



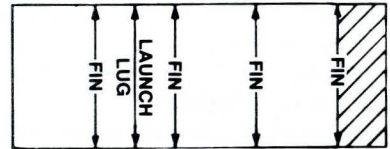
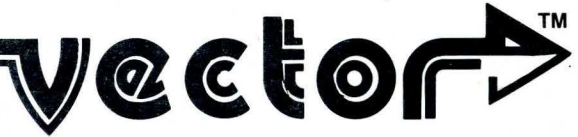


A DAMON COMPANY

ESTES INDUSTRIES
1295 H Street
Penrose, CO 81240 USA

#0871

Flying Model Rocket



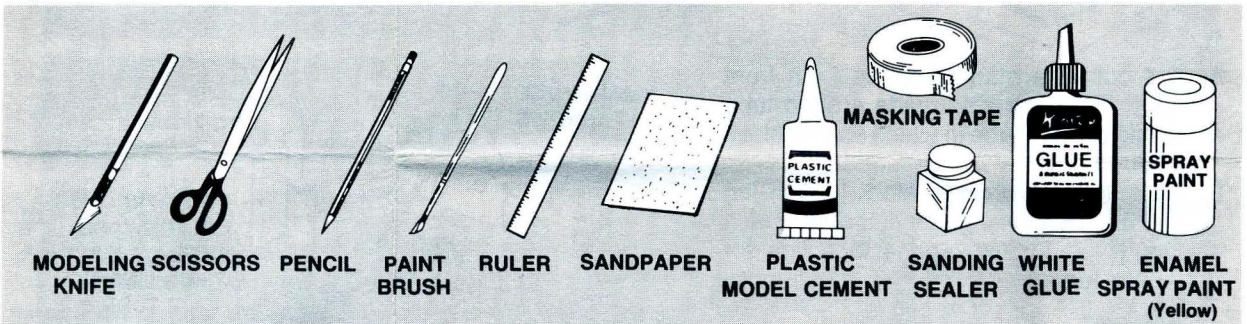
TUBE MARKING GUIDE

ASSEMBLY TIP

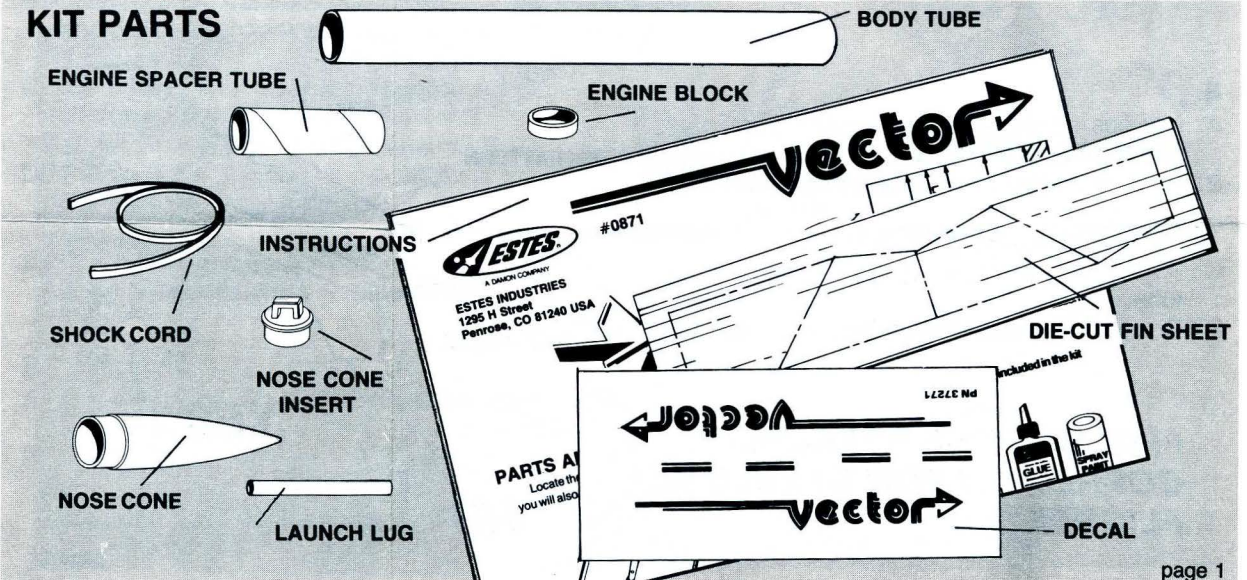
Read all instructions before beginning work on your model. Make sure you have all parts and supplies. Test-fit all parts together before applying any glue. If any parts don't fit properly, sand as required for precision assembly.

