

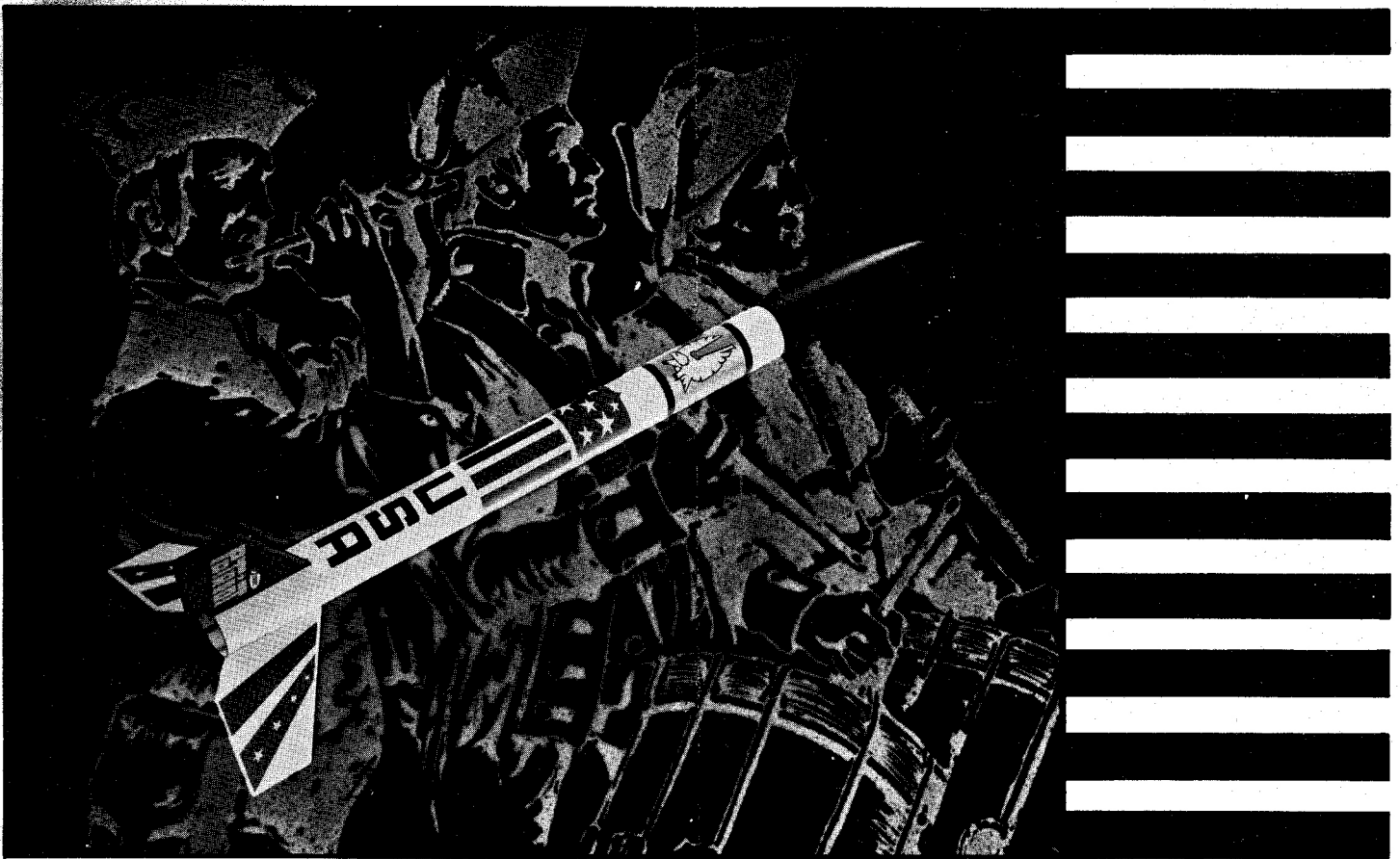




A SUBSIDIARY OF DAMON

PATRIOT

KIT NO. 0652



Your "PATRIOT" was designed with the sport flying model rocketeer in mind. The kit features a durable, all-plastic nose cone and die-cut balsa fins for ease of construction. Two gigantic decal sheets (5 colors in all) provide a spectacular "All-American" red, white and blue decor. The "PATRIOT" is complete with a large bright fluorescent red orange and white parachute to bring it safely back to Earth flight after flight.

In addition to the parts included in this kit, you will also need; a modeling knife, pen or pencil, white glue, ruler, fine and extra fine grit sandpaper, sanding sealer, and paints.

GLUE: WHITE GLUE is best: You may use balsa model airplane cement.

PAINTS: Use enamel or dope for rocket body. DO NOT use dope on plastic nose cone. Dope will "craze" the plastic surface. Use only enamel specifically for plastics.

RECOMMENDED ENGINES: B4-2, B6-4 or C6-5 (Use B4-2 for first flight)

READ THE INSTRUCTIONS CAREFULLY BEFORE BEGINNING CONSTRUCTION.

PART LIST

PART NO.

A)	1	Engine Mount Tube (type BT-20B)	30320
B)	1	Engine Holder (type EH-2)	35025
C)	1	Mylar Retainer Ring (type HR-20)	30168
D)	1	Body Tube Marking Guide and Engine Ring Set (type TA-603)	30045
E)	1	Rocket Body Tube (type BT-60)	30396
F)	1	Shock Cord Mount (type SCM-50)	84444
G)	1	Shock Cord (type SC-2MJ)	85738
H)	1	Plastic Nose Cone (type PNC-60AH)	71043
I)	1	Die-Cut Balsa Fin Sheet (type BFM3)	32240
J)	2	Launch Lugs (type LL-2AM)	38176
K)	1	18" Parachute	85566
L)	1	Parachute Shroud Line (type SLT-108)	38239
M)	6	Parachute Tape Discs (type TD-3F)	38406
N)	1	Decal Sheet (type KDM3A)	37203
O)	1	Decal Sheet (type KDM3B)	37204

TOOLS & MATERIALS REQUIRED

In addition to the parts included in this kit, you will also need; a modeling knife, pen or pencil, white glue, ruler, fine and extra fine grit sandpaper, sanding sealer, and paints.

