



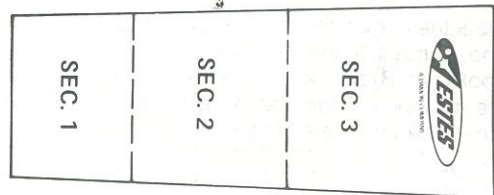
STINGER

SKILL LEVEL 1 - Recommended for Beginning Rocketeers

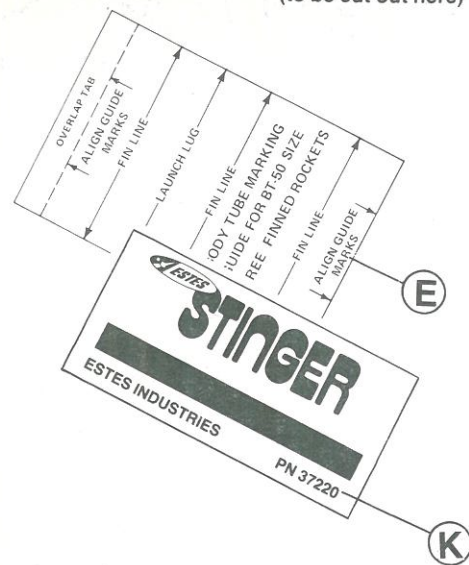
RECOMMENDED ENGINES:
A8-3, B4-4, B6-4, B8-5 and C6-5
First Flight A8-3

BEFORE YOU START

Read each step and study the accompanying drawings before doing any of the work called for in that step. Make sure you have all parts and materials. Check off each step as you complete it. Always test-fit parts together before applying glue. It will sometimes be necessary to sand edges of rings, tubes, etc. to obtain a proper fit. If you are in doubt about the relative size or location of some parts, refer back to this exploded view drawing for clarification. Adequate glue joints are very important for a flying model rocket. Follow the instructions carefully in this regard.



SHOCK CORD MOUNT
(to be cut out here)



PARTS LIST

KIT # 1905

A	1	Engine Mount Tube (type BT-20J)	30326
B	1	Engine Hook (type EH-2)	35025
C	2	Centering Rings (type AR-2050)	30164
D	1	Die-Cut Balsa Sheet (type BF-1905)	32605
E	1	Pattern Sheet	83626
F	1	Body Tube (type BT-50H)	30360
G	1	Launch Lug (LL-2A)	38175
H	1	Shock Cord (type SC-1)	85730
I	1	Nose Cone (type PNC-50Y)	71009
J	1	Plastic Streamer (type RS-20)	38278
K	1	Decal Sheet (type KD-1905)	37220