PARTS AND SUPPLIES

Locate the parts shown below and lay them out on the table in front of you. In addition to the parts included in the kit you will also need:



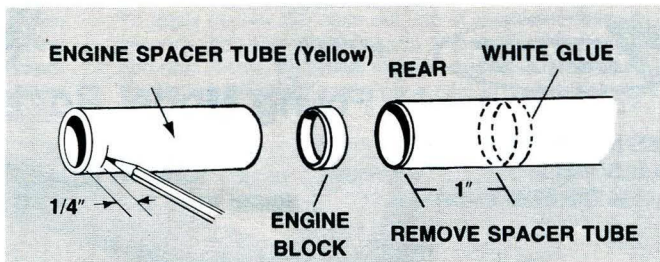
KIT PARTS



ROCKET ASSEMBLY

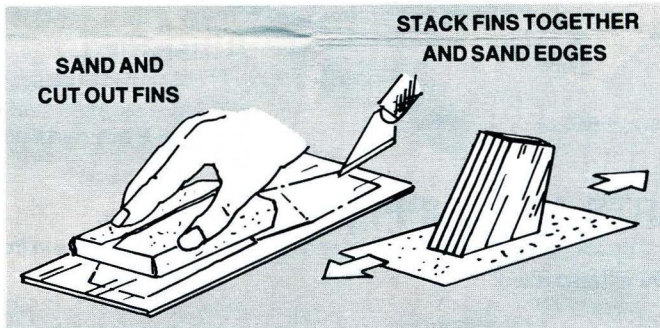
1

- A. Mark yellow engine spacer tube 1/4 inch from one end.
- B. Apply white glue inside the body tube 1 inch from one end.
- C. Using the engine spacer tube, push the engine block up into the end of the body tube with glue in it until the mark on the engine spacer tube is even with the end of the body tube. Remove the engine spacer **IMMEDIATELY**.



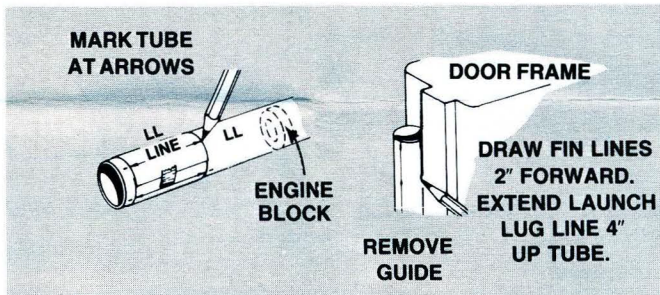
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- A. Fine sand balsa die-cut sheet. Carefully remove fins by freeing edges with sharp knife.
- B. Stack fins together. Sand all edges smooth.



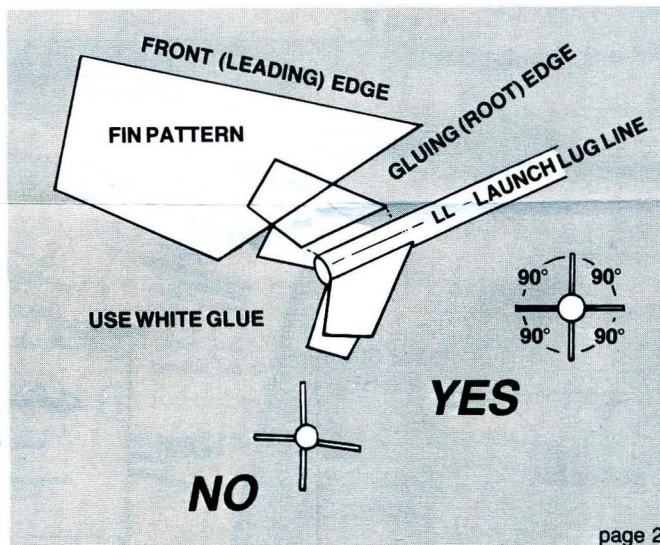
3

- A. Cut out tube marking guide from front page. Tape marking guide around tube at end of body tube in which engine block is glued.
- B. Mark tube at arrows. Mark launch lug line "LL". Remove guide and draw 2 inch long lines for fins and 4 inch line for launch lug.



