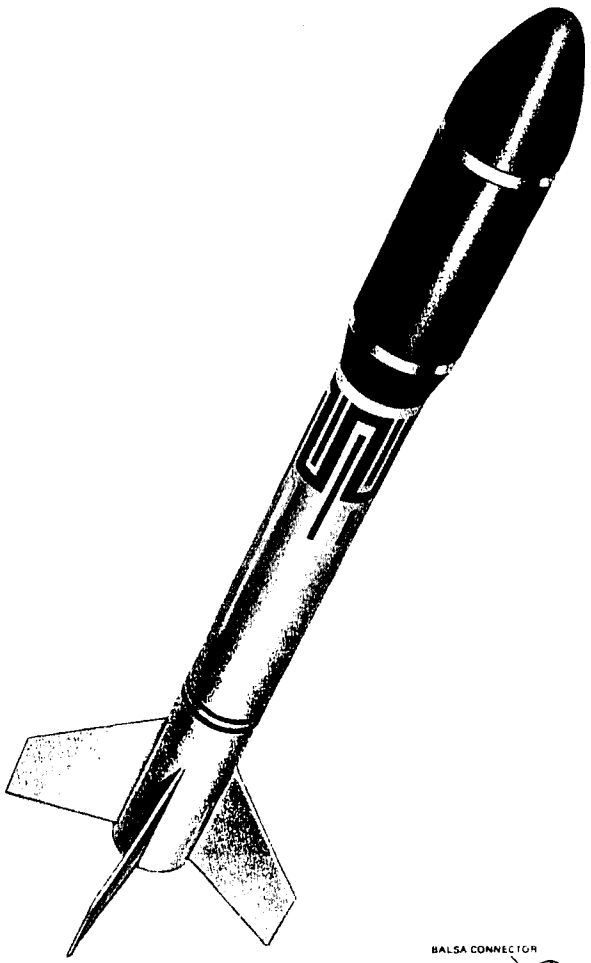
Centuri

CATALOG NO. KC-11

EGG Crate

ASSEMBLY INSTRUCTIONS

FOLLOW DIRECTIONS CAREFULLY!

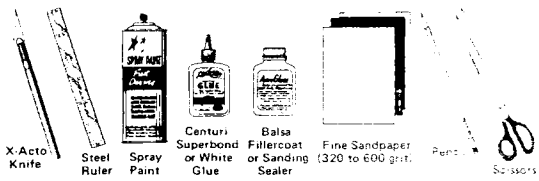


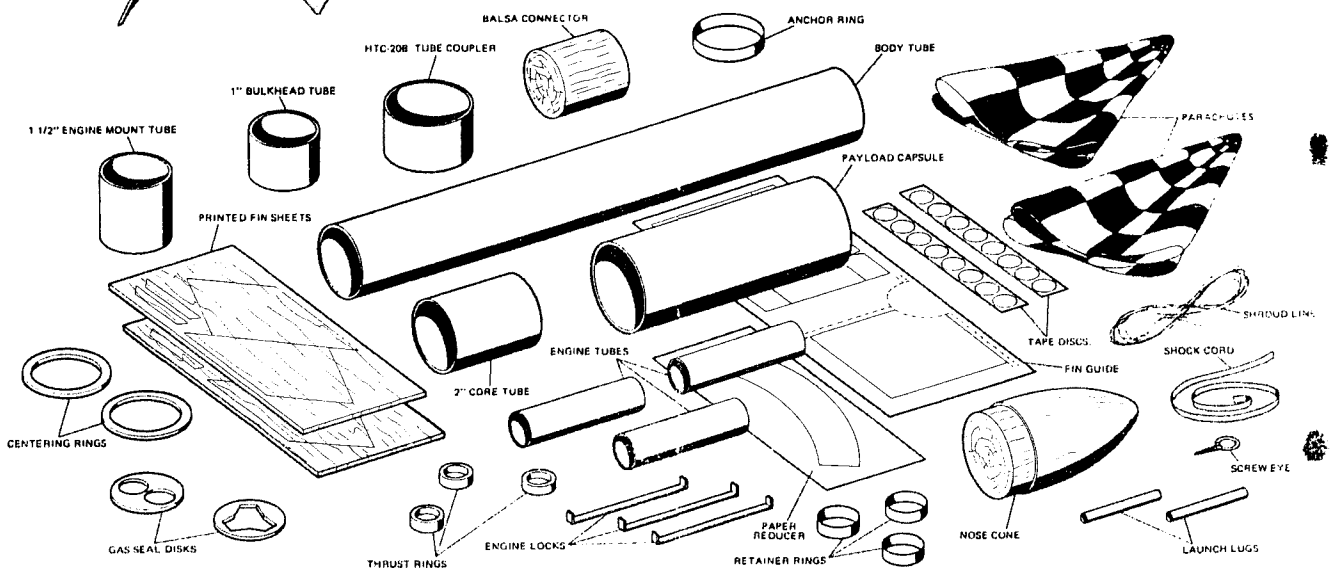
The "Egg Crate" is a multi-purpose payload vehicle with great versatility. Interchangeable engine mounts enable the "Egg Crate" to be flown with one, two, or three engines. The rocket can be flown as an egg lofter in contests or as a heavy duty payload rocket for payloads up to four ounces!

