



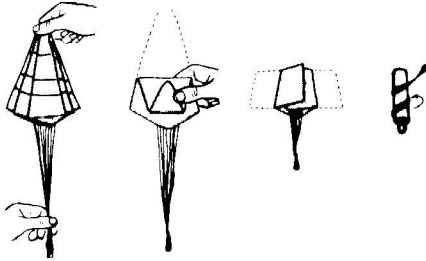
## FLYING INSTRUCTIONS

Igniters and complete engine installation instructions are included in "Engine Operating Instructions" which accompany all Centuri engines.

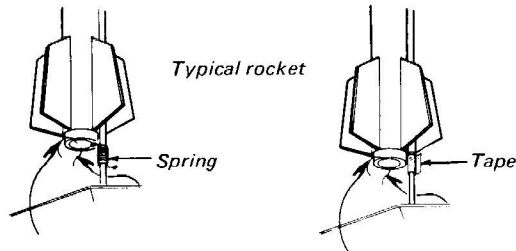
RECOMMENDED ENGINE: C6-3  
MAY SUBSTITUTE B4-2 IN THIS SUPER KIT ONLY

### FLIGHT PREPPING

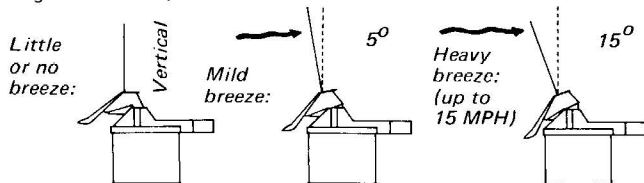
1. Inspect entire recovery system for good condition before each flight. If the recovery system is tangled from the last flight, cut it apart to untangle it.
2. Your Super Kit has an Ejection Baffle which virtually eliminates the need for chute wadding. BUT, we strongly recommend that you still use 2 or 3 sheets of our crepe-type wadding (#5846/SPW-19) in case your engine has an extra strength ejection charge.
3. Fold parachutes as shown and tuck neatly into rocket; . . . trying to avoid tangles. Chutes should be packed just before flight, to avoid them possibly sticking together.



4. Tuck in shock cord and insert nose section. The section should fit snugly, yet be loose enough to eject.
5. Install igniter into engine, following instructions enclosed with engines.
6. Insert engine into its mount, securing with engine lock.
7. Mount the rocket on launcher and prepare for ignition. The rocket must be raised slightly off the launcher's deflector to avoid a short-circuit which might prevent ignition. If your launcher has a "positioning spring" use it as shown. Otherwise just wrap a little tape around the launch rod to support the rocket at the launch lug.



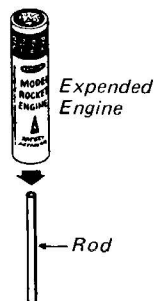
8. If your launcher has a rod-tilting feature, use it only for launching in breezes . . . normally model rockets are launched straight up. For reliable, impressive flights, never tilt the rod more than 15 degrees when flying your SUPER KIT . . . do not tilt the rod to its maximum angle for this kit.



Avoid eye injury by capping the exposed tip of the launch rod when not actually launching. Follow the instructions and the Safety Code, and have many happy hours with Model Rocketry.



P. O. BOX 1988, Phoenix, Arizona, 85001

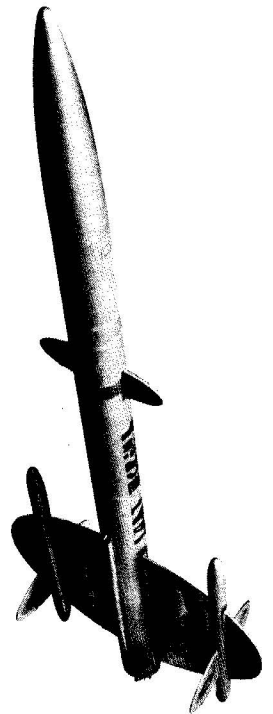


**Centuri** #5308

# SUPER KIT

## U.F.O. INVADER

The year is 1980 and at last the existence of flying saucers is a proven fact. First sighted in the mysterious Bermuda Triangle, the U.F.O. Invader has been observed by countless eye witnesses. The Invader is a submarine as well as a deep-space ship . . . able to travel on the ocean surface, buoyed by its wing pods. It submerges to a hidden undersea base where the aliens perhaps study Earth and its people. Little is known about the aliens, but we know this: we are not alone in the universe!



## MODEL ROCKETEER'S SAFETY CODE

### CONSTRUCTION

My model rockets will be made of only lightweight materials such as paper, wood, plastic, and thin metallic foils, with the exception of payloads and engine holders made of wirelike material.

### 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.

### 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.

### WEIGHT LIMITS

My model rocket will weigh no more than 453 grams (16 oz.) at liftoff, and the engines will contain no more than 113 (4 oz.) of propellant, as prescribed by Federal Regulations.

### STABILITY

I will check the stability of my model rockets before their first flight except when launching models of already proven stability.

### LAUNCHING SYSTEM

The system I use to launch my rockets will 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.

### 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.

### 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.

### BLAST DEFLECTOR

My launcher will have a blast deflector device to prevent the engine exhaust from hitting the ground directly.

### 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.

### POWER LINES

I will never attempt to recover my rocket from a power line or other dangerous places.

### LAUNCH TARGETS AND 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.

### 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.

### 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.

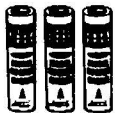
CENTURI Engineering Co. Inc., Phoenix, AZ 85001  
Printed in U.S.A. 081577

## HOW IT WORKS

Your U.F.O. Invader model rocket is designed to fly in the same manner as most model rocket kits. The electrically ignited engine blasts the Invader off the launch pad, guiding it into proper flight by the launch rod. The rocket continues coasting to peak altitude while the motor's delay-charge burns. Then the ejection charge ignites, pushing out the nose cone and parachute system. Your Invader drifts to earth ready to be prepared for another flight.

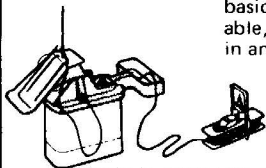
## WHAT IT TAKES TO FLY

You will need engines, igniters, an electrical launch system and parachute wadding to fly your rocket. These supplies are NOT included in individual rocket kits, but are available separately and ARE included in every Centuri Starter Set or Rocket Outfit.



We recommend using Centuri engines; each package includes the famous "Sure-Shot" igniters, acclaimed as the world's most reliable model rocket igniter.

The popular Centuri "Powr-Pad" is an ideal basic launch system; compact, highly portable, reliable, and offering features not found in any other launch system.



Always use standard remote-control electrical ignition and follow the engine recommendations. Be sure to comply with any laws that may apply in your area, for the good of Model Rocketry and your own enjoyment.

## RIGHT MATERIALS FOR THE JOB

Different model rocket kits are made out of a wide variety of materials, depending on the needs of each kit. The chart below explains why this particular kit is designed using certain materials.

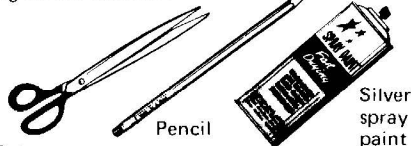
PART	REQUIREMENTS	MATERIAL
Fins	No tools required Precision edges	Pre-cut Fibreboard
Nose Cone & Connector	No tools required Durability	Molded Styrene

## TOOLS YOU WILL NEED

In addition to the parts supplied you will need the following tools to assemble and finish this kit (DO NOT use model airplane glue for building model rockets).



White glue, or "Wilhold" type glue, or Centuri Superbond

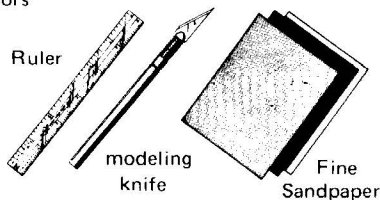


Scissors

Pencil

Silver spray paint

Optional tools, to help you build an even better model, are:



Ruler

modeling knife

Fine Sandpaper

## BEFORE YOU START

In case you are new to model rocketry, here are some general tips to get you off to a good start.

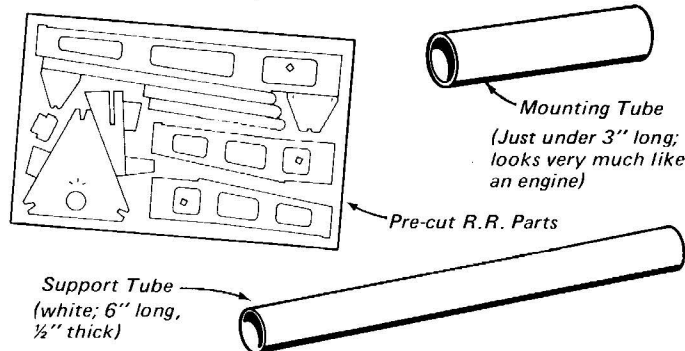
- Choose a practical assembly area: well lighted, big enough to work in, and out of the way of relatives or pets who might accidentally mess up your work.
- Cover your worktable with plywood or heavy cardboard to protect the table from glue, paint, cuts, etc.
- Remove the entire contents of your kit package carefully to avoid losing or damaging small parts. Lay them out neatly and identify each by referring to the "exploded view" drawing on this instruction.
- NOTE: Sometimes certain parts are packed INSIDE of other parts, such as tape discs inside parachutes, decals or couplers inside body tubes, etc.

# ASSEMBLY INSTRUCTIONS

### BEFORE YOU START:

Remove the large "Exploded-View" plan sheet, and place it where you can refer to it while following these assembly instructions.