ASSEMBLY INSTRUCTIONS

1 Slit the engine mount tube (part A) in Fig. 1. Insert engine holder (part B) and slide mylar retainer ring (part C) into position. Glue the retainer ring approximately 6-3/8" from the front of the engine mount tube. Glue engine mount rings (part D) onto tube as indicated. Allow to dry completely.

2 Slip the marking guides (part D) onto the rocket body tube (part E) and mark for fin and launch lug alignment lines.

3 Cut out the shock cord mount (part F) and prefold on dotted lines. Glue shock cord end (part G) into place as in Fig. 3. Glue completed mount into rocket body tube. (Hold mount in place until glue sets.)

4 Using a dowel, or paint brush, apply a 1/4" wide band of glue around the inside of the rocket body tube approximately 6-1/2" from the rear. Slide the engine mount assembly into the body tube until the metal engine holder end is even with the body tube end. Glue the rear engine ring-body tube joint.

5 Sand fin sides (part I) smooth. (Do this before removing them from balsa sheet.) Sand leading and trailing edges round. Other edges remain square.

Rub a small amount of glue into the root edge (body edge) of each fin. Allow glue to set. Then glue (one at a time) to the body tube directly upon the fin alignment lines as shown. BE SURE that all fins project straight away from the body tube. Glue the launch lugs (part J) to the launch lug alignment line exactly as shown.

6 Assemble the parachute (part K) as directed in the parachute instructions. Tie the parachute shroud lines (part L) and shock cord to nose cone ring (part H).

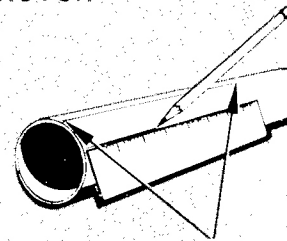
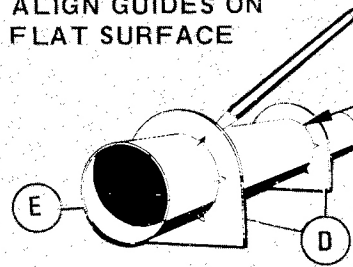
START

1

2

ALIGN GUIDES ON
FLAT SURFACE

MARK TUBE AT
EACH NOTCH



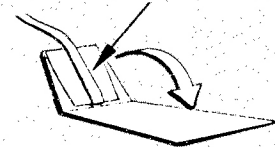
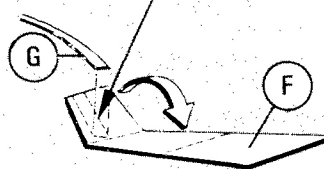
DRAW LAUNCH
LUG LINE ENTIRE
LENGTH OF TUBE

CONNECT MARKING
FRONT AND REAR

3

SPREAD GLUE HERE
FOLD FORWARD

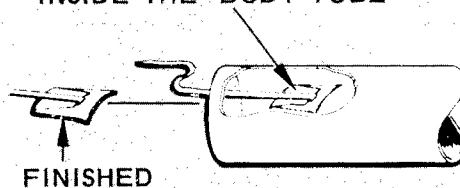
SPREAD GLUE HERE
FOLD FORWARD



PRE-FOLD ON
DOTTED LINES

SPREAD GLUE HERE
INSIDE THE BODY TUBE

SAND TRAIL
EDGE ROUND



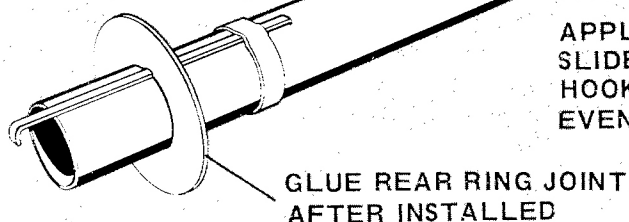
FINISHED

SET BACK AT LEAST
1-1/2" TO ALLOW
FOR NOSE CONE

COMPLETED ENGINE MOUNT

4

APPLY GLUE INSIDE
SLIDE MOUNT INTO
HOOK END MUST BE
EVEN WITH TUBE



GLUE REAR RING JOINT
AFTER INSTALLED

PART LIST		PART NO.
A)	1	Engine Mount Tube (type BT-20B)..... 30320
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TOOLS & MATERIALS REQUIRED

In addition to the parts included in this kit, you will also need; a modeling knife, pen or pencil, white glue, ruler, fine and extra fine grit sandpaper, sanding sealer, and paints.

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2 Slip the marking guides (part D) onto the rocket body tube (part E) and mark for fin and launch lug alignment lines.

3 Cut out the shock cord mount (part F) and prefold on dotted lines. Glue shock cord end (part G) into place as in Fig. 3. Glue completed mount into rocket body tube. (Hold mount in place until glue sets.)

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Rub a small amount of glue into the root edge (body edge) of each fin. Allow glue to set. Then glue (one at a time) to the body tube directly upon the fin alignment lines as shown. BE SURE that all fins project straight away from the body tube. Glue the launch lugs (part J) to the launch lug alignment line exactly as shown.

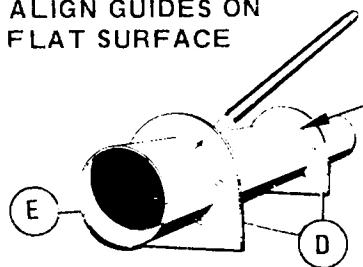
6 Assemble the parachute (part K) as directed in the parachute instructions. Tie the parachute shroud lines (part L) and shock cord to nose cone ring (part H).