The egg loft event is a standard NAR contest event. The object is to loft a grade A large hen's egg to the greatest altitude and recover it uncracked and unbroken. When flying an egg, cushion it with foam rubber. Sealing it in a plastic bag will reduce the mess if it breaks.

Follow the instructions carefully and you will be rewarded with a rugged high performance payloader.

TOOLS: In addition to the parts supplied, you will need the following materials to assemble and finish this kit. DO NOT use model airplane glue for building flying model rockets.





NOTE: Additional items required to fly the EGG CRATE are: engines, chute wadding, launching platform, firing panel, and battery.

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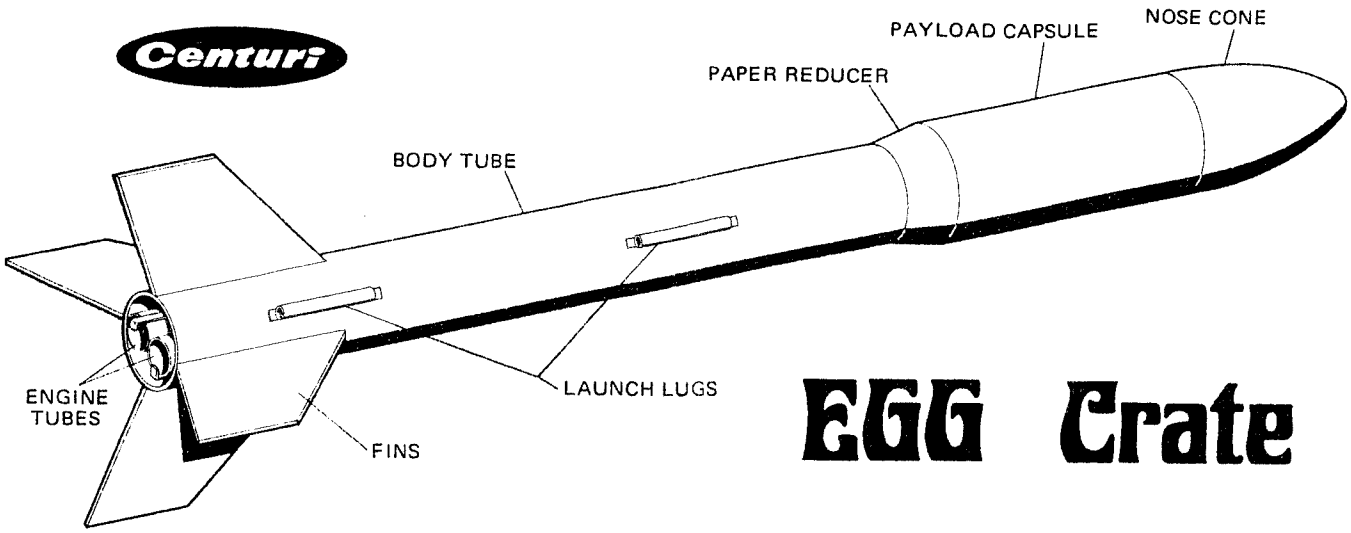
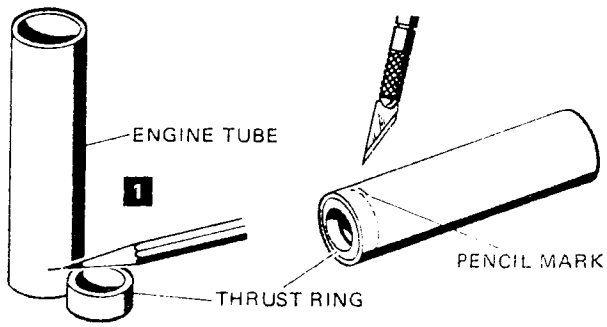


EGG Crate

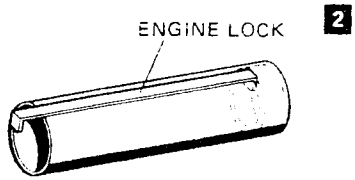
The engine system: With the materials provided, a two or three engine power unit can be assembled. If you are clustering for the first time it would be advisable to build up the two engine mount as two engine clustering is less difficult. With more experience you may wish to try three engine clustering. Consult the extra parts list at the end of the instructions for the few items necessary. Keep your gas seal disk—it will be needed for a three engine mount.