Identify these parts below for the "Rocket-Rack" display stand and set them aside for assembly later. "Rocket-Rack" instructions are on the reverse of the "exploded view."

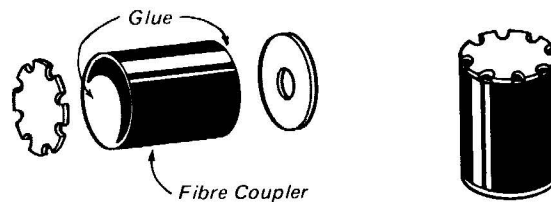


Mounting Tube  
(Just under 3" long;  
looks very much like  
an engine)

Pre-cut R.R. Parts

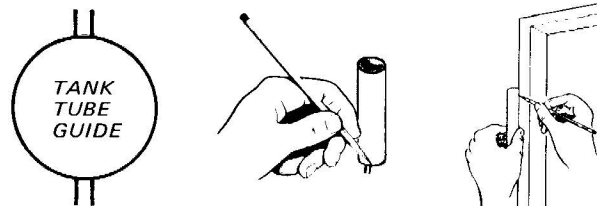
Support Tube  
(white; 6" long,  
1/2" thick)

- 1 Assemble the ejection baffle unit. Set aside to dry.

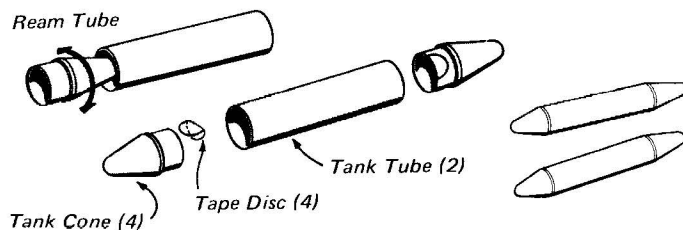


Fibre Coupler

- 2 Stand a tank tube upon its guide below and mark the line positions. Find a convenient groove or channel, such as a door jamb or partially open drawer. Use it as a guide to draw light pencil lines. Repeat for other tank tube.



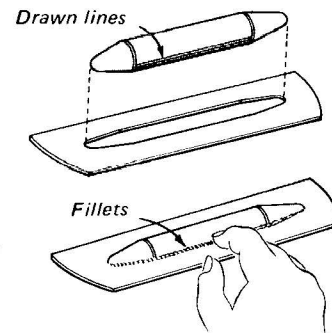
- 3 Assemble the tanks as shown, using four tape discs to provide a gluing surface on the plastic cones.



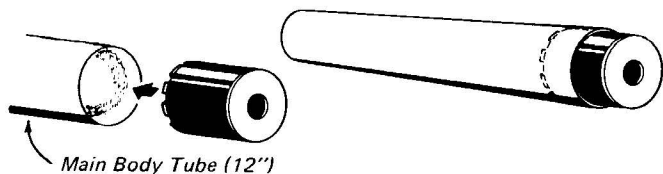
Tank Cone (4)

- 4 Insert tanks into main wings as shown. (Note: due to slight manufacturing variations you may have to shave the slot a little to provide a good fit.)

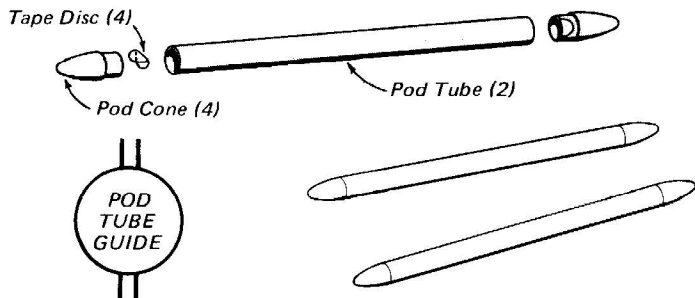
Use the drawn lines to properly center the tank. Thru the rest of this instruction you will be asked several times to "fillet" certain glued joints. "Fillet" means you squirt a fine line of glue along a joint, then smooth it out with your finger. This gives greater strength and durability in a model rocket. Keep a rag handy for cleaning your fingers. Start by applying a fillet on both sides of the tanks where they fit into the wings.



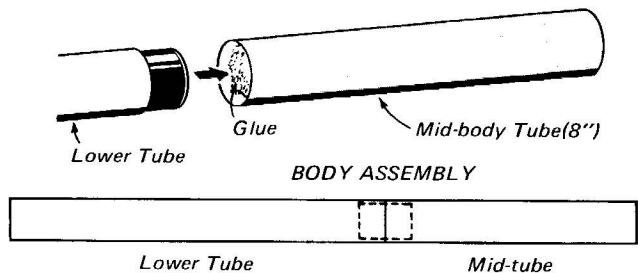
- 5** Test fit the baffle unit into the lower body tube . . . shave or sand to fit, if necessary. Glue baffle unit approximately halfway into tube, with the "donut" end of baffle exposed. Set aside to dry.



- 6** Draw guide lines on pod tubes, and assemble using the same techniques as you did with the tank tubes.

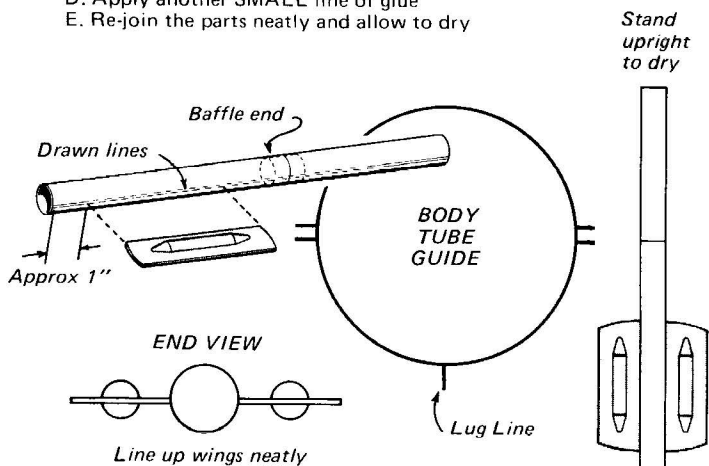


- 7** Glue the mid-body tube onto the lower tube unit. Roll completed assembly on perfectly flat surface to be sure tubes are lined up straight.



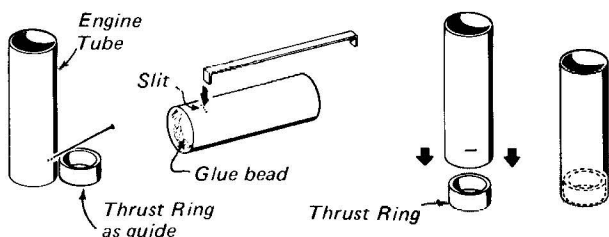
- 8** Draw guide lines on the body assembly, along its full length. Glue each wing assembly in place, using this standard fin-gluing technique:

- Apply a SMALL line of glue to edge of part
- Join the appropriate parts
- Separate the parts and allow several seconds for glue to become tacky
- Apply another SMALL line of glue
- Re-join the parts neatly and allow to dry

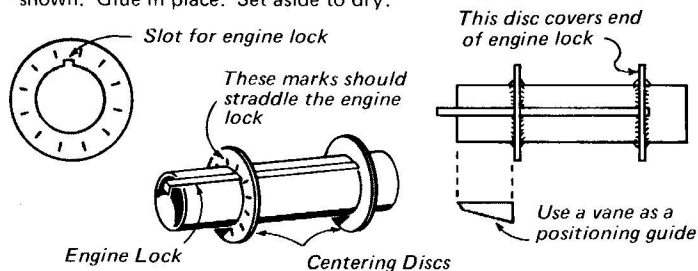


- 9** Make an engine-lock slit in the engine tube by poking holes with a pin or needle (or cutting with a modeling knife if you have one). Push engine lock into tube to finish the slit.

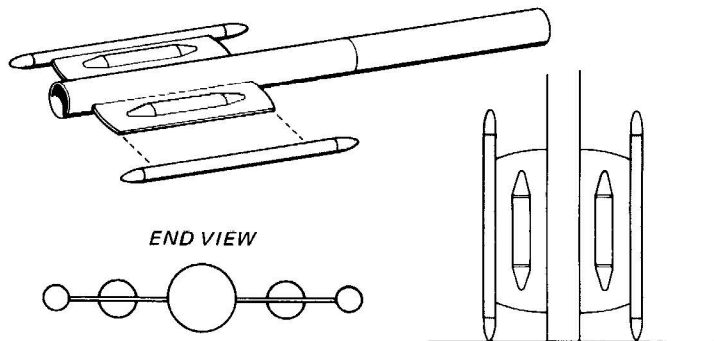
Run glue bead around inside of the slit end of tube. Insert thrust ring by pushing tube down over it.



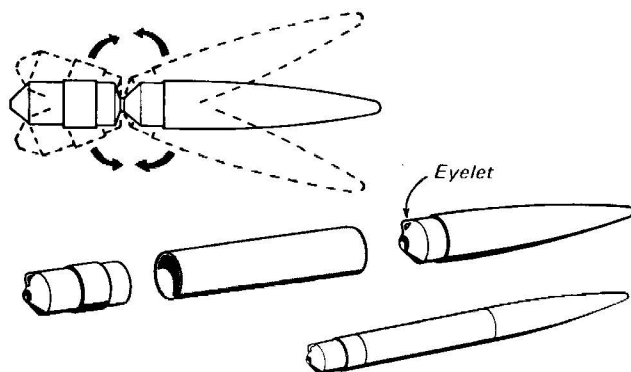
- 10** Insert engine lock into engine tube, and position centering discs as shown. Glue in place. Set aside to dry.