START →

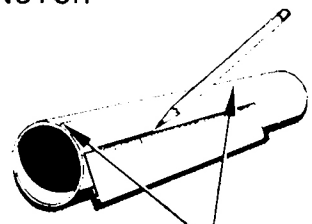
2

ALIGN GUIDES ON FLAT SURFACE

MARK TUBE AT EACH NOTCH



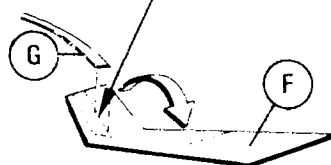
DRAW LAUNCH LUG LINE ENTIRE LENGTH OF TUBE



CONNECT MATCHING FRONT AND REAR MARKS

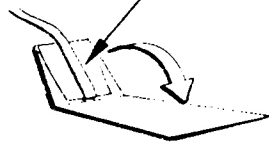
3

SPREAD GLUE HERE FOLD FORWARD

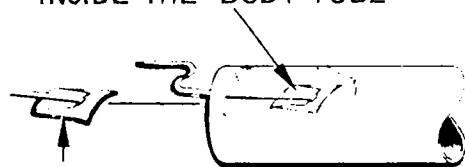


PRE-FOLD ON DOTTED LINES

SPREAD GLUE HERE FOLD FORWARD



SPREAD GLUE HERE INSIDE THE BODY TUBE



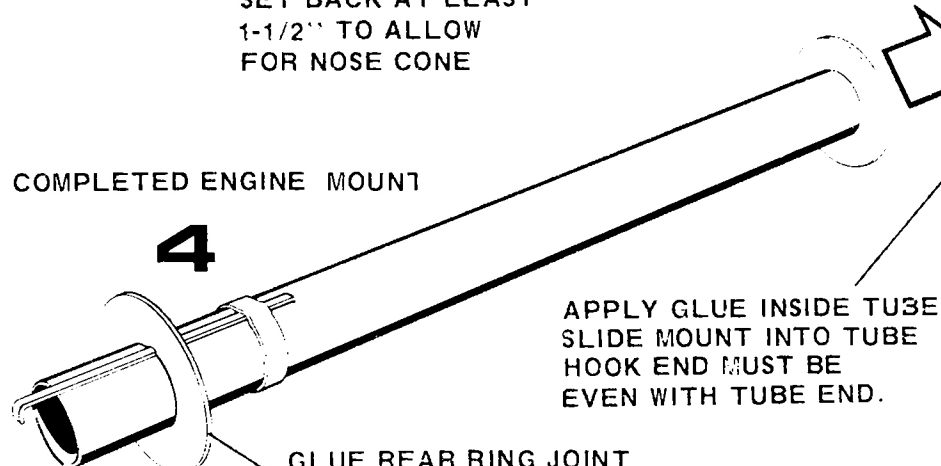
FINISHED

SET BACK AT LEAST 1-1/2" TO ALLOW FOR NOSE CONE

COMPLETED ENGINE MOUNT

4

GLUE REAR RING JOINT AFTER INSTALLED



APPLY GLUE INSIDE TUBE. SLIDE MOUNT INTO TUBE. HOOK END MUST BE EVEN WITH TUBE END.

