

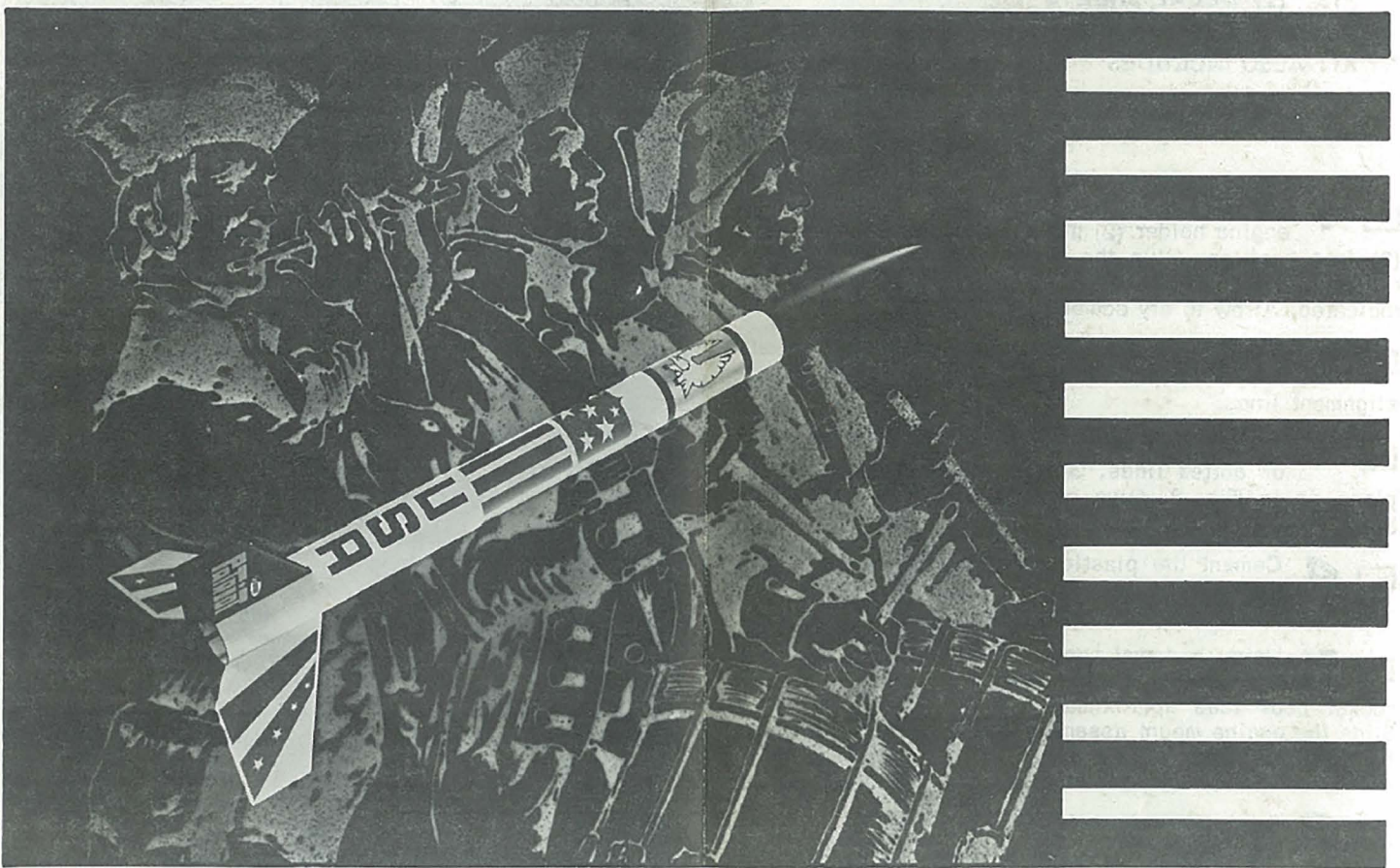




CITATION

KC 3

PATRIOT



Your Citation "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.

TOOLS & MATERIALS REQUIRED

In addition to the parts included in this kit, you will also need; a modeling knife, pen or pencil, white glue, plastic cement (tube or liquid), ruler, fine and extra fine grit sandpaper, sanding sealer, paints as specified and the Citation "STARPORT" launch system.

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

CEMENT: Use only PLASTIC cement (tube or liquid) for plastic parts. Do not use white glue or 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. (Nose cone may be left black, unpainted.)

RECOMMENDED ENGINES: B-2, B-4 or C-5 (Use B-2 for first flight.)

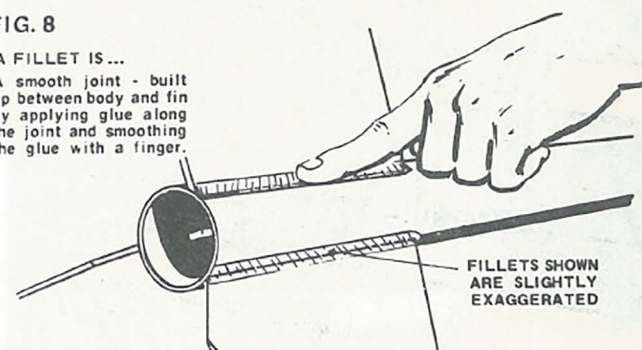
READ THE INSTRUCTIONS CAREFULLY BEFORE BEGINNING CONSTRUCTION.

FINISHING AND PAINTING

FIG. 8

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.



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

10 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. (Nose cone may be left black, unpainted.)

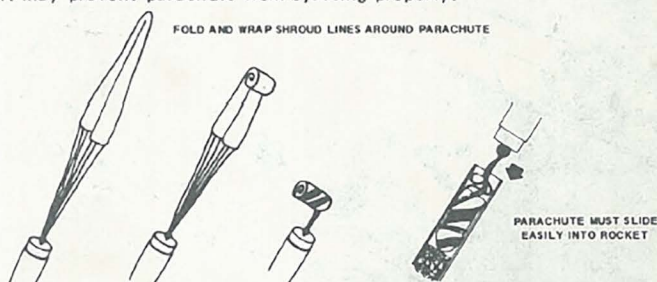
11 Apply decals (15) as directed on the decal backing. Refer to photographs for proper decal positioning. Use a wet paint brush to help smooth out air bubbles from beneath decals.

PRE-FLIGHT PREPARATION AND LAUNCH

T-15 Pack six (6) squares of crumpled recovery wadding loosely into rocket body tube.



T-14 Fold the parachute into a triangular shape. Roll chute tightly 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.



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-13 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.