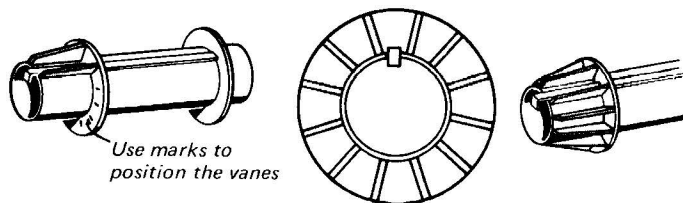
- 11** Glue the pods onto main wings, using the pre-gluing technique explained earlier. Position with the pod's drawn lines, and by resting entire assembly upright on table.



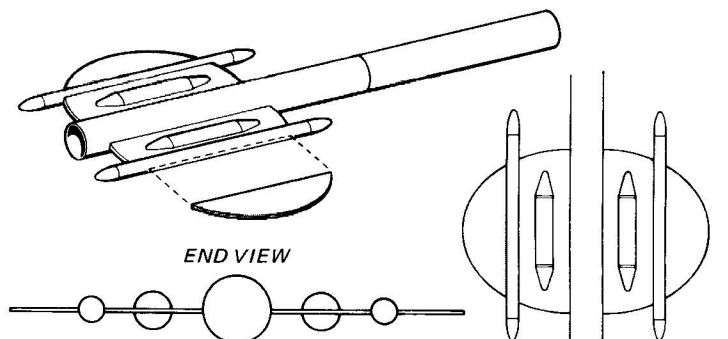
- 12** Wriggle the nose cone/connector unit until it breaks apart at the neck. Scrape away any plastic "flash" scrap along the seams and socket together with the upper body tube.



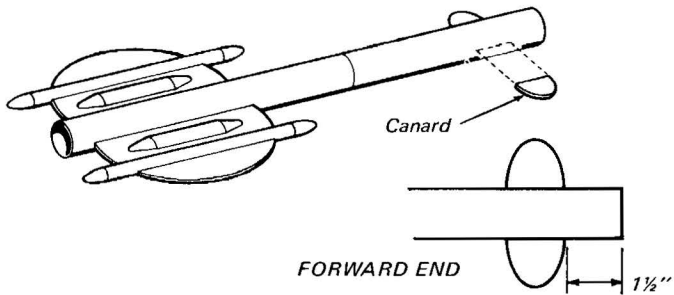
- 13** Glue the 12 little vanes onto the engine mount. Check alignment as you glue, to be sure all are lined up with the center of the tube, and on straight.



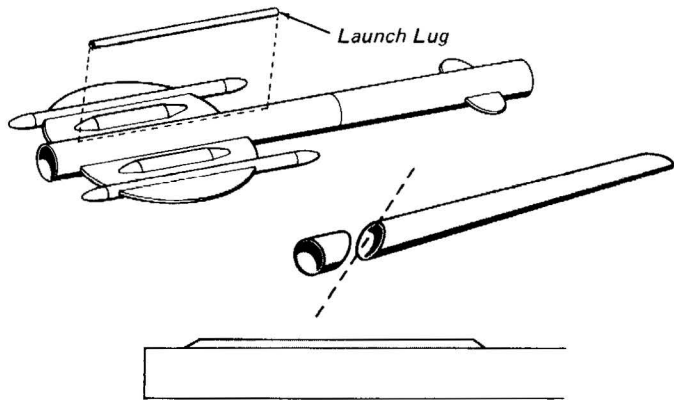
- 14** Glue the wing tips in place.



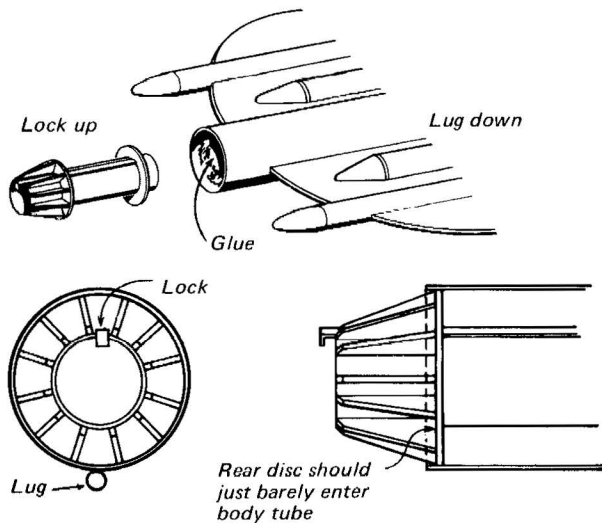
- 15** Glue the canards onto body assembly, approximately 1½" from forward end. Check alignment with wings.



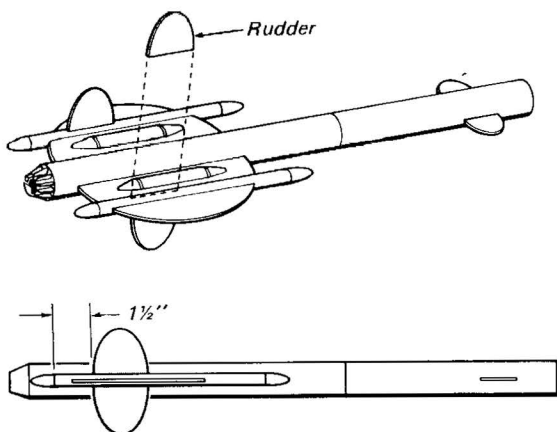
- 16** Glue the launch lug onto its drawn line. **OPTIONAL TIP:** Use a very sharp blade to taper the ends of the lug.



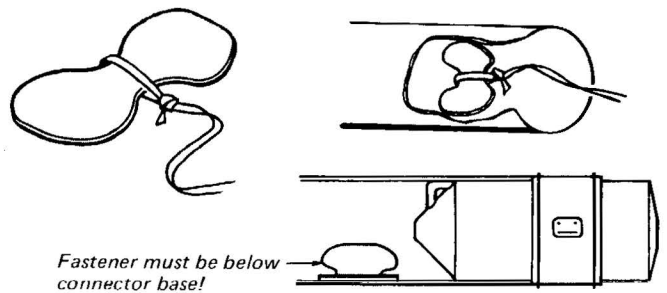
- 17** Install engine mount, making sure that the lock is opposite the launch lug.



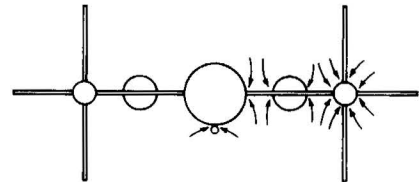
- 18** Glue each rudder onto the pods as shown. Make sure each lines up neatly with the others.



- 19** Tie one end of the shock cord around its fastener as shown, with a double knot. Glue fastener far enough down into body tube to allow full insertion of the nose cone later. Hold fastener until glue sets.

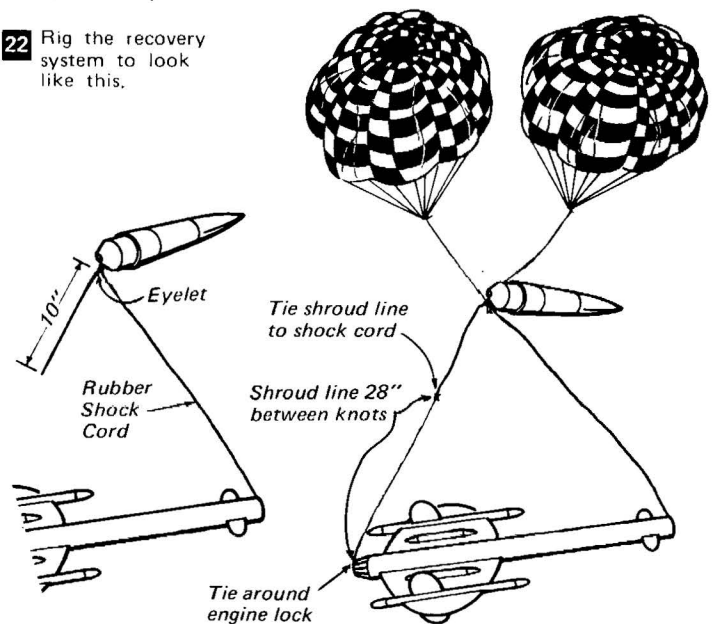


- 20** **VERY IMPORTANT:** Apply glue fillets to every exposed joint. Set rocket aside to dry, but check it to be sure glue does not run and parts do not sag!



- 21** Assemble the two parachute kits enclosed, following the instructions printed right on the chute material. Save the left over shroud line for next step.

- 22** Rig the recovery system to look like this.



- 23** Apply a final set of fillets to all glue joints and allow to dry thoroughly before further handling.

- 24** For best painting results, spray first with enamel primer to seal the fibre-board edges. Or rub a thin film of glue on. Or use filler coat and a brush. You may then want to smooth the edges with very fine sandpaper. When painting plastic parts, never use dope or lacquer! Use enamel only! Dope or lacquer will melt the plastic.