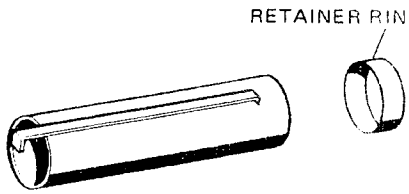
TO BUILD A 2 ENGINE MOUNT



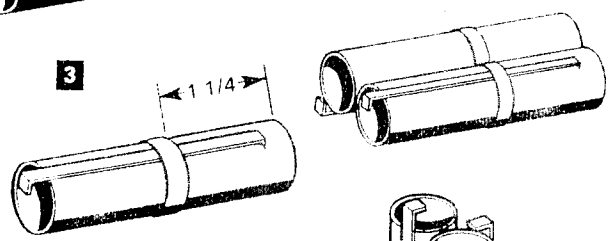
1 Place a thrust ring against each engine tube in turn and mark the tubes at the top of the thrust ring.

2 Cement the thrust rings into the engine tubes, flush with the ends previously marked. Cut a short slit in each engine tube on the pencil mark.

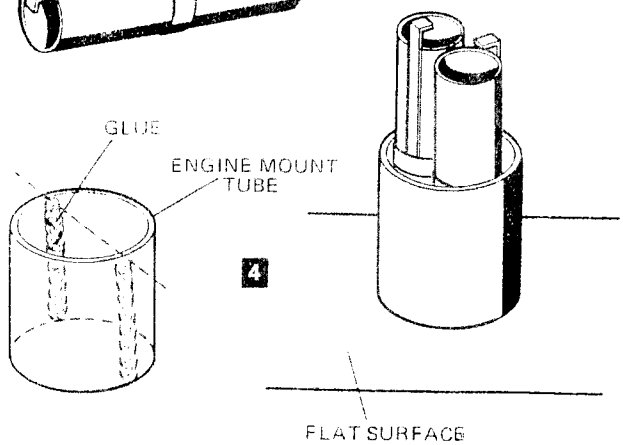




3 Insert one end of an engine lock into the slit in each engine tube. Slip mylar lock retainer rings over the tubes and cement in place at the distance shown.



4 Cement the two engine tubes together, rotating the tubes so the engine locks can be opened freely. Run two generous beads of glue along the inside of the engine mount tube up and down along its length. The two beads should be opposite each other. Press the engine tubes into place. Check again for free movement of the engine locks. The thrust rings should be flush with the end of the engine mount tube.



5 Apply glue to the bottom of the gas seal disk and to the tops of the engine tubes and the engine mount tube. Press the gas seal disk in place. Stand the assembly on its head on wax paper or newspaper and press down gently on the engine tubes and engine mount tube to make sure there is complete contact. Check the alignment of the two engines and allow assembly to dry.

TO BUILD A 3 ENGINE MOUNT

6 Place a thrust ring against each engine tube in turn and mark the tubes at the top of the thrust ring.

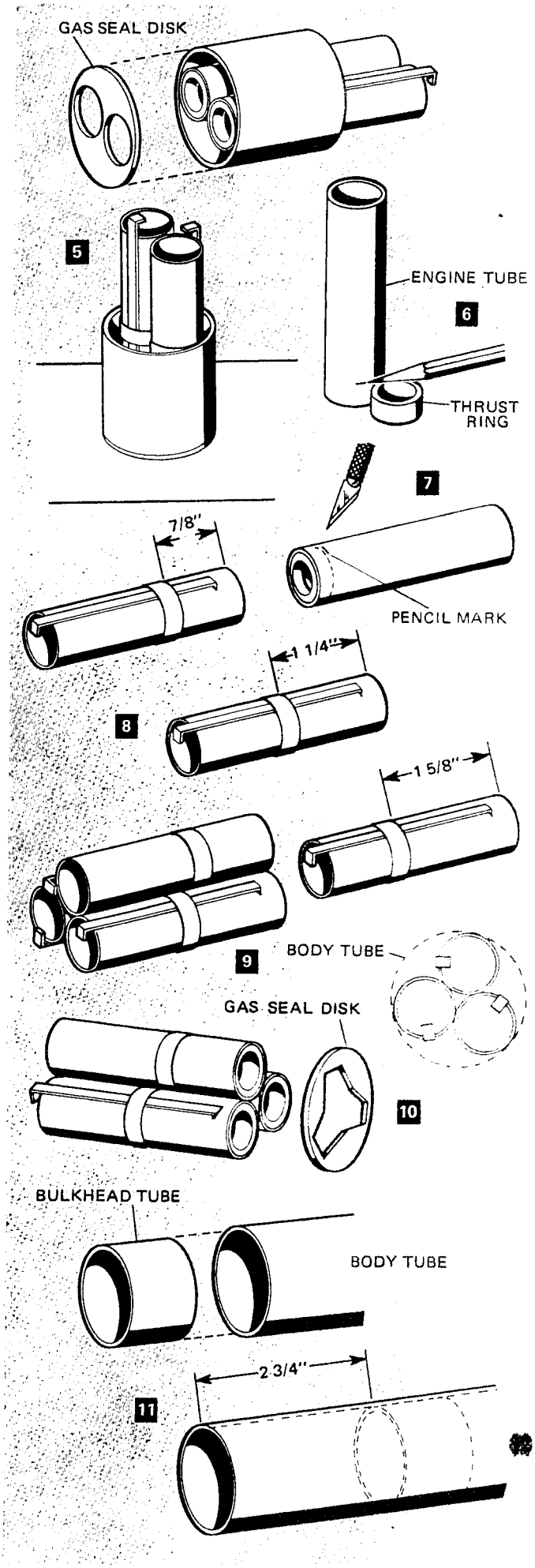
7 Cement the thrust rings into the engine tubes, flush with the ends which were previously marked. Cut a short slit in each engine tube on the pencil mark.

