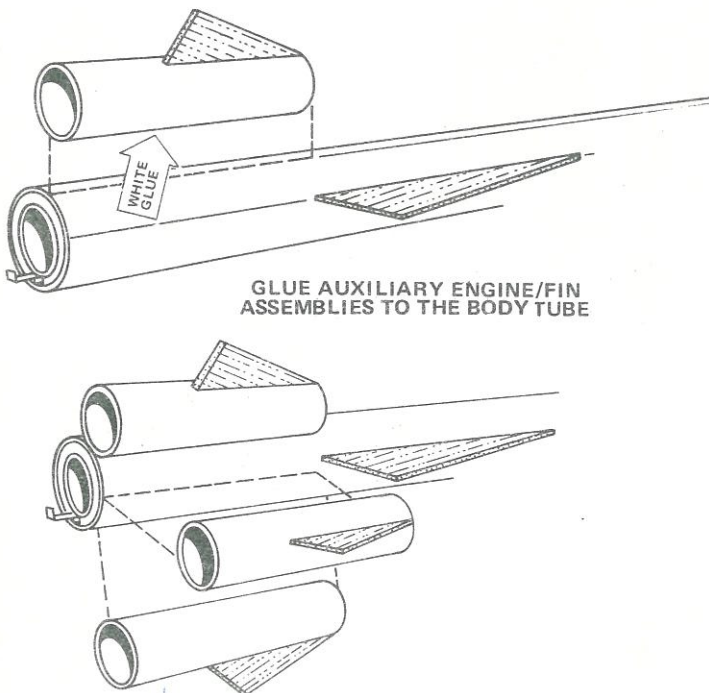


Cut out the Torellian Invader body tube marking guide from the pattern sheet. Wrap the guide around the rear of the large body tube so the engine hook/launch lug arrow on the guide is in line with the engine hook. Mark the tube at each arrow point, front and rear. Draw a straight line connecting each matching front and rear set of marks. Extend all lines 12 inches forward from rear of tube.



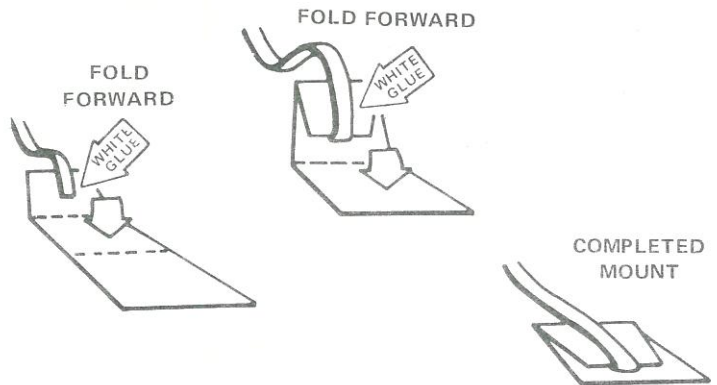
Re-wrap the guide around the tube and slide the guide up the tube until the front of the guide is 5" from the rear of the body tube and re-align the canopy line on the tube and the canopy arrows on the guide. Glue the long fins, as shown, on the alignment lines just ahead of the arrows labeled "long fin" on the guide. Then slide the guide down toward the rear of the body tube until the front of the guide is 3-1/2" from the rear of the body tube, re-align the canopy line and arrows on the guide. Glue the medium size fins on the alignment lines just ahead of the arrows labeled "medium fin/engine" on the guide.

10



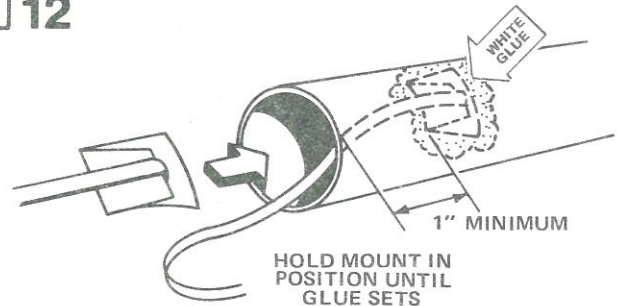
Next glue each of the six auxiliary engine/fin assemblies to the body tube, flush with the rear of the body tube and so the alignment lines on the body tube correspond to the front and rear marks on the auxiliary engines as shown. These tubes must align straight down the body tube. Sight down the rear of the tubes to be sure the center line of the auxiliary tube and fin units are aligned with the center line of the body tube as shown so the fins on the tubes project straight away from the tube.