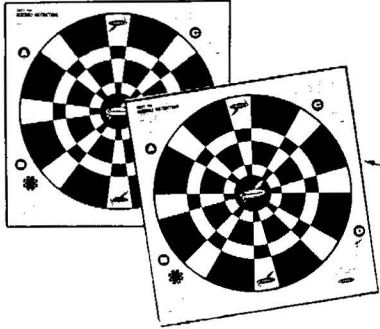
**RECOMMENDED COLOR: SILVER**  
**MAY SUBSTITUTE WHITE OR YELLOW**

Spray painting your finished model with a fast-drying enamel will produce the best results . . . **IF IT IS DONE PROPERLY!!** Most important is the number of coats of paint. **DO NOT** try to paint your model with one heavy coat! Instead, give it a couple of quick, light coats first and then a finish coat. Let each dry before applying the next.

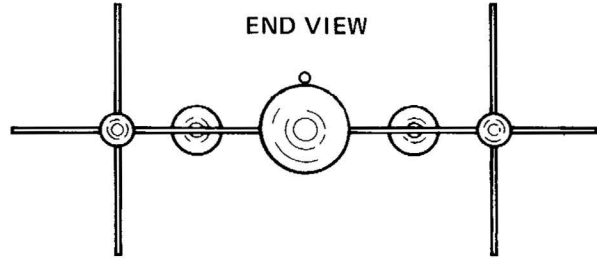
- 25** Applying decals is the last assembly step. Be sure paint is thoroughly dry . . . overnight is best. Read the general instructions printed on the back of the decal. Round up your tools: scissors, rag or paper towel, bowl of water.

Identify the different parts of decal. Notice how each design is covered with a clear shiny shape which holds the design together. *Complete details instructions for decals are on the back of the "Exploded View".*

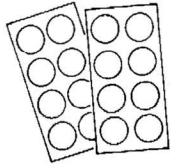
# Exploded View



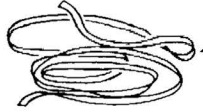
Two Chutes



END VIEW



Two Sets  
Tape Disc  
for chutes

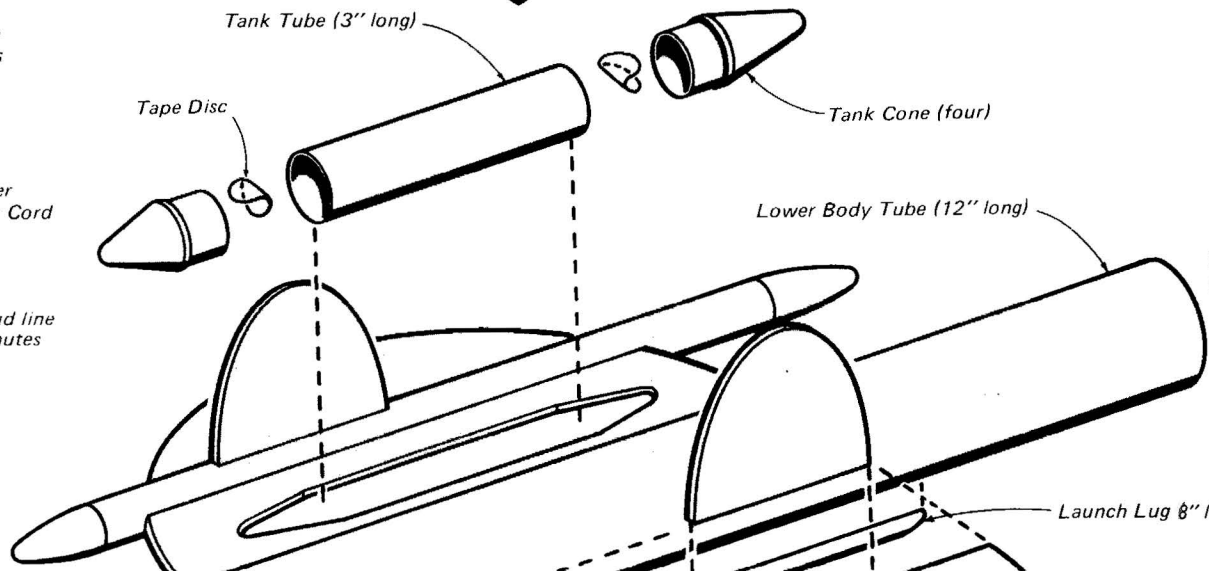


Rubber  
Shock Cord



Shroud line  
for chutes

**TANK ASSEMBLY (TWO)**



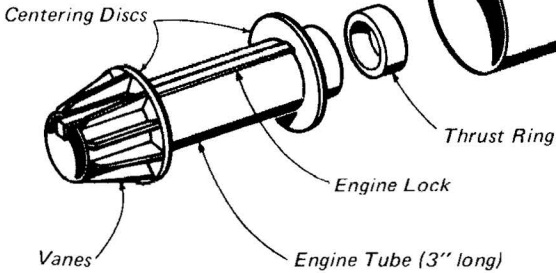
Tank Tube (3" long)

Tape Disc

Tank Cone (four)

Lower Body Tube (12" long)

**ENGINE MOUNT**



Centering Discs

Thrust Ring

Engine Lock

Vanes

Engine Tube (3" long)

Main Wing

Pod Tube (8" long)

Rudder (four)

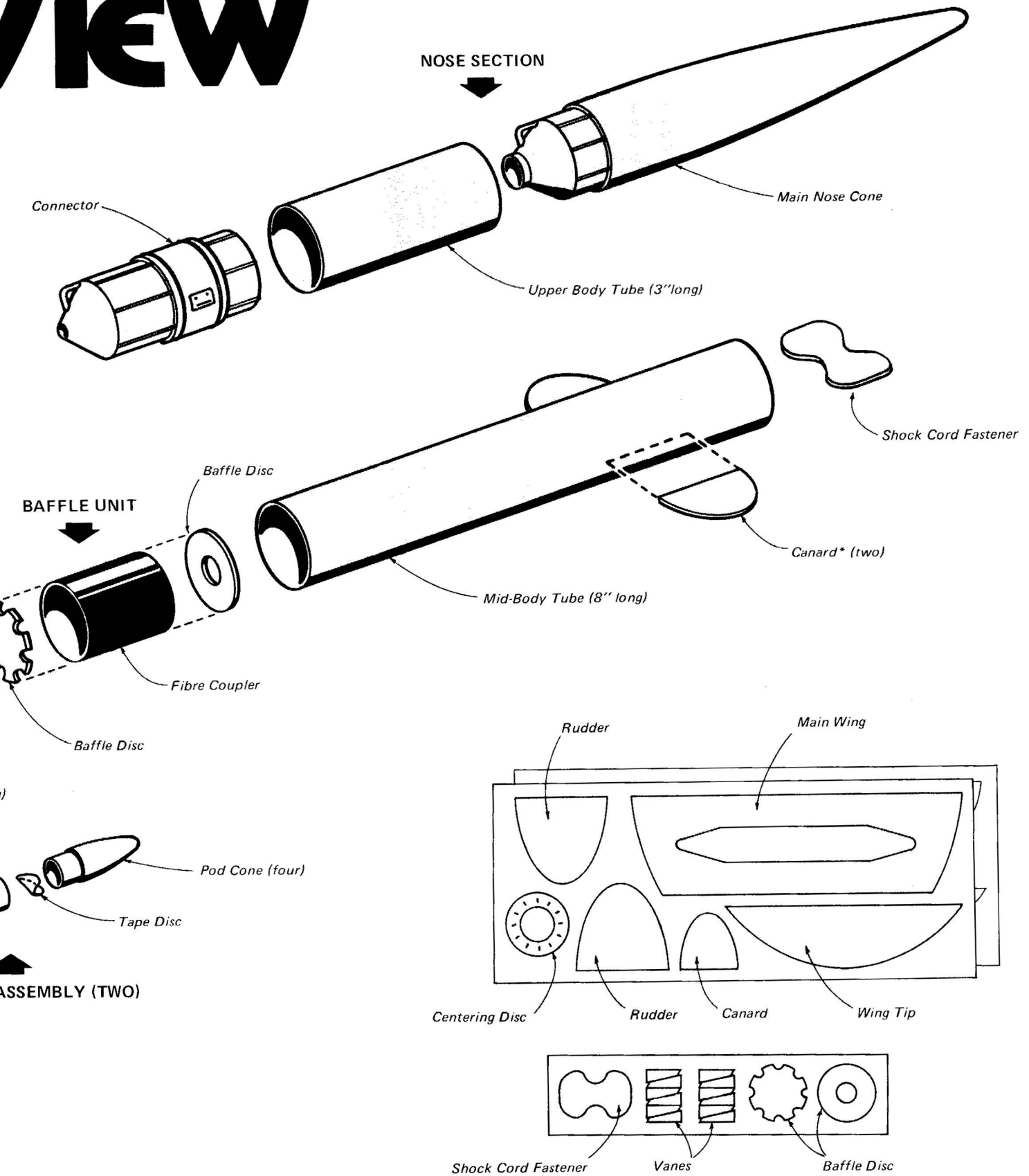
Launch Lug 8" long

PODA

Wing Tip

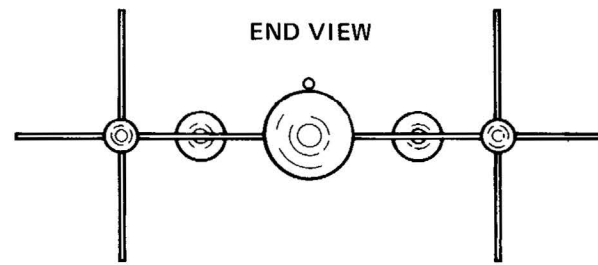
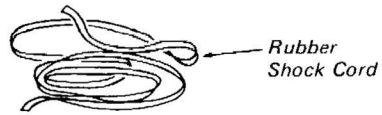
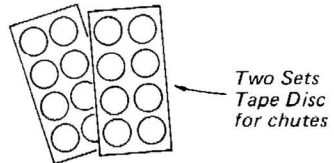
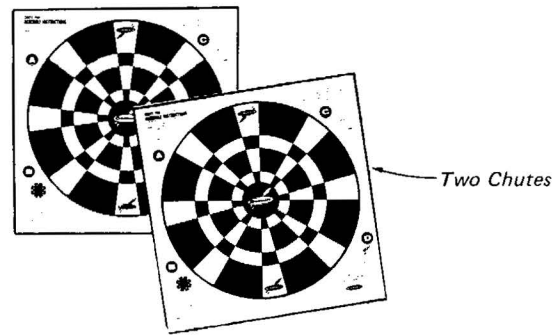