4

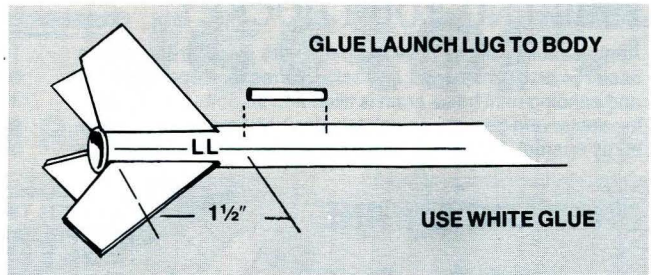
- A. Lay fins on pattern to find gluing (root) and front (leading) edges.
- B. Position and glue fins on alignment lines one at a time. Let each dry several minutes before applying the next one.
- C. Adjust fins to project straight out from tube.
- D. Do not set rocket on fins while glue is wet.



**FINS MUST BE ATTACHED
CORRECTLY FOR STABLE
FLIGHT!**

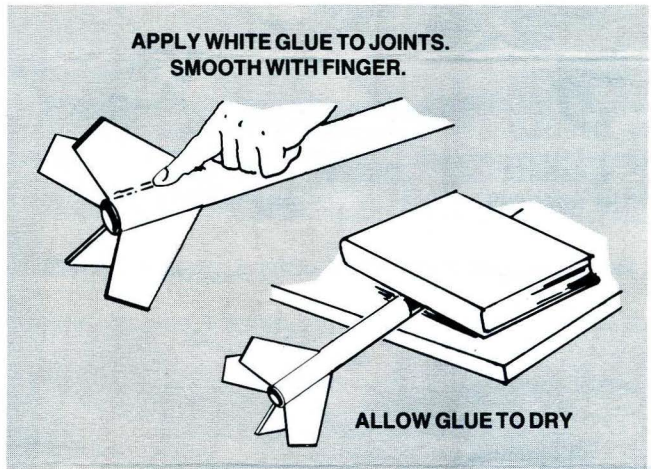
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- A. Glue launch lug straight on launch lug line with its rear edge $1\frac{1}{2}$ inches from rear of tube.



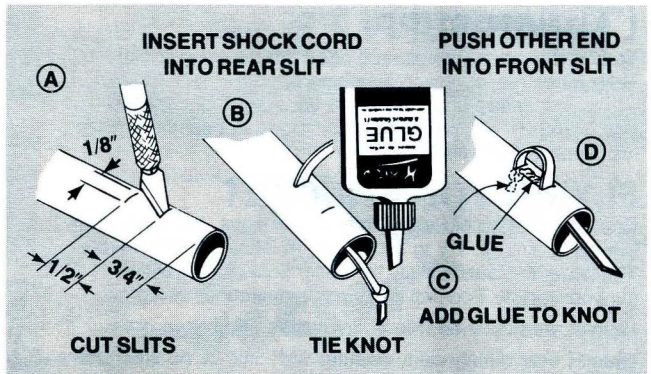
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- A. Apply a glue reinforcement to both sides of each fin/body tube joint and each side of launch lug.
- B. Support rocket as shown until glue dries.



