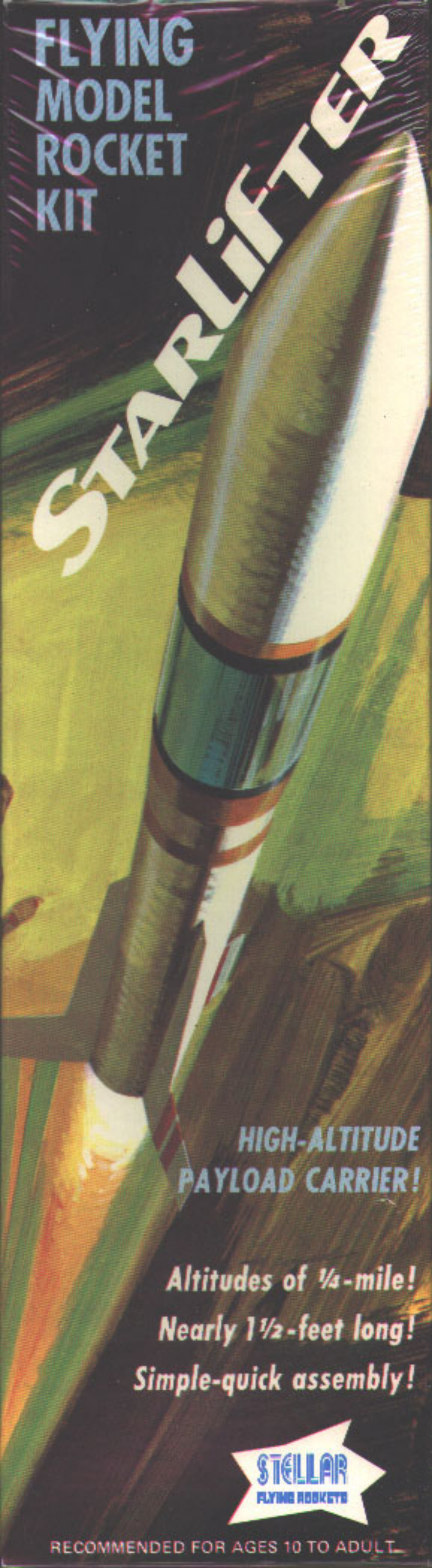
FLYING MODEL ROCKET KIT

STARLIFTER



HIGH-ALTITUDE PAYLOAD CARRIER!

Altitudes of ¼-mile!

Nearly 1½-feet long!

Simple-quick assembly!

STELLAR FLYING ROCKETS

RECOMMENDED FOR AGES 10 TO ADULT

STARLIFTER

FLYING MODEL ROCKET KIT

HOW DOES A FLYING MODEL ROCKET WORK?

4 APOGEE
Rocket reaches altitudes up to 1500 feet and starts to turn over and dive.

5 PARACHUTE EJECTION
Ejection charge ignites, pushing parachute out of the rocket.

3 BURN OUT
Propellant in engine burns out. Delay charge allows rocket to coast upward to apogee.

6 RECOVERY
Parachute opens and rocket slowly descends to earth.

2 LIFT-OFF
Engine thrusts rocket skyward.

1 IGNITION
Engine is ignited electrically.

(Launching system available separately or in Starter Outfit.)

SPECIFICATIONS

Wt.:	1.0 oz.
Length:	17.0"
Dia.:	.908"

RECOMMENDED ENGINES

With Payload: B4-4, C6-5

Without Payload: A5-4, B4-6 C6-7

'A' Engines should be used for first test flights.

Mfg. by: Centuri Engineering Company, P.O. Box 1988, Phoenix, Arizona 85001

STARLIFTER

STELLAR

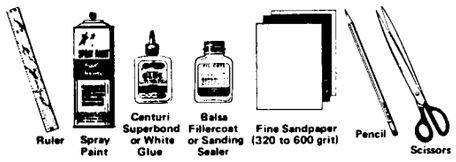
HIGH-ALTITUDE PAYLOAD CARRIER!