# View

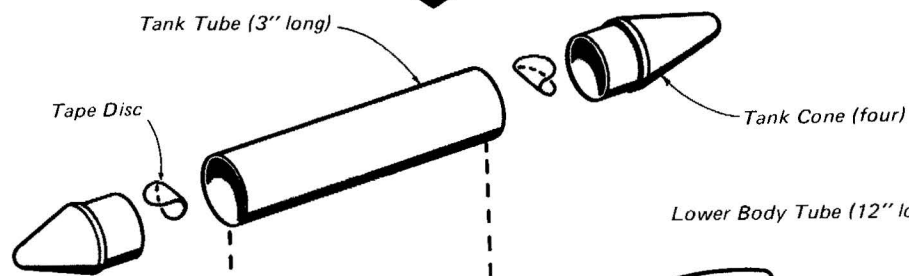


9 10 11 12 13 14 15 16

# Exploded View



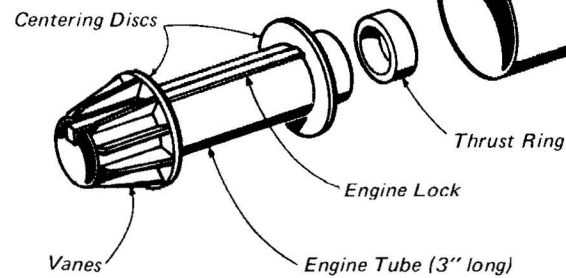
**TANK ASSEMBLY (TWO)**



Lower Body Tube (12" long)

Launch Lug 8" long

**ENGINE MOUNT**



Main Wing

Pod Tube (8" long)

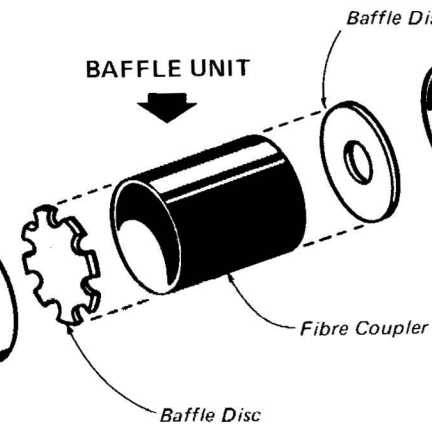
Rudder (four)

Wing Tip

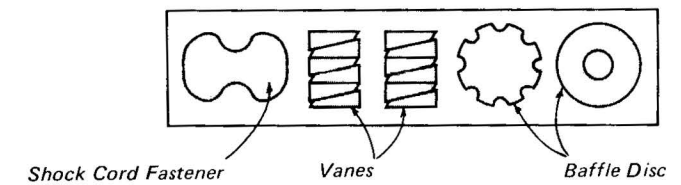
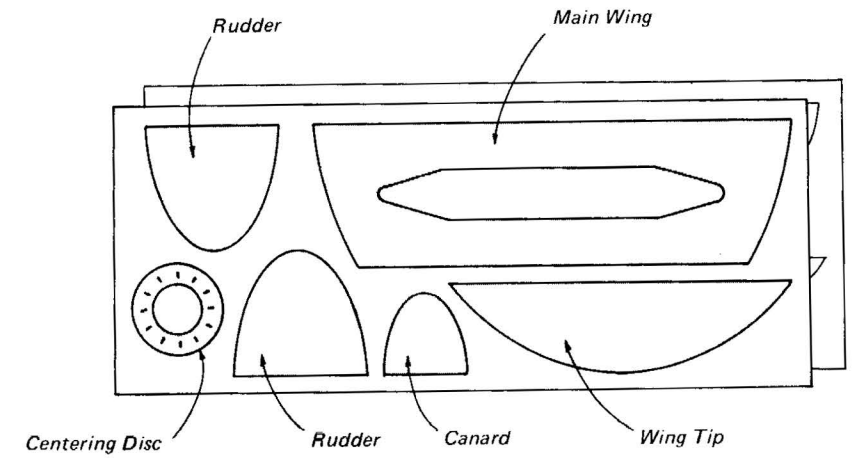
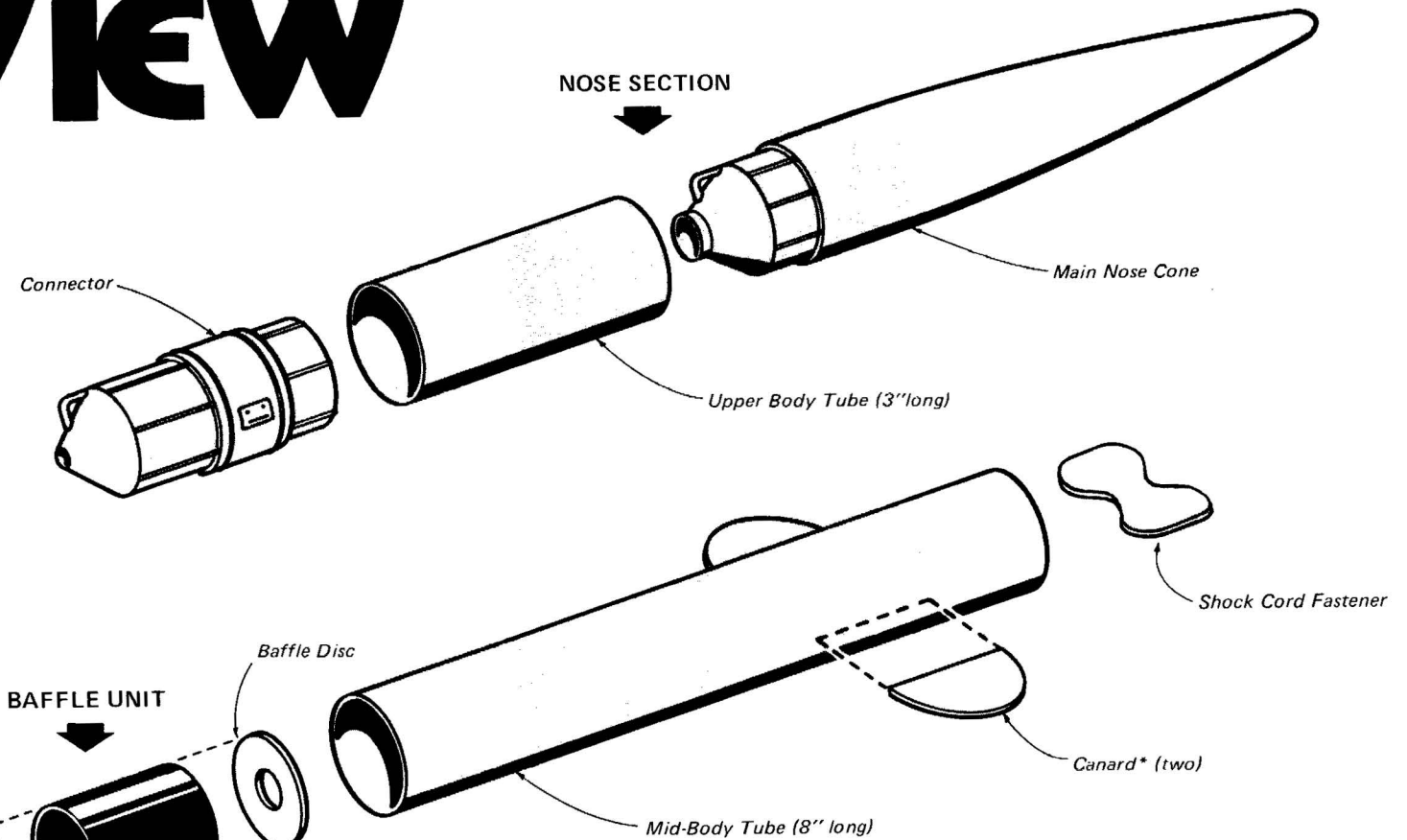
**PODASSEMBLY (TWO)**