TOOLS AND MATERIALS

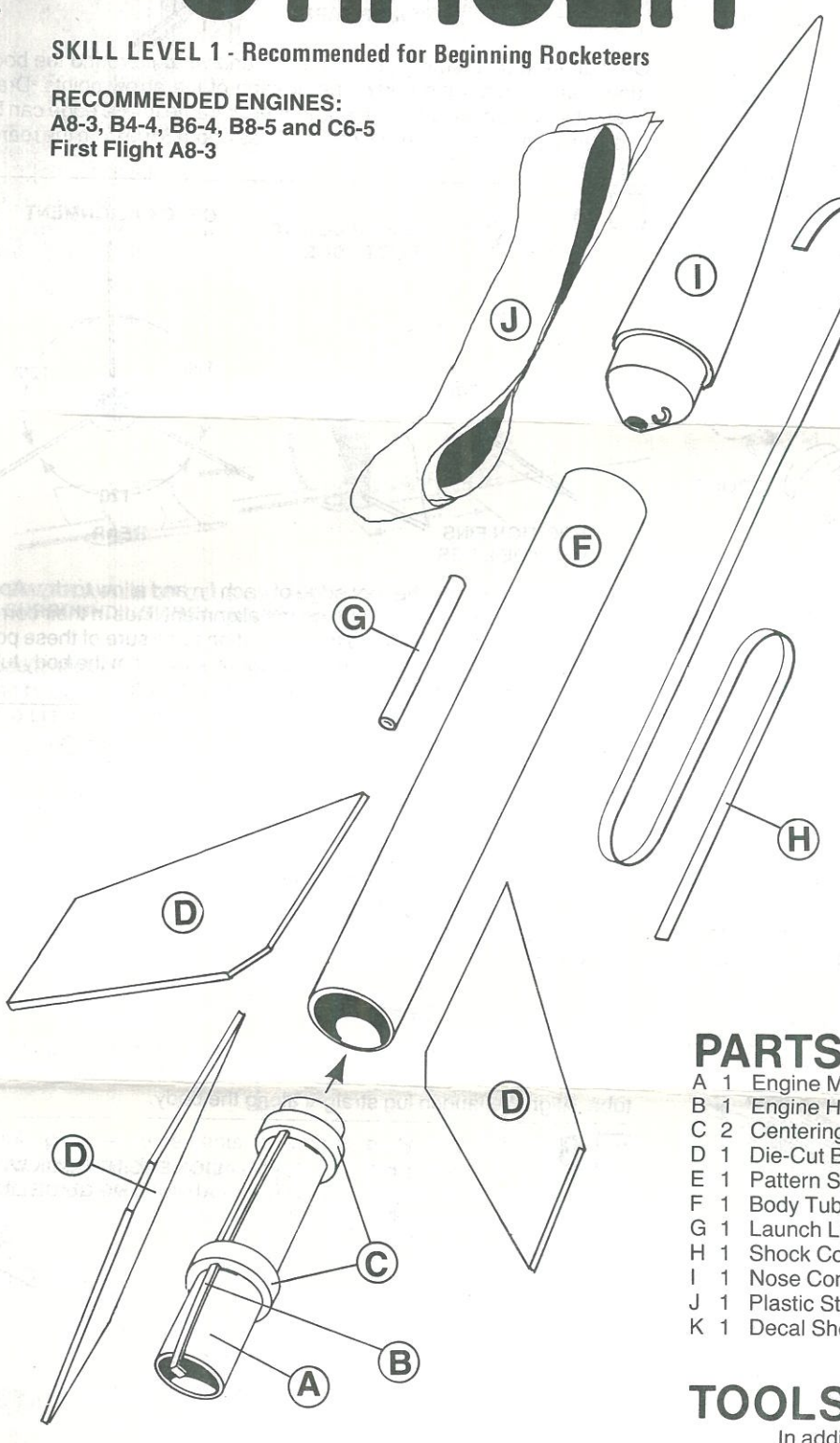
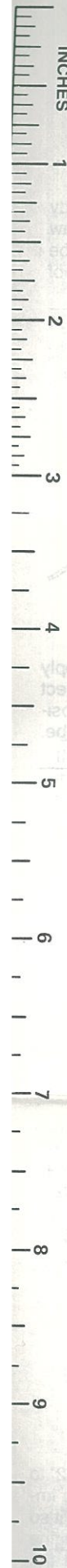
In addition to the parts included in this kit you will need: Scissors, pencil, ruler, fine or extra-fine grit sandpaper, sanding sealer, a medium-size modeling paint brush, modeling knife with sharp blade, gloss white and orange enamel spray paints and household white glue or resin glue (Elmer's, Titebond, or similar). Other types of glue are not recommended.

For easy and positive alignment of the fins on your model, we recommend the use of Estes' Fin Alignment Guide, Part No. 2231.