8 Insert one end of an engine lock into the slit in each engine tube. Slip the mylar lock retainer rings over the tubes and cement in place at the respective distances shown.

9 Cement the engine tubes together, rotating the tubes so the engine locks will not give interference when the engine "cluster" is slipped into the body tube.

10 Cement the gas seal in place on the top of the cluster.

11 Run a bead of cement 2¾ inches inside the body tube. Using a completely dried engine mount, push the bulkhead tube into place so that the engine tubes are flush with the end of the body tube. This must be done quickly without stopping as the thin film of glue dries very fast. Withdraw the engine mount immediately.



FIN ASSEMBLY

12 Carefully cut out the fins and the launch lug standoffs with a sharp knife. Use a metal ruler for a cutting guide. Square up the fin edges by running over a piece of fine sandpaper.

13 Round the leading, tip, and trailing edges. Lightly sand the faces of the fins. Coat the fins with balsa fillercoat, allow to dry thoroughly and sand lightly. Repeat the filling and sanding steps until a smooth surface, completely free of grainline, is obtained. Finish the balsa nose cone at this time, using the same procedure as outlined above.

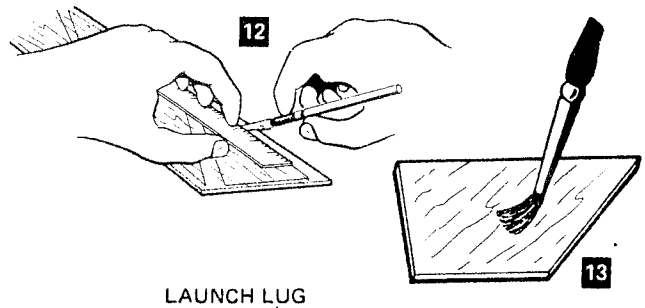
14 Sand the sides of the launch lug standoffs lightly and glue the lugs in place. When the glue is dry, finish the standoffs in the same manner as the fins and cone.

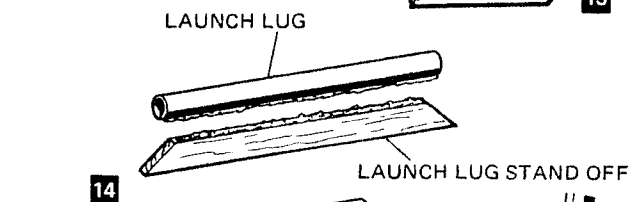
15 Wrap the fin positioning guide around the body tube and mark the fin locations. Using a ruler, draw lines connecting the marks.

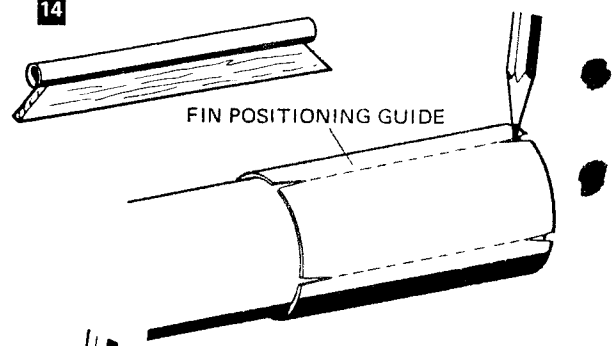
16 Apply cement to the fin locations on the main body tube and to the root edges of the fins. Press the fins in place, making sure they are parallel with the long axis of the body. Check vertical fin alignment with the fin alignment guide. Set the assembly aside to dry.

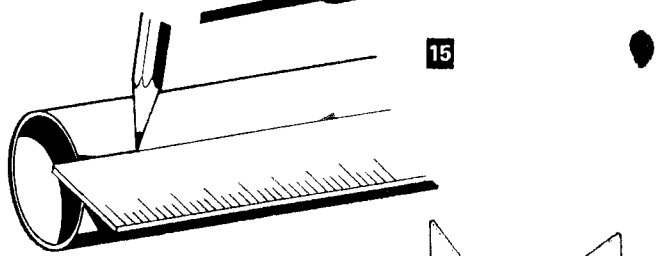
17 After the glue has completely dried run a bead of glue along both sides of all fin body tube joints. Using your finger, smooth the glue into even fillets. Cement the launch lugs onto the body. Make sure they are parallel with the body and centered laterally between two of the fins. Sight through the launch lugs to make sure they are lined with each other.

