

mach 10

ROCKET PLANE

CATALOG NO. KA-4



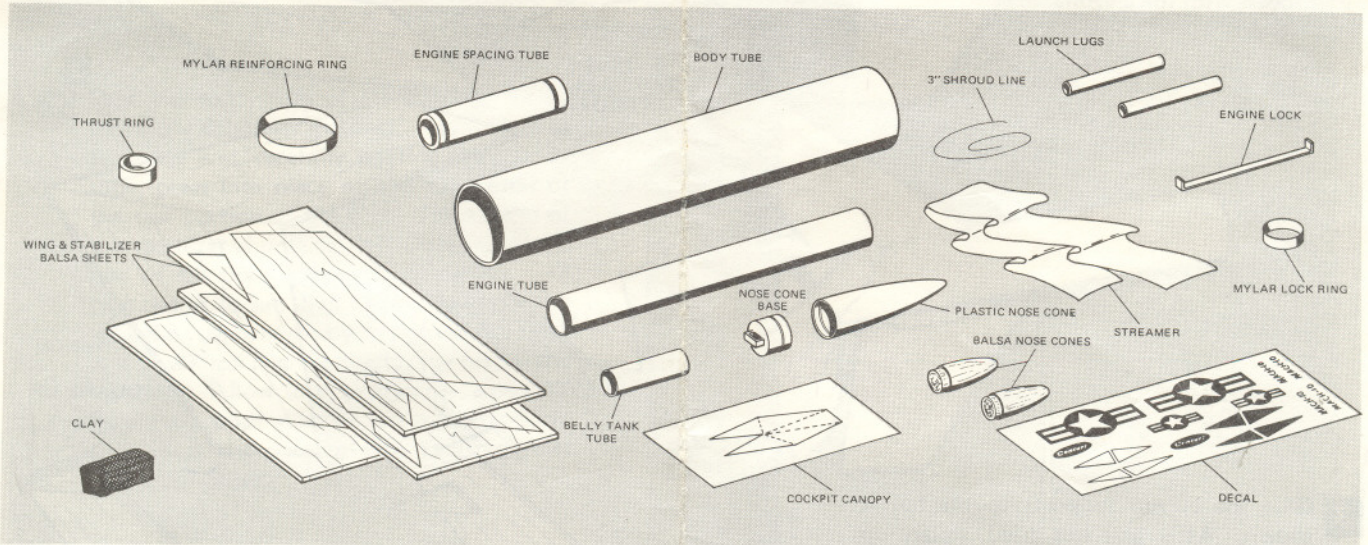
A totally new concept! The Mach 10 screams into the sky at speeds over 100 mph up to 500 feet, peels off, ejects a target marker and heads for home – circling the field and finally skidding to a stop on its belly tank. Hold contests for flight duration, spot landing in a target area of “precision bombing” – landing the ribbon chuted target marker in a pre-determined target area. Invent your own competitions – the Mach 10 goes together quickly and easily – rugged high performance at scale speeds up to 5000 mph flight after flight.

ASSEMBLY INSTRUCTIONS

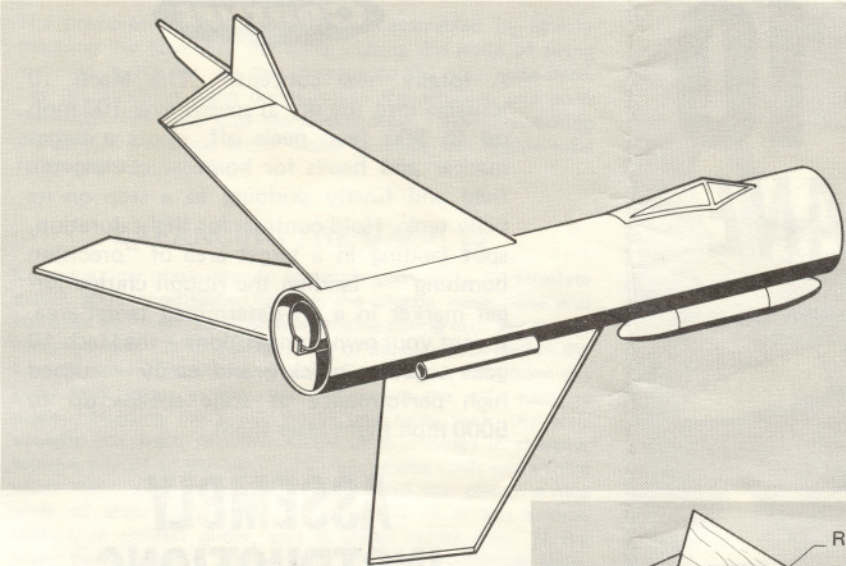
FOLLOW DIRECTIONS CAREFULLY!