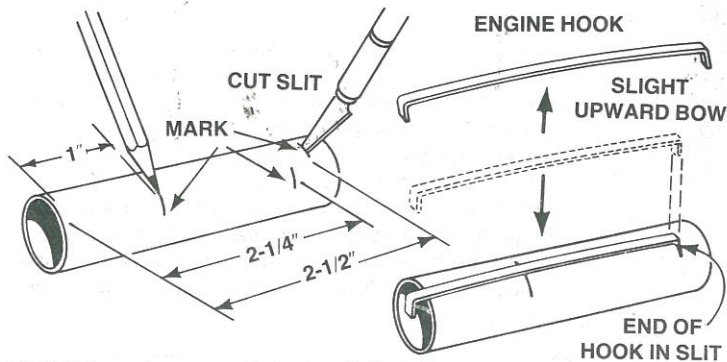


ESTES INDUSTRIES
PENROSE, CO 81240 USA

A DAMON COMPANY

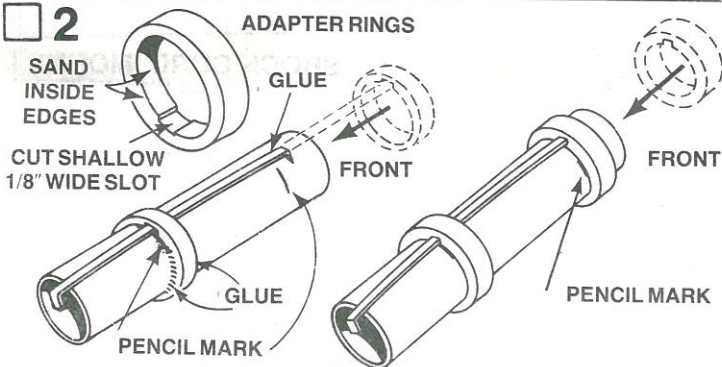


1



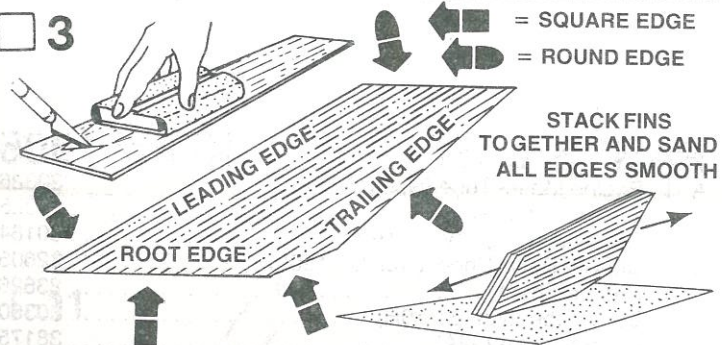
Mark the engine mount tube (part A) at 1", 2-1/4", and 2-1/2" from one end. Cut a 1/8" long slit at the 2-1/2" mark. Gently bend the engine hook (part B) so that it bows upward very slightly in the middle. (Study the drawing — Don't bend the wrong way.) Insert one end of the engine hook into the slit in the tube.

2



Sand the inside edges of the two centering rings (part C) to remove burrs. The rings should slide easily onto the engine mount tube. Cut a very shallow 1/8" wide slot inside the two centering rings so they will fit over the engine hook. Slip one ring onto the forward end of the engine mount tube and slide it down to the 1" mark. Make sure the engine hook runs straight down the tube, then apply glue to both sides of this ring. Apply glue around the tube at the 2-1/4" mark and slide the remaining centering ring into place down to the 2-1/4" mark.

3

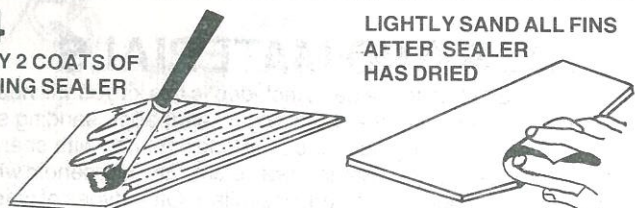


Fine-sand the balsa die-cut sheet (part D), then carefully remove the die-cut fins from the sheet. Free the edges with a sharp knife. Sand the leading and trailing edges of the fins round. Leave other edges square.