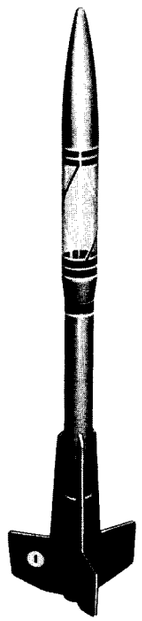
Catalog No. KD-7

The STARLIFTER is capable of carrying payloads of up to one ounce! For example, insects may be carefully packed and launched to determine effects of acceleration in a Science Fair Project! The clear plastic payload section allows observing the payload before and after flight, without removing the payload. The STARLIFTER recovers safely by parachute, ready to be prepped for another launch! Use A5-4 engines (without a payload) for first test flights.

This rocket is designed to be launched only from standard remote-controlled electrical launch systems. Always use the recommended engines and recovery wadding. Check with local authorities for possible restrictions before launching model rockets in your community.

TOOLS: 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 flying model rockets.

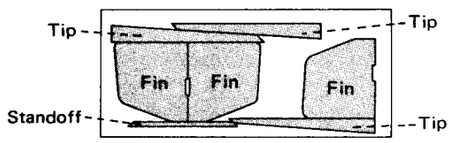




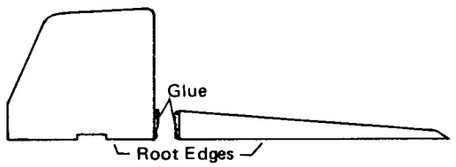
ASSEMBLY INSTRUCTIONS

READ BEFORE STARTING ASSEMBLY

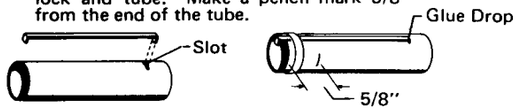
1 Identify each balsa piece in the die-cut sheet. Carefully push each piece from the sheet, starting at one edge and working gently around.



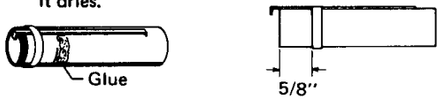
2 Glue each fin and tip together as shown, preferably on wax paper. Make sure the pieces are properly aligned by butting the root edges against a straight edge. Allow to dry.



3 To start assembling engine mount: Push one end of the engine lock into the pre-slotted engine tube. Slide the retainer ring over the lock and tube. Make a pencil mark 5/8" from the end of the tube.



4 Run a bead of glue around the tube, above the pencil mark. Slide the retainer ring into place, 5/8" from the end. Apply a drop of glue where the engine lock sticks into the tube. Wipe away any excess glue, before it dries.



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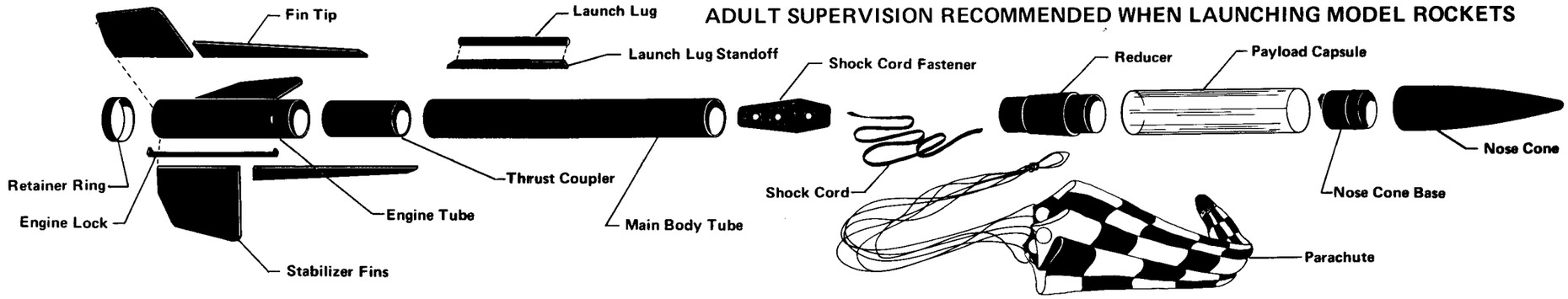
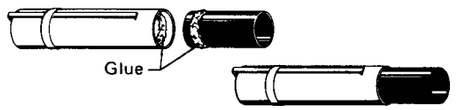
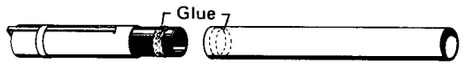