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 MACH 10 are: engines, chute wadding, launching platform, firing panel, and battery.



Centuri

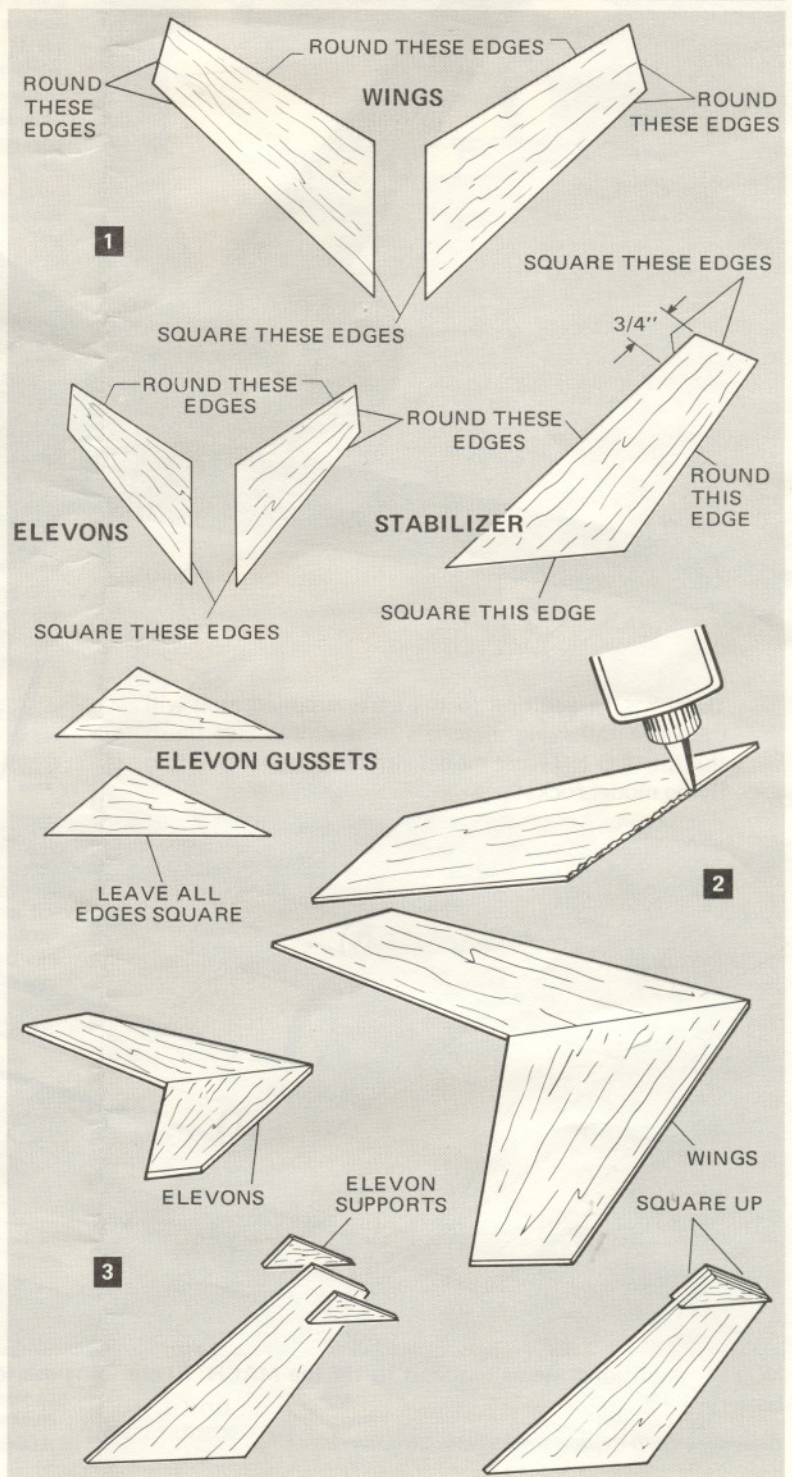
mach 10

WINGS & TAIL ASSEMBLY

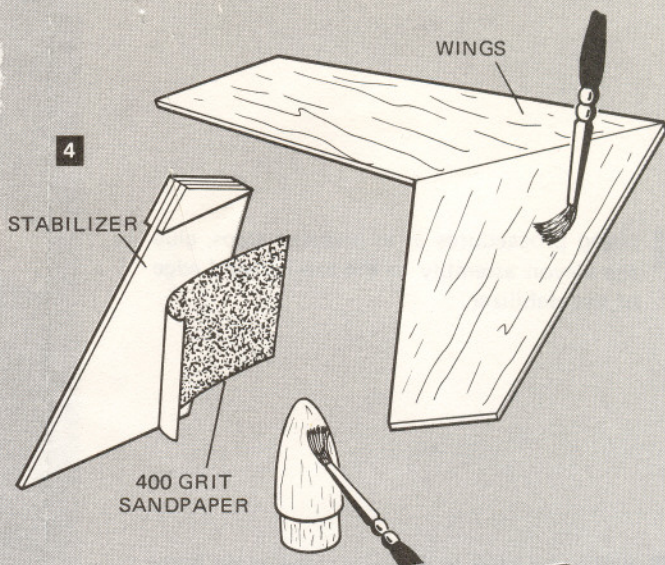
1 Using a sharp knife, cut the wing and tail pieces from the balsa sheets. Using 320 - 400 grit sandpaper, square up the parts and round the edges indicated in the illustrations. Lightly sand the surfaces of all parts.

2 Apply glue to the root edges of the wings, allow glue to become tacky and press together on a flat surface. Repeat this process with the elevons.

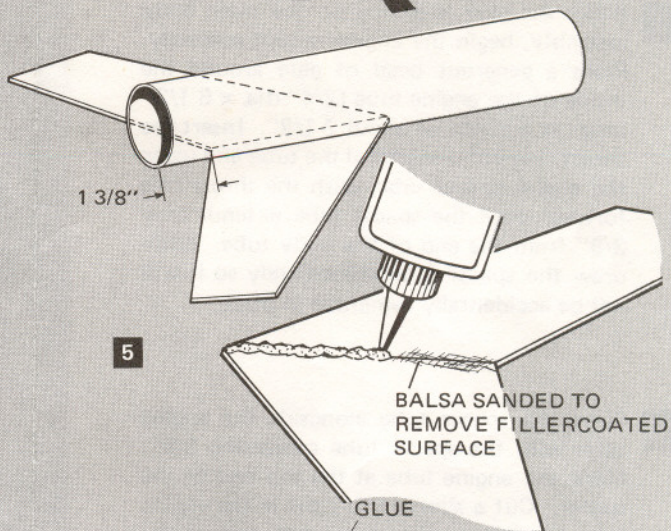
3 Glue the elevon supports to the tail as shown. After glue has dried, square up the cemented parts with sandpaper.



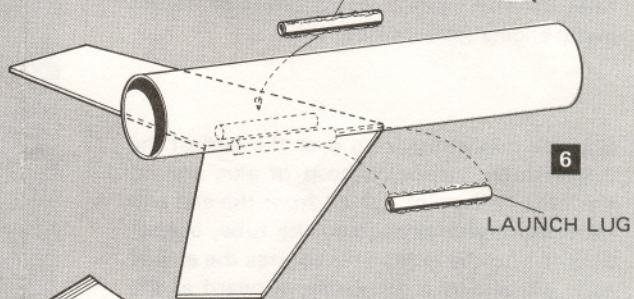