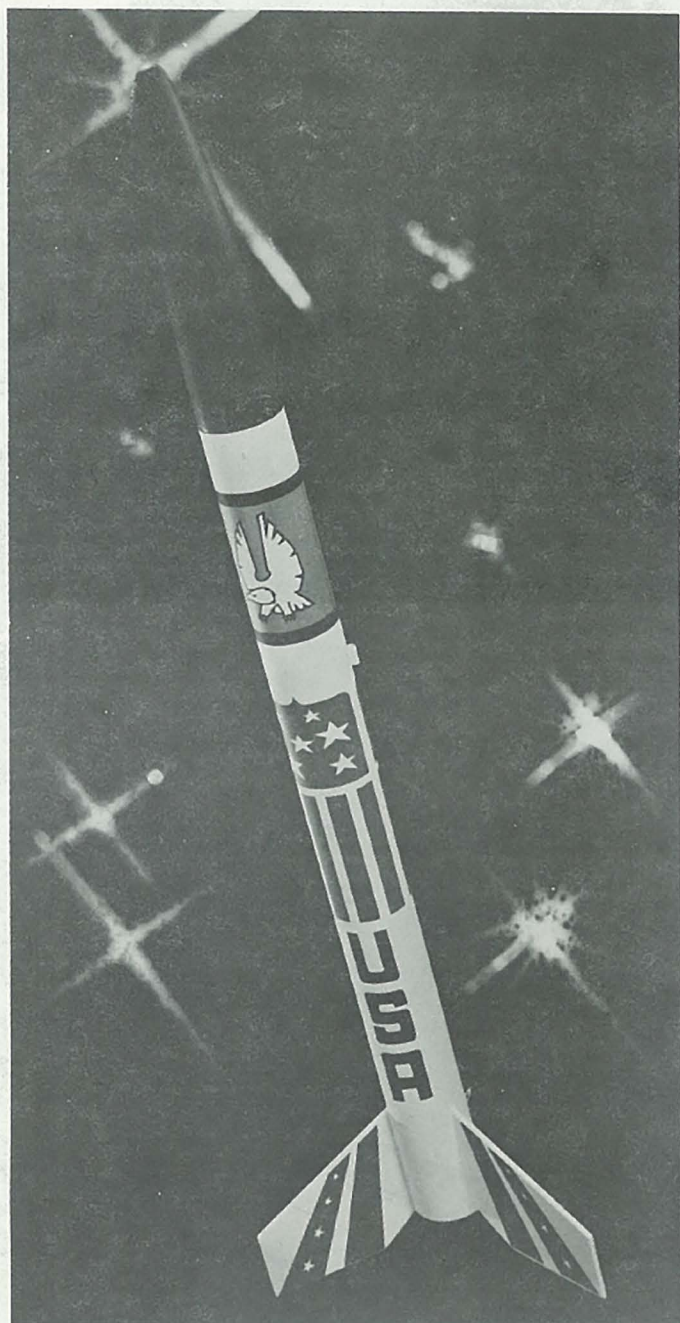
T-12 Select an engine and install an igniter. Estes standard NWI-1 igniters are supplied in strips and should be cut apart (scissors will work) midway between the coated sections. Bend the igniter at the middle as shown and push it into the engine nozzle as far as it will go.

To operate properly igniter must touch the propellant grain. Spread the leads and 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.



T-11 The recommended Citation engines for use with this rocket are B-2, B-4, and C-5. Use B-2 engine for first flight. You may also use Estes standard B4-2, B6-2, B6-4 and C6-5 model rocket engines.

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.



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

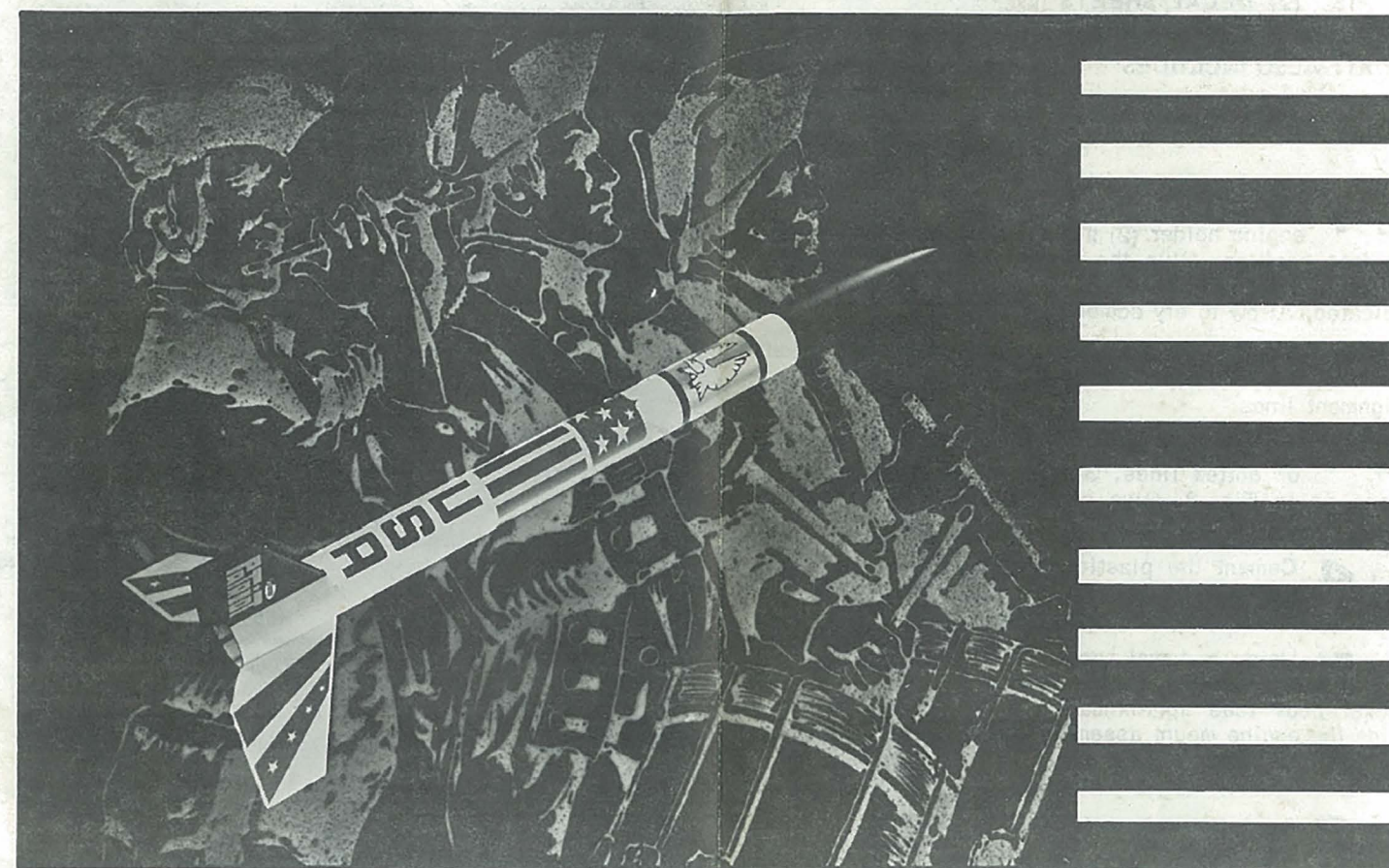
Occasionally the igniter will heat and burn in two without igniting the engine. This is almost always caused by a failure to install it correctly. Disarm the launch panel, remove the model, clean the igniter residue from the nozzle and install a new igniter. Follow the launching procedure again.