ADULT SUPERVISION RECOMMENDED WHEN LAUNCHING MODEL ROCKETS

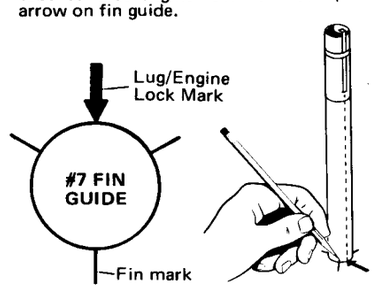
5 Run a bead of glue around the inside of the engine tube's other end, and around the thrust coupler as shown. Insert the coupler with a twisting motion, until it butts against the engine lock. Wipe away excess glue.



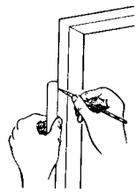
6 Repeat procedure to glue on main body tube. Look at assembly from all angles to be sure the tubes are in line with each other.



7 To draw guide lines for neatly gluing on fins: Stand the main body tube upside down on its fin guide and mark each position on the tube. Be sure to position body tube so that engine lock is lined up with arrow on fin guide.

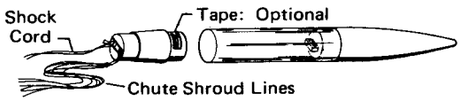


8 Find a convenient groove or channel, such as a door jamb or partially open drawer. Extend the marks into straight guide lines the length of the tube.

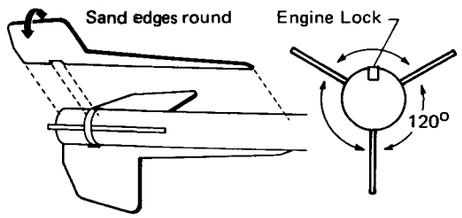


9 Push the plastic insert base into the nose cone until it snaps in place (be careful not to break the cone). Press the cone into one end of the clear plastic payload section.

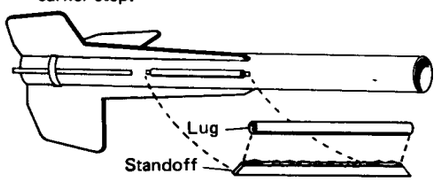
10 Tie the assembled parachute shroud lines and one end of the shock cord around the bar in the plastic reducer. Press the reducer into the payload section. NOTE: Cone and reducer should be a snug pressure fit. Local temperature variations may require adding a piece of thin tape to obtain a tight fit.



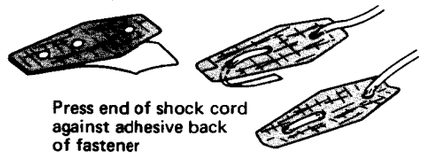
11 Sand all fin edges round, except the root edge. Run a bead of glue along the root edge of a complete fin and press into place on one of the drawn lines. Remove, allow glue up to a minute to become tacky, and re-position. Repeat with remaining fins and check alignment visually. Allow to dry, standing unit upside down.



12 When rocket has dried enough to handle: Run a bead of glue along the balsa standoff and join with launch lug, aligning both pieces. Glue this unit onto the body tube along "lug/engine lock" line drawn in an earlier step.