**BAFFLE UNIT**



**NOSE SECTION**





# DECAL INSTRUCTIONS

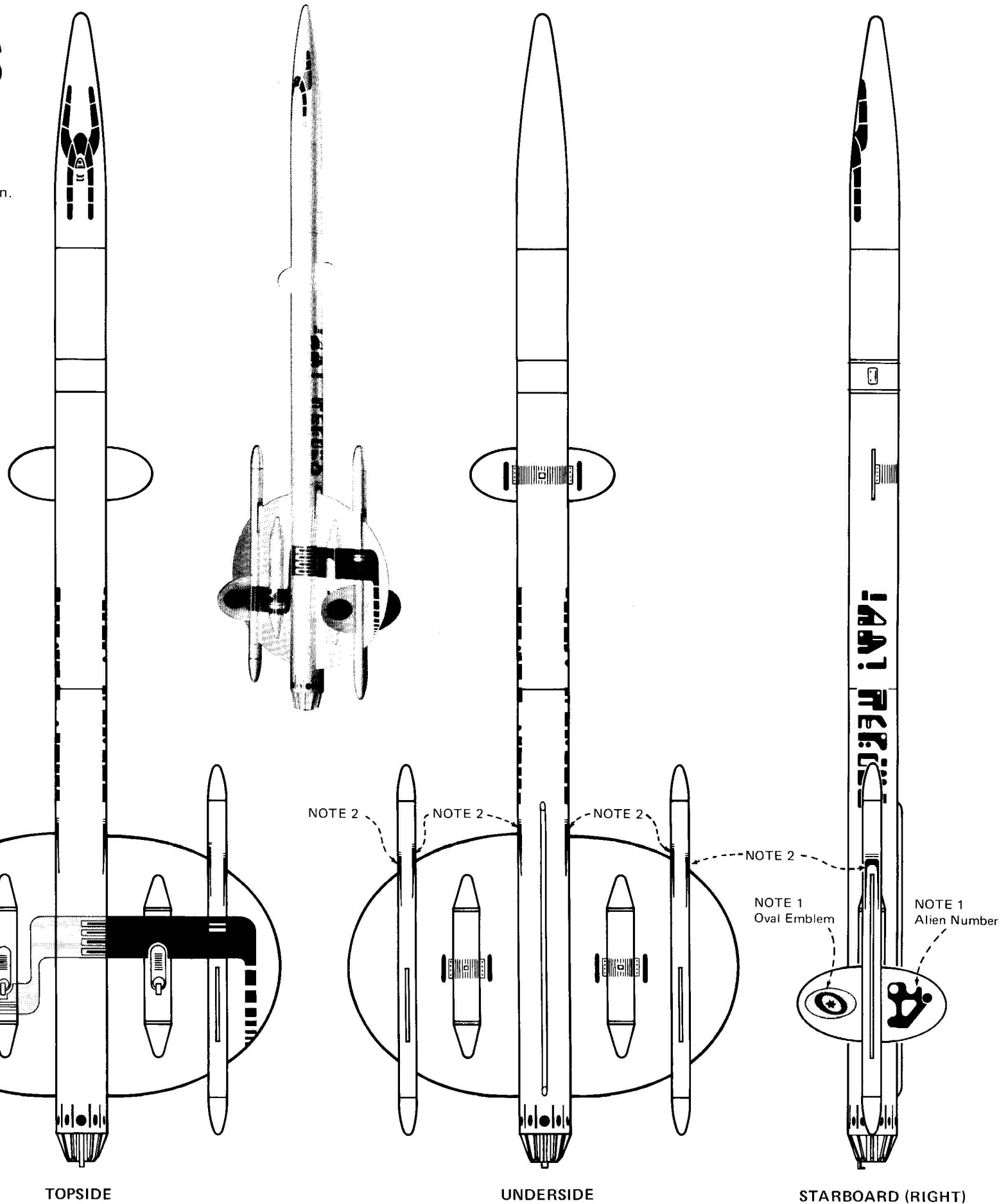
1. Clean surface free of oil or grease.
2. Dip decal in water, Approx. 10 sec.
3. Have surface very wet for easy sliding into position.
4. Slide decal from paper to proper location.
5. Remove all air bubbles.
6. Wash decal to remove excess adhesive

*Properly applied your decal will give long lasting service.*

NOTE 1: Each rudder has an oval emblem on one side, and an alien number on the other side. See photos for relationship.

NOTE 2: There are six vent decals: one for each tube/wing joint.

NOTE 3: The wing stripes are in several separate pieces for easier application. Start applying it where shown below, and work across slowly to avoid ripping the decal.



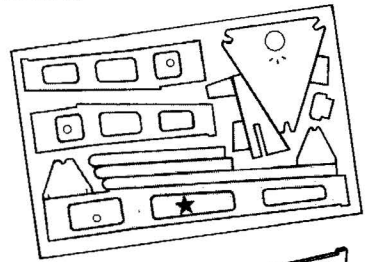
# ROCKET RACK™ MODEL ROCKET DISPLAY STAND

Centuri

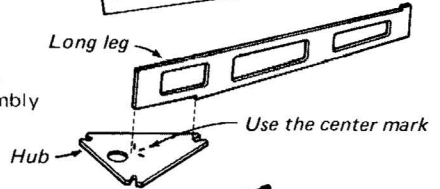
**IMPORTANT:** The Rocket Rack is a Skill Level 2 . . . this means it is more challenging to build than some rocket kits. Follow instructions carefully for satisfactory results. Assembles in about one-half hour. Follow the standard procedure for gluing all the flat parts.

- A. Use white glue.
- B. Apply a **SMALL** line of glue to edge of piece.
- C. Join the appropriate pieces.
- D. Separate the parts and allow several seconds for glue to become tacky.
- E. Apply another **SMALL** line of glue.
- F. Re-join the parts neatly and allow to dry.

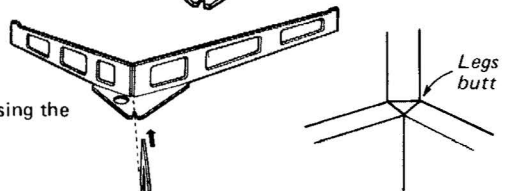
**1** Remove parts very carefully to avoid bending pieces.



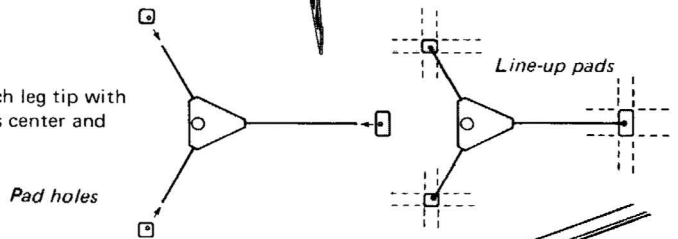
**2** Glue the longest leg onto the hub . . . fit notches together, line up onto mark, and make sure assembly is squared-up.



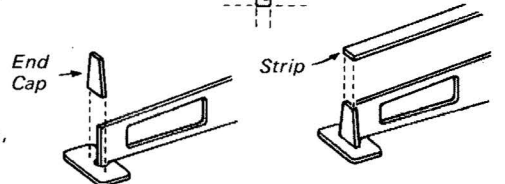
**3** Glue the two shorter legs in place again using the notches. Legs butt together as shown.



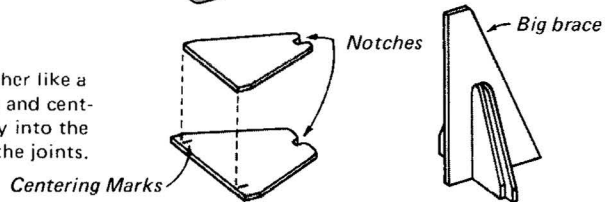
**4** Place each pad onto each leg tip with holes close to the rack's center and glue to hold in place.



**5** Glue each end cap in place, centering neatly on the leg. Now glue each strip on, again centering neatly.



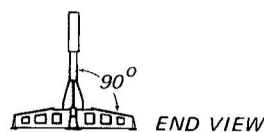
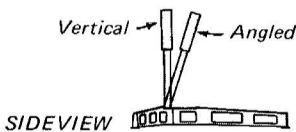
**6** Glue the two small braces together like a sandwich, lining up the notches and centering marks. Slide this assembly into the big brace and apply glue along the joints.



**7** Glue the support tube an inch or so into the mount tube. Glue the T-plate into the end of the mount tube. **NOTE:** For mini-motor kits, leave off the mount tube.



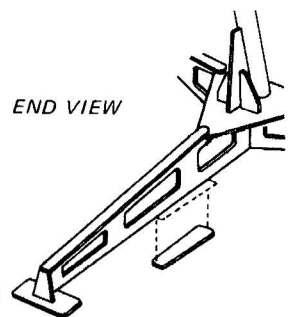
**8** Decide whether you want vertical or angled display . . . insert the support tube just barely thru the hole in the hub and position it. Test fit the brace assembly to check its fit, then glue it in place. **MAKE SURE YOU HAVE A RIGHT ANGLE WHEN VIEWED FROM THE FRONT, OR YOUR ROCKET MAY TIP OVER.**