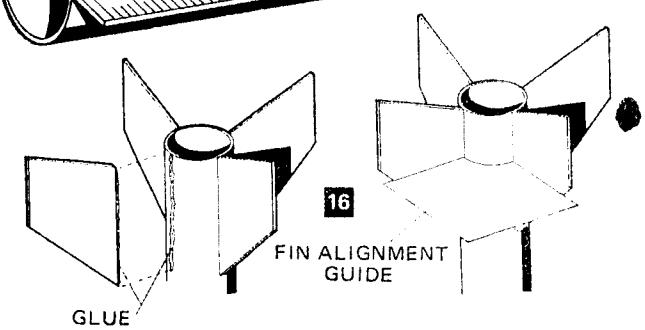
18 Apply a bead of glue around the outer edge of each centering ring. Carefully position the centering rings onto the ends of the coupler tube

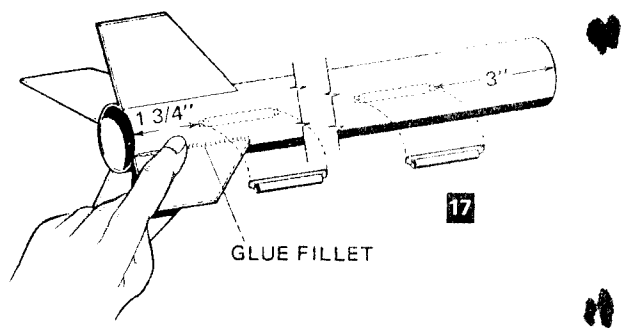


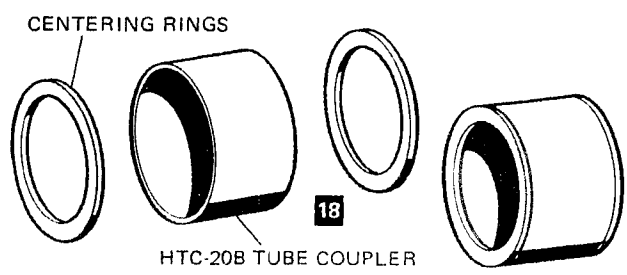












PAYLOAD CAPSULE ASSEMBLY

19 Cut out the reducer from the paper shroud and pre-curl by rolling back and forth around a round pencil or dowel ¼ - ½" in diameter. Curl paper carefully and gradually to prevent creases from forming.

20 Form the paper into a cone and apply glue to the overlap area marked on the shroud. Line up the edge of the paper with the dotted line and press together on a flat surface.

21 Apply a bead of glue to the top edge of the core tube and slip it into the paper reducer until it projects 1/32"

22 Apply a bead of glue around the outside edge of one of the centering rings and spiral a bead of glue around the core tube.

23 Pass the end of the core tube through the centering rings and slide the adapter assembly into place. The edge of the paper reducer should just overlap the rear centering ring.

Run a bead of glue around the core-centering ring joint. Allow the assembly to dry.

24 Run a bead of glue around the inside edge of the core tube and slide the balsa tube connector in place with ¾" projecting.

25 Apply a bead of glue to the inside of the payload capsule tube and slip the adapter section into place.

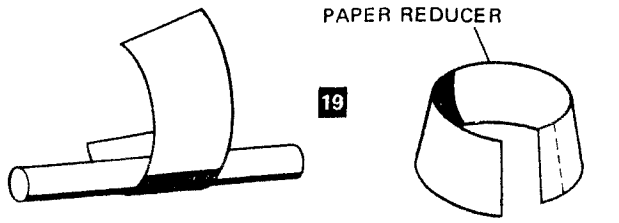
SHOCK CORD & PARACHUTE ASSEMBLY

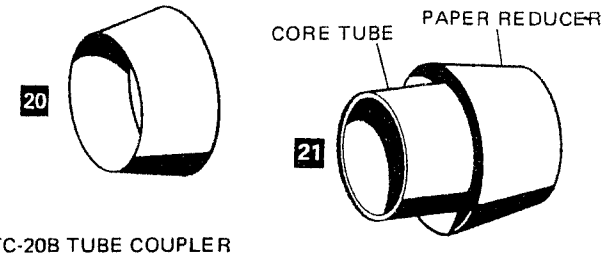
26 Tie one end of the shock cord around the anchor ring in a loose loop. Run a bead of glue around the inside of the body tube at a depth of about 1". Spread the glue out with your finger. Drop the end of the shock cord down into the tube and insert the anchor ring. Using the balsa connector, push the anchor ring down into the tube, imbedding it in the glue. Remove the payload assembly immediately.