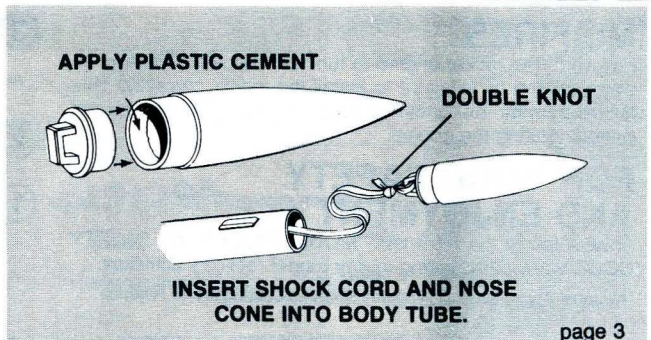
7

- A. Cut two $\frac{1}{8}$ inch wide slits in forward end of body tube as shown. Cut both ends of shock cord at an angle.
- B. Insert one end of shock cord into rear slit and pull through forward end of tube about 3 inches.
- C. Tie double knot near end of shock cord. Put drop of glue on knot. Pull shock cord back into tube so knot is tight against slit.
- D. Pass other end of shock cord through forward slit in body tube. NOTE: Be sure shock cord is not twisted.
- E. Run line of glue on body tube between slit and pull cord down onto glue.



8

- A. Assemble nose cone and nose cone insert with plastic cement.
- B. When dry, tie free end of shock cord to nose loop with double knot. Insert shock cord and nose cone into body tube.

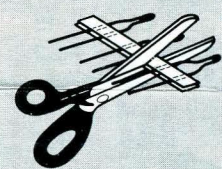


FINISHING YOUR ROCKET

Apply sanding sealer to wood parts with small brush. When sealer is dry, lightly sand all sealed surfaces. Repeat sealing and sanding until balsa grain is filled and smooth. When sanding sealer and glue are completely dry, paint model with yellow spray enamel. Follow instructions on spray can for best results.

To apply decals, cut each out, dip in lukewarm water for 20 seconds, and hold until it uncurls. Slip decal off backing sheet and onto model. Blot away excess water. For best results, let decals dry overnight and apply a coat of clear gloss paint to protect decals.

PREPARE ENGINE



SEPARATE THE IGNITERS

INSERT IGNITER

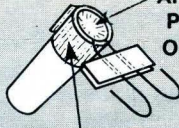


ENGINE

FOLD OVER AND BEND TIPS



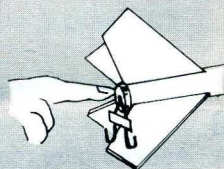
IGNITER TIP MUST TOUCH PROPELLANT DEEP INSIDE NOZZLE OPENING



WRAP TAPE AROUND REAR OF ENGINE FOR FRICTION FIT

PUSH ENGINE INTO ROCKET UNTIL IT IS AGAINST ENGINE BLOCK

APPLY AND FIRMLY PRESS TAPE DISC OR MASKING TAPE IN PLACE



ENGINE MUST FIT TIGHTLY

LAUNCH SUPPLIES

To launch your rocket you will need the following items:

—An Estes model rocket launching system

—Recommended Engines: 1/2A3-2T, A3-4T, and A10-3T

Use 1/2A3-2T engine for your first flight to become familiar with your rocket's flight pattern.

FLYING YOUR ROCKET

Choose a large field away from power lines, tall trees, and low flying aircraft. Try to find a field at least 250 feet square. The larger the launch area, the better your chance of recovering your rocket. Football fields and playgrounds are great.

Launch area must be free of dry weeds and brown grass.

Launch only during calm weather with little or no wind and good visibility.

MISFIRES

Failure of the rocket engine to function properly is nearly always caused by a failure to install the igniter correctly. This failure permits the igniter to heat and burn into two pieces without igniting the engine.

FOR YOUR SAFETY AND ENJOYMENT

Always follow the NAR-HIA* MODEL ROCKETRY SAFETY CODE while participating in any model rocketry activities.