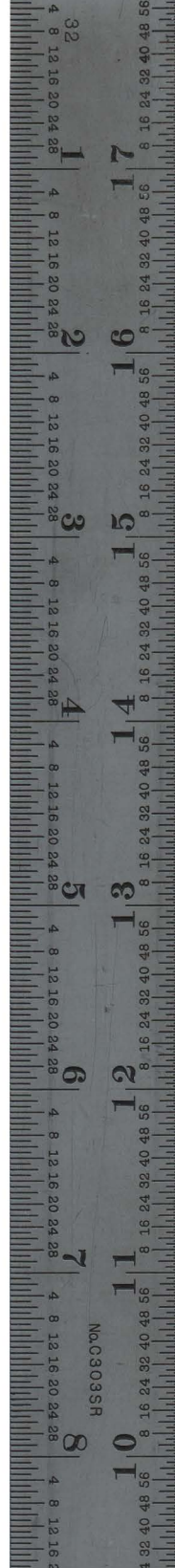
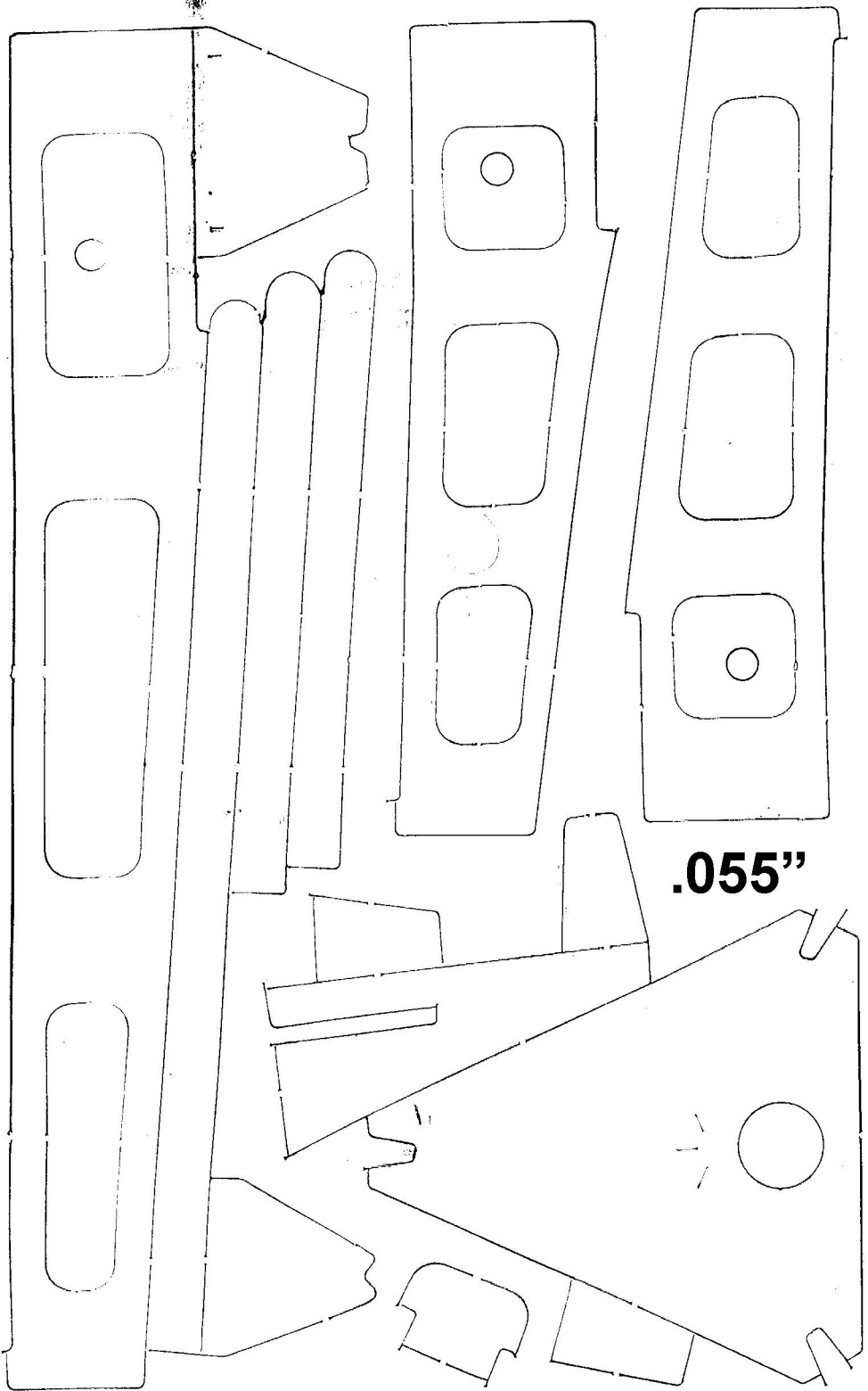


**9** **IMPORTANT:** Apply a glue fillet to **EVERY** exposed joint, and smooth excess glue away with your finger tip.

**10** Here are some optional assembly tips . . .

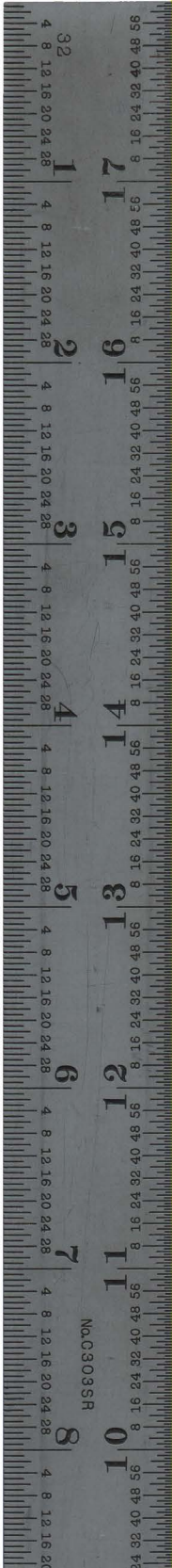
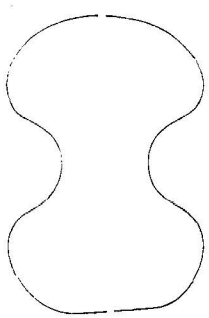
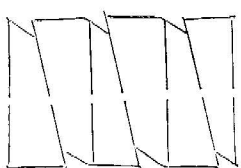
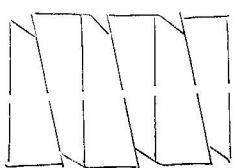
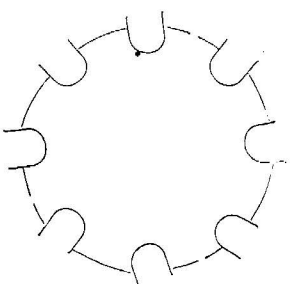
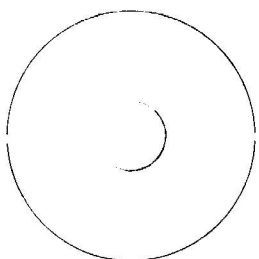
- A: Glue the scrap (marked with a star in Step 1) under the long leg for extra strength.
- B: Smooth any rough edges with fine sandpaper, and spray paint the Rocket-Rack a color such as white, red or silver.