- 4** The balsa parts are more easily finished at this time. To obtain a smooth finish, apply balsa fillercoat to all surfaces and allow to dry. When dry, lightly sand with #400 sandpaper. Apply fillercoat, let dry and sand again. Although two coats of filler may not give a completely smooth finish, it is a reasonable compromise between unfinished and smooth balsa. Heavy surfaces may reduce the glide ability of the Mach 10. The small balsa cones which form the ends of the belly tank should also be filled and sanded at this time.



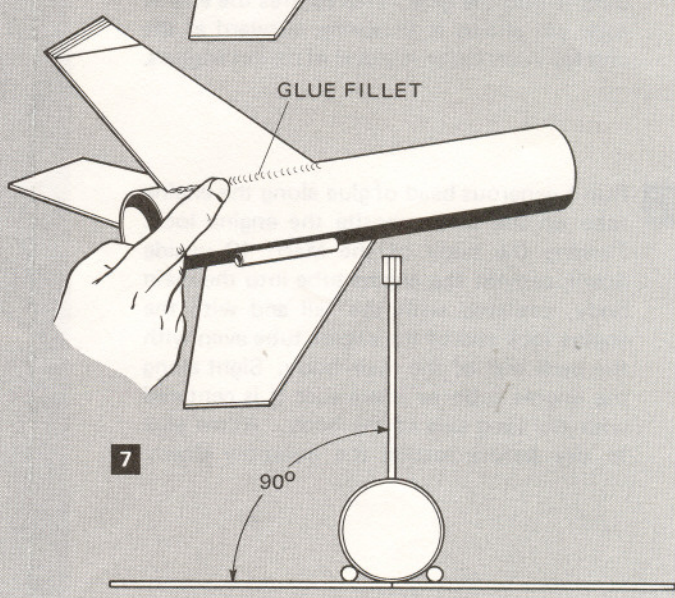
- 5** When all balsa parts have been pre-finished, assembly may begin. Sand the top center joint of the wing to remove the filler material. This will give the glue more "bite" into the wood. Lay the wing on a flat surface, apply a generous bead of glue on the joint and place the large main body tube on the joint with the back of the body tube extending 1 3/8" beyond the rear edge of the wing.