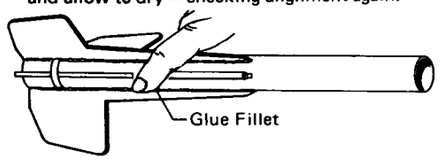


13 Peel the backing from the shock cord fastener. Thread the other end of the elastic shock cord through the fastener as shown. Take care not to touch the adhesive backing any more than absolutely necessary. Slightly crease the fastener lengthwise to allow easy insertion into tube.



14 Insert the fastener 1" past the top of the body tube. Press firmly against the inside wall of the tube with a finger or eraser end of a pencil. NOTE: All edges of the fastener must be firmly contacted to the tube to insure a permanent bond.

15 After the fin assembly has completely dried, run a bead of glue along both sides of each fin joint and the lug support. Using your fore-finger smooth the glue into even fillets, and allow to dry – checking alignment again.

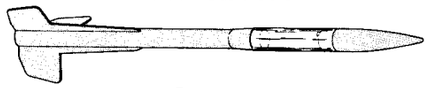


16 When fillets have dried, prepare balsa surfaces for a smooth and realistic finish. Fill the wood grain with Centuri fillercoat or sanding sealer. When dry, sand with fine sandpaper. Repeat until smooth.

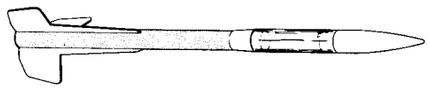
17 When painting plastic parts, never use dope or lacquer! First, spray with enamel primer. The plastic cone and reducer may be removed and painted a separate color for added interest. The plastic payload section should be removed to avoid getting paint on it!

RECOMMENDED COLOR SCHEMES

EASY: Basic Color: Blue

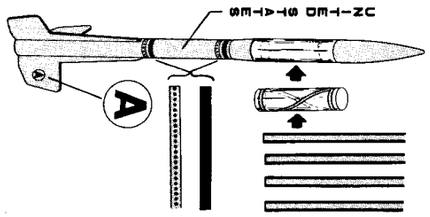


CHALLENGING: Body Tube: Bright Blue; Cone, Reducer, and Fins: White



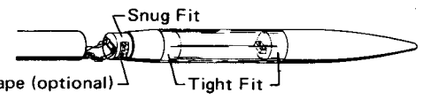
18 Spray painting your finished model with a fast-drying enamel will produce the best results . . . IF IT IS DONE PROPERLY!!! Most important is the number of coats of paint. DO NOT try to paint your model with one heavy coat! Instead, give it a couple of quick light coats first and then a finish coat.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

19 Apply the decals one at a time, according to instructions printed on the decal backing paper. Note that each long decal strip can be cut and applied around the tubes in a variety of ways. Refer also to package illustration.



PAYLOADS

When launching the Starlifter with a payload, be sure the item carried is securely packed. Total payload weight should be about one ounce. The reducer and cone must fit tightly to prevent accidental separation in flight. The reducer-to-body tube fit should be snug, but not tight.



ENGINES

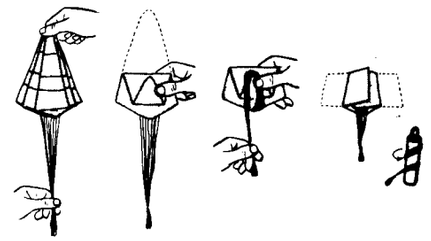
Igniters and complete engine installation instructions are included in "Engine Operating Instructions" which accompany all Stellar engines.

The STARLIFTER can be launched with the following engines. NOTE: Be sure to pick the engine with appropriate time delay, depending on whether a payload is included or not!

LOW ALTITUDE – for first test flights and small launch areas.	
WITHOUT PAYLOAD:	A5-4
MEDIUM ALTITUDE – for general flying and medium size launch areas.	
WITH 1 OZ. PAYLOAD:	B4-4
WITHOUT PAYLOAD:	B4-6
HIGH ALTITUDE – for extremely high flights and large launch areas.	
WITH 1 OZ. PAYLOAD:	C6-5
WITHOUT PAYLOAD:	C6-7

FLIGHT PREPPING

1. Inspect shock cord and fastener for firm bond.
2. Insert Flameproof Parachute Wadding according to its instructions.
3. Tuck in shock cord.
4. Roll chute tightly as shown, and insert – must be able to slip out easily.
5. Socket entire payload section in place.