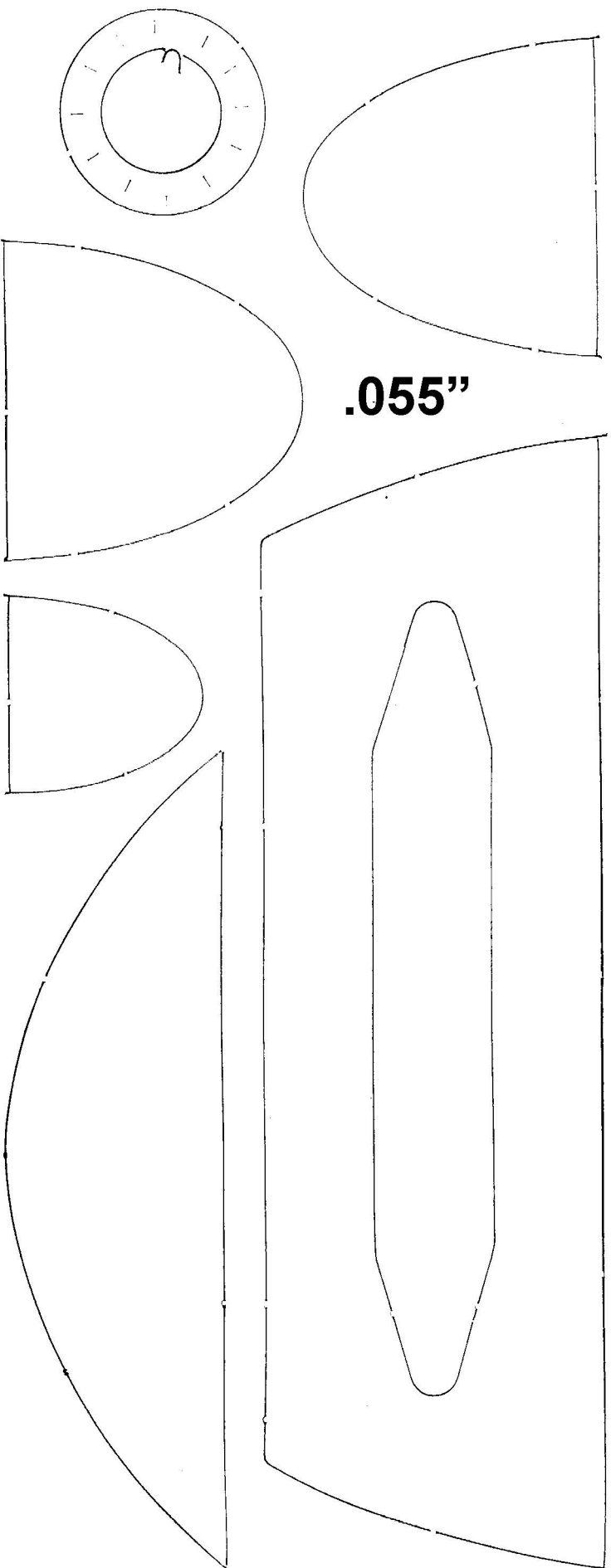


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**.025"**



No. C303SR

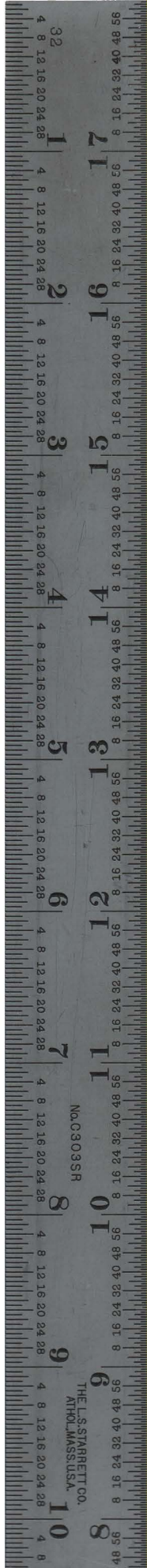
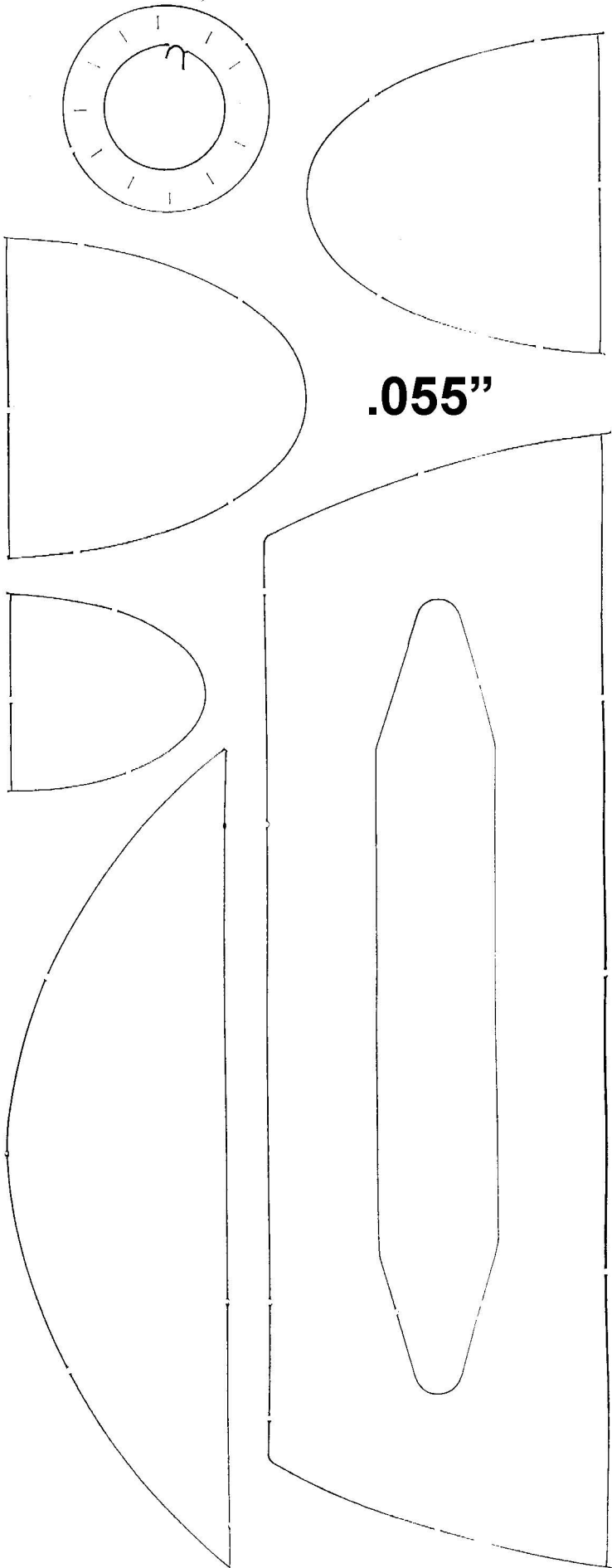


**.055"**



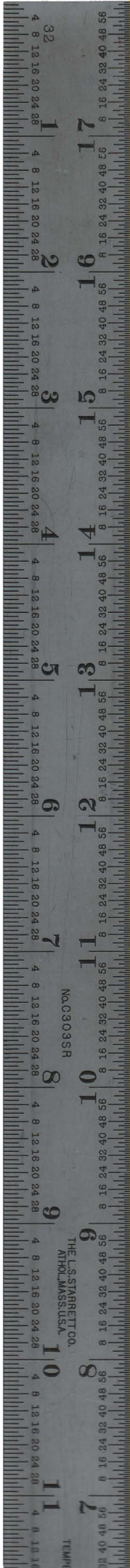
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No. C303SR

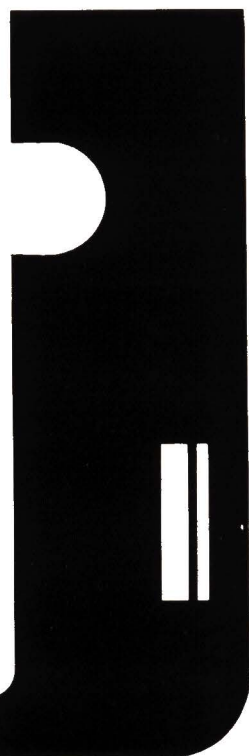
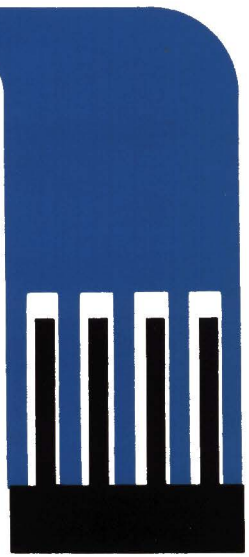
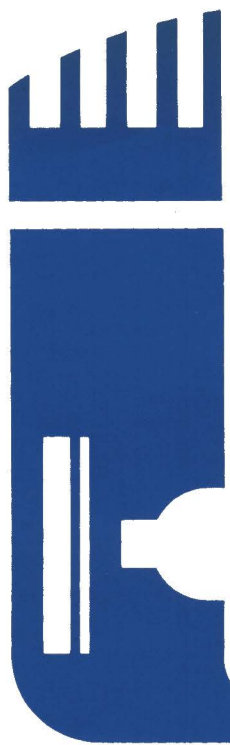
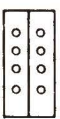
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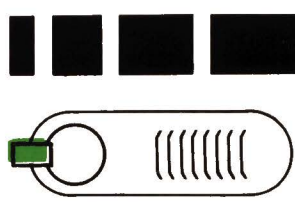
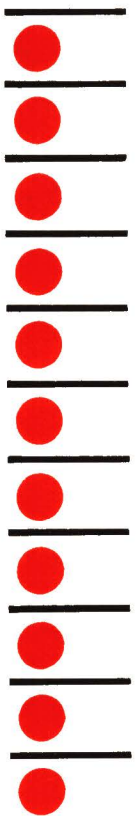
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TEMPER



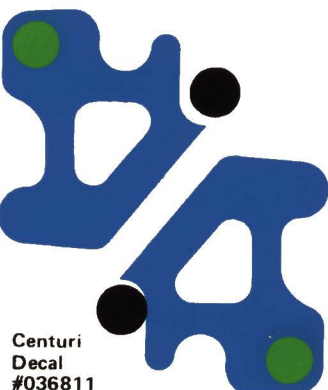
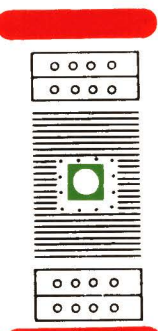
**CENTURI  
PERFORMERS**



ENGINES:  
B4-2, or C6-3



**Centuri**  
U.F.O. INVADER



Centuri  
Decal  
#036811

Centuri UFO Invader #5308

Q	Desc	Stk Num	Size	Other
1	Plastic Nose Cone	N/C	6.4"L	Estes Maniac
4	Plastic Nose Cone	N/C	1"L	BT-20 Conical
4	Plastic Nose Cone	PNC-51	1"L	BT-5
1	Upper Body Tube	ST-13	3"L	Estes BT-56
1	Mid Body Tube	ST-13	8"L	Estes BT-56
1	Lower Body Tube	ST-13	12"L	Estes BT-56
2	Tank Body Tubes	ST-7	3"L	Estes BT-20
2	Pod Body Tubes	ST-5	8"L	Estes BT-5
1	Launch Lug		7/32"Dia x 8"L	
1	Engine Tube	ST-7	3"L	Estes BT-20
1	Thrust Ring	TR-7	.4"L	
1	Engine Lock	EL-1		
1	Coupler	HTC-13	1.5"L	
2	Die-Cut Fiber Sheet		4.25"W 10.25"L .055"T	1/16 balsa works
1	Fiber Diecut Sheet		1.75"W 7.25"L .025"T	
1	Fiber Diecut Display Base		.055"T	Sheet Styrene works
1	Display stand tube	N/C	6"L 1/16"T wall	1/2" Dowel works
1	Engine Casing			Used Engine
1	Shock Cord		1/8"W x 38"L	
2	Chute Pack	CP-20		
	Parachute		20" Yel/Blk	
	Shroud Line		128"	
	Tape Disk(8)		1/2"	
1	Decal		6" x 12.5"	Red/Blu/Blk/Grn





UFO INVADER



Model No. 1000

1/24 Scale  
1000 Pieces  
1000 Pieces  
1000 Pieces

# SUPER KIT

## U.F.O. INVADER™ AERIAL TORpedo SAUCER



FLYING  
MODEL  
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- 1000 Pieces
- 1/24 Scale
- 1000 Pieces

Model No. 1000  
1/24 Scale  
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SUPER KIT  
FLYING MODEL ROCKET