- 6** Apply glue to the simulated cannons (launch lugs) as shown and cement to either side of the wing-body tube joints. These not only serve as launching lugs, but provide added strength to the wing-body assembly.



- 7** Sand the root edges of the stabilizer to remove any fillercoat material. Apply glue to this edge and, carefully sighting along body tube, press into place on the top center of the rear portion of the tube. The aft end of the stabilizer should be 1/4" forward of the rear of the body tube. Hold in place until glue begins to set. Sight along the body and push the stabilizer gently to right or left until it is in vertical alignment with the rest of the assembly. Allow to dry, then run a bead of glue along both sides of the stabilizer-body tube joint and smooth into an even fillet with your finger.



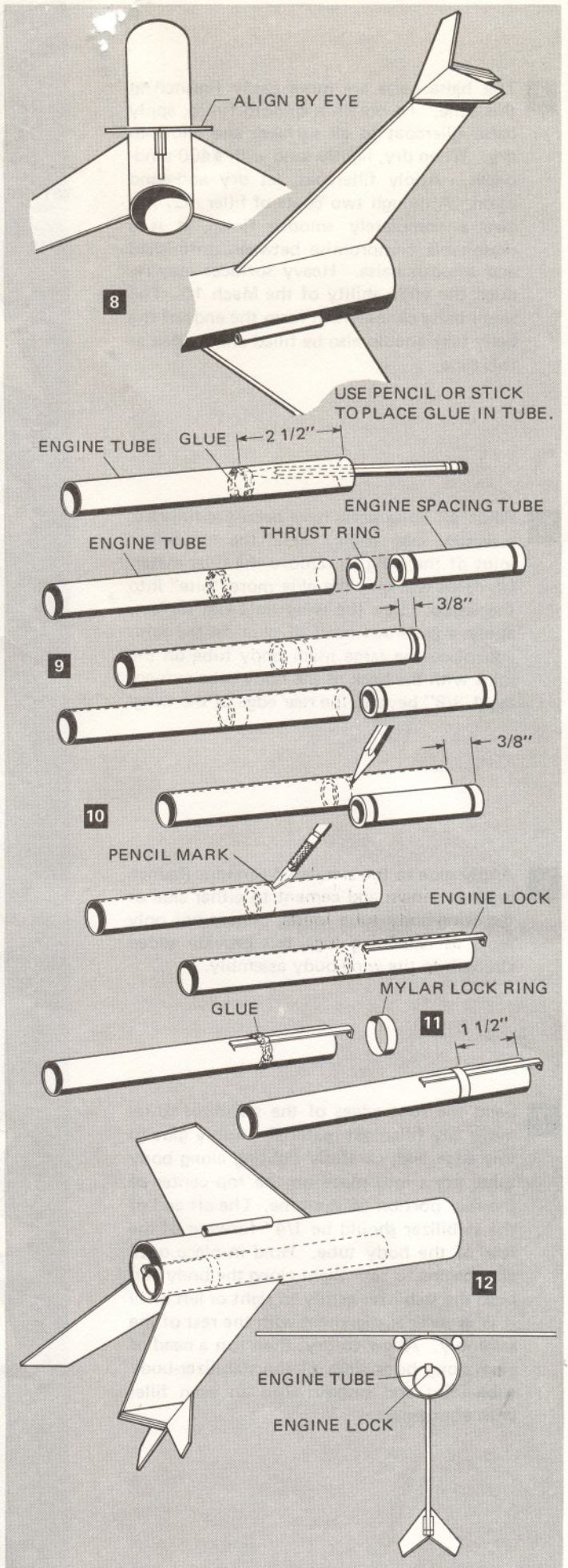
8 Using procedures as in previous steps, glue the elevon assembly to the top forward edge of the stabilizer.