*National Association of Rocketry-The Hobby Industry of America

COUNTDOWN AND LAUNCH

LAUNCH ROD

LAUNCH LUG

MASKING TAPE STAND-OFF

MICRO-CLIPS MUST NOT TOUCH BLAST DEFLECTOR OR EACH OTHER

MICRO-CLIPS

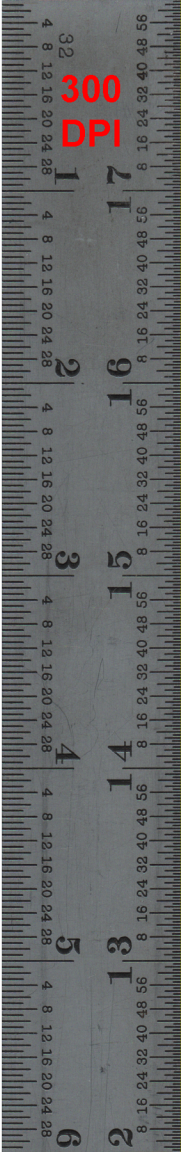
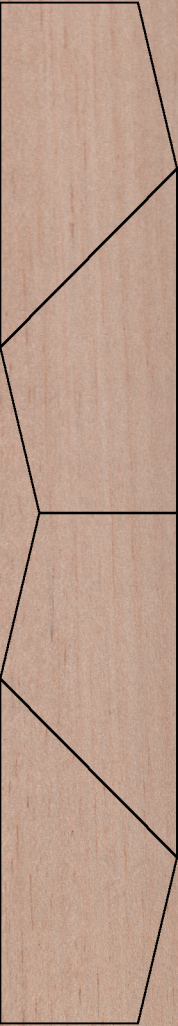
BLAST DEFLECTOR

- 1 INSERT SAFETY KEY to arm the launch controller.
- 2 Move back from your rocket as far as launch wire will permit (at least 15 feet).
- 3 Attach micro-clips to the igniter wires. Arrange the clips so they do not touch each other or the metal blast deflector. Attach clips as close to protective tape on igniter as possible.
- 4 Remove safety cap and slide launch lug over launch rod to place rocket on launch pad. Make sure the rocket slides freely on the launch rod.
- 5 REMOVE SAFETY KEY to disarm the launch controller.

LAUNCH!!! PUSH AND HOLD LAUNCH BUTTON UNTIL ENGINE IGNITES

Remove safety key—Replace cap on rod.

1/16"



300
DPI

1

17

2

16

3

15

4

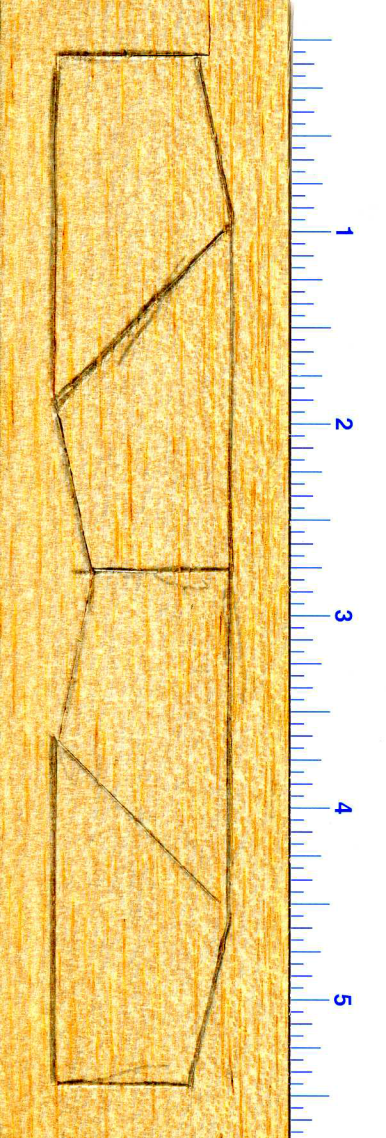
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PN 37271