SAND TRAILING EDGE ROUND

SAND FIN TIP SQUARE

5

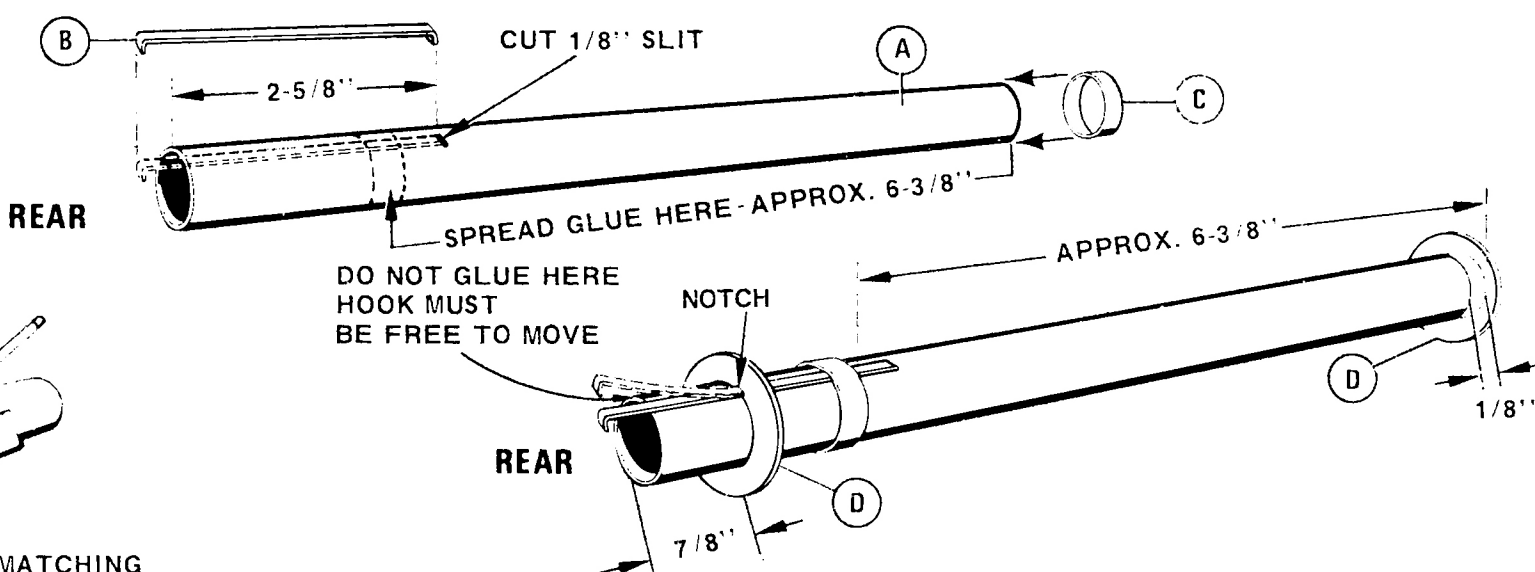
SAND LEADING EDGE ROUND

GLUE

ROOT EDGE

COLOR SCHEME

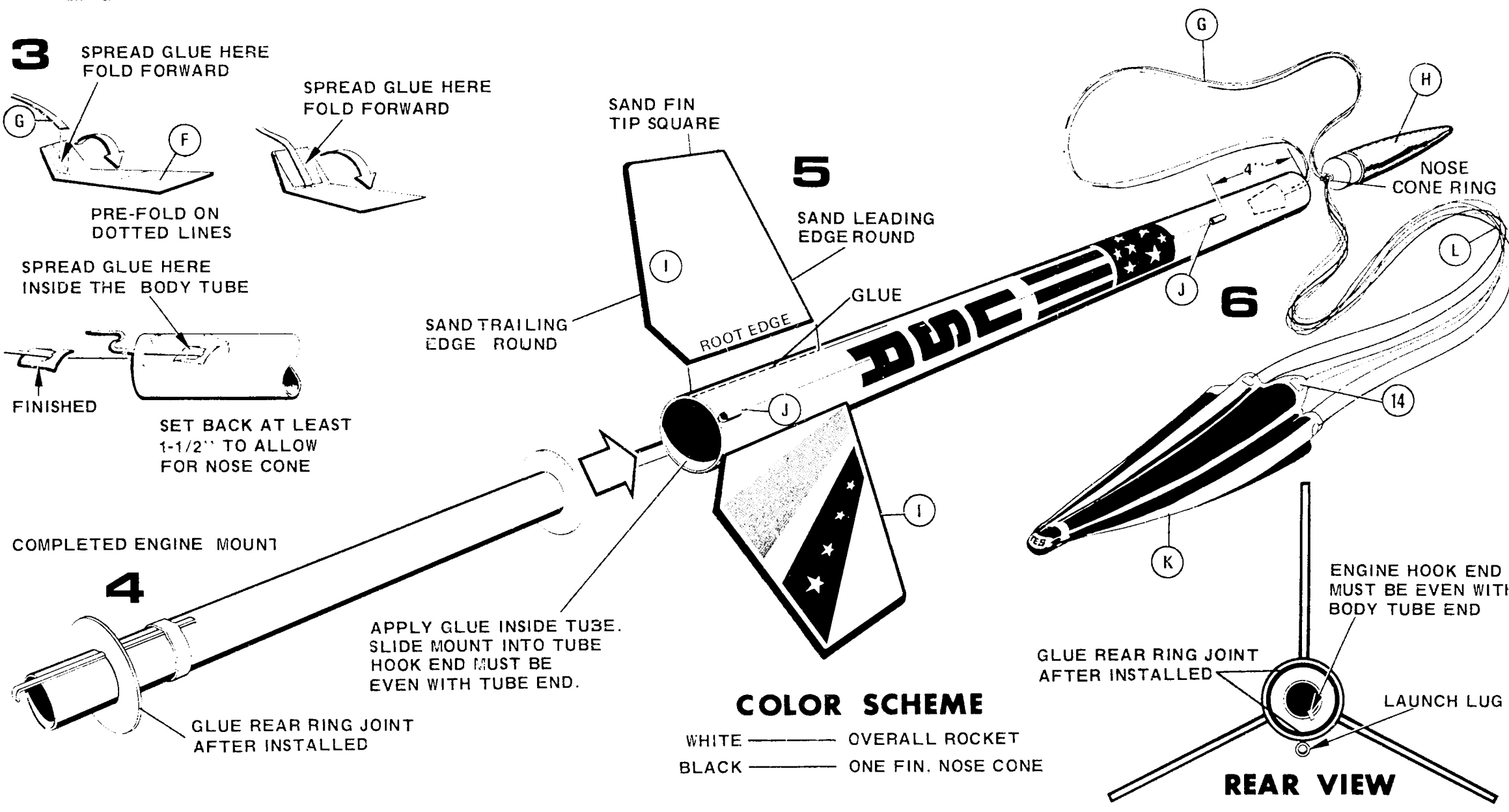
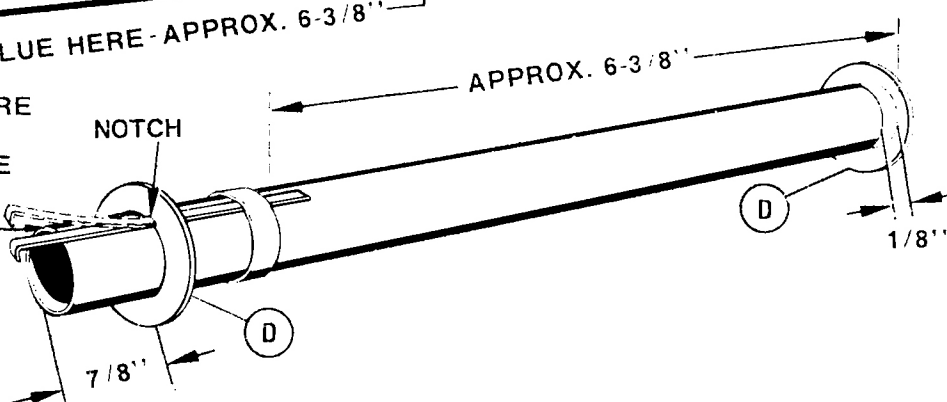
WHITE ———— OVERALL ROCKET
BLACK ———— ONE FIN, NOSE CONE