4

APPLY 2 COATS OF SANDING SEALER

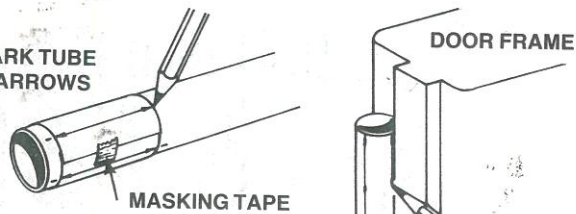
LIGHTLY SAND ALL FINS AFTER SEALER HAS DRIED



Apply a coat of sanding sealer to each fin. Apply sealer to all edges except the root edge. When sealer is dry, lightly sand all the sealed surfaces. Repeat sealing and sanding process until balsa grain no longer shows. Resand root edge, lightly, to remove any trace of sealer.

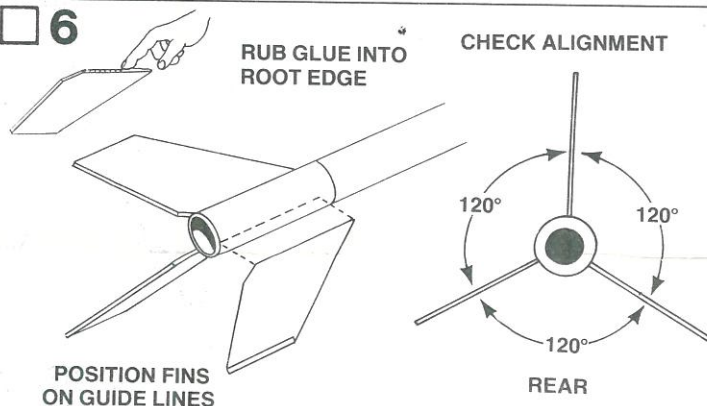
5

MARK TUBE AT ARROWS



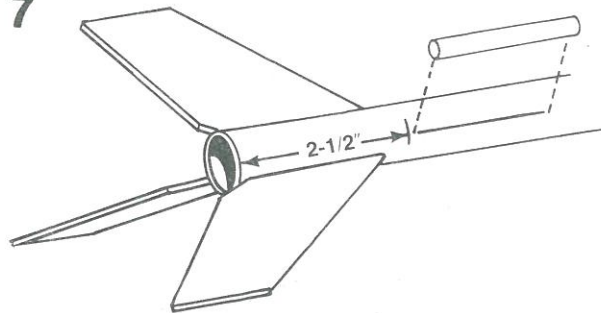
Cut out the tube marking guide (part E) and wrap it around the body tube (part F). Mark the body tube at each of the arrow points. Draw straight lines connecting each mark. A door frame inside edge can be used as a guide as shown. Extend the lines about 6" up from the rear of the tube.

6



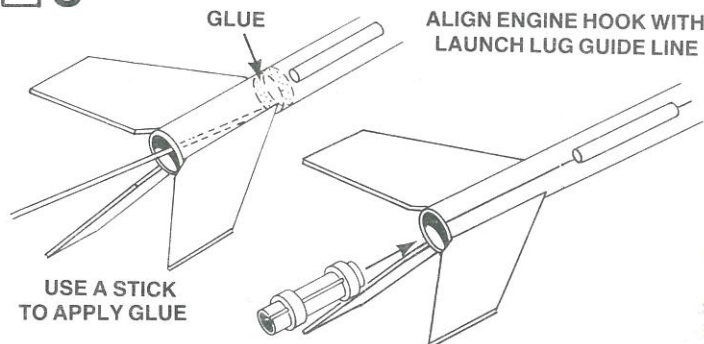
Rub a line of glue into the root edge of each fin and allow to dry. Apply glue to the fins and position fins on the alignment lines in their correct positions on the tube. Refer to the illustration to be sure of these positions. Adjust the fins so they project straight away from the body tube. Do not set the rocket on its fins while the glue is wet.

7



Glue launch lug (part G) to rocket body tube on the launch lug line. The rear of the launch lug should be 2-1/2" from the rear of the rocket body tube. Align the launch lug straight along the body.

8



Apply a ring of glue around inside of rear end of body tube about 2" to 2-1/2" from the end of the tube. Use a stick or dowel as shown. Immediately insert the engine mount unit, being careful to position it so the engine hook will stick out of the end of the tube. Push engine mount in with one smooth motion until the end of the engine mount and the end of the body tube are even.