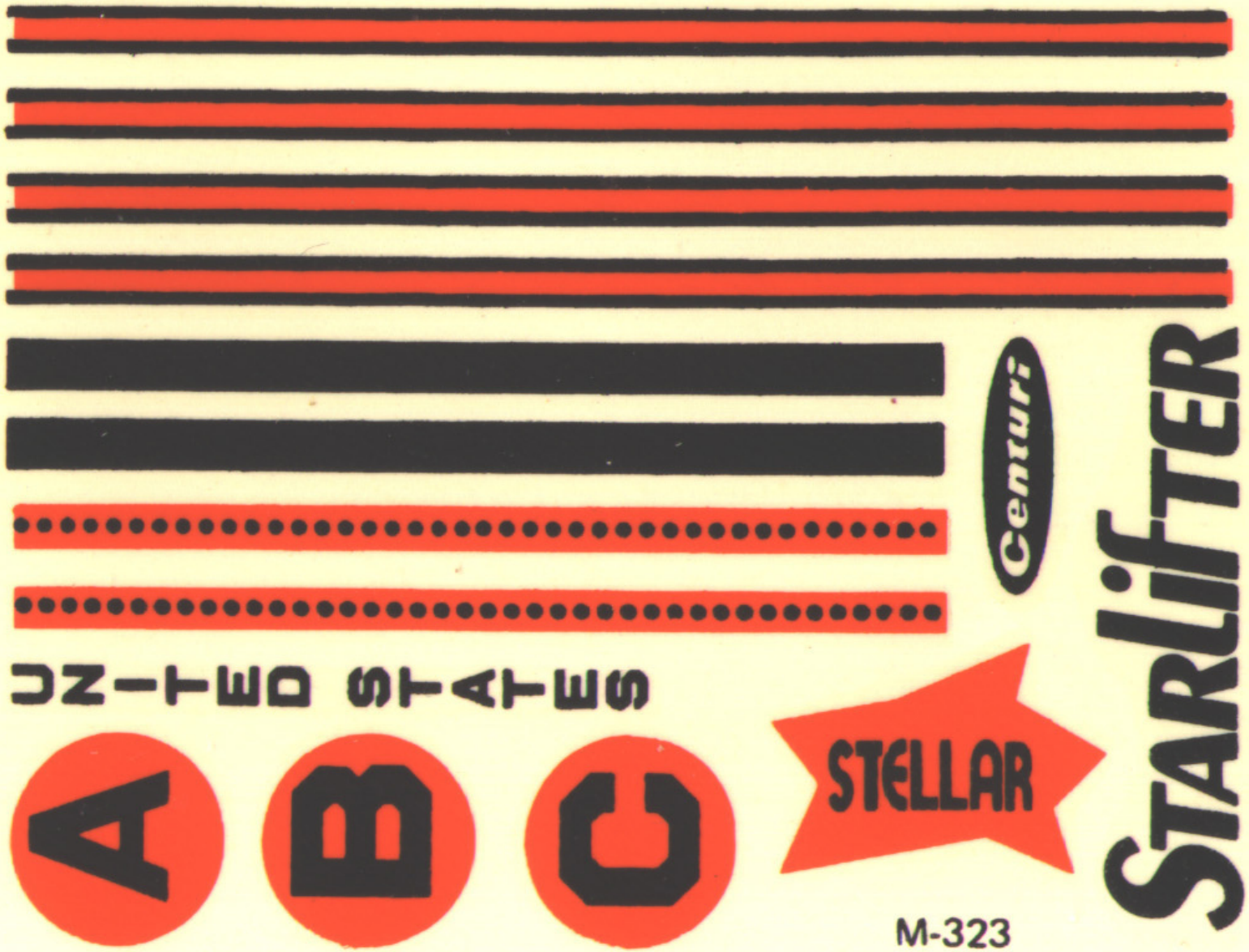
Do not leave the rocket sitting in the sun for long periods as this may soften the adhesives.