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RECOMMENDED ENGINES: B-2, B-4 or C-5 (Use B-2 for first flight.)

READ THE INSTRUCTIONS CAREFULLY BEFORE BEGINNING CONSTRUCTION.

ASSEMBLY INSTRUCTIONS

PART NO.	PART LIST
1	(1) ENGINE MOUNT TUBE
2	(1) ENGINE HOLDER
3	(1) MYLAR RETAINER RING
4A	(2) ENGINE MOUNT RINGS
4B	(1) SET, MARKING GUIDES
5	(1) ROCKET BODY TUBE
6	(1) SHOCK CORD MOUNT
7	(1) SHOCK CORD
8A	(1) PLASTIC NOSE CONE BASE
8B	(1) PLASTIC NOSE CONE
9	(1) SCREW EYE
10	(1) DIE CUT BALSA FIN SHEET
11	(2) LAUNCH LUGS
12	(1) 18" PARACHUTE
13	(1) PARACHUTE SHROUD LINE (108")
14	(6) PARACHUTE TAPE DISCS
15	(2) DECAL SHEETS

KIT ALSO INCLUDES:

COUNTDOWN CHECKLIST CARD

- 1** Slit the engine mount tube (1) in Fig. 1. Insert engine holder (2) and slide mylar retainer ring (3) into position. Glue the engine holder and retainer ring securely. Glue engine mount rings (4A) onto tube as indicated. Allow to dry completely.
- 2** Slip the marking guides (4B) onto the rocket body tube (5) and mark for fin and launch lug alignment lines.
- 3** Cut out the shock cord mount (6) and prefold on dotted lines. Glue shock cord end (7) into place as in Fig. 3. Glue completed mount into rocket body tube. (Hold mount in place until glue sets.)
- 4** Cement the plastic nose cone base (8A) into the nose cone (8B). Use PLASTIC CEMENT. Turn the screw eye (9) into the nose cone base.
- 5** 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.
- 6** Sand fin sides (10) 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 (11) to the launch lug alignment line exactly as shown.
- 7** Assemble the parachute (12) as directed in the parachute instructions. Tie the parachute shroud lines (13) and shock cord to nose cone screw eye.
- 8** 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. 8. Allow glue to set and repeat. (Support rocket horizontally while drying.)

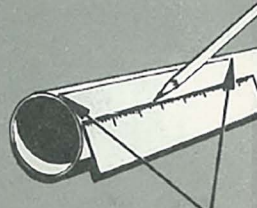
START

1

2

ALIGN GUIDES ON FLAT SURFACE

MARK TUBE AT EACH NOTCH



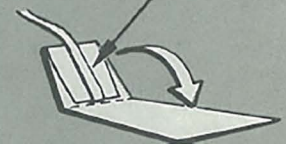
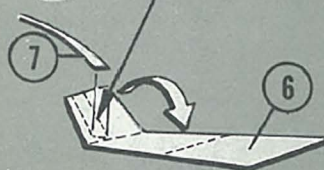
DRAW LAUNCH LUG LINE ENTIRE LENGTH OF TUBE