REAR

DO NOT GLUE HERE HOOK MUST BE FREE TO MOVE

REAR



NOSE CONE RING

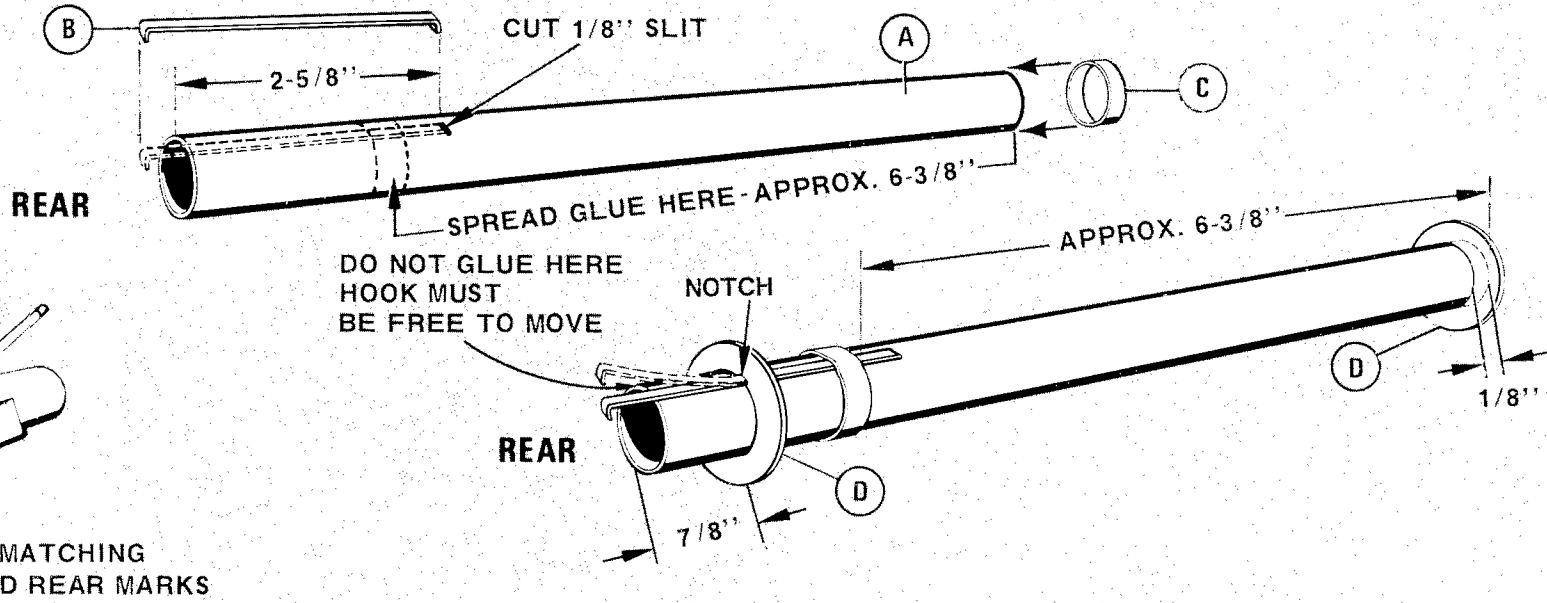
6

ENGINE HOOK END MUST BE EVEN WITH BODY TUBE END

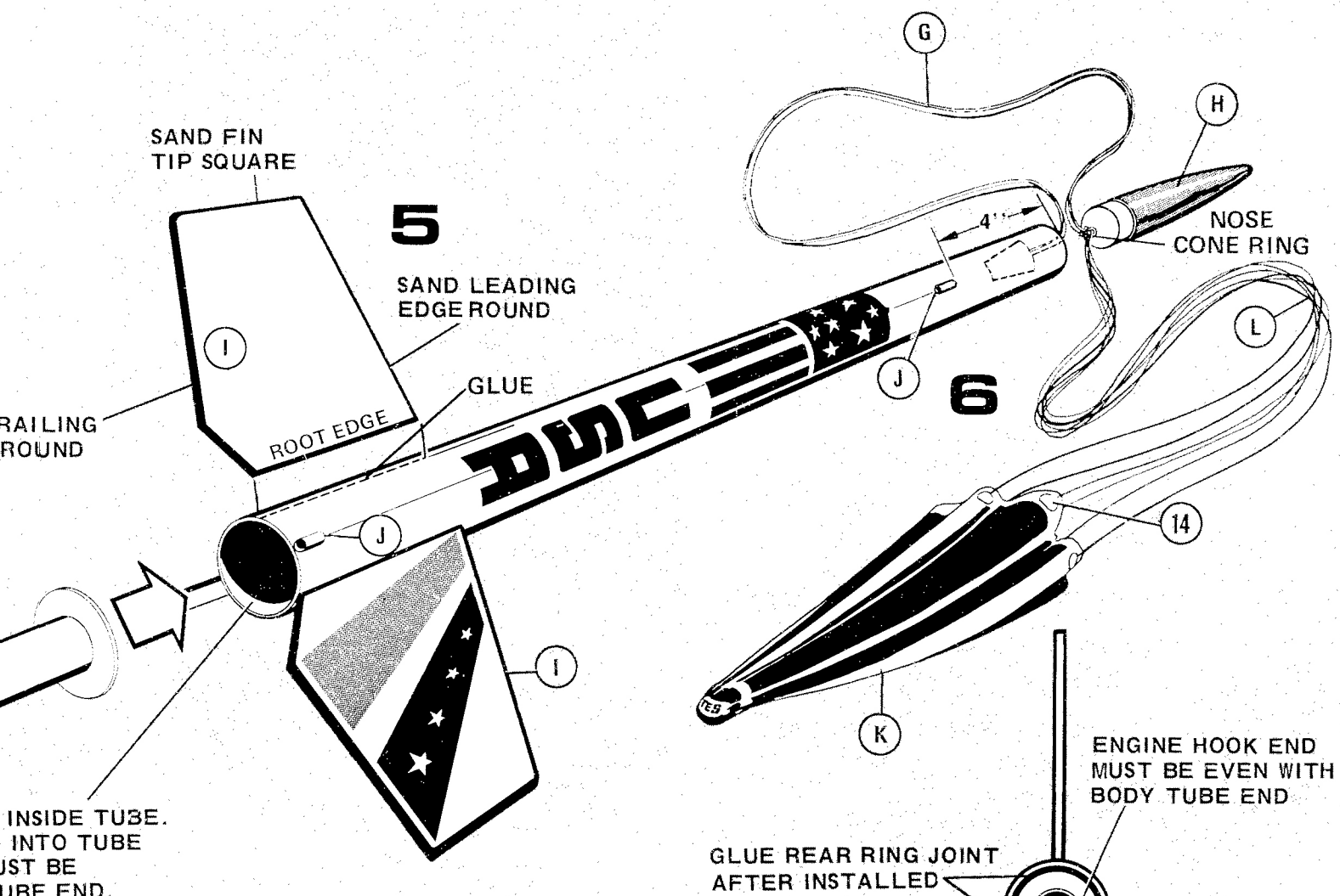
GLUE REAR RING JOINT AFTER INSTALLED

LAUNCH LUG

REAR VIEW



...T MATCHING
...ND REAR MARKS



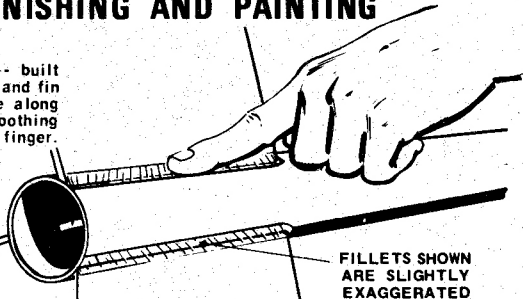
COLOR SCHEME

- WHITE ——— OVERALL ROCKET
- BLACK ——— ONE FIN, NOSE CONE

7 FINISHING AND PAINTING

A FILLET IS ...

A smooth joint -- built up between body and fin by applying glue along the joint and smoothing the glue with a finger.



FILLETS SHOWN ARE SLIGHTLY EXAGGERATED

7 When fin joints are completely dry, apply a glue fillet to each side of the fin-body tube joint. Run a narrow bead of glue along the joint and wipe smooth with finger as in Fig. 7. Allow glue to set and repeat. (Support rocket horizontally while drying.)

8 Allow all glue joints to dry completely. Apply sanding sealer to balsa surfaces, fine sand and repeat until smooth.

9 Give the rocket a light base coat of white spray paint. Follow with a second light coat, allow to dry and sand very lightly. Finish with a fine coat of gloss white paint. Mask one fin and paint black.

10 Apply decals (parts N and O) as directed on the decal backing. Refer to photographs for proper decal positioning. Use a wet paint brush to help smooth out air bubbles from beneath decals.

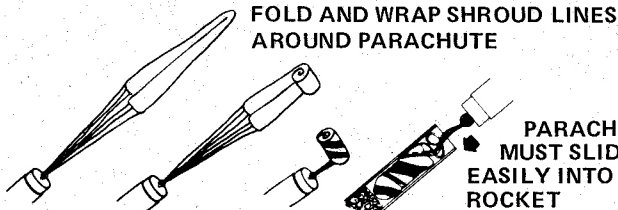
PRE-FLIGHT PREPARATION AND LAUNCH

T-14 Pack seven (7) squares of crumpled recovery wadding loosely into rocket body tube.