9 While the glue is drying on the main body assembly, begin the engine mount assembly. Place a generous bead of glue around the inside of the engine tube (3/4" dia. x 6 1/2" long) at a depth of about 2 1/2". Insert the thrust ring into the end of the tube and using the engine spacer tube, push the thrust ring forward until the spacer tube extends only 3/8" from the end of the body tube. Withdraw the spacer tube immediately so it will not be accidentally cemented in place.

10 Place the spacer tube alongside the engine tube with the spacer tube projecting 3/8". Mark the engine tube at the top end of the spacer. Cut a short (1/8") slit in the engine tube on this mark. Press one end of the metal engine lock into the slit.

11 Slip the mylar lock ring over the end of the engine tube. Apply a bead of glue around the tube at a point 1 1/2" from the end and slide the mylar ring down the tube, imbedding it into the glue. This secures the engine lock yet allows it to spring outward at the end for insertion or removal of rocket engines.

12 Run a generous bead of glue along the engine tube on the side opposite the engine lock. Turning the body of the Mach 10 upside down, cement the engine tube into the main body, centered with the tail and with the engine lock end of the engine tube even with the back end of the main body. Sight along the engine tube to make sure it is centered with the long axis of the body. Allow glue to dry before setting the assembly down.



13 Cut the cockpit from the cardstock sheet. Carefully bend the canopy on the dotted lines and press the front edges together. Secure temporarily with masking tape and run a bead of glue along the inside of the joint. When the glue has dried, remove the masking tape. Run a bead of glue around the inside edge of the cockpit, position it on the top of the body tube 1" from the nose and press the edges of the cockpit down onto the body. Hold until the glue sets.

14 Glue one of the small nose cones into the belly tank tube (1/2" dia. x 1 1/2" long). Run a bead of glue along this assembly and cement to the bottom of the main body as shown. The cone that fits into the forward end of the tank is not glued in, but is left removable for adding flight ballast to the tank. Since this forward cone catches most of the landing shock, it is a good idea to smear an even film of glue over its surface. The dried glue forms a hard finish that will withstand the skidding produced in landing.

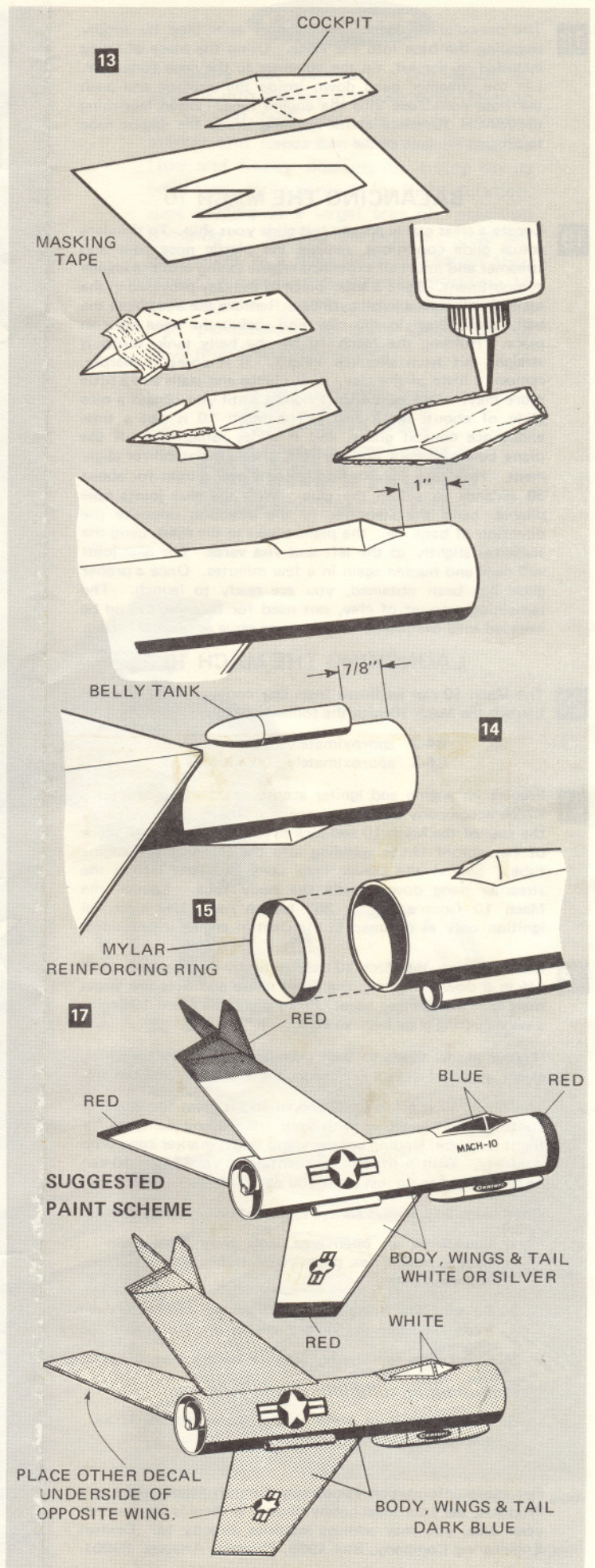
15 Smear a thin film of glue around the inside front edge of the body tube and push the mylar reinforcing ring into the body. This ring strengthens the front of the body and prevents fraying of the inside of the tube.