CONNECT M FRONT AND

3

SPREAD GLUE HERE FOLD FORWARD

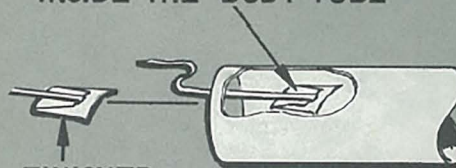
SPREAD GLUE HERE FOLD FORWARD



PRE-FOLD ON DOTTED LINES

SPREAD GLUE HERE INSIDE THE BODY TUBE

SAND TRA EDGE RO

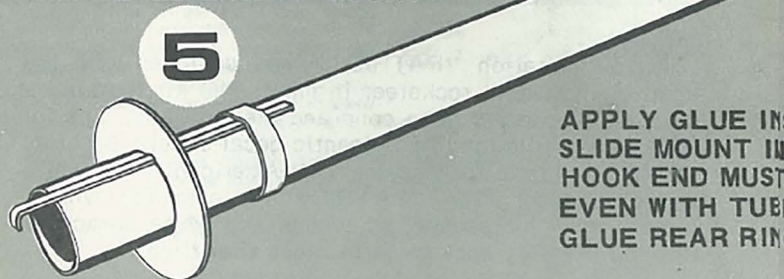


FINISHED

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

COMPLETED ENGINE MOUNT

5



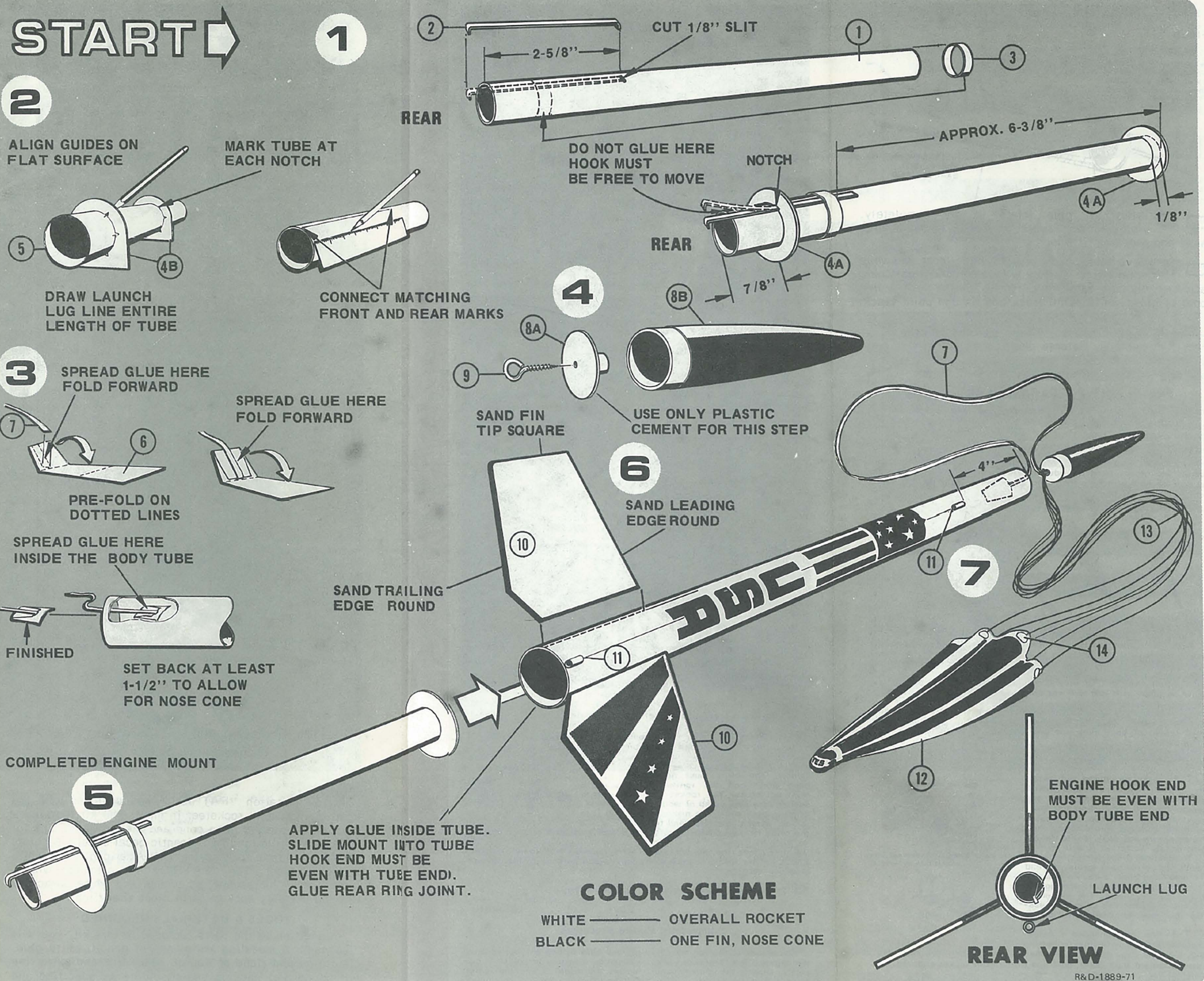
APPLY GLUE IN SLIDE MOUNT IN HOOK END MUST EVEN WITH TUBE GLUE REAR RING

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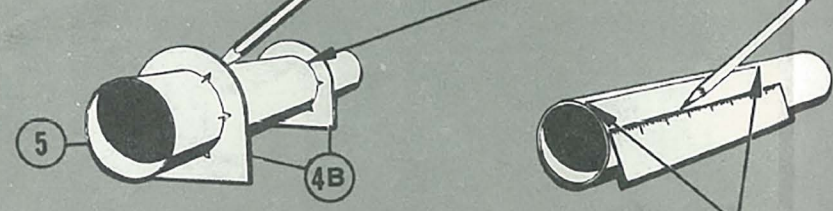


START →

1

2

ALIGN GUIDES ON FLAT SURFACE
MARK TUBE AT EACH NOTCH

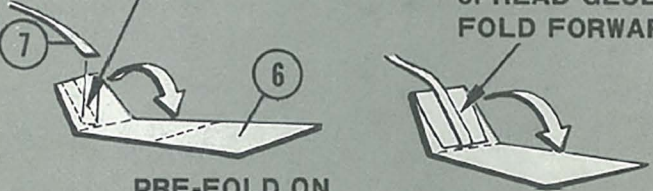


DRAW LAUNCH LUG LINE ENTIRE LENGTH OF TUBE

CONNECT MATCHING FRONT AND REAR MARKS

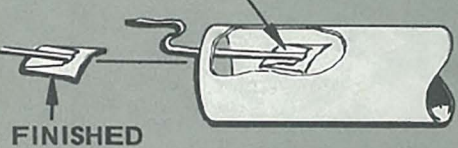
3

SPREAD GLUE HERE FOLD FORWARD
SPREAD GLUE HERE FOLD FORWARD



PRE-FOLD ON DOTTED LINES

4



FINISHED

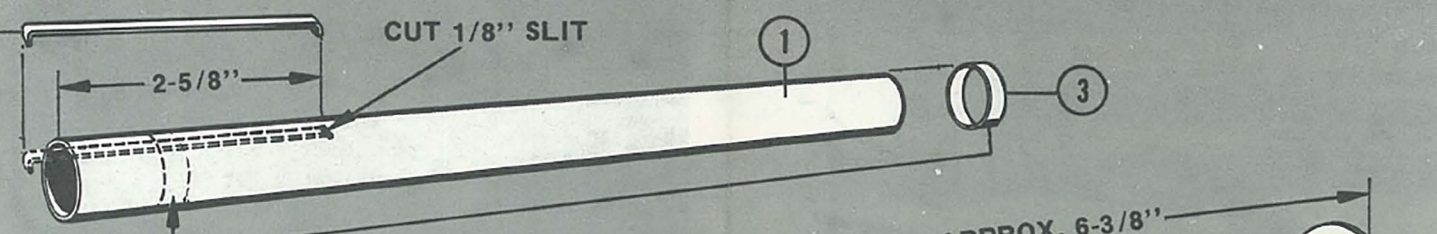
SET BACK AT LEAST 1-1/2" TO ALLOW FOR NOSE CONE