WADDING

T-13 Gather parachute into a triangular shape. Roll 'chute as shown and wrap shroud lines around it. If 'chute is too large, unroll and repack until it slides easily into the rocket. A very tight fit may prevent parachute from ejecting properly.



FOLD AND WRAP SHROUD LINES AROUND PARACHUTE

PARACHUTE MUST SLIDE EASILY INTO ROCKET

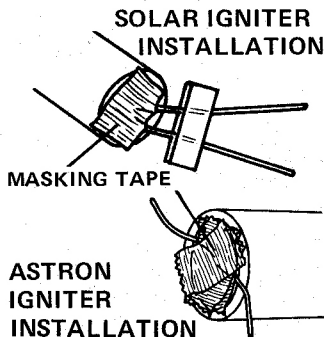
Pack shock cord neatly into rocket. NOTE: DO NOT pack parachute until you are actually ready to launch. For maximum parachute reliability, lightly dust the 'chute with ordinary talcum powder before each flight, especially in colder weather. NOTE: Flying your rocket when temperatures are 35° or less is not recommended. The plastic parachute becomes stiff and will not always open properly at ejection.

T-12 Slide nose cone into place. Nose cone should separate easily from rocket body tube, but not be extremely loose. If fit is too tight, sand inside of body tube end and shoulder of nose cone with fine sandpaper.

If nose cone is too loose, add a wrapping of transparent tape to the shoulder of the nose cone.

T-11 Select an engine and install an igniter. The recommended engines for use with this rocket are B4-2, B6-4 and C6-5. Use B4-2 engine for first flight.

To operate properly igniter must touch the propellant grain. Push it into the engine nozzle as far as it will go. Apply a square of masking tape or tape disc to the nozzle and leads as shown. The eraser on the end of a pencil is good for pressing the tape securely into place.