16 This completes basic assembly. Socket the forward cone into the belly tank and prepare for painting. The plastic "target" nose cone will be inserted after painting is completed.

17 PAINTING: Shown at right are two suggested paint schemes for the Mach 10. You may brush paint the model with airplane "dope" or spray it with an aerosol type paint. Spraying is, of course, the fastest way and usually produces better results. A paint stand may be made by taping a wood dowel into the engine spacer tube and anchoring the other end of the dowel in a vise or wooden base.

If you spray the model, remember to hold the spray can approximately 12" from the model, moving the can up and down in even strokes. Do not attempt to spray the model in one heavy application. Rather spray several light coats, allowing time between for the paint to dry. Don't apply too much paint. Remember, the Mach 10 is a glider. Too much paint might make it sink like the proverbial rock.

When the paint is dry, apply the decals according to instructions printed on the backing material.



- 18** The pre-colored plastic cone is now assembled by simply snapping the base into the cone. Using the piece of string included in the kit, tie the streamer to the nose cone base. Let the streamer hang down inside the airplane and push the nose cone base into the engine tube. When launching the MACH 10, place chute wadding inside the engine tube to protect the base of the nose cone.

BALANCING THE MACH 10

- 19** Locate a clear grassy area to test glide your ship. To simulate actual glide conditions, remove the plastic nose cone and streamer and insert an expended engine casing into the engine compartment. Take a small piece of the clay provided in the kit and roll into a small cylinder. Remove the nose from the belly tank, drop in the clay and socket the cone back in place. Holding the Mach 10 by the belly tank, throw it straight out from shoulder height. If it noses in sharply, remove a little of the clay. If it climbs and stalls add a little more clay. Add or subtract ballast until you obtain a nice glide of about 10-12 feet. The Mach 10 is not a time endurance contest glider, and it glides rather fast. If the plane banks sharply right or left, check the stabilizer alignment. Hold the stabilizer-body joint over a light for about 30 seconds to soften the glue. With the glue joints now pliable, bend the stabilizer in the direction opposite the direction of bank (ie: the plane banks to the right, bend the stabilizer slightly to the left and visa versa. The glue joint will cool and harden again in a few minutes. Once a proper glide has been obtained, you are ready to launch. The remaining amount of clay, not used for balance, should be inserted into the plastic nose cone to serve as takeoff ballast.

LAUNCHING THE MACH 10

- 20** The Mach 10 can be flown from any conventional launcher. Launch the Mach 10 with the following engines:

B4-2 approximately 250' altitude
C6-3 approximately 500' altitude

- 21** Prepare an engine and igniter according to the instructions which accompany all Centuri engines. Insert the engine into the rear of the Mach 10 and lock in place. Push a small piece of flameproof chute wadding into the front of the engine tube. Socket the plastic nose cone in place, letting the streamer hang down inside the body tube. Launch the Mach 10 from a 1/8" x 36" launch rod. Use electrical ignition only as outlined in the Centuri engine instructions.

- 22** Upon ignition, the Mach 10 rises vertically under power, peels off in a slow arc during the delay phase and fires the target marker at the ejection point. From there, the Mach 10 begins a wide circling glide back to earth.

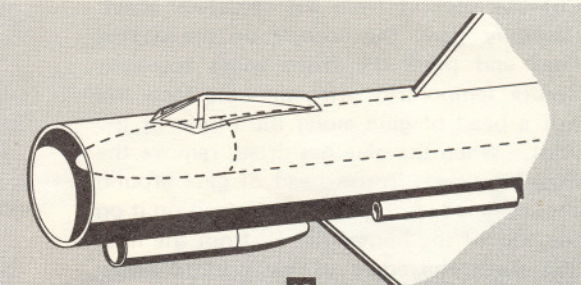
If your model tends to arch over backwards, try launching at an angle of about 60° with the stabilizer pointed up.