Carefully prepare and check all parts of your rocket before each flight.

Launch the STARLIFTER from a 1/8" diameter x 36" long launching rod.

Referring to the specific instructions which accompany Centuri launchers and firing panels, mount the rocket on the launcher and prepare for ignition. Avoid eye injury by capping the exposed tip of the launch rod when not actually launching. Follow instructions and the Safety Code, and have many happy hours with Model Rocketry!

CENTURI ENGINEERING COMPANY
P.O. Box 1988, Phoenix, Arizona 85001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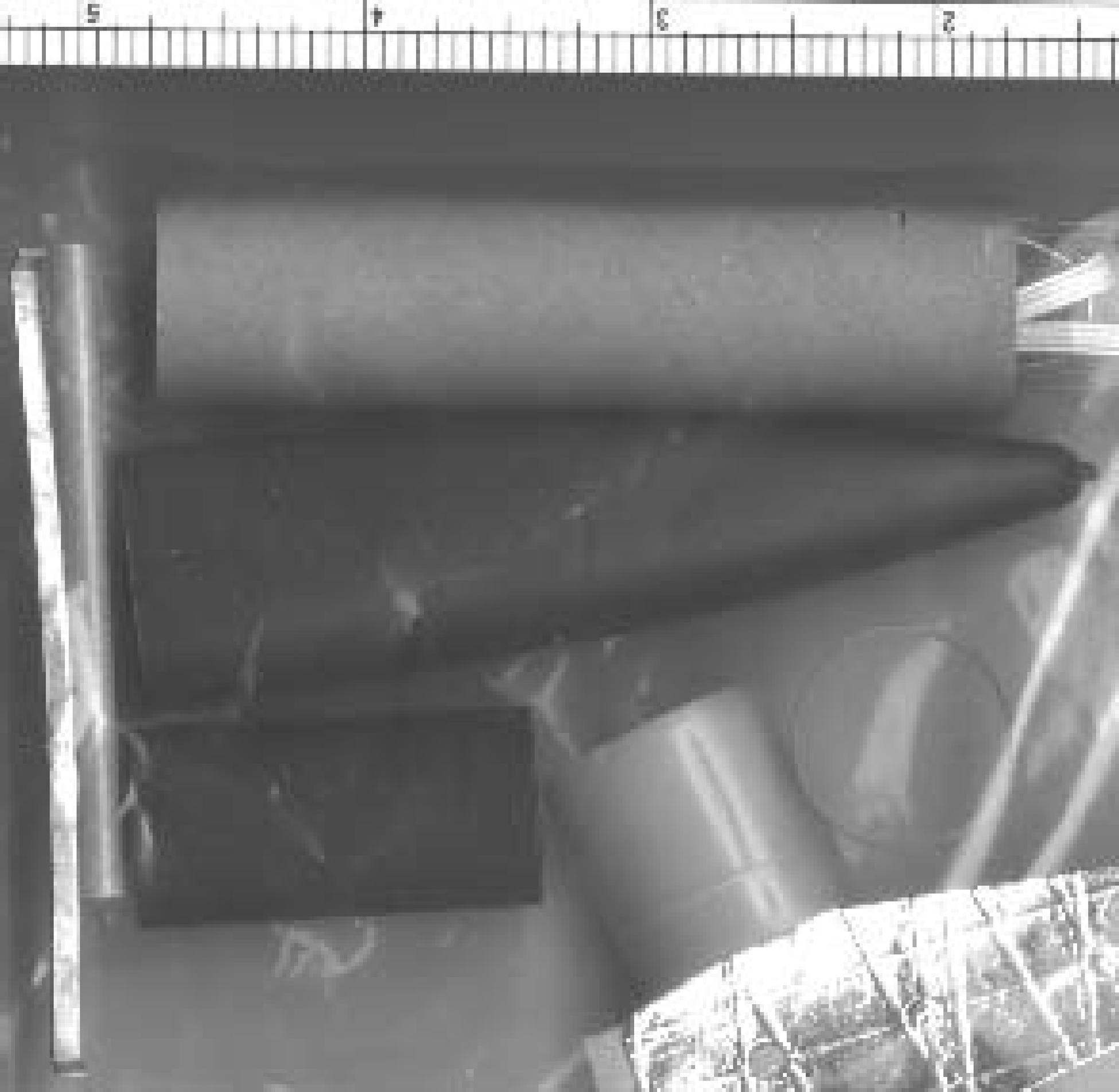