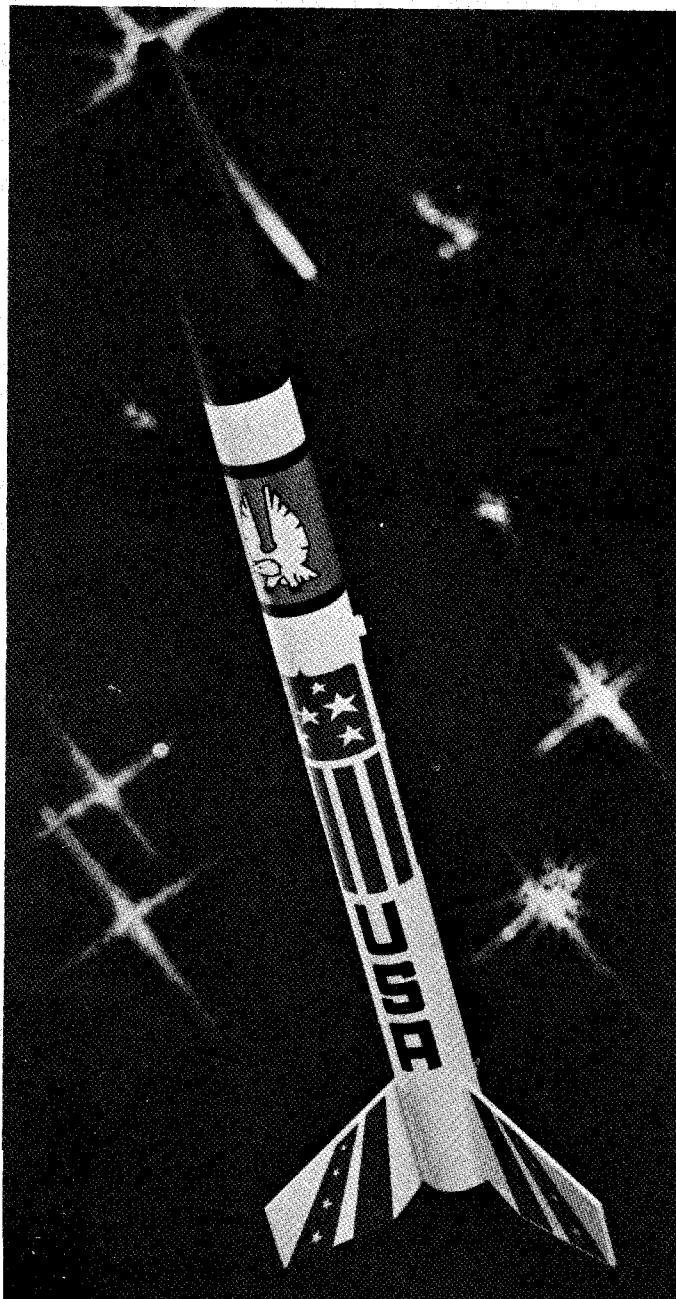


SOLAR IGNITER INSTALLATION

MASKING TAPE

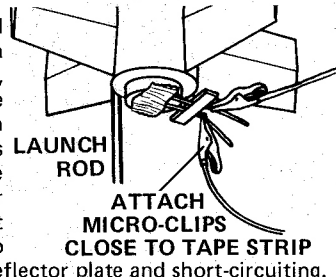
ASTRON IGNITER INSTALLATION

T-10 Insert engine into rocket. Engine hook must latch securely over the end of the engine.



T-9 Disarm the launch panel -- remove safety key.

T-8 Place rocket on launch pad making sure rocket slides freely on launch rod. Clean the micro-clips, then clip one to each lead of the igniter. The clips must not touch each other and the igniter leads must not cross. The rocket may be supported with a scrap of wood or an empty engine casing to make it easier to attach the clips and to keep the clips from touching the blast deflector plate and short-circuiting.



LAUNCH ROD

ATTACH MICRO-CLIPS CLOSE TO TAPE STRIP

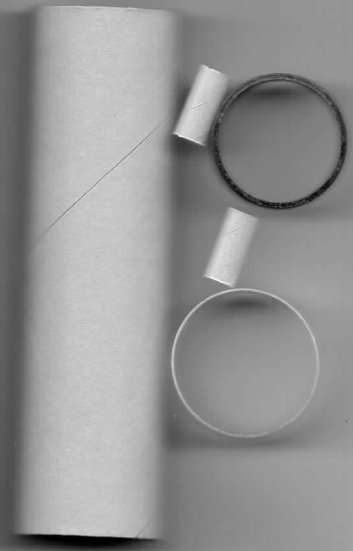
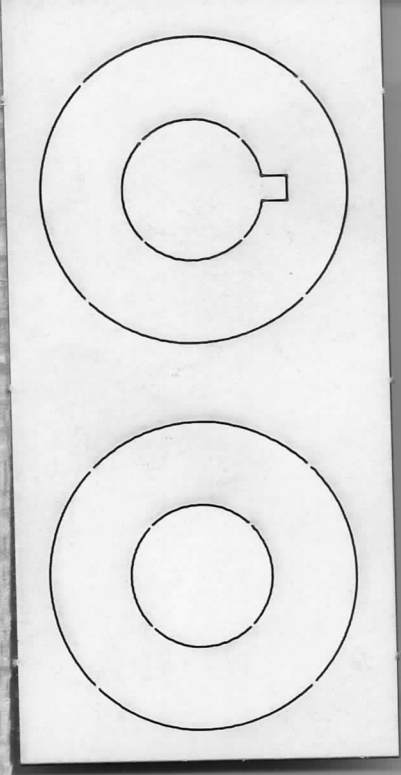
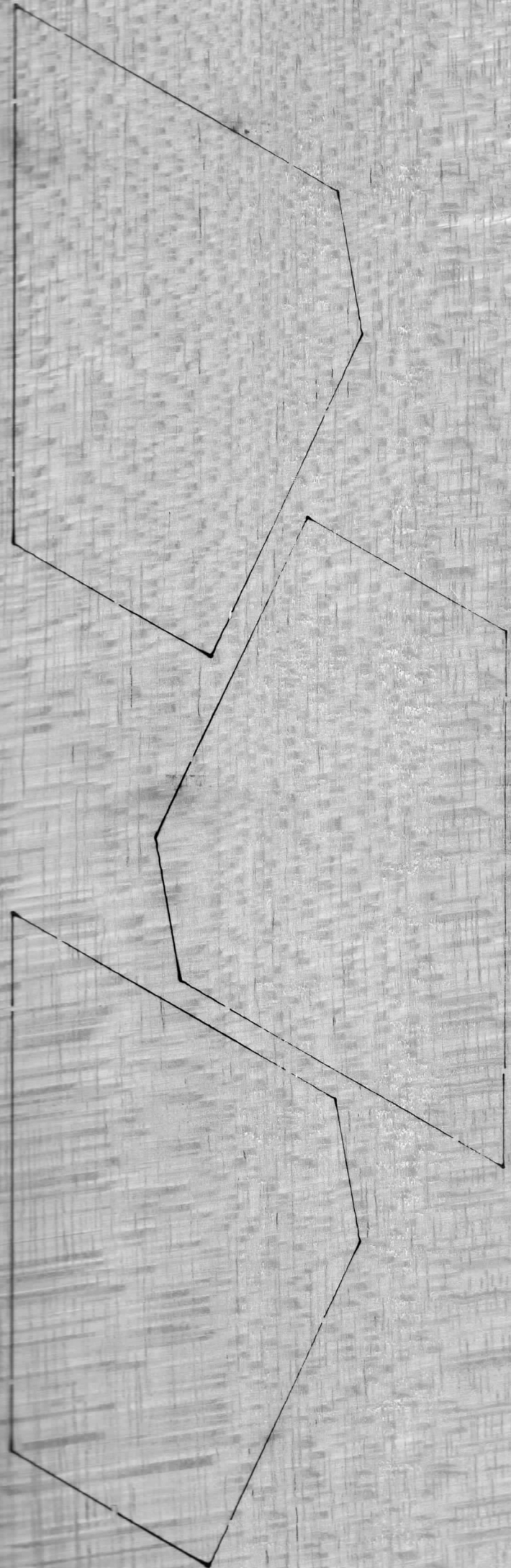
T-7 Clear the launch area, alert recovery crew and trackers. Check for low flying aircraft and unauthorized persons in the recovery area.