The Mach 10 is a fun-to-fly model and is great for informal contests. Get together with your friends and compete for flight duration, landing accuracy and target marker zone drop accuracy. With a little experimentation, your Mach 10 can be programed to do just what you want it to do — every time.

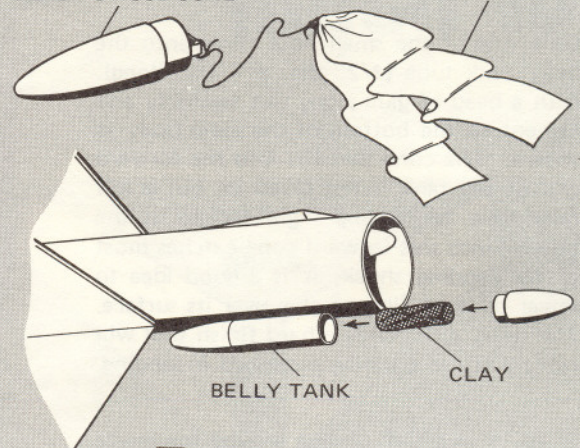
When launching, always adhere to the following safety checks:

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!

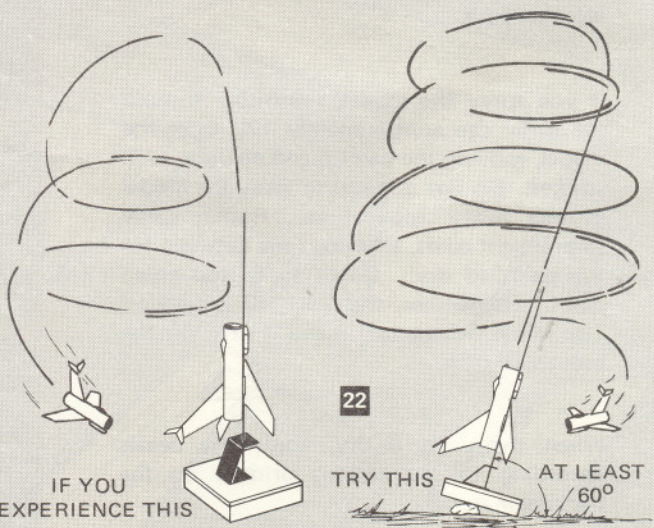
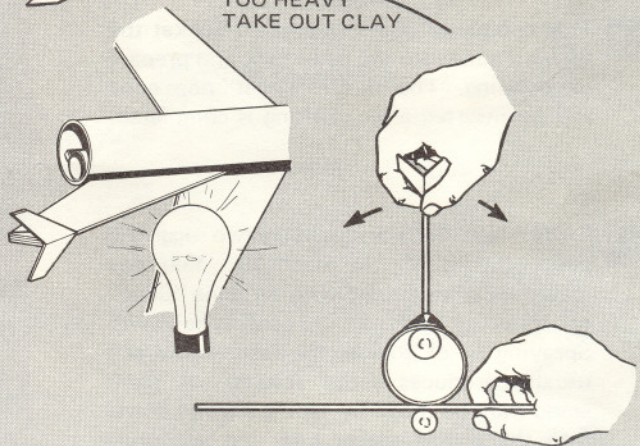
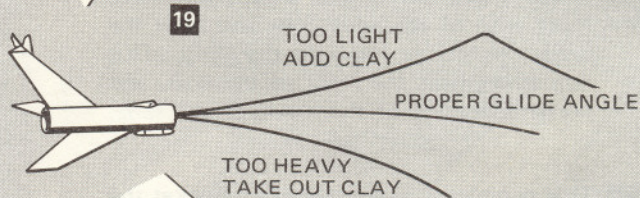
For more information concerning Centuri Model Rocketry Products, see your local hobby dealer. If there is no dealer in your area, you may address inquiries directly to: Centuri Engineering Company, Box 1988, Phoenix, Arizona 85001.



18 PLASTIC NOSE CONE STREAMER



BELLY TANK CLAY



AMAZING IN
FLIGHT!



GLIDE RECOVERY!

**RUGGED —
EASY TO CONSTRUCT!**

mach 10

ROCKET PLANE

SPECIFICATIONS

Length	12"
Body Dia.	1.64"
Wing Span	11"
Net. Wt.	1.85 oz.
Glide Wt.	1.35 oz.