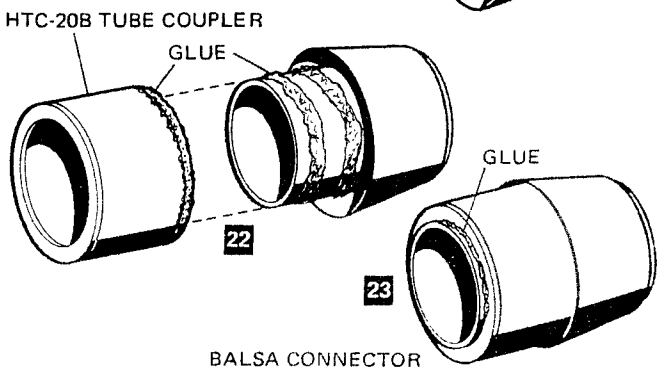
27 Thread the screw eye into the center of the balsa tube connector. Unthread the eye, fill the hole with glue and rethread into the hole.

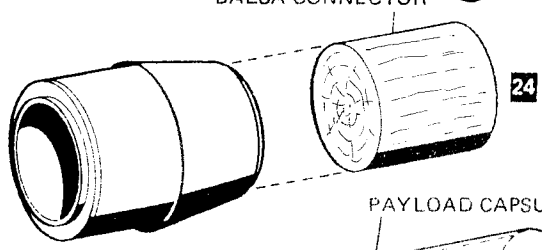
Assemble the parachutes following the instructions printed on the chute material. Tie the shock cord to the shroud ends of the 20" chute and the shroud lines of the 16" chute to the screw eye on the payload section.

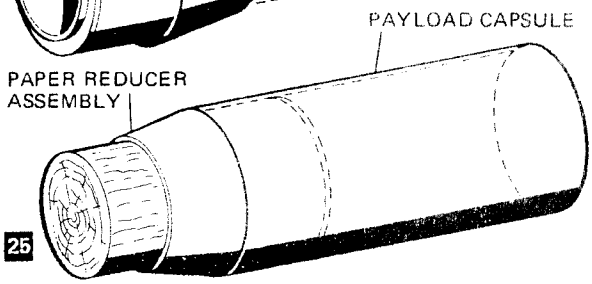
Fit the nose cone into the payload capsule. If the fit is not very tight, wind a band of masking tape around the nose cone base.

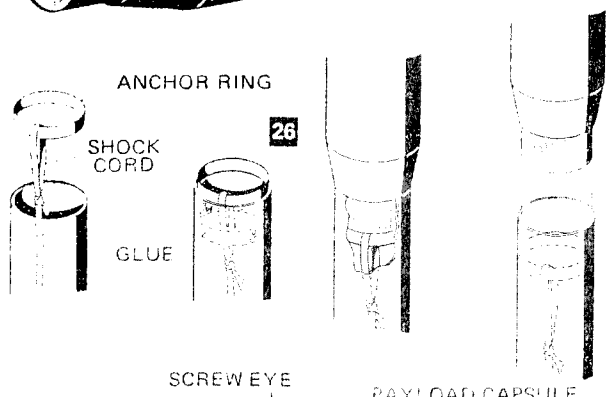


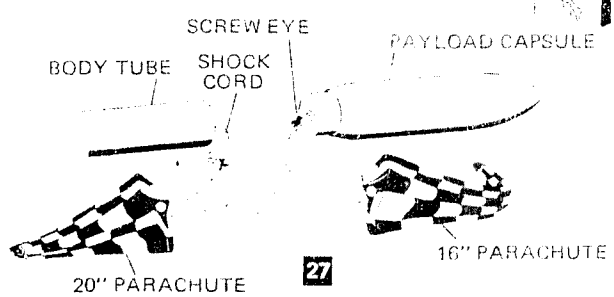










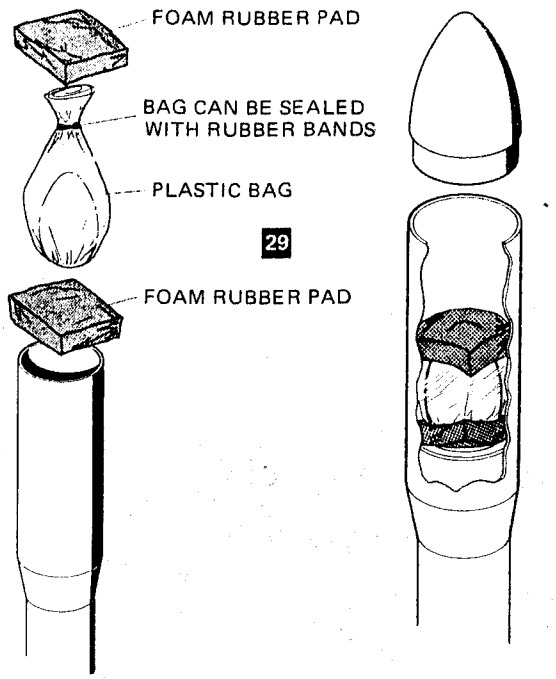


FINISHING THE EGG CRATE

28 Lacquerized Spray enamels are lightweight and provide a smooth, even finish. Bright colors or black are easiest to track. To avoid sags or runs spray on several light coats from a distance of 12" allowing each coat several minutes to dry. Apply the decal according to the instructions printed on the reverse side of the decal sheet.