COMPLETED ENGINE MOUNT

5

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

2



REAR

DO NOT GLUE HERE HOOK MUST BE FREE TO MOVE

4



SAND FIN TIP SQUARE

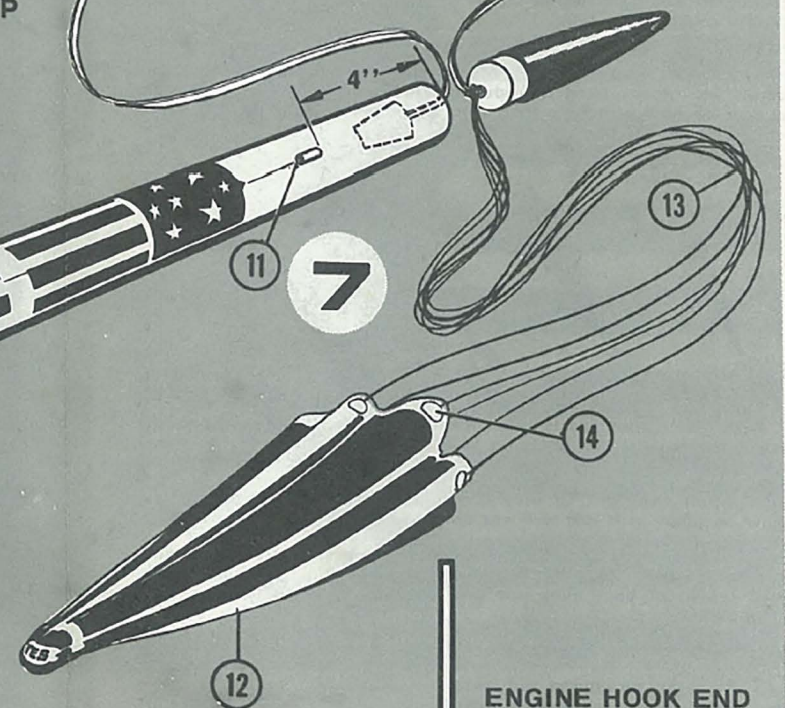
USE ONLY PLASTIC CEMENT FOR THIS STEP

6

SAND LEADING EDGE ROUND

SAND TRAILING EDGE ROUND

7



ENGINE HOOK END MUST BE EVEN WITH BODY TUBE END

COLOR SCHEME

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

REAR VIEW

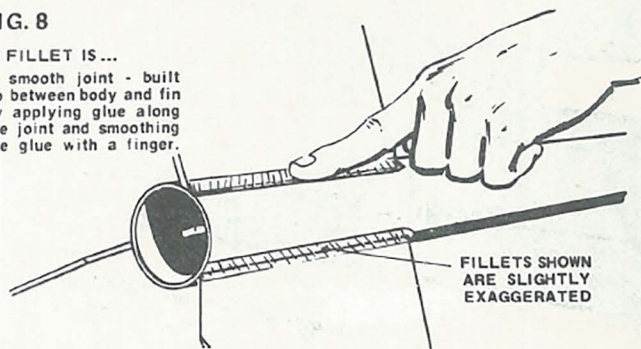
LAUNCH LUG

FINISHING AND PAINTING

FIG. 8

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.



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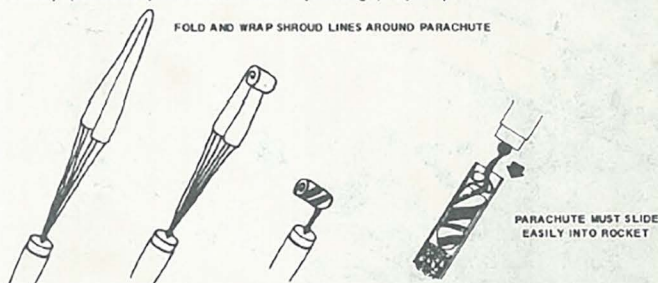
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PRE-FLIGHT PREPARATION AND LAUNCH

T-15 Pack six (6) squares of crumpled recovery wadding loosely into rocket body tube.



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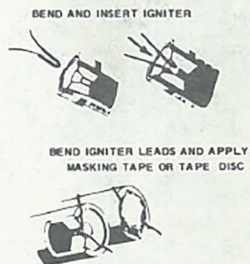
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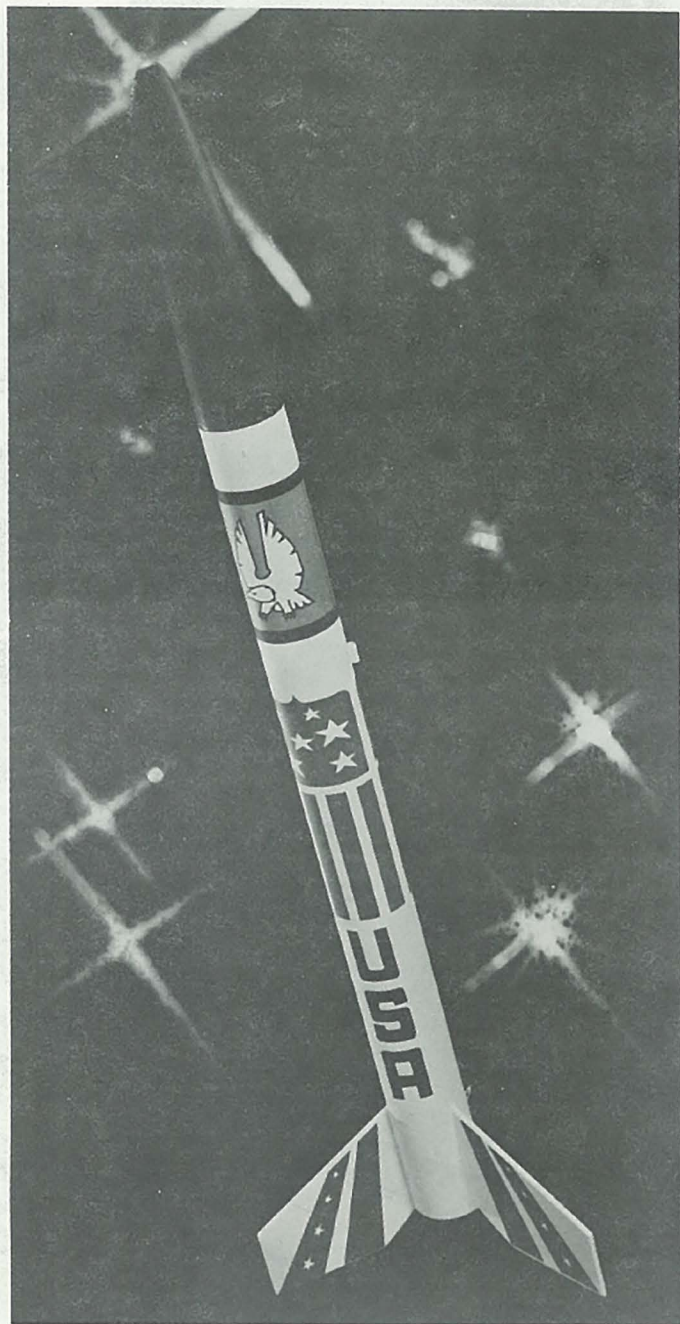
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T-9 Disarm the launch panel - remove safety key.

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.



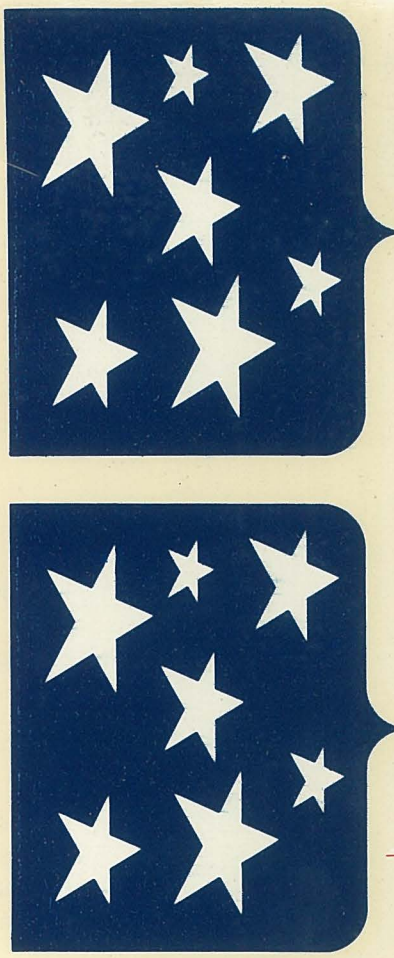
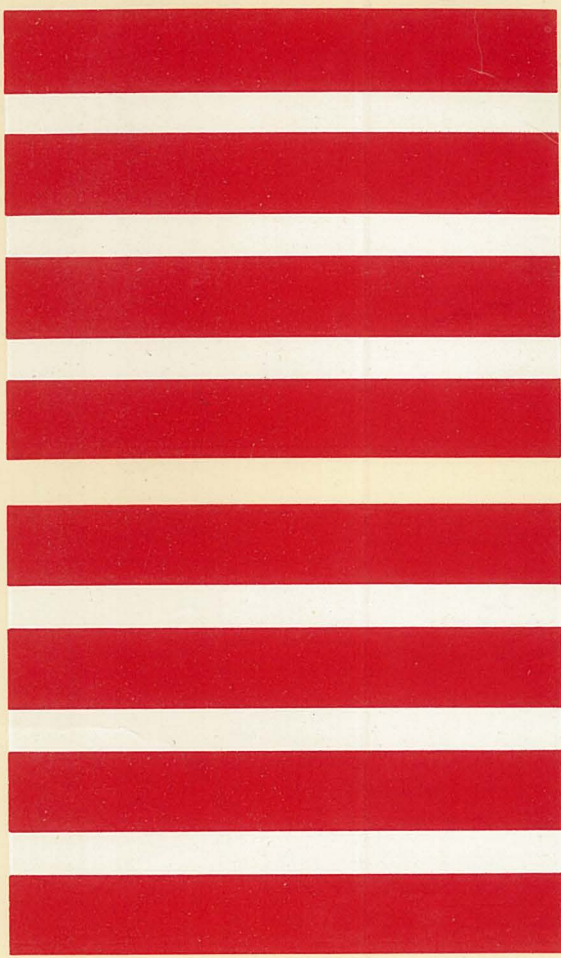
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Important: Misfire Procedure