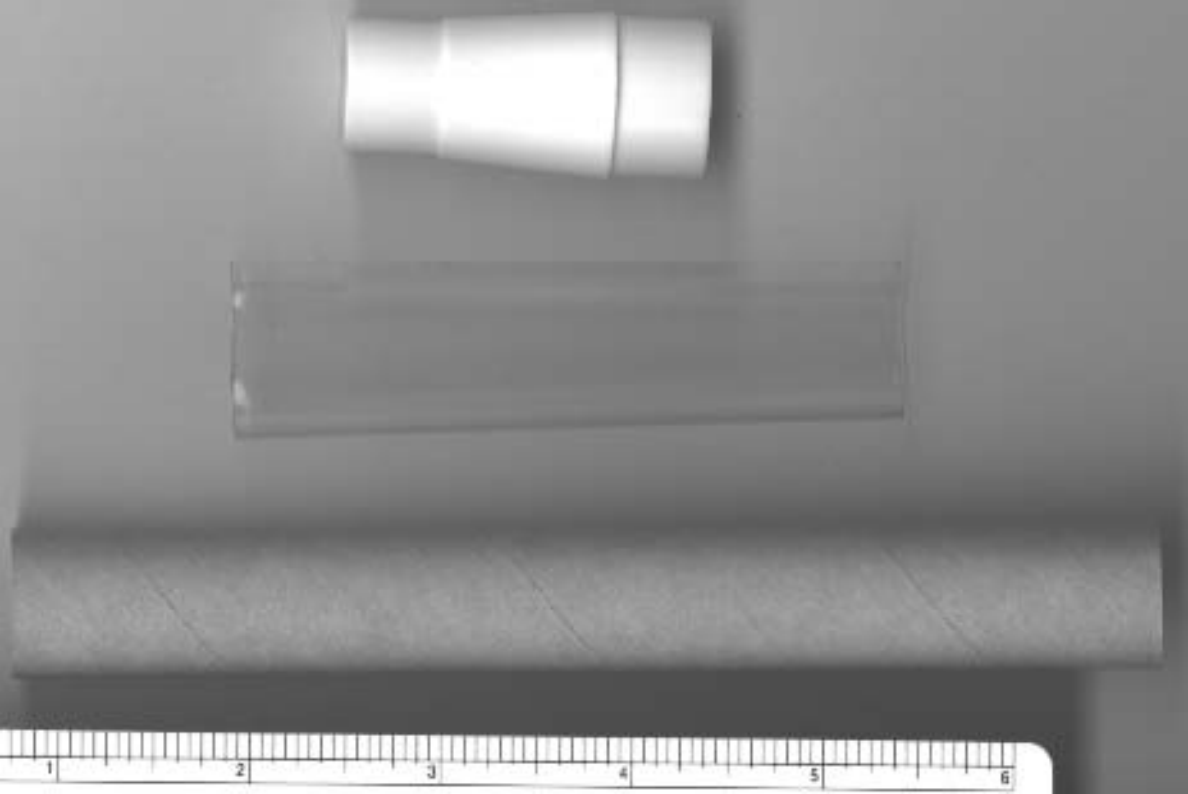
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