T-6 Arm the launch panel -- insert safety key.

5 4 3 2 1 LAUNCH!!

IMPORTANT: MISFIRE PROCEDURE

Occasionally the igniter will heat and burn in two without igniting the engine. This is almost always caused by a failure to install it correctly. Disarm the launch panel, remove the model, clean the igniter residue from the nozzle and install a new igniter. Follow the launching procedure again.



PN 37204
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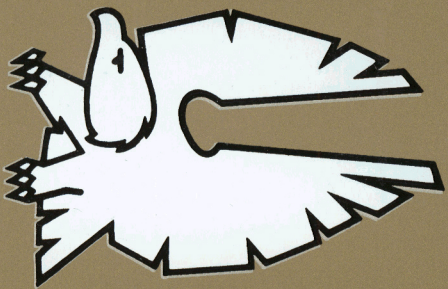
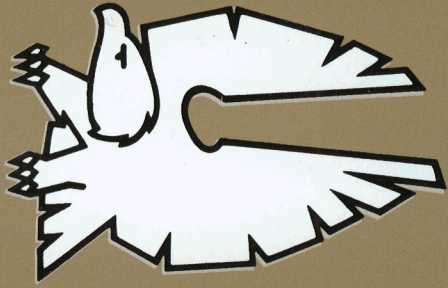
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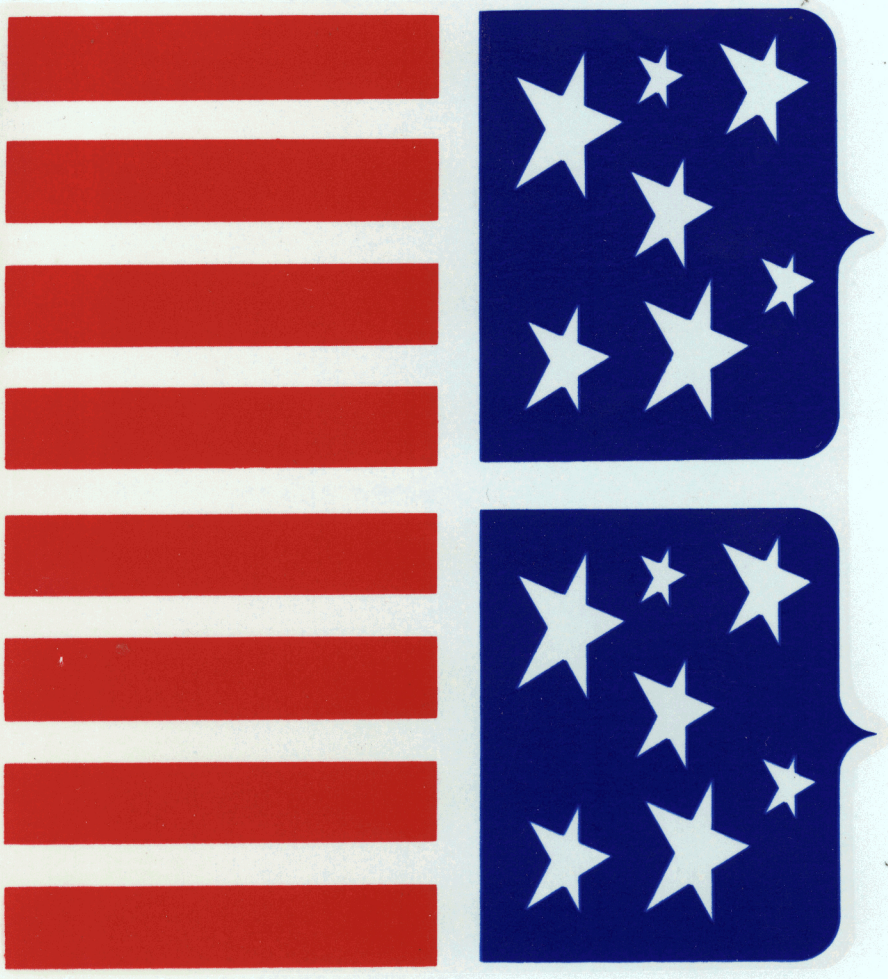
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PN 37203
PATRIOT
ESTES INDUSTRIES
PENROSE, COLORADO



CITATION
 ESTES

A DIVISION OF HOBBY

Recommended for ages 10 and up

PATRIOT



\$4.25

FLYING MODEL
 ROCKET

DEGREE OF CHALLENGE 2

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PATRIOT
 FLYING MODEL
 ROCKET

DEGREE LEVEL 2

The Patriot Flying Model Rocket is a fun, exciting model rocket that is easy to fly and easy to build. It features a white body with a black nose cone, a black section with "ESTES" written vertically, a red and white striped section, and a blue section with white stars. The tail is black with white and red stripes. The rocket is over 2 feet tall and is recommended for ages 10 and up. It is a great choice for beginners and experienced model rocketeers alike.



OVER 2
 FEET TALL

RECOMMENDED FOR
 AGES 10 AND UP

INCLUDES
 1x Motor
 1x Rocket

1x Nose Cone
 1x Body Tube
 1x Fin Set

1x Motor
 1x Rocket
 1x Nose Cone
 1x Body Tube
 1x Fin Set



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