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.



KD-M3A

ESTES INDUSTRIES, PENROSE, COLORADO

Whales Rule Maui Waters - December to May

January

February

March

April

May

June

July

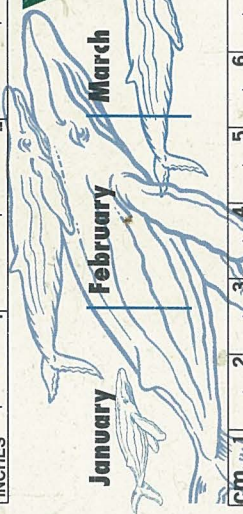
August

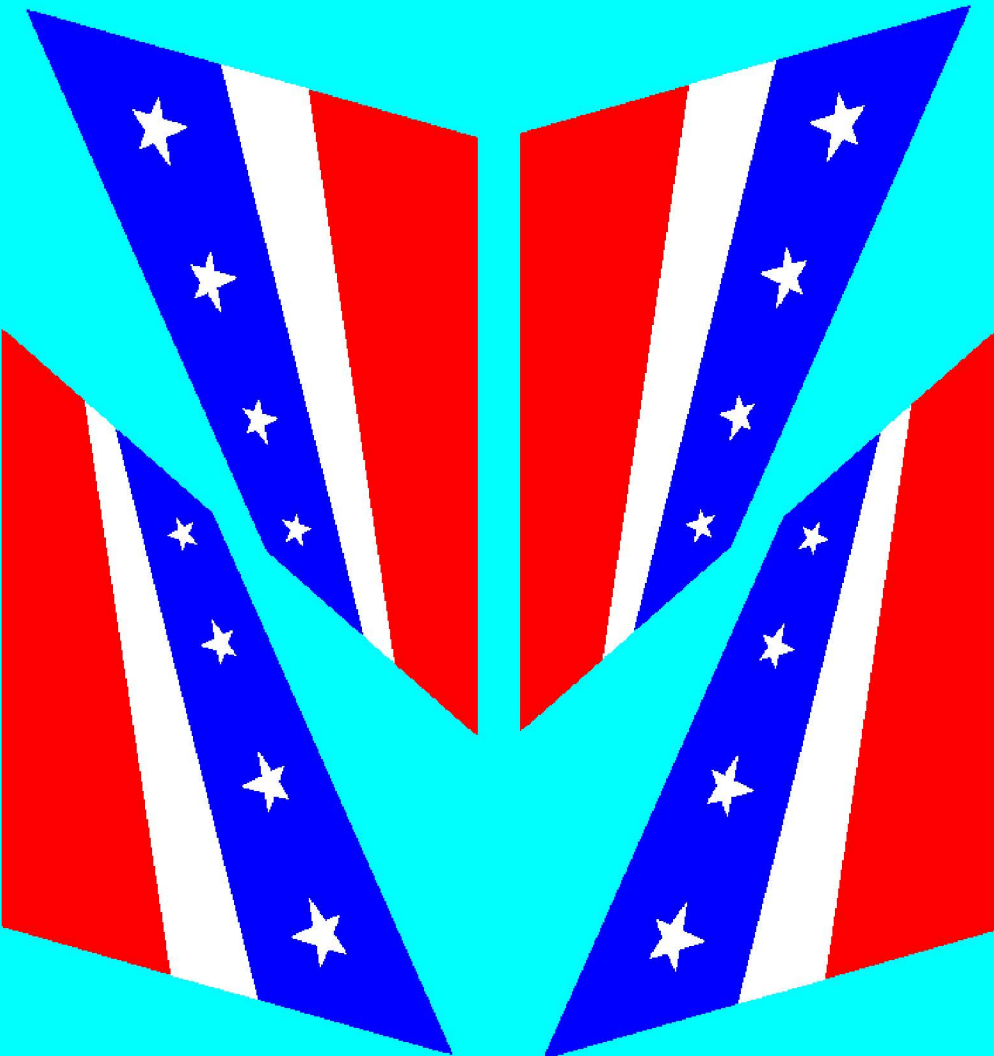
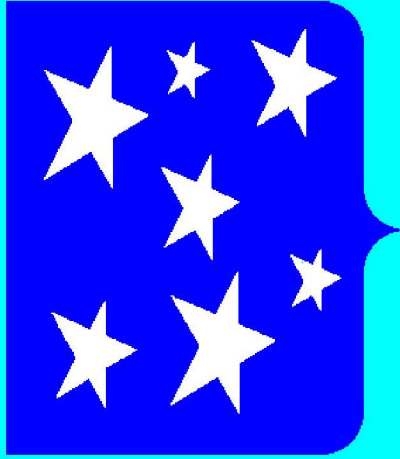
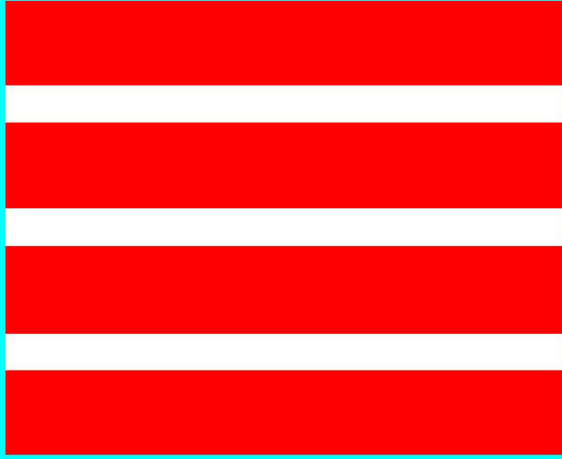
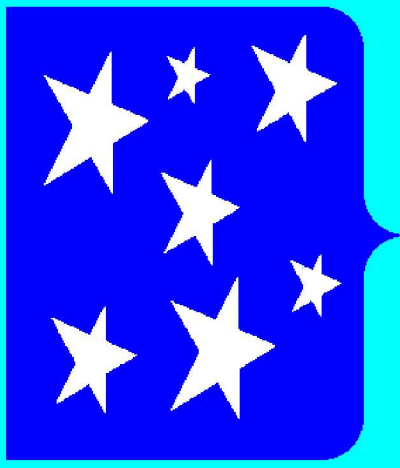
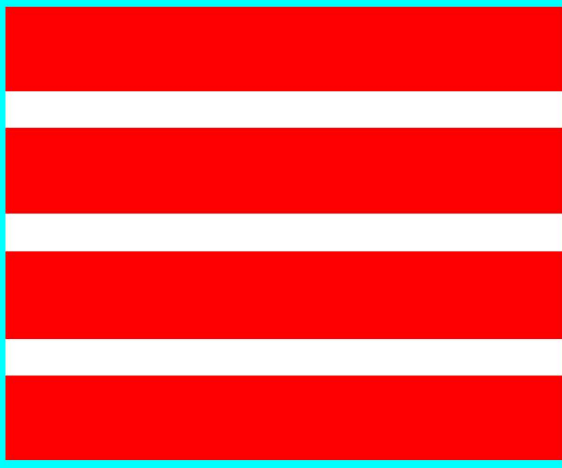
September