\$225

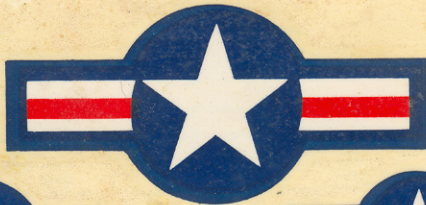
Cat. No. KA-4
Engines Not Inc.

RECOMMENDED ENGINES B4-2 C6-3

IP-398

Centuri

FLYING MODEL ROCKET KIT



MACH-10

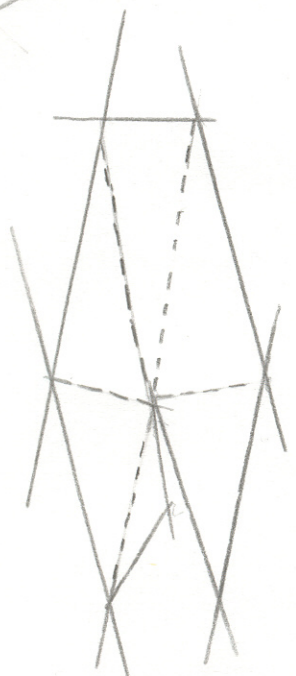
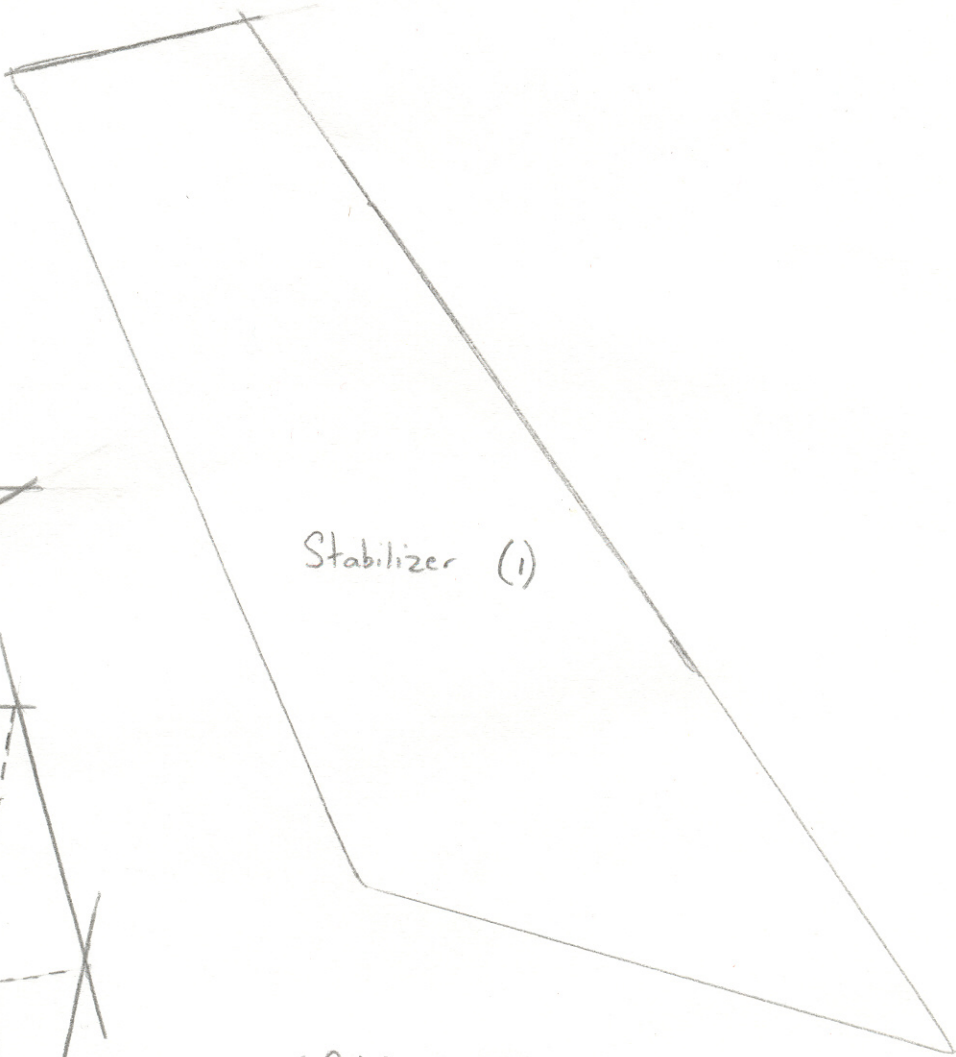
MACH-10



MACH-10
MACH-10

Elevons (2)

Elevon Gusset



----- Fold lines
——— Cut lines