Vector

Redrawn by: JimZ



PN 37271

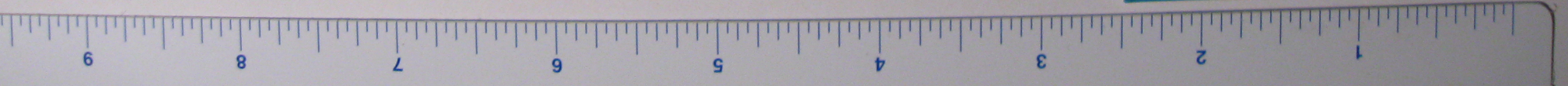
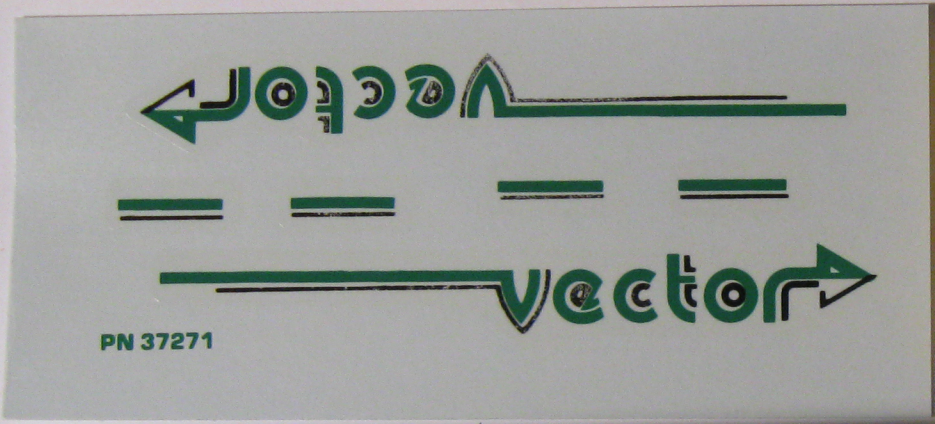
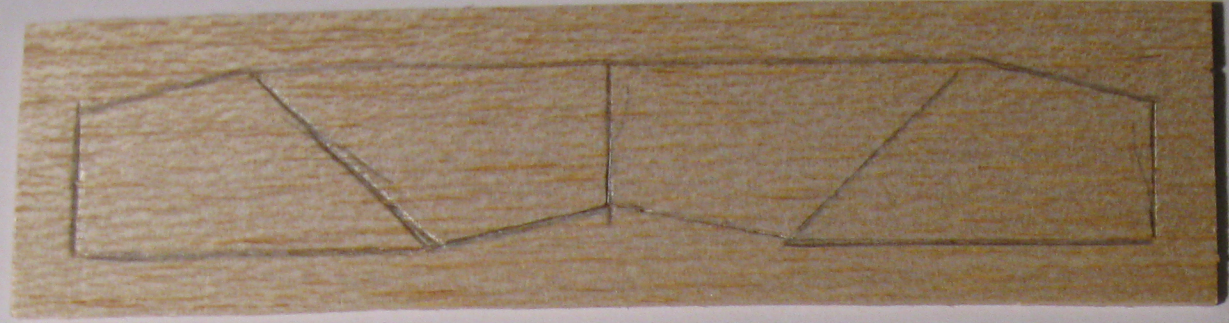
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PARTS LIST KIT NO. 0871 - Vector

Quantity	Description	Type	Number	Details1	Details2	Details3	Details4	Comment
1	PLASTIC NOSE CONE	PNC-5A	72600	2.125" long	.541" dia.	.375 shoulder	2.5" total length	Injection Molded
1	NOSE CONE INSERT	PIN-5	72601		.541" dia.		Base for PNC-5 cones	Injection Molded
1	PAPER BODY TUBE	BT-5P	30308	5.1" long	0.515" ID	0.541" OD	0.013" wall	Glassine
1	ENGINE BLOCK	EB-5B	30222-4	.512" OD	.49" ID	.188" long	fits in BT-5	Yellow
1	SPACER TUBE (13 mm)	N/A	35002	1.75" long	0.5" OD	0.48" ID	0.01" wall	Yellow
1	BALSA FIN STOCK	BFS-20B	32104	1/2" wide	6" long	1/16" thick	0.0625	Scan
1	LAUNCH LUG	LL-2A	38175	5/32" ID	1/8" rod	1-1/4" long		Mylar
1	Shock Cord	SC-1	38367	18" long	1/8" wide			Rubber
1	DECAL	KD-0871	37271	2" wide	4" long	Blk/Grn	Waterslide	Scan
1	Optional Streamer	?	38272	1.2" wide	18" long	Flo. Orange	Surveyor's Tape	polyethylene



vectorTM

FLYING MODEL ROCKET

SKILL LEVEL 1

Suggested for Beginners

Length: 7.75 in. (21 cm)

Engine Types:

1/2A3-2T, (First Flight)

A10-3T, A3-4T



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This is a hobby kit requiring assembly. Engines, launch system, glue and finishing supplies are not included.

0871