October

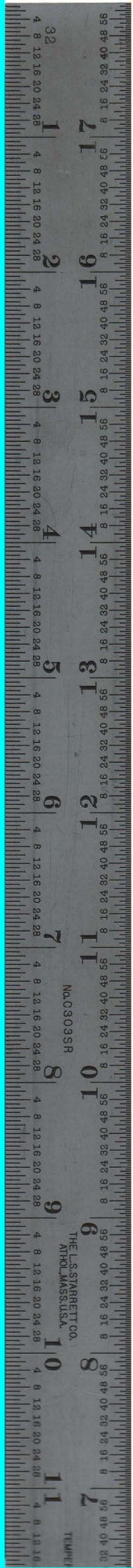
November

December



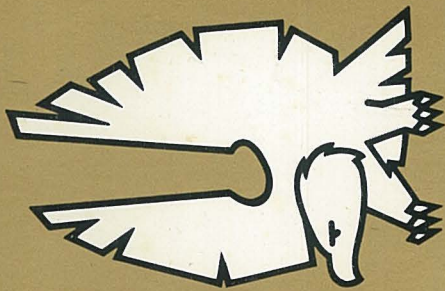


KD-M3A ESTES INDUSTRIES, PENROSE, COLORADO



ESTES
PATRIOT

ESTES
PATRIOT



ESTES

ESTES INDUSTRIES,
PENROSE,
COLORADO



KD-M3B

Whales Rule Maui Waters - December

January

March

April

May

June

July

August

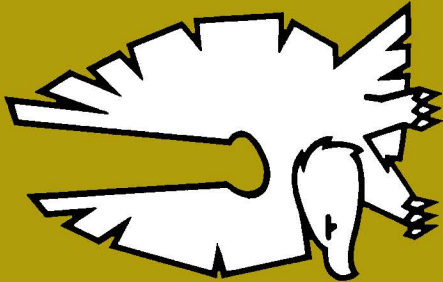
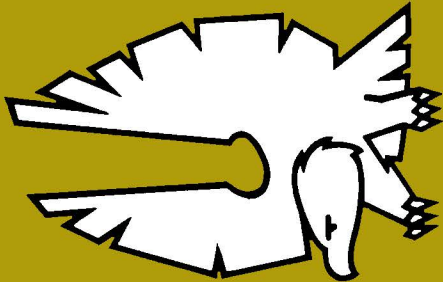
September

October



PATRIOT

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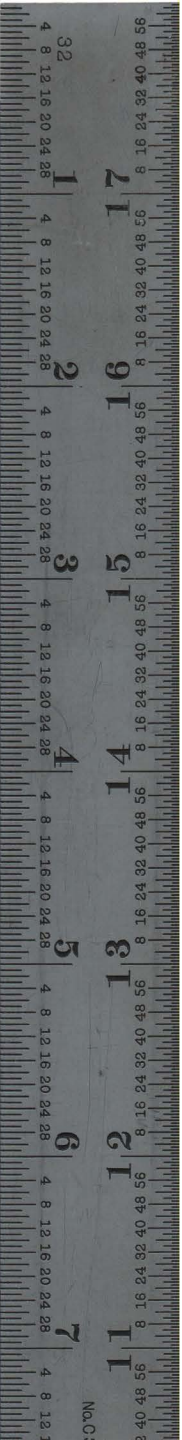