CUSHIONING THE EGG FOR LAUNCHING

29 Launching an egg provides loads of fun and excitement without risking the life of innocent small creatures. Remove the cone of the payload capsule. Place a raw egg in a plastic bag and seal the bag. Make a cushion of foam rubber or crumpled tissue paper in the bottom of the capsule. Carefully slide in the egg. Top the egg with another pad of foam rubber or tissue and then push the cone firmly back in place. Now see if you can fly the egg crate and recover the capsule without breaking the egg.



LAUNCHING THE EGG CRATE

30 The EGG CRATE should be launched with any of the following engines:

B4-2 B6-4 C6-5

Prepare the Egg Crate for launching according to the illustrations at right. NOTE: Complete igniter and engine installation instructions are included in "Engine Operating Instructions" which accompany all Centuri engines.

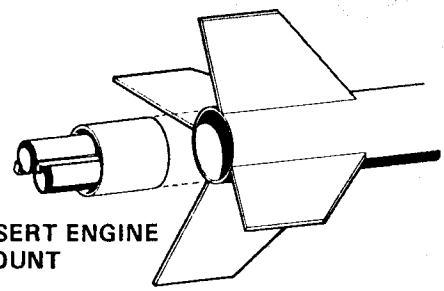
If your engine mount fits loosely into the body tube, wrap the mount with masking tape until the fit is tight. Slip it into the body tube with a screwing movement.

The possible altitudes will vary depending on the finish of the rocket (smoothness) and its weight (heavily painted vs. lightly painted), and payload weight. When a limited amount of launching area is being used, lower altitude flights are recommended. As a rule of thumb, a launching area should have its shortest side no less than one-fourth (¼) the expected maximum altitude of the rocket you're flying. EXAMPLE — If your rocket is going to fly 800 feet high, the shortest side of the launching area should be at least 200 feet long. However, in no event should a rocket be launched in an area less than 100 ft. x 100 ft.

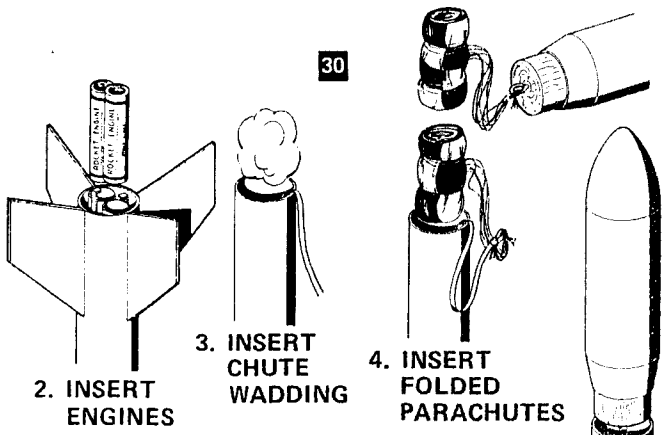
31 Launch the EGG CRATE from a 1/8" dia. x 36" long launching rod. Use electrical ignition only, as outlined in the engine operating instructions. The following safety checks should be adhered to explicitly:

1. Launch in an open area, well away from main streets, powerlines, pedestrians, traffic, and airport approach paths.
2. Be sure the firing panel is disarmed and battery leads disconnected before wiring up the engine.
3. Check for low flying aircraft before launching.
4. Give a short countdown to alert spectators.
5. Always keep in mind that a model rocket is a scientific instrument, not a toy!

For more information concerning Centuri Model Rocketry Products, see your local hobby dealer. If there is no dealer in your area, you may address inquires directly to: Centuri Engineering Company, Box 1988, Phoenix, Arizona 85001.