11



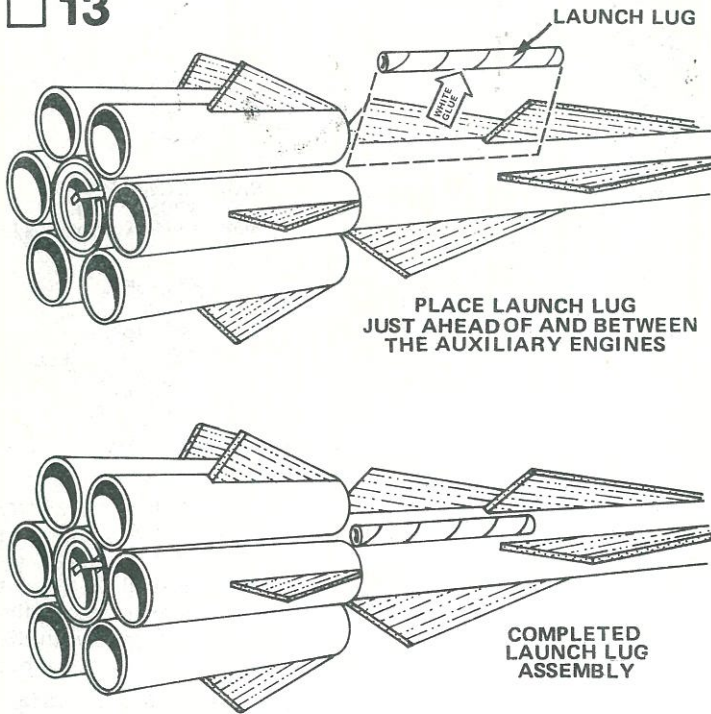
Cut out the shock cord mount from the pattern sheet. Pre-fold on the dotted lines. Apply glue to section 1 and lay the shock cord (part J) into the glue. Fold over and apply glue to the back of the first section and exposed part of section 2. Lay the shock cord as shown and fold over again. Clamp the unit together with your fingers until the glue sets.

12



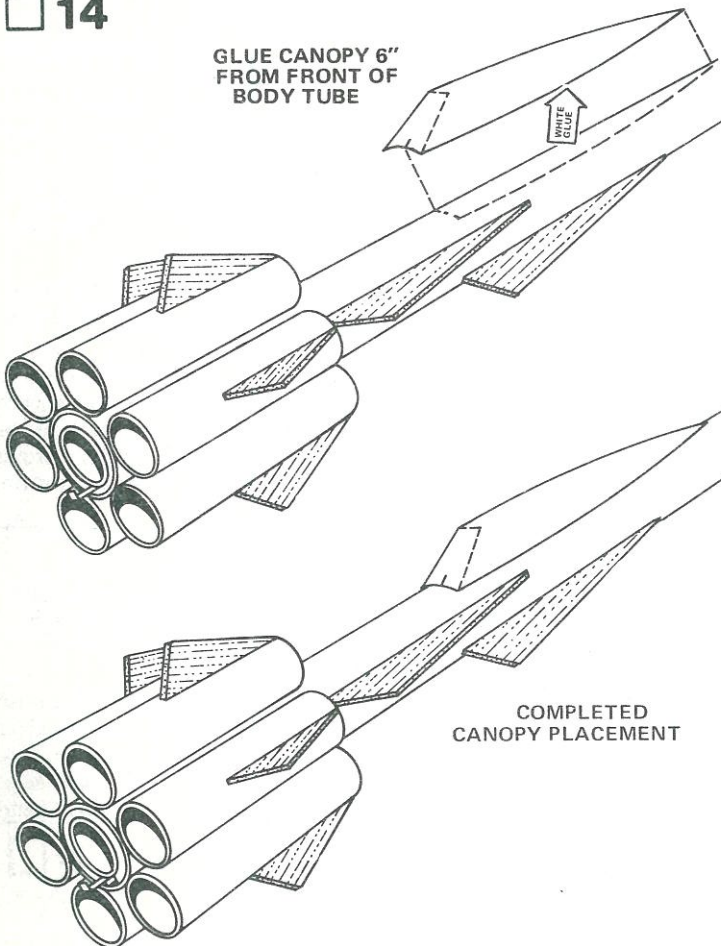
Apply glue to the inside of the body tube in the front end over an area about 1" to 2" from the front end. The glued area should be the same size as the shock cord mount. Press the mount into the glue as shown and hold until the glue sets.