ESTES

ESTES INDUSTRIES,
PENROSE,
COLORADO



KD-M3B

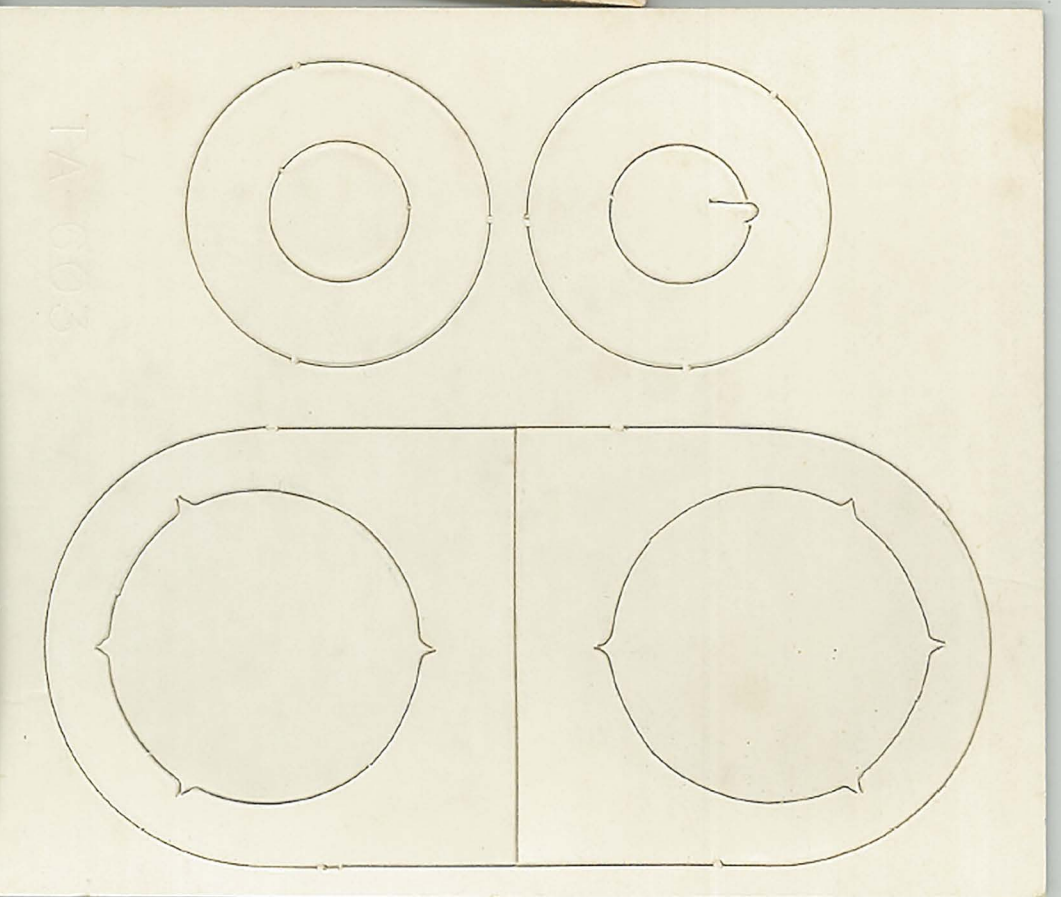


Whales Rule Maui Waters - December to May

January
February
March
April
May
June
July
August
September
October
November
December

cm 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

INCHES 1 2 3 4 5 6 7 8 9 10 11



PARTS LIST KIT NO. KC-3 - Citation Patriot								
Quantity	Description	Type	Number	Details1	Details2	Details3	Details4	Comment
1	PAPER BODY TUBE	BT-20B	30320	8.65" long	0.710" ID	0.736" OD	0.013" wall	Engine Mount Tube
1	ENGINE HOLDER	EH-2	3141/35025	2.8" long	.100" wide	.025" thick		Reg. & D
1	RING	HR-20	3340	.774" ID	.25" wide			Strapdown ring for EH-2 and BT-20J
2	PAPER ADAPTER	RA-2060	3114	BT-20 in BT-60				
1 set	Body Tube Marking Guides	MG-603	37605	3 fins for BT-60				
1	PAPER BODY TUBE	BT-60	30396	18" long	1.595" ID	1.637" OD	0.021" wall	Rocket Body Tube
1	Shock Cord Mount For BT-50 body tubes and larger	SCM-50	84444/900511					Paper
1	Shock Cord	SC-1	85730	1/8" x 18"				
1	PLASTIC NOSE CONE	PNC-60AH	71014	6.75" long	1.627" dia.	.875" shoulder	BT-60	Black 2 piece
1	Screw Eye	SE-3	2284	5/8" long				
1	BALSA FIN STOCK	BFS-40L	3174	1/8" thick	3" wide	12" long		BF-M3 (32240)
2	LAUNCH LUG	LL-2AM	38176	5/32" ID	1/8" rod	3/8" long		
1	Parachute	PK-18	2266/85566	18" dia.				
1	Shroud Line	SLT-108	38239	108"				
6	Tape Disc	TD-3F	38406	1/2" dia.				6x
1	DECAL	KD-M3A	37203	6" wide	11.8" long	waterslide		Red, White, Blue



CITATION



A SUBSIDIARY OF DAMON

Recommended for ages 10 to adult.

PATRIOT



Recommended for
Ages 10 to Adult

FLYING MODEL ROCKET

DEGREE OF CHALLENGE 2

(See side of box for explanation)

WHY ROCKETRY?

From the first countdown to our most recent landing on the moon, young people everywhere have been stirred by man's incredible journeys into space. Along with the excitement there has been a challenge — to learn more about rockets, and to share, somehow, in those great adventures in space.

Enter Estes — pioneer in model rocketry and today the world's largest manufacturer of model rockets, safety engines and accessories. Whatever your age, from 10 to adult, there are Estes rockets you can build, launch, follow through parachute recovery, then fly and fly again.

MODEL ROCKET SAFETY

A recognized safety code — plus safe rocketry materials — equals 24 million safe rocket launches.

This Solid Propellant Model Rocketry Safety Code is Approved by The National Association of Rocketry and the Hobby Industry Association of America.

ROCKETEER'S CODE OF SAFETY

1. CONSTRUCTION — My model rockets will be made of lightweight materials such as paper, wood, plastic and rubber, without any metal as structural parts.
2. ENGINES — I will use only pre-loaded, factory-made model rocket engines in the manner recommended by the manufacturer. I will not change in any way nor attempt to reload these engines.
3. RECOVERY — I will always use a recovery system in my model rockets that will return them safely to the ground so that they may be flown again.
4. WEIGHT LIMITS — My model rocket will weigh no more than 453 grams (16 ozs.) at liftoff, and the engines will contain no more than 113 grams (4 ozs.) of propellant.
5. STABILITY — I will check the stability of my model rockets before their first flight, except when launching models of already proven stability.
6. LAUNCHING SYSTEM — The system I use to launch my model rockets must be remotely controlled and electrically operated and will contain a switch that will return to "off" when released. I will remain at least 10 feet away from any rocket that is being launched.
7. LAUNCH SAFETY — I will not let anyone approach a model rocket on a launcher until I have made sure that either the safety interlock key has been removed or the battery has been disconnected from my launcher.
8. FLYING CONDITIONS — I will not launch my model rocket in high winds, near buildings, power lines, tall trees, low-flying aircraft, or under any conditions which might be dangerous to people or property.
9. LAUNCH AREA — My model rockets will always be launched from a cleared area, free of any easy to burn materials, and I will only use non-flammable recovery wadding in my rockets.
10. JET DEFLECTOR — My launcher will have a jet deflector device to prevent the engine exhaust from hitting the ground directly.
11. LAUNCH ROD — To prevent accidental eye injury, I will always place the launcher so the end of the rod is above eye level or cap the end of the rod with my hand when approaching it. I will never place my head or body over the launching rod. When my launcher is not in use, I will always store it so that the launch rod is NOT in an upright position.
12. POWER LINES — I will never attempt to recover my rocket from a power line or other dangerous places.
13. LAUNCH TARGETS & ANGLE — I will not launch rockets so their flight path will carry them against targets on the ground and will never use an explosive warhead nor a payload that is intended to be flammable. My launching device will always be pointed within 30 degrees of vertical.
14. PRE-LAUNCH TEST — When conducting research activities with unproven designs or methods, I will, when possible, determine their reliability through pre-launch tests. I will conduct launchings of unproven designs in complete isolation from persons not participating in the actual launching.

Revised 2/4/70

ROCKETEER'S PLEDGE

I am proud to be a model rocketeer. I feel it is important to do my part in upholding the outstanding safety record that model rocketry has gained. In all my hobby activities, I will act in a mature manner and will always be considerate of other people and property rights. I pledge to follow the Rocketeer's Code of Safety.