1. INSERT ENGINE MOUNT



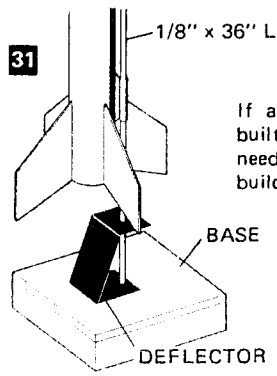
2. INSERT ENGINES

3. INSERT CHUTE WADDING

4. INSERT FOLDED PARACHUTES

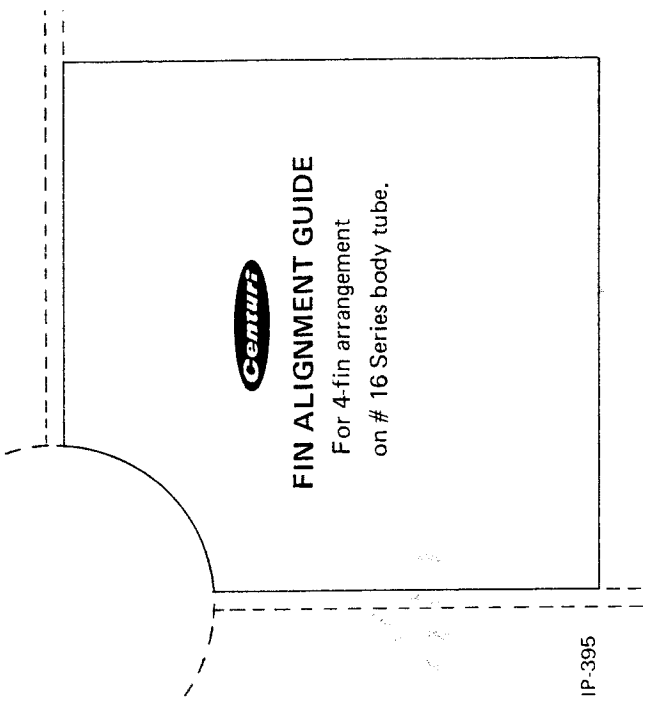
Refer to Centuri's TIR-52 for invaluable aid in reliable cluster ignition.

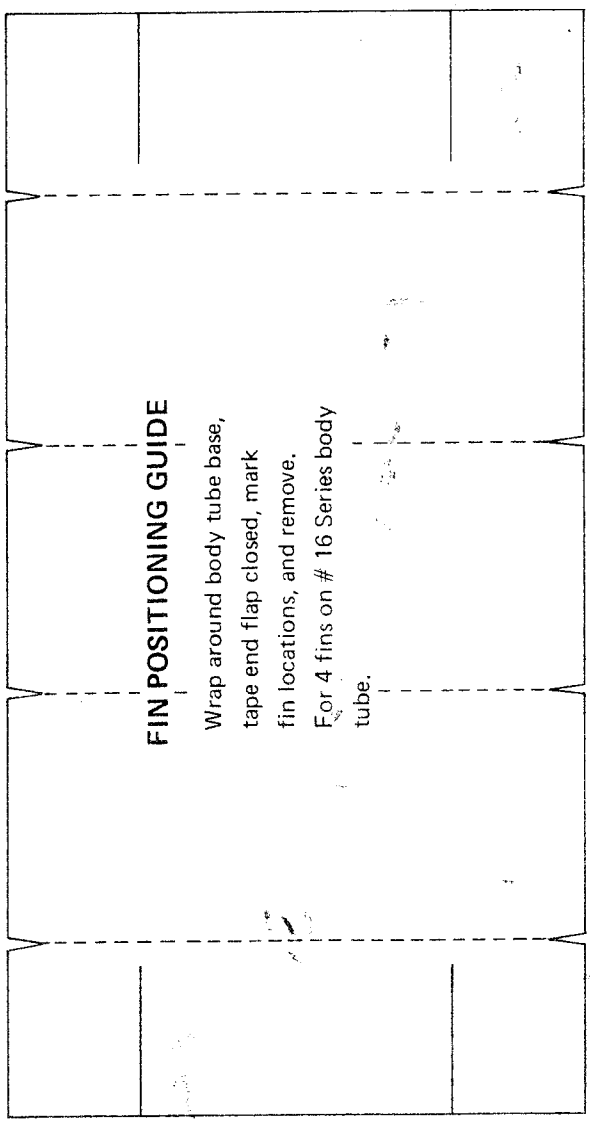
5. ASSEMBLE PAYLOAD SECTION



If a two engine mount assembly was built from the parts supplied, you will need the following extra parts to also build a three engine mount.

Two — ST-73's
Two — TR-7's
Two — Engine locks
Two — Mylar lock rings





TIRED OF THE OLD SHELL GAME?

Attention all eggheads eggsaperated with eggscruciating eggscapades with egg lofting eggsperiments: We eggsalt, eggspound upon, eggsplain, and now eggstravegantly offer you the EGG CRATE Rocket!

Centuri's Egg Crate Rocket is an eggscellent eggsample of what eggsperienced eggsperts, eggsuding confidence, have, after eggsacting eggsperiments, espoused. The Egg Crate Rocket's cost is hardly eggsorbitant yet its eggciting performance is eggspecially eggshilerating. Built to eggsacting standards, distaining eggstraneous eggstra clutter, the Egg Crate Rocket eggsplodes from its pad (nest?) with eggstraordinary speed and eggcellerates into the sky trailing eggsquisite egghaust.

No longer will eggsterminated eggs eggserbate your eggsaperated egos; no more will the air be filled with uneggsemplary and eggcessive eggspletives.

Therefore, Centuri eggscusably eggstatic, eggconomically offers the Egg Crate Rocket, and the author apologises for this eggregeous eggsposition.

N.B.
Centuri offers the product afore mentioned free to those nimble of tongue who can read the above passage aloud in under 15 seconds without goofing.

Centuri