13



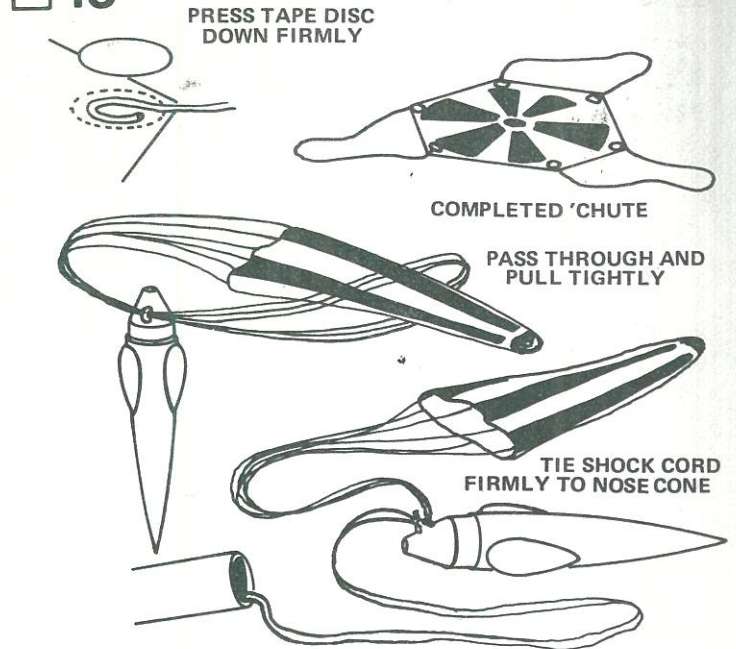
Glue the launch lug (part K) to the body on its line just ahead of and between the auxiliary engines as shown. Align it straight on the tube.

14



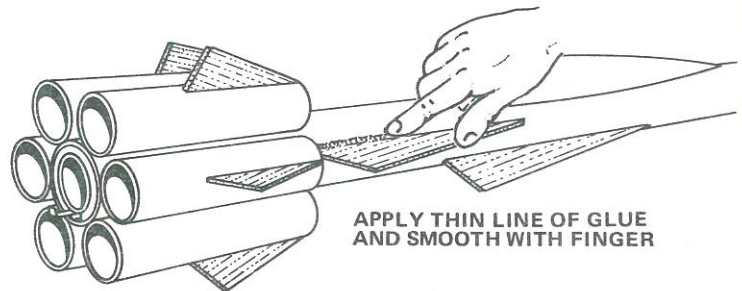
Glue the canopy to the body tube with the front point of the canopy 6" from the front of the body tube. The front point and the small mark on the rear of the canopy should be on the canopy line.

15



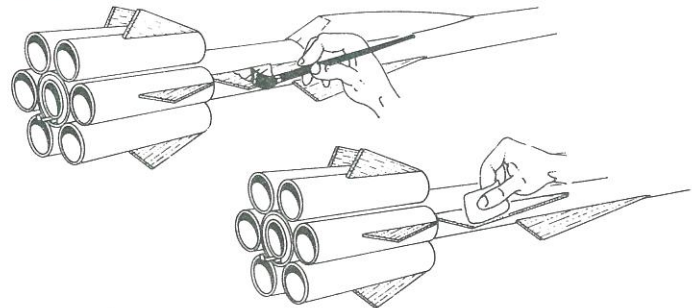
Cut out the parachute (part L) on its edge lines. Cut three 24" lengths of shroud line (part M). Attach line ends to the top of the parachute with tape discs (part N) as shown. Pass the shroud line loops through the ring on the nose cone (part O). Pass the parachute through the loop ends and draw the lines tight against the ring. Tie the free end of the shock cord to the nose cone.

16



Apply glue reinforcements to each fin joint and around canopy. Holding the model level, apply a narrow line of glue to both sides of each fin joint. Smooth out the glue with your finger. Keep the model level until the glue dries.

17



When all glue on the outside of the body is dry, prepare the fins for painting. Apply at least two coats of sanding sealer to the fins. Let dry and sand thoroughly between coats. Do this until the tiny holes in the wood are filled, and everything looks and feels smooth. See pages 5 and 6 for painting instructions, decal placement, and Countdown Checklist.